CITY OF FOREST PARK, GEORGIA

STARR PARK - PHASE I

PROJECT NO.: 02072023

ADDENDUM NO. 1

MARCH 16, 2023

ALL BIDDERS FOR THE REFERENCED PROJECT ARE REQUIRED TO MAKE THE CHANGES BELOW TO THE EXISTING CONTRACT DOCUMENTS OBTAINED FROM THE CITY OF FOREST PARK'S WEBSITE FOR BIDDING PURPOSES:

ITEM NO. 1: RESPONSE TO WRITTEN QUESTIONS RECEIVED PRIOR TO THE FEBRUARY 28, 2023 AT 12:00 PM NOON DEADLINE ESTABLISHED IN THE CONTRACT DOCUMENTS:

- **QUESTION:**
  - What is the estimated cost or budget?
- **RESPONSE:**
  - Project budgets and estimates are proprietary.

- **QUESTION:**
  - Can I get a copy of any addendum released to date?
- **RESPONSE:**
  - All project and bid related documents are posted on the City's website.

- **QUESTION:**
  - Is irrigation required for this project? If so, where are the irrigation plans? Or is this a design-build irrigation proposal?
- **RESPONSE:**
  - Per L1.00, irrigation is required for this project. Irrigation design shall be design/build by the contractor and included in base bid.

- **QUESTION:**
  - When is the estimated installation date?
- **RESPONSE:**
  - Construction is expected to begin within 30 days after the contacts have been completely executed.

- **QUESTION:**
  - Is there a General Contractors license requirement?
- **RESPONSE:**
  - Yes, per the Contract Documents.

- **QUESTION:**
  - Can you provide a CAD file?
- **RESPONSE:**
  - CAD files will be provided only to the successful bidder that is awarded the contract.

- **QUESTION:**
  - Is this a classified or unclassified bid? There is no units for unsuitable.
- **RESPONSE:**
  - This is an unclassified bid. However, bidding contractors may reference Geotechnical Investigation report prepared by Atlas Technical Consultants, dated May 6, 2022.

- **QUESTION:**
  - Can this site be balanced to avoid export/import of dirt?
- **RESPONSE:**
  - Earthwork calculations and takeoffs are ultimately the responsibility of the contractor. Costs for any necessary haul-in or haul-off shall be included in base bid. However, based on preliminary earthwork studies by design team, the site is expected to be approximately balanced, within specified tolerances.

- **QUESTION:**
  - Explain how the allowances are handled. What is the allowance for playground equipment? What is the allowance for skate park? Is the 10% contingency allowance supposed to be somewhere in base bid?
- **RESPONSE:**
  - Contractor shall include allowances in bid, as specified on C0.0 and H1.00. Awarded contractor will then coordinate exact design, product, and installation with design team and owner. Contractor shall include the 10% contingency allowance into the unit price for each line item of the bid. Therefore, the actual price that will be paid for each line item is 90% of the value submitted.

- **QUESTION:**
  - Explain how unit prices work. Is each unit price supposed to have everything priced into that item since there is no grading complete, erosion, or wall line items? Example: are we supposed to include all the grading, clearing, surveying, erosion, ect. for each line item? The bid schedule is very confusing and the way it is right now there is now way we or subcontractors would ever break out numbers like this?
- **RESPONSE:**
  - Unit pricing is broken into structures and defined project components. This is to simplify if items need to be removed from and/or added to the project. Site grading is a site wide issue but specific excavation that is required for various structures is associated with that specific line item.

- **QUESTION:**
  - Clarify what the walls are? There is a detail of on pg, C7.1 for cast in place wall but elevation pages show segmental retaining walls. Also bid schedule shows a concrete wall but no segmented retaining walls.
- **RESPONSE:**
  - Refer to H3.00. Walls shall be segmental retaining walls per H3.00 and specification. Disregard detail on C7.1.

- **QUESTION:**
  - In which Bid Line Item does the Electrical Site Lighting found on Sheets ES – 101; ES – 401; ES – 402 and ES -403 to be included?
- **RESPONSE:**
  - New Bid Form is provided under "Item No. 2" of this Addendum – See Line Item 97.

- **QUESTION:**
  - What is the cost of the permits?
- **RESPONSE:**
  - All fees associated with City of Forest Park permitting are being waived by the City.

- **QUESTION:**
  - Will the retaining wall require a permit? And if so at what cost?
- **RESPONSE:**
  - All fees associated with City of Forest Park permitting are being waived by the City.

- **QUESTION:**
  - Will the Irrigation system to be designed by the Landscape Contractor? If so, then do you have a minimal Zone requirement.
- **RESPONSE:**
  - Refer to note on L1.00. Exact zone requirements will be coordinated with owner.

- **QUESTION:**
  - Will Park Avenue be completely closed during construction; seeing we have work to complete on both sides of the street?
- **RESPONSE:**
  - At this time there is no plan to close Park Avenue. After the award of this contact the successful bidder may provide a written request to the City for this closure. Requests for road closures will be complete with a traffic control and detour plan.

- **QUESTION:**
  - Does the Limits of construction determine the linear footage of Construction Fencing required?
- **RESPONSE:**
  - Contractor's responsibility to determine construction fencing quantities.

- **QUESTION:**
  - Is there a certified land fill usage required by the city of Forest Park?
- **RESPONSE:**
  - No.

- **QUESTION:**
  - Are any items listed for removal going to be removed by the city of Forest Park (reference sheets C2.0 & C2.1)?
- **RESPONSE:**
  - At this time, contractor shall assume all work identified on C2.0 an C2.1 is to be performed by contractor.

- **QUESTION:**
  - Can the limits of demolition be better defined as it relates to the existing pool and its components to remain?
- **RESPONSE:**
  - Refer to C2.0 for description of intent regarding site work. Mechanical equipment located in existing 'pump house' (and all associated appurtenances) shall also be saved and protected.

- **QUESTION:**
  - Was the existing pool in operation during the summer of 2022?
- **RESPONSE:**
  - Yes.

- **QUESTION:**
  - Is there a detail at the edge of slab for the new splash pad?
- **RESPONSE:**
  - Splash pad slab shall be per SW2.0, with finished as specified on H1.01.

- **QUESTION:**
  - What is the quantity of kids that the splash pad is designed for?
- **RESPONSE:**
  - Splash pad was not designed to a specific occupancy count.

- **QUESTION:**
  - Sheet C3.0 references some Pool Drawings for Splash Pad details, could not locate.
- **RESPONSE:**
  - Refer to SW0.0-SW4.2

- **QUESTION:**
  - What product and color are we using for the integral-colored concrete as shown on sheet H1.01?
- **RESPONSE:**
  - Refer to updated H2.00.

- **QUESTION:**
  - Who is providing the laser cut steel city logo as shown on sheet A-201? If the General Contractor is to provide, is there a source that the city wants to use?
- **RESPONSE:**
  - The logo is to be provided by the GC. GC responsible for the all-other requirements for this item.

- **QUESTION:**
  - What is the anticipated Notice to Proceed date?
- **RESPONSE:**
  - Construction is expected to begin within 30 days after the contacts have been completely executed.

- **QUESTION:**
  - What Bid Line Items do Specifications 27 0000, 28 0000 and other Low Voltage Systems as well support item bid under?
- **RESPONSE:**
  - New Bid Form is provided under "Item No. 2" of this Addendum – See Line Item 97.

ITEM NO. 2: BID FORM:

All Bidders are required to remove "SECTION III – BID FORM" from the Contract Documents and replace with "SECTION III – REVISED: BID FORM" that is attached to this Addendum.

ITEM NO. 3: GEOTECHNICAL REPORT:

The geotechnical investigation for Starr Park dated May 6, 2022 is attached to this Addendum and is to be included into the Contract Documents for this project.

ITEM NO. 4: HARDSCAPE DETAILS:

All Bidders are required to remove "Sheet H2.00 – HARDSCAPE DETAILS" from the Contract Drawings and replace this sheet with Sheet "H2.00 – HARDSCAPE DETAILS" with revision date: 03/08/23 that is attached to this Addendum.

ITEM NO. 5: BIDDER FURNISHED INFORMATION:

All Bidders are requested to delete any reference to **Georgia DOT Prequalification and/or Certification** from the Contract Documents. Bidders are only required to provide a **Georgia Contractor's License** number with the submission of the bid.

END OF ADDENDUM NO. 1

Where any original item, term or requirement is not specifically amended, voided or superseded by this addendum, it will remain in effect. This clarification is being provided to all known respondents.

This Addendum must be completed, signed, and attached to the RFP to acknowledge receipt of Addendum. **FAILURE TO ACKNOWLEDGE THIS ADDENDUM MAY RESULT IN REJECTION OF PROPOSAL.**

Business Name _____

Authorized Signature _____ Date _____

Typed Name

& Title _____

SECTION III

REVISED: BID FORM

FOREST PARK
STARR PARK
PHASE - I

PROJECT NO.: 02072023

BID DATE: MARCH 21ST, 2023

BID TIME: 2:00 PM (EST)

SECTION III

TABLE OF CONTENTS

Page

SECTION III

ARTICLE 1 – BID RECIPIENT

1.01 This Bid is submitted to:

City of Forest Park, Georgia

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with the Owner in the form included in the Bidding Documents and to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 – BIDDER'S ACKNOWLEDGEMENTS

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

ARTICLE 3 – BIDDER'S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, other related data identified in the Bidding Documents, and the following Addenda, receipt of which is hereby acknowledged:

Addendum No.	Addendum Date
ADDENDUM NO. 1	MARCH 16, 2023

B. Bidder has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Bidder is familiar with and is satisfied as to all Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Bidder has considered the information known to Bidder; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying the specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents; and (3) Bidder's safety precautions and programs.

E. Based on the information and observations referred to in Paragraph 3.01.D above, Bidder does not consider that further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price(s) bid and

within the times required, and in accordance with the other terms and conditions of the Bidding Documents.

F. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.

G. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by Engineer is acceptable to Bidder.

H. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this Bid is submitted.

ARTICLE 4 – BIDDER'S CERTIFICATION

4.01 Bidder certifies that:

A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;

B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;

C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and

D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:

1. "Corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

ARTICLE 5 – BASIS OF BID

5.01 Bidder will complete the Work in accordance with the Contract Documents for the following price(s). Any incomplete or illegible bid prices will make this bid subject to rejection by the Owner:

SECTION III

ITEM NO.	DESCRIPTION	UNITS	ESTIMATED QUANTITY	UNIT PRICE	TOTAL PRICE
1	BONDS, INSURANCE, MOBILIZATION	LS	1	$_____	$_____
2	TRAFFIC CONTROL (COMPLETE PER GDOT/MUTCD FOR PROJECT DURATION)	LS	1	$_____	$_____
3	DEMOLITION REMOVAL, DISPOSAL AND STORAGE (COMPLETE BUT NOT LIMITED TO VEGETTION, TREES, SAW CUTTING, PAVEMENTS, CONCRETE, STRUCTURES, SIGNAGE, TRAFFIC SIGNALS AND ALL RELATED APPURTENANCES)	LS	1	$_____	$_____
4	GIS "AS-BUILT" SURVEY OF COMPLETE PROJECT ON "GEORGIA STATE PLANE COORDINATES" FOR ALL WORK PERFORMED	LS	1	$_____	$_____
5	4" THICK 6' WIDE CONCRETE SIDEWALK COMPLETE; CLASS "A" 3000 PSI AND ALL REQUIRED APPURTENANCES	SF	48,000	$_____	$_____
6	6" THICK CONCRETE PAVING COMPLETE; CLASS "A" 4000 PSI; INCLUDING 6" GAB COMPACTED BASE AND ALL REQUIRED APPURTENANCES	SF	10,500	$_____	$_____
7	ASPHALT PAVING; "HEAVY DUTY"; **COMPLETE FROM SUBGRADE TO SURFACE COURSE INCLUDING BUT NOT LIMITED TO** RECYCLED APHALTIC CONCRETE 12.5 MM SUPERPAVE, TYPE 1, GP 1 OR 2, INCLUDING BITUMINOUS MATERIL & "H" LIME 2" MIN. THICKNESS; TACK COAT; 2" RECYCLED APHALTIC CONCRETE 19 MM SUPERPAVE PRIME COAT 2" MIN. THICKNESS, TYPE 1, GP 1 OR 2, INCLUDING BITUMINOUS MATERIAL & "H" LIME; 8" GAB, STANDARD PROCTOR COMPACTED SUBGRADE;	SY	500	$_____	$_____

SECTION III

8	ASPHALT PAVING; "LIGHT DUTY"; **COMPLETE FROM SUBGRADE TO SURFACE COURSE INCLUDING BUT NOT LIMITED TO** RECYCLED APHALTIC CONCRETE 9.5 MM SUPERPAVE, TYPE II INCLUDING BITUMINOUS MATERIL & "H" LIME, 1 ¼" MIN. THICKNESS; TACK COAT; 1 ¾" RECYCLED APHALTIC CONCRETE 19 MM SUPERPAVE PRIME COAT 2" MIN. THICKNESS, TYPE 1, GP 1 OR 2, INCLUDING BITUMINOUS MATERIAL & "H" LIME; PRIME COAT, 6" GAB, STANDARD PROCTOR COMPACTED SUBGRADE;	SY	400	$_____	$_____
9	RUBBERIZED TRACK SURFACE; COMPLETE INCLUDING BUT NOT LIMITED TO POURED IN PLACE RUBBERIZED TRAIL SURFACE, STANDARD PROCTOR GAB & STANDARD PROCTOR COMPACTED SUBGRADE AND ALL REQUIRED APPURTENANCES	SF	13,500	$_____	$_____
10	RUBBERIZED PLAYGROUND SURFACE SYSTEM; COMPLETE INCLUDING POURED IN PLACE RUBBERIZED SURFACE, FALL-SAFE PADDING, CONCRETE SLAB PER MANUFACTURER SPECS., DRAINAGE & STANDARD PROCTOR COMPACTED SUBGRADE AND ALL REQUIRED APPURTENANCES	SF	21,000	$_____	$_____
11	PERMEABLE PAVER SYSTEM; COMPLETE INCLUDING PERMEABLE PAVERS, BEDDING AND DRAINAGE; AND ALL REQUIRED APPURTENANCES	SF	9,000	$_____	$_____
12	DOG PARK SURFACE SYSTEM; COMPLETE INCLUDING CLEAN SHREDDED HARDWOOD MULCH DYED BROWN,	SF	7,000	$_____	$_____

	BEDDING AND DRAINAGE; AND ALL REQUIRED APPURTENANCES				
13	ATHLETIC COURT SURFACE SYSTEM; COMPLETE INCLUDING SPECIFIED SURFACES, EDGE RESTRAINT, CONCRETE PAVING AND STANDARD PROCTOR COMPACTION; AND ALL REQUIRED APPURTENANCES	SF	11,500	$_____	$_____
14	SAND VOLLEYBALL COURT SYSTEM; COMPLETE INCLUDING CLEAN BEACH SAND, ANCHORED RUBBER CURB, NON-WOVEN FILTER FABRIC, DRAINAGE AND COMPACTED SUBGRADE; AND ALL REQUIRED APPURTENANCES	SF	3,500	$_____	$_____
15	RIVERROCK SWALE; COMPLETE INCLUDING SUBGRADE PREP, WRAPPED 57 STONE AND 8" MIN – 16" MAX BROWN RIVER ROCK	SF	700	$_____	$_____
16	SYNTHETIC TURF SYSTEM; COMPLETE INCLUDING STANDARD PROCTOR COMPACTED SUBGRADE, DRAINAGE, STONE BASE, TOPPING STONE AND SYNTHETIC TURF SYSTEM; AND ALL REQUIRED APPURTENANCES	SF	46,000	$_____	$_____
17	3000 PSI CONCRETE CURB AND GUTTER; COMPLETE INCLUDING ROLLBACK CURB, GDOT GAB ROAD BASE; MIN. 8" THICK x 30" WIDE UNDER CURB INCLUDING STANDARD PROVTOR COMPACTION AND GRADING AND ALL REQUIRED APPURTENANCES	LF	2,800	$_____	$_____
18	3000 PSI CONCRETE HEADER CURB (WITHOUT FENCING); COMPLETE INCLUDING EXPANSION MATERIAL WHERE REQUIRED, REBAR REINFORCEMENT AND STANDARD PROCTOR	LF	4,300	$_____	$_____

	COMPACTION AND ALL REQUIRED APPURTENANCES				
19	3000 PSI CONCRETE HEADER CURB (WITH FENCING); COMPLETE INCLUDING EXPANSION MATERIAL WHERE REQUIRED, REBAR REINFORCEMENT, FENCING, AND STANDARD PROCTOR COMPACTION AND ALL REQUIRED APPURTENANCES	LF	1,300	$_____	$_____
20	CURB RAMP; GDOT ADA RAMP "TYPE A" COMPLETE INCLUDING ALL REQUIRED APPURTENANCES	EA	3	$_____	$_____
21	CURB RAMP; GDOT ADA RAMP "TYPE B" COMPLETE INCLUDING ALL REQUIRED APPURTENANCES	EA	6	$_____	$_____
22	CURB RAMP; GDOT ADA RAMP "TYPE D" COMPLETE INCLUDING ALL REQUIRED APPURTENANCES	EA	2	$_____	$_____
23	4' TALL ORNAMENTAL METAL FENCING; COMPLETE INCLUDING 3000 PSI CONCRETE FOOTINGS AND ALL MANUFACTURER REQUIRED APPURTENANCES	LF	1,200	$_____	$_____
24	8' TALL ORNAMENTAL METAL FENCING; COMPLETE INCLUDING 3000 PSI CONCRETE FOOTINGS AND ALL MANUFACTURER REQUIRED APPURTENANCES	LF	500	$_____	$_____
25	4' TALL CHAIN LINK FENCING; COMPLETE INCLUDING 3000 PSI CONCRETE FOOTINGS AND ALL MANUFACTURER REQUIRED APPURTENANCES	LF	800	$_____	$_____
26	10' TALL CHAIN LINK FENCING; COMPLETE INCLUDING 3000 PSI CONCRETE FOOTINGS AND ALL MANUFACTURER REQUIRED APPURTENANCES	LF	600	$_____	$_____
27	CMU SEAT WALL; COMPLETE INCLUDING CAST STONE, DRIP EDGE, 2000 PSI GROUT, REBAR REINFORCEMENT, COLOR MATCH MORTAR,	LF	140	$_____	$_____

	3000 PSI CONCRETE FOOTING AND STANDARD PROCTOR SUBGRADE COMPACTION AND ALL REQUIRED APPURTENANCES				
28	CONCRETE RETAINING WALL; COMPLETE INCLUDING ALL REQUIRED APPURTENANCES	SF	4,900	$_____	$_____
29	ADA RAMP; CONCRETE RAMP WITH EDGE PROTECTION INCLUDING ALL REQUIRED APPURTENANCES	LF	40	$_____	$_____
30	PEDESTRIAN WATER FOUNTAIN; COMPLETE IN ACCORDANCE WITH MANUFACTURER SPECS INLCUDING ALL REQUIRED APPURTENANCES	EA	2	$_____	$_____
31	DOG WATER FOUNTAIN; COMPLETE IN ACCORDANCE WITH MANUFACTURER SPECS INCLUDING ALL REQUIRED APPURTENANCES	EA	1	$_____	$_____
32	PET WASTE STATION; COMPLETE IN ACCORDANCE WITH MANUFACTURER SPECS INCLUDING ALL REQUIRED APPURTENANCES	EA	2	$_____	$_____
33	LITTER RECEPTACLE; COMPLETE IN ACCORDANCE WITH MANUFACTURER SPECS INCLUDING ALL REQUIRED APPURTENANCES	EA	17	$_____	$_____
34	VOLLEYBALL COURT; COMPLETE INCLUDING NET SYSTEM, RUBBER CURB, FULL DEPTH FABRIC WRAP, CLEAN BEACH SAND, ANCHORING, GAB LEVELING, DRAINAGE AND STANDARD PROCTOR COMPACTION AND ALL REQUIRED APPURTENANCES	EA	1	$_____	$_____
35	BASKETBALL COURT; COMPLETE INSTALLED PER MANUFACTURER SPECS INCLUDING GOAL(S), SURFACING, STRIPING, EDGE RESTRAINT AND CONCRETE PAVING AND ALL REQUIRED APPURTENANCES	EA	1	$_____	$_____

36	TENNIS COURT; COMPLETE INSTALLED PER MANUFACTURER SPECS INCLUDING NET SYSTEM, SURFACING, STRIPING, EDGE RESTRAINT AND CONCRETE PAVING AND ALL REQUIRED APPURTENANCES	EA	1	$_____	$_____
37	SHADE SAIL; INSTALLED COMPLETE IN ACCORDANCE WITH MAUFACTURER SPECS INCLUDING ALL REQUIRED APPURTENANCES	EA	1	$_____	$_____
38	BENCH; INSALLED COMPLETE IN ACCORDANCE WITH MANUFACTURER SPECS INCLUDING ALL REQUIRED APPURTENANCES	EA	24	$_____	$_____
39	RELOCATION OF FITNESS EQUIPMENT	EA	10	$_____	$_____
40	SPLASH PAD SYSTEM; COMPLETE INCLUDING BUT NOT LIMITED TO FEATURES, PLUMBING, MECHANICAL, GRADING, 6” THICK 3500 PSI CONCREST SLAB, REBAR REINFORCEMENT AND 3” GRAVEL BASE AND ALL REQUIRED APPURTENANCES	EA	1	$_____	$_____
41	48" DIAMETER HDPE STORM DRAIN; WATER TIGHT JOINT; COMPLETE INCLUDING BUT NOT LIMITED TO BEDDING, HAUNCHING, BACKFILL AND COMPACTION AND ALL REQUIRED APPURTENANCES	LF	1,110	$_____	$_____
42	48" DIAMETER RCP STORM DRAIN; CLASS "V"; RUBBER GASKET BELL & SPIGOT; COMPLETE INCLUDING BUT NOT LIMITED TO BEDDING, HAUNCHING, BACKFILL AND COMPACTION AND ALL REQUIRED APPURTENANCES	LF	40	$_____	$_____
43	36" DIAMETER HDPE STORM DRAIN; WATER TIGHT JOINT; COMPLETE INCLUDING BUT NOT LIMITED TO BEDDING, HAUNCHING, BACKFILL AND COMPACTION AND ALL REQUIRED APPURTENANCES	LF	40	$_____	$_____

44	36" DIAMETER RCP STORM DRAIN; CLASS "V"; RUBBER GASKET BELL & SPIGOT; COMPLETE INCLUDING BUT NOT LIMITED TO BEDDING, HAUNCHING, BACKFILL AND COMPACTION AND ALL REQUIRED APPURTENANCES	LF	90	$_____	$_____
45	30" DIAMETER HDPE STORM DRAIN; WATER TIGHT JOINT; COMPLETE INCLUDING BUT NOT LIMITED TO BEDDING, HAUNCHING, BACKFILL AND COMPACTION AND ALL REQUIRED APPURTENANCES	LF	480	$_____	$_____
46	24" DIAMETER HDPE STORM DRAIN; WATER TIGHT JOINT; COMPLETE INCLUDING BUT NOT LIMITED TO BEDDING, HAUNCHING, BACKFILL AND COMPACTION AND ALL REQUIRED APPURTENANCES	LF	1,500	$_____	$_____
47	18" DIAMETER HDPE STORM DRAIN; WATER TIGHT JOINT; COMPLETE INCLUDING BUT NOT LIMITED TO BEDDING, HAUNCHING, BACKFILL AND COMPACTION AND ALL REQUIRED APPURTENANCES	LF	1,370	$_____	$_____
48	18" DIAMETER RCP STORM DRAIN; CLASS "V"; RUBBER GASKET BELL & SPIGOT; COMPLETE INCLUDING BUT NOT LIMITED TO BEDDING, HAUNCHING, BACKFILL AND COMPACTION AND ALL REQUIRED APPURTENANCES	LF	120	$_____	$_____
49	12” ROOF DRAIN PIPING INCLUDING ALL REQUIRED APPURTENANCES	LF	40	$_____	$_____
50	10” ROOF DRAIN PIPING INCLUDING ALL REQUIRED APPURTENANCES	LF	560	$_____	$_____
51	8” ROOF DRAIN PIPING INCLUDING ALL REQUIRED APPURTENANCES	LF	970	$_____	$_____
52	6” ROOF DRAIN PIPING INCLUDING ALL REQUIRED APPURTENANCES	LF	490	$_____	$_____
53	4” ROOF DRAIN PIPING INCLUDING ALL REQUIRED APPURTENANCES	LF	230	$_____	$_____

54	UNDERGROUND STORMWATER DETENTION SYSTEM "A"; COMPLETE INCLUDING BUT NOT LIMITED TO SUITABLE FOUNDATION, BEDDING, HAUNCHING, PIPING, BACKFILL AND GRADING AND ALL REQUIRED APPURTENANCES	EA	1	$_____	$_____
55	UNDERGROUND STORMWATER DETENTION SYSTEM "B"; COMPLETE BUT NOT LIMITED TO SUITABLE FOUNDATION, BEDDING, HAUNCHING, PIPING, BACKFILL AND GRADING AND ALL REQUIRED APPURTENANCES	EA	1	$_____	$_____
56	SUBMERGED GRAVEL WETLAND SYSTEM; COMPLETE INCLUDING ALL REQUIRED APPURTENANCES	EA	1	$_____	$_____
57	BIO RETENTION AREA "#1"; COMPLETE	EA	1	$_____	$_____
58	TRENCH DRAIN; COMPLETE INCLUDING GRATE & COVER, 4000 PSI CONCRETE SLAB & BASE AND ALL REQUIRED APPURTENANCES	LF	370	$_____	$_____
59	GDOT 1019 PRECAST CONCRETE CURB INLET CATCH BASIN W/ CAST IRON HOOD AND GRATE; COMPLETE IN ACCORDANCE WITH GDOT DETAIL 1019B INCLUDING BUT NOT LIMITED TO TRAFFIC RATED FRAME AND GRATE, BEDDING, SEALING PIPE PENETRATION, AND BACKFILL AND ALL REQUIRED APPURTENANCES	EA	8	$_____	$_____
60	GDOT 1019 PRECAST CONCRETE DROP INLET CATCH BASIN W/ CAST IRON HOOD AND GRATE; COMPLETE IN ACCORDANCE WITH GDOT DETAIL 1019B INCLUDING BUT NOT LIMITED TO TRAFFIC RATED FRAME AND GRATE,	EA	15	$_____	$_____

	BEDDING, SEALING PIPE PENETRATION, AND BACKFILL AND ALL REQUIRED APPURTENANCES				
61	GDOT 1034 PRECAST DOUBLE WING CATCH BASIN; COMPLETE IN ACCORDANCE WITH GDOT DETAIL 1034D INCLUDING BUT NOT LIMITED TO TRAFFIC RATED FRAME AND COVER, BEDDING, SEALING PIPE AND ALL REQUIRED APPURTENANCES	EA	1	$_____	$_____
62	GDOT 1019 PRECAST CONCRETE WIER INLET CATCH BASIN W/ CAST IRON HOOD AND GRATE; COMPLETE IN ACCORDANCE WITH GDOT DETAIL 1019A INCLUDING BUT NOT LIMITED TO BEDDING, SEALING PIPE PENETRATION, AND BACKFILL AND ALL REQUIRED APPURTENANCES	EA	4	$_____	$_____
63	CONCRETE JUNCTION BOX W/ CAST IRON TRAFFIC RATED FRAME AND COVER; COMPLETE IN ACCORDANCE WITH GDOT DETAIL 9031U INCLUDING BUT NOT LIMITED TO TRAFFIC RATED FRAME AND COVER, BEDDING, SEALING PIPE PENETRATION, AND BACKFILL AND ALL REQUIRED APPURTENANCES	EA	15	$_____	$_____
64	AREA DRAIN PEDISTAL INLET COMPLETE INCLUDING ALL REQUIRED APPURTENANCES	EA	32	$_____	$_____
65	ROOF DRAIN CO	EA	30	$_____	$_____
66	6" DIAMETER DUCTILE IRON PIPE FOR SANITARY SEWER; COMPLETE INCLUDING BUT NOT LIMITED TO BEDDING, COMPACTION AND TESTING AND ALL REQUIRED APPURTENANCES	LF	230	$_____	$_____
67	8" DIAMETER DUCTILE IRON PIPE FOR SANIARY SEWER;	LF	150	$_____	$_____

	COMPLETE INCLUDING BUT NOT LIMITED TO BEDDING, COMPACTION, TESTING AND ALL REQUIRED APPURTENANCES				
68	8" PVC DRAINAGE LINES; COMPLETE INCLUDING BEDDING AND BACKFILL AND ALL REQUIRED APPURTENANCES	LF	90	$_____	$_____
69	SANITARY SEWER MANHOLE	EA	3	$_____	$_____
70	SANITARY SEWER CLEANOUT	EA	4	$_____	$_____
71	2.5" COPPER PIPE; COMPLETE INCLUDING ALL REQUIRED FITTINGS, BENDS AND BLOCKING AND ALL REQUIRED APPURTENANCES	LF	20	$_____	$_____
72	2" COPPER PIPE; COMPLETE INCLUDING ALL REQUIRED FITTINGS, BENDS AND BLOCKING AND ALL REQUIRED APPURTENANCES	LF	440	$_____	$_____
73	1.5" COPPER PIPE; COMPLETE INCLUDING ALL REQUIRED FITTINGS, BENDS AND BLOCKING AND ALL REQUIRED APPURTENANCES	LF	20	$_____	$_____
74	1" COPPER PIPE; COMPLETE INCLUDING ALL REQUIRED FITTINGS, BENDS AND BLOCKING AND ALL REQUIRED APPURTENANCES	LF	100	$_____	$_____
75	0.75" COPPER PIPE; COMPLETE INCLUDING ALL REQUIRED FITTINGS, BENDS AND BLOCKING AND ALL REQUIRED APPURTENANCES	LF	100	$_____	$_____
76	NEW 2" WATER SERVICE METER; COMPLETE INCLUDING CONNECTION TO EXISTING WATER MAIN	EA	1	$_____	$_____
77	UPSIZE EXISTING 1.5" WATER SERVICE METER	EA	1	$_____	$_____
78	REUSE EXISTING 5/8" WATER SERVICE METER	EA	1	$_____	$_____
79	REUSE EXISTING 1" WATER SERVICE METER	EA	1	$_____	$_____

SECTION III

80	EARTHWORK; COMPLETE	CY	16,500	$_____	$_____
81	4" CALIPER TREE (SPECIFIED SPECIES VARY, SEE SCHEDULE ON TP3.0)	EA	44	$_____	$_____
82	3" CALIPER TREE (SPECIFIED SPECIES VARY, SEE SCHEDULE ON TP3.0)	EA	74	$_____	$_____
83	4" POT GROUNDCOVER (SPECIFIED SPECIES VARY, SEE SCHEDULE ON L2.0)	EA	2,419	$_____	$_____
84	1 GALLON SHRUB/GOURNDCOVER (SPECIFIED SPECIES VARY, SEE SCHEDULE ON L2.0)	EA	706	$_____	$_____
85	2 GALLON SHRUB/GROUNDCOVER (SPECIFIED SPECIES VARY, SEE SCHEDULE ON L2.0)	EA	285	$_____	$_____
86	3 GALLON SHRUB/GROUNDCOVER (SPECIFIED SPECIES VARY, SEE SCHEDULE ON L2.0)	EA	3,134	$_____	$_____
87	PERMANENT GRASSING; SOD; COMPLETE	SF	236,000	$_____	$_____
88	MULCHING	SF	61,000	$_____	$_____
89	BUILDING "A"; COMPLETE INCLUDING ALL REQUIRED APPURTENANCES	EA	1	$_____	$_____
90	BUILDING "B"; COMPLETE INCLUDING ALL REQUIRED APPURTENANCES	EA	1	$_____	$_____
91	BUILDING "C"; COMPLETE INCLUDING ALL REQUIRED APPURTENANCES	EA	1	$_____	$_____
92	BUILDING "D"; COMPLETE INCLUDING ALL REQUIRED APPURTENANCES	EA	1	$_____	$_____
93	BUILDING "E"; COMPLETE INCLUDING ALL REQUIRED APPURTENANCES	EA	1	$_____	$_____
94	BUILDING "F"; COMPLETE INCLUDING ALL REQUIRED APPURTENANCES	EA	1	$_____	$_____
95	PLAYGROUND EQUIPMENT ALLOWANCE	LS	1	$_____	$_____
96	SKATE PARK ALLOWANCE	LS	1	$_____	$_____

97	SITE ELECTRICAL COMPLETE: INCLUDING BUT NOT LIMITED TO ALL SITE WIDE LIGHTING, POWER, LOW VOLTAGE, ETC. THAT IS NOT SPECIFICALLY INCLUDED IN LINE ITEMS FOR STRUCTURES AND APPURTENANCES INCLUDED IN THIS PROJECT	LS	1	$_____	$_____

Total Base Bid in Words:

_____

_____Dollars

In Numbers: $_____

Unit Prices have been computed in accordance with Paragraph 11.03.B of the General Conditions.

Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents.

Bidder acknowledges that total base bid includes a contingency allowance equal to **10%** of the total sum of all line items within the above "**Article 5: Basis of Bid**" as provided in the Contract Documents.

ARTICLE 6 – TIME OF COMPLETION

6.01 Bidder agrees that the Work will be substantially complete within **335** calendar days after the date when the Contract Times commence to run as provided in Paragraph 2.03 of the General Conditions, and will be completed and ready for final payment in accordance with Paragraph 14.07 of the General Conditions within **365** calendar days after the date when the Contract Times commence to run.

6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 7 – ATTACHMENTS TO THIS BID

7.01 The following documents are submitted with and made a condition of this Bid:

A. Required Bid Security (5%);

B. LSBD Forms 1-4 ;

C. List of 5 Project References (Section XVII – Reference and Release Form);

D. Evidence of authority to do business in the state of the Project; or a written covenant to obtain such license within the time for acceptance of Bids;

E. Copy of Contractor's License [or] Evidence of Bidder's ability to obtain a State Contractor's License and a covenant by Bidder to obtain the following said license within the time for acceptance of Bids.
1. Georgia General Contractor's License Number

F. Certificate of Insurance (City of Forest Park as the Certificate Holder);

G. Contractor Affidavit and Agreement (Form 6a);

H. Subcontractor Affidavit (if available) (Form 6b);

I. Contractor's Statement of Legal Status and Financial Capability (Form7);

J. Certification Regarding Debarment, Suspension, and Other Matters (Form 8);

K. Non-Collusion Affidavit (Form 9);

L. Bidder's Contact Directory (Form 10);

M. Acknowledgment of Addenda (Form 11);

N. Required Bidder Qualification Statement with Supporting Data for the following:

1. Organizational Structure/Key Personnel and Resumes:

2. Overall Project Experience, Qualifications, and Performance on Previous Similar Projects

3. Management and Staffing Plan

4. Quality Control Plan Approach

5. Procurement Plan

6. Safety Record and Experience

7.02 The following documents are to be submitted post-award:

A. LSBD Participation Report – Contract Goal: Report detailing percentage of LSBD participation (work performed) and payments to VOB/MBE/WBE/DBE subcontractors on a monthly basis.

ARTICLE 8 – DEFINED TERMS

8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

SECTION III

ARTICLE 9 – BID SUBMITTAL

9.01 This Bid is submitted by:

If Bidder is:

An Individual

Name (typed or printed): _____

By: _____
(Individual's signature)

Doing business as: _____

A Partnership

Partnership Name: _____

By: _____
(Signature of general partner -- attach evidence of authority to sign)

Name (typed or printed): _____

A Corporation

Corporation Name: _____ (SEAL)

State of Incorporation: _____
Type (General Business, Professional, Service, Limited Liability): _____

By: _____
(Signature -- attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____
(CORPORATE SEAL)

Attest _____

Date of Qualification to do business in _____ is ____/____/____.

A Joint Venture

Name of Joint Venture: _____

First Joint Venturer Name: _____ (SEAL)

SECTION III

By: _____
(Signature of first joint venture partner -- attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

Second Joint Venturer Name: _____(SEAL)

By: _____
(Signature of second joint venture partner -- attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

(Each joint venturer must sign. The manner of signing for each individual, partnership, and corporation that is a party to the joint venture should be in the manner indicated above.)

Bidder's Business Address _____

_____

Phone No. _____ Fax No. _____

E-mail _____ _____

SUBMITTED on _____, 20____.

Georgia Contractor License No.: _____.

GEOTECHNICAL INVESTIGATION

Starr Park Phase 1
Forest Park, Georgia
Atlas Project No.: 122104

PREPARED FOR:
Falcon Design Consultants, LLC
235 Corporate Center Drive, Suite 200
Stockbridge, Georgia 30281

PREPARED BY:
Atlas Technical Consultants, LLC
3000 Northfield Place, Suite 1100
Roswell, Georgia 30076

May 6, 2022

ATLAS Project No. 122104

May 6, 2022

Ms. Sarah Shirk
Falcon Design Consultants, LLC
235 Corporate Center Drive, Suite 200
Stockbridge, Georgia 30281

Subject: **Report of Subsurface Exploration and Geotechnical Engineering Evaluation**
Starr Park Phase 1
5031 Park Avenue
Forest Park, Georgia

Dear Ms. Shirk:

Atlas Technical Consultants, LLC (Atlas) is pleased to provide this report of our subsurface exploration and geotechnical engineering evaluation for the referenced project. The field study and this report were accomplished in general accordance with Atlas Proposal No. 22-03300, dated March 7, 2022.

The following report will present a brief summary of our pertinent findings and recommendations followed by our understanding of the proposed construction, methods of exploration employed, site and subsurface conditions encountered, and conclusions and recommendations regarding the geotechnical aspects of the project. Should you have any question regarding items discussed in this report, please do not hesitate to contact the undersigned.

Sincerely,
Atlas Technical Consultants, LLC

David Howell
Staff Engineer

Frank Pike, P.E.
Senior Registered Engineer

GEORGIA REGISTERED No. PE036668 PROFESSIONAL ENGINEER HOMER FRANKLIN PIKE, III

TABLE OF CONTENTS

APPENDIX

1.0 SUMMARY

The following is a brief summary of our pertinent findings and recommendations. The reader is referred to the remaining text of this report for elaboration on these items.

1. The property appears developable from a geotechnical standpoint but extensive undercutting of previously placed fill materials and water deposited alluvium is anticipated. Temporary dewatering during undercutting and stabilization of undercut subgrades with geotextile fabrics and crushed stone are anticipated. Some stabilization of existing subgrades is also anticipated for hardscape and any synthetic turf areas.

2. General subsurface conditions consist of previously placed relatively poor fill underlain in some areas by very soft water deposited alluvium followed by residual soils. No rock or partially weathered rock was encountered to the depths drilled.

   Shallow groundwater will impact development. The shallow groundwater was measured as near as 3 feet below the surface as measured at the time of boring. Due to this being an active park, it was not possible to leave the borings open to obtain stabilized groundwater readings. Unstable surface soils were observed in the northeast portion of the site under the weight of the drilling equipment which may indicate groundwater near the surface.

3. We recommend previously place fill and alluvium be undercut from below foundations and slab areas. The new structures may be supported on residual soil or new structural fill designed based on a soil bearing capacity of 1,500 psf. We anticipate that hardscape and landscape subgrade preparation will be routine in some areas, but other areas will require remedial undercutting and stabilization.

4. The on-site residual soils and most of the encountered previously placed fill soils are visually suitable for reuse as structural fill from a material standpoint but are wet of their optimum moisture and will require drying. The fill encountered in borings B-6, B-9, and B-13 appeared to be mixed with topsoil, so this fill material is not suitable for reuse as structural fill. This conditions may be more widespread than indicated since the fill was placed for playfields.

5. Excavations to the depths explored can be accomplished using conventional heavy earthmoving equipment.

2.0 PROPOSED CONSTRUCTION

We understand that you are planning the improvement of Starr Park in Forest, Park Georgia. Our understanding of the proposed construction is based on the provided “Grading Plan C4.0” , undated, by Croft and Associates, as well as a memo by Martin/Martin Consulting Engineers dated February 24, 2022 regarding the anticipated loads in the proposed structures. The planned improvements will include pavilions, a new pool house, amphitheater, restrooms, hardscapes, and associated stormwater control measures. Proposed finish floor elevations for new structures will be near the existing grade and minimal grade adjustment is anticipated to reach finished floor levels. We understand that all structures are anticipated to be 1-story with no below grade areas. The maximum column loads have been given as 28 kips and wall loads are expected to be approximately 1 kip per foot. The amphitheater will be metal frame and the other structures concrete block walls. No other details of the proposed construction were available at the time this report was prepared.

3.0 METHODS OF EXPLORATION

To evaluate the subsurface conditions, the property was explored by a combination of a visual site reconnaissance and drilling 20 soil test borings to depths ranging from 10 to 20 feet below the existing grade. The borings were located in the field by measuring distances and estimating directions from identifiable site features. Therefore, their locations as shown on the Site and Boring Location Plan in the Appendix should be considered approximate.

The borings were advanced by twisting continuous hollow stem auger flights into the ground. At selected intervals, Standard Penetration Resistance Testing (SPT) was performed in general accordance with ASTM Standard D-1586, and soil samples were collected for visual classification. Upon completion, the soil test borings were plugged and backfilled. The results of the penetration tests, when properly evaluated, provide an indication of the relative consistency of the soil being sampled, the potential for difficult excavation, and the soil's ability to support loads. A more detailed description of the drilling and sampling process is included in the Appendix of this report.

Soil samples recovered during the drilling process were returned to the office where they were classified in general accordance with the Unified Soil Classification System (USCS). Detailed descriptions of the materials encountered at each boring location, along with a graphical representation of the Standard Penetration Test results, are shown on the Soil Boring Records in the Appendix. Elevations on the Soil Boring Records were interpolated from the topographical contours on the plan provided to us and should be considered approximate.

4.0 SITE DESCRIPTION, GEOLOGY AND SUBSURFACE CONDITIONS

4.1 Site Description

The subject property is an existing park that includes a small stage, tennis courts, playgrounds, a walking track, pavilions, restrooms and other single-story structures, and various ball fields. The site generally slopes down to the southwest with approximately 15 feet of elevation change. Unstable surface soils were observed in the northeast soccer fields, pumping of the subgrade was observed under the weight of the drilling equipment.

The investigated site is immediately surrounded by single-family residences to the northwest and southeast, while it is bound by existing multi-level developments to the northeast and existing baseball fields to the southwest.

A review of selected historical aerial photographs and historical USGS topographic maps indicates the park was initially developed between 1955 and 1960 with modification through the years since. The 1960 aerial photograph indicates a pond in the northwest corner of the site. A creek exits the pond and flows to the south. At the pond the drainage swale bends to the east and the old drainage swale continued “upstream” through this section of the park and under Ash Street.

4.2 Geology

The site is located in the Piedmont Physiographic Province of Georgia. The residual soils in the Piedmont are the result of the chemical and physical weathering of the underlying parent rock. The weathering profile usually results in fine grained clayey silts and silty clays near the surface, where weathering is more advanced. With depth, sandy silts and silty sands are found, often containing mica. Below the residual soils, partially weathered rock is often found as a transition above relatively unweathered rock. In local practice, partially weathered rock is arbitrarily defined as residual soils with Standard Penetration Resistances in excess of 100 blows per foot (50 blows per 6 inches), and which can be penetrated by a power auger.

4.3 Subsurface Conditions

4.3.1 Pavement

Boring B-19 initially encountered about 2 inches of asphalt, which was underlain by 3 inches of base stone.

4.3.2 Topsoil

Most of the borings with the exception of borings B-11, B-18, and B-19 initially encountered 1 to 8 inches of topsoil and associated root zone.

4.3.3 Previously Placed Fill

Fill soils are those soils that have been placed or reworked in conjunction with past construction activities, grading or farming. Previously placed fill soils were encountered in all boring locations to depths ranging from 2 to 12 feet below the existing grade. The fill was classified as silty SAND (SM) with Standard Penetration Test (SPT) results ranging from 1 to 13 blows per foot (bpf). Based on the SPT results, the soil represented by these samples would be considered poorly to variably compacted. Some of the previously placed fill encountered in borings B-6, B-9, and B-13 appeared to be mixed with topsoil. The fills were often underlain by very soft soils. It is unlikely that a high degree of compaction could be obtained for fills placed on this type of subgrade.

4.3.4 Alluvium/Possible Alluvium

Alluvium is soil that has been transported and deposited by moving water. It is typically encountered adjacent to water course and in the bottom of valleys like previously crossed the park site. Alluvium soil type can change drastically over short horizontal and vertical distances and can contain organics. It is difficult to distinguish between alluvium and fill that was placed from an alluvial soil borrow source. Apparent alluvium was encountered in borings B-3, B-5, B-6, B-8, B-9, B-11, B-12, and B-13 with initial contact occurring at depths ranging from 3 to 12 feet below the existing grade. The alluvium/possible alluvium was found to be wet during drilling. Standard Penetration Tests varied from 1 to 10 blows per foot but most of the alluvium was very soft.

4.3.5 Residuum

Residuum is soil formed by in-place weathering of the parent rock. In wet environments the residuum is often difficult to distinguish from alluvium. Soils classified as apparent residuum was encountered at all boring locations beneath the previously placed fill or alluvium/possible alluvium, where encountered. The residuum was classified as sandy SILTs (ML), silty SANDs (SM), and clayey SANDs (SC), and were of low consistency. Standard Penetration Test results ranged from 1 to 20 blows per foot.

No rock or partially weathered rock was encountered to the depths drilled.

4.3.6 Groundwater

Groundwater was encountered in borings B-1 through B-3, B-5, B-6, B-8 through B-10 through B-14, B-16, B-17, and B-20 at the time of drilling at depths ranging from 3 to 13 feet below the existing grade. Stabilized groundwater levels will be somewhat higher.

Groundwater fluctuations of 5 feet or more are common in this geology.

4.3.7 Infiltration Test Results

Infiltration testing was completed using an automated constant-head permeameter which measures the soil's infiltration rate or saturated hydraulic conductivity (K_{sat}) at specified time intervals. Test locations and depths were selected by others. The testing began by performing hand auger borings by manually rotating a sharpened steel bucket auger into the ground at test locations P-1 through P-7 to depths of 2 feet below the existing grade. The test locations are shown on Figure 1 in the appendix. The proposed infiltration test could not be performed at location P-1 due to the presence of water 3 inches above the test elevation.

Infiltration testing was completed using an automated constant-head permeameter, which measures the soil's infiltration rate or saturated hydraulic conductivity (K_{sat}) at specified time intervals. The depth of water in the borehole does not change during the measurement period and the change in weight of the water reservoir over the time interval is recorded. As a result, the rate of water supplied corresponds to the soil infiltration rate from the bottom and side surfaces of the borehole. Once a steady water consumption rate is reached, the resulting percolation rate can be determined. The infiltration rate is then calculated using the Reynolds and Elrick solution. The resulting infiltration rates for the referenced test locations are presented in the table below.

The following table provides a tabular summary of the infiltration rate recorded at each test location.

Summary of Infiltration Test Results

Location	Depth (ft)	Test Elevation (Feet)	Infiltration Rate (in/hr)
P-1	2	977	n/a
P-2	2	968	0.1
P-3	2	971	0.2
P-4	2	977	0.2
P-5	2	968	1+
P-6	2	975	0.2
P-7	2	975	0.1

At the time of construction, we request the opportunity to evaluate soil conditions to verify that the conditions anticipated in design actually exist. Otherwise, we assume no responsibility for construction compliance with the design concepts, specifications or recommendations. The infiltration rate may be different at other locations and depths and is dependent on soil properties at the specific location. If variations become evident during construction, it will be necessary to reevaluate the recommendations of this letter after on-site observations of the conditions.

The conditions described in the preceding paragraphs, and those shown in the Appendix, have been based on interpolation of the results of the previously described data using generally accepted principles and practices of geotechnical engineering. However, conditions in this geology may vary intermediate of the tested locations, and even more so on previously developed property.

Although individual soil test borings are representative of the subsurface conditions at the precise boring locations on the day drilled, they are not necessarily indicative of the subsurface conditions at other locations or other times. The nature and extent of variation between the borings may not become evident until the course of construction. If such variations are then noted, it will be necessary to reevaluate the recommendations of this report after on-site observation of the conditions.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The following conclusions and recommendations are based on the data gathered during this exploration, our understanding of the proposed construction, our experience with similar site and subsurface conditions and generally accepted principles and practices of geotechnical engineering. Should the proposed construction change significantly from that described in this report, we request that we be advised so that we may amend these recommendations accordingly. This report and the conclusions and recommendations provided herein are provided exclusively for the use of Falcon Design Consultants, LLC and are intended solely for design of the referenced project.

5.1 General

The fill encountered in the soil test borings was generally loose and appeared to be mixed with topsoil in some areas such as in borings B-6, B-9, and B-13. No documentation of the previous grading process was available for review. It appears the fill may have been placed in some areas on soft subgrade and in most cases apparently placed for the construction of playfields. It is not likely that fills were placed with the intent of structural support. There is the possibility that undetected areas of unsuitable soils were left in place or were placed during the grading, that pits have been dug and unsuitable soils or organics have been buried, or other unanticipated conditions may exist. This is a risk inherent in development on an undocumented, previously graded property. We recommend that any soils to remain in place be thoroughly evaluated by the engineer as detailed in Section 5.2 and 5.3 of this report.

The majority of the borings performed included a zone of very soft alluvial soils and shallow groundwater that will impact development. The shallow groundwater was measured as near as 3 feet below the surface as measured at the time of boring. Due to this being an active park, it was not possible to leave the borings open to obtain stabilized groundwater readings. Stabilized groundwater will likely be shallower than indicated in the borings. Unstable surface soils were observed in the northeast soccer fields, pumping of the subgrade was observed under the weight of the drilling equipment.

We do not recommend that building foundations and slabs be supported on previously placed fill or alluvial soils. Where these materials are encountered, they should be undercut, the underlying exposed subgrade stabilized with stabilization stone layers and grade reestablished with structural fill. Alternately building foundations and slabs may be supported on a light capacity pile such as helical piles. Within the depths explored bearing material capable of supporting helical piles were not encountered. Additional drilling would be required for design of helical piles and the pile lengths may be significant. At this time, we assume the most cost-effective approach would be remediation of the subsurface using grading techniques to allows conventional shallow foundation support on the remediated subgrade.

For hardscape and turf areas, we recommend the existing subgrades be evaluated. We anticipate subgrade preparation will be routine in some areas, but other areas will require remedial stabilization, likely by undercutting, and placement of stabilization stone.

5.2 Site Preparation

As an initial step in site preparation, all trees and unwanted vegetation should be removed, stumps grubbed, and organic topsoil stripped. Asphalt pavement should be stripped but the underlying base stone can typically remain in place.

We recommend that a geotechnical engineer observe proofrolling with a fully loaded tandem axle dump truck (20 tons) of any surface soils that are to remain in place so that soil consistency can be evaluated to determine if reconditioning is warranted. If reconditioning is warranted, the "disturbed" soil will need to be scarified, moisture conditioned and then compacted to project specifications. Based on our experience we expect the proofrolling to reveal surface soils which will require stabilization. The required stability of the subgrade will depend on planned site use. For natural grass field, the sugrade need only be reasonably stable.

In hard scape or synthetic turf areas we recommend the subgrade be stable and where necessary stabilization should be performed. This will likely include undercutting of a few feet and placement of stabilization stone.

All building pad areas should be evaluated by proofrolling as described above and excavation of backhoe pits. We recommend that fill or alluvium that is below or extending 10 feet laterally from building areas be undercut and replaced with structural fill. We anticipate that temporary dewatering will be required during this undercutting. The bottom of the undercut will be soft and will require stabilization with layers of crushed stone. Typically, about 3 feet of stone may be required along with geotextile fabric to prepare the subgrade to receive structural fill.

5.3 Earthwork

Structural fill should be free of organic material, have a plasticity index (PI) less than 20 and contain rock sizes no larger than 4 inches. To compact structural fill, soils will need to be within about 3 percent of their optimum moisture. Drying of onsite soils should be anticipated to allow compaction. This may necessitate that fill used to backfill undercuts be imported to the site. The residual soils on the property visually appear suitable for reuse as structural fill from a material standpoint but the soils are wet. The existing fill soils appear visually suitable for reuse as structural fill, except for the fill encountered in borings B-6, B-9, and B-13, which appeared to be mixed with topsoil. Other areas of previously placed fill will likely contain topsoil or other organics since most fills were initially placed for playfields. We recommend that you do not attempt to reuse alluvium/possible alluvium soils as structural fill.

All structural fills should be compacted to at least 95 percent of the soil's standard Proctor maximum dry density, as determined by ASTM Standard D-698. The upper foot of fill which will support pavements or slabs should be compacted to at least 98 percent of the soil's standard Proctor maximum dry density for improved support. In areas which are at or above the finished grade, and which will support pavements or slabs, the upper 8 inches immediately below these systems should be scarified and recompacted to the 98 percent criteria.

Density testing should be performed by a soils technician to determine the degree of compaction and verify compliance with the project specifications. For underfloor areas, at least one field density test should be made per 5000 square feet of fill area for each two-foot lift. Testing frequency should be increased in confined areas. Areas which do not meet the compaction specifications should be recompacted to achieve compliance. In confined areas, such as utility trenches, the use of portable compaction equipment and thin lifts of 3 to 4 inches may be required to achieve compaction.

Where fill is placed against slopes steeper than 5H:1V, it will be necessary to "bench" the new fill into the existing soils to insure an adequate bonding of the fill with the existing material. Inadequate benching may create a predefined plane of weakness and adversely affect slope stability.

Excavations to the depths and at the locations explored can be accomplished using conventional heavy earthmoving equipment such as dozer assisted pans, and substantial excavations of rock and partially weathered rock are not anticipated.

5.4 Groundwater Control

We do not anticipate that at grade structures will require permanent dewatering systems. This should be confirmed at the time of construction. Permanent dewatering systems should be considered if groundwater is within 3 feet of finished floor levels. This recommendation does not consider the potential for flooding.

Temporary dewatering will likely be required during remedial undercutting. The contractor should determine his anticipated excavation depths and the groundwater at the time of construction and install systems that minimize the water softening of undercut subgrades.

5.5 Foundations

5.5.1 Shallow Foundations

Remedial undercutting of areas of planned building foundations and slabs has been recommended. Foundations should be supported on residual soils or structural fill placed as recommended. We recommend the footings be designed based on a design bearing capacity of 1,500 psf. Minimum foundation widths of 24 inches and 18 inches are recommended for individual column and strip footings, respectively, to preclude the possibility of localized soil bearing failures. Exterior foundations should bear at least 18 inches below external grades to prevent frost damage. We anticipate total and differential settlement will be less than 1 inch and ½ inch respectively for foundations constructed as recommended.

As with any construction, all foundation excavations should be evaluated by a geotechnical engineer, who will verify that the design bearing pressure is available intermediate of boring locations, and that foundations are not immediately underlain by worse conditions. If the engineer finds localized conditions of weak or organic soil below an individual footing, it should be undercut or a lower bearing pressure used, depending upon the actual conditions found.

5.5.2 Alternate Foundations/ Structural Slabs

An alternative to the remedial undercutting, stabilization and fill placement recommended would be support of both foundations and building slabs on light capacity piles such as helical piers. We note that soils that are sufficient for supporting helical piers were not encountered in most borings. Deeper borings are recommended if helical piers are to be considered for foundations support. We anticipate that long helical piers extending to substantial depth will be more costly than remedial grading to allow shallow foundation support. If you desire to evaluate this alternative further additional subsurface exploration can be proposed. utilize a structural slab supported on these systems and the slab should not be supported directly on the existing soils.

A helical pier is a combination of a steel shaft onto which is welded one or more circular steel bearing plates (helixes). The first shaft/helix is twisted into the ground and additional shafts are added to allow the helix(s) to be installed to a greater depth.

5.6 Soil Supported Slabs

Where remedial grading is performed to remove previously place fill and alluvial soil, the ground floors may be supported as slab on grade. A modulus of subgrade reaction *k* of 100 pci may be assumed for lightly loaded slabs. To reduce the potential for slab moisture related problems, we recommend the slab be underlain by a six-inch layer of free draining stone. An effective vapor barrier is recommended for areas of the slab with moisture sensitive floor coverings.

5.7 Temporary and Permanent Slopes

Permanent and temporary slopes may be used to accommodate grade changes. If temporary slopes are used, they should be constructed no steeper than 1.5H: 1V for slopes less than 15 feet high. Permanent slopes should be constructed no steeper than 2H: 1V. These recommendations are based on our experience with similar conditions and no detailed slope stability analyses have been performed. All finished slopes should be suitably protected from erosion.

5.8 Lateral Earth Pressures

No below grade levels are anticipated but some low height retaining walls may be required. Lateral earth pressures imposed on a retaining wall are a function of the soil properties, the inclination of the backfill behind the retaining wall, any surcharge loads applied behind the wall and the amount of deflection the wall system can undergo. Lateral earth pressures developed from the "active" condition are applicable for design of temporary or permanent free-standing retaining walls, if adequate wall movement can occur to fully mobilize the shear strength of the retained soil.

Permanent laterally restrained walls, such as basement walls, should be designed for pressures using the full "at-rest" case. Based on the conditions found, the following equivalent fluid pressures are recommended, assuming no hydrostatic pressure, a horizontal backfill configuration, no surcharge loads, and "typical" Piedmont soils used for backfill.

Active Pressure	40 pcf
At Rest Pressure	60 pcf

A moist unit weight of 120 pcf may be assumed for typical Piedmont soils placed to structural fill standards. Heavy compaction equipment should not be used to compact backfill immediately behind any retaining wall, unless the wall is designed for the increased pressure. Retaining wall backfill should be compacted to at least 95% of the soil's standard Proctor maximum dry density; therefore, hand operated compaction equipment will be necessary in these areas. Areas exposed to groundwater or surface infiltration of water should include a properly filtered footing and wall drain. The drain should include a perforated schedule 40 PVC pipe, placed in clean crushed stone and encapsulated in a 4-ounce needle punched nonwoven filter fabric.

For structures supported on shallow foundations, lateral loads can be resisted by passive pressures against the face of the foundation or sliding resistance on the base of the footing. An allowable equivalent fluid pressure of 150 pcf is recommended for passive resistance and includes a factor of safety of about 2. A factor of safety of at least 2 is recommended due to the large deflections required to mobilize full passive

resistance. Additional resistance to movement can be gained by developing sliding friction on the base of the footing and an allowable friction factor of 0.3 may be used. This includes a factor of safety of about 1.5.

5.9 Seismic Criteria for Structural Engineer

Based on the data collected from the site, the following structures should be designed using the Seismic Site Class "D" as determined by the International Building Code 2018/ASCE 7-16.

6.0 QUALIFICATIONS OF RECOMMENDATIONS

This evaluation of the geotechnical aspects of the proposed design and construction has been based on our understanding of the project and the data obtained during this study. The general subsurface conditions used in our evaluation were based on interpolation of the subsurface data between the borings. Regardless of the thoroughness of a subsurface exploration, there is the possibility that conditions will differ between boring locations, that conditions are not as anticipated by the designers, or that the construction process has modified the soil conditions. Therefore, experienced soil engineers and technicians should evaluate earthwork and foundation construction to verify that the conditions anticipated in design actually exist. Otherwise, we assume no responsibility for construction compliance with the design concepts, specifications or recommendations.

The recommendations contained in this report have been developed on the basis of the previously described project characteristics and subsurface conditions. If project criteria change, we should be permitted to determine if the recommendations should be modified. The findings of such a review will be presented in a supplemental report. Even after completion of a subsurface study, the nature and extent of variation between borings may not become evident until the course of construction. If such variations then become evident, it will be necessary to reevaluate the recommendations of this report after on-site observations of the conditions.

These professional services have been performed, the findings derived, and recommendations prepared in accordance with generally accepted geotechnical engineering principles and practices. This warranty is in lieu of all warranties either expressed or implied. This company is not responsible for the conclusions, opinions or recommendations of others based on these data.

APPENDIX

SOIL TEST BORING PROCEDURES (ASTM D-1586)

The soil test borings were advanced by twisting continuous auger flights into the ground. At selected intervals, soil samples were obtained by driving a standard 1.4 inch I.D., 2.0 inch O.D., split tube sampler into the ground. The sampler was initially seated six inches to penetrate any loose cuttings created in the boring process. The sampler is then driven an additional 12 inches by blows of a 140 pound "hammer" falling 30 inches. The number of blows required to drive the sampler the final foot is designated the Standard Penetration Resistance.

The samples recovered were sealed in glass jars and were transported to the office where they were classified by an engineer in general accordance with the Unified Soil Classification System (USCS).

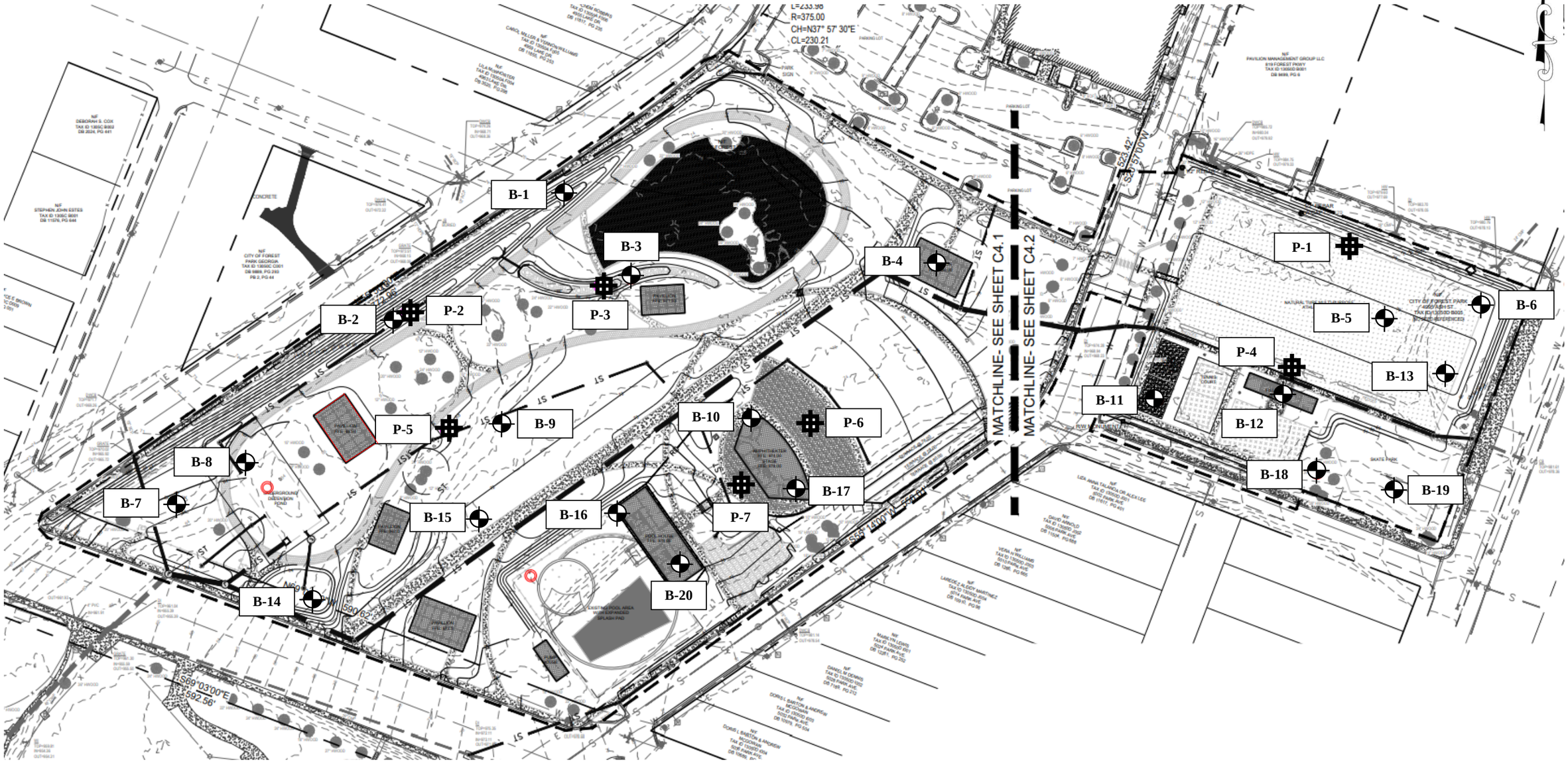
CORRELATION OF STANDARD PENETRATION RESISTANCEWITH RELATIVE COMPACTNESS AND CONSISTENCY

Sand and Gravel

Standard Penetration Resistance Blows / Foot	Relative Compactness
0 - 4	Very Loose
5 - 10	Loose
11 - 30	Medium Dense
31 - 50	Dense
Over 50	Very Dense

Silt and Clay

Standard Penetration Resistance Blows / Foot	Relative Compactness
0 - 1	Very Soft
2 - 4	Soft
5 - 8	Firm
9 - 15	Stiff
16 - 30	Very Stiff
31 - 50	Hard
Over 50	Very Hard



LEGEND

- SOIL TEST BORING LOCATIONS
- INFILTRATION TEST LOCATIONS

FIGURE 1: SITE AND TEST LOCATION PLAN

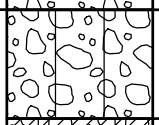
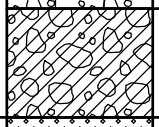
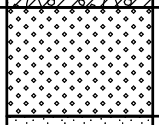
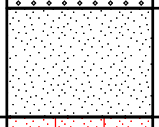
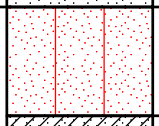
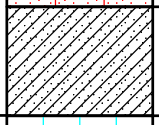
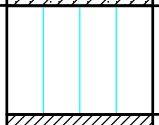
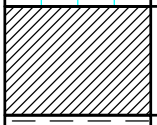
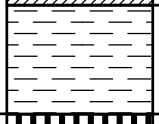
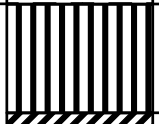
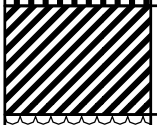
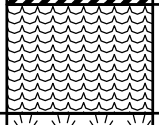
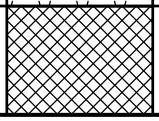
STARR PARK
5087 PARK AVENUE
FOREST PARK, GEORGIA

ATLAS
3000 NORTHFIELD PLACE, SUITE 1100
ROSWELL, GA 30076

DRAWN BY:	DH
APPROVED BY:	FP
PROJECT NO.:	122104
DATE:	5/2/22
SCALE:	NTS

NOTES:
BUILDINGS MARKED IN RED MAY NOT BE SUPPORTED ON SHALLOW FOUNDATIONS. SEE FULL GEOTECHNICAL REPORT.

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS
			GRAPH	LETTER	
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
				GP	POORLY- GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
	MORE THAN 50%OF COARSEFRACTION RETAINED ONNO. 4 SIEVE	GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
MORE THAN 50%OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	SAND AND SANDY SOILS	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SP	POORLY-GRADED SANDS,GRAVELLY SAND, LITTLE OR NO FINES
	MORE THAN 50%OF COARSEFRACTION PASSING ON NO. 4 SIEVE	SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
MORE THAN 50% OF MATERIAL IS SMALLER THANNO. 200 SIEVE SIZE	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
ALLUVIUM				PT	ALLUVIUM, PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS
FILL				FILL	MATERIAL PLACED BY MAN

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

ATLAS

Starr Park Phase 1

DEPTH (FT)	DESCRIPTION	ELEV.	BLOW COUNTS	N VALUE
	TOPSOIL: 5 inches	972		
	FILL: Loose red orange silty medium to fine SAND (SM)		1-2-2	4
5	RESIDUUM: Loose to very loose gray tan silty medium to fine SAND (SM)	967	2-4-6	10
			2-2-3	5
10		962	1-1-1	2
	Firm orange fine sandy SILT (ML)			
15		957	1-2-3	5
	Boring terminated at 15 feet			
20				
25				
30				
35				
40				

PENETRATION (BLOWS PER FOOT): 10 20 30 40 60 80 100

SOIL BORING RECORD

BORING NUMBER	B-1
DATE DRILLED	4/23/2022
PROJECT NUMBER	122104
PAGE	1 of 1

- Groundwater level at time of boring
- Groundwater level - 24 hrs
- Caved depth - 24 hrs
- Standard penetration test
- Undisturbed sample

ATLAS

Starr Park Phase 1

DEPTH (FT)	DESCRIPTION	ELEV.	BLOW COUNTS	N VALUE
	TOPSOIL: 4 inches	968		
	FILL: Loose red orange silty medium to fine SAND (SM)		3-4-3	7
	RESIDUUM: Medium dense to loose gray silty medium to fine SAND (SM)			
5		963	3-5-8	13
			3-3-4	7
10		958	3-4-5	9
	Medium dense tan orange silty medium to fine SAND (SM), micaceous			
15		953	1-5-7	12
	Boring terminated at 15 feet			
20				
25				
30				
35				
40				

PENETRATION (BLOWS PER FOOT): 10 20 30 40 60 80 100

SOIL BORING RECORD

BORING NUMBER	B-2
DATE DRILLED	4/23/2022
PROJECT NUMBER	122104
PAGE	1 of 1

▽ Groundwater level at time of boring

▼ Groundwater level - 24 hrs

Ⓒ Caved depth - 24 hrs

⊠ Standard penetration test

▮ Undisturbed sample

Starr Park Phase 1

DEPTH (FT)	DESCRIPTION	ELEV.	BLOW COUNTS	N VALUE
	TOPSOIL: 3 inches FILL: Loose red brown silty medium to fine SAND (SM)	971	3-2-3	5
5	ALLUVIUM: Very loose gray silty coarse to fine SAND (SM), wet	966	WOH-WOH-1	1
			WOH-WOH-1	1
10		961	WOH-1-2	3
15	RESIDUUM: Loose silty fine SAND (SM), micaceous	956	1-2-3	5
	Boring terminated at 15 feet			

PENETRATION (BLOWS PER FOOT): 10 20 30 40 60 80 100

SOIL BORING RECORD

BORING NUMBER	B-3
DATE DRILLED	4/23/2022
PROJECT NUMBER	122104
PAGE	1 of 1

▽ Groundwater level at time of boring

▼ Groundwater level - 24 hrs

C Caved depth - 24 hrs

⊠ Standard penetration test

▮ Undisturbed sample

Starr Park Phase 1

DEPTH (FT)	DESCRIPTION	ELEV.	BLOW COUNTS	N VALUE
	TOPSOIL: 3 inches FILL: Loose brown silty medium to fine SAND (SM)	976	4-5-3	8
5	RESIDUUM: Loose to medium dense gray orange silty medium to fine SAND (SM)	971	2-3-2	5
			3-4-8	12
	Very stiff gray medium to fine sandy SILT (ML)			
10		966	4-9-10	19
	Boring terminated at 10 feet			

PENETRATION (BLOWS PER FOOT): 10 20 30 40 60 80 100

REMARKS: No groundwater encountered at time of boring.

Groundwater level at time of boring

Groundwater level - 24 hrs

Caved depth - 24 hrs

Standard penetration test

Undisturbed sample

SOIL BORING RECORD

BORING NUMBER	B-4
DATE DRILLED	4/23/2022
PROJECT NUMBER	122104
PAGE	1 of 1

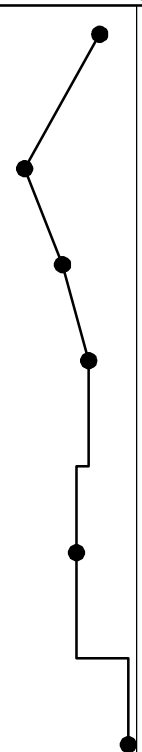
ATLAS

Starr Park Phase 1

DEPTH (FT)	DESCRIPTION	ELEV.	BLOW COUNTS	N VALUE
	TOPSOIL: 2 inches	977		
	FILL: Loose to very loose brown silty medium to fine SAND (SM)		1-2-4	6
5		972	0-0-1	1
	No sample recovered		2-2-1	3
	Loose brown silty medium to fine SAND (SM)			
10		967	2-2-3	5
	ALLUVIUM: Loose gray silty medium to fine SAND (SM)			
15		962	1-1-3	4
	RESIDUUM: Loose brown gray silty fine SAND (SM), wet, micaceous			
20		957	4-4-5	9
	Boring terminated at 20 feet			
25				
30				
35				
40				

PENETRATION (BLOWS PER FOOT)

10 20 30 40 60 80 100



SOIL BORING RECORD

BORING NUMBER	B-5
DATE DRILLED	4/23/2022
PROJECT NUMBER	122104
PAGE	1 of 1

- Groundwater level at time of boring
- Groundwater level - 24 hrs
- Caved depth - 24 hrs
- Standard penetration test
- Undisturbed sample

Starr Park Phase 1

DEPTH (FT)	DESCRIPTION	ELEV.	BLOW COUNTS	N VALUE
	TOPSOIL: 1 inch	981		
	FILL: Very loose to loose brown silty medium to fine SAND (SM), topsoil mixed as 3 to 5 feet		1-1-2	3
5		976	2-5-4	9
	POSSIBLE ALLUVIUM: Very soft gray clayey SAND (SC), wet		WOH-WOH-3	3
10		971	WOH-2-1	3
	RESIDUUM: Firm tan orange gray medium to fine sandy SILT (ML), wet, micaceous			
15			1-2-3	5
	Boring terminated at 15 feet			

PENETRATION (BLOWS PER FOOT): 10 20 30 40 60 80 100

20 25 30 35 40

SOIL BORING RECORD

BORING NUMBER	B-6
DATE DRILLED	4/23/2022
PROJECT NUMBER	122104
PAGE	1 of 1

▽ Groundwater level at time of boring

▼ Groundwater level - 24 hrs

C Caved depth - 24 hrs

⊠ Standard penetration test

▮ Undisturbed sample

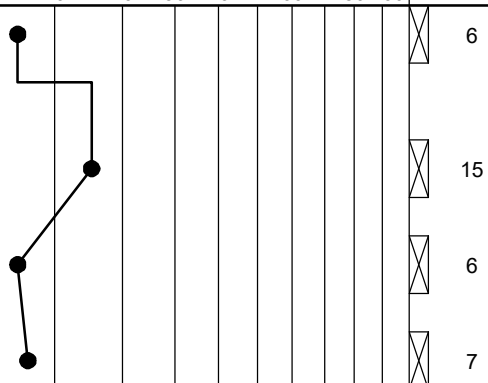
ATLAS

Starr Park Phase 1

DEPTH (FT)	DESCRIPTION	ELEV.	BLOW COUNTS	N VALUE
	TOPSOIL: 3 inches	965		
	FILL: Loose brown silty medium to fine SAND (SM)		4-3-3	6
	RESIDUUM: Medium dense to loose tan gray silty medium to fine SAND (SM), micaceous			
5		960	3-5-10	15
			4-3-3	6
10		955	1-3-4	7
	Boring terminated at 10 feet			

PENETRATION (BLOWS PER FOOT)

10 20 30 40 60 80 100



REMARKS: No groundwater encountered at time of boring.

▽ Groundwater level at time of boring

▼ Groundwater level - 24 hrs

C Caved depth - 24 hrs

☒ Standard penetration test

▮ Undisturbed sample

SOIL BORING RECORD

BORING NUMBER	B-7
DATE DRILLED	4/23/2022
PROJECT NUMBER	122104
PAGE	1 of 1

Starr Park Phase 1

DEPTH (FT)	DESCRIPTION	ELEV.	BLOW COUNTS	N VALUE
	TOPSOIL: 4 inches FILL: Loose red orange silty medium to fine SAND (SM)	965	2-3-5	8
5	ALLUVIUM: Very loose gray silty medium to fine SAND (SM), wet	960	0-0-1	1
			2-4-6	10
10		955	1-1-1	2
15	RESIDUUM: Loose tan orange silty medium to fine SAND (SM), micaceous Boring terminated at 15 feet	950	2-3-3	6
20				
25				
30				
35				
40				

PENETRATION (BLOWS PER FOOT): 10 20 30 40 60 80 100

▽ Groundwater level at time of boring

▼ Groundwater level - 24 hrs

C Caved depth - 24 hrs

⊠ Standard penetration test

▮ Undisturbed sample

SOIL BORING RECORD

BORING NUMBER	B-8
DATE DRILLED	4/23/2022
PROJECT NUMBER	122104
PAGE	1 of 1

Starr Park Phase 1

DEPTH (FT)	DESCRIPTION	ELEV.	BLOW COUNTS	N VALUE
	TOPSOIL: 5 inches	971		
	FILL: Loose to very loose brown silty medium to fine SAND (SM), mixed with topsoil		2-2-4	6
5		966	4-4-3	7
			1-1-2	3
	ALLUVIUM: Very loose dark gray silty medium to fine SAND (SM), wet			
10		961	1-1-1	2
15	RESIDUUM: Very loose white gray silty medium to fine SAND (SM), wet		1-2-2	4
	Boring terminated at 15 feet			
20				
25				
30				
35				
40				

PENETRATION (BLOWS PER FOOT): 10 20 30 40 60 80 100

▽ Groundwater level at time of boring

▼ Groundwater level - 24 hrs

C Caved depth - 24 hrs

⊠ Standard penetration test

▮ Undisturbed sample

SOIL BORING RECORD

BORING NUMBER	B-9
DATE DRILLED	4/23/2022
PROJECT NUMBER	122104
PAGE	1 of 1

Starr Park Phase 1

DEPTH (FT)	DESCRIPTION	ELEV.	BLOW COUNTS	N VALUE
	TOPSOIL: 4 inches	974		
	FILL: Medium dense brown silty medium to fine SAND (SM)		5-7-6	13
5	RESIDUUM: Very loose to loose tan orange silty fine SAND (SM)	969	1-1-2	3
			1-0-1	1
10		964	1-1-1	2
15		959	1-2-4	6
	Boring termianted at 15 feet			

PENETRATION (BLOWS PER FOOT): 10 20 30 40 60 80 100

▽ Groundwater level at time of boring

▼ Groundwater level - 24 hrs

C Caved depth - 24 hrs

⊠ Standard penetration test

▮ Undisturbed sample

SOIL BORING RECORD

BORING NUMBER	B-10
DATE DRILLED	4/23/2022
PROJECT NUMBER	122104
PAGE	1 of 1

ATLAS

Starr Park Phase 1

DEPTH (FT)	DESCRIPTION	ELEV.	BLOW COUNTS	N VALUE
	FILL: Loose brown silty medium to fine SAND (SM)	978	2-2-2	4
5	POSSIBLE ALLUVIUM: Very loose gray silty medium to fine SAND (SM)	973	0-0-2	2
	RESIDUUM: Very soft to firm gray tan fine sandy SILT (ML), micaceous		1-1-1	2
10	Boring terminated at 10 feet	968	1-2-3	5

PENETRATION (BLOWS PER FOOT): 10 20 30 40 60 80 100

REMARKS: No groundwater encountered at time of boring.

▽ Groundwater level at time of boring

▼ Groundwater level - 24 hrs

C Caved depth - 24 hrs

☒ Standard penetration test

▮ Undisturbed sample

SOIL BORING RECORD

BORING NUMBER	B-11
DATE DRILLED	2/26/1901
PROJECT NUMBER	122104
PAGE	1 of 1

ATLAS

Starr Park Phase 1

DEPTH (FT)	DESCRIPTION	ELEV.	BLOW COUNTS	N VALUE
	TOPSOIL: 2 inches	978		
	FILL: Loose brown silty medium to fine SAND (SM)		4-3-4	7
5	ALLUVIUM: Very loose gray clayey medium to fine SAND (SC)	973	2-1-1	2
	RESIDUUM: Loose gray tan clayey medium to fine SAND (SC)		2-2-3	5
10		968	3-4-5	9
	Boring terminated at 10 feet			

PENETRATION (BLOWS PER FOOT)

10 20 30 40 60 80 100

15 20 25 30 35 40

SOIL BORING RECORD

BORING NUMBER	B-12
DATE DRILLED	4/23/2022
PROJECT NUMBER	122104
PAGE	1 of 1

▽ Groundwater level at time of boring

▼ Groundwater level - 24 hrs

C Caved depth - 24 hrs

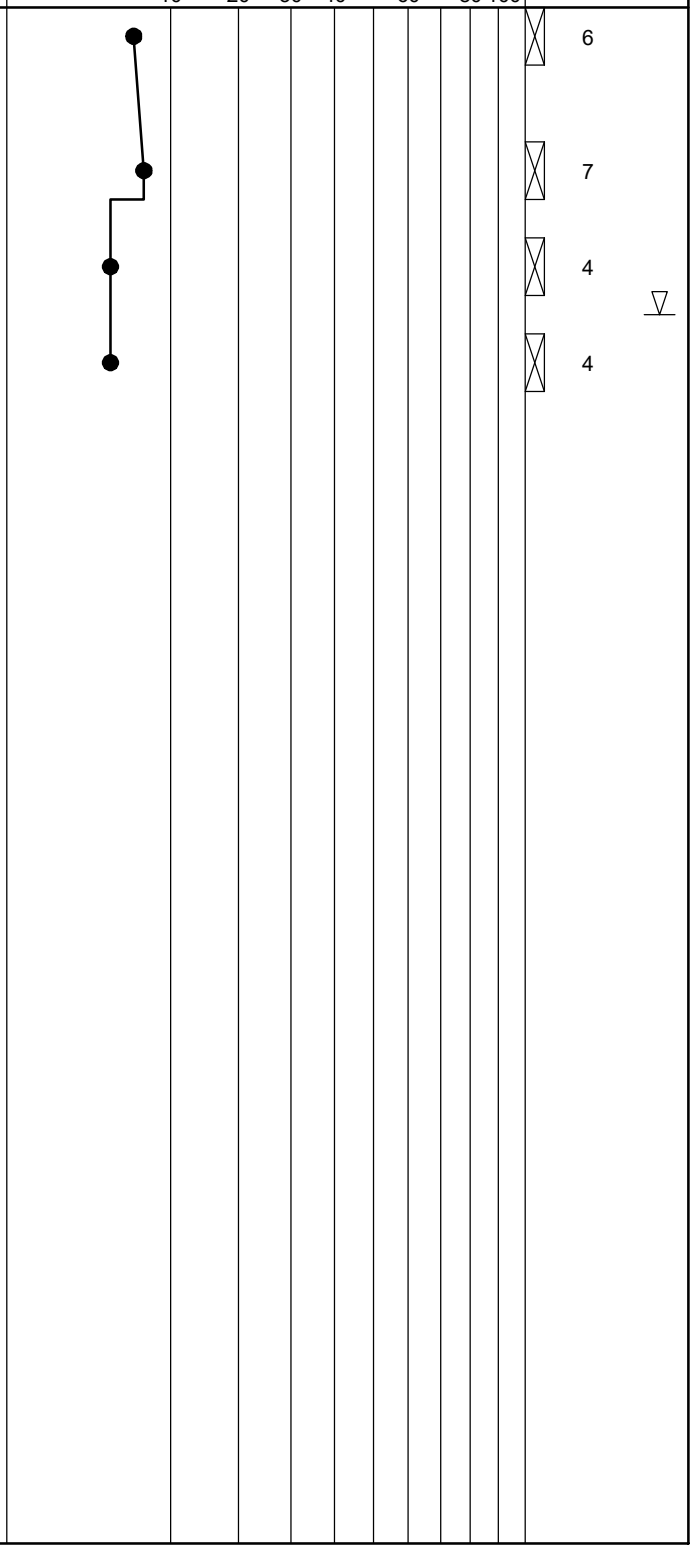
☒ Standard penetration test

▮ Undisturbed sample

ATLAS

Starr Park Phase 1

DEPTH (FT)	DESCRIPTION	ELEV.	BLOW COUNTS	N VALUE
	TOPSOIL: 3 inches FILL: Loose brown silty medium to fine SAND (SM), topsoil mixed at 3 to 5 feet	981	2-3-3	6
5	POSSIBLE ALLUVIUM: Soft gray clayey medium to fine SAND (SC), wet	976	4-3-4	7
	RESIDUUM: Loose tan brown gray silty medium to fine SAND (SM), wet		2-2-2	4
10	Boring terminated at 10 feet	971	1-2-2	4
15				
20				
25				
30				
35				
40				



SOIL BORING RECORD

BORING NUMBER	B-13
DATE DRILLED	4/23/2022
PROJECT NUMBER	122104
PAGE	1 of 1

▽ Groundwater level at time of boring

▼ Groundwater level - 24 hrs

C Caved depth - 24 hrs

☒ Standard penetration test

▮ Undisturbed sample

Starr Park Phase 1

DEPTH (FT)	DESCRIPTION	ELEV.	BLOW COUNTS	N VALUE
	TOPSOIL: 4 inches	967		
	FILL: Loose brown silty medium to fine SAND (SM)		3-5-4	9
	RESIDUUM: Loose gray tan silty medium to fine SAND (SM), micaceous, wet at 6 feet			
5		962	3-3-4	7
			1-2-4	6
10		957	3-3-3	6
	Boring terminated at 10 feet			
15				
20				
25				
30				
35				
40				

PENETRATION (BLOWS PER FOOT): 10 20 30 40 60 80 100

▽ Groundwater level at time of boring

▼ Groundwater level - 24 hrs

C Caved depth - 24 hrs

⊠ Standard penetration test

▮ Undisturbed sample

SOIL BORING RECORD

BORING NUMBER	B-14
DATE DRILLED	4/23/2022
PROJECT NUMBER	122104
PAGE	1 of 1

Starr Park Phase 1

DEPTH (FT)	DESCRIPTION	ELEV.	BLOW COUNTS	N VALUE
	TOPSOIL: 3 inches FILL: Loose brown silty medium to fine SAND (SM)	973	4-4-5	9
5	RESIDUUM: Loose to very loose tan orange silty medium to fine SAND (SM), micaceous	968	4-4-6	10
			1-1-2	3
10	Loose tan orange silty fine SAND (SM), micaceous, damp	963	1-2-3	5
	Boring terminated at 10 feet			

PENETRATION (BLOWS PER FOOT)

10 20 30 40 60 80 100

REMARKS: No groundwater encountered at time of boring.

SOIL BORING RECORD

BORING NUMBER	B-15
DATE DRILLED	4/23/2022
PROJECT NUMBER	122104
PAGE	1 of 1

▽ Groundwater level at time of boring

▼ Groundwater level - 24 hrs

C Caved depth - 24 hrs

⊠ Standard penetration test

▮ Undisturbed sample

ATLAS

Starr Park Phase 1

DEPTH (FT)	DESCRIPTION	ELEV.	BLOW COUNTS	N VALUE
	TOPSOIL: 4 inches	974		
	FILL: Very loose brown silty medium to fine SAND (SM)		3-1-1	2
	RESIDUUM: Loose to very loose gray tan silty fine SAND (SM), micaceous			
5		969	4-4-4	8
			1-1-1	2
10		964	1-1-2	3
15		959	1-2-2	4
	Boring terminated at 15 feet			

PENETRATION (BLOWS PER FOOT): 10 20 30 40 60 80 100

▽ Groundwater level at time of boring

▼ Groundwater level - 24 hrs

C Caved depth - 24 hrs

⊠ Standard penetration test

▮ Undisturbed sample

SOIL BORING RECORD

BORING NUMBER	B-16
DATE DRILLED	4/23/2022
PROJECT NUMBER	122104
PAGE	1 of 1

ATLAS

Starr Park Phase 1

DEPTH (FT)	DESCRIPTION	ELEV.	BLOW COUNTS	N VALUE
	TOPSOIL: 3 inches	976		
	FILL: Loose brown silty medium to fine SAND (SM)		6-4-4	8
	RESIDUUM: Very loose tan brown orange silty fine SAND (SM), micaceous			
5		971	1-1-1	2
			0-1-1	2
10		966	1-1-2	3
15		961	1-2-2	4
	Boring terminated at 15 feet			
20				
25				
30				
35				
40				

PENETRATION (BLOWS PER FOOT): 10 20 30 40 60 80 100

Groundwater level at time of boring

Groundwater level - 24 hrs

Caved depth - 24 hrs

Standard penetration test

Undisturbed sample

SOIL BORING RECORD

BORING NUMBER	B-17
DATE DRILLED	4/23/2022
PROJECT NUMBER	122104
PAGE	1 of 1

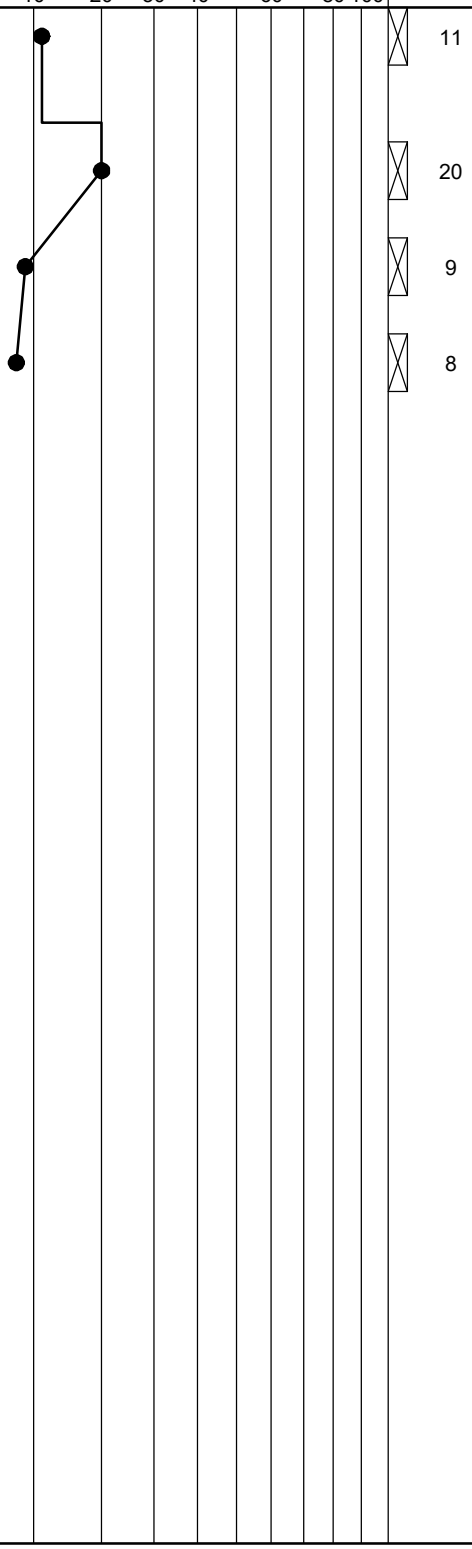
ATLAS

Starr Park Phase 1

DEPTH (FT)	DESCRIPTION	ELEV.	BLOW COUNTS	N VALUE
	FILL: Medium dense tan brown silty medium to fine SAND (SM)	983	3-4-7	11
5	RESIDUUM: Medium dense tan orange silty medium to fine SAND (SM)	978	4-9-11	20
	Stiff to firm tan black medium to fine sandy SILT (ML), micaceous, damp		3-4-5	9
10		973	2-4-4	8
	Boring terminated at 10 feet			

PENETRATION (BLOWS PER FOOT)

10 20 30 40 60 80 100



REMARKS: No groundwater encountered at time of boring.

SOIL BORING RECORD

BORING NUMBER	B-18
DATE DRILLED	4/23/2022
PROJECT NUMBER	122104
PAGE	1 of 1

▽ Groundwater level at time of boring

▼ Groundwater level - 24 hrs

C Caved depth - 24 hrs

☒ Standard penetration test

▮ Undisturbed sample

Starr Park Phase 1

DEPTH (FT)	DESCRIPTION	ELEV.	BLOW COUNTS	N VALUE
	ASPHALT: 2 inches G.A.B.: 3 inches FILL: Loose brown silty medium to fine SAND (SM)	983	3-2-3	5
5	RESIDUUM: Loose orange tan gray silty medium to fine SAND (SM)	978	4-3-5	8
			2-4-6	10
10	Boring terminated at 10 feet	973	2-4-5	9

PENETRATION (BLOWS PER FOOT): 10 20 30 40 60 80 100

REMARKS: No groundwater encountered at time of boring.

Groundwater level at time of boring

Groundwater level - 24 hrs

Caved depth - 24 hrs

Standard penetration test

Undisturbed sample

SOIL BORING RECORD

BORING NUMBER	B-19
DATE DRILLED	4/23/2022
PROJECT NUMBER	122104
PAGE	1 of 1

ATLAS

Starr Park Phase 1

DEPTH (FT)	DESCRIPTION	ELEV.	BLOW COUNTS	N VALUE
	TOPSOIL: 8 inches	978		
	FILL: Very loose brown silty medium to fine SAND (SM)		2-2-2	4
	RESIDUUM: Very loose to loose gray orange silty medium to fine SAND (SM)			
5		973	1-1-3	4
			1-2-3	5
10		968	3-5-3	8
15		963	2-4-3	7
	Boring terminated at 15 feet			

PENETRATION (BLOWS PER FOOT): 10 20 30 40 60 80 100

▽ Groundwater level at time of boring

▼ Groundwater level - 24 hrs

C Caved depth - 24 hrs

⊠ Standard penetration test

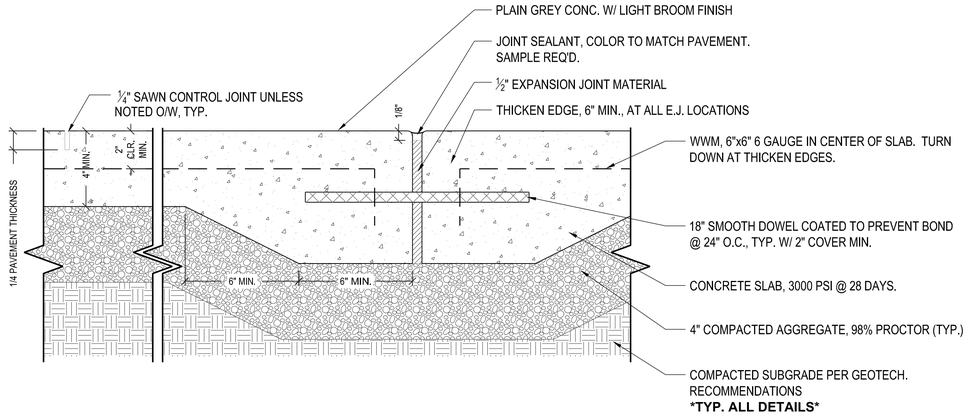
▮ Undisturbed sample

SOIL BORING RECORD

BORING NUMBER	B-20
DATE DRILLED	4/23/2022
PROJECT NUMBER	122104
PAGE	1 of 1

NOTES:

1. EXPANSION JOINTS (E.J.) TO OCCUR ADJACENT TO ALL COLD POURS INCLUDING ROAD CURBS, GRADE TRANSITION WALLS, BACK-OF-CURBS & AT ALL VERTICAL SURFACES INCLUDING BLDG. SLABS, SEATWALLS, & PLANTER CURBS.
2. EXPANSION JOINTS SHALL BE 25' O.C. MAX. REFER TO PLANS FOR MANDATORY LOCATIONS.
3. CONTROL JOINTS (C.J.) SHALL BE PLACED IN ALL CONC. SLABS INCLUDING TYP. SIDEWALKS & CONC. BANDS. LOCATE CONTROL JOINTS (C.J.) AS SHOWN ON PLANS. WHERE NOT INDICATED SPACE JOINTS EQUAL TO SLAB WIDTH, 12' MAX.
4. MOCK UP TO BE PROVIDED TO BE APPROVED PRIOR TO INSTALLATION



1 SECTION: PEDESTRIAN CONCRETE

SCALE: 3" = 1'-0"

ENHANCED CONCRETE:
INTEGRAL COLOR CONCRETE WITH WASH OFF FINISH
COLOR: SCHOFIELD C-14 FRENCH GRAY *OR APPROVED EQUAL*
AGGREGATE: GRAY PEA GRAVEL
SAND: GRANITE
FINISH: WASH OFF: 50
RETARDANT: TOPCAST #015
JOINTS: SAW CUT, REFER TO HARDSCAPE PLAN

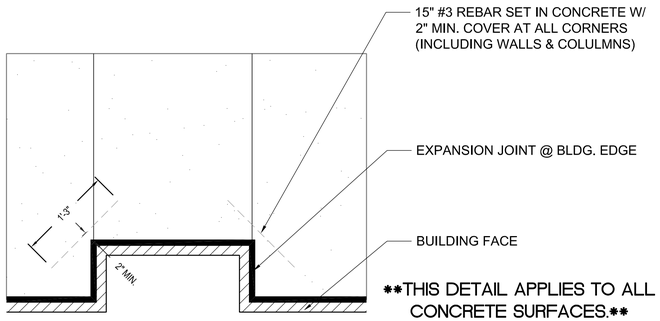
CLIENT & LA TO APPROVE MOCK UP PRIOR TO INSTALLATION

SUBMIT PRODUCT AND INSTALLATION INFORMATION FOR APPROVAL BY L.A. PRIOR TO PROCUREMENT/PLACEMENT.

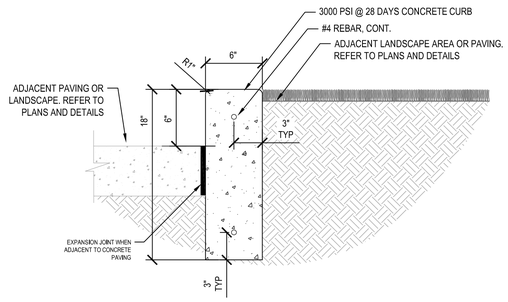
EXPANSION JOINT BETWEEN ANY CHANGE IN PAVING TYPES, TYP.

6 ENHANCED CONCRETE WITH INTEGRAL COLOR

1" = 1'-0"

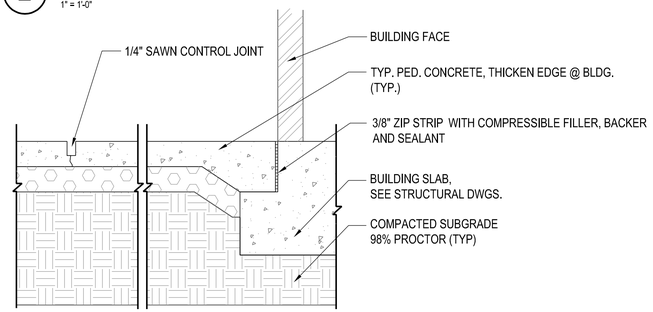


THIS DETAIL APPLIES TO ALL CONCRETE SURFACES.



2 CONCRETE AT BUILDING FACADE

1" = 1'-0"

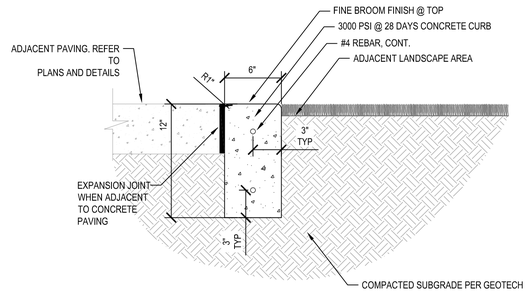


NOTES:

1. CONTROL JOINTS (CJ) SHALL BE PLACED IN ALL CONC. SLABS, INCLUDING TYP. SIDEWALKS AND CONC. BANDS. CJ SPACING NOT TO EXCEED SIDEWALK WIDTH.
2. EXPANSION JOINTS (EJ) SHALL BE PLACED ADJ. TO GRADE TRANSITION WALLS, EXISTING VEHICULAR CURBS, AND AT ALL RIGID INTERSECTIONS INCLUDING BLDG. SLABS, SEATWALLS, PLANTER CURBS. SEE PLANS FOR LOCATIONS AND FOLLOW ABOVE WHERE NOT INDICATED ON PLANS.
3. JOINT SEALANT COLOR TO MATCH CONC. - SUBMITTAL REQUIRED.
4. CJ TO BE SAWN WITHIN 24 HOURS.

4 6" TALL CONCRETE HEADER CURB

1 1/2" = 1'-0"



3 TYP. CONTROL JOINT & BLDG. EDGE EX. JOINT

1" = 1'-0"

5 FLUSH CONCRETE HEADER CURB

1 1/2" = 1'-0"

CROFT

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Kennesaw, Georgia 30144
770.529.7714 (p) 770.529.7716 (f)
www.croftae.com

E&A EBERLY & ASSOCIATES

GEORGIA REGISTERED No. 1690 PROFESSIONAL LANDSCAPE ARCHITECT ROGER LEE WELLS

OWNER

THE CITY OF FOREST PARK
745 FOREST PARKWAY
FOREST PARK, GA 30297

STARR PARK PHASE I

5031 PARK AVENUE
FOREST PARK, GA

No.	Date	Description
A	02.10.2022	100% DD SET
	04.05.2022	LDP SET
	07.26.2022	LDP RESUBMIT
B	08.29.2022	BID SET
1	09.16.2022	ADDENDUM #1
	11.14.2022	LDP RESUBMIT
2	03.08.2023	ADDENDUM #2
	ISSUANCE	

PROJECT NUMBER
21-012

DRAWN: RW/CL
CHECKED: JI/MW

SHEET TITLE

HARDSCAPE DETAILS

SHEET NO.

H2.00