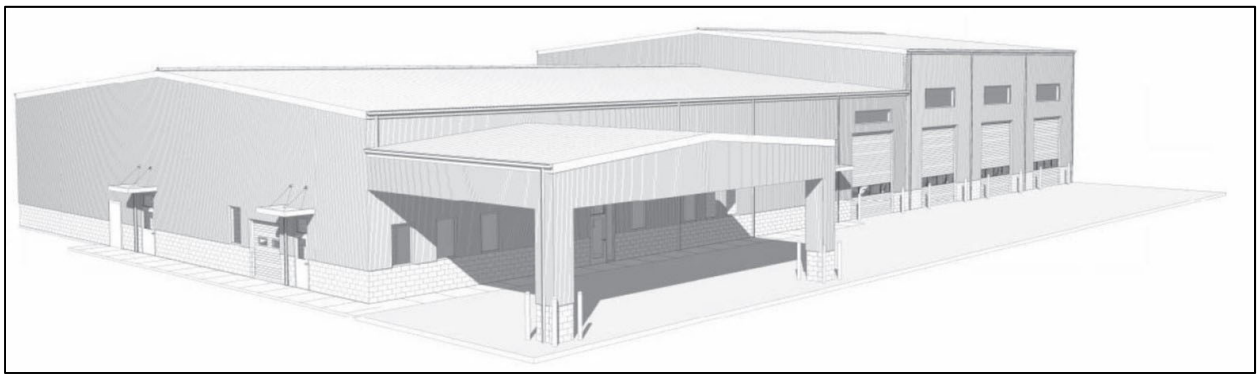
Greenville Utilities

GREENVILLE UTILITIES NEW OPERATIONS CENTER

FLEET MAINTENANCE BUILDING

721 Utility Way
Greenville, North Carolina



REQUEST FOR PROPOSALS (RFP)

Design Criterion Documents

JULY, 2020

your trusted advisor
CT consultants
engineers
architects
planners

Prepared by CT Consultants

4420 Cooper Road, Cincinnati, Ohio 45242 phone: 513.791.1700 www.ctconsultants.com

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SECTION 1
Request for Proposals (RFP)

GREENVILLE UTILITIES COMMISSION
Greenville, North Carolina

REQUEST FOR PROPOSALS

Design-build (DB) Services

Fleet Maintenance Building

A. SCOPE OF SOLICITATION AND TECHNICAL INFORMATION

The Greenville Utilities Commission, Greenville, North Carolina ("GUC") is seeking to hire a qualified Design Build team to provide design and general contracting services for a Fleet Maintenance Building to be located at 721 Utility Way, Greenville, NC 27834.

1.0 GENERAL

1.1 Scope

This solicitation is being made pursuant to NCGS 143-128.1B,b purpose of this solicitation is to receive RFPs from qualified DB Firms to deliver and complete design services based on the existing 35% criterion document (included in this advertisement), to provide pre-construction service and construction delivery services in accordance with the North Carolina Design-build Bridge construction delivery method. The work includes but is not limited to design development, construction documents, cost estimating; constructibility review; advanced material procurement projections; site access/utilization; and construction project scheduling and construction delivery. The scope of work for DB services required is described further in this document. The Fleet Maintenance Building will facilitate the day-to-day and emergency activities of GUC's fleet management division. Approximately 21,000 square feet of office space, maintenance shop bays, storage, warehousing and related structures are contemplated with an expected employee occupancy of 12 persons. The overall project budget is $7,000,000.

The DB team must have experience as the design builder for the construction of a minimum of five (5) projects with three (3) comparable size or larger maintenance or similar complexes.

The specific scope of work for the selected DB for the Project will be defined in the design build bridge agreement; however, at a minimum the following services are required of the DB:

- Develop a single contract (AIA template) incorporating the criterion documents as a basis of design on which the remainder of the design will be developed
- Provide design build services including design development and construction documents, cost estimating, participation in life-cycle cost analysis, value-engineering, constructibility reviews, scheduling, applying for and obtaining permits, etc.
- Provide and maintain Request for Information ("RFI") and submittal logs
- Develop and maintain a master project schedule
- Prepare and maintain a cash flow analysis
- Cloud based project drawing, documents and file sharing
- Define and prepare scopes of work for bid packages and perform first tier subcontractor vetting and scope of work-bid confirmation
- Construction of the project including but not limited to all labor and materials to perform the construction work in accordance with this RFP
- Prepare of shop drawings and submittals
- Develop a site management plan
- Provide construction management and general contracting services

- Establish and maintain quality control standards
- Develop a commissioning plan and work in conjunction with the commissioning agent
- Provide BIM, FIM and record documents of as-built conditions on the project.

In accordance with North Carolina General Statutes Section 143-128.1B *Design-build bridging contracts* and 143-129 *Procedures for letting public contracts* the successful DB Team will be required to bid all first tier subcontractors.

Construction for the project is anticipated to begin early Spring 2021 and to be substantially complete within 12 months of the starting date.

B. SOLICITATION INFORMATION

1.0 PROPOSAL PACKAGE

To be considered, the following components shall be submitted to the GUC in a concise manner as part of the response to this RFP. Failure to include all of the elements specified below may be cause for rejection. Additional information may be provided, but shall be succinct and relevant to this RFP. Submittals shall be limited to 50 pages, single sided or 25 double sided. Document pages shall be 8-1/2 inches by 11 inches in size or folded to such a size. Qualifications Statements shall correspond to the sections below:

1.1 Firm Information

Included at a minimum, the DB shall provide:

a. Firm name, mailing address (include physical location if mailing address is a P.O. Box), contact person, telephone number, and e-mail address.

b. Type of organization (joint venture, partnership, limited partnership, corporation, etc.). If submitting as a joint venture, firm shall provide a summary of the draft agreement terms.

c. Firm history, including background of firm's executive management and number of years the firm has been in business.

d. Financial information:
   i. Firm's total annual construction volume for the past five (5) years.
   ii. Name and contact information of the firm's bonding company.
   iii. Letter from the surety indicating the firm's current bonding capacity and the surety's willingness to bond the Project.
   iv. A.M. Best rating for the firm's surety, and its status to do business in North Carolina.
   v. Respondent’s experience modifier rate.

e. Has the firm, or joint venture partner, been involved in litigation or arbitration with an owner of a facility in the past 10 years? If so, please describe each instance, giving specific detail regarding the reasons for the claim and amount in dispute. Explain how the claim was resolved.

1.2 Firm Experience

Briefly describe the Firm's related experience as the design builder for the construction of comparable size or larger utility or similar complexes and provide confirmation that the firm and its team members are licensed to provide design and general contracting services in North Carolina. The Firm must provide at least five (5) recent projects of a similar scope and complexity, three (3) of which should involve fleet maintenance or similar experience. These projects should also demonstrate the Firm's ability to meet time and budget requirements, as well as the firm's capability, creativity and unique problem solving skills, budget and schedule compliance, and

added value. The following minimum information should be included for each project:

a. Owner and location of the project,
b. Completion date or status of the project,
c. Brief project description highlighting its key elements,
d. Capacity and square footage of the project
e. Date awarded,
f. Date completed or date of anticipated project completion,
g. Key personnel proposed for this project that were involved in the project,
h. Initial project budget, final cost, and type of contract, and
i. Owner's contact name, phone number, and e-mail address.

1.3 Project Team

The project team shall consist of members with demonstrated knowledge as the design builder for the construction of fleet maintenance building or similar building construction. To indicate such experience, describe the project team's knowledge of this construction type, local codes and ordinances, and experience in dealing with local and state regulatory and permitting agencies. The firm(s) must be licensed to provide design and general contracting services in North Carolina.

a. Identify design and construction firms who will be assigned to deliver the project and their respective roles. Provide relevant information for each firm assigned to the project.
b. Identify the key personnel who will be assigned to deliver design, pre-construction and construction services for the Project and indicate their respective roles and responsibilities, indicating proposed candidates' names and positions
c. Identify the firm's single point of contact for the entire Project,
d. Provide an organization chart clearly defining all individuals proposed for the Project,
e. Provide resumes for each individual listed above, including the following:
    1) Name and title
    2) Years of experience
    3) Years with firm
    4) Office location
    5) Education, certifications, licenses, and/or special training
    6) Description of role and key responsibilities for the Project and level of involvement in each phase
    7) Listing and description of relevant project experience
    8) Licenses held
f. Identify the level of commitment to the Project for each key personnel, including the project executive and lead project manager(s). Indicate their ability to start design services on August 31, 2020.

1.4 Project Approach

Provide a narrative describing the firm's approach to the Project. The following items shall be addressed specifically:

a. Describe approach to implementing both the buildings and infrastructure work from design, to pre-construction and through construction. Identify opportunities, challenges, and risk mitigation strategies.

b. Discuss role as a team member on the Project that includes GUC, its criterion document architect/engineer, and other Project Stakeholders.

c. Discuss approach to project controls, including scope, schedule, budget and cost control, and construction quality control with examples of past success.

d. Describe procurement plan to ensure completion of the Project on a timely basis.

e. Describe practices and processes in monitoring and managing construction activities and subcontractor performance so as to minimize requests for change orders and avoid or mitigate construction related disputes.

f. Indicate whether the firm would propose to self-perform any work on the Project and, if so, the how the firm will comply with NCGS 143 in self-performance.

g. Describe how the firm will ensure competitive pricing and on-time, quality performance by its subcontractors.

h. Describe the firm's approach to creating a competitive procurement environment for the benefit of the Project.

i. Describe the firm's experience implementing apprenticeship and/or work for development programs to the benefit of the Project.

1.5 Minority Participation

Describe the program (plan) that your company has developed to encourage participation by local, minority and other HUB firms to meet or exceed the goals set by North Carolina General Statute 143-128.2. Attach a copy of that plan to this proposal. Provide documentation of the local, minority and other HUB participation that you have achieved over the past two years on both public and private construction projects. Outline specific efforts that your company takes to notify, recruit, and utilize local, minority and other HUB firms of opportunities for participation. Indicate the participation goal that you expect to achieve on this project. The selected DB will be required to submit a final plan for compliance with Section 143-128.2 for GUC approval prior to soliciting bids for the Project's first tier subcontractors.

1.6 Quality of Service

Testimonials: The Firm may include no more than five, one page letters from clients that it has worked with on previous projects. Letters should comment on budget and/or schedule experiences and qualitative matters related to services rendered by the Firm or Team members. The Firm may also include a list of other client references with owner name and contact information.

2.0 EVALUATION CRITERIA

Qualification Statements and other information will be evaluated by the Selection Committee based on the firms' ability to meet the requirements of this RFP. The primary evaluation criteria includes:

a. Experience providing design and general contracting services for similar projects.
b. Approach to the Project.
c. Ability to meet the established schedule.
d. Qualifications and abilities of key individuals proposed for the Project.
e. Experience with and success in utilizing local, minority and HUB subcontractors.
f. Client references.
g. Location and knowledge of Greenville, NC.

2.1 SELECTION

a. The top three proposals will be chosen based on qualification statements and interviews if determined to be necessary by GUC, then the pricing (see Section 3.0) included in the responses in a separate sealed envelope will be opened. The lowest responsive, responsible price will be used for final selection. GUC reserves the right to reject all proposals for any reason.

3.0 SUBMITTALS and INQUIRIES

RFP packages should be no more than fifty (50) pages in length. Please prepare a cover letter no longer than two (2) pages, signed by an authorized representative of the firm. The table of contents will follow the cover letter (the cover letter and table of contents are not included in the overall page count). Pages shall be 8.5" x 11" with the exception of charts, photos, and exhibits, which may utilize 11" x 17" folded to 8.5" x 11."

RFPs must include, in a sealed envelope all of the following:

a. **The design-builder's price for providing the general conditions of the contract.**
b. **The design-builder's proposed fee for general construction services.**
c. **The design-builder's fee for design services.**

Inquiries on the project or requests for additional information must be E-mailed to: Cleve Haddock, CLGPO, haddocgc@guc.com, Procurement Manager no later than Monday, August 10 at 5:00 p.m. local time. Greenville Utilities Commission will not be responsible for or bound by any oral instructions made by any employee(s) of GUC regarding this RFP invitation. A Pre-submittal Conference will be held on Monday, August 3, 2020 at 10:00 AM in the Building A Training Room located at 801 Mumford Road, the current Operations Center.

To be considered, nine (9) copies and one (1) electronic file of the completed RFP should be mailed or delivered to: Cleve Haddock, CLGPO, Procurement Manager, Greenville Utilities Commission, 401 S. Greene Street, Greenville, N.C. 27834 and referenced: **DB Services Fleet Maintenance Building RFP.**

4.0 DUE DATE and INTERVIEWS

RFP submittals must be received no later than Monday August 17 at 3:00 p.m. local time**. Late submittals will not be considered.** Interviews may be conducted. After the screening of RFPs, shortlisted Firms may be given additional information prior to interviews. If conducted, these interviews will relate less to the past experience and already detailed in the submittal and more to identification of the Firm's program approach and to an appraisal of the people who would be directly involved in the project.

C. TERMS AND CONDITIONS

GUC reserves the right to reject all proposals or accept such proposals, as appears in its own best interest, and to waive technicalities or irregularities of any kind in the proposal. GUC is not obligated to accept the lowest cost proposal.

1.0 CONFLICT OF INTEREST

In general, conflicts of interest relate to the potential for self-gain usually, but not always, of a fiscal nature. Potential for self-gain can serve to undermine the judgment or objectivity of Proposers providing DB services. A potential or actual conflict of interest exists when commitments and obligations to GUC are likely to be compromised by a Proposer's other interests or commitments, especially economic, particularly if those interests or commitments are not disclosed. Not all conflicting interests are necessarily impermissible. Timely and complete disclosure of potential conflicts of interest may be a satisfactory remedy and protects the CMAR from suspicion and accusations of breach of professional integrity. Proposers are asked to disclose any situation or relationship that might be regarded as potential conflict of interest with, but not limited to, their expected duties and recommendations as defined in this RFP.

2.0 PROPOSER INCURRED COSTS

All costs that may be incurred to prepare Proposals, attend meetings, attend site inspections, provide requested follow-up information, make formal and informal presentations, and for the entire contract negotiations process if applicable, shall be the sole responsibility of each Proposer. GUC is not responsible under any circumstances for reimbursement of any costs that may be incurred by Proposers during the proposal preparation, subsequent selection or negotiation stages.

3.0 MINORITY BUSINESS PARTICIPATION PROGRAM

GUC has adopted an Affirmative Action and Minority and Women Business Enterprise Plan (M/WBE)

Program. Firms submitting a proposal are attesting that they also have taken affirmative action to ensure equality of opportunity in all aspects of employment, and to utilize M/WBE suppliers of materials and/or labor.

4.0 INSURANCE REQUIREMENTS

GUC shall be named as additional insured for its interest on all policies of insurance except Worker's Compensation as regards ongoing operations, products, and completed operations and this shall be noted on the face of the Certificate of Insurance.

Certificates for all such policies shall be provided by the Firm's insurance agent or broker to GUC within (fifteen) 15 working days from the date of award. Firm will provide GUC a minimum of 30 days advance notice in the event of the insurance policies or insurance policy is canceled. Sub-consultants approved by GUC to perform work on this project are subject to all of the requirements in this section. Firm agrees to maintain and keep in force during the life of the design engagement, with a company or companies authorized to do business in North Carolina for the following insurance policies:

Automobile Liability - $1,000,000.00 per Occurrence- Combined Single Limit
Coverage shall include bodily injury and property damage and cover all vehicles including owned, non-owned and hired.

Commercial General Liability - $1,000,000.00 per Occurrence (Including products and completed operations liability)

Worker's Compensation
Coverage A - State of North Carolina Statutory

Coverage B - Employers Liability
$500,000.00/$500,000.00

Umbrella Liability - $1,000,000.00 Per Occurrence Over Primary Insurance

Errors and Omissions Liability - $2,000,000.00

Builder's Risk – maintain in the names of GUC and the DB, fire, vandalism and extended coverage insurance upon the entire structure or structures on which the work of this Contract is to be done and upon all material in or adjacent thereto and intended for use thereon to one hundred percent (100%) of the Contract amount.

5.0 PROPOSAL WITHDRAWAL

A proposer must notify GUC in writing of its request to withdraw a RFP within seventy-two (72) hours after the due date, not including Saturdays, Sundays, or holidays.

6.0 AFFIRMATIVE ACTION

The Provider will take affirmative action in complying with all Federal and State requirements concerning fair employment and employment of the handicapped, and concerning the treatment of all employees, without discrimination by reason of race, color, religion, sex, national origin, or physical handicap.

7.0 MEDIATION/BINDING ARBITRATION

In the event of any dispute between the Parties, the Parties agree to submit any dispute to nonbinding mediation before a mutually agreeable Mediator prior to initiating litigation. If the Parties are unable to agree upon a Mediator within thirty (30) days after demand therefore, either Party may petition a Court of competent jurisdiction for the designation of a qualified Mediator for these purposes. Each Party shall bear its own costs and expenses of participating in the mediation (including, without limitation,

reasonable attorneys' fees), and each Party shall bear one-half (1/2) of the costs and expenses of the Mediator. Unless otherwise agreed, the Parties will hold the mediation in Greenville, North Carolina. The matters discussed or revealed in the mediation session shall not be disclosed in any subsequent litigation. In the event the matter is not resolved in mediation, either Party may request arbitration. The parties shall jointly select an Arbitrator, and shall be bound by the decision of the Arbitrator with respect to any dispute between the parties with respect to this Agreement. If the parties are unable to mutually agree upon an Arbitrator, the Parties shall each select an Arbitrator, and the two Arbitrators so selected shall select a third Arbitrator, and the decision of the majority of the Arbitrators shall be conclusive and binding upon the Parties. The Parties at all times agree to equally split the costs of any Arbitrator(s) selected in an effort to resolve the dispute between the Parties. Any party desiring to resolve a dispute under the terms of this Agreement shall notify the other Party in writing, and the Parties shall seek to agree upon a mutually agreed upon Arbitrator within a period of ten (10) days from the date of such written demand. If the Parties are unable to agree within such ten (10) day period, the Parties shall each select an Arbitrator, and the two (2) Arbitrators so selected shall select a third Arbitrator within fifteen (15) days from the date of the written demand for arbitration, and a decision shall be rendered by the Arbitrator(s) so selected within five
(5) days after such Arbitrator(s) is selected.

8.0 INDEMNITY PROVISION

Provider agrees to indemnify and save GUC of the City of Greenville, Pitt County, North Carolina, and the City of Greenville, North Carolina, its co-owners, joint ventures, agents, employees, and insurance carriers harmless from any and all losses, claims, actions, costs, expenses including reasonable attorney fees, judgments, subrogations, or other damages resulting from injury to any person (including injury resulting in death), or damage (including loss or destruction) to property of whatsoever nature of any person arising out of or incident to the performance of the terms of this Contract by Provider, including, but not limited to, Provider's employees, agents, subcontractors, and others designated by Provider to perform work or services in, about, or attendant to, the work and services under the terms of this Contract. Provider shall not be held responsible for any losses, expenses, claims, subrogations, actions, costs, judgments, or other damages, directly, solely, and proximately caused by the negligence of GUC of the City of Greenville, Pitt County, North Carolina. Insurance covering this indemnity agreement by the Provider in favor of Greenville Utilities Commission of the City of Greenville, Pitt County, North Carolina, shall be provided by Provider.

9.0 GOVERNING LAWS

All requests, contracts, transactions, agreements, etc., are made under and shall be governed by and construed in accordance with the laws of the State of North Carolina.

10.0 ADMINISTRATIVE CODE

Bids, Proposers, and awards are subject to applicable provisions of the North
Carolina Administrative Code.

11.0 SITUS

The place of all contracts, transactions, agreements, their situs and forum, shall be North Carolina, where all matters, whether in contract or tort, relating to the validity, construction, interpretation, and enforcement shall be determined.

12.0 E-VERIFY

E-Verify - I understand that E-Verify is the federal E-Verify program operated by the United States Department of Homeland Security and other federal agencies, or any successor or equivalent program used to verify the work authorization of newly hired employees pursuant to federal law in accordance with NCGS §64-25 et seq. I am aware of and in compliance with the requirements of E-Verify and Article 2 of Chapter 64 of the North Carolina General Statutes. To the best of my knowledge, any subcontractors employed by me as a part of this contract are in compliance with the requirements of

E-Verify and Article 2 of Chapter 64 of the North Carolina General Statutes.

13.0 IRAN DIVESTMENT ACT CERTIFICATION

By acceptance of this purchase order, Vendor/Contractor certifies that, as of the date of the purchase order or contract, it is not on the Final Divestment List as created by the State Treasurer pursuant to N.C.G.S. § 143-6A-4. In compliance with the requirements of the Iran Divestment Act and N.C.G.S. § 143C-6A-5(b), Vendor/Contractor shall not utilize in the performance of the contract any subcontractor that is identified on the Final Divestment List.

14.0 UNIFORM GUIDANCE

Contracts funded with federal grant or loan funds must be procured in a manner that conforms with all applicable federal laws, policies, and standards, including those under the Uniform Guidance (2 C.F.R. Part 200).

15.0 CONFIDENTIAL INFORMATION

Except as provided by statute and rule of law, GUC will keep trade secrets which the Provider does not wish disclosed confidential. Each page shall be identified in boldface at the top and bottom as "CONFIDENTIAL" by the Provider. Cost information shall not be deemed confidential. The determination of whether a matter is confidential will be determined by North Carolina law.

16.0 EXECUTION

In the discretion of GUC, failure of a duly authorized official of Provider to sign the Signatory Page may render the RFP invalid.

COMPLETE AND RETURN THE BELOW FORM(S)

E-VERIFY LETTER OF COMPLIANCE
Greenville Utilities Commission

1. I have submitted a proposal for contract or desire to enter into a contract with the Greenville Utilities Commission;
2. As part of my duties and responsibilities pursuant to said proposal and/or contract, I affirm that I am aware of and in compliance with the requirements of E-Verify, Article 2 of Chapter 64 of the North Carolina General Statutes, to include (mark which applies):

3. ____ After hiring an employee to work in the United States I verify the work authorization of said employee through E-Verify and retain the record of the verification of work authorization while the employee is employed and for one year thereafter; or
4. ____ I employ less than fifteen (15) employees in the State of North Carolina.

5. As part of my duties and responsibilities pursuant to said proposal and/or contract, I affirm that to the best of my knowledge and subcontractors employed as a part of this proposal and/or contract, are in compliance with the requirements of E-Verify, Article 2 of Chapter 64 of the North Carolina General Statutes, to include (mark which applies):

6. ____ After hiring an employee to work in the United States the subcontractor verifies the work authorization of said employee through E-Verify and retains the record of the verification of work authorization while the employee is employed and for one year thereafter; or

7. ____ Employ less than fifteen (15) employees in the State of North Carolina.
   Specify subcontractor: _____

_____ (Company Name)

By: _____ (Typed Name)

_____ (Authorized Signatory)

_____ (Title)

_____ (Date)

Letter of Compliance to IRAN Divestment Act Certification for

Greenville Utilities

Commission

RFP Number (if applicable): _____

Name of Vendor or Bidder: _____

_____

IRAN DIVESTMENT ACT
CERTIFICATION REQUIRED BY N.C.G.S.
143C-6A-5(a)

As of the date listed below, the vendor or bidder listed above is not listed on the Final Divestment List created by the State Treasurer pursuant to N.C.G.S. 143-6A-4.

The undersigned hereby certifies that he or she is authorized by the vendor or bidder listed above to make the foregoing statement.

_____

Signature Date

_____

Printed Name Title

Notes to persons signing this form:

N.C.G.S. 143C-6A·5(a) requires this certification for bids or contracts with the State of North Carolina, a North Carolina local government, or any other political subdivision of the State of North Carolina. The certification is required at the following times:

- When a bid is submitted
- When a contract is entered into (if the certification was not already made when the vendor made its bid)
- When a contract is renewed or assigned

N.C.G.S. 143C-6A-5(b) requires that contractors with the State, a North Carolina local government, or any other political subdivision of the State of North Carolina must not utilize any subcontractor found on the Stale Treasurer's Final Divestment List.

The State Treasurer's Final Divestment List can be found on the State Treasurer's website at the address www.nctreasurer.com/Iran and will be updated every 180 days.

SIGNATORY PAGE

It is certified that this Proposal/RFP is made in good faith and without collusion or connection with any other person submitting a proposal on these services. It is also certified that this proposal is made in good faith and without collusion or connection with any GUC employee(s).

Certified check or cash for $ n/a or bid bond for $ n/a attached.

Firm Name_____Phone (_____)_____

Address _____

City_____State_____Zip Code_____

Fax (_____)_____E-Mail _____

Authorized Official_____ Title_____

_____ Date _____
Signature

SECTION 2
Design Narratives

SECTION 2: DESIGN - NARRATIVES

GENERAL REQUIREMENTS

Project Background:
The Fleet Maintenance Building, also referred to as 'Building 5', is part of an 82-acre campus master plan for Greenville Utilities New Operations Center located off Highway 43 and Rock Spring Road. Currently under construction is the development of the site along with the construction of the Engineering & Operations Building (Building 2), Systems Support Building (Building 3) and Central Stores Warehouse (Building 4). Storage Buildings A and B, (Buildings 6 & 7) are in the final design phase with construction completion anticipated for Spring 2021.

Project Scope:
The RFP project scope includes the Fleet Maintenance Building, ancillary Wash Station and associated site development. To ensure a cohesive campus design, consideration shall be given to site development and overall building aesthetic. It is the expectation that the design and construction of the Fleet Maintenance Building be completed using equal levels of building construction, finish materials, equipment and design considerations in order to provide equity across Buildings 3, 4 and 5. This goal was established during the master planning phase in 2017 and continues to be an important aspect of the project. The selected DB team shall refer to approved submittals being used during the current construction project for Basis of Design and coordinate with GUC as needed during the Design Phase going forward. Additional information is described below and within the Design Criterion Documents included within this RFP.

Function:
The Fleet Maintenance Building will provide service/repair and front office support space for GUC's fleet service and maintenance needs. It is comprised of Front Office area including offices, break room, training room, storage areas, a small Mezzanine serving archive storage, electric/tech rooms and Garage area including service/repair bays. The High Bays include a 7-ton Bridge Crane. The Low Bays include tire repair, vehicle lifts and welding/fabrication space. Air & power reels along with a monitored fluid distribution system, fed overhead from the Fluid Storage Room, support the Maintenance Bays. Clerestory windows above the overhead doors provide natural light to supplement lighting in these areas.

The Space Allocation Table, along with the Room Data Sheets, describe minimum square footage allowances and design considerations required for each room. The included Schematic Design drawings, including Civil, Architectural and Interior Design, show critical functional layouts and adjacencies necessary for the successful operation of the facility. The DB team is expected to review these with the Owner to refine the design during the Design Development phase of the project, prior to finalizing construction bid documents.

ARCHITECTURAL DESIGN AND MATERIALS

Building Systems and Material Selections:
Interior and exterior materials, systems and finishes shall be selected based on durability, ease of maintenance, cost effectiveness and compatibility with GUCs current systems and practices found in Buildings 3 & 4.

The Fleet Maintenance Building shall be constructed as a Pre-engineered Metal Building with similar panel profiles, finish and colors to match appearance of Buildings 3 & 4. Exterior materials include 4'-0" split face concrete masonry unit (CMU) wainscot, exterior metal building panels with exposed fasteners, and low slope standing seam metal roof with concealed fasteners to match the appearance of Building 3 & 4. Roof drainage system includes gutter and downspouts tied in the underground drainage system. PEMB Canopies are to be located at each entrance as indicated on the drawings.

Furniture & Finishes:
Interior finishes & furnishings shall be selected for durability. Colors and materials shall match those found in Buildings 3 & 4. Furniture configurations and finishes shall ensure equity across similar staff positions found across campus. Refer to attached Furniture Package Basis of Design, which is included as reference as coordination purposes only. The Owner intends to purchase and install the furniture package under separate scope. The DB shall work with the Owner to determine related project requirements, including power & data needs.

Basis of Design:
The DB team shall reference GUC provided, approved, submittals from the current phase construction to use as Basis of Design. Similar materials/manufacturers found to be 'approved equal' are acceptable. This project contains Owner Furnished Owner Installed (OFOI) items which are identified in the drawings and Room Data Sheets The DB team shall coordinate with the Owner during the Design Phase to ensure power, data and other considerations are been met within the project scope.

Wayfinding:
Site and building signage is part of the GUC branded, comprehensive campus plan. Refer to attached Signage Package for signage types and locations to be included in project scope.

Safety and Security:
Active security measures, including fencing, gates, security cameras, electronic access control, and site lighting are included. Provisions for maintaining a secured site during construction must be considered, including coordination with any concurrent construction activity occurring elsewhere on site (by Others). Verify needs with Owner during Design Phase.

SITE DESIGN & ENGINEERING

Project Location:
Access to Fleet Maintenance facility is from Rock Spring Road. Site development includes underground utilities, employee parking, perimeter fencing, clearing & grading and paving. Refer to Civil drawings for project limits.

Utilities:
The Fleet Maintenance Building shall tie into existing utilities on-site including power, water, gas, electric, sewer and storm water. Refer to Civil drawings for locations.

Soils
Refer to attached Geotechnical Report for soil boring locations and conditions.

Demolition
A limited amount of site demolition may be required to connect the Fleet Maintenance Site into the existing campus. This may include the removal of portions of the perimeter security fence.

Clearing and Grubbing:
Clear and grub all trees and vegetation necessary for construction while saving as many trees as possible. Protect landscaping recently installed during the current construction phase. The DB contractor may use the area to the west of the Fleet Maintenance Building for construction laydown area. Refer to Civil drawings.

STRUCTURAL DESIGN

Design Load Capacities:
Design the structure for applicable loads (dead, live, wind, snow, seismic, etc.) in accordance with the North Carolina Building Code (based on the International Building Code, which is partly based on the 2010 ASCE 7 Minimum Design Loads for Buildings and Other Structures). Soil loads and resistance shall be based on the Geotechnical soil investigation results.

Lateral Deflection:
The Fleet Maintenance Building shall be an enclosed pre-engineered metal building on reinforced concrete foundations. This building will have gable roofs. The roof over the High bays in the Maintenance Bays shall be higher than the Low Bays roof. The High bays will have a bridge crane. The floor slabs shall be slightly sloped where required to drain to floor trench drains. The mezzanines shall be supported by steel framing. The building interior will have concrete masonry unit (CMU) walls full-height, as well as a bridge crane; therefore, the lateral deflection shall be limited much more than typical pre-engineered metal buildings.

PLUMBING DESIGN

Codes and Standards:

The applicable provisions of the following standards shall govern this work. All work shall be installed in strict accordance with the latest edition of all applicable codes including (but not limited to) the following codes and standards.

- North Carolina Building Code
- North Carolina Plumbing Code
- International Fuel Gas Code
- American's with Disabilities Act

Domestic Cold Water:
A new domestic water service shall be extended from the existing site domestic water line. Before entering the building, there shall be a reduced pressure zone backflow preventer, to protect the water service. The water piping shall be extended throughout the building to serve multiple restroom facilities, sinks, and supply for the domestic hot water system. Piping material for all domestic water systems shall be copper type "L" piping for above ground piping, and Copper type "K" piping for below ground piping. All domestic water piping shall be insulated.

Domestic Hot Water:
A new domestic hot water system shall be provided to serve the restroom lavatories and various sinks. 140 F hot water piping shall be provided to mop sinks, and any other fixtures used for office cleaning. At all breakroom sinks and lavatories, a mixing valve shall be provided to mix hot water down to 105 F. The water heater type shall be Commercial Tank-type gas.

Emergency Eye Wash Equipment:
Where personnel come into regular contact with corrosive materials, or materials otherwise harmful to personnel are handled or stored, emergency fixtures shall be provided within 10 seconds travel time, or approximately 55 feet. These fixtures shall be provided with tempered water that is 80 °F. All emergency fixtures shall be installed with a floor drain underneath.

Sanitary Drainage:
A new sanitary drainage system shall be provided. All restrooms, sinks, floor drains, etc., shall discharge into this system, unless otherwise noted. Floor drains with trap primers shall be provided throughout the building in rooms such as restrooms, mechanical rooms, and other areas, as required. Piping material is to be schedule 40 PVC and fittings with socket type connections.

Oil Water Separators:
Waste water from trench drains located in areas where vehicles are washed or serviced is required to be piped through an oil interceptor before entering the building drainage system. These interceptors shall be gravity type oil interceptors with grit chamber and shall be sized per prevailing code requirements.

Storm Drainage:

Where flat roofs collect water, a new storm drainage system shall be provided for the building. Primary roof drains will convey storm water to the site storm system. Secondary roof drains will convey water to the overflow storm system, which terminates above ground to inform occupants that the primary system is clogged. Piping material is to be schedule 40 PVC and fittings with socket type connections. All downspouts shall be tied into the underground storm drainage system. No primary storm drainage systems shall discharge to surface. This includes man door canopies, carport roof and wash station.

Compress Air System:

Provide a compressed air system and extend piping to all equipment and hose reels as required. Design system at 150 psi. Provide minimum 2" loop encircling areas that have compressed air equipment and hose reels. Provide minimum ¾" drop to hose reels and equipment, or larger if required. Air compressor shall have air dryer, and air drops shall have a drip leg before equipment connections with shut off valve to drain water out of the piping system. Compressed air piping shall be schedule 40 black iron steel with threaded malleable black iron fittings.

Plumbing Fixtures:

Basis of design shall be approved submittals for Buildings 3 and 4.
Fixtures to be provided in the restrooms include:

- Wall hung water closets
- Wall hung urinals
- Wall hung style lavatories, or lavatories set in a countertop.
- Hose bibs for cleaning

Other fixtures to be provided include but are not limited to:

- Mop sinks in Janitor's closets
- Sinks in kitchen/breakroom areas
- Supply boxes and floor drains with trap primers for refrigerators, ice machines, coffee makers, and other miscellaneous countertop fixtures.

Faucets and flush valves in the restrooms shall be sensor type, hardwired.

Domestic cold-water connections with inline backflow prevention and floor drains shall be provided for ice machines, refrigerators, coffee makers, and water coolers.

All plumbing fixtures shall be provided with necessary shut off valves and angle stops. All public restroom and kitchen/breakroom fixtures shall be ADA compliant.

ELECTRICAL SYSTEMS DESIGN

Codes and Standards:

All work shall be designed in accordance with the prevailing codes and standards including the following:

- National Electric Code (NEC)

- International Fire Code (IFC)
- International Building Code (IBC)
- State and Local Codes
- Illuminating Engineering Society of North America – Lighting Levels Standards
- National Electrical Manufacturer's Association
- Electronic Industry Association/Telecommunications Industry Association

Interior General Design Elements:

- Power Distribution Equipment
- Service Entrance Equipment
- Raceway Systems and Conductors
- Power Systems for HVAC and Special Equipment
- General and Special Receptacles
- General and Emergency Lighting
- Grounding

Exterior General Design Elements:

- Underground power and special system conduits and conductors
- Trenching for underground primary and secondary electric services
- Concrete pad for electric service transformer
- Roadway, parking lot, service yard and pathway LED lighting assemblies, to match existing, including concrete bases
- EV charging stations at 4 locations in the parking lot, types and charge rates as directed by GUC
- Wall-mounted full-cutoff LED around perimeter as required to supplement other site lighting, style to match existing
- Recessed full-cutoff LED downlights at soffits of Car Port and other canopies
- Recess-box type NEMA 3R While-In-Use GFCI WR rated receptacles along exterior walls at nominal 50-foot spacings and at designated locations as directed by GUC
- Trenching back filling, compacting and resurfacing of electrically excavated grounds and paved areas

General:

"Provide" shall be taken to mean "furnish/procure, transport, receive, install and terminate/connect". "Technology" shall be taken to mean "voice, data, PCs, copiers, printers, scanners, plotters, monitors, flat panel TVs, servers, electronic/fioptic equipment/racks/cabinets, etc.". Some work is specifically defined as by GUC. Provide all other work (lighting, electrical and fire alarm) for the facility with all systems and components tested and rendered fully operational. Provide materials, means, methods, etc. to match those used in Buildings 3 and 4. Provide luminaires, equipment, devices, etc. to match those used for Buildings 3 and 4.

Site:

Provide conduit to service future EV charging stations. Opposite of future EV charging stations, provide mushroom type emergency power off switch to disconnect the EV chargers from power source. Provide auxiliary connection for fire alarm trouble signal initiation. GUC will

furnish LED lighting standards for installation and wiring under Division 26. Provide LED full cut-off lighting at carport and at all exterior canopies. Provide LED full cut-off wall-mounted area lighting around perimeter of building, with style to match those used on other campus buildings.

Lighting and Luminaires:
Provide LED commercial grade lighting in all areas, indoor and out. Exterior parking lot fixtures will be OFOI. Comply with applicable building and energy codes, with industry standards and with Illuminating Engineering Society of North America (IESNA) standards and recommendations. Provide diffusing lenses for all luminaires except for large outdoor area lights. Provide dimming drivers for indoor luminaires. GUC will provide acceptable manufactures list.

Lighting Controls:
Comply with prevailing building and energy codes as a minimum baseline for lighting controls. This shall include use of occupancy and vacancy sensors wherever required by code(s) and wherever practical indoors. Provide photocell and time-based control for outdoor lighting. Additionally, provide dimming and manual controls as needed to accommodate operational needs.

Emergency Power and Egress Lighting:
A 50A/3P 480Y/277V, 3-phase, 4-wire emergency branch power circuit is reserved in Building 2 panelboard EH1 (adjacent to and backed up from the Building 2 outdoor generator) for serving emergency lighting and fire alarm system loads in the Fleet Maintenance building. One (1) 3-inch conduit is being installed from EH1 to a grade-mounted junction in the general vicinity of the Fleet Maintenance Building as part of the campus construction project that is currently in progress. Extend conduit and provide conductors as required to provide the Fleet Maintenance Building with this emergency feeder. Provide a dedicated service disconnect switch located adjacent to the new Fleet Maintenance Building main fused service disconnect. Provide panelboards (with 100% fused overcurrent protective devices) and dry-type step-down transformers as required to distribute emergency power in the building. Provide selective coordination study, design and implementation for all emergency branch feeders and branch circuits. Provide emergency power to fire alarm system. Provide code-compliant emergency egress lighting fed from this emergency power branch. Coordinate whole building back-up generator and ATS needs with Owner during Design Development Phase.

Power Distribution:
Serve the building from pad-mounted utility transformer (OFOI), rated 480Y/277V, 3-phase, 4-wire secondary. Provide (3) 4-inch and (2) 2-inch empty conduits from GUC's primary switching cabinet to the new Fleet Maintenance Building pad-mounted utility transformer. Provide secondary conduits and conductors from utility transformer to the Fleet Maintenance Building service entrance switchboard on the Mezzanine level of the Fleet Maintenance Building. Provide minimum of 2-inch concrete encasement around the secondary conduits that rise from below grade to the service entrance switchboard. GUC will provide primary switching cabinet and conductors from primary switching cabinet to utility transformer. GUC will provide conductor

terminations at primary switching cabinet and at utility transformer (primary and secondary). Provide secondary metering compliant with GUC standards.

Provide service entrance switchboard with a single main service disconnect (LSIG ERM breaker) and with fully rated load-side bussing configured for future extension. Provide panelboards (480Y/277V and 208Y/120V via dry-type step-down transformers) for each branch of power, located in the buildings as feasible to serve loads with minimal voltage drop. Provide at least 25% spare load capacity in switchboard and in each panelboard. Provide at least 50% spare pole space in each panelboard. Provide Surge Protection Devices (SPDs) at the service entrance switchboard and at downstream panelboards. Provide rack-mounted Uninterruptible Power Supply system for each technology rack/cabinet, to provide continuous power to critical loads while they are transferred to and from generator power. Provide dedicated (not isolated) green-insulated equipment grounding conductors with all feeders and branch circuits. Provide LSIG ERM breakers where required by NEC for large 480V circuit breakers. Provide Schneider Electric (Square D) power distribution equipment as basis of design, to match equipment used in other campus buildings.

Equipment:
Provide electrical power and control work for all equipment, devices, appliances, etc. of GUC and of all trades as required to render all fully operational. This includes equipment, etc. furnished by GUC and that furnished/installed under general trades, fire protection, plumbing, mechanical/HVAC, and technology.

Raceways, Wires and Cables:
Electric Metallic Tubing (EMT): Feeders (and large branch circuits) - Concealed Indoor.

Intermediate Metal Conduit (IMC): Exposed Outdoor and Exposed Indoor (if subject to physical damage from mobile equipment).

Rigid Nonmetallic Conduit (Schedule 40 PVC): Exterior Underground and Below Slabs.
Flexible Conduit: Where required and permitted for lighting luminaire connections (generally 6 feet or less).

Liquid Tight Flexible Conduit: At connections to vibrating equipment such as motors and transformers.

Conductors: Aluminum for feeders rated 100 amps and larger, copper for all other applications.

Type MC Cables: Small branch circuit work throughout buildings where concealed in wall or ceiling cavities, and luminaire whips.

Type SO or SJO Cables: Specialty applications only, for certain lighting luminaires or cord-drop/reel-cord receptacles.

Conductor Sizes: All branch and feeder circuit conductors shall be sized as per NEC. Minimum conductor size for any circuit shall be #12 AWG. Provide Type XHHW-2 conductor insulation in wet locations and below grade/slab.

Wiring Devices:
Provide Specification Grade devices. Provide tamper-resistant receptacles in areas as/if required by NEC. Provide ground fault circuit interrupter (GFCI) receptacles at locations as required by NEC (or GFCI branch breakers for applications where the receptacles would not be readily accessible). Provide wall plates types and device types/color-coding to match other campus buildings.

HVAC SYSTEMS DESIGN

Design Criterion:
The building shall be designed in accordance with the following outdoor air conditions.

- Summer dry/Wet bulb; 94/74 degrees F
- Winter dry bulb; 21 degrees F

The building shall be designed in accordance with the following indoor conditions.

	Summer	Winter
• Public Spaces	74 F	70 F
• Offices	74 F	70 F
• Corridors	74 F	70 F
• Mechanical Room	80 F	60 F
• Parts Storage Room	80 F	60 F
• Garage Bays (not cooled)		60 F
• Mezzanine (not cooled)		60 F
• Warehouse (not cooled)		60 F
• Vehicle Storage (not cooled)		60 F

Codes and Standards:
All work shall be designed in accordance with the prevailing codes and standards including the following:

- North Carolina Building Code
- North Carolina Mechanical Code
- American Society for Test Materials (ASTM);
- National Fire Protection Association (NFPA);
- Underwriters Laboratories (UL);
- American Gas Association (AGA);
- National Sanitation Foundation (NSF).

- Sheet Metal & Air Conditioning Contractors National Association
- (SMACNA).
- American National Standards Institute (ANSI)
- Building Code Seismic Relative Displacement Requirements.

Air Conditioning:

Air conditioning for the office building shall be provided using a grade mounted DOAS unit for ventilation and a VRF split system with heat recovery for conditioning and zoning. The office building has an estimated 8,900 square feet of enclosed space to be air conditioned.

The fleet maintenance bays shall be heated using gas fired unit heaters and high-volume low speed fans will provide mixing. Ventilation shall be provided using a CO/NO2 detection system and roof mounted exhaust fans. Exhaust and make-up air shall be provided at a rate of 10,000 cfm (0.75 cfm per square foot). Maintenance bays will also have dedicated point of use vehicle exhaust systems.

Basis of Design Manufactures:

- VRF Systems – Daikin
- ERV Systems – Greenheck
- Radiant Heaters – Space-Ray

Note: Review manufacturers as currently installed on campus.

Controls:

Primary equipment shall be integrated into owner's Johnson Controls front end system. VRF and ductless split systems shall be read only points. Restroom exhaust shall be excluded from BAS system and be always on.

Ductwork:

All ductwork shall be Pittsburgh Construction with a minimum thickness of 24 gauge. In addition, ductwork used in systems over 3" H20 shall have cold sealant applied. All return ductwork shall be lined from within 10' of the supply and return air opening. All low pressure supply, return, outside air, relief and exhaust ductwork shall be sized at .08"/100 feet.

Shop fabricate ductwork of gages and reinforcement complying with SMACNA "HVAC Duct Construction Standards". Maximum length of Flex Duct equals five (5) feet per diffuser. Exposed ductwork shall be spiral or oval.

Ductwork insulation:

Flexible Fiberglass Ductwork Insulation: Glass fibers bonded with a thermosetting resin. Comply with ASTM C 553, Type II, without facing and with vapor barrier all-service jacket manufactured from kraft paper, reinforcing scrim, aluminum foil, and vinyl film. All insulation to be formaldehyde free.

Cold Ductwork System Insulation (below ambient temperature)

- Outdoor air intake ductwork between air entrance and fan inlet or HVAC unit inlet.
- HVAC supply ductwork between fan discharge, or HVAC unit discharge, and room terminal outlet.
- HVAC Ductwork three feet downstream of roof penetrations.
- HVAC Louvers, Plenums and Ductwork three feet downstream of wall penetrations.

Insulate each ductwork system specified above with one of the following types and thicknesses of insulation:

- Externally wrapped flexible fiberglass; 1-1/2" thick, application limited to concealed locations.
- Internally lined flexible fiberglass; 1” thick, application limited to return ductwork.

FIRE ALARM

Summary:

Provide automatic fire detection and alarm system including control panel, booster panels, detectors, remote annunciators, manual pull stations, audio/visual alarm devices, wiring, components, relays, appurtenances and accessories. Provide voice/speaker feature for audible aspect of alarm notification devices. Centralized fire alarm monitoring and control are being installed as part of the campus construction currently in progress, with the head end located in Building 2. Integrate with this system, and with campus building automation/management system. Provide optical fiber interface from Fleet Maintenance Building to Building 2 accordingly. There are technology conduits that are being installed as part of the currently underway construction that may be used as raceways. Coordinate with GUC and with trades working on the other buildings as needed to render this interface fully functional. The fire alarm systems currently being installed as part of the overall campus construction project is Johnson Controls/Simplex, which shall be basis of design. A Mass Notification System is not anticipated at this time. A radio repeater system may be required to accommodate radios of first responders.

FIRE PROTECTION

Summary:

Provide a wet pipe sprinkler system throughout the entire building. Design and installation shall be per current code adopted NFPA-13 and all state and local codes. All work shall be completed by a state licensed fire protection contractor. All design, fees and permits shall be included as part of the project scope.

Pipe and Fittings Material:

Pipe shall be black steel. Sizes 2” and small shall be schedule 40 with cast iron thread pattern fittings. Sizes larger than 2” can be schedule 10 with roll grooved ends and grooved couplings. Welded outlets are permitted.

Sprinklers:
Factory brass finish in all area without ceilings. Areas with ceilings shall be concealer style with flat white cover plates. Sprinklers in all ceiling areas shall be placed at the center or quarter points of ceiling tiles and sprinklers in hard ceilings shall be symmetrically spaced with all ceiling elements whenever possible. Where required by code, provide quick response type.

Hangers:
Provide hangers and fasteners per NFPA-13, including all earthquake bracing with calculation.

TECHNOLOGY SYSTEMS

Structured Cabling Systems:
The structured cabling systems shall be designed using current BICSI and TIA wiring standards and methods. The cabling backbone will consist of single mode fiber from the Engineering and Operations building by connecting the building to the on-site communications conduit system. A 4" conduit from the pull box by the fueling station will terminate in the telecommunications room (TR) shall also have a multi-cell innerduct. A 25- pair analog voice cable is also included as part of the backbone cabling. The base rating for the horizontal cabling with be category 6. Provide (2) cables per typical work area. Cameras and wireless access point (WAP) locations will receive category 6A to meet the potential PoE and bandwidth requirements. Camera locations will receive (1) cable and WAP locations will receive (2) cables. Typical wall outlets shall be terminated on a matched category jack using TIA-568b standard. Horizontal cables terminated in the TR shall be punched down on matched category 110-style flat patch panels. WAPs and security devices shall have discrete patch panels. TR spaces shall be fully built out with 2-post racks for cabling / patch panels, plywood on the walls, overhead ladder rack, grounding and re-usable fire stopped pathways.

Security Access Control:
The security access control features of this building are supported by the existing on-site Avigilon system. All exterior man doors and doors to Parts area will have access control as well as strategic doors as determined by GUC.

Surveillance Video System:
The surveillance cameras shall be monitored / recorded via the existing on-site Avigilon system. All cameras shall be rated for the environment and have minimum of 1080p resolution. Exterior cameras will feature a higher resolution to cover larger areas. All interior cameras shall have wide dynamic range. All entrances into buildings and wash station shall be covered. General coverage of exterior approaches and maintenance areas is expected and shall include analytic capabilities. Any high value material storage will also receive full coverage. There is not intent to provide coverage for employee work areas such as offices, open offices, break areas, interior corridors and hallways.

Audio Video Systems:

Audio and video systems shall be tailored to the specific area they shall be used in. Displays should be based on room size, light conditions and intended use. There is a break room with a display connected to a small training room with a display. Content should be able to be wirelessly broad cast to both displays. Provide a video conferencing unit, such as Crestron Flex, based in the training room for soft codec Full commercial equipment is being deployed, such as Crestron, Extron, NEC, and QSC, in the rest of the campus. Include provisions for cable TV at displays. The owner desires as much consistency as possible between conference systems.

A sound masking system is required for the office area of the building. With PA speaker / horns in the maintenance / shop areas. Full coverage is expected for emergency announcements. This should be an expansion of the QSC system on the campus.

SECTION 3

Design

Program, Room Data Sheets, Drawings, Furniture & Signage

SPACE ALLOCATION TABLE

DEPARTMENT	RM #	SPACE NAME	LEVEL	MINIMUM NSF EACH
General				
	105	Lobby	1	92
	106	Reception	1	126
	104	Family Restroom	1	86
	n/a	Corridor	1	As required
	n/a	Circulation	1	As required
Office				
	101	Fleet Manager		180
	102	Future Office		120
	107	Meeting Room		195
	112	Mechanic Supervisor	1	156
	111	Mechanic	1	156
	121	Parts Manager	1	156
Support				
	109	Break Room	1	380
	103	Training Room	1	620
	108	Storage Closet	1	60
	110	Copy/Print Workroom	1	156
	113	Janitor Closet	1	45
	117	Storage	1	As required
	119	Calibration Lab	1	300
	118	Women's Restroom/Lockers		300
	123	Men's Restroom	1	168
	123	Men's Shower/Lockers	1	224
	120	Parts & Tool Storage	1	1875
	116	Reference Library	1	80
	122	Fluid Storage	1	425
	115	Repair Shop	1	920
	114	Tire Repair	1	900
	114	Low Maintenance Bays	1	2640
	114	High Maintenance Bays	1	7920
Building Services				
	n/a	Water Service	1	As required
	201	Communications/Technology Closet	Mezzanine	As required
	202	Electric Service	Mezzanine	192
	203	Archive/Bulk Storage	Mezzanine	850
Wash Station				
	n/a	Equipment Room	Site	48

SPACE NAME	Break Room	RM #: 109

FUNCTION	Kitchen facility for food preparation & storage for Fleet Maintenance employees. Informal countertop bar seating. Separated from Training Room by folding partition wall.
SPECIAL DIMENSIONS	Provide clearances for bar seating when folding partition wall is in use. Maintain under-counter clearance for icemaker. Refer to Space Allocation Table for minimum square footage requirements
ACOUSTICS	Sound batt insulation full extent of ceiling
OCCUPANCY	Seating for min. (4) people while partition wall is in use
ADJACENCY REQUIREMENTS	Central to front office areas and immediately adjacent, and open to, Training Room.
OTHER REQUIREMENTS	Ventilation and sound control to minimize disruption to front office functions. Semi-recessed fire extinguisher cabinet.
ACCESS CONTROL	Compatible with GUCs Medco keying system. Coordinate keying and access control needs with Owner during design.
FINISHES	
FLOOR	Sealed Concrete
WALLS	Walls - Semi-Gloss Paint – North Wall (P-24); Balance (P-21) Ceramic Tile Splash (PT-9); Channel Guard (CG-5)
CEILING	Acoustical Ceiling Tile (ACT), Ceiling Height: 9’-0” Min.
OTHER	3’x4’ Tackboard
EQUIPMENT	OFOI - Refrigerator with freezer, under-counter ice machine, (2) microwaves, coffee maker (hard lined)
CASEWORK	Upper & lower cabinets with adjustable shelving. Countertop with backsplash. High countertop for bar seating. ADA compliant work surface. Finishes: Laminate Casework (PL-1); Quartz Countertops (SS-4)
FURNITURE	Counter Stools 4- (S-15); 1 Trash/Recycle (LA-3)

PLUMBING	Provide deep compartment sink with ADA compliant goose-neck faucet with sprayer. Provide supply box with shut-off for coffee maker, refrigerator and ice maker.
MECHANICAL	Temp: 74 degrees F cooling 70 degrees F heating 50% RH (+/- 10%) Local Controls: n/a Zoning: dedicated zone Exhaust: None Special: None
ELECTRICAL	Provide GFCI-protected receptacles throughout the room. Do not protect downstream receptacles from an upstream GFCI receptacle. Provide dedicated circuit for each appliance (ice machine, refrigerator, microwave, oven, range, coffee makers, etc.). Provide convenience outlet receptacles on walls without counters at maximum 10-foot spacings. Provide GFCI quad receptacle adjacent to each technology outlet.
COMM/DATA	Data plate w/ears @ 48" for wall phone. (1) 55" flat panel display with (1) data and (1) coaxial cable to Data closet on Mezzanine. (1) Crestron AM-200. Crestron should provide basic control of TV OFOI (schedule on/off).
LIGHTING	Comply with IESNA, prevailing codes (including energy), regulations, ordinances, and special input from GUC, if any. Provide 2' X 2' LED troffers. Provide LED undercabinet lighting if desired by GUC. Provide occupancy sensor control.
FIRE ALARM	Comply with prevailing codes, regulations and ordinances. See Narrative.
FIRE PROTECTION	Fully automatic fire suppression system
SPECIAL REQUIREMENTS	Refer to plans & narratives for additional information.
SIGNAGE / WAYFINDING	Refer to signage package

SPACE NAME	Calibration Lab	RM #:119

FUNCTION	Multi-purpose space with work benches
SPECIAL DIMENSIONS	Coordinate clearances with OFOI workbenches and OFI equipment/tools. Refer to Space Allocation Table for minimum square footage requirements.
ACOUSTICS	Sound batt insulation full extent of ceiling
OCCUPANCY	2-3 people
ADJACENCY REQUIREMENTS	Near Parts & Tools Storage & off primary circulation serving Maintenance Bays
OTHER REQUIREMENTS	Power/data outlets above counter height. Room contains primary chase serving Electric & Comm Rooms above. Provide exterior window and interior sidelite at door.
ACCESS CONTROL	Compatible with GUCs Medco keying system. Coordinate keying and access control needs with Owner during design.
FINISHES	
FLOOR	Sealed Concrete
WALLS	Semi-gloss Paint (P-21)
CEILING	Acoustical Ceiling Tile (ACT), Ceiling Height: 9’-0” Min.
OTHER	Interior walls – CMU. Exterior wall – GYP. BD. over furring to finish inside face of PEMB wall construction. Roller blinds at exterior window.
EQUIPMENT	Computer, OFOI, work bench, tools and equipment, OFOI
CASEWORK	n/a
FURNITURE	OFOI workbenches
PLUMBING	Coordinate with Owner during Design Phase for compressed air piping needs.
MECHANICAL	Temp: 74 degrees F cooling 70 degrees F heating

	50% RH (+/- 10%) Local Controls: n/a Zoning: Dedicated zone Exhaust: None Special: None
ELECTRICAL	Provide receptacles at maximum 4-foot spacings above counters/work benches. Provide receptacles elsewhere on maximum 8-foot spacings. Provide quad receptacle adjacent to each technology outlet.
COMM/DATA	Data plate w/ears @ 48” for wall phone. (1) data location with (2) data cables. Above ceiling sound masking.
LIGHTING	Comply with IESNA, prevailing codes (including energy), regulations, ordinances, and special input from GUC, if any. Provide 2’ X 2’ LED troffers. Provide LED undercabinet lighting if desired by GUC. Include occupancy sensor control. Provide enhanced/special lighting for room-specific tasks in this room.
FIRE ALARM	Comply with prevailing codes, regulations and ordinances. See Narrative.
FIRE PROTECTION	Fully automatic fire suppression system
SPECIAL REQUIREMENTS	Refer to plans and narratives for additional information.
SIGNAGE / WAYFINDING	Refer to signage package

SPACE NAME	Carport	RM #: n/a

FUNCTION	Covered outdoor parking area sized for (2) fleet trucks
SPECIAL DIMENSIONS	16'-0" minimum clear height. Refer to Space Allocation Table for minimum square footage requirements.
ACOUSTICS	n/a
OCCUPANCY	2 trucks + pedestrian circulation
ADJACENCY REQUIREMENTS	Include front entrance under cover
OTHER REQUIREMENTS	Match detailing of PEMB exterior
ACCESS CONTROL	n/a
FINISHES	
FLOOR	Concrete pad. See Civil
WALLS	Match PEMB exterior
CEILING	PEMB Soffit
OTHER	n/a
EQUIPMENT	Bollards at corners
CASEWORK	n/a
FURNITURE	n/a
PLUMBING	n/a
MECHANICAL	n/a
ELECTRICAL	See "Exterior Design Elements" portion of Electrical Systems section of the Narrative.

COMM/DATA	(1) H5A 6MP Bullet w/IR Avigilon camera for general coverage. (1) green cat6A in carport ceiling structure for WAP. (1) paging horn.
LIGHTING	Comply with IESNA, prevailing codes (including energy), regulations, ordinances, and special input from GUC, if any. Provide recessed full-cutoff LED lighting.
FIRE ALARM	Comply with prevailing codes, regulations and ordinances. See Narrative.
FIRE PROTECTION	Fully automatic fire suppression system
SPECIAL REQUIREMENTS	Maintain clear path for safe pedestrian circulation
SIGNAGE / WAYFINDING	Refer to signage package

SPACE NAME	Circulation	RM #: n/a
FUNCTION	Primary circulation corridor connecting Back of House service functions (Parts & Tools Storage, Lockers and access to Front of House office areas) to Maintenance Bays	
SPECIAL DIMENSIONS	Minimum width 6’-0”. Provide 4’-0” exterior door. Provide pair of 3’-0” doors to Maintenance Bays. Refer to Space Allocation Table for minimum square footage requirements.	
ACOUSTICS	Provide sound batts full extent of ceiling if perimeter walls do not extend full height to underside of deck	
OCCUPANCY	n/a	
ADJACENCY REQUIREMENTS	Maintenance Bays, Parts & Tool Storage, Locker Rooms & Calibration Lab	
OTHER REQUIREMENTS	Exterior entrance from east. Access to Mechanical Yard. Compatible with GUCs Medco keying system. Coordinate keying and access control needs with Owner during design. Recessed walk-off mat at exterior door.	
ACCESS CONTROL	Access control at exterior entry door. Assume wall mounted proximity reader. Compatible with GUCs Medco keying system. Coordinate keying and access control needs with Owner during design phase.	
FINISHES		
FLOOR	Sealed Concrete	
WALLS	Central Core Semi-Gloss Paint (P-23); Balance Paint (P-21). See drawing for extents	
CEILING	Acoustical Ceiling Tile (ACT), Ceiling Height: 9’-0” Min.	
OTHER	3’ x 4’ Tackboard	
EQUIPMENT	Coordinate with Owner during Design Phase	
CASEWORK	n/a	
FURNITURE	Trash/Recycle (LA-3)	

PLUMBING	Electric water coolers with bottle filling station. ADA compliant. Basis of Design Elkay EZH2O.
MECHANICAL	Temp: 74 degrees F cooling 70 degrees F heating 50% RH (+/- 10%) Local Controls: n/a Zoning: Dedicated zone Exhaust: None Special: None
ELECTRICAL	Provide convenience outlet receptacles on walls at nominal 12-foot spacings.
COMM/DATA	(1) Green Cat6 for (1) ceiling WAP. Active sound masking with above ceiling emitters. (1) 46" display with Brightsign signage player. (1) blue cat6 at display. (1) ceiling mounted Avigilon H5A 4 MP dome camera with IR to view parts counter.
LIGHTING	Comply with IESNA, prevailing codes (including energy), regulations, ordinances, and special input from GUC, if any. Provide LED downlights or 2' X 2' LED troffers, based on GUC input. Provide occupancy sensor control.
FIRE ALARM	Comply with prevailing codes, regulations and ordinances. See Narrative.
FIRE PROTECTION	Fully automatic fire suppression system
SPECIAL REQUIREMENTS	Interior walls – CMU. Exterior wall – GYP. BD. over furring to finish inside face of PEMB wall construction.
SIGNAGE / WAYFINDING	Refer to signage package

SPACE NAME	Closet	RM #: 108

FUNCTION	Office supply storage
SPECIAL DIMENSIONS	Allow for wire storage shelving. Refer to Space Allocation Table for minimum square footage requirements.
ACOUSTICS	n/a
OCCUPANCY	n/a
ADJACENCY REQUIREMENTS	Front office area
OTHER REQUIREMENTS	No sidelite required
ACCESS CONTROL	Compatible with GUCs Medco keying system. Coordinate keying and access control needs with Owner during design.
FINISHES	
FLOOR	Sealed Concrete
WALLS	Semi-Gloss Paint (P-21)
CEILING	Acoustical Ceiling Tile (ACT), Ceiling Height: 9’-0” Min.
OTHER	
EQUIPMENT	Wire storage shelving, 2’d x 4’w x 6’h, OFOI
CASEWORK	n/a
FURNITURE	n/a
PLUMBING	n/a
MECHANICAL	Temp: 74 degrees F cooling 70 degrees F heating 50% RH (+/- 10%) Local Controls: n/a

	Zoning: Zoned with Corridor Exhaust: None Special: None
ELECTRICAL	Provide one convenience outlet receptacle.
COMM/DATA	None
LIGHTING	Comply with IESNA, prevailing codes (including energy), regulations, ordinances, and special input from GUC, if any. Provide LED lighting. Provide occupancy sensor control.
FIRE ALARM	Comply with prevailing codes, regulations and ordinances. See Narrative.
FIRE PROTECTION	Fully automatic fire suppression system
SPECIAL REQUIREMENTS	SCW door. Refer to plans for additional information.
SIGNAGE / WAYFINDING	Refer to signage package

SPACE NAME	Comm/Tech	RM #: 201

FUNCTION	Main Communications / Technology data closet
SPECIAL DIMENSIONS	Size as needed for panelboards and associated equipment. Refer to Space Allocation Table for minimum square footage requirements.
ACOUSTICS	n/a
OCCUPANCY	n/a
ADJACENCY REQUIREMENTS	Mezzanine, exterior wall,
OTHER REQUIREMENTS	Feed by chase from service entrance point at Water Room.
ACCESS CONTROL	Assume integrated hardware type for entry door. Compatible with GUCs Medco keying system. Coordinate keying and access control needs with Owner during design.
FINISHES	
FLOOR	Sealed Concrete
WALLS	¾" AC-Grade plywood on all walls except entry wall. Semi-Gloss Paint (P-21)
CEILING	Acoustical Ceiling Tile (ACT), Ceiling Height: 9'-0" Min.
OTHER	Other
EQUIPMENT	Cable wire management
CASEWORK	n/a
FURNITURE	n/a
PLUMBING	None
MECHANICAL	Temp: 74 degrees F cooling 70 degrees F heating 50% RH (+/- 10%)

	Local Controls: n/a Zoning: Dedicated ductless split system with low ambient kit Exhaust: None Special: None
ELECTRICAL	Provide (2) dedicated-circuit special NEMA configuration receptacles for each technology cabinet/rack/head-end. Provide convenience outlet receptacles on walls at maximum 10-foot spacings. Provide rack-mounted, or GUC-approved equivalent, package UPS to back up each power supply for electronics/fioptics.
COMM/DATA	12”x1” overhead ladder rack. Provide (1) 2-post network equipment rack with (1) vertical wire manager. Provide patch panels and horizontal wire management as necessary to terminate all horizontal category cabling. WAPs and security devices shall have discrete patch panels. Data/Voice cat6 cables shall be blue. WAP cat6A cables shall be green. Cameras/security cat6A cables shall be yellow. (1) 4” conduit from site communications conduit system shall terminate in this space. Provide (1) 3Kva UPS compatible with campus monitor system (Eaton). (1) 70v amplifier and Dante receiver for campus PA system.
LIGHTING	Comply with IESNA, prevailing codes (including energy), regulations, ordinances, and special input from GUC, if any. Provide LED lighting. Provide occupancy sensor control.
FIRE ALARM	Comply with prevailing codes, regulations and ordinances. See Narrative.
FIRE PROTECTION	Fully automatic fire suppression system
SPECIAL REQUIREMENTS	Extend walls full height to underside of roof deck
SIGNAGE / WAYFINDING	Refer to signage package

SPACE NAME	Copy/Print Room	RM #: 110

FUNCTION	Workroom in support of front office functions. Includes printer/copier and mail collection.
SPECIAL DIMENSIONS	As needed to accommodate Printer/Copier & related office equipment. Refer to Space Allocation Table for minimum square footage requirements.
ACOUSTICS	Sound batt insulation full extent of ceiling & walls
OCCUPANCY	
ADJACENCY REQUIREMENTS	Front office, Meeting Room, Supply Closet
OTHER REQUIREMENTS	
ACCESS CONTROL	Assume integrated hardware type for entry door. Compatible with GUCs Medco keying system. Coordinate keying and access control needs with Owner during design.
FINISHES	
FLOOR	Sealed Concrete
WALLS	GYP. BD. over furring. Semi-Gloss Paint (P-1)
CEILING	Acoustical Ceiling Tile (ACT), Ceiling Height: 9’-0” Min.
OTHER	3’ x 4’ Tackboard, SCW door with sidelite.
EQUIPMENT	OFOI - Printer/Copier, postage machine, fax machine
CASEWORK	Base & Wall Cabinets. Minimum 8’-0” LF. Finishes: Base Cabinet (PL-3); Overhead (PL-4); Countertop (PL-2).
FURNITURE	Trash/Recycle (LA-12)
PLUMBING	n/a
MECHANICAL	Temp: 74 degrees F cooling

	70 degrees F heating 50% RH (+/- 10%) Local Controls: n/a Zoning: Dedicated zone Exhaust: None Special: None
ELECTRICAL	Provide dedicated-circuit receptacle for each copier, printer, etc. Provide general receptacles at 4-foot spacings above counters. Provide receptacles elsewhere on nominal 8-foot spacings.
COMM/DATA	(1) location with (2) blue cat6 cables at copier location. (1) location with (2) blue cat6 cables at counter height at work area. Active sound masking with above ceiling emitters.
LIGHTING	Comply with IESNA, prevailing codes (including energy), regulations, ordinances, and special input from GUC, if any. Provide occupancy sensor control. Provide 2' X 2' LED troffers. Provide LED undercabinet lighting if requested by GUC.
FIRE ALARM	Comply with prevailing codes, regulations and ordinances. See Narrative.
FIRE PROTECTION	Fully automatic fire suppression system
SPECIAL REQUIREMENTS	Refer to plans & narratives for additional information.
SIGNAGE / WAYFINDING	Refer to signage package

SPACE NAME	Corridor	RM #: n/a

FUNCTION	Circulation for Front of House office functions.
SPECIAL DIMENSIONS	Minimum width 5'-0". Refer to Space Allocation Table for minimum square footage requirements.
ACOUSTICS	Sound batt insulation full extent of ceiling
OCCUPANCY	
ADJACENCY REQUIREMENTS	Main building lobby, office, Meeting room & Training Room
OTHER REQUIREMENTS	Exterior access door with sidelite. Recessed walk-off mat at exterior door.
ACCESS CONTROL	Access control at entry door. Assume wall mount proximity reader. Compatible with GUCs Medco keying system. Coordinate keying and access control needs with Owner during design.
FINISHES	
FLOOR	Sealed Concrete
WALLS	Painted. Central Core Semi-Gloss Paint (P-23); Balance (P-21) See drawing for extents; Corner Guard (CG-1).
CEILING	Acoustical Ceiling Tile (ACT), Ceiling Height: 9'-0" Min.
OTHER	3' x 4' Tackboard
EQUIPMENT	Semi-recessed fire extinguisher cabinet (Fire extinguishers OFOI, typical)
CASEWORK	n/a
FURNITURE	n/a
PLUMBING	
MECHANICAL	Temp: 74 degrees F cooling 70 degrees F heating 50% RH (+/- 10%)

	Local Controls: n/a Zoning: Dedicated zone, feeds Closet Exhaust: None Special: None
ELECTRICAL	Provide convenience outlet receptacles on walls at maximum 20-foot spacings.
COMM/DATA	(1) H5A 6MP Bullet w/IR Avigilon camera for general coverage – exterior (1) ceiling data location with (1) green cat6A cable for WAP. Active sound masking with above ceiling emitters.
LIGHTING	Comply with IESNA, prevailing codes (including energy), regulations, ordinances, and special input from GUC, if any. Provide LED downlights or 2' X 2' LED troffers, based on GUC input. Provide occupancy sensor control.
FIRE ALARM	Comply with prevailing codes, regulations and ordinances. See Narrative.
FIRE PROTECTION	Fully automatic fire suppression system
SPECIAL REQUIREMENTS	Refer to plans & narratives for additional information.
SIGNAGE / WAYFINDING	Refer to signage package

SPACE NAME	Electric Room	RM #: 202

FUNCTION	Primary electrical room
SPECIAL DIMENSIONS	Minimum wall height (free & clear) 9'-0" to accommodate panels. Refer to Space Allocation Table for minimum square footage requirements.
ACOUSTICS	n/a
OCCUPANCY	n/a
ADJACENCY REQUIREMENTS	Mezzanine, chase access from main entrance at Water Room. Exterior wall.
OTHER REQUIREMENTS	Chain link fence enclosure with lockable gate. Fire extinguisher bracket
ACCESS CONTROL	Secured gate. Coordinate additional keying and access control with Owner during Design Phase.
FINISHES	
FLOOR	Sealed Concrete
WALLS	Semi-Gloss Paint (P-21)
CEILING	Exposed
OTHER	GYP. BD. furring at PEMB exterior wall.
EQUIPMENT	n/a
CASEWORK	n/a
FURNITURE	n/a
PLUMBING	None
MECHANICAL	Temp: 74 degrees F cooling 70 degrees F heating 50% RH (+/- 10%)

	Local Controls: n/a Zoning: Dedicated zone Exhaust: None Special: None
ELECTRICAL	Provide at least one GFCI receptacle per wall. See Narrative for power distribution system aspects.
COMM/DATA	(2) blue cat6 cables for Fire Alarm Control Panel.
LIGHTING	Comply with IESNA, prevailing codes (including energy), regulations, ordinances, and special input from GUC, if any. Provide occupancy sensor control. Provide LED “strip” or equivalent lights.
FIRE ALARM	Comply with prevailing codes, regulations and ordinances. See Narrative.
FIRE PROTECTION	Fully automatic fire suppression system
SPECIAL REQUIREMENTS	Refer to plans & narratives for additional information.
SIGNAGE / WAYFINDING	Refer to signage package

SPACE NAME	Fleet Manager	RM #: 101

FUNCTION	Office for Fleet Manager
SPECIAL DIMENSIONS	Proportioned to accommodate furniture configuration. Line of sight to wall mounted digital disply/TV OFOI. Refer to Space Allocation Table for minimum square footage requirements.
ACOUSTICS	Sound batt insulation full extent of ceiling & walls
OCCUPANCY	1 + 2 guests
ADJACENCY REQUIREMENTS	Front office area, Future office
OTHER REQUIREMENTS	Exterior window, door with sidelite
ACCESS CONTROL	Compatible with GUCs Medco keying system. Coordinate keying and access control needs with Owner during design.
FINISHES	
FLOOR	Sealed Concrete
WALLS	Paint (P-1)
CEILING	Acoustical Ceiling Tile (ACT), Ceiling Height: 9’-0” Min.
OTHER	At inside face of exterior PEMB, GYP. BD. over furring full height.
EQUIPMENT	OFOI - Computer, phone, Wall mounted Display/TV
CASEWORK	n/a
FURNITURE	Typical OB-1; Task Chair (S-10); 2-Side Chairs- (S-7) or Alt (S-13); Optional 2 Dr. File with Laminate Top or 2 H. Bookcase with Laminate Top (Furniture typical is based on the 172 Sq. Ft. office)
PLUMBING	None
MECHANICAL	Temp: 74 degrees F cooling 70 degrees F heating

	50% RH (+/- 10%) Local Controls: n/a Zoning: Dedicated zone Exhaust: None Special: None
ELECTRICAL	Provide convenience outlet receptacles on walls at maximum 10-foot spacings. Provide quad receptacle adjacent to each technology outlet.
COMM/DATA	(2) blue cat6 at desk location. (1) blue cat6 & (1) coax at 72" ABOVE FINISHED FLOOR (AFF) for display. Active sound masking with above ceiling emitters.
LIGHTING	Comply with IESNA, prevailing codes (including energy), regulations, ordinances, and special input from GUC, if any. Provide occupancy sensor control. Provide LED "strip" or equivalent lights.
FIRE ALARM	Comply with prevailing codes, regulations and ordinances. See Narrative.
FIRE PROTECTION	Fully automatic fire suppression system
SPECIAL REQUIREMENTS	In-wall blocking for display. Refer to plans & narratives for additional information.
SIGNAGE / WAYFINDING	Refer to signage package

SPACE NAME	Fluid Storage	RM #: 122

FUNCTION	Storage for fluids, including those for fluid distribution system and waste oil
SPECIAL DIMENSIONS	Height and width to accommodate overhead door and holding tanks (250 ga & 500 ga for fluid storage and collection). Refer to Space Allocation Table for minimum square footage requirements.
ACOUSTICS	CMU walls full height to underside of roof deck
OCCUPANCY	n/a
ADJACENCY REQUIREMENTS	Exterior, Parts & Tool Storage, & Repair Shop or Maintenance Bays
OTHER REQUIREMENTS	Overhead door. Extend cmu walls to underside of deck. Fire extinguisher bracket.
ACCESS CONTROL	Compatible with GUCs Medco keying system. Coordinate keying and access control needs with Owner during design.
FINISHES	
FLOOR	Sealed concrete
WALLS	Semi-Gloss Paint (P-22)
CEILING	Exposed
OTHER	Plywood on inside face of exterior PEMB wall to min. 8’-0” above finished floor (aff).
EQUIPMENT	Fluid Distribution & Management System
CASEWORK	n/a
FURNITURE	n/a
PLUMBING	If required by code, provide emergency fixtures including eye/face washes and showers. All fixtures shall comply with ANSI Z358.1-2014.
MECHANICAL	Temp: 74 degrees F cooling

	70 degrees F heating 50% RH (+/- 10%) Local Controls: n/a Zoning: Dedicated zone Exhaust: 1 cfm/sqft Special: None
ELECTRICAL	Comply with applicable provisions of NEC Chapter 5 as applicable. Provide electrical power and control work associated with Computer OFOIized fluid distribution systems (hydraulic fluid, motor oil, anti-freeze, transmission fluid, etc.), for overhead door and for ancillary equipment. Some fuel storage will also occur in this room. Provide quad GFCI receptacle adjacent to each technology outlet. Also provide GFCI receptacles at nominal 10-foot spacings.
COMM/DATA	Wall mounted outdoor rated horn for campus PA system. (1) H5A 6MP Bullet w/IR Avigilon camera for general coverage
LIGHTING	Comply with IESNA, prevailing codes (including energy), regulations, ordinances, and special input from GUC, if any. Provide occupancy sensor control. Provide LED lighting, vapor-tight as a minimum requirement, more restrictive if needed based on NEC Chapter 5 provisions.
FIRE ALARM	Comply with prevailing codes, regulations and ordinances. See Narrative.
FIRE PROTECTION	Fully automatic fire suppression system
SPECIAL REQUIREMENTS	Fluid Inventory Control and Management Systems Basis of Design: Balcrank. Coordinate with Owner during Design Phase. Refer to plans & narratives for additional information.
SIGNAGE / WAYFINDING	Refer to signage package

SPACE NAME	Future Office	RM #: 102

FUNCTION	Future office space for front office stabove finished floor (aff)
SPECIAL DIMENSIONS	Proportion for furniture configuration, exterior wall. Refer to Space Allocation Table for minimum square footage requirements.
ACOUSTICS	Sound batt insulation full extent of ceiling & walls
OCCUPANCY	1 + 1 guest
ADJACENCY REQUIREMENTS	Front office
OTHER REQUIREMENTS	Exterior window, interior door with sidelite
ACCESS CONTROL	Compatible with GUCs Medco keying system. Coordinate keying and access control needs with Owner during design.
FINISHES	
FLOOR	Sealed Concrete
WALLS	Paint (P-1)
CEILING	Ceiling
OTHER	At inside face of PEMB, provide Gyp. Bd. over furring full height.
EQUIPMENT	OFOI – Computer, phone
CASEWORK	n/a
FURNITURE	Typical OC-1; Task Chair (S-10) w/Soft Casters; 1 – Side Chair (S-9) or Alt (S-13); Optional 2 Dr. File with Laminate Top or 2 H. Bookcase with Laminate Top (Furniture typical is based on the 120 Sq. Ft. office)
PLUMBING	
MECHANICAL	Temp: 74 degrees F cooling 70 degrees F heating 50% RH (+/- 10%)

	Local Controls: n/a Zoning: Dedicated zone Exhaust: None Special: None
ELECTRICAL	Provide convenience outlet receptacles on walls at maximum 10-foot spacings. Provide quad receptacle adjacent to each technology outlet.
COMM/DATA	(2) blue cat6 at desk location. Active sound masking with above ceiling emitters.
LIGHTING	Comply with IESNA, prevailing codes (including energy), regulations, ordinances, and special input from GUC, if any. Provide occupancy sensor control. Provide 2' X 2' LED troffers.
FIRE ALARM	Comply with prevailing codes, regulations and ordinances. See Narrative.
FIRE PROTECTION	Fully automatic fire suppression system
SPECIAL REQUIREMENTS	Refer to plans & narratives for additional information.
SIGNAGE / WAYFINDING	Refer to signage package

SPACE NAME	High Maintenance Bays	RM #: 114

FUNCTION	High volume bays for service of fleet vehicles.
SPECIAL DIMENSIONS	Minimum clear, unobstructed height within full range of bridge crane shall be 30'-0". Refer to Space Allocation Table for minimum square footage requirements.
ACOUSTICS	None
OCCUPANCY	8-10 technicians
ADJACENCY REQUIREMENTS	Exterior, Low bays
OTHER REQUIREMENTS	Expandable PEMB wall to the west. Vertical life overhead doors with clerestory window above. Fire extinguisher bracket.
ACCESS CONTROL	Access control on all exterior man-doors. Assume wall mounted proximity reader. Compatible with GUCs Medco keying system. Coordinate keying and access control needs with Owner during design.
FINISHES	
FLOOR	Sealed Concrete
WALLS	Semi-Gloss Paint (P-22)
CEILING	Exposed
OTHER	At interior face of PEMB provide plywood sheathing above cmu wainscot minimum 8'-0 above finished floor (aff).
EQUIPMENT	7-ton Bridge Crane, Fluid Distribution System. Refer to drawings for additional information
CASEWORK	n/a
FURNITURE	n/a
PLUMBING	Vehicle bay drainage shall be directed to an oil interceptor. All other fixtures shall terminate to sanitary. Provide, hose bibs, compressed air and water hose reels per Criterion plans. Provide and coordinate all connections for maintenance equipment.

MECHANICAL	Temp: 60 degrees F heating Local Controls: n/a Zoning: Radiant heater between each vehicle bay with dedicated control Exhaust: 0.75 cfm/sqft, controlled by CO/NO2 sensors Special: HVLS circulation fan, point of use vehicle exhaust
ELECTRICAL	Comply with applicable provisions of NEC Chapter 5 as applicable. Provide electrical power and control work associated with special equipment (cranes, vehicle Lifts OFOI, tire racks, tire changers, tire balancers, presses, vacuums, sand blast cabinets, air compressors, air dryers, charging stations, overhead doors, etc.), and for ancillary equipment. Provide GFCI-protected cord reel drops (nominal 12, located outside of overhead "footprint" of crane assemblies and travel paths). Provide banks of GFCI receptacles (nominal 16 sets) at walls, columns and/or pedestals. Provide quad GFCI receptacle adjacent to each technology outlet. Also provide GFCI receptacles at nominal 16-foot spacings along walls. Install all outlets at minimum 24-inches above highest point of floor slab. Do not install any electrical work below a height of 18" above lowest point of floor slab unless installed compliant with NEC Chapter 5, including Articles 500 through 503 as applicable. Do not feed any electrical work on the west end wall of the bays from below grade/slab; this wall may be removed in the future for a building addition.
COMM/DATA	(2) locations with (1) green cat6A cable for WAP. (2) paging horns connected to PA system. (4) H5A 6MP Bullet w/IR Avigilon cameras for interior. (2) H5A 8MP Bullet w/IR Avigilon cameras for exterior.
LIGHTING	Comply with IESNA, prevailing codes (including energy), regulations, ordinances, and special input from GUC, if any. Provide occupancy sensor and manual control. Provide LED high-bay wide-optics lighting (work zone extends up to 30 feet above slab), UL Damp Label as a minimum requirement, more restrictive if needed based on NEC Chapter 5 provisions. Lighting design shall result in uniform lighting levels between the high and low bay areas, which are open to each other. Provide enhanced/special lighting for room-specific tasks in the bay areas.
FIRE ALARM	Comply with prevailing codes, regulations and ordinances. See Narrative.
FIRE PROTECTION	Fully automatic fire suppression system
SPECIAL REQUIREMENTS	Refer to plans & narratives for additional information.

SIGNAGE / WAYFINDING	Refer to signage package

SPACE NAME	Janitor Closet	RM #: 113

FUNCTION	Janitorial supplies and mop sink
SPECIAL DIMENSIONS	Refer to Space Allocation Table for minimum square footage requirements.
ACOUSTICS	n/a
OCCUPANCY	n/a
ADJACENCY REQUIREMENTS	Central to front office areas and locker rooms.
OTHER REQUIREMENTS	CMU walls
ACCESS CONTROL	Compatible with GUCs Medco keying system. Coordinate keying and access control needs with Owner during design.
FINISHES	
FLOOR	Sealed concrete
WALLS	Semi-Gloss Paint (P-22)
CEILING	GYP. BD. or Acoustical Ceiling Tile (ACT), Ceiling Height: 9’-0” Min.
OTHER	Stainless steel wall protection panels at floor sink.
EQUIPMENT	Mop holder & shelf
CASEWORK	n/a
FURNITURE	n/a
PLUMBING	Terrazzo mop sink base with service sink faucet.
MECHANICAL	Temp: 74 degrees F cooling 70 degrees F heating 50% RH (+/- 10%) Local Controls: n/a

	Zoning: Zoned with Corridor Exhaust: 1cfm/sqft Special: None
ELECTRICAL	Provide GFCI receptacle for dispenser(s), if any. Provide at least 1 GFCI convenience outlet receptacle.
COMM/DATA	
LIGHTING	Comply with IESNA, prevailing codes (including energy), regulations, ordinances, and special input from GUC, if any. Provide occupancy sensor and manual control. Provide LED high-bay wide-optics lighting (work zone extends up to 30 feet above slab), UL Damp Label as a minimum requirement, more restrictive if needed based on NEC Chapter 5 provisions. Lighting design shall result in uniform lighting levels between the high and low bay areas, which are open to each other. Provide enhanced/special lighting for room-specific tasks in the bay areas.
FIRE ALARM	Comply with prevailing codes, regulations and ordinances. See Narrative.
FIRE PROTECTION	Fully automatic fire suppression system
SPECIAL REQUIREMENTS	Refer to plans & narratives for additional information.
SIGNAGE / WAYFINDING	Refer to signage package

SPACE NAME	Lobby	RM #: 105

FUNCTION	Main building entrance for stabove finished floor (aff) and visitors
SPECIAL DIMENSIONS	Refer to Space Allocation Table for minimum square footage requirements.
ACOUSTICS	Sound batt insulation full extent of ceiling & walls
OCCUPANCY	1-2 guests
ADJACENCY REQUIREMENTS	Reception
OTHER REQUIREMENTS	Exterior wall, near Carport. Recessed walk-off mat at exterior door.
ACCESS CONTROL	Access control at lobby/carport door. Assumed wall mounted proximity reader. Access control into corridor. Assume integrated hardware. Compatible with GUCs Medco keying system. Coordinate keying and access control needs with Owner during design.
FINISHES	
FLOOR	Sealed Concrete
WALLS	Paint East Wall (P-5); Balance (P-2)
CEILING	Acoustical Ceiling Tile (ACT), Ceiling Height: 9’-0” Min.
OTHER	At inside face of exterior PEMB, provide Gyp. Bd. over furring full height.
EQUIPMENT	3’ x 4’ Tackboard
CASEWORK	Laminate Transaction Countertop- (PL-4)
FURNITURE	1-Chair (LS-10); 1-Table (LT-6); 1-Trash (LA-9)
PLUMBING	n/a
MECHANICAL	Temp: 74 degrees F cooling 70 degrees F heating 50% RH (+/- 10%)

	Local Controls: n/a Zoning: Dedicated zone Exhaust: None Special: None
ELECTRICAL	Provide 1 duplex receptacle per wall. Provide quad receptacle adjacent to each technology outlet, if any.
COMM/DATA	Ceiling mounted Avigilon H5A 2MP dome camera w/IR.
LIGHTING	Comply with IESNA, prevailing codes (including energy), regulations, ordinances, and special input from GUC, if any. Provide occupancy sensor control. Provide recessed LED downlights.
FIRE ALARM	Comply with prevailing codes, regulations and ordinances. See Narrative.
FIRE PROTECTION	Fully automatic fire suppression system
SPECIAL REQUIREMENTS	Sliding transaction window. Coordinate placement with furniture configuration. Refer to plans & narratives for additional information.
SIGNAGE / WAYFINDING	Refer to signage package

SPACE NAME	Low Maintenance Bays	RM #: 114

FUNCTION	Fleet maintenance where high clearance and/or overhead crane are not required.
SPECIAL DIMENSIONS	Min. clear height above 21'-0". Refer to Space Allocation Table for minimum square footage requirements.
ACOUSTICS	n/a
OCCUPANCY	2-4 technicians
ADJACENCY REQUIREMENTS	High Bays, Tire Repair, Repair Shop, Exterior
OTHER REQUIREMENTS	Vertical life overhead door with clerestory window above. Fire extinguisher bracket.
ACCESS CONTROL	Access control on all exterior man-doors. Assume wall mounted proximity reader. Access control into corridor. Assume integrated hardware. Compatible with GUCs Medco keying system. Coordinate keying and access control needs with Owner during design.
FINISHES	
FLOOR	Sealed Concrete
WALLS	Semi-Gloss Paint (P-22)
CEILING	Exposed
OTHER	At interior face of PEMB, provide plywood sheathing above cmu wainscot to minimum 8'-0 above finished floor (aff).
EQUIPMENT	(2) vehicle Lifts OFOI, Fluid Distribution System. Refer to drawings for additional information.
CASEWORK	n/a
FURNITURE	Trash/Recycle @Door (LA-3)
PLUMBING	Vehicle bay drainage shall be directed to an oil interceptor. All other fixtures shall terminate to sanitary. Provide, hose bibs, compressed air and water hose reels per Criterion plans. Provide and coordinate all

	connections for maintenance equipment. Provide emergency fixtures including eye/face washes and showers. All fixtures shall comply with ANSI Z358.1-2014.
MECHANICAL	Temp: 60 degrees F heating Local Controls: n/a Zoning: Radiant heater between each vehicle bay with dedicated control Exhaust: 0.75 cfm/sqft, controlled by CO/NO2 sensors Special: HVLS circulation fan, point of use vehicle exhaust
ELECTRICAL	Comply with applicable provisions of NEC Chapter 5 as applicable. Provide electrical power and control work associated with special equipment (vehicle Lifts OFOI, tire racks, tire changers, tire balancers, presses, vacuums, sand blast cabinets, air compressors, air dryers, charging stations, overhead doors, etc.), and for ancillary equipment. Provide GFCI-protected cord reel drops (nominal 6, located outside of overhead "footprint" of crane assemblies and travel paths). Provide banks of GFCI receptacles (nominal 6 sets) at walls, columns and/or pedestals. Also provide GFCI receptacles at nominal 16-foot spacings along walls. Install all outlets at minimum 24-inches above highest point of floor slab. Do not install any electrical work below a height of 18" above lowest point of floor slab unless installed compliant with NEC Chapter 5, including Articles 500 through 503 as applicable.
COMM/DATA	(1) locations with (1) green cat6A cable for WAP. (1) paging horn connected to PA system. (1) H5A 6MP Bullet w/IR Avigilon cameras for interior. (2) H5A 8MP Bullet w/IR Avigilon cameras for exterior.
LIGHTING	Comply with IESNA, prevailing codes (including energy), regulations, ordinances, and special input from GUC, if any. Provide occupancy sensor and manual control. Provide LED high-bay or low-bay wide-optics lighting (work zone extends up to underside of overhead structural steel), UL Damp Label as a minimum requirement, more restrictive if needed based on NEC Chapter 5 provisions. Lighting design shall result in uniform lighting levels between the high and low bay areas, which are open to each other. Provide enhanced/special lighting for room-specific tasks in the bay areas.
FIRE ALARM	Comply with prevailing codes, regulations and ordinances. See Narrative.
FIRE PROTECTION	Fully automatic fire suppression system
SPECIAL REQUIREMENTS	Refer to plans & narratives for additional information.

SIGNAGE / WAYFINDING	Refer to signage package

SPACE NAME	Mechanic	RM #: 111

FUNCTION	Office for Mechanic
SPECIAL DIMENSIONS	Proportion as appropriate to accommodate furniture location and interior viewing window into Maintenance Bays. Refer to Space Allocation Table for minimum square footage requirements.
ACOUSTICS	Sound batt insulation full extent of ceiling & walls
OCCUPANCY	1 + 1 guest min.
ADJACENCY REQUIREMENTS	Mechanic Supervisor, Low Bays
OTHER REQUIREMENTS	Interior borrowed lite for viewing into Maintenance Bays
ACCESS CONTROL	Compatible with GUCs Medco keying system. Coordinate keying and access control needs with Owner during design.
FINISHES	
FLOOR	Sealed Concrete
WALLS	Paint (P-1)
CEILING	Acoustical Ceiling Tile (ACT), Ceiling Height: 9’-0” Min.
OTHER	CMU wall construction with GYP. BD. over furring strips.
EQUIPMENT	OFOI - Computer, phone
CASEWORK	none
FURNITURE	Typical OD-1; Task Chair (S-10) w/Soft Casters; 2 Side Chairs (S-9) or Alt. (S-13); Optional 2 Dr. File with Laminate Top or 2 H. Bookcase with Laminate Top (Furniture typical is based on the 156 Sq. Ft. office)
PLUMBING	n/a
MECHANICAL	Temp: 74 degrees F cooling 70 degrees F heating

	50% RH (+/- 10%) Local Controls: n/a Zoning: Dedicated zone Exhaust: None Special: None
ELECTRICAL	Provide convenience outlet receptacles on walls at maximum 8-foot spacings. Provide quad receptacle adjacent to each technology outlet.
COMM/DATA	(2) blue cat6 at desk location. Active sound masking with above ceiling emitters.
LIGHTING	Comply with IESNA, prevailing codes (including energy), regulations, ordinances, and special input from GUC, if any. Provide occupancy sensor control. Provide 2' X 2' LED troffers. Include wall-box dimmer.
FIRE ALARM	Comply with prevailing codes, regulations and ordinances. See Narrative.
FIRE PROTECTION	Fully automatic fire suppression system
SPECIAL REQUIREMENTS	Refer to plans and narratives for additional information.
SIGNAGE / WAYFINDING	Refer to signage package

SPACE NAME	Mechanic Supervisor	RM #: 112

FUNCTION	Office for Mechanic Supervisor
SPECIAL DIMENSIONS	Proportion as appropriate to accommodate furniture location and interior viewing window into Maintenance Bays. Refer to Space Allocation Table for minimum square footage requirements.
ACOUSTICS	Sound batt insulation full extent of ceiling & walls
OCCUPANCY	1 + 2 guest min.
ADJACENCY REQUIREMENTS	Mechanic, Low Bays
OTHER REQUIREMENTS	Interior borrowed lite for viewing into Maintenance Bays
ACCESS CONTROL	Compatible with GUCs Medco keying system. Coordinate keying and access control needs with Owner during design.
FINISHES	
FLOOR	Sealed Concrete
WALLS	Paint (P-1)
CEILING	Acoustical Ceiling Tile (ACT), Ceiling Height: 9’-0” Min.
OTHER	CMU wall construction with GYP. BD. over furring strips.
EQUIPMENT	OFOI - Computer, phone
CASEWORK	None
FURNITURE	Typical OD-1 ; Task Chair (S-10) w/Soft Casters; 2 Side Chairs (S-9) or Alt (S-13); Optional 2 Dr. File with Laminate Top or 2 H. Bookcase with Laminate Top (Furniture typical is based on the 156 Sq. Ft. office)
PLUMBING	n/a
MECHANICAL	Temp: 74 degrees F cooling 70 degrees F heating

	50% RH (+/- 10%) Local Controls: n/a Zoning: Dedicated zone Exhaust: None Special: None
ELECTRICAL	Provide convenience outlet receptacles on walls at maximum 10-foot spacings. Provide quad receptacle adjacent to each technology outlet.
COMM/DATA	(2) blue cat6 at desk location. Active sound masking with above ceiling emitters.
LIGHTING	Comply with IESNA, prevailing codes (including energy), regulations, ordinances, and special input from GUC, if any. Provide occupancy sensor control. Provide 2' X 2' LED troffers. Include wall-box dimmer.
FIRE ALARM	Comply with prevailing codes, regulations and ordinances. See Narrative.
FIRE PROTECTION	Fully automatic fire suppression system
SPECIAL REQUIREMENTS	Refer to plans for additional information.
SIGNAGE / WAYFINDING	Refer to signage package

SPACE NAME	Meeting Room	RM #: 107

FUNCTION	Meeting room serving front office stabove finished floor (aff) and guests
SPECIAL DIMENSIONS	Proportions to allow for conference table, credenza & video display viewing . Refer to Space Allocation Table for minimum square footage requirements.
ACOUSTICS	Sound batt insulation full extent of ceiling & walls
OCCUPANCY	Minimum 8 people
ADJACENCY REQUIREMENTS	Near Lobby & front office areas
OTHER REQUIREMENTS	Minimum (2) exterior windows, interior door with sidelite
ACCESS CONTROL	Compatible with GUCs Medco keying system. Coordinate keying and access control needs with Owner during design.
FINISHES	
FLOOR	Sealed Concrete
WALLS	Paint East Wall (P-3) Balance (P-1)
CEILING	Acoustical Ceiling Tile (ACT), Ceiling Height: 9’-0” Min.
OTHER	At interior face of PEMB, provide Gyp. Bd. over furring strips full height.
EQUIPMENT	4x4 Marker Board, OFOI - Video Display/TV
CASEWORK	None
FURNITURE	1-Table (T-18); 8- Chairs (S-4) w/ Soft Casters; 1-Credenza (C-1); 1-Trash Receptacle (LA-3)
PLUMBING	None
MECHANICAL	Temp: 74 degrees F cooling 70 degrees F heating 50% RH (+/- 10%)

	Local Controls: n/a Zoning: Dedicated zone Exhaust: None Special: None
ELECTRICAL	Provide convenience outlet receptacles on walls at maximum 10-foot spacings, with a receptacle located within 6 feet of both sides of door. Provide quad receptacle adjacent to each technology outlet. Provide 1 recessed flush floor box with recessed activation, minimum 2 duplex receptacles, and minimum 2-gang provision for technology outlets (include 1-inch conduit from technology compartment to above accessible ceiling). Comply with NEC 210.65.
COMM/DATA	(2) blue cat6 cables in floor box. (2) blue cat6 cables at display location and (1) coaxial cable. Provide 65" 4K display with tuner. Provide Crestron AM-300. Provide Crestron HDMI transmitter in floor box. Provide Crestron control surface for control of display.
LIGHTING	Comply with IESNA, prevailing codes (including energy), regulations, ordinances, and special input from GUC, if any. Provide occupancy sensor control. Provide 2' X 2' LED troffers. Provide contemporary decorative suspended LED luminaire above table to match those used in meeting/conference rooms of other buildings on the GUC campus.
FIRE ALARM	Comply with prevailing codes, regulations and ordinances. See Narrative.
FIRE PROTECTION	Fully automatic fire suppression system
SPECIAL REQUIREMENTS	Provide blocking in wall for display. Refer to plans & narratives for additional information.
SIGNAGE / WAYFINDING	Refer to signage package

SPACE NAME	Men's Locker Room	RM #: 123

FUNCTION	Men's Locker Room and Shower
SPECIAL DIMENSIONS	ADA compliant. Refer to Space Allocation Table for minimum square footage requirements.
ACOUSTICS	Sound batt insulation full extent of ceiling
OCCUPANCY	
ADJACENCY REQUIREMENTS	Accessible from main Circulation, adjacent and open to Men's Restroom
OTHER REQUIREMENTS	CMU walls full height to underside of deck
ACCESS CONTROL	None
FINISHES	
FLOOR	Sheet Vinyl (SV-1) w/Flash Cove Base
WALLS	West & South Walls Semi-Gloss Paint (P-23); Balance FRP Wall Protection 8'H (WP-7) w/Paint (P-22) Above
CEILING	GYP. BD. or Acoustical Ceiling Tile (ACT), Ceiling Height: 9'-0" Min.
OTHER	Provide Gyp. Bd. over furring strips at inside face of exterior PEMB, full height.
EQUIPMENT	Robe hook, Shower curtain rod, HC Accessible Shower unit, HD metal lockers – Basis of Design "Lyon n5578wcp" with z-base and slope top.
CASEWORK	None
FURNITURE	3' long hardware bench with steel pedestals (ADA compliant)
PLUMBING	Provide ADA compliant plumbing fixtures including wall mounted urinals, wall mounted water closets, and ADA showers. See specifications for more requirements.
MECHANICAL	Temp: 74 degrees F cooling

	70 degrees F heating 50% RH (+/- 10%) Local Controls: n/a Zoning: Dedicated zone Exhaust: 0.25 cfm/sqft, 80cfm per fixture Special: None
ELECTRICAL	Provide minimum of 2 GFCI duplex receptacles. Provide GFCI protected power to locker assemblies if they are equipped with integral lights or receptacles.
COMM/DATA	(1) Wall speaker for PA system.
LIGHTING	Comply with IESNA, prevailing codes (including energy), regulations, ordinances, and special input from GUC, if any. Provide occupancy sensor control. Provide 2' X 2' UL Damp Label LED troffers.
FIRE ALARM	Comply with prevailing codes, regulations and ordinances. See Narrative.
FIRE PROTECTION	Fully automatic fire suppression system
SPECIAL REQUIREMENTS	Refer to plans and narratives for additional information.
SIGNAGE / WAYFINDING	Refer to signage package

SPACE NAME	Men's Restroom	RM #: 123

FUNCTION	Men's Restroom
SPECIAL DIMENSIONS	ADA compliant. Refer to Space Allocation Table for minimum square footage requirements.
ACOUSTICS	Sound batt insulation full extent of ceiling
OCCUPANCY	
ADJACENCY REQUIREMENTS	Accessible from main Circulation, adjacent and open to Men's Lockers
OTHER REQUIREMENTS	CMU walls full height to underside of deck
ACCESS CONTROL	None
FINISHES	
FLOOR	FLOOR - Sheet Vinyl (SV-1) w/ Flash Cove Base
WALLS	FRP Wall Protection 8'H (WP-7); Semi-Gloss Paint (P-22) Above
CEILING	GYP. BD. or Acoustical Ceiling Tile (ACT), Ceiling Height: 9'-0" Min.
OTHER	Provide Gyp. Bd. over furring strips at inside face of exterior PEMB, full height.
EQUIPMENT	Clothes hooks for PPE gear, grab bars (Bradley 812 series), 24x72 Mirror, Automatic paper towel dispenser (Georgia Pacific EnMotion), Seat Cover Dispenser, Touchless soap dispenser, toilet/urinal partitions, waste receptacle
CASEWORK	None
FURNITURE	None
PLUMBING	Provide ADA compliant plumbing fixtures including wall mounted porcelain lavatory with manual faucet, wall hung water closet and urinal with automatic flush valves.
MECHANICAL	Temp:

	74 degrees F cooling 70 degrees F heating 50% RH (+/- 10%) Local Controls: n/a Zoning: Dedicated zone Exhaust: 80 cfm/ fixture Special: None
ELECTRICAL	Provide 1 GFCI duplex receptacle adjacent to lavatory sink.
COMM/DATA	None
LIGHTING	Comply with IESNA, prevailing codes (including energy), regulations, ordinances, and special input from GUC, if any. Provide occupancy sensor control. Provide 2' X 2' UL Damp Label LED troffers. Provide decorative LED lighting wall sconces above sinks to match those used on other buildings on the GUC campus.
FIRE ALARM	Comply with prevailing codes, regulations and ordinances. See Narrative.
FIRE PROTECTION	Fully automatic fire suppression system
SPECIAL REQUIREMENTS	Refer to plans and narratives for additional information.
SIGNAGE / WAYFINDING	Refer to signage package

SPACE NAME	Mezzanine Storage	RM #: 203

FUNCTION	Bulk and archive file storage for Fleet Maintenance services
SPECIAL DIMENSIONS	As required by code. Refer to Space Allocation Table for minimum square footage requirements.
ACOUSTICS	n/a
OCCUPANCY	n/a
ADJACENCY REQUIREMENTS	Open to, and accessible from, Parts & Tool Storage, provides access to Electric Room and Comm/Tech closet.
OTHER REQUIREMENTS	Minimum clear height 7'-6" above finished floor (aff), Access to Low Bays via pair of HM 3'-0" doors with safety chain.
ACCESS CONTROL	None
FINISHES	
FLOOR	Sealed Concrete
WALLS	Semi-Gloss Paint (P-22)
CEILING	Exposed
OTHER	Provide plywood sheathing along inside face of exterior PEMB to min. 9'-0" above finished floor (aff)
EQUIPMENT	n/a
CASEWORK	None
FURNITURE	OFOI - 2' d x 4' w x 6' h HD metal storage shelving units
PLUMBING	n/a
MECHANICAL	Temp: 74 degrees F cooling 70 degrees F heating 50% RH (+/- 10%) Local Controls:

	Zoning: Dedicated zone, communicates with Electric and Parts/Tool Storage Exhaust: None Special: None
ELECTRICAL	Provide GFCI receptacles on nominal 16-foot spacings, coordinated with shelving assemblies. Provide quad receptacle adjacent to each technology outlet.
COMM/DATA	n/a
LIGHTING	Comply with IESNA, prevailing codes (including energy), regulations, ordinances, and special input from GUC, if any. Provide occupancy sensor control. Provide wide-optics LED lighting, coordinated with shelving assemblies.
FIRE ALARM	Comply with prevailing codes, regulations and ordinances. See Narrative.
FIRE PROTECTION	Fully automatic fire suppression system
SPECIAL REQUIREMENTS	Refer to plans and narratives for additional information.
SIGNAGE / WAYFINDING	Refer to signage package

SPACE NAME	Parts & Tool Storage	RM #120

FUNCTION	Contains storage units for parts & tools and Counter service.
SPECIAL DIMENSIONS	Min. clear height at storage area 21'-0". Refer to Space Allocation Table for minimum square footage requirements.
ACOUSTICS	CMU walls extend to underside of deck
OCCUPANCY	1-2
ADJACENCY REQUIREMENTS	Parts Manager, Fluid Storage, exterior
OTHER REQUIREMENTS	Overhead door. Semi-recessed fire extinguisher cabinet.
ACCESS CONTROL	Access control at exterior entry door w/wall mounted proximity reader. Access control at door from corridor into space.
FINISHES	
FLOOR	Sealed Concrete
WALLS	Semi-Gloss Paint (P-22)
CEILING	Exposed
OTHER	Provide plywood sheathing at inside face of exterior PEMB to min. 8'-0" above finished floor (aff)
EQUIPMENT	Coiling counter door (stainless steel, lockable). OFOI - keying machine. Coordinate other equipment needs with Owner during Design Phase.
CASEWORK	HD metal base cabinets (drawer unit and shelving with door units). Basis of Design: Lyon Heavy Duty modular units, impact resistant stainless steel top
FURNITURE	Task Stool (S-3)
PLUMBING	n/a
MECHANICAL	Temp: 74 degrees F cooling 70 degrees F heating

	50% RH (+/- 10%) Local Controls: n/a Zoning: Dedicated zone, communicates with Mezzanine Exhaust: None Special: None
ELECTRICAL	Provide receptacles at maximum 4-foot spacings above counters/work benches. Provide electrical power and control work for key cutting machine, overhead door, security shutter and other ancillary equipment. Provide GFCI protected power for charging stations for forkLifts OFOI, hand tool batteries, etc. Provide quad receptacle adjacent to each technology outlet. Provide GFCI receptacles elsewhere on nominal 12-foot spacings.
COMM/DATA	(3) data locations with (2) blue cat6 cables at parts counter. (1) paging horn.
LIGHTING	Comply with IESNA, prevailing codes (including energy), regulations, ordinances, and special input from GUC, if any. Provide occupancy sensor control. Provide wide-optics UL Damp Label LED lighting. Provide enhanced/special lighting for room-specific tasks in this room (ex. at counter).
FIRE ALARM	Comply with prevailing codes, regulations and ordinances. See Narrative.
FIRE PROTECTION	Fully automatic fire suppression system
SPECIAL REQUIREMENTS	Refer to plans and narratives for additional information.
SIGNAGE / WAYFINDING	Refer to signage package

SPACE NAME	Parts Manager	RM #: 121

FUNCTION	Office for Parts Manager
SPECIAL DIMENSIONS	Proportion as appropriate to accommodate furniture location and interior viewing window into Parts & Tool Room. Refer to Space Allocation Table for minimum square footage requirements.
ACOUSTICS	Sound batt insulation full extent of ceiling
OCCUPANCY	1 + 1 guest min.
ADJACENCY REQUIREMENTS	Parts & Tool Storage
OTHER REQUIREMENTS	Interior borrowed lite for viewing into Parts & Tool Storage
ACCESS CONTROL	Compatible with GUCs Medco keying system. Coordinate keying and access control needs with Owner during design.
FINISHES	
FLOOR	Sealed Concrete
WALLS	Paint (P-1)
CEILING	Acoustical Ceiling Tile (ACT), Ceiling Height: 9’-0” Min.
OTHER	CMU wall construction with GYP. BD. over furring strips.
EQUIPMENT	3’ x 4’ Markerboard; OFOI - Computer, phone
CASEWORK	n/a
FURNITURE	Typical OD-1; Task Chair (S-10) w/Soft Casters; 2 Side Chair (S-9) or Alt. (S-13); Optional 2 Dr. File with Laminate Top or 2 H. Bookcase with Laminate Top (Furniture typical is based on the 156 Sq. Ft. office)
PLUMBING	n/a
MECHANICAL	Temp: 74 degrees F cooling 70 degrees F heating 50% RH (+/- 10%)

	Local Controls: n/a Zoning: Dedicated zone Exhaust: None Special: None
ELECTRICAL	Provide convenience outlet receptacles on walls at maximum 10-foot spacings. Provide quad receptacle adjacent to each technology outlet.
COMM/DATA	(2) blue cat6 at desk location. Active sound masking with above ceiling emitters.
LIGHTING	Comply with IESNA, prevailing codes (including energy), regulations, ordinances, and special input from GUC, if any. Provide occupancy sensor control. Provide 2' X 2' LED troffers. Include wall-box dimmer.
FIRE ALARM	Comply with prevailing codes, regulations and ordinances. See Narrative.
FIRE PROTECTION	Fully automatic fire suppression system
SPECIAL REQUIREMENTS	Refer to plans and narratives for additional information.
SIGNAGE / WAYFINDING	Refer to signage package

SPACE NAME	Reception	RM #: 106

FUNCTION	Front office workstation
SPECIAL DIMENSIONS	Coordinate furniture configuration with transaction window location. Refer to Space Allocation Table for minimum square footage requirements.
ACOUSTICS	Sound batt insulation full extent of ceiling & walls
OCCUPANCY	1
ADJACENCY REQUIREMENTS	Lobby
OTHER REQUIREMENTS	Open to Corridor
ACCESS CONTROL	None
FINISHES	
FLOOR	Sealed Concrete
WALLS	Paint West Wall (P-4) Balance (P-1)
CEILING	Acoustical Ceiling Tile (ACT), Ceiling Height: 9’-0” Min.
OTHER	Provide Gyp. Bd. over furring strips full height at inside face of exterior PEMB.
EQUIPMENT	OFOI - Computer, phone, desktop printer/fax
CASEWORK	None
FURNITURE	Workstation WS-B-3 w/Modifications; Task Chair (S-10)
PLUMBING	none
MECHANICAL	Temp: 74 degrees F cooling 70 degrees F heating 50% RH (+/- 10%)

	Local Controls: n/a Zoning: Dedicated zone Exhaust: None Special: None
ELECTRICAL	Provide convenience outlet receptacles on walls at nominal 8-foot spacings. Provide quad receptacle adjacent to each technology outlet.
COMM/DATA	(2) blue cat6 cables at reception window. (1) momentary button to unlock lobby to corridor door. (1) latching button to report to access control system as assistance needed.
LIGHTING	Comply with IESNA, prevailing codes (including energy), regulations, ordinances, and special input from GUC, if any. Provide occupancy sensor control. Provide 2' X 2' LED troffers. Include wall-box dimmer.
FIRE ALARM	Comply with prevailing codes, regulations and ordinances. See Narrative.
FIRE PROTECTION	Fully automatic fire suppression system
SPECIAL REQUIREMENTS	Refer to plans and narratives for additional information.
SIGNAGE / WAYFINDING	Refer to signage package

SPACE NAME	Reference Library	RM #: 116

FUNCTION	Houses manuals and Computer OFOI for reference use
SPECIAL DIMENSIONS	ADA compliant. Refer to Space Allocation Table for minimum square footage requirements.
ACOUSTICS	n/a
OCCUPANCY	1
ADJACENCY REQUIREMENTS	Central to office areas and Maintenance bays
OTHER REQUIREMENTS	CMU walls
ACCESS CONTROL	none
FINISHES	
FLOOR	Sealed concrete
WALLS	Semi-gloss paint (P-21)
CEILING	Acoustical Ceiling Tile (ACT), Ceiling Height: 8’-0” Min.
OTHER	No door required
EQUIPMENT	3’ x 4’ tackboard; OFOI - Computer
CASEWORK	Countertop – Laminate (PL-4); Optional Monitor Arm
FURNITURE	2-Bookcases (BC-1); 1-Task Chair (S-10) w/Soft Casters
PLUMBING	None
MECHANICAL	Temp: 74 degrees F cooling 70 degrees F heating 50% RH (+/- 10%) Local Controls: n/a Zoning: Zoned with Circulation

	Exhaust: None Special: None
ELECTRICAL	Provide convenience outlet receptacles on walls at nominal 8-foot spacings. Provide quad receptacle adjacent to each technology outlet.
COMM/DATA	(2) data locations with (1) blue cat6 cables at countertop
LIGHTING	Comply with IESNA, prevailing codes (including energy), regulations, ordinances, and special input from GUC, if any. Provide occupancy sensor control. Provide 2' X 2' LED troffers. Include wall-box dimmer.
FIRE ALARM	Comply with prevailing codes, regulations and ordinances. See Narrative.
FIRE PROTECTION	Fully automatic fire suppression system
SPECIAL REQUIREMENTS	Refer to plans and narratives for additional information.
SIGNAGE / WAYFINDING	Refer to signage package

SPACE NAME	Repair Shop	RM #: 115

FUNCTION	Small repairs and fabrication shop
SPECIAL DIMENSIONS	Locate bench top paint booth to allow for ventilation through sidewall rather than roof. Refer to Space Allocation Table for minimum square footage requirements.
ACOUSTICS	Extend CMU walls to underside of deck or provide ceiling/lid over space.
OCCUPANCY	1-2
ADJACENCY REQUIREMENTS	Low Bays via overhead coiling door, exterior
OTHER REQUIREMENTS	CMU walls to underside of deck, Vertical lift overhead door to exterior, ventilation as required for paint booth. Fire extinguisher bracket.
ACCESS CONTROL	Compatible with GUCs Medco keying system. Coordinate keying and access control needs with Owner during design.
FINISHES	
FLOOR	Sealed Concrete
WALLS	Semi-Gloss Paint (P-22)
CEILING	Exposed
OTHER	Provide plywood sheathing on inside face of exterior PEMB to min. 8’-0” above finished floor (aff)
EQUIPMENT	Refer to plans for list of equipment. Coordinate final placement with Owner during Design Phase
CASEWORK	None
FURNITURE	OFOI - workbenches
PLUMBING	Drainage shall be directed to an oil interceptor. All other fixtures shall terminate to sanitary. Provide, hose bibs, compressed air and water hose reels per Criterion plans. Provide and coordinate all connections for paint booth, power washers and other maintenance equipment. Provide emergency fixtures including eye/face washes and showers. All fixtures shall comply with ANSI Z358.1-2014.

MECHANICAL	Temp: 74 degrees F cooling 70 degrees F heating 50% RH (+/- 10%) Local Controls: n/a Zoning: Dedicated zone Exhaust: 0.75cfm/sqft Special: None
ELECTRICAL	Comply with applicable provisions of NEC Chapter 5 as applicable. Provide electrical power (GFCI protected) and control work associated with special equipment (welder(s), plasma cutter(s), band saw(s), drill press(es), chain hoist(s), rotary scroll(s), etc.), for overhead door, for air compressor and air dryer (located in exterior closet), and for ancillary equipment. Note that there will be acetylene, argon and oxygen tanks in this room, along with paint storage and paint spray booth. Provide GFCI duplex receptacles at 4-foot spacings along counters/work benches. Provide quad GFCI receptacle adjacent to each technology outlet. Also provide GFCI receptacles at nominal 10-foot spacings.
COMM/DATA	(1) location with (1) green cat6A cable for WAP. (1) paging horn connected to PA system. (1) H5A 6MP Bullet w/IR Avigilon camera for interior.
LIGHTING	Comply with IESNA, prevailing codes (including energy), regulations, ordinances, and special input from GUC, if any. Provide occupancy sensor control. Provide enhanced/special lighting for room-specific tasks in this room. Provide LED lighting, vapor-tight as a minimum requirement, more restrictive if needed based on NEC Chapter 5 provisions.
FIRE ALARM	Comply with prevailing codes, regulations and ordinances. See Narrative.
FIRE PROTECTION	Fully automatic fire suppression system
SPECIAL REQUIREMENTS	Refer to plans and narratives for additional information.
SIGNAGE / WAYFINDING	Refer to signage package

SPACE NAME	Restroom	RM #: 104

FUNCTION	Front office area restroom for visitors and stabove finished floor (aff)
SPECIAL DIMENSIONS	ADA compliant. Refer to Space Allocation Table for minimum square footage requirements.
ACOUSTICS	Sound batt insulation full extent of walls
OCCUPANCY	1
ADJACENCY REQUIREMENTS	Lobby
OTHER REQUIREMENTS	Full height walls to underside of deck
ACCESS CONTROL	Compatible with GUCs Medco keying system. Coordinate keying and access control needs with Owner during design.
FINISHES	
FLOOR	Sheet Vinyl (SV-1) w/Flash Cove Base
WALLS	North & West Wall-FRP Wall Protection 8'H (WP-7) w/Semi-Gloss Paint (P-22) Above; East Wall (P-24); Balance (P-22)
CEILING	GYP. BD. or Acoustical Ceiling Tile (ACT), Ceiling Height: 8'-0" Min.
OTHER	Provide Gyp. Bd. over furring strips at inside face of exterior PEMB, to min. 9'-0" above finished floor (aff).
EQUIPMENT	Grab bars (Bradley 812 series), mirror, touchless soap dispenser, touchless paper towel dispenser (Basis of Design :Georgia Pacific EnMotion 594661), baby changing station.
CASEWORK	n/a
FURNITURE	n/a
PLUMBING	Provide ADA compliant plumbing fixtures including wall mounted water closet and lavatory.
MECHANICAL	Temp: 74 degrees F cooling 70 degrees F heating 50% RH (+/- 10%)

	Local Controls: n/a Zoning: Zoned with Corridor Exhaust: 80 cfm/ fixture Special: None
ELECTRICAL	Provide 1 GFCI duplex receptacle adjacent to lavatory sink.
COMM/DATA	
LIGHTING	Comply with IESNA, prevailing codes (including energy), regulations, ordinances, and special input from GUC, if any. Provide occupancy sensor control. Provide 2' X 2' UL Damp Label LED troffers. Provide decorative LED lighting wall sconce(s) above sink to match those used on other buildings on the GUC campus.
FIRE ALARM	Comply with prevailing codes, regulations and ordinances. See Narrative.
FIRE PROTECTION	Fully automatic fire suppression system
SPECIAL REQUIREMENTS	Refer to plans and narratives for additional information.
SIGNAGE / WAYFINDING	Refer to signage package

SPACE NAME	Supply Storage	RM #: 108

FUNCTION	Equipment storage for Back of House
SPECIAL DIMENSIONS	As required. Refer to Space Allocation Table for minimum square footage requirements.
ACOUSTICS	None
OCCUPANCY	n/a
ADJACENCY REQUIREMENTS	Near Maintenance bays and Parts & Tool Storage
OTHER REQUIREMENTS	CMU walls
ACCESS CONTROL	Compatible with GUCs Medco keying system. Coordinate keying and access control needs with Owner during design.
FINISHES	
FLOOR	Sealed Concrete
WALLS	Semi-Gloss Paint (P-22)
CEILING	Exposed
OTHER	
EQUIPMENT	OFOI - Wire shelving units
CASEWORK	None
FURNITURE	None
PLUMBING	None
MECHANICAL	Temp: 74 degrees F cooling 70 degrees F heating 50% RH (+/- 10%) Local Controls: n/a Zoning: Dedicated zone

	Exhaust: None Special: None
ELECTRICAL	Provide (2) duplex receptacles
COMM/DATA	n/a
LIGHTING	Comply with IESNA, prevailing codes (including energy), regulations, ordinances, and special input from GUC, if any. Provide occupancy sensor control. Provide 2' X 2' LED troffers.
FIRE ALARM	Comply with prevailing codes, regulations and ordinances. See Narrative.
FIRE PROTECTION	Fully automatic fire suppression system
SPECIAL REQUIREMENTS	Refer to plans and narratives for additional information.
SIGNAGE / WAYFINDING	Refer to signage package

SPACE NAME	Tire Repair	RM #: 114

FUNCTION	Open area within Low Maintenance Bays for tire storage and repair
SPECIAL DIMENSIONS	Min overhead clear height 21’-0”. Maintain minimum clearances around equipment as required. Refer to Space Allocation Table for minimum square footage requirements.
ACOUSTICS	None
OCCUPANCY	n/a
ADJACENCY REQUIREMENTS	Low Maintenance Bays, Exterior wall
OTHER REQUIREMENTS	Coordinate equipment layout to ensure clear line of sight from Mechanic and Mechanic Manager’s offices. Fire extinguisher bracket
ACCESS CONTROL	None
FINISHES	
FLOOR	Sealed Concrete
WALLS	Semi-Gloss Paint (P-22)
CEILING	Exposed
OTHER	Provide plywood sheathing along inside face of exterior PEMB to min. 8’-0” above finished floor (aff).
EQUIPMENT	Refer to plans for list of equipment this area
CASEWORK	None
FURNITURE	None
PLUMBING	Compressed air piping
MECHANICAL	Temp: 60 degrees F heating Local Controls: n/a Zoning: Radiant heater between each vehicle bay with dedicated control

	Exhaust: 0.75 cfm/sqft, controlled by CO/NO2 sensors Special: HVLS circulation fan
ELECTRICAL	Comply with applicable provisions of NEC Chapter 5 as applicable. Provide electrical power and control work associated with special equipment (tire Carousel OFOI, vehicle Lifts OFOI, tire racks, tire changers, tire balancers, presses, vacuums, sand blast cabinets, air compressors, air dryers, charging stations, etc.), and for ancillary equipment. Provide GFCI-protected cord reel drops (nominal 2, located outside of overhead "footprint" of crane assemblies and travel paths). Provide banks of GFCI receptacles (nominal 2 sets) at walls, columns and/or pedestals. Provide quad GFCI receptacle adjacent to each technology outlet. Also provide GFCI receptacles at nominal 12-foot spacings along walls. Install all outlets at minimum 24-inches above highest point of floor slab. Do not install any electrical work below a height of 18" above lowest point of floor slab unless installed compliant with NEC Chapter 5, including Articles 500 through 503 as applicable.
COMM/DATA	(1) Paging horn.
LIGHTING	Comply with IESNA, prevailing codes (including energy), regulations, ordinances, and special input from GUC, if any. Provide occupancy sensor and manual control. Provide LED high-bay or low-bay wide-optics lighting (work zone extends up to underside of overhead structural steel), UL Damp Label as a minimum requirement, more restrictive if needed based on NEC Chapter 5 provisions. Lighting design shall result in uniform lighting levels between the high and low bay areas, which are open to each other. Provide enhanced/special lighting for room-specific tasks if needed.
FIRE ALARM	Comply with prevailing codes, regulations and ordinances. See Narrative.
FIRE PROTECTION	Fully automatic fire suppression system
SPECIAL REQUIREMENTS	Refer to plans and narratives for additional information.
SIGNAGE / WAYFINDING	Refer to signage package

SPACE NAME	Training Room	RM #: 103

FUNCTION	Employee Training and Vendor presentations
SPECIAL DIMENSIONS	Proportion to allow for multiple seating configurations. Refer to Space Allocation Table for minimum square footage requirements.
ACOUSTICS	Sound batt insulation full extent of ceiling. CMU walls to underside of deck.
OCCUPANCY	Minimum 16 people at tables
ADJACENCY REQUIREMENTS	Adjacent, and open to, Break Room. Direct access to exterior
OTHER REQUIREMENTS	Overhead coiling door to exterior, exterior window, folding panel partition, interior door with borrowed lite. Ventilation and sound control to minimize disruption to/from front office & Break Rm functions.
ACCESS CONTROL	Compatible with GUCs Medco keying system. Coordinate keying and access control needs with Owner during design.
FINISHES	
FLOOR	Sealed Concrete
WALLS	Semi-Gloss Paint North Wall (P-24); Balance (P-21)
CEILING	Acoustical Ceiling Tile (ACT), Ceiling Height: 9’-0” Min.
OTHER	CMU walls except at north wall provide Gyp. Bd. over furring strips at inside face of exterior PEMB to min. 9’-0” above finished floor (aff)f.
EQUIPMENT	4x8 markerboard, 3’ x 4’ tackboard; OFOI - Wall mounted digital display/TV, vending machines,
CASEWORK	8’-0” lf min Base Cabinets Finishes: Plastic Laminate (PL-3); Countertop (PL-2)
FURNITURE	(8) Training Tables (T-6); 16 Chairs (S-16) w/Soft Casters; 1 Trash/Recycle (LA-13)
PLUMBING	Provide trench drain near overhead door connected to sanitary.
MECHANICAL	Temp:

	74 degrees F cooling 70 degrees F heating 50% RH (+/- 10%) Local Controls: n/a Zoning: Dedicated zone Exhaust: None Special: Supplemental heater near overhead door.
ELECTRICAL	Provide convenience outlet GFCI receptacles on walls at maximum 10-foot spacings, with a receptacle located within 6 feet of both sides of door. Provide quad GFCI receptacle adjacent to each technology outlet. Provide 2 recessed flush floor boxes, each with recessed activation, minimum 2 GFCI duplex receptacles, and minimum 2-gang provision for technology outlets (include 1-inch conduit from technology compartment to above accessible ceiling). Provide receptacle on dedicated circuit for each of 3 vending machines, fed from GFCI circuit breakers. Comply with NEC 210.65.
COMM/DATA	(1) green cat6A in ceiling for WAP. (1) 55" flat panel display with (1) data and (1) coaxial cable to Data closet on Mezzanine. (1) Crestron AM-300 with digital media transmitter in floor box or wall. Crestron should provide basic control of TV OFOI.
LIGHTING	Comply with IESNA, prevailing codes (including energy), regulations, ordinances, and special input from GUC, if any. Provide occupancy sensor control and wall-box dimmer controls. Provide 2' X 2' LED troffers. Provide contemporary decorative suspended LED luminaire above table to match those used in meeting/conference rooms of other buildings on the GUC campus.
FIRE ALARM	Comply with prevailing codes, regulations and ordinances. See Narrative.
FIRE PROTECTION	Fully automatic fire suppression system
SPECIAL REQUIREMENTS	Refer to plans and narratives for additional information.
SIGNAGE / WAYFINDING	Refer to signage package

SPACE NAME	Wash Station	RM #: n/a

FUNCTION	Utility room to house equipment needed to service (2) wash bays
SPECIAL DIMENSIONS	As required for equipment. Refer to Space Allocation Table for minimum square footage requirements.
ACOUSTICS	None
OCCUPANCY	n/a
ADJACENCY REQUIREMENTS	Central to wash bays
OTHER REQUIREMENTS	CMU enclosure with steel door. Under Wash Bay canopy. Raised on concrete island and protected by bollards. Fire extinguisher bracket.
ACCESS CONTROL	Compatible with GUCs Medco keying system. Coordinate keying and access control needs with Owner during design.
FINISHES	
FLOOR	Sealed Concrete
WALLS	CMU, painted semi-gloss
CEILING	Interior: Exposed; at canopy provide PEMB soffit panels.
OTHER	Exterior: Paint exposed steel. PEMB soffit and panels to match Fuel Island finishes.
EQUIPMENT	OFOI - Truck Wash Dual Pump Station with hot & cold water, soap dispensing with accessories including hoses, wall booms and sprayers. Basis of Design: Dultmeier.
CASEWORK	None
FURNITURE	None
PLUMBING	Provide water connection to wash station equipment. Trench drain connected to oil/water separator with grid chamber.
MECHANICAL	Temp: 70 degrees F heating

ELECTRICAL	Provide GFCI protection for all work. Provide GFCI NEMA 3R Type WR While-In-Use duplex receptacle assemblies near all equipment needing 120V/15-20A cord & plug power, near other powered equipment for maintenance, and elsewhere as directed by GUC. Provide electrical power and control work for all equipment including, but not limited to, multiple truck wash pumping stations (up to 10 HP, 3-phase). Provide dedicated panelboard(s) for this out-building. Provide a single main service disconnect for the building. Provide all wiring in Electrical Schedule 40 or 80 PVC conduit. Provide water-tight corrosion-resistant boxes, enclosures, fittings, anchors, screws, bolts, washers, etc.
COMM/DATA	(1) H5A 6MP Bullet w/IR Avigilon camera for general coverage. (1) green cat6A in canopy ceiling structure for WAP. (1) paging horn.
LIGHTING	Comply with IESNA, prevailing codes (including energy), regulations, ordinances, and special input from GUC, if any. Inside: Provide occupancy sensor control. Provide UL Wet Label (in any position) corrosion-resistant LED lighting assemblies. Exterior canopy: Provide recessed full-cutoff LED lighting.
FIRE ALARM	n/a
FIRE PROTECTION	Fully automatic fire suppression system
SPECIAL REQUIREMENTS	Match fit & finish of Fuel Island. Provide metal soffit with recessed lighting. Slope roof to drain to center. Tie downspouts to underground drainage system. Exposed steel columns, painted. Bollards to protect 12" concrete island and equipment. Refer to plans and narrative for additional information.
SIGNAGE / WAYFINDING	Refer to signage package

SPACE NAME	Water Service	RM #: n/a

FUNCTION	Main utility service entrance location. Include water, electric and fire pump.
SPECIAL DIMENSIONS	As required. Refer to Space Allocation Table for minimum square footage requirements.
ACOUSTICS	Extend CMU walls full height to underside of deck.
OCCUPANCY	n/a
ADJACENCY REQUIREMENTS	Exterior, Mechanical Equipment Yard, chase to Mezzanine.
OTHER REQUIREMENTS	Walls to underside of deck
ACCESS CONTROL	Compatible with GUCs Medco keying system. Coordinate keying and access control needs with Owner during design.
FINISHES	
FLOOR	Sealed concrete
WALLS	CMU, painted.
CEILING	Exposed
OTHER	Provide plywood on inside face of exterior PEMB, min. 8’-0” above finished floor (aff)
EQUIPMENT	Fire extinguisher bracket.
CASEWORK	None
FURNITURE	None
PLUMBING	Provide backflow preventer and floor drain sized to handle full flow of backflow preventer discharge. Provide gas fired water heater with hot water recirculating pump.
MECHANICAL	Temp: 74 degrees F cooling 70 degrees F heating

	50% RH (+/- 10%) Local Controls: n/a Zoning: Dedicated zone Exhaust: None Special: None
ELECTRICAL	Provide 2 GFCI duplex receptacles.
COMM/DATA	n/a
LIGHTING	Comply with IESNA, prevailing codes (including energy), regulations, ordinances, and special input from GUC, if any. Provide occupancy sensor control. Provide vapor-tight LED lighting.
FIRE ALARM	Comply with prevailing codes, regulations and ordinances. See Narrative.
FIRE PROTECTION	Fully automatic fire suppression system
SPECIAL REQUIREMENTS	Exterior access.
SIGNAGE / WAYFINDING	Refer to signage package

SPACE NAME	Women's Locker Room	RM #: 118

FUNCTION	Womens restroom, showers & locker room
SPECIAL DIMENSIONS	ADA compliant. Refer to Space Allocation Table for minimum square footage requirements.
ACOUSTICS	Sound batt insulation full extent of ceiling
OCCUPANCY	Occupancy
ADJACENCY REQUIREMENTS	Off main Corridor serving Maintenance Bays, near Men's Restroom
OTHER REQUIREMENTS	CMU walls to underside of deck
ACCESS CONTROL	None
FINISHES	
FLOOR	Sheet Vinyl (SV-1) w/Flash Cove Base
WALLS	WALLS- West Wall & Shower Area -FRP Wall Protection 8'H (WP-7) w/Semi-Gloss Paint (P-22) Above; Paint North Wall (P-24); Paint Balance (P-22)
CEILING	GYP. BD. or Acoustical Ceiling Tile (ACT), Ceiling Height: 8'-0" Min.
OTHER	Other
EQUIPMENT	Clothes hooks for PPE gear, grab bars (Bradley 812 series), 24x72 Mirror, Automatic paper towel dispenser (Georgia Pacific EnMotion), Seat Cover Dispenser, Touchless soap dispenser, toilet/urinal partitions, waste receptacle, napkin dispenser, Robe hook, Shower curtain rod, HC Accessible Shower unit, HD metal lockers – Basis of Design LYON N5578WCP WITH Z-BASE AND SLOPE TOP
CASEWORK	None
FURNITURE	3'-0" L Hardwood bench with pedestal base
PLUMBING	Provide ADA compliant plumbing fixtures including shower. Wall mounted porcelain lavatory with manual faucet. Wall hung water closet

	with automatic flush valve. Shower head, faucet and drain in solid surface shower receptor. Floor drain located immediately outside shower.
MECHANICAL	Temp: 74 degrees F cooling 70 degrees F heating 50% RH (+/- 10%) Local Controls: n/a Zoning: Dedicated zone Exhaust: 0.25 cfm/sqft, 80cfm per fixture Special: None
ELECTRICAL	Provide 1 GFCI duplex receptacle adjacent to lavatory sink. Provide minimum of 2 GFCI duplex receptacles in open locker area. Provide GFCI protected power to locker assemblies if they are equipped with integral lights or receptacles.
COMM/DATA	(1) Wall speaker for PA system.
LIGHTING	Comply with IESNA, prevailing codes (including energy), regulations, ordinances, and special input from GUC, if any. Provide occupancy sensor control. Provide 2' X 2' UL Damp Label LED troffers.
FIRE ALARM	Comply with prevailing codes, regulations and ordinances. See Narrative.
FIRE PROTECTION	Fully automatic fire suppression system
SPECIAL REQUIREMENTS	Refer to plans and narratives for additional information.
SIGNAGE / WAYFINDING	Refer to signage package

PROJECT DIRECTORY

OWNER

GREENVILLE UTILITIES
401 S. GREEN STREET
GREENVILLE, NC 27835

ARCHITECT AND STRUCTURAL ENGINEER

CT CONSULTANTS, INC.
4420 COOPER ROAD, SUITE 200
CINCINNATI, OH 45242
(p) 513.791.1700

CIVIL ENGINEER AND LANDSCAPE ARCHITECT

RIVERS AND ASSOCIATES, INC.
107 EAST SECOND STREET
GREENVILLE, NC 27858
(p) 252.752.4135

MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION, AND COMMUNICATION TECHNOLOGY ENGINEERING

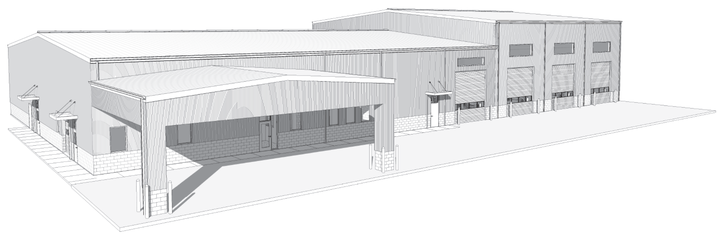
KLH ENGINEERS
1538 ALEXANDRIA PIKE
FT. THOMAS, KY 41075
(p) 859.442.8050

INTERIOR DESIGN

DESIGN DETAILS
118 WEST PIKE STREET
COVINGTON, KY 41011
(p) 513.793.0404

ENVIRONMENTAL GRAPHIC DESIGN

BROWNSTONE DESIGN INC.
217 WEST 9TH STREET
CINCINNATI, OH 45202
(p) 513.723.1881



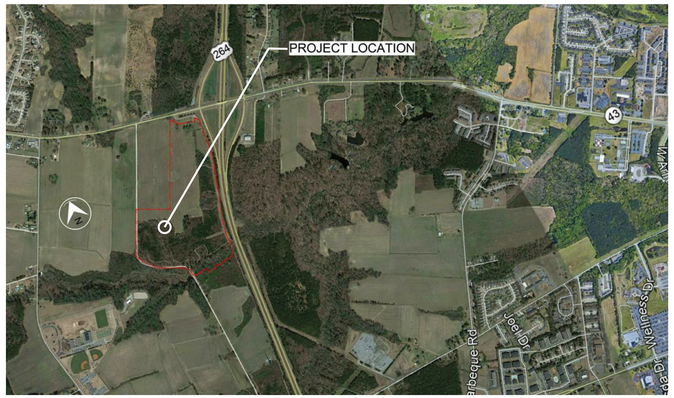
REQUEST FOR PROPOSALS (RFP)

CRITERION DRAWINGS

GREENVILLE UTILITIES
FLEET MAINTENANCE BUILDING

721 Utility Way
Greenville, NC 27834

SITE MAP



SYMBOL LEGEND

- 1 — REVISION TAG
- # — KEYNOTE TAG
- 101 — DOOR TAG
- 1 — WINDOW TAG
- 11 — PROPOSED STRUCTURAL GRID
- LEVEL / EL: — LEVEL LINE
- 1i — WALL TYPE TAG
- 3C / 3C2A403C / 3C — INTERIOR ELEVATION TAG
- ROOM NAME / 101 — PROPOSED ROOM TAG
- 1 / A101 SIM — INDICATES SECTION LETTER OR DETAIL NUMBER; INDICATES DRAWING SHEET ON WHICH SECTION/DETAIL IS SHOWN
- 1 / A101 SIM — INDICATES CALLOUT AREA
- 1 / A101 — INDICATES ELEVATION NUMBER; INDICATES DRAWING SHEET ON WHICH ELEV. IS SHOWN
- CJ — CONTROL JOINT

DRAWING INDEX

DWG #	SHEET TITLE	REV. NO.	DATE	DESCRIPTION
5T	TITLE SHEET	A	JULY 2020	RFP CRITERION DRAWINGS
C1	SITE DEMOLITION PLAN	A	JULY 2020	RFP CRITERION DRAWINGS
C2	SITE PLAN	A	JULY 2020	CRITERION DOCUMENTS
C3	GRADING AND UTILITIES PLAN	A	JULY 2020	CRITERION DOCUMENTS
5A100	OVERALL FLOOR PLAN	A	JULY 2020	CRITERION DOCUMENTS
5A102	MEZZANINE & WASH STATION FLOOR PLANS	A	JULY 2020	CRITERION DOCUMENTS
5A201	NORTH & SOUTH BUILDING ELEVATION	A	JULY 2020	CRITERION DOCUMENTS
5A202	EAST & WEST BUILDING ELEVATIONS	A	JULY 2020	CRITERION DOCUMENTS
5A301	BUILDING SECTIONS	A	JULY 2020	CRITERION DOCUMENTS
5A302	WALL SECTIONS	A	JULY 2020	CRITERION DOCUMENTS
5A801	PERSPECTIVE - NORTHEAST CORNER	A	JULY 2020	CRITERION DOCUMENTS
5A802	PERSEPCTIVE - SOUTHWEST CORNER	A	JULY 2020	CRITERION DOCUMENTS
5A803	SERVICE VEHICLE CLEARANCES & VIEWS	A	JULY 2020	RFP CRITERION DRAWINGS
5ID.01	INTERIOR FINISHES	A	JULY 2020	CRITERION DOCUMENTS
5ID.02	FURNITURE PLAN	A	JULY 2020	CRITERION DOCUMENTS
	SITE AND BUILDING SIGNAGE	A	JULY 2020	CRITERION DOCUMENTS

PRELIMINARY
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REV	REVISIONS	DATE	BY
A	RFP CRITERION DRAWINGS	JULY 2020	

DATE: JULY 2020
DRAWN BY: ARJW
CHECKED BY: JDEG
APPROVED BY:
F.B. NO. PG.

FLEET MAINTENANCE BUILDING
Greenville Utilities
721 Utility Way, Greenville, NC 27834

TITLE SHEET

SCALE: As Indicated
HORZ:
VERT:
CONTRACT NO: 16068104
SHEET 5T

6/11/2020 5:25:29 PM

RAI Project No. 2017055
Dwg No. W-3730

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NO	REVISIONS	DATE	BY
A	RFP CRITERION DRAWINGS	JULY 2020	JSJ

DATE: July 2020
DESIGNED BY: JSJ
DRAWN BY: SBC
CHECKED BY: JSJ

FLEET MAINTENANCE BUILDING
Greenville Utilities
721 Utility Way, Greenville, NC 27834

DEMOLITION PLAN

CONTRACT NO: 16068104
SCALE: AS NOTED
SHEET: C1

NAD83-2011

NCSR 1205 / ROCK SPRING ROAD (60' R/W; 18' SOIL)

OUTLET CONTROL STRUCTURE (OCS) SEE SHEET C5.4

20' EMERGENCY SPILLWAY ELEV. 76.0'

ALEX GRAY CORBETT
PN 12788
ESTATE FILE 1978-151
MB 60 PG 77
ZONED: RA-20

REMOVE SECTION ACROSS DRIVE AND TIE NEW FENCE INTO EXISTING PERIMETER FENCE

EXISTING WOODS LINE

REMOVE EXISTING SWALE

LIMITS OF DISTURBANCE

CLEAR AND GRUB

REMOVE CURB AND GUTTER AND INSTALL VALLEY GUTTER

PROPOSED WOODS LINE

CLEAR & GRUB

PROTECT

10'x20'x1.83' THK CLASS 'B' STONE W/ FILTER FABRIC

SWALE INV. 77.5

WL=70.00

5'x8'x1.5' THK CLASS 'B' STONE W/ FILTER FABRIC

CLASS B STONE (8'x5'x8" THK) W/ FILTER FABRIC

6'x8'x1.5' THK

TEMPORARY ROCK CHECK DAMS (TYP)

TBM = 82.36

TEG SURVEY CONTROL POINT
1004 (8" SURVEY SPIKE)
N = 686,311.49 FT.
E = 2,463,007.05 FT.
NAVD 1988 ELEV. = 82.36

S 64°35'59" E 667.26' (TOTAL)

637.26'

30.00'

906.60

N 25°23'54" E 2949.14' (TOTAL)

238.00'

APPROXIMATE LOCATION OF THE 1% FLOOD PLAIN LIMIT AS TAKEN FROM FLOOD RATE MAP DATED JULY 16, 2014 COMMUNITY PANEL 3720468600K (BFE VARIES 80'-81')

L40 L45 L50 L55

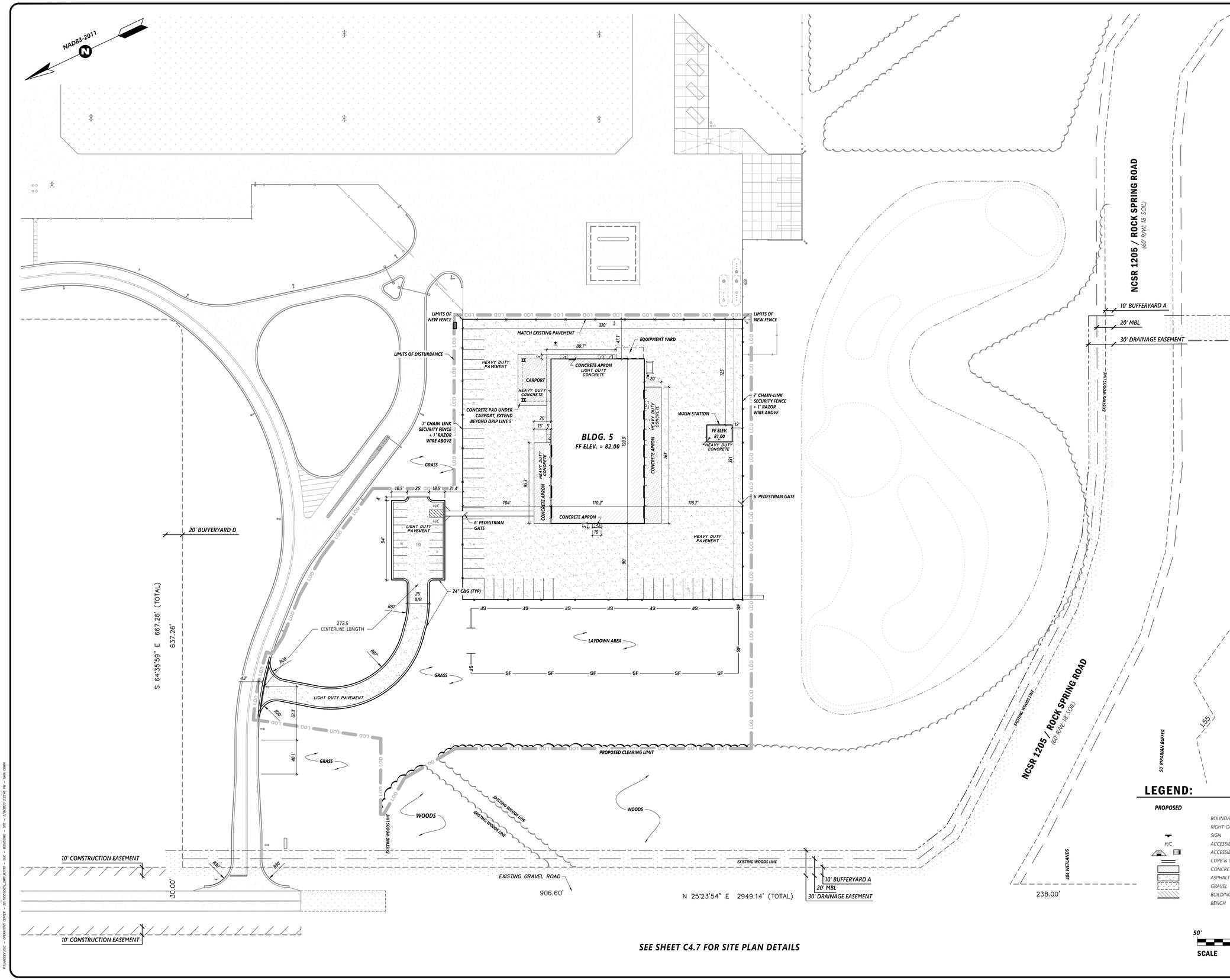
E OF HARRIS MILL RUN IS THE PROPERTY LINE AS TAKEN FROM M.B. 60 PG 77

LEGEND:

PROPOSED	EXISTING
BOUNDARY LINE	
RIGHT-OF-WAY	
SIGN	
ACCESSIBLE PARKING SPACE	
ACCESSIBLE RAMP	
CURB & GUTTER	
CONCRETE	
ASPHALT	
GRAVEL	
BUILDING	
BENCH	

SCALE 1 inch = 50 ft (50' 0 25' 50')

P:\JAX\DATA\GVL - OPERATIONS CENTER - 2017055\CAD_DWG\W3730 - GVC - BLDG.DWG - DEMO - 7/16/2020 3:37:03 PM - SHAN COBIN



SEE SHEET C4.7 FOR SITE PLAN DETAILS

LEGEND:

PROPOSED	EXISTING
	BOUNDARY LINE
	RIGHT-OF-WAY
	SIGN
H/C	ACCESSIBLE PARKING SPACE
	ACCESSIBLE RAMP
	CURB & GUTTER
	CONCRETE
	ASPHALT
	GRAVEL
	BUILDING
	BENCH

50' 0 25' 50'

SCALE 1 inch = 50 ft

RAI Project No. 2017055
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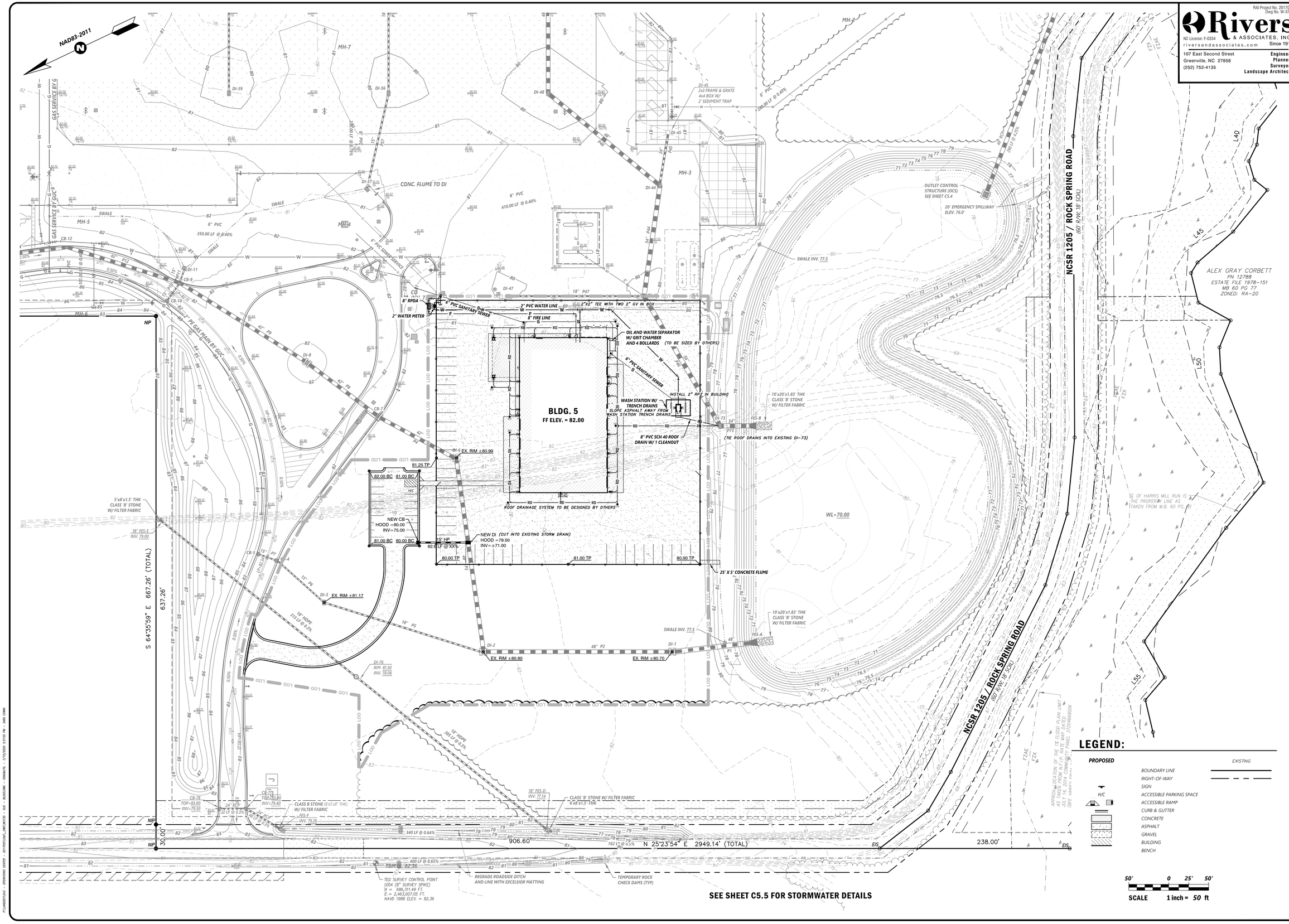
A	RFP CRITERION DRAWINGS	JULY 2020	JSJ

DATE: July 2020
DESIGNED BY: JSJ
DRAWN BY: SBC
CHECKED BY: JSJ

FLEET MAINTENANCE BUILDING
Greenville Utilities
721 Utility Way, Greenville, NC 27834

SITE PLAN

CONTRACT NO: 16068104
SCALE: AS NOTED
SHEET C2



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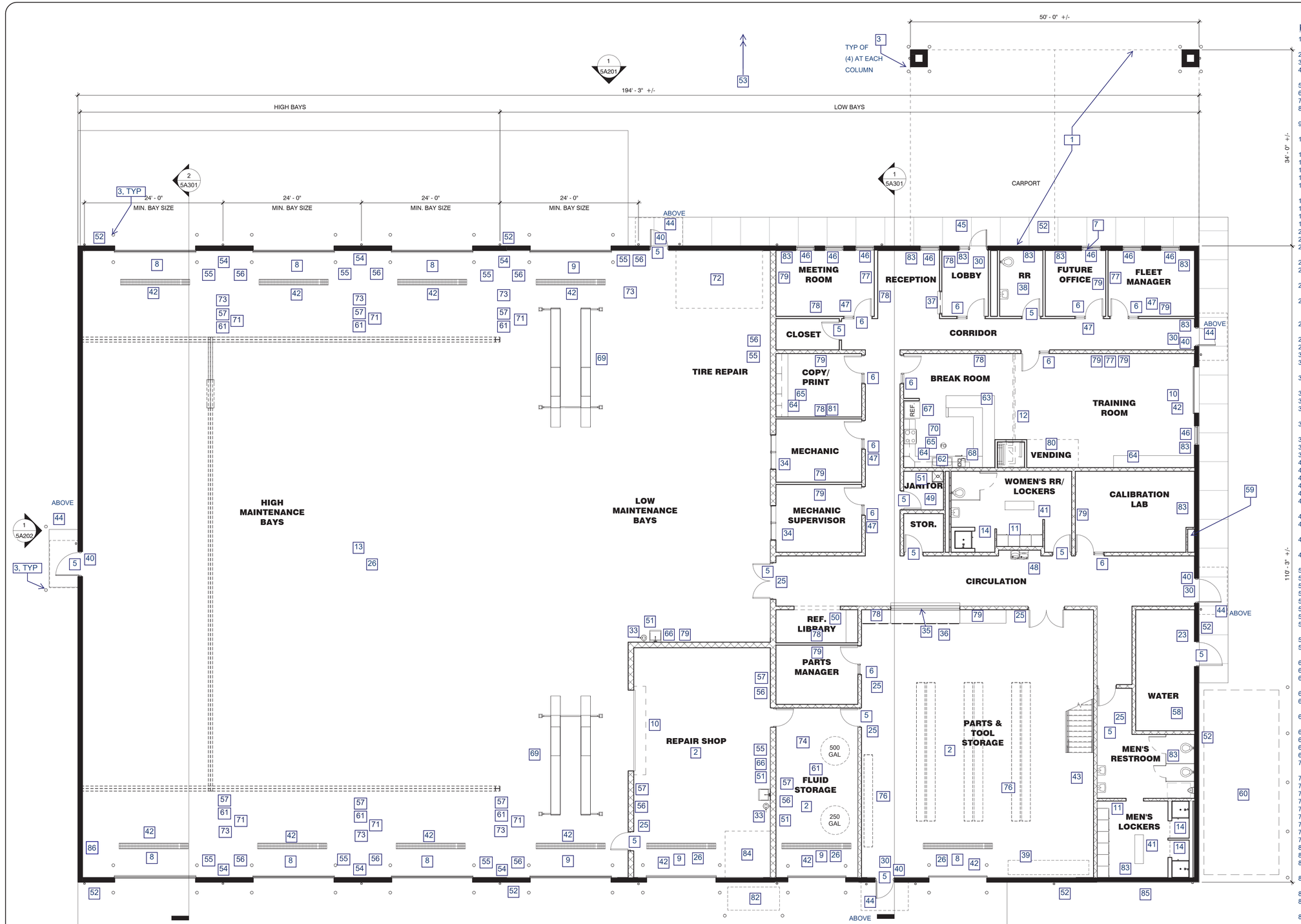
DATE: July 2020
DESIGNED BY: JSJ
DRAWN BY: SBC
CHECKED BY: JSJ

FLEET MAINTENANCE BUILDING
Greenville Utilities
721 Utility Way, Greenville, NC 27834

GRADING AND UTILITIES PLAN

CONTRACT NO: 16068104
SCALE: AS NOTED
SHEET C3



KEYNOTES

1. (2) VEHICLE CARPORT, PEMB WITH RECESSED SOFFIT LIGHTING, 16'-0" MIN. CLEARANCE
2. HEAVY DUTY CONCRETE WITH FIBER REINFORCING
3. 6" DIA GALV. BOLLARD WITH PRE-FINISHED SLEEVE
4. PREFINISHED METAL DOWNSPOUT TIED TO UNDERGROUND ROOF DRAINAGE SYSTEM
5. INSULATED HM DOOR AND FRAME, PAINTED
6. SCW DOOR WITH PAINTED HM FRAME & SIDELITE
7. INSULATED ALUMINUM FRAMED WINDOW, FIXED
8. OVERHEAD SECTIONAL STEEL DOOR WITH VISION PANELS, VERTICAL LIFT TRACK
9. OVERHEAD SECTIONAL STEEL DOOR WITH VISION PANELS
10. OVERHEAD COILING STEEL DOOR WITH VISION PANELS
11. 2-TIER HD METAL LOCKERS
12. FOLDING PANEL PARTITION, MANUAL OPERATION
13. OVERHEAD BRIDGE CRANE, 7 TON
14. PRE-FABRICATED SHOWER STALL
15. CONCRETE SLAB ON STEEL DECK OR HOLLOW CORE PLANK
16. GUARDRAIL
17. PEMB TAPERED COLUMN/FRAME, PAINTED
18. PEMB BEAM, PAINTED
19. PEMB GIRT, PAINTED
20. PREFINISHED METAL GUTTER
21. METAL WALL PANELS WITH CONCEALED FASTENERS
22. PREFINISHED METAL DOWNSPOUT TIED TO UNDERGROUND ROOF DRAINAGE SYSTEM
23. PREFINISHED, METAL LINER PANEL
24. 4'-0" H SPLIT FACE CMU WAINSCOT, TYPICAL FULL BLDG PERIMETER
25. PROVIDE BULLNOSE CMU AT INTERIOR EXPOSED DOOR JAMBS, TYPICAL
26. PLYWOOD SHEATHING FROM TOP OF WAINSCOT TO 8'-0" AFF MIN., PAINTED. TYPICAL AT INSIDE FACE OF EXTERIOR PEMB WALL, UNO.
27. STANDING SEAM METAL ROOF PANELS WITH CONCEALED FASTENERS
28. METAL SOFFIT PANELS TO MATCH WALL PANELS
29. CHAIN LINK ENCLOSURE WITH SECURED GATE
30. RECESSED WALK-OFF MAT
31. TRUCK WASH PUMP & ACCESSORIES, SERVING EACH SIDE (OFOI)
32. CLERESTORY WINDOW, TYPICAL ABOVE OVERHEAD DOORS
33. EMERGENCY EYEWASH, SHOWER & FLOOR DRAIN
34. INTERIOR BORROWED LIGHT
35. COILING SECURITY SHUTTER, MANUAL OPERATION, WITH STAINLESS STEEL COUNTER.
36. HEAVY DUTY METAL BASE CABINET WITH IMPACT RESISTANT, STAINLESS STEEL TOP
37. SLIDING TRANSACTION WINDOW WITH SHELF
38. ADA COMPLIANT FAMILY RESTROOM
39. HANDTOOL BATTERY CHARGING STATION
40. HM FRAME WITH TRANSOM GLASS
41. HARDWOOD BENCH
42. TRENCH DRAIN, TYPICAL AT EACH OVERHEAD DOOR
43. OPEN GRATE METAL STAIR
44. CANOPY WITH SOFFIT & UNDERMOUNT LIGHTING
45. FULL GLASS ENTRY DOOR WITH HM FRAME, SIDELITE AND TRANSOM
46. ROLLER SHADE, TYPICAL AT EXTERIOR WINDOWS
47. ROLLER SHADE, TYPICAL AT OFFICE/ MTG RM SIDELITES
48. ELECTRIC WATER COOLERS WITH BOTTLE FILLING STATION, ADA COMPLIANT
49. MOP SINK WITH MOP RACK/SHELF AND WALL PROTECTION PANELS
50. COUNTERTOP. REFER TO FINISH SCHEDULE
51. INDOOR HOSE BIB
52. OUTDOOR WALL HYDRANT
53. FUTURE EV CHARGING STATION, TYPICAL OF (4)
54. VEHICLE EXHAUST HOSE REEL, WALL MOUNTED
55. COMPRESSED AIR REEL
56. WATER REEL
57. POWER RECEPTACLE - REEL DROP FROM ABOVE/WALL MOUNT
58. WATER SERVICE ENTRANCE
59. ELECTRIC AND TECHNOLOGY SERVICE ENTRANCE TO MEZZANINE ABOVE
60. MECHANICAL EQUIPMENT YARD
61. FLUID DISTRIBUTION SYSTEM, COMPUTERIZED
62. DEEP BOWL SINK WITH GOOSE NECK FAUCET & SPRAYER FOR POT WASHING
63. BAR HEIGHT COUNTERTOP. SEE FINISH SCHEDULE
64. BASE CABINET WITH DOORS AND ADJUSTABLE SHELVES
65. WALL CABINET WITH DOORS AND ADJUSTABLE SHELVES
66. UTILITY SINK W/ SIDE SHELF & GOOSENECK SPRAYER
67. REFRIGERATOR, OFOI
68. UNDERCOUNTER ICE MAKER, OFOI
69. VEHICLE LIFT, OFOI
70. MICROWAVE, UNDERCABINET MOUNT, WITH RECIRCULATING EXHAUST FAN, OFOI
71. OVERHEAD FLUID DISTRIBUTION REEL DROPS
72. SEMI-AUTOMATED TIRE STORAGE CAROUSEL,OFOI
73. GAS HEATER, ABOVE
74. 500ga USED OIL TANK & TRAY
75. 20'-0" LOW SLOPE CONCRETE APRON
76. METAL SHELVING UNITS, 2' d x 4' w x 8' h, OFOI
77. VIDEO DISPLAY/TV, OFOI. PROVIDE BLOCKING
78. TACKBOARD
79. MARKERBOARD
80. VENDING MACHINES, OFOI (FOOD/BEVERAGE)
81. COPIER, OFOI
82. AIR COMPRESSOR. HARD LINE PIPING TO REEL DROPS
83. GWB ON FURRING STRIPS TO 8" ABOVE CLG, TYP AT INSIDE FACE OF EXTERIOR PEMB WALL.
84. BENCH TOP PAINT BOOTH. VENT TO EXTERIOR.
85. OIL AND WATER SEPARATOR WITH GRIT CHAMBER. PROTECT WITH BOLLARDS.
86. EXPANDABLE END WALL.

TIRE REPAIR EQUIPMENT

- VERTICAL TIRE STORAGE CAROUSEL (ELECT), OFOI
- TIRE CHANGER (ELECT), OFOI
- TIRE BALANCING (220V SINGLE-PHASE ELECT REQD), OFOI
- SAND BLAST CABINET, OFOI
- METAL PRESS (ELECT), OFOI
- VACCUUM (ELECT), OFOI

REPAIR SHOP EQUIPMENT

- CHAIN HOIST, MANUAL, OFOI
- BENCHTOP PAINT BOOTH, CFCI
- WORKBENCH, OFOI
- BAND SAW, OFOI
- WELDER 220V, OFOI
- PLASMA CUTTER 220V, OFOI
- AIR HOSE (1 EA SIDE), CFCI
- DRILL PRESS, OFOI
- STORAGE CABINETS, OFOI
- PAINT CABINET, OFOI
- METAL/WOOD RACK, OFOI
- TANKS (ARGON, OXYGEN, ACETYLENE) OFOI

1 5A100 **OVERALL FLOOR PLAN**
SCALE: 1/8" = 1'-0"

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REV	REVISIONS	DATE	BY
A	RFP CRITERION DRAWINGS	JULY 2020	

DATE: JULY 2020
DRAWN BY: ARJW
CHECKED BY: JDEG
APPROVED BY:
P.E. NO.
P.G.

FLEET MAINTENANCE BUILDING
Greenville Utilities
721 Utility Way, Greenville, NC 27834

OVERALL FLOOR PLAN

SCALE: 1/8" = 1'-0"
HORZ:
VERT:
CONTRACT NO: 16068104
SHEET 5A100

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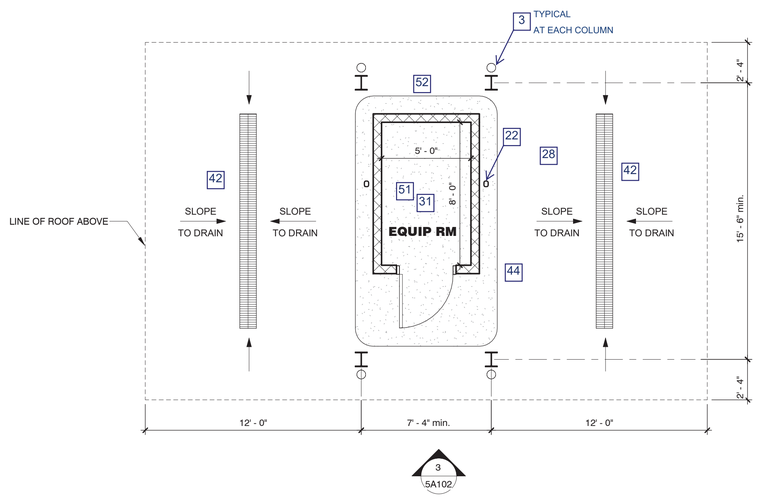
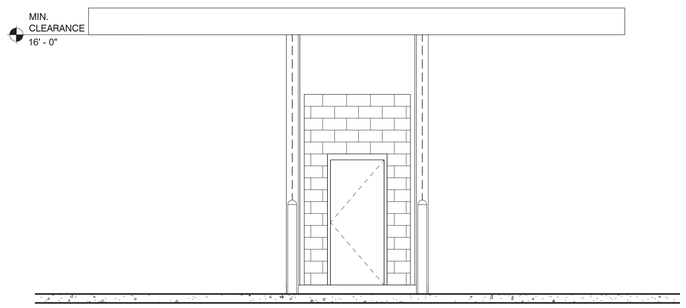


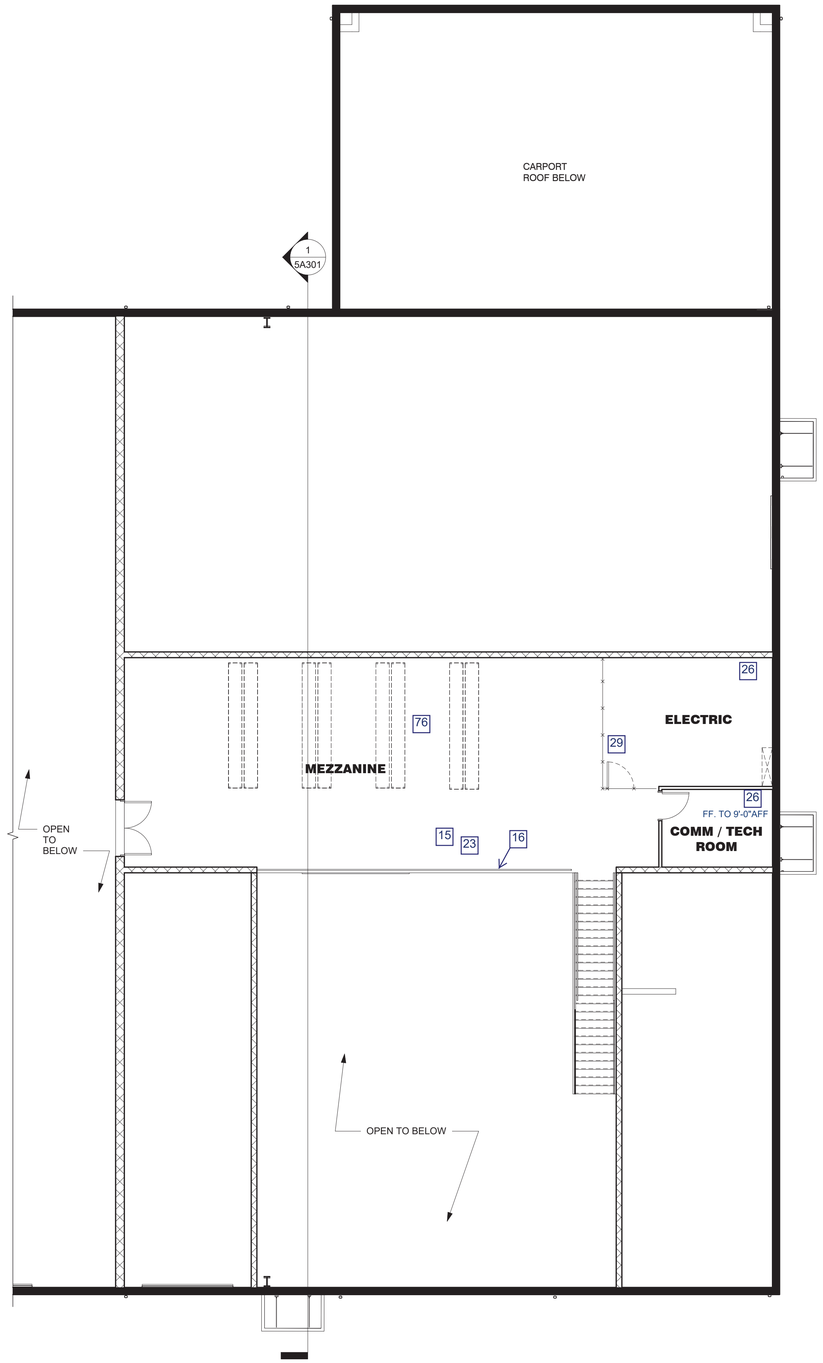
2 5A102 WASH STATION FLOOR PLAN

SCALE: 1/4" = 1'-0" REFER TO CIVIL FOR SITE UTILITIES THIS AREA



3 5A102 WASH STATION ELEVATION

SCALE: 1/4" = 1'-0"



1 5A102 MEZZANINE FLOOR PLAN

SCALE: 1/8" = 1'-0"

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APPROVED BY:
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MEZZANINE FLOOR PLAN

SCALE: As indicated
HORZ:
VERT:
CONTRACT NO:
16068104
SHEET
5A102

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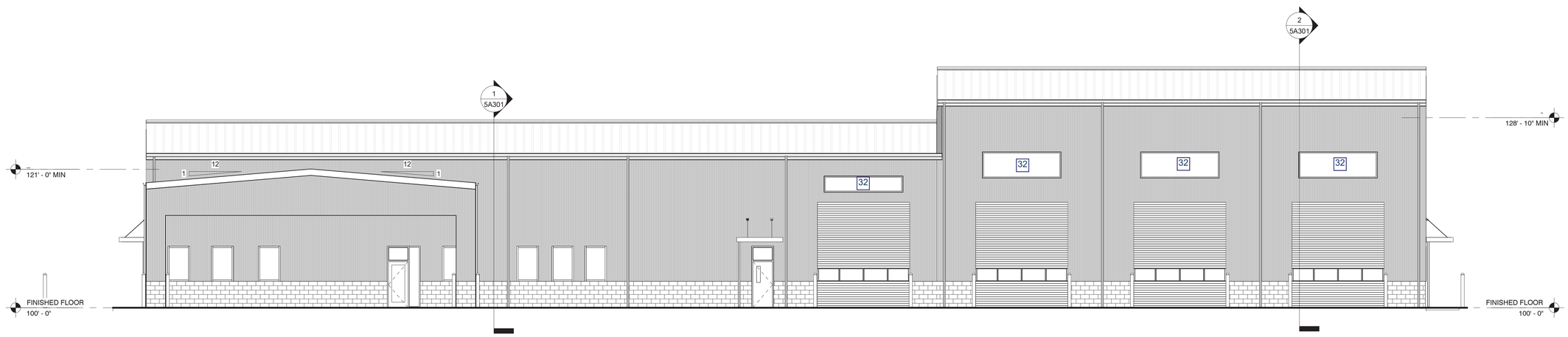
2 / 5A201 **SOUTH ELEVATION**

1/8" = 1'-0"



1 / 5A201 **NORTH ELEVATION**

1/8" = 1'-0"

6/11/2020 4:54:29 PM

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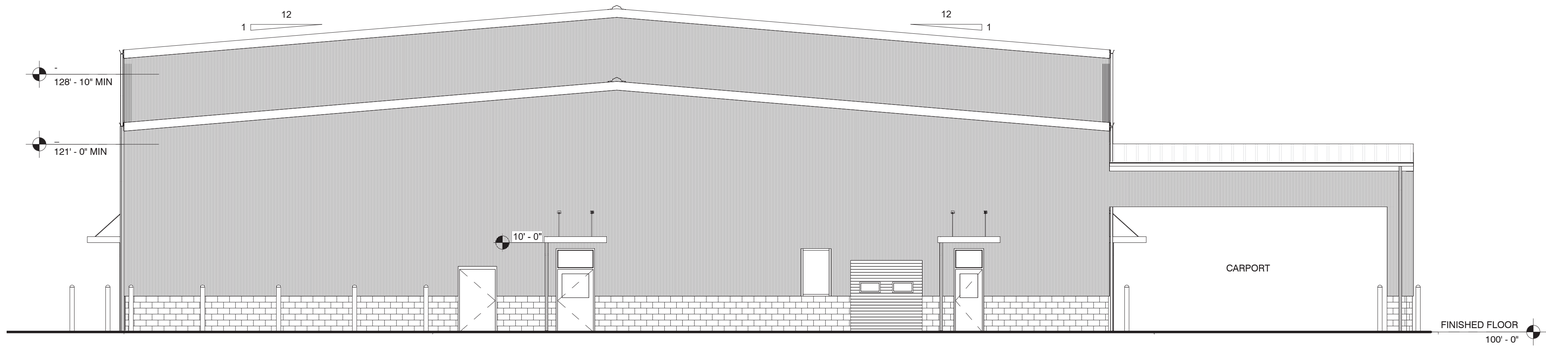
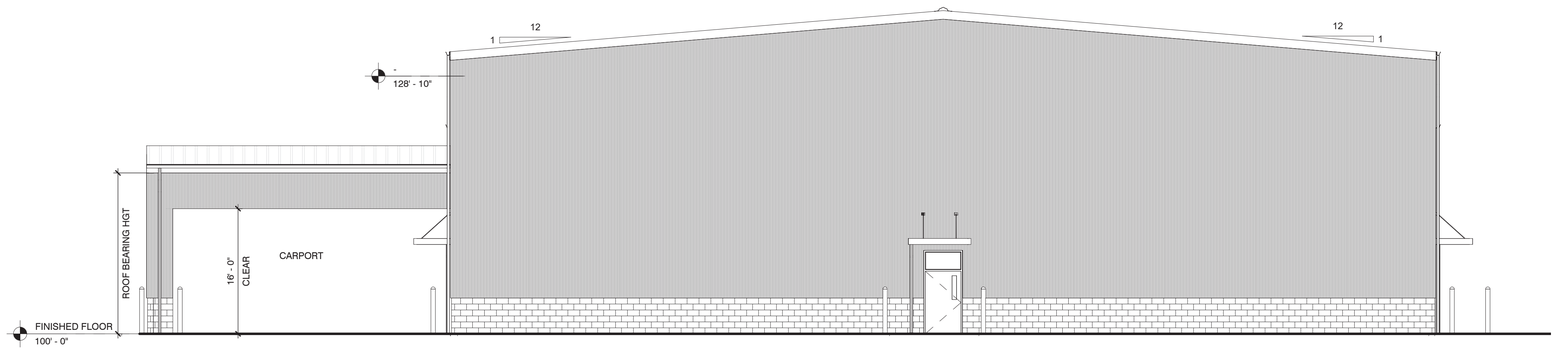
NORTH & SOUTH BUILDING ELEVATION

SCALE:	1/8" = 1'-0"
HORZ:	
VERT:	
CONTRACT NO:	16068104
SHEET	5A201



2 5A202 **EAST ELEVATION**

1/8" = 1'-0"



1 5A202 **WEST ELEVATION**

1/8" = 1'-0"

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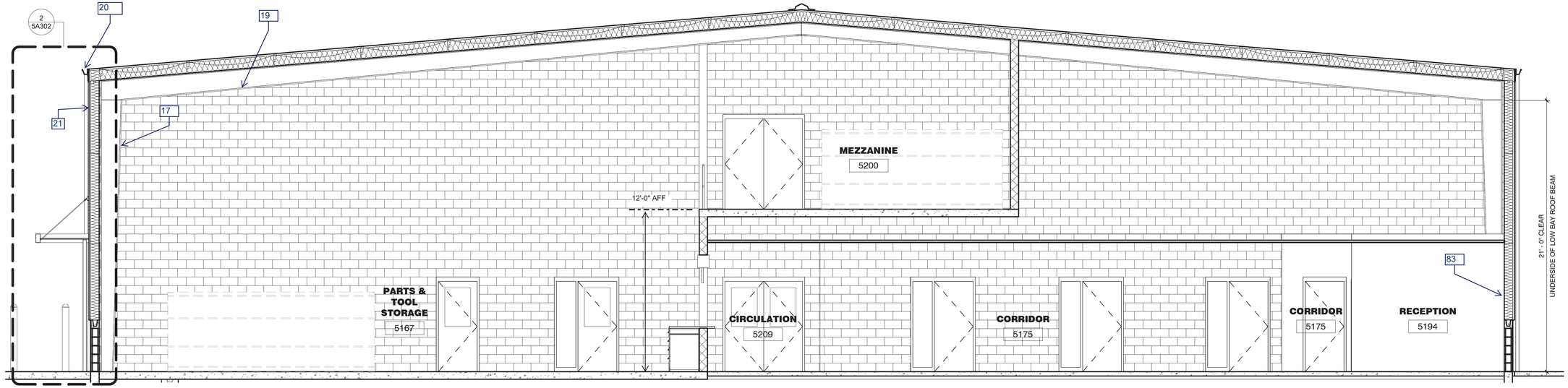
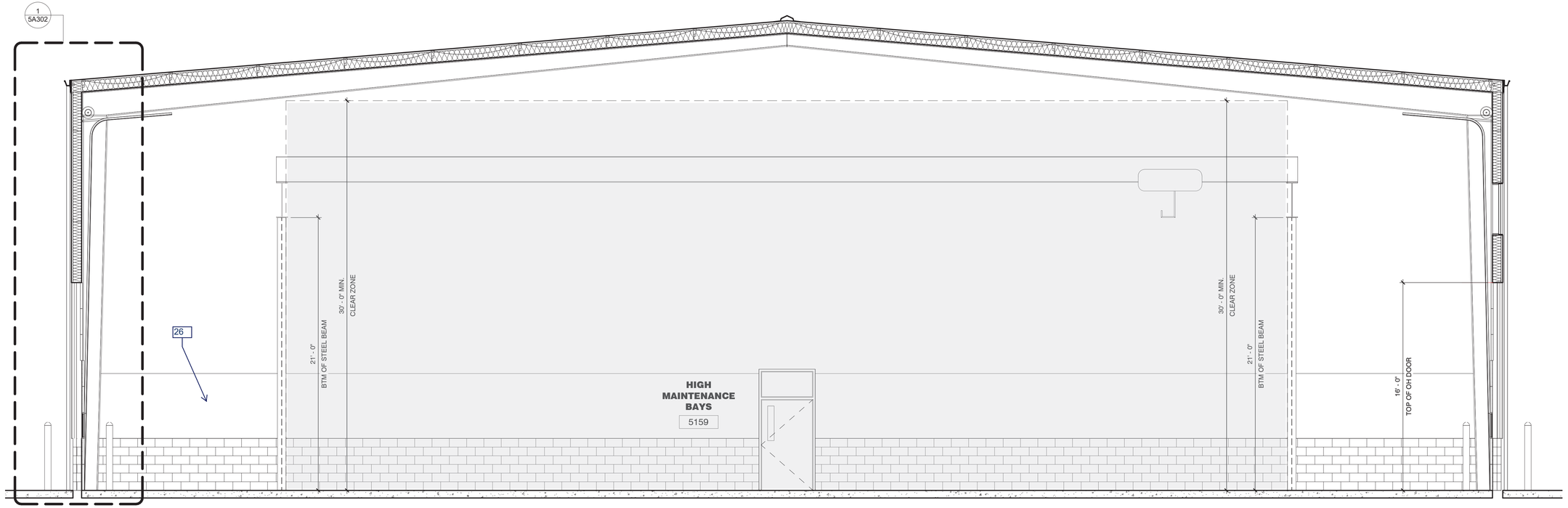
EAST & WEST BUILDING ELEVATIONS

SCALE: 1/8" = 1'-0"
HORZ:
VERT:
CONTRACT NO:
16068104
SHEET
5A202



1 5A301 BUILDING SECTION

SCALE: 1/4" = 1'-0"



2 5A301 BUILDING SECTION

SCALE: 1/4" = 1'-0"

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CHECKED BY: JDEG
APPROVED BY:
F.B. NO. PG.

FLEET MAINTENANCE BUILDING
Greenville Utilities
721 Utility Way, Greenville, NC 27834

BUILDING SECTIONS

SCALE: 1/4" = 1'-0"
HORZ:
VERT:
CONTRACT NO:
16068104
SHEET
5A301

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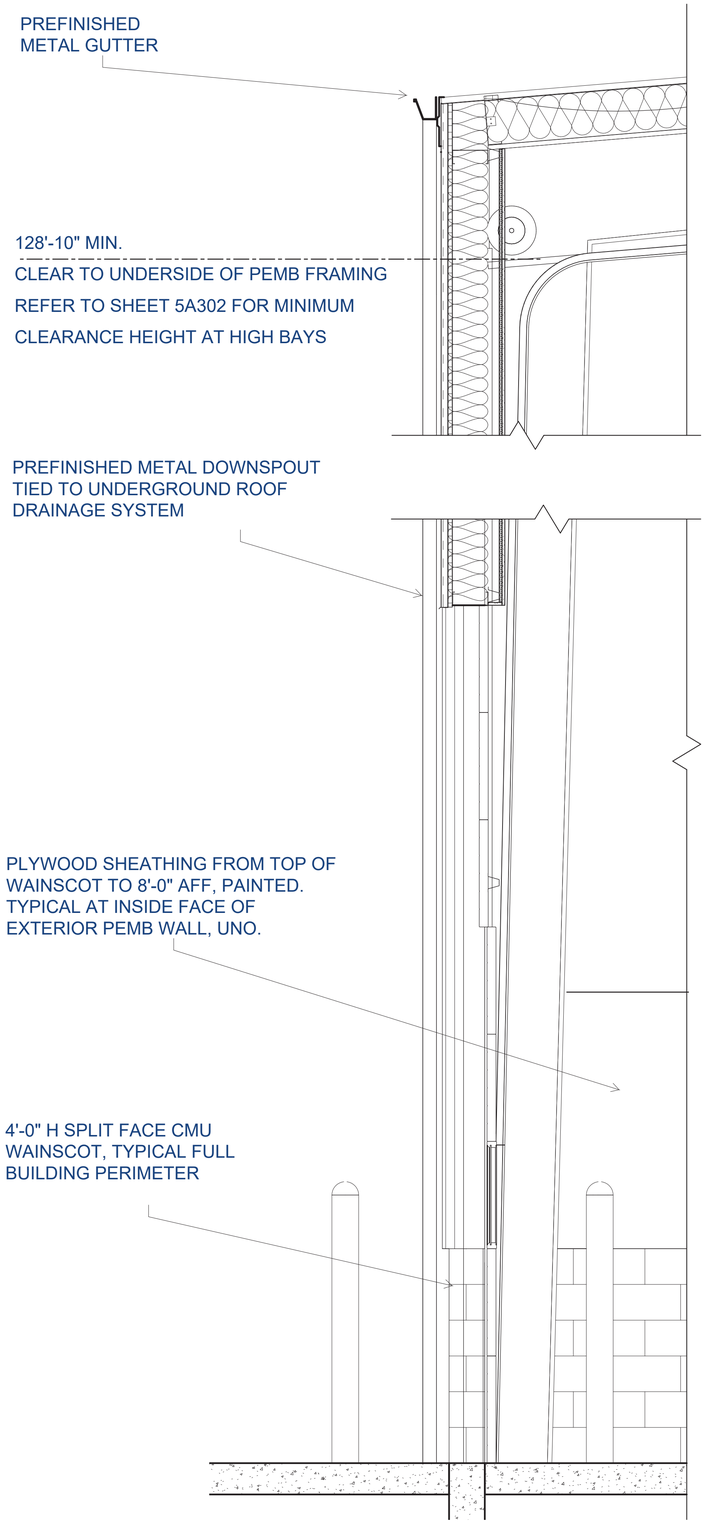
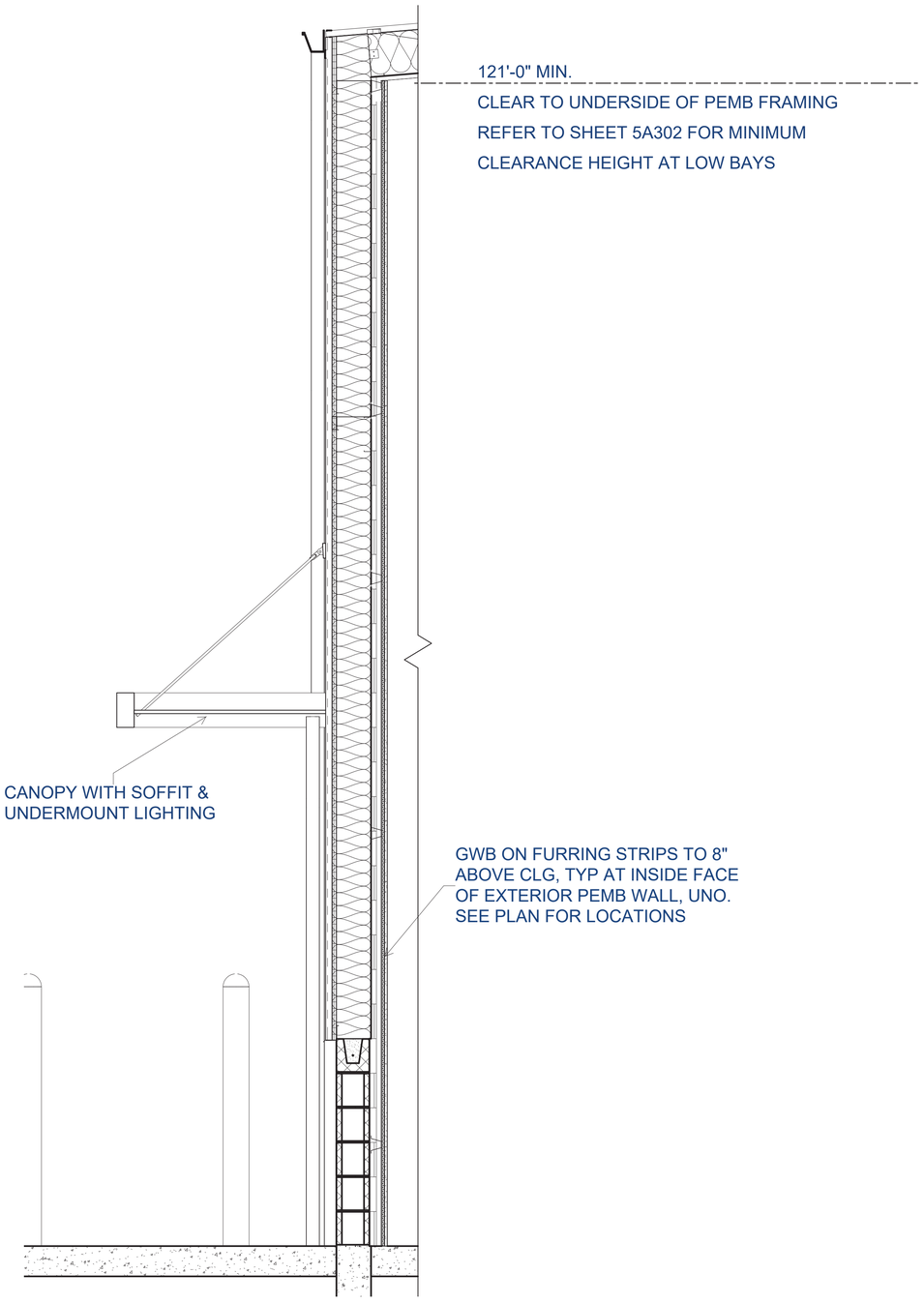


1 5A302 **WALL SECTION**
SCALE: 3/4" = 1'-0"



2 5A302 **WALL SECTION** - OPPOSITE HAND
SCALE: 3/4" = 1'-0"

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APPROVED BY:
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FLEET MAINTENANCE BUILDING
Greenville Utilities
721 Utility Way, Greenville, NC 27834

WALL SECTIONS

SCALE: 3/4" = 1'-0"
HORZ:
VERT:
CONTRACT NO:
16068104
SHEET
5A302

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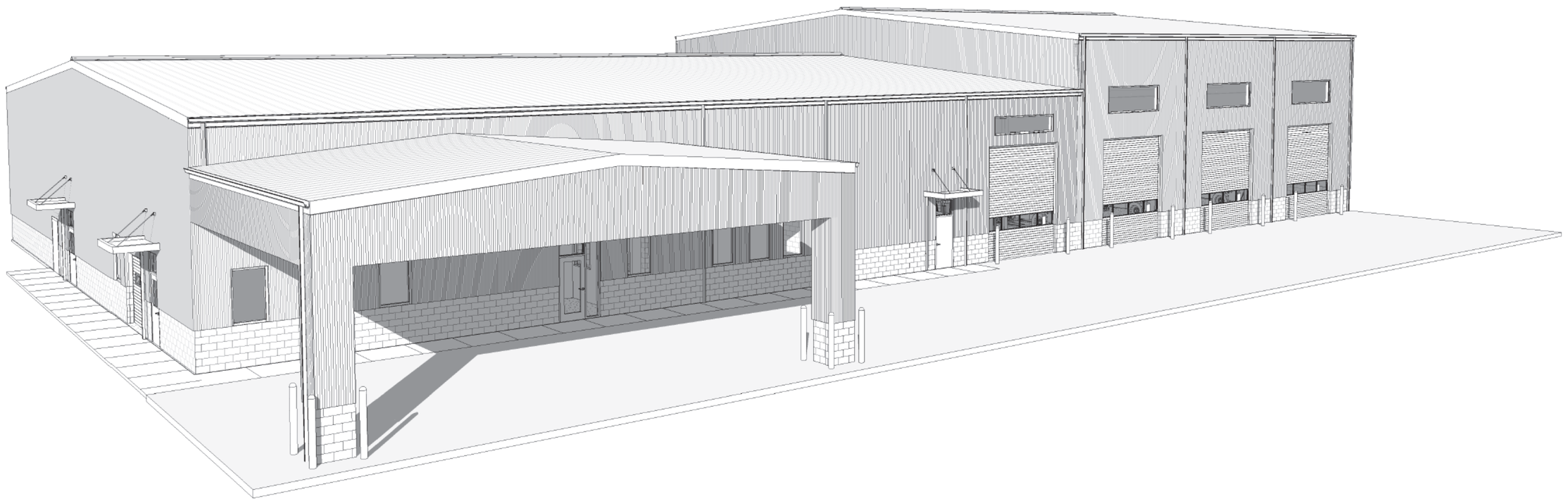

1 / 5A801 **PERSPECTIVE - NORTHEAST CORNER**

SCALE:

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A	RFP CRITERION DRAWINGS	JULY 2020	

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FLEET MAINTENANCE BUILDING
Greenville Utilities
721 Utility Way, Greenville, NC 27834

PERSPECTIVE - NORTHEAST CORNER

SCALE:
HORZ:
VERT:
CONTRACT NO:
16068104
SHEET
5A801

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1 5A801 **PERSPECTIVE - SOUTHWEST CORNER**
SCALE:

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FLEET MAINTENANCE BUILDING
Greenville Utilities
721 Utility Way, Greenville, NC 27834

PERSPECTIVE - SOUTHWEST CORNER

SCALE:
HORZ:
VERT:
CONTRACT NO:
16068104
SHEET
5A802

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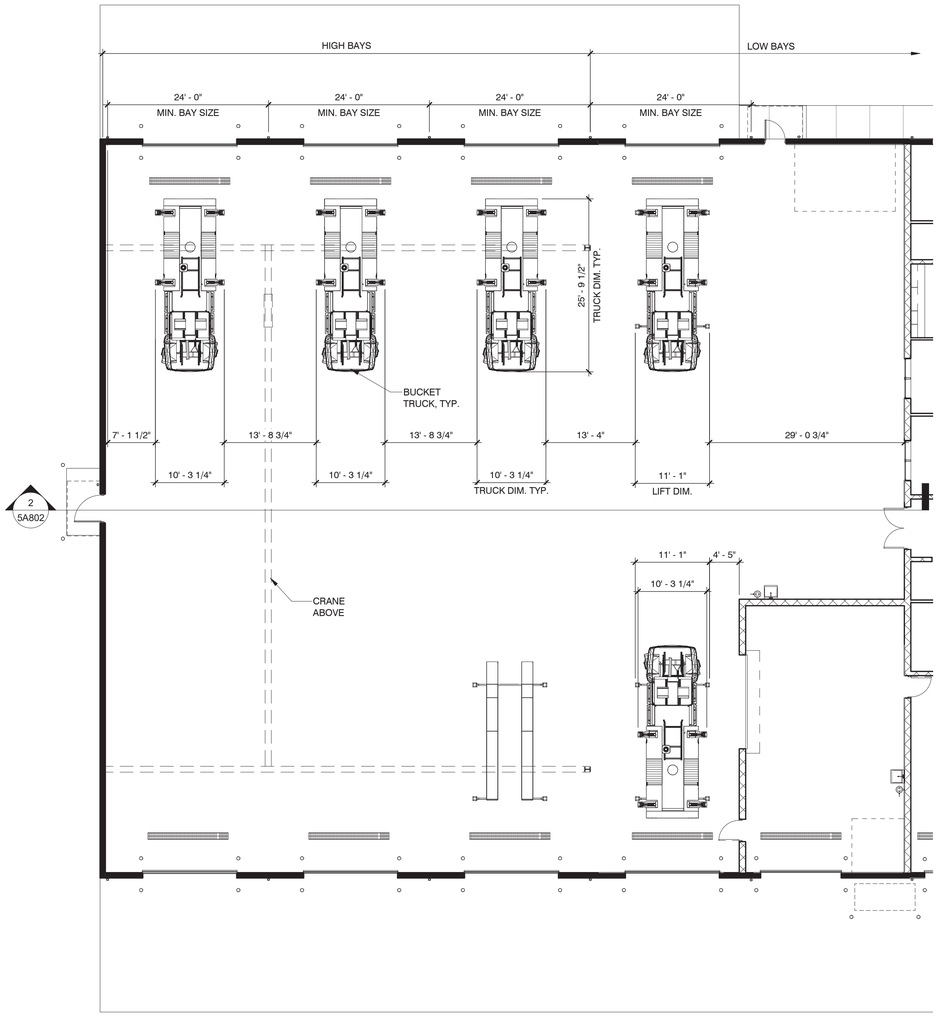
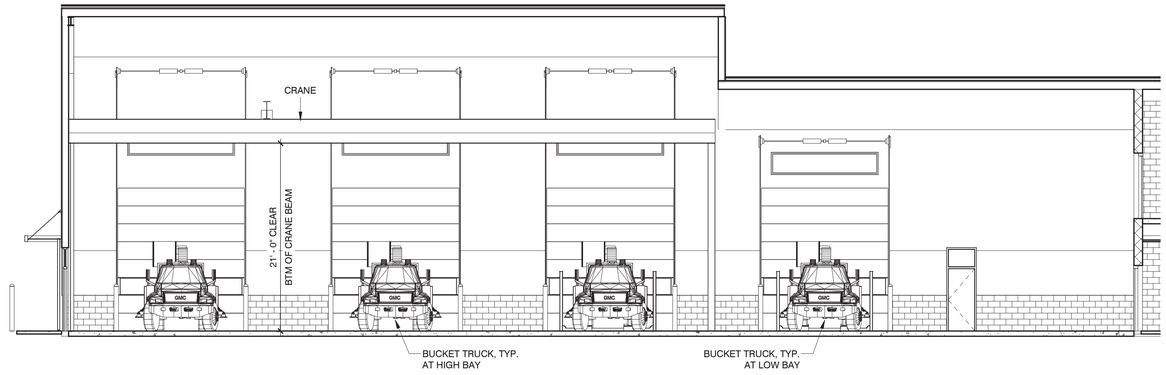


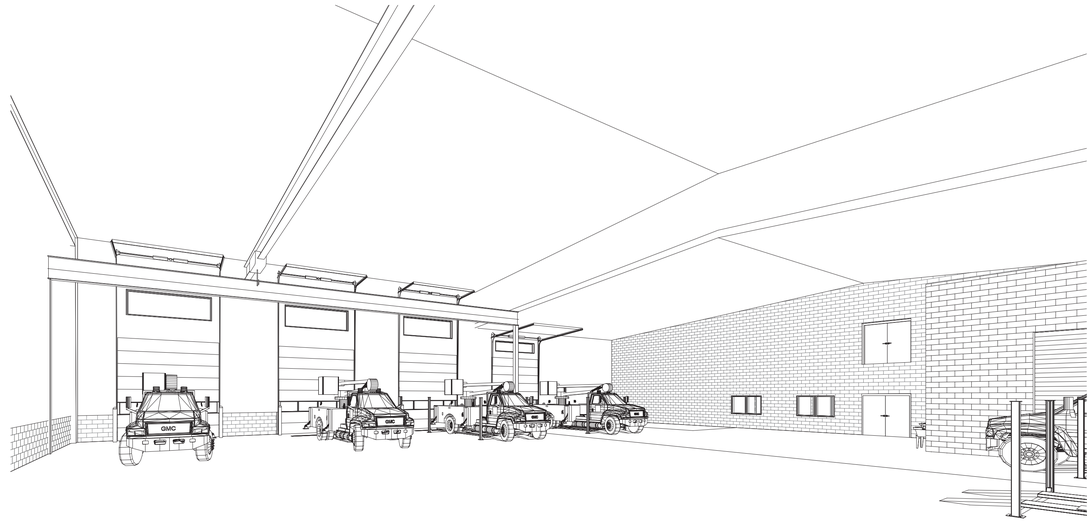
1 5A802 SERVICE VEHICLE CLEARANCE PLAN

SCALE: 3/32" = 1'-0"



2 5A802 BUILDING SECTION - SERVICE BAYS

SCALE: 1/8" = 1'-0"



3 5A802 VEHICLE CLEARANCE 3D VIEW

SCALE:

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A	RFP CRITERION DRAWINGS	JULY 2020	

DATE: JULY 2020
DRAWN BY: Author
CHECKED BY: Checker
APPROVED BY:
F.B. NO. PG.

FLEET MAINTENANCE BUILDING
Greenville Utilities
721 Utility Way, Greenville, NC 27834

SERVICE VEHICLE CLEARANCES & VIEWS

SCALE: As Indicated
HORZ:
VERT:
CONTRACT NO:
16068104
SHEET
5A803

GENERAL NOTES - FINISHES

1. THE INTENT OF THE INTERIOR FINISHES ARE TO ALIGN WITH GUC BUILDINGS 2, 3, & 4. GOALS INCLUDE PROVIDING A COHESIVE EMPLOYEE EXPERIENCE, BRAND MESSAG,E AND A UNIFIED BUILDING CAMPUS.
2. THE INTERIORS MATERIALS SCHEDULE PROVIDES FINISH MATERIAL TAG, DESCRIPTION, MANUFACTURER, STYLE NAMES / NUMBERS, AND SOME INSTALLATION INFORMATION AS A BASIS OF DESIGN.
3. PAINT - THIS SCHEDULE PROVIDES PAINT COLOR AND SHEEN. DIFFERENT PAINT TYPES ARE REQUIRED FOR DIFFERENT SUB-STRATES (I.E. DRYWALL, CONCRETE BLOCK, METAL). CONTRACTOR IS TO REFER TO DRAWINGS FOR SUBSTRATE TYPES AND MANUFACTURER SPECIFICATIONS FOR PAINT TYPE REQUIREMENTS.
4. EGGSHELL PAINT SHEEN 5-10; SEMI-GLOSS SHEEN 50 ON A STANDARD 60 METER GLOSS READING RANGES.
5. ALL INTERIOR MATERIALS ARE TO BE INSTALLED PER MANUFACTURERS' RECOMMENDED BEST PRACTICES AND INSTRUCTIONS. INSTALLATION METHODS MAY VARY BASED ON SUBSTRATE TYPE.
6. ALL HOLLOW METAL DOOR FRAMES TO BE P-28 U.N.O.
7. ALL METAL DOORS TO BE P-28 U.N.O.
8. ALL CEILING PAINT TO BE P-10 UNLESS NOTED OTHERWISE. ALL CEILING/SOFFIT PAINT TO BE FLAT SHEEN.
9. ALL PEMB WALLS IN THE GARAGE & ASSOCIATED SERVICE AREAS, WATER, FLUID STORAGE, PARTS & TOOL STORAGE & MEZZANINE ARE TO HAVE WP-11 INSTALLED. PAINT P-22 UNLESS NOTED OTHERWISE.
10. ALL PEMB WALLS IN THE OFFICE AREAS ARE TO HAVE WP-12 INSTALLED. PAINT AS NOTED ON THE ROOM DATA SHEETS.
11. ALL OFFICES & MEETING ROOM TO HAVE RUBBER BASE (B-1) ON ALL WALLS UNLESS NOTED OTHERWISE.
12. ALL GYPSUM WALLS TO HAVE RUBBER BASE (B-1) UNLESS NOTED OTHERWISE.
13. EXPOSED COLUMNS TO BE PAINTED P-22.
14. WINDOW SILLS TO BE PL-5.
15. MEZZANINE AND STAIR RAILINGS TO BE PAINTED P-28.

FINISH APPLICATION NOTES

THE FOLLOWING NOTES ARE PROVIDED AS A CONVENIENCE TO UNDERSTANDING INSTALLATION DETAILS UTILIZED IN BUILDINGS 2, 3 & 4. THIS REFERENCE SHOULD BE VERIFIED FOR APPLICATION IN THE FLEET MAINTENANCE BUILDING.

A. WP-7 FRP : 4'-0" X 8'-0" SHEETS ARE TO BE INSTALLED IN FULL SHEETS VERTICALLY FROM THE TOP OF FLOOR BASE. SILICONE BUTT JOINT WITH SCRIM ALIGNED. MANUFACTURERS TRIM PIECE AT TOP, BOTTOM AND INSIDE AND OUTSIDE CORNERS. PAINT ABOVE.

B. SV-1 SHEET VINYL INSTALL - HEAT WELD WITH FLASH COVE BASE. INSTALL APPROPRIATE COVE FORMER AND SATIN ALUMINUM OR STAINLESS STEEL TOP TRIM.

C. LEVEL 5 FINISH GYPBOARD REQUIRED WHERE ACCENT PAINT IS CALLED OUT.

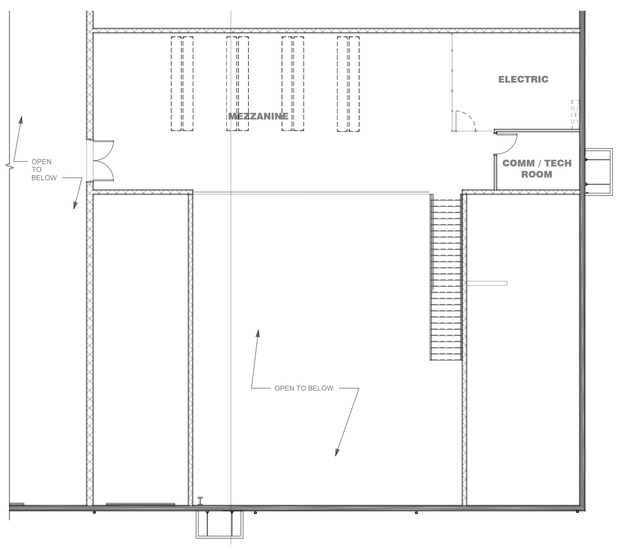
D. WP-11 - THE PANELS SHOULD BE FASTENED TO EACH METAL STUD OR STRUCTURAL GIRT AT 12"CENTERS WITH #8 X 1-½" SIMPSON BUGLE-HEAD SQUARE DRIVE SELF TAPPING SCREWS. THE TOP OF THE PLYWOOD PANEL SHOULD HAVE AN EASED EDGE, SANDED SMOOTH AND PAINTED 2 COATS ON THE FINISHED SIDE.

E. WP-12 - 1/2" TYPE X GYPSUM AND FURRING STRIPS TO BE INSTALLED FULL- HEIGHT TO A 8" MIN. ABOVE CEILING.

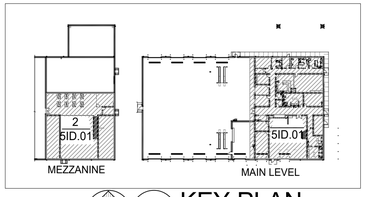
FINISH PLAN LEGEND

XX-## — WALL FINISH SYMBOL

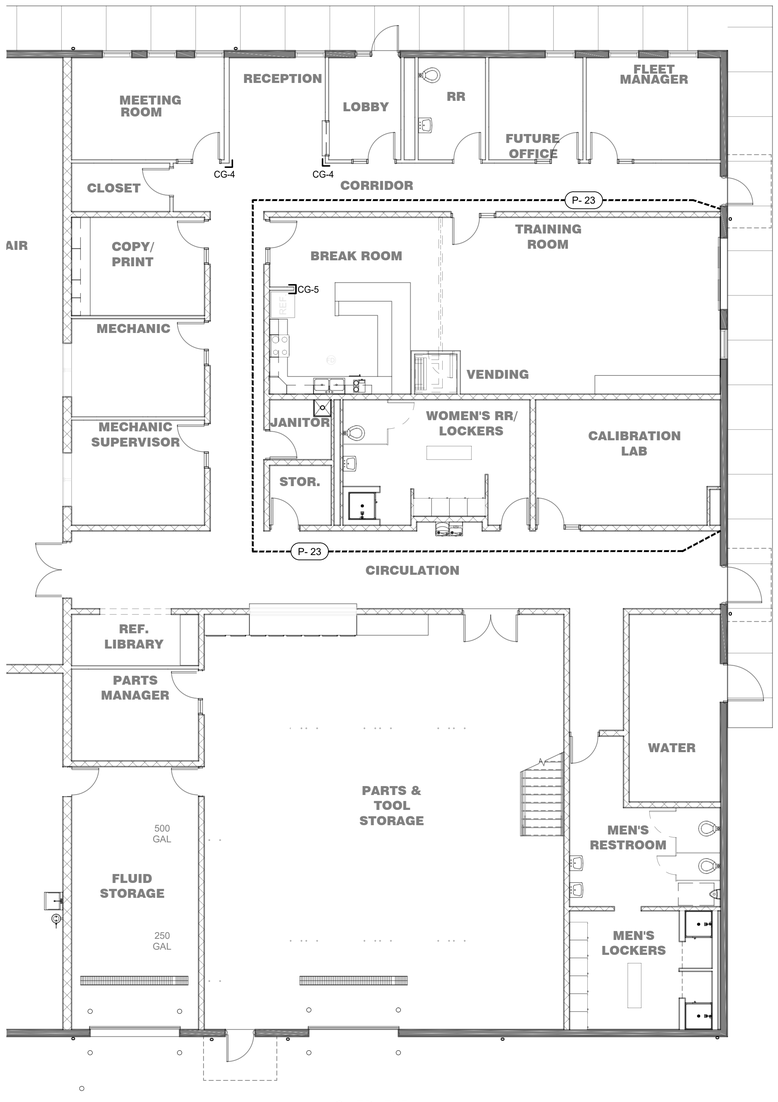
CG-X — CORNER GUARD LOCATION



MEZZANINE LEVEL
2 / 5ID.01 — FINISH FLOOR PLAN
SCALE: 3/32" = 1'0"



3 / 5ID.01 — KEY PLAN
SCALE: NTS



LOWER LEVEL
1 / 5ID.01 — FINISH FLOOR PLAN
SCALE: 1/8" = 1'0"

INTERIORS MATERIALS SCHEDULE

CODE	ITEM DESCRIPTION	
	FLOORING, BASE & TRIM	
B-1	RUBBER FLOOR BASE - GRAY	
	MANUF.	JOHNSONITE
	STYLE NAME/NO:	DC-71
	SIZE:	4" COVE, ⅛" GAUGE
	COLOR:	71 Storm Cloud
	CONTACT:	ROD SEABOLT rseabolt@CDCDIST.com
TR-3	METAL TRIM	
	MANUF.	SCHLUTER TRIM
	STYLE NAME / NO.:	JOLLY PROFILE ANODIZED ALUMINUM
	COLOR:	SATIN ALUMINUM
	SIZE:	AS REQUIRED FOR SPECIFIC TILE
SC-1	SEALED CONCRETE	
SV-1	SHEET VINYL W/ FLASH COVE BASE	
	MANUF.	GERFLOR
	STYLE NAME / NO.:	MIPOLAM ELEGANCE
	COLOR:	0344 NUTMEG
	SIZE:	6'-6" WIDE SHEET GOODS
	INSTALLATION:	REFER TO SCHEDULE NOTE C.
	CONTACT:	KEN THEISSEN ktheissen@gerflorusa.com
	TILE WALLS	
PT-9	PORCELAIN TILE - BACKSPLASH BREAK / KITCHEN	
	MANUF.	TRINITY TILE
	STYLE NAME:	GIA
	COLOR:	SNOW CREST
	SIZE:	4" X 12"
	GROUT:	G-4 POWER GROUT
	NOTE:	INSTALL BRICK PATTERN W/TR-3 ON EXPOSED EDGES
	CONTACT:	JEN WINKLER (937)369-4878 JEN@SOURCEONECONTRACT.COM
G-4	GROUT - BACKSPLASH	
	MANUF.	TEC
	STYLE NAME / NO.:	POWER GROUT/ HIGH PERFORMANCE GROUT
	COLOR:	939 MIST
	SIZE:	3/16" GROUT LINE
	MILLWORK FINISHES	
PL-1	PLASTIC LAMINATE - MAPLE	
	MANUF.:	NEVAMAR
	STYLE:	TEXTURED FINISH
	COLOR:	WM6340T CLEAR MAPLE
	CONTACT:	
PL-2	PLASTIC LAMINATE - DARK GRAY STONE	
	MANUF.:	FORMICA
	STYLE:	PAPER FINISH
	COLOR:	8813-PA TONAL PAPER TERRAZZO
	CONTACT:	WURTHBAER - MIKE MULLER mmuller@wurthbaersupply.com
PL-3	PLASTIC LAMINATE - DARK GREY	
	MANUF.:	FORMICA
	STYLE:	MATTE FINISH
	COLOR:	928-58 MOUSE
	CONTACT:	WURTHBAER - MIKE MULLER mmuller@wurthbaersupply.com
PL-4	PLASTIC LAMINATE - SCRIM	
	MANUF.:	PIONITE
	STYLE:	TEXTURED/SUEDE FINISH
	COLOR:	AT650-SD CAVALCADE SOUTH
	CONTACT:	GERRY ROECK groeck@nchelieu.com
PL-5	PLASTIC LAMINATE - GREY STONE - FOR WINDOW SILLS	
	MANUF.:	WILSONART
	STYLE:	MATTE FINISH
	COLOR:	TITANIUM EV
	ITEM#:	4810-60
	CONTACT:	DONNA ARIAPAD donnaariapad@flaggrinc.com
SS-1	SOLID SURFACE - LIGHT GREY SPECKLE	
	MANUF.:	CORIAN
	COLOR:	SILVER BIRCH
	CONTACT:	OVSCO- BRIAN FORTIN bnan.fortin@ovsco.com
SS-4	QUARTZ - CONCRETE	
	MANUF.:	CORIAN QUARTZ
	COLOR:	DOVE GREY LEATHERED TEXTURE
	CONTACT:	OVSCO- BRIAN FORTIN bnan.fortin@ovsco.com

INTERIORS MATERIALS SCHEDULE

CODE	ITEM DESCRIPTION	
	PAINT FINISHES	
P-1	FIELD PAINT - PALE GRAY	
	MANUF.	PPG
	COLOR:	TINSEL
	MP#:	PPG 1012-3
	FINISH:	EGGSHELL UNLESS NOTED OTHER
P-2	PAINT - MEDIUM LIGHT GRAY	
	MANUF.	PPG
	COLOR:	GRAY FROST
	MP#:	PPG 1012-4
	FINISH:	EGGSHELL UNLESS NOTED OTHER
P-3	PAINT - DARK BLUE	
	MANUF.	PPG
	COLOR:	BLUE FJORD
	MP#:	448-6
	FINISH:	EGGSHELL UNLESS NOTED OTHER
P-4	PAINT - DARK TEAL	
	MANUF.	SHERWIN WILLIAMS
	COLOR:	GRAND CANAL
	MP#:	SW 6488
	FINISH:	EGGSHELL UNLESS NOTED OTHER
P-5	PAINT - DARK GREEN	
	MANUF.	SHERWIN WILLIAMS
	COLOR:	SURF GREEN
	MP#:	SW 6473
	FINISH:	EGGSHELL UNLESS NOTED OTHER
P-10	PAINT - WHITE : CEILINGS	
	MANUF.	PPG
	COLOR:	CEILING WHITE
	MP#:	
	FINISH:	FLAT
	SEMI- GLOSS PAINTS	
P-21	PAINT - PALE GRAY	
	MANUF.	PPG
	COLOR:	TINSEL
	MP#:	PPG 1012-3
	FINISH:	SEMI-GLOSS
P-22	PAINT - MEDIUM LIGHT GRAY	
	MANUF.	PPG
	COLOR:	GRAY FROST
	MP#:	PPG 1012-4
	FINISH:	SEMI-GLOSS
P-23	PAINT - DARK BLUE	
	MANUF.	PPG
	COLOR:	BLUE FJORD
	MP#:	448-6
	FINISH:	SEMI-GLOSS
P-24	PAINT - DARK TEAL	
	MANUF.	SHERWIN WILLIAMS
	COLOR:	GRAND CANAL
	MP#:	SW 6488
	FINISH:	SEMI-GLOSS
P-25	PAINT - DARK GREEN	
	MANUF.	SHERWIN WILLIAMS
	COLOR:	SURF GREEN
	MP#:	SW 6473
	FINISH:	SEMI-GLOSS
P-28	PAINT - DOOR FRAMES (U.N.O.)	
	MANUF.	PPG
	COLOR:	VOLCANIC ASH
	MP#:	555-6
	FINISH:	SEMI-GLOSS
	WALLCOVERING / WALL PROTECTION	
WP-7	FRP - FIBER REINFORCED PLASTIC PANEL	
	MANUF.:	MARLITE
	STYLE:	SYMMETRIX FRP W/ SMART SEAM & SANI-SEAL TRIM
	COLOR:	WHITE C100-G44
	ITEM#:	C100-G44
	INSTALLATION:	SEE SCHEDULE NOTE A
	CONTACT:	MARK SCHNEIDER mark@tnstateplastics.com
WP-11	STYLE:	½" EXT. CDX PLYWOOD SHEATHING
	COLOR:	PAINTED SEMI-GLOSS
	INSTALL:	40" - 90" A.F.F.
		REFER TO SCHEDULE NOTE E.
WP-12	STYLE:	½" TYPE-X GYPSUM ON FURRING STRIPS
	COLOR:	PAINTED SEMI-GLOSS
	INSTALL:	FULL HT TO 8" MIN ABOVE FINISHED CEILING
	CORNER GUARDS	
CG-4	MANUF.:	CS SPECIALTIES
	STYLE:	CO-8 90 DEGREE CORNER
	SIZE:	8'-0" HEIGHT
	FINISH:	#4 SATIN STAINLESS FINISH
	CONTACT:	BWA SOUTH MELISSA HECKMAN Melissat@bwasouth.com
CG-5	MANUF.:	CS SPECIALTIES
	STYLE:	SCO-8 CHANNEL GUARD
	SIZE:	8'-0" HEIGHT - VERIFY WALL THICKNESS
	FINISH:	#4 SATIN STAINLESS FINISH
	CONTACT:	BWA SOUTH MELISSA HECKMAN Melissat@bwasouth.com

PRELIMINARY
NOT
RELEASED FOR CONSTRUCTION

DESIGN DETAILS interiors group

your trusted advisor consultants engineers architects planners

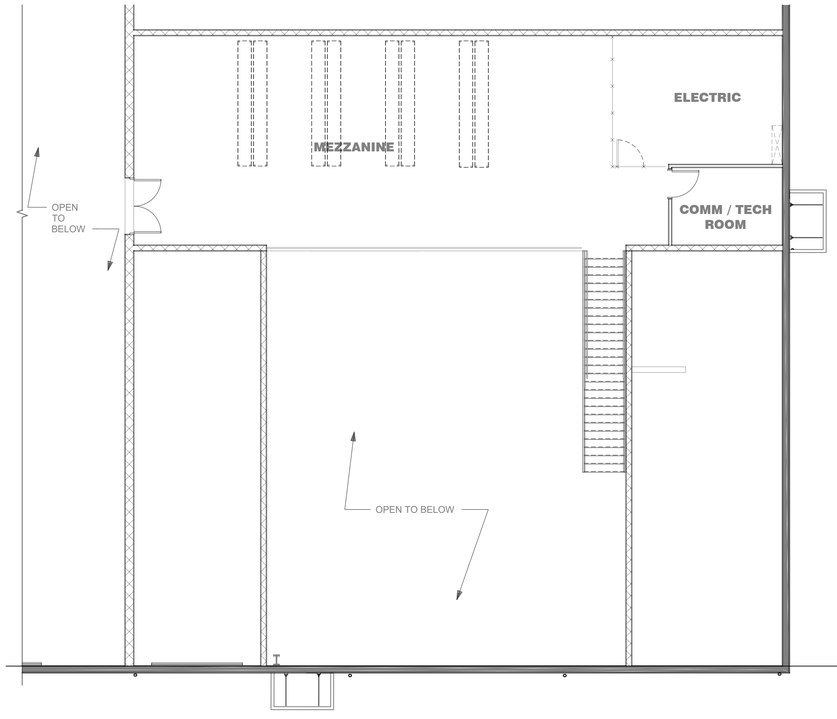
REV	REVISION	DATE	BY
A	RFP CRITERION DRAWINGS	JULY 2020	

SCALE: AS SHOWN
DATE: 05/27/20
DESIGNED BY: ATS
DRAWN BY: ATS
CHECKED BY: ATS

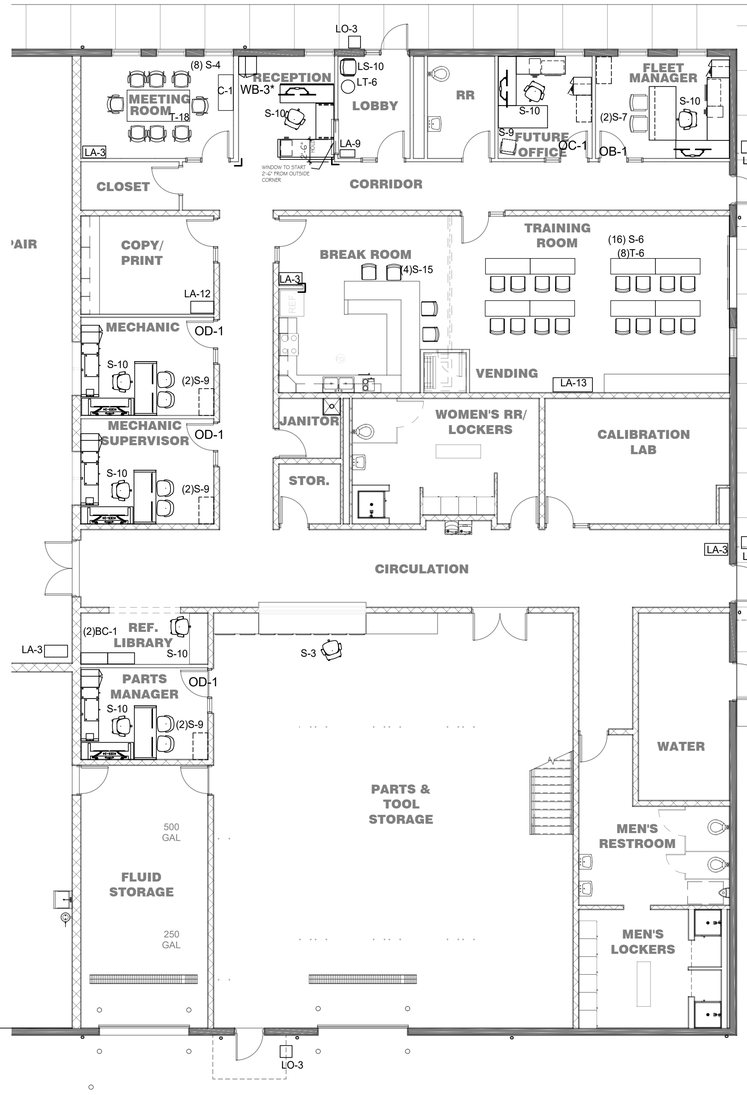
FLEET MAINTENANCE BUILDING
Greenville Utilities
721 Utility Way, Greenville, NC 27834

INTERIOR FINISHES

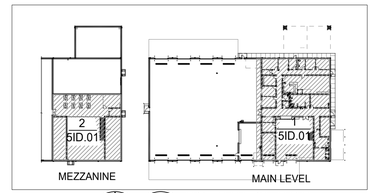
PROJECT NO:
16068104
DRAWING NAME
INTERIOR FINISHES
SHEET
5ID.01



MEZZANINE
2 / 5ID.02 FURNITURE PLAN
SCALE: 1/8" = 1'0"



MAIN LEVEL
1 / 5ID.02 FURNITURE PLAN
SCALE: 1/8" = 1'0"



3 / 5ID.02 KEY PLAN
SCALE: NTS

FURNITURE FOR REFERENCE ONLY

PRELIMINARY
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RELEASED FOR CONSTRUCTION

DESIGN DETAILS interiors group

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REV	REVISION	DATE	BY
A	RFP CRITERION DRAWINGS	JULY 2020	

SCALE: AS SHOWN
DATE: 05/27/20
DESIGNED BY: ATS
DRAWN BY: ATS
CHECKED BY: ATS

FLEET MAINTENANCE BUILDING
Greenville Utilities
721 Utility Way, Greenville, NC 27834

FURNITURE PLAN

PROJECT NO:
16068104
DRAWING NAME
FURNITURE
SHEET
5ID.02

C:\USERS\ANN\DROPBOX\DD_GUC 2020\BLDG 5\DD_ DRAWINGS\GUC_BLDG 5_FIN CD.DWG — 5ID.02 — 7/8/2020 12:15:31 PM — ANN SCHRADER

Greenville Utilities

FLEET MAINTENANCE BUILDING SIGNAGE & WAYFINDING

CRITERION DOCUMENTS PACKAGE

PREPARED JULY 2020

BROWNSTONE DESIGN

your trusted advisor consultants

POTENTIAL BIDDER QUALIFICATIONS

A. ALL POTENTIAL BIDDERS: Must submit examples of three to five similar projects, completed under the bidding company's name, within a period of three years prior to the date of this bid. This submittal is to include both photographs and shop drawing examples. Potential bidders must also submit a written statement regarding their qualifications as they directly relate to this project along with their bid.

B. ALTERNATE MATERIALS AND METHODS: All bids are to be based directly on the materials and fabrication techniques indicated in this drawing package. No alternates will be considered as part of the base bid. Any alternates suggested by the potential bidder must be quoted separately as alternates and must be accompanied by a complete description of the proposed alternate in order to be considered.

QUALITY ASSURANCE

A. LABELING: There shall be no visible labels, manufacturer's or otherwise, code permitting, on the completed signs. If labels are required, a sample label and intended location must be submitted for Designer review, prior to application.

B. STOCK: All materials, hardware, electrical components, finishes, etc. used to fabricate any and all sign components shall be "NEW" (not previously used or operated in any other application) and from the most recent original manufacturer's production run/supply and appropriately matched to the service conditions required of the site.

C. ARTWORK: Digital Illustrator artwork will be provided by the designer and/or the Owner. All enlarging and reducing and message input is the responsibility of the Sign Contractor.

D. EXECUTION: Problems such as messages being too long to fit into the required formats, difficult logo or logo-type components to reproduce accurately, etc., must be brought to the attention of the Designer & Owner, prior to execution. It is required that the Sign Contractor not resolve these kinds of discrepancies on his own.

E. OWNERSHIP: All graphic designs created by the Designer and/or Owner for this project are to be used exclusively for this project. The Sign Contractor must receive express written permission from both the Designer and Owner for any use other than for the completion of this project including self-promotion and publication. It is required that all original artwork furnished by the Owner be returned upon completion of this project.

F. ACCEPTANCE: All work shall be complete in every respect and satisfactory to all governing legislative authorities and building codes, the Owner and the Designer.

SUBMITTALS

A. SHOP DRAWINGS: Two (2) printed sets and two (1) digital, pdf sets of detailed shop drawings (plans, sections, elevations and scale drawings) are to be submitted. One printed set and one digital set to the Construction Manager and the other two to Designer for review prior to production. These drawings are to show/indicate all materials, finishes, construction and fastener details, lighting, and installation detailing of artwork and signage structure, including locations of all material seams (finished and unfinished). Additional drawing(s) may be requested by the Designer, at the sign contractor's expense to further indicate items in question.

B. PRODUCT DATA: Submit manufacturer's technical data, installation instructions and cleaning instructions for each type of sign and/or fixture required.

C. SPECIFIC SAMPLES: Submit four (4) 6"x6" samples of all actual material to be used for each different finish surface, (each color and texture) coated to match the proper color texture and finish as for each indicated, to show the quality of fabrication and design. If there are material seams or joints in the sign cabinet, a sample of a continuously welded, ground, filed, and smoothed seam with the correct indicated finish(s) applied must be submitted for Designer review. Completed and installed components will be evaluated based on these submittals.

D. STRUCTURE: Design of installation, internal structure, mounting assemblies and foundations by Sign Contractor. Sign Contractor shall submit two sets of comprehensive shop drawings incorporating an adequate foundation or mounting structure for all sign components given site conditions. The sign contractor shall at his expense submit calculations, stamped by the appropriate Engineer registered in the state of Final Installation for all structural members, including foundations for Owner's review.

E. ELECTRICAL REQUIREMENTS: Sign Contractor shall provide at the earliest possible time the specific electrical requirements (if any) to the Owner.

MATERIALS

A. ALUMINUM SHEET: Provide aluminum sheet of alloy and temper recommended by the aluminum producer or finisher for the type of use and finish indicated, and with not less than the strength and durability properties specified in ASTM B109 for 5005-H15.

B. ALUMINUM EXTRUSIONS: Provide aluminum extrusions of alloy and temper recommended by the aluminum producer or finisher for the type of use and finish indicated, and with not less than the strength and durability properties specified in ASTM B-221 for 6063-T5H

C. PVC: Provide primed and painted PVC materials as required to meet the requirements of the permanent installation. All PVC edges and corners are to be chamfered, smooth and finished to match.

D. PHOTOPOLYMER: Provide primed and painted photopolymer materials as required to meet the requirements of the permanent installation.

E. STRUCTURAL STEEL: Provide internal structural steel as required to meet the requirements of the permanent installation.

F. PRINTED WALLPAPER SUBSTRATE: Wallpaper substrate is to be Ultraflex systems Suede Number 59. Any alternates are to have a comparable warranty and are to be submitted for approval.

G. LED LIGHTING: All LED lighting is to be Gelcore Tetra Power White XL LED lighting. It is to have the 3 led's per foot option
Contact: Gelcore Headquarters
6180 Halle Drive, Valley View, Ohio 44125-4635, Phone (216) 606-6555
Kentucky Rep: Mark Kelly (216) 513-8912

H. FASTENERS: Unless otherwise indicated, use concealed fasteners fabricated from metals that are non-corrosive to either the signage materials or the mounting surface.

FABRICATION

A. GENERAL: Provide sign copy to comply with the requirements indicated for sizes, styles, spacing, content, positions, materials, finishes, and colors of letters, numbers, symbols and other graphic devices.

B. SIGNAGE/CABINET: Structural design shall utilize a unitized, self-supportive framing. Fabricate cabinet, exposed faces and graphic devices to size and style indicated and produce surfaces free from oil canning, warping, distortion or any irregularities or inconsistencies. Include internal bracing for stability and attachment of mounting accessories as required.

C. ALUMINUM SHEET: Not less than 0.125" thick unless noted otherwise. Fabricate by the HELIARC or MIG. welding process with all visible seams continuously welded, filled and ground smooth, unless the seam occurs along a color break. Then a clean butt joint with concealed backing channel and plug weld is acceptable upon receipt of an owner approved sample, to match surrounding material finish. All bends, curves and folds to be geometrically correct and produced by a consistent mechanical method unless approved otherwise by Designer.

FINISHES

A. COLORS AND SURFACE TEXTURES: For exposed signage materials with applied colors, or other characteristics related to appearance, provide color matches indicated, or if not indicated, as selected and reviewed by the Designer.

B. PIGMENTED FINISH (PAINT): Provide manufacturer's standard pigmented finish system consisting of prime coat(s) and finish coat(s), to a chemically cleaned and inhibited non-directional mechanical finish.

C. APPLICATION: All applications of color/coatings are to be equal and of consistent covering with no "streaking", "spotting", "gradation" or other variations within and from each similar application.

D. ULTRA-VIOLET/FADING PROTECTION: Contractor shall utilize materials, coatings and processes to minimize as much as possible any noticeable fading of pigmented coatings. A 2 part acrylic polyurethane paint is a minimum requirement if note specified otherwise.

INSTALLATION

A. Signage Contractor shall be responsible for determining the erection and dismantling of all barricade or protective coverings necessary to safeguard the public and property during the performance and duration of his work.

B. Install sign units where specified, level and plumb with sign surfaces flush and free from distortion or other defects in appearance. Signage units shall be anchored permanently to existing ceiling, structure, finished grade, wall facade, or fixture as appropriate.

C. Sign Contractor shall be responsible for any electrical connections. On site excavations will require a utilities (B.U.D) survey and require that the fabricator use vacuum excavation techniques so as not to disturb any existing site utilities. Repairs to any damage to existing utilities during excavation are the sole responsibility of the fabricator.

DESIGN DRAWINGS

A. These drawings/specifications are for the sole purpose of design intent only and not intended for construction. The fabricator will be required to submit shop drawings for review and for the construction of all elements.

B. Resulting working drawings, shop drawings and contract documents are the sole responsibility of the Fabricator in every respect.

C. The Designer shall review the shop drawings only for conformance with general design intent, and will in no way be responsible or liable for any results of construction from working drawings, material selection, shop drawings, contract documents, or any other agreements.

TERMINOLOGY

A. OWNER: Greenville Utilities

B. CRITERIA ARCHITECT: CT Consultants, Inc.
4420 Cooper Road, Suite 200
Cincinnati OH 45242

C. DESIGNER: Brownstone Design
217 West Ninth Street, Cincinnati, Ohio 45202
Telephone: (513) 723-1881

D. CONTRACTOR / FABRICATOR: The persons and/or company receiving compensation and bound by agreement with the Owner to have responsibility to provide goods and services as described within the design intent drawings and as amended in writing by the Owner.

Greenville Utilities

FLEET MAINTENANCE BUILDING SIGNAGE & WAYFINDING

CRITERION DOCUMENTS

ENVIRONMENTAL GRAPHICS
BROWNSTONE DESIGN INC.
217 W. 9TH STREET
CINCINNATI, OHIO 45202

NOT FOR CONSTRUCTION
THE CONTRACTOR AND/OR THE SIGN FABRICATOR IS TO PROVIDE SHOP DRAWINGS FOR REVIEW & APPROVAL

BROWNSTONE DESIGN

your trusted advisor consultants

GENERAL SPECIFICATIONS

Job No. 0326
Scale AS NOTED
5 EG1.1
Date JULY 2020 DRAFT FOR REVIEW
CRITERION DOCUMENTS

Greenville Utilities

IMPORTANT NOTE THIS IS NOT TO BE CONSIDERED AN APPROVED ARTWORK FILE. ACTUAL, APPROVED ARTWORK IS TO BE PROVIDED BY THE CLIENT. ANY AND ALL CHANGES AND/OR ALTERATIONS ARE TO BE SUBMITTED FOR THE CLIENT'S WRITTEN APPROVAL. THIS IS TO BE DONE FOR EACH, INDIVIDUAL CASE. THIS IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND/OR SIGNAGE FABRICATOR.

NOTE THAT FOR FURTHER INFORMATION SPECIFIC TO BRANDING APPLICATIONS ALSO REFER TO THE GREENVILLE UILITIES COMMISSION CORPORATE BRANDING STANDARDS. BRANDING SPECIFIC QUESTIONS CAN BE ANSWERED BY CONTACTING:

ERIN WALTON
COMMUNICATIONS SPECIALIST
GREENVILLE UTILITIES COMMISSION
(252) 551-3390

Greenville Utilities

A 2.1 PROJECT LOGO

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz 1234567890

FRUTIGER BLACK ITALIC

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz 1234567890

FRUTIGER BOLD ITALIC

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz 1234567890

UNIVERS CONDENSED BOLD (TYPICALLY WITH A +10 TRACKING)

B 2.1 PROJECT FONTS

GUC BLUE 1
PMS: 2945
3M VINYL: TBD
MATHEWS PAINT #
MP2171 , AMERITECH BLUE
SATIN FINISH

GUC BLUE 2
PMS: N/A
3M VINYL: LIGHT NAVY 7725-197
MATHEWS PAINT #
MP2306, CZECH FLAG BLUE
SATIN & GLOSS FINISHES
ROMARK ACRYLIC #
321-504

EMERGENCY RED COLOR
PMS: N/A
3M VINYL: TBD
MATHEWS PAINT #
MP15195, RED RAGE
SATIN FINISH

TYPICAL BLACK
MATHEWS PAINT:
BLACK
PAINT #MP30132
SATIN FINISH

GUC GREEN 1
PMS: 327
3M VINYL: TBD
MATHEWS PAINT #
MP14688, LOS CABOS TEAL
SATIN FINISH
ROMARK ACRYLIC #
321-901

GUC GREEN 2
PMS: N/A
3M VINYL: TBD
MATHEWS PAINT #
SATIN FINISH

FROSTED VINYL
PMS: N/A
3M: FROSTED VINYL
FROSTED CRYSTAL
7725SE-314

3M REFLECTIVE VINYLS
3M TYPICAL REFLECTIVE
WHITE VINYL 680CR

3M TYPICAL REFLECTIVE
BLUE VINYL (TBD)

NOTE THAT THE FINAL FINISHES HAVE BEEN DETERMINED IN PHASE ONE OF THE OVERALL PROJECT. ALL OF THE FINISHES AND MATERIALS THAT ARE USED IN THIS PHASE OF THE OVERALL PROJECT ARE TO MATCH THE FINISHES AND MATERIALS USED IN THE FIRST PROJECT PHASE. NO EXCEPTIONS WILL BE PERMITTED.

NOTE THESE BLOCKS ARE A COMPUTER REPRESENTATION OF THE COLORS. AS SUCH THEY ARE ONLY A CLOSE APPROXIMATION OF THE ACTUAL COLORS. PLEASE REFER TO THE ACTUAL PANTONE, MATHEWS PAINT AND 3M VINYL SWATCHES FOR A MORE ACCURATE COLOR MATCH. NOTE ALTERNATIVES TO THE 3M VINYL SYSTEM WILL REQUIRE THAT THE FABRICATOR SUBMIT 6" SQUARE SAMPLES FOR APPROVAL. ALSO NOTE THAT ANY SUCH MATERIALS MUST HAVE A COMPARABLE WARRANTY. ALTERNATES TO THE MATHEWS PAINT SYSTEM WILL NOT BE CONSIDERED.

IMPORTANT NOTE THAT THE SIGN FABRICATOR IS TO "SUBMIT FOUR (4) 6"X6" SAMPLES OF ALL ACTUAL MATERIAL, PAINT, OR VINYL ON THE SPECIFIC SUBSTRATE TO BE USED FOR EACH DIFFERENT FINISH SURFACE." IF SAME FABRICATOR THAT WAS CONTRACTED FOR PHASE ONE IS CONTRACTED FOR PHASE TWO THIS WILL NOT BE REQUIRED UNLESS THERE IS SOME UNFORSEEN QUESTION ABOUT A SPECIFIC FINISH OR MATERIAL.

C 2.1 PROJECT COLOR & MATERIALS PALETTE

Greenville Utilities

FLEET MAINTENANCE BUILDING SIGNAGE & WAYFINDING

CRITERION DOCUMENTS

ENVIRONMENTAL GRAPHICS
BROWNSTONE DESIGN INC.
217 W. 9TH STREET
CINCINNATI, OHIO 45202

NOT FOR CONSTRUCTION
THE CONTRACTOR AND/OR THE SIGN FABRICATOR IS TO PROVIDE SHOP DRAWINGS FOR REVIEW & APPROVAL

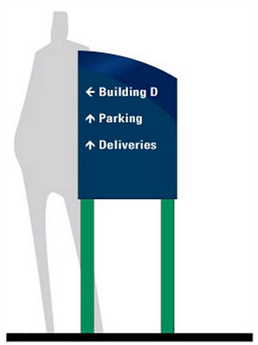
BROWNSTONE DESIGN

your trusted advisor consultants

PROJECT STANDARDS

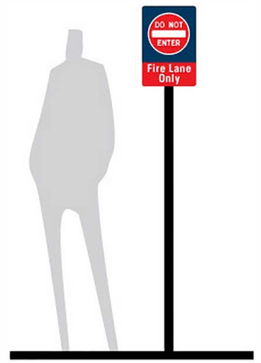
Job No. 0326
Scale AS NOTED
Date JULY 2020 DRAFT FOR REVIEW
CRITERION DOCUMENTS

5 EG2.1



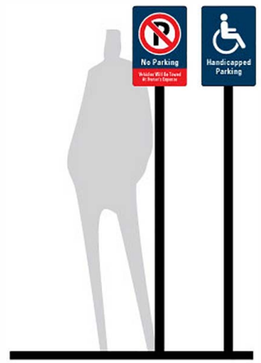
A 3.1 **SECONDARY VEHICULAR DIRECTIONAL SIGN**

SVD



B 3.1 **MISC REGULATORY SIGNAGE ELEMENTS**

REG 1-9



C 3.1 **MISC DESIGNATED PARKING SIGNAGE**

PKG1-9



D 3.1 **SECONDARY BUILDING ENTRANCE ELEMENT**

SBE1



E 3.1 **CONTROL POINT SIGNAGE**

CPS1-2



NOTE THAT THERE ARE SEVERAL ALTERNATE LAYOUTS FOR THIS SIGN TYPE

F 3.1 **LOADING/SERVICE DOCK SIGNAGE**

LDS1



NOTE THAT THERE ARE ALTERNATE CONTENT OPTIONS AND LAYOUTS FOR THIS SIGN TYPE. ALL CONTENT MUST BE APPROVED BY THE CLIENT.

G 3.1 **TYPICAL NO TRESPASSING FENCE SIGNAGE**

NTF1



H 3.1 **BUILDING TRANSITION GRAPHICS (FROSTED)**

BTG1



I 3.1 **BUILDING TRANSITION GRAPHICS (WHITE REF)**

BTG2

A-I 3.1 **GUC BUILDING 5 EXTERIOR FAMILY OF SIGNAGE ELEMENTS**

SCALE= NOT APPLICABLE

NOTE THAT THESE SIGN TYPES AND ALL OF THE ELEMENTS IN THIS PACKAGE ARE TO BE FABRICATED USING THE SAME MATERIALS, METHODS AND FINISHES THAT WERE USED IN THE INITIAL, PHASE ONE SIGNAGE ELEMENTS. IT IS CRITICAL THAT ALL OF THE SIGNAGE ON THE OVERALL PROJECT ARE CONSISTENT. THE SIGNAGE FABRICATOR IS TO BE RESPONSIBLE FOR FIELD VERIFICATION AND REVIEW OF ALL OF THE PHASE ONE SIGN ELEMENTS TO ENSURE CONSISTENCY.

Greenville Utilities

FLEET MAINTENANCE BUILDING SIGNAGE & WAYFINDING

CRITERION DOCUMENTS

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217 W. 9TH STREET
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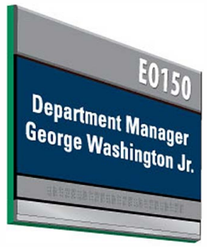
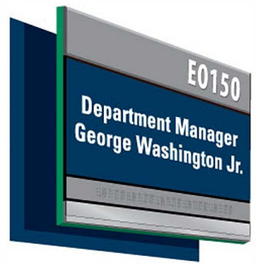
FAMILY OF EXTERIOR SIGNAGE ELEMENTS LISTING

Job No. 0326
Scale AS NOTED
Date JULY 2020 DRAFT FOR REVIEW
CRITERION DOCUMENTS

5 EG3.1



A 4.1 **PRIMARY ADA ROOM**
WALL MTD SIGNAGE (FOH)
PRW1



B 4.1 **PRIMARY ADA ROOM**
GLASS MTD SIGNAGE (FOH)
PRG1



C 4.1 **SECONDARY ADA ROOM**
WALL MTD SIGNAGE (FOH)
SRW1



D 4.1 **SECONDARY ADA ROOM**
GLASS MTD SIGNAGE (FOH)
SRG1



E 4.1 **MENS ADA RESTROOMS**
(FRONT OF HOUSE)
RRM1



F 4.1 **WOMENS ADA RESTROOMS**
(FRONT OF HOUSE)
RRW1



G 4.1 **UNISEX ADA RESTROOMS**
(FRONT OF HOUSE)
RRU1

A-G 4.1 **GUC INTERIOR "FRONT OF HOUSE" FAMILY OF SIGNAGE ELEMENTS**
SCALE= NOT APPLICABLE



H 4.1 **PRIMARY ADA ROOM**
WALL MTD SIGNAGE (BOH)
PRW2



I 4.1 **PRIMARY ADA ROOM**
GLASS MTD SIGNAGE (BOH)
PRG2



J 4.1 **SECONDARY ADA ROOM**
WALL MTD SIGNAGE (BOH)
SRW2



K 4.1 **SECONDARY ADA ROOM**
GLASS MTD SIGNAGE (BOH)
SRG2

H-K 4.1 **GUC INTERIOR "BACK OF HOUSE" FAMILY OF SIGNAGE ELEMENTS**
SCALE= NOT APPLICABLE

NOTE THAT THESE SIGN TYPES AND ALL OF THE ELEMENTS IN THIS PACKAGE ARE TO BE FABRICATED USING THE SAME MATERIALS, METHODS AND FINISHES THAT WERE USED IN THE INITIAL, PHASE ONE SIGNAGE ELEMENTS. IT IS CRITICAL THAT ALL OF THE SIGNAGE ON THE OVERALL PROJECT ARE CONSISTENT. THE SIGNAGE FABRICATOR IS TO BE RESPONSIBLE FOR FIELD VERIFICATION AND REVIEW OF ALL OF THE PHASE ONE SIGN ELEMENTS TO ENSURE CONSISTENCY.

Greenville Utilities

FLEET MAINTENANCE BUILDING SIGNAGE & WAYFINDING

CRITERION DOCUMENTS

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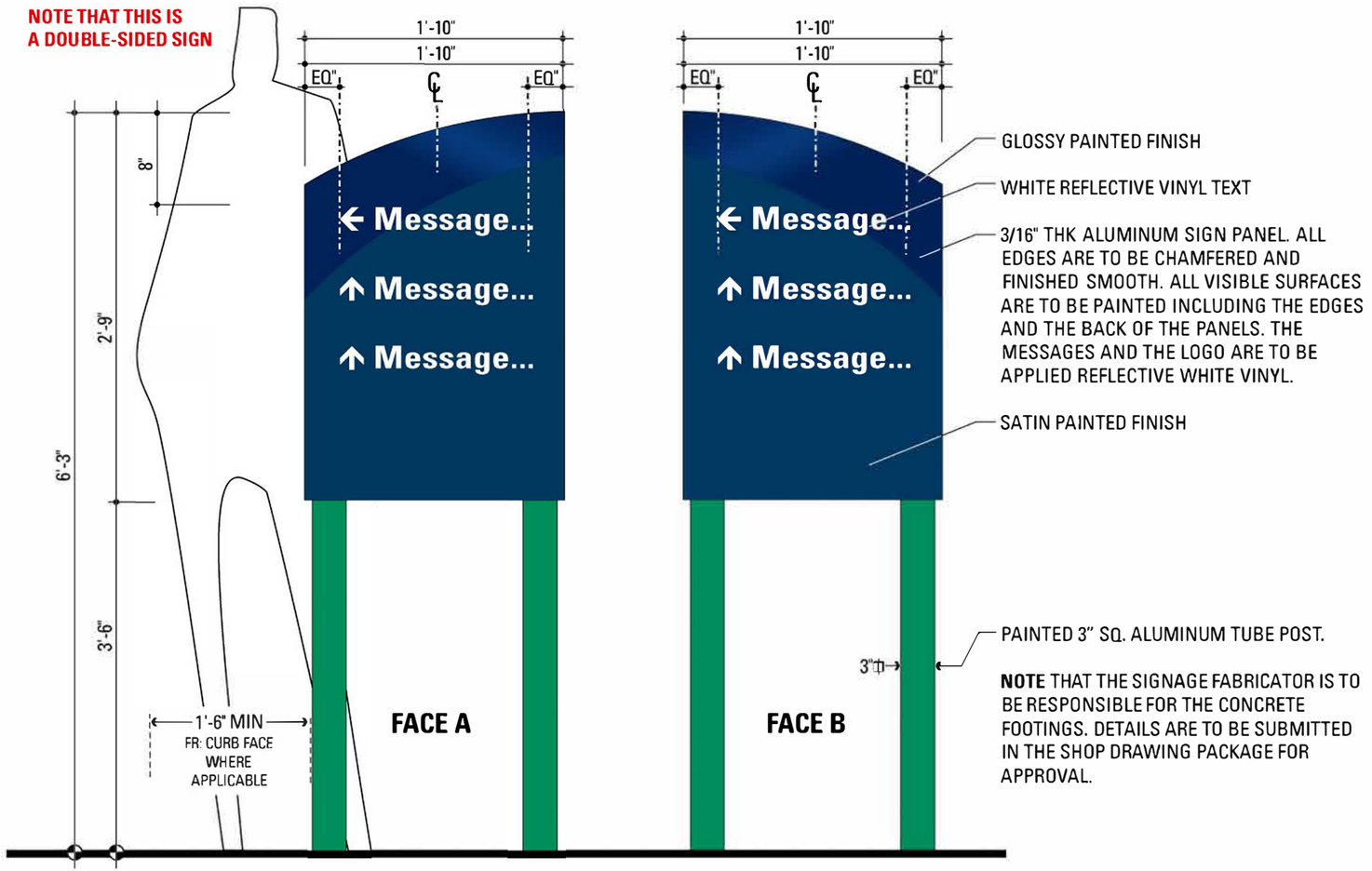
FAMILY OF INTERIOR SIGNAGE ELEMENTS LISTING

Job No. 0326
Scale AS NOTED
5 EG4.1
Date JULY 2020 DRAFT FOR REVIEW
CRITERION DOCUMENTS

TBD

THESE GRAPHICS ARE TO BE DETERMINED PENDING CLIENT DIRECTION REGARDING CONTENT

NOTE THAT THIS IS A DOUBLE-SIDED SIGN



NOTE THAT THIS SIGN TYPE AND ALL OF THE ELEMENTS IN THIS PACKAGE ARE TO BE FABRICATED USING THE SAME MATERIALS, METHODS AND FINISHES THAT WERE USED IN THE INITIAL, PHASE ONE SIGNAGE ELEMENTS. IT IS CRITICAL THAT ALL OF THE SIGNAGE ON THE OVERALL PROJECT ARE CONSISTENT. THE SIGNAGE FABRICATOR IS TO BE RESPONSIBLE FOR FIELD VERIFICATION AND REVIEW OF ALL OF THE PHASE ONE SIGN ELEMENTS TO ENSURE CONSISTENCY.

NOTE THAT THE MESSAGES FOR THIS SIGN TYPE WILL VARY.

THIS PARTICULAR EXAMPLE IS SIGN NUMBER SVD/SW.1.03

A/5.1 **FACE A AND B ELEVATIONS SECONDARY VEHICULAR DIRECTIONAL- SIGNAGE TYPE SVD**

SCALE= 1" = 1'-0"

Greenville Utilities

FLEET MAINTENANCE BUILDING SIGNAGE & WAYFINDING

CRITERION DOCUMENTS

ENVIRONMENTAL GRAPHICS
BROWNSTONE DESIGN INC.
217 W. 9TH STREET
CINCINNATI, OHIO 45202

NOT FOR CONSTRUCTION
THE CONTRACTOR AND/OR THE SIGN FABRICATOR IS TO PROVIDE SHOP DRAWINGS FOR REVIEW & APPROVAL

BROWNSTONE DESIGN

your trusted advisor consultants

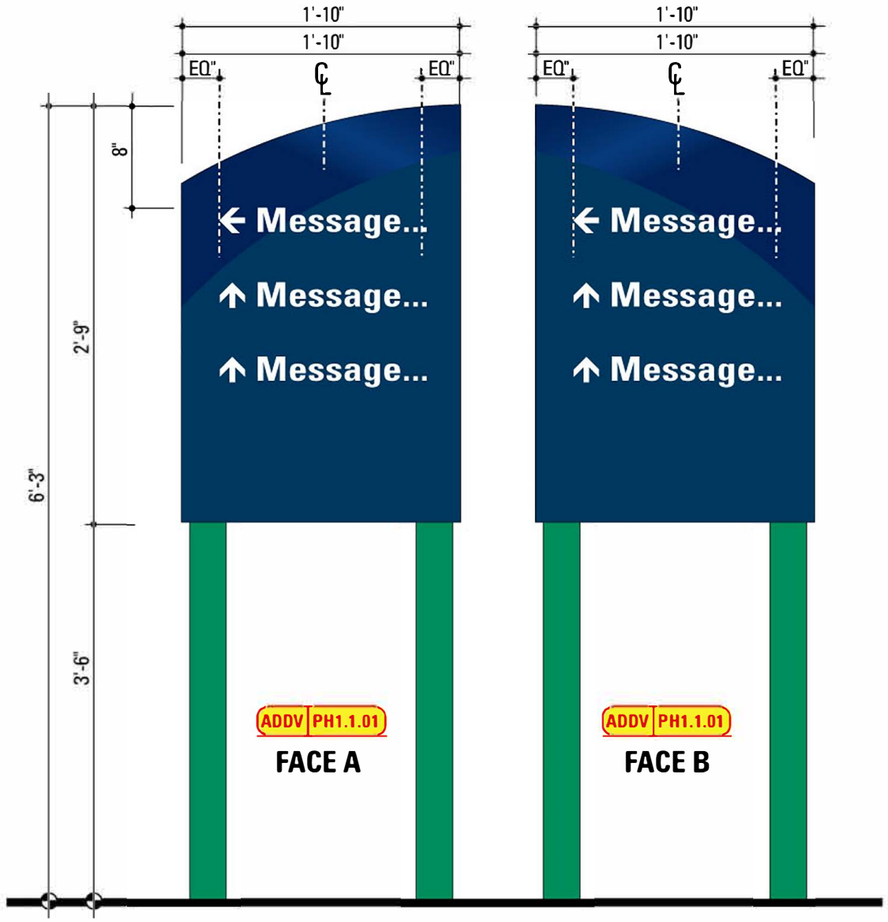
VEHICULAR DIRECTIONAL SIGNAGE

Job No. 0326
Scale AS NOTED
5 EG5.1
Date JULY 2020 DRAFT FOR REVIEW
CRITERION DOCUMENTS

TBD

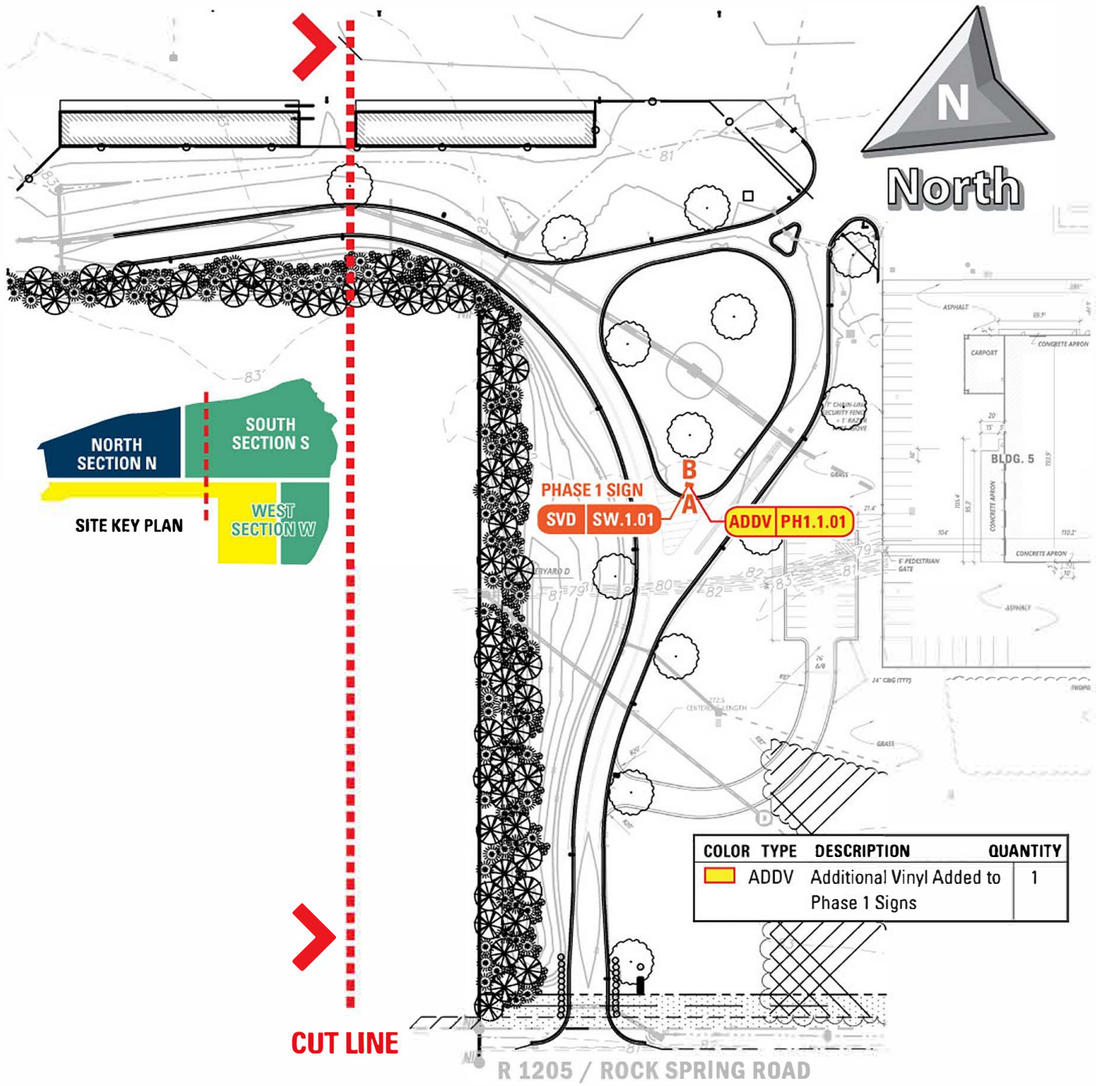
THESE GRAPHICS ARE TO BE DETERMINED. THE EXISTING SIGNAGE MUST BE VERIFIED TO DETERMINE WHICH MESSAGES ARE APPROPRIATE AND IF THE EXISTING MESSAGES WILL NEED TO BE REMOVED AND REPLACED IN ORDER FOR FLEET MAINTENANCE SPECIFIC DIRECTIONS TO BE ADDED.

FOR THE PURPOSES OF BIDDING THE FABRICATOR IS TO ASSUME THAT ALL OF THE EXISTING MESSAGES WILL NEED TO BE REMOVED AND REPLACED WITH NEW REFLECTIVE VINYL GRAPHICS



NOTE THAT THIS SIGN WAS IMPLEMENTED IN PHASE 1. FOR THIS PHASE THE EXISTING DIRECTIONAL MESSAGING VINYL IS TO BE REMOVED AND REPLACED WITH THE MESSAGES INDICATED IN THIS DRAWING. ALL MESSAGES ARE TO BE VERIFIED WITH THE CLIENT PRIOR TO ANY FABRICATION.

A 6.1 **FACE A AND B ELEVATIONS SECONDARY VEHICULAR DIRECTIONAL- SIGN SVD/SW.1.01**
SCALE= 1" = 1'-0"



COLOR	TYPE	DESCRIPTION	QUANTITY
	ADDV	Additional Vinyl Added to Phase 1 Signs	1

NOTE THAT SIGN LOCATION LABELS ARE TO BE USED AS FOLLOWS:

TYPE | AA.1.00
- TYPE — INDICATES THE SIGN TYPE
- AA — INDICATES THE LEVEL ON WHICH THE SIGN IS LOCATED
- 1.00 — INDICATES THE SIGN NUMBER WITHIN THE SIGN TYPE IN AREA
- AA — INDICATES SITE SECTION OR BUILDING THE SIGN IS LOCATED IN

NOTE THAT THIS SIGN WILL BE REFERRED TO AS TYPE/AA.1.00

B 6.1 **PHASE 1 SITE DIRECTIONAL SIGNAGE LOCATION PLAN- SIGN SVD/SW.1.01**
SCALE= NOT DRAWN TO SCALE (REFER TO ARCH PACKAGE)

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ADDITIONAL VINYL MESSAGES

Job No. 0326
Scale AS NOTED
Sheet 5 EG6.1
Date JULY 2020 DRAFT FOR REVIEW
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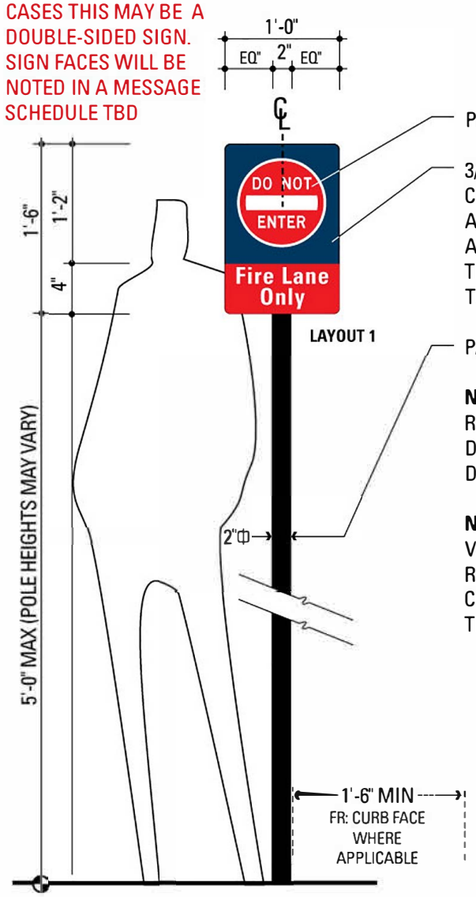
***NOTE THAT DURING CONSTRUCTION ADMINISTRATION OF PHASE ONE IT WAS DECIDED THAT THE ARTWORK ON THSE SIGNS WERE TO MATCH THE GRAPHICS STIPULATED BY LOCAL SIGNAGE CODES. THESE SIGN ARE TO MATCH THE ONES INSTALLED DURING PHASE ONE. FEILD VERIFY PHASE ONE GRAPHICS TO INSURE THAT THESE MATCH.**

NOTE THAT IN SOME CASES THIS MAY BE A DOUBLE-SIDED SIGN. SIGN FACES WILL BE NOTED IN A MESSAGE SCHEDULE TBD



PRINTED REFLECTIVE VINYL GRAPHIC

3/16" THK ALUMINUM SIGN PANEL WITH 1" RAD CORNERS. ALL EDGES ARE TO BE CHAMFERED AND FINISHED SMOOTH. ALL VISIBLE SURFACES ARE TO BE PAINTED INCLUDING THE EDGES AND THE BACK OF THE PANELS. THE MESSAGES ARE TO BE APPLIED REFLECTIVE WHITE VINYL.

PAINTED 2" SQ. ALUMINUM TUBE POST.

NOTE THAT THE SIGNAGE FABRICATOR IS TO BE RESPONSIBLE FOR THE CONCRETE FOOTINGS. DETAILS ARE TO BE SUBMITTED IN THE SHOP DRAWING PACKAGE FOR APPROVAL.

NOTE THAT INSTALLATION CONDITIONS WILL VARY. THE SIGNAGE FABRICATOR IS TO BE RESPONSIBLE FOR FIELD VERIFICATION OF CONDITIONS FOR EACH LOCATION AND APPLYING THE APPROPRIATE FOOTINGS.

ADDITIONAL SIGN LAYOUTS

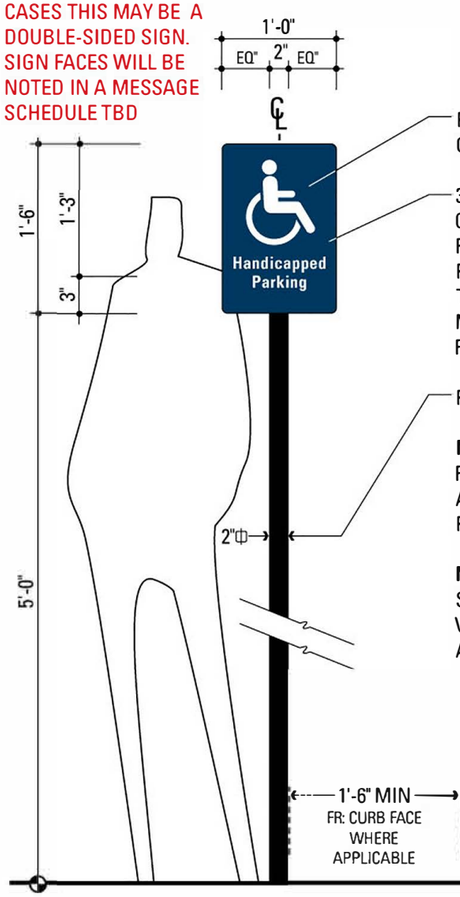


LAYOUT 2 LAYOUT 3

NOTE THAT THESE SIGN TYPES AND ALL OF THE ELEMENTS IN THIS PACKAGE ARE TO BE FABRICATED USING THE SAME MATERIALS, METHODS AND FINISHES THAT WERE USED IN THE INITIAL, PHASE ONE SIGNAGE ELEMENTS. IT IS CRITICAL THAT ALL OF THE SIGNAGE ON THE OVERALL PROJECT ARE CONSISTENT. THE SIGNAGE FABRICATOR IS TO BE RESPONSIBLE FOR FIELD VERIFICATION AND REVIEW OF ALL OF THE PHASE ONE SIGN ELEMENTS TO ENSURE CONSISTENCY.

A 7.1 **ELEVATION TYPICAL REGULATORY SIGNAGE- SIGNAGE TYPES REG 1**
SCALE= 1" = 1'-0"

NOTE THAT IN SOME CASES THIS MAY BE A DOUBLE-SIDED SIGN. SIGN FACES WILL BE NOTED IN A MESSAGE SCHEDULE TBD



PRINTED REFLECTIVE AND/OR REFLECTIVE VINYL GRAPHIC

3/16" THK ALUMINUM SIGN PANEL WITH 1" RAD CORNERS. ALL EDGES ARE TO BE CHAMFERED AND FINISHED SMOOTH. ALL VISIBLE SURFACES ARE TO BE PAINTED INCLUDING THE EDGES AND THE BACK OF THE PANELS. THE BACK IS TO BE PAINTED BLACK TO MATCH THE POST. THE MESSAGES ARE TO BE APPLIED REFLECTIVE WHITE VINYL.

PAINTED 2" SQ. ALUMINUM TUBE POST.

NOTE THAT THE SIGNAGE FABRICATOR IS TO BE RESPONSIBLE FOR THE CONCRETE FOOTINGS. DETAILS ARE TO BE SUBMITTED IN THE SHOP DRAWING PACKAGE FOR APPROVAL.

NOTE THAT INSTALLATION CONDITIONS WILL VARY. THE SIGNAGE FABRICATOR IS TO BE RESPONSIBLE FOR FIELD VERIFICATION OF CONDITIONS FOR EACH LOCATION AND APPLYING THE APPROPRIATE FOOTINGS.



LAYOUT 2

NOTE THAT THESE SIGN TYPES AND ALL OF THE ELEMENTS IN THIS PACKAGE ARE TO BE FABRICATED USING THE SAME MATERIALS, METHODS AND FINISHES THAT WERE USED IN THE INITIAL, PHASE ONE SIGNAGE ELEMENTS. IT IS CRITICAL THAT ALL OF THE SIGNAGE ON THE OVERALL PROJECT ARE CONSISTENT. THE SIGNAGE FABRICATOR IS TO BE RESPONSIBLE FOR FIELD VERIFICATION AND REVIEW OF ALL OF THE PHASE ONE SIGN ELEMENTS TO ENSURE CONSISTENCY.

B 7.1 **ELEVATION TYPICAL DESIGNATED PARKING SIGNAGE- SIGNAGE TYPES PKG 1**
SCALE= 1" = 1'-0"

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VEHICULAR DIRECTIONAL SIGNAGE

Job No. 0326
Scale AS NOTED
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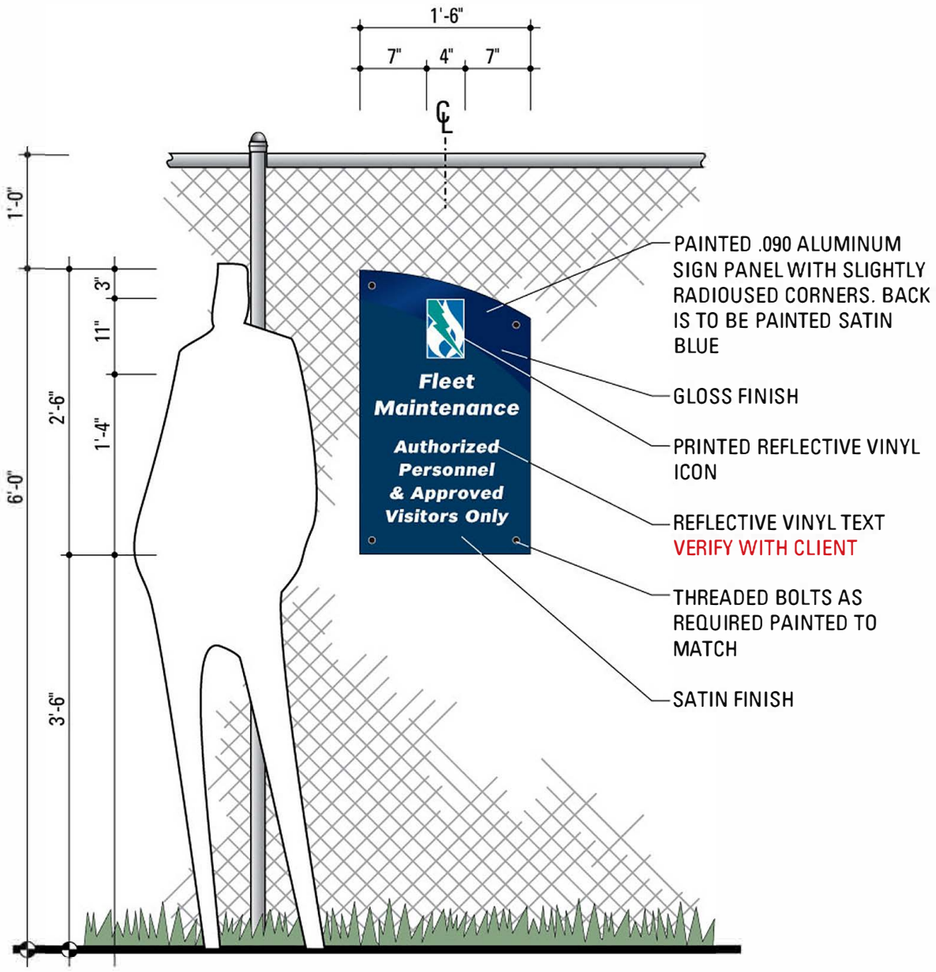
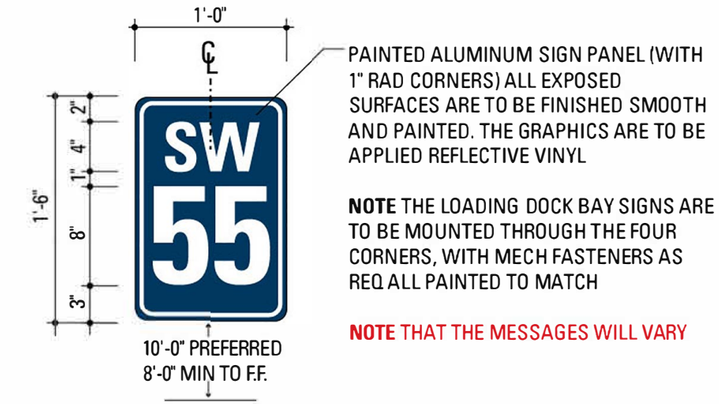
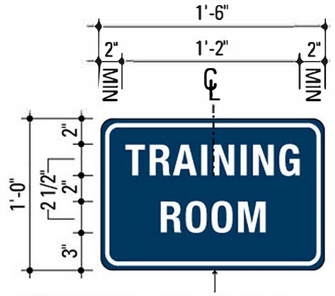


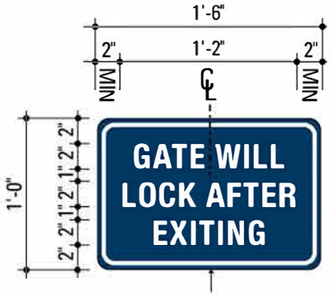
A 8.1 **ELEVATION FENCE MOUNTED EXTERIOR CONTROL POINT- SIGNAGE TYPE CPS2**
SCALE= 3/4" = 1'-0"

NOTE THAT THESE SIGN TYPES AND ALL OF THE ELEMENTS IN THIS PACKAGE ARE TO BE FABRICATED USING THE SAME MATERIALS, METHODS AND FINISHES THAT WERE USED IN THE INITIAL, PHASE ONE SIGNAGE ELEMENTS. IT IS CRITICAL THAT ALL OF THE SIGNAGE ON THE OVERALL PROJECT ARE CONSISTENT. THE SIGNAGE FABRICATOR IS TO BE RESPONSIBLE FOR FIELD VERIFICATION AND REVIEW OF ALL OF THE PHASE ONE SIGN ELEMENTS TO ENSURE CONSISTENCY.

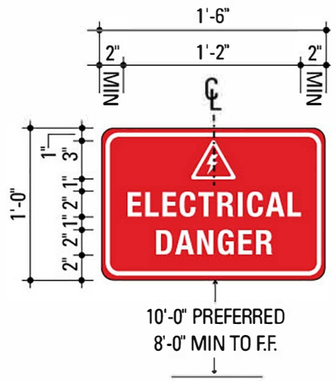




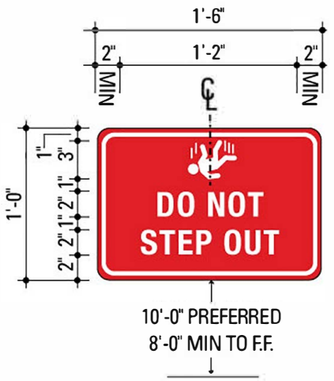
ATTERNATE HORIZONTAL LAYOUT #1



ATTERNATE HORIZONTAL LAYOUT #2



ATTERNATE HORIZONTAL LAYOUT #3



ATTERNATE HORIZONTAL LAYOUT #4

B 8.1 **ELEVATION PRIMARY LOADING DOCK SIGNAGE- SIGNAGE TYPE LDS1**
SCALE= 1" = 1'-0"

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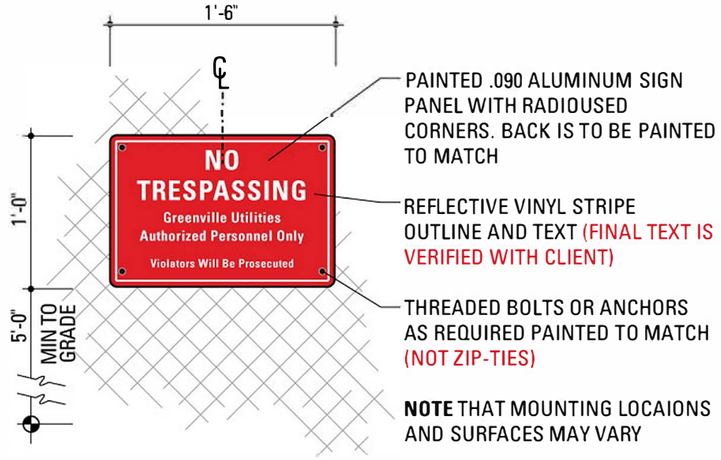
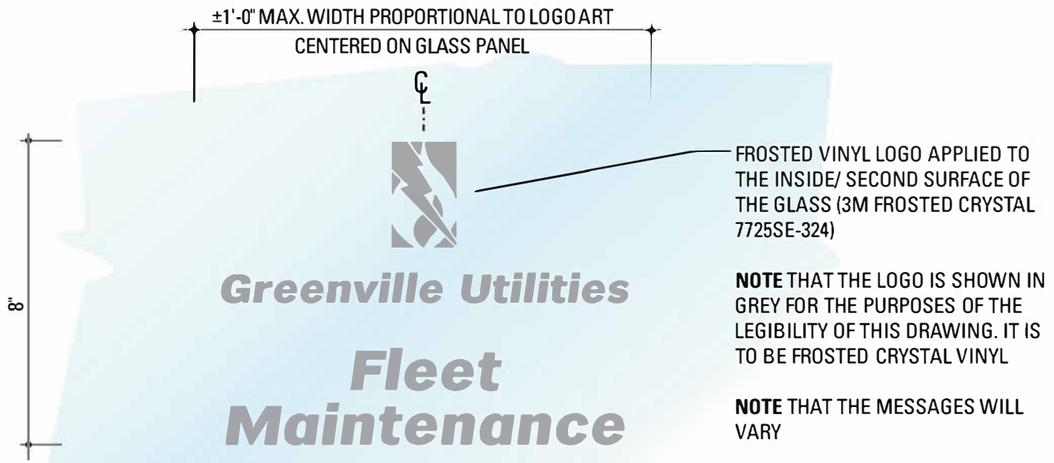
CONTROL POINT & LOADING DOCK SIGNAGE

Job No. 0326
Scale AS NOTED
Date JULY 2020 DRAFT FOR REVIEW
CRITERION DOCUMENTS

5 EG8.1



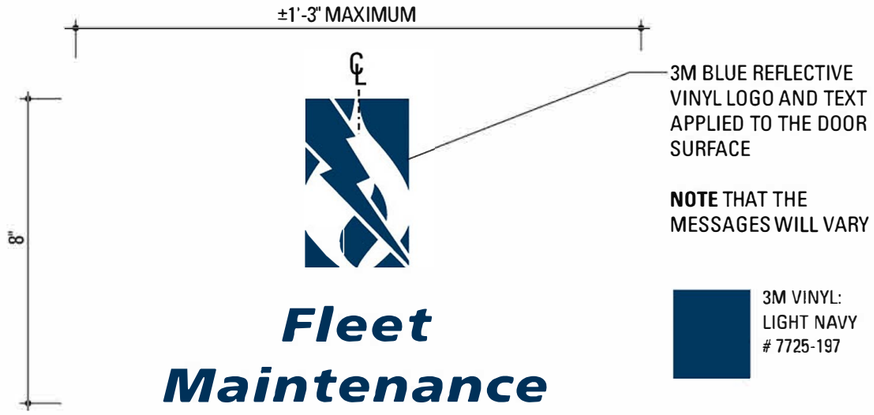
A 9.1 TYPICAL NO TRESSPASSING FENCE SIGNAGE- SIGNAGE TYPE NTF1
SCALE= 1" = 1'-0"



NOTE THAT GIVEN THAT THE GLASS MAY BE SLIGHTLY TINTED THE FABRICATOR IS TO BE RESPONSIBLE FOR APPLYING A ROUGHLY 3" SQUARE PIECE OF THE FROSTED VINYL TO THE INSIDE SECOND SURFACE OF THE GLASS FOR REVIEW PRIOR TO FABRICATION. IF THE SAMPLE IS NOT APPROPRIATELY LEGIBLE THE FROSTED ELEMENTS ARE TO BE CUT TO BE APPLIED TO THE OUTSIDE SURFACE OF THE GLASS.

NOTE THAT THE FABRICATOR IS TO BE RESPONSIBLE FOR FIELD VERIFICATION OF ALL DIMENSIONS PRIOR TO FABRICATION. THE DIMENSIONS IN THIS DRAWING ARE ESTIMATED

B 9.1 ELEVATION BUILDING TRANSITION GRAPHICS- SIGNAGE TYPE BTG1
SCALE= 3" = 1'-0"



C 9.1 ELEVATION BUILDING TRANSITION GRAPHICS- SIGNAGE TYPE BTG2
SCALE= 3" = 1'-0"

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Greenville Utilities

FLEET MAINTENANCE BUILDING SIGNAGE & WAYFINDING

CRITERION DOCUMENTS

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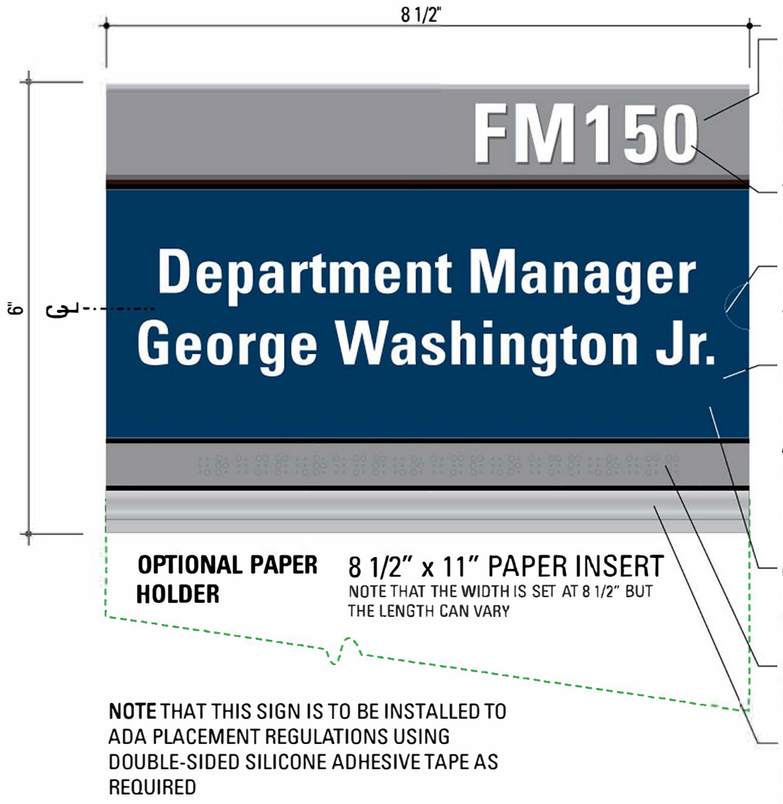
BUILDING ENTRANCE & TRANSITION SIGNAGE

Job No. 0326
Scale AS NOTED
Date JULY 2020 DRAFT FOR REVIEW
CRITERION DOCUMENTS

5 EG9.1



NOTE THAT THIS SIGN IS TO BE INSTALLED TO ADA PLACEMENT REGULATIONS USING DOUBLE-SIDED SILICONE ADHESIVE TAPE AS REQUIRED

ETCHED, PRIMED AND PAINTED PHOTO POLYMER PANEL WITH A LOGO PRINTED DIRECTLY TO THE TOP OF THE PANEL AS INDICATED. THIS PANEL IS TO HAVE A 1/8" BEVEL ALONG ITS ENTIRE OUTSIDE PERIMETER.

THIS PANEL IS TO HAVE 1/16" RAISED ROOM NUMBER

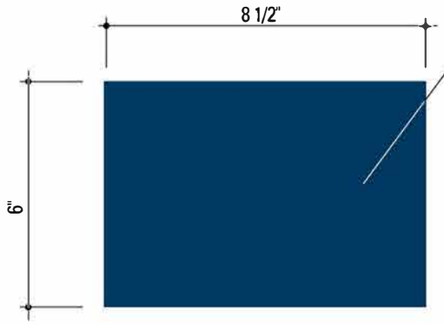
"THUMB HOLE" TO BE IN BACK GREEN PORTION OF THE PANEL (NOT VISIBLE FROM THE FRONT OF THE SIGN

LAYERED, LAMINATED CUSTOM ACRYLIC SIGN PANEL WITH 1/8" BEVELED EDGES. BACK PANEL IS TO BE GREEN. WITH A PRINTED ACRYLIC NAME INSERT. THE NAMES ARE TO BE DIGITALLY PROVIDED TO THE FABRICATOR BY CLIENT. (A POTENTIAL MATERIAL SUPPLIER IS ROMARK FROM FINDLAY, OH)

CLEAR (NON GLARE) ACRYLIC COVERING AN RECESSED SLOT TO ACCEPT A PRINTED NAME CARD. CARD IS TO BE PROVIDED BY CLIENT

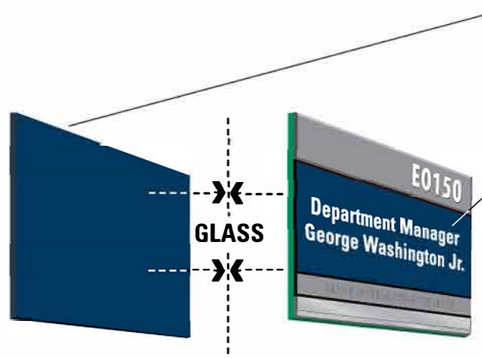
GRADE 2 BRAILLE TEXT COMPLIANT WITH ADA REGULATIONS

PAINTED OR ANODIZED ALUMINUM, PAPER HOLDER TO BE INSTALLED TIGHT TO THE BOTTOM EDGE OF THE SIGN FABRICATOR IS TO



ACRYLIC BACKING PANEL TO MATCH WITH 1/8" BEVELED EDGES ATTACHED TO THE INSIDE/ SECOND SURFACE OF THE GLASS (A POTENTIAL MATERIAL SUPPLIER IS ROMARK FROM FINDLAY, OH)

NOTE THAT THIS SIGN IS TO BE INSTALLED USING DOUBLE-SIDED SILICONE ADHESIVE TAPE AS REQUIRED AND IS ALIGHNED TO MATCH THE LOCATION OF THE FRONT PORTION OF THE SIGN. THE INTENTION IS TO CONCEAL THE TAPE ETC.



ACRYLIC BACKING PANEL TO MATCH WITH 1/8" BEVELED EDGES ATTACHED TO THE INSIDE/ SECOND SURFACE OF THE GLASS (A POTENTIAL MATERIAL SUPPLIER IS ROMARK FROM FINDLAY, OH)

SEE PRW1 SIGN DETAILS

NOTE THAT THIS SIGN IS TO BE INSTALLED USING DOUBLE-SIDED SILICONE ADHESIVE TAPE AS REQUIRED AND IS ALIGHNED TO MATCH THE LOCATION OF THE RID1 PORTION OF THE SIGN. THE INTENTION IS TO CONCEAL THE TAPE ETC.

A 10.1 PRIMARY WALL MTD ROOM IDENTIFICATION- SIGNAGE TYPE PRW1

SCALE= 1/2 ACTUAL SIZE



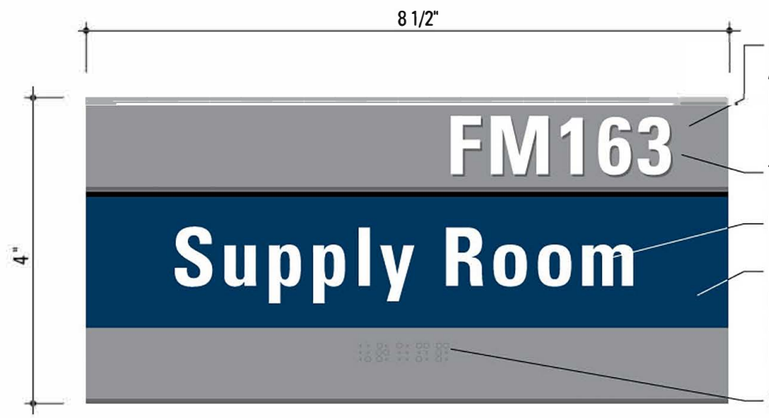
B 10.1 ISOMETRIC VIEW PRIMARY ROOM ID- SIGNAGE TYPE PRW1 & PRG1

SCALE= NOT APPLICABLE

NOTE THAT THESE SIGN TYPES AND ALL OF THE ELEMENTS IN THIS PACKAGE ARE TO BE FABRICATED USING THE SAME MATERIALS, METHODS AND FINISHES THAT WERE USED IN THE INITIAL, PHASE ONE SIGNAGE ELEMENTS. IT IS CRITICAL THAT ALL OF THE SIGNAGE ON THE OVERALL PROJECT ARE CONSISTENT. THE SIGNAGE FABRICATOR IS TO BE RESPONSIBLE FOR FIELD VERIFICATION AND REVIEW OF ALL OF THE PHASE ONE SIGN ELEMENTS TO ENSURE CONSISTENCY.

C 10.1 PRIMARY ROOM ID FOR GLASS APPLICATIONS- SIGNAGE TYPE PRG1

ELEVATION SCALE= 3" = 1'-0" ISOMETRIC SCALE= NOT APPLICABLE



ETCHED, PRIMED AND PAINTED PHOTO POLYMER PANEL WITH A LOGO PRINTED DIRECTLY TO THE TOP OF THE PANEL AS INDICATED. THIS PANEL IS TO HAVE A 1/8" BEVEL ALONG ITS ENTIRE OUTSIDE PERIMETER.

THIS PANEL IS TO HAVE 1/16" RAISED ROOM NUMBER TEXT

RAISED TEXT AS REQUIRED

LAYERED, LAMINATED CUSTOM ACRYLIC SIGN PANEL WITH 1/8" BEVELED EDGES. BACK PANEL IS TO BE GREEN. SEE ISOMETRIC DRAWING (A POTENTIAL MATERIAL SUPPLIER IS ROMARK FROM FINDLAY, OH)

GRADE 2 BRAILLE TEXT COMPLIANT WITH ADA REGULATIONS

NOTE THAT THE SRG1 IS FOR GLASS APPLICATIONS. SEE PRG1 FOR SIMILIAR DETAILS

NOTE THAT THIS SIGN IS TO BE INSTALLED TO ADA PLACEMENT REGULATIONS USING DOUBLE-SIDED SILICONE ADHESIVE TAPE AS REQUIRED

D 10.1 SECONDARY ROOM ID- SIGNAGE TYPES SRW1 & SRG1

SCALE= 1/2 ACTUAL SIZE

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INTERIOR FRONT OF HOUSE SIGNAGE ROOM ID SIGNAGE

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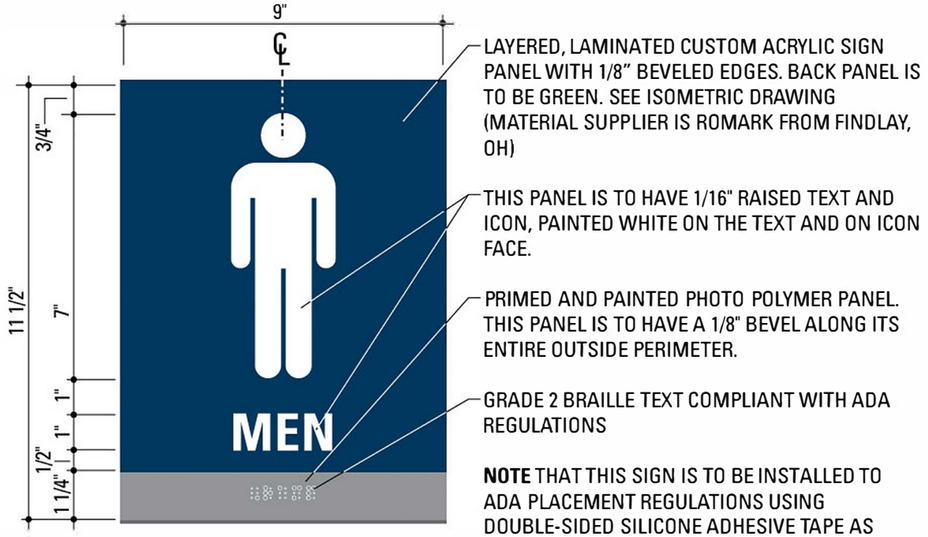
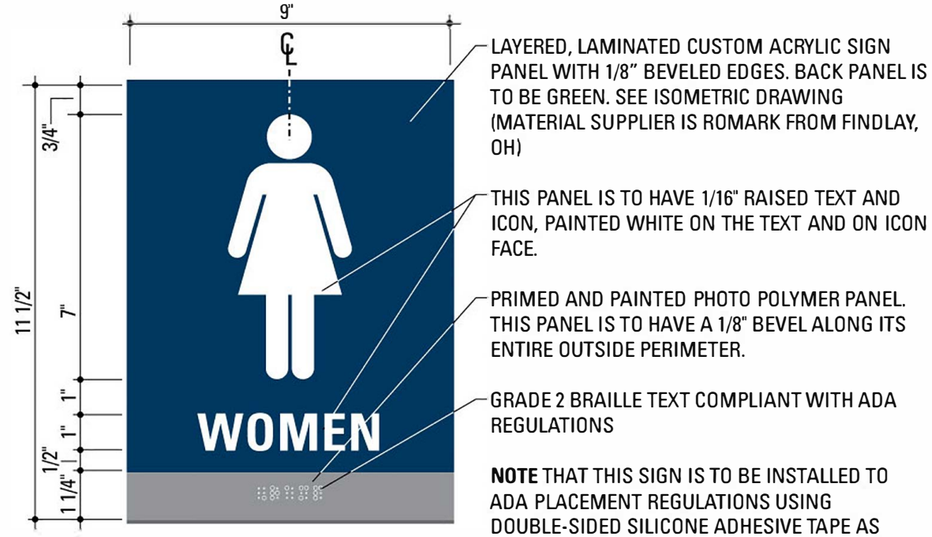
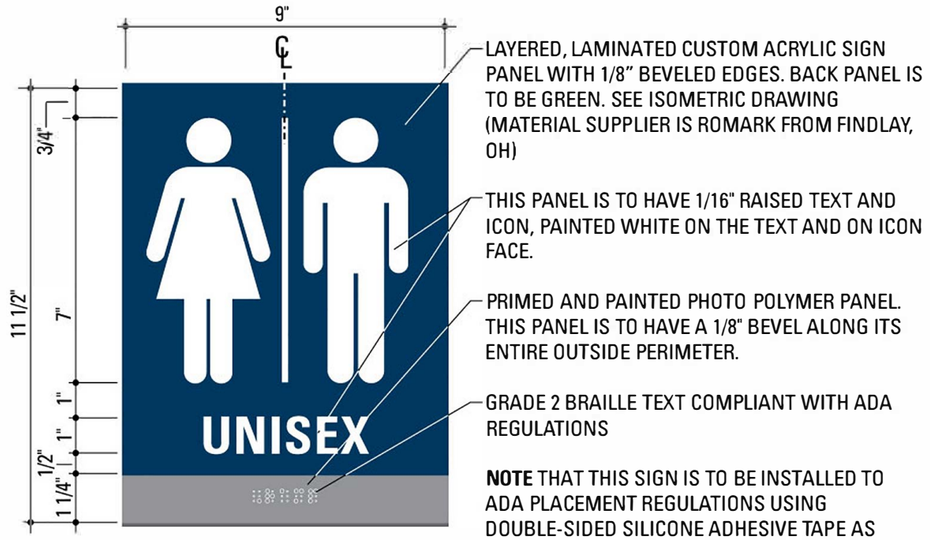


A 11.1 MEN'S RESTROOM SIGNAGE- SIGNAGE TYPE RRM1
SCALE= 3" = 1'-0"



B 11.1 WOMEN'S RESTROOM SIGNAGE- SIGNAGE TYPE RRW1
SCALE= 3" = 1'-0"



C 11.1 UNISEX RESTROOM SIGNAGE- SIGNAGE TYPE RRU1
SCALE= 3" = 1'-0"



D 11.1 ISOMETRIC VIEWS RESTROOM SIGNAGE- SIGNAGE TYPE RRM1, RRW1 & RRU1
SCALE= NOT APPLICABLE

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INTERIOR FRONT OF HOUSE SIGNAGE RESTROOM SIGNAGE

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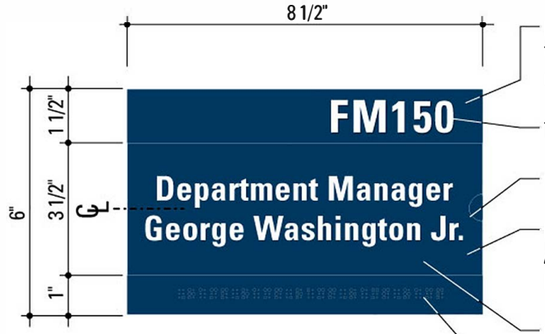


ETCHED, PRIMED AND PAINTED PHOTO POLYMER PANEL WITH A LOGO PRINTED DIRECTLY TO THE TOP OF THE PANEL AS INDICATED. THIS PANEL IS TO HAVE A 1/8" BEVEL ALONG ITS ENTIRE OUTSIDE PERIMETER.

THIS PANEL IS TO HAVE 1/16" RAISED ROOM NUMBER

"THUMB HOLE" TO BE IN BACK PORTION OF PANEL (NOT VISIBLE FROM THE FRONT OF THE SIGN

LAYERED, LAMINATED CUSTOM ACRYLIC SIGN PANEL WITH CHAMFERED EDGES. WITH A PRINTED ACRYLIC NAME INSERT (A POTENTIAL MATERIAL SUPPLIER IS ROMARK FROM FINDLAY, OH)

CLEAR (NON GLARE) ACRYLIC COVERING AN RECESSED SLOT TO ACCEPT A PRINTED NAME CARD. THE NAMES ARE TO BE DIGITALLY PROVIDED TO THE FABRICATOR BY CLIENT

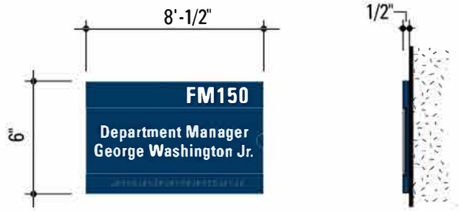
GRADE 2 BRAILLE TEXT COMPLIANT WITH ADA REGULATIONS

NOTE THAT THIS SIGN IS TO BE INSTALLED TO ADA PLACEMENT REGULATIONS USING DOUBLE-SIDED SILICONE ADHESIVE TAPE AS REQUIRED

NOTE THAT THESE SIGN TYPES AND ALL OF THE ELEMENTS IN THIS PACKAGE ARE TO BE FABRICATED USING THE SAME MATERIALS, METHODS AND FINISHES THAT WERE USED IN THE INITIAL, PHASE ONE SIGNAGE ELEMENTS. IT IS CRITICAL THAT ALL OF THE SIGNAGE ON THE OVERALL PROJECT ARE CONSISTENT. THE SIGNAGE FABRICATOR IS TO BE RESPONSIBLE FOR FIELD VERIFICATION AND REVIEW OF ALL OF THE PHASE ONE SIGN ELEMENTS TO ENSURE CONSISTENCY.

A / 12.1 PRIMARY ADA ROOM WALL AND GLASS MTD SIGNAGE (BOH)- SIGNAGE TYPES PRW2 & PRG2

SCALE= 3" = 1'-0"

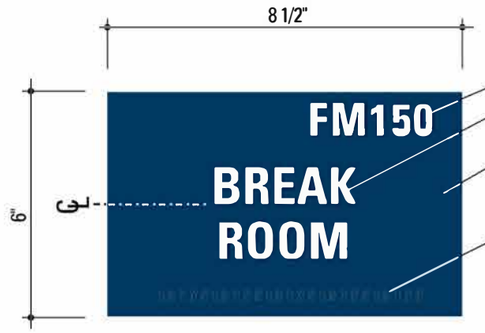




NOTE THAT THE PRG2 SIGN IS THE SAME AS THE PRW2 SIGN WITH THE ADDITION OF AN ACRYLIC BACKING PANEL TO MATCH WITH 1/8" BEVELED EDGES ATTACHED TO THE INSIDE/ SECOND SURFACE OF THE GLASS

B / 12.1 PRIMARY ADA ROOM WALL & GLASS MTD SIGNAGE (BOH)- SIGNAGE TYPES PRW2 PRG2

SCALE= 1 1/2" = 1'-0"



THIS PANEL IS TO HAVE 1/16" RAISED ROOM NUMBER

THIS PANEL IS TO HAVE 1/16" RAISED TEXT

CUSTOM ACRYLIC SIGN PANEL WITH CHAMFERED EDGES. (A POTENTIAL MATERIAL SUPPLIER IS ROMARK FROM FINDLAY, OH)

GRADE 2 BRAILLE TEXT COMPLIANT WITH ADA REGULATIONS

NOTE THAT THIS SIGN IS TO BE INSTALLED TO ADA PLACEMENT REGULATIONS USING DOUBLE-SIDED SILICONE ADHESIVE TAPE AS REQUIRED

NOTE THAT THE SRG2 SIGN IS THE SAME AS THE SRW2 SIGN WITH THE ADDITION OF AN ACRYLIC BACKING PANEL TO MATCH WITH 1/8" BEVELED EDGES ATTACHED TO THE INSIDE/ SECOND SURFACE OF THE GLASS

C / 12.1 SECONDARY ADA ROOM WALL AND GLASS MTD SIGNAGE (BOH)- SIGNAGE TYPES SRW2 & SRG2

SCALE= 3" = 1'-0"

Greenville Utilities

FLEET MAINTENANCE BUILDING SIGNAGE & WAYFINDING

CRITERION DOCUMENTS

ENVIRONMENTAL GRAPHICS
BROWNSTONE DESIGN INC.
217 W. 9TH STREET
CINCINNATI, OHIO 45202

NOT FOR CONSTRUCTION
THE CONTRACTOR AND/OR THE SIGN FABRICATOR IS TO PROVIDE SHOP DRAWINGS FOR REVIEW & APPROVAL

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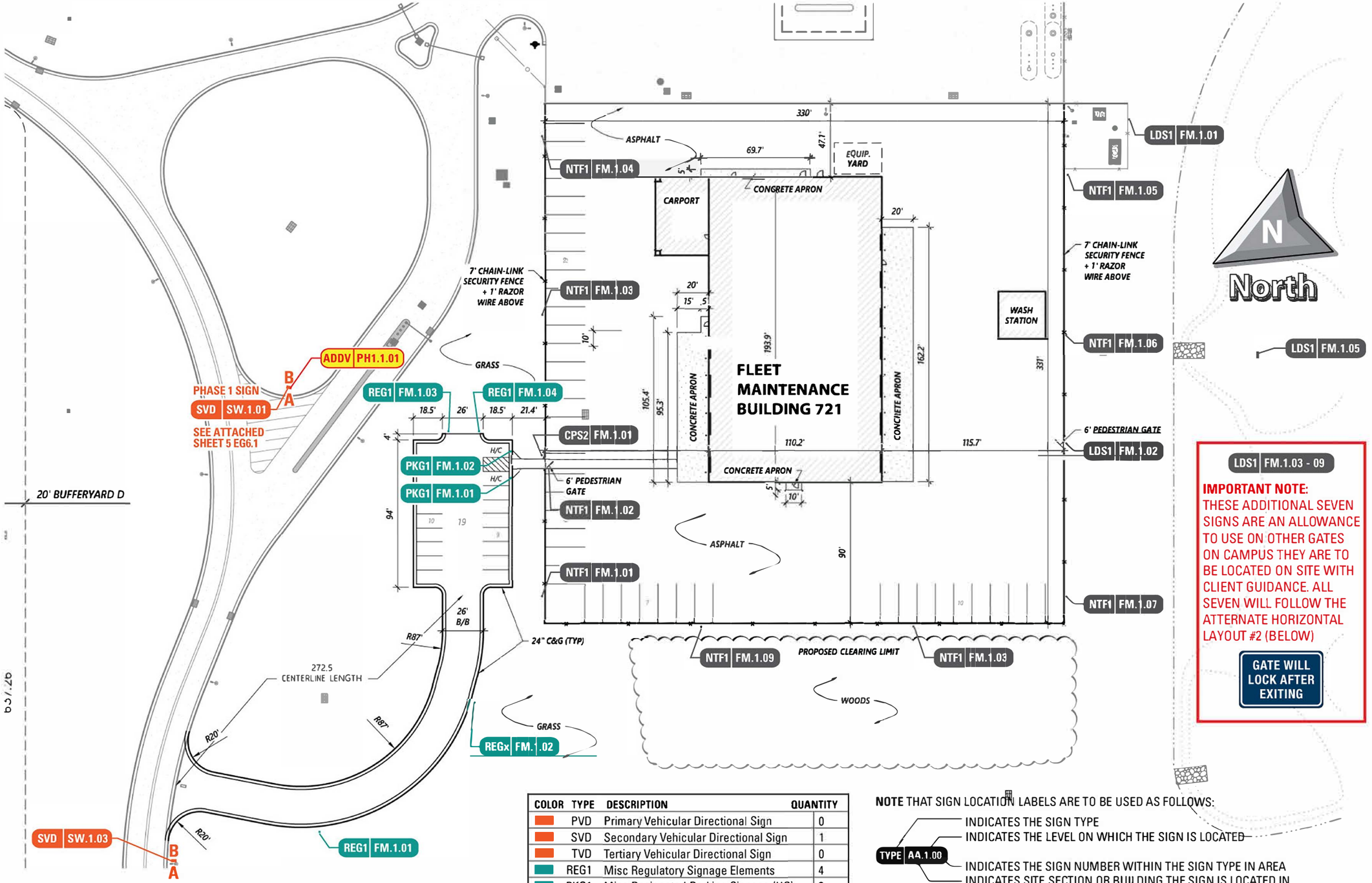
BACK OF HOUSE SIGNAGE

Job No. 0326
Scale AS NOTED
Date JULY 2020 DRAFT FOR REVIEW
CRITERION DOCUMENTS

5 EG12.1



A 13.1 **SITE SIGNAGE LOCATION PLAN**
SCALE= NOT DRAWN TO SCALE (REFER TO ARCH PACKAGE)

COLOR	TYPE	DESCRIPTION	QUANTITY
	PVD	Primary Vehicular Directional Sign	0
	SVD	Secondary Vehicular Directional Sign	1
	TVD	Tertiary Vehicular Directional Sign	0
	REG1	Misc Regulatory Signage Elements	4
	PKG1	Misc Designated Parking Signage (HC)	2
	PKG2	Misc Designated Parking Signage (TBD)	0
	SBE1	Secondary Building Entrance Element	0
	SEP1	Secondary Exterior Pedestrian Directional	0
	CPS1-2	Control Point Signage	1
	LDS1-5	Loading and/or Service Dock Signage	9
	NTF1	Typical No Trespassing Fence Signage	9
	ADDV	Additional Vinyl Added to Phase 1 Signs	0

NOTE THAT SIGN LOCATION LABELS ARE TO BE USED AS FOLLOWS:

TYPE AA.1.00
- TYPE: INDICATES THE SIGN TYPE
- A: INDICATES THE LEVEL ON WHICH THE SIGN IS LOCATED
- 1.00: INDICATES THE SIGN NUMBER WITHIN THE SIGN TYPE IN AREA
- AA: INDICATES SITE SECTION OR BUILDING THE SIGN IS LOCATED IN

NOTE THAT THIS SIGN WILL BE REFERRED TO AS TYPE/AA.1.00

NOTE THIS DRAWING IS NOT INTENDED TO ILLUSTRATE THE EXACT LOCATIONS. BASED ON THE LOCATIONS INDICATED IN THIS DRAWING, THE FABRICATOR WILL BE RESPONSIBLE FOR FINAL VERIFICATION OF UTILITIES ETC AND FOR LOCATING EACH SIGN IN THE FIELD. ANY QUESTIONABLE LOCATIONS WILL REQUIRE APPROVAL PRIOR TO INSTALLATION. **ALL SITE SIGNAGE LOCATIONS ARE TO BE STAKED FOR REVIEW AND APPROVAL**

LDS1 FM.1.03 - 09

IMPORTANT NOTE:
THESE ADDITIONAL SEVEN SIGNS ARE AN ALLOWANCE TO USE ON OTHER GATES ON CAMPUS THEY ARE TO BE LOCATED ON SITE WITH CLIENT GUIDANCE. ALL SEVEN WILL FOLLOW THE ATTERNATE HORIZONTAL LAYOUT #2 (BELOW)

GATE WILL LOCK AFTER EXITING

Greenville Utilities

FLEET MAINTENANCE BUILDING SIGNAGE & WAYFINDING

CRITERION DOCUMENTS

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BROWNSTONE DESIGN INC.
217 W. 9TH STREET
CINCINNATI, OHIO 45202

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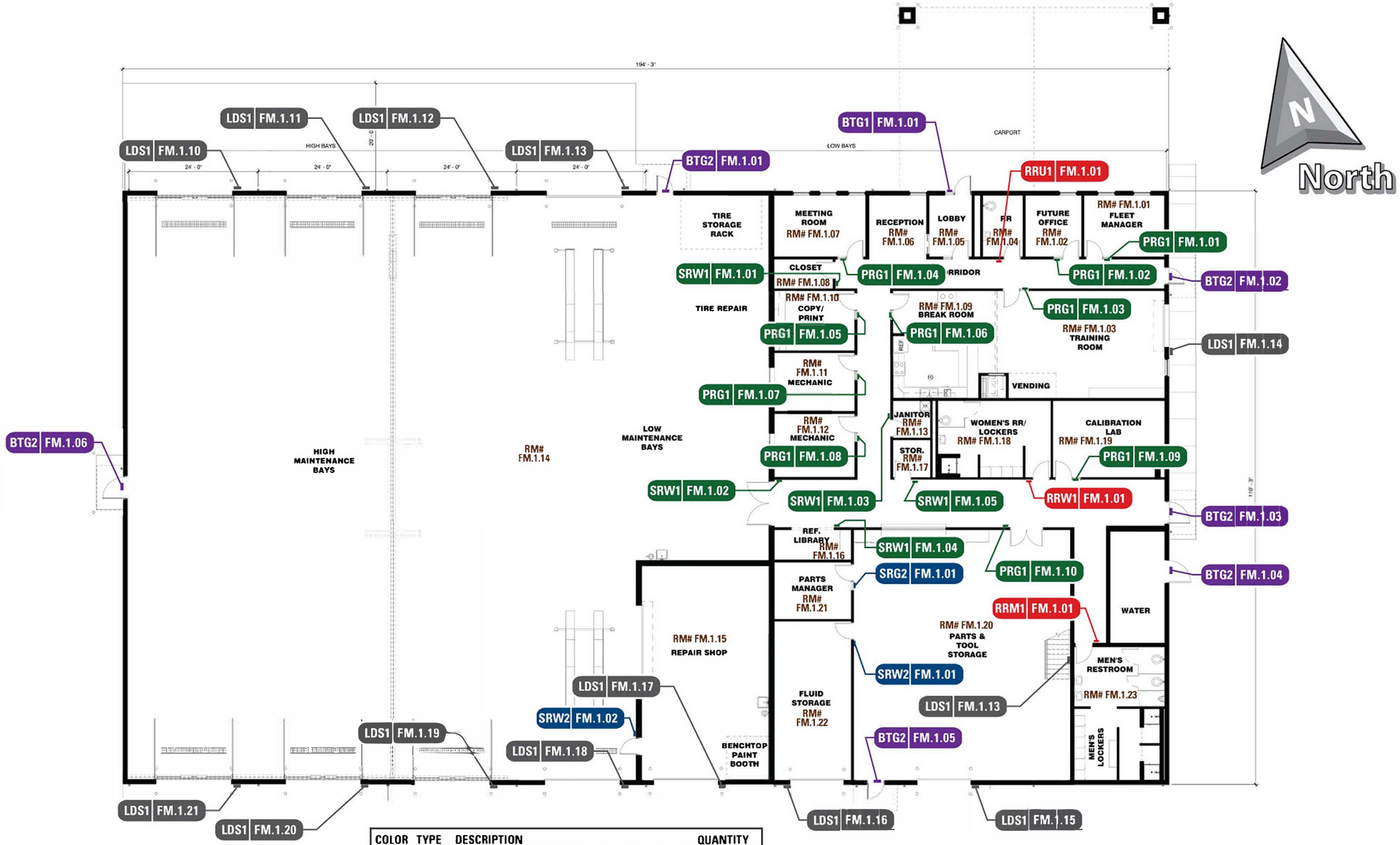
SITE SIGNAGE LOCATION PLAN

Job No. 0326
Scale AS NOTED
Date JULY 2020 DRAFT FOR REVIEW
CRITERION DOCUMENTS

5 EG13.1



COLOR	TYPE	DESCRIPTION	QUANTITY
	EDG1	Entrance Door Graphics	0
	BTG1	Building Transition Graphics	1
	BTG2	Building Transition Graphics	6
	PRW1	Primary ADA Room Wall Mtd Signage (FOH)	0
	PRG1	Primary ADA Room Glass Mtd Signage (FOH)	10
	SRW1	Secondary ADA Room Wall Mtd Signage (FOH)	5
	SRG1	Secondary ADA Room Glass Mtd Signage (FOH)	0
	RRM1	Mens ADA Restrooms (FOH)	1
	RRW1	Womens ADA Restrooms (FOH)	1
	RRU1	Unisex ADA Restrooms (FOH)	1
	PRW2	Primary ADA Room Wall Mtd Signage (BOH)	0
	PRG2	Primary ADA Room Wall Mtd Signage (BOH)	0
	SRW2	Secondary ADA Room Wall Mtd Signage (BOH)	2
	SRG2	Secondary ADA Room Glass Mtd Signage (BOH)	1
	LDS1	Loading and/or Service Dock Signage	13
NOTE THAT LDS1/FM.1.01-09 ARE LOCATED ON THE ATTACHED SITE PLAN			

NOTE THAT SIGN LOCATION LABELS ARE TO BE USED AS FOLLOWS:

TYPE AA.1.00
- TYPE: INDICATES THE SIGN TYPE
- AA: INDICATES THE LEVEL ON WHICH THE SIGN IS LOCATED
- 1: INDICATES THE SIGN NUMBER WITHIN THE SIGN TYPE IN AREA
- 00: INDICATES SITE SECTION OR BUILDING THE SIGN IS LOCATED IN

NOTE THAT THIS SIGN WILL BE REFERRED TO AS TYPE/AA.1.00

A / 14.1 **BUILDING FIVE LEVEL 1 SIGNAGE LOCATION PLAN**

SCALE= SIGNAGE ELEMENTS ARE NOT DRAWN TO SCALE

- PROPOSED ROOM NUMBERS
- (A) DOOR TYPE (SEE BLDG & ENT DRWS)
- POTENTIAL FUTURE GRAPHIC FEATURE ELEMENT

NOTE THIS DRAWING IS NOT INTENDED TO ILLUSTRATE THE EXACT LOCATIONS. BASED ON THE LOCATIONS INDICATED IN THIS DRAWING, THE FABRICATOR WILL BE RESPONSIBLE FOR INSTALLING THE SIGNS TO ADA SPECIFICATIONS IN THE FIELD. **ANY QUESTIONABLE LOCATIONS WILL REQUIRE APPROVAL PRIOR TO INSTALLATION.**

Greenville Utilities

FLEET MAINTENANCE BUILDING SIGNAGE & WAYFINDING

CRITERION DOCUMENTS

ENVIRONMENTAL GRAPHICS
BROWNSTONE DESIGN INC.
217 W. 9TH STREET
CINCINNATI, OHIO 45202

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THE CONTRACTOR AND/OR THE SIGN FABRICATOR IS TO PROVIDE SHOP DRAWINGS FOR REVIEW & APPROVAL

BROWNSTONE DESIGN

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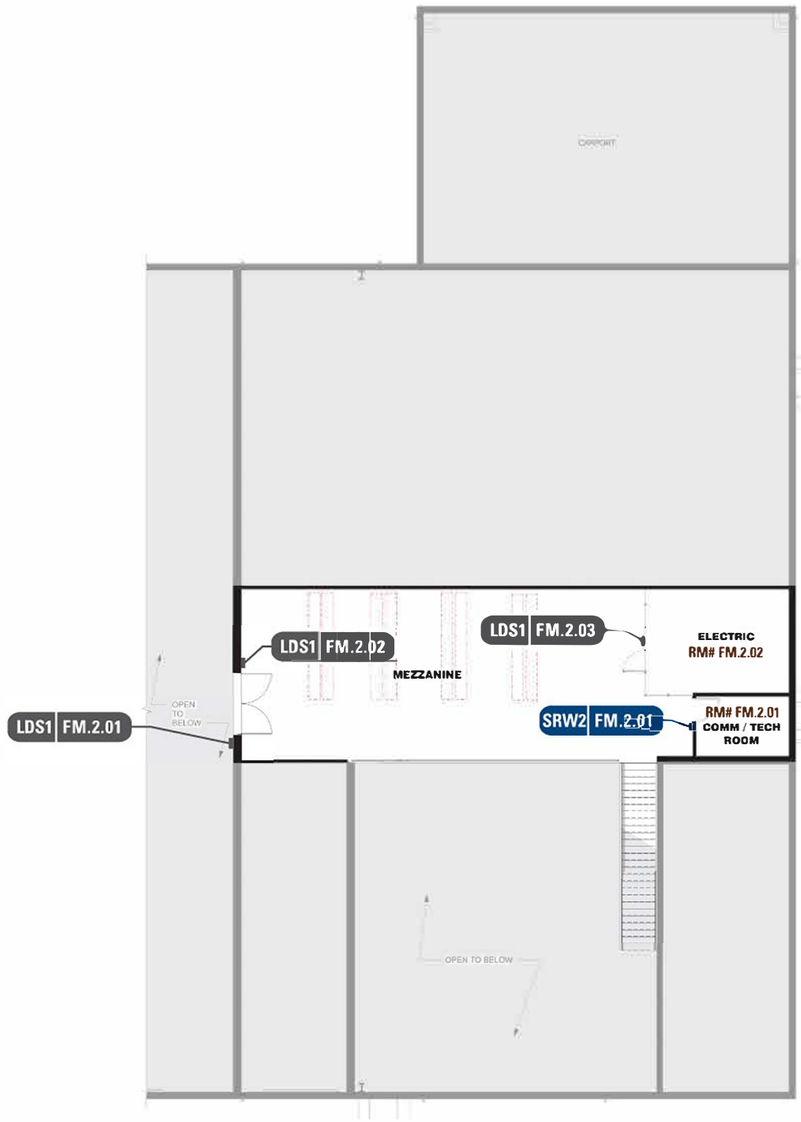
BUILDING FIVE LEVEL 1 SIGN LOCATION PLANS

Job No. 0326
Scale AS NOTED
5 EG14.1
Date JULY 2020 DRAFT FOR REVIEW
CRITERION DOCUMENTS



NOTE THAT SIGN LOCATION LABELS ARE TO BE USED AS FOLLOWS:

TYPE | AA.1.00

- TYPE — INDICATES THE SIGN TYPE
- AA — INDICATES THE LEVEL ON WHICH THE SIGN IS LOCATED
- 1.00 — INDICATES THE SIGN NUMBER WITHIN THE SIGN TYPE IN AREA
- 1 — INDICATES SITE SECTION OR BUILDING THE SIGN IS LOCATED IN

NOTE THAT THIS SIGN WILL BE REFERRED TO AS TYPE/AA.1.00

A / 14.2 **BUILDING FIVE MEZZANIANIE SIGNAGE LOCATION PLAN**

SCALE= NOT DRAWN TO SCALE

COLOR	TYPE	DESCRIPTION	QUANTITY
	EDG1	Entrance Door Graphics	0
	BTG1	Building Transition Graphics	0
	BTG2	Building Transition Graphics	0
	PRW1	Primary ADA Room Wall Mtd Signage (FOH)	0
	PRG1	Primary ADA Room Glass Mtd Signage (FOH)	0
	SRW1	Secondary ADA Room Wall Mtd Signage (FOH)	0
	SRG1	Secondary ADA Room Glass Mtd Signage (FOH)	0
	RRM1	Mens ADA Restrooms (FOH)	0
	RRW1	Womens ADA Restrooms (FOH)	0
	RRU1	Unisex ADA Restrooms (FOH)	0
	PRW2	Primary ADA Room Wall Mtd Signage (BOH)	0
	PRG2	Primary ADA Room Wall Mtd Signage (BOH)	0
	SRW2	Secondary ADA Room Wall Mtd Signage (BOH)	1
	SRG2	Secondary ADA Room Glass Mtd Signage (BOH)	0
	LDS1	Loading and/or Service Dock Signage	3

- PROPOSED ROOM NUMBERS
- A DOOR TYPE (SEE BLDG & ENT DRWS)
- POTENTIAL FUTURE GRAPHIC FEATURE ELEMENT

NOTE THIS DRAWING IS NOT INTENDED TO ILLUSTRATE THE EXACT LOCATIONS. BASED ON THE LOCATIONS INDICATED IN THIS DRAWING, THE FABRICATOR WILL BE RESPONSIBLE FOR INSTALLING THE SIGNS TO ADA SPECIFICATIONS IN THE FIELD. **ANY QUESTIONABLE LOCATIONS WILL REQUIRE APPROVAL PRIOR TO INSTALLATION.**

North

Greenville Utilities

FLEET MAINTENANCE BUILDING SIGNAGE & WAYFINDING

CRITERION DOCUMENTS

ENVIRONMENTAL GRAPHICS
BROWNSTONE DESIGN INC.
217 W. 9TH STREET
CINCINNATI, OHIO 45202

NOT FOR CONSTRUCTION
THE CONTRACTOR AND/OR THE SIGN FABRICATOR IS TO PROVIDE SHOP DRAWINGS FOR REVIEW & APPROVAL

BROWNSTONE DESIGN

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BUILDING FIVE MEZZANINE SIGN LOCATION PLANS

Job No. 0326
Scale AS NOTED
Date JULY 2020 DRAFT FOR REVIEW
CRITERION DOCUMENTS

5 EG14.2

SIGN INFORMATION	SIGN DESCRIPTION	MESSAGE FACE A	MESSAGE FACE B	NOTES
SIGN TYPE **BTG1** **SIGN #** **BTG1/FM.1.07** **DRAWING SHEET** EG9.1	BTG1-BUILDING TRANSITION GRAPHICS **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	FLEET MAINTENANCE		
SIGN TYPE **BTG2** **SIGN #** **BTG2/FM.1.01** **DRAWING SHEET** EG9.1	BGT2-BUILDING TRANSITION GRAPHICS **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	MAINTENANCE BAYS		
SIGN TYPE **BTG2** **SIGN #** **BTG2/FM.1.02** **DRAWING SHEET** EG9.1	BGT2-BUILDING TRANSITION GRAPHICS **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	EMPLOYEE ENTRANCE		VERIFY MESSAGE
SIGN TYPE **BTG2** **SIGN #** **BTG2/FM.1.03** **DRAWING SHEET** EG9.1	BGT2-BUILDING TRANSITION GRAPHICS **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	EMPLOYEE ENTRANCE		VERIFY MESSAGE
SIGN TYPE **BTG2** **SIGN #** **BTG2/FM.1.04** **DRAWING SHEET** EG9.1	BGT2-BUILDING TRANSITION GRAPHICS **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	WATER MECHANICAL ROOM		VERIFY MESSAGE
SIGN TYPE **BTG2** **SIGN #** **BTG2/FM.1.05** **DRAWING SHEET** EG9.1	BGT2-BUILDING TRANSITION GRAPHICS **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	PARTS & TOOL STORAGE		
SIGN TYPE **BTG2** **SIGN #** **BTG2/FM.1.06** **DRAWING SHEET** EG9.1	BGT2-BUILDING TRANSITION GRAPHICS **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	MAINTENANCE BAYS		
SIGN TYPE **CPS2** **SIGN #** **CPS2/FM.1.01** **DRAWING SHEET** EG8.1	CPS2-CONTROL POINT SIGN **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	REFER TO DRAWINGS FOR LAYOUT		

SIGN INFORMATION	SIGN DESCRIPTION	MESSAGE FACE A	MESSAGE FACE B	NOTES
SIGN TYPE **LDS1** **SIGN #** **LDS1/FM.1.01** **DRAWING SHEET** EG8.1	LDS1-LOADING AND/OR SERVICE DOCK SIGN **MOUNTING DETAIL** USE ALTERNATE LAYOUT-SEE NOTES COLUMN	REFER TO DRAWINGS FOR LAYOUT USE ALTERNATE LAYOUT #3		USE ALTERNATE HORIZONTAL LAYOUT #3 REFER TO DRAWING FOR MORE INFORMATION
SIGN TYPE **LDS1** **SIGN #** **LDS1/FM.1.02** **DRAWING SHEET** EG8.1	LDS1-LOADING AND/OR SERVICE DOCK SIGN **MOUNTING DETAIL** USE ALTERNATE LAYOUT-SEE NOTES COLUMN	REFER TO DRAWINGS FOR LAYOUT USE ALTERNATE LAYOUT #2		USE ALTERNATE HORIZONTAL LAYOUT #2 REFER TO DRAWING FOR MORE INFORMATION
SIGN TYPE **LDS1** **SIGN #** **LDS1/FM.1.03** **DRAWING SHEET** EG8.1	LDS1-LOADING AND/OR SERVICE DOCK SIGN **MOUNTING DETAIL** USE ALTERNATE LAYOUT-SEE NOTES COLUMN	REFER TO DRAWINGS FOR LAYOUT USE ALTERNATE LAYOUT #2		USE ALTERNATE HORIZONTAL LAYOUT #2 REFER TO DRAWING FOR MORE INFORMATION THIS SIGN IS PART OF AN ALLOWANCE TO BE USED IN OTHER CAMPUS LOCATIONS WITH CLIENT GUIDANCE
SIGN TYPE **LDS1** **SIGN #** **LDS1/FM.1.04** **DRAWING SHEET** EG8.1	LDS1-LOADING AND/OR SERVICE DOCK SIGN **MOUNTING DETAIL** USE ALTERNATE LAYOUT-SEE NOTES COLUMN	REFER TO DRAWINGS FOR LAYOUT USE ALTERNATE LAYOUT #2		USE ALTERNATE HORIZONTAL LAYOUT #2 REFER TO DRAWING FOR MORE INFORMATION THIS SIGN IS PART OF AN ALLOWANCE TO BE USED IN OTHER CAMPUS LOCATIONS WITH CLIENT GUIDANCE
SIGN TYPE **LDS1** **SIGN #** **LDS1/FM.1.05** **DRAWING SHEET** EG8.1	LDS1-LOADING AND/OR SERVICE DOCK SIGN **MOUNTING DETAIL** USE ALTERNATE LAYOUT-SEE NOTES COLUMN	REFER TO DRAWINGS FOR LAYOUT USE ALTERNATE LAYOUT #2		USE ALTERNATE HORIZONTAL LAYOUT #2 REFER TO DRAWING FOR MORE INFORMATION THIS SIGN IS PART OF AN ALLOWANCE TO BE USED IN OTHER CAMPUS LOCATIONS WITH CLIENT GUIDANCE
SIGN TYPE **LDS1** **SIGN #** **LDS1/FM.1.06** **DRAWING SHEET** EG8.1	LDS1-LOADING AND/OR SERVICE DOCK SIGN **MOUNTING DETAIL** USE ALTERNATE LAYOUT-SEE NOTES COLUMN	REFER TO DRAWINGS FOR LAYOUT USE ALTERNATE LAYOUT #2		USE ALTERNATE HORIZONTAL LAYOUT #2 REFER TO DRAWING FOR MORE INFORMATION THIS SIGN IS PART OF AN ALLOWANCE TO BE USED IN OTHER CAMPUS LOCATIONS WITH CLIENT GUIDANCE
SIGN TYPE **LDS1** **SIGN #** **LDS1/FM.1.07** **DRAWING SHEET** EG8.1	LDS1-LOADING AND/OR SERVICE DOCK SIGN **MOUNTING DETAIL** USE ALTERNATE LAYOUT-SEE NOTES COLUMN	REFER TO DRAWINGS FOR LAYOUT USE ALTERNATE LAYOUT #2		USE ALTERNATE HORIZONTAL LAYOUT #2 REFER TO DRAWING FOR MORE INFORMATION THIS SIGN IS PART OF AN ALLOWANCE TO BE USED IN OTHER CAMPUS LOCATIONS WITH CLIENT GUIDANCE
SIGN TYPE **LDS1** **SIGN #** **LDS1/FM.1.08** **DRAWING SHEET** EG8.1	LDS1-LOADING AND/OR SERVICE DOCK SIGN **MOUNTING DETAIL** USE ALTERNATE LAYOUT-SEE NOTES COLUMN	REFER TO DRAWINGS FOR LAYOUT USE ALTERNATE LAYOUT #2		USE ALTERNATE HORIZONTAL LAYOUT #2 REFER TO DRAWING FOR MORE INFORMATION THIS SIGN IS PART OF AN ALLOWANCE TO BE USED IN OTHER CAMPUS LOCATIONS WITH CLIENT GUIDANCE

SIGN INFORMATION	SIGN DESCRIPTION	MESSAGE FACE A	MESSAGE FACE B	NOTES
SIGN TYPE **LDS1** **SIGN #** **LDS1/FM.1.09** **DRAWING SHEET** EG8.1	LDS1-LOADING AND/OR SERVICE DOCK SIGN **MOUNTING DETAIL** USE ALTERNATE LAYOUT-SEE NOTES COLUMN	REFER TO DRAWINGS FOR LAYOUT USE ALTERNATE LAYOUT #2		USE ALTERNATE HORIZONTAL LAYOUT #2 REFER TO DRAWING FOR MORE INFORMATION THIS SIGN IS PART OF AN ALLOWANCE TO BE USED IN OTHER CAMPUS LOCATIONS WITH CLIENT GUIDANCE
SIGN TYPE **LDS1** **SIGN #** **LDS1/FM.1.10** **DRAWING SHEET** EG8.1	LDS1-LOADING AND/OR SERVICE DOCK SIGN **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	FM 4		
SIGN TYPE **LDS1** **SIGN #** **LDS1/FM.1.11** **DRAWING SHEET** EG8.1	LDS1-LOADING AND/OR SERVICE DOCK SIGN **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	FM 3		
SIGN TYPE **LDS1** **SIGN #** **LDS1/FM.1.12** **DRAWING SHEET** EG8.1	LDS1-LOADING AND/OR SERVICE DOCK SIGN **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	FM 2		
SIGN TYPE **LDS1** **SIGN #** **LDS1/FM.1.13** **DRAWING SHEET** EG8.1	LDS1-LOADING AND/OR SERVICE DOCK SIGN **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	FM 1		
SIGN TYPE **LDS1** **SIGN #** **LDS1/FM.1.14** **DRAWING SHEET** EG8.1	LDS1-LOADING AND/OR SERVICE DOCK SIGN **MOUNTING DETAIL** USE ALTERNATE LAYOUT-SEE NOTES COLUMN	TRAINING ROOM		USE ALTERNATE HORIZONTAL LAYOUT #1 REFER TO DRAWING FOR MORE INFORMATION
SIGN TYPE **LDS1** **SIGN #** **LDS1/FM.1.15** **DRAWING SHEET** EG8.1	LDS1-LOADING AND/OR SERVICE DOCK SIGN **MOUNTING DETAIL** USE ALTERNATE LAYOUT-SEE NOTES COLUMN	PARTS & TOOL STORAGE		USE ALTERNATE HORIZONTAL LAYOUT #1 REFER TO DRAWING FOR MORE INFORMATION
SIGN TYPE **LDS1** **SIGN #** **LDS1/FM.1.16** **DRAWING SHEET** EG8.1	LDS1-LOADING AND/OR SERVICE DOCK SIGN **MOUNTING DETAIL** USE ALTERNATE LAYOUT-SEE NOTES COLUMN	FLUID STORAGE		USE ALTERNATE HORIZONTAL LAYOUT #1 REFER TO DRAWING FOR MORE INFORMATION

SIGN INFORMATION	SIGN DESCRIPTION	MESSAGE FACE A	MESSAGE FACE B	NOTES
SIGN TYPE **LDS1** **SIGN #** **LDS1/FM.1.17** **DRAWING SHEET** EG8.1	LDS1-LOADING AND/OR SERVICE DOCK SIGN **MOUNTING DETAIL** USE ALTERNATE LAYOUT-SEE NOTES COLUMN	REPAIR SHOP		USE ALTERNATE HORIZONTAL LAYOUT #1 REFER TO DRAWING FOR MORE INFORMATION
SIGN TYPE **LDS1** **SIGN #** **LDS1/FM.1.18** **DRAWING SHEET** EG8.1	LDS1-LOADING AND/OR SERVICE DOCK SIGN **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	FM 8		
SIGN TYPE **LDS1** **SIGN #** **LDS1/FM.1.19** **DRAWING SHEET** EG8.1	LDS1-LOADING AND/OR SERVICE DOCK SIGN **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	FM 7		
SIGN TYPE **LDS1** **SIGN #** **LDS1/FM.1.20** **DRAWING SHEET** EG8.1	LDS1-LOADING AND/OR SERVICE DOCK SIGN **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	FM 6		
SIGN TYPE **LDS1** **SIGN #** **LDS1/FM.1.21** **DRAWING SHEET** EG8.1	LDS1-LOADING AND/OR SERVICE DOCK SIGN **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	FM 5		
SIGN TYPE **LDS1** **SIGN #** **LDS1/FM.1.22** **DRAWING SHEET** EG8.1	LDS1-LOADING AND/OR SERVICE DOCK SIGN **MOUNTING DETAIL** USE ALTERNATE LAYOUT-SEE NOTES COLUMN	UP TO MEZZANINE		USE ALTERNATE HORIZONTAL LAYOUT #1 REFER TO DRAWING FOR MORE INFORMATION
SIGN TYPE **NTF1** **SIGN #** **NTF1/FM.1.01** **DRAWING SHEET** EG9.1	NTF1-TYPICAL NO TRESPASSING FENCE SIGN **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	REFER TO DRAWINGS FOR LAYOUT		FINAL CONTENT IS TO BE REVIEWED AND APPROVED BY THE CLIENT PRIOR TO FABRICATION. CONTENT SHOULD BE THE SAME AS WHAT WAS USED IN PHASE ONE OF THE CAMPUS SIGNAGE
SIGN TYPE **NTF1** **SIGN #** **NTF1/FM.1.02** **DRAWING SHEET** EG9.1	NTF1-TYPICAL NO TRESPASSING FENCE SIGN **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	REFER TO DRAWINGS FOR LAYOUT		FINAL CONTENT IS TO BE REVIEWED AND APPROVED BY THE CLIENT PRIOR TO FABRICATION. CONTENT SHOULD BE THE SAME AS WHAT WAS USED IN PHASE ONE OF THE CAMPUS SIGNAGE

SIGN INFORMATION	SIGN DESCRIPTION	MESSAGE FACE A	MESSAGE FACE B	NOTES
SIGN TYPE NTF1 **SIGN #** NTF1/FM.1.03 **DRAWING SHEET** EG9.1	NTF1-TYPICAL NO TRESPASSING FENCE SIGN **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	REFER TO DRAWINGS FOR LAYOUT		FINAL CONTENT IS TO BE REVIEWED AND APPROVED BY THE CLIENT PRIOR TO FABRICATION. CONTENT SHOULD BE THE SAME AS WHAT WAS USED IN PHASE ONE OF THE CAMPUS SIGNAGE
SIGN TYPE NTF1 **SIGN #** NTF1/FM.1.04 **DRAWING SHEET** EG9.1	NTF1-TYPICAL NO TRESPASSING FENCE SIGN **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	REFER TO DRAWINGS FOR LAYOUT		FINAL CONTENT IS TO BE REVIEWED AND APPROVED BY THE CLIENT PRIOR TO FABRICATION. CONTENT SHOULD BE THE SAME AS WHAT WAS USED IN PHASE ONE OF THE CAMPUS SIGNAGE
SIGN TYPE NTF1 **SIGN #** NTF1/FM.1.05 **DRAWING SHEET** EG9.1	NTF1-TYPICAL NO TRESPASSING FENCE SIGN **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	REFER TO DRAWINGS FOR LAYOUT		FINAL CONTENT IS TO BE REVIEWED AND APPROVED BY THE CLIENT PRIOR TO FABRICATION. CONTENT SHOULD BE THE SAME AS WHAT WAS USED IN PHASE ONE OF THE CAMPUS SIGNAGE
SIGN TYPE NTF1 **SIGN #** NTF1/FM.1.06 **DRAWING SHEET** EG9.1	NTF1-TYPICAL NO TRESPASSING FENCE SIGN **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	REFER TO DRAWINGS FOR LAYOUT		FINAL CONTENT IS TO BE REVIEWED AND APPROVED BY THE CLIENT PRIOR TO FABRICATION. CONTENT SHOULD BE THE SAME AS WHAT WAS USED IN PHASE ONE OF THE CAMPUS SIGNAGE
SIGN TYPE NTF1 **SIGN #** NTF1/FM.1.07 **DRAWING SHEET** EG9.1	NTF1-TYPICAL NO TRESPASSING FENCE SIGN **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	REFER TO DRAWINGS FOR LAYOUT		FINAL CONTENT IS TO BE REVIEWED AND APPROVED BY THE CLIENT PRIOR TO FABRICATION. CONTENT SHOULD BE THE SAME AS WHAT WAS USED IN PHASE ONE OF THE CAMPUS SIGNAGE
SIGN TYPE NTF1 **SIGN #** NTF1/FM.1.08 **DRAWING SHEET** EG9.1	NTF1-TYPICAL NO TRESPASSING FENCE SIGN **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	REFER TO DRAWINGS FOR LAYOUT		FINAL CONTENT IS TO BE REVIEWED AND APPROVED BY THE CLIENT PRIOR TO FABRICATION. CONTENT SHOULD BE THE SAME AS WHAT WAS USED IN PHASE ONE OF THE CAMPUS SIGNAGE
SIGN TYPE NTF1 **SIGN #** NTF1/FM.1.09 **DRAWING SHEET** EG9.1	NTF1-TYPICAL NO TRESPASSING FENCE SIGN **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	REFER TO DRAWINGS FOR LAYOUT		FINAL CONTENT IS TO BE REVIEWED AND APPROVED BY THE CLIENT PRIOR TO FABRICATION. CONTENT SHOULD BE THE SAME AS WHAT WAS USED IN PHASE ONE OF THE CAMPUS SIGNAGE
SIGN TYPE PKG1 **SIGN #** PKG1/FM.1.01 **DRAWING SHEET** EG7.1	PKG1-MISC DESIGNATED PARKING SIGNAGE **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	HC PARKING- REFER TO DRAWINGS USE LAYOUT 2		VERIFY THAT THIS IS A VAN ACCESSIBLE HANDICAPPED PARKING SPACE

SIGN INFORMATION	SIGN DESCRIPTION	MESSAGE FACE A	MESSAGE FACE B	NOTES
SIGN TYPE **PKG1** **SIGN #** **PKG1/FM.1.02** **DRAWING SHEET** EG7.1	PKG1-MISC DESIGNATED PARKING SIGNAGE **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	HC PARKING- REFER TO DRAWINGS USE LAYOUT 2		VERIFY THAT THIS IS A VAN ACCESSIBLE HANDICAPPED PARKING SPACE
SIGN TYPE **PRG1** **SIGN #** **PRG1/FM.1.01** **DRAWING SHEET** EG10.1	PRG1-PRIMARY ADA ROOM GLASS MTD SIGN (FOH) **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	FM.1.01 FLEET MANAGER		
SIGN TYPE **PRG1** **SIGN #** **PRG1/FM.1.02** **DRAWING SHEET** EG10.1	PRG1-PRIMARY ADA ROOM GLASS MTD SIGN (FOH) **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	FM.1.02 OCCUPANT'S NAME TBD BY GUC		THIS IS NOTED AS A FUTURE OFFICE ON THE ARCHITECTURAL PLANS. VERIFY MESSAGE WITH CLIENT OR LEAVE INSERT BLANK UNTIL AN OCCUPANT IS DETERMINED
SIGN TYPE **PRG1** **SIGN #** **PRG1/FM.1.03** **DRAWING SHEET** EG10.1	PRG1-PRIMARY ADA ROOM GLASS MTD SIGN (FOH) **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	FM.1.03 TRAINING ROOM		
SIGN TYPE **PRG1** **SIGN #** **PRG1/FM.1.04** **DRAWING SHEET** EG10.1	PRG1-PRIMARY ADA ROOM GLASS MTD SIGN (FOH) **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	FM.1.07 MEETING ROOM		
SIGN TYPE **PRG1** **SIGN #** **PRG1/FM.1.05** **DRAWING SHEET** EG10.1	PRG1-PRIMARY ADA ROOM GLASS MTD SIGN (FOH) **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	FM.1.10 COPY & PRINT ROOM		VERIFY NOMENCLATURE
SIGN TYPE **PRG1** **SIGN #** **PRG1/FM.1.06** **DRAWING SHEET** EG10.1	PRG1-PRIMARY ADA ROOM GLASS MTD SIGN (FOH) **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	FM.1.09 BREAK ROOM		
SIGN TYPE **PRG1** **SIGN #** **PRG1/FM.1.07** **DRAWING SHEET** EG10.1	PRG1-PRIMARY ADA ROOM GLASS MTD SIGN (FOH) **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	FM.1.11 MECHANIC		THIS IS NOTED AS “MECHANIC” ON THE ARCHITECTURAL PLANS. VERIFY MESSAGE WITH CLIENT OR PRINT “MECHANIC” ON THE INSERT UNTIL AN OCCUPANT IS DETERMINED

SIGN INFORMATION	SIGN DESCRIPTION	MESSAGE FACE A	MESSAGE FACE B	NOTES
SIGN TYPE **PRG1** **SIGN #** **PRG1/FM.1.08** **DRAWING SHEET** EG10.1	PRG1-PRIMARY ADA ROOM GLASS MTD SIGN (FOH) **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	FM.1.12 MECHANIC		THIS IS NOTED AS “MECHANIC” ON THE ARCHITECTURAL PLANS. VERIFY MESSAGE WITH CLIENT OR PRINT “MECHANIC” ON THE INSERT UNTIL AN OCCUPANT IS DETERMINED
SIGN TYPE **PRG1** **SIGN #** **PRG1/FM.1.09** **DRAWING SHEET** EG10.1	PRG1-PRIMARY ADA ROOM GLASS MTD SIGN (FOH) **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	FM.1.19 CALIBRATION LAB		
SIGN TYPE **PRG1** **SIGN #** **PRG1/FM.1.10** **DRAWING SHEET** EG10.1	PRG1-PRIMARY ADA ROOM GLASS MTD SIGN (FOH) **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	FM.1.20 PARTS & TOOL STORAGE		
SIGN TYPE **REG1** **SIGN #** **REG1/FM.1.01** **DRAWING SHEET** EG7.1	REG1-MISC REGULATORY SIGNAGE ELEMENTS **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	NO PARKING- REFER TO DRAWINGS USE LAYOUT 3		
SIGN TYPE **REG1** **SIGN #** **REG1/FM.1.02** **DRAWING SHEET** EG7.1	REG1-MISC REGULATORY SIGNAGE ELEMENTS **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	NO PARKING- REFER TO DRAWINGS USE LAYOUT 3		
SIGN TYPE **REG1** **SIGN #** **REG1/FM.1.03** **DRAWING SHEET** EG7.1	REG1-MISC REGULATORY SIGNAGE ELEMENTS **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	DO NOT ENTER- REFER TO DRAWINGS USE LAYOUT 1		VERIFY THAT THIS IS A FIRE LANE AND/OR IF THIS SHOULD BE “NO PARKING” INSTEAD OF “DO NOT ENTER”- SEE DRAWING TO DECIDE WHICH LAYOUT IS APPROPRIATE
SIGN TYPE **REG1** **SIGN #** **REG1/FM.1.04** **DRAWING SHEET** EG7.1	REG1-MISC REGULATORY SIGNAGE ELEMENTS **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	DO NOT ENTER- REFER TO DRAWINGS USE LAYOUT 1		VERIFY THAT THIS IS A FIRE LANE AND/OR IF THIS SHOULD BE “NO PARKING” INSTEAD OF “DO NOT ENTER”- SEE DRAWING TO DECIDE WHICH LAYOUT IS APPROPRIATE
SIGN TYPE **RRM1** **SIGN #** **RRM1/FM.1.01** **DRAWING SHEET** EG11.1	RRM1-MENS ADA RESTROOMS (FOH) **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	REFER TO DRAWINGS FOR LAYOUT		

SIGN INFORMATION	SIGN DESCRIPTION	MESSAGE FACE A	MESSAGE FACE B	NOTES
SIGN TYPE **RRU1** **SIGN #** **RRU1/FM.1.01** **DRAWING SHEET** EG11.1	RRU1-UNISEX ADA RESTROOMS (FOH) **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	REFER TO DRAWINGS FOR LAYOUT		
SIGN TYPE **RRW1** **SIGN #** **RRW1/FM.1.01** **DRAWING SHEET** EG11.1	RRW1-WOMENS ADA RESTROOMS (FOH) **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	REFER TO DRAWINGS FOR LAYOUT		
SIGN TYPE **SRG2** **SIGN #** **SRG2/FM.1.01** **DRAWING SHEET** EG12.1	SRG2-SECONDARY ADA ROOM GLASS MTD SIGN (BOH) **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	FM.1.21 PARTS MANAGER		
SIGN TYPE **SRW1** **SIGN #** **SRW1/FM.1.01** **DRAWING SHEET** EG10.1	SRW1-SECONDARY ADA ROOM WALL MTD SIGN (FOH) **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	FM.1.08 CLOSET		
SIGN TYPE **SRW1** **SIGN #** **SRW1/FM.1.02** **DRAWING SHEET** EG10.1	SRW1-SECONDARY ADA ROOM WALL MTD SIGN (FOH) **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	FM.1.14 MAINTENANCE BAYS		
SIGN TYPE **SRW1** **SIGN #** **SRW1/FM.1.03** **DRAWING SHEET** EG10.1	SRW1-SECONDARY ADA ROOM WALL MTD SIGN (FOH) **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	FM.1.13 JANITOR		VERIFY NOMENCLATURE
SIGN TYPE **SRW1** **SIGN #** **SRW1/FM.1.04** **DRAWING SHEET** EG10.1	SRW1-SECONDARY ADA ROOM WALL MTD SIGN (FOH) **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	FM.1.16 REFERENCE LIBRARY		
SIGN TYPE **SRW1** **SIGN #** **SRW1/FM.1.05** **DRAWING SHEET** EG10.1	SRW1-SECONDARY ADA ROOM WALL MTD SIGN (FOH) **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	FM.1.17 STORAGE		

SIGN INFORMATION	SIGN DESCRIPTION	MESSAGE FACE A	MESSAGE FACE B	NOTES
SIGN TYPE **SRW2** **SIGN #** **SRW2/FM.1.01** **DRAWING SHEET** EG12.1	SRW2-SECONDARY ADA ROOM WALL MTD SIGN (BOH) **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	FM.1.22 FLUID STORAGE		
SIGN TYPE **SRW2** **SIGN #** **SRW2/FM.1.02** **DRAWING SHEET** EG12.1	SRW2-SECONDARY ADA ROOM WALL MTD SIGN (BOH) **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	FM.1.15 REPAIR SHOP		
SIGN TYPE **LDS1** **SIGN #** **LDS1/FM.2.01** **DRAWING SHEET** EG8.1	LDS1-LOADING AND/OR SERVICE DOCK SIGN **MOUNTING DETAIL** USE ALTERNATE LAYOUT-SEE NOTES COLUMN	ARCHIVE STORAGE ACCESS OR MEZZANINE ACCESS		VERIFY NOMENCLATURE USE ALTERNATE LAYOUT #1
SIGN TYPE **LDS1** **SIGN #** **LDS1/FM.2.02** **DRAWING SHEET** EG8.1	LDS1-LOADING AND/OR SERVICE DOCK SIGN **MOUNTING DETAIL** USE ALTERNATE LAYOUT-SEE NOTES COLUMN	"DO NOT STEP OUT" REFER TO DRAWINGS FOR LAYOUT		USE ALTERNATE LAYOUT #4
SIGN TYPE **LDS1** **SIGN #** **LDS1/FM.2.03** **DRAWING SHEET** EG8.1	LDS1-LOADING AND/OR SERVICE DOCK SIGN **MOUNTING DETAIL** USE ALTERNATE LAYOUT-SEE NOTES COLUMN	"ELECTRIC DANGER" REFER TO DRAWINGS FOR LAYOUT		USE ALTERNATE LAYOUT #3
SIGN TYPE **SRW2** **SIGN #** **SRW2/FM.2.01** **DRAWING SHEET** EG12.1	SRW2-SECONDARY ADA ROOM WALL MTD SIGN (BOH) **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	FM.2.01 COMMUNICATIONS TECH ROOM		
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SIGN TYPE **SVD** **SIGN #** **SVD/SW.1.03** **DRAWING SHEET** EG5.1	SVD-SECONDARY VEHICULAR DIRECTIONAL SIGN **MOUNTING DETAIL** USE TYPICAL MOUNTING DETAIL	REFER TO DRAWINGS FOR LAYOUT		NOTE THAT SVD/SW.1.02 WAS PART OF THE PHASE ONE SIGNAGE SCOPE

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SECTION 5
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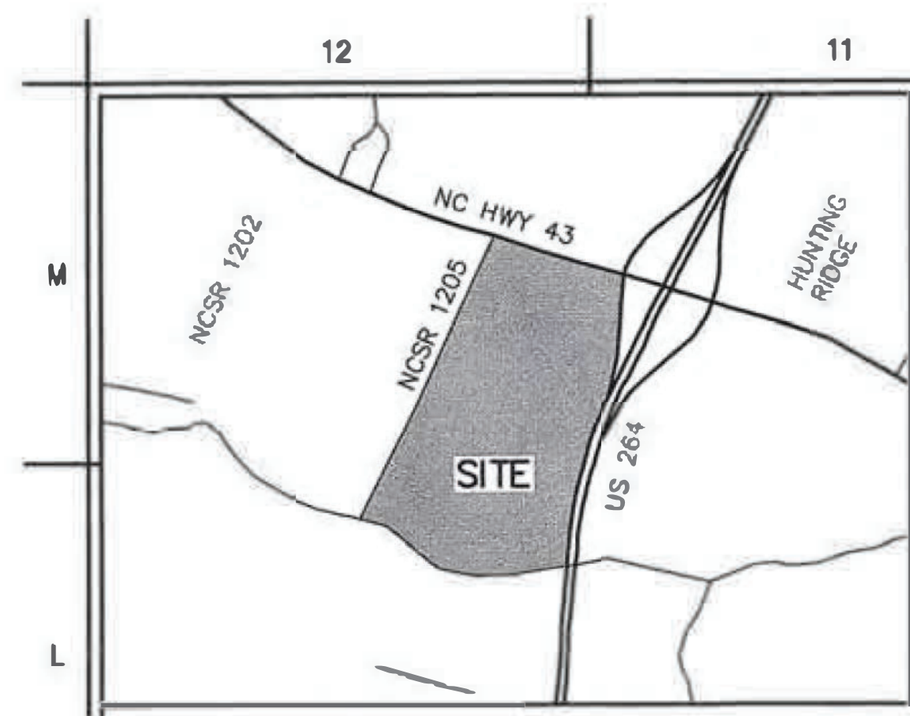
Project Information

RAI Project No. 2017055
Dwg No. W-3730
Rivers & Associates, Inc.
NC License: F-0334
riversandassociates.com
Since 1918
107 East Second Street
Greenville, NC 27858
(252) 752-4135
Engineers
Planners
Surveyors
Landscape Architects

NORTH CAROLINA PROFESSIONAL SEAL 12324 ENGINEER STEPHEN JANOWSKI



VICINITY MAP
NOT TO SCALE

LINE TABLE FROM "B" TO EIS "D" ALONG THE CENTERLINE OF NCSR 1205		
L73	96.06	N04°48'11"W
L74	94.25	N29°05'46"W
L75	98.62	N58°29'56"W
L76	377.65	N64°51'36"W
L77	95.95	N59°02'34"W
L78	93.59	N47°35'37"W
L79	262.42	N37°45'57"W
L80	56.15	N34°16'52"W
L81	77.06	N12°34'03"W

NOTE :
COMBINED SCALE FACTOR = 0.99989185

ALL DISTANCES ARE HORIZONTAL GROUND MEASUREMENTS IN FEET AND DECIMALS THEREOF UNLESS NOTED OTHERWISE.
ALL COORDINATES SHOWN ARE RELATIVE TO NAD 83/2011 COORDINATE ADJUSTMENTS.

STATE OF NORTH CAROLINA PITT COUNTY

I, WILLIAM B. HILLIARD, CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION; (DEED DESCRIPTION RECORDED IN BOOK — PAGE —). THAT THE RATIO OF PRECISION AS CALCULATED IS 1:10,000+; THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH THE STANDARDS OF PRACTICE. WITNESS MY ORIGINAL SIGNATURE, REGISTRATION NUMBER AND SEAL THIS 18th DAY OF APRIL, 2017.

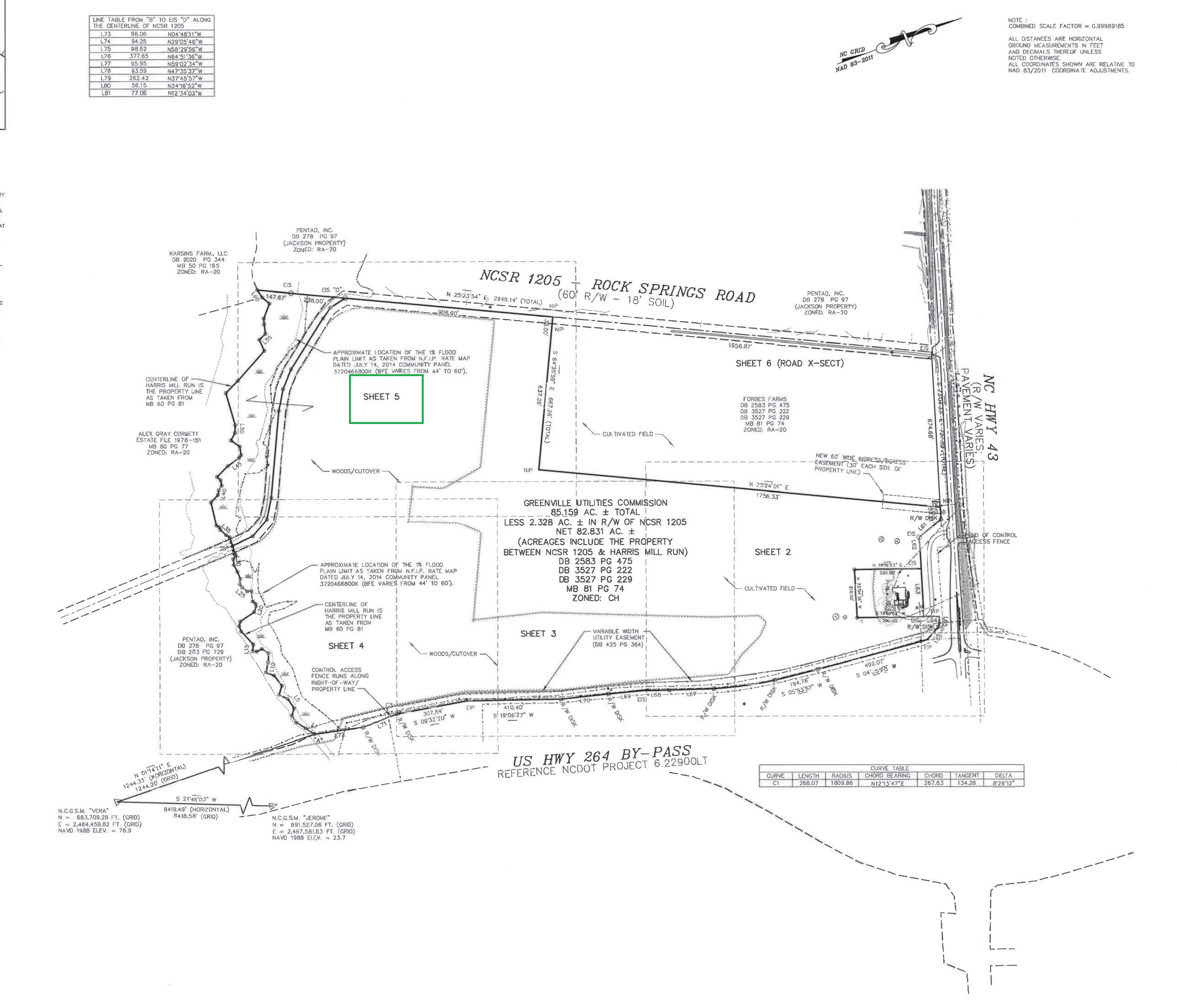
L – 4509

I, WILLIAM B. HILLIARD, CERTIFY THAT THIS PROJECT WAS COMPLETED UNDER MY DIRECT AND RESPONSIBLE CHARGE FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION; THAT THIS GROUND SURVEY WAS PERFORMED AT THE 95 PERCENT CONFIDENCE LEVEL TO MEET FEDERAL GEOGRAPHIC DATA COMMITTEE STANDARDS; THAT THIS SURVEY WAS PERFORMED TO MEET THE REQUIREMENTS FOR A TOPOGRAPHIC/PLANIMETRIC SURVEY TO THE ACCURACY OF CLASS A AND VERTICAL ACCURACY WHEN APPLICABLE TO THE CLASS C STANDARD, AND THAT THE ORIGINAL DATA WAS OBTAINED ON BETWEEN 03/28/17 AND 04/12/17; THAT THE SURVEY WAS COMPLETED ON 4/12/17; AND ALL COORDINATES ARE BASED ON NAD 83/2011 AND ALL ELEVATIONS ARE BASED ON NAVD 88.

LINE TABLE FROM "A" TO "B"		
LINE	LENGTH	BEARING
L1	47.72	S55°54'51"W
L2	47.54	S52°23'19"W
L3	34.22	S75°57'48"W
L4	33.79	N53°47'31"W
L5	48.78	S76°47'45"W
L6	41.99	S44°47'59"W
L7	41.52	N52°29'07"W
L8	54.95	S72°35'09"W
L9	38.43	S40°28'02"W
L10	45.77	N57°31'55"W
L11	39.54	N67°12'20"W
L12	34.65	S53°46'04"W
L13	26.30	S05°02'50"E
L14	17.52	S21°07'43"W
L15	30.28	N63°46'56"W
L16	76.54	S67°02'27"W
L17	23.63	S88°39'23"W
L18	21.12	N57°47'12"W
L19	73.29	N14°19'58"W
L20	26.54	N50°36'35"W
L21	11.26	N83°40'40"W
L22	15.72	S59°57'37"W
L23	47.47	N77°18'04"W
L24	18.58	S11°34'10"W
L25	28.09	S56°56'59"W
L26	16.95	S74°47'26"W
L27	23.91	N62°25'58"W
L28	33.30	S86°44'04"W
L29	33.70	S82°20'10"W
L30	26.39	N75°05'37"W
L31	19.52	N36°59'16"W
L32	43.72	N87°23'40"W

LINE TABLE "B" TO "C"		
LINE	LENGTH	BEARING
L33	38.59	N89°48'22"W
L34	17.82	S50°04'12"W
L35	34.05	S62°45'38"W
L36	12.62	N88°59'49"W
L37	13.96	S46°59'19"W
L38	104.43	N83°35'23"W
L39	44.77	N26°17'37"W
L40	20.20	N58°12'49"W
L41	23.20	N38°33'07"W
L42	24.42	N80°59'06"W
L43	20.73	S63°38'41"W
L44	67.30	N25°16'45"W
L45	59.14	N15°27'29"W
L46	15.43	N32°47'26"W
L47	38.26	N78°36'34"W
L48	46.01	S54°27'32"W
L49	36.54	N42°17'39"W
L50	33.28	N67°32'39"W
L51	146.25	N86°00'57"W
L52	73.70	N25°04'26"W
L53	175.30	N28°46'15"W
L54	52.06	S85°46'05"W
L55	37.16	N23°56'56"W
L56	41.39	N77°51'13"W
L57	25.66	N73°35'50"W
L58	69.92	N49°02'14"W
L59	41.16	S60°04'03"W
L60	38.37	S76°12'58"W

LINE TABLE		
LINE	LENGTH	BEARING
L61	122.50	S19°43'11"E
L62	137.35	S73°04'36"E
L63	210.00	S73°04'36"E
L64	68.16	N19°23'21"E
L65	44.09	S64°10'55"E
L66	74.73	S28°08'18"E
L67	194.30	S18°25'14"W
L68	115.83	S19°20'31"W
L69	149.83	S14°39'55"W
L70	207.14	S13°46'36"W
L71	156.24	S01°52'08"E
L72	218.64	S12°26'47"W



CURVE TABLE						
CURVE	LENGTH	RADIUS	CHORD BEARING	CHORD	TANGENT	DELTA
C1	268.07	1809.86	N12°13'47"E	267.83	134.28	8°29'12"

SEAL 4/26/18 — NORTH CAROLINA PROFESSIONAL SEAL L-4509 LAND SURVEYOR WILLIAM B. HILLIARD

SEAL

LEGEND

ECM = EXISTING CONCRETE MONUMENT
EIP = EXISTING IRON PIPE
EIS = EXISTING IRON STAKE
NIP = NEW IRON PIPE
NPK = NEW PK NAIL
CLF = CHAIN LINK FENCE
CP = CONCRETE PAD
CSW = CONCRETE SIDEWALK
CT = CEDAR TREE
DIP = DUCTILE IRON PIPE
DWT = DOG WOOD TREE
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EMH = ELECTRIC MANHOLE
FOC = FIBER OPTIC CABLE BOX/SIGN
FZAE = FLOOD ZONE AE (1%)
FZX = FLOOD ZONE X
GW = GUY WIRE
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MB = MAIL BOX
MH = MANHOLE
OT = OAK TREE
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PP = POWER POLE
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TSB = TRAFFIC SIGNAL BOX
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—WTL— = USACOE 404 WETLANDS LINE

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GRAPHIC SCALE: 1" = 200'
0 100 200 400

REV. NO.	DATE	REVISIONS	BY
2	03/21/18	ADDITIONAL SPOT ELEVATIONS	WBH
1	10/24/17	UPDATED SITE CONTROL POINTS	WBH

THE EAST GROUP, P.A.
▪Engineering ▪Architecture ▪Surveying ▪Technology
S. Evans St., Greenville, NC 27834 252-758-3746, 252-830-3954 (Fax)

PROJECT TITLE
GREENVILLE UTILITIES COMMISSION
CITY OF GREENVILLE, PITT CO., N.C.

DRAWING TITLE
PROPERTY, LOCATION AND TOPOGRAPHIC SURVEY

SCALE: 1" = 200'	DEPARTMENT: SURVEY
DRAWN BY: WBH / DATE STARTED: 03/28/17	SHEET No.: SHEET 1 OF 6
CHECKED	DRAWING NO.: SU1
APPROVED	
PROJECT NO.: 20170054	

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SURVEY REDUCED FROM ORIGINAL SIZE.
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2	REVISIONS FOR ADDENDUM #3	01/10/19	JSJ
3	NCDENR COMMENTS	03/11/19	JSJ
4	ISSUED AS CONFORMED SET	03/15/19	JSJ
5	BRIDGING DOCUMENTS	JULY 2020	

DATE: 12/07/18
DESIGNED BY: -
DRAWN BY: -
CHECKED BY: -

NEW OPERATIONS CENTER
Greenville Utilities Commission
NC HWY 43 & 64 Bypass, Greenville, NC 27834

SURVEY - OVERALL

CONTRACT NO: 160681
SCALE: AS NOTED
SHEET: C1.1

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RAI Project No. 2017055
Dwg No. W-3730

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4/26/18

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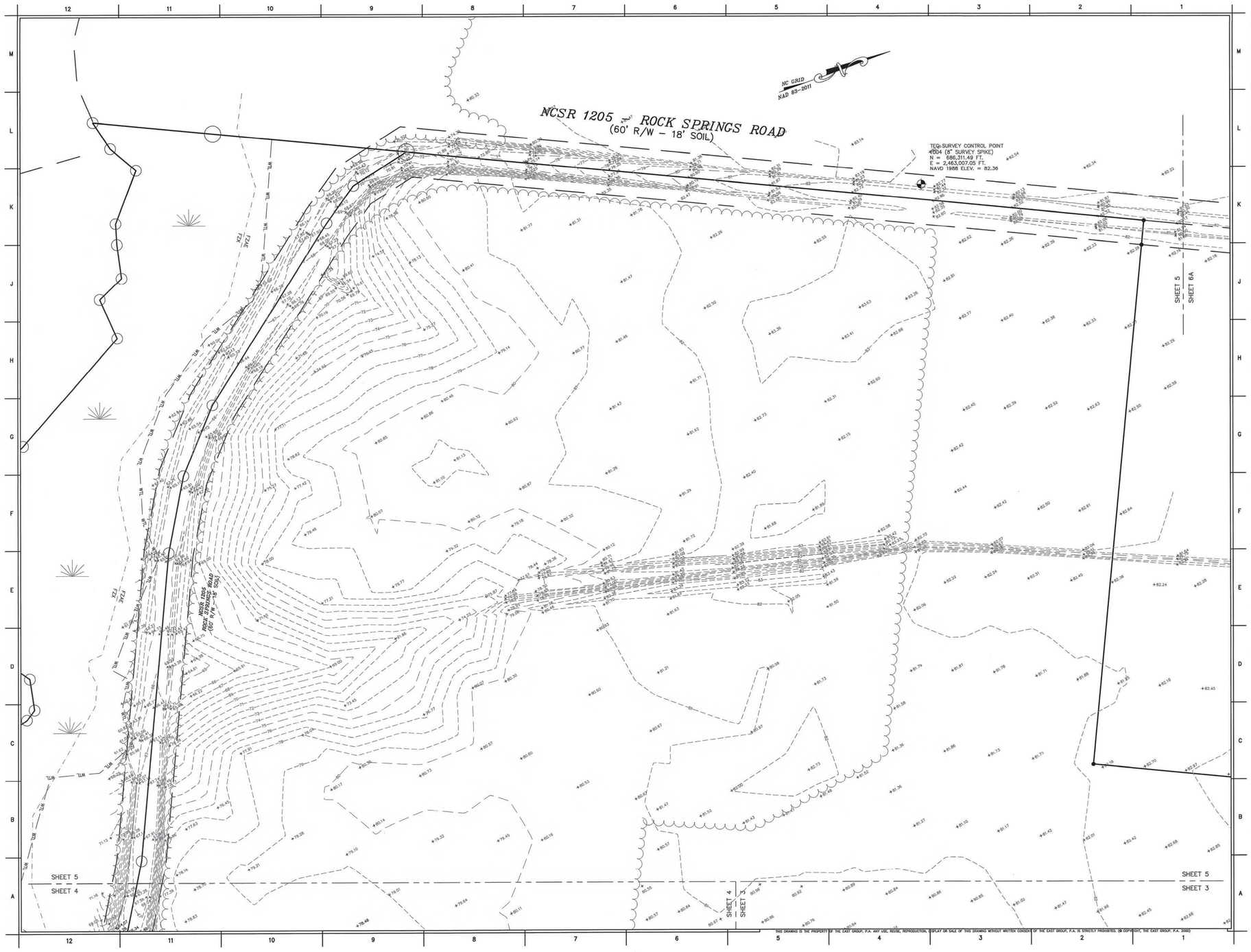

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GRAPHIC SCALE: 1" = 50'
0 25 50 100

REV. NO.	DATE	REVISIONS	BY
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1	10/24/17	UPDATED SITE CONTROL POINTS	WBH

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•Engineering•Architecture•Surveying•Technology
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PROJECT TITLE
GREENVILLE UTILITIES COMMISSION
CITY OF GREENVILLE, PITT CO., N.C.

DRAWING TITLE
PROPERTY, LOCATION AND TOPOGRAPHIC SURVEY

SCALE	DEPARTMENT
1" = 50'	SURVEY
DRAWN BY: WBH	DATE STARTED: 03/28/17
CHECKED:	SHEET No.: SHEET 5 OF 6
APPROVED:	DRAWING NO.: SU5
PROJECT NO.: 20170054	

NO	REVISIONS	DATE	BY
0	ISSUE FOR BIDDING AND PERMIT	12/07/18	JSJ
1	REVISIONS FOR ADDENDUM #2	01/04/19	JSJ
2	REVISIONS FOR ADDENDUM #3	01/10/19	JSJ
3	INCORP. COMMENTS	03/11/19	JSJ
4	ISSUED AS CONFORMED SET	03/15/19	JSJ

DATE: 12/07/18
DESIGNED BY: -
DRAWN BY: -
CHECKED BY: -

NEW OPERATIONS CENTER
Greenville Utilities Commission
NC HWY 43 & 264 Bypass, Greenville, NC 27834

SURVEY - ENLARGEMENT

CONTRACT NO: 160681
SCALE: AS NOTED
SHEET: C1.5

SURVEY REDUCED FROM ORIGINAL SIZE.
(APPROXIMATE SCALE 1" = 60')

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Geotechnical Engineering Report

GUC Building 5
Greenville, Pitt County, NC
May 29, 2020
Terracon Project No. 72205044



Prepared for:
MHAworks, PA
Greenville, North Carolina

Prepared by:
Terracon Consultants, Inc.
Winterville, North Carolina

May 29, 2020

MHAworks, PA
409 Evans Street, Suite C
Greenville, NC 27858

Attn: Ms. Amy Spruill - Project Manager
P: (252) 329-0119
E: aspruill@Mhaworks.com

Re: Geotechnical Engineering Report
GUC Building 5
NC Hwy 43 W and US 264 Bypass
Greenville, Pitt County, NC
Terracon Project No. 72205044

Dear Ms. Spruill:

We have completed Geotechnical Engineering services for the above referenced project. This study was performed in general accordance with Terracon Proposal No. P72205044 dated May 14, 2020. This report presents the findings of the subsurface exploration and provides geotechnical recommendations concerning earthwork and the design and construction of foundations, floor slabs and pavements for the proposed project.

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

Sincerely,
Terracon Consultants, Inc.

Andrew J. Gliniak, PE
Project Engineer
Registered NC 042183

James (Jim) D. Hoskins, III, PE
Sr. Principal / Office Manager

REPORT TOPICS

INTRODUCTION 1
SITE CONDITIONS 1
PROJECT DESCRIPTION 2
GEOTECHNICAL CHARACTERIZATION 3
GEOTECHNICAL OVERVIEW 4
EARTHWORK 4
SHALLOW FOUNDATIONS 9
SEISMIC CONSIDERATIONS 10
LIQUEFACTION 10
FLOOR SLABS 11
PAVEMENTS 12
GENERAL COMMENTS 14
FIGURES 16

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

ATTACHMENTS

EXPLORATION AND TESTING PROCEDURES
PHOTOGRAPHY LOG
SITE LOCATION AND EXPLORATION PLANS
EXPLORATION RESULTS
SUPPORTING INFORMATION

Note: Refer to each individual Attachment for a listing of contents.

REPORT SUMMARY

Topic [1]	Overview Statement [2]
Project Description	A portion of the site for GUC's new operation center is being considered for an additional building and parking designated as Building 5 that will be a single-story pre-engineered metal building with a footprint of approximate 13,145 square feet.
Geotechnical Characterization	The borings encountered near surface fill and very loose to medium dense sand. Medium stiff to stiff clay was also encountered in the borings at varying depths. Groundwater is anticipated at a depth of 3 to 4 feet below the existing ground surface.
Geotechnical Overview	Isolated subgrade repairs should be anticipated during earthwork, especially in the wooded portion of the site. Isolated foundation overexcavation up to 3 feet below existing grades may be required. Near surface soils at the site are moisture sensitive and performing earthwork operations during warmer periods of the year (May through October) will help reduce the potential for problems associated with wet, unstable subgrades. The fill encountered appears to have been placed in a controlled manner, but we have no records to indicate the degree of control. Support of foundations, floor slabs, and pavements, on or above existing fill soils, is discussed in this report.
Earthwork	The building footprint and parking lot area should be densified in place using a medium weight vibratory roller after stripping. The purpose of the vibratory rolling is to densify the loose, near surface soils and potentially improve floor slab and foundation support. The existing ditches should be stripped approximately 1-foot or more to denser soils and backfilled with compacted fill.
Shallow Foundations	Allowable bearing pressure = 2,000 psf Expected settlements: < 1-inch total, < ½ -inch differential
Pavements	With subgrade prepared as noted in **Earthwork**. Concrete: ■ 5 inches Portland Cement Concrete (PCC) in Light and Medium Duty areas ■ 7 inches PCC in areas exhibiting heavy traffic Asphalt: ■ 3 inches Asphaltic Concrete (AC) over 6 inches granular base in Light Duty areas ■ 3 inches AC over 8 inches granular base in Medium Duty areas
General Comments	This section contains important information about the limitations of this geotechnical engineering report.

1. If the reader is reviewing this report as a pdf, the topics above can be used to access the appropriate section of the report by simply clicking on the topic itself.
2. This summary is for convenience only. It should be used in conjunction with the entire report for design purposes.

Geotechnical Engineering Report

GUC Building 5
NC Hwy 43 W and US 264 Bypass
Greenville, Pitt County, NC

Terracon Project No. 72205044
May 29, 2020

INTRODUCTION

This report presents the results of our subsurface exploration and geotechnical engineering services performed for the proposed operations center building to be located at NC Hwy 43 W and US 264 Bypass in Greenville, Pitt County, NC. The purpose of these services is to provide information and geotechnical engineering recommendations relative to:

- Subsurface soil conditions
- Groundwater conditions
- Site preparation and earthwork
- Pavement design and construction
- Foundation design and construction
- Floor slab design and construction
- Seismic site classification per IBC

The geotechnical engineering Scope of Services for this project included the advancement of 13 soil test borings to depths of approximately 5 and 25 feet below existing site grades.

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

SITE CONDITIONS

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

Item	Description
Parcel Information	The project is located at the new GUC Operations Facility at NC Hwy 43 W and US 264 Bypass in Greenville, Pitt County, NC. See **Site Location and Exploration Plans**
Site Coordinates	Approximately 35.6247°N, 77.4408°W

Item	Description
Existing Improvements	Mostly undeveloped portion of the site adjacent to the stormwater pond of the facility. Underground stormwater conveyance is located around the proposed building. Two vee ditches approximately 3 to 4 feet deep based on visual observations bisect the wooded portion of the site.
Current Ground Cover	The area is wooded and partially graded.
Existing Topography	Relatively level.
Geology	The subject site is located in the Coastal Plain Physiographic Province. The Coastal Plain soils consist mainly of marine sediments that were deposited during successive periods of fluctuating sea level and moving shoreline. The soils include sands, silts, and clays with irregular deposits of shells, which are typical of those lain down in a shallow sloping sea bottom. Recent alluvial sands, silts, and clays are typically present near rivers and creeks. According to USGS Mineral Resources On-Line Spatial Data based on the 1998 digital equivalent of the 1985 Geologic Map of North Carolina updated in 1998, the site is mapped within the Yorktown Formation and Duplin Formation, Undivided (Tertiary).

We also collected photographs at the time of our field exploration program. Representative photos are provided in our **Photography Log**.

PROJECT DESCRIPTION

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

Item	Description
Information Provided	Project details were obtained from the emails between April 29, 2020 with CT Consultants, Inc. and MHA Works thru May 1, 2020.
Project Description	A portion of the site for GUC's new operation center is being considered for an additional building and parking designated as Building 5.
Proposed Structure	A single-story pre-engineered metal building with a footprint of approximate 13,145 square feet and adjacent parking.
Building Construction	Steel framed supported on monolithic shallow foundation and floor slab with exterior brick veneer or siding (assumed).
Finished Floor Elevation	Unknown, assumed to match existing.
Maximum Loads (assumed)	■ Columns: Up to 30 kips ■ Walls: Up to 2 kips per linear foot (klf) ■ Slabs: 100 pounds per square foot (psf)

Item	Description
Grading/Slopes	Up to 2 feet of cut and/or fill placement assumed.
Pavements	We assume both rigid (concrete) and flexible (asphalt) pavement sections will be considered and the pavement design period is 20 years. Traffic will consist primarily of autos/light trucks.
Estimated Start of Construction	Summer 2020

GEOTECHNICAL CHARACTERIZATION

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

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

Model Layer	Layer Name	General Description
1	**Fill**	Existing fill
2	**Looser Sand**	Very loose to loose sand
3	**Denser Soil**	Medium stiff to stiff clay and loose to medium dense sand

Boring B-2 encountered sand with wood to a depth of approximately 3 feet. Fill was encountered in Boring B-5 to a depth of approximately 3 feet below existing grade. The fill appears to have been placed in a controlled manner, but we have no records to indicate the degree of control during placement of the fill.

Groundwater

Mud rotary drilling techniques were used to advance the borings which can obscure water levels during drilling. Groundwater readings were measured at 3 feet to 4 feet below grade in the borings during our field exploration. The remainder of the borings caved in to depths of 3 feet to 4 feet which can coincide with the groundwater level. Based on the measured water levels in the borings, cave in depths, and the moisture condition of the soil samples, groundwater is anticipated at a depth of 3 feet to 4 feet below the existing ground surface.

The groundwater level can change due to seasonal variations in the amount of rainfall, runoff and other factors not evident at the time the borings were performed. The possibility of groundwater

level fluctuations should be considered when developing the design and construction plans for the project.

GEOTECHNICAL OVERVIEW

The borings encountered near surface fill and very loose to medium dense sand. Wood was encountered to a depth of 3 feet in Boring B-2. After stripping topsoil, the building and parking lot footprints should be densified in place using a medium weight vibratory roller. The purpose of the vibratory rolling is to densify the loose, near surface soils for pavement and floor slab and potentially improve foundation support. Isolated subgrade repairs and foundation overexcavation may be required in areas that are not improved by vibratory rolling. Near surface soils with wood should also be removed.

Isolated subgrade repairs after vibratory rolling should be anticipated in the wooded portion of the site in the vicinity of Borings B-6, B-7, B-8, B-12 and B-13. The wood encountered in Boring B-2 and additional areas encountered during site preparation should also be removed. Isolated foundation overexcavation up to 3 feet below existing grades may be required to remove the looser/softer soil or those such as those encountered in Boring B-12. Near surface soils at the site are moisture sensitive and performing earthwork operations during warmer periods of the year (May through October) will reduce the potential for problems associated with wet, unstable subgrades. Positive site drainage is always recommended. The use of rubber-tired vehicles should be limited, especially the use of Lulls.

Fill to a depth of 3 feet was encountered in Boring B-5. Deeper fill will be associated with the stormwater pipe already installed at the site. In our opinion, foundations, floor slabs, and pavements could be supported on or above the existing fill soils that withstand proofrolling and consist of acceptable materials as determined during earthwork. However, there is inherent risk for the owner that compressible fill or unsuitable material, within or buried by the fill, will not be discovered. This risk of unforeseen conditions cannot be eliminated without completely removing the existing fill but can be reduced by following the recommendations contained in this report.

Following the recommended **Earthwork**, the structure can be supported on shallow foundations bearing on approved existing soils or structural fill compacted as recommended and sized for a maximum net allowable soil bearing pressure of 2,000 psf.

The **General Comments** section provides an understanding of the report limitations.

EARTHWORK

Earthwork is anticipated to include clearing and grubbing, excavations, and fill placement. The following sections provide recommendations for use in the preparation of specifications for the

work. Recommendations include critical quality criteria, as necessary, to render the site in the state considered in our geotechnical engineering evaluation for foundations, floor slabs, and pavements.

Site Preparation

Site preparation should begin with the complete removal of surface vegetation and topsoil in the proposed building footprint and pavement areas. Low ground pressure or tracked equipment could be required for site preparation. Based on site observations during the drilling process, topsoil should be stripped up to a depth of approximately 6 inches. The existing ditches that bisect the site should be stripped approximately 1-foot to a denser subgrade prior to backfilling. A Terracon representative should field verify the stripping depth during construction. Topsoil may be reused in areas of the site to be landscaped but should not be used as engineered fill or backfill. Stumps should be removed, and the hole somewhat enlarged for backfill with compacted fill.

After stripping, the exposed subgrade soils in the building and pavement footprints should be densified in place using a medium weight vibratory roller. The purpose of the vibratory rolling is to densify the exposed subgrade soils for floor slab and pavement support and to potentially improve the foundation bearing soils. The roller should make at least six passes across the site, with the second set of three passes perpendicular to the first set of three passes. If water is brought to the surface by the vibratory rolling, the operation should be discontinued until the water subsides. Vibratory rolling should be completed during dry weather.

After the vibratory rolling, pore pressures should be allowed to dissipate for a minimum of 16 hours. After the waiting period, proofrolling should be performed on the exposed subgrade soils in areas to receive fill or at the subgrade elevation with a fully loaded, tandem-axle dump truck (20-ton minimum) or similar rubber-tired construction equipment. Proofrolling is recommended as a means of detecting areas of soft or unstable subgrade soils. The proofrolling should be performed during a period of dry weather to avoid degrading an otherwise suitable subgrade. The proofrolling operations should be observed by a representative of the geotechnical engineer. Subgrade soils that exhibit excessive rutting or deflection during proofrolling should be repaired as directed by the field representative. Typical repairs include overexcavation followed by replacement with either properly compacted fill or by a subgrade stabilization fabric in conjunction with a sand fill or crushed stone.

Existing Fill

As noted in **Geotechnical Characterization**, existing fill is present at the site. The fill appears to have been placed in a controlled manner, but we have no records to indicate the degree of control. Support of pavements, on or above existing fill soils, is discussed in this report. However, even with the recommended construction procedures, there is inherent risk for the owner that compressible fill or unsuitable material, within or buried by the fill will, not be discovered. This risk

of unforeseen conditions cannot be eliminated without completely removing the existing fill but can be reduced by following the recommendations contained in this report.

To take advantage of the cost benefit of not removing the entire amount of undocumented fill, the owner must be willing to accept the risk associated with building over the undocumented fills following the recommended reworking of the material. Should this be the case, pavements, slabs, and foundations can be supported by the existing fill. Additional testing and observations of the existing fill could be required during construction.

Fill Material Types

Fill required to achieve design grade should be classified as structural fill and general fill. Structural fill is material used below, or within 5 feet of structures, pavements or constructed slopes. General fill is material used to achieve grade outside of these areas. Earthen materials used for structural and general fill should meet the following material property requirements:

Soil Type [1]	USCS Classification	Acceptable Parameters (for Structural Fill)
Imported Soil	SC, SM, SP	All location and elevations.
On-Site Soils	SC, SM	On site soils that meet these soil classifications are generally suitable for fill if properly moisture conditioned.

1. Controlled, compacted fill should consist of approved materials that are free of organic matter and debris. Frozen material should not be used, and fill should not be placed on a frozen subgrade. A sample of each material type should be submitted to the geotechnical engineer for evaluation.

On-site near surface clays are not recommended for use as structural fill due to their high fines content and moisture sensitivity relative to sandy soils available. Near surface clay could be considered for use as general fill (non-structural).

Fill Compaction Requirements

Structural and general fill should meet the following compaction requirements.

Item	Structural Fill	General Fill
Maximum Lift Thickness	9 inches or less in loose thickness when heavy, self-propelled compaction equipment is used 4 to 6 inches in loose thickness when hand-guided equipment (i.e. jumping jack or plate compactor) is used	Same as Structural fill
Minimum Compaction Requirements [1, 2]	95% of max. above and below foundations	92% of max.
Water Content Range [1]	-2% to +2% of optimum	As required to achieve min. compaction requirements

1. Fill should be tested for moisture content and compaction during placement. If in-place density tests indicate the specified moisture or compaction limits have not been met, the area represented by the tests should be reworked and retested as required until the specified moisture and compaction requirements are achieved.
2. It is not necessary to achieve 95% compaction on the existing ground prior to placing fill or beginning construction. However, the subgrade should be evaluated by a representative of the geotechnical engineer prior to placing fill or beginning construction.
3. Maximum dry density and optimum moisture content as determined by the materials standard Proctor (ASTM D698)

It is important to note that the use of rubber-tired traffic, such as lulls, may impact the prepared subgrade soils leading to re-grading. We recommend that the use of rubber-tired traffic be limited on the prepared subgrades or that the area be stabilized for their travel.

Grading and Drainage

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

Exposed ground should be sloped and maintained at a minimum 5% away from the building for at least 5 feet beyond the perimeter of the buildings. Locally, flatter grades may be necessary to transition ADA access requirements for flatwork. After building construction and landscaping have been completed, final grades should be verified to document effective drainage has been achieved. Grades around the structure should also be periodically inspected and adjusted, as

necessary, as part of the structure's maintenance program. Where paving or flatwork abuts the structure, a maintenance program should be established to effectively seal and maintain joints and prevent surface water infiltration.

Earthwork Construction Considerations

Near surface soils at the site are moisture sensitive and performing earthwork operations during warmer periods of the year (May through October) will reduce the potential for problems associated with wet, unstable subgrades.

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

As a minimum, excavations should be performed in accordance with OSHA 29 CFR, Part 1926, Subpart P, "Excavations" and its appendices, and in accordance with any applicable local, and/or state regulations.

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

Construction Observation and Testing

The earthwork efforts should be monitored under the direction of the Geotechnical Engineer. Monitoring should include documentation of adequate removal of vegetation and topsoil, proofrolling, and mitigation of areas delineated by the proofroll to require mitigation.

Each lift of compacted fill should be tested, evaluated, and reworked, as necessary, until approved by the Geotechnical Engineer prior to placement of additional lifts. Each lift of fill should be tested for density and water content at a frequency of at least one test for every 2,500 square feet of compacted fill in the building areas and 5,000 square feet in pavement areas. One density and water content test should be performed for every 50 linear feet of compacted utility trench backfill.

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

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

SHALLOW FOUNDATIONS

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

Design Parameters – Compressive Loads

Item	Description
Maximum Net allowable bearing pressure [1]	2,000 psf
The required embedment below lowest adjacent finished grade for frost protection and protective embedment [2]	12 inches
Minimum width for continuous wall footings	12 inches for thickened slab 16 inches for strip footings
Minimum width for isolated column footings	24 inches
Approximate total settlement [3]	Up to 1 inch
Estimated differential settlement [3]	Up to ½ inch
Ultimate coefficient of sliding friction [4]	0.35

1. The recommended net allowable bearing pressure is the pressure in excess of the minimum surrounding overburden pressure at the footing base elevation. The maximum net allowable bearing pressure may be increased by 1/3 for temporary wind loads.
2. For frost protection and to reduce effects of seasonal moisture variations in subgrade soils. For perimeter footings and footings beneath unheated areas.
3. The actual magnitude of settlement that will occur beneath the foundations will depend upon the variations within the subsurface soil profile, the structural loading conditions and the quality of the foundation excavation. The estimated total and differential settlements listed assume that the foundation-related earthwork and the foundation design are completed in accordance with our recommendations.
4. For uplift resistance, use the weight of the foundation concrete plus the weight of the soil over the plan area of the footings. 110 pounds per cubic foot should be used for the density of the soil.

Foundation Construction Considerations

The foundation bearing materials should be evaluated at the time of the foundation excavation. This is an essential part of the construction process. A representative of the geotechnical engineer should use a combination of hand auger borings and dynamic cone penetrometer (DCP) testing to determine the suitability of the bearing materials for the design bearing pressure. DCP testing should be performed to a depth of 3 to 5 feet below the bottom of foundation excavation. Excessively soft, loose, or wet bearing soils should be over excavated to a depth recommended by the geotechnical engineer. The excavated soils should be replaced with structural fill or washed, crushed stone (NCDOT No. 57) wrapped in a geotextile fabric (Mirafi 140 N or equivalent). However, footings could bear directly on the soils after over excavation if approved by the geotechnical engineer.

The base of all foundation excavations should be free of water and loose soil prior to placing concrete. Concrete should be placed soon after excavating to reduce bearing soil disturbance. Should the soils at bearing level become excessively disturbed or saturated, the affected soil should be removed prior to placing concrete.

SEISMIC CONSIDERATIONS

The seismic design requirements for buildings and other structures are based on Seismic Design Category. Site Classification is required to determine the Seismic Design Category for a structure. The Site Classification is based on the upper 100 feet of the site profile defined by a weighted average value of either shear wave velocity, standard penetration resistance, or undrained shear strength in accordance with Section 20.4 of ASCE 7 and the International Building Code (IBC). Based on the soil properties encountered at the site and as described on the exploration logs and results, it is our professional opinion that the **Seismic Site Classification is D**. Subsurface explorations at this site were extended to a maximum depth of 20 feet. The site properties below the boring depth to 100 feet were estimated based on our experience and knowledge of geologic conditions of the general area. Additional deeper borings or geophysical testing may be performed to confirm the conditions below the current boring depth.

LIQUEFACTION

Based on the results of the borings, liquefaction is not expected based on the density and clay content of the soils as well as the relatively low level of ground motions associated with the design earthquake.

FLOOR SLABS

Design parameters for floor slabs assume the requirements for **Earthwork** have been followed. Specific attention should be given to positive drainage away from the structure and positive drainage of the aggregate base beneath the floor slab.

Floor Slab Design Parameters

Item	Description
Floor slab support	Approved existing soil or structural fill.
Modulus of subgrade reaction	100 pounds per square inch per inch (psi/in) for point loading conditions.
Base Course	4 inches crushed stone (NCDOT ABC)

Saw-cut control joints should be placed in the slab to help control the location and extent of cracking. For additional recommendations, refer to the ACI Design Manual.

The use of a vapor retarder should be considered beneath concrete slabs on grade that will be covered with wood, tile, carpet or other moisture sensitive or impervious coverings. The slab designer should refer to ACI 302 and/or ACI 360 for procedures and cautions regarding the use and placement of a vapor retarder.

The area underlying the floor slabs should be rough graded and then thoroughly proofrolled with a loaded tandem axle dump truck prior to final grading and placement of base rock. Attention should be paid to high traffic areas that were rutted and disturbed earlier and to areas where backfilled trenches are located. Areas where unsuitable conditions are located should be repaired by removing and replacing the affected material with properly compacted fill. All floor slab subgrade areas should be moisture conditioned and properly compacted to the recommendations in this report immediately prior to placement of the base rock and concrete.

On most project sites, the site grading is generally accomplished early in the construction phase. However, as construction proceeds, the subgrade may be disturbed due to utility excavations, construction traffic, desiccation, rainfall, etc. As a result, the floor slab subgrade may not be suitable for placement of base rock and concrete and corrective action will be required to repair the damaged areas.

Floor Slab Construction Considerations

Finished subgrade, within and for at least 5 feet beyond the floor slabs, should be protected from traffic, rutting, or other disturbance and maintained in a relatively moist condition until floor slabs are constructed. If the subgrade should become damaged or desiccated prior to construction of floor slabs, the affected material should be removed, and structural fill should be added to replace the

resulting excavation. Final conditioning of the finished subgrade should be performed immediately prior to placement of the floor slab support course.

The Geotechnical Engineer should approve the condition of the floor slab subgrades immediately prior to placement of the floor slab support course, reinforcing steel, and concrete. Attention should be paid to high traffic areas that were rutted and disturbed earlier, and to areas where backfilled trenches are located.

PAVEMENTS

Pavement thickness design is dependent upon the following:

- Anticipated traffic conditions during the life of the pavement.
- Subgrade and paving material characteristics.
- Climatic conditions of the region.

We have assumed that traffic loads at the site will be produced primarily by delivery and garbage trucks in the medium duty areas and by passenger cars and light delivery vehicles for the light duty areas. Two pavement section alternatives have been provided. The light-duty pavement sections are for car parking areas only. Medium-duty pavement sections should be used for garbage/delivery truck traffic areas. We have assumed a 20-year design period and the following traffic volume:

Medium-duty Areas	Light-duty Areas
■ Light-duty traffic ■ Up to 10 delivery and trash collection vehicles per week ■ <1 semi-truck per week	■ 500 cars and pickups per day

A subgrade CBR of 3 was selected for design pavement section based upon our experience with similar near surface subgrade soils and our understanding of the quality of the subgrade as prescribed by the **Site Preparation** conditions as outlined in **Earthwork**.

Pavement Section Thicknesses

For areas subject to concentrated and repetitive loading conditions, i.e. dumpster pads and ingress/egress aprons, or in areas where vehicles will turn at low speeds, we recommend using a Portland cement concrete pavement with a thickness of at least 7 inches underlain by at least 4 inches of crushed stone. For dumpster pads, the concrete pavement area should be large enough to support the container and tipping axle of the refuse truck. The following table provides options for general AC and PCC Sections:

Recommended Pavement Sections			
Pavement Type	**Material**	**Layer Thickness (inches)**	
		Light Duty	**Medium Duty**
Portland Cement Concrete (PCC)/ Rigid	Portland Cement Concrete (4,000 psi)	5	
	Crushed Aggregate Base Course (NCDOT ABC)	4[1]	
Asphaltic Concrete (AC)/ Flexible (Superpave)	Asphalt Surface (NCDOT S9.5B)	3[2]	3[3]
	Crushed Aggregate Base Course (NCDOT ABC)	6	8

1. Crushed Aggregate Base Course is recommended for construction purposes. Concrete could be placed directly on an approved subgrade. However, stormwater can quickly degrade exposed subgrades without the crushed aggregate base course leading to additional subgrade repairs.
2. Placed in two equal lift thicknesses (1.5 inches each) for ease of construction. The light duty section could be reduced to a total of 2 inches placed in two equal lift thicknesses (1-inch each) if construction allows.
3. Placed in two equal lift thicknesses (1.5 inches each).

For subgrade instability that could develop due to the weather. We recommend that contingencies be placed in the budget for a geosynthetic and addition stone. The geosynthetic could be left off corridors/easements for deeper utility lines for ease of construction.

The placement of a partial pavement thickness for use during construction is not suggested without a detailed pavement analysis incorporating construction traffic. In addition, we should be contacted to confirm the traffic assumptions outlined above. If the actual traffic varies from the assumptions outlined above, modification of the pavement section thickness could be required.

Recommendations for pavement construction presented depend upon compliance with recommended material specifications. To assess compliance, observation and testing should be performed under the direction of the geotechnical engineer.

Asphalt concrete and aggregate base course materials should conform to the North Carolina Department of Transportation (NCDOT) “Standard Specifications for Roads and Structures”. Concrete pavement materials should conform to ACI 330.1 “Specifications for Unreinforced Parking Lots”. Concrete pavement should be air-entrained and have a minimum compressive strength of 4,000 psi after 28 days of laboratory curing per ASTM C-31. ACI 330R-01 recommendations should be followed concerning control and expansion joints, as well as other concrete pavement practices.

Pavement Maintenance

The pavement sections represent minimum recommended thicknesses and, as such, periodic maintenance should be anticipated. Therefore, preventive maintenance should be planned and provided for through an on-going pavement management program. Maintenance activities are intended to slow the rate of pavement deterioration and to preserve the pavement investment. Maintenance consists of both localized maintenance (e.g., crack and joint sealing and patching) and global maintenance (e.g., surface sealing). Preventive maintenance is usually the priority when implementing a pavement maintenance program. Additional engineering observation is recommended to determine the type and extent of a cost-effective program. Even with periodic maintenance, some movements and related cracking may still occur, and repairs may be required.

Pavement performance is affected by its surroundings. In addition to providing preventive maintenance, the civil engineer should consider the following recommendations in the design and layout of pavements:

- Final grade adjacent to paved areas should slope down from the edges at a minimum 2%.
- Subgrade and pavement surfaces should have a minimum 2% slope to promote proper surface drainage.
- Install below pavement drainage systems surrounding areas anticipated for frequent wetting.
- Install joint sealant and seal cracks immediately.
- Seal all landscaped areas in or adjacent to pavements to reduce moisture migration to subgrade soils.
- Place compacted, low permeability backfill against the exterior side of curb and gutter.
- Place curb, gutter and/or sidewalk directly on clay subgrade soils rather than on unbound granular base course materials.

GENERAL COMMENTS

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

Our Scope of Services does not include either specifically or by implication any environmental or biological (e.g., mold, fungi, bacteria) assessment of the site or identification or prevention of

pollutants, hazardous materials or conditions. If the owner is concerned about the potential for such contamination or pollution, other studies should be undertaken.

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

Site characteristics as provided are for design purposes and not to estimate excavation cost. Any use of our report in that regard is done at the sole risk of the excavating cost estimator as there may be variations on the site that are not apparent in the data that could significantly impact excavation cost. Any parties charged with estimating excavation costs should seek their own site characterization for specific purposes to obtain the specific level of detail necessary for costing. Site safety, and cost estimating including, excavation support, and dewatering requirements/design are the responsibility of others. If changes in the nature, design, or location of the project are planned, our conclusions and recommendations shall not be considered valid unless we review the changes and either verify or modify our conclusions in writing.

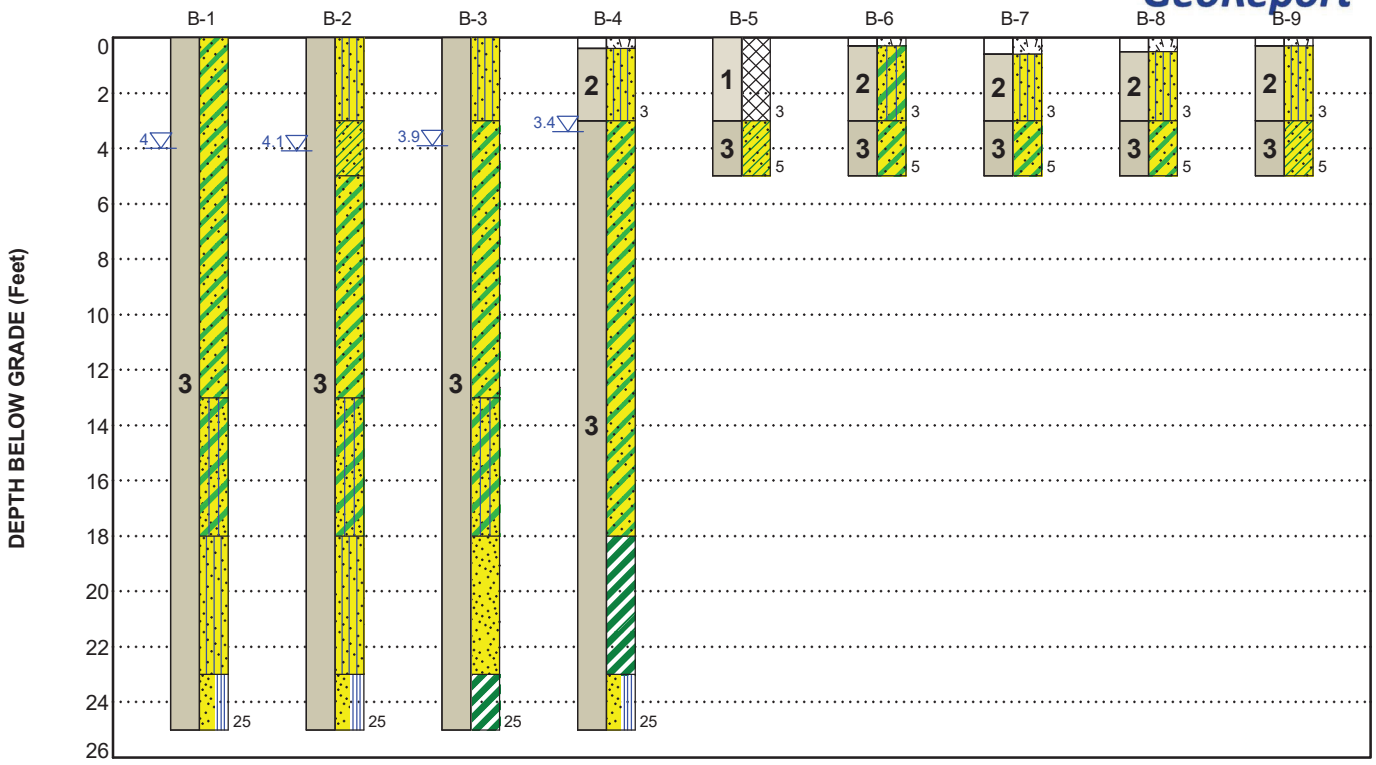
FIGURES

Contents:

GeoModel (2 pages)

GEOMODEL

GUC Building 5 ■ Greenville, NC
Terracon Project No. 72205044



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

Model Layer	Layer Name	General Description
1	**Fill**	Existing fill
2	**Looser Sand**	Very loose to loose sand
3	**Denser Soil**	Medium stiff to stiff clay and loose to medium dense sand

LEGEND

- Clayey Sand
- Silty Clayey Sand
- Silty Sand
- Poorly-graded Sand with Silt
- Sandy Lean Clay
- Poorly-graded Sand
- Fat Clay
- Topsoil
- Fill

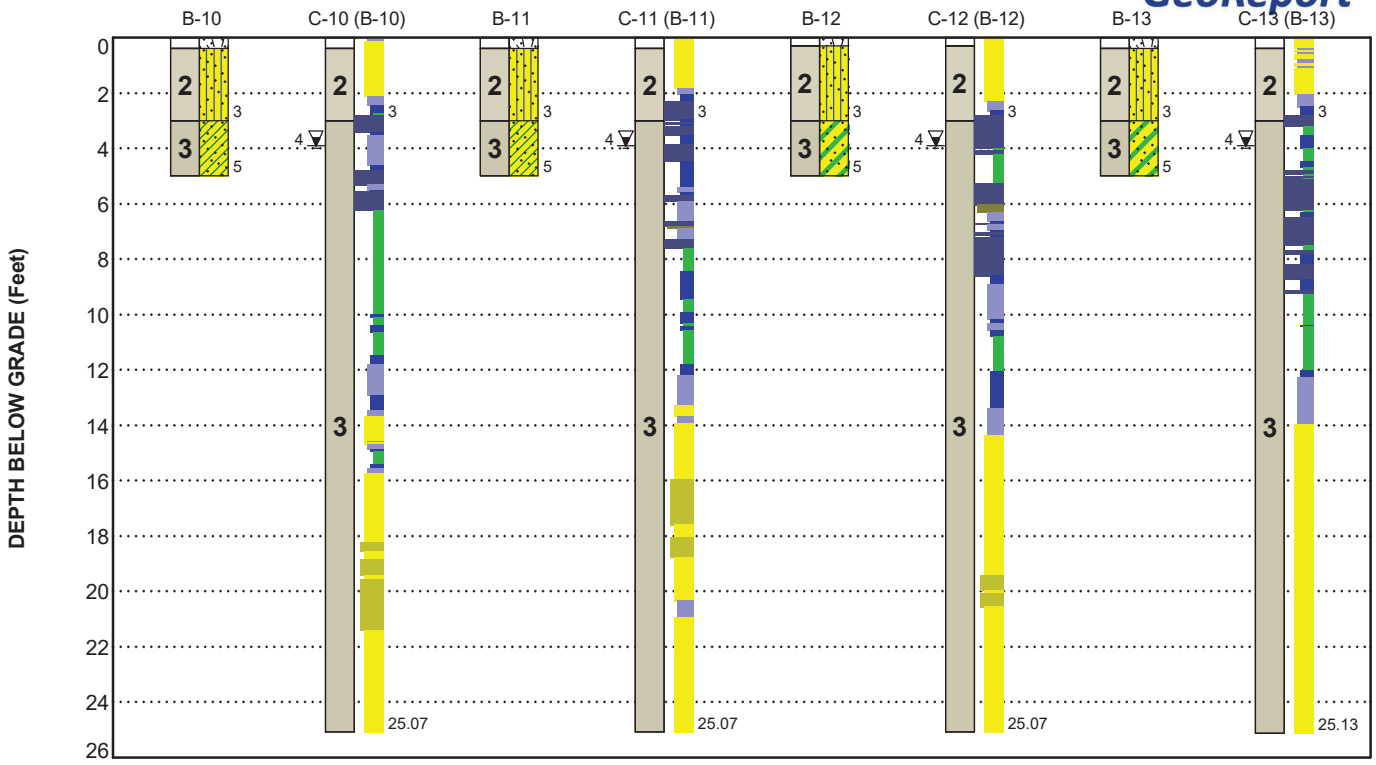
▽ First Water Observation

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

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

GEOMODEL

GUC Building 5 ■ Greenville, NC
Terracon Project No. 72205044



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Model Layer	Layer Name	General Description
1	Fill	Existing fill
2	Looser Sand	Very loose to loose sand
3	Denser Soil	Medium stiff to stiff clay and loose to medium dense sand

LEGEND

Topsoil
Clayey Sand
Silty Sand
Sandy Lean Clay

Soil Behavior Type (SBT)

1 Sensitive, fine grained
2 Organic soils - clay
3 Clay - silty clay to clay
4 Silt mixtures - clayey silt to silty clay
5 Sand mixtures - silty sand to sandy silt
6 Sands - clean sand to silty sand
7 Gravelly sand to dense sand
8 Very stiff sand to clayey sand
9 Very stiff fine grained

CPT Assumed Water Depth

First Water Observation

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

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

ATTACHMENTS

EXPLORATION AND TESTING PROCEDURES

Field Exploration

Soundings/Boring Locations	Boring Depth (feet)	Location
B-1, B-2, B-3, B-4	SPT: 5 to 25	Proposed pavement areas
B-10, B-11, B-12, B-13	SPT: 5 CPT: 25	Approximate building corners

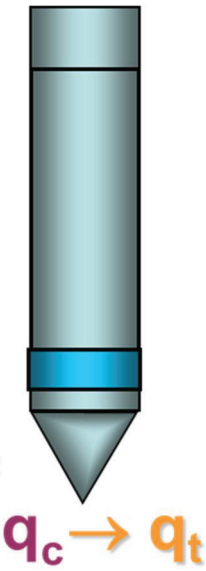
Boring Layout and Elevations: Coordinates of the borings were determined by overlaying the plans provided on aerial photography by referencing common features. The soil boring locations were marked in the field by Terracon by referencing existing site features and a handheld GPS. The locations of the borings should be considered accurate only to the degree implied by the means and methods used to define it.

Subsurface Exploration Procedures: Access clearing was provided by GUC to access most of the boring locations. We conducted standard penetration test (SPT) borings and cone penetration test (CPT) sounding at the site.

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

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

Cone Penetration Testing (CPT): The CPT hydraulically pushes an instrumented cone through the soil while nearly continuous readings are recorded to a portable computer. The cone is equipped with electronic load cells to measure tip resistance and sleeve resistance and a pressure transducer to measure the generated ambient pore pressure. The face of the cone has an apex angle of 60° and an area of 10 cm^2. Digital data representing the tip resistance, friction resistance, pore water pressure, and probe inclination angle are recorded about every 2 centimeters while advancing through the ground at a rate between 1½ and 2½ centimeters per second. These measurements are correlated to various soil properties used for geotechnical design. No soil samples are gathered through this subsurface investigation technique.



CPT testing is conducted in general accordance with ASTM D5778 "Standard Test Method for Performing Electronic Friction Cone and Piezocone Penetration Testing of Soils." Upon completion, the data collected was downloaded and processed by the project engineer.

Laboratory Testing

The project engineer reviewed the field data and assigned laboratory tests to understand the engineering properties of the various soil strata, as necessary, for this project. Procedural standards noted below are for reference to methodology in general. In some cases, variations to methods were applied because of local practice or professional judgment. Standards noted below include reference to other, related standards. Such references are not necessarily applicable to describe the specific test performed.

- ASTM D2216 Standard Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass
- ASTM D2487 Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)
- ASTM D2488 Standard Practice of Description and Identification of Soils (Visual Manual Method)
- ASTM D4318 Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
- ASTM D422 Standard Test Method for Particle-Size Analysis of Soils
- ASTM D1140 Standard Test Methods for Determining the Amount of Material Finer than No. 200 Sieve in Soils by Washing

The laboratory testing program often included examination of soil samples by an engineer. Based on the material's texture and plasticity, we described and classified the soil samples in accordance with the Unified Soil Classification System.

PHOTOGRAPHY LOG

Photos taken May 4, 2020.



Site from northwest corner facing southeast



Site from northwest facing southwest



Site from northeast facing southwest



Site from southeast facing northwest



Existing ditches facing north



Existing ditch outlet facing stormwater pond to the southeast

SITE LOCATION AND EXPLORATION PLANS

Contents:

Site Location Plan
Exploration Plan

Note: All attachments are one page unless noted above.

SITE LOCATION

GUC Building 5 ■ Greenville, NC

May 29, 2020 ■ Terracon Project No. 72205044

Terracon GeoReport

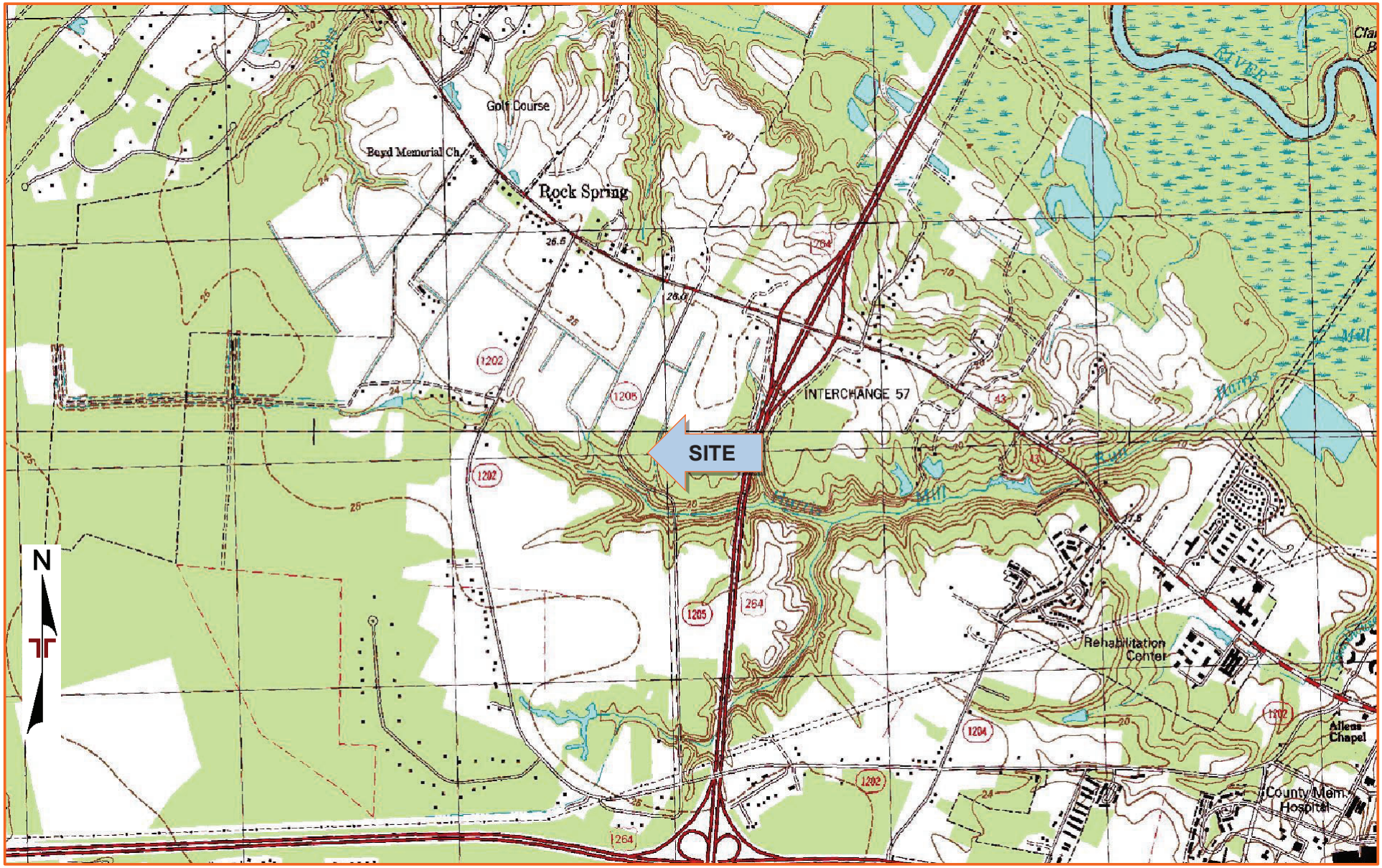


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

TOPOGRAPHIC MAP IMAGE COURTESY OF THE U.S. GEOLOGICAL SURVEY QUADRANGLES INCLUDE: GREENVILLE NW, NC (1/1/1998) and GREENVILLE SW, NC (1/1/1998).

EXPLORATION PLAN

GUC Building 5 ■ Greenville, NC

May 29, 2020 ■ Terracon Project No. 72205044



DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

AERIAL PHOTOGRAPHY PROVIDED BY MICROSOFT BING MAPS

EXPLORATION RESULTS

Contents:

Boring Logs (B-1 through B-13)
Grain Size Distribution
Atterberg Limits

Note: All attachments are one page unless noted above.

BORING LOG NO. B-1

PROJECT: GUC Building 5

CLIENT: Greenville Utilities Commission
Greenville, NC

SITE: NC Hwy 43 W and US 264 Bypass
Greenville, NC

LOCATION See Exploration Plan

Latitude: 35.6257° Longitude: -77.441°

MODEL LAYER	GRAPHIC LOG	DEPTH		DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
3		0.0	**CLAYEY SAND (SC)**, brown, gray, and tan to light gray, medium dense, silty sand lenses	5	▽		8-6-4 N=10			
							3-4-6 N=10			
							6-8-9 N=17			
				10			3-5-6 N=11			
		13.0	**SILTY CLAYEY SAND (SC-SM)**, light gray and tan, loose	15			3-4-5 N=9			
		18.0	**SILTY SAND (SM)**, tan, medium dense	20			6-7-8 N=15			
		23.0	**POORLY GRADED SAND WITH SILT (SP-SM)**, brown, medium dense		▨					
		25.0	***Boring Terminated at 25 Feet***	25			5-5-8 N=13			

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

Hammer Type: Automatic

Advancement Method:
Mud rotary

Abandonment Method:
Boring backfilled with soil cuttings upon completion.

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

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

▽ *At completion of drilling*

▨ *Cave in at completion of drilling*

Terracon
314 Beacon Dr
Winterville, NC

Boring Started: 05-13-2020 | Boring Completed: 05-13-2020

Drill Rig: D-50 | Driller: RTS

Project No.: 72205044

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 72205044 GUC BUILDING 5.GPJ TERRACON_DATATEMPLATE.GDT 5/26/20

BORING LOG NO. B-2

PROJECT: GUC Building 5

CLIENT: Greenville Utilities Commission
Greenville, NC

SITE: NC Hwy 43 W and US 264 Bypass
Greenville, NC

LOCATION See Exploration Plan

Latitude: 35.6255° Longitude: -77.4411°

MODEL LAYER	GRAPHIC LOG	DEPTH		DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
3		0.0	**SILTY SAND (SM)**, witth wood, tan, gray, and brown, medium dense				5-11-10 N=21			
		3.0	**SANDY LEAN CLAY (CL)**, tan with light brown, stiff				4-6-6 N=12			
		5.0	**CLAYEY SAND (SC)**, light gray and brown, medium dense	5			10-10-11 N=21			
							4-6-7 N=13			
		13.0	**SILTY CLAYEY SAND (SC-SM)**, tan and light gray, loose	10			4-4-4 N=8			
		18.0	**SILTY SAND (SM)**, light gray, medium dense	15			6-9-12 N=21			
		23.0	**POORLY GRADED SAND WITH SILT (SP-SM)**, tan and light brown, medium dense	20			10-12-13 N=25			
		25.0	***Boring Terminated at 25 Feet***	25						

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

Hammer Type: Automatic

Advancement Method:
Mud rotary

Abandonment Method:
Boring backfilled with soil cuttings upon completion.

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

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

At completion of drilling

Cave in at completion of drilling

Terracon
314 Beacon Dr
Winterville, NC

Boring Started: 05-13-2020	Boring Completed: 05-13-2020
Drill Rig: D-50	Driller: RTS
Project No.: 72205044	

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 72205044 GUC BUILDING 5.GPJ TERRACON_DATATEMPLATE.GDT 5/26/20

BORING LOG NO. B-3

PROJECT: GUC Building 5

CLIENT: Greenville Utilities Commission
Greenville, NC

SITE: NC Hwy 43 W and US 264 Bypass
Greenville, NC

LOCATION See Exploration Plan

Latitude: 35.6251° Longitude: -77.4406°

MODEL LAYER	GRAPHIC LOG	DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
3		**SILTY SAND (SM)**, tan and brown, medium dense							
		3.0				10-11-18 N=29	8	NP	37
		CLAYEY SAND (SC), light brown, tan, and gray to light gray, loose to medium dense	5	▽		5-6-7 N=13			
						7-7-8 N=15			
			10			4-4-5 N=9			
		13.0							
		SILTY CLAYEY SAND (SC-SM), light gray and tan, loose	15			3-4-5 N=9			
		18.0							
		POORLY GRADED SAND (SP), brown, loose	20			7-4-3 N=7			
		23.0							
		FAT CLAY (CH), trace sand, gray, stiff	25			4-5-5 N=10			
		25.0							
		Boring Terminated at 25 Feet							

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

Hammer Type: Automatic

Advancement Method:
Mud rotary

Abandonment Method:
Boring backfilled with soil cuttings upon completion.

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

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

▽ *At completion of drilling*

Cave in at completion of drilling

Terracon
314 Beacon Dr
Winterville, NC

Boring Started: 05-13-2020 | Boring Completed: 05-13-2020

Drill Rig: D-50 | Driller: RTS

Project No.: 72205044

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 72205044 GUC BUILDING 5.GPJ TERRACON_DATATEMPLATE.GDT 5/26/20

BORING LOG NO. B-4

PROJECT: GUC Building 5

CLIENT: Greenville Utilities Commission
Greenville, NC

SITE: NC Hwy 43 W and US 264 Bypass
Greenville, NC

LOCATION See Exploration Plan

Latitude: 35.6246° Longitude: -77.4401°

MODEL LAYER	GRAPHIC LOG	DEPTH		DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
		0.4	**TOPSOIL**							
2		3.0	**SILTY SAND (SM)**, gray, loose				3-4-5 N=9	12		
3			**CLAYEY SAND (SC)**, tan, light brown with reddish brown to tan and light brown, medium dense	5	▽		5-7-9 N=16	19		
							5-6-7 N=13	21		
				10			4-6-7 N=13	19		
							3-4-7 N=11	21	28-16-12	29
		18.0	**FAT CLAY (CH)**, trace sand, gray, medium stiff	15						
				20			0-3-3 N=6	65		
		23.0	**POORLY GRADED SAND WITH SILT (SP-SM)**, brown, medium dense		▨		5-10-13 N=23	22		
		25.0	***Boring Terminated at 25 Feet***	25						

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

Hammer Type: Automatic

Advancement Method:
Mud rotary

Abandonment Method:
Boring backfilled with soil cuttings upon completion.

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

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

▽ *At completion of drilling*

▨ *Cave in at completion of drilling*

Terracon
314 Beacon Dr
Winterville, NC

Boring Started: 05-13-2020 | Boring Completed: 05-13-2020

Drill Rig: D-50 | Driller: RTS

Project No.: 72205044

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 72205044 GUC BUILDING 5.GPJ TERRACON_DATATEMPLATE.GDT 5/26/20

BORING LOG NO. B-5

PROJECT: GUC Building 5

CLIENT: Greenville Utilities Commission
Greenville, NC

SITE: NC Hwy 43 W and US 264 Bypass
Greenville, NC

MODEL LAYER	GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 35.6241° Longitude: -77.4404° DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1		**FILL - SANDY LEAN CLAY**, tan with light brown and white				5-6-7 N=13			
		3.0							
3		**SANDY LEAN CLAY (CL)**, with wood, tan and light brown, medium dense				4-5-6 N=11			
		5.0	5						
		Boring Terminated at 5 Feet							

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

Hammer Type: Automatic

Advancement Method:
Mud rotary

Abandonment Method:
Boring backfilled with soil cuttings upon completion.

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

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Cave in at completion of drilling

Terracon
314 Beacon Dr
Winterville, NC

Boring Started: 05-13-2020 | Boring Completed: 05-13-2020

Drill Rig: D-50 | Driller: RTS

Project No.: 72205044

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 72205044 GUC BUILDING 5.GPJ TERRACON_DATATEMPLATE.GDT 5/26/20

BORING LOG NO. B-6

PROJECT: GUC Building 5

CLIENT: Greenville Utilities Commission
Greenville, NC

SITE: NC Hwy 43 W and US 264 Bypass
Greenville, NC

MODEL LAYER	GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 35.6248° Longitude: -77.4405° DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
		0.3 **TOPSOIL**							
2		**SILTY CLAYEY SAND (SC-SM)**, light brown and tan, very loose			X	2-2-1 N=3			
		3.0							
3		**CLAYEY SAND (SC)**, light brown and tan, loose			X	2-3-5 N=8			
		5.0	5						
		Boring Terminated at 5 Feet							

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

Hammer Type: Automatic

Advancement Method:
Mud rotary

Abandonment Method:
Boring backfilled with soil cuttings upon completion.

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

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Cave in at completion of drilling

Terracon
314 Beacon Dr
Winterville, NC

Boring Started: 05-13-2020 | Boring Completed: 05-13-2020

Drill Rig: D-50 | Driller: RTS

Project No.: 72205044

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 72205044 GUC BUILDING 5.GPJ TERRACON_DATATEMPLATE.GDT 5/26/20

BORING LOG NO. B-7

PROJECT: GUC Building 5

CLIENT: Greenville Utilities Commission
Greenville, NC

SITE: NC Hwy 43 W and US 264 Bypass
Greenville, NC

MODEL LAYER	GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 35.6243° Longitude: -77.4408° DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
		0.6 **TOPSOIL**							
2		**SILTY SAND (SM)**, tan, loose			X	2-2-2 N=4			
		3.0							
3		**CLAYEY SAND (SC)**, light brown and tan, medium dense			X	3-5-5 N=10			
		5.0	5						
		Boring Terminated at 5 Feet							

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

Hammer Type: Automatic

Advancement Method:
Mud rotary

Abandonment Method:
Boring backfilled with soil cuttings upon completion.

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

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Cave in at completion of drilling

Terracon
314 Beacon Dr
Winterville, NC

Boring Started: 05-13-2020 | Boring Completed: 05-13-2020

Drill Rig: D-50 | Driller: RTS

Project No.: 72205044

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 72205044 GUC BUILDING 5.GPJ TERRACON_DATATEMPLATE.GDT 5/26/20

BORING LOG NO. B-8

PROJECT: GUC Building 5

CLIENT: Greenville Utilities Commission
Greenville, NC

SITE: NC Hwy 43 W and US 264 Bypass
Greenville, NC

MODEL LAYER	GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 35.6249° Longitude: -77.4409° DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
		0.5 **TOPSOIL**							
2		**SILTY SAND (SM)**, tan, loose				3-2-2 N=4			
		3.0							
3		**CLAYEY SAND (SC)**, tan, light brown, and gray, medium dense				3-5-6 N=11			
		5.0	5						
		Boring Terminated at 5 Feet							

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

Hammer Type: Automatic

Advancement Method:
Mud rotary

Abandonment Method:
Boring backfilled with soil cuttings upon completion.

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

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Cave in at completion of drilling

Terracon
314 Beacon Dr
Winterville, NC

Boring Started: 05-13-2020 | Boring Completed: 05-13-2020

Drill Rig: D-50 | Driller: RTS

Project No.: 72205044

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 72205044 GUC BUILDING 5.GPJ TERRACON_DATATEMPLATE.GDT 5/26/20

BORING LOG NO. B-9

PROJECT: GUC Building 5

CLIENT: Greenville Utilities Commission
Greenville, NC

SITE: NC Hwy 43 W and US 264 Bypass
Greenville, NC

MODEL LAYER	GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 35.6244° Longitude: -77.4412° DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
		0.3 **TOPSOIL**							
2		**SILTY SAND (SM)**, gray and tan, very loose				2-1-1 N=2			
		3.0							
3		**SANDY LEAN CLAY (CL)**, light gray and brown, stiff				4-4-7 N=11			
		5.0	5						
		Boring Terminated at 5 Feet							

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

Hammer Type: Automatic

Advancement Method:
Mud rotary

Abandonment Method:
Boring backfilled with soil cuttings upon completion.

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

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Cave in at completion of drilling

Terracon
314 Beacon Dr
Winterville, NC

Boring Started: 05-13-2020	Boring Completed: 05-13-2020
Drill Rig: D-50	Driller: RTS
Project No.: 72205044	

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 72205044 GUC BUILDING 5.GPJ TERRACON_DATATEMPLATE.GDT 5/26/20

BORING LOG NO. B-10

PROJECT: GUC Building 5

CLIENT: Greenville Utilities Commission
Greenville, NC

SITE: NC Hwy 43 W and US 264 Bypass
Greenville, NC

LOCATION See Exploration Plan

Latitude: 35.6245° Longitude: -77.4403°

MODEL LAYER	GRAPHIC LOG	DEPTH		DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
		0.4	**TOPSOIL**							
2			**SILTY SAND (SM)**, tan and light brown, loose				3-4-3 N=7			
		3.0								
3			**SANDY LEAN CLAY (CL)**, with roots, light brown with tan, medium stiff to stiff				3-4-4 N=8			
		5.0		5						
			Boring Terminated at 5 Feet							

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

Hammer Type: Automatic

Advancement Method:
Mud rotary

Abandonment Method:
Boring backfilled with soil cuttings upon completion.

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

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Cave in at completion of drilling

Terracon
314 Beacon Dr
Winterville, NC

Boring Started: 05-13-2020	Boring Completed: 05-13-2020
Drill Rig: D-50	Driller: RTS
Project No.: 72205044	

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 72205044 GUC BUILDING 5.GPJ TERRACON_DATATEMPLATE.GDT 5/26/20

CPT LOG NO. C-10 (B-10)

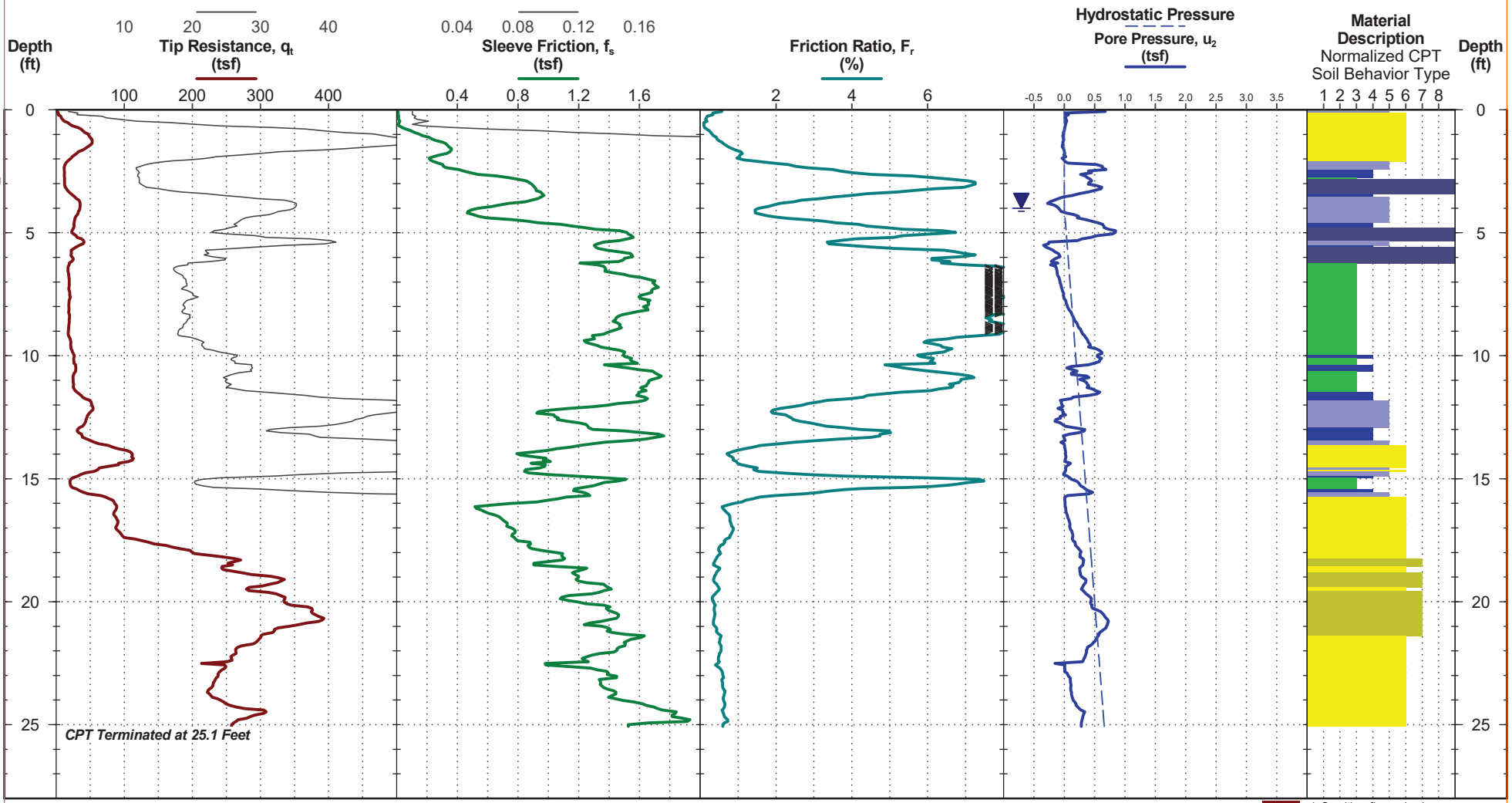
PROJECT: GUC Building 5

CLIENT: Greenville Utilities Commission
Greenville, NC

TEST LOCATION: See Exploration Plan

SITE: NC Hwy 43 W and US 264 Bypass
Greenville, NC

Latitude: 35.624524°
Longitude: -77.44032°



Cave in depth = 21.2 feet

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

Auger anchors used as reaction force.
CPT sensor calibration reports available upon request.

WATER LEVEL OBSERVATION

▼ 4 ft estimated water depth
(used in normalizations and correlations; See **Supporting Information**)

Probe no. 4287 with net area ratio of 0.84

Calibrated 3/9/2017

Terracon
314 Beacon Dr
Winterville, NC

CPT Started: 5/27/2020

CPT Completed: 5/27/2020

Rig: Geoprobe

Operator: BJM

Project No.: 72205044

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. CPT REPORT 72205044 GUC BUILDING 5.GPJ TERRACON_DATATEMPLATE.GDT 5/28/20

BORING LOG NO. B-11

PROJECT: GUC Building 5

CLIENT: Greenville Utilities Commission
Greenville, NC

SITE: NC Hwy 43 W and US 264 Bypass
Greenville, NC

LOCATION See Exploration Plan

Latitude: 35.6243° Longitude: -77.4404°

MODEL LAYER	GRAPHIC LOG	DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
		0.4 **TOPSOIL**							
2		**SILTY SAND (SM)**, tan, loose				3-4-4 N=8			
		3.0							
3		**SANDY LEAN CLAY (CL)**, tan and light brown, stiff				3-6-6 N=12	21	40-17-23	52
		5.0	5						
		Boring Terminated at 5 Feet							

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

Hammer Type: Automatic

Advancement Method:
Mud rotary

Abandonment Method:
Boring backfilled with soil cuttings upon completion.

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

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Cave in at completion of drilling

Terracon
314 Beacon Dr
Winterville, NC

Boring Started: 05-13-2020 | Boring Completed: 05-13-2020

Drill Rig: D-50 | Driller: RTS

Project No.: 72205044

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 72205044 GUC BUILDING 5.GPJ TERRACON_DATATEMPLATE.GDT 5/26/20

CPT LOG NO. C-11 (B-11)

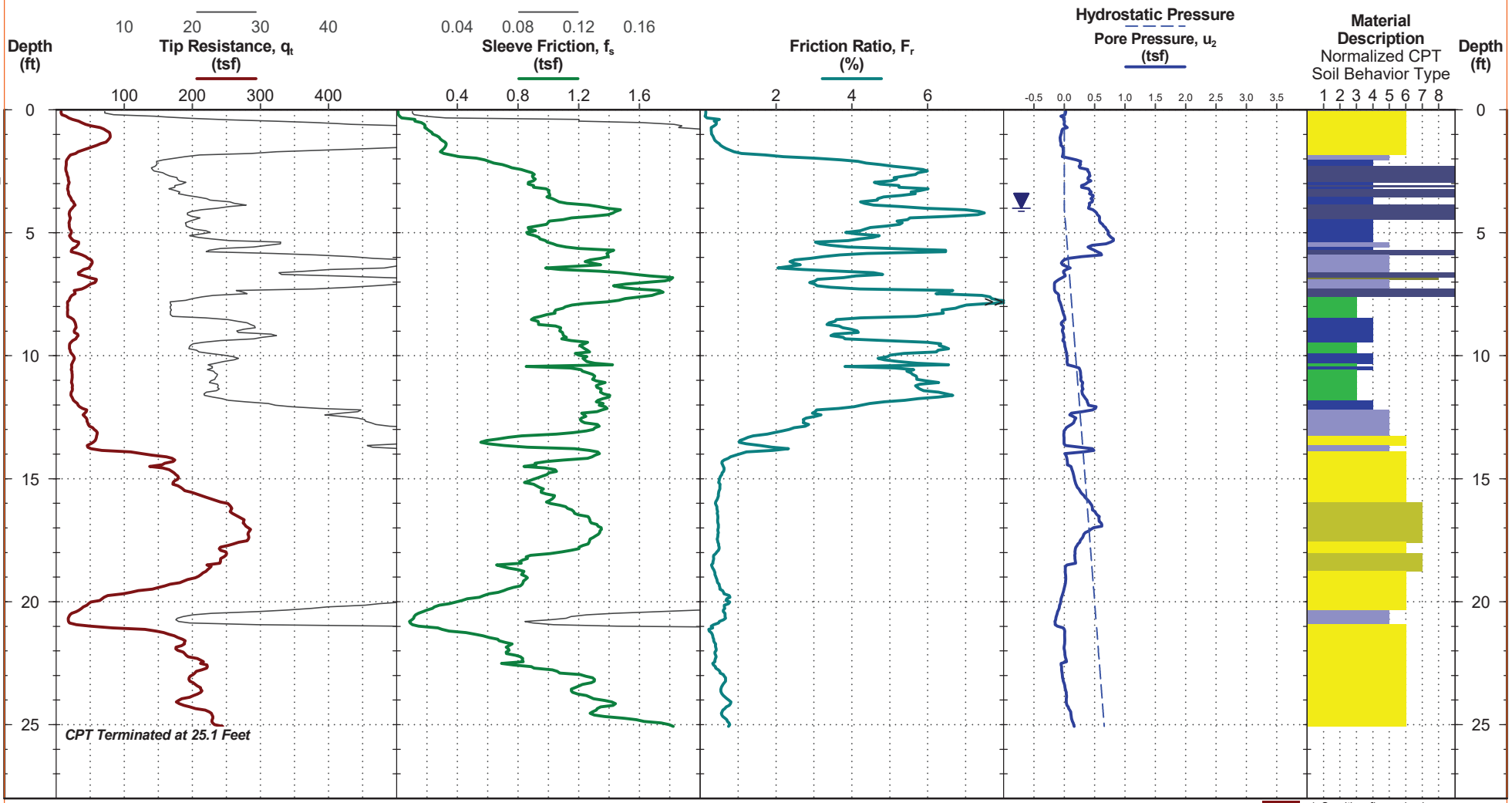
PROJECT: GUC Building 5

CLIENT: Greenville Utilities Commission
Greenville, NC

TEST LOCATION: See Exploration Plan

SITE: NC Hwy 43 W and US 264 Bypass
Greenville, NC

Latitude: 35.624336°
Longitude: -77.440433°



Cave in depth = 20.9 feet

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

Auger anchors used as reaction force.
CPT sensor calibration reports available upon request.

WATER LEVEL OBSERVATION

▼ 4 ft estimated water depth
(used in normalizations and correlations; See **Supporting Information**)

Probe no. 4287 with net area ratio of 0.84

Calibrated 3/9/2017

Terracon
314 Beacon Dr
Winterville, NC

CPT Started: 5/27/2020
CPT Completed: 5/27/2020
Rig: Geoprobe
Operator: BJM
Project No.: 72205044

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. CPT REPORT 72205044 GUC BUILDING 5.GPJ TERRACON_DATATEMPLATE.GDT 5/28/20

BORING LOG NO. B-12

PROJECT: GUC Building 5

CLIENT: Greenville Utilities Commission
Greenville, NC

SITE: NC Hwy 43 W and US 264 Bypass
Greenville, NC

LOCATION See Exploration Plan

Latitude: 35.6247° Longitude: -77.4408°

MODEL LAYER	GRAPHIC LOG	DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
		0.3 **TOPSOIL**							
2		**SILTY SAND (SM)**, tan and light brown, very loose			X	0-0-2 N=2			
		3.0							
3		**CLAYEY SAND (SC)**, tan and light brown, loose			X	2-3-4 N=7			
		5.0	5						
		Boring Terminated at 5 Feet							

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

Hammer Type: Automatic

Advancement Method:
Mud rotary

Abandonment Method:
Boring backfilled with soil cuttings upon completion.

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

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Cave in at completion of drilling

Terracon
314 Beacon Dr
Winterville, NC

Boring Started: 05-13-2020 | Boring Completed: 05-13-2020

Drill Rig: D-50 | Driller: RTS

Project No.: 72205044

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 72205044 GUC BUILDING 5.GPJ TERRACON_DATATEMPLATE.GDT 5/26/20

CPT LOG NO. C-12 (B-12)

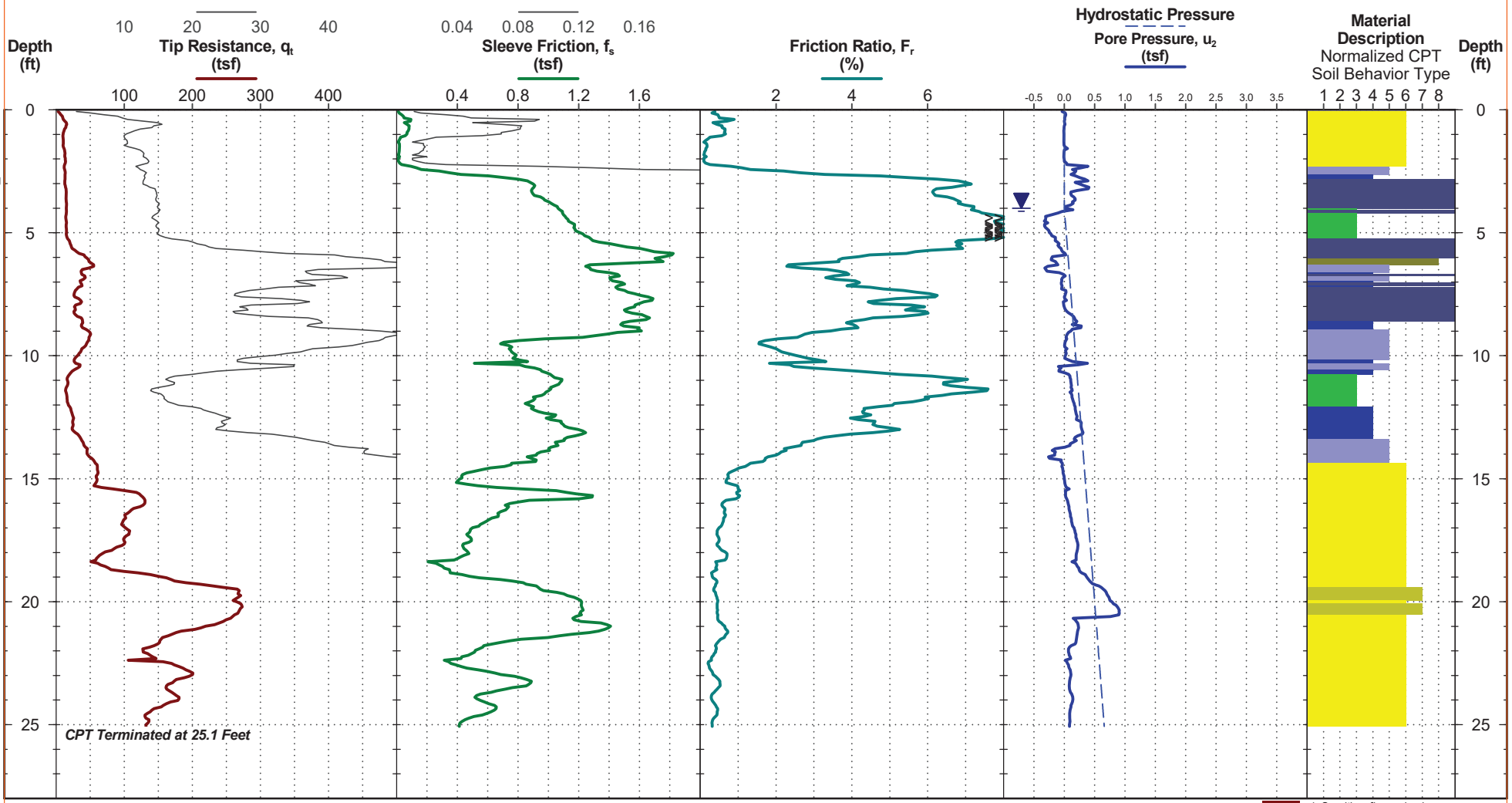
PROJECT: GUC Building 5

CLIENT: Greenville Utilities Commission
Greenville, NC

TEST LOCATION: See Exploration Plan

SITE: NC Hwy 43 W and US 264 Bypass
Greenville, NC

Latitude: 35.624718°
Longitude: -77.440818°



Cave in depth = 20.8 feet

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

Auger anchors used as reaction force.
CPT sensor calibration reports available upon request.

WATER LEVEL OBSERVATION

▼ 4 ft estimated water depth
(used in normalizations and correlations; See Supporting Information)

Probe no. 4287 with net area ratio of 0.84

Calibrated 3/9/2017

Terracon
314 Beacon Dr
Winterville, NC

CPT Started: 5/27/2020
CPT Completed: 5/27/2020
Rig: Geoprobe
Operator: BJM
Project No.: 72205044

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. CPT REPORT 72205044 GUC BUILDING 5.GPJ TERRACON_DATATEMPLATE.GDT 5/28/20

BORING LOG NO. B-13

PROJECT: GUC Building 5

CLIENT: Greenville Utilities Commission
Greenville, NC

SITE: NC Hwy 43 W and US 264 Bypass
Greenville, NC

LOCATION See Exploration Plan

Latitude: 35.6245° Longitude: -77.4409°

MODEL LAYER	GRAPHIC LOG	DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
		0.4 **TOPSOIL**							
2		**SILTY SAND (SM)**, tan, loose			X	0-2-2 N=4			
		3.0							
3		**CLAYEY SAND (SC)**, tan and light brown with gray, loose			X	3-3-3 N=6			
		5.0	5						
		Boring Terminated at 5 Feet							

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

Hammer Type: Automatic

Advancement Method:
Mud rotary

Abandonment Method:
Boring backfilled with soil cuttings upon completion.

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

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Cave in at completion of drilling

Terracon
314 Beacon Dr
Winterville, NC

Boring Started: 05-13-2020 | Boring Completed: 05-13-2020

Drill Rig: D-50 | Driller: RTS

Project No.: 72205044

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 72205044 GUC BUILDING 5.GPJ TERRACON_DATATEMPLATE.GDT 5/26/20

CPT LOG NO. C-13 (B-13)

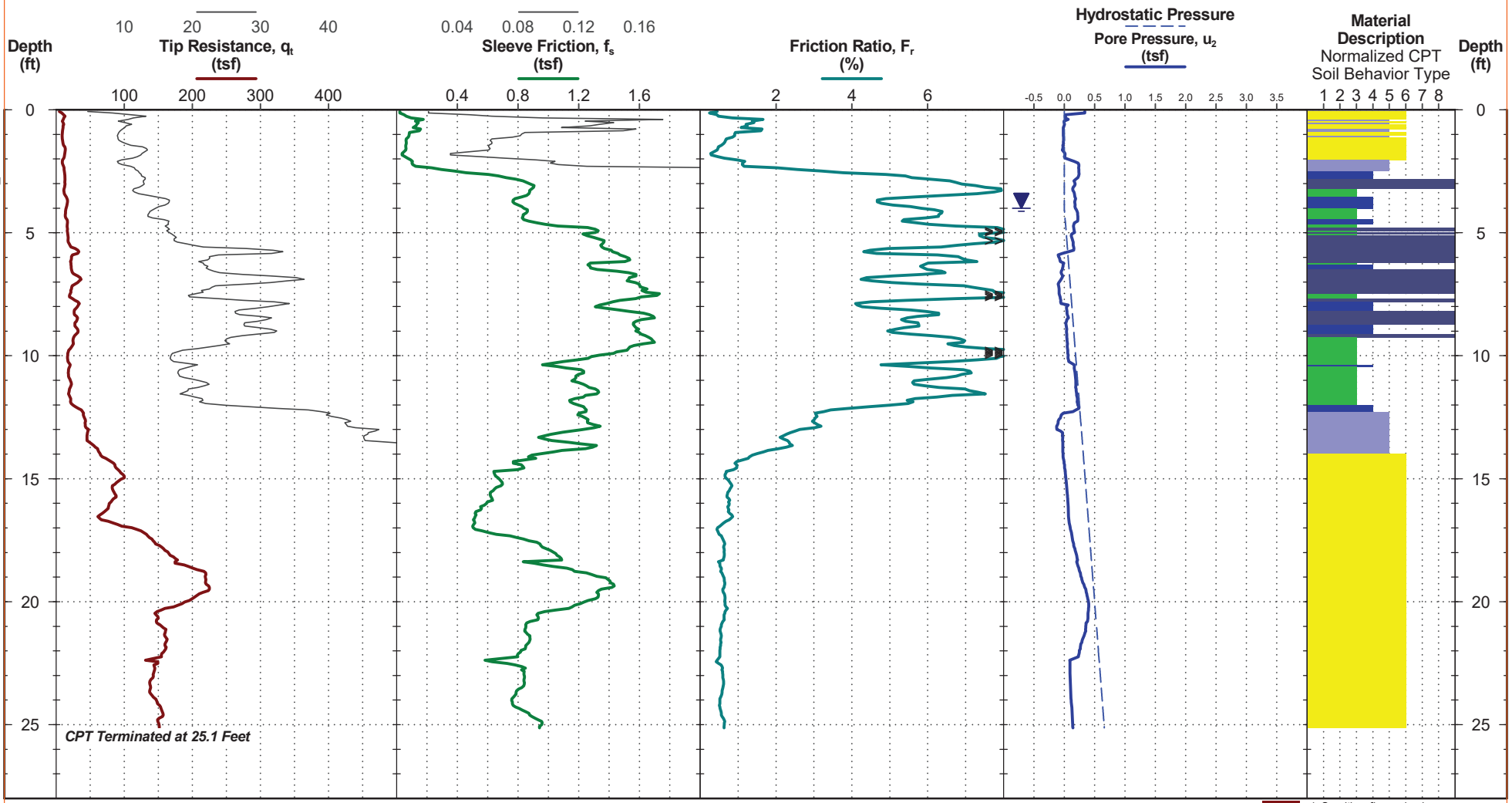
PROJECT: GUC Building 5

CLIENT: Greenville Utilities Commission
Greenville, NC

TEST LOCATION: See Exploration Plan

SITE: NC Hwy 43 W and US 264 Bypass
Greenville, NC

Latitude: 35.624524°
Longitude: -77.44093°



Cave in depth = 20.2 feet

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

Auger anchors used as reaction force.
CPT sensor calibration reports available upon request.

WATER LEVEL OBSERVATION

▼ 4 ft estimated water depth
(used in normalizations and correlations; See Supporting Information)

Probe no. 4287 with net area ratio of 0.84

Calibrated 3/9/2017

Terracon
314 Beacon Dr
Winterville, NC

CPT Started: 5/27/2020

CPT Completed: 5/27/2020

Rig: Geoprobe

Operator: BJM

Project No.: 72205044

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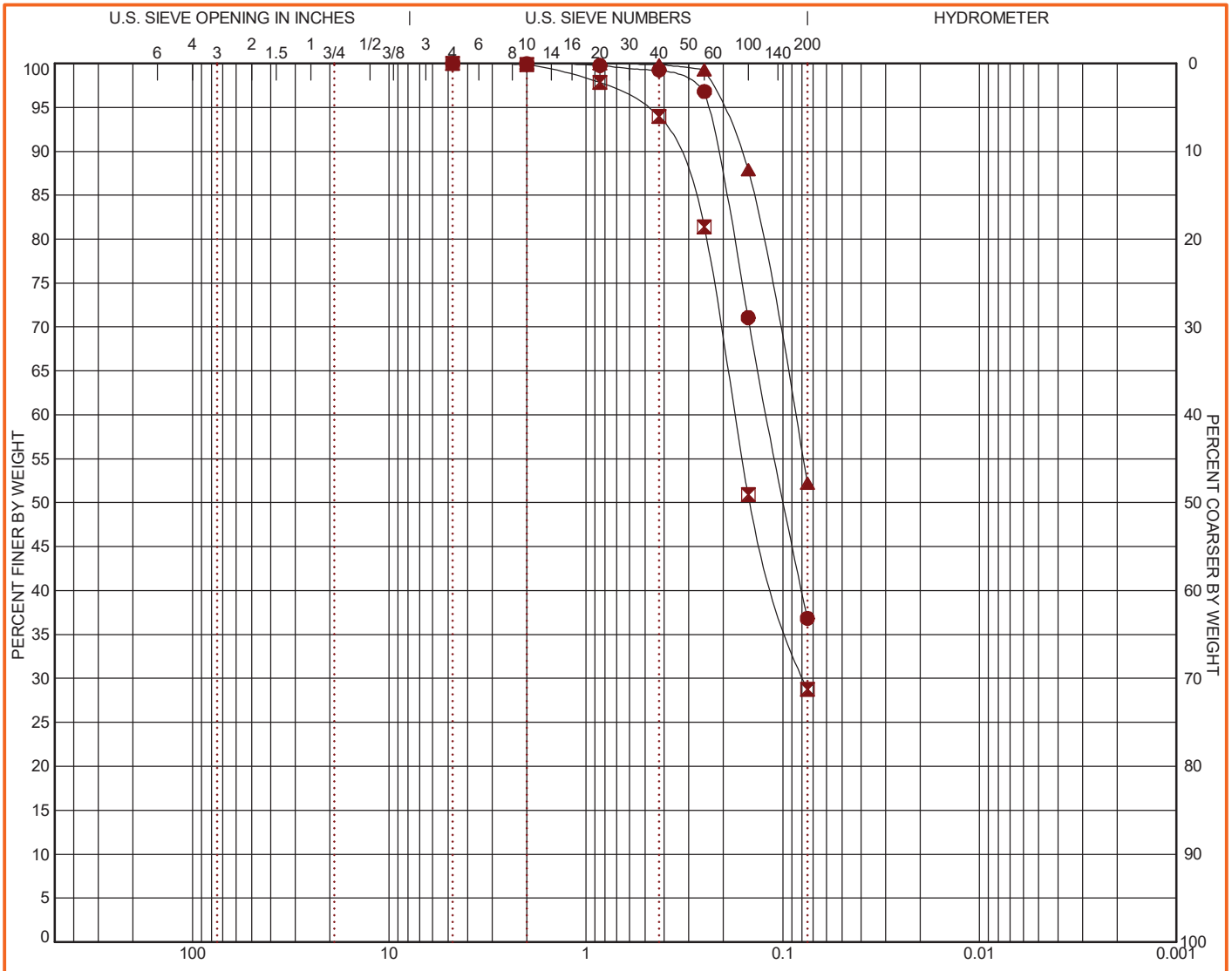
GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	BORING ID	DEPTH	% COBBLES	% GRAVEL	% SAND	% SILT	% FINES	% CLAY	USCS
●	B-3	1 - 2.5	0.0	0.0	63.2		36.8		SM
⊠	B-4	13.5 - 15	0.0	0.0	71.2		28.8		SC
▲	B-11	3.5 - 5	0.0	0.0	47.8		52.2		CL

GRAIN SIZE	●	⊠	▲
D_{60}	0.12	0.175	0.087
D_{30}		0.078	
D_{10}			

COEFFICIENTS	●	⊠	▲
C_C			
C_U			

●		⊠		▲	
Sieve	% Finer	Sieve	% Finer	Sieve	% Finer
#4	100.0	#4	100.0	#10	100.0
#10	99.97	#10	99.85	#20	99.94
#20	99.76	#20	97.84	#40	99.85
#40	99.24	#40	93.96	#60	99.29
#60	96.8	#60	81.42	#100	87.91
#100	71.07	#100	50.91	#200	52.23
#200	36.84	#200	28.76		

SOIL DESCRIPTION	
●	SILTY SAND (SM)
⊠	CLAYEY SAND (SC)
▲	SANDY LEAN CLAY (CL)

REMARKS	
●	
⊠	
▲	

PROJECT: GUC Building 5

PROJECT NUMBER: 72205044

SITE: NC Hwy 43 W and US 264 Bypass
Greenville, NC

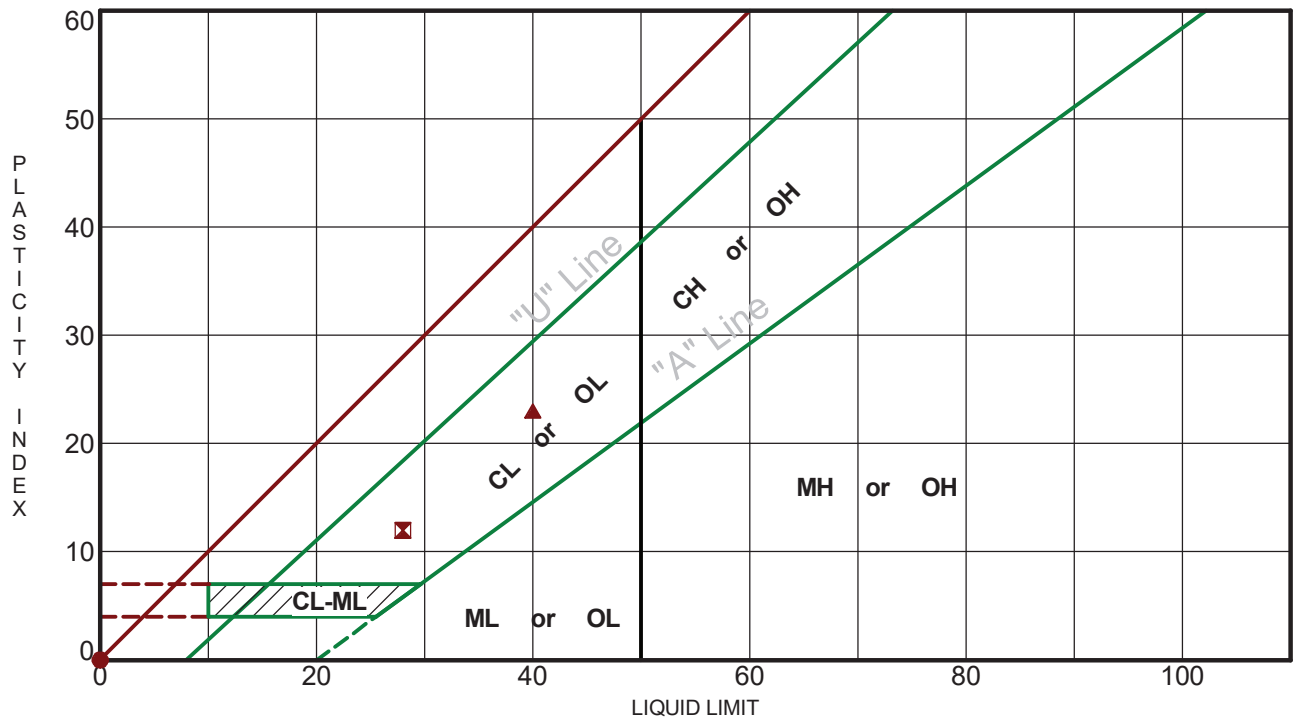
Terracon
314 Beacon Dr
Winterville, NC

CLIENT: Greenville Utilities Commission
Greenville, NC

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GRAIN SIZE: USCS 1 72205044 GUC BUILDING 5.GPJ TERRACON_DATATEMPLATE.GDT 5/26/20

ATTERBERG LIMITS RESULTS

ASTM D4318



Boring ID		Depth	LL	PL	PI	Fines	USCS	Description
●	B-3	1 - 2.5	NP	NP	NP	36.8	SM	SILTY SAND
⊠	B-4	13.5 - 15	28	16	12	28.8	SC	CLAYEY SAND
▲	B-11	3.5 - 5	40	17	23	52.2	CL	SANDY LEAN CLAY

PROJECT: GUC Building 5

PROJECT NUMBER: 72205044

SITE: NC Hwy 43 W and US 264 Bypass
Greenville, NC

Terracon
314 Beacon Dr
Winterville, NC

CLIENT: Greenville Utilities Commission
Greenville, NC

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ATTERBERG LIMITS 72205044 GUC BUILDING 5.GPJ TERRACON_DATATEMPLATE.GDT 5/26/20

SUPPORTING INFORMATION

Contents:

General Notes
Unified Soil Classification System
CPT General Notes

Note: All attachments are one page unless noted above.

GENERAL NOTES
DESCRIPTION OF SYMBOLS AND ABBREVIATIONS

Terracon GeoReport

SAMPLING	WATER LEVEL	FIELD TESTS
Standard Penetration Test	Water Initially Encountered Water Level After a Specified Period of Time Water Level After a Specified Period of Time Water levels indicated on the soil boring logs are the levels measured in the borehole at the times indicated. Groundwater level variations will occur over time. In low permeability soils, accurate determination of groundwater levels is not possible with short term water level observations.	N Standard Penetration Test Resistance (Blows/Ft.) (HP) Hand Penetrometer (T) Torvane (DCP) Dynamic Cone Penetrometer UC Unconfined Compressive Strength (PID) Photo-Ionization Detector (OVA) Organic Vapor Analyzer

DESCRIPTIVE SOIL CLASSIFICATION

Soil classification is based on the Unified Soil Classification System. Coarse Grained Soils have more than 50% of their dry weight retained on a #200 sieve; their principal descriptors are: boulders, cobbles, gravel or sand. Fine Grained Soils have less than 50% of their dry weight retained on a #200 sieve; they are principally described as clays if they are plastic, and silts if they are slightly plastic or non-plastic. Major constituents may be added as modifiers and minor constituents may be added according to the relative proportions based on grain size. In addition to gradation, coarse-grained soils are defined on the basis of their in-place relative density and fine-grained soils on the basis of their consistency.

LOCATION AND ELEVATION NOTES

Unless otherwise noted, Latitude and Longitude are approximately determined using a hand-held GPS device. The accuracy of such devices is variable. Surface elevation data annotated with +/- indicates that no actual topographical survey was conducted to confirm the surface elevation. Instead, the surface elevation was approximately determined from topographic maps of the area.

STRENGTH TERMS

RELATIVE DENSITY OF COARSE-GRAINED SOILS (More than 50% retained on No. 200 sieve.) Density determined by Standard Penetration Resistance		CONSISTENCY OF FINE-GRAINED SOILS (50% or more passing the No. 200 sieve.) Consistency determined by laboratory shear strength testing, field visual-manual procedures or standard penetration resistance		
Descriptive Term (Density)	**Standard Penetration or N-Value Blows/Ft.**	**Descriptive Term (Consistency)**	**Unconfined Compressive Strength Qu, (tsf)**	**Standard Penetration or N-Value Blows/Ft.**
Very Loose	0 - 3	Very Soft	less than 0.25	0 - 1
Loose	4 - 9	Soft	0.25 to 0.50	2 - 4
Medium Dense	10 - 29	Medium Stiff	0.50 to 1.00	4 - 8
Dense	30 - 50	Stiff	1.00 to 2.00	8 - 15
Very Dense	> 50	Very Stiff	2.00 to 4.00	15 - 30
		Hard	> 4.00	> 30

RELATIVE PROPORTIONS OF SAND AND GRAVEL		RELATIVE PROPORTIONS OF FINES	
Descriptive Term(s) of other constituents	Percent of Dry Weight	**Descriptive Term(s) of other constituents**	**Percent of Dry Weight**
Trace	<15	Trace	<5
With	15-29	With	5-12
Modifier	>30	Modifier	>12

GRAIN SIZE TERMINOLOGY		PLASTICITY DESCRIPTION	
Major Component of Sample	**Particle Size**	**Term**	**Plasticity Index**
Boulders	Over 12 in. (300 mm)	Non-plastic	0
Cobbles	12 in. to 3 in. (300mm to 75mm)	Low	1 - 10
Gravel	3 in. to #4 sieve (75mm to 4.75 mm)	Medium	11 - 30
Sand	#4 to #200 sieve (4.75mm to 0.075mm	High	> 30
Silt or Clay	Passing #200 sieve (0.075mm)		

UNIFIED SOIL CLASSIFICATION SYSTEM

Terracon GeoReport

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

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

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

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

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

[E] $Cu = D_{60}/D_{10}$ $\quad Cc = \dfrac{(D_{30})^2}{D_{10} \times D_{60}}$

[F] If soil contains ≥ 15% sand, add "with sand" to group name.

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

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

[I] If soil contains ≥ 15% gravel, add "with gravel" to group name.

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

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

[L] If soil contains ≥ 30% plus No. 200 predominantly sand, add "sandy" to group name.

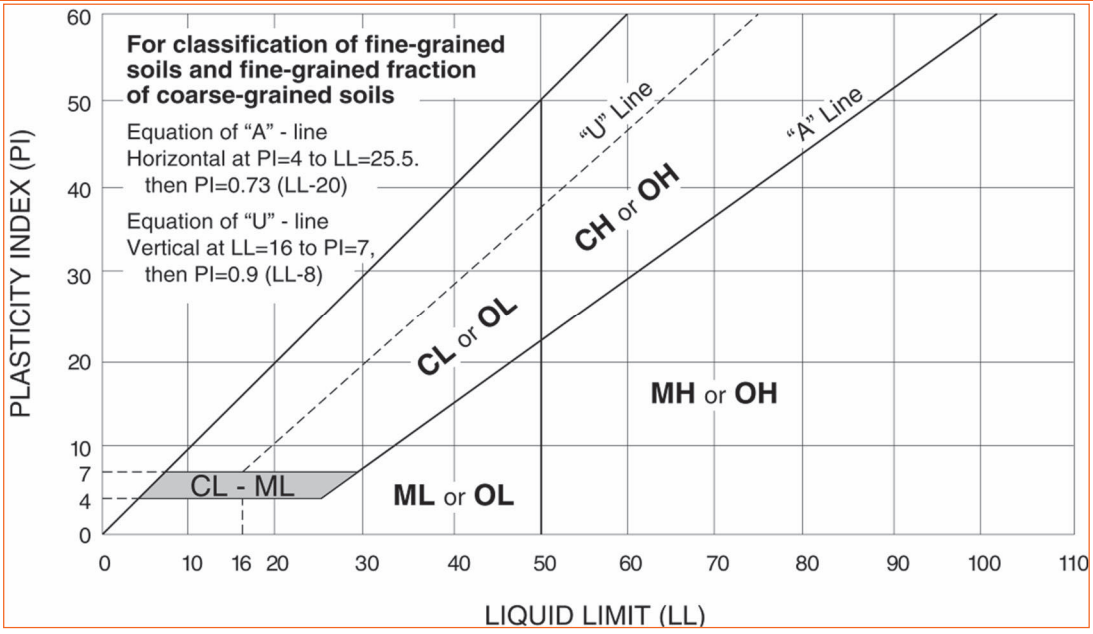
[M] If soil contains ≥ 30% plus No. 200, predominantly gravel, add "gravelly" to group name.

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

[O] PI < 4 or plots below "A" line.

[P] PI plots on or above "A" line.

[Q] PI plots below "A" line.



CPT GENERAL NOTES
DESCRIPTION OF SYMBOLS AND ABBREVIATIONS

Terracon GeoReport

DESCRIPTION OF MEASUREMENTS AND CALIBRATIONS

To be reported per ASTM D5778:

Uncorrected Tip Resistance, q_c
Measured force acting on the cone divided by the cone's projected area

Corrected Tip Resistance, q_t
Cone resistance corrected for porewater and net area ratio effects
$q_t = q_c + u_2(1 - a)$
Where a is the net area ratio, a lab calibration of the cone typically between 0.70 and 0.85

Pore Pressure, u
Pore pressure measured during penetration
u_1 - sensor on the face of the cone
u_2 - sensor on the shoulder (more common)

Sleeve Friction, f_s
Frictional force acting on the sleeve divided by its surface area

Normalized Friction Ratio, F_r
The ratio as a percentage of f_s to q_t, accounting for overburden pressure

To be reported per ASTM D7400, if collected:

Shear Wave Velocity, V_s
Measured in a Seismic CPT and provides direct measure of soil stiffness

DESCRIPTION OF GEOTECHNICAL CORRELATIONS

Normalized Tip Resistance, Q_{tn}
$Q_{tn} = ((q_t - \sigma_{v0})/P_a)(P_a/\sigma'_{v0})^n$
$n = 0.381(I_c) + 0.05(\sigma'_{v0}/P_a) - 0.15$

Over Consolidation Ratio, OCR
$OCR\ (1) = 0.25(Q_{tn})^{1.25}$
$OCR\ (2) = 0.33(Q_{tn})$

Undrained Shear Strength, S_u
$S_u = Q_{tn} \times \sigma'_{v0}/N_{kt}$
N_{kt} is a soil-specific factor (shown on S_u plot)

Sensitivity, S_t
$S_t = (q_t - \sigma_{v0}/N_{kt}) \times (1/f_s)$

Effective Friction Angle, ϕ'
$\phi'\ (1) = \tan^{-1}(0.373[\log(q_t/\sigma'_{v0}) + 0.29])$
$\phi'\ (2) = 17.6 + 11[\log(Q_{tn})]$

Unit Weight, γ
$\gamma = (0.27[\log(F_r)]+0.36[\log(q_t/atm)]+1.236) \times \gamma_{water}$
σ_{v0} is taken as the incremental sum of the unit weights

Small Strain Shear Modulus, G_0
$G_0\ (1) = \rho V_s^2$
$G_0\ (2) = 0.015 \times 10^{(0.55Ic + 1.68)}(q_t - \sigma_{v0})$

Soil Behavior Type Index, I_c
$I_c = [(3.47 - \log(Q_{tn}))^2 + (\log(F_r) + 1.22)^2]^{0.5}$

SPT N_{60}
$N_{60} = (q_t/atm) / 10^{(1.1268 - 0.2817Ic)}$

Elastic Modulus, E_s (assumes $q/q_{ultimate} \sim 0.3$, i.e. FS = 3)
$E_s\ (1) = 2.6\Psi G_0$ where $\Psi = 0.56 - 0.33\log Q_{tn,clean\ sand}$
$E_s\ (2) = G_0$
$E_s\ (3) = 0.015 \times 10^{(0.55Ic + 1.68)}(q_t - \sigma_{v0})$
$E_s\ (4) = 2.5q_t$

Constrained Modulus, M
$M = \alpha_M(q_t - \sigma_{v0})$
For $I_c > 2.2$ (fine-grained soils)
$\alpha_M = Q_{tn}$ with maximum of 14
For $I_c < 2.2$ (coarse-grained soils)
$\alpha_M = 0.0188 \times 10^{(0.55Ic + 1.68)}$

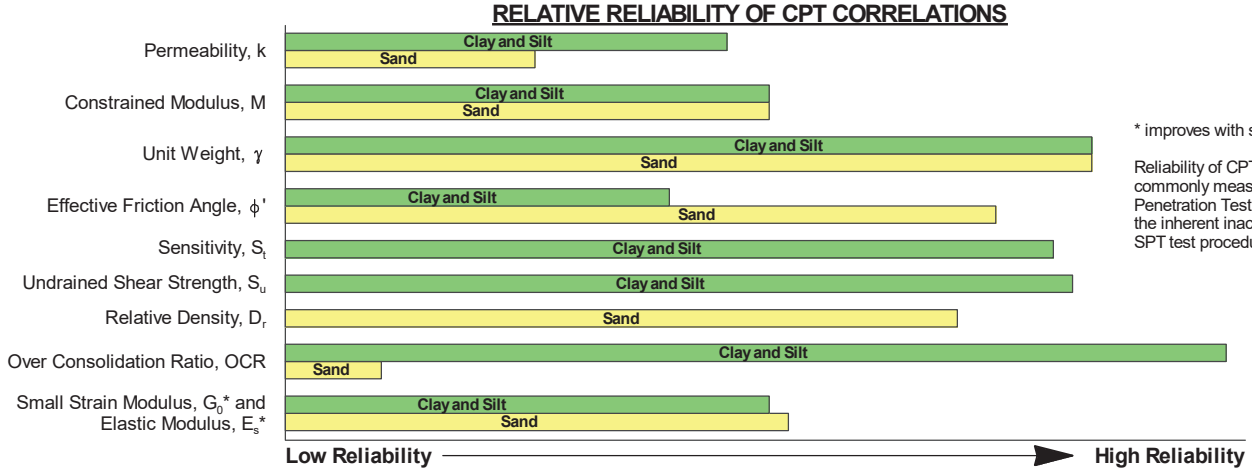
Hydraulic Conductivity, k
For $1.0 < I_c < 3.27$ $k = 10^{(0.952 - 3.04Ic)}$
For $3.27 < I_c < 4.0$ $k = 10^{(-4.52 - 1.37Ic)}$

Relative Density, D_r
$D_r = (Q_{tn} / 350)^{0.5} \times 100$

REPORTED PARAMETERS

CPT logs as provided, at a minimum, report the data as required by ASTM D5778 and ASTM D7400 (if applicable). This minimum data include q_t, f_s, and u. Other correlated parameters may also be provided. These other correlated parameters are interpretations of the measured data based upon published and reliable references, but they do not necessarily represent the actual values that would be derived from direct testing to determine the various parameters. To this end, more than one correlation to a given parameter may be provided. The following chart illustrates estimates of reliability associated with correlated parameters based upon the literature referenced below.

RELATIVE RELIABILITY OF CPT CORRELATIONS



* improves with seismic V_s measurements

Reliability of CPT-predicted N_{60} values as commonly measured by the Standard Penetration Test (SPT) is not provided due to the inherent inaccuracy associated with the SPT test procedure.

WATER LEVEL

The groundwater level at the CPT location is used to normalize the measurements for vertical overburden pressures and as a result influences the normalized soil behavior type classification and correlated soil parameters. The water level may either be "measured" or "estimated:"

Measured - Depth to water directly measured in the field

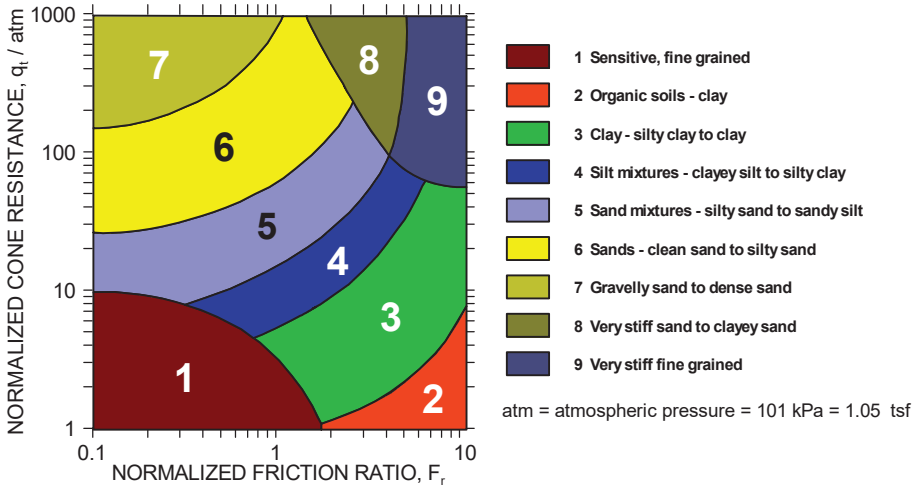
Estimated - Depth to water interpolated by the practitioner using pore pressure measurements in coarse grained soils and known site conditions

While groundwater levels displayed as "measured" more accurately represent site conditions at the time of testing than those "estimated," in either case the groundwater should be further defined prior to construction as groundwater level variations will occur over time.

CONE PENETRATION SOIL BEHAVIOR TYPE

The estimated stratigraphic profiles included in the CPT logs are based on relationships between corrected tip resistance (q_t), friction resistance (f_s), and porewater pressure (u_2). The normalized friction ratio (F_r) is used to classify the soil behavior type.

Typically, silts and clays have high F_r values and generate large excess penetration porewater pressures; sands have lower F_r's and do not generate excess penetration porewater pressures. The adjacent graph (Robertson *et al.*) presents the soil behavior type correlation used for the logs. This normalized SBT chart, generally considered the most reliable, does not use pore pressure to determine SBT due to its lack of repeatability in onshore CPTs.



atm = atmospheric pressure = 101 kPa = 1.05 tsf

REFERENCES

Kulhawy, F.H., Mayne, P.W., (1997). "Manual on Estimating Soil Properties for Foundation Design," Electric Power Research Institute, Palo Alto, CA.

Mayne, P.W., (2013). "Geotechnical Site Exploration in the Year 2013," Georgia Institue of Technology, Atlanta, GA.

Robertson, P.K., Cabal, K.L. (2012). "Guide to Cone Penetration Testing for Geotechnical Engineering," Signal Hill, CA.

Schmertmann, J.H., (1970). "Static Cone to Compute Static Settlement over Sand," *Journal of the Soil Mechanics and Foundations Division*, 96(SM3), 1011-1043.