



PROJECT MANUAL



2312-A | Griggs Pool & Pavilion **ROUGH GRADING - PACKAGE NO. 1**

FOR TROUP COUNTY

716 GLENN ROBERTSON DRIVE | LAGRANGE, GEORGIA 30240

03 AUG 2023

Owner/Client:

Troup County Board of
Commissioners
100 Ridley Ave
LaGrange, GA 30240
P | 706.883.1610
Eric Mosley, County Manager
emosley@troupcountyga.gov
Smith Design Group, Inc.

Architect of Record:

Gordon M. Smith, Jr.
Smith Design Group, Inc.
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LaGrange, Georgia 30240
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PART 1 | GENERAL REQUIREMENTS

SECTION A - INVITATION TO BID

Sealed proposals from general or grading contractors will be received by **Troup County Purchasing Department**, in 100 Ridley Avenue, Suite 3100, until 2 p.m. at the time prevailing in LaGrange, Georgia on **07 SEP 2023** for the **Griggs Pool & Pavilion, Package No. 1 - Rough Grading** located at **716 Glenn Robertson Drive**, LaGrange, Georgia. At the time and place noted above the proposals will be publicly opened.

The contract, if awarded, will be on a lump sum basis. No bid may be withdrawn for a period of sixty (60) days after time has been called on the date of the opening.

The project is to be substantially complete in **sixty (60) consecutive calendar days**. Anticipated start date for construction is on or about **21 SEP 2023**.

Bids delivered to:
Troup County Purchasing Department
100 Ridley Ave., Suite 3100
LaGrange, GA 30240

Late bids will not be accepted.

Mandatory Pre-Bid to be held on 17 AUG 2023 at 2 PM on the Project Site.

All requests for clarification or additional information must be made via email **ONLY** to Diana Evans, Troup County Purchasing Director at devans@troupc.org and also Skip Smith, Smith Design Group, Inc. at skip@sdgarch.net. No phone calls or contacts other than email is allowed. Contacting any other party prior to the bid opening for information will require that any bid submitted by said bidder being non-responsive. No requests for information or Questions will be allowed after 25 August 2023

Any and all addenda for this project will be posted at www.troupcountyga.org/rfp.html.

Bid Bond equal to 5% of bid is required. Both a Performance Bond and a Payment Bond will be required in the amount equal to 100% for the contract price from the successful bidder. The bonding surety must be either authorized by the Insurance Commissioner of Georgia or be on the United States Treasury's list of approved bond sureties.

No requests for information or Questions will be allowed after 25 August 2023

The successful bidder shall be required to provide comprehensive and liability insurance wherein the County is named as co-insured, contractor is also required to provide a certificate of insurance for Workmen's Compensation Insurance.

The successful bidder must provide a vendor application, e-verify form and a W-9 prior to beginning work. All subcontractors must provide a Troup County e-verify form prior to beginning work on site. These forms can be downloaded from www.troupcountyga.org/rfp.html.

The Owner reserves the right to reject any or all bids and to waive technicalities and informalities.

Troup County Board of Commissioners

BY: _____

Diana Evans, Purchasing Director

Troup County, Georgia

END OF SECTION A

SECTION B - PROPOSAL FORM

DATE TBD

2312-A | Griggs Pool & Pavilion, Package No. 1 - Rough Grading

INVITED BIDDERS:

B-01

Having carefully examined the drawings entitled "**Griggs Pool & Pavilion, Package No. 1 - Rough Grading**" and numbered _____ and all dated **03 AUG 2023** and Addendum No. _____ as well as the premises and conditions affecting the work, the undersigned purposes to furnish all services, labor, and material called for by them for the entire work in accordance with said document for the TOTAL SUM OF _____ DOLLARS (\$_____)

B-02

The undersigned further purposes that, should any of the following alternatives be accepted and be incorporated in the Contract, the TOTAL SUM will be altered in each case as follows:

- 2.1 Deductive Alternatives: No Items Included
- 2.2 Additive Alternates: No Items Included

B-03

For and in consideration of the sum of One Dollar (\$1.00), the receipt of which is hereby acknowledged, the undersigned agrees that this proposal may not be revoked, or withdrawn for a period of sixty (60) days from and including the date of the Bid Opening.

B-04

The undersigned agrees to execute a contract (AIA Document A101) no later than ten (10) days from and including date of notification of acceptance of this proposal in writing, by mail, telegraph, facsimile transmission, or delivery.

B-05

The undersigned agrees to commence actual physical work on the site with an adequate force and equipment within ten (10) days from and including a date to be specified in written order of the Owner and be substantially complete in **sixty (60) consecutive calendar days**.

B-06

Enclosed herewith is a Bid Bond* in an amount of _____ Dollars (\$_____) being not less than 5% of the BASE BID. The undersigned agrees that the above-stated amount is the proper measure of liquidated damages which the Owner will sustain by failure of the undersigned to execute the Contract and to furnish the Performance Bond and the Labor & Material Payment Bond in case this proposal is accepted and further agrees to the following.

*Certified or Cashier’s Check not acceptable

B-07

If this proposal is accepted within sixty (60) days from and including the date of the Bid Opening and the undersigned fails to execute the Contract within ten (10) days from and including date of notice of such acceptance, or, if he fails to furnish with Performance Bond and Labor & Material Payment Bond, the obligation of the Bid Bond will remain in full force and effect, and the money payable therefore shall be paid the Owner as liquidated damage for such failure; otherwise the obligation of the Bid Bond will be null and void.

B-08

Included in the Base Bid is undercutting of 4'-0" of the existing unsuitable soil for 10'-0" outside the pool, pool deck, and pavilion. See drawings for exact area to be under cut 4'-0". If the Owner’s Geotechnical firm recommends additional undercutting the unit price for undercutting unsuitable soils and hauling off site will be used. Also included in the Base Bid is importing suitable soil to replace the existing unsuitable soil to existing grade, then importing additional suitable soil to attain the new rough grade level shown on the drawings.

Respectfully submitted,

Name: _____

Address: _____

By: _____

Title: _____

The full names and addresses of persons and firms interested in the forgoing bids as principals are as follows:

Legal Name of Bidder: _____

Sitework Subcontractor: _____

Utility Subcontractor: _____

Erosion Control Subcontractor: _____

Unit Prices: 1. Unsuitable Soil: \$_____ CY (includes removal and hauling off-site, importing & compacting replacement structural fill per geotechnical report)

2. Imported Structural Fill: \$_____ CY (includes hauling to site, placing & compacting structural fill per geotechnical report)

3. #57 stone in-place \$_____ /ton

Note: The Bid Form will not be accepted without the following breakdown of the Base Bid.

General Requirements \$_____

Mobilization \$_____

Erosion Control \$_____

Demolition \$_____

Rough Grading \$_____

Temporary Grassing \$_____

Utilities install & all tap fees (water & sewer lines) \$_____

Storm Drainage \$_____

BASE BID TOTAL \$_____

END OF SECTION B

SECTION C.1 - SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

C.1.01

The following Supplementary Instructions, Articles C.1-02 thru C.0-10 inclusively, modify, change, delete from or add to the "Instructions to Bidders", AIA Document A701, 2007 Edition, which is by reference made a part of this project manual.

Upon written request, the Architect will furnish any Bidder with a copy of the "Instructions to Bidder." Where any Article, Paragraph, Subparagraph or Clause of the Instructions to Bidders is modified, change, deleted from or added to, the unaltered provisions of that Article, Paragraph, Subparagraph or Clause shall remain in effect.

C.1.02 ARTICLE 1 DEFINITIONS

1. In the ninth line of Paragraph 1.1 immediately following the word "Specifications" insert, "the Bidder's signed Proposal Form."
2. Add to Paragraph 1.3 the following: Post-bid Addenda are written or graphic instruments issued by the Architect after receipt of Bids, but prior to the signing of the Form of Agreement Between the Owner and Contractor, which modify the Bidding Documents and may or may not increase or decrease the Base Bid.
3. Add to Paragraph 1.7 the following: Unit prices are net. The term "net" as used in reference to unit prices means that the net prices offered by the Bidder is inclusive of all sums for payment, repayment, reimbursement, remittance, remuneration, compensation, profit, cost, overhead, expense, loss, expenditure, allowance, charge, demand, hire, wages, salary, tax, cash, assessment, price, money, bill, statement, dues, recovery, restitution, benefit, recoupment, exaction or injury.

C.1-03 ARTICLE 2 BIDDER'S REPRESENTATIONS

There are no modifications, changes, deletions from or additions to any Article, Paragraph, Subparagraph or Clause of Article 2 of the Instructions to Bidders.

C.1-04 ARTICLE 3 BIDDING DOCUMENTS

1. Beginning in the fourth line following the word "therein", of Subparagraph 3.1.1, delete the remainder of this Subparagraph and substitute the following therefor: Deposits will be refunded fully or in part, as designated in the advertisement or Invitation to Bid.
2. Add to subparagraph 3.3.3 the following: The Architect's approval of the substitutions shall not relieve any Contractor of the responsibility for any deviation from the requirements of the Contract Documents, nor shall the Architect's approval relieve the Contractor from responsibility for substitution, that is to say, that should the Architect give approval for a substitution and it be found at anytime that the material or equipment is not equal to that specified or that the information

furnished in the request for substitution was not accurate, the Architect may require the Contractor to furnish the specified material or equipment at no additional cost to the Owner.

C.1-05 ARTICLE 4 BIDDING PROCEDURES

Add to Subparagraph 4.1.1. the following: Bids shall be submitted in triplicate and include an electronic copy on a jump drive with USB connectivity.

C.1-06 ARTICLE 5 CONSIDERATIONS OF BIDS

1. Delete Subparagraph 5.3.2 in its entirety and substitute the following therefor:

5.3.2 Alternative or Alternative Bids are both deductive and additive and
a.) The successful bidder will be determined by the Base Bid.

C.1-07 ARTICLE 6 POST-BID INFORMATION

There are no modifications, changes, deletions from or additions to any Article, Paragraph, Subparagraph or Clause of Article 6 of the Instructions to Bidders.

C.1-08 ARTICLE 7 PERFORMANCE AND PAYMENT BOND

Delete Subparagraph 7.1.3 in its entirety and substitute the following therefor:

7.1.3 The bonds shall be written by companies listed in the current issue of "Federal Register" Department of the Treasury as companies having complied with the law and regulations of the Department of the Treasury and that the companies also have a current surety license in the State of Georgia. The cost of furnishing bonds meeting the above requirements shall be included in the Bid.

END OF SECTION C.1

SECTION D - FORM OF CONTRACT

D-01 FORM TO BE USED

- 1.1 The Agreement for the work will be written on the Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum, AIA Document A101, 2007 edition, with modifications.
- 1.2 Upon written request, the Architect will furnish any bidder with a copy of the form of Agreement with modifications. A copy of the modifications is included in Section I of this Project Manual.

END OF SECTION D

SECTION E.1 - SUPPLEMENTARY GENERAL CONDITIONS

SUPPLEMENTARY CONDITIONS

The following supplements modify the "General Conditions of the Contract for Construction", AIA Document A201, Fourteenth Edition, 2007. Where a portion of the "General Conditions" is modified or deleted by these Supplementary Conditions, the unaltered portions of the General Conditions shall remain in effect.

E.1-01 ARTICLE I: GENERAL PROVISIONS

1. Delete the second sentence and substitute the following for the second sentence:
A modification is (1) a written amendment to the Contract signed by both parties or (2) a change order, and (3) a construction change directive.

E.1-02 ARTICLE 2: OWNER

2. Information and Services required of the Owner
Delete subparagraph 2.2.5 and substitute the following:
5. The Contractor will be furnished free of charge three (3) copies of drawings and project manuals. Additional sets will be furnished at the cost of reproduction, postage and handling.

E.1-03 ARTICLE 3: CONTRACTOR

4. Labor and Materials
Add the following subparagraphs 3.4.4 and 3.4.5 to 3.4:
 - 3.4.4 After the contract has been executed, the owner and architect will consider a formal request for the substitution of products in place of those specified only under the conditions set forth in the General Requirements (Division 1 of the Specifications).
 - 3.4.5 By making requests for substitutions based on subparagraph 3.4.3 above, the Contractor:
 - .1 represents that the contractor has personally investigated the proposed substitute product and determined that it is equal or superior in all respects to that specified;
 - .2 represents that the contractor will provide the same warranty for the substitution that the contractor would for the specified;
 - .3 certifies that the cost data presented is complete and includes all related costs under this contract except the Architect's redesign costs, and waives all claims for additional costs related to the substitution which subsequently becomes apparent; and
 - .4 will coordinate the installation of the accepted substitute, making such changes as may be required for the work to be complete in all respects.
8. Allowances

3.8.2.3 Add the following to the end of Clause 3.8.2.3: "except when installation is specified as part of the allowance in the General Requirements (Division 1 of the Specification)."

3.18 Indemnification

Delete this paragraph in its entirety by deleting subparagraph 3.18.1, and subparagraph 3.18.2, and substitute the following:

To the fullest extent permitted by law, the contractor shall indemnify and hold harmless the owner, the architect, and the architect's consultants from and against liability, claims, damages, losses, and expenses including attorney's fees, arising out of or resulting from performance of the work, provided that such liability, claims, damage, loss or expense is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the work itself) including loss of use resulting there from, but only to the extent caused in whole or in part by negligent acts or omissions of contractor, a subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not such liability, claim, damage, loss or expense is caused in part by a party indemnified here under.

In claims against any person or entity indemnified under this paragraph by an employee of the contractor, a subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under this paragraph shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the contractor or a subcontractor under worker's compensation acts, disability benefits acts or other employee benefits acts.

E.1-04 ARTICLE 4: ADMINISTRATION OF THE CONTRACT

4.2 Architect's Administration of Contract

8. Delete the words. "may authorize minor changes in the work as provided in paragraph 7.4".

Add the following subparagraph 4.2.15 to paragraph 4.2:

4.2.15 Architect shall have no authority to approve or accept materials or workmanship inferior to or not in conformance with that called for by contract documents.

2. Claims and Disputes. (4.3 is not included at all in 2007)

2. Delete the words "arbitration or" from second and third sentences.

Delete the following subparagraphs:

4.3.3

4.3.4

4.3.5

4.3.7

4.3.8

4.3.8.1

4.3.8.2

and substitute the following:

Claims by the Contractor

All contractor claims shall be initiated by written notice and claim to the owner and architect. Such written notice and claim must be furnished within twenty-one days after occurrence of the event, or the first appearance of the condition, giving rise to the claim.

Pending final resolution of any claim of the contractor, the contractor shall diligently proceed with performance of this contract and the owner shall continue to make payments to the contractor in accordance with this contract. The resolution of any claim under this paragraph shall be reflected by a change order executed by the owner, the architect, and the contractor.

Claims for Additional Costs

If the contractor wishes to make claim for an increase in the contract price, as a condition precedent to any liability of the owner therefore, the contractor shall give the architect written notice of such claim within twenty-one days after the occurrence of the event, or the first appearance of the condition, giving rise to such claim. Such notice shall be given by the contractor before proceeding to execute any additional or changed work. The failure by the contractor to give such notice and to give such notice prior to executing the work shall constitute a waiver of any claim for additional compensation.

In connection with any claim by the contractor against the owner for compensation in excess of the contract price, any liability of the owner for the contractor's costs shall be strictly limited to direct costs incurred by the contractor and shall in no event include indirect costs or consequential damages by the contractor. The owner shall not be liable to the contractor for claims of third parties, including subcontractors, unless and until liability of the contractor has been established therefore in a court of competent jurisdiction.

Claims for Additional Time

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

the contractor fails to make such claim as required in this paragraph, any claim for an extension of time shall be waived.

4.3 Resolution of Claims and Disputes

4. Delete the words "but subject to arbitration" from the first sentence.

5. Arbitration

Delete this paragraph in its entirety.

E.1-05 ARTICLE 5: SUBCONTRACTORS

2. Award of Subcontracts and other Contracts for Portions of the Work

1. Delete the last sentence of subparagraph 5.2.1

5.4 Contingent Assignment of Subcontractors

E.1-07 (OMITTED)

E.1-08 (OMITTED)

E.1-09 ARTICLE 9: PAYMENTS AND COMPLETION

Note: The General Contractor and sub contractors are to plan on payments being made 30 days after approved application of payment is submitted to the owner.

3. Applications for Payment

9.3.1 Add the following sentence to subparagraph 9.3.1: "The form of application for payment shall be a notarized AIA Document G702, Application and Certification for Payment, supported by AIA Document G703, Continuation Sheet.

Add the following clause 9.3.1.3 to subparagraph 9.3.1:

9.3.1.3 Until substantial completion, the owner shall pay 90% of the amount due the contractor on account of progress payments.

9.8 Substantial Completion

9.8.3 Add the following sentences at the end of subparagraph 9.8.3.

The payment shall be sufficient to increase the total to 100% of the contract sum, less such amounts as the architect shall determine for incomplete work and unsettled claims.

9.10 Final Completion and Final Payment

Add the following subparagraph to 9.10.5 to paragraph 9.10:

9.10.5 As a prerequisite to final payment, the contractor shall submit the following items to the architect, properly executed:

1. AIA Document G706, "Contractor's Affidavit of Payment of Debts and Claims."
2. AIA Document G706A, "Contractors Affidavit of Release of Lien", conditional upon receipt of final payment
3. AIA Document G707, "Consent of Surety to Final Payment"
4. Guarantee by contractor and each subcontractor that the work will be free of defects in materials and workmanship for a period of one (1) year, except as otherwise specified. Form of guarantee shall be as included herein.

E.1-10 ARTICLE 10: PROTECTION OF PERSONS AND PROPERTY

10.1 Safety Precautions and Programs

Add the following subparagraph 10.1.1 to paragraph 10.1

10.1.1 The contractor will implement interim life safety measures to compensate for hazard posed by construction. The interim life safety measures will be maintained during the construction period so that life safety is not diminished in any occupied area; furthermore, to maintain a safe environment in the construction and adjacent areas.

Interim life safety measures will be implemented at project construction development and will be continuously enforced through construction completion.

10.2 Safety of Persons and Property

Add the following subparagraphs 10.2.4.1 and 10.2.4.2 to paragraph 10.2.4:

10.2.4.1 When use or storage of explosives or other hazardous materials or equipment or unusual methods are necessary the contractor shall give the owner reasonable advance notice and secure owner's written approval.

10.2.4.2 Contractor shall comply with OSHA Hazardous Communication Standard as described in the Code of Federal Regulations 29, part 1910.1200, effective May 23, 1988.

E.1-11 ARTICLE 11: INSURANCE AND BONDS

11.1 Contractor's Liability Insurance

11.1.1.1 Delete the semicolon at the end of Clause 11.1.1.1 and add: "including private entities performing work at the site and exempt for the coverage on account of number of employees

or occupation, which entities shall maintain voluntary compensation coverage at the same limits specified for mandatory coverages for the duration of the project.”

- 11.1.1.2 Delete the semicolon at the end of clause 11.1.1.2 and add: “or persons or entities excluded by statute from the requirements and clause 11.1.1.1 but required by the contract documents to provide the insurance required by that clause.”

Add the following clauses 11.1.1.9 and 11.1.1.10 to 11.1.1:

- 11.1.1.9 Liability insurance shall include all major divisions of coverage and be on a comprehensive basis including:

1. Premises Operations (including X, C, U, coverages as applicable)
2. Independent Contractor’s Protective
3. Products and Completed Operations
4. Personal Injury Liability with Employment Exclusion deleted
5. Contractual, including specified provision for contractor’s obligation under paragraph 3.18
6. Owned, non-owned and hired motor vehicles.
7. Broad Form Property Damage including Completed Operations.

- 11.1.1.10 If the general liability coverage are provided by a commercial general liability policy on a claims-made basis, the policy date or retroactive date shall predate the contract, the termination date of the policy or applicable extended reporting period shall be no earlier than the termination date of coverages required to be maintained after final payment, certified in accordance with subparagraph 9.10.2.

Add the following clause 11.1.2.1 to subparagraph 11.1.2:

- 11.1.2.1 The insurance required by subparagraph 11.1.1 shall be written for not less than the following limits, or greater if required by law:

1. Workers’ Compensation:
 - a. State: Statutory
 - b. Applicable Federal (i.e. Longshoremen’s):Statutory
 - c. Employer’s Liability \$500,000 per accident; \$500,000 Disease Policy Limit; 500,000 Disease each employee
2. Comprehensive or Commercial General Liability (including premises operations, independent contractor’s protective, products and completed operations, broad form property damage)
 - a. Bodily Injury

- \$1,000,000 each occurrence
- \$1,000,000 aggregate
- b. Property Damage
 - \$1,000,000 each occurrence
 - \$1,000,000 aggregate
- c. Products and Completed Operations to be maintained for 7 years after final payment.
- d. Property Damage Liability Insurance shall provide X, C, and U coverage.
- e. Broad Form Property Damage Coverage shall include completed operations.

3. Contractual Liability:

- a. Bodily Injury:
 - \$1,000,000 each occurrence
 - \$1,000,000 aggregate
- b. Property Damage
 - \$1,000,000 each occurrence
 - \$1,000,000 aggregate

4. Personal Injury with Employment Exclusion deleted:

\$1,000,000 aggregate

5. Business Auto Liability (including owned, non-owned and hired vehicles):

- a. Bodily Injury:
 - \$1,000,000 each occurrence
 - \$1,000,000 aggregate
- b. Property Damage:
 - \$1,000,000 each occurrence

6. If the general liability coverages are provided by a commercial liability policy, the:

- a. General aggregate shall be not less than \$1,000,000 and it shall apply, in total, to this project only.
- b. Fire damage limit shall be not less than \$500,000 on any one fire.
- c. Medical expense limit shall be not less than \$5,000 on any one person.

7. Umbrella Excess Liability:

\$1,000,000 over primary insurance

11.1.3 Add the following sentence to subparagraph 11.1.3:

If this insurance is written on the Comprehensive General Liability policy form, the certificates shall be AIA Document G705, Certificate of Insurance. If this insurance is written on a commercial general liability policy form, ACORD form 25S will be acceptable.

11.2 Owner's Liability Insurance

11.2.1 Delete 11.2 and substitute the following: "The contractor shall purchase and maintain insurance covering the owner's contingent liability for claims which may arise from operations under the contract."

11.3 Property Insurance

11.3.1 Modify the first sentence of subparagraph 11.3.1 as follows: Delete "Unless otherwise provided, the owner" and substitute "the Contractor".

Add the following sentences: The form of policy for this coverage shall be completed value. If the owner is damaged by the failure of the contractor to maintain such insurance, then the contractor shall bear all reasonable cost properly attributable thereto.

11.3.1.2 Delete clause 11.3.1.2

11.3.1.3 Delete clause 11.3.1.3

11.3.4 Delete subparagraph 11.3.4

11.3.5 Delete subparagraph 11.3.5

Delete subparagraph 11.3.6 and substitute the following:

11.3.6 Before an exposure to loss may occur, the contractor shall file with the owner two certified copies of the policy or policies providing this property insurance coverage, each containing those endorsements specifically related to the project. Each policy shall contain a provision that the policy will not be cancelled or allowed to expire until at least 30 days prior written notice has been given to the contractor.

11.3.8 Modify subparagraph 11.3.8 by substituting "Contractor" for "Owner" as fiduciary; except that the first reference to "Owner" in the first sentence, the word "this" should be substituted for "Owner's".

11.3.9 Modify subparagraph 11.3.9 by substituting "Contractor" for "Owner" each time the latter word appears.

11.3.10 Modify subparagraph 11.3.10 by substituting "Contractor" for "Owner" each time the latter word appears.
Delete the last sentence

11.4 Performance Bond and Payment Bond

Add the following sub-paragraphs 11.4.1.1 and 11.4.1.2:

11.4.1.1 The contractor shall deliver the required bonds to the owner not later than 3 days following the date the agreement is entered into, or if the work is to be commenced prior thereto in response to a letter of intent, the contractor shall, prior to the commencement of the work, submit evidence satisfactory to the owner that such bonds will be furnished.

11.4.1.2 The contractor shall require the attorney-in-fact who executed the required bonds on behalf of the surety to affix thereto a certified and current copy of the power of attorney.

E.1-13 ARTICLE 13: MISCELLANEOUS PROVISIONS

13.5 Test and Inspections

13.5.1 Modify the last sentence of subparagraph 13.5.1 by deleting the word "Owner" and substituting "Contractor" in its place.

Add the following paragraph 13.8 to Article 13:

13.8 Equal Opportunity

13.8.1 The contractor shall maintain policies of employment as follows:

13.8.1.1 The contractor and contractor's subcontractors shall not discriminate against any employee or applicant for employment because of race, religion, sex, national origin, age, veteran's status, or handicapped (when otherwise qualified). The contractor shall take affirmative action to insure that applicants are employed and that employees are treated during employment without regard to their race, religion, sex, national origin, age, veteran's status, or handicap (when otherwise qualified). Such action shall include but not be limited to the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the policies of nondiscrimination.

13.8.1.2 The contractor and the contractor's subcontractors shall, in all solicitations or advertisements for employees placed by them or on their behalf, state consideration for employment without regard to race, religion, sex, national origin, age, veteran's status or handicap (when otherwise qualified).

13.9 CODES

13.9.1 INTERNATIONAL BUILDING CODE

The latest Edition of the International Building Code with all amendments including State of Georgia amendments as of date of opening of bids shall govern the construction of this project and is adopted and incorporated into the Contract Documents and is made a part thereof by reference, provided, however: That the drawings and specifications shall be adhered to in all cases where they call for quality of materials, quality of workmanship, or quality of construction which is equal to or in excess of the quality required by the International Building Code, and provided also; that there shall be no variances from the plans and specifications except to the extent that the said variances shall be necessary in order to comply with the International Building Code. It shall be the responsibility of the contractor to familiarize himself or herself with the requirements of the International Building Code. If there are any expressed requirements in the plans and/or specifications which are at variance to the

International Building Code, all changes in the work, necessary to eliminate the said requirements and make the work conform to the International Building Code shall be adjusted as provided in the contract for changes in the work.

13.8.2 INTERNATIONAL PLUMBING CODE

The latest Edition of the International Plumbing Code with all amendments and State of Georgia Amendments as of date of opening of bids shall govern the installation of all work and is adopted and incorporated into the Contract Documents and is made a part thereof by reference, provided, however: That the drawings and specifications shall be adhered to in all cases where they call for quality of materials, quality of workmanship, or quality of construction which is equal to or in excess of the quality required by the International Plumbing Code, and provided also; that there shall be no variances from the plans and specifications except to the extent that the said variances shall be necessary in order to comply with the International Plumbing Code. It shall be the responsibility of the contractor to familiarize himself or herself with the requirements of the International Plumbing Code. If there are any expressed requirements in the plans and/or specifications which are at variance to the International Plumbing Code, all changes in the work, necessary to eliminate the said requirements and make the work conform to the International Plumbing Code shall be adjusted as provided in the contract for changes in the work.

13.8.3 INTERNATIONAL FUEL GAS CODE

The latest Edition of the International Fuel Gas Code with all amendments and State of Georgia Amendments as of date of opening of bids shall govern the construction of this project and is adopted and incorporated into the Contract Documents and is made a part thereof by reference, provided, however: That the drawings and specifications shall be adhered to in all cases where they call for quality of materials, quality of workmanship, or quality of construction which is equal to or in excess of the quality required by the International Fuel Gas Code, and provided also; that there shall be no variances from the plans and specifications except to the extent that the said variances shall be necessary in order to comply with the International Fuel Gas Code. It shall be the responsibility of the contractor to familiarize himself or herself with the requirements of the International Fuel Gas Code. If there are any expressed requirements in the plans and/or specifications which are at variance to the International Fuel Gas Code, all changes in the work, necessary to eliminate the said requirements and make the work conform to the Standard Fuel Gas Code shall be adjusted as provided in the contract for changes in the work.

13.8.4 NATIONAL ELECTRICAL CODE

The latest Edition of the National Electrical Code with all amendments as of date of opening of bids shall govern the construction of this project and is adopted and incorporated into the Contract Documents and is made a part thereof by reference, provided, however: That the drawings and specifications shall be adhered to in all cases where they call for quality of materials, quality of workmanship, or quality of construction which is equal to or in excess of the quality required by the National Electrical Code, and provided also; that there shall be no variances from the plans and specifications except to the extent that the said variances shall be necessary in order to comply with the National Electrical Code. It shall be the responsibility of the contractor to familiarize himself or

herself with the requirements of the National Electrical Code. If there are any expressed requirements in the plans and/or specifications which are at variance to the National Electrical Code, all changes in the work, necessary to eliminate the said requirements and make the work conform to the National Electrical Code shall be adjusted as provided in the contract for changes in the work.

13.8.5 LIFE SAFETY CODE

The Latest Edition of the Life Safety Code, NFPA 101 shall govern the construction of this project and is adopted and incorporated into the Contract Documents and is made a part thereof by reference, provided, however: That the drawings and specifications shall be adhered to in all cases where they call for quality of workmanship, or quality of construction which is equal to or in excess of the quality required by the Life Safety Code, and provided also; that there shall be no variances from the plans and specifications except to the extent that the said variances shall be necessary in order to comply with the Life Safety Code. It shall be the responsibility of the contractor to familiarize himself or herself with the requirements of the Life Safety Code. If there are any expressed requirements in the plans and/or specifications which are at variance to the Life Safety Code, all changes in the work, necessary to eliminate the said requirements and make the work conform to the Life Safety Code shall be adjusted as provided in the contract for changes in the work.

13.8.6 INTERNATIONAL MECHANICAL CODE

The 2018 Edition of the International Mechanical Code with all amendments and State of Georgia Amendments as of date of opening of bids shall govern the construction of this project and is adopted and incorporated into the Contract Documents and is made a part thereof by reference, provided, however: That the drawings and specifications shall be adhered to in all cases where they call for quality of materials, quality of workmanship, or quality of construction which is equal to or in excess of the quality required by the International Mechanical Code, and provided also; that there shall be no variances from the plans and specifications except to the extent that the said variances shall be necessary in order to comply with the International Mechanical Code. It shall be the responsibility of the contractor to familiarize himself or herself with the requirements of the International Mechanical Code. If there are any expressed requirements in the plans and/or specifications which are at variance to the International Mechanical Code, all changes in the work, necessary to eliminate the said requirements and make the work conform to the International Mechanical Code shall be adjusted as provided in the contract for changes in the work.

13.8.7 AMERICANS WITH DISABILITIES ACT OF 2010

The American With Disabilities Act Of 2010 with all amendments as of the date of the opening of bids shall govern the installation of all work and is adopted and incorporated into the Contract Documents and is made a part thereof by reference, provided, however: that the drawings and specifications shall be adhered to in all cases where they call for quality of materials, quality of workmanship, or quality of construction which is equal to or in excess of the quality required by the Americans With Disabilities Act Of 2010, and provided also; that there shall be no variances from the plans and specifications except to the extent that the said variances shall be necessary in order to comply with the Americans With Disabilities Act Of 2010. It shall be the responsibility of the contractor to familiarize himself or herself with the requirements of the Americans With Disabilities Act

Of 2010. If there are any expressed requirements in the plans and/or specifications which are at variance to the American With Disabilities Act Of 2010, all changes in the work, necessary to eliminate the said requirements and make the work conform to the Americans With Disabilities Act Of 2010 shall be adjusted as provided in the contract for changes in the work.

E.1-14 (OMITTED)

END OF SECTION E.1

SECTION E.2 - ADDITIONAL SUPPLEMENTARY GENERAL CONDITIONS

EXHIBIT "E"

For all purposes of the Agreement between the parties, the following provisions of A201- 2007 are amended as follows:

Section 3. 2.2 is deleted, and the following paragraph substituted:

"The Contractor shall have the continuing duty to read, carefully study and compare each of the Contract Documents, the Shop Drawings and the Product Data and shall give written notice to the Architect of any inconsistency, ambiguity, error, or omission which the Contractor may discover with respect to these documents before proceeding with the affected Work. The issuance, or the express or implied approval by the Owner or the Architect of the Contract Documents, Shop Drawings or Product Data shall not relieve the Contractor of the continuing duties imposed hereby, nor shall any such approval be evidence of the Contractor' s compliance with this Contract. The Owner has requested the Architect to only prepare documents for the Project, including the Drawings and Specifications for the Project, which are accurate, adequate, consistent, coordinated and sufficient for construction.

HOWEVER, THE OWNER MAKES NO REPRESENTATION OR WARRANTY OF ANY NATURE WHATSOEVER TO THE CONTRACTOR CONCERNING SUCH DOCUMENTS.

By the execution hereof, the Contractor acknowledges and represents that it has received, reviewed, and carefully examined such documents, has found them to be reasonably complete, accurate, adequate, consistent, coordinated and sufficient for construction."

Section 3. 7.4 is amended by striking the clause:

"The Contractor shall promptly provide notice to the Owner and the Architect before conditions are disturbed and in no event less than 21 days after first observance of the conditions" and the replacement of the same with : " the Contractor shall provide written notice to the Owner and the Architect before conditions are disturbed and within forty- eight hours after first observance of the conditions."

Section 3. 9. 2 is amended by the addition of the following:

"The Contractor shall employ and maintain at the Project site only competent supervisory personnel. Absent written instruction from the Contractor to Owner and Architect to the contrary, the superintendent shall be deemed the Contractor' s authorized representative at the site and shall be authorized to receive and accept any and all communications from the Owner or the Architect."

Sections 3. 10. 1, 3. 10. 2, and 3. 10. 3 are replaced with the following provisions:

"The Contractor, within fifteen(15) days of commencing the Work, shall submit to the Owner and the Architect for their information, the Contractor's schedule for completing the Work. Additionally, within fifteen(15) days of commencing the Work, the Contractor shall submit to the Owner and the Architect a separate shop drawing and submittal schedule detailing the schedule for the submission to the Architect of all shop drawings, submittals, product data and other similar documents. Each of

the schedules required herein shall be revised no less frequently than monthly unless the parties otherwise agree in writing) and shall be revised to reflect conditions encountered from time- to-time and shall be related to the entire Project. Each such revision shall be furnished to the Owner and the Architect. The schedules, and all revisions, shall be in such form, and shall contain such detail, as the Owner or the Architect may require.

THE PARTIES SPECIFICALLY AGREE THAT ANY FLOAT CONTAINED IN THE SCHEDULES SHALL BELONG TO THE PROJECT AND IN NO EVENT SHALL THE CONTRACTOR MAKE CLAIM FOR ANY ALLEGED DELAY, ACCELERATION, OR EARLY COMPLETION SO LONG AS THE PROJECT IS COMPLETED WITHIN THE CONTRACT TIME.

Strict compliance with the requirements of this Paragraph is a condition precedent for payment to the Contractor, and failure by the Contractor to strictly comply with said requirements shall constitute a material breach of this Contract."

Section 7.3.1 is amended by the addition of the following paragraph:

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

Section 7.3.7 is amended by deleting in the first sentence the words "a reasonable allowance for overhead and profit" and substitute "an allowance for overhead and profit in accordance with clauses 7.3.11.1 through 7.3.11.6 below."

Section 7.3 is further amended by the addition of the following subparagraph 7.3.11 to read:

"7.3.11 The allowance for the combined overhead and profit included in the total cost to the owner as provided in subparagraph 7.3.6 shall be based on the following schedule:

1. For the contractor, the work performed by the contractor' s own forces, 15% of the cost.
2. For the contractor, for work performed by the contractor' s subcontractor, 7.5% of the amount due the subcontractor.
3. For each subcontractor or sub- contractor involved for work performed by that subcontractor' s or subcontractor' s own forces 7.5% of the cost.
4. For each subcontractor, for work performed by the subcontractor' s sub- subcontractor, 7.5% of the amount due the sub- subcontractor.
5. Cost to which overhead and profit is to be applied shall be determined in accordance with subparagraph 7.3.6.
6. In order to facilitate checking of quotations for extras or credits, all proposals, except those so minor that their propriety can be seen by inspection, shall be accompanied by a complete itemization of costs including labor, materials, and subcontracts. Labor and materials shall be itemized in the manner prescribed above. Where major cost items are subcontracts, they shall be itemized also. In no case will a change involving over \$ 100.00 be approved without such itemization."

Section 8.3.1 is amended by the addition of the following paragraph:

“Pursuant to the provisions of Paragraph 8.3.1 herein-above, the contract time may be extended upon written notice and claim of the Contractor to the Owner and the Architect. It is, however, expressly agreed that the time for completion as stated in the Contract Documents includes due allowance for calendar days on which work cannot be performed out-of-doors. For purposes of this Contract, and for purposes of extensions of contract time, the Contractor agrees that it anticipates adverse weather sufficient to prevent work in accordance with the schedule set forth herein-below, and the Contractor further agrees that unless it encounters actual adverse weather in excess of those days set forth herein-below, it shall not make, nor shall it be entitled to, any extension of the contract time:

January– 3 days	May– 2 days	September 2 days
February– 3 days	June– 3 days	October– 2 days
March– 3 days	July– 3 days	November– 2 days
April– 3 days	August– 3 days	December– 3 days

The Contractor agrees that it shall provide written notice to the Owner and the Architect on the day of any adverse weather not anticipated and for which a request for a time extension has been, or will be, made. Said notice shall state with particularity a description of the adverse weather as well as a description of the nature and extent of any delay caused by such weather. Receipt of this notice by the Owner and the Architect is a condition precedent to the submission of any claim for an extension of time. Furthermore, the Contractor shall submit a written claim for extension of time within seven (7) days after the occurrence of the adverse weather and such claim shall be supported by such documentation including, but not limited to, official weather reports, as the Owner or the Architect may require. To the extent that any of the terms and conditions set forth in this paragraph are in conflict with any of the terms and conditions of this Agreement, the terms and conditions of this paragraph shall govern and control.”

and

“In connection with any claim by the Contractor against the Owner for completion in excess of the Contract Price, any liability of the Owner shall be strictly limited to direct costs incurred by the Contractor and shall in no event include indirect costs or consequential damages of the Contractor including but not limited to, loss of business opportunity; loss of bonding capacity; loss of use; loss of productivity; home office overhead; or other similar consequential losses or damages. The Owner shall not be liable to the Contractor for claims of third parties, including Subcontractors, unless and until liability of the Contractor has been established therefore in a court of competent jurisdiction.”

Section 9.2 is replaced with the following paragraph:

“Within ten(10) calendar days of the effective date of this Agreement, the Contractor shall submit the Owner and to the Architect a Schedule of Values allocating the Contract Sum to the various portions of the Work. The Contractor's Schedule of Values shall be prepared in such form, with such detail, and supported by such data as the Architect or the Owner may require in order to verify its accuracy. The Contractor shall not imbalance its Schedule of Values nor artificially inflate any element thereof. The violation of this provision by the Contractor shall constitute a material breach of this Contract. The Schedule of Values shall be used only as a basis for the Contractor's Applications for Payment

and shall only constitute such basis after it has been acknowledged in writing by the Architect and the Owner."

Section 9. 6 is amended by inclusion of the following provision:

"Notwithstanding anything to the contrary contained herein, the Owner may, at its option, withhold making any payment and shall not be obligated to make any payment to the Contractor hereunder if one or more of the following conditions exist:

1. Contractor has failed to perform any of its obligations hereunder or otherwise, or is otherwise in default under any of the Contract Documents; or
2. Any part of such payment is attributable to Work which is defective or not performed in accordance with the Contract Documents; provided, however, that such payment, subject to other provisions of these Contract Documents, shall be made as to the part thereof attributable to the Work which is performed in accordance with the Contract Documents and is not defective; or
3. Contractor has failed to make payment promptly to the Contractor's Subcontractors or for materials or labor used in the Work; or,
4. If Owner determines in good faith that the portion of the Contract Sum then remaining unpaid will not be sufficient to complete the Work in accordance with the Contract Documents whereupon, at the Owner's sole discretion, no additional payments need be made to the Contractor nor, at the Owner's sole discretion, shall such payments be due the Contractor hereunder, unless and until the Contractor at its sole cost, performs a sufficient additional portion of the Work so that thereafter such portion of the Contract Sum then remaining unpaid is in the good faith judgment of the Owner, sufficient to complete the Work in accordance with the Contract Documents."

Section 9. 8. 1 is deleted and replaced by the following paragraph:

"Substantial Completion means that stage in the progression of the Work, as approved by the Owner in writing, when the Project is sufficiently complete in accordance with the Contract Documents that the Owner can enjoy beneficial use or occupancy of the entire Project and can utilize it for all of its intended purposes. A condition precedent to Substantial Completion is the receipt by the Owner of all necessary certificates of occupancy or other authorizations for the use and occupancy of the Project required by any governmental or regulatory authority. Owner reserves the right to occupy and use any part, phase or system of the Project when such part, phase or system is substantially completed, but such partial use or occupancy of the Project shall not result in the Project being deemed Substantially Complete, and such partial use or occupancy shall not be evidence of Substantial Completion."

Section 11. 4. 1 is deleted and replaced by the following paragraph:

"The Contractor shall furnish separate performance and payment bonds to the Owner. Each bond shall set forth a penal sum in an amount not less than the Contract Price. Each bond furnished by the Contractor shall incorporate by reference the terms of this Contract as fully as though they were set forth verbatim in such bonds. In the event the Contract Price is adjusted by Change Order executed by the Contractor, the penal sum of both the performance bond and the payment bond shall be deemed increased by like amount. The performance and payment bonds furnished by the Contractor shall be in form suitable to the Owner and shall be executed by a surety, or sureties, reasonably suitable to the Owner."

Section 14. 2. 2 is amended by the deletion of the following: "upon certification by the Initial Decision Maker that sufficient cause exists to justify such action."

Section 14. 4. 3 is deleted and replaced with the following:

"In the case of such termination for the Owner' s convenience, the Contractor shall be entitled to receive payment for Work executed, and costs incurred by reason of such termination, along with reasonable overhead and profit on Work performed prior to termination. In the event the employment of the Contractor is terminated for cause, and it is subsequently determined by a Court of competent jurisdiction that such termination was without cause, such termination shall thereupon be deemed a termination for convenience under the terms of this Agreement."

The Agreement is further amended by the inclusion of the following provisions:

"11. 6 Failure to make payment due

In the event the Owner fails to make any payment required hereunder to Contractor within thirty 30) days of the date due, commencing on the thirty- first day after the date due said late payment shall bear interest at the rate of eight percent (8%) per annum. Owner and Contractor expressly agree that the above- stated terms shall take precedence over the provisions of the Georgia Prompt Pay Act, O. C. G. A. § 13- 11- 1, et seq., and the parties further agree that said Act shall not be applicable to this Agreement."

and

"11. 7 Georgia Security and Immigration Compliance

Each party hereby certifies that it has complied with the Immigration Reform and Control Act of 1986 (IRCA), D.L. 99- 603 and the Georgia Security and Immigration Compliance Act, O.C.G.A. 13- 10- 90 et seq., by registering and verifying information for all new employees through EVerify and executing any affidavits required by Ga. Comp. R. & Regs. r. 300- 10- 1-. 01 et seq. Contractor shall provide any necessary documentation and affidavits required for verification of lawful presence in compliance with the requirements of O. C. G. A. § 50- 36- 1 et seq."

END OF SECTION E.2

SECTION F - SPECIAL CONDITIONS

1. OWNER'S REPRESENTATIVE

- A. The Owner's Representative shall be **Jay Anderson, Asst. County Manager**. All documentation required by the specifications to be submitted to the "Owner" shall be submitted to the Architect for transmittal to the Owner.
- B. All instructions and requests for changes from the Owner to the contractor will be issued through the "Architect" PROVIDED: that the Engineer shall not have the authority to authorize changes in the work which shall mean changes to the contract sum. PROVIDED FURTHER: that the "Engineer" will request and review Contractor's proposal for such changes and will submit recommendations to the owner for issuance for change orders.
- C. Changes in the contract sum shall be authorized in writing solely by the Owner.
- D. Except as provided herein above, the contractor shall disregard any instructions from persons other than "Architect".
- E. Should a situation arise, in conflict with these requirements, the contractor shall notify the "Architect" immediately.
- F. The Contractor shall bear all costs incurred by his failure to follow the instructions contained in paragraphs A, B, C, D, E above.

2. UTILITIES: SEE SECTION 01501 - Temporary Facilities and Controls

3. STORAGE AREAS

- A. Location: Space for materials storage at the site is limited. Storage of all items shall be at the discretion of the contractor as designated by the Owner. Provide storage trailers as required. At completion of the work, material and debris shall be removed.
- B. Storage: All materials not used at the end of the day shall be returned to the designated storage areas.

4. EXISTING CONDITIONS: The Contractor, in undertaking the work under this contract, is assumed to have visited the premises and to have taken into consideration all conditions which might affect his work. No consideration will be given any claim based on lack of knowledge of existing conditions except where the contract documents make definite provisions for adjustment of cost or extension of time due to existing conditions which cannot be readily ascertained.

Existing utilities shall not be interrupted or disturbed in any way without the written approval of the Owner of the utility in question. All liability shall be borne by the Contractor and he or she shall save the

Owner and the Architect and their agents and employees harmless from all claims arising out of the unauthorized interruption or disturbance of any existing utility.

All workers shall be expected to exhibit acceptable behavior and dress.

5. ACTS AND EXECUTIVE ORDERS: The contractor, by signing the contract, acknowledges that he or she is aware of and familiar with the contents and requirements of the following acts and executive orders:
- A. High Voltage Act
 - B. Underground Gas Pipe Law - Georgia law 1969, PP.50-57.
 - C. Williams Steiger Occupational Safety and Health Act of 1970.
 - D. The non-discrimination clause contained in Section 202 Executive Order 11246 as amended by Executive order 11375 relative to Equal Opportunity for all persons without regard to race, color, religion, sex or national origin and the implementing rules and regulations described by the Secretary of Labor are incorporated.
 - E. Public Employee Hazardous Chemical Protection and Right To Know Act: O.C.G.A. Sec. 45.22 (1988 H.B.No.503).3.
 - F. Drug Free Workplace Act - O.C.G.A. Sec.50-24 (2010 H.B.No.9).
 - G. State of Georgia "Call-Before-You-Dig-" Law. Requirements following:
 - 1. Notification must be made to the Utilities Protection Center 2010 Lakeside Parkway, Tucker, Georgia 30084. Telephone No. 800-282-7411 during UPC business days Monday through Friday (excluding holidays), during business hours of 7:00a.m. to 4:00 p.m.
 - 2. The call must be made 72 hours prior to excavation and must include location of excavation, name, address, and phone number of the company or person excavating, type of excavation and start date.
 - 3. If the excavation is not finished in 17 days, additional notice must be given no later than 14 days from the day of the first notification.
 - 4. If blasting is required after notice is given, Contractor must call back to update location request or "ticket".
 - 5. This law applies to all mechanized equipment, from drag lines to pile drives.
 - 6. All electric, gas, telephone, and cable TV utilities in the state are required to be members of the UPC. If underground facilities are cut that belong to a utility that is required to be UPC member, but is not, the Contractor is not liable.

7. Violators can be fined from \$1,000 to \$3,000 plus the cost of replacing or repairing damaged facilities and any injury to persons or property.
6. ACCESS TO PREMISES: Ingress and egress shall be limited to the construction entrance as shown on the drawings to the subject work areas. Any debris dropped or tracked outside of areas in which work is being done, shall be immediately cleaned up.
7. SUBMITTALS: The Contractor agrees that submittals of equipment and material and submittals of shop drawings of equipment and materials layouts required from the Contractor under provisions of these specifications and processed by the Architect are not Change Orders and that the purpose of the said submittals by the Contractor is to demonstrate the Contractor understands the design concept of the project by indicating which equipment and materials he or she intends to furnish and install and by detailing the installation he or she intends to achieve.
8. SHOP DRAWINGS:

A. General: The contractor shall check data to ensure compliance with specifications and check and verify field measurements, and shall review, approve and stamp each copy submitted with date and name of person making review before submitting them to the Architect. Six copies of all shop drawings shall be submitted to the Architect, four (4) of which will be returned to the Contractor and one (1) copy to the Owner's Representative. Where additional copies are required by the Contractor, the extra copies shall be furnished accordingly. Sufficient copies for maintenance manuals shall be submitted.

B. Identification: All submittal data shall be identified to show Griggs Pool & Pavilion, Package No. 1 - Rough Grading, specification section, drawing or detail number, room number, date, revision date, contractor and subcontractor's name, and the model, style and size of item being submitted. Manufacturer's standard drawings shall be modified by deletions or additions to show clearly only items applicable to this project.

C. Review.

1. The Contractor agrees that submittals of equipment and material and shop drawings of equipment and material layouts required under provisions of these specifications and processed by the Architect are not Change Orders. The purpose of submittals is to demonstrate that the Contractor understands the design concept of the project by indicating the equipment and materials he or she intends to furnish and install, and by detailing the installation he or she intends to achieve.

2. The Contractor shall conform to the requirements of the Contract Documents unless a change order or a specific letter of clarification is issued. The Contractor shall identify on each submittal and in letter form to the Architect any and all deviations from the contract documents.

3. Any submittal or shop drawings not conforming to the contract documents without this identification and notification shall be assumed to be marked "Revise and Resubmit",

and the contractor shall promptly re-submit said submittal so as to be in full compliance with the contract documents.

4. Failure of the Contractor to provide this information during the shop drawings phase shall make the Contractor responsible for all changes to achieve compliance with the contract documents.

9. SCHEDULING AND PHASING OF WORK: After award of contract, a pre-construction meeting shall be held at the site between the Owner's representative, representative of the Contractor, and representatives of the Architect to review the project and set up the approximate work schedule. With ten (10) days of this meeting, the Contractor shall submit five (5) typed copies of the work sequence schedule, showing proposed dates of beginning completion milestones and completing work, to the Architect for approval. A CPM schedule will also be required, subject to Architect's approval.

10. VANDALISM

The Contractor shall take every precaution not to leave equipment and materials where they can be reached and used for defacing new or existing work at any time and in particular at night and on the weekends.

11. PROGRESS REPORTS:

- A. Prior to submitting the first periodical estimate, the contractor shall have furnished to the Owner and the Architect, a construction progress schedule that outlines each phase of work. The Contractor shall adhere to the schedule and update it prior to each subsequent request for payment. Failure to adhere to the schedule shall be admittance on the part of the Contractor that he or she is behind schedule and corrective steps, at no cost to the Owner, must be taken to bring the job back on schedule.
- B. Cost Breakdown: Contractor shall furnish a complete cost breakdown for all materials installed and for each phase of the work. The cost of breakdown will be furnished prior to the first request for payment. This cost breakdown will reflect the Project Schedule and illustrate the estimated monthly Request for Payment.

12. COMMUNICATIONS:

- A. All notices, demands, requests, instructions, approvals, proposals and claims must be in writing. Requests for clarifications and instruction concerning the drawings or specifications shall be submitted to the Architect by mail or facsimile transmission on the Request For Information form in Sect. I. Only written and signed instructions will be considered binding and a part of the Construction Documents.
- B. Any notice to demand, request instruction to, proposal to, or claim upon the Contractor shall be sufficiently given if delivered at the office of the Contractor stated in Owner-Contractor Agreement (or at such office as he may designate in writing to the Owner), or deposited in the United States mail

in a sealed, postage paid envelope, or if delivered with charges prepaid to any telegraph company or transmission, in each case addressed to said office.

- C. All papers required to be delivered to the Owner shall, unless otherwise specified in writing by the Contractor, be delivered to:

Jay Anderson, Asst. County Manager
Troup County Board of Commissioners
100 Ridley Avenue
LaGrange, GA 30240
janderson@troupcountyga.gov

and any notice to, demand, request, instruction, approval, proposal, or claim upon the Owner shall be sufficiently given if delivered, or deposited in the United States mail in a sealed, postage paid envelope, or delivered charges prepaid to any telegraph company for transmission to said individual at said address or such other representatives of the Owner may subsequently specify in writing to the Contractor for such purpose.

- D. All papers required to be delivered to the Architect shall be delivered to:

SMITH DESIGN GROUP, INC.
206 WEST HARALSON STREET
LaGRANGE, GEORGIA 30240

and any notice to, demand, request, proposal, or claim upon the Architect shall be sufficiently given if delivered, or deposited in the United States mail in a sealed, postage paid envelope, or delivered charges prepaid to any telegraph company for transmission to said Architect at said address.

- E. Any notice, demand, request, instruction, approval, proposal, or claim shall be deemed to have been given as of the time of actual delivery or (in case of mailing) when the same should have been received in due course of post, or in the case of telegrams, at the time of actual receipt, as the case may be.

13. LAYING OUT WORK:

The Contractor shall verify all existing conditions and contiguous work and lay out his or her work therefrom, providing for himself all other necessary measurements, lines and levels, and shall assume the responsibility for the correctness of the laying out of the work.

14. EXISTING PLANTING:

Construct protective tree fencing as described in the construction documents as indicated around tree save area. Storage or parking in the areas is not allowed.

15. SIGNS:

The Contractor shall cause no signs to be displayed at the site unless specifically authorized in writing by the Owner, except however, the Contractor shall furnish, erect and maintain such signs required by safety regulation to safeguard life and property.

16. NOTIFICATION TO OWNER WHEN CONTRACTOR VISITS SITE AFTER FINAL INSPECTION:

- A. When the Contractor's representative visits the job site after the final inspection to perform specific work such as maintenance service, seasonal balance, or to correct a deficiency, the Contractor shall notify the Owner not less than 48 hours prior to the date on which they will visit the site, except under an emergency condition.
- B. The Contractor shall visit the designated office of the Owner to notify the Owner that the Contractor is on the site prior to visiting the site, thereby enabling the Owner representative to accompany the Contractor, should they so desire while the Contractor is on the project site.
- C. An exact copy of the notification shall be provided to the Architect with the intent of the site visit. After the Contractor has completed the site visit, the Contractor shall give a written report of the action taken and any incomplete work yet to be performed to the Architect within five (5) days.

17. FIRE MARSHAL DRAWINGS:

- A. The Architect will deliver to the Contractor the set of drawings approved by the Fire Marshal. The Contractor shall maintain custody of these documents in a clean, unmarked condition at the job site for ready reference by the Fire Marshal during job visits.
- B. This set of documents shall be returned to the Architect with the Final Request for Payment and the Certificate of Occupancy by the Fire Marshal or receipt for same.
- C. The Contractor is subject to a fine of \$1500 by the State Fire Marshal if a Fire Marshal representative visits the job site and the Fire Marshal approved plans and specifications are not available.

18. ALL GLASS - FIBER PRODUCTS, INCLUDING INSULATION

All Glass-Fiber products, including insulation are to carry carcinogen warning labels as required by the Department of Labor.

19. HAZARDOUS MATERIALS:

- A. A/E's Responsibility: Plans and specification have been prepared by the A/E for the Owner without the A/E having conducted investigation as to the presence of asbestos or hazardous waste on the project. Not being a part of this contract, the A/E has not charged any fees and has not and will not advise the Owner with regard to the detection and/or removal of asbestos or hazardous waste. the Owner is aware that asbestos or hazardous waste could be present and will make all decisions with regard to its removal. The removal of all hazardous materials and encapsulation of remaining surfaces is the sole responsibility of the Owner.

B. Friable Materials: If the Contractor observes the existence of friable materials which must be disturbed during the course of his work, Contractor shall promptly notify Owner and Architect. Owner shall make all arrangements regarding testing and removal or encapsulation of asbestos materials if present. The Contractor shall not perform any work pertinent to the friable material prior to receipt of special instructions from the Owner through the Architect. "Friable Material" is any material which can be crumbled, pulverized or reduced to a powder by hand pressure when dry.

20. ASBESTOS (ACBM):

A. Specifications written for equipment and materials in the specifications are intended to eliminate any asbestos containing substance. The Contractor and his suppliers are hereby notified that NO ASBESTOS CONTAINING PRODUCT IS PERMITTED. If a product is listed in these specifications which contain asbestos, the Contractor and his or her supplier shall so inform the A/E immediately and shall not deliver such product to the project site until additional written instructions are received.

B. Upon completion of construction, and prior to final inspection, the Contractor(s) for work performed under this division of the specifications shall be required to provide a certificate to the A/E in the following form:

CERTIFICATION FOR ASBESTOS CONTAINMENT

I / we _____
(Sub-contractor)

certify that there is no asbestos contained in materials provided and/or installed by us in

(Project / Building)

WITNESS: _____ DATE: _____
(Notary Public)

CONTRACTOR: _____

BY: _____

TITLE: _____

21. NOTIFICATION OF JOB SITE OBSERVATIONS

Recommended observations by Mechanical / Electrical Engineers at the following stages of construction for a Mechanical / Electrical design project. General contractor to notify Architect 48 hours prior to each of the following:

A. Plumbing:

1. First major portion of underfloor piping before being covered.
2. Roughing of water, waste and vent piping for first major toilet battery.
3. All overhead piping upon completion of pipe insulation and prior to insulation of ceiling.

- B. Air Conditioning:
 - 1. First major portion of ductwork prior to being insulated.
 - 2. First major portion of piping prior to being insulated.
 - 3. All overhead ductwork and piping upon completion of insulation but prior to installation of ceiling.

- C. Electrical:
 - 1. Substantially completed conduit system prior to wire pulling.
 - 2. Completion of major wire pulling and energizing of distribution panels.
 - 3. Substantially completed installation of lighting fixtures prior to installation of ceiling.

- D. Fire Protection: All overhead piping prior to installation of ceiling.

- E. All Systems:
 - 1. Upon written notification of the contractor that the installation is 100% complete.
 - 2. A second inspection to insure that all items noted at final inspections have been corrected.

END OF SECTION F

SECTION G - STATEMENT OF WORK

G-01 WORK TO BE DONE

The work covered by this contract consists of furnishing all plant, labor, equipment, and materials and performing all operations required to accomplish all the work required by the Project Manual entitled, "**Griggs Pool & Pavilion, Package No. 1 - Rough Grading**", and the Drawings similarly entitled, all dated **03 AUG 2023** in strict accordance therewith and subject to the terms and conditions of the Contract.

G-02 DESCRIPTION AND LOCATION OF SITE:

1. The site of this work is located at **716 Glenn Robertson Drive, LaGrange, GA. 30240.**
2. Verify with Owner exact location of storage trailer and equipment.

G-03 ACCESS TO PROPERTY:

Access to the property is to be from **Brown Street.**

END OF SECTION G

SECTION H - PROJECT CLOSE-OUT

H-01 GENERAL:

In order to insure an orderly and efficient transfer of the project to the Owner, prepare, assemble and transmit to the Architect the closing documents hereinafter described.

H-02 TIME OF TRANSMITTAL:

After receiving the Certificate of Substantial Completion and in no case, not later than the date of the Contractor's request for Final Inspection, the Contractor shall transmit to the Architect the closing documents. Final inspection will not take place until all required closing documents have been received by the Architect.

H-03 NUMBER OF COPIES:

Unless specifically noted otherwise hereinafter, three copies of all closing documents shall be submitted.

H-04 IDENTIFICATION:

All bound documents shall be identified by the use of an embossed plastic tape on the front cover, showing the Griggs Pool & Pavilion, Package No. 1 - Rough Grading and number, the nature of the information contained in the document (i.e. A/C Maintenance Manual for Roof Mounted Units, A/C1, A/C2, etc.), name of General Contractor and name of Subcontractor who made the installation.

H-05 REQUIRED PRIOR TO FINAL PAYMENTS

1. "As-Built Plans" - **One Set**
2. Warranty by General Contractor - **Three Copies**
3. Contractor's Affidavit of Payment of Debts and Claims - **Three Copies**
4. Contractor's Affidavit of Release of Liens - **Three Copies**
5. Statutory Affidavit - **Three Copies**
6. Non-Influence Affidavit - **Three Copies**
7. Sealants Five Year Warranty - **Three Copies**
8. Roof System Warranty - **Three Copies**

H-06 REQUIRED CLOSING DOCUMENTS:

- 5.1 Warranty by Roofing Contractor: Sample form is included in Section I of this project manual.

5.2 Statutory Affidavit by Roofing Contractor: Sample form is included in Section I of this project manual.

5.3 Non-influence Affidavit by Roofing Contractor: Sample form is included in Section I of this project manual.

5.4 Inspection Reports: The Contractor shall contact each of the agencies to set up inspections. The Contractor shall secure and submit to the Owner, a Certification from the local Governmental Agency or Agencies that the construction has been inspected as required by laws or ordinances and that the building (buildings) is (are) acceptable to the following authorities:

- a. Local Building Inspector (where applicable)
- b. Local Plumbing Inspector (where applicable)
- c. Local Electrical Inspector (where applicable)
- d. Local Fire Marshal w / occupancy permit
- e. State Elevator Inspector (where applicable)
- f. State Health Department (where applicable)

5.5 Project Record Documents: (one copy)

Contractor's attention is called to Section 01502 of this project manual for a complete description of the required documents.

5.6 Maintenance and Operation Manuals & Parts List:

Contractor's attention is called to the fact that various sections of this project manual require that maintenance manuals, operation manuals and parts list are to be furnished.

5.7 Warranties for Items Beyond One Year Limit:

The following items generally require a warranty in excess of the normal "one year" guarantee and are so described in various sections of this project manual; this list is not necessary all inclusive and should any warranties called for in a section of this project manual be omitted from the following list, the section requirement shall govern:

- a. 5 year warranty on workmanship

H-07 CHECK - OFF LIST:

General Contractor is to submit all close-out documents in bound and permanently labeled 3-ring notebooks and as-built drawings together at one time prior to Architect's approval of release of any retainage. Please see Section H-05 "Required for Final Payment" for check off list. Additional items may be required due to job specific requirements.

END OF SECTION H

SECTION I - SAMPLE FORMS

I-01 GENERAL

The Bidding Documents make reference to various forms that are required to be executed as a part of work of the project.

I-02 FORMS

1. The specimen forms are included hereinafter for the bidders information only:
 - A. Statutory Affidavit
 - B. Warranty by General Contractor
 - C. Non-Influence Affidavit
 - D. Certificate of Final Completion
 - E. Change Order Form
 - F. Modification to Standard Form of Agreement (NOT INCLUDED)
 - G. Progress Schedule (example) (NOT INCLUDED)
 - * H. Certificate of the Contractor of his duly authorized representative, DE Form 0263, revised Jan. 1990 (NOT INCLUDED)
 - * I. Summary of Materials Stored, DE Form 0264 (NOT INCLUDED)
 - * J. Schedule of Change Orders, DE Form 0265 (NOT INCLUDED)
 - K. Request For Information
 - L. Subcontractor / Vendor Directory

- * Indicates that these forms are to be used with Application and Certificate for Payment, AIA Document G702 (See also Article 1-02, .2, e and f of this section).

2. The following documents are not bound herein, however upon written request, the Architect will furnish any Bidder a copy of any of the documents listed:
 - a. Bid Bond, AIA Document A310.
 - b. Standard Form of Agreement between Owner and Contractor where the Basis of Payment is a Stipulated Sum, AIA Document A101.
 - c. Performance Bond and Payment, AIA Document A312.
 - d. Certificate of Insurance, AIA Document G705
 - e. Application and Certificate for Payment, AIA Document G702.
 - f. Continuation Sheet, AIA Document G703.
 - g. Certification of Substantial Completion, AIA Document G704.
 - h. Contractor's Affidavit of Release of Lien's, AIA Document G706.

STATUTORY AFFIDAVIT

SPECIMEN A

COUNTY OF _____

STATE OF _____

FROM _____ (Contractor)

TO _____ (Owner)

Re: Contract entered into the _____ day of _____, 2015, between the above-mentioned parties for the construction of a _____ at _____

KNOW ALL MEN BY THESE PRESENTS:

1. The undersigned hereby certifies that all work required under the above contract has been performed in accordance with the terms thereof, that all materialmen, subcontractors, mechanics, and laborers have been paid and satisfied in full, and that there are no outstanding claims of any character (including disputed claims or any claims to which the contractor has or will assert any defense) arising out of the performance of the contract which have not been paid and satisfied in full,

2. The undersigned further certifies that to the best of his knowledge and belief there are no unsatisfied claims for damages resulting from injury or death to any employees, subcontractors, or the public at large arising out of the performance of the contract, or any suits or claims for any other damage of any kind, nature, or description which might constitute a lien upon the property of the owner.

3. The undersigned makes this affidavit for the purpose of receiving final payment in full settlement of all claims against the owner arising under or by virtue of the contract, and acceptance of such payment is acknowledged as a release of the owner from any and all claims arising under or by virtue of the contract.

This _____ day of _____, 2015. (L.S.)

Signature

Title

COUNTY OF _____

STATE OF _____

Firm

Personally before me, the undersigned authority, appeared _____ who is known to me to be an official of the firm of _____, who, after being duly sworn, stated on his oath that he had read the above statement and that the same is true and correct.

Notary Public

My commission expires _____

This _____ day of _____, _____.

**WARRANTY BY
GENERAL CONTRACTOR**

SPECIMEN B

PROJECT:
(name,address)

ARCHITECT:

TO (Owner)

ARCHITECT'S PROJECT NUMBER:

**CONTRACTOR:
CONTRACT FOR:**

DATE OF ISSUANCE:

CONTRACT DATE:

_____, as General Contractor on the above job do hereby guarantee that all work executed under the Plans and Specifications will be free from defects of materials and/or workmanship for a period of, _____ beginning _____ and ending _____ and that all defects occurring within the warranty period shall be replaced or repaired at no cost to the Owner.

This guarantee covers all work as shown on the Plans and specified in the Specifications and Contract Documents.

Nothing in the above shall be deemed to imply that this guarantee shall apply to any work which has been abused or neglected by the Owner.

Legal Name of Contractor

BY:

TITLE:

Notary Public

This _____ day of _____, 20____.

NON-INFLUENCE AFFIDAVIT

SPECIMEN C

COUNTY OF _____
 STATE OF _____
 FROM _____
 _____ (Contractor)
 TO _____
 _____ (Owner)

Re: Contract entered into the _____ day of _____, 2015, between the above-mentioned parties
 for the construction of a _____
 at _____

KNOW ALL MEN BY THESE PRESENTS:

I do solemnly swear on my oath that as to the contract dated _____, 20____,
 between _____ and the _____
 I have no knowlege of the exertion of any influence or the attempted exertion of any influence on the firm on
 behalf of which this affidavit is made in any way, manner, or form in the purchase of materials, equipment, or
 other items involved in construction, manufacture, or employment of labor under the aforesaid contract by the
 Owner or any employee of the Owner, or any person connected with the Owner in any way whatsoever.

In witness whereof, the undersigned has signed and sealed this instrument
 This _____ day of _____, 2015.

 (L.S.)
 Signature

 Title

 Firm

COUNTY OF _____
 STATE OF _____

Personally before me, the undersigned authority, appeared _____
 who is known to me to be an official of the firm of _____, who,
 after being duly sworn, stated on his oath that he had read the above statement and that the same is true and
 correct.

 Notary Public
 My commission expires _____

This _____ day of _____, _____.

CERTIFICATE OF FINAL COMPLETION

SPECIMEN D

Distribution to:

- OWNER
- ARCHITECT
- CONTRACTOR
- FIELD
- OTHER

PROJECT:
(name,address)

ARCHITECT:

ARCHITECT'S PROJECT NUMBER:

TO (Owner):

CONTRACTOR:

CONTRACT FOR:

DATE OF ISSUANCE:

CONTRACT DATE:

In accordance with the Contract documents and to the best of his or her knowledge, information and belief, and on the basis of his observations, on-site observation and final observation held on _____, the Architect certifies to the Owner that the work has been completed in accordance with the terms and conditions of the Contract Documents; and that the Contractor is entitled to Final Payment as certified by him in Contractor's Application for Payment.

Acceptance of this Certificate of Final Completion by the Owner and the Contractor shall in no way waive or void any terms or conditions of the Contract Documents.

SMITH DESIGN GROUP, INC.

By: _____
Project Architect

APPROVED AND AGREED:

CONTRACTOR
By: _____

OWNER
By: _____

**** CHANGE ORDER ****

SPECIMEN E

SMITH DESIGN GROUP, INC.

206 West Haralson Street
LaGrange, GA 30240
(706) 882-5511
Fax# (706) 883-7777

DATE: _____

CHANGE ORDER: _____

JOB NO.: _____

CONTRACT FOR: _____

CONTRACT DATE: _____

To: (Contractor)

You are directed to make the following changes in this contract:

Description	Unit Price	Total

Original Contract sum: \$ _____

Net(Addition)(Deduction)of all approved change orders: \$ _____

Total Adjusted Contract Price prior to this change order: \$ 0.00

This Change Order No. _____ (Add)(Deduct): \$ 0.00

Total Current Adjusted Contract Price: \$ 0.00

Recommended For Owner's Acceptance:

Approved And Agreed:

SMITH DESIGN GROUP, INC.

Contractor

By: _____

By: _____

project architect/administrator

Owner: _____

Architect: _____

Contractor _____

Other: _____

Owner

By: _____

REQUEST FOR INFORMATION

SPECIMEN K

TO: Smith Design Group, Inc.
206 West Haralson Street
LaGrange, GA 30240

REQUEST FOR INFORMATION # _____

DATE: _____ JOB# _____

REFERENCE SHEET _____

ATTENTION: _____

NO.: _____ DETAIL: _____

PROJECT: _____

VIA: _____

FAX: _____ MAIL: _____

QUESTION:

SIGNED: _____

DATE: _____

ANSWER REQUIRED BY (DATE): _____

ATTACHMENTS: YES () NO ()

COPIES TO: _____

ANSWER:



SIGNED: _____

DATE: _____

THIS REQUEST FOR INFORMATION RESULTED IN PROPOSED CHANGE NUMBER ____.

SUBCONTRACTOR / VENDOR DIRECTORY		PROJECT: SPECIMEN L		
		DATE:	JOB NO.:	
		BY:	PAGE: OF	
#	COMPANY NAME ADDRESS	CONTACT NAME PHONE / FAX	DIV. #	WORK DESCRIPTION

SPECIMEN M: ALL CONTRACTORS & SUB-CONTRACTORS ARE REQUIRED TO SUBMIT THIS FORM TO DIANA EVANS, PURCHASING DIRECTOR OF TROUP COUNTY, PRIOR TO BEGINNING WORK ON SITE.

	TROUP COUNTY, GEORGIA VENDOR/CONTRACTOR (E-VERIFY) AFFIDAVIT AND AGREEMENT	
<p>Please initial the appropriate statement for your current and future business relations with the Troup County, sign and have notarized if applicable (<u>one</u> of items A thru E <u>must</u> be initialed):</p> <p>A) ___ My company provides products <u>only</u> for the County (no physical labor or services).</p> <p>B) ___ I am a sole proprietor and have no employees, or plans to hire employees (attach a copy of a drivers license instead).</p> <p>C) ___ I am a sole proprietor and exempt as a professional licensed through the Georgia Secretary of State. (attach copy of current professional license)</p> <p>D) ___ My company is providing labor or services on a one-time basis that will not exceed \$2,499.99.</p> <p>E) ___ This entity is a governmental unit.</p> <p>F) ___ My company provides labor or services to the County and I have supplied the EV number below (notarization below is required).</p>		
<i>Signature of Authorized Officer or Agent</i>	<i>Printed Name</i>	<i>Date</i>
<i>Company / Contractor Name</i>		<i>Title of Authorized Officer or Agent</i>
<p>NOTARIZATION REQUIRED FOR E-VERIFY NUMBER SUBMISSIONS:</p> <p>COMES NOW before me, the undersigned officer duly authorized to administer oaths, the undersigned contractor, who, after being duly sworn, states as follows:</p> <p>By executing this affidavit, the undersigned contractor verifies its compliance with O.C.G.A. § 13-10-91 and Georgia Department of Labor Rule 300-10-1-.02, stating affirmatively that the individual, firm, or corporation which is contracting with the County has registered with and is participating in a federal work authorization program in accordance with the applicability provisions and deadlines established in O.C.G.A. § 13-10-91 and Georgia Department of Labor Rule 300-10-1-.02. Furthermore, the undersigned contractor will continue to use the federal work authorization program throughout the contract period.</p> <p>The undersigned contractor further agrees that, should it employ or contract with any subcontractor(s) in connection with the physical performance of services pursuant to the contract with the Troup County, Georgia, of which this affidavit is a part, the undersigned contractor will secure from such subcontractor(s) similar verification of compliance with O.C.G.A. § 13-10-91 and Georgia Department of Labor Rule 300-10-1-.02 through the subcontractor's execution of the subcontractor affidavit required by Georgia Department of Labor Rule 300-10-1-.08 or a substantially similar subcontractor affidavit. The undersigned contractor further agrees to maintain records of such compliance and provide a copy of each such verification to the County at the time the subcontractor(s) is retained to perform such service.</p>		
<p>EEV (E-Verify Number) Issued by DOHS</p> 	<p>Sworn to and subscribed before me This _____ day of _____, 20____ Notary Public</p>	
<p>Visit http://www.uscis.gov/e-verify/what-e-verify for more information or to obtain a number.</p>		

**END OF SECTION I
END OF PART 1 - GENERAL REQUIREMENTS**



PART 2 | TECHNICAL SPECIFICATIONS

SECTION 01027 - APPLICATIONS FOR PAYMENT

PART 1.00 - GENERAL

1.1 SUMMARY

- A. This Section specifies administrative and procedural requirements governing the Contractor's Applications for Payment.
 - 1. Coordinate the Schedule of Values and Applications for Payment with the Contractor's Construction Schedule, Submittal Schedule, and List of Subcontractors.
- B. Related Sections: The following Sections contain requirements that relate to this Section.
 - 1. Schedules: The Contractor's Construction Schedule and Submittal Schedule are specified in Division 1 Section "Submittals."

1.2 SCHEDULE OF VALUES

- A. Coordination: Coordinate preparation of the Schedule of Values with preparation of the Contractor's Construction Schedule.
 - 1. Correlate line items in the Schedule of Values with other required administrative schedules and forms, including:
 - a. Contractor's Construction Schedule.
 - b. Application for Payment forms, including Continuation Sheets.
 - c. List of subcontractors.
 - d. List of products.
 - e. List of principal suppliers and fabricators.
 - 2. Submit the Schedule of Values to the Architect at the earliest possible date but no later than 7 days before the date scheduled for submittal of the initial Applications for Payment.
 - 3. Subschedules: Where Work is separated into phases requiring separately phased payments, provide subschedules showing values correlated with each phase of payment.
- B. Format and Content: Use the Project Manual table of contents as a guide to establish the format for the Schedule of Values. Provide at least one line item for each Specification Section.
 - 1. Identification: Include the following Project identification on the Schedule of Values:
 - a. Project name and location.

- b. Name of the Architect.
 - c. Project number.
 - d. Contractor's name and address.
 - e. Date of Submittal.
2. Arrange the Schedule of Value in tabular form with separate columns to indicate the following for each item listed:
 - a. Related Specification Section or Division.
 - b. Description of Work.
 - c. Name of subcontractor.
 - d. Name of manufacturer or fabricator.
 - e. Name of Supplier.
 - f. Change Orders (numbers) that affect value.
 - g. Dollar value.
 - 1) Percentage of Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent.
3. Provide a breakdown of the Contract Sum in sufficient detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Project Manual table of contents. Break principal subcontract amounts down into several line items.
4. Round amounts to nearest whole dollar; the total shall equal the Contract Sum.
5. Provide a separate line item in the Schedule of Values for each part of the Work where Applications for Payment may include materials or equipment, purchased or fabricated and stored, but not yet installed.
 - a. Differentiate between items stored on-site and items stored off-site. Include requirements for insurance and bonded warehousing, if required.
6. Provide separate line items on the Schedule of Values for initial cost of the materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
7. Margins of Cost: Show line items for indirect costs and margins on actual costs only when such items are listed individually in Applications for Payment. Each item in the Schedule of Values and Applications for Payment shall be complete. Include the total cost and proportionate share of general overhead and profit margin for each item.
 - a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the Schedule of Values.
8. Schedule Updating: Update and resubmit the Schedule of Values prior to the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

1.3 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment shall be consistent with previous applications and payments as certified by the Architect and paid for by the Owner.
1. The initial Application for Payment, the Application for Payment at time of Substantial Completion, and the final Application for Payment involve additional requirements.
- B. Payment-Application Times: Progress-payment date is as agreed to by the Owner and Contractor.
- C. Payment-Application Forms: Use AIA Document G702 and Continuation Sheets G703 as the form for Applications for Payment.
- D. Application Preparation: Complete every entry on the form. Include notarization and execution by a person authorized to sign legal documents on behalf of the Contractor. The Architect will return incomplete applications without action.
1. Entries shall match data on the Schedule of Values and the Contractor's Construction Schedule. Use update schedules if revisions were made.
 2. Include amounts of Change Orders and Construction Change Directives issued prior to the last day of the construction period covered by the application.
- E. Transmittal: Submit 3 signed and notarized original copies of each Application for Payment to the Architect by a method ensuring receipt within 24 hours. One copy shall be complete, including waivers of lien and similar attachments, when required.
1. Transmit each copy with a transmittal form listing attachments and recording appropriate information related to the application, in a manner acceptable to the Architect.
- F. Waivers of Mechanics Lien: With each Application for Payment, submit waivers of mechanics lien from every entity who is lawfully entitled to file a mechanics lien arising out of the Contract and related to the Work covered by the payment.
- G. Initial Application for Payment: Administrative actions and submittals, that must precede or coincide with submittal of the first Application for Payment, include the following:
1. List of subcontractors.
 2. List of principal suppliers and fabricators.
 3. Schedule of Values.
 4. Contractor's Construction Schedule (preliminary if not final).
 5. Schedule of principal products.
 6. List of Contractor's staff assignments.
 7. List of Contractor's principal consultants.
 8. Copies of building permits.
 9. Copies of authorizations & licenses from governing authorities for performance of Work.
 10. Initial progress report.
 11. Report of preconstruction meeting.
 12. Certificates of insurance and insurance policies.

13. Performance and payment bonds.
14. Data needed to acquire the Owner's insurance.

H. Application for Payment at Substantial Completion: Following issuance of the Certificate of Substantial Completion, submit an Application for Payment.

1. This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
2. Administrative actions and submittals that shall precede or coincide with this application include:
 - a. Occupancy permits and similar approvals.
 - b. Warranties (guarantees) and maintenance agreements.
 - c. Test/adjust/balance records.
 - d. Maintenance instructions.
 - e. Meter readings.
 - f. Startup performance reports.
 - g. Changeover information related to Owner's occupancy, use, operation, and maintenance.
 - h. Final cleaning.
 - i. Application for reduction of retainage and consent of surety.
 - j. Advice on shifting insurance coverages.
 - k. Final progress photographs.
 - l. List of incomplete Work, recognized as exceptions to Architect's Certificate of Substantial Completion.

- I. Final Payment Application: Administrative actions and submittals that must precede or coincide with submittal of the final Application for Payment include the following:
1. Completion of Project closeout requirements.
 2. Completion of items specified for completion after Substantial Completion
 3. Ensure that unsettled claims will be settled.
 4. Ensure that incomplete Work is not accepted and will be completed without undue delay.
 5. Transmittal of required Project construction records to the Owner.
 6. Certified property survey.
 7. Proof that taxes, fees, and similar obligations were paid.
 8. Removal of temporary facilities and services.
 9. Removal of surplus materials, rubbish, and similar elements.
 10. Change of door locks to Owner's access.

PART 2.00 - PRODUCTS (Not Applicable)

PART 3.00 - EXECUTION (Not Applicable)

END OF SECTION 01027

SECTION 01101 - ALTERNATES / APPROVED MANUFACTURERS

PART 1.00 - GENERAL

1.01 Quality Assurance:

A. Work Included: To enable the owner to compare total costs where alternate materials and methods might be used. Alternates have been established as shown on the drawings or described hereinafter in this section.

B. Related Work Described Elsewhere:

1. Materials and methods to be used in the Base Bid and in the Alternates as shown on the drawings or described in pertinent sections of this project manual or hereinafter in this section.
2. Method for stating the alternates is described in Section B - Proposal Form, of this project manual.

1.02 Definitions: Omitted

1.03 Submittals: All Alternates described hereinafter are required to be reflected on the Proposal Form submitted by bidders.

1.04 Product Handling: Alternates are additive and may be accepted by the owner as he or she may choose and in any sequence that he or she may choose.

1.05 Job Conditions: Job conditions pursuant to the installation of the various products or materials of each alternate will be as described in pertinent other sections of this project manual and in accordance with the published specifications of the manufacturer of the product or material being installed as a part of each alternate.

PART 2.00 - PRODUCTS

2.01 Alternates:

- A. Deductive Alternates: SEE PROPOSAL FORM B
- B. Additive Alternates: SEE PROPOSAL FORM B

PART 3.00 - EXECUTION

3.01 Inspection: Prior to beginning installation of any alternates, the contractor shall examine the areas and conditions under which the work is to be carried out; notify the Architect in writing of conditions detrimental to the completion of the work; do not proceed with the work until unsatisfactory conditions have been corrected.

3.02 Installation:

A. Advance Coordination: Immediately after award of the contract, thoroughly and clearly advise all necessary personnel and suppliers as to the nature and extent of alternates selected by the owner. Use all means necessary to alert those personnel and suppliers involved as to all changes in the work caused by the owner's selection or rejection of alternates.

B. Alternates: Selected alternates will be incorporated into the building with installation being in conformance with the drawings, pertinent other sections of this project manual and the published instructions of the manufacturers whose products are being installed as a part of each alternate.

3.03 Field Quality Control:

A. General: Field quality control pursuant to the installation of the various products or materials of each alternate is described in pertinent other sections of this project manual and in accordance with the published specifications of the manufacturer of the products or materials being installed as a part of each alternate.

B. Inspection: Materials and workmanship at all times will be subject to inspection by the Architect or his representative.

PART 4.00 - APPROVED MANUFACTURERS

4.01 In addition to the manufacturers and products named or described in the project manual, the manufacturers and products listed hereinafter are acceptable provided they meet the requirements of each respective section of the project manual as well as the requirements of the drawings. All coordination and compatibility with other work necessitated by proposed substitution will be accomplished in complete and proper fashion at no cost to the owner.

4.02 Section 04201 - Unit Masonry (Not Used)

Brick

1. Cherokee
2. Boral

Block (Regular)

1. Williams Bros.
2. Bickerstaff
3. Solite

Mortar

1. Medusa
2. Blue Circle
3. Soloman Grind-Chem Serv.

Block (Split- Face)

1. Masonry Products
2. Williams Bros.
3. Nat'l. Concrete Masonry

Blocks (Acoustical)

1. Proudfoot
2. Williams Bros.
3. Acousta - Wal Association

Reinforcing

1. Dur-O-Wal
2. Ileckman Bldg. Prod.
3. Masonry Reinf. Corp. of Amer.

4.03 Section 05512 - Metal Spiral Stairs (Not Used)

4.04 Section 05521 - Pipe and Tube Handrails and Railings (Not Used)

1. Julius Blum & Co.
2. T. G. Braun
3. Lawler Machine & Foundry Co., Inc.

- 4.05 Section 05723 - Safety Nosings (Not Used)
 - 1. Wooster Products
 - 2. American Safety Tread
 - 3. Armstrong Products, Inc.

- 4.06 Section 05800 - Expansion Control Devices (Not Used)
 - 1. Metalines
 - 2. The C/X Group
 - 3. MM Systems
 - 4. Balco, Inc.

- 4.07 Section 07114 - Below Grade Membrane Waterproofing (Not Used)
 - 1. Sealtight "Melnar" by W.R. Meadows
 - 2. Royston Waterproofing
 - 3. America Colloid Co. (volclay)

- 4.08 Section 07210 - Building Insulation (Not Used)
 - 1. Owens Corning
 - 2. CertainTeed
 - 3. Manville

- 4.09 Section 07535 - Reinforced Flexible Sheet Roofing System (Not Used)
 - 1. Bondcote
 - 2. Carlisle

- 4.10 Section 07620 - Metal Flashing and Trim (Not Used)
 - 1. AEP SPAM
 - 2. ASC Pacific, Inc.
 - 3. Berridge Manufacturing Co.
 - 4. MM Systems
 - 5. American Building

- 4.11 Section 07812 - Structural Skylights (Not Used)
 - 1. Gammans Architectural Product, Inc. , Newnan, GA

- 4.12 Section 07900 - Sealants (Not Used)
 - 1. Dow Corning
 - 2. G.E. Silicones
 - 3. Sonneborn

- 4.13 Section 08363 - Rolling Counter Doors (Not Used)
 - 1. Peele Rolling Pass Windows
 - 2. Raynor Garage Doors
 - 3. Overhead Door

4.14 Section 08401 - Aluminum Entrance & Storefronts (Not Used)

1. Kawneer
2. PPG
3. YKK
4. EFCO Corp.

4.15 Section 08522 - Aluminum Windows (Not Used)

1. Kawneer
2. EFCO Corp.
3. Traco (min.3-7/8" frame depth)
4. Alenco (min. 3-7/8" frame depth)

4.16 Section 08711 - Finish Hardware (Not Used)

Locksets & Cylinders

1. Schlage Lock Co.
2. Corbin
3. Yale
4. Best

Butts

1. Stanley
2. Hager Hinge Co.
3. H. Soss & Co.

Surface Closers

1. LCN Closers
2. Corbin
3. Norton

Flush Bolts

1. Triangle Brass
2. Ives
3. Stanley

Push / Pull Plates

1. Triangle Brass
2. Quality
3. Ives

Surface Bolts

1. Triangle Brass
2. Ives
3. Stanley

Silencers

1. Triangle Brass
2. Glyn-Johnson
3. Ives

Panic Devices

1. Von Duprin

Threshold

1. Zero International
2. National Guard
3. Hager
4. Pemko

Kick Plates

1. Quality
2. Bladwin
3. Ives

Stop / Bumpers / Holders

1. Triangle Brass
2. Glyn-Johnson
3. Ives

Weatherstripping

1. Zero International
2. National Guard
3. Pemko
4. Hager

4.17 Section 09553 - Strip Wood Flooring System (Not Used)

- 4.18 Section 09660 - Resilient Tile Flooring (Not Used)
 - 1. Armstrong (asbestos free)
 - 2. Azrock (asbestos free)
 - 3. Amitco Duravynyl Tile (asbestos free)

- 4.19 Section 09680 - Floor Carpeting (Not Used)
 - 1. Milliken
 - 2. Interface
 - 3. Shaw

- 4.20 Section 10441 - Building Identification Letters (Not Used)
 - 1. Andco
 - 2. Leeds
 - 3. Matthews

- 4.21 Section 10500 - Metal Lockers (Not Used)

- 4.22 Section 10800 - Rest Room, Shower Room, & Locker Room Accessories (Not Used)
 - 1. Bradley
 - 2. Bobrick
 - 3. A & J
 - 4. ASI

- 4.23 Section 10900 - Wardrobe & Closet Specialties (Not Used)
 - 1. Parker/Nutone, Inc.
 - 2. Stanley
 - 3. REI

- 4.24 Section 11050 - Library Equipment (Not Used)

- 4.25 Section 11181 - Dark Room Equipment (Not Used)

- 4.26 Section 11400 - Commercial Food Service Equipment (Not Used)

- 4.27 Section 11461 Unit Kitchen (Not Used)

- 4.28 Section 11873 - Dock Bumpers (Not Used)
 - 1. Dura - Lock
 - 2. Pawling Corp.
 - 3. Serco Corp.

END OF SECTION 01101

SECTION 01200 - PROJECT MEETINGS

PART 1.00 - GENERAL

1.1 SUMMARY

A. This Section specifies administrative and procedural requirements for project meetings, including, but not limited to, the following:

1. Preconstruction conferences.
2. Progress meetings.

1.2 PRECONSTRUCTION CONFERENCE

A. Schedule a preconstruction conference before starting construction, at a time convenient to the Owner and the Architect, but no later than 10 days after execution of the Agreement. Hold the conference at the Project Site or another convenient location. Conduct the meeting to review responsibilities and personnel assignments.

B. Attendees: Authorized representatives of the Owner, Architect, and their consultants; the Contractor and its superintendent; major subcontractors; manufacturers; suppliers; and other concerned parties shall attend the conference. All participants at the conference shall be familiar with the Project and authorized to conclude matters relating to the Work.

C. Agenda: Discuss items of significance that could affect progress, including the following:

1. Tentative construction schedule.
2. Critical work sequencing.
3. Designation of responsible personnel.
4. Procedures for processing field decisions and Change Orders.
5. Procedures for processing Applications for Payment.
6. Distribution of Contract Documents.
7. Submittal of Shop Drawings, Product Data, and Samples.
8. Preparation of record documents.
9. Use of the premises.
10. Parking availability.
11. Office, work, and storage areas.
12. Equipment deliveries and priorities.
13. Safety procedures.
14. First Aid.
15. Security.
16. Housekeeping.
17. Working hours.

1.3 PROGRESS MEETINGS

A. Conduct progress meetings at the Project Site at weekly intervals. Notify the Owner and the Architect of scheduled meeting dates.

B. Attendees: In addition to representatives of the Owner and the Architect, each subcontractor, supplier, or other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with the Project and authorized to conclude matters relating to the Work.

C. Agenda: Review and correct or approve minutes of the previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to the status of the Project.

1. Contractor's Construction Schedule: Review progress since the last meeting. Determine where each activity is in relation to the Contractor's Construction Schedule, whether on time or ahead or behind schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to insure that current and subsequent activities will be completed within the Contract Time.

2. Review the present and future needs of each entity present, including the following:

- a. Interface requirements.
- b. Time.
- c. Sequences.
- d. Status of submittals.
- e. Deliveries.
- f. Off-site fabrication problems.
- g. Access.
- h. Site utilization.
- i. Temporary facilities and services.
- j. Hours of work.
- k. Hazards and risks.
- l. Housekeeping.
- m. Quality and work standards.
- n. Change Orders.
- o. Documentation of information for payment requests.

D. Reporting: No later than 3 days after each meeting, general contractor is to distribute typed minutes of the meeting to each party present and to parties who should have been present. Include a brief summary, in narrative form, of progress since the previous meeting and report.

1. Schedule Updating: Revise the Contractor's Construction Schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue the revised schedule concurrently with the report of each meeting.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01200

SECTION 01300 - SUBMITTALS

PART 1.00 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for submittals required for performance of the Work, including the following:
1. Contractor's construction schedule.
 2. Daily construction reports.
 3. Shop Drawings.
 4. Product Data.
 5. Samples.
 6. Quality assurance submittals.
- B. Administrative Submittals: Refer to other Division 1 Sections and other Contract Documents for requirements for administrative submittals. Such submittals include, but are not limited to, the following:
1. Permits.
 2. Applications for Payment.
 3. Performance and payment bonds.
 4. Insurance certificates.
 5. List of subcontractors.
- C. Related Sections: The following Sections contain requirements that relate to this Section:
1. Division 1 Section "Applications for Payment" specifies requirements for submittal of the Schedule of Values.
 2. Division 1 Section "Project Meetings" specifies requirements for submittal and distribution of meeting and conference minutes.
 3. Division 1 Section "Quality Control" specifies requirements for submittal of inspection and test reports.
 4. Division 1 Section "Contract Closeout" specifies requirements for submittal of Project Record Documents and warranties at project closeout.

1.2 DEFINITIONS

- A. Coordination Drawings show the relationship and integration of different construction elements that require careful coordination during fabrication or installation to fit in the space provided or to function as intended.
1. Preparation of Coordination Drawings is specified in Division 1 Section "Coordination" and may include components previously shown in detail on Shop Drawings or Product Data.
- B. Field samples are full-size physical examples erected on-site to illustrate finishes, coating, or finish materials. Field samples are used to establish the standard by which the Work will be judged.

C. Mockups are full-size assemblies for review of construction, coordination, testing, or operation; they are not Samples.

1.3 SUBMITTAL PROCEDURES

A. Coordination: Coordination preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.

1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.

2. Coordinate transmittal of different types of submittals for related elements of the Work so processing will not be delayed by the need to review submittals concurrently for coordination.

- a. The Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until all related submittals are received.

3. Processing: To avoid the need to delay installation as a result of the time required to process submittals, allow sufficient time for submittal review, including time for resubmittals.

- a. Allow 2 weeks for initial review. Allow additional time if the Architect must delay processing to permit coordination with subsequent submittals.

- b. If an intermediate submittal is necessary, process the same as the initial submittal.

- c. Allow 2 weeks for reprocessing each submittal.

- d. No extension of Contract Time will be authorized because of failure to transmit submittals to the Architect sufficiently in advance of the Work to permit processing.

B. Submittal Preparation: Place a permanent label or title block on each submittal for identification. Indicate the name of the entity that prepared each submittal on the label or title block.

1. Provide a space approximately 4 by 5 inches (100 by 125 mm) on the label or beside the title block on Shop Drawings to record the Contractor's review and approval markings and the action taken.

2. Include the following information on the label for processing and recording action taken.

- a. Project name.

- b. Date.

- c. Name and address of the Architect.

- d. Name and address of the Contractor.

- e. Name and address of the subcontractor.

- f. Name and address of the supplier.

- g. Name of the manufacturer.

- h. Number and title of appropriate Specification Section.

- i. Drawing number and detail references, as appropriate.

C. Submittal Transmittal: Package each submittal appropriately for transmittal and handling.

Transmit each submittal from the Contractor to the Architect using a transmittal form. The Architect will not accept submittals received from sources other than the Contractor.

1. On the transmittal, record relevant information and requests for data. On the form, or separate sheet, record deviations from Contract Document requirements, including variations and limitations. Include Contractor's certification that information complies with Contract Document requirements.

1.4 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Bar-Chart Schedule: Prepare a fully developed, horizontal bar-chart-type, contractor's construction schedule. Submit within 30 days after the date established for "Commencement of the Work."
1. Provide a separate time bar for each significant construction activity. Provide a continuous vertical line to identify the first working day of each week. Use the same breakdown of units of the Work as indicated in the "Schedule of Values."
 2. Within each time bar, indicate estimated completion percentage in 10 percent increments. As Work progresses, place a contrasting mark in each bar to indicate Actual Completion.
 3. Prepare the schedule on a sheet, or series of sheets, of stable transparency, or other reproducible media, of sufficient width to show data for the entire construction period.
 4. Secure time commitments for performing critical elements of the Work from parties involved. Coordinate each element on the schedule with other construction activities; include minor elements involved in the sequence of the Work. Show each activity in proper sequence. Indicate graphically the sequences necessary for completion of related portions of the Work.
 5. Coordinate the Contractor's Construction Schedule with the Schedule of Values, list of subcontractors, Submittal Schedule, progress reports, payment requests, and other schedules.
 6. Indicate completion in advance of the date established for Substantial Completion. Indicate Substantial Completion on the schedule to allow time for the Architect's procedures necessary for certification of Substantial Completion.
- B. Work Stages: Indicate important stages of construction for each major portion of the Work, including submittal review, testing, and installation.
- C. Area Separations: Provide a separate time bar to identify each major construction area for each major portion of the Work. Indicate where each element in an area must be sequenced or integrated with other activities.
- D. Cost Correlation: At the head of the schedule, provide a cost correlation line, indicating planned and actual costs. On the line, show dollar volume of Work performed as of the dates used for preparation of payment requests.

1. Refer to Division 1 Section "Applications for Payment" for cost reporting and Payment procedures.

E. Distribution: Following response to the initial submittal, print and distribute copies to the Architect, Owner, subcontractors, and other parties required to comply with scheduled dates. Post copies in the Project meeting room and temporary field office.

1. When revisions are made, distribute to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in construction activities.

F. Schedule Updating: Revise the schedule after each meeting, event, or activity where revisions have been recognized or made. Issue the updated schedule concurrently with the report of each meeting.

1.5 DAILY CONSTRUCTION REPORTS

A. Prepare a daily construction report recording the following information concerning events at the site, and submit duplicate copies to the Architect at weekly intervals:

1. List of subcontractors at the site.
2. Approximate count of personnel at the site.
3. High and low temperatures, general weather conditions.
4. Accidents and unusual events.
5. Meetings and significant decisions.
6. Stoppages, delays, shortages, and losses.
7. Meter readings and similar recordings.
8. Emergency procedures.
9. Orders and requests of governing authorities.
10. Change Orders received, implemented.
11. Services connected, disconnected.
12. Equipment or system tests and startups.
13. Partial Completions, occupancies.
14. Substantial Completions authorized.

1.6 SHOP DRAWINGS

A. Submit newly prepared information drawn accurately to scale. Highlight, encircle, or otherwise indicate deviations from the Contract Documents. Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings. Standard information prepared without specific reference to the Project is not a Shop Drawing.

B. Shop Drawings include fabrication and installation Drawings, setting diagrams, schedules, patterns, templates and similar Drawings. Include the following information:

1. Dimensions.
2. Identification of products and materials included by sheet and detail number.
3. Compliance with specified standards.

4. Notation of coordination requirements.
5. Notation of dimensions established by field measurement.
6. Sheet size: Except for templates, patterns and similar full-size Drawings, submit shop Drawings on sheets at least 8-1/2 by 11 inches (215 by 280 mm) but no larger than 24 by 36 inches.
7. Initial Submittal: Submit one correctable, translucent, reproducible print and three blue- or black-line prints for the Architect's review. The Architect will return the reproducible print.
8. Final Submittal: Submit 4 blue- or black-line prints and 2 additional prints where required for maintenance manuals, plus the number of prints needed by the Architect for distribution. The Architect will retain 3 prints (one each for Architect, Engineer, and Owner) and return the remainder.
 - a. One of the prints returned shall be marked up and maintained as a "Record Document."
9. Do not use Shop Drawings without an appropriate final stamp indicating action taken.

1.7 PRODUCT DATA

A. Collect Product Data into a single submittal for each element of construction or system. Product Data includes printed information, such as manufacturer's installation instructions, catalog cuts, standard color charts, roughing-in diagrams and templates, standard wiring diagrams, and performance curves.

1. Mark each copy to show applicable choices and options. Where printed Product Data includes information on several products that are not required, mark copies to indicate the applicable information. Include the following information:
 - a. Manufacturer's printed recommendations.
 - b. Compliance with trade association standards.
 - c. Compliance with recognized testing agency standards.
 - d. Application of testing agency labels and seals.
 - e. Notation of dimensions verified by field measurement.
 - f. Notation of coordination requirements.
2. Do not submit Product Data until compliance with requirements of the Contract Documents has been confirmed.
3. Preliminary Submittal: Submit a preliminary single copy of Product Data where selection of options is required.
4. Submittals: Submit 4 copies of each required submittal; submit 5 copies where required for maintenance manuals. The Architect will retain two and will return the other marked with action taken and corrections or modifications required.
 - a. Unless noncompliance with Contract Document provisions is observed, the submittal may serve as the final submittal.
5. Distribution: Furnish copies of final submittal to installers, subcontractors, suppliers, manufacturers, fabricators, and others required for performance of construction activities. Show distribution on transmittal forms.

- a. Do not proceed with installation until a copy of Product Data is in the Installer's possession.
- b. Do not permit use of unmarked copies of Product Data in connection with construction.

1.8 SAMPLES

A. Submit full-size, fully fabricated Samples cured and finished as specified and physically identical with the material or product proposed. Samples include partial sections of manufactured or fabricated components, cuts or containers of materials, color range sets, and swatches showing color, texture, and pattern.

1. Mount or display Samples in the manner to facilitate review of qualities indicated. Prepare Samples to match the Architect's sample. Include the following:

- a. Specification Section number and reference.
- b. Generic description of the Sample.
- c. Sample source.
- d. Product name and or name of the manufacturer.
- e. Compliance with recognized standards.
- f. Availability and delivery time.

2. Submit Samples for review of size, kind, color, pattern, and texture. Submit Samples for a final check of these characteristics with other elements and a comparison of these characteristics between the final submittal and the actual component as delivered and installed.

- a. Where variation in color, pattern, texture, or other characteristic is inherent in the material or product represented, submit at least 3 multiple units that show approximate limits of the variations.
- b. Refer to other Specification Sections for requirements for Samples that illustrate workmanship, fabrication, techniques, details of assembly, connections, operation, and similar construction characteristics.
- c. Refer to other Sections for Samples to be returned to the Contractor for incorporation in the Work. Such Samples must be undamaged at time of use. On the transmittal, indicate special requests regarding disposition of Sample submittals.
- d. Samples not incorporated into the Work, or otherwise designated as the Owner's property, are the property of the Contractor and shall be removed from the site prior to Substantial Completion.

3. Preliminary Submittals: Submit a full set of choices where Samples are submitted for selection of color, pattern, texture, or similar characteristics from a range of standard choices.

- a. The Architect will review and return preliminary submittals with the Architect's notation, indicating selection and other action.

4. Submittals: Except for Samples illustrating assembly details, workmanship, fabrication techniques, connections, operation, and similar characteristics, submit 3 sets. The Architect will return one set marked with the action taken.

5. Maintain sets of Samples, as returned, at the Project Site, for quality comparisons throughout the course of construction.
 - a. Unless noncompliance with Contract Document provisions is observed, the submittal may serve as the final submittal.
 - b. Sample sets may be used to obtain final acceptance of the construction associated with each set.

B. Distribution of Samples: Prepare and distribute additional sets to subcontractors, manufacturers, fabricators, suppliers, installers, and others as required for performance of the Work. Show distribution on transmittal forms.

1. Field samples are full-size examples erected on-site to illustrate finishes, coatings, or finish materials and to establish the Project standard.
 - a. Comply with submittal requirements to the fullest extent possible. Process transmittal forms to provide a record of activity.

1.9 QUALITY ASSURANCE SUBMITTALS

A. Submit quality-control submittals, including design data, certifications, manufacturer's instructions, manufacturer's field reports, and other quality-control submittals as required under other Sections of the Specifications.

B. Certifications: Where other Sections of the Specifications require certification that a product, material, or installation complies with specified requirements, submit a notarized certification from the manufacturer certifying compliance with specified requirements.

1. Signature: Certification shall be signed by an officer of the manufacturer or other individual authorized to sign documents on behalf of the company.

C. Inspection and Test Reports: Requirements for submittal of inspection and test reports from independent testing agencies are specified in Division 1 Section "Quality Control."

1.10 ARCHITECT'S ACTION

A. Except for submittals for the record or information, where action and return is required, the Architect will review each submittal, mark to indicate action taken, and return promptly.

1. Compliance with specified characteristics is the Contractor's responsibility.

B. Action Stamp: The Architect will stamp each submittal with a uniform, action stamp. The Architect will mark the stamp appropriately to indicate the action taken, as follows:

1. Final Unrestricted Release: When the Architect marks a submittal "No Exceptions Taken," the Work covered by the submittal may proceed provided it complies with requirements of the Contract Documents. Final payment depends on that compliance.
2. Final-But-Restricted Release: When the Architect marks a submittal "Make Corrections Noted," the Work covered by the submittal may proceed provided it complies with notations or corrections on the submittal and requirements of the Contract Documents. Final payment depends on that compliance.

3. Returned for Resubmittal: When the Architect marks a submittal "Rejected, Resubmit," do not proceed with Work covered by the submittal, including purchasing, fabrication, delivery, or other activity. Revise or prepare a new submittal according to the notations; resubmit without delay. Repeat if necessary to obtain different action mark.

a. Do not use, or allow others to use, submittals marked "Rejected, Resubmit" at the Project Site or elsewhere where Work is in progress.

4. Other Action: Where a submittal is for information or record purposes or special processing or other activity, the Architect will return the submittal without action.

C. Unsolicited Submittals: The Architect will return unsolicited submittals to the sender without action.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01300

SECTION 01400 - QUALITY CONTROL

PART 1.00 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for quality-control services.
- B. Quality-control services include inspections, tests, and related actions, including reports performed by Contractor, by independent agencies, and by governing authorities. They do not include contract enforcement activities performed by Architect.
- C. Inspection and testing services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with Contract Document requirements.
- D. Requirements of this Section relate to customized fabrication and installation procedures, not production of standard products.
 - 1. Specific quality-control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
 - 2. Specified inspections, tests, and related actions do not limit Contractor's quality-control procedures that facilitate compliance with Contract Document requirements.
 - 3. Requirements for Contractor to provide quality-control services required by Architect, Owner, or authorities having jurisdiction are not limited by provisions of this Section.
- E. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. Division 1 Section "Submittals" specifies requirements for development of a schedule of required tests and inspections.

1.2 RESPONSIBILITIES

- A. Contractor Responsibilities: Unless otherwise indicated as the responsibility of another identified entity, Contractor shall provide inspections, tests, and other quality-control services specified elsewhere in the Contract Documents and required by authorities having jurisdiction.
 - 1. Where individual Sections specifically indicate that certain inspections, tests, and other quality-control services are the Contractor's responsibility, the Contractor shall employ and pay a qualified independent testing agency to perform quality-control services.
 - 2. Where individual Sections specifically indicate that certain inspections, tests, and other quality-control services are the Owner's responsibility, the Owner will employ and pay a qualified independent testing agency to perform those services.
 - a. Where the Owner has engaged a testing agency for testing and inspecting part of the Work, and the Contractor is also required to engage an entity for the same or related element, the Contractor shall not employ the entity engaged by the Owner, unless agreed to in writing by the Owner.

B. Retesting: The contractor is responsible for retesting where results of inspections, tests, or other quality-control services prove unsatisfactory and indicate noncompliance with Contract Document requirements, regardless of whether the original test was Contractor's responsibility.

1. The cost of retesting construction, revised or replaced by the Contractor, is the Contractor's responsibility where required tests performed on original construction indicated noncompliance with Contract Document requirements.

C. Associated Services: Cooperate with agencies performing required inspections, tests, and similar services, and provide reasonable auxiliary services as requested. Notify the agency sufficiently in advance of operations to permit assignment of personnel. Auxiliary services required include, but are not limited to, the following:

1. Provide access to the Work.
2. Furnish incidental labor and facilities necessary to facilitate inspections and tests.
3. Take adequate quantities of representative samples of materials that require testing or assist the agency in taking samples.
4. Provide facilities for storage and curing of test samples.
5. Deliver samples to testing laboratories.
6. Provide the agency with a preliminary design mix proposed for use for materials mixes that require control by the testing agency.
7. Provide security and protection of samples and test equipment at the Project Site.

D. Duties of the Testing Agency: The independent agency engaged to perform inspections, sampling, and testing of materials and construction specified in individual Sections shall cooperate with the Architect and the Contractor in performance of the agency's duties. The testing agency shall provide qualified personnel to perform required inspections and tests.

1. The agency shall notify the Architect and the Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
2. The agency is not authorized to release, revoke, alter, or enlarge requirements of the Contract Documents or approve or accept any portion of the Work.
3. The agency shall not perform any duties of the Contractor.

E. Coordination: Coordinate the sequence of activities to accommodate required services with a minimum of delay. Coordinate activities to avoid the necessity of removing and replacing construction to accommodate inspections and tests.

1. The Contractor is responsible for scheduling times for inspections, tests, taking samples, and similar activities.

1.3 SUMMITTALS

A. Unless the Contractor is responsible for this service, the independent testing agency shall submit a certified written report, in duplicate, of each inspection, test, or similar service to the Architect.

B. If the Contractor is responsible for the service, submit a certified written report, in duplicate, of each inspection, test, or similar service through the Contractor.

1. Submit additional copies of each written report directly to the governing authority, when the authority so directs.

2. Report Data: Written reports of each inspection, test, or similar service include, but are not limited to, the following:

- a. Date of issue.
- b. Project title and number.
- c. Name, address, and telephone number of testing agency.
- d. Dates and locations of samples and tests or inspections.
- e. Names of individuals making the inspection or test.
- f. Designation of the Work and test method.
- g. Identification of product and Specification Section.
- h. Complete inspection or test data.
- i. Test results and an interpretation of test results.
- j. Ambient conditions at the time of sample taking and testing.
- k. Comments or professional opinion on whether inspected or tested Work complies with Contract Document requirements.
- l. Name and signature of laboratory inspector.
- m. Recommendations on retesting.

1.4 QUALITY ASSURANCE

A. Qualifications for Service Agencies: Engage inspection and testing service agencies, including independent testing laboratories, that are prequalified as complying with the American Council of Independent Laboratories' "Recommended Requirements for Independent Laboratory Qualification" and that specialize in the types of inspections and tests to be performed.

1. Each independent inspection and testing agency engaged on the Project shall be authorized by authorities having jurisdiction to operate in the state where the Project is located.

PART 2.00 - PRODUCTS (Not Applicable)

PART 3.00 - EXECUTION

3.1 REPAIR AND PROTECTION

A. General: Upon completion of inspection, testing, sample taking and similar services, repair damaged construction and restore substrates and finishes.

B. Protect construction exposed by or for quality-control service activities, and protect repaired construction.

C. Repair and protection is Contractor's responsibility, regardless of the assignment of responsibility for inspection, testing, or similar services.

END OF SECTION 01400

SECTION 01421 - REFERENCES, STANDARDS, AND DEFINITIONS

PART 1.00 - GENERAL

1.1 DEFINITIONS

- A. General: Basic contract definitions are included in the Conditions of the Contract.
- B. "Indicated": The term "indicated" refers to graphic representations, notes, or schedules on the Drawings; or to other paragraphs or schedules in the Specifications and similar requirements in the Contract Documents. Terms such as "shown," "noted," "scheduled," and "specified" are used to help the user locate the reference. Location is not limited.
- C. "Directed": Terms such as "directed," "requested," "authorized," "selected," "approved," "required," and "permitted" mean directed by the Architect, requested by the Architect, and similar phrases.
- D. "Approved": The term "approved," when used in conjunction with the Architect's action on the Contractor's submittals, applications, and requests, is limited to the Architect's duties and responsibilities as stated in the Conditions of the Contract.
- E. "Regulations": The term "regulations" includes laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, as well as rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. "Furnish": The term "furnish" means to supply and deliver to the Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- G. "Install": The term "install" describes operations at the Project site including the actual unloading, temporary storage, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
- H. "Provide": The term "provide" means to furnish and install, complete and ready for the intended use.
- I. "Installer": An installer is the Contractor or another entity engaged by the Contractor, either as an employee, subcontractor, or contractor of lower tier, to perform a particular construction activity, including installation, erection, application, or similar operations. Installers are required to be experienced in the operations they are engaged to perform.
1. The term "experienced," when used with the term "installer," means having successfully completed a minimum of five previous projects similar in size and scope to this Project; being familiar with the special requirements indicated; and having complied with requirements of authorities having jurisdiction.
 2. Trades: Using a term such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding

generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to tradespersons of the corresponding generic name.

J. "Project site" is the space available to the Contractor for performing construction activities, either exclusively or in conjunction with others performing other work as part of the Project. The extent of the Project site is shown on the Drawings and may or may not be identical with the description of the land on which the Project is to be built.

K. "Testing Agencies": A testing agency is an independent entity engaged to perform specific inspections or tests, either at the Project site or elsewhere, and to report on and, if required, to interpret results of those inspections or tests.

1.2 INDUSTRY STANDARDS

A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.

B. Publication Dates: Comply with standards in effect as of the date of the Contract Documents.

C. Conflicting Requirements: Where compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to the Architect for a decision before proceeding.

1. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of the requirements. Refer uncertainties to the Architect for a decision before proceeding.

D. Copies of Standards: Each entity engaged in construction on the Project must be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.

1. Where copies of standards are needed to perform a required construction activity, the Contractor shall obtain copies directly from the publication source and make them available on request.

E. Abbreviations and Names: Trade association names and titles of general standards are frequently abbreviated. Where abbreviations and acronyms are used in the Specifications or other Contract Documents, they mean the recognized name of the trade association, standards-producing organization, authorities having jurisdiction, or other entity applicable to the context of the text provision. Refer to Gale Research's "Encyclopedia of Associations" or Columbia Books' "National Trade & Professional Associations of the U.S.," which are available in most libraries.

1.3 SUBMITTALS

A. Permits, Licenses, and Certificates: For the Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of Work.

PART 2.00 - PRODUCTS (Not Applicable)

PART 3.00 - EXECUTION (Not Applicable)

END OF SECTION 01421

SECTION 01501 - TEMPORARY FACILITIES AND CONTROLS

PART 1.00 - GENERAL

1.01 Quality Assurance: Temporary facilities and controls shall comply with laws, codes and regulations of the place where the project is located.

1.02 Definitions: Omitted

1.03 Submittals: Omitted

1.04 Product Handling:

A. Use all means necessary to maintain temporary facilities and controls in proper and safe condition throughout the progress of the work.

B. Replacements. In the event of loss or damage, immediately make all replacements and repairs necessary to the approval of the Architect and at no additional cost to the Owner.

1.05 Job Conditions: Make all required connections to existing utility systems necessary to provide temporary utility services described hereinafter in accordance with provisions of this project manual.

PART 2.00 - PRODUCTS

2.01 Temporary Facilities:

A. Field Offices and Sheds:

1. Furnish, install and maintain throughout the work in this project, a field office building adequate in size and accommodation for all of Contractor's offices, superintendent's office, supply and tool room.

2. The field office shall be available to the Architect and /or his representative, the Owner and/or his representative and cooperating agencies throughout the work in this project.

3. The Contractor and his subcontractors may maintain such other offices and storage facilities as may be necessary to the proper conduct of the work in this project.

B. Toilet Facilities: Furnish, install and maintain in a clean and sanitary condition throughout the work in this project, adequate enclosed toilet and washing facilities for use by persons employed on this project.

2.02 Temporary Enclosures and Controls: Furnish, install and maintain, throughout the work in this project, all required scaffolds, tarpaulins, barricades, canopies, warning signs, steps, bridges, platforms and other temporary construction necessary for the proper and safe execution of the work in this project in compliance with all pertinent safety codes and other regulations.

2.03 Temporary Utilities:

A. Water and Sewer:

1. Furnish, install and maintain all necessary temporary water lines, sewer lines and service throughout the work in this project.
2. Cost of furnishing, installing and maintaining temporary water and sewer lines and services shall be paid for by the Contractor.

B. Gas:

1. Furnish, install and maintain all necessary temporary gas service throughout the work of this project.
2. Cost of furnishing, installing and maintaining temporary gas service shall be paid for by the Contractor.

C. Electricity:

1. Furnish, install and maintain all necessary temporary electrical lines and service throughout the work of this project.
2. Furnish and install area distribution boxes so located that individual trades may use 100 feet maximum length extension cords to obtain adequate power and artificial lighting at all points where required for the work, for inspection and for safety.
3. Cost of furnishing, installing and maintaining temporary electrical services shall be paid for by the Contractor.

D. Telephone and Fax (on separate lines):

1. Make all necessary arrangements and pay all costs for installation and operation of telephone service and fax service to the Contractor's field office throughout the work in this project.
2. This telephone and fax shall be made available for use by the Architect or his representative and the Owner or his representative.
3. The Contractor and his or her subcontractors may have other telephones as may be necessary to the proper conduct of the work of this project, making all arrangements for and paying all costs for said additional telephones and service.

E. Heat:

1. Provide, maintain and pay all costs for, throughout the work of this project, temporary heat as necessary to protect all work and materials from damage due to cold or dampness.
2. Fuel, equipment and heating shall not constitute a non-insurable fire hazard and shall be approved by the Architect prior to use.

2.04 Fencing of Construction Area: Omitted

2.05 Haul Roads: Omitted

PART 3.00 - EXECUTION

3.01 Inspection: Omitted

3.02 Installation: Install (locate) field offices, storage sheds, toilet facilities and all other temporary facilities as directed or approved by the Architect.

3.03 Field Quality Control:

A. Maintenance: Maintain all temporary facilities and controls and pay all costs related thereto, in a safe, functioning and sanitary condition throughout work in this project.

B. Removal:

1. Field offices, sheds, toilet facilities, temporary enclosures and controls shall be removed only after approval of their removal by the Architect.
2. Temporary utilities may be removed as soon as permanent utility services are provided and are properly working; cost for maintaining permanent utility service shall be paid by the Contractor until date as determined at time of issuing of the Architect's Certificate of Substantial Completion.

END OF SECTION 01501

SECTION 01700 - CONTRACT CLOSEOUT

PART 1.00 - GENERAL

1.1 SUMMARY

A. This Section includes administrative and procedural requirements for contract closeout including, but not limited to, the following:

1. Inspection procedures.
2. Project record document submittal.
3. Operation and maintenance manual submittal.
4. Submittal of warranties.
5. Final cleaning.

B. Closeout requirements for specific construction activities are included in the appropriate Sections in Divisions 2 through 16.

1.2 SUBSTANTIAL COMPLETION

A. Preliminary Procedures: Before requesting inspection for certification of Substantial Completion, complete the following. List exceptions in the request.

1. In the Application for Payment that coincides with, or first follows, the date Substantial Completion is claimed, show 100 percent completion for the portion of the Work claimed as substantially complete.
 - a. Include supporting documentation for completion as indicated in these Contract Documents and a statement showing an accounting of changes to the Contract Sum.
 - b. If 100 percent completion cannot be shown, include a list of incomplete items, the value of incomplete construction, and reasons the Work is not complete.
2. Advise the Owner of pending insurance changeover requirements.
3. Submit specific warranties, workmanship bonds, maintenance agreements, final certifications, and similar documents.
4. Obtain and submit releases enabling the Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
5. Submit record drawings, maintenance manuals, and similar final record information.
6. Deliver tools, spare parts, extra stock, and similar items.
7. Make final changeover of permanent locks and transmit keys to the Owner. Advise the Owner's personnel of changeover in security provisions.

8. Complete startup testing of systems and instruction of the Owner's operation and maintenance personnel. Discontinue and remove temporary facilities from the site, along with mockups, construction tools, and similar elements.
9. Complete final cleanup requirements, including touchup painting.
10. Touch up and otherwise repair and restore marred, exposed finishes.

B. Inspection Procedures: On receipt of a request for inspection, the Architect will either proceed with inspection or advise the Contractor of unfilled requirements. The Architect will prepare the Certificate of Substantial Completion following inspection or advise the Contractor of construction that must be completed or corrected before the certificate will be issued.

1. The Architect will repeat inspection when requested and assured that the Work is substantially complete.
2. Results of the completed inspection will form the basis of requirements for final acceptance.

1.3 FINAL ACCEPTANCE

A. Preliminary Procedures: Before requesting final inspection for certification of final acceptance and final payment, complete the following. List exceptions in the request.

1. Submit the final payment request with releases and supporting documentation not previously submitted and accepted. Include insurance certificates for products and completed operations where required.
2. Submit an updated final statement, accounting for final additional changes to the Contract Sum.
3. Submit a certified copy of the Architect's final inspection list of items to be completed or corrected, endorsed and dated by the Architect. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance and shall be endorsed and dated by the Architect.
4. Submit final meter readings for utilities, a measured record of stored fuel, and similar data as of the date of Substantial Completion or when the Owner took possession of and assumed responsibility for corresponding elements of the Work.
5. Submit consent of surety to final payment.
6. Submit evidence of final, continuing insurance coverage complying with insurance requirements.

B. Reinspection Procedure: The Architect will reinspect the Work upon receipt of notice that the Work, including inspection list items from earlier inspections, has been completed, except for items whose completion is delayed under circumstances acceptable to the Architect.

1. Upon completion of reinspection, the Architect will prepare a certificate of final acceptance. If the Work is incomplete, the Architect will advise the Contractor of Work that is incomplete or of obligations that have not been fulfilled but are required for final acceptance.
2. If necessary, reinspection will be repeated.

1.4 RECORD DOCUMENT SUBMITTALS

A. General: Do not use record documents for construction purposes. Protect record documents from deterioration and loss in a secure, fire-resistant location. Provide access to record documents for the Architect's reference during normal working hours.

B. Record Drawings: Maintain a clean, undamaged set of blue or black line white-prints of Contract Drawings and Shop Drawings. Mark the set to show the actual installation where the installation varies substantially from the Work as originally shown. Mark which drawing is most capable of showing conditions fully and accurately. Where Shop Drawings are used, record a cross-reference at the corresponding location on the Contract Drawings. Give particular attention to concealed elements that would be difficult to measure and record at a later date.

1. Mark record sets with red erasable pencil. Use other colors to distinguish between variations in separate categories of the Work.
2. Mark new information that is important to the Owner but was not shown on Contract Drawings or Shop Drawings.
3. Note related change-order numbers where applicable.
4. Organize record drawing sheets into manageable sets. Bind sets with durable-paper cover sheets; print suitable titles, dates, and other identification on the cover of each set.

C. Record Specifications: Maintain one complete copy of the Project Manual, including addenda. Include with the Project Manual one copy of other written construction documents, such as Change Orders and modifications issued in printed form during construction.

1. Mark these documents to show substantial variations in actual Work performed in comparison with the text of the Specifications and modifications.
2. Give particular attention to substitutions and selection of operations and information on concealed construction that cannot otherwise be readily discerned later by direct observation.
3. Note related record drawing information and Product Data.
4. Upon completion of the Work, submit record Specifications to the Architect for the Owner's records.

D. Record Product Data: Maintain one copy of each Product Data submittal. Note related Change Orders and markup of record drawings and Specifications.

1. Mark these documents to show significant variations in actual Work performed in comparison with information submitted. Include variations in products delivered to the site and from the manufacturer's installation instructions and recommendations.
2. Give particular attention to concealed products and portions of the Work that cannot otherwise be readily discerned later by direct observation.
3. Upon completion of markup, submit complete set of record Product Data to the Architect for the Owner's records.

E. Record Sample Submitted: Immediately prior to Substantial Completion, the Contractor shall meet with the Architect and the Owner's personnel at the Project Site to determine which Samples are to be transmitted to the Owner for record purposes. Comply with the Owner's instructions regarding delivery to the Owner's Sample storage area.

F. Miscellaneous Record Submittals: Refer to other Specifications Sections for requirements of miscellaneous record keeping and submittals in connection with actual performance of the Work. Immediately prior to the date or dates of Substantial Completion, complete miscellaneous records and place in good order. Identify miscellaneous records properly and bind or file, ready for continued use and reference. Submit to the Architect for the Owner's records.

G. Maintenance Manuals: Organize operation and maintenance data into suitable sets of manageable size. Bind properly indexed data in individual, heavy-duty, 2-inch (51 mm), 3-ring, vinyl-covered binders, with pocket folders for folded sheet information. Mark appropriate identification on front and spine of each binder. Include the following types of information:

1. Emergency instructions.
2. Spare parts list.
3. Copies of warranties.
4. Wiring diagrams.
5. Recommended "turn-around" cycles.
6. Inspection procedures.
7. Shop Drawings and Product Data.
8. Fixture lamping schedule.

PART 2.00 - PRODUCTS (Not Applicable)

PART 3.00 - EXECUTION

3.1 CLOSEOUT PROCEDURES

A. Operation and Maintenance Instructions: Arrange for each Installer of equipment that requires regular maintenance to meet with the Owner's personnel to provide instruction in proper operation and maintenance. Provide instruction by manufacturer's representatives if installers are not experienced in operation and maintenance procedures. Include a detailed review of the following items:

1. Maintenance manuals.
2. Record documents.

3. Spare parts and materials.
4. Tools.
5. Lubricants.
6. Fuels.
7. Identification systems.
8. Control sequences.
9. Hazards.
10. Cleaning.
11. Warranties and bonds.
12. Maintenance agreements and similar continuing commitments.

B. As part of instruction for operating equipment, demonstrate the following procedures:

1. Startup.
2. Shutdown.
3. Emergency operations.
4. Noise and vibration adjustments.
5. Safety procedures.
6. Economy and efficiency adjustments.
7. Effective emergency utilization.

3.2 FINAL CLEANING

A. General: The General Conditions require general cleaning during construction. Regular site cleaning is included in Division 1 Section "Construction Facilities and Temporary Controls."

B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to the condition expected in a normal, commercial building cleaning and maintenance program. Comply with manufacturer's instructions.

1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion.
 - a. Remove labels that are not permanent labels.
 - b. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other substances that are noticeable vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials.
 - c. Clean exposed exterior and interior hard-surfaced finishes to a dust-free condition, free of stains, films, and similar foreign substances. Restore reflective surfaces to their original condition. Leave concrete floors broom clean. Vacuum carpeted surfaces.
 - d. Wipe surfaces of mechanical and electrical equipment. Remove excess lubrication and other substances. Clean plumbing fixtures to a sanitary condition. Clean light fixtures and lamps.
 - e. Clean the site, including landscape development areas, of rubbish, litter, and other foreign substances. Sweep paved areas broom clean; remove stains, spills, and other foreign deposits. Rake grounds that are neither paved nor planted to a smooth, even-textured surface.

C. Pest Control: Engage an experienced, licensed exterminator to make a final inspection and rid the Project of rodents, insects, and other pests.

D. Removal of Protection: Remove temporary protection and facilities installed for protection of the Work during construction.

E. Compliance: Comply with regulations of authorities having jurisdiction and safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on the Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from the site and dispose of lawfully.

1. Where extra materials of value remain after completion of associated Work, they become the Owner's property. Dispose of these materials as directed by the Owner.

END OF SECTION 01700

SECTION 01740 - WARRANTIES

PART 1.00 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for warranties required by the Contract Documents, including manufacturers standard warranties on products and special warranties.
1. Refer to the General Conditions for terms of the Contractor's period for correction of the Work.
- B. Related Sections: The following Sections contain requirements that relate to this Section:
1. Division 1 Section "Submittals" specifies procedures for submitting warranties.
 2. Division 1 Section "Contract Closeout" specifies contract closeout procedures.
 3. Division 2 through 16 Sections for specific requirements for warranties on products and installations specified to be warranted.
 4. Certifications and other commitments and agreements for continuing services to Owner are specified elsewhere in the Contract Documents.
- C. Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the Work that incorporates the products. Manufacturer's disclaimers and limitations on product warranties do not relieve suppliers, manufacturers, and subcontractors required to countersign special warranties with the Contractor.

1.2 WARRANTY REQUIREMENTS

- A. Related Damages and Losses: When correcting failed or damaged warranted construction, remove and replace construction that has been damaged as a result of such failure or must be removed and replaced to provide access for correction or warranted construction.
- B. Reinstatement of Warranty: When Work covered by a warranty has failed and been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.
- C. Replacement Cost: Upon determination that Work covered by a warranty has failed, replace or rebuild the Work to an acceptable condition complying with requirements of the Contract Documents. The Contractor is responsible for the cost of replacing or rebuilding defective Work regardless of whether the Owner has Work regardless of whether the Owner has benefited from use of the Work through a portion of its anticipated useful service life.
- D. Owner's Recourse: Expressed warranties made to the Owner are in addition to implied warranties and shall not limit the duties, obligations, rights, and remedies otherwise available under the law. Expressed warranty periods shall not be interpreted as limitations on the time in which the Owner can enforce such other duties, obligations, rights, or remedies.

1. Rejection of Warranties: The Owner reserves the right to reject warranties and to limit selection to products with warranties not in conflict with requirements of the Contract Documents.

E. Where the Contract Documents require a special warranty, or similar commitment on the Work or part of the Work, the Owner reserves the right to refuse to accept the Work, until the Contractor presents evidence that entities required to countersign such commitments are willing to do so.

1.3 SUBMITTALS

A. Submit written warranties to the Architect prior to the date certified for Substantial Completion. If the Architect's Certificate of Substantial Completion designates a commencement date for warranties other than the date of Substantial Completion for the work, or a designated portion of the Work, submit written warranties upon request of the Architect.

1. When a designated portion of the Work is completed and occupied or used by the Owner, by separate agreement with the Contractor during the construction period, submit properly executed warranties to the Architect within 15 days of completion of that designated portion of the Work.

B. When the Contract Documents require the Contractor, or the Contractor and a subcontractor, supplier or manufacturer to execute a special warranty, prepare a written document that contains appropriate terms and identification, ready for execution by the required parties. Submit a draft to the Owner, through the Architect, for approval prior to final execution.

1. Refer to Divisions 2 through 16 Sections for specific content requirements and particular requirements for submitting special warranties.

C. Bind warranties and bonds in heavy-duty, commercial-quality, durable 3-ring, vinyl-covered loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8 1/2 -by- 11-inch (115 -by- 280-mm) paper.

1. Provide heavy paper dividers with celluloid covered tabs for each separate warranty. Mark the tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product, and the name, address, and telephone number of the Installer.

2. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project title or name, and name of the Contractor.

3. When warranted construction requires operation and maintenance manuals, provide additional copies of each required warranty, as necessary, for inclusion in each required manual.

PART 2.00 - PRODUCTS (Not Applicable)

PART 3.00 - EXECUTION (Not Applicable)

END OF SECTION 01740

SECTION 02110 - DEMOLITION

PART 1.00 - GENERAL

1.01 Quality Assurance:

- A. **Qualifications of Workmen:** Provide at least one person who shall be present at all times during demolition operations and who shall be thoroughly familiar with the requirements of this portion of the work and the methods by which the same is accomplished.
- B. **Codes and Standards:** In addition to complying with all pertinent codes and regulations, comply with the requirements of those insurance carriers providing coverage for this work.
- C. **Contractor's Responsibility:** It shall be the Contractor's responsibility to protect all existing construction designated to remain and to provide for the public safety during all demolition operations.

1.02 Definitions: Omitted

1.03 Submittals: Omitted

1.04 Product Handling:

- A. **Damage to Existing Construction:** In the event of damage to any construction and/or equipment not scheduled to be demolished or removed, the Contractor shall immediately make all repairs and replacements necessary to the approval of the Architect and at no additional cost to the Owner. The Contractor is to provide all necessary barricades, coverings, floor protection, wall protection, door and frame protection to prevent damage to any construction that is to remain.

1.05 Job Conditions:

- A. **Dust Control:** Use all means necessary to prevent the spread of dust during the performance of the work of this section.
- B. **Burning:** On-site burning will not be permitted.
- C. **Hazardous Materials:** Should, during the course of demolition, any suspect hazardous materials be encountered, stop work in suspect area and immediately notify the Architect. See Section F. Items 19 & 20 for additional information.

PART 2.00 - PRODUCTS

2.01 Materials:

- A. **Barricades:** Use only new and solid lumber and plywood of utility grade or better for construction of all temporary barricades.

B. Other Materials: All other material, not specifically described but required for the proper execution of the work of this section shall be selected by the Contractor, subject to approval by the Architect.

PART 3.00 - EXECUTION

3.01 Inspection:

A. The Contractor shall examine the areas and conditions under which the demolition operations are to be carried out; notify the Architect in writing of conditions detrimental to the completion of the demolition; do not proceed with the work until unsatisfactory conditions have been corrected.

3.02 Installation:

A. Preparation:

1. Notification: Notify the Architect at least two full working days prior to commencing the work of this section.
2. Site Inspection: Prior to all work of this section, carefully inspect the entire site and all objects designated to be removed and to be preserved.
3. Clarification: The drawings show generally all existing construction that is to be removed; however,
 - a. Remove existing ceilings as shown on the drawings.
 - b. Removal of various mechanical and electrical items as shown.
 - c. Removal of existing walls, doors, windows, frames, millwork, concrete slabs and floor finishes as shown. **Do not remove any structural columns in walls.**
 - d. Before commencing the work of this section, verify with the Architect all construction that is to be removed.

4. Scheduling:

- a. Schedule all work in a careful manner with all necessary consideration for neighbors and the public.
- b. Avoid interference with the use of and passage to and from adjacent buildings and facilities.

3.03 Field Quality Control:

A. Temporary Barricade: Construct temporary barricades to protect existing construction and the public from damage or harm caused by the work of this section; barricades shall be constructed in accordance with all pertinent codes and regulations.

B. Disconnection of Utilities: Before starting site operations, disconnect or arrange for disconnection of all utility services designated to be removed, performing all such work in accordance with the requirements of the utility company or agency involved.

C. Protection of Utilities: Preserve in operating condition all active utilities traversing the site. all active utilities designated to remain, and make all necessary temporary connections to maintain all utilities to existing building at all times.

D. Demolition: Demolish existing construction designated to be removed on the drawings or as determined under Article 3.02, A, 3, in their entirety.

E. Disposal of Debris: Remove from the site all debris resulting from the demolition operations; burning of debris on site will not be permitted; place of disposal for demolished items shall be the Contractor's responsibility and should be a permitted dump site approved by State of Georgia EPD. Provide Dump Tickets to Owner and Architect

END OF SECTION 02110

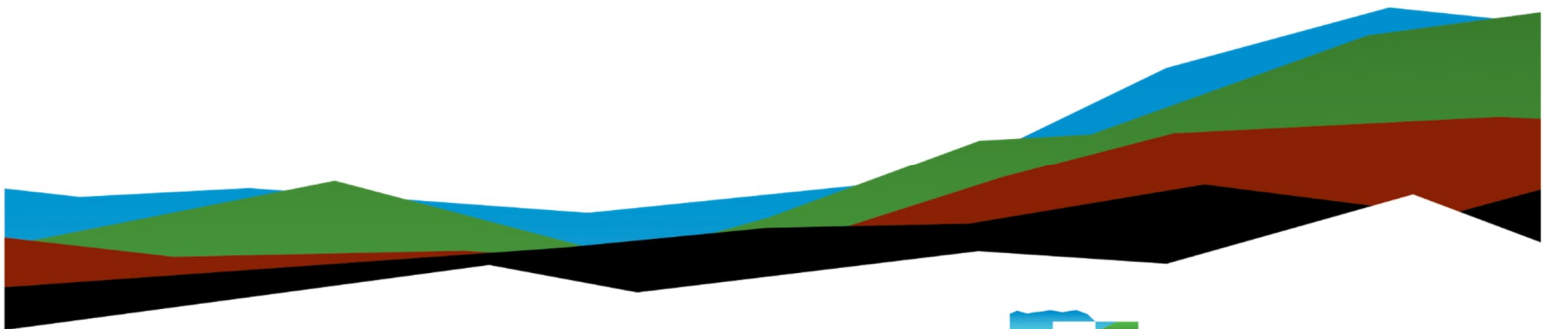
William Griggs Pool and Pavilion

Geotechnical Engineering Report

July 12, 2023 | Terracon Project No. HP235034

Prepared for:

Smith Design Group, Inc.
206 W Haralson St.
LaGrange, GA 30240



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July 12, 2023

Smith Design Group, Inc.
206 W Haralson St.
LaGrange, GA 30240

Attn: Skip Smith
P: (706) 882 5511
E: skip@sdgarch.net

Re: Geotechnical Engineering Report
William Griggs Pool and Pavilion
710 Glenn Roberson
LaGrange, GA
Terracon Project No. HP235034

Dear Mr. Smith:

We have completed the scope of Geotechnical Engineering services for the above referenced project in general accordance with Terracon Proposal No. PHP235034 dated May 24, 2023. This report presents the findings of the subsurface exploration and provides geotechnical recommendations concerning earthwork and the design and construction of foundations and floor slabs for the proposed project.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning this report or if we may be of further service, please contact us.

Sincerely,

Terracon

A handwritten signature in black ink that reads "Brennan Hoy".

Brennan J. Hoy E.I.T.
Staff Engineer

Thomas E. Driver, P.E.
Regional Manager

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Geotechnical Engineering Report

William Griggs Pool and Pavilion | LaGrange, GA

July 12, 2023 | Terracon Project No. HP235034



Note: This report was originally delivered in a web-based format. **Blue Bold** text in the report indicates a referenced section heading. The PDF version also includes hyperlinks which direct the reader to that section and clicking on the  Terracon logo will bring you back to this page. For more interactive features, please view your project online at client.terracon.com.

Refer to each individual Attachment for a listing of contents.

Introduction

This report presents the results of our subsurface exploration and Geotechnical Engineering services performed for the proposed Pool and Pavillion to be located at 710 Glenn Roberson in LaGrange, GA. The purpose of these services was to provide information and geotechnical engineering recommendations relative to:

- Subsurface soil (and rock) conditions
- Groundwater conditions
- Seismic site classification per IBC
- Site preparation and earthwork
- Dewatering considerations
- Foundation design and construction
- Floor slab design and construction
- Lateral earth pressure
- Pavement design and construction
- Frost considerations

The geotechnical engineering Scope of Services for this project included the advancement of test borings, laboratory testing, engineering analysis, and preparation of this report.

Drawings showing the site and boring locations are shown on the **Site Location** and **Exploration Plan**, respectively. The results of the laboratory testing performed on soil samples obtained from the site during our field exploration are included on the boring logs and as separate graphs in the **Exploration Results** section.

Project Description

Our initial understanding of the project was provided in our proposal and was discussed during project planning. A period of collaboration has transpired since the project was initiated, and our final understanding of the project conditions is as follows:

Item	Description
Information Provided	The following document was provided to Terracon: <ul style="list-style-type: none">■ Griggs Complex- Soil Boring Map- 19 May 2023
Project Description	The project consists of the construction of a new pool and pavilion to the north of the existing Griggs complex building. The pool is planned to be approximately 8 feet deep.

Item	Description
Proposed Structures	New pavilion and pool.
Building Construction	The pavilion is expected to be wood framed with a concrete slab on grade. The new swimming pool is expected to be concrete.
Finished Floor Elevation	Finished floor elevation for the new pavilion is anticipated to be 5 to 10 feet above current site grades.
Maximum Loads	In the absence of information provided by the design team, we will use the following loads in estimating settlement based on our experience with similar projects. <ul style="list-style-type: none"> ■ Columns: 20 kips ■ Slabs: 100 pounds per square foot (psf)
Grading/Slopes	It is anticipated that fill on the order of 5 to 10 feet will be needed to achieve final site grades.
Below-Grade Structures	Proposed 8 feet deep swimming pool.
Free-Standing Retaining Walls	Not anticipated.

Terracon should be notified if any of the above information is inconsistent with the planned construction, especially the grading limits, as modifications to our recommendations may be necessary.

Site Conditions

The following description of site conditions is derived from our site visit in association with the field exploration and our review of publicly available geologic and topographic maps.

Item	Description
Parcel Information	The project is located at 710 Glenn Roberson in LaGrange, GA. Latitude/Longitude (approximate) 33.028456° N / -85.015180° W (See Exhibit D) See Site Location
Existing Improvements	Existing playground equipment and utilities.
Current Ground Cover	Grassed.

Item	Description
Existing Topography	The site generally slopes down from east to west with elevations ranging from approximately 714 to 703 feet.

Geotechnical Characterization

We have developed a general characterization of the subsurface conditions based upon our review of the subsurface exploration, laboratory data, geologic setting and our understanding of the project. This characterization, termed GeoModel, forms the basis of our geotechnical calculations and evaluation of the site. Conditions observed at each exploration point are indicated on the individual logs. The individual logs can be found in the **Exploration Results** and the GeoModel can be found in the **Figures** attachment of this report.

As part of our analyses, we identified the following model layers within the subsurface profile. For a more detailed view of the model layer depths at each boring location, refer to the GeoModel.

Model Layer	Layer Name	General Description
1	FILL	Silty Sand (SM), Loose to Medium Dense and Sandy Silt (ML) medium stiff
2	Partially Weathered Rock	Fine to Medium grained, Very Dense, Tan/Gray
3	Silty Sand	Fine to Medium grained, Loose to Medium Dense, Tan/Brown
4	Sandy Silt	Fill, Medium Stiff, Brown/Tan
5	Dense Silty Sand	Fine to Medium grained, Dense to Very Dense, Tan/Brown/Gray

Groundwater conditions may be different at the time of construction. Groundwater conditions may change because of seasonal variations in rainfall, runoff, and other conditions not apparent at the time of drilling. Long-term groundwater monitoring was outside the scope of services for this project.

Site Geology

The project site is located in the Piedmont Physiographic Province of Georgia which is characterized by medium to high grade metamorphic rocks and scattered igneous

intrusions. The term metamorphic describes rocks that have been subjected to high temperatures and/or pressures, usually deep within the earth's crust. These high temperatures and pressures cause the textural and mineralogical characteristics of the original rock to be altered and can also cause certain rock types to fully melt, becoming what is known as magma. Magma is less dense than the surrounding solidified rock and tends to move upward through fractures and joints, displacing the surrounding rock. This rock type is known as an igneous intrusion. Metamorphic rocks are predominant in this region but, due to erosion and uplift, both of these rocks will eventually become exposed at the land surface.

The subsurface bedrock in this region has undergone differing rates of weathering, which often produces a considerable variation in depth to competent rock over short horizontal distances. It is also not unusual for lenses and boulders of hard rock and zones of partially weathered rock to be present within the soil mantle above the general bedrock level. The typical residual soil profile consists of clayey soils near the surface, where soil weathering is more advanced, underlain by sandy silts and silty sands, which often consist of saprolites (native soils which maintain the original fabric of the parent rock). Generally, the soil becomes harder with depth to the top of parent crystalline rock or "massive bedrock" which occurs at depth.

The boundary between soil and rock is typically not sharply defined. A transitional zone termed "partially weathered rock" is normally found overlying bedrock. Partially weathered rock (PWR) is defined for engineering purposes as residual material with a standard penetration resistance exceeding 100 blows per foot (bpf).

Seismic Site Class

The seismic design requirements for buildings and other structures are based on Seismic Design Category. Site Classification is required to determine the Seismic Design Category for a structure. The Site Classification is based on the upper 100 feet of the site profile defined by a weighted average value of either shear wave velocity, standard penetration resistance, or undrained shear strength in accordance with Section 20.4 of ASCE 7 and the International Building Code (IBC). Based on the soil properties observed at the site and as described on the exploration logs and results, our professional opinion is that a **Seismic Site Classification of D** should be considered for the project. Subsurface explorations at this site were extended to a maximum depth of 25 feet. The site properties below the boring depth to 100 feet were estimated based on our experience and knowledge of geologic conditions of the general area. Additional deeper borings or geophysical testing may be performed to confirm the conditions below the current boring depth.

Geotechnical Overview

Trace organics were encountered in the near-surface existing fill soils in most of the borings performed. Based on our understanding of the proposed construction, these soils, if not removed, may be present near the elevation of the bottom of the pool. Excessive settlement of these soils may occur and affect the performance of the pool. As such, we recommend that the soils containing organic materials be partially undercut and replaced with suitable structural fill.

The near surface silty soils could become unstable with typical earthwork and construction traffic, especially after precipitation events. Effective drainage should be completed early in the construction sequence and maintained after construction to avoid potential issues. If possible, the grading should be performed during the warmer and drier times of the year. If grading is performed during the winter months, an increased risk for possible undercutting and replacement of unstable subgrade will persist. Additional site preparation recommendations, including subgrade improvement and fill placement, are provided in the **Earthwork** section.

Support of structures on or above existing fill materials is discussed in this report. However, even with the recommended construction procedures, an inherent risk remains for the owner that compressible fill or unsuitable material, within or buried by the fill, will not be discovered. This risk of unforeseen conditions cannot be eliminated without completely removing the existing fill but can be reduced by following the recommendations contained in this report. To take advantage of the cost benefit of not removing the entire amount of undocumented fill, the owner must be willing to accept the risk of increased differential performance which can result in increased cracking and abrupt differential settlement. Should this risk be acceptable, floor slabs and pavements can be supported above the fill.

The recommendations contained in this report are based upon the results of field and laboratory testing (presented in the **Exploration Results**), engineering analyses, and our current understanding of the proposed project. The **General Comments** section provides an understanding of the report limitations.

Earthwork

Earthwork is anticipated to include topsoil stripping, excavations, and engineered fill placement. The following sections provide recommendations for use in the preparation of specifications for the work. Recommendations include critical quality criteria, as necessary, to render the site in the state considered in our geotechnical engineering evaluation for foundations and below grade structures.

UNDERCUTTING RECOMMENDATION

Site Preparation

Prior to placing fill, existing vegetation, topsoil, and root mats should be removed. Complete stripping of the topsoil should be performed in the proposed pavilion and pool areas. Additionally, we recommend that the soils containing organic materials be partially undercut and replaced with suitable structural fill. Undercutting on the order of 3 to 4 feet should be anticipated for below-grade structures.

Where fill is placed on existing slopes steeper than 5H:1V, benches should be cut into the existing slopes prior to fill placement. The benches should have a minimum vertical face height of 1 foot and a maximum vertical face height of 3 feet and should be cut wide enough to accommodate the compaction equipment. This benching will help provide a positive bond between the fill and natural soils and reduce the possibility of failure along the fill/natural soil interface.



Subgrade Preparation

We recommend that the soils which contain organic materials within the footprint of the proposed structures be removed to a depth of approximately 3 to 4 feet below the bottom of footings or bearing elevations. Structural fill placed beneath the entire footprint of the foundations should extend horizontally a minimum distance of 10 feet beyond the outside edge of footings. Portions of the near-surface materials anticipated to be developed as excavation spoils are not considered suitable for use as structural fill.

After stripping and undercutting, the subgrade should be proofrolled with an adequately loaded vehicle such as a fully-loaded tandem-axle dump truck. The proofrolling should be performed under the observation of the Geotechnical Engineer or representative. Areas excessively deflecting under the proofroll should be delineated and subsequently addressed by the Geotechnical Engineer. Such areas should either be removed or modified by as directed by the Geotechnical Engineer. Excessively wet or dry material should either be removed or moisture conditioned and recompacted.

All exposed areas which will receive fill, once properly cleared and benched where necessary, should be scarified to a minimum depth of 10 inches, moisture conditioned as necessary, and compacted per the compaction requirements in this report. Compacted structural fill soils should then be placed to the proposed design grade and the moisture content and compaction of subgrade soils should be maintained until foundation or pavement construction.

Based upon the subsurface conditions determined from the geotechnical exploration, subgrade soils exposed during construction are anticipated to be relatively workable; however, the workability of the subgrade may be affected by precipitation, repetitive construction traffic or other factors. If unworkable conditions develop, workability may be improved by scarifying and drying.

Existing Fill

As noted in **Geotechnical Characterization**, each of the borings encountered previously placed fill to depths ranging from about 2 to 7.5 feet. We have no records to indicate the degree of control, and consequently, the fill is considered unreliable for support of the proposed construction without some remediation. Support of structures on or above existing fill soils is discussed in this report. However, even with the recommended construction procedures, inherent risk exists for the owner that compressible fill or unsuitable material, within or buried by the fill will, not be discovered. This risk of unforeseen conditions cannot be eliminated without completely removing the existing fill but can be reduced by following the recommendations contained in this report.

If the owner elects to construct on the existing fill, the following protocol should be followed. Once the planned subgrade elevation has been reached, the entire area should be proofrolled. Areas of soft or otherwise unsuitable material should be undercut and replaced with either new structural fill or suitable, existing on site materials.

Excavation

Partially Weathered Rock (PWR) and auger refusal materials were encountered. However, based on our understanding of project, we do not anticipate that these materials will be encountered during mass grading or utility installation. We anticipate that excavations for the proposed construction can be accomplished with conventional earthmoving equipment. The bottom of excavations should be thoroughly cleaned of loose soils and disturbed materials prior to backfill placement and/or construction.

Fill Material Types

Fill required to achieve design grade should be classified as structural fill and general fill. Structural fill is material used below, or within 10 feet of structures. General fill is material used to achieve grade outside of these areas.

Reuse of On-Site Soil: Much of the on-site soil contained organics and is not anticipated to be suitable for reuse as Structural Fill and should not be placed beneath settlement sensitive structures and within foundation bearing zones.

Material property requirements for on-site soil for use as general fill and structural fill are noted in the table below:

Property	General Fill	Structural Fill
Composition	Free of deleterious material	Free of deleterious material

IMPORTED FILL MATERIALS REQUIREMENTS

Geotechnical Engineering Report

William Griggs Pool and Pavilion | LaGrange, GA

July 12, 2023 | Terracon Project No. HP235034



Property	General Fill	Structural Fill
Maximum particle size	6 inches (or 2/3 of the lift thickness)	3 inches
Fines content	Not limited	Not limited
Plasticity	Not limited	Maximum plasticity index of 30
GeoModel Layer Expected to be Suitable ^{1,2}	1, 2, 3	3, 4

1. Based on subsurface exploration. Actual material suitability should be determined in the field at time of construction.
2. If Partially Weathered Rock (PWR) materials are encountered, the materials should be processed in accordance with the maximum particle size requirements prior to use as fill.

Imported Fill Materials: Imported fill materials should meet the following material property requirements. Regardless of its source, compacted fill should consist of approved materials that are free of organic matter and debris. Frozen material should not be used, and fill should not be placed on a frozen subgrade.

Soil Type ¹	USCS Classification	Acceptable Parameters (for Structural Fill)
Low Plasticity Cohesive	CL, CL-ML ML, SM, SC	Liquid Limit less than 50 Plasticity index less than 30 Less than 25% retained on No. 200 sieve
Granular	GW, GP, GM, GC, SW, SP, SM, SC	Less than 50% passing No. 200 sieve

1. Structural and general fill should consist of approved materials free of organic matter and debris. Frozen material should not be used, and fill should not be placed on a frozen subgrade. A sample of each material type should be submitted to the Geotechnical Engineer for evaluation prior to use on this site.

Fill Placement and Compaction Requirements

Structural and general fill should meet the following compaction requirements.

Item	Structural Fill	General Fill
Maximum Lift Thickness	8 inches or less in loose thickness when heavy, self-propelled compaction equipment is used 4 to 6 inches in loose thickness when hand-guided equipment (i.e. jumping jack or plate compactor) is used	Same as structural fill
Minimum Compaction Requirements ^{1,2}	98% of max. below foundations and within 1 foot of finished pavement subgrade 95% of max. above foundations, below floor slabs, and more than 1 foot below finished pavement subgrade	92% of max.
Water Content Range ¹	-3% to +3% of optimum	As required to achieve min. compaction requirements

1. Maximum density and optimum water content as determined by the standard Proctor test (ASTM D 698).
2. High plasticity cohesive fill should not be compacted to more than 100% of standard Proctor maximum dry density.

Utility Trench Backfill

Any soft or unsuitable materials encountered at the bottom of utility trench excavations should be removed and replaced with structural fill or bedding material in accordance with public works specifications for the utility being supported. This recommendation is particularly applicable to utility work requiring grade control and/or in areas where subsequent grade raising could cause settlement in the subgrade supporting the utility. Trench excavation should not be conducted below a downward 1:1 projection from existing foundations without engineering review of shoring requirements and geotechnical observation during construction.

On-site materials are considered suitable for backfill of utility and pipe trenches from one foot above the top of the pipe to the final ground surface, provided the material is free of organic matter and deleterious substances.

Trench backfill should be mechanically placed and compacted as discussed earlier in this report. Compaction of initial lifts should be accomplished with hand-operated tampers or other lightweight compactors. Where trenches are placed beneath slabs or footings, the backfill should satisfy the gradation and expansion index requirements of engineered fill discussed in this report.

For low permeability subgrades, utility trenches are a common source of water infiltration and migration. Utility trenches penetrating beneath the structures should be effectively sealed to restrict water intrusion and flow through the trenches, which could migrate below the building. The trench should provide an effective trench plug that extends at least 5 feet from the face of the building exterior. The plug material should consist of cementitious flowable fill or low permeability clay. The trench plug material should be placed to surround the utility line. If used, the clay trench plug material should be placed and compacted to comply with the water content and compaction recommendations for structural fill stated previously in this report.

Grading and Drainage

All grades must provide effective drainage away from the building during and after construction and should be maintained throughout the life of the structure. Water retained next to the building can result in soil movements greater than those discussed in this report. Greater movements can result in unacceptable differential floor slab and/or foundation movements, cracked slabs and walls, and roof leaks. The roof should have gutters/drains with downspouts that discharge onto splash blocks at a distance of at least 10 feet from the building.

Exposed ground should be sloped and maintained at a minimum 5% away from the building for at least 10 feet beyond the perimeter of the building. Locally, flatter grades may be necessary to transition ADA access requirements for flatwork. After building construction and landscaping have been completed, final grades should be verified to document effective drainage has been achieved. Grades around the structure should also be periodically inspected and adjusted, as necessary, as part of the structure's maintenance program. Where paving or flatwork abuts the structure, a maintenance program should be established to effectively seal and maintain joints and prevent surface water infiltration.

Earthwork Construction Considerations

Shallow excavations for the proposed structures are anticipated to be accomplished with conventional construction equipment. Upon completion of filling and grading, care should be taken to maintain the subgrade water content prior to construction of grade-supported improvements such as floor slabs and pavements. Construction traffic over the completed subgrades should be avoided. The site should also be graded to prevent ponding of surface water on the prepared subgrades or in excavations. Water collecting over or adjacent to construction areas should be removed. If the subgrade freezes, desiccates, saturates, or is disturbed, the affected material should be removed, or the materials should be scarified, moisture conditioned, and recompacted prior to floor slab construction.

Groundwater was encountered in each of the borings during our exploration. Based on our understanding of the proposed development, it is possible that groundwater may affect construction. If groundwater is encountered during construction, some form of temporary or permanent dewatering may be required. Conventional dewatering methods, such as pumping from sumps, should likely be adequate for temporary removal of any groundwater encountered during excavation at the site. Well points would likely be required for significant groundwater flow, or where excavations penetrate groundwater.

Construction site safety is the sole responsibility of the contractor who controls the means, methods, and sequencing of construction operations. Under no circumstances shall the information provided herein be interpreted to mean Terracon is assuming responsibility for construction site safety or the contractor's activities; such responsibility shall neither be implied nor inferred.

As a minimum, excavations should be performed in accordance with OSHA 29 CFR, Part 1926, Subpart P, "Excavations" and its appendices, and in accordance with any applicable local and/or state regulations. All excavations should be sloped or braced as required by Occupational Safety and Health Administration (OSHA) regulations to provide stability and safe working conditions. Temporary excavations will probably be required during grading operations. The grading contractor, by his contract, is usually responsible for designing and constructing stable, temporary excavations and should shore, slope or bench the sides of the excavations as required to maintain stability of both the excavation sides and bottom. All excavations should comply with applicable local, state and federal safety regulations, including the current OSHA Excavation and Trench Safety Standards.

Our scope of services did not include an analysis of slope stability using laboratory derived shear strength data. However, in this geologic region, up to 20-foot tall slopes are regularly built at inclinations of up to 2(H):1(V) and perform satisfactory if properly constructed, are not inundated or subject to rapid drawdown conditions. Shallow sloughing at the surface can occur when slopes are not properly constructed and/or exposed to inclement weather prior to placement of vegetative cover. It is advisable to create a berm at the midpoint of taller slopes to help reduce slope erosion. We recommend that fill slopes be over filled and cut back to develop an adequately compacted slope face rather than tracking in the slope face for compaction. In addition, for erosion protection, a protective vegetative cover should be established on temporary and permanent slopes as soon as possible.

Construction Observation and Testing

The earthwork efforts should be observed by the Geotechnical Engineer (or others under their direction). Observation should include documentation of adequate removal of surficial materials (vegetation, topsoil, and pavements), evaluation and remediation of existing fill materials, as well as proofrolling and mitigation of unsuitable areas delineated by the proofroll.

Each lift of compacted fill should be tested, evaluated, and reworked, as necessary, as recommended by the Geotechnical Engineer prior to placement of additional lifts. Each lift of fill should be tested for density and water content at a frequency of at least one test for every 2,500 square feet of compacted fill in structural areas. Where not specified by local ordinance, one density and water content test should be performed for every 100 linear feet of compacted utility trench backfill and a minimum of one test performed for every 12 vertical inches of compacted backfill.

In areas of foundation excavations, the bearing subgrade should be evaluated by the Geotechnical Engineer. If unanticipated conditions are observed, the Geotechnical Engineer should prescribe mitigation options.

In addition to the documentation of the essential parameters necessary for construction, the continuation of the Geotechnical Engineer into the construction phase of the project provides the continuity to maintain the Geotechnical Engineer's evaluation of subsurface conditions, including assessing variations and associated design changes.

Shallow Foundations

If the site has been prepared in accordance with the requirements noted in **Earthwork**, the following design parameters are applicable for shallow foundations.

Design Parameters – Compressive Loads

Item	Description
Maximum Net Allowable Bearing Pressure ^{1, 2}	2,500 psf
Required Bearing Stratum ³	Structural fill
Minimum Foundation Dimensions	Columns: 24 inches Continuous Footings: 16 inches
Ultimate Passive Resistance ⁴ (equivalent fluid pressures)	300 pcf
Sliding Resistance ⁵	0.35
Minimum Embedment below Finished Grade ⁶	18 inches
Estimated Total Settlement from Structural Loads ²	Less than about 1 inch
Estimated Differential Settlement ^{2, 7}	About 1/2 of total settlement

Item	Description
<ol style="list-style-type: none"> 1. The maximum net allowable bearing pressure is the pressure in excess of the minimum surrounding overburden pressure at the footing base elevation. Values assume that exterior grades are no steeper than 10% within 10 feet of structure. 2. Values provided are for maximum loads noted in Project Description. Additional geotechnical consultation will be necessary if higher loads are anticipated. 3. Unsuitable or soft soils should be overexcavated and replaced per the recommendations presented in Earthwork. 4. Use of passive earth pressures require the sides of the excavation for the spread footing foundation to be nearly vertical and the concrete placed neat against these vertical faces or that the footing forms be removed and compacted structural fill be placed against the vertical footing face. Assumes no hydrostatic pressure. 5. Can be used to compute sliding resistance where foundations are placed on suitable soil/materials. Frictional resistance for granular materials is dependent on the bearing pressure which may vary due to load combinations. For fine-grained materials, lateral resistance using cohesion should not exceed ½ the dead load. 6. Embedment necessary to minimize the effects of frost and/or seasonal water content variations. For sloping ground, maintain depth below the lowest adjacent exterior grade within 5 horizontal feet of the structure. 7. Differential settlements are noted for equivalent-loaded foundations and bearing elevation as measured over a span of 40 feet. 	

Design Parameters – Overturning and Uplift Loads

Shallow foundations subjected to overturning loads should be proportioned such that the resultant eccentricity is maintained in the center-third of the foundation (e.g., $e < b/6$, where b is the foundation width). This requirement is intended to keep the entire foundation area in compression during the extreme lateral/overturning load event. Foundation oversizing may be required to satisfy this condition.

Uplift resistance of spread footings can be developed from the effective weight of the footing and the overlying soils with consideration to the IBC basic load combinations.

Item	Description
Soil Moist Unit Weight	120 pcf
Soil Effective Unit Weight¹	50 pcf
Soil weight included in uplift resistance	Soil included within the prism extending up from the top perimeter of the footing at an angle of 20 degrees from vertical to ground surface

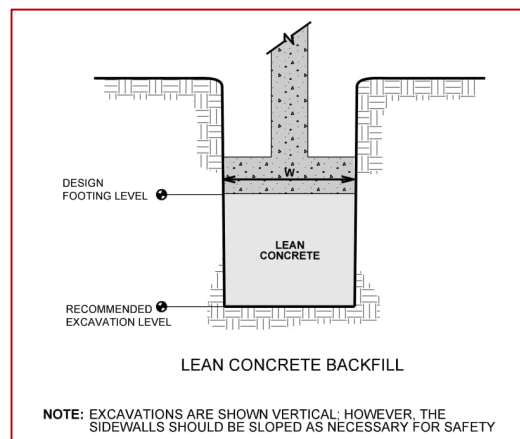
1. Effective (or buoyant) unit weight should be used for soil above the foundation level and below a water level. The high groundwater level should be used in uplift design as applicable.

Foundation Construction Considerations

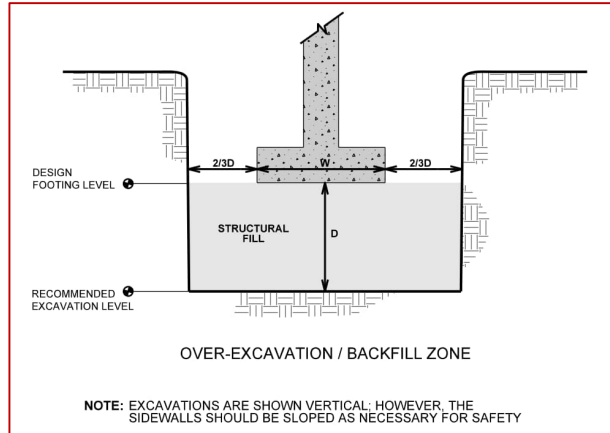
As noted in **Earthwork**, the footing excavations should be evaluated under the observation of the Geotechnical Engineer. The base of all foundation excavations should be free of water and loose soil, prior to placing concrete. Concrete should be placed soon after excavating to reduce bearing soil disturbance. Care should be taken to prevent wetting or drying of the bearing materials during construction. Excessively wet or dry material or any loose/disturbed material in the bottom of the footing excavations should be removed/reconditioned before foundation concrete is placed.

Sensitive soils exposed at the surface of footing excavations may require surficial compaction with hand-held dynamic compaction equipment prior to placing structural fill, steel, and/or concrete. Should surficial compaction not be adequate, construction of a working surface consisting of either crushed stone or a lean concrete mud mat may be required prior to the placement of reinforcing steel and construction of foundations.

If unsuitable bearing soils are observed at the base of the planned footing excavation, the excavation should be extended deeper to suitable soils, and the footings could bear directly on these soils at the lower level or on lean concrete backfill placed in the excavations. The lean concrete replacement zone is illustrated on the sketch below.



Overexcavation for structural fill placement below footings should be conducted as shown below. The overexcavation should be backfilled up to the footing base elevation as recommended in the **Earthwork** section.

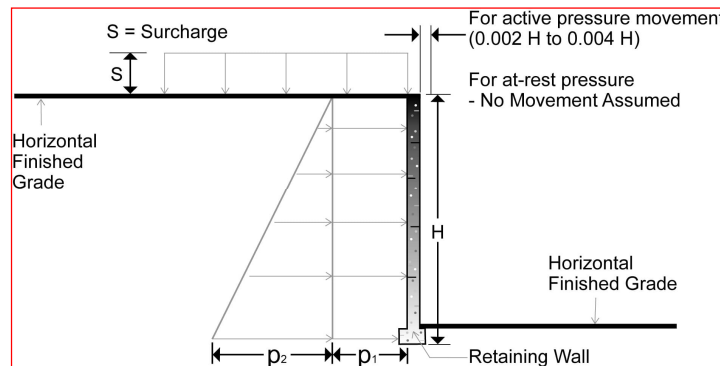


Below-Grade Structures

Existing fill materials containing organics were observed at the site in most of the borings performed. As previously described, partial undercutting on the order of 3 to 4 feet and replacement with suitable structural fill is recommended. The area should be further evaluated at the time of construction to refine recommendations as needed.

Design Parameters

Structures with unbalanced backfill levels on opposite sides should be designed for earth pressures at least equal to values indicated in the following table. Earth pressures will be influenced by structural design of the walls, conditions of wall restraint, methods of construction, and/or compaction and the strength of the materials being restrained. Two wall restraint conditions are shown in the diagram below. Active earth pressure is commonly used for design of free-standing cantilever retaining walls and assumes wall movement. The “at-rest” condition assumes no wall movement and is commonly used for basement walls, loading dock walls, or other walls restrained at the top. The recommended design lateral earth pressures do not include a factor of safety and do not provide for possible hydrostatic pressure on the walls (unless stated).



Lateral Earth Pressure Design Parameters

Earth Pressure Condition ¹	Coefficient for Backfill Type ²	Surcharge Pressure ³ p ₁ (psf)	Equivalent Fluid Pressures (psf) ^{2,4}	
			Unsaturated ⁵	Submerged ⁵
Active (K _a)	Granular - 0.31	(0.31)S	(40)H	(80)H
	Fine Grained - 0.41	(0.41)S	(50)H	(85)H
At-Rest (K _o)	Granular - 0.47	(0.47)S	(55)H	(90)H
	Fine Grained - 0.58	(0.58)S	(70)H	(95)H

1. For active earth pressure, wall must rotate about base, with top lateral movements 0.002 H to 0.004 H, where H is wall height. For passive earth pressure, wall must move horizontally to mobilize resistance. Fat clay or other expansive soils should not be used as backfill behind the wall.
2. Uniform, horizontal backfill, with a maximum unit weight of 110 pcf for cohesive soils and 120 pcf for granular soils.
3. Uniform surcharge, where S is surcharge pressure.
4. Loading from heavy compaction equipment is not included.
5. To achieve "Unsaturated" conditions, follow guidelines in **Subsurface Drainage for Below-Grade Walls** below. "Submerged" conditions are recommended when drainage behind walls is not incorporated into the design.

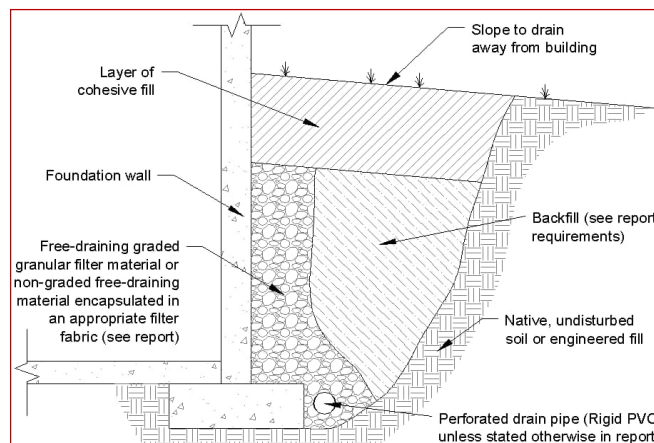
Backfill placed against structures should consist of granular soils or low plasticity cohesive soils. For the granular values to be valid, the granular backfill must extend out and up from the base of the wall at an angle of at least 45 degrees from vertical for the active case.

Footings, slabs or other loads bearing on backfill behind walls may have a significant influence on the lateral earth pressure. Placing footings within wall backfill and in the zone of active soil influence on the wall should be avoided unless structural analyses indicate the wall can safely withstand the increased pressure.

The lateral earth pressure recommendations given in this section are applicable to the design of rigid retaining walls subject to slight rotation, such as cantilever, or gravity type concrete walls. These recommendations are not applicable to the design of modular block - geogrid reinforced backfill walls (also termed MSE walls). Recommendations covering these types of wall systems are beyond the scope of services for this assignment. However, we would be pleased to develop a proposal for evaluation and design of such wall systems upon request.

Subsurface Drainage for Below-Grade Walls

A perforated rigid plastic drain line installed behind the base of walls and extends below adjacent grade is recommended to prevent hydrostatic loading on the walls. The invert of a drain line around a below-grade building area or exterior retaining wall should be placed near foundation bearing level. The drain line should be sloped to provide positive gravity drainage to daylight or to a sump pit and pump. The drain line should be surrounded by clean, free-draining granular material having less than 5% passing the No. 200 sieve, such as No. 57 aggregate. The free-draining aggregate should be encapsulated in a filter fabric. The granular fill should extend to within 2 feet of final grade, where it should be capped with compacted cohesive fill to reduce infiltration of surface water into the drain system.



As an alternative to free-draining granular fill, a prefabricated drainage structure may be used. A prefabricated drainage structure is a plastic drainage core or mesh which is covered with filter fabric to prevent soil intrusion and is fastened to the wall prior to placing backfill.

General Comments

Our analysis and opinions are based upon our understanding of the project, the geotechnical conditions in the area, and the data obtained from our site exploration. Variations will occur between exploration point locations or due to the modifying effects of construction or weather. The nature and extent of such variations may not become evident until during or after construction. Terracon should be retained as the Geotechnical Engineer, where noted in this report, to provide observation and testing services during pertinent construction phases. If variations appear, we can provide further evaluation and supplemental recommendations. If variations are noted in the absence of our observation and testing services on-site, we should be immediately notified so that we can provide evaluation and supplemental recommendations.

Geotechnical Engineering Report

William Griggs Pool and Pavilion | LaGrange, GA

July 12, 2023 | Terracon Project No. HP235034



Our Scope of Services does not include either specifically or by implication any environmental or biological (e.g., mold, fungi, bacteria) assessment of the site or identification or prevention of pollutants, hazardous materials or conditions. If the owner is concerned about the potential for such contamination or pollution, other studies should be undertaken.

Our services and any correspondence are intended for the sole benefit and exclusive use of our client for specific application to the project discussed and are accomplished in accordance with generally accepted geotechnical engineering practices with no third-party beneficiaries intended. Any third-party access to services or correspondence is solely for information purposes to support the services provided by Terracon to our client. Reliance upon the services and any work product is limited to our client and is not intended for third parties. Any use or reliance of the provided information by third parties is done solely at their own risk. No warranties, either express or implied, are intended or made.

Site characteristics as provided are for design purposes and not to estimate excavation cost. Any use of our report in that regard is done at the sole risk of the excavating cost estimator as there may be variations on the site that are not apparent in the data that could significantly effect excavation cost. Any parties charged with estimating excavation costs should seek their own site characterization for specific purposes to obtain the specific level of detail necessary for costing. Site safety and cost estimating including excavation support and dewatering requirements/design are the responsibility of others. Construction and site development have the potential to affect adjacent properties. Such impacts can include damages due to vibration, modification of groundwater/surface water flow during construction, foundation movement due to undermining or subsidence from excavation, as well as noise or air quality concerns. Evaluation of these items on nearby properties are commonly associated with contractor means and methods and are not addressed in this report. The owner and contractor should consider a preconstruction/precondition survey of surrounding development. If changes in the nature, design, or location of the project are planned, our conclusions and recommendations shall not be considered valid unless we review the changes and either verify or modify our conclusions in writing.

Geotechnical Engineering Report

William Griggs Pool and Pavilion | LaGrange, GA

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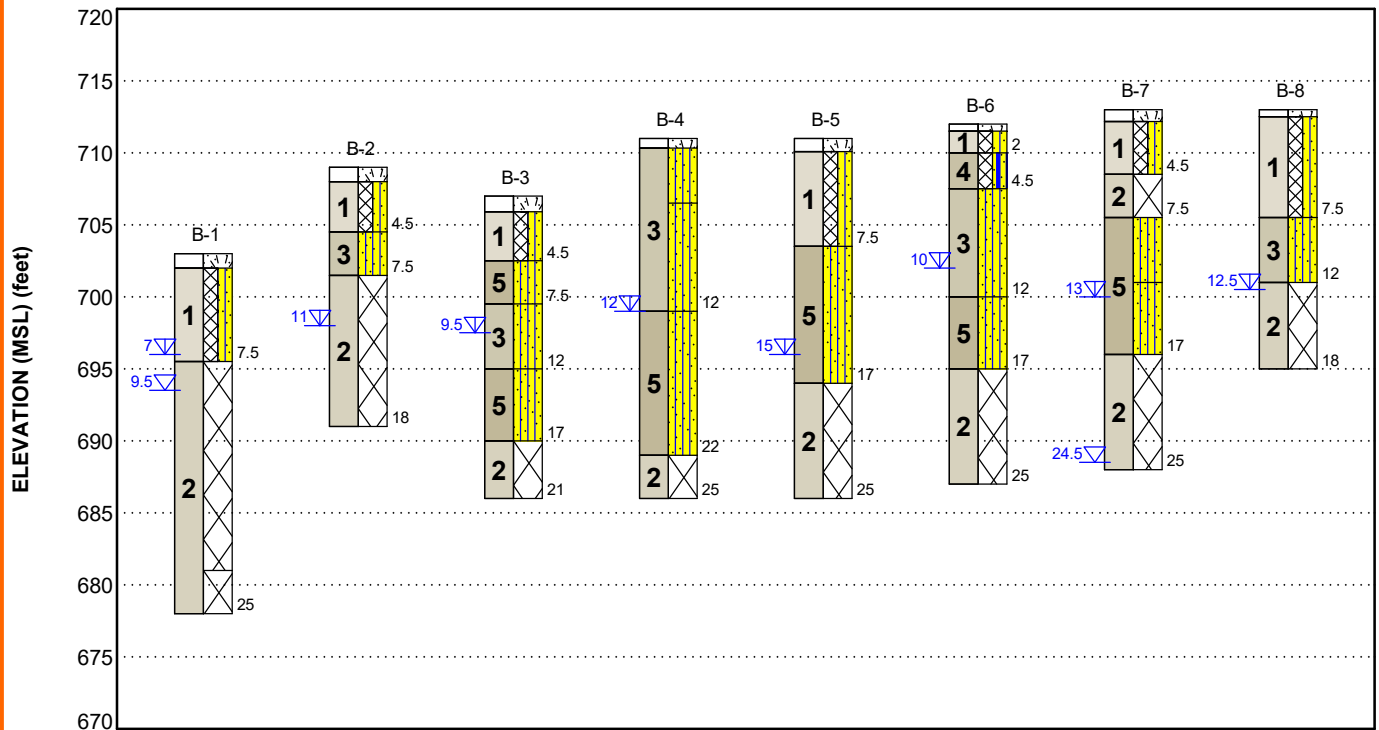
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GeoModel

GEOMODEL

William Griggs Pool and Pavilion ■ LaGrange, GA
 Terracon Project No. HP235034



This is not a cross section. This is intended to display the Geotechnical Model only. See individual logs for more detailed conditions.

Model Layer	Layer Name	General Description
1	FILL	Silty Sand (SM), Loose to Medium Dense and Sandy Silt (ML) medium stiff
2	Partially Weathered Rock	Fine to Medium grained, Very Dense, Tan/Gray
3	Silty Sand	Fine to Medium grained, Loose to Medium Dense, Tan/Brown
4	Sandy Silt	Fill, Medium Stiff, Brown/Tan
5	Dense Silty Sand	Fine to Medium grained, Dense to Very Dense, Tan/Brown/Gray

LEGEND

- Topsoil
- Sandy Silt
- Silty Sand
- Weathered Rock

- First Water Observation
- Second Water Observation

NOTES:

Layering shown on this figure has been developed by the geotechnical engineer for purposes of modeling the subsurface conditions as required for the subsequent geotechnical engineering for this project. Numbers adjacent to soil column indicate depth below ground surface.

The groundwater levels shown are representative of the date and time of our exploration. Significant changes are possible over time. Water levels shown are as measured during and/or after drilling. In some cases, boring advancement methods mask the presence/absence of groundwater. See individual logs for details.

Geotechnical Engineering Report

William Griggs Pool and Pavilion | LaGrange, GA

July 12, 2023 | Terracon Project No. HP235034



Attachments

Exploration and Testing Procedures

Field Exploration

Number of Borings	Approximate Boring Depth (feet)	Location
8	18 to 25	Pavilion and Pool

Boring Layout and Elevations: Terracon personnel provided the boring layout using handheld GPS equipment (estimated horizontal accuracy of about ± 10 feet) and referencing existing site features. Approximate ground surface elevations were obtained by interpolation from the provided Grading Plan. If elevations and a more precise boring layout are desired, we recommend borings be surveyed.

Subsurface Exploration Procedures: We advanced the borings with an ATV-mounted drill rig using continuous flight hollow stem augers. Four samples were obtained in the upper 10 feet of each boring and at intervals of 5 feet thereafter. In the split-barrel sampling procedure, a standard 2-inch outer diameter split-barrel sampling spoon was driven into the ground by a 140-pound automatic hammer falling a distance of 30 inches. The number of blows required to advance the sampling spoon the last 12 inches of a normal 18-inch penetration is recorded as the Standard Penetration Test (SPT) resistance value. The SPT resistance values, also referred to as N-values, are indicated on the boring logs at the test depths. We observed and recorded groundwater levels during drilling and sampling. For safety purposes, all borings were backfilled with auger cuttings after their completion.

The sampling depths, penetration distances, and other sampling information was recorded on the field boring logs. The samples were placed in appropriate containers and taken to our soil laboratory for testing and classification by a Geotechnical Engineer. Our exploration team prepared field boring logs as part of the drilling operations. These field logs included visual classifications of the materials observed during drilling and our interpretation of the subsurface conditions between samples. Final boring logs were prepared from the field logs. The final boring logs represent the Geotechnical Engineer's interpretation of the field logs and include modifications based on observations and tests of the samples in our laboratory.

Geotechnical Engineering Report

William Griggs Pool and Pavilion | LaGrange, GA

July 12, 2023 | Terracon Project No. HP235034



Site Location and Exploration Plans

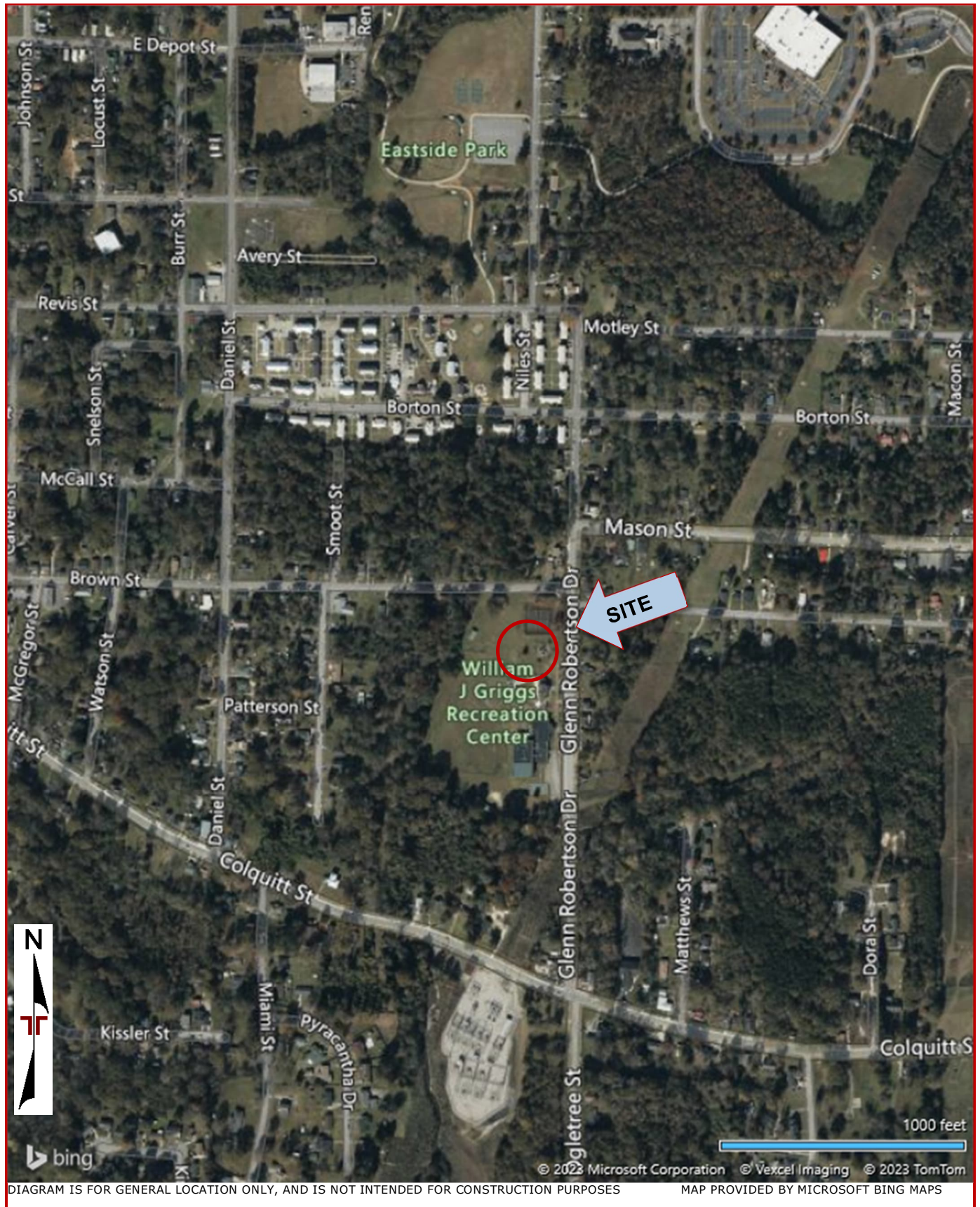
Contents:

Site Location Plan

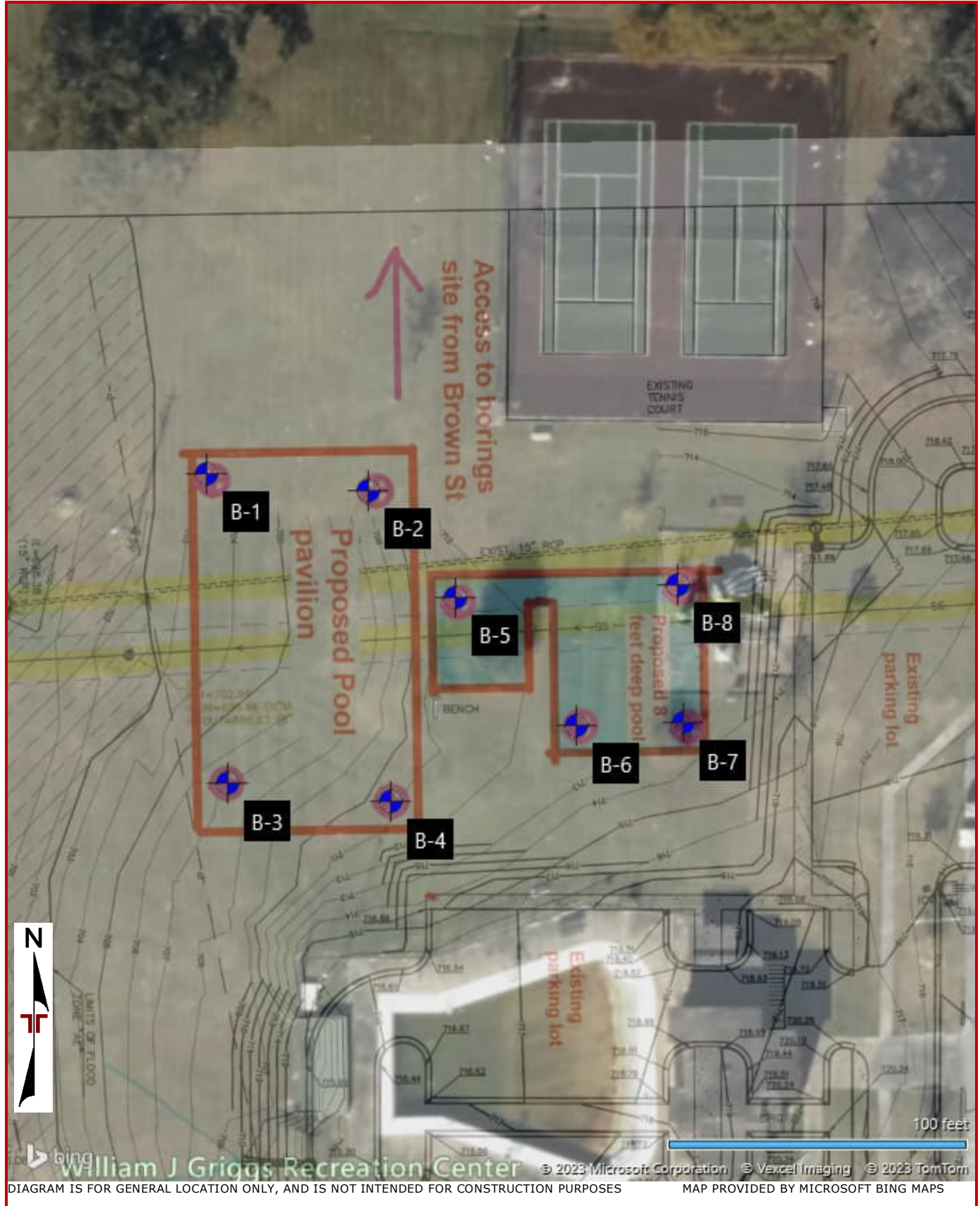
Exploration Plan

Note: All attachments are one page unless noted above.

Site Location



Exploration Plan



Exploration and Laboratory Results

Contents:

Boring Logs (B-1 through B-8)

Note: All attachments are one page unless noted above.

BORING LOG NO. B-1

PROJECT: William Griggs Pool and Pavilion

CLIENT: Smith Design Group Inc
LaGrange, GA

SITE: 710 Glenn Roberson Drive
LaGrange, GA

MODEL LAYER	GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 33.0286° Longitude: -85.0154° Surface Elev.: 703 (Ft.) ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
		TOPSOIL , -12" Topsoil	702			2-3-3 N=6			
1		FILL - SILTY SAND (SM) , trace organics, fine to medium grained, tan and brown, loose to medium dense, rock fragments				4-5-6 N=11			
			5			3-3-3 N=6			
			7.5	▽					
		PARTIALLY WEATHERED ROCK SAMPLED AS SILTY SAND (SM) , fine to medium grained, tan, very dense	695.5			31-50/2"			
			10	▽					
2						8-26-50/3"			
			15						
			20			50/4"			
			22.0						
		PARTIALLY WEATHERED ROCK SAMPLED AS SILTY SAND (SM) , fine to medium grained, tan and gray, very dense	681						
			25.0			50/6"			
		Boring Terminated at 25 Feet	678						

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
HSA

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

The topographic and elevation data shown hereon was obtained from the provided Grading Plan and is not certified as correct by this engineer. Users of this data do so at their own risk.

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

- ▽ While drilling
- ▽ At completion of drilling

☒ Cave-in



Boring Started: 05-31-2023

Boring Completed: 05-31-2023

Drill Rig: CME-550

Driller: Subcontractor

Project No.: HP235034

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL - HP235034 WILLIAM GRIGGS PO.GPJ TERRACON_DATATEMPLATE.GDT 7/11/23

BORING LOG NO. B-2

PROJECT: William Griggs Pool and Pavilion

CLIENT: Smith Design Group Inc
LaGrange, GA

SITE: 710 Glenn Roberson Drive
LaGrange, GA

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL - HP235034 WILLIAM GRIGGS PO GPJ TERRACON_DATATEMPLATE.GDT 7/11/23

MODEL LAYER	GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 33.0286° Longitude: -85.0152° Surface Elev.: 709 (Ft.) ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
		DEPTH							
		1.0 TOPSOIL , -12" Topsoil	708		X	3-3-3 N=6			
1		FILL - SILTY SAND (SM) , trace organics, fine grained, tan and orange, loose			X	1-2-4 N=6			
		4.5	704.5						
3		SILTY SAND (SM) , trace mica, fine grained, tan and brown, loose			X	1-3-5 N=8			
		7.5	701.5						
2		PARTIALLY WEATHERED ROCK SAMPLED AS SILTY SAND (SM) , fine to medium grained, tan and gray, very dense		▽					
		18.0	691	50/2"					
		Auger Refusal at 18 Feet		50/4"					

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
HSA

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

The topographic and elevation data shown hereon was obtained from the provided Grading Plan and is not certified as correct by this engineer. Users of this data do so at their own risk.

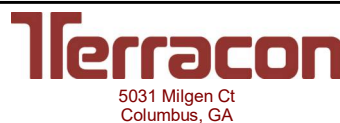
Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

▽ At completion of drilling

☒ Cave-in



Boring Started: 05-31-2023

Boring Completed: 05-31-2023

Drill Rig: CME-550

Driller: Subcontractor

Project No.: HP235034

BORING LOG NO. B-3

PROJECT: William Griggs Pool and Pavilion

CLIENT: Smith Design Group Inc
LaGrange, GA

SITE: 710 Glenn Roberson Drive
LaGrange, GA

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL - HP235034 WILLIAM GRIGGS PO.GPJ TERRACON_DATATEMPLATE.GDT 7/11/23

MODEL LAYER	GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 33.0283° Longitude: -85.0154°	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS		PERCENT FINES
										LL-PL-PI		
		Surface Elev.: 707 (Ft.)										
		TOPSOIL , -13" Topsoil	1.1	705.9				3-3-3 N=6				
1		FILL - SILTY SAND (SM) , trace organics, fine grained, brown, loose	4.5	702.5				1-3-5 N=8				
5		SILTY SAND (SM) , fine to medium grained, tan and white, dense, rock fragments	7.5	699.5	5			7-21-28 N=49				
3		SILTY SAND (SM) , trace mica, fine to medium grained, tan and brown, medium dense, rock fragments	12.0	695	10			11-4-6 N=10				
5		SILTY SAND (SM) , trace mica, fine grained, brown, dense	17.0	690	15			12-12-20 N=32				
2		PARTIALLY WEATHERED ROCK SAMPLED AS SILTY SAND (SM) , fine to medium grained, tan and gray, very dense	21.0	686	20			50/1"				
		Auger Refusal at 21 Feet										

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
HSA

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

See [Supporting Information](#) for explanation of symbols and abbreviations.

Notes:

The topographic and elevation data shown hereon was obtained from the provided Grading Plan and is not certified as correct by this engineer. Users of this data do so at their own risk.

WATER LEVEL OBSERVATIONS

At completion of drilling

Cave-in



Boring Started: 05-31-2023

Boring Completed: 05-31-2023

Drill Rig: CME-550

Driller: Subcontractor

Project No.: HP235034

BORING LOG NO. B-4

PROJECT: William Griggs Pool and Pavilion

CLIENT: Smith Design Group Inc
LaGrange, GA

SITE: 710 Glenn Roberson Drive
LaGrange, GA

MODEL LAYER	GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 33.0283° Longitude: -85.0152°	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS		PERCENT FINES
										LL-PL-PI		
			0.7	710.3				5-7-8 N=15				
		TOPSOIL , -8" Topsoil										
		SILTY SAND (SM) , fine to medium grained, tan and brown, medium dense, rock fragments										
			4.5	706.5				3-7-8 N=15				
		SILTY SAND (SM) , fine grained, tan and brown, medium dense										
3					5			2-5-6 N=11				
								5-10-10 N=20				
			12.0	699								
		SILTY SAND (SM) , fine to medium grained, tan and gray, very dense										
5								10-24-28 N=52				
								26-37-44 N=81				
			22.0	689								
		PARTIALLY WEATHERED ROCK SAMPLED AS SILTY SAND (SM) , fine to medium grained, tan and brown, very dense										
2												
			25.0	686				50/4"				
		Boring Terminated at 25 Feet			25							

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
HSA

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

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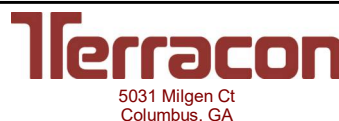
Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

At completion of drilling

Cave-in



Boring Started: 05-31-2023

Boring Completed: 05-31-2023

Drill Rig: CME-550

Driller: Subcontractor

Project No.: HP235034


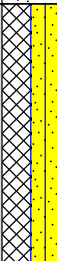
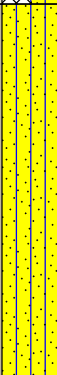

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL - HP235034 WILLIAM GRIGGS PO.GPJ TERRACON_DATATEMPLATE.GDT 7/11/23

BORING LOG NO. B-5

PROJECT: William Griggs Pool and Pavilion

CLIENT: Smith Design Group Inc
LaGrange, GA

SITE: 710 Glenn Roberson Drive
LaGrange, GA

MODEL LAYER	GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 33.0285° Longitude: -85.0151° Surface Elev.: 711 (Ft.) ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
		TOPSOIL , -11" Topsoil	710.1		X	2-5-6 N=11			
1		FILL - SILTY SAND (SM) , trace organics, fine grained, red and brown, loose to medium dense, rock fragments			X	1-3-5 N=8			
		SILTY SAND (SM) , trace mica, fine to medium grained, tan and white, very dense	703.5		X	1-3-5 N=8			
5					X	5-13-38 N=51			
				▽	X	7-16-43 N=59			
		PARTIALLY WEATHERED ROCK SAMPLED AS SILTY SAND (SM) , fine to medium grained, tan and red, very dense	694		X	20-49-50/5"			
2					X	50/5"			
		Boring Terminated at 25 Feet	686						

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
HSA

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

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Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

▽ At completion of drilling

⊠ Cave-in



Boring Started: 05-31-2023

Boring Completed: 05-31-2023

Drill Rig: CME-550

Driller: Subcontractor

Project No.: HP235034

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL - HP235034 WILLIAM GRIGGS PO.GPJ TERRACON_DATATEMPLATE.GDT 7/11/23

BORING LOG NO. B-7

PROJECT: William Griggs Pool and Pavilion

CLIENT: Smith Design Group Inc
LaGrange, GA

SITE: 710 Glenn Roberson Drive
LaGrange, GA

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL - HP235034 WILLIAM GRIGGS PO.GPJ TERRACON_DATATEMPLATE.GDT 7/11/23

MODEL LAYER	GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 33.0284° Longitude: -85.0149°	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS		PERCENT FINES
										LL-PL-PI		
			0.8	712.2				6-9-7 N=16				
1		FILL - SILTY SAND (SM) , fine to medium grained, brown and tan, medium dense, rock fragments	4.5	708.5				4-6-8 N=14				
2		PARTIALLY WEATHERED ROCK SAMPLED AS SILTY SAND (SM) , fine to medium grained, tan and gray, very dense	7.5	705.5	5			15-38-50/5"				
		SILTY SAND (SM) , trace mica, fine grained, brown, dense	12.0	701	10			6-11-20 N=31				
5		SILTY SAND (SM) , trace mica, fine grained, yellow and green, dense	17.0	696	15	▽		1-3-43 N=46				
2		PARTIALLY WEATHERED ROCK SAMPLED AS SILTY SAND (SM) , fine to medium grained, tan and gray, very dense	25.0	688	20			14-39-50/4"				
		Boring Terminated at 25 Feet			25	▽		32-50/3"				

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
HSA

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

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Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

- ▽ While drilling
- ▽ At completion of drilling

Cave-in



Boring Started: 05-31-2023

Boring Completed: 05-31-2023

Drill Rig: CME-550

Driller: Subcontractor

Project No.: HP235034

BORING LOG NO. B-8

PROJECT: William Griggs Pool and Pavilion

CLIENT: Smith Design Group Inc
LaGrange, GA

SITE: 710 Glenn Roberson Drive
LaGrange, GA

MODEL LAYER	GRAPHIC LOG	LOCATION See Exploration Plan	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS	PERCENT FINES	
		Latitude: 33.0285° Longitude: -85.0149°						LL-PL-PI		
		Surface Elev.: 713 (Ft.)								
		ELEVATION (Ft.)								
		0.5 TOPSOIL , -6" Topsoil	712.5			4-4-5 N=9				
1		FILL - SILTY SAND (SM) , trace organics, fine to medium grained, tan and brown, loose to medium dense, rock fragments				3-3-3 N=6				
		7.5	705.5			6-6-6 N=12				
3		SILTY SAND (SM) , fine grained, tan and gray, medium dense				7-9-13 N=22				
		12.0	701							
2		PARTIALLY WEATHERED ROCK SAMPLED AS SILTY SAND (SM) , fine to medium grained, tan and gray, very dense				24-50/2"				
		18.0	695							
		Auger Refusal at 18 Feet								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
HSA

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (If any).

Notes:

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Abandonment Method:

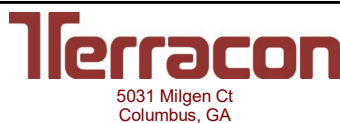
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS

At completion of drilling

Cave-in



Boring Started: 05-31-2023

Boring Completed: 05-31-2023

Drill Rig: CME-550

Driller: Subcontractor

Project No.: HP235034

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL HP235034 WILLIAM GRIGGS PO.GPJ TERRACON_DATATEMPLATE.GDT 7/11/23

Supporting Information

Contents:

General Notes

Unified Soil Classification System

Note: All attachments are one page unless noted above.

Unified Soil Classification System

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests ^A				Soil Classification	
				Group Symbol	Group Name ^B
Coarse-Grained Soils: More than 50% retained on No. 200 sieve	Gravels: More than 50% of coarse fraction retained on No. 4 sieve	Clean Gravels: Less than 5% fines ^C	$Cu \geq 4$ and $1 \leq Cc \leq 3$ ^E	GW	Well-graded gravel ^F
		Gravels with Fines: More than 12% fines ^C	$Cu < 4$ and/or $[Cc < 1$ or $Cc > 3.0]$ ^E	GP	Poorly graded gravel ^F
			Fines classify as ML or MH	GM	Silty gravel ^{F, G, H}
		Sands: 50% or more of coarse fraction passes No. 4 sieve	Clean Sands: Less than 5% fines ^D	Fines classify as CL or CH	GC
	$Cu \geq 6$ and $1 \leq Cc \leq 3$ ^E			SW	Well-graded sand ^I
	Sands with Fines: More than 12% fines ^D		$Cu < 6$ and/or $[Cc < 1$ or $Cc > 3.0]$ ^E	SP	Poorly graded sand ^I
			Fines classify as ML or MH	SM	Silty sand ^{G, H, I}
	Fine-Grained Soils: 50% or more passes the No. 200 sieve	Silts and Clays: Liquid limit less than 50	Inorganic:	PI > 7 and plots above "A" line ^J	CL
PI < 4 or plots below "A" line ^J				ML	Silt ^{K, L, M}
Organic:			$\frac{LL \text{ oven dried}}{LL \text{ not dried}} < 0.75$	OL	Organic clay ^{K, L, M, N} Organic silt ^{K, L, M, O}
			Silts and Clays: Liquid limit 50 or more	Inorganic:	PI plots on or above "A" line
PI plots below "A" line		MH			Elastic silt ^{K, L, M}
Organic:		$\frac{LL \text{ oven dried}}{LL \text{ not dried}} < 0.75$		OH	Organic clay ^{K, L, M, P} Organic silt ^{K, L, M, Q}
		Highly organic soils:		Primarily organic matter, dark in color, and organic odor	

^A Based on the material passing the 3-inch (75-mm) sieve.

^B If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.

^C Gravels with 5 to 12% fines require dual symbols: GW-GM well-graded gravel with silt, GW-GC well-graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay.

^D Sands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt, SW-SC well-graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay.

^E $Cu = \frac{D_{60}}{D_{10}}$ $Cc = \frac{(D_{30})^2}{D_{10} \times D_{60}}$

^F If soil contains $\geq 15\%$ sand, add "with sand" to group name.

^G If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

^H If fines are organic, add "with organic fines" to group name.

^I If soil contains $\geq 15\%$ gravel, add "with gravel" to group name.

^J If Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.

^K If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel," whichever is predominant.

^L If soil contains $\geq 30\%$ plus No. 200 predominantly sand, add "sandy" to group name.

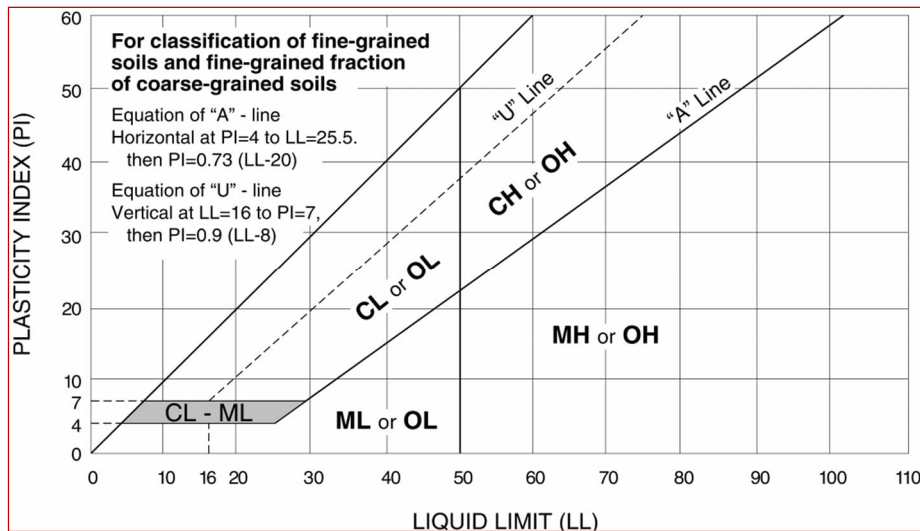
^M If soil contains $\geq 30\%$ plus No. 200, predominantly gravel, add "gravelly" to group name.

^N PI ≥ 4 and plots on or above "A" line.

^O PI < 4 or plots below "A" line.

^P PI plots on or above "A" line.

^Q PI plots below "A" line.



Rock Classification Notes

WEATHERING	
Term	Description
Fresh	Mineral crystals appear bright; show no discoloration. Features show little or now staining on surfaces. Discoloration does not extend into intact rock.
Slightly weathered	Rock generally fresh except along fractures. Some fractures stained and discoloration may extend <0.5 inches into rock.
Moderately weathered	Significant portions of rock are dull and discolored. Rock may be significantly weaker than in fresh state near fractures. Soil zones of limited extent may occur along some fractures.
Highly weathered	Rock dull and discolored throughout. Majority of rock mass is significantly weaker and has decomposed and/or disintegrated; isolated zones of stronger rock and/or soil may occur throughout.
Completely weathered	All rock material is decomposed and/or disintegrated to soil. The rock mass or fabric is still evident and largely intact. Isolated zones of stronger rock may occur locally.

STRENGTH OR HARDNESS		
Description	Field Identification	Uniaxial Compressive Strength, psi
Extremely strong	Can only be chipped with geological hammer. Rock rings on hammer blows. Cannot be scratched with a sharp pick. Hand specimens require several hard hammer blows to break.	>36,000
Very strong	Several blows of a geological hammer to fracture. Cannot be scratched with a 20d common steel nail. Can be scratched with a geologist's pick only with difficulty.	15,000-36,000
Strong	More than one blow of a geological hammer needed to fracture. Can be scratched with a 20d nail or geologist's pick. Gouges or grooves to ¼ inch deep can be excavated by a hard blow of a geologist's pick. Hand specimens can be detached by a moderate blow.	7,500-15,000
Medium strong	One blow of geological hammer needed to fracture. Can be distinctly scratched with 20d nail. Can be grooved or gouged 1/16 in. deep by firm pressure with a geologist's pick point. Can be fractured with single firm blow of geological hammer. Can be excavated in small chips (about 1-in. maximum size) by hard blows of the point of a geologist's pick;	3,500-7,500
Weak	Shallow indent by firm blow with geological hammer point. Can be gouged or grooved readily with geologist's pick point. Can be excavated in pieces several inches in size by moderate blows of a pick point. Small thin pieces can be broken by finger pressure.	700-3,500
Very weak	Crumbles under firm blow with geological hammer point. Can be excavated readily with the point of a geologist's pick. Pieces 1-in. or more in thickness can be broken with finger pressure. Can be scratched readily by fingernail.	150-700

DISCONTINUITY DESCRIPTION			
Fracture Spacing (Joints, Faults, Other Fractures)		Bedding Spacing (May Include Foliation or Banding)	
Description	Spacing	Description	Spacing
Intensely fractured	< 2.5 inches	Laminated	< ½-inch
Highly fractured	2.5 – 8 inches	Very thin	½ – 2 inches
Moderately fractured	8 inches to 2 feet	Thin	2 inches – 1 foot
Slightly fractured	2 to 6.5 feet	Medium	1 – 3 feet
Very slightly fractured	> 6.5 feet	Thick	3 – 10 feet
		Massive	> 10 feet

ROCK QUALITY DESIGNATION (RQD) ¹	
Description	RQD Value (%)
Very Poor	0 - 25
Poor	25 - 50
Fair	50 - 75
Good	75 - 90
Excellent	90 - 100

1. The combined length of all sound and intact core segments equal to or greater than 4 inches in length, expressed as a percentage of the total core run length.