#### SECTION 00 91 13 - ADDENDUM No. 2

#### **December 12, 2024**

Applying to all Bidders.

This addendum is issued for the purpose of clarifying the intent of the Contract Documents for making necessary corrections, deletions, and/or additions to the Documents on all items of discrepancy raised up to the issuance of this addendum.

Each Bidder is hereby instructed and authorized to incorporate into their proposal the instructions contained in this addendum.

#### TO ALL BIDDERS

#### **REVISED DRAWING LIST**

The following drawings have been revised and are to replace the respective counterparts.

#### Civil:

- C501, Grading and Drainage Plan
- C601, Water and Sewer Plan
- Pump Performance Curve

#### Architectural:

A5.01, Alternate Pricing for Stage and Amphitheater

#### **APPROVED SUSBSITUTIONS**

The City of Rockmart accepts the following substitutions:

#### 07 27 72 - Fluid Applied Membrane Air Barrier

• WR Meadows Air Shield LMP Air Barrier

#### 07 54 23 - Membrane Roofing

- Sikaplan Fastened-60 Energy Smart PVC with the condition that the fascia cover trim provided is materially equal to JM Presto-Tite as shown in drawings.
- GAF 60mil TPO with the condition that the fascia cover trim provided is materially equal to JM Presto-Tite as shown in drawings.

#### 07 41 13 - Metal Roof Panel

- CMP S2500 Panels by Construction Metal Products
- Pac-Clad Tite Lock Plus

#### 10 21 13 - Toilet Compartments

• Hiny Hiders Solid Plastic Toilet Partitions, with the condition that all other accessories specified are included.

#### **SUPPLEMENTAL INFORMATION**

The City of Rockmart has provided the following supplemental information:

Geotechnical Report by GeoSystem Engineers dated 08-13-2024

#### **GENERAL – REQUEST FOR INFORMATION / CLARIFICATIONS**

All responses are bolded for clarity.

Will this job be awarded on the base bid only or will the alternates be the deciding factor? The alternates will be considered in the award of the project and will likely be the deciding factor. Please include all requested alternates.

We are registered with Georgia Procurement Registry; do we need to register with Cevian or any other agency to make sure we do not miss any addenda / information that will be distributed regarding this project? **No.** 

Does the city / funding agency have a budget for construction? **Yes, however they are unwilling to share that information currently.** 

Is there any information that has not been posted on the Georgia Procurement Registry? **Not to our knowledge**.

At first glance I did not see a geotechnical report; I may have missed it. Will there be one provided? It is attached.

When are RFI's Due into Cevian Design Lab? 12-10-2024.

Have any RFI Responses been issued out to participating General Contractors? **No Addenda or RFI's have** been issued directly to any contractors. **All information is posted directly to the City of Rockmart's** website.

Have any Addenda been released for this project? One, which updated the bid date and due date for questions.

Is there a Pre-Bid Contractor Sign-In Sheet to view? Yes, please see the Pre-Bid Sign In Sheet located on the City of Rockmart's Website.

What email address should our RFI's be submitted to? <a href="mark@ceviandesign.com">mark@ceviandesign.com</a>

Are handrails and guardrails to be painted steel, galvanized, or stainless steel? **Painted per Finish Legend and Finish Schedule on A3.01.** 

Please confirm the sod section at the amp seating area should be Bermuda sod and not synthetic turf. **Bermuda**.

The final erosion control drawing mentions Ds4 Sodding. Please confirm where sodding will be required, and where seeding and straw will be adequate. Sodding is not required outside of the seating area for the amphitheater as shown on A1.14. Seed and straw is acceptable everywhere else.

Will there be a landscaping allowance? **No landscaping allowance**. **Outside of seed, straw, and sod no other landscaping is in this scope of work**.

Should sidewalks (L.D. Concrete paving) concrete be 4,500 PSI like the exterior slabs noted on the structural plans? If not, please advise what strength concrete should be used for exterior paving. **3,000psi is** acceptable for all sidewalks, stairs, and pedestrian paths LD Concrete. Vehicle paths should remain at 4,500psi.

What is the spec for replacement of fence as shown on the site plan? Replace with like materials, size, and spacing. The contractor may choose to reuse the existing fencing material if it can be saved without damage.

Should alternate #8 to delete the pump and force main include deletion of the electrical scope related to the pump per the pump station details? **Yes.** 

With alternate #1 to delete 5 rows of amp seating, does the same grading plan apply to the project? **No, all grading associated with the deleted 5 rows will also be removed from the scope of work.** 

Please confirm that the A/V staging area is deleted if this alternate No. 1 is accepted. **Yes, the A/V Staging area is deleted.** 

Handrails: Please provide details for handrails/guardrails such as type of steel, finish, and dimensions shown at the following locations:

- a. Decorative railing at stairs along both sides of cast stone seat walls
- b. Swing Gate: Please provide details for the swing gate shown between Back of House and Amphitheater Stage per drawing A1.04. Please see sheet A1.17 for handrail design associated with ADA ramps and cast stone seat walls, and please see sheet A1.10 for swing gate details. For finishes associated with handrails please refer to Finish Legend and Finish Schedule on A3.01.

Missing Detail: Drawing S3.01 shows a cut section through the perimeter stairs at the amphitheater seating labeled 4/S1.01. The current detail does not seem to be applicable to this location. Please provide the details for this section. **4S1.01 shows a typical retaining wall section, for the height of the applicable wall please refer to sheet 1/A1.16.** 

Low Roof Framing: Detail C/S1.02 shows (2) sets of HSS 12x6x1/4 strut on both sides of the roof. RCP detail 4/A1.05 is showing (2) sets of HSS 6x6, please confirm which detail to proceed with. The structural detail is correct. Proceed with 12 x 6 x1/4 HSS.

Landscaping: Are there any Landscape plantings (Shrubs and Trees) to be provided for this project? The Civil and Architectural drawings only show Sod, Topsoil, Gravel, and Drainage Mat at each Seat Wall. Please clarify if additional landscape materials, their locations, and any irrigation are to be included in this project. **No landscaping outside of seed and straw, and sod in the amphitheater seating area is included in this project.** 

Will permit fees be waived by the City for this project? Yes.

Have the plans been approved for construction by the City? The city has reviewed, and found them to acceptable, but has not issued as permit.

What is the anticipated start date for the project? The owner would like to start in the month of February if possible.

What is the cost associated with materials testing that we should carry in our contract sum per Spec Section 01 20 00 1.3B? The GC will only be responsible for third party inspection services if the initial testing fails. All other third-party testing cost will be the responsibility of the city.

Is there a public budget for this project? The owner wishes for the budget to remain private at this time.

Can we submit a subcontractors list post-bid? Sometimes last-minute changes occur during bid day and we're unable to update this list prior to submission. **Yes.** 

Is this a classified or unclassified earthwork project? Unclassified.

Civil drawings indicate that there has been a subsurface investigation completed. Is the report for this available to bidders? **Yes, it is attached for your review.** 

Sidewalk notes on drawing C201 indicate woven geotextile fabric underneath all sidewalk and concrete paving, is this the intent. **Geo-textile fabric is not required on any sidewalk or Light Duty concrete for this job.** 

Are there requirements for temporary fencing to secure the site or is an open site acceptable? Per 00 15 00 1.19b Provide 6-foot-high fence around Concession and Restroom building, provide a separate 6-foot-high fence around Stage(s) and Back of House. If the contractor feels it necessary to further secure the site we always encourage you to do so, but no further barriers are required.

Will the Owner be responsible for costs associated with utility meters? Yes.

Will the local electrical company be responsible for the transformer and associated concrete pad? Yes.

When is the deadline for alternate product submission? Per Addenda No. 1, 12-10-2024

The Plumbing drawings have not been coordinated with Civil Site drawings. The Plumbing shows storm connection "see site plans" where none is shown. Please provide a set of coordinated Civil Site drawings and Plumbing drawings. While not precisely located, the general intent and direction of both the domestic water and sewer are shown. Precise connections must coordinated in the field.

What is the Storm Piping material and size? The Civil Site drawings do not provide any detailed information regarding any material types and or their sizing. Labels indicating the pipe size and material have been added to attached revised Sheet C501, Grading and Drainage Plan.

The 6" Trench Grate that is shown at the Concessions building exit at the bottom of the stairs. Where does this Trench Grate connect to the Storm Piping? **Stormwater passing through Trench Grate** 

#### will drain to proposed Drop Inlet 4.

Is the Water Line metered and is there a Backflow in the Concessions building (versus in the site)? Please clarify. Water meter and Backflow have been added to revised Sheet C501, Grading and Drainage Plan. City will provide and install Water meter and Backflow, Contractor shall coordinate with City during construction.

What is the Pump Station model number? And will the Pump curves be provided? **Pump Station model** number is **E-One DH152-93**, per Sheet C603 Note 1.01. Pump curve is attached.

Will the Foundation Wall Drains, tie into the Storm Piping? The Architectural drawings show many drains, and the Structural drawings show drainage "see civil". The Civil Site drawings do not show any. Please provide a set of coordinated Civil Site drawings and Plumbing drawings. **Architectural does not connect to civil storm piping. Architectural storm should be piped to daylight.** 

Is there a Landscape plan or an irrigation plan for this project? No, other than seed and straw and sod as shown, landscaping and irrigation is outside the scope of this project.

Are there any testing requirements? Are tests on the City of the Contractor? The GC will only be responsible for third party inspection services if the initial testing fails. All other third party testing cost will be the responsibility of the city.

Will the Contractor be responsible for running the conduit for the AV equipment that is not a part of this contract? **No.** 

Is there a Geotech report? Can we have access to that report? Yes, it is included in the Addenda.

We would like to request CAD files for this project, will sign a CAD release form if needed. Could we get a Cut/Fill or Earthwork report if the CAD files can't be provided? **No CAD files will be provided at this time, however they will be made available to the GC who is awarded the project.** 

Waterproofing Details: Please identify and tag details and cut section on the floor plan for details below and above grade. Currently the details are coming off the wall section details which leaves a lot of room for interpretation on the waterproofing scope. I will attempt to clarify, however this list is not comprehensive.

- At the Concessions and Restroom building, a 4" perforated drains should follow the exterior perimeter of the footing.
- All Amphitheater seat walls should be waterproofed per 3/A1.16 and 2/A1.16
- All Amphitheater retaining walls should be waterproofed per 1/A1.16
- At the Stages and Back of House; All retaining walls that rise above the Back of House slab shall be waterproofed per 2/A1.09, 2/A1.10, 2/A1.04, and 5/A1.04
- At the Stages and Back of House; All CMU retaining walls that form the perimeter of the back of house slab shall be waterproofed per 1/A1.09, 3/A1.09, and 4/A1.09, and 2/A1.10
- At the exterior perimeter of the Field and Amphitheater Stage all sections of the retaining wall that are below grade shall be waterproofed per 4/A1.10
- All parapets at Back of House shall be waterproofed per 5/A1.05
- All parapets at Concessions and Restroom shall be waterproofed per 8/A2.02

- No waterproofing or drainage is required for the A/C Skirt Wall except for the Cap Flashing.
- Air Barriers are required at all exterior CMU walls.

Water Drainage at Front of House: Please confirm layout and design intent for the 4" perforated PVC pipe shown on detail 10/A1.18. Currently it shows the pipe enclosed inside the retaining walls which will not be possible to take to daylight. **The pipe is an error, please disregard. There are no drains associated with Front of House.** 

Architectural and Structural Drawings Discrepancies 10/A: The Backfilling of the Ramps and the Back of House Building Pad is shown to be with Aggregates per the Architectural drawings, and then shown with Soil per the Structural drawings. Please clarify the correct backfilling material that is to be provided at the Ramps and Building Pad for their backfill. **Backfill material to be stone per architectural.** 

Footing Amphitheater Seating: Drawing S3.01 shows a cut section at the stairs and landing tagged 4/S1.01. This detail does not provide information for the footing and retaining walls in this area. Please advise. **4S1.01 shows a typical retaining wall section, for the height of the applicable wall please refer to sheet 1/A1.16.** 

Audio/Visual Staging Area: Please provide slab and foundation details for this area. This seat wall is the same as other seat walls, structurally Detail 2 on Sheet S3.01 architecturally it is similar to 3/A1.16.

Drawings show two different sizes of plywood for decking. Just to confirm, TPO roofing is to receive a 3/4" plywood (A1.09) and metal roofing is to receive a 5/8" plywood (6/A1.05)? **This is correct.** 

Is there a specification on the polished concrete shown on A2.05? Yes, per sheet A3.01 Finish Schedule and Finish Legend. Class B, Level 2, Satin, Per Concrete Polishing Council.

Are restrooms the only rooms that require signage? If not, then could we receive a signage schedule to price by? **Yes restrooms are the only rooms that require signage.** 

What is the new bid date and time? Per Addenda No. 1, the revised Bid Date and Time is December 19<sup>th</sup>, at 10:00am.

Please clarify minority/female participation requirements. I understand there are goal percentages, but I don't see any paperwork for reporting our efforts or minority/female participation. The requirements are spelled out "Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246) (43 FR 14895)" This can be found in the Project Manual under the "Contract Provisions for Federally Assisted Construction Projects (Davis-Bacon)". Our understanding is once a General Contractor is awarded the bid, the reporting forms and method that they use are not specifically called out, just the percentages required.

On C702 there is reference to a trailhead project. Is the buffer zone and silt fence in that area that is outside our limits of disturbance part of a different project and not the responsibility of the Rockmart Amphitheater GC? **Not in this scope, not the responsibility of the General Contractor.** 

Is there a separate detail for amphitheater side walls and footings or should we use 4/S1.01? Please use 4S1.01. This shows a typical retaining wall section, for the height of the applicable wall please refer to sheet 1/A1.16.

Are permitting costs the responsibility of the GC? No, all permits will be waived by the City of Rockmart.

Please advise Signage Layouts and Qtys to provide Signage Pricing. **Two each restroom signs. No other signs are required.** 

Cannot tell where the trench drain actually is. How many feet do we need to quote? Is there any pipe to carry the water from the trench drain into the storm system? If so what size and how many feet? Also, what size are the grates. The detail on C801 does not show this. The trench drain extends the width of the sidewalk serving the stairs. Stormwater passing through Trench Grate will drain to proposed Drop Inlet 4.

Have the Davis-Bacon wages increased since the initial bid documents came out? **No increase(s) have been shown from the initial Davis-Bacon wage rates included in the Project Manual.** 

Sizes are not shown for the stormwater piping. Please advise. Labels indicating the pipe size and material have been added to attached revised Sheet C501, Grading and Drainage Plan.

Is there a landscape plan – a landscape allowance will be carried. **No landscaping outside of seed and straw, and sod as shown is in this scope of work.** 

Who will do the landscape design – the design cost will be included in the allowance. **No landscaping** outside of seed and straw, and sod as shown is in this scope of work.

Irrigation – may or may not have it depending on the irrigation design, cost will be included in the allowance. **No irrigation system is in this scope of work.** 

Who is responsible for third party testing? **Testing to be paid for by owner, failed tests will be repaid by contractor.** 

Is the Contractor expected to work with third party testing agency? Yes, the General Contractor will be responsible for coordinating the testing agency.

Is there any AV equipment or conduit in this project? No.

Can the site be visited? Yes, there is public access to the site.

If the cast stone subcontractors have suggestions for alternative ways to form the stone that will save money and efficiency, will you consider them? Yes, however to keep all bids equal, they will need to submit them for approval.

What is the manufactured stone allowance. The allowance is \$8/SF for the stone itself delivered to the site, per Section 01 20 00, 1.2 Cash Allowances, F, 1.

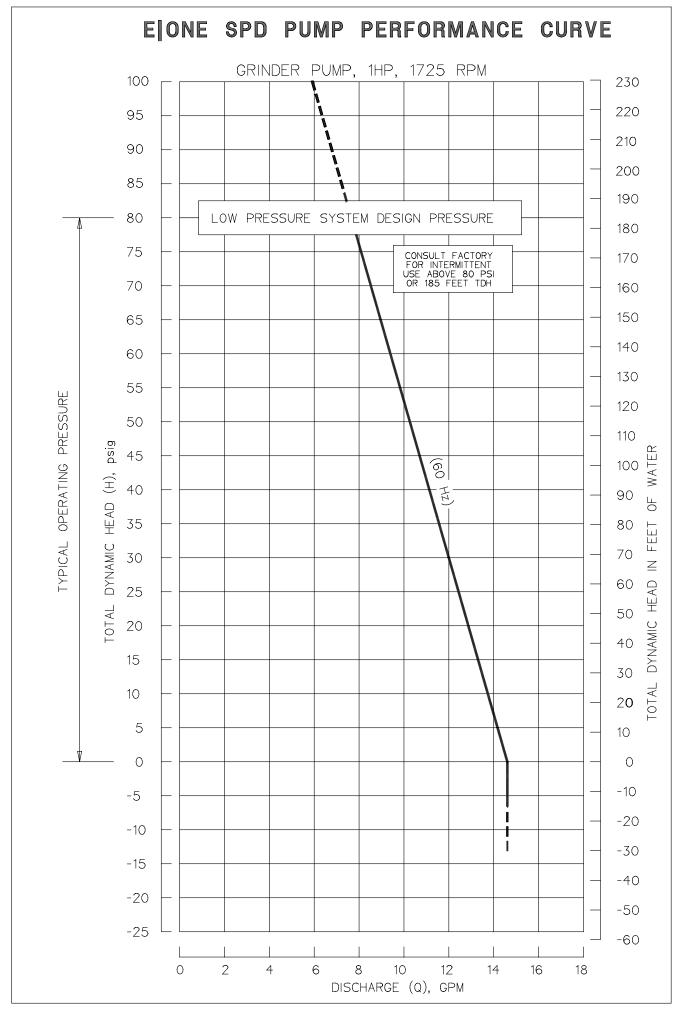
Would you be open to VE items. Submit any substitutions, but large VE items that change the design intent will not be considered initially. After the project is awarded VE items will be strongly considered.

The site plan shows a building to be demolished? – one has already been demolished, but the other (closer to the concessions) is remaining (verify by site visit). **This is correct, only one structure is remaining to be demolished.** 

Could we get some clarification on the size and type of pipes that will be a part of Storm Drain 1 & 2? Labels indicating the pipe size and material have been added to attached revised Sheet C501, Grading and Drainage Plan.

Who is responsible for removing trees? The City will be responsible for cutting and removing trees.

**END OF DOCUMENT** 





August 13, 2024

City of Rockmart, Georgia c/o Mr. J. Lamar Rogers, P.E Turnipseed Engineers, Inc. 2255 Cumberland Parkway Building 400 Atlanta, Georgia 30339

Re: Subsurface Investigation Report

City of Rockmart

Historic Rockmart Event Center Rockmart, Polk County, Georgia GeoSystems Project No. 24-2945

Dear Mr. Rogers:

GeoSystems Engineering, Inc. (GeoSystems) has completed the authorized subsurface investigation for the proposed Historic Rockmart Event Center. The purpose of the investigation was to characterize subsurface conditions at the site of a new amphitheater and restroom building and provide recommendations for foundation design and construction. The following report describes our investigation procedures and presents the findings.

#### PROJECT INFORMATION

Our understanding of this project is based on the information provided in your email of May 23, 2024. We received a 2020 preliminary project drawing set, a site topographic plan showing the locations of the proposed amphitheater and restroom structures, and recent architecture plan and section drawings of the amphitheater and stage. We have also reviewed available Google Earth historic aerial photographs of the site and a site-specific soil survey from the NRCS website.

The site is located in an open field 400 to 600 feet south of the intersection of Martin Luther King Jr. Street and West Church Street, near downtown Rockmart. Site topography is sloping down to the southeast toward Euharlee Creek and varies in grade from moderately to slightly sloping. Total relief is about 8 feet in the development area, between a high elevation of 756 feet to a low of 748 feet. The creek floodplain appears to extend slightly into both the stage and restroom footprints.

Construction details and foundation loads for the amphitheater and restroom structures have not been provided; however, the provided drawings indicate mostly CMU and cast-in-place concrete structures with shallow spread footing foundations. The amphitheater stage will include a braced cantilevered roof system anticipated to require foundation overturning resistance. The planned finished floor elevation for the restroom building is 751 feet, indicating a maximum of about 3 feet of fill and 2 feet of excavation will be required to achieve the finish floor elevation. Amphitheater stage elevations are planned at 753.5 feet, requiring placement of approximately 2 to 6 feet of fill, and 757.5 feet, requiring 1 to 8 feet of fill.

#### INVESTIGATION PROCEDURES

Our services on this project were in accordance with GeoSystems Proposal No. 24-2945, dated June 5, 2024. Authorization to perform the investigation was provided on June 18, 2024. The scope of work included visual observations of the site, review of available Natural Resources Conservation Service (NRCS) soil survey information for the area, drilling five soil test borings (B-1 through B-5), collection of soil samples, laboratory soil classification testing, evaluation of the boring and laboratory test data and preparation of this report. The boring locations are shown on the attached Boring Location Plan (Figure 1). The boring locations were established in the field by a GeoSystems engineer using survey tape measurements from the corners of the proposed structures, previously staked in the field by Turnipseed Engineers. Boring elevations were estimated based on the contours shown on the provided site layout with grade elevations drawing. Since these measures are not precise, the boring locations and elevations should be considered approximate.

Soil sampling and standard penetration testing in the borings were in general accordance with ASTM Standard D 1586. The borings were advanced to termination or auger refusal depths varying from 10 to 30 feet below the existing ground surface by mechanically rotating hollow-stem augers into the ground. At regular intervals, soil samples were obtained with a standard 1.4-inch I.D., 2-inch O.D. split-barrel sampler. The sampler was first seated 6 inches to penetrate any loose cuttings, and then driven an additional foot with blows from a 140-pound hammer falling 30 inches. The number of blows required to drive the sampler the final foot was recorded and is designated the "standard penetration resistance," or "N" value. Penetration resistance, when properly evaluated, is an index of the soil's strength, density, and ability to support foundations.

The soil samples obtained from the soil test borings were initially classified in the field by the driller. The samples were then transported to our laboratory and visually classified by a staff scientist under the direction of a senior geotechnical engineer. Laboratory grain size distribution and Atterberg limits tests were also performed on four split-spoon samples to confirm soil classifications. Final soil test boring logs, which represent our interpretation of the field conditions, were then prepared based on the driller's field logs, visual examination of the soil samples and the laboratory classification testing. Included on the boring logs are soil descriptions and unified classifications, graphical plots of the standard penetration resistances, and groundwater conditions encountered at the time of the investigation. The lines designating interfaces between various strata represent approximate boundaries only, as transitions between the soil strata may be gradual. Also, we note that subsurface conditions in uninvestigated locations may vary from those encountered at specific boring locations. The final soil test boring logs and laboratory test reports are enclosed as attachments to this report.

#### AREA AND SITE GEOLOGY

The site is geologically located in the Great Valley District of the southern section of the Appalachian Ridge and Valley Province of Georgia. The Ridge and Valley in Georgia lies to the north and west of the Piedmont Province and is bounded on its northern edge by the Cumberland Plateau and Lookout Mountain. The topography in the Great Valley District is characterized by broad and open areas, with the occasional scattered ridge or hill. Elevations in the district usually range from 700 to 1,000 feet above sea level with relief of 50 to 100 feet. The eastern edge of the Great Valley follows the escarpment of the Great Smokey-Cartersville Fault.

The rocks in the Ridge and Valley province are primarily ancient sedimentary materials ranging from 420 to 500 million years old, usually dating to the Cambrian or Ordovician times. Although nominally classified as sedimentary, the rocks of the province have long since been consolidated into very hard rocks by cementation and great pressure. The most common rocks include limestones, sandstones, and shales, which are normally interbedded and quite broken. All of these rocks have weathered in placed and are underlain by a mantle of residual soils formed by their chemical alterations. The residuum layer primarily consists of the insoluble materials that was once present in the rock. Characteristically, these soils are red brown or yellow clay and silt, containing varying amounts of sand, chert gravel, and boulders. The naturally developed soil profile is subject to changes by erosion and man's grading activities, which may change strip away some or all of the upper more weathered soils zones or cover the residual soils with manmade fill, washed in alluvial soils or both.

Geologic mapping shows the site is in the Newala Limestone rock unit and is bordered by the Rockmart Slate formation immediately to the south and east. The Newala is of lower Ordovician age (~470 to ~500 million years old) and is estimated to be 250 to 300 feet thick in the Rockmart area. Bedrock in the Newala Limestone generally consists of light to dark grey, thickly bedded limestone and light to medium gray, massively bedded dolomite. Chert also occurs locally. Limestone and dolomite are common sedimentary rocks containing calcium or calcium carbonate. Limestone may or may not contain magnesium carbonate, whereas dolomite is made up mostly of magnesium carbonate. Most limestone is associated and often interbedded with dolomite. Chert is a hard, microcrystalline quartz rock that typically occurs as nodules or concretions in the dolomite and limestone.

All of the limestone and dolomite rocks are carbonates, which are prone to karstic solutioning activity by water. Weathering of these rocks by solutioning typically proceeds along the joint dips of the bedding planes and along secondary joints that were formed by strain energy release during periods of uplift and rebound. Due to the solution weathering, the bedrock surface is not characteristically flat, but is typically extremely irregular with slots, pits and pinnacles or fingers of hard rock projecting upward through the soil mass. The interface between soil and rock is typically a sharp, uneven line with a zone of very soft soil occurring in many instances immediately above the rock surface.

The Rockmart Slate formation is middle Ordovician age (~458 to ~470 million years old) and is mapped to the south and east of Rockmart. This formation overlies the Newala where exposed. Thickness of the Rockmart Slate formation has not be accurately determined, but is estimated to be on the order of 1,200 to 3,000 feet. Rocks in this unit include dark gray to black calcareous slate, micaceous siltstone, and thin beds of sandstone interbedded with slate and conglomerate. Slate is a fine-grained rock formed mostly from shale under pressure from overburden soil and rock. Siltstone is indurated silt having the texture and composition of shale but lacks the fine lamination of shale. Sandstone is a clastic rock made up of grains of sand in a matrix of silt or clay. Conglomerate is a coarse grained clastic sedimentary rock composed of granules, pebbles, cobbles and boulders set in a fine-grained matrix of silt or sand and commonly cemented by calcium carbonate, iron oxide, silica or hardened clay. Rockmart Slate conglomerate can include various mixes of limestone, dolomite, chert, quartzite and quartz.

#### SUBSURFACE CONDITIONS

#### **Soil Survey**

A soil survey report of shallow subsurface conditions in the area of the proposed restroom and amphitheater structures was generated from the Department of Agriculture's NRCS website. Specifically, the report identifies one soil series, Fullerton cherty silt loam, 15 to 25 percent slopes (FuE). This series consists of well drained residual soils and have a typical profile consisting of interbedded layers of gravelly silt loam, gravelly clay loam, and gravelly silty clay to a depth of 88 inches. Depth to the water table and to a restrictive feature is more than 80 inches.

#### **Soil Test Borings**

The boring data shows subsurface conditions at the site consist of residual soils and hollow stem auger refusal material. Residual is a term used to identify soils that were formed in-place by the chemical weathering process of the underlying rocks. Refusal is a designation applied to any material that cannot be further penetrated by the soil drilling process and is normally indicative of a very hard or very dense materials, such as boulders, rock lenses, or the upper surface of bedrock. Groundwater was measured in two borings at the end of the workday. The following briefly discusses the residual soil and refusal conditions, along with water table information.

Residual Soils. The residual soils encountered in the borings are generally typical of those described in the previous geology and soil survey sections of this report. The residual soil stratum extended from below the ground surface to auger refusal depths varying from 10 to 16 feet in borings B-1, B-2 and B-4 and boring termination depths of 15 and 30 feet, respectively in borings B-3 and B-5. The residual soil stratigraphy consists predominantly of interbedded firm to stiff sandy silt (ML) and sandy clay (CL), with loose to medium dense clayey sand (SC). Standard penetration resistances in these soils varied from a minimum of 6 to a maximum of 17 blows per foot (bpf).

At the location of boring B-5, very soft sandy silt (ML) was encountered from below a depth of about 13 feet to boring termination at 30 feet. In these soils, standard penetration resistances were recorded as "WOH," a drilling term identifying full 18 inches of split-barrel penetration into the soil solely under the weight of the 140-pound hammer. This condition appears to be a zone of very weak soils that often occurs immediately above limestone bedrock or within a pit or slot formed by residual weathering of the rock. The boring data and site conditions do not indicate a wide lateral extent of this condition.

Refusal Material. As mentioned above, refusal material was encountered in borings B-1, B-2 and B-4 at depths of 16, 10 and 15 feet, respectively. Rock core drilling or other investigation methods are required to determine the nature and continuity of refusal material; however, refusal at this site appears to be the upper surface of bedrock. The refusal depths indicate top of rock elevations varying from 734 to 738 feet. We note that a small rock outcropping at the ground surface was also observed approximately 30 feet northeast of the northern corner of the amphitheater stage.

<u>Groundwater</u>. Groundwater was encountered in borings B-4 and B-5 at the time of the field investigation. No groundwater was observed in the remaining borings. Although stabilized groundwater levels were not measured, water levels were recorded in the open bore holes at depths

of 15 and 13 feet, ½ to 2 hours after drilling. The groundwater levels indicate a water table elevation around 734 or 735 feet. We note that groundwater is subject to subsurface conditions, runoff, climate, seasonal variations, and other factors; therefore, groundwater conditions at other locations or at other times may be different than those reported during this study.

#### CONCLUSIONS AND RECOMMNEDATIONS

The following conclusions and recommendations are based on our observations at the site, interpretation of the boring and laboratory data obtained during the investigation, and our experience with similar site and subsurface conditions. Allowable foundation bearing pressure was estimated using previous correlations with the standard penetration test data from the soil test borings and our previous experience with compacted fill. Subsurface conditions in uninvestigated locations may vary somewhat from those encountered. If the restroom and amphitheater stage locations or elevations change from the conditions noted in this report, we request that we be advised so that we may reevaluate our recommendations.

#### **Design Recommendations**

Foundation Support. Based on the proposed restroom finish floor and amphitheater stage elevations, the existing site topography shows that foundations for both structures will bear in either undisturbed residual soils or new structural fill. The competent residual soil overburden and new structural fill placed and compacted in accordance with recommendations in this report should bridge over any deeper isolated areas of weak soils in slots or fissures, as indicated in boring B-5, and provide adequate long-term foundation support for the structures. We recommend that shallow foundations, designed for a maximum allowable uniform soil bearing capacity of 3,000 pounds per square foot (psf), be used for support of the proposed restroom and amphitheater stage structures in these conditions. Foundations may include conventional individual column footings or long continuous wall footings, a turned-down slab-on-grade foundation and a moment resisting foundation system, if necessary for the amphitheater stage cantilevered roof system.

Design of a moment resisting foundation system is comparable to cantilevered retaining wall design, where the foundation resists overturning and horizontal forces primarily by the weight of the foundation and overlying soils or surface loads. For eccentric loading conditions, foundation toe pressure can be increased by a maximum of 33 percent, if the average foundation contact pressure does not exceed the recommended bearing capacity and the resultant force is located within the center 1/3 of the footing. A coefficient of friction value of 0.47 is recommended for design against sliding of shallow concrete foundations cast against sandy silt and sandy clay soils, similar to the residual soils encountered at this site.

Due to any very light loading conditions, we recommend foundation widths of not less than 24 inches for any individual column footings and not less than 18 inches for long continuous wall footings for ease of construction and to reduce the possibility of localized shear failures. Exterior footings should be placed at least 12 inches below final exterior grades to assure that foundations bear below the possible frost penetration depth.

<u>Floor/Grade Slab Support.</u> On grade support of the restroom floor slab and the amphitheater stage slabs is subject to site preparation and earthwork recommendations contained in the construction section of this report. The on grade slabs should include isolation joints around

columns and along footing-supported walls to minimize cracking from possible differential movements of the structures. As an alternative to isolation joints, a monolithic turned-down slab-on-grade may be used. The turned-down slab should be thickened underneath columns and any load bearing walls and have adequate reinforcement to resist foundation overturning forces and minimize cracking between the thickened and flat portions of the slab. A subdrainage system below the slabs is not necessary; however, a 4-inch layer of clean crushed stone base course covered with a vapor retarder membrane is recommended below the slabs to prevent possible capillary rise of groundwater. A 2-inch thick layer of clean sand placed over the membrane is also recommended to adsorb excess water from the floor slab concrete during curing.

Below Grade Structure/Retaining Wall Earth Pressures. Earth pressures on retaining walls and walls below grade are influenced by the structural design of the walls, conditions of wall restraint, methods of construction and the strength of the materials being restrained. The most common conditions assumed for earth retaining wall design are the active and at-rest conditions. Active conditions apply to relatively flexible earth retention structures, such as free-standing cantilevered walls, where some movement and rotation may occur to mobilize soil shear strength. Walls that are rigidly restrained, such as basement, pit and tunnel walls, should be designed for the at-rest condition. A third condition, the passive state, represents the maximum possible pressure when a structure is pushed against the soil, and is used in wall foundation design to help resist active or at-rest pressures.

Passive earth pressure resistance is generally ignored for retaining wall foundations embedded 2 or 3 feet but can be relied on for deeper foundations. To rely on passive resistance, erosion, or excavation of the soil from the passive wedge side of the foundation must be prohibited during the life of the structure. Since significant lateral deflections are required to fully develop the passive resistance, the total calculated passive pressure should be reduced by a safety factor of at least 2.0 for design purposes.

We recommend that select, clean granular backfill be used behind any retaining walls or underground structure walls for this project. The granular backfill zone must extend beyond the lateral earth pressure wedge in order to develop the respective earth pressure on the structure. Our recommended earth pressure coefficients for the granular backfill are based on previous experience with similar conditions and the following assumed properties for compacted crushed stone (GP/GW or GDOT graded aggregate base (GAB)) and sand (SW/SM):

Crushed Stone: Cohesion (c) - 0

Angle of Internal Friction ( $\phi$ ) - 40 degrees

Soil Unit Weight (γ) - 140 pcf

Sand: Cohesion (c) - 0

Angle of Internal Friction ( $\phi$ ) - 30 degrees

Soil Unit Weight (γ) - 120 pcf

Using  $\phi$ -angles of 40 and 30 degrees for clean crushed stone and sand results in the following earth pressure coefficients for design of any retaining walls, below grade structure walls and moment resisting foundations at this site:

Earth Pressure	Coeff	icient
Conditions	Crushed Stone	Sand
Active (K <sub>A</sub> )	0.22	0.33
At-Rest (K <sub>O</sub> )	0.36	0.50
Passive (K <sub>P</sub> )	4.60	3.00

Tractors and other heavy equipment should not operate within 10 feet of below grade walls to prevent excessive lateral pressures on the walls. If footings or other surcharge loadings are located a short distance outside below grade walls, they may also exert appreciable additional lateral pressures. If an imaginary line projected downward at a 45-degree angle from the bottom near edge of the footing or surcharge load does not intersect the wall, the effect of the load on the wall may be neglected. Whenever this line intersects the wall, the effect of the surcharge loads should be added to the calculated earth pressures to determine total lateral stresses.

Slope Stability. Our investigation did not include analysis of slope stability for any temporary or permanent condition. However, we recommend that excavations above the water table and less than 20 feet in height not exceed 1.5(H):1.0(V) for temporary slopes and 2.0(H):1.0(V) for permanent slopes constructed in undisturbed residual soils or structural fill placed in accordance with our recommendations. A minimum setback from the top of all slopes of 10 feet is recommended for structures and 5 feet for pavements.

During construction, temporary slopes should be regularly inspected for signs of movement or unsafe conditions. Soil slopes should be covered for protection from the weather and surface runoff should be diverted away from the slopes. A protective cover of low-growing turf-type grass or other suitable vegetation should be established on permanent soil slopes as soon as possible after construction for erosion protection.

#### **Construction Recommendations**

Site and Subgrade Preparation. Initially, the structure construction areas must be stripped of all vegetation, grass, root systems, and any refuse or other deleterious non-soil materials. Clean topsoil may be either stockpiled for later use or wasted off site. Stockpiled clean topsoil may be used to top dress disturbed areas prior to permanent seeding and final stabilization of the site. On completion of the stripping, excavations to planned site grades and placement of fill can be performed. Prior to any fill placement, the site should be carefully inspected by the project geotechnical engineer. At that time, the engineer should observe proofrolling of the planned fill areas utilizing a 20 to 30-ton loaded dump truck. The purpose of the proofrolling is to confirm soil subgrade conditions are adequate for placement and compaction of fill and to locate any possible unsuitable soft, weak, and/or excessively wet soil conditions not indicated by the soil test borings. Depending on the inspection results, remedial measures may be required to stabilize the subgrade and/or to provide adequate foundation support conditions for the structures.

**Earthwork.** New structural fill required to achieve planned site grades and backfill excavations or utility trenches should be clean soil, free of organic matter and deleterious materials. Material containing rocks or stones greater than 3 inches in diameter should not be used. We recommend the maximum dry density (MDD) of structural fill soils be at least 100 pcf and the soils should also have a plasticity index (PI) typically less than 30.

Structural fill should be placed in maximum 6 to 8-inch lifts, loose measure, and compacted to at least 95 percent of the maximum dry density as determined by the standard Proctor compaction test (ASTM D-698). In confined areas portable compaction equipment and thinner lifts of 3 to 4 inches may be required to achieve specified degrees of compaction. All fill should be placed in horizontal lifts and adequately keyed into stripped and scarified subgrade soils. In landscaped areas, where no structures are planned or anticipated in the future, the compaction criteria may be reduced to 90 percent of the standard Proctor maximum dry density.

Moisture control of the fill soils is essential in achieving specified densities and soil moisture contents within  $\pm 3$  percent of the optimum moisture content (OMC) should be maintained during placement and compaction. We recommend that the grading contractor have equipment on site during the earthwork for both drying and wetting fill soils in order to control moisture contents within tolerances for compaction.

During fill placement, an adequate number of density tests should be performed by a soils technician working under the direction of the project geotechnical engineer to determine the degree of compaction and compliance with the project specifications. Tests should be performed for each 2-foot thick layer of compacted fill. Any areas that do not meet compaction requirements should be reworked to achieve compliance.

**Foundation Construction.** We recommend that all structure foundation excavations be evaluated by the project geotechnical engineer to confirm that conditions are similar to those encountered in the borings and that the bearing soils are capable of supporting the design foundation bearing pressure. We note that some stabilization and/or undercutting and replacement of weak or wet soils with crushed stone may be required in order to provide adequate foundation support. The extent of any stabilization measures or undercutting required should be determined at the time of construction by the inspecting geotechnical engineer.

Foundation excavations should be free of all soft or loose soil, mud, disturbed materials, and other deleterious materials prior to placement of concrete. In addition, foundation concrete should not be placed on a frozen subgrade. Any foundation bearing area that has been disturbed due to construction activities or exposure to precipitation or run-off must be repaired prior to construction of the foundation slab. We recommend the foundation excavations be concreted as soon as practical after they are prepared and inspected, and storm water or runoff should be prevented from ponding on or infiltrating the bearing surfaces. If it is necessary to leave foundation excavations open for an extended period of time, we recommend that a thin mat of lean concrete be placed over the bottom for protection.

#### **QUALIFICATIONS**

This report has been prepared for the exclusive use of Turnipseed Engineers, Inc. and the City of Rockmart, Georgia relative to design and construction of the proposed Rockmart Historic Event Center. Conclusions and recommendations in this report were based on our understanding of the project, the data gathered during this investigation, and our experience with similar site and subsurface conditions. We note that regardless of the thoroughness of a subsurface investigation, there is always the possibility that conditions between test locations will differ from those at the actual test locations, that conditions are not as anticipated by the designers, or that the construction process has altered the soil conditions. If conditions differing from those anticipated are encountered during construction, GeoSystems should review the unexpected conditions to address any issues.

Our professional services were performed, our findings derived, and our conclusions prepared consistent with the professional skill and care ordinarily provided by geotechnical engineers practicing in the same locality under the same or similar circumstances for projects of this type. This warranty is in lieu of all other warranties or guarantees either expressed or implied. GeoSystems is not responsible for the conclusions, opinions or recommendations of others based on the findings of this investigation.

We appreciate the opportunity to provide this subsurface investigation and look forward to assisting with any necessary materials testing and inspections during the project construction phase. Should you have any questions concerning this report, please call us.

Sincerely,

GeoSystems Engineering, Inc.

Austin Anderson Staff Scientist

Attachments: Boring Location Plan (Figure 1)

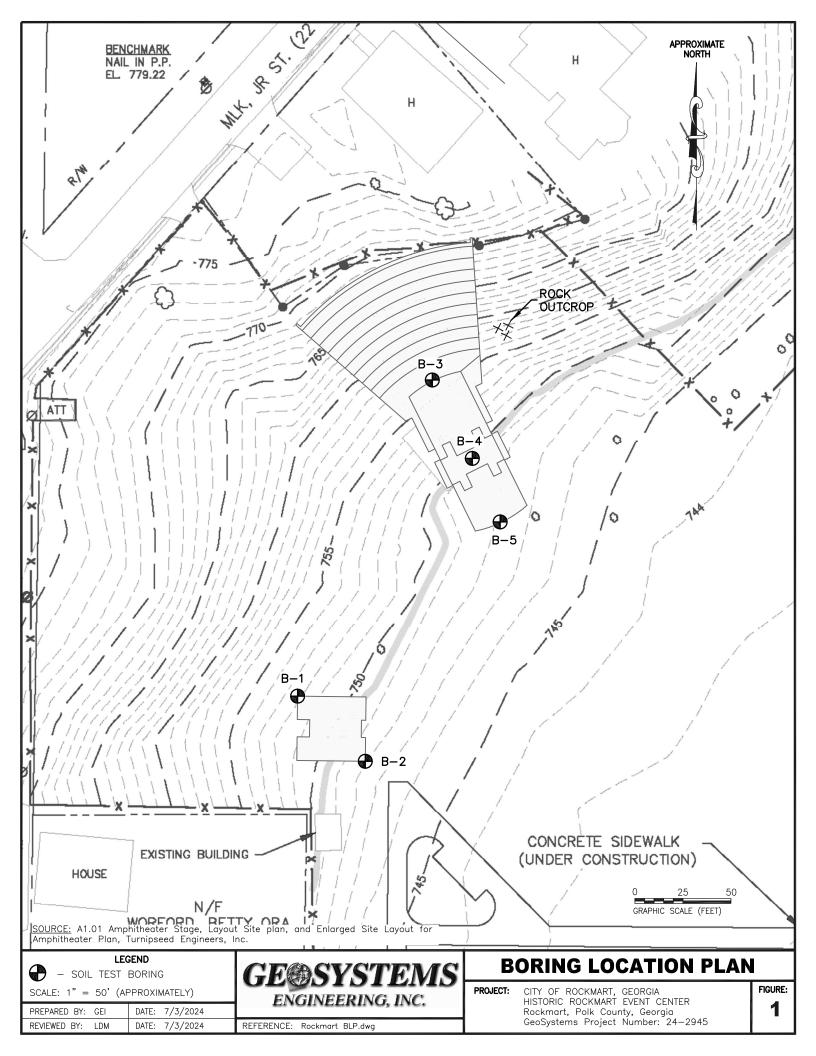
Key to Symbols and Classifications

Logs of Borings

Laboratory Test Reports

Larry D. Mullins, P.E. Principal Engineer

PROFESSIONAL 08/13/2024



#### **KEYS TO SYMBOLS AND CLASSIFICATIONS**

SPECIAL STRATIGRAPHY	FILL		PARTIALLY WEATHERED ROCK
IDENTIFIERS USED TO HIGHLIGHT SPECIFIC	TOPSOIL		ROCK ( GENERAL)
LAYERS	PAVEMENT		WATER ALLUVIUM
	CLEAN SANDS &		SP: Poorly graded sands
	GRAVELS		SW: Well graded sands
COARSE GRAINED SOIL - GRAVELS & SANDS	( < 5% FINES CONTENT)		GP: Poorly graded gravels
(MORE THAN 50% OF			GW: Well graded gravels
MATERIAL IS RETAINED ON NO. 200 SIEVE)	CANDO & CDAVELO MITU		SM: Silty sands
,	) SANDS & GRAVELS WITH HIGH FINES CONTENT		GM: Silty gravels
	( > 15% FINES CONTENT)	///	SC: Clayey sands
			GC: Clayey gravels
	OII TO		ML: Low plasticity inorganic silts
FINE GRAINED SOIL -	SILTS		MH: High plasticity inorganic silts
SILTS & CLAYS	CLAVC		CL: Low placticity inorganic clays
(MORE THAN 50% OF MATERIAL PASSES NO.	CLAYS		CH: High plasticity inorganic clays
200 SEIVE)	ORGANIC		OL: Low plasticity organic silts and clays
	SILTS & CLAYS		OH: High plasticity organic silts and clays

## CORRELATION OF PENETRATION RESISTANCE WITH RELATIVE DENSITY AND CONSISTENCY

	NUMBER OF BLOWS, N	APPROXIMATE RELATIVE DENSITY
	0 - 4	Very Loose
SANDS AND GRAVELS	5 - 10	Loose
	11 - 30	Medium Dense
	31 - 50	Dense
	OVER 50	Very Dense
	NUMBER OF BLOWS, N	APPROXIMATE RELATIVE CONSISTENCY
	0 - 1	Very Soft
	2 - 4	Soft
SILTS AND CLAYS	5 - 8	Firm
	9 - 15	Stiff
	16 - 30	Very Stiff
	31 - 50	Hard
	OVER 50	Very Hard

### **CITY OF ROCKMART LOG OF BORING B-1** HISTORIC EVENT CENTER **ROCKMART, GEORGIA** NOTES: 1. No groundwater encountered at GEOLOGIST: NA ELEVATION (feet): 752 the time of boring completion (NGWE). 2. No groundwater measured at the end of day BORING DEPTH (feet): 16 DATE DRILLED: 7/12/2024 (NGWM). WATER \_\_\_\_\_ TOB (feet): NGWE \_\_\_\_\_\_ 24HR (feet): NGWM DRILLER: GABLE DRILLING CO., INC. DRILLING METHOD: HOLLOW STEM AUGER WTIH AUTOMATIC HAMMER STANDARD PENETRATION RESISTANCE GRAPHIC LOG N VALUE DEPTH (feet) ELEV (feet) (blows/ft) **GEOLOGIC DESCRIPTION** 20 30 40 60 80 752 RESIDUUM: Firm brown fine sandy SILT (ML) 8 Stiff brown to reddish brown fine sandy SILT (ML), with clay 12 747 Very stiff to stiff yellowish brown to brown CLAY (CL) 17 10 742 No sample recovered 6 737 15 Auger Refusal at 16 feet.

### **CITY OF ROCKMART LOG OF BORING B-2** HISTORIC EVENT CENTER **ROCKMART, GEORGIA** NOTES: 1. No groundwater encountered at GEOLOGIST: NA ELEVATION (feet): 748 the time of boring completion (NGWE). 2. No groundwater measured at the end of day DATE DRILLED: 7/12/2024 BORING DEPTH (feet): 10 (NGWM). WATER \_\_\_\_\_ TOB (feet): NGWE \_\_\_\_\_\_ 24HR (feet): NGWM DRILLER: GABLE DRILLING CO., INC. DRILLING METHOD: HOLLOW STEM AUGER WTIH AUTOMATIC HAMMER STANDARD PENETRATION RESISTANCE GRAPHIC LOG N VALUE DEPTH (feet) ELEV (feet) (blows/ft) **GEOLOGIC DESCRIPTION** 20 30 40 60 80 748 RESIDUUM: Medium dense to loose brown clayey SAND (SC), with fine 13 743 Loose brown to pale brown clayey fine SAND (SC) 10 Firm pale brown fine sandy SILT (ML), very hard with rock fragments at 9.5 feet. 738 . 50/2' Auger refusal at 10 feet.

#### CITY OF ROCKMART HISTORIC EVENT CENTER ROCKMART, GEORGIA

#### **LOG OF BORING B-3**

GEOLOGIST: NA ELEVATION (feet): 751

DATE DRILLED: 7/12/2024 BORING DEPTH (feet): 15

DRILLER: GABLE DRILLING CO., INC. WATER □ TOB (feet): NGWE ■ 24HR (feet): NGWM

NOTES: 1. No groundwater encountered at the time of boring completion (NGWE). 2. No groundwater measured at the end of day (NGWM).

DRILLING MI	DRILLING METHOD: HOLLOW STEM AUGER WTIH AUTOMATIC HAMMER						
DEPTH (feet) GRAPHIC LOG	GEOLOGIC DESCRIPTION	ELEV (feet)	N VALUE			RATION RESIST ws/ft)	ΓΑΝCE 40 60 80
0 -	RESIDUUM: Stiff to very stiff brown fine sandy SILT (ML)	751 - - -	11				
5 <b>-</b>         -	Stiff orange and brown to black fine sandy SILT (ML)  Very stiff yellowish brown to reddish brown fine sandy SILT (ML)	746 <del>-</del>  	17			•	
10 -		741 -	17			•	
15	Stiff brown to yellowish brown fine sandy SILT (ML), very moist  Boring terminated at 15 feet.	736 _	11			•	
	FENAC ENCINEEDING INC						

#### CITY OF ROCKMART HISTORIC EVENT CENTER ROCKMART, GEORGIA

#### **LOG OF BORING B-4**

GEOLOGIST: NA ELEVATION (feet): 749

DATE DRILLED: 7/12/2024 BORING DEPTH (feet): 15

DRILLER: GABLE DRILLING CO., INC. WATER LEVEL ▼ TOB (feet): 15 ▼ 24HR (feet): 15

NOTES: 1. Groundwater detected at 15 feet at the time of boring. 2. Groundwater was measured at 15 feet at the end of the day.

	ETHOD: HOLLOW STEM AUGER WTIH AUTOMATIC HAMMER			
(feet) GRAPHIC LOG	GEOLOGIC DESCRIPTION	ELEV (feet)	N VALUE	STANDARD PENETRATION RESISTANCE (blows/ft)  2  3  4  5  6  10  20  30  40  60
	RESIDUUM: Firm brown to reddish brown CLAY (CL), some fine to medium sand	749 ¯ - -	7	
5 -	Stiff dark brown to reddish brown CLAY (CL), some fine to medium sand	- - 744 —	10	
	Stiff yellowish brown and red fine sandy SILT (ML)	-	12	
10 —	Stiff reddish brown to brown fine sandy SILT (ML), with clay	- 739 — -	12	•
IS	Stiff yellowish brown to dark yellowish brown CLAY (CL), very moist	- - 734	10	
	Auger refusal at 15 feet.			

# CITY OF ROCKMART HISTORIC EVENT CENTER ROCKMART, GEORGIA

#### **LOG OF BORING B-5**

GEOLOGIST: NA ELEVATION (feet): 748

DATE DRILLED: 7/12/2024 BORING DEPTH (feet): 30

NOTES: 1. Groundwater detected at 13 feet at the time of boring. 2. Groundwater was measured at 13 feet at the end of the day

DRILLING M	ETHOD: HOLLOW STEM AUGER WTIH AUTOMATIC HAMMER						
DEPTH (feet) GRAPHIC LOG	GEOLOGIC DESCRIPTION	ELEV (feet)	N VALUE	STANDARD PEN (	IETRATION I blows/ft)	RESISTANCE	
0	RESIDUUM: Stiff brown fine sandy SILT (ML)	748	Z	2 3 4 5 6	10 2	0 30 40 60 8	30
- - - - 5 —	Stiff yellowish brown SILT (ML), moist with some clay	- - 743 —	11				
5 —	Stiff yellowish brown to brown fine sandy SILT (ML)	/43 <del>-</del> - -	13		•		
10 —		738 <del>-</del> -	12		•		
15 —	Very soft yellowish brown fine sandy SILT (ML)	733 —	woн				
- - - 20 —	Very soft brown fine sandy SILT (ML)	- - 728 —	woh•				
- - -		- - -	woh <sup>•</sup> _				
25 —	No sample recovery	723 —					
30	Boring terminated at 30 feet.	718 _	WOH				
	TENAS ENGINEEDING ING						



Project: City of Rockmart Historic Event Center

Location: Rockmart, Polk County, GA Project No: GTX-319470

Boring ID: B-2 Sample Type: Bag Tested By: mgh Sample ID: S-1 Test Date: 07/23/24 Checked By: MCM

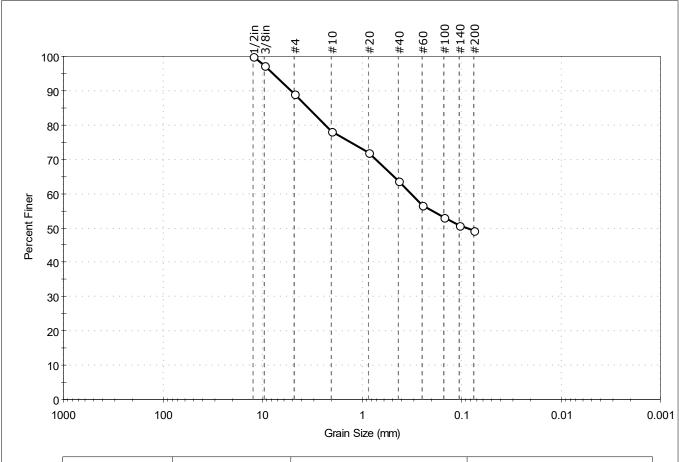
Depth: 6-7.5 ft Test Id: 361316

Test Comment: ---

Visual Description: Moist, brown clayey sand

Sample Comment: ---

### Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	%Silt &Clay Size
	10.9	39.9	49.2

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1/2in	12.50	100		
3/8in	9.50	97		
#4	4.75	89		
#10	2.00	78		
#20	0.85	72		
#40	0.42	64		
#60	0.25	57		
#100	0.15	53		
#140	0.11	51		
#200	0.075	49		

<u>Coefficients</u>						
D <sub>85</sub> = 3.4492 mm	$D_{30} = N/A$					
D <sub>60</sub> = 0.3189 mm	$D_{15} = N/A$					
D <sub>50</sub> = 0.0897 mm	$D_{10} = N/A$					
$C_u = N/A$	$C_c = N/A$					

<u>Classification</u> <u>ASTM</u> Clayey SAND (SC)

AASHTO Clayey Soils (A-6 (3))

<u>Sample/Test Description</u> Sand/Gravel Particle Shape: ANGULAR

 ${\sf Sand/Gravel\; Hardness: HARD}$ 



Project: City of Rockmart Historic Event Center

Location: Rockmart, Polk County, GA Project No: GTX-319470

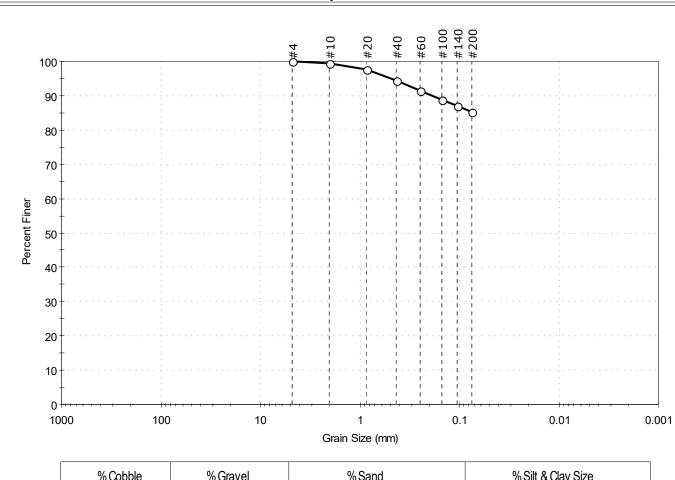
Boring ID: B-4 Sample Type: Bag Tested By: mgh Sample ID: S-2 Test Date: 07/23/24 Checked By: MCM

Depth: 3.5-5 ft Test Id: 361317

Test Comment: --Visual Description: Moist, reddish brown clay

Sample Comment: ---

### Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
	0.0	14.7	85.3

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	99		
#20	0.85	98		
#40	0.42	94		
#60	0.25	91		
#100	0.15	89		
#140	0.11	87		
#200	0.075	85		

<u>Coefficients</u>					
$D_{85} = N/A$	$D_{30} = N/A$				
$D_{60} = N/A$	$D_{15} = N/A$				
D <sub>50</sub> = N/A	$D_{10} = N/A$				
$C_u = N/A$	$C_c = N/A$				

<u>Classification</u>
ASTM Lean CLAY (CL)

AASHTO Clayey Soils (A-6 (18))

<u>Sample/Test Description</u> Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness: ---



Project: City of Rockmart Historic Event Center

Location: Rockmart, Polk County, GA Project No: GTX-319470

Boring ID: B-4 Sample Type: Bag Tested By: mgh Sample ID: S-3 Test Date: 07/23/24 Checked By: MCM

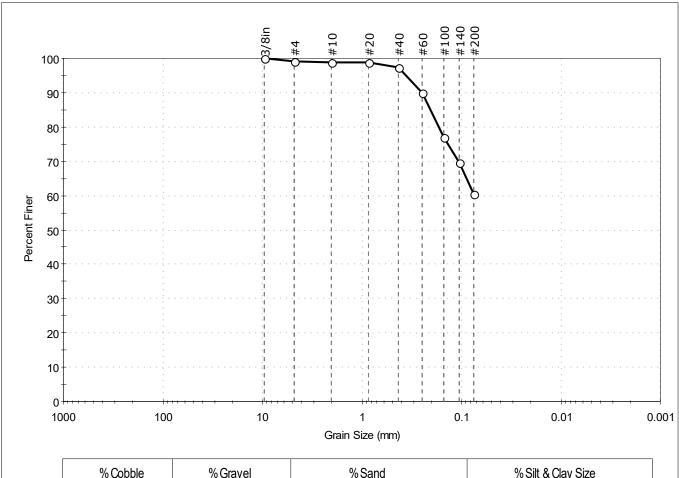
Depth: 8.5-10 ft Test Id: 361318

Test Comment: ---

Visual Description: Moist, light reddish brown sandy silt

Sample Comment: ---

### Particle Size Analysis - ASTM D6913



% Cobble % Gravel		% Sand	% Silt & Clay Size		
_	0.8	38.8	60.4		

Sieve Name Sieve Size, mm		Percent Finer	r Spec. Percent Comp			
3/8in	9.50	100				
#4	4.75	99				
#10	2.00	99				
#20	0.85	99				
#40	0.42	97				
#60	0.25	90				
#100	0.15	77				
#140	0.11	70				
#200	0.075	60				

	<u>Coefficients</u>								
D	<sub>85</sub> =0.2050 mm	$D_{30} = N/A$							
D	$_{60} = N/A$	$D_{15} = N/A$							
D	$_{50} = N/A$	$D_{10} = N/A$							
С	u =N/A	$C_C = N/A$							

ASTM Sandy SILT (ML)

AASHTO Silty Soils (A-4 (0))

<u>Sample/Test Description</u> Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

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Project: City of Rockmart Historic Event Center

Location: Rockmart, Polk County, GA Project No:

GTX-319470 Boring ID: B-5 Sample Type: Bag Tested By: mgh Test Date: 07/23/24 Checked By: n/a Sample ID: S-4

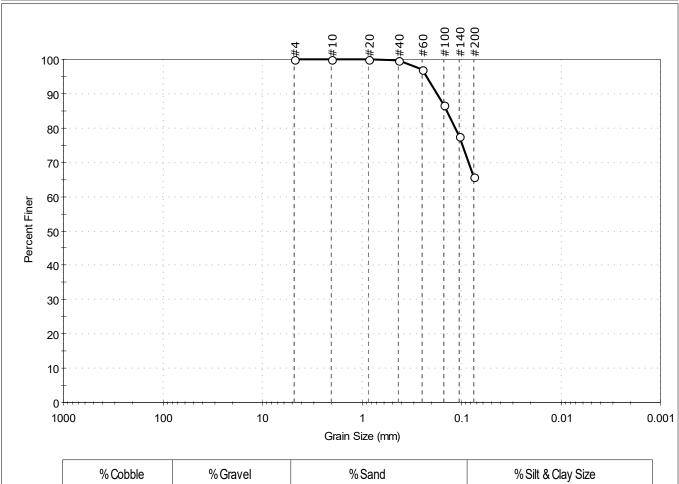
361319 Depth: 8.5-10 ft Test Id:

Test Comment:

Visual Description: Moist, light gray sandy silt

Sample Comment:

### Particle Size Analysis - ASTM D6913



% Cobble % Gravel		% Sand	% Silt & Clay Size		
_	0.0	34.3	65.7		

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
#4	4.75	100		
#10	2.00	100		
#20	0.85	100		
#40	0.42	100		
#60	0.25	97		
#100	0.15	87		
#140	0.11	78		
#200	0.075	66		

<u>Coefficients</u>									
D <sub>85</sub> = 0.1400 mm	$D_{30} = N/A$								
$D_{60} = N/A$	$D_{15} = N/A$								
$D_{50} = N/A$	$D_{10} = N/A$								
$C_u = N/A$	C <sub>c</sub> =N/A								

<u>Classification</u> Sandy SILT (ML) **ASTM** AASHTO Silty Soils (A-4 (0))

<u>Sample/Test Description</u> Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness: ---



Project: City of Rockmart Historic Event Center Location: Rockmart, Polk County, GA

Location:Rockmart, Polk County, GAProject No:GTX-319470Boring ID:B-2Sample Type: BagTested By:bdh

Boring ID: B-2 Sample Type: Bag Tested By: bdh Sample ID: S-1 Test Date: 07/23/24 Checked By: MCM

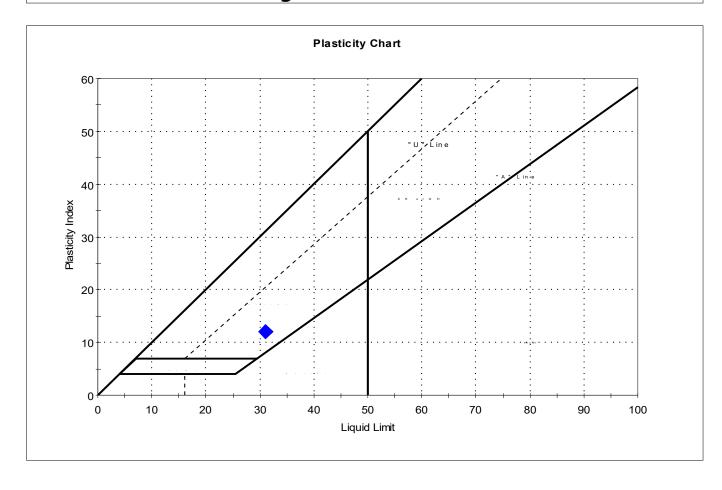
Depth: 6-7.5 ft Test Id: 361312

Test Comment: ---

Visual Description: Moist, brown clayey sand

Sample Comment: ---

### Atterberg Limits - ASTM D4318



Symbol	Sample ID	Boring	Depth	Natural Moisture Content,%	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
<b>•</b>	S-1	B-2	6-7.5 ft	15	31	19	12	-0.3	Clayey SAND (SC)

Sample Prepared using the WET method

36% Retained on #40 Sieve

Dry Strength: HIGH Dilatancy: NONE Toughness: MEDIUM



Project: City of Rockmart Historic Event Center

Location: Rockmart, Polk County, GA Project No:

Boring ID: B-4 Sample Type: Bag Tested By: bdh Sample ID: S-2 Test Date: 07/23/24 Checked By: MCM

GTX-319470

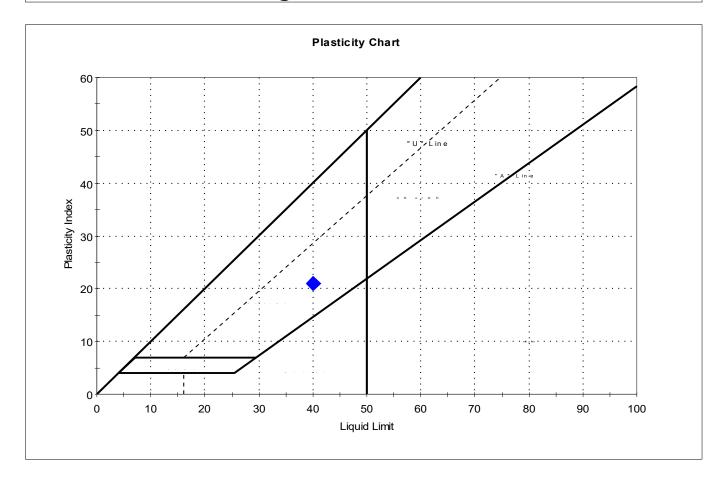
Depth: 3.5-5 ft Test Id: 361313

Test Comment: ---

Visual Description: Moist, reddish brown clay

Sample Comment: ---

### Atterberg Limits - ASTM D4318



Symbol	Sample ID	Boring	Depth	Natural Moisture Content,%	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
•	S-2	B-4	3.5-5 ft	22	40	19	21	0.1	Lean CLAY (CL)

Sample Prepared using the WET method

6% Retained on #40 Sieve

Dry Strength: HIGH Dilatancy: NONE Toughness: MEDIUM



Project: City of Rockmart Historic Event Center

Location: Rockmart, Polk County, GA Project No:

Boring ID: B-4 Sample Type: Bag Tested By: bdh Sample ID: S-3 Test Date: 07/23/24 Checked By: MCM

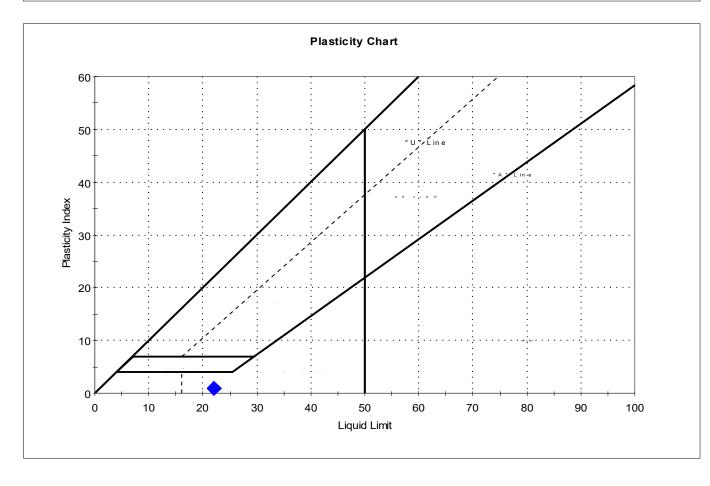
GTX-319470

Depth: 8.5-10 ft Test Id: 361314
Test Comment: ---

Visual Description: Moist, light reddish brown sandy silt

Sample Comment: ---

### Atterberg Limits - ASTM D4318



Symbol	Sample ID	Boring	Depth	Natural Moisture Content,%	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
<b>•</b>	S-3	B-4	8.5-10 ft	19	22	21	1	-2.4	Sandy SILT (ML)

Sample Prepared using the WET method

3% Retained on #40 Sieve Dry Strength: MEDIUM Dilatancy: SLOW Toughness: MEDIUM



Project: City of Rockmart Historic Event Center

Location: Rockmart, Polk County, GA Project No: GTX-319470
Boring ID: B-5 Sample Type: Bag Tested By: bdh

Boring ID: B-5 Sample Type: Bag Tested By: bdh Sample ID: S-4 Test Date: 07/23/24 Checked By: MCM

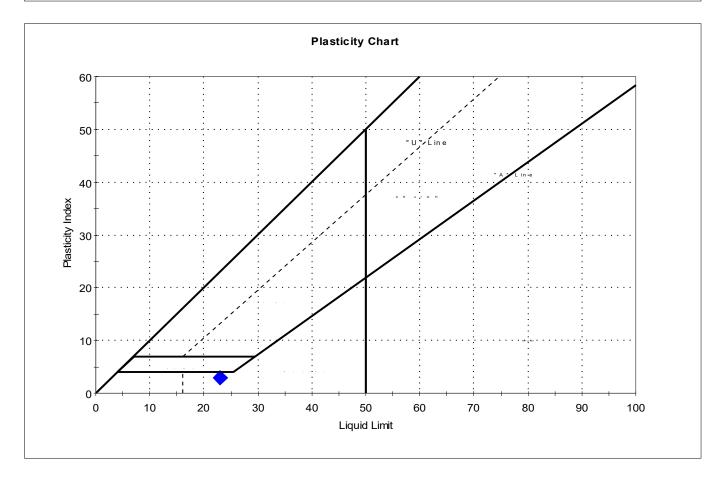
Depth: 8.5-10 ft Test Id: 361315

Test Comment: ---

Visual Description: Moist, light gray sandy silt

Sample Comment: ---

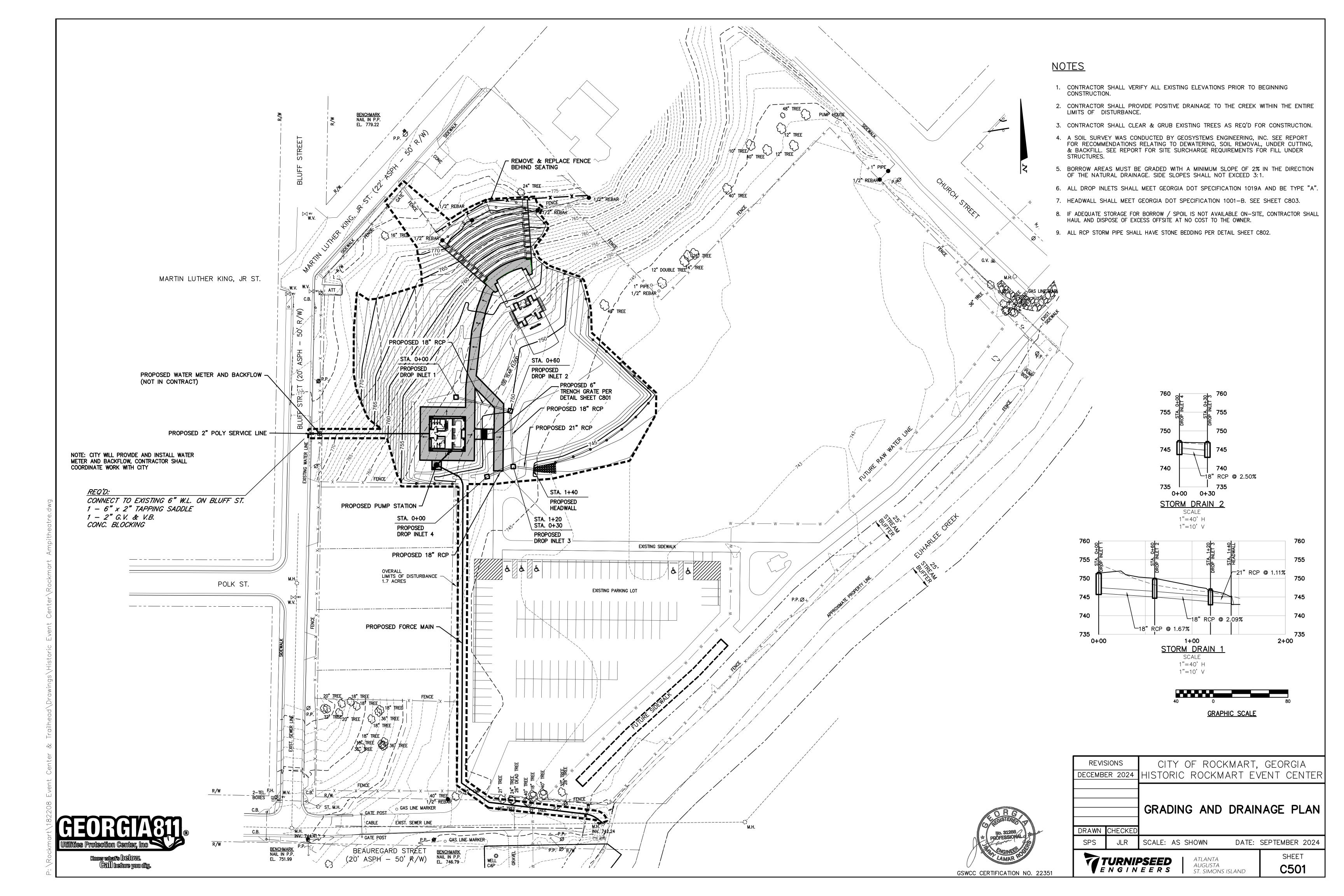
### Atterberg Limits - ASTM D4318



Symbol	Sample ID	Boring	Depth	Natural Moisture Content,%	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
<b>•</b>	S-4	B-5	8.5-10 ft	19	23	20	3	-0.2	Sandy SILT (ML)

Sample Prepared using the WET method

0% Retained on #40 Sieve Dry Strength: MEDIUM Dilatancy: SLOW Toughness: MEDIUM



EXIST. GRADE 745

1+00

FORCE MAIN PROFILE SCALE: HORZ: 1" = 20' VERT: 1" = 5'

2+00

-PROPOSED 1 1/4" HDPE SDR 11 FORCE MAIN (MIN. 4'-0" COVER)

3+00

CITY OF ROCKMART, GEORGIA REVISIONS HISTORIC ROCKMART EVENT CENTER DECEMBER 2024

745

735

5+20

WATER AND SEWER PLAN

DRAWN CHECKEI SPS SCALE: AS SHOWN JLR

5+00

DATE: SEPTEMBER 2024

TURNIPSEED ENGINEERS GSWCC CERTIFICATION NO. 22351

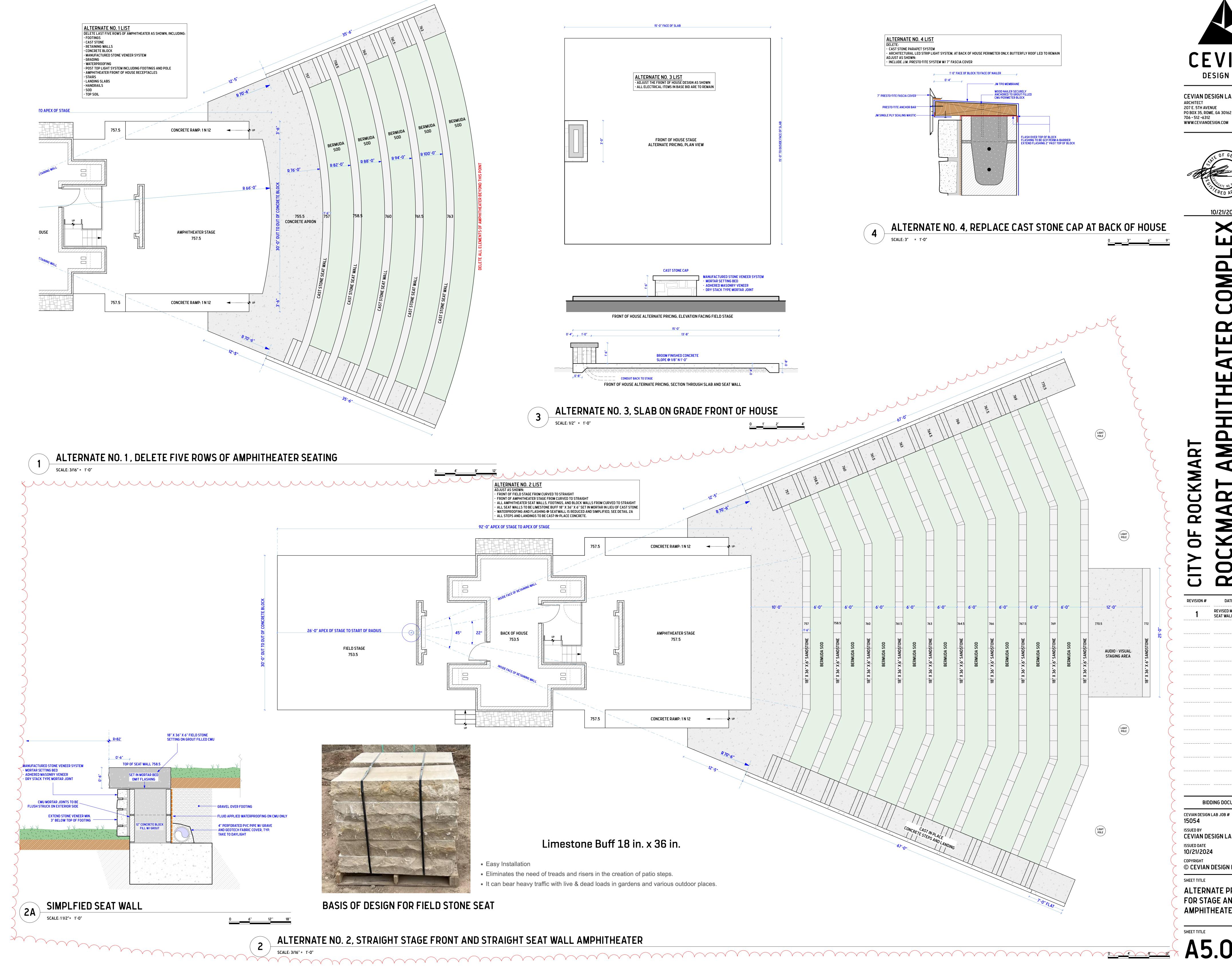
NOTE: CONTRACTOR SHALL INSTALL FORCE MAIN TO ENSURE CONSTANT POSITIVE

GRADE TO HIGH POINT WITH 4'-0" MIN. COVER UNLESS NOTED OTHERWISE.

4+00

SHEET ATLANTA AUGUSTA ST. SIMONS ISLAND C601

0+00



CEVIAN DESIGN LAB, LLC 207 E. 5TH AVENUE



10/21/2024

REVISED MATERIAL FOR AMP SEAT WALL ALTERNATE

**BIDDING DOCUMENTS** 

CEVIAN DESIGN LAB JOB # 15054

CEVIAN DESIGN LAB, LLC ISSUED DATE 10/21/2024

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**ALTERNATE PRICING** FOR STAGE AND **AMPHITHEATER**