



Huntsville, Alabama

308 Fountain Circle
Huntsville, AL 35801

Cover Memo

Meeting Type: City Council Regular Meeting **Meeting Date:** 7/27/2023

File ID: TMP-3155

Department: General Services

Subject:

Type of Action: Approval/Action

Resolution authorizing the Mayor to enter into a Standard Agreement for Engineering Services between the City of Huntsville and Amiri Engineering Corporation for the Apollo Park Phase III.

Resolution No.

Finance Information:

Account Number: 4018-71-00000-521026-00000000

City Cost Amount: \$39,900.00

Total Cost: \$39,900.00

Special Circumstances:

Grant Funded: None

Grant Title - CFDA or granting Agency: N/A

Resolution #: N/A

Location: (list below)

Address: 901 Nunnhsae Park Drive NW

District: District 1 ☐ District 2 ☐ District 3 ☐ District 4 ☐ District 5 ☒

Additional Comments:

Construction Materials Testing, Special Inspections and ADEM Inspections for the Apollo Park Phase III.

RESOLUTION NO. 23-_____

BE IT RESOLVED by the City Council of the City of Huntsville, Alabama, that the Mayor be, and he is hereby authorized to enter into an agreement by and between the City of Huntsville and Amiri Engineering Corporation in the amount of Thirty-Nine Thousand Nine Hundred Dollars and No/100's (\$39,900.00) for the Apollo Park Phase 3 located at 901 Nunnhsae Park Drive NW, Huntsville, Alabama on behalf of the City of Huntsville, a municipal corporation in the State of Alabama, which said agreement is substantially in words and figures similar to the certain document attached hereto and identified as "Standard Agreement for Engineering Services between the City of Huntsville and Amiri Engineering Corporation" consisting of seventeen (17) pages, together with the signature of the City Council President and an executed copy of said document being permanently kept on file in the Office of the City Clerk of the City of Huntsville, Alabama.

ADOPTED this the 27th day of July, 2023.

President of the City Council of
the City of Huntsville, Alabama

APPROVED this the 27th day of July, 2023.

Mayor of the City of Huntsville,
Alabama

**STANDARD AGREEMENT
BETWEEN
CITY OF HUNTSVILLE
AND
AMIRI ENGINEERING CORPORATION**



This Agreement is made by and between
the City of Huntsville, Alabama, a
Municipal Corporation by:

**City of Huntsville
308 Fountain Circle
Huntsville, Alabama 35801**

(hereinafter referred to as the "Owner") and:

**Amiri Engineering Corporation
2609 Artie Street SW
Huntsville, Alabama 35805**

(hereinafter referred to as the "Engineer") under seal for services described below to be rendered for the following Project:

Project Title: **Apollo Park Phase III**
Address: **901 Nunnhsae Park Dr NW**
General Project Description: **Construction Materials Testing, Special Inspections and ADEM Inspections for the Apollo Park Phase III**

This Agreement shall be effective on the date it is executed by the last party to execute it. The Owner and the Engineer hereby agree as follows:

Date: _____

President of the City Council: _____

ARTICLE I

THE ENGINEER'S BASIC DUTIES TO THE OWNER

1.1 By executing this Agreement, the Engineer represents to the Owner that the Engineer is professional qualified to act as the Materials Testing and Inspection Engineer for the project and is licensed to practice Engineering by all public entities having jurisdiction over the Engineer and the Project. The Engineer further represents to the Owner that the Engineer will maintain all necessary licenses, permits or other authorizations necessary to act as Engineer for the Project until Engineer's remaining duties hereunder have been satisfied. The Engineer assumes full responsibility to the Owner for the negligent acts, errors and omissions of its consultants or others employed or retained by the Engineer in connection with the Project.

1.2 Execution of this Agreement by the Engineer constitutes a representation that the Engineer has become familiar with the Project site and the local conditions under which the Project is to be implemented.

1.3 PERIOD OF PERFORMANCE

1.3.1 The Engineer shall commence services pursuant to this agreement as of July 27, 2023. The final completion date for the completion of the Project shall be approximately July 27, 2024.

1.4 ADMINISTRATION OF CONSTRUCTION

1.4.1 The Engineer shall provide construction materials testing, and special inspections in addition to ADEM inspections of the work to be performed on the **Apollo Park Phase III** as set forth below and shall perform those duties and discharge those responsibilities set forth herein.

1.4.2 For the purposes of performing the work described as set forth herein and as included in Exhibit "A", the Engineer shall represent the Owner during construction. Instructions and other appropriate communications from the Owner to the contractor shall be communicated through the Engineer. The Engineer shall act on behalf of the Owner only to the extent provided herein.

1.4.3 The Engineer shall carefully examine the Work of the Contractor whenever and wherever appropriate. The purpose of such examinations will be to determine the quality, quantity and progress of the Work in comparison with the requirements of the Construction Contract. In making such examinations, the Engineer shall exercise care to protect the Owner from defects or deficiencies in the Work, from unexcused delays in the schedule and from overpayment to the Construction Contract. Following each such examination the Engineer shall submit a written field observation report of such examination, together with any appropriate comments or recommendations, to the Owner.

1.4.4 The Engineer shall at all times have access to the Work wherever it is located. The Engineer shall not have control or charge of construction means, methods, techniques, sequences or procedures, or safety precautions or programs in connection with the Work.

1.4.5 The Engineer shall reject Work which does not conform to the Contract Documents unless directed by the Owner, in writing, not to do so. Whenever, in the Engineer's opinion, it is necessary or advisable, the Engineer shall require special examination or testing of the Work in accordance with the provisions of the Construction Contract whether or not such Work is fabricated, installed or completed.

1.4.6 As relates to materials testing and inspection services performed herein, the Engineer shall review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data and Samples. Approval by the Engineer of the Contractor's submittal shall constitute the Engineer's representation to the Owner and the Project Architect that such submittal is generally in conformance with the design concept and information given through the Contract Documents. Such action shall be taken with reasonable promptness so as to cause no delay to the Contractor or the Project. Owner should receive a copy of all engineer approved shop drawings, product data, samples, etc.

1.4.7 The Engineer shall review, and advise the Owner and Project Architect concerning, proposals and requests for Change Orders from the Contractor. The Engineer shall provide input and recommendations to the Owner and Project Architect as necessary for the preparation of Change Orders for the Owner's approval and execution in accordance with

the Construction Contract, and shall have authority to order, by Field Order, minor changes in the Work not involving an adjustment in the Contract Price or an extension of the Contract Time.

1.4.8 In accordance with Section 7.7 herein, the Engineer shall indemnify and hold harmless the Owner, its officers, agents, and employees, from and against all liability, claims, damages, loss, costs and expenses arising out of, or resulting from, Engineer's negligent acts, errors, or omissions in the performance of the Engineer's professional services under this agreement. In the event the Owner is alleged to be liable on account of alleged negligent acts, errors or omissions of the Engineer, the Engineer shall defend such allegations and shall bear all costs, fees and expenses of such defense.

1.5 ADDITIONAL SERVICES

The following services of the Engineer are not included in Paragraphs 1.3 through 1.4. Nevertheless, the Engineer shall provide such services if authorized in writing by the Owner, and they shall be paid for by the Owner as provided hereinafter.

1.5.1

Providing services made necessary solely by the default of the Contractor or major defects or deficiencies in the Work of the Contractor, including assistance to the Owner regarding litigation of claims related to the Construction Contract or project.

1.6 SERVICE SCHEDULE

1.6.1 The Engineer shall perform its services expeditiously. Upon request by the Owner, the Engineer shall submit for the Owner's approval a schedule for the performance for the Engineer's services which shall include allowance for time required for the Owner's review of submissions and for approvals of authorities having jurisdiction over the Project. This schedule, when approved by the Owner, shall not, except for cause, be exceeded by the Engineer.

1.7 PERSONNEL

1.7.1 The Engineer shall assign only qualified personnel to perform any service concerning the project. At the time of execution of this Agreement, the parties anticipate that the following named individuals will perform those functions indicated:

NAME	FUNCTION
<u>Nasser Amiri</u>	<u>MSCE, P.E.</u>

So long as the individuals named above remain actively employed or retained by the Engineer, they shall perform the functions indicated next to their names. Newly hired employees by the Engineer after the execution of this contract shall be declared to the Owner in writing and classed in a manner similar to existing employees, and subject to all of the terms of this Agreement.

1.7.2 The Owner shall designate representatives who are authorized to make all decisions except for change orders on the Owner's behalf when requested to do so by the Engineer. The following designated Owner representative(s) are authorized to make such decisions and shall be available on any on-call basis and shall be called in the order listed herein:

Name	Work Telephone	Cell Telephone
<u>Natasha Wright</u>	<u>256-705-3098</u>	

The Owner shall furnish a revised listing to the Engineer when any changes affecting this list.

ARTICLE II

THE OWNER'S BASIC DUTIES TO THE ENGINEER OTHER THAN COMPENSATION

N/A

ARTICLE III CONSTRUCTION COSTS

N/A

ARTICLE IV BASIS OF COMPENSATION

4.1 The Owner shall compensate the Engineer for services rendered pursuant to Paragraphs 1.3 through 1.4 of this Agreement by payment in accordance with the rates included in the Schedule of Services and Fees as set forth in Exhibit "A" up to the Total Not-to Exceed Amount of **\$39,900.00**. These amounts include the cost of addenda related to the bidding of the Construction Project.

4.2 Payment to the Engineer of the reimbursable amount set forth in Paragraph 4.1 shall be allocated per the attached proposal to include construction materials testing, ADEM and special inspections:

Additional services of the Engineer as described in Paragraph 1.5, if any, shall be compensated as follows:
Compensation for such services shall be computed on an hourly basis in accordance with Exhibit "A" attached herewith.
Additional Services of consultants, if any, shall be compensated on the basis of multiple of one point two (1.2) times the amounts billed to the Engineer for such service.

4.3 Reimbursable Expenses as defined in Article V, shall be reimbursed to the Engineer by the Owner as provided in Article V.

4.4 If the Engineer's services are changed materially through no fault of the Engineer, compensation due to the Engineer shall be equitably adjusted, either upward or downward.

ARTICLE V PAYMENT TO THE ENGINEER

5.1 ENGINEER'S INVOICES

5.1.1 Not more frequently than monthly, unless otherwise agreed in writing by the Engineer and the Owner, the Engineer shall submit an invoice to the Owner requesting payment for services properly rendered and reimbursement for Reimbursable Expenses due hereunder. The Engineer's invoice shall describe with reasonable particularity each service rendered, the date thereof, the time expended if services under Paragraphs 1.7 or 4.5 are included in the invoice and the person(s) rendering such service. The Engineer's invoice shall be accompanied by such documentation or data in support of Reimbursable Expenses for which reimbursement is sought as the Owner may require.

5.1.2 If payment is requested for services rendered by the Engineer pursuant to Paragraphs 1.3 through 1.6, the invoice shall additionally reflect the allocations as provided in Paragraph 4.2 and shall state the percentage of completion as to each such allocation. The invoice shall bear the signature of the Engineer, which signature shall constitute the Engineer's representation to the Owner that the services indicated in the invoice have progressed to the level indicated, have been properly and timely performed as required herein that the Reimbursable Expenses included in the invoice have been reasonably incurred, that all obligations of the Engineer covered by prior invoices have been paid in full, and that, to the best of the Engineer's knowledge, information and informed belief, the amount requested is currently due and owing, there being no reason known to the Engineer the payment of any portion thereof should be withheld. Submission

of the Engineer's invoice for final payment and reimbursement shall further constitute the Engineer's representation to the Owner that, upon receipt from the Owner of the amount invoiced, all obligations of the Engineer to others, including its consultants, incurred in connection with the Project, will be paid in full.

5.2 TIME FOR PAYMENT

5.2.1 The Owner shall make payment to the Engineer of all sums properly invoiced as provided in Paragraph 5.1, within thirty (30) days of the Owner's receipt thereof.

5.3 OWNER'S RIGHT TO WITHHOLD PAYMENT

5.3.1 In the event the Owner becomes credibly informed that any representations of the Engineer, provided pursuant to Subparagraph 5.1.2, are wholly or partially inaccurate, the Owner may withhold payment of sums then or in the future otherwise due to the Engineer until the inaccuracy, and the cause thereof, is corrected to the Owner's reasonable satisfaction.

5.4 REIMBURSABLE EXPENSES

5.4.1 Reasonable expenses for the project will only include expenses for ADEM Permit and Monitoring for the duration of the project and anything related to the ADEM process.

5.5 ENGINEER'S RECORDS

5.5.1 Documentation accurately reflecting the time expended by the Engineer and his personnel and records of Reimbursable Expenses shall be maintained by the Engineer and shall be available to the Owner for review and copying upon request.

ARTICLE VI TERMINATION

6.1 TERMINATION FOR CAUSE

6.1.1 This Agreement may be terminated by either party upon seven (7) days written notice to the other should such other party fail substantially to perform in accordance with its material terms through no fault of the party initiating the termination.

6.2 TERMINATION BY THE OWNER WITHOUT CAUSE

6.2.1 This Agreement may be terminated by the Owner without cause upon seven (7) days' written notice to the Engineer. In the event of such a termination without cause, the Engineer shall be compensated for all services performed prior to termination, together with Reimbursable Expenses incurred. In such event, the Engineer shall promptly submit to the Owner its invoice for final payment and reimbursement which invoice shall comply with the provisions of Paragraph 5.1.

ARTICLE VII MISCELLANEOUS PROVISIONS

7.1 GOVERNING LAW

7.1.1 This Agreement shall be governed by the law of the State of Alabama.

7.2 INTENT AND INTERPRETATION

7.2.1 The intent of this Contract is to require complete, correct and timely execution of the Work. Any Work that may be required, implied or inferred by the Contract Documents, or any one or more of them, as necessary to product the intended result shall be provided by the Engineer.

7.2.2 This Contract is intended to be an integral whole and shall be interpreted as internally consistent. What is required by any one Contract Document shall be considered as required by the Contract.

7.2.3 When a word, term or phrase is used in this Contract, it shall be interpreted or construed, first, as defined herein; second, if not defined, according to its generally accepted meaning in the Engineering industry; and third, if there is no generally accepted meaning in the Engineering industry, according to its common and customary usage.

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

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

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

7.3 TIME IS OF THE ESSENCE

7.3.1 Time limitations contained herein, or provided for hereby, are of the essence of this Agreement.

7.4 USE AND OWNERSHIP OF DOCUMENTS

7.4.1 The drawings, specifications and other documents or things prepared by the Engineer for the Project shall become and be the sole property of the Owner. The Engineer shall be permitted to retain copies thereof for its records and for its future professional endeavors. Such drawings, specifications and other documents or things are not intended by the Engineer for use on other projects by the Owner or others. Any reuse by the Owner without the written approval of the Engineer, shall be at the sole risk of the Owner and the Owner shall indemnify and save harmless the Engineer from any and all liability, costs, claims, damages, losses and expenses including attorney's fees arising out of, or resulting from, such reuse by the Owner; provided however, that this agreement to indemnify and save harmless shall not apply to any reuse of documents retained by, or through, the Contractor.

7.5 SUCCESSORS AND ASSIGNS

7.5.1 The Engineer shall not assign its rights hereunder, excepting its right to payment, nor shall it delegate any of its duties hereunder without the written consent of the Owner. Subject to the provisions of the immediately preceding sentence, the Owner and the Engineer, respectively, bind themselves, their successors, assigns and legal representatives to the other party to this Agreement and to the successors, assigns and legal representatives of such other party with respect to all covenants of this Agreement.

7.6 NO THIRD-PARTY BENEFICIARIES

7.6.1 Nothing contained herein shall create a contractual relationship with, or any rights in favor of, any third party.

7.7 INSURANCE

The Engineer shall carry insurance of the following kinds and amounts in addition to any other forms of insurance or bonds required under the terms of the contract specifications. The Engineer shall procure and maintain for the duration of the job until final acceptance by the Owner, or as later indicated, insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by the Engineer, his agents, representatives, employees or subcontractors.

A. MINIMUM SCOPE OF INSURANCE:

1. General Liability:

Insurance will be written on an occurrence basis. Claims-made coverage will be accepted only on an

exception basis after the Owner's approval. General Liability Coverage and Owners Contractors Protective Insurance should be written by the same insurance company.

Commercial General Liability

Products and Completed Operations
Contractual
Personal Injury
Explosion, Collapse and Underground
Broad Form Property Damage

2. Professional Liability:

Insurance may be written on a "claims-made" basis, providing coverage for negligent acts, errors or omissions in the performance of professional services. Coverage will be maintained for three years after completion of the professional services and Certificates of Insurance will be submitted to the Owner within reasonable economic terms. Coverage shall be no less comprehensive than that which is carried by at least 25% of the registered Engineers or Engineering Firms contracting in the United States. Such coverage shall be carried on a continuous basis including prior acts coverage to cover the subject project. The professional liability insurance shall contain contractual liability coverage.

3. Automobile Liability:

Business Automobile Liability providing coverage for all owned, hired and non-owned autos. Coverage for loading and unloading shall be provided under either automobile liability or general liability policy forms.

4. Workers' Compensation Insurance:

Statutory protection against bodily injury, sickness or disease or death sustained by employee in the scope of employment. Protection shall be provided by a commercial insurance company or a recognized self-insurance fund authorized before the State of Alabama Industrial Board of Relations.

5. Employers Liability Insurance:

Covering common law claims of injured employees made in lieu of or in addition to a worker's compensation claim.

B. MINIMUM LIMITS OF INSURANCE:

1. General Liability:

Commercial General Liability on an "occurrence form" for bodily injury and property damage:

\$ 1,000,000 General Aggregate Limit
\$ 1,000,000 Products - Completed Operations Aggregate
\$ 1,000,000 Personal & Advertising Injury
\$ 1,000,000 Each Occurrence

2. Professional Liability:

Insurance may be made on a "claims-made" basis:

\$ 100,000 Per Claim - Land Surveyors
\$ 250,000 Per Claim - Other Professionals

3. Automobile Liability:

\$ 500,000 Combined Single Limit per accident for bodily injury and property damage.

4. Workers' Compensation:

As Required by the State of Alabama Statute

5. Employers Liability:

\$ 100,000 Bodily Injury by Accident or Disease

\$ 500,000 Policy Limit by Disease

C. OTHER INSURANCE PROVISIONS:

The City is hereby authorized to adjust the requirements set forth in this document in the event it is determined that such adjustment is in the City's best interest. If the insurance requirements are not adjusted by the City prior to the City's release of specifications with regard to the project in question, then the minimum limits shall apply.

The policies are to contain, or be endorsed to contain, the following provisions:

1. General Liability and Automobile Liability Coverage's Only:

- a. The City, its elected and appointed officials, employees, agents and specified volunteers are to be covered as Additional Insureds, as their interests may appear, as respects: liability arising out of activities performed by or on behalf of Engineer for products used by and completed operations of Engineer; or automobiles owned, leased, hired or borrowed by Architect. Additional insured status shall be through ISO Additional Endorsement CG 20 10 11 85 or equivalent that is sufficient to provide the coverage required by this Agreement.
- b. Engineer's insurance coverage shall be primary insurance as respects the City, its elected and appointed officials, employees, agents and specified volunteers, as their interests may appear. Any insurance or self-insurance maintained by the City, its officers, officials, employees, agents or specified volunteers shall be excess of Architect's insurance and shall not contribute to it.
- c. Engineer's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

2. All Coverages:

- a. Engineer is responsible to pay all deductibles. Each insurance policy required by this clause shall be endorsed to state that coverage shall not be suspended, voided, canceled by either party, reduced in coverage or in limits except after thirty (30) days' prior written notice by certified mail, return receipt requested, has been given to the City. Cancellation of coverage for non-payment of premium will require ten (10) days written notice to the City.
- b. Any failure to comply with reporting provisions of the policies shall not affect coverage provided to the City, its officers, employees, agents or specified volunteers.

D. ACCEPTABILITY OF INSURERS:

Insurance is to be placed with insurers with an A. M. Best's rating of no less than A-V.

E. VERIFICATION OF COVERAGE:

The Owner shall be indicated as a Certificate Holder and the Engineer shall furnish the Owner with Certificates

of Insurance reflecting the coverage required by this document. The A. M. Best Rating and deductibles, if applicable, shall be indicated on the Certificate of Insurance for each insurance policy. The certificates for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. All certificates are to be received and approved by the Owner before work commences. The Owner reserves the right to require complete, certified copies of all required insurance policies at any time.

F. CONSULTANTS AND/OR SUBCONTRACTORS WORKING FOR THE ENGINEER:

The Engineer shall include all subcontractors and/or consultants as insureds under its policies or shall furnish separate certificates and/or endorsements for each subcontractor and/or consultant.

G. HOLD HARMLESS AGREEMENT:

1. Other Than Professional Liability Exposures:

The Engineer, to the fullest extent permitted by law, shall indemnify and hold harmless the Owner, its elected and appointed officials, employees, agents and specified volunteers against all claims, damages, losses and expenses, including, but not limited to, attorney's 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 personal injury, including bodily injury sickness, disease or death, or to injury to or destruction of tangible property, including loss of use resulting therefrom, and (2) is caused by any negligent act or omission of the Engineer or any of their consultants, or anyone directly or indirectly employed by them or anyone for whose acts they are legally liable. Such obligation should not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in this paragraph.

2. Professional Liability:

The Engineer shall indemnify and hold harmless the Owner, its officers, agents, employees, and specified volunteers from and against any and all claims, demands, losses and expenses including, but not limited to attorney's fees, liability, or consequential damages of any kind or nature resulting from any negligent acts, errors, or omissions of the Engineer or any subconsultants employed by them or anyone employed by them or anyone for whose acts they are legally liable in the performance of the professional services under this agreement.

ARTICLE VIII OTHER CONDITIONS OR SERVICES

8.1 N/A

8.2 ENTIRE AGREEMENT

8.2.1 This Agreement represents the entire agreement between the Owner and the Engineer and supersedes all prior communications, negotiations, representations or agreements, either written or oral. This agreement may be amended only by written instrument signed by both Owner and Engineer.

ENGINEER

SEAL

Nasser Amiri

By:

(SIGNATURE)

**Nasser Amiri
Amiri Engineering Corporation
2609 Artie Street SW
Huntsville, AL 35805**

(DATE OF EXECUTION)

OWNER

SEAL

Tommy Battle

By:

(SIGNATURE)

**Tommy Battle, Mayor
City of Huntsville
308 Fountain Circle
Huntsville, AL 35801**

(DATE OF EXECUTION)

The parties agree that any form of electronic signature, including but not limited to signatures via facsimile, scanning, or electronic mail, may substitute for the original signature and shall have the same legal effect as the original signature.

AMIRI ENGINEERING CORP.

Geotechnical, Materials & Environmental Engineers

EXHIBIT A

June 13, 2023

City of Huntsville
Attn: Ms. Natash Wright
Project Management
P.O. Box 308
Huntsville, Alabama 35804

Subject: Proposal to Provide Subsurface Exploration,
Construction Materials Testing and Inspections Services
Proposed Apolo Park-Phase III
Huntsville, Alabama
AMIRI Proposal No. 4847CMT-Rev

Dear Ms. Wright,

Thank you for the opportunity to submit this proposal to provide Construction Materials Testing Services and special inspections services for the subject project.

We are looking forward to working with you on this project. If you have any questions regarding the information contained herein, or we may be of further assistance to you, please contact us at your convenience.

Sincerely,

AMIRI ENGINEERING CORPORATION



Nasser Amiri, MSCE, P.E.
Principal

PART I

BUDGET FOR SPECIAL INSPECTIONS AND CONSTRUCTION MATERIALS TESTING

Our services will be billed based on the actual work performed and the unit fees enclosed in this proposal. However, based on our understanding of the project, and our experience with similar construction, we are providing the following quote. The following are the outline of anticipated services at the subject project:

Soils Testing and Monitoring

We understand that much of the existing south pond will be filled to reach the proposed grades for the support of the new park including sidewalks, Pavilion and other park facilities. In addition grades in other portions of the site will have to be adjusted to reach fine grade subgrade elevations. The following are a brief outline of the anticipated soil testing and monitoring services for the subject project.

- a. Obtain samples and perform appropriate laboratory testing, as necessary, on materials proposed for use as fill, backfill, and slab or paving sub grade. Tests may include:
 - * Atterberg (liquid and plastic) Limits (ASTM D 4318)
 - * Moisture-Density Relationship by Standard Proctor Method (ASTM D 698).
- b. Observe and document subgrade conditions prior to soil fill or aggregate base course placement, including proof roll testing by the contractor with an approved vehicle.
- c. Observe placement of engineered fill and backfill (including backfill in utility trenches). Perform in-place tests for moisture content, density and degree of compaction. Where deficiencies are noted during fill or backfill placement, we notify contractor and Owner, suggest and observe remedial actions, including reworking and recompacting materials.
- d. Provide documentation of events in the field and notify the contractor, Owner and other appropriate persons upon recognition of deficiencies.

Based on review of the site plans, and our experience with similar projects, we assume that proofrolling operations and site visits, during the earthwork operations, will require 8 to 10 trips by Registered (PE) Geotechnical Engineer.

In addition, Professional Engineer time for consultations to improve the existing conditions to reduce/minimize water infiltration into the underlying soils, including field monitoring to improve the conditions for minimizing water loss due to infiltration into the underlying soil will be performed by the Geotechnical Engineer.

Based on our understanding of the project and estimated time frames for the earthwork testing and monitoring as well as consultation and field observation of reducing water loss into the underlying soils, we estimate that our costs associated with these services will be \$ 9,000.

Foundations - Spread Footings

The following is a brief outline of the anticipated foundation bearing soil testing and monitoring services for the subject project.

- a. Observe and document approximate dimensions of excavated or formed foundations to verify that foundation elements comply with the contract documents. Perform subgrade bearing capacity tests using the Dynamic Cone Penetrometer Method (ASTM STP 399) to verify that bearing capacity of soils at foundation subgrade levels meets or exceeds the design requirements.
- b. Provide documentation of events in the field and notify the contractor, Owner and other appropriate persons upon recognition of deficiencies

Considering length of the retaining wall footings, we assume that footing installation for the retaining walls will be accomplished in 20 to 25 episodes. Based on our understanding of the project and estimated time frames discussed, we assume that costs associated with our services for Foundation Observation and Testing Services will be \$ 3400.

Concrete Testing

Concrete Testing and Monitoring

- a. Observe and document placement of reinforcing steel with regard to size, grade, spacing, length, location and type of splices, cover to forms, cleanliness and secureness.
- b. Request and document that the contractor has provided proper storage and curing facilities for the first 24 hours after casting of cylinders.
- c. Sample and test concrete at the frequency indicated in the contract documents as well as document placement location and supplier information from the batch load ticket. Tests may include:
 - * Slump (ASTM C 143)
 - * Air Content (ASTM C 173 or C 231)
 - * Mix Temperature (ASTM C 1064)
 - Compression test cylinders (ASTM C 31) set of four per 100 cubic yards
 - * Unit Weight (ASTM C 138)
 - * Batch to-placement time
- d. Transport, laboratory cure (7 and 28 days), then test cylinders for compressive strength (ASTM C 39).
- e. Perform flatness and levelness testing on slabs.
- f. Provide documentation of events in the field and notify the contractor, Owner and other appropriate persons upon recognition of deficiencies.

We assume that project specification requires that one (1) set of concrete cylinders (4 specimens per set) be made from each 50 cubic yards of each concrete mix design placed in

any one day; one (1) specimen tested at seven (7) days, two (2) specimens tested at 28 days, and one (1) specimen retained in reserve for later testing, if required. Based on our experience with similar construction, we assume that spread footings will be cast in about 12 episodes.

Based on our understanding of the project, we estimate that the footings will be cast in 25 episodes and retaining walls will be installed in 60 episodes. In addition, we estimate that a total 10 slab pours within the water channels and 20 sidewalk pours will be made. With such schedule and anticipated testing frequencies, we estimate that a total of 50 sets of concrete samples (total of 200 cylinders) will be cast. With such an assumption, our costs for concrete testing is estimated to be \$ 15,500.

Reinforcing Steel and Pre-Concrete Pour Inspections

The following are the anticipated inspection and testing services at the subject project site:

- A. Observation of reinforcement steel for the total number, and size of the rebar in all structural members, including foundations, retaining walls, slabs and pavement within the water channels will be checked.
- B. Observation of the rebar to verify that all rebar installations are made per structural plans.
- C. Clarify that clearance requirements between the reinforcement steel and earth as well as air meets project documents.
- D. Size of the planned structural members will be checked by measuring planned top of the pavement, footing, slab and/or sidewalk elevations and comparing with bottom of these structures.

Any deficiencies will be brought to the contractor's attention, and the corrected area will be checked again, to verify project compliance before concrete placement. For these tasks, we assume that a total of 35 trips will be made. Based on the above testing schedule, our estimated costs for Asphalt testing and inspections will be \$6000.

6.0 Liner Installation Observation, Meetings, Miscellaneous Testing

Costs associated with observation of synthetic liner to confirm that installation techniques meet project requirements, our services for attending meetings, consultations about various items, checking thickness of gravel beneath the pavements, sidewalks and slabs will be charged per our Unit rates. Based on our experience with similar project conditions, estimated costs for such services including report preparation and travel charges is estimated to be \$6000.

PART II

BUDGET SUMMARY

Earthwork Testing	\$ 9,000.00
Foundation Observation.....	\$ 3,400.00
Concrete Testing.....	\$ 15,500.00
Reinforcing Steel and Pre-Concrete Pour Inspections	\$ 6,000.0
Liner Installation Observation, Meetings, Consultations, Miscellaneous Testing	<u>\$ 6,000.00</u>
TOTAL	<u>\$ 39,900.00</u>

PART II
SCHEDULE OF SERVICES AND FEES
FOR
CONSTRUCTION MONITORING AND MATERIALS TESTING

FIELD TESTING PERSONNEL

Engineering Technician, Per Hour.....	\$ 45.00
Senior Engineering Technician, Per Hour.....	\$ 50.00
Senior Project Engineer/Manager, P.E., Per Hour.....	\$110.00
Master of Science in Civil/Geotechnical Engineering, 30 years of Experience and Registered Engineering License	

Concrete and Aggregate Testing

Laboratory compressive strength testing of concrete cylinders, grout and mortar

Cubes, Flexural strength testing of beams:

• Concrete sampling and testing, per set of 4, includes slump, air, pick up, mold....	\$180.00
• Concrete Sampling and Testing, per set of 5, includes pick up, mold.....	\$195.00
• Concrete Sampling & Testing, per set of 6, includes Pick up, molds.....	\$220.00
• Flexural strength tests on beams, includes, sampling, pick up, per set of 4...	\$250.00
• Slump Test,.....	\$ 15.00
• Air Content Test, Pressure Method.....	\$ 20.00
• Air Content Test, Volumetric Method.....	\$ 25.00
• Mortar Sampling & Testing, includes pick up, per set of 3.....	\$140.00
• CMU/Grout Prism sampling & testing, including, pick up, per set of 3.....	\$190.00
• Unit weight determination.....	\$ 25.00
• Swiss/Schmidt Hammer, per day.....	\$ 30.00
• Floor Flatness/Levelness, per pour, includes technician time and equipment rental.....	\$350.00
• Concrete Coring, 3" core, per inch of depth.....	\$ 5.00
• Concrete Core, 4" core, per inch of depth.....	\$ 6.00
• Concrete Core, 6" core, per inch of depth.....	\$ 7.00
• Mix Design Review.....	\$ 40.00

SOIL TESTING

Moisture/Density Relationship

a. Standard Proctor Compaction Method (ASTM D 698), per sample.....	\$100.00
b. Modified Proctor Method (ASTM D 1557), per sample.....	\$110.00
Field Density and Moisture Content Testing, Using Nuclear Gauge, per test.....	\$ 27.00
Natural Moisture Content Determination, per test.....	\$ 7.00
Atterberg Limit Determination, per sample.....	\$ 65.00
Material Finer than No. 200 Sieve (washed), per sample.....	\$ 35.00
Mechanical Grain Size Analysis, per sample.....	\$ 75.00

Proposal for Construction Materials Testing and Special Inspections Services
Proposed Apolo Park-Phase III, Huntsville, Alabama
Page 7 of 8

Dynamic Cone Penetrometer Test Rental, per C	
Collect Bulk Samples for Proctor test.....	\$ 15.00
Sieve and hydrometer analysis, ASTM D422,.....	\$ 20.00
Specific gravity, ASTM D854.....	\$ 150.00
Unit weight, dry, undisturbed sample.....	\$ 55.00
PH test,.....	\$ 55.00
Remolding samples to specified conditions.....	\$ 25.00
Unit Weight, split spoon samples.....	\$ 70.00
California Bearing Ratio.....	\$ 30.00
	\$400.00

ASPHALT TESTING

Field density Tests,.....	
Nuclear Density Gauge Rental, per hour.....	\$ 25.00
Asphalt Core thickness determination, cut cores and measure thickness.....	\$ 6.00
Measurement of basestone thickness,.....	\$ 35.00
Bulk Specific Gravity of cores,.	\$ 20.00
Marshall Density,.....	\$ 25.00
Marshall Stability.....	\$ 90.00
	\$ 90.00

STRUCTURAL STEEL

Calibrate Torque Wrench rental, per day,.....	\$ 25.00
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TRAVEL CHARGES

Round Trip Charges to Jobsite, Per Trip.....	\$ 30.00
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GENERAL COSTS

The personnel rates will be billed portal to portal with overtime billed for time in excess of eight (8) hours per day or for work performed on weekends or holidays at a rate of 1.5.