ADDENDUM NO. ONE (1)

Date: 01/29/2026 Architect's Project No. A24-129GSB

Project: DoSS Office Build Out, Addition, & Site Development Project, BL141-25

Client: Gwinnett County

Contract for: General Contracting

This Addendum forms a part of the Contract Documents and Construction Drawings and modifies the original Bid Documents for the above referenced project.

CHANGES TO THE CONTRACT DOCUMENTS

A. CHANGES TO THE SPECIFICATIONS

1. Replace existing Spec Section 05 31 00 Steel Decking with attached Revised Section 05 31 00 Steel Decking.
2. Replace existing Spec Section 08 11 00 Hollow Metal Doors and Frames with attached Revised Section 08 11 00 Hollow Metal Doors and Frames.
3. Replace existing Spec Section 09 51 00 Acoustical Panel Ceilings with attached Revised Section 09 51 00 Acoustical Panel Ceilings.
4. Add new Spec Section 07 27 26 Fluid Applied Air Barrier.
5. Add new Spec Section 28 30 10 Video Surveillance System.

B. CHANGES TO THE DRAWINGS

1. Replace existing D2.1A with attached Revised D2.1A.

C. BIDDER QUESTIONS / CLARIFICATIONS

Q1. Fencing; C2.00 / A1.2A: When this project was initially bid, Addendum #1 provided clarification about the fence height. This new set of plans still has the same discrepancy. Civil dictates 6' but fence section says 8'. Please confirm 8' is the correct height of the fence.

A1. 8'-0" is the correct height.

Q2. Site Concrete; C6.0: Is aggregate base required underneath the curb & gutter? On C6.0, the Curb and Gutter detail doesn't show any. However, aggregate base is indicated in the heavy duty pavement detail on this same page.

A2. This is not required under curb & gutter.

Q3. Signage: Are there any plans, drawings, or schedules available for the signage on this project?

A3. A10.1A shows all of this information.

Q4. Landscaping; L1.0 / L1.1: I was looking over the landscaping plans (L1.0 and L1.1) and there is not any indication on what areas need sod vs seed. There is also not a plant schedule present. Can you share the areas which need sod / seed and provide a plant schedule?

A4. Refer to the attached plant schedule.

Q5. **Is there a preferred COM switch?**
A5. Refer to information on LV0.10A.

Q6. **Is there a preferred SEC switch?**
A6. Refer to information on LV0.10A.

Q7. **Is there a preferred AP?**
A7. Refer to information on LV0.10A.

Q8. **The project duration has been reduced while scope has increased. Since the maintenance building is a PEMB with long lead times, can a separate deadline be established or a two (2) month schedule extension granted specifically for this building, as the priority is the relocation of support services?**
A8. Not at this time.

Q9. **Will the GC currently working on site be responsible for removing the existing pile of dirt on site?**
A9. Yes, that is their responsibility to move.

Q10. **Will alternate pre-engineered building manufacturers be accepted? Currently, the specifications call for VP Buildings, and they have been non-responsive.**
A10. Refer to spec section 13 12 00 Metal Building Systems, PART 2 – PRODUCTS, 2.01 MANUFACTURERS, A. Acceptable Manufacturer: Kirby Building Systems is an approved alternate for this project as well.

Q11. **Will the county or the power company be responsible to relocate the power box shown on drawing C4.0?**
A11. City of Lawrenceville.

Q12. **Will the county be responsible for relocating the existing power poles and overhead lines? They are hanging relatively low and may become an obstruction during construction of the Maintenance Building. These power poles are not shown on the drawings.**

A12. This has been coordinated with the City of Lawrenceville.

Q13. **Will low voltage work (data cabling, CCTV, access control, A/V etc.) be handled in house or is it part of the biddable scope?**
A13. The low voltage scope needs to be bid through a General Contractor. No bids will be accepted for partial scope of work.

Q14. **Are you able to tell me why the bid was cancelled the first time around?**
A14. The previous bid was rejected so that the County could make changes to the specifications/scope of work.

Q15. **Could we please confirm the full extent of signage work included in the Base Bid?**
A15. Refer to A10.1A.

Q16. **Is there a sign schedule and quantity list?**
A16. Drawing A10.1A provides clear direction.

Q17. **Are sign shop drawings and material submittals required for all signs?**
A17. Yes, both are required.

Q18. **Please provide a copy of the pre-bid meeting sign-in sheet.**
A18. Refer to attached pre-bid meeting sign-in sheet.

Q19. **What is the anticipated start date?**
A19. Refer to A20 below.

Q20. **What is the anticipated duration / completion date?**
A20. Anticipated Start Date: End of March/Early April 2026
Contract Duration: 215 consecutive calendar days

Q21. **Is there a budget, anticipated cost of construction, or an Owner's Stated Cost Limitation for this project?**
A21. There is approved funding for this project. Gwinnett County expects each Contractor to bid a competitive price. Award will be made to the lowest responsive and responsible bidder.

Q22. **Will the General Contractor be responsible for including the costs of any permit, utility, tap, meter, or impact fees?**
A22. These costs will all be paid by the Owner.

Q23. **Will the General Contractor be responsible for including the costs of 3rd party materials testing and/or special inspections?**
A23. These costs will all be paid by the Owner.

Q24. **Who can we contact to arrange additional site visits for our subcontractors?**
A24. Email Mark Baumgart with Gwinnett County and Copy Kevin Boy with PPI as follows:
Mark Baumgart – mark.baumgart@gwinnettcounty.com
Kevin Boy – 874kb@ppi.us

Q25. **Are there any restrictions on the hours of the day or days of the week that work can be performed?**
A25. Per spec section 01 73 00 CONSTRUCTION EXECUTION, 3.03 WORKING TIMES, A. The basic hours of work for the Contractor shall be 7:00 a.m. through 5:00 p.m., Monday through Friday within Gwinnett County but Contractor shall follow work and noise ordinances based on Authority Having Jurisdiction (AHJ). No work will be allowed outside of these hours unless scheduled in advance. The Contractor shall notify the Owner **72 hours in advance** for scheduling off-hours work.

Q26. **Workshop Structural Drawings and PEMB Package, Foundation Design Basis vs Final PEMB Reactions: The structural documents indicate footing sizes are based on estimated PEMB column reactions and require revision if final reactions exceed those**

used for design. Please provide final PEMB reactions (service and ultimate) and confirm whether the foundation design will be re-issued prior to footing construction, including how scope, schedule, and cost impacts will be addressed if redesign is required.

A26. Foundation Design is complete and matches the Varco Pruden PEMB reactions. However, that note is indicating if a different PEMB company is selected, the Structural Engineer of Record will need to review and make sure the Foundation Design still works.

Q27. Specifications Section 09 65 16 Resilient Flooring and Accessories, Moisture Mitigation Requirement: The specifications include moisture testing requirements yet also indicate moisture mitigation "shall be included in base bid," creating ambiguity as to whether mitigation is required everywhere resilient flooring occurs or only where test results fail acceptance thresholds. Please clarify whether moisture mitigation is required in all resilient flooring areas or only as needed based on test results and provide the governing acceptance thresholds for installation.

A27. Moisture Mitigation is only required where test results fail. If the moisture levels are above what basis of design products allow then moisture mitigation is provided. When we did the buildout on the adjacent space, the moisture content for the LVT flooring did not pass and mitigation was required.

Q28. Fire Protection and Fire Alarm Scope, Architectural Fire Code Notes: The architectural notes state fire sprinkler and fire alarm plans are "for reference only" and "not part of the permit set," which leaves permit responsibility and pricing scope unclear. Please confirm whether fire sprinkler and fire alarm systems (design, stamped permit drawings, permitting, procurement, and installation) are included in Base Bid, and identify the responsible parties for permitting with the AHJ.

A28. Yes, these are included in base bid. Gwinnett County P&D would be the AHJ.

Q29. Life Safety System Scope, Specifications Life Safety System and Cross-Discipline Monitoring Points: The Life Safety System requirements describe drawings as diagrammatic and reference a minimum device requirement, including monitoring points tied to other disciplines (sprinkler heat-trace monitoring, backflow/PIV supervision). Please provide a complete point/device list with locations and identify trade responsibility for furnishing, installing, and wiring each monitoring point so the Life Safety scope is fully quantifiable.

A29. A performance spec was provided. Refer to Sections 21 01 00 and 21 11 00. Systems shall be designed and stamped by licensed Fire Protection Engineer and/or Fire Protection Contractor. Electrical Drawings indicate locations for fire alarm items.

Q30. Civil/Specs Hazardous Materials, Asbestos Survey and Abatement Responsibility: The contract documents indicate the Owner will notify the contractor if asbestos is present, but it is not clear whether a full asbestos survey has been completed for all impacted areas or who carries abatement scope if encountered. Please provide the asbestos survey report for all affected areas and confirm whether any required abatement is Owner-provided or Contractor scope.

A30. This is a general note in the event something is discovered. Asbestos Survey and Abatement for this building are completed.

Q31. Structural Fill Material, DoSS Structural Notes: The structural requirements reference high-density polystyrene structural fill (ASTM C578) with compressive resistance criteria, but the exact locations and limits of use are not clearly identified in the provided set. Please identify the specific locations, depths, limits, and detailing requirements where polystyrene structural fill is required so it can be bid correctly.

A31. This is not required. Note to be deleted.

Q32. **Concrete Slab Tolerances, Workshop Structural Notes: The structural notes include slab flatness/levelness tolerances and indicate replacement where tolerances are not met, but the documents do not clearly state whether these tolerances apply to all slabs or only to specific equipment or program areas. Please identify the specific slab areas where the stated Ff/Fl tolerances apply and confirm the testing standard and timing for acceptance.**

A32. This applies to all new slabs. This is reviewed by the Structural Engineer shortly after it is poured.

Q33. **Please specify the color for the storefront.**

A33. Clear Anodized.

Q34. **Please provide the contact information for the BAS contractor at this facility for controls integration of the newly installed mechanical equipment.**

A34. This facility utilizes Trane controls.

Q35. **Please clarify whether evacuation map printing is in or out of sign contractor scope.**

A35. Included.

Q36. **Please confirm who is responsible for providing and mounting of the glass-mounted backing panels.**

A36. This will be the responsibility of the Contractor/Sub-Contractor who provides the signage.

Q37. **Please confirm final quantity counts by sign type (A–H).**

A37. Drawing A10.1A provides clear direction.

Q38. **Please provide a full interior signage schedule will be issued.**

A38. Drawing A10.1A provides clear direction.

Q39. **Sheet E0.3B shop equipment schedule indicates (6) 5-20R cord reels and (3) 6-20R cord reels to be installed for various shop equipment. Please confirm if the Electrical Contractor is to furnish these cord reels? If so, please provide a spec or basis of design.**

A39. Provide Reelcraft 5-20R Cord Reels with 45ft and Reelcraft 6-20R Cord Reels with 45ft.

Q40. **Sheet E0.3B shop equipment schedule shows a note that all equipment is to be contractor provided. Please confirm if the Electrical Contractor is required to provide all pieces of equipment (i.e. air compressor, bench grinder, etc...)? If so, please provide a spec or basis of design for all equipment required to be provided.**

A40. Sheet A2.3B provides all of this information. Yes, this work is in the Contractor's scope.

Q41. **Please provide sizes for all trees, plants, shrubs, etc., on the landscaping plan.**

A41. Refer to the attached plant schedule.

Q42. **Are we required to use VP Buildings as the PEMB manufacturer or are equivalent manufacturers acceptable??**

A42. Refer to spec section 13 12 00 Metal Building Systems, PART 2 – PRODUCTS, 2.01 MANUFACTURERS, A. Acceptable Manufacturer. Kirby Building Systems is an approved alternate for this project as well.

Q43. **Are Gwinnett County Standard incorporated into these drawings and specifications? If not, will they be required and supersede the specifications and drawings?**

A43. Gwinnett County Standards are incorporated into these drawings. However, if there is a discrepancy, the Gwinnett County Standard will supersede.

Q44. **There are multiple pages that are referenced, but are not included in the drawing set we were given. (A8.5A, A8.5B, A2.1C). Will these drawings be made available?**

A44. A8.5A should be A8.2A. A8.5B and A2.1C could not be found in the document.

Q45. **For the exterior CMU walls at the addition, will furring to be required?**

A45. Yes, provide 7/8" hat channel to support the gypsum wall board. Refer to wall section 3/A6.1A.

Q46. **Is the opening of the overhead door the exact size of the desired hallways? If not, please provide details of infill framing.**

A46. No. Infill framing will be required at this location.

Q47. **Are the specifications currently provided only in reference to the pre-engineered metal building? If so, will there be separate specifications provided for the addition and buildout?**

A47. Specifications are for both projects.

Q48. **A2.2B shows walls called out as Gypsum Wall Board and S2.1B calls out the same walls as CMU. Please advise which is the correct wall finish.**

A48. A2.2B shows P4 CMU walls.

Q49. **If the structural drawings are correct, would you like the CMU walls to be furred?**

A49. No.

Q50. **If CMU walls are to be installed per the structural drawings, please advise as to what height they should be.**

A50. A2.2B states extend to structure above.

Q51. **If CMU walls are to be provided, are conduits allowed to be on the walls as opposed to in the walls?**

A51. Yes, this is acceptable.

Q52. **It is assumed that some furnishings and equipment are to be owner provided and installed. Please provide a matrix as to what is to be furnished by whom and what is to be installed by whom.**

A52. Furniture is being purchased by the Owner. All equipment listed on A2.3B is under the Contractor's scope. If equipment is purchased by the Contractor, it will be installed by the Contractor. Furniture company will handle furniture installation.

Q53. **If furnishings and equipment are to be furnished and installed by GC, please provide a schedule and desired manufacturer.**

A53. Furniture is being purchased by the Owner. All equipment listed on A2.3B is under the Contractor's scope. If equipment is purchased by the Contractor, it will be installed by the Contractor. Furniture company will handle furniture installation

Q54. **Where new windows are being put into the existing CMU wall, what kind of lintels will be required? Please provide a design and / or schedule for the lintels**

A54. Refer to S2.2A.

Q55. **Is the existing 8 foot stud wall framing to be removed and then re-built, or can we extend the existing stud wall framing and if so to what height?**

A55. Extend the existing stud wall framing to 6" above the ceiling.

Q56. **Exterior door on window details on A9.2A show insulated 6" studs. Wall sections provided on A6.1a show 7/8" hat channels. Please confirm which is correct?**

A56. A6.1A is correct.

Q57. Sheet D2.1A do not indicate any work on existing sanitary plumbing or flooring near the southwest corner bathrooms. Please confirm whether we need to remove and patch.

A57. Keynote 8 shows this information on D2.1A.

Q58. The required saw cutting for under slab sanitary sewer to supply the new bathroom and floor drains is not shown on Sheet D2.1A. The lines are shown on the plumbing plan. Please indicate required saw cutting for the under slab sanitary lines on Sheet D2.1A.

A58. Keynote 8 shows this information on D2.1A.

Q59. Reference plan keynote 17 on A2.2A, which states we should carry 500 sf of slab leveling, please indicate the thickness of this.

A59. Slab varies from 1/2" to 1" in these areas.

Q60. At existing exterior front entrance there are cracked, depressed and sloped areas. Sheet D2.1A do not call for its removal of this area. Please verify if this is to be covered up with self-leveling concrete or if the concrete is to be removed and replaced.

A60. Refer to D2.1A.

Q61. Are we to provide fencing or railing on top of the retaining wall?

A61. Fencing.

Q62. A concrete Transformer Pad is shown on the detail on Sheet E0.10 but does not provide any information on the concrete thickness, strength, or reinforcement. Please verify these requirements.

A62. Refer to 5/E5.1B.

Q63. Proposed RTU-01A in the DOSS Office will require a structural steel frame, however no details are provided on the structural drawings. Please provide this design.

A63. Refer to the attached typical mechanical support detail.

Q64. Several pieces of roof mounted HVAC equipment are shown on the DOSS Workshop which most likely require a structural steel frame, however no details are provided on the structural drawings. Please provide this design, if required.

A64. This will be coordinated with the PEMB drawings. Structural Steel frames not required.

Q65. If an irrigation system is required for the landscaping, please verify if the irrigation system is to be on its own water meter. If so, please provide revise the detail on Sheet C4.0.

A65. No irrigation system required.

Q66. Specification Section 033000 calls for slab on grade concrete to be 3,000 p.s.i., and Sheet S1.1B calls for 4,000 p.s.i. Please verify which is correct.

A66. Sheet S1.1B is correct.

Q67. Specification Section 033000 calls for Minimum Local Floor Flatness and Floor Levelness – Minimum Local: FF17/FL15 and Sheet S1.1B calls for FF15/FL15. Please verify which is correct.

A67. Sheet S1.1B is correct.

Q68. Specification Section 033000 calls for Overall Floor Flatness and Floor Levelness – Minimum Local: FF25/FL20 and Sheet S1.1B calls for FF20/FL20. Please verify which is correct.

A68. Sheet S1.1B is correct.

Q69. **Specification Section 053100 details Floor Deck but not Roof Decking. Please provide the requirements for Roof Decking.**

A69. Refer to the attached revised specification section.

Q70. **Detail 3 on Sheet A1.2A shows a stoop with steps and a ramp but does not have any details. A stoop exists at this location. Are we to remove the existing stoop and replace it or add the ramp to the existing stoop. Please provide details on this construction.**

A70. All construction is new in this location. Refer to detail on A1.2A.

Q71. **Please provide a geotechnical report for this project.**

A71. This has been attached as requested.

Q72. **C1.0 (Existing Conditions and Demolition Plan) note the existing gate and gate operator are to be re-installed in a different location. No location is shown on the site electrical plans for power to the relocated gate. Please clarify.**

A72. Gate located directly in front of the Workshop building will be relocated. Enlarged plan of this gate is shown on 2/A1.2A.

Q73. **Note 4 on E0.10 (Site Plan – Electrical) states that the S1 fixtures shown are existing to be relocated and to maintain existing controls. These fixtures are not shown on the existing conditions plan. Please clarify if these fixtures are new or provided by the owner for installation by the GC.**

A73. Note 4 on E0.10B references "weather tight junction box with gasket for 120v power to gate operator".

Q74. **Section 2.2A of Specification 095100 states that ACT type A is to be USG Frost High-NRC. The LR/NRC/CRC values, edge profile, and thickness requirements listed in subsection A.2. do not match this product. Please advise.**

A74. Refer to the attached revised specification.

Q75. **Several partition types listed on Sheet A2.2A are scheduled to go from finish floor to the bottom of structure above. Please confirm the roof deck elevation within the existing portion of the expansion/renovation area.**

A75. Roof Deck elevation varies from 17'-0" – 16'-0" depending on location of building.

Q76. **Sheet P0.1B indicates that SH-1 showers within the pre-engineered metal building are to receive wall tile. Please provide an elevation of this condition and confirm the tile to be utilized.**

A76. T2 is being used at showers. Florida Tile Coastal Sands FT129927 6x6 with 183 Chateau grout.

Q77. **Note #12 on Sheet A2.2B calls for lockers to be received within the pre-engineered metal building bathrooms. No specifications have been provided as referenced. Please provide a specification for lockers.**

A77. ASI 12x18x72 DBL Tier Locker, Color Gray, 16 Gauge Door with Air Vents, Lift Trigger multipoint latch with padlock eye, 3 single prong wall hooks, continuous slope hood, 6" closed base. Color Gray #25.

Q78. **Specification Section 081100 (subsection 2.2) lists construction requirements of interior hollow metal doors, but not exterior. Please confirm the requirements of exterior hollow metal doors.**

A78. Refer to the attached revised specification.

Q79. **Sheet A2.4A states that partition type P2 is to be received in the new Section Manager office. Per the Partition Schedule, these walls are to "extend 6" above ceiling". Please confirm the ceiling system and ceiling elevation outside of this office.**

A79. This is an acoustical ceiling tile system at 10'-0" A.F.F.

Q80. **Millwork Elevation 1/A8.2A called for within the Open Office room 231 is of the entry vestibule. Please confirm the correct elevations tag should be 2/A8.1A.**

A80. Confirmed.

Q81. **Millwork specifications sections 064000: Cabinets, Paneling, Trim / 066000: Decorative Plastic Laminate / 068000: Quartz Countertops have been removed from the provided specifications dated 2026-01-09 and replaced with specification section 064023: Cabinets and Countertops. Please confirm specification sections that were removed no longer apply to this project and should not be used for pricing purposes.**

A81. The sections referenced above reference the Gwinnett County Building Standards. These were not part of the release for the project manual. During the previous round of questioning, a request was made for the Gwinnett County Building Standards so it was provided.

Q82. **Waterproofing specifications sections 071000: Dampproofing and Waterproofing / 072000: Insulation and Barriers have been removed from the provided specifications dated 2026-01-09. Please confirm specification sections that were removed no longer apply to this project and should not be used for pricing purposes.**

A82. The sections referenced above reference the Gwinnett County Building Standards. These were not part of the release for the project manual. During the previous round of questioning, a request was made for the Gwinnett County Building Standards so it was provided.

Q83. **Roofing specifications 071000: Roofing General / 073000: Asphalt Shingles / 074000: Metal Roofing / 075000: Low-Slope Membrane Roofing / 076000: Flashing and Sheet Metal / 077000: Roof Accessories have been removed from the provided specifications dated 2026-01-09. Please confirm specification sections that were removed no longer apply to this project and should not be used for pricing purposes. All roofing specifications have been removed from the project, please provide specifications for the roofing scope of work to be included on this project.**

A83. The sections referenced above reference the Gwinnett County Building Standards. These were not part of the release for the project manual. During the previous round of questioning, a request was made for the Gwinnett County Building Standards so it was provided. Basis of design for Roofing information is located in the 13 12 00-05 Specification Section since this will be supplied by PEMB.

Q84. **Please confirm Kirby Building Systems is an approved alternate for the PEMB.**

A84. Kirby Building Systems is an approved alternate for the PEMB.

Q85. **Wall section 5/A6.1B calls for fluid-applied air and vapor barrier behind brick at the PEMB. The note on this detail says to refer to specifications. The only mention of fluid-applied air barrier is in the CMU spec section 04 22 00-5 and 04 21 13-7. These spec sections refer to 07 14 00 and 07 27 26. Neither of these sections are within the specifications. Please provide air and vapor barrier to be included at the PEMB behind the brick?**

A85. Refer to the attached new spec section 07 27 26 Fluid Applied Air Barrier.

Q86. **It is not recommended to pave directly up to the edge of the PEMB slab. Detail 4/A6.1B shows a concrete apron tying into the PEMB SOG. Please confirm the width of a concrete apron required between the asphalt paving and the SOG of the PEMB.**

A86 4’-0” Concrete Apron,

Q87. Please confirm the deck height of the build out and addition building, respectively.
A87. Build-Out – Roof Deck elevation varies from 17’-0” – 16’-0” depending on location of building. Addition – 13’-9”,

Q88. Are Kawneer, YKK, or CR Lawrence allowed as alternates to the basis of design for glass manufacturers?
A88. YKK system is acceptable.

Q89. Per Detail 4/A6.1B, please confirm that the electric coiling door operator will be needed.
A89. Confirmed this is needed as shown on Electrical Drawings.

Q90. Per Sheet A6.1B, please confirm areas to include gypsum board at the interior side of exterior walls as well as locations left with exposed insulation.
A90. Sheet A2.2B Keynote 16 indicates areas with Liner Panels at 10’-0” AFF. Other locations not indicated by Keynote 16 will follow the Gwinnett County Building Standards indicating plywood 8’-0” in height. Women 109 and HVAC Lab 106 will require gypsum board.

Q91. Please include a detail for the overhead coiling door to be attached to a metal girt / stud.
A91. This connection is handled by the PEMB. This is not an architectural connection.

Q92. Within the Gwinnett County Standards, Sheet 363, Division 06 - Wood, Plastics and Composites line item 1 states maintenance building workshop area walls are to be lined with painted plywood, 8’ in height, throughout space. Please confirm plywood is required per standards.
A92. Sheet A2.2B Keynote 16 indicates areas with Liner Panels at 10’-0” AFF. Other locations not indicated by Keynote 16 will follow the Gwinnett County Building Standards indicating plywood 8’-0” in height.

Q93. Per Sheet AV2.0A calls for a cable cubby with no additional information provided. Please provide information.
A93. Cable Cubby to be an Extron Cable Cubby 700 with retractors.

Q94. Per Sheer AV2.0A Calls for Biamp Sound Masking to meet county standards. No standards have been provided or listed in the specifications. Please clarify.
A94. Biamp Sound Masking is DynaSound. It should utilize the Cambridge QT X 300 Sound Masking Control Module. Product Data has been attached.

Q95. Low voltage drawings indicated CCTV cameras but no specs have been provided. Please clarify.
A95. Refer to the attached new spec section 28 30 10 Video Surveillance System.

Q96. There are multiple references to a finish schedule throughout the drawings, will one be provided?
A96. Refer to A10.2A and A10.1B. All finish information is provided on these sheets.

Q97. Detail 5 on Sheet A8.1A refers to mosaic wall tile, however, no mosaic tile is listed in the Finish Schedule. Please confirm the tile to be received at this elevation.
A97. Mosaic Tile is Crossville, WOW Crafted Handmade, Sage, 2x10.

Q98. Please provide specifications or a schedule for the required exterior monument sign and interior ADA signage.

A98. Exterior Monument sign is not in this scope of work. Interior ADA signage is all detailed on A10.1A.

Q99. Concrete Flume; Could you provide a section view of the concrete flume? Aggregate Base needed below?

A99. Refer to the attached concrete flume detail.

Q100. Camera System; Can you provide specifications on the camera system? There are none found in the project manual. Also, are we to provide new cameras on the interior of this space? Two outdoor cameras are shown.

A100. Refer to the attached new spec section 28 30 10 Video Surveillance System.

Q101. Low Voltage; What distance should be carried for the (2) 12-Strand OSP fiber runs from MDF Room 112 to Records IDF? Any reason we cannot run a 24-strand ILO (2) 12-strands?

A101. (2) 12-Strand OSP Fiber runs are required. Please carry 250'-0".

Q102. General: What are the expected working hours in the not in scope areas? Similarly, what are the working conditions? Will these areas be occupied?

A102. Per spec section 01 73 00 CONSTRUCTION EXECUTION, 3.03 WORKING TIMES, A. The basic hours of work for the Contractor shall be 7:00 a.m. through 5:00 p.m., Monday through Friday within Gwinnett County but Contractor shall follow work and noise ordinances based on Authority Having Jurisdiction (AHJ). No work will be allowed outside of these hours unless scheduled in advance. The Contractor shall notify the Owner **72 hours in advance** for scheduling off-hours work.

Q103. Floor plans & elevations for MDF/IDF for Building A? Should we assume this equipment to be existing?

A103. MDF / IDF Rooms are existing inside the existing Records Management Center.

C. SUBSTITUTION REQUESTS

1. **Substitution for ADA Signage:**
   Nova or Square Modular Aluminum Frames: Vista System is **APPROVED.** Contact: Vista System, 1800 N. East Avenue, Sarasota, FL 34234. Phone: 941-365-4646. Website: www.vistasystem.com.

D. LIST OF ATTACHMENTS

BL141-25 Pre-Bid Meeting Sign-in Sheet 01/14/2026 (2 pages)
Plant Schedule (1 page)
Typical Mechanical Support Detail (1 page)
DoSS Geotechnical Report (38 pages)
Biamp Sound Masking (7 pages)
Concrete Flume (1 page)
Revised Spec Section 05 31 00 Steel Decking (2 pages)
Revised Spec Section 08 11 00 Hollow Metal Doors and Frames (5 pages)
Revised Spec Section 09 51 00 Acoustical Panel Ceilings (6 pages)
New Spec Section 07 27 26 Fluid Applied Air Barrier (6 pages)
New Spec Section 09 51 00 Acoustical Panel Ceilings (6 pages)
New Spec Section 28 31 10 Video Surveillance System (11 pages)
D2.1A – Demolition Plan (1 page)

All Bidders shall acknowledge receipt of this addendum by inserting its number and date on page 000410-2 of the BIDDING FORM. Failure to do so may subject the bidder to disqualification. This addendum forms a part of the Contract Documents.

END OF ADDENDUM NO. ONE (1)

1/14/26

PRE-BID CONFERENCE

BL141-35

	Representative Name	Company Name	Phone #	E-Mail Address
	(DEPARTMENT REPRESENTATIVES SIGN-IN AT BOTTOM)			
1.	Madeline Layson	Multiplex LLC	678-317-2040	admin@multiplexllc.com
2.	Lane Guthrie	Place Services	770-680-9941	lane.guthrie@PSI.works
3.	Donald Mabe	Powerlink Technologies	(843)906-2617	donald.mabe@powerlinktech.com
4.	Scott Daile /	Garrard	770-243-3133	sdaile@garraydgroup.com
5.	Scott Jennings	Grahl Const.	706-850-4848	sjennings@grahlconstruction.com
6.	Nathan Butler	Electrical Contractor Inc.	404-883-8909	n.butler@eci-nc.us
7.	Carson Cranberry	Kevin Price Const.	334-750-5476	cgranberry@kpgc.net
8.	Spencer Philpott	Reeves Young	404-402-5477	SPhilpott@ReevesYoung.com
9.	Jared Keil	Reeves Young	954 604 9000	jkeil@reevesyoung.com
10.	Albino Vargas	Vargas Contracting	678 284 8969	jvargascontracting.[redacted].com
11.	Brad Hall / Jason Moore	AI Signs	770-654-2914	brad@alsigns.com
12.	T.J. Gunter	Gunter Mead Corp	706-255-0773	tgunter@guntermead.com
13.	Erik Hall	NetPlanner	678-463-1137	erik.hall@netplanner.com

Department Representative Name	Department	Department Representative Name	Department
Jake Scarpone	DOFS	Kevin Boy	PPL
Anna West	DOFS		
MARK BAUMGARTNER	D'SS		

1/14/26

PRE-BID CONFERENCE

BL141-35

	Representative Name	Company Name	Phone #	E-Mail Address
	(DEPARTMENT REPRESENTATIVES SIGN-IN AT BOTTOM)			
1.	Trenton King	Construction Works	678.340.1225	trent@cwiatl.com
2.	Jody Dyess	Beam Team C	404-787-4425	jodydyess@thebeamteam.com
3.	Justin Burgess	JR Hobbs	470-909-3239	jburgess@jrhobbs.com
4.	Jeff Nathe	JR Hobbs	470-954-9369	JNathe@JRHobbs.com
5.	Darshan Patel	Tektron LED	404-906-0938	TektronLED.com
6.	~~S~~ AMAR RAJASHEKAR	PENCOR	470-461-6903	ARAJASHEKAR@PENCORCONSTRUCTION-COM
7.	Jesh Patel	Tektron LED	404-906-9295	jesh@tektronled.com
8.	Taylor White	Reeves Young	404-317-5706	Twhite@reevesyoung.com
9.	Joyce Zhai	Simple Floors Inc.	678-469-3241	Joyce@Simplefloors.com
10.	LARRY Clemons	Cleandreams	313-728-7083	Cleandreamllc.com
11.				
12.				
13.				

Department Representative Name	Department	Department Representative Name	Department

PLANT SCHEDULE

TREES

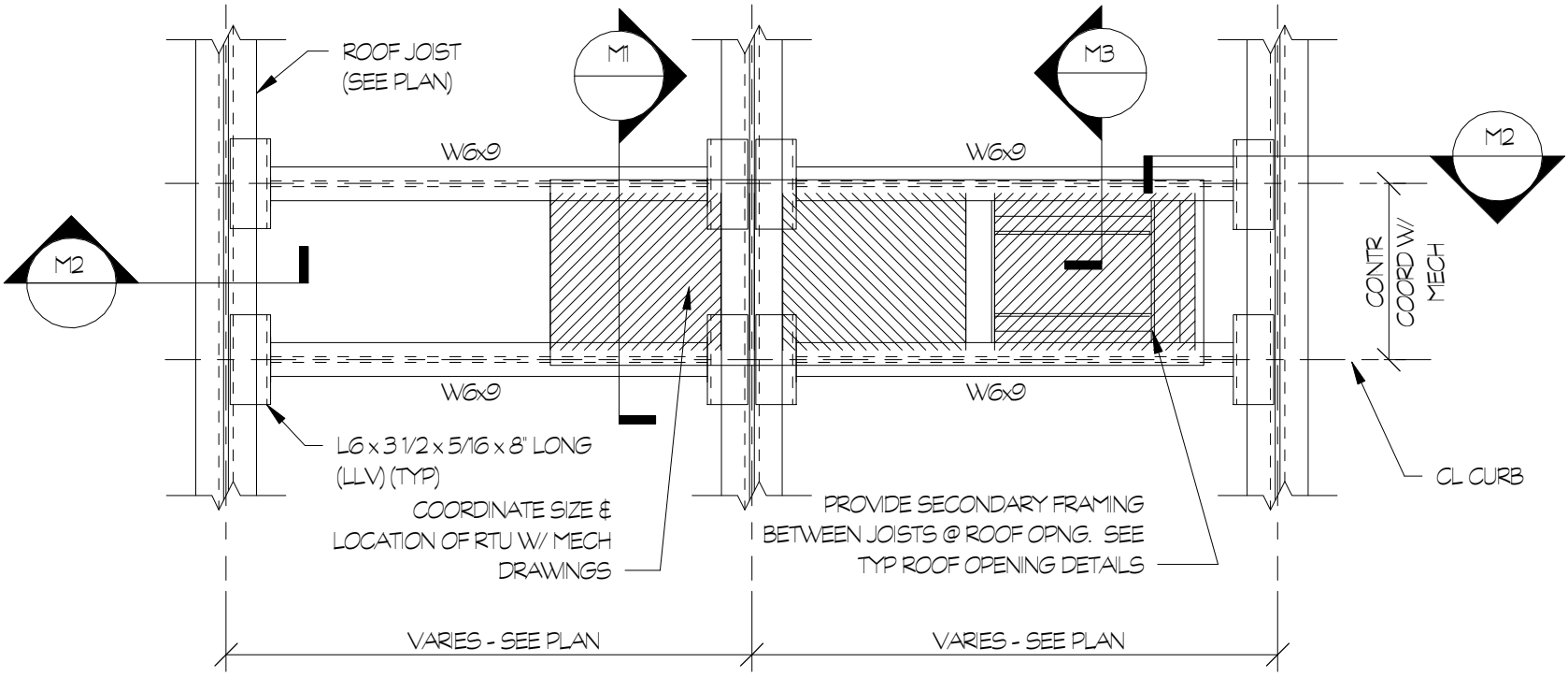
QTY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	Notes
3	MG	MAGNOLIA GRANDIFLORA 'BRACKEN'S BROWN BEAUTY'	BRACKEN'S BROWN BEAUTY MAGNOLIA	8' HT.	AS SHOWN	STRAIGHT CENTRAL LEADER TO MINIMUM 6' HT, WELL SPACED BRANCHES, SYMMETRICAL CROWN
4	SM	MAGNOLIA VIRGINIANA 'NORTHERN BELLE'	NORTHERN BELLE SWEETBAY MAGNOLIA	8' HT.	AS SHOWN	MULTI-STEM, TREE-FORMED (LIMBED UP)
5	QT	NYSSA SYLVATICA 'CHERRY PIE' PP27588	WHITE CHAPEL TUPELO	2.5" CAL	AS SHOWN	STRAIGHT CENTRAL LEADER TO MINIMUM 6' HT, WELL SPACED BRANCHES, SYMMETRICAL CROWN
12	**TOTAL**					

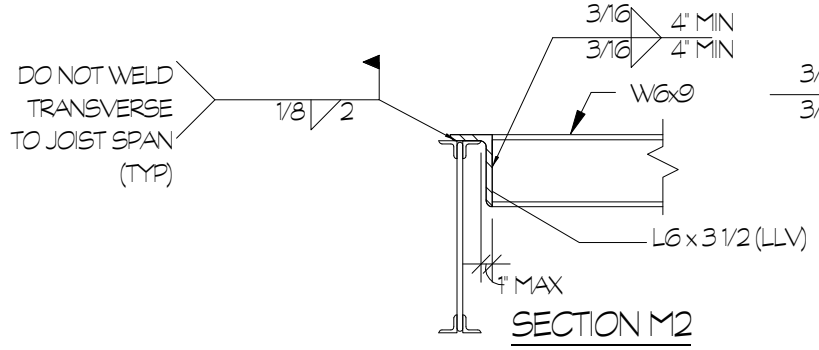
SHRUBS

646	CGD	DISTYLLIUM 'PIIDIST-V' PP27,631	FIRST EDITIONS CINNAMON GIRL DISTYLIUM	3 GAL	3'-0" O.C.	FULL POT, WELL SHAPED
57	ICC	ILEX CORNUTA 'CARISSA'	CARISSA HOLLY	3 GAL.	3'-6" O.C.	FULL POT, WELL SHAPED
113	SS	PANICUM VIRGATUM 'SHENANDOAH'	SHENANDOAH SWITCHGRASS	3 GAL	3'-0" O.C.	FULL POT, WELL SHAPED
816	**TOTAL**					

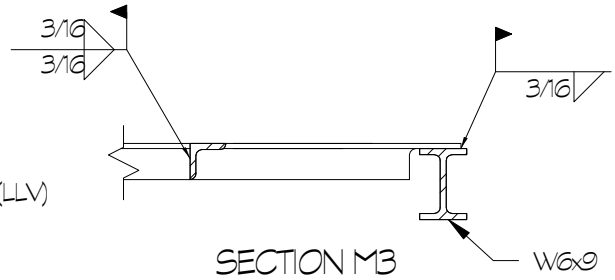
TURF

15,250 SF		TIFTUF BERMUDA SOD				

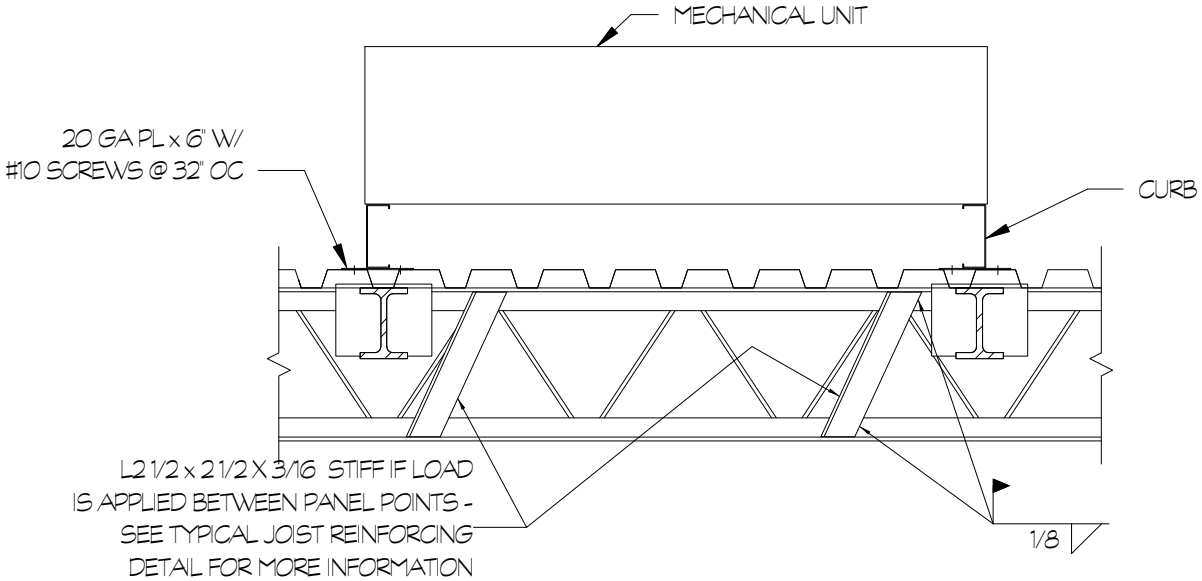




SECTION M2



SECTION M3



SECTION M1

ECS Southeast, LLC

Geotechnical Engineering Report

DoSS Relocation Project

Lawrenceville, Georgia

ECS Project No. 10: 12639

May 16, 2025

ECS SOUTHEAST, LLC
Geotechnical • Construction Materials • Environmental • Facilities

May 16, 2025

Mr. Mark Baumgart
Gwinnett County Government
75 Langley Drive
Lawrenceville, GA 30046

ECS Project No. 10:12639

Reference: Geotechnical Engineering Report
DoSS Relocation Project
1050 Grayson Highway
Lawrenceville, Georgia

Dear Mr. Baumgart:

ECS Southeast, LLC (ECS) has completed the subsurface exploration, laboratory testing, and geotechnical engineering analyses for the above-referenced project. Our services were performed in general accordance with our agreed scope of work as outlined in our Proposal No. 10:20356, dated March 27, 2025, and authorized by Mr. Mark Baumgart with Gwinnett County with Purchase Order 2000469175, dated April 4, 2025. This report presents our understanding of the geotechnical aspects of the project along with the results of the field exploration and laboratory testing conducted, and our design and construction recommendations.

It has been our pleasure to be of service to Gwinnett County during the design phase of this project. We would appreciate the opportunity to remain involved during the continuation of the design phase, and we would like to provide our services during construction phase operations as well to verify subsurface conditions assumed for this report. Should you have any questions concerning the information contained in this report, or if we can be of further assistance to you, please contact us.

Respectfully submitted,

ECS Southeast, LLC

Steven G. Schultz, P.E.
Geotechnical Project Manager
SSchultz@ecslimited.com

Brian E. Schiessle, PE
Principal Engineer
Bschiessle@ecslimited.com

TABLE OF CONTENTS

APPENDICES

EXECUTIVE SUMMARY

The following summarizes the main findings of the exploration, particularly those that may impact the cost of the planned development. Additionally, our principal recommendations are outlined below. Please note that the Executive Summary should not replace a thorough review of the entire geotechnical report.

- Fill/possible fill soils and materials were encountered in all Borings except B-6 and B-9. Details regarding the impact of fill soils on the planned development are contained in the body of the report.
- Sandy elastic Silt (MH) soils of moderately high plasticity were noted in the upper 5½ feet in boring B-7. This type of soil is moderate to highly elastic and this type of soil is moisture sensitive has the potential to lose strength when exposed to the combination of wet weather and construction traffic. Plastic and/or elastic soils may be present in other areas on site unexplored by our widely spaced borings.
- Provided that any soft or poor-quality residual subgrade soils are remediated, subgrades are prepared, and any new structural fill installed in accordance with the construction recommendations of this report; the new building may be supported on shallow spread footings utilizing a net allowable bearing pressure capacity of 3,000 psf.
- The floor slab may be designed as a slab on grade bearing on engineer-approved densified existing fill and new compacted fill designed with a modulus of subgrade reaction of 125 pci (pound per cubic inch)

This Executive Summary is intended as a very brief overview of the primary geotechnical conditions that are expected to affect design and construction. Information gleaned from this Executive Summary should not be utilized in lieu of reading the entire geotechnical report.

1.0 INTRODUCTION

1.1 GENERAL

The purpose of this exploration was to provide geotechnical information for the design of the proposed building relocation. According to information provided to ECS, the proposed project consists of the construction of a single-story pre-engineered metal building founded on conventionally shallow foundations and a concrete slab-on-grade.

The recommendations prepared for this report are based on the results of our subsurface exploration and project information provided by Mr. Mark Baumgart of Gwinnett County. This report contains the results of our subsurface exploration and laboratory testing programs, site characterization, engineering analyses, and recommendations for the design and construction of the planned development.

1.2 SCOPE OF SERVICES

The purposes of this exploration were to explore the soil and groundwater conditions at the site and to develop engineering recommendations to guide design and construction of the proposed project. We accomplished the purposes of the exploration by:

1. Reviewing publications concerning local geology of the site and performing a general site reconnaissance.
2. Drilling borings to explore the subsurface soil and groundwater conditions.
3. Performing laboratory tests on selected representative soil samples from the borings to evaluate pertinent engineering properties.
4. Evaluating the field and laboratory data to develop appropriate engineering recommendations.

2.0 PROJECT INFORMATION

2.1 PROJECT LOCATION AND SITE DESCRIPTION

The site is located on the northeastern portion of an existing lot cornering Park Place Drive to the north, residential neighborhood to the east, commercial development to the south, and Grayson Highway to the west in Lawrenceville, Georgia. A Site Location Diagram is provided in Appendix A (Figure 1).

Based on review of available aerial imagery and from our site reconnaissance during boring layout, the site was an undeveloped outparcel with a stockpile of soil present on a portion of the site at the time of our exploration. The stockpile was moved to accommodate the requested boring locations.

Imagery of Project Site and Surrounding Condition (Google Earth, March 2022)

2.2 PROPOSED CONSTRUCTION

The proposed project consists of a new one-story pre-engineered metal building with associated infrastructure.

Building loads have not been provided; however, based on our experience with similar projects, we estimate that maximum column loads will be under 75 kips and maximum wall loads will be under 3 kips per linear foot.

If any of the information presented is incorrect or has changed, please advise ECS so that we may reevaluate our recommendations.

3.0 FIELD EXPLORATION AND LABORATORY TESTING

3.1 FIELD EXPLORATION PROGRAM

To explore the subsurface conditions at this site, a total of nine soil test borings (B-1 to B-9) were performed within the proposed building footprint to depths of approximately 25 feet below existing grade.

The requested test boring locations were provided to ECS and were established in the field by ECS using a hand-held Global Positioning System (GPS) unit. Boring B-6, B-8 and B-7 were slightly relocated in the field to avoid interference with the overhead utilities crossing the site. The approximate boring locations are shown in Test Location Diagram in Appendix A (Figure 2).

The soil test borings were performed with an ATV mounted drill rig, which utilized hollow stem augers to advance the boreholes. No water or drilling fluid was introduced during the process. Representative soil samples were obtained by means of the split-barrel sampling procedure in general accordance with ASTM Specification D-1586 with an automatic drive hammer. In this procedure, a 2-inch O.D., split-barrel sampler is driven into the soil a sampling interval distance of 18 inches by a 140-pound hammer falling 30 inches.

The number of blows required to drive the sampler through the last 12-inches of the sampling interval is termed the Standard Penetration Test (SPT) N-value and is indicated for each sample on the boring logs. This value can be used as a qualitative indication of the in-place relative density of cohesionless soils. In a less reliable way, it also indicates the consistency of cohesive soils.

The drill crew prepared a field log of the soils encountered in the borings. After recovery, each sample was removed from the sampler and visually classified. Representative portions of each sample were then sealed and brought to our laboratory in Lawrenceville, Georgia for further visual examination and laboratory testing by ECS.

3.2 REGIONAL GEOLOGY

The site is in the Piedmont Region of Georgia. According to the Geologic Map of Georgia, the site is in Metamorphic formation with underlying bedrock consist of amphibolite, quartzite and mica-schist. The natural soils at the site consist primarily of residual materials formed from the in-place physical and chemical weathering of the underlying parent bedrock. The relative density of the residual soils is primarily dependent upon the degree of weathering, surface disturbance, groundwater action, and residual mineral bonding. The shear strength of residual soils is anisotropic and exhibits great variations from point to point. Soils with the flaky minerals oriented parallel to the potential shear plane and the slickenside surfaces have lower shear strengths.

The boundary between soil and rock is not clearly defined. A transitional zone called partially weathered rock (PWR) is normally found above the parent rock. PWR is defined for engineering purposes, as residual material with standard penetration resistances more than 100 blows per foot. Weathering is facilitated by fractures, joints, and the presence of less resistant rock types. Consequently, PWR and hard rock profiles are irregular and zones of PWR or rock may occur within the soil mantle well above the general bedrock level. In some cases, boulders can be found in the upper soil matrix.

The natural geology in portions of the site has been modified in the past by grading that included the placement of fill materials. The quality of man-placed fills can vary significantly, and it is often difficult to assess the engineering properties of existing fills. Furthermore, there is no specific correlation between N-values from Standard Penetration Tests performed in soil test borings and the degree of compaction of existing fill soils; however, a qualitative assessment of existing fills can sometimes be made based on the N-values obtained and observations of the materials sampled in the test borings.

Groundwater levels are irregular in the Piedmont Region. The surface of the groundwater table is largely dependent on the topography and is generally parallel to the ground surface. It can exhibit some distortions due to differences in vertical and horizontal permeability. The groundwater table can fluctuate several feet with seasonal rainfall.

3.3 SOIL CONDITIONS

Data from the soil test borings is included in Appendix B. The subsurface conditions discussed in the following paragraphs and those shown on the boring logs represent an estimate of the subsurface conditions based on interpretation of the boring data using normally accepted geotechnical engineering judgments. We note that the transition between different soil strata is usually less distinct than those shown on the boring logs.

Stratum	Description	Ranges of SPT (1) N-values (bpf (2))
N/A	**Gravel Base** – The surface layer at Borings B-9 was aggregate base of 6 inches in thickness at the test location. Gravel thicknesses are expected to be variable across the gravel portions of the project site.	N/A
N/A	**Topsoil** – The surface layer at Boring B-1, B-2, B-7, and B-8 consisted of approximately 1 to 2 inches of topsoil. Topsoil thicknesses are expected to be variable across landscaped areas of the project site.	N/A
I	**Undocumented Fill (3) –** Soils described as undocumented fill and possible undocumented fill consisting of loose to medium dense silty Sand (SM) was encountered in all borings apart from borings B-6 and B-9 at depths of 3 to 5½ feet below the ground surface.	10 to 24
II	**Residual Soils** – Residual soils were encountered beneath the surface material or fill/possible fill soils. The residual soils described as loose to dense silty Sand (SM), stiff sandy Silt (ML) and stiff Elastic Silt (MH).	4 to 40

Notes:
(1) Standard Penetration Testing.
(2) Blows per foot.
(3) Fill may be any material that has been transported and deposited by man. Undocumented fill is considered any man placed materials with no moisture-density records from the time it was originally placed.

3.4 GROUNDWATER OBSERVATIONS

Observations for groundwater were made during sampling, upon completion of drilling operations at each boring location, and upon completion of drilling operations at the end of day. Water levels were measured and recorded on our boring logs provided in Appendix B.

Groundwater was observed in the open boreholes in all nine borings performed (B-1 to B-9). End of day groundwater measurements at these locations ranged from 10 to 16 feet below existing grades. Variations in the long-term water table may occur because of changes in precipitation, evaporation, surface water runoff, construction activities, and other factors.

3.5 LABORATORY TESTING

Classification and index property tests were performed by ECS on representative soil samples obtained from the test borings to aid in classifying soils according to the Unified Soil Classification System and to quantify and correlate engineering properties. Laboratory testing included moisture content testing, Atterberg Limits, and washed sieve gradation analyses. The results of the laboratory testing program are included in Appendix C.

Each sample was visually classified based on texture and plasticity in accordance with ASTM D2488 Standard Practice for Description and Identification of Soils (Visual-Manual Procedures) and including USCS classification symbols, and ASTM D2487 Standard Practice for Classification for Engineering

Purposes (Unified Soil Classification System (USCS)). After classification, the samples were grouped in the major zones noted on the boring logs in Appendix B. The group symbols for each soil type are indicated in parentheses along with the soil descriptions. The stratification lines between strata on the logs are approximate; in situ, the transitions may be gradual.

4.0 DESIGN RECOMMENDATIONS

4.1 IMPACTS ON SITE DEVELOPMENT AND DESIGN

A geotechnical related concern identified during this exploration that may impact the project includes the presence of undocumented fill materials and the presence of plastic / elastic soils.

4.1.1 Design Implications of Undocumented Fill

As previously noted, existing undocumented fill materials were encountered beneath the ground surface at seven of the nine borings performed to approximate depths ranging from 3 to 5½ feet below the ground surface. Visual examination indicated the presence of root fragments in the undocumented fill materials encountered.

If very soft soils or pockets of debris, organics, stumps, etc., exist within the fill and are not removed during construction, then localized excessive differential settlements could occur in response to new structural loads and the on-going process of volume change which may still occur in the fill. If such non-uniform settlements occur, then moderate distress could result.

With the presumption that some unsuitable material may be present in the undocumented fill, we recommend a grading allowance for the removal and replacement of unsuitable materials be set aside as a contingency and that the Owner anticipate localized undercutting of unsuitable or soft materials may be necessary during site grading. The actual extent and nature of the required remedial measures can be determined by ECS from supplemental test pits/hand augers, DCP testing and proofrolling at the time of construction.

4.1.2 Design Implications of Highly Plastic Soils

Beneath the surface material, sandy elastic Silt (MH), soils of moderately high plasticity were noted in the upper 5½ feet in boring B-7. This type of soil and is moisture sensitive has the potential to lose strength when exposed to the combination of wet weather and construction traffic. The severity of these potential problems depends to a great extent on the weather conditions during construction. A concerted effort should be made to control construction traffic and surface water while subgrade soils are exposed.

The elastic Silts (MH) possess a low shrink/swell risk in the Piedmont geology. However, due to the moisture sensitivity of the soil, the use of this type of soil as structural fill is problematic and not recommended. Depending on the rainfall conditions at the time of construction, the elastic/plastic soils at the site could become unstable, requiring reworking, scarifying, drying, and compaction for proper compaction.

4.2 FOUNDATIONS

Provided subgrades and Engineered Fills are prepared as recommended in this report, the proposed structure can be supported by shallow foundations including column footings and continuous wall footings. We recommend the foundation design use the following parameters.

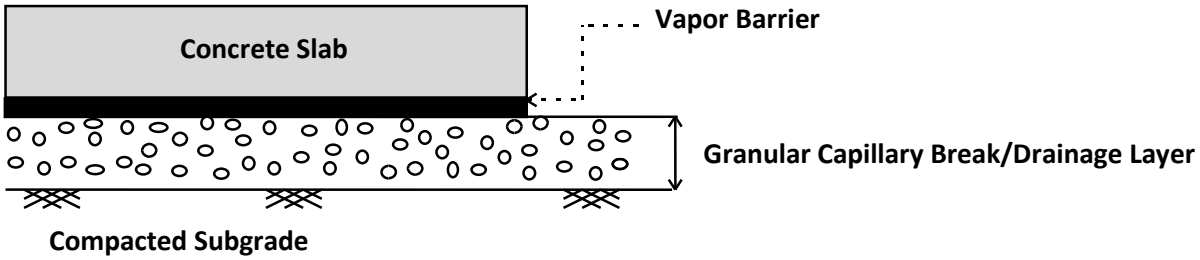
Design Parameter	Column Footing
Net Allowable Bearing Pressure (1)	3,000 psf
Acceptable Bearing Soil Material	Approved Residual Soils or Engineered Fill
Minimum Width Column Wall	 36 inches 24 Inches
Minimum Footing Embedment Depth (Below outside finished grade) (2)	12 inches
Estimated Total Settlement (3)	Less than 1 inch
Estimated Differential Settlement (4)	Less than ½-inch

Notes:
(1) Net allowable bearing pressure is the applied pressure more than the surrounding overburden soils above the base of the foundation.
(2) For frost penetration requirements.
(4) Based on estimated structural loads. If final loads are different, ECS must be contacted to update foundation recommendations and settlement calculations.
(5) Based on estimated maximum column/wall loads and variability in borings. Differential settlement can be re-evaluated once the foundation plans are more complete.

Potential Undercuts: If poor-quality soils are observed at the footing bearing elevations, the poor-quality materials should be undercut and removed. Any undercut should be backfilled with Engineered Fill up to the original design bottom of footing elevation. Alternatively, the undercut could be backfilled lean concrete ($f'_c \geq 1{,}000$ psi at 28 days). The footing can then be constructed on top of the Engineered Fill or hardened lean concrete.

4.3 SLABS ON GRADE

It appears that the slabs will bear on a combination of new Engineered Fill and engineer-approved exiting residual soils. Based on the soil test borings and limited laboratory testing, the on-site soils appear generally considered suitable for support of the floor slabs apart from the elastic / plastic soils encountered in B-7. Within the building footprint there may be areas of soft or yielding previously plasced fill soils that should be removed and replaced with compacted Engineered Fill in accordance with the recommendations included in this report. The following graphic depicts our soil-supported slab recommendations:



1. Drainage Layer Thickness: 4 inches
2. Drainage Layer Material: granular material such as GAB having a maximum aggregate size of 1.5 inches and no more than 10 percent fines.
3. Subgrade compacted to *98%* maximum dry density per ASTM D698

Subgrade Modulus: Provided the Engineered Fill and Granular Drainage Layer are constructed in accordance with our recommendations, the slab may be designed assuming a modulus of subgrade reaction, k_1 of 125 pci (lbs./cu. inch).

Vapor Barrier: Before the placement of concrete, a vapor barrier may be placed on top of the granular drainage layer to reduce moisture vapor penetration through the floor slab. When a vapor barrier is used, special attention should be given to surface curing of the slab to reduce the potential for uneven drying, curling and/or cracking of the slab. Depending on proposed flooring material types, the structural engineer and/or the architect may choose to eliminate the vapor barrier in spaces without air conditioning.

Slab Isolation: Soil-supported slabs should be isolated from the foundations and foundation-supported elements of the structure so that differential movement between the foundations and slab will not induce excessive shear and bending stresses in the floor slab. Where the structural configuration prevents the use of a free-floating slab such as in a drop-down footing/monolithic slab configuration, the slab should be designed with adequate reinforcement and load transfer devices to reduce overstressing of the slab.

The above should be considered general guidance to assist the Owner/Developer and design team. Project specific designs, plan details or other input from the Structural Engineer of Record should control.

5.0 SITE CONSTRUCTION RECOMMENDATIONS

5.1 SUBGRADE PREPARATION

5.1.1 Stripping, Grubbing, and Removal of Structures and Utilities

The subgrade preparation for the building areas should consist of stripping all surface material, and any soft or poor-quality materials from the 5-foot expanded building and 5-foot expanded pavement limits, where practical. ECS should be retained to verify that poor-quality surficial materials have been removed prior to the placement of Engineered Fill or construction of structures or pavements.

Excavations resulting from the removal of the above items and associated loose fill should be backfilled with new Engineered Fill as discussed in the following section of this report. This should be observed on a full-time basis by a representative of ECS to document that the poor-quality materials have been removed and that the subgrade is suitable for support of the proposed construction and/or fills.

Any below ground construction/utilities in the vicinity of the proposed building expansion should be removed prior to the initiation of new construction. We suggest that the available information regarding the existing utilities at the site be reviewed prior to construction.

5.1.2 Proofrolling

Prior to fill placement or other construction on subgrades, the subgrades should be evaluated by ECS. The exposed subgrade should be thoroughly proofrolled with construction equipment having a minimum axle load of 10 tons [e.g., fully loaded tandem-axle dump truck]. Proofrolling should be traversed in two perpendicular directions with overlapping passes of the vehicle under the observation of ECS. This procedure is intended to assist in identifying any localized yielding materials.

Where proofrolling identifies areas that are yielding or "pumping" subgrade those areas should be repaired prior to the placement of any subsequent Engineered Fill or other construction materials. Methods of stabilization include undercutting, moisture conditioning, or chemical stabilization. The situation should be discussed with ECS to determine the appropriate procedure. Test pits may be excavated to explore the shallow subsurface materials to help in determining the cause of the observed yielding materials, and to assist in the evaluation of appropriate remedial actions to create a firm and unyielding subgrade.

5.2 ENGINEERED FILL MATERIALS

Materials for use as Engineered Fill should consist of inorganic soils with the following engineering properties and compaction requirements.

ENGINEERED FILL INDEX PROPERTIES	
Subject	**Property**
Building and Pavement Areas	LL < 45, PI < 25
Max. Particle Size	4 inches
Fines Content	Less than 65%
Minimum dry unit weight (in place)	$\geq$ 95 pcf
Max. organic content	5% by dry weight

ENGINEERED FILL COMPACTION REQUIREMENTS	
Subject	**Requirement**
Compaction Standard	Standard Proctor, ASTM D698
Required Compaction	95% of Max. Dry Density (98% in the top 2 feet)
Moisture Content	$\pm$3% points of the soil's optimum value
Loose Thickness	8 inches prior to compaction

Suitability of On-Site Soils for Reuse as Engineered Fill: Laboratory testing on the selected soils from Borings B-1, B-5 and B-7 between the depths of 1 and 5 feet indicates that the natural moisture content of the tested soils ranged between about 19 to 31 percent. Laboratory testing indicates that the moisture content of the tested soil samples is likely near or slightly above optimum for proper compaction. During site grading, the exposed subgrade may require reworking to stabilize the subgrade prior to fill placement or construction. Atterberg Limits testing was performed on selected soils from Borings B-1, B-5, and B-7 indicates the liquid limit of the samples obtained from Borings B-7 are above the recommended limits for re-use as Engineered Fill.

Prior to placement of Engineered Fill, representative bulk samples (about 50 pounds) of on-site and/or off-site borrow should be submitted to ECS for laboratory testing, which will typically include Atterberg limits, natural moisture content, grain-size distribution, and moisture-density relationships (i.e., Proctors) for compaction. Import materials should be tested prior to being hauled to the site to determine if they meet project specifications.

Fill Placement Considerations: Fill materials should not be placed on frozen soils, on frost-heaved soils, and/or on excessively wet soils. Borrow fill materials should not contain frozen materials at the time of placement, and all frozen or frost-heaved soils should be removed prior to placement of Engineered Fill or other fill soils and aggregates. Excessively wet soils or aggregates should be scarified, aerated, and moisture conditioned.

5.3 FOUNDATION AND SLAB OBSERVATIONS

Protection of Foundation Excavations: Exposure to the environment may weaken the soils at the footing bearing level if the foundation excavations remain open for too long a time. Therefore, foundation concrete should be placed the same day that excavations are made. If the bearing soils are softened by surface water intrusion or exposure, the softened soils must be removed from the foundation excavation bottom immediately prior to placement of concrete. If the excavation must remain open overnight, or if rainfall becomes imminent while the bearing soils are exposed the subgrade should be covered and protected. Alternatively, a 1 to 3-inch thick “mud mat” of “lean” concrete could be placed on the bearing soils before the placement of reinforcing steel to protect the subgrade.

Footing Subgrade Observations: Provided the building pad is prepared following the recommendations provided in Sections 5.1 and 5.2 of this report, the soils at the foundation bearing elevation are anticipated to be suitable for support of the proposed structure. It is important to have the Geotechnical Engineer of Record (ECS), or their authorized representative, observe the foundation subgrade prior to placing foundation concrete, to confirm the bearing soils are what was anticipated.

Slab Subgrade Verification: Prior to placement of a drainage layer, the subgrade should be prepared in accordance with the recommendations found in *Section 5.1.2 Proofrolling*.

5.4 UTILITY INSTALLATIONS

Utility Subgrades: The soils encountered in our exploration are expected to be generally suitable for support of utility pipes. The pipe subgrades should be observed and probed for stability by ECS. Any loose or poor-quality materials encountered should be removed and replaced with suitable compacted Engineered Fill, or pipe stone bedding material.

Utility Backfilling: The granular bedding material (often AASHTO #57 stone") should be at least 4 inches thick, but not less than that specified by the civil engineer's project drawings and specifications. We recommend that the bedding materials be placed up to the springline of the pipe. Fill placed for support of the utilities, as well as backfill over the utilities, should satisfy the requirements for Engineered Fill and Fill Placement.

Excavation safety: All excavations and slopes should be constructed and maintained in accordance with OSHA excavation safety standards. The contractor is solely responsible for designing, constructing, and maintaining stable temporary excavations and slopes. The contractor's responsible person, as defined in 29 CFR Part 1926, should evaluate the soil exposed in the excavations as part of the contractor's safety procedures. In no case should slope height, slope inclination, or excavation depth, including utility trench excavation depth, exceed those specified in local, state, and federal safety regulations. ECS is providing this information solely as a service to our client. ECS is not assuming responsibility for construction site safety or the contractor's activities; such responsibility is not being implied and should not be inferred.

6.0 ADDITIONAL REVIEW

We recommend that ECS review the final project plans and specifications so we can confirm that those plans/specifications are in accordance with the recommendations of this geotechnical report.

Subsurface conditions that could adversely affect the site development and construction costs include existing fills soils with depths varying from 3 feet to 5 feet within the borings performed as well as elastic silt encountered near the surface of B-7. At the time of construction, we recommend supplemental test pits be performed to further evaluate the character of the existing fill material and elastic silts.

7.0 CLOSING

ECS has prepared this report to guide the geotechnical-related design and construction aspects of the project. This report should not be used as a contract document nor be referenced on any project drawings. This report is provided for the exclusive use of Gwinnett County Government and their project specific design team. This report is not intended to be used or relied upon in connection with other projects or by other third parties. ECS disclaims liability for any such third-party use or reliance without express written permission.

We have performed our services in accordance with the standard of care expected of professionals in the industry performing similar services on projects of like size and complexity at this time in the region. No other representation expressed or implied, and no warranty or guarantee is included or intended in this report. ECS is not responsible for the conclusions, opinions, or recommendations of others based on the data in this report.

The description of the proposed project is based on information provided to ECS by Gwinnett County Government. If any of this information is inaccurate or changes, either because of our interpretation of the documents provided or site or design changes that may occur later, ECS should be contacted so we

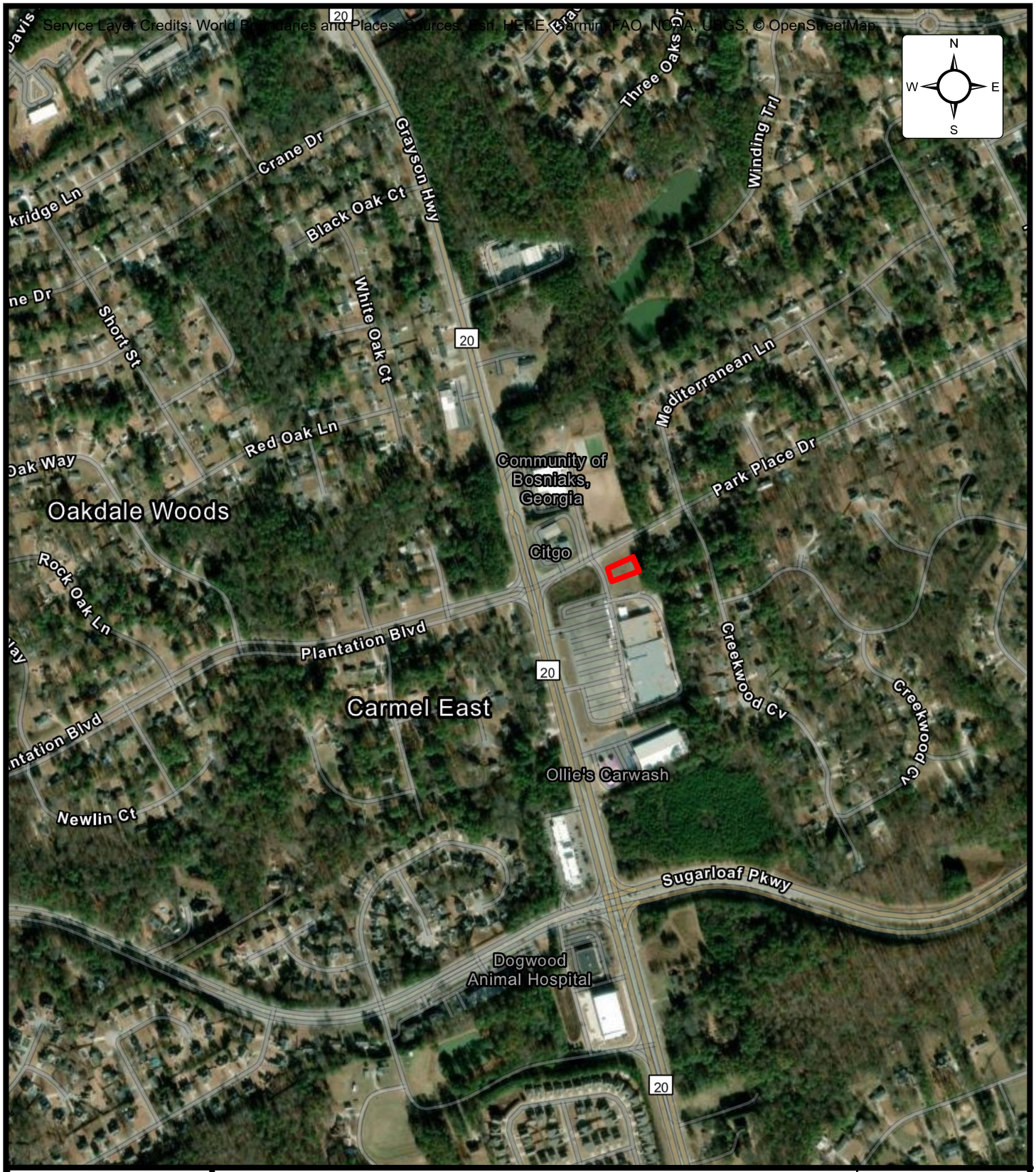
can review our recommendations and provide additional or alternate recommendations that reflect the proposed construction.

We recommend that ECS review the final project plans and specifications so we can confirm that those plans/specifications are in accordance with the recommendations of this geotechnical report.

Field observations, monitoring, and quality assurance testing during earthwork and foundation installation are an extension of and integral to the geotechnical design recommendation. We recommend that the owner retain this quality assurance services and that ECS be allowed to continue our involvement throughout these critical phases of construction to provide general consultation as issues arise. We would be pleased to provide an estimated cost for these services at the appropriate time. Please contact Mr. Steven Schultz by email (SSchultz@ecslimited.com) or at our office number (770-590-1971).

APPENDIX A – Diagrams

Figure 1 - Site Location Diagram
Figures 2- Exploration Location Diagram

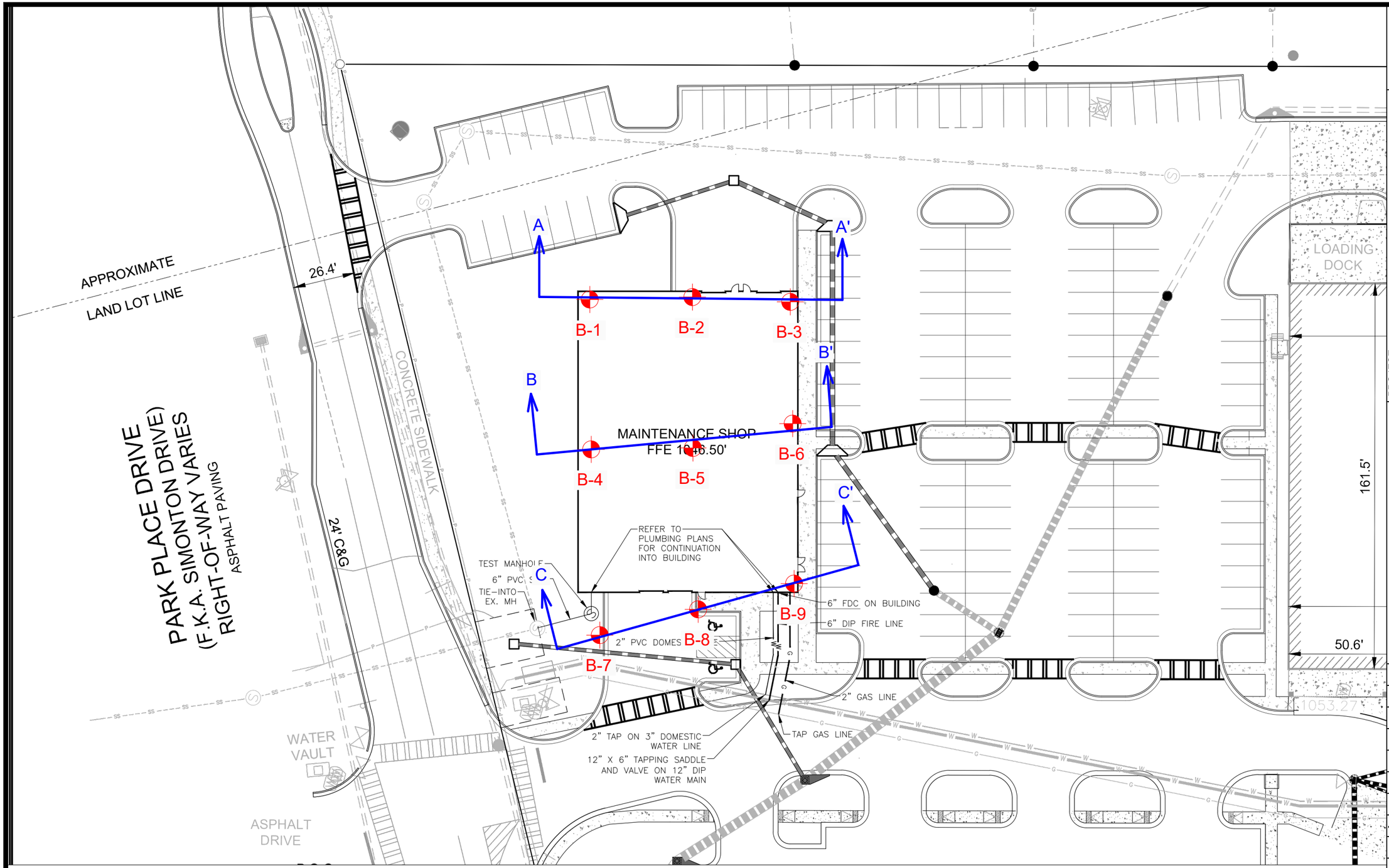


SITE LOCATION DIAGRAM
DoSS Relocation Project

1050 Grayson Highway, Lawrenceville, Georgia

Gwinnett County - Facilities Mgmt.

ENGINEER	SGS1
SCALE	1" = 700'
PROJECT NO.	10:12639
SHEET	FIGURE 1
DATE	5/6/2025



LEGEND

- Approximate Boring Location
- B-# Boring Designation
- X — X' Cross Section

Graphic Scale 1"=40'

40 20 0 10 20 30 40

ECS

PROJECT: DoSS Relocation Project
Lawrenceville, GA

PREPARED FOR: Gwinnett County - Facilities Management

FIGURE NAME: BORING LOCATION DIAGRAM

REFERENCE: Utility Plan
Precision Planning, Inc.
3/7/2025

REVISIONS

JOB NO.	10:12639
SCALE	1"=40'
DRAWN	EEC 5/2025
APPR.	KJH 5/2025

Figure No.: 2

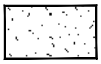
APPENDIX B – Field Operations

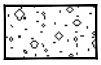
Reference Notes for Boring Logs
Subsurface Cross Sections (A-A', B-B', C-C')
Boring Logs B-1 through B-9

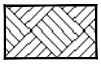
REFERENCE NOTES FOR BORING LOGS

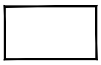
MATERIAL[1,2]

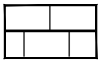

ASPHALT


CONCRETE


GRAVEL

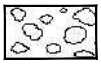

TOPSOIL

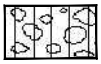

VOID


BRICK

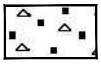

AGGREGATE BASE COURSE

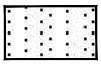

GW **WELL-GRADED GRAVEL**
gravel-sand mixtures, little or no fines

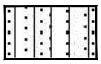

GP **POORLY-GRADED GRAVEL**
gravel-sand mixtures, little or no fines


GM **SILTY GRAVEL**
gravel-sand-silt mixtures

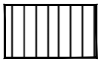

GC **CLAYEY GRAVEL**
gravel-sand-clay mixtures

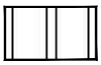

SW **WELL-GRADED SAND**
gravelly sand, little or no fines

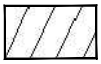

SP **POORLY-GRADED SAND**
gravelly sand, little or no fines


SM **SILTY SAND**
sand-silt mixtures

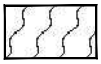

SC **CLAYEY SAND**
sand-clay mixtures

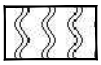

ML **SILT**
non-plastic to medium plasticity

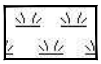

MH **ELASTIC SILT**
high plasticity


CL **LEAN CLAY**
low to medium plasticity


CH **FAT CLAY**
high plasticity


OL **ORGANIC SILT or CLAY**
non-plastic to low plasticity


OH **ORGANIC SILT or CLAY**
high plasticity


PT **PEAT**
highly organic soils

DRILLING SAMPLING SYMBOLS & ABBREVIATIONS

SS	Split Spoon Sampler	PM	Pressuremeter Test
ST	Shelby Tube Sampler	RD	Rock Bit Drilling
WS	Wash Sample	RC	Rock Core, NX, BX, AX
BS	Bulk Sample of Cuttings	REC	Rock Sample Recovery %
PA	Power Auger (no sample)	RQD	Rock Quality Designation %
HSA	Hollow Stem Auger		

PARTICLE SIZE IDENTIFICATION

DESIGNATION		PARTICLE SIZES
Boulders		12 inches (300 mm) or larger
Cobbles		3 inches to 12 inches (75 mm to 300 mm)
Gravel:	Coarse	¾ inch to 3 inches (19 mm to 75 mm)
	Fine	4.75 mm to 19 mm (No. 4 sieve to ¾ inch)
Sand:	Coarse	2.00 mm to 4.75 mm (No. 10 to No. 4 sieve)
	Medium	0.425 mm to 2.00 mm (No. 40 to No. 10 sieve)
	Fine	0.074 mm to 0.425 mm (No. 200 to No. 40 sieve)
Silt & Clay ("Fines")		<0.074 mm (smaller than a No. 200 sieve)

COHESIVE SILTS & CLAYS

UNCONFINED COMPRESSIVE STRENGTH, Q_P[4]	SPT[5] (BPF)	CONSISTENCY[7] (COHESIVE)
<0.25	<2	Very Soft
0.25 - <0.50	2 - 4	Soft
0.50 - <1.00	5 - 8	Firm
1.00 - <2.00	9 - 15	Stiff
2.00 - <4.00	16 - 30	Very Stiff
4.00 - 8.00	31 - 50	Hard
>8.00	>50	Very Hard

GRAVELS, SANDS & NON-COHESIVE SILTS

SPT[5]	DENSITY
<5	Very Loose
5 - 10	Loose
11 - 30	Medium Dense
31 - 50	Dense
>50	Very Dense

RELATIVE AMOUNT[7]	COARSE GRAINED (%)[8]	FINE GRAINED (%)[8]
Trace	≤5	≤5
With	10 - 20	10 - 25
Adjective *(ex: "Silty")*	25 - 45	30 - 45

WATER LEVELS[6]

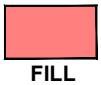

WL (First Encountered)


WL (Completion)


WL (Seasonal High Water)


WL (Stabilized)

FILL AND ROCK


FILL


POSSIBLE FILL


PROBABLE FILL


ROCK

[1]Classifications and symbols per ASTM D 2488-17 (Visual-Manual Procedure) unless noted otherwise.

[2]To be consistent with general practice, "POORLY GRADED" has been removed from GP, GP-GM, GP-GC, SP, SP-SM, SP-SC soil types on the boring logs.

[3]Non-ASTM designations are included in soil descriptions and symbols along with ASTM symbol [Ex: (SM-FILL)].

[4]Typically estimated via pocket penetrometer or Torvane shear test and expressed in tons per square foot (tsf).

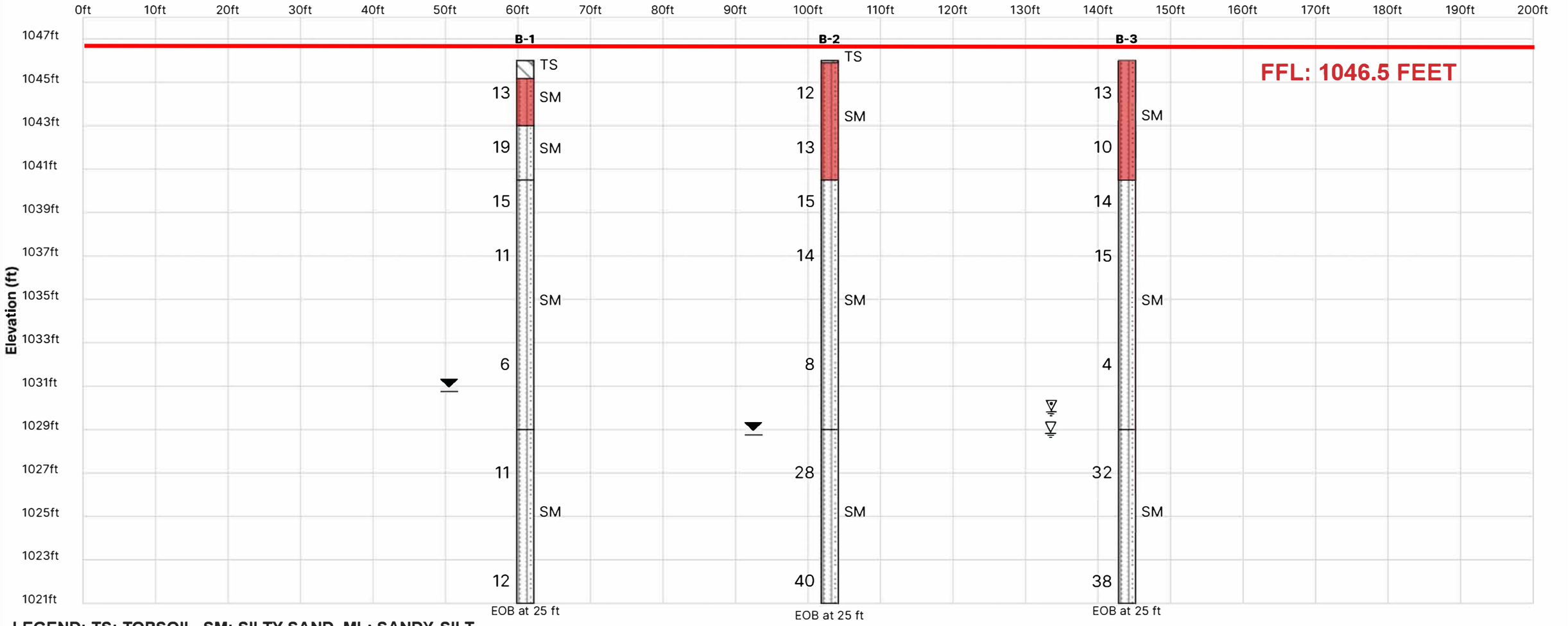
[5]Standard Penetration Test (SPT) refers to the number of hammer blows (blow count) of a 140 lb. hammer falling 30 inches on a 2 inch OD split spoon sampler required to drive the sampler 12 inches (ASTM D 1586). "N-value" is another term for "blow count" and is expressed in blows per foot (bpf). SPT correlations per 7.4.2 Method B and need to be corrected if using an auto hammer.

[6]The water levels are those levels actually measured in the borehole at the times indicated by the symbol. The measurements are relatively reliable when augering, without adding fluids, in granular soils. In clay and cohesive silts, the determination of water levels may require several days for the water level to stabilize. In such cases, additional methods of measurement are generally employed.

[7]Minor deviation from ASTM D 2488-17 Note 14.

[8]Percentages are estimated to the nearest 5% per ASTM D 2488-17.

Subsurface Cross Section - A-A'



LEGEND: TS: TOPSOIL, SM: SILTY SAND, ML: SANDY SILT

Note: Elevations have been estimated from the Grading and drainage Plan by Precision Planning Inc. dated March 7, 2025. Elevations have not been certified as correct by ECS. Users of this data do so at their own risk.

CLIENT: DRAWN	Gwinnett County - Facilities Mgmt.	PROJECT:	DoSS Relocation Project
DATE:	5-16-25	PROJECT NO.:	10:12639
DRAWN BY:	FM	SCALE:	NTS

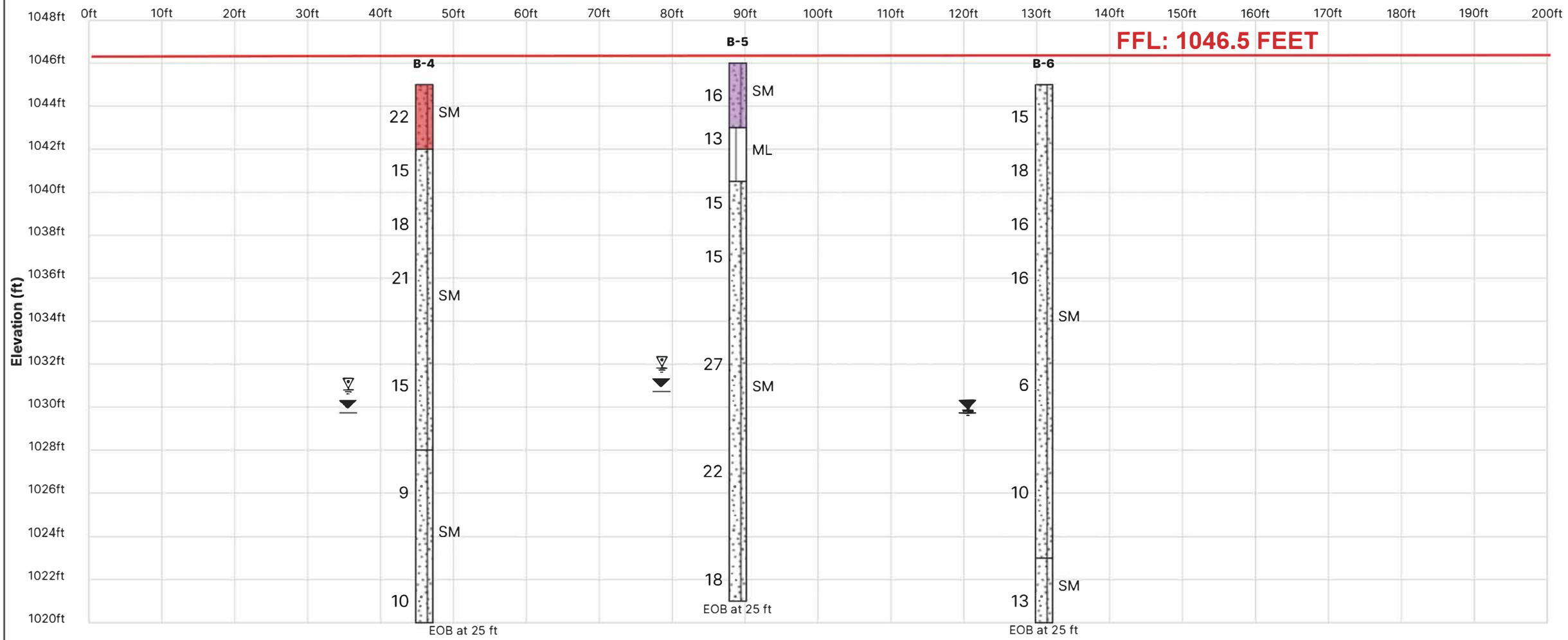
Notes:

1 - EOB: END OF BORING AR: AUGER REFUSAL SR: SAMPLER REFUSAL
2 - SEE INDIVIDUAL BORING LOG AND GEOTECHNICAL INFORMATION.
3 - STANDARD PENETRATION TEST RESISTANCE (LEFT OF BORING) IN BLOWS PER FOOT (ASTM D1586).
4 - TOPOGRAPHIC INFORMATION IS BASED ON PUBLICLY AVAILABLE DATA (GOOGLE OR CESIUM). THE TOPOGRAPHIC LINE SHOWN BETWEEN BORINGS IS FOR VISUAL REFERENCE ONLY.

PLEASE REFER TO THE REFERENCE NOTES FOR BORING LOGS FOR SYMBOLOGY MEANING AND ADDITIONAL INFORMATION.

Plastic Limit Water Content Liquid Limit X—●—△			
[FINES CONTENT %]			
BOTTOM OF CASING	WL (First Encountered)	Fill	
LOSS OF CIRCULATION	WL (Completion)	Possible Fill	
CALIBRATED PENETROMETER	WL (Estimated Seasonal High Water)	Probable Fill	
	WL (Stabilized)	WR/Rock	

Subsurface Cross Section - B-B'



LEGEND: TS: TOPSOIL, SM: SILTY SAND, ML: SANDY SILT

Note: Elevations have been estimated from the Grading and drainage Plan by Precision Planning Inc. dated March 7, 2025. Elevations have not been certified as correct by ECS. Users of this data do so at their own risk.

CLIENT:	Gwinnett County - Facilities Mgmt.	PROJECT:	DoSS Relocation Project
DRAWN DATE:	MAY 9, 2025	PROJECT NO.:	10:12639
DRAWN BY	BR	SCALE:	NTS

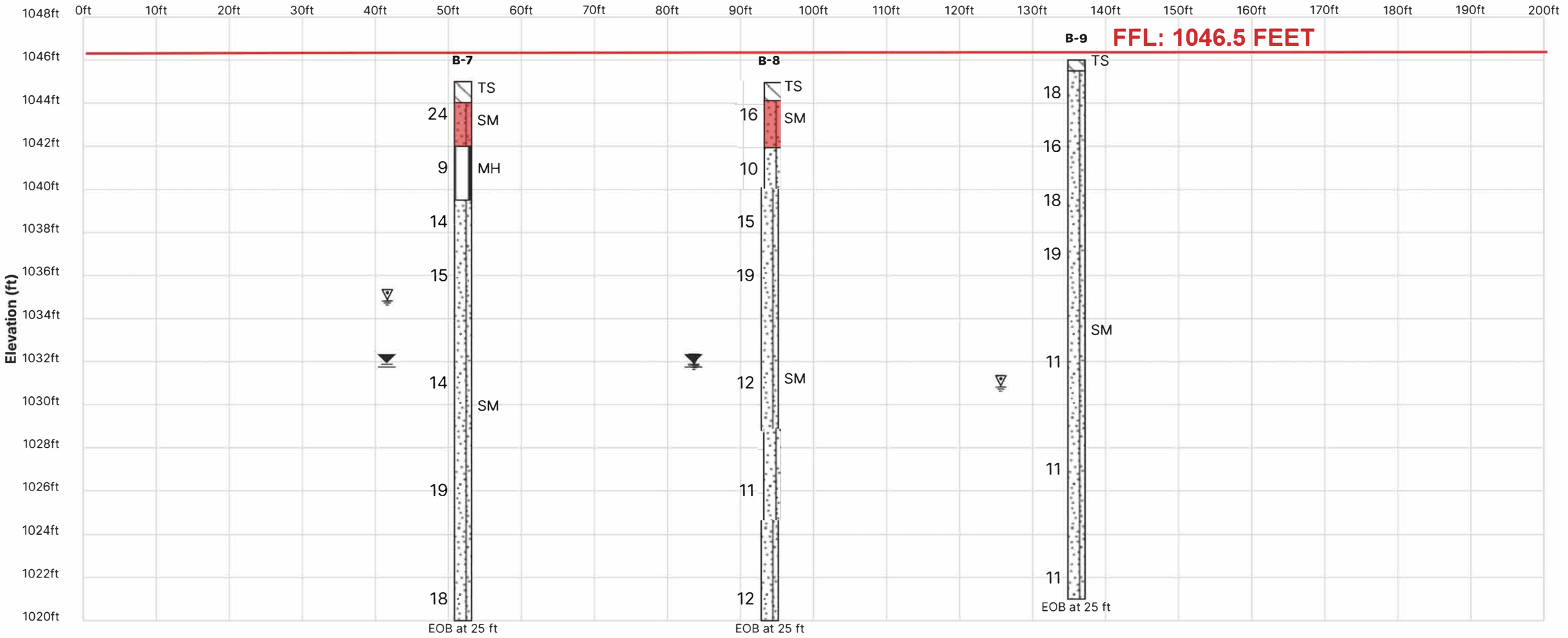
Notes:

1 - EOB: END OF BORING AR: AUGER REFUSAL SR: SAMPLER REFUSAL
2 - SEE INDIVIDUAL BORING LOG AND GEOTECHNICAL INFORMATION.
3 - STANDARD PENETRATION TEST RESISTANCE (LEFT OF BORING) IN BLOWS PER FOOT (ASTM D1586).
4 - TOPOGRAPHIC INFORMATION IS BASED ON PUBLICLY AVAILABLE DATA (GOOGLE OR CESIUM).
THE TOPOGRAPHIC LINE SHOWN BETWEEN BORINGS IS FOR VISUAL REFERENCE ONLY.

PLEASE REFER TO THE REFERENCE NOTES FOR BORING LOGS FOR SYMBOLOGY MEANING AND ADDITIONAL INFORMATION.

Plastic Limit Water Content Liquid Limit X—●—△		WL (First Encountered)		Fill	
[FINES CONTENT %]		WL (Completion)		Possible Fill	
BOTTOM OF CASING		WL (Estimated Seasonal High Water)		Probable Fill	
LOSS OF CIRCULATION		WL (Stabilized)		WR/Rock	
CALIBRATED PENETROMETER					

Subsurface Cross Section - C-C'



LEGEND: TS: TOPSOIL, SM: SILTY SAND, ML: SANDY SILT, MH: SANDY ELASTIC SILT,

Note: Elevations have been estimated from the Grading and drainage Plan by Precision Planning Inc. dated March 7, 2025. Elevations have not been certified as correct by ECS. Users of this data do so at their own risk.

CLIENT:	Gwinnett County - Facilities Mgmt.	PROJECT:	DoSS Relocation Project
DRAWN DATE:	MAY 9, 2025	PROJECT NO.:	10:12639
DRAWN BY	BR	SCALE:	NTS

Notes:

1 - EOB: END OF BORING AR: AUGER REFUSAL SR: SAMPLER REFUSAL
2 - SEE INDIVIDUAL BORING LOG AND GEOTECHNICAL INFORMATION.
3 - STANDARD PENETRATION TEST RESISTANCE (LEFT OF BORING) IN BLOWS PER FOOT (ASTM D1586).
4 - TOPOGRAPHIC INFORMATION IS BASED ON PUBLICLY AVAILABLE DATA (GOOGLE OR CESIUM). THE TOPOGRAPHIC LINE SHOWN BETWEEN BORINGS IS FOR VISUAL REFERENCE ONLY.

PLEASE REFER TO THE REFERENCE NOTES FOR BORING LOGS FOR SYMBOLOGY MEANING AND ADDITIONAL INFORMATION.

Plastic Limit Water Content Liquid Limit X—●—△		WL (First Encountered)		Fill	
[FINES CONTENT %]		WL (Completion)		Possible Fill	
BOTTOM OF CASING		WL (Estimated Seasonal High Water)		Probable Fill	
LOSS OF CIRCULATION		WL (Stabilized)		WR/Rock	
CALIBRATED PENETROMETER					

CLIENT: **Gwinnett County - Facilities Mgmt.**	PROJECT NO.: **10:12639**	BORING NO.: **B-1**	SHEET: **1 OF 1**
PROJECT NAME: **DoSS Relocation Project**	DRILLER/CONTRACTOR: **Sunrise Drilling Inc**		
SITE LOCATION: **1050 Grayson Highway, Lawrenceville, Georgia, 30045**			LOSS OF CIRCULATION
LATITUDE: **33.924431**	LONGITUDE: **-83.972065**	STATION:	SURFACE ELEVATION: **1046 +/-**	BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DISTANCE (IN)	SAMPLE RECOVERY (IN)	DESCRIPTION OF MATERIAL	STRATIGRAPHY	WATER LEVELS	ELEVATION (FT)	BLOWS/6" (TCP/MC/SPT-N VALUE)*
					Topsoil [Thickness=2"].				
	S-1	SS	18	18	FILL - (SM) SILTY SAND - reddish brown, moist, medium dense.			1045	6-6-7 (13)
	S-2	SS	18	18	(SM) SILTY SAND - reddish brown & orange brown, contains mica, wet to moist, medium dense to loose.				8-10-9 (19)
5	S-3	SS	18	18				1040	6-7-8 (15)
	S-4	SS	18	18					4-5-6 (11)
10								1035	
	S-5	SS	18	18			▼		3-3-3 (6)
15					As above but medium dense.			1030	
	S-6	SS	18	18					4-5-6 (11)
20								1025	
	S-7	SS	18	18					4-5-7 (12)
					END OF BORING AT 25ft				

RQD% ◆ REC% ◆ (0 20 40 60 80 100)
TCP ▼ ModCal ☒ SPT ⊗ (0 20 30 40 50)
Fines% F MC% ● (0 20 40 60 80 100)
PL MC LL (0 20 40 60 80 100)

13 19 15 11 6 11 12
21.6 48.8 26 36 F

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

▽ WL (First Encountered):	BORING STARTED: 05/15/2025		CAVE IN DEPTH: Not Observed
▼ WL (Completion): 15 ft	BORING COMPLETED: 04/15/2025		HAMMER TYPE: Automatic
▽ WL (Seasonal High Water):	EQUIPMENT:	LOGGED BY:	DRILLING METHOD:
▽ WL (Stabilized):	ATV	BR	Hollow Stem Auger

GEOTECHNICAL BOREHOLE LOG

CLIENT: **Gwinnett County - Facilities Mgmt.**	PROJECT NO.: **10:12639**	BORING NO.: **B-2**	SHEET: **1 OF 1**
PROJECT NAME: **DoSS Relocation Project**	DRILLER/CONTRACTOR: **Sunrise Drilling Inc**		
SITE LOCATION: **1050 Grayson Highway, Lawrenceville, Georgia, 30045**			LOSS OF CIRCULATION
LATITUDE: **33.924320**	LONGITUDE: **-83.972028**	STATION:	SURFACE ELEVATION: **1046 +/-**	BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DISTANCE (IN)	SAMPLE RECOVERY (IN)	DESCRIPTION OF MATERIAL	STRATIGRAPHY	WATER LEVELS	ELEVATION (FT)	BLOWS/6" (TCP/MC/SPT-N VALUE)*
					Topsoil [Thickness=1"].				
	S-1	SS	18	18	FILL - (SM) SILTY SAND - reddish brown, contains roots and rock fragments, medium dense.			1045	5-8-4 (12)
	S-2	SS	18	18					12-7-6 (13)
5					(SM) SILTY SAND - reddish brown, gray & orange brown, contains mica, wet to moist, medium dense to loose.			1040	
	S-3	SS	18	18					6-7-8 (15)
	S-10	SS	18	18					8-7-7 (14)
10								1035	
	S-5	SS	18	18					4-4-4 (8)
15					As above but contains mica, medium dense to dense.			1030	
	S-6	SS	18	18					8-14-14 (28)
20								1025	
	S-7	SS	18	18					12-19-21 (40)
					END OF BORING AT 25ft				

RQD% ◆ REC% ◆ (0 20 40 60 80 100)
TCP ▼ ModCal ▣ SPT ⊗ (0 20 30 40 50)
PL × MC ● LL ▽ (0 20 40 60 80 100)

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

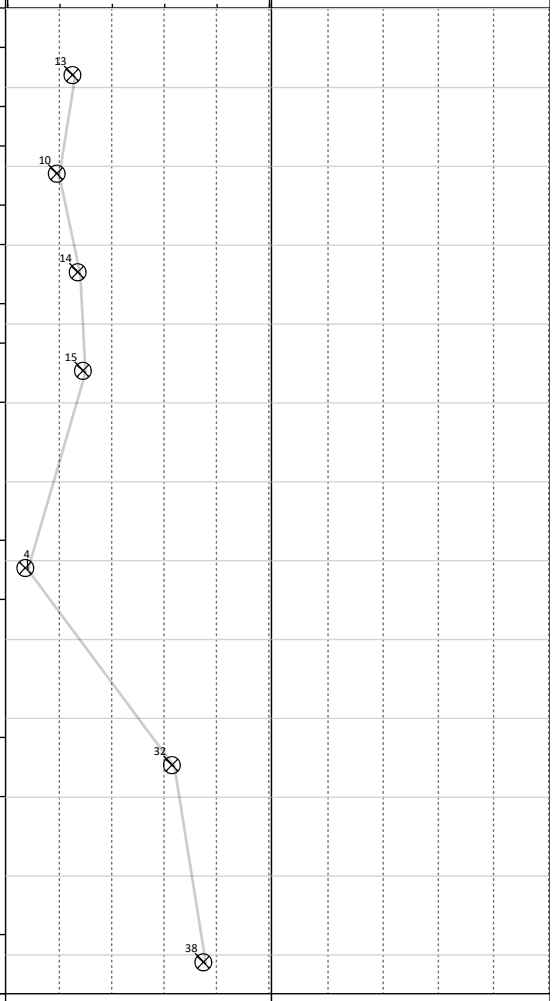
WL (First Encountered):	BORING STARTED: 04/15/2025		CAVE IN DEPTH: Not Observed
WL (Completion): 17 ft	BORING COMPLETED: 04/15/2025		HAMMER TYPE: Automatic
WL (Seasonal High Water):	EQUIPMENT:	LOGGED BY:	DRILLING METHOD:
WL (Stabilized):	ATV	BR	Hollow Stem Auger

GEOTECHNICAL BOREHOLE LOG

CLIENT: **Gwinnett County - Facilities Mgmt.**	PROJECT NO.: **10:12639**	BORING NO.: **B-3**	SHEET: **1 OF 1**
PROJECT NAME: **DoSS Relocation Project**	DRILLER/CONTRACTOR: **Sunrise Drilling Inc**		
SITE LOCATION: **1050 Grayson Highway, Lawrenceville, Georgia, 30045**			LOSS OF CIRCULATION
LATITUDE: **33.924210**	LONGITUDE: **-83.971995**	STATION:	SURFACE ELEVATION: **1046 +/-**	BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DISTANCE (IN)	SAMPLE RECOVERY (IN)	DESCRIPTION OF MATERIAL	STRATIGRAPHY	WATER LEVELS	ELEVATION (FT)	BLOWS/6" (TCP/MC/SPT-N VALUE)*
					FILL - (SM) SILTY SAND - reddish brown, contains slight mica and roots, moist, medium dense to loose.			1045	
	S-1	SS	18	18					5-6-7 (13)
	S-2	SS	18	18					7-5-5 (10)
5									
	S-3	SS	18	18	(SM) SILTY SAND - reddish brown & orange brown, contains mica, moist to wet, medium dense to very loose.			1040	5-7-7 (14)
	S-4	SS	18	18					6-7-8 (15)
10								1035	
	S-5	SS	18	18					2-2-2 (4)
15							▽	1030	
					As above but dense.		▽		
	S-5	SS	18	18					9-14-18 (32)
20								1025	
	S-7	SS	18	18					22-18-20 (38)
					END OF BORING AT 25ft				

RQD% ◆ REC% ◆ 0 20 40 60 80 100 | 0 20 40 60 80 100
TCP ▼ ModCal ▣ | PL MC LL
0 SPT ⊗ 20 30 40 50 | 0 20 40 60 80 100



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

▽ **WL (First Encountered):**	**17 ft**	**BORING STARTED:**	**04/15/2025**	**CAVE IN DEPTH:**	**Not Observed**
▼ **WL (Completion):**		**BORING COMPLETED:**	**04/15/2025**	**HAMMER TYPE:**	**Automatic**
▼ **WL (Seasonal High Water):**		**EQUIPMENT:**	**LOGGED BY:**	**DRILLING METHOD:**	
▽ **WL (Stabilized):**	**16 ft : End of day**	**ATV**	**BR**	**Hollow Stem Auger**	

GEOTECHNICAL BOREHOLE LOG

CLIENT: **Gwinnett County - Facilities Mgmt.**	PROJECT NO.: **10:12639**	BORING NO.: **B-4**	SHEET: **1 OF 1**
PROJECT NAME: **DoSS Relocation Project**	DRILLER/CONTRACTOR: **Sunrise Drilling Inc**		
SITE LOCATION: **1050 Grayson Highway, Lawrenceville, Georgia, 30045**			LOSS OF CIRCULATION
LATITUDE: **33.924387**	LONGITUDE: **-83.972264**	STATION:	SURFACE ELEVATION: **1045 +/-**	BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DISTANCE (IN)	SAMPLE RECOVERY (IN)	DESCRIPTION OF MATERIAL	ELEVATION (FT)	BLOWS/6" (TCP/MC/SPT-N VALUE)*
					FILL - (SM) SILTY SAND - reddish brown & orange brown, contains slight mica, moist, medium dense.	1045	
	S-1	SS	18	18			9-10-12 (22)
					(SM) SILTY SAND - reddish brown, orange brown & tannish brown, contains mica, moist to wet, medium dense.		
	S-2	SS	18	18			6-7-8 (15)
5						1040	
	S-3	SS	18	18			6-8-10 (18)
	S-4	SS	18	18			8-10-11 (21)
10						1035	
	S-5	SS	18	18			6-7-8 (15)
15						1030	
					As above but loose.		
	S-6	SS	18	18			3-4-5 (9)
20						1025	
	S-7	SS	18	18			4-4-6 (10)
					END OF BORING AT 25ft	1020	

RQD% ◆ REC% ◆ (0 20 40 60 80 100)
TCP ▼ ModCal ▣ SPT ⊗ (0 20 30 40 50)
PL × MC ● LL ▽ (0 20 40 60 80 100)

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

▽ **WL (First Encountered):**	**BORING STARTED:** 04/15/2025		**CAVE IN DEPTH:** Not Observed
▼ **WL (Completion):** 15 ft	**BORING COMPLETED:** 04/15/2025		**HAMMER TYPE:** Automatic
▼ **WL (Seasonal High Water):**	**EQUIPMENT:**	**LOGGED BY:**	**DRILLING METHOD:**
▽ **WL (Stabilized):** 14 ft : End of day	ATV	BR	Hollow Stem Auger

GEOTECHNICAL BOREHOLE LOG

CLIENT: **Gwinnett County - Facilities Mgmt.**	PROJECT NO.: **10:12639**	BORING NO.: **B-5**	SHEET: **1 OF 1**
PROJECT NAME: **DoSS Relocation Project**	DRILLER/CONTRACTOR: **Sunrise Drilling Inc**		
SITE LOCATION: **1050 Grayson Highway, Lawrenceville, Georgia, 30045**			LOSS OF CIRCULATION
LATITUDE: **33.924274**	LONGITUDE: **-83.972226**	STATION:	SURFACE ELEVATION: **1046 +/-**	BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DISTANCE (IN)	SAMPLE RECOVERY (IN)	DESCRIPTION OF MATERIAL	ELEVATION (FT)	BLOWS/6" (TCP/MC/SPT-N VALUE)*
	S-1	SS	18	18	POSSIBLE FILL - (SM) SILTY SAND - orange brown, contains mica, moist, medium dense.	1045	5-8-8 (16)
	S-2	SS	18	18	(ML) SILT - orange brown & tannish brown, contains mica, moist, stiff.		4-6-7 (13)
5	S-3	SS	18	18	(SM) SILTY SAND - reddish brown, orange brown tannish brown, contains mica, moist, medium dense.	1040	6-7-8 (15)
	S-4	SS	18	18			6-7-8 (15)
10	S-5	SS	18	18		1035	8-15-12 (27)
15	S-6	SS	18	18		1030	8-9-13 (22)
20	S-7	SS	18	18		1025	15-10-8 (18)
					END OF BORING AT 25ft		

STRATIGRAPHY

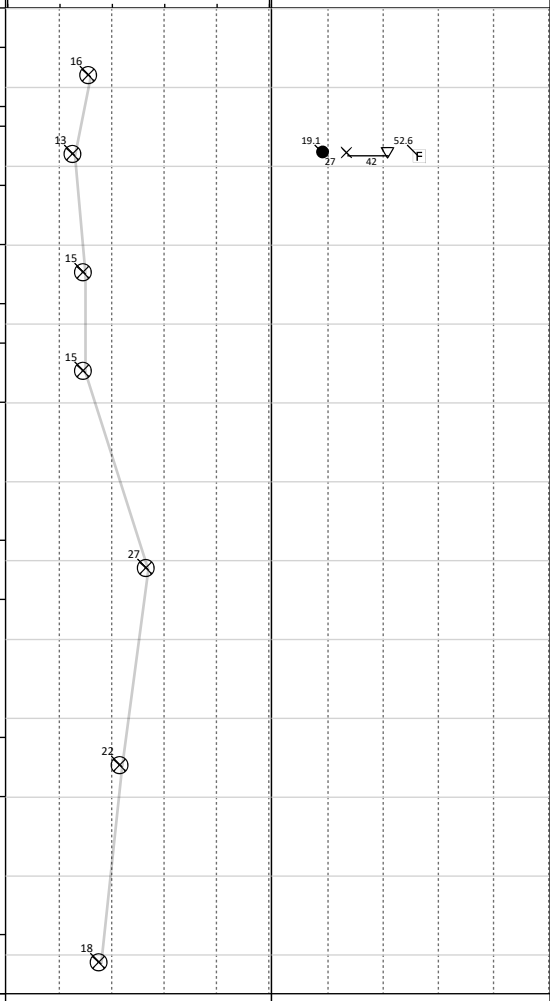
WATER LEVELS

RQD% ◆ REC% ◆ 0 20 40 60 80 100

TCP ▼ ModCal ▣ SPT ⊗ 0 20 30 40 50

Fines% F MC% ● 0 20 40 60 80 100

PL MC LL 0 20 40 60 80 100



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

▽ **WL (First Encountered):**	**BORING STARTED:** 04/15/2025		**CAVE IN DEPTH:** Not Observed
▼ **WL (Completion):** 15 ft	**BORING COMPLETED:** 04/15/2025		**HAMMER TYPE:** Automatic
▼ **WL (Seasonal High Water):**	**EQUIPMENT:**	**LOGGED BY:**	**DRILLING METHOD:**
▽ **WL (Stabilized):** 14 ft : End of day	ATV	BR	Hollow Stem Auger

GEOTECHNICAL BOREHOLE LOG

CLIENT: **Gwinnett County - Facilities Mgmt.**	PROJECT NO.: **10:12639**	BORING NO.: **B-6**	SHEET: **1 OF 1**
PROJECT NAME: **DoSS Relocation Project**	DRILLER/CONTRACTOR: **Sunrise Drilling Inc**		
SITE LOCATION: **1050 Grayson Highway, Lawrenceville, Georgia, 30045**			LOSS OF CIRCULATION
LATITUDE: **33.924172**	LONGITUDE: **-83.972160**	STATION:	SURFACE ELEVATION: **1045 +/-**	BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DISTANCE (IN)	SAMPLE RECOVERY (IN)	DESCRIPTION OF MATERIAL	STRATIGRAPHY	WATER LEVELS	ELEVATION (FT)	BLOWS/6" (TCP/MC/SPT-N VALUE)*
					(SM) SILTY SAND - orange brown, reddish brown & tannish brown, contains mica, moist, medium dense to loose.			1045	
	S-1	SS	18	18					6-7-8 (15)
	S-2	SS	18	18					8-9-9 (18)
5								1040	
	S-3	SS	18	18					7-8-8 (16)
	S-4	SS	18	18					9-8-8 (16)
10								1035	
	S-5	SS	18	18			▼		3-3-3 (6)
15								1030	
	S-6	SS	18	18					4-5-5 (10)
20								1025	
	S-7	SS	18	18					6-6-7 (13)
					END OF BORING AT 25ft			1020	

RQD% ◆ REC% ◆ (0 20 40 60 80 100)

TCP ▼ ModCal ▣ SPT ⊗ (0 20 30 40 50)

PL × MC ● LL ▽ (0 20 40 60 80 100)

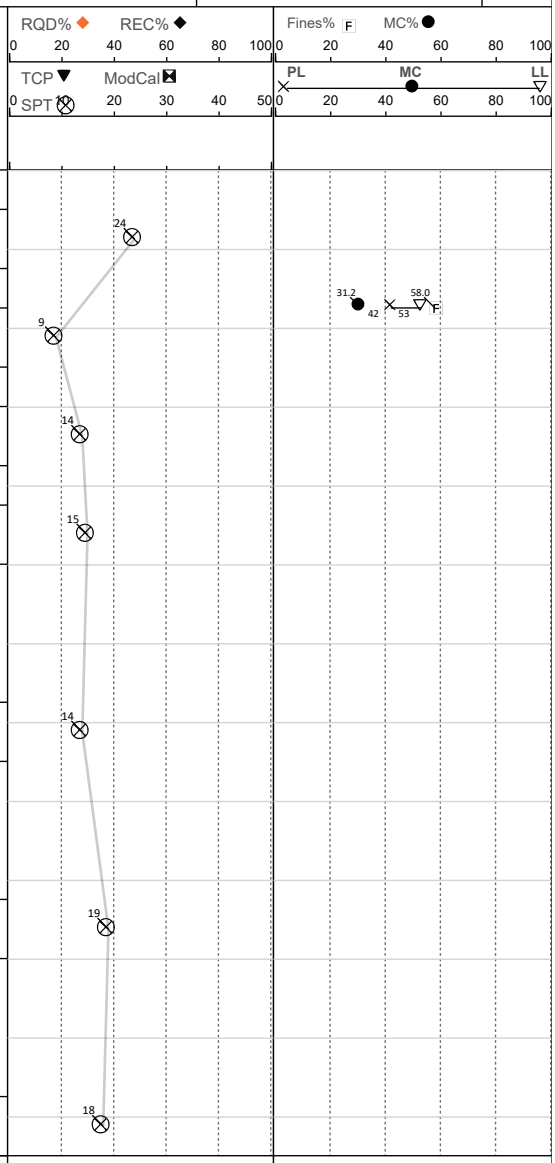
THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

▽ **WL (First Encountered):**		**BORING STARTED:**	**04/15/2025**	**CAVE IN DEPTH:**	**Not Observed**
▼ **WL (Completion):**	**15 ft**	**BORING COMPLETED:**	**04/15/2025**	**HAMMER TYPE:**	**Automatic**
▼ **WL (Seasonal High Water):**		**EQUIPMENT:**	**LOGGED BY:**	**DRILLING METHOD:**	
▽ **WL (Stabilized):**	**15 ft : End of day**	**ATV**	**BR**	**Hollow Stem Auger**	

GEOTECHNICAL BOREHOLE LOG

CLIENT: **Gwinnett County - Facilities Mgmt.**	PROJECT NO.: **10:12639**	BORING NO.: **B-7**	SHEET: **1 OF 1**
PROJECT NAME: **DoSS Relocation Project**	DRILLER/CONTRACTOR: **Sunrise Drilling Inc**		
SITE LOCATION: **1050 Grayson Highway, Lawrenceville, Georgia, 30045**			LOSS OF CIRCULATION
LATITUDE: **33.924323**	LONGITUDE: **-83.972510**	STATION:	SURFACE ELEVATION: **1045 +/-**	BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DISTANCE (IN)	SAMPLE RECOVERY (IN)	DESCRIPTION OF MATERIAL	ELEVATION (FT)	BLOWS/6" (TCP/MC/SPT-N VALUE)*
					Topsoil [Thickness=1"].	1045	
	S-1	SS	0	18	FILL - (SM) SILTY SAND - orange brown & reddish brown, contains mica, moist, medium dense.		11-12-12 (24)
	S-2	SS	0	18	(MH) ELASTIC SILT - reddish brown, moist, stiff.		6-4-5 (9)
5	S-3	SS	0	18	(SM) SILTY SAND - reddish brown , orange brown, contains mica, moist, medium dense.	1040	5-7-7 (14)
	S-4	SS	0	18			8-7-8 (15)
10						1035	
	S-4	SS	0	18			4-6-8 (14)
15						1030	
	S-6	SS	0	18			8-9-10 (19)
20						1025	
	S-7	SS	0	18			10-6-12 (18)
					END OF BORING AT 25ft	1020	



THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

WL (First Encountered):		BORING STARTED:	04/15/2025	CAVE IN DEPTH:	Not Observed
WL (Completion):	13 ft	BORING COMPLETED:	04/15/2025	HAMMER TYPE:	Automatic
WL (Seasonal High Water):		EQUIPMENT:	LOGGED BY:	DRILLING METHOD:	
WL (Stabilized):	10 ft : End of day	ATV	BR	Hollow Stem Auger	

GEOTECHNICAL BOREHOLE LOG

CLIENT: **Gwinnett County - Facilities Mgmt.**	PROJECT NO.: **10:12639**	BORING NO.: **B-8**	SHEET: **1 OF 1**
PROJECT NAME: **DoSS Relocation Project**	DRILLER/CONTRACTOR: **Sunrise Drilling Inc**		
SITE LOCATION: **1050 Grayson Highway, Lawrenceville, Georgia, 30045**			LOSS OF CIRCULATION
LATITUDE: **33.924222**	LONGITUDE: **-83.972439**	STATION:	SURFACE ELEVATION: **1045 +/-**	BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DISTANCE (IN)	SAMPLE RECOVERY (IN)	DESCRIPTION OF MATERIAL	STRATIGRAPHY	WATER LEVELS	ELEVATION (FT)	BLOWS/6" (TCP/MC/SPT-N VALUE)*
					Topsoil [Thickness=2"].			1045	
	S-1	SS	0	18	FILL - (SM) SILTY SAND - reddish brown, contains roots and mica, moist, medium dense.				5-8-8 (16)
	S-2	SS	0	18	(SM) SILTY SAND - reddish brown, orange brown & tannish brown, contains mica, moist, loose to medium dense.				4-5-5 (10)
5	S-3	SS	0	18				1040	6-7-8 (15)
	S-4	SS	0	18					12-9-10 (19)
10								1035	
	S-5	SS	0	18					4-5-7 (12)
15								1030	
	S-6	SS	0	18					4-5-6 (11)
20								1025	
	S-7	SS	0	18					4-5-7 (12)
					END OF BORING AT 25ft			1020	

RQD% ◆ REC% ◆ (0 20 40 60 80 100)
TCP ▼ ModCal ▣ SPT ⊗ (0 20 30 40 50)
PL MC LL (0 20 40 60 80 100)

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

▽ **WL (First Encountered):**		**BORING STARTED:**	**04/15/2025**	**CAVE IN DEPTH:**	**Not Observed**
▼ **WL (Completion):**	**13 ft**	**BORING COMPLETED:**	**04/15/2025**	**HAMMER TYPE:**	**Automatic**
▼ **WL (Seasonal High Water):**		**EQUIPMENT:**	**LOGGED BY:**	**DRILLING METHOD:**	
▽ **WL (Stabilized):**	**13 ft : End of day**	**ATV**	**BR**	**Hollow Stem Auger**	

GEOTECHNICAL BOREHOLE LOG

CLIENT: **Gwinnett County - Facilities Mgmt.**	PROJECT NO.: **10:12639**	BORING NO.: **B-9**	SHEET: **1 OF 1**
PROJECT NAME: **DoSS Relocation Project**	DRILLER/CONTRACTOR: **Sunrise Drilling Inc**		
SITE LOCATION: **1050 Grayson Highway, Lawrenceville, Georgia, 30045**			LOSS OF CIRCULATION
LATITUDE: **33.924123**	LONGITUDE: **-83.972373**	STATION:	SURFACE ELEVATION: **1046 +/-**	BOTTOM OF CASING

DEPTH (FT)	SAMPLE NUMBER	SAMPLE TYPE	SAMPLE DISTANCE (IN)	SAMPLE RECOVERY (IN)	DESCRIPTION OF MATERIAL	STRATIGRAPHY	WATER LEVELS	ELEVATION (FT)	BLOWS/6" (TCP/MC/SPT-N VALUE)*
					Topsoil [Thickness=6"] GAB.			1045	
	S-1	SS	18	18	(SM) SILTY SAND - reddish brown, orange brown & tannish brown, contains mica, moist, medium dense.				10-9-9 (18)
	S-2	SS	18	18					9-8-8 (16)
5	S-3	SS	18	18				1040	8-9-9 (18)
	S-4	SS	18	18					8-9-10 (19)
10								1035	
	S-5	SS	18	18			▽		5-6-5 (11)
15								1030	
	S-6	SS	18	18					3-5-6 (11)
20								1025	
	S-7	SS	18	18					4-5-6 (11)
					END OF BORING AT 25ft				

RQD% ◆ REC% ◆ (0 20 40 60 80 100)
TCP ▼ ModCal ▣ SPT ⊗ (0 20 30 40 50)
PL × MC ● LL ▽ (0 20 40 60 80 100)

THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY LINES BETWEEN SOIL TYPES. IN-SITU THE TRANSITION MAY BE GRADUAL

▽ WL (First Encountered):		BORING STARTED:	04/15/2025	CAVE IN DEPTH:	Not Observed
▼ WL (Completion):	15	BORING COMPLETED:	04/15/2025	HAMMER TYPE:	Automatic
▼ WL (Seasonal High Water):		EQUIPMENT:	LOGGED BY:	DRILLING METHOD:	
▽ WL (Stabilized):	15 ft : End of day	ATV	BR	Hollow Stem Auger	

GEOTECHNICAL BOREHOLE LOG

APPENDIX C – Laboratory Testing

Laboratory Test Results Summary
Liquid and Plastic Limit Test Results

Laboratory Testing Summary

Sample Location	Sample Number	Depth (ft)	^MC (%)	Soil Type	Atterberg Limits			**Percent Passing No. 200 Sieve	Moisture - Density		CBR (%)		#Organic Content (%)
					LL	PL	PI		<Maximum Density (pcf)	<Optimum Moisture (%)	0.1 in.	0.2 in.	
B-1	S-1	1.0-2.5	21.6	SM	36	26	10	48.8					
B-7	S-2	3.5-3.5	31.2	MH	53	42	11	58.0					
B-5	S-2	3.0-4.5	19.1	ML	42	27	15	52.6					

Notes: See test reports for test method, ^ASTM D2216-19, *ASTM D2488, **ASTM D1140-17, #ASTM D2974-20e1 < See test report for D4718 corrected values

Definitions: MC: Moisture Content, Soil Type: USCS (Unified Soil Classification System), LL: Liquid Limit, PL: Plastic Limit, PI: Plasticity Index, CBR: California Bearing Ratio, OC: Organic Content

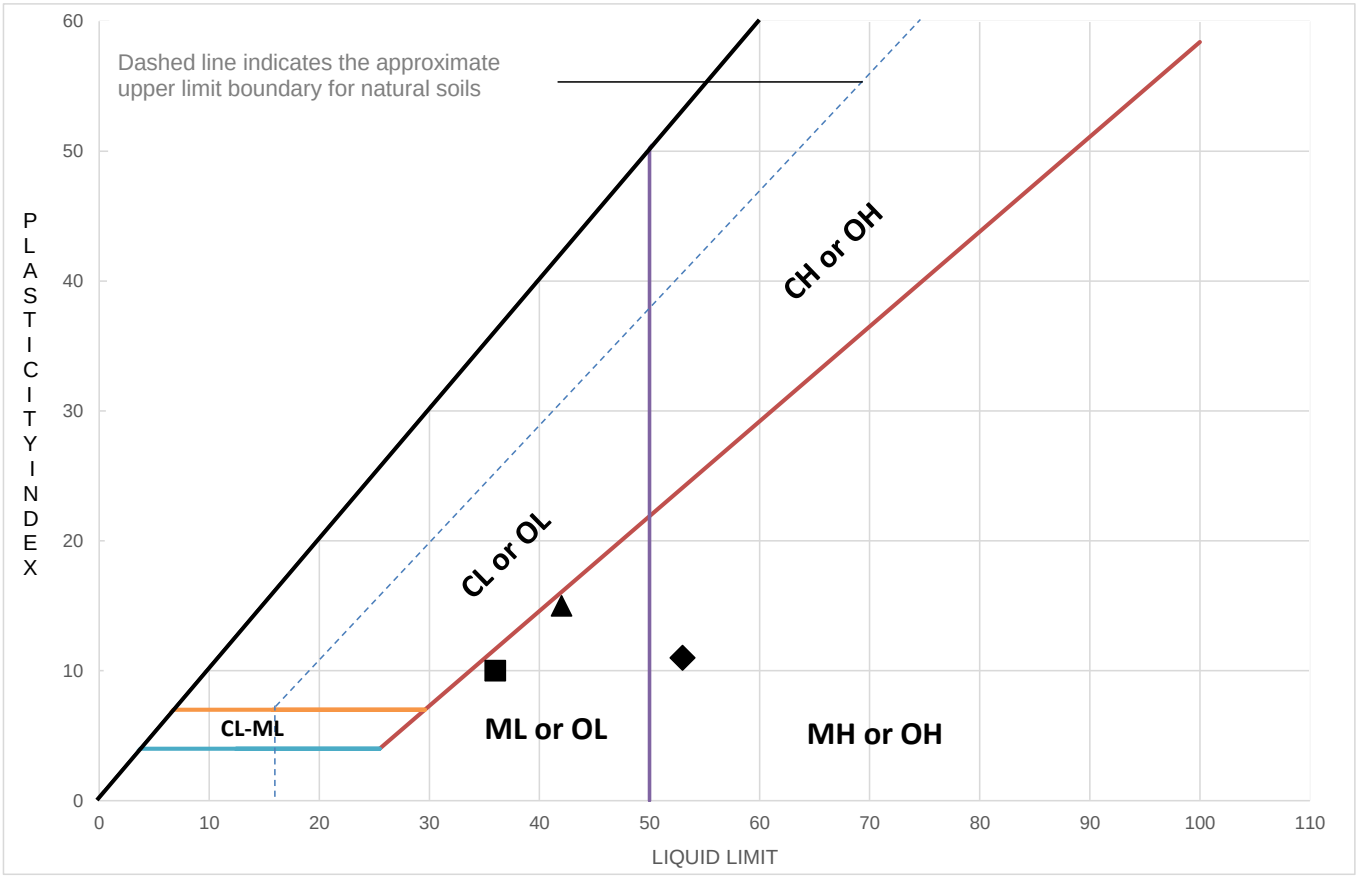
Project: DoSS Relocation Project
Client: Gwinnett County - Facilities Mgmt.

Project No.: 10:12639
Date Reported: 5/6/2025

Office / Lab	Address	Office Number / Fax
ECS Southeast LLC - Lawrenceville	1550 North Brown Road, Suite 140, Lawrenceville, GA 30043	(770)590-1971

Tested by	Checked by	Approved by	Date Received
SMarcano-Escalante		SMarcano-Escalante	

LIQUID AND PLASTIC LIMITS TEST REPORT



TEST RESULTS (ASTM D4318-10 (SINGLE POINT TEST))

	Sample Location	Sample Number	Sample Depth (ft)	LL	PL	PI	%<#40	%<#200	AASHTO	USCS	Material Description
■	B-1	S-1	1.00-2.50	36	26	10		48.8			
◆	B-7	S-2	3.50-3.50	53	42	11		58.0			
▲	B-5	S-2	3.00-4.50	42	27	15		52.6			

Project: DoSS Relocation Project
Client: Gwinnett County - Facilities Mgmt.

Project No.: 10:12639
Date Reported: 5/6/2025

Office / Lab	Address	Office Number / Fax
ECS Southeast LLC - Lawrenceville	1550 North Brown Road, Suite 140, Lawrenceville, GA 30043	(770)590-1971

Tested by	Checked by	Approved by	Date Received
SMarcano-Escalante		SMarcano-Escalante	

APPENDIX D – Supplemental Report Documents

GBA Important information About This Geotechnical-Engineering Report

Important Information about This

Geotechnical-Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

The Geoprofessional Business Association (GBA) has prepared this advisory to help you – assumedly a client representative – interpret and apply this geotechnical-engineering report as effectively as possible. In that way, you can benefit from a lowered exposure to problems associated with subsurface conditions at project sites and development of them that, for decades, have been a principal cause of construction delays, cost overruns, claims, and disputes. If you have questions or want more information about any of the issues discussed herein, contact your GBA-member geotechnical engineer. Active engagement in GBA exposes geotechnical engineers to a wide array of risk-confrontation techniques that can be of genuine benefit for everyone involved with a construction project.

Understand the Geotechnical-Engineering Services Provided for this Report

Geotechnical-engineering services typically include the planning, collection, interpretation, and analysis of exploratory data from widely spaced borings and/or test pits. Field data are combined with results from laboratory tests of soil and rock samples obtained from field exploration (if applicable), observations made during site reconnaissance, and historical information to form one or more models of the expected subsurface conditions beneath the site. Local geology and alterations of the site surface and subsurface by previous and proposed construction are also important considerations. Geotechnical engineers apply their engineering training, experience, and judgment to adapt the requirements of the prospective project to the subsurface model(s). Estimates are made of the subsurface conditions that will likely be exposed during construction as well as the expected performance of foundations and other structures being planned and/or affected by construction activities.

The culmination of these geotechnical-engineering services is typically a geotechnical-engineering report providing the data obtained, a discussion of the subsurface model(s), the engineering and geologic engineering assessments and analyses made, and the recommendations developed to satisfy the given requirements of the project. These reports may be titled investigations, explorations, studies, assessments, or evaluations. Regardless of the title used, the geotechnical-engineering report is an engineering interpretation of the subsurface conditions within the context of the project and does not represent a close examination, systematic inquiry, or thorough investigation of all site and subsurface conditions.

Geotechnical-Engineering Services are Performed for Specific Purposes, Persons, and Projects, and At Specific Times

Geotechnical engineers structure their services to meet the specific needs, goals, and risk management preferences of their clients. A geotechnical-engineering study conducted for a given civil engineer will not likely meet the needs of a civil-works constructor or even a different civil engineer. Because each geotechnical-engineering study is unique, each geotechnical-engineering report is unique, prepared *solely* for the client.

Likewise, geotechnical-engineering services are performed for a specific project and purpose. For example, it is unlikely that a geotechnical-engineering study for a refrigerated warehouse will be the same as one prepared for a parking garage; and a few borings drilled during a preliminary study to evaluate site feasibility will not be adequate to develop geotechnical design recommendations for the project.

Do not rely on this report if your geotechnical engineer prepared it:

- for a different client;
- for a different project or purpose;
- for a different site (that may or may not include all or a portion of the original site); or
- before important events occurred at the site or adjacent to it; e.g., man-made events like construction or environmental remediation, or natural events like floods, droughts, earthquakes, or groundwater fluctuations.

Note, too, the reliability of a geotechnical-engineering report can be affected by the passage of time, because of factors like changed subsurface conditions; new or modified codes, standards, or regulations; or new techniques or tools. *If you are the least bit uncertain* about the continued reliability of this report, contact your geotechnical engineer before applying the recommendations in it. A minor amount of additional testing or analysis after the passage of time – if any is required at all – could prevent major problems.

Read this Report in Full

Costly problems have occurred because those relying on a geotechnical-engineering report did not read the report in its entirety. Do not rely on an executive summary. Do not read selective elements only. *Read and refer to the report in full.*

You Need to Inform Your Geotechnical Engineer About Change

Your geotechnical engineer considered unique, project-specific factors when developing the scope of study behind this report and developing the confirmation-dependent recommendations the report conveys. Typical changes that could erode the reliability of this report include those that affect:

- the site's size or shape;
- the elevation, configuration, location, orientation, function or weight of the proposed structure and the desired performance criteria;
- the composition of the design team; or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project or site changes – even minor ones – and request an assessment of their impact. *The geotechnical engineer who prepared this report cannot accept*

responsibility or liability for problems that arise because the geotechnical engineer was not informed about developments the engineer otherwise would have considered.

Most of the "Findings" Related in This Report Are Professional Opinions

Before construction begins, geotechnical engineers explore a site's subsurface using various sampling and testing procedures. *Geotechnical engineers can observe actual subsurface conditions only at those specific locations where sampling and testing is performed.* The data derived from that sampling and testing were reviewed by your geotechnical engineer, who then applied professional judgement to form opinions about subsurface conditions throughout the site. Actual sitewide-subsurface conditions may differ – maybe significantly – from those indicated in this report. Confront that risk by retaining your geotechnical engineer to serve on the design team through project completion to obtain informed guidance quickly, whenever needed.

This Report's Recommendations Are Confirmation-Dependent

The recommendations included in this report – including any options or alternatives – are confirmation-dependent. In other words, they are not final, because the geotechnical engineer who developed them relied heavily on judgement and opinion to do so. Your geotechnical engineer can finalize the recommendations *only after observing actual subsurface conditions* exposed during construction. If through observation your geotechnical engineer confirms that the conditions assumed to exist actually do exist, the recommendations can be relied upon, assuming no other changes have occurred. *The geotechnical engineer who prepared this report cannot assume responsibility or liability for confirmation-dependent recommendations if you fail to retain that engineer to perform construction observation.*

This Report Could Be Misinterpreted

Other design professionals' misinterpretation of geotechnical-engineering reports has resulted in costly problems. Confront that risk by having your geotechnical engineer serve as a continuing member of the design team, to:

- confer with other design-team members;
- help develop specifications;
- review pertinent elements of other design professionals' plans and specifications; and
- be available whenever geotechnical-engineering guidance is needed.

You should also confront the risk of constructors misinterpreting this report. Do so by retaining your geotechnical engineer to participate in prebid and preconstruction conferences and to perform construction-phase observations.

Give Constructors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can shift unanticipated-subsurface-conditions liability to constructors by limiting the information they provide for bid preparation. To help prevent the costly, contentious problems this practice has caused, include the complete geotechnical-engineering report, along with any attachments or appendices, with your contract documents, *but be certain to note conspicuously that you've included the material for information purposes only.* To avoid misunderstanding, you may also want to note that "informational purposes" means constructors have no right to rely on the interpretations, opinions, conclusions, or recommendations in the report. Be certain that constructors know they may learn about specific project requirements, including options selected from the report, *only* from the design drawings and specifications. Remind constructors that they may perform their own studies if they want to, and *be sure to allow enough time* to permit them to do so. Only then might you be in a position to give constructors the information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions. Conducting prebid and preconstruction conferences can also be valuable in this respect.

Read Responsibility Provisions Closely

Some client representatives, design professionals, and constructors do not realize that geotechnical engineering is far less exact than other engineering disciplines. This happens in part because soil and rock on project sites are typically heterogeneous and not manufactured materials with well-defined engineering properties like steel and concrete. That lack of understanding has nurtured unrealistic expectations that have resulted in disappointments, delays, cost overruns, claims, and disputes. To confront that risk, geotechnical engineers commonly include explanatory provisions in their reports. Sometimes labeled "limitations," many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

Geoenvironmental Concerns Are Not Covered

The personnel, equipment, and techniques used to perform an environmental study – e.g., a "phase-one" or "phase-two" environmental site assessment – differ significantly from those used to perform a geotechnical-engineering study. For that reason, a geotechnical-engineering report does not usually provide environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated subsurface environmental problems have led to project failures.* If you have not obtained your own environmental information about the project site, ask your geotechnical consultant for a recommendation on how to find environmental risk-management guidance.

Obtain Professional Assistance to Deal with Moisture Infiltration and Mold

While your geotechnical engineer may have addressed groundwater, water infiltration, or similar issues in this report, the engineer's services were not designed, conducted, or intended to prevent migration of moisture – including water vapor – from the soil through building slabs and walls and into the building interior, where it can cause mold growth and material-performance deficiencies. Accordingly, ***proper implementation of the geotechnical engineer's recommendations will not of itself be sufficient to prevent moisture infiltration. Confront the risk of moisture infiltration*** by including building-envelope or mold specialists on the design team. ***Geotechnical engineers are not building-envelope or mold specialists.***

GEOPROFESSIONAL BUSINESS ASSOCIATION

Telephone: 301/565-2733
e-mail: info@geoprofessional.org www.geoprofessional.org

Sound Masking Submittal (Dynasound)

DATA SHEET
CAMBRIDGE Qt X 300/300D
SOUND MASKING CONTROL MODULE

The Cambridge Qt™ X 300/300D control module is a sound masking generator, controller, third octave band equalizer and amplifier, with two auxiliary audio inputs to allow for distribution of audio from paging controllers and/or (background) music players. The Qt X 300/300D controls up to 3 zones of Qt Standard or Active emitters. The Qt X 300/300D control module is a compact three-zone networkable controller suitable for installations of up to 36,000 square feet (3,345 m²). Each zone can be independently adjusted for masking and aux audio levels and spectra. Both models feature full compatibility with Biamp's SageVue™ system management software. When multiple controllers are included in a single system audio inputs can be shared across all controllers via AVB or Dante (300/D).

FEATURES

- Compatible with Qt Standard emitters and Qt Active emitters.
- Supports up to 3 zones
- AVB or Dante (300/D) media network
- 2 audio inputs for paging and music
- Contact closure integrates with fire alarm systems
- Front panel with LCD
- Front Panel Lock (via software control)
- Auto ramping
- Event scheduling
- Adjustable equalizer for masking and audio inputs
- 4 non-correlated sound masking audio sources per zone
- Built-in clock with system NTP support
- Wall mount bracket included, optional rack mount bracket also available
- Dual network ports (media / control)
- Web interface control by any web-enabled device
- Third party control API/Ethernet
- CE marked, UL listed, and RoHS compliant
- Covered by Biamp Systems' five-year warranty
- Manufactured in the U.S.A.
- TAA compliant
- GSA eligible

ARCHITECTS & ENGINEERS SPECIFICATION

The controller shall consist of all electronics required for operating a sound masking system from a single accessible location. Systems with distributed electronic packages above ceilings are not acceptable. The controller shall permit password protected access for control and monitoring via LAN/browser interface. The controller shall provide three zones and shall be sufficient to generate sound masking, audio control and audio power for up to 36,000 square feet (3,345 m²) of coverage. The unit shall be capable of time-of-day masking level control; per-zone settings shall be available for day/night levels and start times, ramping interval, and weekday/Sat/Sun behavior. Each audio output shall provide 4 non-correlated channels of masking noise to minimize comb filtering. The unit shall meet all requirements of Underwriters Laboratories, the US and Canadian National Electrical Codes, FCC Part 15, and all pertinent UK and EU codes. The controller shall be CE marked, UL listed, and shall be compliant with the RoHS directive. Warranty shall be 5 years. The controller shall be Qt X 300/300D.

Qt X 300/300D SPECIFICATIONS

ACTIVE EMITTERS	
Max Emitter/Device Capacity:	50 Qt Active Emitters per cable run
Max Emitter Cabling Distance:	800 feet (243m) per cable run
Frequency Response[1]	
Sound Masking:	125Hz to 6.3kHz
Music/Paging:	115Hz to 12kHz
SPL[1]	
Minimum Masking SPL (@ 1m):	30dBA
Maximum Masking SPL (@ 1m):	55dBA
Maximum Music/Paging SPL (@ 1m):	74dBA
Equalization	
Sound Masking (125Hz - 6.3kHz):	ISO 1/3 Octave Bands
Music/Paging (200Hz - 8kHz):	ISO 1/1 Octave Bands
STANDARD EMITTERS	
Max Emitter/Device Capacity:	60 Qt Emitters per cable run
Max Emitter Cabling Distance:	1000 feet (300m) per cable run
Frequency Response[1]	
Sound Masking:	200Hz to 6.3kHz
Music/Paging:	200Hz to 10kHz
SPL[1]	
Minimum Masking SPL (@ 1m):	30dBA
Maximum Masking SPL (@ 1m):	55dBA
Maximum Music/Paging SPL (@ 1m):	56dBA
Equalization	
Sound Masking (200Hz - 6.3kHz):	ISO 1/3 Octave Bands
Music/Paging (200Hz - 8kHz):	ISO 1/1 Octave Bands
Masking	
Number of Masking Zones:	3 (2 cable runs per zone)
Number of Non-Correlated Masking Sources:	4 per zone
Masking Level Adjustment:	0.5dB steps

Audio Inputs	
Input Connector Type:	Captive Screw Terminal
Number of Inputs:	2 (Mono)
Input Level:	+24dBu (12.3VRMS max)
Input Gain Range:	6dB steps
Input Level Adjustment:	1dB steps
Input Impedance:	8kΩ
Phantom Power:	+48VDC (7mA/input)
Remote Control	
Connector Type:	Captive Screw Terminal
Input Type:	Contact Closure (Normally Open)
Number of Inputs:	2
Output Type:	Logic Status (5VDC)
Number of Outputs:	2 2 Channels GPIO
Output Connections:	6 RJ-45
Minimum Output Impedance:	2Ω (per channel)
Power Supply	
Operating Voltage:	100-240VAC 50/60Hz
Current Draw:	0.9A
Output:	24VDC @ 2.7A
Max. Power Consumption (24VDC):	22W
Included Accessories:	ACT Hole Saw Wall Bracket
Overall Dimensions	
Height:	3.5 inches (89mm)
Width:	14 5/8 inches (371.5mm)
Depth:	3.8 inches (97mm)
Weight:	1.5 lbs (0.68kg) (with surface mount bracket installed)
Environmental:	
Ambient Operating Temperature Range:	40 - 104° F (4 - 40° C)
Humidity:	0-95% relative humidity (non-condensing)
Altitude:	0-6,600 ft (0-2000m) MSL
Compliance:	FCC Part 15B (USA) UL Listed (USA and Canada) CE Marked (Europe) RoHS Directive (Europe)

[1] Specifications based on use of Qt Emitters / Qt Active Emitter array and based on published layout practices

Qt X 300/300D BACK PANEL

biamp. biampinfo@biamp.com +1 503 641 7287 www.biamp.com

DATA SHEET
QT® ACTIVE EMITTER
SOUND MASKING LOUDSPEAKER

Qt® Active Emitters are wide dispersion (nearly 180 degrees) direct field loudspeakers with 1.25" (3.17 cm) drivers capable of simultaneous reproduction of both sound masking and clear audio sources such as paging signals. Patented direct-field technology ensures both uniform, comfortable sound masking as well as clear, articulate paging in a loudspeaker that's virtually invisible once deployed in finished or open structure ceilings. The Qt Active Emitter features onboard active electronics to power the loudspeaker and a ported enclosure design allowing lower frequency extension to the 125 Hz octave band. Power is delivered via an external power supply and power injectors, both available as accessories. Active Emitters deliver four uncorrelated audio channels, automatically eliminating phasing. Active Emitters are plenum-rated, ETL listed, and comply with UL 2043. Each Active Emitter comes standard with a slip-ring mount for acoustical tile mounting. These features, along with plug and play installation and easy configuration capability, make QtPro systems the most intelligently engineered and most effective sound masking systems on the market today.

FEATURES

- Wide dispersion direct field speakers with 1.25" (32 mm) drivers
- Small driver size results in nearly 180° dispersion of direct field sound masking
- Reduces acoustical interference by using four uncorrelated channels
- DIP switches attenuate the volume level up to 4.5 dB in 1.5 dB decrements for easy micro-zoning
- Plug and play installation and easy configuration
- Comes standard with slip ring for acoustical tile mounting
- CE marked, ETL listed, and RoHS compliant
- Evaluated to the requirements of UL 2043 and is suitable for use in air handling spaces
- Covered by Biamp Systems' five-year warranty

ARCHITECTS & ENGINEERS SPECIFICATION

The emitter shall consist of a single 1.25" (32 mm), 4 ohm, full range transducer installed in a vented enclosure. The enclosure shall be manufactured from material meeting UL Standard 2043 requirements for heat and smoke release in accordance with the provisions of the following codes: National Electric Code, NFPA 70; International Mechanical Code, NFPA 5000; Standard for the Installation of Air Conditioning and Ventilating Systems, and NFPA 90A. The emitter shall be provided with internal logic to automatically sequence 4 channels of mutually incoherent masking sound generators when connected with standard category cables. Input and output receptacles shall be standard RJ-45 quick connect network type with positive locking. A twist-and-lock mounting ring shall be provided for quick and secure mounting in ceiling materials. The enclosure shall provide a secondary attachment for a security cable where required by local authorities. Warranty shall be 5 years. The emiiter shall be a Qt® Active Emitter.

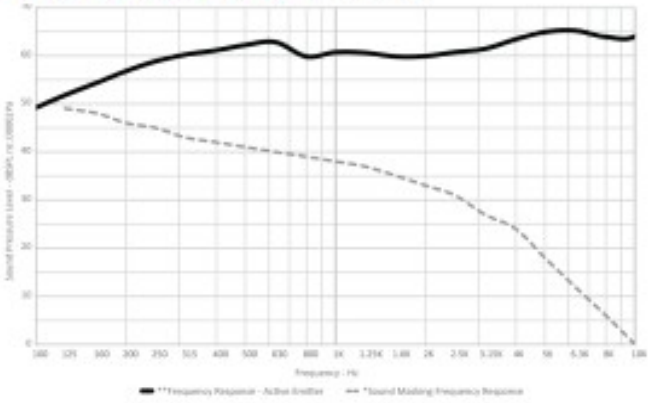
Qt ACTIVE EMITTER SPECIFICATIONS

Loudspeaker Type:	Active with integrated amplifier
Frequency Response	
Sound Masking[1]:	125Hz to 10kHz
Music/Paging (-10dB)[2]:	115Hz to 12kHz
SPL[1]	
Minimum Masking SPL (@ 1m):	30dBA
Maximum Masking SPL (@ 1m):	60dBA
Maximum Music/Paging SPL (@ 1m):	74dBA
Nominal Impedance:	40 kΩ
Nominal Dispersion:	170° conical / half space
Channel Selection:	4 Auto-Sequencing and Repeating Channels
Selectable Attenuation:	0 dB, -1.5 dB, -3 dB, -4.5 dB
I/O Connectors:	2 RJ-45 connectors
Cabling:	Category UTP Cabling (8 conductor)

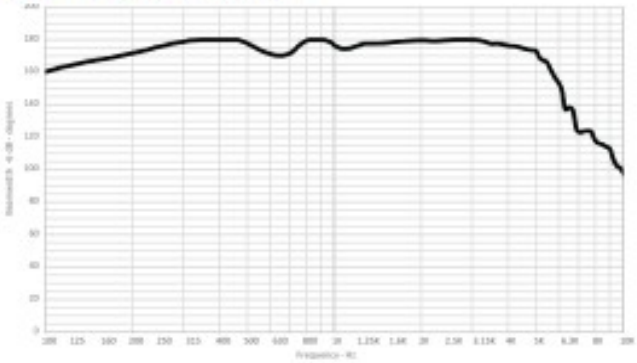
Maximum Power Consumption:	2 W
Driver Diameter:	1.25" (32mm)
Enclosure:	Front Vented
Color:	Black or White
Product Dimensions	
Overall Diameter:	3.25 inches (83mm)
Depth:	3.5 inches (89mm)
Weight:	6.5 oz. (184g)
Included Accessories:	Acoustic Ceiling Tile Mounting Ring UTP Cable (16ft/25ft/30ft)
Compliance:	ETL listed (USA and Canada) Evaluated to the requirements of UL 2043 and is suitable for use in air handling spaces

[1] Specifications based on emitter array using published layout practices in conjunction with Qt Control Processor.
[2] Specifications based on laboratory measurements by NWAA Labs, not using Qt Control Processor..

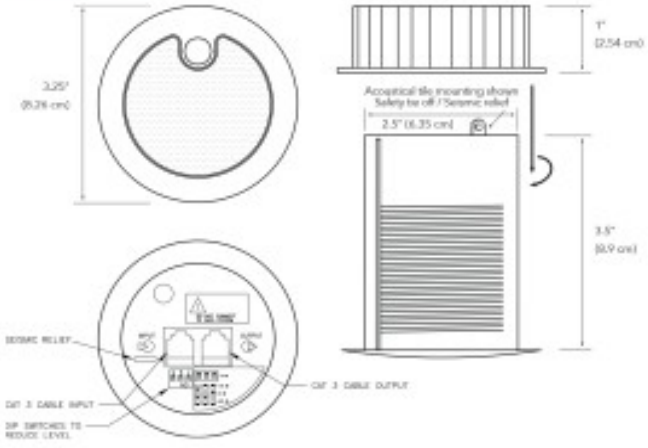
FREQUENCY RESPONSE (dB SPL)



BEAMWIDTH (Degrees)



DIMENSIONS



REQUIRED ACCESSORIES

Description	SKU
Power Supply	PS-AE-3
Power Injector	PI-AE

OPTIONAL ACCESSORIES

Description	SKU
Drywall Mount	DM
Beam Bracket	AE-BB-W, AE-BB-B
Universal Bracket	AE-UB-W, AE-UB-B

DATA SHEET
QT® PI-AE
ACTIVE EMITTER POWER INJECTOR

The Active Emitter Power Injector is used to combine DC power from the Active Emitter Power Supply with the audio signal from the QtPro module in order to provide a powered "signal" for the Qt® Active Emitter. There are two output ports that each support up to 25 Qt Active Emitters. The Active Emitter Power Injector can be mounted at the head end or placed in the plenum. It fits inside a standard 4x4 electrical enclosure.

FEATURES

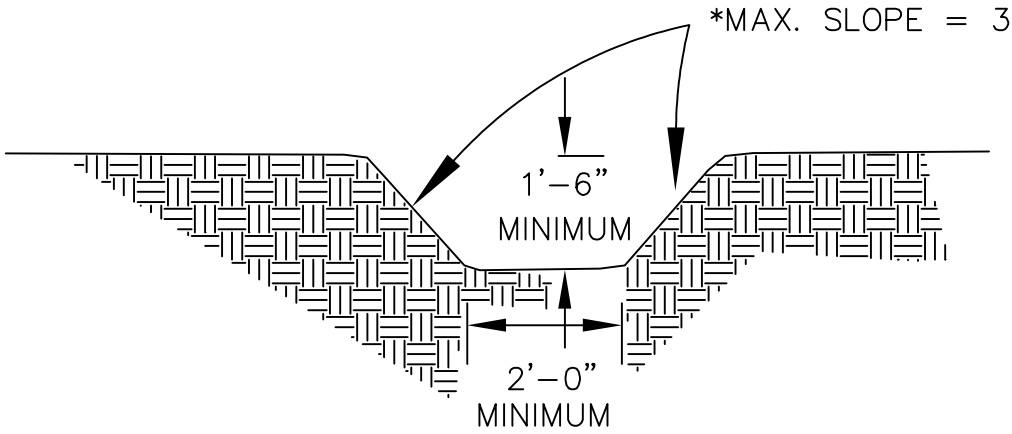
- Combines DC power from the Active Emitter Power Supply and signal from a QtPro Control Module
- Two output ports each support up to 25 Qt Active Emitters
- Can be mounted at the head end or placed in the plenum
- Fits inside a standard 4x4 electrical enclosure

DATA SHEET
QT® PS-AE-3
ACTIVE EMITTER POWER SUPPLY

The Active Emitter Power Supply is an external power supply that provides DC power to the Qt® Active Emitter through the Active Emitter Power Injector. It houses three 14/2 conductor cabling outputs that each power up to 50 Qt Active Emitters for a total of 150 Active Emitter maximum. The Active Emitter Power supply is rack or wall mountable.

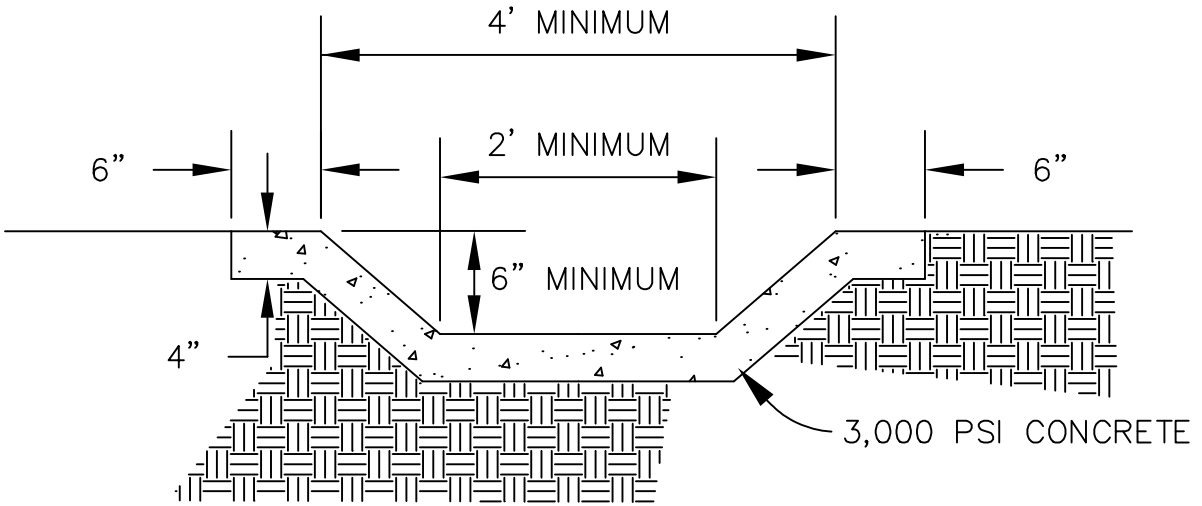
FEATURES

- Supplies power to Qt Active Emitters by way of Active Emitter Power Injector
- Powers up to 150 Qt Active Emitters total
- Houses three output connectors powering 50 Emitters per output
- Utilizes 14/2 conductor cabling to power Qt Active Emitter Power Injector
- Rack or wall mountable



*STEEPER SLOPE TO BE REVIEWED AND
APPROVED BY COUNTY ROAD SUPERINTENDENT

GRASSED CHANNEL



CONCRETE FLUME DETAIL

SECTION 05 31 00

STEEL DECKING
Addendum 1 – 1/28/26

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. The General Conditions, Supplementary Conditions, and General Requirements (Division 1), apply to the work specified in this Section. Related work specified in other Sections includes Section 05 12 00, Structural Steel Framing.

1.02 SCOPE

A. Work described in this Section includes Steel Decking.

1.03 INDUSTRY STANDARDS

A. Reference: Some products and execution are specified in this Section by reference to published specifications or standards of the following (with respective abbreviations used).

The American Society for Testing & Materials (ASTM)
The Steel Deck Institute (SDI)
American Iron & Steel Institute (AISI)
American Welding Society (AWS)

1.04 SUBMITTALS

In accordance with requirements in Division 1, submit the following:

A. Shop Drawings: Submit shop drawings for steel deck. Shop drawings shall indicate layout of decking, clearance and connections to other work, gages, deck section properties, types of metal, and surface coating.

B. Structural Data: Submit structural properties of decking for approval.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Steel Roof Deck: Fabricate panels, without top-flange stiffening grooves, to comply with "SDI Specifications and Commentary for Steel Roof Deck," in SDI Publication No. 30, and with the following:
1. Prime-Painted Steel Sheet: ASTM A 1008, Structural Steel (SS), Grade 33 minimum, shop primed with manufacturer's standard baked-on, rust-inhibitive primer.
a. Color: Manufacturer's standard.
2. Deck Profile: As indicated.
3. Profile Depth: As indicated.
4. Design Uncoated-Steel Thickness: As indicated.
5. Span Condition: Triple span or more.
6. Side Laps: Overlapped or interlocking seam at Contractor's option.

PART 3 - EXECUTION

3.01 FIELD QUALITY CONTROL

A. Testing: A qualified independent testing agency shall perform field quality-control inspections.

B. Field welds shall be subject to inspection.

3.02 PROTECTION

Before erection, sheets shall be protected from weather. Do not store in contact with ground.

3.03 ATTACHMENT

A. Place deck and attach to structure with puddle welds at the spacing shown on the drawings, with installation in accordance with the manufacturer's recommendations. Install side lap fasteners as noted.

B. Deck laps shall be made at supports with higher slope side on top.

3.04 INSPECTION

A. Contact Architect for inspection of deck installation before covering deck.

3.05 SUSPENDED LOADS

A. Attachment of suspended loads to deck is prohibited.

END OF SECTION 05 31 00

SECTION 08 11 00

HOLLOW METAL DOORS AND FRAMES
Addendum 1 – 1/28/26

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

A. This Section includes steel doors and frames.

B. Related Sections: The following Sections contain requirements that relate to this Section:
1. Division 8, Section "Finish Hardware" for door hardware
2. Division 8, Section "Glazing" for glass in steel doors and sidelights.
3. Division 9, Section "Painting" for field painting primed doors and frames.

1.03 SUBMITTALS

A. General: Submittals shall be in accordance with Specification Section 01 33 00.

B. Steel door and frame submittal to be completed only after pre-submittal meeting has taken place between Contractor, Owner, Architect, hollow metal frame supplier, hardware supplier, wood door supplier, and glazing supplier.

C. Product Data for each type of door and frame specified, including details of construction, materials, dimensions, hardware preparation, core, label compliance, sound ratings, profiles, and finishes.

D. Provide Shop Drawings showing fabrication and installation of steel doors and frames. Include details of each frame type, elevations of door design types, conditions at openings, details of construction, location and installation requirements of door and frame hardware and reinforcements, and details of joints and connections. Show anchorage and accessory items.

E. Door Schedule: Submit schedule of doors and frames using same reference numbers and format for details and openings as those on Contract Drawings.
1. Indicate coordination of glazing frames and stops with glass and glazing requirements.

1.04 QUALITY ASSURANCE

A. Provide doors and frames complying with ANSI/SDI 100 "Recommended Specifications for Standard Steel Doors and Frames" and as specified.

B. Fire-Rated Door Assemblies: Units that comply with NFPA 80, are identical to door and frame assemblies tested for fire-test-response characteristics per ASTM E 152, and are labeled and listed by UL, Warnock Hersey, or another testing and inspecting agency acceptable to authorities having jurisdiction.

C. Single-Source Responsibility: Provide doors and frames and related components from one manufacturer for each type of door and frame.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Deliver doors and frames cardboard-wrapped or crated to provide protection during transit and job storage. Provide additional protection to prevent damage to finish of factory-finished doors and frames.

B. Inspect doors and frames on delivery for damage. Minor damages may be repaired provided refinished items match new work and are acceptable to Architect; otherwise, remove and replace damaged items as directed.

C. Store doors and frames at building site under cover. Place units on minimum 4-inch- (100-mm-) high wood blocking or pallets. Avoid using nonvented plastic or canvas shelters that could create a humidity chamber. If cardboard wrappers on doors become wet, remove cartons immediately. Provide minimum 1/4-inch (6-mm) spaces between stacked doors to promote air circulation.

PART 2 – PRODUCTS

2.01 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   1. Steel Doors and Frames:
      a. Ceco Door Products.
      b. Curries Co.
      c. Mesker Industries, Inc.
      d. Steelcraft Manufacturing Co.
      e. Pioneer Industries
      f. Republic Steel Corp.
      g. Premier Steel Doors and Frames
      h. Amweld Building Products, Inc.

2.02 DOORS

A. Steel Doors: Provide 1-3/4-inch- (44-mm-) thick doors of materials and ANSI/SDI 100 grades and models specified below, or as indicated on Drawings or schedules:
   1. Interior Doors: Grade III, extra heavy-duty, Model 2, seamless design, minimum 18 gauge thick, cold-rolled steel sheet faces.
   2. Exterior Doors: Grade III, extra heavy-duty, Model 2A, seamless design, minimum 18 gauge thick galvanized steel sheet faces.

2.03 FRAMES

A. Provide metal frames for doors, transoms, sidelights, borrowed lights, and other openings, according to ANSI/SDI 100, and of types and styles as shown on Drawings and schedules. Conceal fastenings, unless otherwise indicated.
   1. Fabricate frames with mitered or coped corners, continuously face welded construction for exterior and interior applications.
   2. Fabricate frames for interior openings from 0.0598-inch- (1.5-mm-) thick steel sheet.
   3. Fabricate frames for secure interior openings from 0.0785-inch- (2.0-mm-) thick galvanized steel sheet.
   4. Form exterior frames from 0.0785-inch- (2.0-mm-) thick galvanized steel sheet.

B. Door Silencers: Except on weather-stripped frames, drill stops to receive 3 silencers on strike jambs of single-door frames and 2 silencers on heads of double-door frames.

2.04 FABRICATION

A. Fabricate steel door and frame units to be rigid, neat in appearance, and free from defects, warp, or buckle. Where practical, fit and assemble units in manufacturer's plant. Clearly identify work that cannot be permanently factory assembled before shipment, to assure proper assembly at Project site. Comply with ANSI/SDI 100 requirements.
   1. Internal Construction: One of the following manufacturer's standard core materials according to SDI standards:
      a. Vertical steel stiffeners.
      b. Honeycomb
      c. Polystyrene
   2. Clearances: Not more than 1/8 inch (3.2 mm) at jambs and heads, except not more than 1/4 inch (6.4 mm) between non-fire-rated pairs of doors. Not more than 3/4 inch (19 mm) at bottom.
      a. Fire Doors: Provide clearances according to NFPA 80.

B. Fabricate exposed faces of doors and panels, including stiles and rails of nonflush units, from only cold-rolled steel sheet.

C. Tolerances: Comply with SDI 117 "Manufacturing Tolerances Standard Steel Doors and Frames."

D. Fabricate concealed stiffeners, reinforcement, edge channels, louvers, and moldings from either cold- or hot-rolled steel sheet.

E. Exposed Fasteners: Unless otherwise indicated, provide countersunk flat or oval heads for exposed screws and bolts.

F. Hardware Preparation: Prepare doors and frames to receive hardware indicated in Division 8 Section “Finish Hardware” according to final door hardware schedule and templates provided by hardware supplier. Comply with applicable requirements of SDI 107 and ANSI A115 Series specifications for door and frame preparation for hardware.

1. For concealed overhead door closers, provide space, cutouts, reinforcing, and provisions for fastening in top rail of doors or head of frames, as applicable.

H. Reinforce doors and frames to receive surface-applied hardware. Drilling and tapping for surface-applied hardware may be done at Project site.

I. Locate hardware as indicated on Shop Drawings or, if not indicated, according to the Door and Hardware Institute's (DHI) "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."

J. Glazing Stops: Minimum 0.0359-inch- (0.9-mm-) thick steel or 0.040-inch- (1-mm-) thick aluminum.
1. Provide nonremovable stops on outside of exterior doors and on secure side of interior doors for glass, louvers, and other panels in doors.
2. Provide screw-applied, removable, glazing beads on inside of glass, louvers, and other panels in doors.

2.05 FINISHES, GENERAL

A. Comply with NAAMM's "Metal Finishes Manual" for recommendations relative to applying and designating finishes.

2.6 STEEL SHEET FINISHES

A. Surface Preparation: Solvent-clean surfaces to comply with SSPC-SP 1 to remove dirt, oil, grease, and other contaminants that could impair paint bond. Remove mill scale and rust, if present, from uncoated steel to comply with SSPC-SP 5 (White Metal Blast Cleaning) or SSPC-SP 8 (Pickling).

B. Pre-treatment: Immediately after surface preparation, apply a conversion coating of type suited to organic coating applied over it.

C. Factory Priming for Field-Painted Finish: Apply shop primer that complies with ANSI A224.1 acceptance criteria, is compatible with finish paint systems indicated, and has capability to provide a sound foundation for field-applied topcoats. Apply primer immediately after surface preparation and pre-treatment.

PART 3 – EXECUTION

3.01 INSTALLATION

A. General: Install steel doors, frames, and accessories according to Shop Drawings, manufacturer's data, and as specified.

B. Placing Frames: Comply with provisions of SDI 105, unless otherwise indicated. Set frames accurately in position, plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is completed, remove temporary braces and spreaders, leaving surfaces smooth and undamaged.
1. Install at least 3 wall anchors per jamb adjacent to hinge location on hinge jamb and at corresponding heights on strike jamb. Acceptable anchors include masonry wire anchors and masonry removable yoke.
2. Install fire-rated frames according to NFPA 80. **Do not paint over UL labels.**

C. Door Installation: Fit hollow-metal doors accurately in frames, within clearances specified in ANSI/SDI 100.
   1. Fire-Rated Doors: Install with clearances specified in NFPA 80. **Do not paint over UL labels.**

3.02 ADJUSTING AND CLEANING

A. Prime Coat Touchup: Immediately after erection, sand smooth any rusted or damaged areas of prime coat and apply touchup of compatible air-drying primer.

B. Protection Removal: Immediately before final inspection, remove protective wrappings from doors and frames.

END OF SECTION 08 11 00

SECTION 09 51 00

ACOUSTICAL PANEL CEILINGS
Addendum 1 – 1/28/26

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes acoustical panels and exposed suspension systems for ceilings.

1.2 SUBMITTALS

A. Product Data: For each product indicated.

B. Coordination Drawings: Drawn to scale and coordinating penetrations and ceiling-mounted items. Show the following:
   1. Ceiling suspension assembly members.
   2. Method of attaching hangers to building structure.
   3. Ceiling-mounted items including lighting fixtures, diffusers, grilles, speakers, sprinklers, access panels, and special moldings.
   4. Details to show compliance with Category “C” Seismic restraints.

C. Samples: For each ceiling panel, for each exposed suspension system member and for each color and texture required.

D. Product test reports.

E. Research/evaluation reports.

F. Maintenance data.

G. UL Acoustical Compliance: For acoustical performance, each carton of material must carry Underwriters Laboratories certification for CAC and NRC.

H. UL Suspension System Load Compliance: Manufacturer must certify that the metal suspension system is UL Classified to be load compliant per ASTM C635. For load compliance, each carton of main tees must carry Underwriters Laboratories certification for load compliance.

1.3 QUALITY ASSURANCE

A. Acoustical Testing Agency Qualifications: An independent testing laboratory or an NVLAP-accredited laboratory.

B. Single Source Responsibility: To obtain Lifetime ceiling system warranty, 30-year ceiling system warranty, color match or ceiling panel and suspension system compatibility, all acoustical panel and suspension system components shall be produced and supplied by one manufacturer.

C. Subcontractor qualifications: Installer shall have not less than three years of successful experience in the installation of ceiling suspension systems on projects with requirements similar to requirements specified.

D. Fire-Test-Response Characteristics:
   1. Surface-Burning Characteristics: Acoustical panels complying with ASTM E 1264 for Class A materials, when tested per ASTM E 84.

E. Mockups: Build mockups to verify selections made under sample Submittals and to demonstrate aesthetic effects and qualities of materials and execution.
   1. Build mockup to set standards and quality levels to adhere to.
   2. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

F. Pre-installation Conference: Conduct conference at Project site to comply with requirements in Division 1 Project Meetings.

1.4 EXTRA MATERIALS

A. Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
   1. Full-size units equal to 5.0 percent of quantity installed, but not fewer than 5 tiles for each type of ceiling panel and suspension system.

1.5 WARRANTY

A. Acoustical Panel: Submit a written warranty executed by the manufacturer, agreeing to repair or replace acoustical panels that fail within the warranty period. Failures include, but are not limited to:
   1. Acoustical Panels: Sagging, warping and mold/mildew protection.
   2. Grid System: Rusting and manufacturer's defects.

B. Warranty Periods:
   1. Acoustical Panels: 30 years from date of Substantial Completion.
   2. Grid System: Supporting: 30 years from date of Substantial Completion.

C. The warranty shall not deprive the Owner of other rights the Owner may have under provisions of the Contract Documents and will be in addition to and run concurrent with other warranties made by the Contractor under the requirements of the Contract Documents.

1.6 ENVIRONMENTAL CONDITIONS

A. Installation of acoustical panels shall not begin until building is enclosed, permanent heating and cooling equipment is in operation, and residual moisture from concrete or any finish work has dissipated.

B. Do not use ceiling panels in extreme or continuous high humidity, or areas exposed directly to weather or water. Ceiling panels are sized and designed for use within the standard occupancy range of temperature and humidity, 65-85 degrees F, no more than 70% relative humidity.

C. Allow time for dimensional changes in ceiling panels stored at temperature/humidity conditions well outside of those recommended for service.

1.7 PROJECT CONDITIONS

A. Building shall be enclosed with windows and exterior doors in place and glazed, and roof watertight before installation of ceiling system and related ceiling components.

B. Coordination with other work:
1. Mechanical/Plumbing work: Ductwork above ceiling shall be complete and permanent heating and cooling systems operating to climate conditions prior to installation of ceiling components. Plumbing lines above ceiling shall be complete, pressure tested and operational prior to installation of ceiling components.
2. Electrical work: Installation of conduit above ceiling shall be complete before installation of ceiling components.
3. Fire protection work: Fire protection lines and/or equipment occurring above ceiling shall be completed and tested before ceiling components are installed.

PART 2 - PRODUCTS

2.1 GENERAL

A. Acoustical Panel Standard: Comply with ASTM E 1264.

B. Metal Suspension System Standard: Comply with ASTM C 635.

C. Metal Edge Moldings and Trim: Type and profile indicated or, if not indicated, manufacturer's standard moldings for edges and penetrations that fit acoustical panel edge details and suspension systems indicated; formed from sheet metal of same material, finish, and color as that used for exposed flanges of suspension system runners.

2.2 ACOUSTICAL CEILING PANELS **(Ceiling Type A, Refer to Drawings)**

A. Acceptable Manufacturers:
1. Ceiling Tile:
a. Basis of Design:
1) USG Frost High-NRC / High-CAC Panels
b. Other Manufacturers: Architect approved prior to bid. Refer to Division 1 requirements.
2. General Performance Description:
a. Factory applied white.
b. Light reflectance: 0.84
c. Noise reduction coefficient: 0.70
d. CAC Min: 36
e. ASTM E1264 Classification: Type IV, Form 1 and Form 2, Pattern E and G.
f. ASTM E84 Surface burning characteristics: Class A, Flame spread: 25, Smoke developed: 50.
g. SLB Edge.
h. 24” x 24” x 3/4”.

2.3 METAL SUSPENSION SYSTEM

A. Acceptable Manufacturers:
1. Steel:
a. Base of Design:
1) USG.

b. Other Manufacturers: Architect approved prior to bid. Refer to Division 1 requirements.

B. DONN Brand DX/DXL Acoustical Suspension System: Double-web, hot-dipped galvanized steel meeting or exceeding ASTM C635.
1. Main and cross tees shall be positively locked, yet removable without need for the use of tools.
2. Hanger wire: galvanized carbon steel; soft temper, prestretched; yield stress load at least three times design load; not less than 12 gauge.
3. Provide seismic clips and other items recommended by manufacturer for seismic details.

2.4 LINEAR METAL CEILING PANEL **(Ceiling Type C on Drawing A4.1A)**

A. Basis-of-Design Product: Subject to compliance with requirements, provide USG Interiors, Inc. 'Barz'

B. All panels are to be manufactured from single sheets of aluminum selected for surface flatness, smoothness and freedom from surface blemishes where exposed to view in a finished unit. Do not use material where the exposed surface exhibit pitting, seam marks, roller marks, stains, discolorations, or variations in flatness exceeding those permitted by referenced standards for stretcher-leveled aluminum alloy sheets.

C. The individual linear members are to be die formed from a single sheet of aluminum, to dimensions as noted on drawings, with integral top return and end flanges. Each individual linear aluminum members shall be straight and square within 1/32" over 10'. Twisting or bowing of linear members is not acceptable. Objectionable deflection will not be tolerated. No indentations, marks or defacing of the exposed surface of the metal ceiling panel will be allowed. Roll forming shall not be allowed.

D. Panel material shall be primed aluminum sheet type 3105 series alloy that has up to 90% recycled content. It shall be machine stretcher-leveled and a minimum of .040" thickness, or greater if required, so that the panel deflection does not exceed L/360.

E. Individual linear members shall be factory attached to torsion spring backer supports (cassette assemblies). Each panel (cassette) assembly shall have minimum two backer supports (three backer supports for lengths greater than 60"), creating a modular panel assembly with minimum 1/4" reveals between panel ends.

F. No fasteners of any kind shall be visible on exposed face surfaces of ceilings or support tees. Down-light openings, sprinkler holes and miscellaneous penetrations shall be carefully field cut as required.

G. The Barz finish shall be:
1. Dark Jatoba S37 "Saranté" PVC free, laminate that is permanently bonded to the aluminum sheet with formaldehyde free, water-based adhesive of minimum bond strength of 425 psi @ 25 degrees C or other color selected from the manufacturer's 23 colors in the Sarante – PVC Free laminate group of colors.

H. Linear member size and spacing shall be 2" Face Width x 4" Deep at 8" on center.

I. Panel sizes are 24" x 96"

J. End Profile: Linear Barz end joints are reveal condition unless specified otherwise integral enclosures. Linear members shall have integral ends in single piece.

K. Barz to be non-perforated unless otherwise noted.

L. The plenum shall be 100% accessible. Every cassette must be removable. Progressive panel access is not acceptable. Heavy duty torsion springs and steel clip assemblies to be mounted to every cassette for downward access, without potential for damage to cassette face or hinge assembly. Hinge assembly shall be mounted to every cassette with minimum two flush to face, counter sunk chamfered fasteners. Attaching torsion spring directly to cassette with fastener will not be acceptable.

M. All Barz with visual exposure where row terminates shall have integral end returns.

N. Provide and install matching finish trim on each side of each suspended area

2.5 ACCESSORIES

A. Sound Attenuation Blankets: The ceiling panels must not be used to support any material including insulation. Where insulation is used, it should be no heavier than 0.26 lbs./sq. ft. and installed with the following USG recommendations: insulation must be applied perpendicular to the suspension cross tees with the suspension system supporting the weight of the insulation.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and structural framing to which acoustical panel ceilings attach or abut, with Installer present, for compliance with requirements specified in this and other Sections that affect ceiling installation and anchorage. Do not proceed with installation until unsatisfactory conditions have been corrected.

B. Work to be concealed: Verify work above ceiling system is complete and installed in manner that will not affect layout and installation of system components.

3.2 PREPARATION

A. Measure each ceiling area and establish the layout of acoustical panels to balance border widths at opposite edges of each ceiling.

B. Field dimensions: Installer must verify actual field dimensions prior to installation.

3.3 INSTALLATION

A. General: Install acoustical panel ceilings to comply with publications referenced below per manufacturer's instructions and CISCA "Ceiling Systems Handbook."
   1. Standard for Ceiling Suspension System Installations: Comply with ASTM C 636.
   2. Standard for Ceiling Suspension Systems Requiring Seismic Restraint: Comply with ASTM E 580.

B. Suspend ceiling hangers from building's structural members, plumb and free from contact with insulation or other objects within ceiling plenum. Splay hangers only where required and,

if permitted with fire-resistance-rated ceilings, to miss obstructions; offset resulting horizontal forces by bracing, countersplaying, or other equally effective means. Where width of ducts and other construction within ceiling plenum produces hanger spacings that interfere with location of hangers, use trapezes or equivalent devices.

C. Install edge moldings and trim of type indicated at perimeter of acoustical ceiling area and where necessary to conceal edges of acoustical panels. Screw attach moldings to substrate with concealed fasteners at intervals not more than 16 inches o.c. and not more than 3 inches from ends, leveling with ceiling suspension system to a tolerance of 1/8 inch in 12 feet. Miter corners accurately and connect securely.

D. Install suspension system runners so they are square and securely interlocked with one another. Remove and replace dented, bent, or kinked members.

E. Install panels with undamaged edges and fitted accurately into suspension system runners and edge moldings. Scribe and cut panels at borders and penetrations to provide neat, precise fit.
   1. Arrange directionally patterned acoustical panels as follows:
      a. In the manner directed by the Architect.

3.4 CLEANING

A. Clean exposed surfaces of acoustical panel ceilings, including trim, edge moldings, and suspension system members. Comply with manufacturer's instructions for cleaning and touchup of minor finish damage. Remove and replace ceiling components that cannot be successfully cleaned and repaired to permanently eliminate evidence of damage.

END OF SECTION 09 51 00

SECTION 07 27 26

FLUID APPLIED MEMBRANE AIR BARRIERS
Addendum 1 – 1/28/26

PART 1 – GENERAL

1.01 SECTION INCLUDES

A. Surface preparation.

B. Application of liquid-applied vapor permeable air barrier.

C. Application of materials to provide bridge and seal air leakage pathways in:
1. Wall connections and penetrations.
2. Walls, windows and doors.
3. Masonry ties.
4. All other penetrations through the wall assembly.

1.02 RELATED SECTIONS

A. Division 3 Section “Concrete”

B. Division 9 Section “Gypsum Sheathing” for exterior sheathing over metal studs.

1.03 REFERENCES

A. ASTM D412 – Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers-Tension.

B. ASTM E84 – Standard Test Method for surface Burning characteristics of Building Materials.

C. ASTM E96 (Method B) – Standard Test Methods for Water Vapor Transmission of Materials.

D. ASTM E283 – Standard Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen.

E. ASTM E783 – Standard Test Method for Field Measurement of Air Leakage Through Installed Exterior Windows and Doors.

F. ASTM E1105 – Standard Test Method for Field Determination of Water Penetration of Installed Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform or Cyclic Static Air Pressure Difference.

G. ASTM E2178 – Standard Test Method for Air Permeance of Building Materials.

H. ASTM E2357 – Standard Test Method for Determining Air Leakage of Air Barrier Assemblies.

I. The Air Barrier Association of America (ABAA).

1.04 SUBMITTALS

A. General: Submittals shall be in accordance with Specification Section 01 33 00.

B. Submit manufacturer's product data and application instructions.

C. Submit manufacturer’s details of all typical conditions.

D. Certification of compatibility by manufacturer, listing all materials on the project with which the product and accessories may come into contact.

1.05 QUALITY ASSURANCE

A. Installer Qualifications:
   1. Use an experienced Contractor’s Installer and adequate number of skilled personnel who are thoroughly trained and experienced in the application of the air barrier.
      a. Contractor’s Air Barrier Installer performing Work shall be approved by air barrier membrane manufacturer.

B. Obtain air barrier materials and accessories from a single manufacturer regularly engaged in manufacturing the product.

C. Provide products which comply with all state and local regulations controlling use of volatile organic compounds (VOCs).

1.06 PRECONSTRUCTION MEETING

A. Preconstruction Meeting: Convene minimum one week prior to commencing Work of this section, in accordance with Section 01 31 20 Project Meetings.

1.07 MOCK-UPS

A. Prior to installation of air barrier, apply air barrier as follows to verify details under shop drawing submittals and to demonstrate tie-ins with adjoining construction, and other termination conditions, as well as qualities of materials and execution.

B. Apply air barrier on field-constructed mock-ups.

1.08 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.

B. Store materials in a clean dry area in accordance with manufacturer's instructions.

C. Store at temperatures above 40°F, free from contact with cold or frozen surfaces.

D. Protect materials during handling and application to prevent damage or contamination.

1.09 ENVIRONMENTAL REQUIREMENTS

A. Product not intended for uses subject to abuse or permanent exposure to the elements.

B. Do not proceed with product application if rainfall is forecast or imminent within 12 hours.

C. Do not apply membrane when air or surface temperatures are below 20°F.

D. Do not apply when air, material and surface temperatures are expected to fall below 20°F within 24 hours of completed application.

PART 2 – PRODUCTS

2.01 MANUFACTURER

A. Parex USA, Inc.

B. W. R. Meadows, Inc.

C. Tremco Commercial Sealants and Waterproofing.

D. Carlisle Coatings & Waterproofing, Inc.

E. Architect approved equal.

2.02 MATERIALS

A. Liquid Air Barrier System: 100% Acrylic elastomeric waterproof membrane and air barrier which can be either rolled, brushed, or spray applied.
   1. WeatherSeal Spray & Roll-On by Parex USA, Inc.

2.03 ACCESSORIES

A. Flashing and Transition Membrane: Self-adhesive polymeric sheet membrane.
   1. ExoAir 110AT by Tremco.
   2. Air-Shield thru-wall flashing by W. R. Meadows.

B. Joint Sealant: Treat joints at exterior sheathing in strict accordance with air barrier membrane manufacturer's requirements.

C. Liquid Flashing: Fluid applied, single component, flashing membrane for rough openings and detailing.

D. Membrane Adhesive:
   1. Temperature above 40 F: Water-Based Adhesive
      a. Mel-Prime W/B Water-Based Adhesive by W. R. Meadows.
   2. Temperature below 40 F: Solvent-Based Primer.
      a. Mel-Prime VOC Compliant Solvent-Base Adhesive or Standard Solvent-Based Adhesive by W. R. Meadows.

E. Pointing Mastic: mastic for sealing penetrations and terminations of membrane.
   1. Pointing Mastic by W.R. Meadows

PART 3 – EXECUTION

3.01 EXAMINATION

A. Examine surfaces to receive membrane. Notify Architect if surfaces are not acceptable. Do not begin surface preparation or application until unacceptable conditions have been corrected.

3.02 SURFACE PREPARATION

A. Protect adjacent surfaces not designated to receive air barrier.

B. Clean and prepare surfaces to receive air barrier membrane in accordance with manufacturer's instructions.

C. Do not apply membrane to surfaces unacceptable to manufacturer.

D. Concrete surfaces must be clean, free of standing water, ice, snow, frost, dust, dirt, oil, curing compounds or any other foreign material that could prevent proper adhesion of the membrane.

E. Patch all holes and voids and smooth out any surface misalignments.

F. Patch all cracks, protrusions, small voids, offsets, details, irregularities and small deformities with cementitious patching mortar at least two hours before application.

G. Ensure joints between dissimilar building materials are sealed with a strip of self-adhesive membrane 6" wide, centered over the joint.

H. Exterior Sheathing Panels:
1. Install and fasten exterior sheathing panels according to the sheathing manufacturer’s instructions.
2. Treat all countersunk and removed fasteners with joint filler or liquid flashing material.
3. Inspect the joint to ensure that all areas to receive joint treatment are clean, dry, smooth, and free from all bond-breaking contaminants.
4. Remove and replace any damaged structural wall components.
5. Joint Treatment using liquid flashing:
    a. Fill joint with liquid flashing creating a 1” band over the joint area.
    b. Do not strike flush with the sheathing surface.
    c. Run the spreader tool over the liquid flashing to remove any inconsistencies.
6. Joint Treatment with polyurethane joint sealant
    a. Fill joint with joint sealant and strike flush with the surface of the exterior sheathing panels.
    b. Allow joint sealant to cure for a minimum of 24 hours prior to proceeding with full application of air barrier membrane.
7. Joint Treatment with self-adhesive membrane
    a. Prime either side of the joint extending 3” from the center with adhesive recommended by the manufacturer.
    b. Install a 4” strip of self-adhesive membrane centered over the joint and roll press firmly into place.
    c. Fill all joints wider than 1/4" with detailing membrane prior to application of self-adhesive membrane.

8. Joint Treatment with fluid applied membrane
    a. Fill joint area with fluid applied membrane using a spreader tool or putty knife.
    b. Apply fluid applied membrane extending beyond the joint 3” onto face of exterior sheathing.
    c. Fully embed the reinforcing fabric 3” wide into the wet fluid applied membrane centered over the joint.
    d. Run the spreader tool or putty knife over the embedded reinforcing fabric to remove any air bubbles.

3.03 APPLICATION OF AIR BARRIER SYSTEM

A. TRANSITION MEMBRANE
1. Prime surfaces to be covered in one working day with applicable primer.
2. Apply transition membrane with a minimum overlap of 3” onto primed surface at all joints, columns, beams and dissimilar materials.
3. Roll membrane firmly into place.
4. Ensure membrane is fully adhered and remove all wrinkles and fish mouths.
5. Overlap subsequent courses of membrane a minimum of 2” and ensure joints are fully adhered.
6. Seal top edge of transition membrane with pointing mastic.

B. ROUGH OPENING TRANSITION MEMBRANE
1. Self-adhesive Transition Membrane.
    a. Prime the area to be detailed using adhesive recommended by the membrane manufacturer according to the substrate.
    b. Pre-cut the self-adhesive membrane for each area of the rough opening to ensure ease of handling.
    c. Apply the first pre-cut strip at the base of the rough opening by removing the release paper and rolling firmly into place, ensuring that there is a minimum of 3” of membrane extending onto the wall and a minimum of 3” of membrane extending into the rough opening.
    d. Repeat this procedure for the vertical areas of the rough opening and the header portion of the opening.
    e. Ensure all edge overlaps are a minimum of 2” and end to end overlaps are 4”.
    f. Seal all terminations with mastic recommended by membrane manufacturer.

C. THROUGH WALL FLASHING
1. Prime surfaces to be covered in one working day with applicable primer.
2. Remove release paper prior to application.
3. Apply through wall flashing at based of masonry walls as indicated on Drawings.
4. Recess through wall flashing 1/2” from the face of the masonry.
5. Apply a bead of pointing mastic if through wall flashing is not embedded into masonry.

D. AIR BARRIER MEMBRANE
1. Apply air barrier membrane in accordance with manufacturer's instructions.
2. Thoroughly mechanically mix membrane prior to application.
3. Frequently inspect surface area with a wet mil gauge to ensure consistent thickness.

4. Work material into any fluted rib forming indentations.
5. Allow 48 hours for full cure of the membrane.
6. Avoid use of products which contain tars, solvents, pitches, polysulfide polymers, or PVC materials that may come into contact with air barrier system.

3.04 PROTECTION

A. Cover air barrier membrane as soon as possible, since it is not designed for permanent exposure.

END OF SECTION 07 27 26

SECTION 28 3010

VIDEO SURVEILLANCE SYSTEM
Addendum 1 – 1/29/26

PART 1 GENERAL

1.01 RELATED DOCUMENTS

A. Contract drawings and general provisions of the Contract, including General and Supplementary Conditions apply to this Section and shall be considered a part of this section and shall have the same force as if specified herein full.

1.02 DESCRIPTION

A. This section includes furnishing and installing all materials and providing all labor and supervision pertaining to the installation of an IP Based Video Surveillance System.

B. The requirements of the IP Based Video Surveillance System shall include all raceway, cabling, devices, equipment, computer software and hardware required to provide a fully functional system. Provide all labor, materials, equipment, and supervision to install, check out, adjust, and calibrate the total system. Reference contract drawings for complete requirements.

C. The requirements of the IP Based Video Surveillance System shall include all power inserters and connection to electrical panels for power circuits at exterior camera locations for complete and fully operational system.

D. The requirements of the IP Based Video Surveillance System include all programming of the Video Server to record all cameras in Time Lapse and Motion / Alarm record modes. The Video Server shall be programmed to record all cameras in continuous Time Lapse Mode at a minimum frame rate of 5 frames per second (fps) continuous at 1080p resolution. The Video Server shall be programmed to record when activity is detected in the cameras field of view at 30 frames per second and at the full resolution of the camera. During alarm recording mode, cameras are to be recorded at full resolution so that full zoom capabilities are available when viewing archived alarm events. This level of programming has been difficult for most Security Contractors. Obtaining Manufacturer's on-site / phone support and all associated cost are the full responsibility of the Security Contractor.

E. The requirements of the IP Based Video Surveillance System include all programming of the Video Server to ensure recorded video from all cameras is stored and archived for 31 days. The Security Contractor shall be responsible for sizing the archiver hardware storage capacity based on 31 days of constant recording of all cameras recorded at all times and at 5 fps as well as motion-based recording based on 50% motion, 30 fps and full resolution for 31 days.

F. This division of the Specifications covers the complete IP Based Video Surveillance system as indicated on the Drawings and specified herein. The Security Contractor shall

provide all labor, materials, equipment, and supervision to install the specified system with the exception of cabling, path panels, patch cords, conduit & junction boxes. The installation of all cabling, patch panels & patch cords shall be responsibility of Security Contractor. The junction boxes and conduits shall be responsibility of electrical Contractor.

G. As part of the scope of this contract, the Security Contractor shall install and configure client software on up to two (2) Owner provided workstations. Each workstation shall be able to view all respective cameras.

H. The IP Based Video Surveillance System shall utilize an existing dedicated network. The Security Contractor must ensure that all Video surveillance cameras are connected to this network and that all video is routed to the Network Server (for live view and archiving).

I. The Security Contractor shall be responsible for coordinating the exact location of the IP Based Video Surveillance System network equipment in data racks provided by Security Contractor. The data racks shall be provided by low voltage Contractor.

J. A minimum of one (1) portable media with client monitoring software and one (1) Operating Instruction Manual (for the software) must be provided with each Client Workstation software application that is loaded onto Owner provided computer hardware. Additional copies of client monitoring software with loading and operating instructions on portable media must be available upon Owner's request at no charge for the duration of the warranty period.

K. All conflicts between the drawings and specifications shall be brought to the attention of the owner as soon as possible. In general, specification requirements shall take precedence over drawing requirements.

L. As part of the base bid, the Video surveillance management and recording system shall include a network-based Video Recording System. Contractor shall provide all storage hardware and licenses required to expand the existing Aviglon network for the county.

1.03 QUALITY ASSURANCE

A. Industry Referenced Standards. The following specifications and standards are incorporated into and become a part of this Specification by reference.
1. NFPA 70 National Electric Code
2. UL 50 Enclosures for Electrical Equipment
3. UL 1590
4. FCC Part 15, Class B
5. ICEA S-83-596 ICEA Standard for Fiber Optic Premises Distribution Cabling – Current Edition
6. IEEE802.3at PoE
7. IEEE802.3af PoE
8. EN 60950-1
9. EN 55022 Class B (Emissions)
10. EN 55024 (Immunity), VCCI

1.04 INSTALLER'S QUALIFICATIONS

A. Firm with at least 5 years of successful application, installation, and testing experience on specified systems and equipment. All supervisors and installers assigned to the installation of this system or any of its components shall have factory certification from each equipment manufacturer that they are qualified to install and test the provided products. General Electric trade staff shall not be used for the installation of the Video Surveillance System and associated hardware. All installers assigned to the installation of this system or any of its components shall have a minimum of 3 years' experience in the installation of the specified equipment.

B. Security Contractor must be a certified installer of the manufacturer of the IP Based Video Surveillance System.

C. The Security Contractor must be licensed in the State of Georgia as a Low Voltage Telecommunications (LV-T) or Low Voltage Unrestricted (LV-U) class certification.

D. The responsibilities of the Security Contractor shall include but not be limited to the following:
1. Shop drawings on all IP Based Video Surveillance Systems and equipment.
2. Installation of all new IP Based Video Surveillance Systems and equipment as documented in the drawings and specifications.
3. Set up and programming of all alarm event and recording parameters for all cameras (as defined by Owner).
4. Coordination with Owner to establish at list of common camera names. Then programming of all camera names into all Video Surveillance System displays.
5. Testing and check-out of all IP Based Video Surveillance systems and equipment.
6. Training for all IP Based Video Surveillance systems and equipment.
7. Warranty for all IP Based Video Surveillance systems and equipment.
8. As-Built drawings, operations, and maintenance for the complete IP Based Video Surveillance System.

E. The responsibilities of the Security Contractor shall include but not be limited to the following:
1. Set up and programming of all motion detection.
2. Wire and wiring termination for all IP Based Video Surveillance and control systems and equipment.

1.05 SUBMITTALS

A. Product data for each component.

B. Shop Drawings: Prior to proceeding with the work: Provide detailed equipment assemblies and indicate dimensions, weights, required clearances, method of field assembly, components, and location of each field connection, and a complete schedule of all equipment and materials with associated manufacturers cuts sheets which are to be used.

1. Wiring Diagrams: Detail wiring for power, signal, and control systems and differentiate between manufacturer-installed and field-installed wiring. Identify terminals to facilitate installation, operation, and maintenance. Include a single-line diagram showing cabling interconnection of components and levels throughout system and impedances.
2. Artwork drawings and lists indicating proposed nameplate nomenclature and arrangements for control panels and plug panels prior to fabrication reflecting equipment used.
3. Each drawing shall have a descriptive title and all sub-parts of each drawing shall be labeled. All drawings shall have the name and locations of the project, Systems Contractor's name in the title block.
4. Details and descriptions of any other aspect of the system, which must differ from the contract documents due to field conditions or equipment, furnished.

C. FCC Approval: The system shall be approved for direct interconnection to the telephone utility under Part 68 of FCC rules and regulations. Systems, which are not FCC approved or utilize an intermediary device for connection, will not be considered. Provide the FCC registration number of the system being proposed as part of the submittal process.

D. Product Certificates: Signed by manufacturers of equipment certifying that products furnished comply with specified requirements.

E. Installer Certificates: Signed by manufacturer certifying that installers comply with requirements.

F. Manufacturer Certificates: Signed by manufacturers certifying that they comply with requirements.

G. Field Test Reports: Indicate and interpret test results for compliance with performance requirements. Include record of final matching transformer-tap settings, and signal ground-resistance measurement certified by Installer.

H. Maintenance Data: For equipment to be included in maintenance manuals specified in Division 1.
   a. Record of Owners equipment-programming option decisions.
   b. All instructions necessary for proper operation and manufacturer's instructions.
   c. "Proof of Performance" information.
   d. Manufacturer's maintenance information.
   e. Copies of non-proprietary computer programs and system set up disks documenting all programmable features of the installed system.

I. Record Drawings: Prior to final acceptance, provide three (3) complete sets of drawings indicating all cable numbers and construction details in accordance with the actual system installation. Revise all shop drawings to represent actual installation conditions. These Record Drawings will be used during "Final Acceptance Testing".

J. System Training: Submit the following information describing the training programs and system trainers as outlined in paragraph 1.6 of this specification and in accordance with Division 1 specifications.

a. Include with the submittal a preliminary staff development training program in outline form for review and approval by the Design Professional.
b. Include with the submittal a current copy of the trainer's certification from the manufacturer that certifies and identifies the trainer(s) who are eligible to provide training and support for the project.
c. Include with the submittal a current copy of trainer's need's assessment form which will be reviewed with the Design Professional for the system's preliminary system programming and configuration.
d. Include with the submittal copies of all documentation used to identify for the owner those participants attending and completing the training programs.

K. A copy of the manufacturer's standard statement of warranty proving all equipment provided for the system is covered with the required five-year warranty shall be included with the project submittal. This statement of warranty shall be provided on the manufacturer's stationary.

1.06 DRAWINGS

A. The Drawings indicate the arrangement of IP Based Video Surveillance equipment. Coordinate installation of equipment with the structural, mechanical, and electrical equipment and access thereto.

B. Raceway home runs as shown on the IP Based Video Surveillance System shall be installed as shown on the Drawings, and as required by the associated equipment manufacturers.

C. Revit drawings (floor plans only) in electronic RVT format shall be provided to the Security Contractor and Security Contractor for the production of shop drawings and As-built drawings. The Security Contractor is totally responsible for the conversion, if necessary, of the electronic files to whatever in house CAD program the Security Contractor utilizes for the production of the as-built drawings.

1.07 ACCEPTABLE MANUFACTURERS

A. Reference products section of specifications for acceptable manufacturers.

1.08 WARRANTY

A. Provide a manufacturer's five-year warranty of the system against defects in material and workmanship. This warranty will cover all electronic equipment associated with the system. If any defects are found within the warranty period, the defective equipment shall be replaced at no cost (equipment only); a one-year warranty shall be provided for labor.

B. A copy of the manufacturer's standard statement of warranty proving all equipment provided for the system is covered with the required five-year warranty shall be included with the project submittal. This statement of warranty shall be provided on the manufacturer's stationary. The standard five-year warranty is an important element in establishing a standard in quality. Manufacturers who circumvent the five-year warranty by offering special "extended warranties" that are not part of their normal published warranty will not be accepted.

C. Contractor shall respond, excluding weekends and holidays, within 24 hours to any warranty service calls. If equipment cannot be repaired within 24 hours of service visit, the Contractor shall provide "loaner" equipment to the facility at no charge.

D. Make available a service contract offering continuing factory authorized service of the system after the initial warranty period.

PART 2 – PRODUCTS

2.01 MATERIALS

A. Materials or equipment specified by manufacturer's name shall be provided unless approval of other manufacturers is listed in addendum to these Specifications. Any materials or equipment approved in addendum shall function the same as the equipment specified.

2.02 VIDEO SURVEILLANCE CAMERAS

A. All cameras shall be U.L. listed and shall be the standard product of one manufacturer complying with not less than the specifications contained herein. Installation of each camera shall include mounting brackets and/or camera housings fully compatible with the camera provided and as required by IP Based Video Surveillance System camera schedule.

B. All camera installations shall be securely attached to the mounting surface. Use lead shields on solid masonry, toggle bolts for hollow masonry, and machine bolts for steel. All anchoring devices shall be rated to support not less than five times the total equipment weight. All anchor bolts must be a minimum of 2 ½" inches in length. Reference mounting details in contract documents.

C. Indoor/Outdoor Fixed Dome, Wide Dynamic Range, 2 Megapixel Cameras (Type 1):
1. The camera shall be the Avigilon H5A series vandal resistant, dome style camera.
2. This camera shall also be available in a comparable outdoor rated version.
3. All cameras, in this category, shall be equipped with variable focal (3.3mm to 9mm) lenses.

D. Indoor 270 Degree Field-of-View Multisensor, Dome Style, Wide Dynamic Range 15 Megapixel Camera (Type 2)
1. The camera shall be the Avigilon H4 Multisensor vandal resistant, 270-degree dome style camera, 15 Megapixel (3X5MP).
2. All cameras, in this category, shall be equipped with a 2.8mm fixed lens.
3. Provide outdoor dome and cover for exterior locations.

E. Indoor/Outdoor Fixed Dome, Wide Dynamic Range, 6 Megapixel Cameras (Type 3):
1. The camera shall be the Avigilon H5A series vandal resistant, dome style camera.
2. This camera shall also be available in a comparable outdoor rated version.
3. All cameras, in this category, shall be equipped with variable focal (4.9 to 8mm) lenses.

F. Indoor/Outdoor Fixed Dome, Wide Dynamic Range, 4 Megapixel Cameras (Type 4):
1. The camera shall be the Avigilon H5A series vandal resistant, dome style camera.
2. This camera shall also be available in a comparable outdoor rated version.
3. All cameras, in this category, shall be equipped with variable focal (3.3mm to 9mm) lenses.

G. Indoor Fixed Dual Sensor Dome, Wide Dynamic Range, 10 Megapixel Cameras (Type 5):
1. The camera shall be the Avigilon H5DH Dual Sensor series, dome style camera, 10 Megapixel (2X5MP).
2. All cameras, in this category, shall be equipped with variable focal (3.35 to 7mm) lenses.

H. Indoor/Outdoor Fixed Dome, Wide Dynamic Range, 8 Megapixel Cameras (Type 6):
1. The camera shall be the Avigilon H5A series vandal resistant, dome style camera.
2. This camera shall also be available in a comparable outdoor rated version.
3. All cameras, in this category, shall be equipped with variable focal (4.9mm to 8mm) lenses.

I. It shall be the Security Contractor responsibility to ensure that the latest version of firmware, that is compatible with the Video Management System, is downloaded to all cameras prior to Final Inspection.

J. Interior Mini-Domes: All mini-dome style cameras, installed in lay-in tile ceilings, shall be supported by T-bar Support Kits.

K. Reference camera details and schedule for housing types required.

2.03 VIDEO MANAGEMENT SYSTEM (VMS)

A. GENERAL
1. Approved VMS Manufacturer(s). System shall be Aviglon and shall utilize the existing Aviglon VMS network for the county.
2. The Video Management System (VMS) software shall be used to view live and recorded video from IP devices connected to local and wide area networks. The VMS software shall have a client/server-based architecture that can be configured as a standalone VMS system with the client software running on the server hardware and/or the client running on any network-connected TCP/IP workstation. Multiple client workstations shall be capable of simultaneously viewing live and/or recorded video from one or more servers. Multiple servers shall also be able to simultaneously provide live and/or recorded video to one or more workstations.
3. The VMS shall not charge for the number of concurrent clients.
4. Recording of all videos transmitted to the VMS shall be continuous, uninterrupted, and unattended.
5. The VMS system shall offer the capability of video motion detection recording, such that video is recorded when the motion is detected in the camera's field-of-view or within a pre-programmed region of interest of the camera's view. Video prior to and after the detection of the motion shall also be stored. The exact amount of video stored prior to and after the event shall be determined by the OWNER.
6. The VMS software shall have an open architecture supporting IP cameras and encoders from multiple manufacturers providing best-of-breed solutions ranging from low-cost, entry-level features to high-resolution, megapixel features.
7. The VMS client software shall be able to view live video and audio, recorded video and audio, and be able to configure the complete system all from a single application.
8. The VMS shall always continue to record video and audio during the administration and configuration of any feature.

9. The VMS client software shall have the same functionality when connected remotely as it does when it is run locally on the same computer as the server software.
10. The VMS client software shall add and remove features based on the permissions of the user and the licensed functionality.
11. The VMS shall also allow an authorized user to view video through a web client interface. The web client interface shall allow authorized users to view live video, view recorded video, control pan-tilt zoom (PTZ) cameras and activate triggers. The web client interface shall allow connections to multiple VMS servers simultaneously.
12. The VMS server software shall record and retrieve video, audio and alarm data and provide it to the VMS clients upon request.
13. The VMS software shall provide at no additional charge a purpose-built mobile application capable of viewing multiple simultaneous live video streams and playing a recorded video stream. Application shall be provided for both iOS and Android operating systems (including Kindle Fire).
14. The VMS shall license the total number of cameras on the system. This license shall be based on the MAC address of a single network card that is present on the system. The VMS shall only require that this network card be enabled and does not require that data is actually sent through it.
15. The VMS shall not require the manufacturer to be contacted when a camera fails.
16. The VMS server software shall run as a service. The VMS shall not require any application to be running in order to operate.
17. The VMS shall allow the use of maps. The maps will be accessible to users with the appropriate permission levels and display video sources and their status.

B. WEB CLIENT
1. The Web Client will be a thin client, using either an active-x control or an MJPEG streaming method.
2. The Web Client shall support IE, Firefox, Safari, Chrome, and Opera.
3. Licensing will not be required.
4. Users will not be able to change any settings within the server via the thin client.
5. Users will be able to select layouts for live viewing, or individual cameras or groups of cameras.
6. Users will be able to access recorded video and download recorded video from the system.
7. Users will be able to use the motion log to find recorded video.
8. The Web Client shall support the use of facility maps and support the use of custom layouts.
9. The Web client shall allow remote access for iPhone, Blackberry, Windows Mobile, and Android mobile phones without the installation of an app.

C. MONITOR STATION
1. The monitor station will be a thick client for viewing live and recorded video, along with handling administrative tasks.
2. The software shall not require a client license to operate.

3. The thick client will support an encrypted XML file for storing settings. The file can be set up to be shared between many clients, allowing the administrator to update all clients with a single file push.
4. Clients will be able to us Active Directory to authenticate users.
5. The Monitor Station will display the servers it is connected to along with the server's cameras in a tree view on the left-hand side.
    a. The tree view will allow the user to see the status of the servers that the instance of the monitor station is aware of.
    b. The tree view will also include access to custom layouts, facility maps and action buttons.
    c. There will be an option to hide the tree on start-up of the monitor station.
    d. The user shall be able search for cameras using a searchable box on the left-hand tree.
6. Live view will allow views of 1, 4, 8, 9, 10, 13, 16, 25 and 36 cameras. A wide-screen option for 18 and 24 cameras will also be available.
    a. Layouts will be selectable via icon or keyboard function keys.
    b. Layouts will not be limited to cameras from a single server.
    c. Users will be able to get any combinations of layouts to cycle through on the main screen.
    d. Users will be able to designate cameras within a layout to be able to cycle between multiple cameras from multiple servers.
    e. Layouts shall be able to be put into groups.
7. If motion is detected on a camera, then the software, then the camera shall have a red pulse around the edge of the window.
8. Live view will allow cameras to be dragged and dropped onto the live view from the left-hand tree. Cameras can be duplicated in a view.
9. Users will be able to invoke a digital zoom by drawing a box. After invoking the digital zoom, the Monitor Station shall support the use of picture in picture within the zoomed image.
10. Digitally zoomed areas will be treated as a digital PTZ.
11. PTZ Presets shall be listed in a drop-down menu in the camera window.
12. Users shall be able to move the PTZ movements simply by clicking on the image or by using the scroll wheel.
13. Live view shall allow the user to de-warp the video from panoramic lenses and cameras.
14. Right clicking on a camera in live view will have the following behaviors:
    a. Right clicking on a camera within live view will allow the user to be able to review the recently recorded video for that camera.
    b. Right clicking on a camera within live view will also allow access to the properties dialog box for that camera.
    c. Right clicking on a camera will bring up the option to save a still image of the live view.
    d. Live audio will be able to be accessed by right clicking on a camera in the live view.

e. Allowing access to recorded video.

15. Recorded video will be able to be accessed by right clicking the live view, expanding the camera in the tree view, or by opening the media player via the pull-down menus.
16. The Media player shall support the following functionality:
    a. The ability to fast forward and rewind video at up to 16x normal playback speed.
    b. The ability to generate clips of recorded video. The clips can be defined by either frame numbers or by using slider bars visible on the player.
    c. The ability to save video directly to a CD or to a local hard drive or network share.
    d. If motion detection and logging are enabled, a timeline of video will be displayed. The user will be able to zoom in on the timeline and use it to select where video will start playing from.
    e. Users will have access to a motion log which will show motion events and how long they occurred for. Clicking on the entry will start the video from the appropriate spot.
    f. The player will support digital zoom.
    g. The player will have the option to allow an object search. The user will be able to define an area and seek out changes in the image within that area.
    h. The User shall have the option of forcing export of video as the native codec of the camera or MJPEG.
    i. User will have the option to burn time-date into the video as a clip.
    j. Users will have the option to create a time index file for clips.
    k. Users will be able to grab a snapshot of the recorded video.
17. Synchronized playback will allow for cameras to simply be dragged and dropped into the player. The Synchronized player shall allow for the exporting of the view of up to four cameras a single video file.
18. The Monitor Station will be able to display logging information, such as changes to the server, lost camera signals, who exported recorded video, when did users log-on/off and other errors. This functionality will be limited to administrative users. The log will be exportable as txt or to the Windows clipboard.
19. The Monitor Station shall also provide real time status updates for server status and camera status, including the CPU usage, disk usage, bandwidth usage, licensing and number and names of users who are logged in.
20. The system will support an Alarm Log to make it easier to find DIO based events.
21. Facility maps will be available in the software for viewing.
    a. When the user hovers over a camera in the facility map it will display the camera in a window off the side of the map.
    b. While a camera is displayed it will allow access to recorded video from that camera as well as the live stream.
    c. Cameras will display where they are pointed.

d. Embedded layouts will change the layout of the Monitor station if they are clicked on.
e. Embedded Facility maps will cause the current map to change to the embedded map if clicked on.
f. The user will have the option of importing and placing doors from supported access control partners on the map. This shall allow them to see badge events as well as alarm events. It shall also support the ability to lock and unlock doors from the map.
g. Panic button events from the Audio Enhancement systems will be visible on the map as well.

22. The Monitor Station will support the Axis Joystick as well as standard USB joysticks.
23. The software shall support the ability to open a live window that can be moved around. This window will be able to access the view of any camera or layout the user has access to.
24. The user will be able to enable or disable the following settings:
    a. Server name in the live view.
    b. Camera Name in the live view.
    c. Audio notification on motion.
    d. Forcing aspect ratio.
    e. Use Direct Show for display.
    f. Double clicking to change the server layout.
    g. Double clicking expands the camera.
    h. Allowing multiple live windows.
    i. Block live windows from popping up.
    j. Live window always on top.
    k. The speed in which layouts cycle.
    l. Hiding left tree on start up.
    m. Launching Facility maps on start up.
25. Users with Administrator privileges will be able to configure the server and camera settings. Users will also be able to test SMTP settings and database settings.
    a. Users will be able to configure the framerate of the camera, including the option to have the server record continuously at 1 fps with the option to go to the camera's maximum framerate on motion detection.
    b. Users will be able to select various time-lapse options for the camera.
    c. Users will be able to select the camera stream type.
    d. Users will be able to select camera or server-side motion detection.
26. Users will be able to access a graphic representation of what the server's motion detection settings are picking up.
27. Users will be able to configure user settings as well as layout settings from within the thick client.
28. The software shall allow users to send video or messages to other users in the form of a popup window.

29. The Monitor Station will allow users to send video to other users, allowing for remote live pop ups of video of important events.
30. The Monitor Station will support Layout touring. Selecting a layout will cycle through a list of cameras.

D. IP VIDEO SERVER

1. The Server shall be designed to run on a Windows platform, supporting both Desktop and Server class operating systems including Windows7.
2. Server shall run as a Window's Service. This service shall run as part of the local service account. This service shall be running as long as the system is booted and has started Windows. It shall not require the user to be logged in.
3. The Server will store settings in SQL Express and shall not require a full MS-SQL license.
4. The Server shall have an option for a 32-bit binary and a true 64-bit binary. In a 64-bit OS, the server shall run as a native 64-bit application, not merely a 32-bit application.
5. The service shall connect to the camera and handle streaming to the server. It shall not require each client to connect to individual cameras.
6. This service shall allow the cameras to be placed on one network and the clients on a separate network using a different IP range.
7. The software shall support the ONVIF standard.
8. The software shall support Megapixel virtual cameras within a single camera license.
9. The server shall only require two ports for streaming video as well as handling any setting changes or commands from the client software.
10. The Server shall record the video streams from different cameras.
    a. The service shall handle transcoding of the camera streams if the cameras are MJPEG based. The video shall be re-encoded to WMV to reduce storage needs and to reduce the impact of streams to clients on the server.
    b. For MPEG-4 based cameras, the video shall be stored in the native codec of the server.
    c. For H.264 based cameras the video shall be stored in the native codec of the server.
    d. Each camera will have the option to be able to be stored in different locations (i.e., One locally, another on a NAS, a third on a different network share)
    e. Streaming from server to client shall support H.264.
11. The Server shall support H.264, MPEG-4, MJPEG and MXPEG based cameras.
12. The Server shall support motion detection at the camera and at the software levels.
13. The Server shall provide graphic examples of what it determines as motion to thick clients if the thick client requests it.
    a. The software shall display the motion detection as an outline around the area moving.

b. The software shall provide a bar showing the total percentage of change. This bar shall have a slider on it to allow the user to quickly set motion detection.

14. The Server shall allow for multiple zones to be set within an image that support differing motion detection values within a cameras field of view.
    a. There shall be no limit on the total number of zones allowed, either on a per camera or per server basis.
    b. Zones should allow the ability to ignore motion within an area.
    c. The user shall have the ability to move the zones after the fact.
    d. Motion zones should be able to be tied into a rules engine to allow the software to use them as triggers for events.
15. The Server shall support the use of imported maps to show camera placement. These maps will be in .jpg, .gif, or .bmp formats as determined by the user.
    a. Hovering over a camera on a map shall cause it to be displayed in a window on the side.
    b. When the camera is displayed on the side, the option to review recently recorded video will be available to them.
    c. The user shall be able to embed layouts onto the facility map. Clicking on the layout shall change the display of the client software.
    d. Alarms from DIOs shall be able to be embedded as well.
    e. Audio sources shall also be an option.
    f. Other facility maps shall also be an option to embed. Clicking on a different embedded map shall bring up that map.
    g. Doors from certain access control systems can be imported and displayed. Hovering over the door shall display the last badge used to badge in, a live view of the camera associated with the door. The user from this pop up shall be able to see badge events and alarm events along with the associated video.
16. The Server shall not require the administrator to contact the manufacturer to replace a camera.
17. The Server shall support reporting to a diagnostic tool.
    a. The server will report the number of active cameras.
    b. The server shall report active cameras offline.
    c. The version of the server.
    d. The amount of disk space left.
    e. The recording status of the server.
18. The server shall support pre-motion and post motion recording.
19. The server shall support customizable layouts. The layouts will allow for blank spaces within the layout.
20. The server shall support an unlimited number of users.
    a. Users can be drawn from either an Active Directory server, Novell eDirectory or entered manually.
    b. There will be five different levels of user.

c. Users can be members of a group with settings set for the group. Individual user settings can override the group settings.

d. Permissions can be set for live viewing, access to recorded video, control of PTZ cameras, access to audio, the ability to export video, custom layouts, facility maps and rules. Permissions can be defined on a per camera basis.

e. The server shall support the option of having the users limited to being signed into a single location.

21. The server will include a diagnostic version with limited interface, to allow for testing of the server.
22. The server shall support an optional secondary server with fall-over capacity.
23. A rules engine shall be included to allow the server to handle more complex tasks.
    a. Triggers will include:
        1. Dry contacts (DIO)
        2. Motion detection of a camera stream.
        3. Scheduled events. Events can be scheduled on daily, weekly, or monthly basis. Individual events can be handled as well.
        4. An alert button for the user interaction in the monitor station.
        5. Inputs sent programmatically via appropriate APIs.
        6. Access control events from supported Access Control Vendors.
    b. Actions will include:
        1. Logging the event.
        2. Opening or closing a dry contact.
        3. Sending an e-mail with a custom text message tied to the trigger. Multiple texts will be allowed for different triggers.
        4. Sending an e-mail with an .avi clip from a selected camera.
        5. Sending an e-mail with a .jpg of a selected event from a camera.
        6. Opening a live window for a user who is viewing.
        7. Move a PTZ to a certain preset location.
        8. Force recording.
        9. Force recording with audio.
        10. Instant Replay
        11. Sending video to a Network Decoder
        12. Switching single camera or layout views.
        13. Message Instruction
        14. Moving, copying, or deleting of files.
        15. Execute a program or batch file.
        16. Send an ASCII string to a TCP port.
24. The server shall support time out functionality.
25. A universal RTSP option shall exist for adding cameras if they are not currently supported through native APIs.
26. Full PTZ functionality shall be supported.
27. Dewarping of Panoramic shall be supported for the following manufacturers:
    a. Sentry 360
    b. Vivotek
    c. Panasonic

d. Axis
e. Immervision
f. Mobotix
g. ACTi
h. Advidia

28. The server will only stream video to clients that the clients request.
29. If live video is paused, then the server shall stop streaming video to the clients to conserve bandwidth.
30. The server shall support integration with various access control platforms, including:
    a. S2
    b. Lenel
    c. Monitorcast
31. The server shall have support for the Audio Enhancement's panic button functionality.
32. The server shall have the ability to handle a total throughput of 600 mbit/s total throughput for the server for camera connections.

2.04 ETHERNET NETWORK SWITCHES

A. All network switches shall be as selected by the Owner's IT Support Group and provided by Security Contractor.

B. Minimum requirements for Gigabyte PoE Ethernet Network Switches are as follows:
1. Ethernet switches shall be UL listed and shall meet with regulatory agency approval for Safety Certification, Electromagnetic Emission Certification, and Network Equipment-Building System (NEBS) guidelines.
2. All switches to be capable of mounting in standard 19" equipment racks.
3. All switches must support Quality of Service (QOS) and shall support IEEE 802.1p COS and Internet Protocol (IP) Differentiated Services Code Point (DSCP) services as a minimum.
4. All switches shall support rate-limiting based on source/destination IP address, source/destination MAC address, or Layer 4 TCP/UDP information.
5. All switches shall provide Power over Ethernet and support the following standards: IEEE 802.3ad, IEEE 802.1Q, 802.1D, 802.1X, and 802.3af.

C. Acceptable manufacturers shall include Cisco Systems and Hewlett-Packard.

2.05 PATCH PANELS (PROVIDED BY SECURITY CONTRACTOR)

A. All patch panels shall be provided by security Contractor except where noted on drawings that patch panels will be provided as part of the structured cabling system. See plans for quantity and size of each patch panel. Provide additional patch panels as required to land all cables as necessary.

2.06 PoE INSERTERS (MIDSPAN)

A. Minimum configuration shall be:
   1. 10/100/1000 Mbps pass through rate
   2. Each device / port shall meet IEEE PoE or upcoming IEEE PoH standards

B. Minimum number of ports shall be 12. See Contract drawings to verify the exact quantity of ports required at each facility. Note that spare ports are required for future expansion.

C. PoE power options shall be 15.4, 30, 36 or 72 watts.

D. Acceptable manufacturers shall be PowerDsine and Transition Networks. NO SUBSTITUTIONS ALLOWED.

E. Acceptable models are the 9000 and 9500 series.

2.07 PoE EXTENDERS

A. Minimum configuration shall be:
   1. 10/100/1000 pass through rate
   2. Each device / port shall meet EEPoE standards
   3. Each port extends data and PoE connections 200 meters

B. Acceptable manufacturers shall be PowerDsine, Veracity, and Transition Networks. NO SUBSTITUTIONS ALLOWED.

2.08 COPPER WIRING REQUIREMENTS (Provided by Security Contractor, except for locations as noted on drawings where cables are provided by the Voice/Data Contractor)

A. CAT 6 cable between IP Camera location and the closest MDF / IDF shall be provided. The following requirements shall be for any miscellaneous cables needed to make the IP Based Video Surveillance System fully operational:
   1. Indoor: Data cables shall be 100 Ohm, un-shielded twisted pair (UTP), 23 AWG, plenum rated with solid copper conductors. Cables shall exceed ANSI/TIA/EIA-568-B.2 Category 6 requirements and the spool shall be labeled as such. Cables shall be tested to 250 MHz. Cables shall be UL or ETL verified to exceed Category 6 requirements and cable jacket shall be labeled to indicate verification. Cable color shall be yellow.
   2. Outdoor Rated: Data cables shall be 100 Ohm, un-shielded twisted pair (UTP), 23 AWG, outdoor rated with solid copper conductors with water blocking properties. Cables shall exceed ANSI/TIA/EIA-568-B.2
      Category 6 requirements and the spool shall be labeled as such. Cables shall be tested to 250 MHz. Cables shall be UL or ETL verified to exceed Category 6 requirements and cable jacket shall be labeled to indicate verification. Cable color shall be black.

2.09 CATEGORY 6 CONNECTIVITY (Provided by Security Contractor)

A. Termination jacks for CAT 6 cable between IP Camera location and the closest MDF /

IDF shall be provided. The following requirements shall be for any miscellaneous connectors needed to make the IP Based Video Surveillance System fully operational:

1. Each jack shall be power sum rated, with a power sum NEXT performance equal to or better than the ANSI/TIA/EIA-568-B.2-1 Category 6 pair-to-pair NEXT performance specifications.
2. Each jack shall be T568B wiring configuration.

2.10 SURFACE MOUNT BOXES "BISCUIT" (Provided by Security Contractor)

A. Surface mount boxes shall house two jacks.

B. Bases shall be installed with two screws to building structure.

C. Boxes shall be compatible with connectivity.

D. Blanks shall be provided for each unused port.

2.11 CATEGORY 6 PATCH CORDS (Provided by Security Contractor)

A. Category 6 patch cords shall be provided by security Contractor. Coordinate length of each patch cord with Security Contractor.

2.12 WIRING DUCT (Provided by Electrical Contractor)

A. Contractor shall provide surface mount raceway for cables installed below ceiling.

B. Wiring duct shall be typical to Hubbell PS3 series.

C. Wiring duct shall be painted to match existing wall color.

2.13 UNINTERRUPTIBLE POWER SUPPLY (UPS)

A. (UPS) Units shall be provided by security Contractor for:
   1. Equipment Racks in MDF / IDF Rooms where Video Surveillance System servers and archiving equipment / hardware is installed.
   2. Equipment Racks in MDF / IDF Rooms where Video Surveillance System network switches, routers, fiber optic receivers and transmitters are installed.

B. (UPS) Units shall be provided and installed at the following locations:
   1. Video monitors, either wall mounted or placed on work surfaces in the Administrative Offices.
   2. All locations where Video Surveillance System client workstations are installed.

C. All UPS Units must be sized adequately to support the complete load connected equipment and to provide battery backup for a minimum of 15 minutes.

D. UPS batteries shall be valve regulated (sealed or maintenance free) lead-acid cell type. Batteries shall be installed within the UPS enclosure or in a standard enclosure provided

for that purpose by the UPS manufacturer.

E. Furnish calculations with shop drawings verifying UPS sizing in compliance with these specifications.

2.14 TRANSIENT VOLTAGE SURGE SUPPRESSION (TVSS) (Provided by Security Contractor)

A. Protect all equipment against surges induced on all control, video, and power cables. All copper cables and conductors which serve as 120V power, control, or video conductors shall have surge protection circuits installed at each end and locations where conductors enter or exit a building. Fuses shall not be used for surge protection.

B. Surge suppression devices shall meet the following standards/publications:
1. UL 497B
2. UL 1449 (must meet 330 Volt suppression rating)
3. IEEE Category B impulse and ring wave tests

C. Acceptable Manufacturers: Northern Technologies, Inc., EDCO, Ditek. Product shall be warranted against defect for a period of not less than five (5) years.

D. All power connections, including 24 VDC and 24 VAC power supplies and direct wired or plug-in 120 VAC power connections, for all systems and components specified herein, shall be equipped with surge suppression devices. Devices shall be bonded to building grounding system in accordance with Article 250 of the National Electric Code.

E. Grounding: Provide a dedicated, separate No. 6 AWG copper conductor from building grounding system to the security equipment room, security equipment cabinets, and central control room. Connect all lightning protection devices and security equipment non-current carrying metal parts to grounding conductor in accordance with Article 250 of the National Electric Code. Provide ground bus bar in equipment room and control room with dedicated ground conductor to each cabinet, enclosure, pull/junction box and all equipment.

F. Ground Resistance Measurement: Each signal ground system D.C. resistance shall be measured between any point on the signal ground bus and the earth ground. An instrument designed specifically to measure the resistance of a point to each earth ground shall be used. The systems sub-Contractor shall measure ground resistance in accordance with the procedure as outlined by the test equipment manufacturer. Instrument shall be Biddle earth resistance test instrument or approved equal.

PART 3 - EXECUTION

3.01 INSTALLATION

A. System components and appurtenances shall be installed in accordance with NFPA 70, manufacturer's instructions, and as shown. Necessary interconnections, services, and adjustments required for a complete and operable signal distribution system shall be provided. Penetrations in fire-rated construction shall be fire-stopped in accordance with contract documents. Conduits and raceways shall be installed in accordance with

the National Electric Code (NEC). Cables shall not be installed in the same cable tray, utility pole compartment, or floor trench compartment with AC power cables. Metal conduits shall not be continuous between buildings. Contractor to provide ground isolation between buildings by breaking continuous copper cabling and metal conduit runs.

B. Equipment: All monitor and camera mount support brackets shall be securely attached to mounting surfaces. Use lead shields on solid masonry, wood screws on wood, and machine bolts on structural steel. All anchoring devices shall be rated to support not less than five times the total equipment weight. See installation details for mounting to gypsum board and lay-in ceilings.

C. Surge Protection:
1. All copper cables and conductors which serve as control, power, or data conductors shall have surge protection devices installed at each end that complies with electrical and security specifications.
2. Protect all video and data equipment from surges induced on all control, power and data cables. All cooper cables and conductors which serve as control, power, or data conductors shall have surge protection circuits installed at each end that meet the IEEE 472 surge withstand capability test. Fuses shall not be used for surge protection.

D. Power: All interior and exterior cameras shall be powered from central power supplies in the security equipment rooms.

3.02 TESTING

A. Materials and documentation to be furnished under this specification are subject to inspections and tests. All components shall be terminated prior to testing. Equipment and systems will not be accepted until the required inspections and tests have been made, demonstrating that the video distribution system conforms to the specified requirements, and that the required equipment, systems, and documentation have been provided.

B. The Contractors shall complete the Commissioning Form (provided as part of the Bid Document Package). The form must be completed and signed off by the Contractors prior to Final Inspection. Final Inspection of the equipment and systems will not be granted until the required inspections and test have been completed by the Contractor.

3.03 LABELING

A. Cable Labeling:
1. All cable and wire installed for VIDEO SURVEILLANCE SYSTEM Systems shall be properly tagged. Use the following standard labeling scheme to identify the physical location of both ends of each cable.
   a. A100 –C1
   b. Camera #: Use one number per cable.
   c. Room number where camera is installed.
   d. Room Camera
   e. Number Number

f. A100 C-1
g. Format Example
h. A100-C1

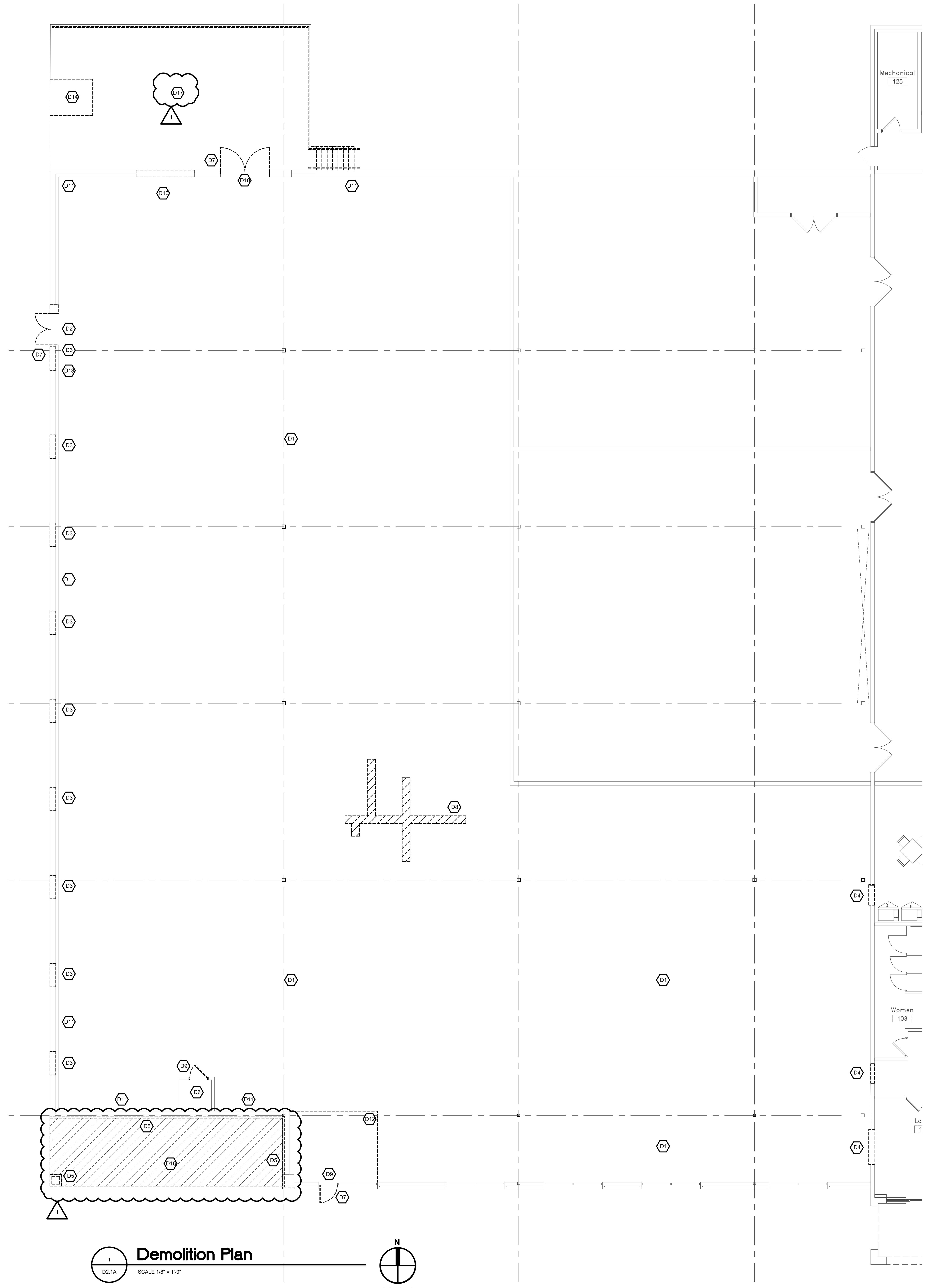
B. Complete two (2) labels for each cable, one for each end. Secure label to end of cable, within view of the termination of the cable at each end. Labels shall be white with a protective wrap-around plastic transparent cover that will serve to protect the ink from smearing and secure the label to the cable. All labels shall be typed with black ink.

3.04 TRAINING

A. The Contractor shall include in the base Contract all costs required to train owners operating and maintenance personnel in the use and maintenance of systems provided under this section of the Specifications. Training sessions shall be conducted by qualified instructors who are familiar with the equipment and with the system installation. "Quickstart" user guides developed by the Contractor shall be presented in these training sessions.

B. Time to be included in base Contracts for specific systems shall be as follows: Video Surveillance Systems – 16 hours.

END OF SECTION 28 30 10



1 D2.1A **Demolition Plan**

SCALE 1/8" = 1'-0"

General Demolition Notes

1. REMOVE AND PROPERLY DISPOSE OF EXISTING CONSTRUCTION WHERE INDICATED. REMOVE ONLY THOSE PORTIONS OF EXISTING CONSTRUCTION NECESSARY TO ACCOMMODATE NEW CONSTRUCTION.
2. ANY EXISTING ELECTRICAL OUTLETS, PHONE JACKS AND DATA OUTLETS FOUND IN WALLS SCHEDULED TO BE DEMOLISHED SHALL BE REMOVED UNLESS OTHERWISE NOTED. CONFIRM ITEMS TO BE SALVAGED FOR REUSE WITH THE OWNER. REFER TO ELECTRICAL FOR EXTENT OF REMOVAL AND NEW WIRING REQUIREMENTS.
3. CARE SHALL BE TAKEN TO PROTECT EXISTING WORK TO REMAIN FOR THE DURATION OF THE PROJECT. PROTECTIVE COVERS SHALL BE UTILIZED TO PROTECT WORK NOT INDICATED TO BE REMOVED. ALL FINISHES DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER.
4. WHERE ITEMS ARE REMOVED IN EXISTING WALLS SCHEDULED TO REMAIN, WALLS SHALL BE PATCHED, PREPPED AND REPAIRED TO MATCH ADJACENT FINISH.
5. ALL BUILDING SYSTEMS INCLUDING, BUT NOT LIMITED TO, HVAC, FIRE ALARM, SPRINKLER, AND ALL LIFE SAFETY SYSTEMS SHALL REMAIN IN OPERATION AT ALL TIMES FOR THE DURATION OF THE PROJECT. ANY ANTICIPATED OUTAGE SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER IMMEDIATELY PRIOR TO EACH OCCURRENCE.
6. EXISTING BUILDING HAS A FIRE ALARM SYSTEM INSTALLED AND IN OPERATION. CONTRACTOR SHALL ENDEAVOR TO KEEP EXISTING FIRE ALARM IN SERVICE AND OPERATING DURING CONSTRUCTION. PER NFPA 101, CURRENT EDITION, - WHERE A REQUIRED FIRE ALARM SYSTEM IS OUT OF SERVICE FOR MORE THAN 4 HOURS IN A 24-HOUR PERIOD, THE AUTHORITY HAVING JURISDICTION SHALL BE NOTIFIED, AND THE BUILDING SHALL BE EVACUATED OR AN APPROVED FIRE WATCH SHALL BE PROVIDED FOR ALL PARTIES LEFT UNPROTECTED BY THE SHUTDOWN UNTIL THE FIRE ALARM SYSTEM HAS BEEN RETURNED TO SERVICE.
7. SHUT DOWN OF SOME BUILDING SYSTEMS WILL BE REQUIRED IN ORDER TO CONSTRUCT THIS PROJECT. THESE SHUT DOWN ACTIVITIES MAY NEED TO BE PERFORMED AFTER BUSINESS HOURS AND ARE TO BE COORDINATED WITH THE OWNER IN ADVANCE.
8. ALL DEMOLITION WORK SHALL COMPLY WITH THE REQUIREMENTS OF NFPA 241, CURRENT EDITION, STANDARD FOR SAFEGUARDING CONSTRUCTION, ALTERATION AND DEMOLITION OPERATIONS.
9. WHERE NEW DOOR FRAMES ARE INSTALLED IN EXISTING WALLS, ROUGH OPENING DIMENSIONS SHALL BE VERIFIED BY CONTRACTOR.
10. WHERE NEW FINISHES ARE TO BE INSTALLED, EXISTING FINISHES ARE TO BE REMOVED.
11. THE CONTRACTOR SHALL PHOTOGRAPH EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION. ANY DAMAGE TO EXISTING BUILDING OR FINISHES CAUSED BY THE CONTRACTOR OR CONTRACTOR'S FORCES SHALL BE REPAIRED AT NO COST TO THE OWNER. ALL REPAIRS SHALL MATCH EXISTING CONSTRUCTION AND CONDITIONS AND SHALL BE PERFORMED AS PART OF THIS CONTRACT.
12. IN AREAS WHERE WORK IS DONE, PATCH AND REPAIR EXISTING FIREPROOFING AND SMOKE TIGHT ASSEMBLIES TO MAINTAIN EXISTING FIRE AND SMOKE BARRIERS.
13. EXTREME CARE SHALL BE TAKEN IN REMOVAL OF EQUIPMENT. THAT WILL BE REUSED AND RELOCATED, OR RETURNED TO THE OWNER. GENERAL CONTRACTOR SHALL REMOVE AND STORE ALL EXISTING EQUIPMENT FOR USE IN FINAL LAYOUT. ANY EXISTING FURNITURE OR EQUIPMENT NOT USED IN FINAL LAYOUT SHALL BE RETURNED TO THE OWNER.
14. IN AREAS WHERE WORK IS DONE, SEAL ALL WALL PENETRATIONS, EXISTING AND NEW, AS REQUIRED TO MAINTAIN THE INTEGRITY OF THE EXISTING WALLS.
15. WHERE WALL OPENINGS IN EXISTING WALLS ARE CLOSED, NEW WALLS SHALL MATCH THE THICKNESS AND MATERIAL OF THE EXISTING WALLS.
16. THE GENERAL CONTRACTOR SHALL VERIFY LOCATION OF EXISTING UTILITIES BEFORE COMMENCING WORK. CARE SHALL BE TAKEN TO PROTECT ALL UTILITIES WHICH ARE TO REMAIN.

Demolition Keynotes

- D1 REMOVE AND PROPERLY DISPOSE OF EXISTING WAREHOUSE LIGHTS.
- D2 REMOVE AND PROPERLY DISPOSE OF EXISTING DOORS. INFILL CMU FOR NEW DOOR INSTALLATION. REFER TO STRUCTURAL DRAWINGS FOR REQUIREMENTS.
- D3 REMOVE AND PROPERLY DISPOSE OF CMU IN THIS AREA. CUTTING OPENING TO INCORPORATE NEW STOREFRONT WINDOW. REFER TO STRUCTURAL DRAWINGS FOR REQUIREMENTS.
- D4 REMOVE AND PROPERLY DISPOSE OF CMU IN THIS AREA. CUTTING OPENING TO INCORPORATE NEW DOOR. REFER TO STRUCTURAL DRAWINGS FOR REQUIREMENTS.
- D5 REMOVE AND PROPERLY DISPOSE OF BRICK VENEER IN THIS AREA. PREP AREA FOR INSTALLATION OF NEW BRICK VENEER.
- D6 EXISTING RISER ROOM. PROTECT THIS AREA DURING DEMOLITION AND CONSTRUCTION. ANY DAMAGE SHALL BE REPAIRED AT NO COST TO THE OWNER.
- D7 CONTRACTOR SHALL PROVIDE SIGNAGE AT ENTRY SIDE OF DOOR THAT READS AS FOLLOWS: " DANGER, CONSTRUCTION ZONE UNAUTHORIZED PERSONNEL, KEEP OUT
- D8 EXISTING FLOOR SLAB TO BE SAWCUT IN THIS AREA FOR NEW PLUMBING. REFER TO PLUMBING.
- D9 REMOVE AND PROPERLY DISPOSE OF EXISTING DOOR AND DOOR HARDWARE. EXISTING DOOR FRAME TO REMAIN. EXISTING DOOR FRAME SHALL BE PREPPED FOR NEW DOOR, ALL DAMAGED FRAMES SHALL BE REPAIRED AS REQUIRED. EXTREME CARE SHALL BE TAKEN NOT TO DAMAGE EXISTING FRAME DURING DEMOLITION AND CONSTRUCTION. REFER TO A9 SERIES FOR ADDITIONAL INFORMATION.
- D10 REMOVE AND PROPERLY DISPOSE OF EXISTING OVERHEAD DOOR AND EXISTING HINGED DOOR. INFILL OPENING WITH MATCHING FINISHES TO ACCOMMODATE NEW FLOOR PLAN.
- D11 EXISTING METAL STUD FRAMING ALONG THE EXTERIOR WALLS TO BE EXTENDED TO 10'-6" AFF.
- D12 REMOVE DAMAGED TILE AND CONCRETE FROM DEPRESSED AREA AT FRONT ENTRANCE. REPLACE WITH NEW 4" THICK 3000 PSI CONCRETE. THIS AREA IS ROUGHLY 200 SF.
- D13 EXISTING FLOOR SINK TO BE CUT AND CAPPED. PREP SLAB TO RECEIVE NEW FLOORING AS SHOWN ON FINISH DRAWINGS
- D14 REMOVE EXISTING DOCK LEVELER. DOCK LEVELER DIMENSIONS ARE 74" WIDE X 87" DEEP. DEPTH OF DOCK LEVELER IS 19.5". INFILL AREA WITH CONCRETE AFTER DOCK LEVELER IS REMOVED.
- D15 DEMO EXISTING LOADING DOCK STAIRS AND RAILING. PATCH CONCRETE AS REQUIRED AND PREP FOR NEW CONSTRUCTION.
- D16 DEMO EXISTING CONCRETE AND REPLACE WITH NEW CONCRETE. REFER TO DETAILS 7 & 8 ON SHEET A1.2A. THIS SPACE IS 454 SF IN AREA.

Demolition Plan Legend

(dashed double line)	EXISTING TO BE REMOVED. WALLS THAT EXTEND TO STRUCTURE ARE TO BE REMOVED TO STRUCTURE IN ENTIRETY.
(solid double line)	EXISTING TO REMAIN. PATCH AND REPAIR TO LIKE NEW CONDITIONS AFTER DEMOLITION AND CONSTRUCTION.

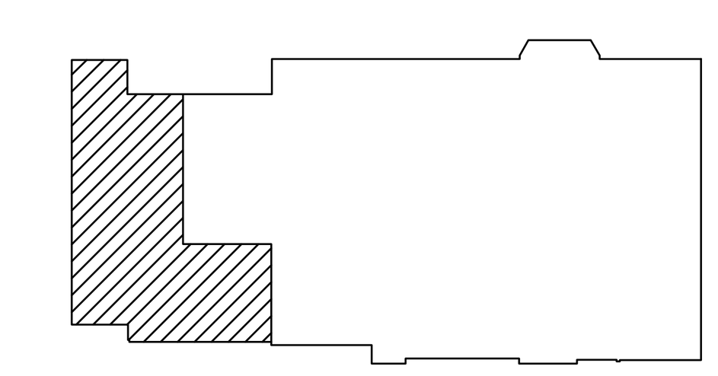
Door Symbol Legend

= EXISTING DOOR TO REMAIN

= DOOR TO BE REMOVED

Existing Fire Rating Notes

1. CONTRACTOR SHALL PROTECT INTEGRITY OF ALL FIRE/SMOKE RATED WALLS AND ASSEMBLIES AT ALL TIMES.
2. IF ANY RATED WALLS OR RATED ASSEMBLIES ARE DAMAGED DURING DEMOLITION OR CONSTRUCTION, THE CONTRACTOR SHALL MAKE NECESSARY REPAIRS AS REQUIRED TO ENSURE THAT RATING REMAINS IN PLACE.



DOSS KEY PLAN

STAMP

PRECISION Planning Inc.
planners • engineers • architects • surveyors
400 Pike Boulevard, Lawrenceville, Ga 30046
770.338.8000 • www.ppi.us

GWINNETT COUNTY DEPARTMENT OF SUPPORT SERVICES
1050 Grayson Highway
Lawrenceville, Georgia 30046

PROJECT

DEMOLITION PLAN

DESIGN	DRAWN	CHECKED
PPI	KMB	LGD

SHEET TITLE

DATE	NO	DESCRIPTION
12/10/25		100% BID DOCUMENTS
01/28/26	1	ADDENDUM 1

RELEASE

01/28/26
DATE

A24-129GSB
PROJ. NUMBER

129GSB-D2.1A
FILE NAME

FILE NUMBER

D2.1A