



Quick Start EV Training Center - Pooler Expansion

Addendum #1

October 27, 2023

ADDENDUM NO. 1

The following items shall take precedence over the drawings and specifications for the above-named project and shall become a part of the contract documents. Where any item called for in the specifications, or indicated on the drawings, is not supplemented hereby, the original requirements shall remain in effect. Where any original item is amended, voided, or superseded hereby, the provisions of such item not specifically amended, voided, or superseded shall remain in effect.

ATTACHMENTS

Drawings:

N/A

Specifications:

- 033543 – Polished Concrete Finishing
- 042613 – Masonry Veneer
- 107301 – Aluminum Wall Hung Canopies
- 123661.16 – Solid Surface Countertops

Additional Attachments:

1. Important Notes for Bidders, Bid Form & Bid Packages
2. GMP Alternate Narrative which includes information regarding Alternates 1 thru 8.

SECTION 033543 - POLISHED CONCRETE FINISHING

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:

1. Grinding and honing of the slab surface to receive clear reactive, penetrating liquid hardener/densifier to interior concrete.
2. Application of clear reactive, penetrating liquid hardener.
3. Progressively polishing and burnishing of the slab surface to achieve Finish Requirements.
4. Application of stain resistant surface treatment and coefficients of friction coating (DCOF)

B. Related Requirements:

1. Section 01 25 00- Substitution Procedures.
2. Section 01 33 00- Submittal Procedures.
3. Section 01 45 80- Testing Laboratory Services.
4. Section 01 60 00- Product Requirements.
5. Section 01 74 00- Cleaning and Waste Management.
6. Section 03 30 00- Cast-in-Place Concrete.
7. Section 07 90 00- Joint Sealants.

1.02 REFERENCES

- A. The date of the standard is that in effect as the date of receipt of bids for the project
- B. Living Building Challenge (LBC).
- C. Scientific Certification System (SCS) Indoor Air Quality Gold Certification.
- D. NSF International/Nonfood Compound Registration.
- E. American National Standard Institute / National Floor Safety Institute
 1. ANSI/NSFI B101.1 Test Method for Measuring Wet SCOF of Common Hard-Surface Floor Materials.
- F. ASTM International (ASTM):
 1. C1028 - Standard Test Method for Determining the Static Coefficient of Friction of Ceramic Tile and Other Like Surfaces by the Horizontal Dynamometer Pull-Meter Method.
 2. C1353 – Standard Test Method for Abrasion Resistance of Dimension Stone Subjected to Foot Traffic Using a Rotary Platform, Double-Head Abraser
 3. D523- Standard Test Method for Specular Gloss.
 4. D1308 - Standard Test Method for Effect of Household Chemicals on Clear and Pigmented Organic Finishes.
 5. D4541 - Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers.
 6. E96/96M Method B (Water Method) - Standard Test Methods for Water Vapor Transmission of Materials.
 7. G154 -Standard Practice for Operating Fluorescent Ultraviolet (UV) Lamp Apparatus for Exposure of Nonmetallic Materials.

1.03 ADMINISTRATIVE REQUIREMENTS

- A. Pre-Installation Meeting: Convene before the start of work on new concrete slabs, patching of concrete slabs and start of application of concrete finish system.

1. Require attendance of parties directly affecting work of this Section, including the Owner's Representative, Contractor, Architect, concrete installer, and applicator. Meeting should only convene when required parties are present.
2. Review the following:
 - a. Physical requirements of completed concrete slab and slab finish.
 - b. Locations and time of test areas.
 - c. Protection of surfaces not scheduled for finish application.
 - d. Surface preparation.
 - e. Application procedure.
 - f. Quality control.
 - g. Cleaning.
 - h. Protection of finish system.
 - i. Coordination with other work.

1.04 SUBMITTALS

- A. Product Data:
 1. Submit manufacturer's product data sheets and tested physical and performance properties on products to be used for the work.
- B. VOC Certification: Submit certification that products furnished comply with regulations controlling use of volatile organic compounds (VOC).
- C. Certificates:
 1. Certificates by manufacturer stating that installer is listed applicator of special concrete finishes, and has completed the necessary training programs.
- D. Floor Protection Plan.

1.05 QUALITY ASSURANCE

- A. Installer Qualifications:
 1. Applicator to be familiar with the specified requirements and the methods needed for proper performance of work of this section. Applicator must have availability of proper equipment to perform work within scope of this project on a timely basis. Applicator should have successfully performed a minimum of 5 projects of similar scope and complexity.
- B. Mock-up: On site, prior to the start of the polished concrete finishing process.
 1. Require attendance of parties directly affecting work of this Section, including the Contractor, Architect, applicator, and Owner's Representative.
 2. Notify the above parties one week in advance of date and time when mock-up will be completed.
 3. Demonstrate the materials, equipment and application methods to be used for work specified herein in pre-approved location approximately 50 sq. ft. in area or as directed by [Architect][Owner's Representative].
 4. Retain approved mock-up during construction as a standard for judging the completed work. Areas may remain as part of the completed work.

1.06 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials in original containers, with seals unbroken, bearing manufacturer labels indicating brand name and directions for storage.
- B. Store concrete hardener/densifier and surface protectant treatment in environment recommended on published manufacturer's product data sheets.
 - 1. Store containers upright in a cool, dry, well-ventilated place, out of the sun with temperature between 40 and 100 degrees F (4 and 38 degrees C).
 - 2. Protect from freezing.
 - 3. Store away from other chemicals and potential sources of contamination.
 - 4. Keep lights, fire, sparks, and heat away from containers.
 - 5. Do not drop containers or slide across sharp objects.
 - 6. Do not stack pallets more than three high.
 - 7. Keep containers tightly closed when not in use.

1.07 FIELD CONDITIONS

- A. Environmental limitations:
 - a. Comply with manufacturer's written instructions for substrate temperature and moisture content, ambient temperature and humidity, ventilation, and other conditions affecting performance and finishing requirements.
- B. Close areas to traffic during floor application and after application for time period recommended in writing by manufacturer.
- C. Protect the completed slab to prevent damage by the other trades during floor completion.
- D. Temperature Limitations:
 - a. Apply when surface and air temperature are between 40 degrees F (4 degrees C) and 95 degrees F (35 degrees C) unless otherwise indicated by manufacturer's written instructions.
 - b. Apply when surface and air temperatures are expected to remain above 40 degrees F (4 degrees C) for a minimum of 8 hours after application, unless otherwise indicated by manufacturer's written instructions.
- E. Apply when air conditions are calm to minimize surface treatment contacting surface not intended to be finished.
- F. Do not apply to frozen substrate. Allow adequate time for substrate to thaw if freezing conditions exist before application.
- G. Apply a minimum of 24 hours after rain event. Suspend application when rain is anticipated for a period of 8 hours after application, unless otherwise indicated by manufacturer's written instructions.
- H. Temporary Heat: Ambient temperature of 50 degrees F (10 degrees C) minimum.
- I. Ventilation: Provide adequate ventilation in confined or enclosed areas in accordance with manufacturer's instructions.
- J. Concrete shall NOT contain fly ash or slag.**

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Basis of Design is the following:

2.02 MATERIALS

- A. Clear, water-based, blended surfactant cutting aid: Product used to extend the life of diamond tooling and minimize concrete surface scratches during the wet-grinding process.
 - 1. Product: Consolideck First Cut manufactured by PROSOCO, Inc., Lawrence, KS, (800) 255-4255, www.prosoco.com.
 - 2. Subject to compliance with the following requirements:
 - a. Comply with national, state and district AIM VOC regulations and contains 0.5 g/L or less.
- B. Liquid Concrete Repair Material: Low-odor, liquid fill material used to fill pinholes, small air voids and pop-outs, micro-cracks and other gaps in concrete surface during grinding.
 - 1. Product: Consolideck Grind-N-Fill manufactured by PROSOCO, Inc., Lawrence, KS, (800) 255-4255, www.prosoco.com.
 - 2. Subject to compliance with the following requirements:
 - a. Comply with national, state and district AIM VOC regulations and contain 100 g/L or less.
- C. Pre-Densifier Concrete Cleaner: Cleaner to remove dirt, oil, grease, and other stains from existing slab surface.
 - 1. Product: Consolideck Cleaner/Degreaser manufactured by PROSOCO, Inc., Lawrence, KS, (800) 255-4255, www.prosoco.com.
- D. Penetrating Concrete Hardener/Densifier: Lithium silicate hardener/densifier.
 - 1. Product: Consolideck LS, manufactured by PROSOCO, Inc., Lawrence, KS, (800) 255-4255, www.prosoco.com.
 - 2. Subject to compliance with the following requirements:
 - a. Living Building Challenge 2.0/2.1 Red List Compliant.
 - b. Recipient of Scientific Certification System (SCS) Indoor Air Quality Gold Certification.
 - c. Comply with national, state and district AIM VOC regulations and contain 50 g/L or less.
 - d. Registered as an approved NSF International/Nonfood Compound Registration.
 - e. Abrasion Resistance: Greater than 50 percent improvement over untreated samples when tested in accordance with ASTM C1353.
 - f. Achieve 'High Traction Range' readings when tested in accordance with ANSI B101.1.
 - g. Coefficient of Friction: Greater than 0.60 dry, Greater than 0.60 wet when tested in accordance with ASTM C1028.
 - h. Adhesion: Greater than 10 percent increase in pull-off strength when compared to an untreated sample when tested in accordance with ASTM D4541.
 - i. Water Vapor Transmission: 100 percent retained when compared to untreated samples when tested in accordance with ASTM E96/96M Method B (Water Method).
 - j. UV Stability: No degradation or yellowing of material when tested in accordance with ASTM G154.
- E. Interior Concrete Protective Treatments:
 - 1. General Purpose high-gloss film forming premium sealer, lithium silicate hardener/densifier.
 - a. Product: Consolideck LSGuard, manufactured by PROSOCO, Inc., Lawrence, KS, (800) 255-4255, www.prosoco.com.
 - b. Subject to compliance with the following requirements:
 - i. Living Building Challenge 2.0/2.1 Red List Compliant.
 - ii. Recipient of Scientific Certification System (SCS) Indoor Air Quality Gold Certification.
 - iii. Comply with national, state and district AIM VOC regulations.
 - iv. Registered as an approved NSF International/Nonfood Compound Registration.
 - v. Achieve 'High Traction Range' readings when tested in accordance with ANSI B101.1.
 - vi. Coefficient of Friction: Greater than 0.60 dry, greater than 0.60 wet when tested in accordance with ASTM C1028.
 - vii. Adhesion: : Greater than 10 percent increase in pull-off strength when compared to an untreated sample when tested in accordance with ASTM D4541.

- viii. UV Stability: No degradation or yellowing of material when tested in accordance with ASTM G154.

2.03 EQUIPMENT

- A. Auto Scrubber Machine: For cleaning operations.
- B. Hand Grinder or stand-up edger for edge grinding/polishing.
- C. Grinding/Polishing Equipment:
 - 1. Dry grinding/polishing machines shall include a dust extraction system, including HEPA filtration vacuum.
- D. Diamond Segments:
 - 1. Use heads from the same manufacturers throughout the entirety of the project.
- E. Diamond Heads Types:
 - 1. Resin Bonded, Phenolic Diamonds: 100, 200, 400, 800, 1500, and **3000**
- F. Burnishing Machine and Burnishing Pads to produce specified results.
 - 1. Burnishing Machine: High speed burnisher, generating pad speeds of 1,500 RPM or higher, as recommended by protective treatment manufacturer. Dust skirt must be installed at time of work.
 - 2. Burnishing Pads: as recommended by protective treatment manufacturer.
 - a. White Burnishing Pad, non-abrasive.
 - b. Consolideck Heat Pad manufactured by PROSOCO, Inc., Lawrence, KS, (800) 255-4255, www.prosoco.com.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine substrate with installer present for conditions affecting performance of finish. Correct conditions detrimental to timely and proper work. Notify the Architect in writing of conditions detrimental to the proper and timely completion of the work.
- B. Do not begin installation until all unsatisfactory conditions are resolved. Beginning work constitutes acceptance of site conditions and responsibility for defective installation caused by prior observable conditions.

3.02 PREPARATION

- A. Clean dirt, dust, oil, grease and other contaminants that interfere with penetration or performance of specified product from surfaces. Use appropriate concrete cleaners approved by the concrete surface treatment manufacturer where necessary. Rinse thoroughly using pressure water spray to remove cleaner residues. Allow surfaces to dry completely before application of product.
- B. Repair, patch and fill cracks, voids, defects and damaged areas in surface as approved by the Architect. Allow repair materials to cure completely before application of product.
- C. Variations in substrate texture and color will affect final appearance and should be corrected prior to application of sealer/hardener system and the polishing steps.
- D. Protect surrounding areas prior to application. If product is accidentally misapplied to adjacent surfaces, flush with water immediately before material dries.
- E. Avoid contact in areas not to be treated. Avoid contact with metal, glass and painted surfaces.
- F. Seal open joints in accordance with Section 07 90 00.

- G. Apply specified sealants and caulking and allow complete curing before application of penetrating concrete hardener/densifier.
- H. Do not proceed until unsatisfactory conditions have been corrected.

3.03 CONCRETE GRINDING, HONING, AND POLISHING

- A. Adhere to industry standard grinding, honing, and polishing procedures for dry and wet grinding and honing.
- B. Scrub and rinse slab surface with clean water and vacuum with auto-scrubber between and after final passes.
- C. Sequential progression of diamond tooling steps shall be required and limited to no more than double the grit value of the previous diamonds used.
- D. Overlap adjacent passes by 25 percent.
- E. Perform each pass perpendicular to the other pass north/south then east/west; multiple passes may be needed.
- F. Progressively grind, hone and polish the slab surface utilizing approved diamond segments as necessary to produce Finishing requirements.
 - 1. Apply liquid concrete repair material to fill gaps, voids and pop-outs during grinding operation per manufacturer's published recommendations.
 - 2. Apply cutting aid chemical during the initial wet grinding process per manufacturer's published recommendations. (Typically before the 200 grit resin or lower).

3.04 APPLICATION OF PENETRATING CONCRETE HARDENER/DENSIFIER

- A. Apply hardener/densifier at the rate of 500 to 700 square feet per gallon with a low pressure sprayer fitted with a 0.5 gpm spray tip. (Typically after 200-grit and no later than 400 grit).
- B. Apply sufficient material to keep concrete surface wet for 5 to 10 minute period, without producing puddles.
- C. Allow treated surface to dry.
- D. Continue progressively polishing floor with required resin diamonds as necessary to produce desired final finish to smooth finish or 3000 GRIT and meet dynamic coefficients of friction (DCOF) for ADA as measured by ANSI A137.1

3.05 APPLICATION OF INTERIOR CONCRETE PROTECTIVE TREATMENT

- A. Application of general purpose, high gloss protective treatment:
 - 1. Apply per manufacturer's published recommendations to clean, dry slab at the completion of mechanically polishing the slab surface.
 - 2. Lightly wet a clean microfiber pad with protective treatment and wring out excess, leaving the pad damp.
 - 3. Working from one control joint to another, apply a light, fine spray of protective treatment to a small section of the floor using a clean, pump-up sprayer fitted with a 0.5 gpm spray tip, at an estimated coverage rate of 2000 to 3000 square feet per gallon.
 - 4. Using the damp microfiber pad and firm downward pressure, immediately spread the protective treatment to produce a thin, even coating. Spread the product as far as possible while maintaining a wet edge. Properly applied, protective treatment dries quickly. Stop spreading once drying begins. Avoid overlapping.
 - 5. Allow to dry tack free, typically 20 to 60 minutes.

6. Once dry, high- speed burnish slab surface fitted with manufacturer recommended burnishing pad to increase gloss and to help the treatment fuse and bond with the concrete for increased durability and longevity. Surface temperatures immediately behind the burnisher must achieve 90.5 degrees Fahrenheit. (Burnish between coats if multiple applications are desired.)
7. Repeat above steps 1 through 6, as necessary for additional applications of protective treatment, to achieve desired final finish (Maximum 3 coats).

3.06 SLAB PROTECTION

- A. Protect finished floors to prevent damage including staining, gouges and scratching by construction traffic and activities until possession.
- B. Do not drag or drop equipment or material across the slab which will scratch or chip it.
- C. Inspect tires for debris prior to use on slab. Remove embedded items which may cause damage to floor slab.
- D. Clean up spills on slab immediately. Provide cleaning chemicals and absorptive materials.
- E. Develop a concrete protection procedure which addresses the following procedures:
 1. Communication of protection plan to subcontractors and vendors.
 2. Procedures for cleaning up slab spills, including use of and availability of cleaning chemicals and absorptive materials at Site.
- F. Provide a clean slab surface using concrete maintenance cleaner within an auto scrubber, equipped with soft nylon brushes, in accordance with manufacturer's published recommendations.

3.07 FINISHING REQUIREMENTS

- A. Appearance:
 1. Interior exposed finished slab areas must consist of the following:
 - a. Slab surface must meet the desired sheen, as discussed in Pre-Installation meeting and be consistent with approved Mock-up.
 - b. Slab surface must have a consistent look and exhibit a finish that has no evidence of streaking or burnish marks.
 - c. White residue or hazy appearance is not acceptable.
 - d. Exposure of aggregate beyond CPAA Class C-Medium Aggregate and D- Large Aggregate is not acceptable.
 2. Interior exposed finished slab areas must consist of the following CPAA Gloss Level:
- B. Finished Gloss Level 4 – Highly-Polished Gloss Appearance and shall meet dynamic coefficients of friction (DCOF) as measured by ANSI A137.1

END OF SECTION 033543

SECTION 042613 - MASONRY VENEER

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplemental General Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:

- 1. Clay face brick.
- 2. Mortar.
- 3. Ties and anchors.
- 4. Embedded flashing.
- 5. Miscellaneous masonry accessories.

- B. Products Installed but not Furnished under This Section:

- 1. Cast-stone trim in masonry veneer.
- 2. Steel lintels in masonry veneer.
- 3. Steel shelf angles for supporting masonry veneer.

- C. Related Requirements:

- 1. Section 018113.33 "Sustainable Design Requirements – Georgia Peach" for sustainable design requirements.
- 2. Section 051200 "Structural Steel Framing" for installing anchor sections of adjustable masonry anchors for connecting to structural steel frame.
- 3. Section 076200 "Sheet Metal Flashing and Trim" for sheet metal flashing and for furnishing manufactured reglets installed in masonry joints.

1.3 REINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.

- B. Shop Drawings: For the following:

- 1. Masonry Units: Show sizes, profiles, coursing, and locations of special shapes.
- 2. Fabricated Flashing: Detail corner units, end-dam units, and other special applications.

C. Samples for Initial Selection:

1. Clay face brick, in the form of straps of five or more bricks.
2. Stone trim.
3. Colored mortar.
4. Weep holes/vents.

1.5 INFORMATIONAL SUBMITTALS

A. List of Materials Used in Constructing Mockups: List generic product names together with manufacturers, manufacturers' product names, model numbers, lot numbers, batch numbers, source of supply, and other information as required to identify materials used. Include mix proportions for mortar and grout and source of aggregates.

1. Submittal is for information only. Receipt of list does not constitute approval of deviations from the Contract Documents unless such deviations are specifically brought to the attention of Design Professional and approved in writing.

B. Material Certificates: For each type and size of the following:

1. Masonry units.
 - a. Include material test reports substantiating compliance with requirements.
 - b. For brick, include size-variation data verifying that actual range of sizes falls within specified tolerances.
 - c. For exposed brick, include test report for efflorescence according to ASTM C 67.
 - d. For surface-coated brick, include test report for durability of surface appearance after 50 cycles of freezing and thawing according to ASTM C 67.
2. Cementitious materials. Include name of manufacturer, brand name, and type.
3. Mortar admixtures.
4. Preblended, dry mortar mixes. Include description of type and proportions of ingredients.
5. Anchors, ties, and metal accessories.

C. Mix Designs: For each type of mortar. Include description of type and proportions of ingredients.

1. Include test reports for mortar mixes required to comply with property specification. Test according to ASTM C 109/C 109M for compressive strength, ASTM C 1506 for water retention, and ASTM C 91/C 91M for air content.

D. Cold-Weather and Hot-Weather Procedures: Detailed description of methods, materials, and equipment to be used to comply with requirements.

1.6 QUALITY ASSURANCE

A. Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for materials and execution.

1. Build mockup of typical wall area as shown on Drawings.

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2. Build mockups for each type of exposed unit masonry construction in sizes approximately 48 inches long by 48 inches high by full thickness, including face and backup wythes and accessories.
 - a. Include a sealant-filled joint at least 16 inches long in each mockup.
 - b. Include lower corner of window opening at upper corner of exterior wall mockup. Make opening approximately 12 inches wide by 16 inches high.
 - c. Include through-wall flashing installed for a 24-inch length in corner of exterior wall mockup approximately 16 inches down from top of mockup, with a 12-inch length of flashing left exposed to view (omit masonry above half of flashing).
 - d. Include metal studs, sheathing, water-resistive barrier, veneer anchors, flashing, cavity drainage material, and weep holes in exterior masonry-veneer wall mockup.
 3. Where masonry is to match existing, erect mockups adjacent and parallel to existing surface.
 4. Clean one-half of exposed faces of mockups with masonry cleaner as indicated.
 5. Protect accepted mockups from the elements with weather-resistant membrane.
 6. Approval of mockups is for color, texture, and blending of masonry units; relationship of mortar and sealant colors to masonry unit colors; tooling of joints; and aesthetic qualities of workmanship.
 - a. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Design Professional specifically approves such deviations in writing.
 7. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Material Completion.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Store masonry units on elevated platforms in a dry location. If units are not stored in an enclosed location, cover tops and sides of stacks with waterproof sheeting, securely tied. If units become wet, do not install until they are dry.
- B. Deliver preblended, dry mortar mix in moisture-resistant containers. Store preblended, dry mortar mix in delivery containers on elevated platforms in a dry location or in covered weatherproof dispensing silos.
- C. Store masonry accessories, including metal items, to prevent corrosion and accumulation of dirt and oil.

1.8 FIELD CONDITIONS

- A. Protection of Masonry: During construction, cover tops of veneer, projections, and sills with waterproof sheeting at end of each day's work. Cover partially completed masonry when construction is not in progress.
 1. Extend cover a minimum of 24 inches down face of veneer, and hold cover securely in place.

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- B. Stain Prevention: Prevent grout, mortar, and soil from staining the face of masonry. Immediately remove grout, mortar, and soil that come in contact with masonry.
1. Protect base of walls from rain-splashed mud and from mortar splatter by spreading coverings on ground and over wall surface.
 2. Protect sills, ledges, and projections from mortar droppings.
 3. Protect surfaces of window and door frames, as well as similar products with painted and integral finishes, from mortar droppings.
 4. Turn scaffold boards near the wall on edge at the end of each day to prevent rain from splashing mortar and dirt onto completed masonry.
- C. Cold-Weather Requirements: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen substrates. Remove and replace unit masonry damaged by frost or by freezing conditions. Comply with cold-weather construction requirements contained in TMS 602/ACI 530.1/ASCE 6.
1. Cold-Weather Cleaning: Use liquid cleaning methods only when air temperature is 40 deg F and higher and will remain so until masonry has dried, but not less than seven days after completing cleaning.
- D. Hot-Weather Requirements: Comply with hot-weather construction requirements contained in TMS 602/ACI 530.1/ASCE 6.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Source Limitations for Masonry Units: Obtain exposed masonry units of a uniform texture and color, or a uniform blend within the ranges accepted for these characteristics, from single source from single manufacturer for each product required.
- B. Source Limitations for Mortar Materials: Obtain mortar ingredients of a uniform quality, including color for exposed masonry, from single manufacturer for each cementitious component and from single source or producer for each aggregate.

2.2 UNIT MASONRY, GENERAL

- A. Masonry Standard: Comply with TMS 602/ACI 530.1/ASCE 6, except as modified by requirements in the Contract Documents.
- B. Defective Units: Referenced masonry unit standards may allow a certain percentage of units to contain chips, cracks, or other defects exceeding limits stated. Do not use units where such defects will be exposed in the completed Work and will be within 20 feet vertically and horizontally of a walking surface.
- C. Fire-Resistance Ratings: Comply with requirements for fire-resistance-rated assembly designs indicated.

2.3 BRICK

- A. General: Provide shapes indicated and as follows, with exposed surfaces matching finish and color of exposed faces of adjacent units:
1. For ends of sills and caps and for similar applications that would otherwise expose unfinished brick surfaces, provide units without cores or frogs and with exposed surfaces finished.
 2. Provide special shapes for applications where stretcher units cannot accommodate special conditions, including those at corners, movement joints, bond beams, sashes, and lintels.
 3. Provide special shapes for applications requiring brick of size, form, color, and texture on exposed surfaces that cannot be produced by sawing.
 4. Provide special shapes for applications where shapes produced by sawing would result in sawed surfaces being exposed to view.
- B. Clay Face Brick: Facing brick complying with ASTM C 216.
1. Basis-of-Design Product: Provide North Georgia Brick; or a comparable product by one of the following:
 - a. Cherokee Brick and Tile Company
 - b. Boral Bricks, Inc.
 2. Grade: MW or SW.
 3. Type: FBS.
 4. Initial Rate of Absorption: Less than 30 g/30 sq. in. per minute when tested according to ASTM C 67.
 5. Efflorescence: Provide brick that has been tested according to ASTM C 67 and is rated "not effloresced."
 6. Size (Actual Dimensions): 3-5/8 inches wide by 2-1/4 inches (57 mm) high by 7-5/8 inches (194 mm) long.
 7. Application: Use where brick is exposed unless otherwise indicated.

2.4 MORTAR MATERIALS

- A. Portland Cement: ASTM C 150/C 150M, Type I or II, except Type III may be used for cold-weather construction. Provide natural color or white cement as required to produce mortar color indicated.
1. Alkali content shall not be more than 0.1 percent when tested according to ASTM C 114.
- B. Hydrated Lime: ASTM C 207, Type S.
- C. Portland Cement-Lime Mix: Packaged blend of portland cement and hydrated lime containing no other ingredients.
- D. Mortar Cement: ASTM C 1329/C 1329M.

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- E. Mortar Pigments: Natural and synthetic iron oxides and chromium oxides, compounded for use in mortar mixes and complying with ASTM C 979/C 979M. Use only pigments with a record of satisfactory performance in masonry mortar.
 - F. Colored Cement Products: Packaged blend made from portland cement and hydrated lime or mortar cement and mortar pigments, all complying with specified requirements, and containing no other ingredients.
 - 1. Colored Portland Cement-Lime Mix:
 - a. Manufacturers: Provide products by the following:
 - 1) Holcim (US) Inc.
 - 2) Lafarge North America Inc.
 - 3) Lehigh Hanson; Heidelberg Cement Group.
 - 2. Formulate blend as required to produce color indicated or, if not indicated, as selected from manufacturer's standard colors.
 - 3. Pigments shall not exceed 10 percent of portland cement by weight.
 - 4. Pigments shall not exceed 5 percent of mortar cement by weight.
 - G. Aggregate for Mortar: ASTM C 144.
 - 1. For mortar that is exposed to view, use washed aggregate consisting of natural sand or crushed stone.
 - 2. For joints less than 1/4 inch thick, use aggregate graded with 100 percent passing the No. 16 sieve.
 - 3. White-Mortar Aggregates: Natural white sand or crushed white stone.
 - 4. Colored-Mortar Aggregates: Natural sand or crushed stone of color necessary to produce required mortar color.
 - H. Water: Potable.

2.5 TIES AND ANCHORS

- A. General: Ties and anchors shall extend at least 1-1/2 inches into veneer but with at least a 5/8-inch cover on outside face.
- B. Materials: Provide ties and anchors specified in this article that are made from materials that comply with the following unless otherwise indicated:
 - 1. Hot-Dip Galvanized, Carbon-Steel Wire: ASTM A 1064 with ASTM A 153/A 153M, Class B-2 coating.
 - 2. Stainless-Steel Wire: ASTM A 580/A 580M, Type 304.
 - 3. Galvanized-Steel Sheet: ASTM A 653/A 653M, Commercial Steel, G60 zinc coating.
 - 4. Steel Sheet, Galvanized after Fabrication: ASTM A 1008/A 1008M, Commercial Steel, with ASTM A 153/A 153M, Class B coating.
 - 5. Stainless-Steel Sheet: ASTM A 240/A 240M or ASTM A 666, Type 304.

C. Adjustable Masonry-Veneer Anchors:

1. General: Provide anchors that allow vertical adjustment but resist a 100-lbf load in both tension and compression perpendicular to plane of wall without deforming or developing play in excess of 1/16 inch.
2. Fabricate sheet metal anchor sections and other sheet metal parts from 0.075-inch-thick steel sheet, galvanized after fabrication.
3. Fabricate wire ties from 0.187-inch-diameter, hot-dip galvanized-steel or stainless-steel wire unless otherwise indicated.
4. Fabricate wire connector sections from 0.187-inch-diameter, hot-dip galvanized, carbon] or stainless-steel wire.
5. Construction Professional's Option: Unless otherwise indicated, provide any of the adjustable masonry-veneer anchors specified.
6. Masonry-Veneer Anchors: Connector section and a rib-stiffened, sheet metal anchor section with screw holes top and bottom, with projecting tabs having slotted holes for inserting vertical leg of connector section. Connector section consists of a rib-stiffened, sheet metal bent plate with down-turned leg designed to fit in anchor section slot and with integral tabs designed to engage continuous wire.
 - a. Basis-of-Design Product: Subject to compliance with requirements, provide Hohmann & Barnard, Inc; HB-213-2X Adjustable Veneer Anchor or a comparable product by one of the following:
 - 1) Heckman Building Products, Inc.
 - 2) Wire-Bond.
 - b. Pintle:
 - 1) 3/16" dia. ASTM A1064-13 steel wire; ASTM A153-09, Class B-2, hot dip galvanize after fabrication, minimum; .
 - 2) Horizontal length: Embed 2" minimum in face masonry bed joints.
7. Polymer-Coated, Steel Drill Screws for Steel Studs: ASTM C 954 except manufactured with hex washer head and neoprene or EPDM washer, No. 10 diameter by length required to penetrate steel stud flange with not less than three exposed threads, and with organic polymer coating with salt-spray resistance to red rust of more than 800 hours according to ASTM B 117.
8. Stainless-Steel Drill Screws for Steel Studs: ASTM C 954 except manufactured with hex washer head and neoprene or EPDM washer, No. 10 diameter by length required to penetrate steel stud flange with not less than three exposed threads; either made from Type 410 stainless steel or made with a carbon-steel drill point and 300 Series stainless-steel shank.

2.6 EMBEDDED FLASHING MATERIALS

- A. Metal Flashing: Provide metal flashing complying with Section 076200 "Sheet Metal Flashing and Trim" and as follows:
1. Stainless Steel: ASTM A 240/A 240M or ASTM A 666, Type 304, 0.016 inch thick.
 2. Fabricate continuous flashings in sections 96 inches long minimum, but not exceeding 12 feet. Provide splice plates at joints of formed, smooth metal flashing.
 3. Fabricate through-wall metal flashing embedded in masonry from stainless steel.

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4. Fabricate through-wall flashing with snaplock receiver on exterior face where indicated to receive counterflashing.
 5. Fabricate through-wall flashing with sealant stop unless otherwise indicated. Fabricate by bending metal back on itself 3/4 inch at exterior face of wall and down into joint 1/4 inch to form a stop for retaining sealant backer rod.
 6. Metal Sealant Stops: Fabricate from stainless steel. Extend back through masonry and into air space with a 45deg back dam to support membrane and out to exterior wall face. At exterior wall face, bend metal back on itself for 3/4 inch (19 mm) and down into joint 3/8 inch (10 mm) to form a stop for retaining sealant backer rod.
 7. Fabricate metal expansion-joint strips from stainless steel to shapes indicated.
 8. Solder metal items at corners.
 9. Fabricate through-wall flashing with end dams at flashing terminations.

B. Flexible Flashing: Use one of the following unless otherwise indicated:

1. Rubberized-Asphalt Flashing: Composite flashing product consisting of a pliable, adhesive rubberized-asphalt compound, bonded to a high-density, cross-laminated polyethylene film to produce an overall thickness of not less than **0.040 inch**.
 - a. Manufacturers: Provide products by one of the following:
 - 1) [Carlisle Coatings & Waterproofing Inc.](#)
 - 2) [Fiberweb, Clark Hammerbeam Corp.](#)
 - 3) [Heckmann Building Products, Inc.](#)
 - 4) [Hohmann & Barnard, Inc.](#)
 - 5) [Polyguard Products, Inc.](#)
 - 6) [W. R. Meadows, Inc.](#)
 - b. Accessories: Provide preformed corners, end dams, other special shapes, and seaming materials produced by flashing manufacturer.

C. Application: Unless otherwise indicated, use the following:

1. Where flashing is indicated to receive counterflashing, use metal flashing.
2. Where flashing is indicated to be turned down at or beyond the wall face, use metal flashing.
3. Where flashing is partly exposed and is indicated to terminate at the wall face, use metal flashing with a sealant stop or flexible flashing with a metal drip edge or flexible flashing with a metal sealant stop.
4. Where flashing is fully concealed, use metal flashing.

D. Solder and Sealants for Sheet Metal Flashings: As specified in Section 076200 "Sheet Metal Flashing and Trim."

1. Solder for Stainless Steel: ASTM B 32, Grade Sn96, with acid flux of type recommended by stainless-steel sheet manufacturer.

E. Adhesives, Primers, and Seam Tapes for Flashings: Flashing manufacturer's standard products or products recommended by flashing manufacturer for bonding flashing sheets to each other and to substrates.

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- F. Termination Bars for Flexible Flashing: Stainless steel sheet 0.019 inch by 1-1/2 inches with a 3/8 inch sealant flange at top.

2.7 MISCELLANEOUS MASONRY ACCESSORIES

- A. Compressible Filler: Premolded filler strips complying with ASTM D 1056, Grade 2A1; compressible up to 35 percent; of width and thickness indicated; formulated from neoprene or urethane.
- B. Weep/Vent Products: Use the following unless otherwise indicated:
1. Cellular Plastic Weep/Vent: One-piece, flexible extrusion made from UV-resistant polypropylene copolymer, full height and width of head joint and depth 1/8 inch (3 mm) less than depth of outer wythe, in color selected from manufacturer's standard.
 - a. Products: Provide one of the following:
 - 1) Advanced Building Products Inc.; Mortar Maze Cell Vent.
 - 2) Heckmann Building Products, Inc.; No. 85 Cell Vent.
 - 3) Hohmann & Barnard, Inc; QV Quadro-Vent.
 - C. Cavity Drainage Material: Free-draining mesh, made from polymer strands that will not degrade within the wall cavity.
 1. Products: Provide one of the following:
 - a. Advanced Building Products Inc.; Mortar Break II.
 - b. CavClear/Archovations, Inc.; CavClear Masonry Mat.
 - c. Heckmann Building Products, Inc.; Weep-Thru Mortar Deflector.
 - d. Hohmann & Barnard, Inc; Mortar Trap.
 - e. Mortar Net Solutions; Mortar Net with Insect Barrier.
 - f. Wire-Bond; Cavity Net II.
 2. Configuration: Provide one of the following:
 - a. Strips, full depth of cavity and 10 inches high, with dovetail-shaped notches 7 inches deep that prevent clogging with mortar droppings.
 - b. Strips, not less than 1-1/2 inches thick and 10 inches high, with dimpled surface designed to catch mortar droppings and prevent weep holes from clogging with mortar.

2.8 MASONRY CLEANERS

- A. Proprietary Acidic Cleaner: Manufacturer's standard-strength cleaner designed for removing mortar/grout stains, efflorescence, and other new construction stains from new masonry without discoloring or damaging masonry surfaces. Use product expressly approved for intended use by cleaner manufacturer **and manufacturer of masonry units being cleaned**.

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1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Diedrich Technologies, Inc.; a division of Sandell Construction Solutions.
 - b. EaCo Chem, Inc.
 - c. PROSOCO, Inc.

2.9 MORTAR MIXES

- A. General: Do not use admixtures, including pigments, air-entraining agents, accelerators, retarders, water-repellent agents, antifreeze compounds, or other admixtures unless otherwise indicated.
 1. Do not use calcium chloride in mortar or grout.
 2. Use portland cement-lime or mortar cement mortar unless otherwise indicated.
- B. Preblended, Dry Mortar Mix: Furnish dry mortar ingredients in form of a preblended mix. Measure quantities by weight to ensure accurate proportions, and thoroughly blend ingredients before delivering to Project site.
- C. Mortar for Unit Masonry: Comply with ASTM C 270, Property Specification. Use Type N unless another type is indicated.
 1. For masonry below grade or in contact with earth, use Type S.
- D. Pigmented Mortar: Use colored cement product.
 1. Pigments shall not exceed 10 percent of portland cement by weight.
 2. Pigments shall not exceed 5 percent of mortar cement by weight.
 3. Mix to match Design Professional's sample.
 4. Application: Use pigmented mortar for exposed mortar joints.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
 1. For the record, prepare written report, endorsed by Installer, listing conditions detrimental to performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

- A. Leave openings for equipment to be installed before completing masonry. After installing equipment, complete masonry to match the construction immediately adjacent to opening.
- B. Use full-size units without cutting if possible. If cutting is required to provide a continuous pattern or to fit adjoining construction, cut units with motor-driven saws; provide clean, sharp, unchipped edges. Allow units to dry before laying unless wetting of units is specified. Install cut units with cut surfaces and, where possible, cut edges concealed.
- C. Select and arrange units for exposed unit masonry to produce a uniform blend of colors and textures. Mix units from several pallets or cubes as they are placed.
- D. Wetting of Brick: Wet brick before laying if initial rate of absorption exceeds 30 g/30 sq. in. per minute when tested according to ASTM C 67. Allow units to absorb water so they are damp but not wet at time of laying.

3.3 TOLERANCES

A. Dimensions and Locations of Elements:

- 1. For dimensions in cross section or elevation, do not vary by more than plus 1/2 inch or minus 1/4 inch.
- 2. For location of elements in plan, do not vary from that indicated by more than plus or minus 1/2 inch.
- 3. For location of elements in elevation, do not vary from that indicated by more than plus or minus 1/4 inch in a story height or 1/2 inch total.

B. Lines and Levels:

- 1. For bed joints and top surfaces of bearing walls, do not vary from level by more than 1/4 inch in 10 feet, or 1/2 inch maximum.
- 2. For conspicuous horizontal lines, such as lintels, sills, parapets, and reveals, do not vary from level by more than 1/8 inch in 10 feet, 1/4 inch in 20 feet, or 1/2 inch maximum.
- 3. For vertical lines and surfaces, do not vary from plumb by more than 1/4 inch in 10 feet, 3/8 inch in 20 feet, or 1/2 inch maximum.
- 4. For conspicuous vertical lines, such as external corners, door jambs, reveals, and expansion and control joints, do not vary from plumb by more than 1/8 inch in 10 feet, 1/4 inch in 20 feet, or 1/2 inch maximum.
- 5. For lines and surfaces, do not vary from straight by more than 1/4 inch in 10 feet, 3/8 inch in 20 feet, or 1/2 inch maximum.
- 6. For vertical alignment of exposed head joints, do not vary from plumb by more than 1/4 inch in 10 feet, or 1/2 inch maximum.
- 7. For faces of adjacent exposed masonry units, do not vary from flush alignment by more than 1/16 inch except due to warpage of masonry units within tolerances specified for warpage of units.

C. Joints:

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1. For bed joints, do not vary from thickness indicated by more than plus or minus 1/8 inch, with a maximum thickness limited to 1/2 inch.
 2. For exposed bed joints, do not vary from bed-joint thickness of adjacent courses by more than 1/8 inch.
 3. For head and collar joints, do not vary from thickness indicated by more than plus 3/8 inch or minus 1/4 inch.
 4. For exposed head joints, do not vary from thickness indicated by more than plus or minus 1/8 inch. Do not vary from adjacent bed-joint and head-joint thicknesses by more than 1/8 inch.
 5. For exposed bed joints and head joints of stacked bond, do not vary from a straight line by more than 1/16 inch from one masonry unit to the next.

3.4 LAYING MASONRY WALLS

- A. Lay out walls in advance for accurate spacing of surface bond patterns with uniform joint thicknesses and for accurate location of openings, movement-type joints, returns, and offsets. Avoid using less-than-half-size units, particularly at corners, jambs, and, where possible, at other locations.
- B. Bond Pattern for Exposed Masonry: Unless otherwise indicated, lay exposed masonry in running bond; do not use units with less-than-nominal 4-inch horizontal face dimensions at corners or jambs.
- C. Stopping and Resuming Work: Stop work by stepping back units in each course from those in course below; do not tooth. When resuming work, clean masonry surfaces that are to receive mortar, remove loose masonry units and mortar, and wet brick if required before laying fresh masonry.
- D. Built-in Work: As construction progresses, build in items specified in this and other Sections. Fill in solidly with masonry around built-in items.
- E. Fill space between steel frames and masonry solidly with mortar unless otherwise indicated.

3.5 MORTAR BEDDING AND JOINTING

- A. Lay solid masonry units with completely filled bed and head joints; butter ends with sufficient mortar to fill head joints and shove into place. Do not deeply furrow bed joints or slush head joints.
- B. Lay hollow brick with face shells fully bedded in mortar and with head joints of depth equal to bed joints. At starting course, fully bed entire units, including area under cells.
 1. At anchors and ties, fully bed units and fill cells with mortar as needed to fully embed anchors and ties in mortar.
- C. Set cast-stone trim units in full bed of mortar with full vertical joints.
 1. Clean soiled surfaces with fiber brush and soap powder and rinse thoroughly with clear water.

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2. Allow cleaned surfaces to dry before setting.
 3. Rake out mortar joints for pointing with sealant.
- D. Tool exposed joints slightly concave when thumbprint hard, using a jointer larger than joint thickness unless otherwise indicated.

3.6 ANCHORED MASONRY VENEERS

- A. Anchor masonry veneers to wall framing and concrete and masonry backup with masonry-veneer anchors to comply with the following requirements:
1. Fasten screw-attached anchors through sheathing to wall framing and to concrete and masonry backup with metal fasteners of type indicated. Use two fasteners unless anchor design only uses one fastener.
 2. Embed connector sections and continuous wire in masonry joints.
 3. Locate anchor sections to allow maximum vertical differential movement of ties up and down.
 4. Space anchors as indicated, but not more than 16 inches o.c. vertically and 16 inches o.c. horizontally, with not less than one anchor for each 2 sq. ft. of wall area. Install additional anchors within 12 inches of openings and at intervals, not exceeding 8 inches, around perimeter.
- B. Provide not less than 2 inches of airspace between back of masonry veneer and face of insulation.
1. Keep airspace clean of mortar droppings and other materials during construction. Bevel beds away from airspace, to minimize mortar protrusions into airspace. Do not attempt to trowel or remove mortar fins protruding into airspace.

3.7 ANCHORING MASONRY TO STRUCTURAL STEEL AND CONCRETE

- A. Anchor masonry to structural steel and concrete, where masonry abuts or faces structural steel or concrete to comply with the following:
1. Provide an open space not less than 2 inches wide between masonry and structural steel or concrete unless otherwise indicated. Keep open space free of mortar and other rigid materials.
 2. Anchor masonry with anchors embedded in masonry joints and attached to structure.
 3. Space anchors as indicated, but not more than 24 inches o.c. vertically and 36 inches o.c. horizontally.

3.8 EXPANSION JOINTS

- A. General: Install expansion-joint materials in unit masonry as masonry progresses. Do not allow materials to span expansion joints without provision to allow for in-plane wall or partition movement.
- B. Form expansion joints as follows:

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1. Build in compressible joint fillers where indicated.
 2. Form open joint full depth of brick wythe and of width indicated, but not less than 3/8 inch for installation of sealant and backer rod specified in Section 079200 "Joint Sealants."
- C. Provide horizontal, pressure-relieving joints by either leaving an airspace or inserting a compressible filler of width required for installing sealant and backer rod specified in Section 079200 "Joint Sealants," but not less than 3/8 inch.
1. Locate horizontal, pressure-relieving joints beneath shelf angles supporting masonry.

3.9 LINTELS

- A. Install steel lintels where indicated.
- B. Provide minimum bearing of 8 inches at each jamb unless otherwise indicated.

3.10 FLASHING, WEEP HOLES, AND VENTS

- A. General: Install embedded flashing and weep holes in masonry at shelf angles, lintels, ledges, other obstructions to downward flow of water in wall, and where indicated.
- B. Install flashing as follows unless otherwise indicated:
 1. Prepare masonry surfaces so they are smooth and free from projections that could puncture flashing. Where flashing is within mortar joint, place through-wall flashing on sloping bed of mortar and cover with mortar. Before covering with mortar, seal penetrations in flashing with adhesive, sealant, or tape as recommended by flashing manufacturer.
 2. Extend flashing through veneer, across airspace behind veneer, and up face of sheathing at least 8 inches; with upper edge tucked under air barrier, lapping at least 4 inches. Fasten upper edge of flexible flashing to sheathing through termination bar.
 3. At lintels and shelf angles, extend flashing a minimum of 6 inches into masonry at each end. At heads and sills, extend flashing 6 inches at ends and turn up not less than 2 inches to form end dams.
 4. Interlock end joints of ribbed sheet metal flashing by overlapping ribs not less than 1-1/2 inches or as recommended by flashing manufacturer, and seal lap with elastomeric sealant complying with requirements in Section 079200 "Joint Sealants" for application indicated.
 5. Install metal drip edges and sealant stops with ribbed sheet metal flashing by interlocking hemmed edges to form hooked seam. Seal seam with elastomeric sealant complying with requirements in Section 079200 "Joint Sealants" for application indicated.
 6. Install metal drip edges beneath flexible flashing at exterior face of wall. Stop flexible flashing 1/2 inch back from outside face of wall, and adhere flexible flashing to top of metal drip edge.
- C. Install reglets and nailers for flashing and other related construction where they are shown to be built into masonry.

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- D. Install weep holes in veneers in head joints of first course of masonry immediately above embedded flashing.
 - 1. Use specified weep/vent products to form weep holes.
 - 2. Space weep holes 24 inches o.c. unless otherwise indicated.
 - E. Place cavity drainage material in airspace behind veneers to comply with configuration requirements for cavity drainage material in "Miscellaneous Masonry Accessories" Article.
 - F. Install vents in head joints in exterior wythes at spacing indicated. Use specified weep/vent products to form vents.
 - 1. Close cavities off vertically and horizontally with blocking in manner indicated. Install through-wall flashing and weep holes above horizontal blocking.

3.11 FIELD QUALITY CONTROL

- A. Testing and Inspecting: Design Professional will engage special inspectors to perform tests and inspections and prepare reports. Allow inspectors access to scaffolding and work areas as needed to perform tests and inspections. Retesting of materials that fail to comply with specified requirements shall be done at Construction Professional's expense.
- B. Inspections: Special inspections according to Level B in TMS 402/ACI 530/ASCE 5.
 - 1. Begin masonry construction only after inspectors have verified proportions of site-prepared mortar.
- C. Testing Prior to Construction: One set of tests.
- D. Clay Masonry Unit Test: For each type of unit provided, according to ASTM C 67 for compressive strength.
- E. Concrete Masonry Unit Test: For each type of unit provided, according to ASTM C 140 for compressive strength.
- F. Mortar Test (Property Specification): For each mix provided, according to ASTM C 780. Test mortar for mortar air content and compressive strength.

3.12 REPAIRING, POINTING, AND CLEANING

- A. Remove and replace masonry units that are loose, chipped, broken, stained, or otherwise damaged or that do not match adjoining units. Install new units to match adjoining units; install in fresh mortar, pointed to eliminate evidence of replacement.
- B. Pointing: During the tooling of joints, enlarge voids and holes, except weep holes, and completely fill with mortar. Point up joints, including corners, openings, and adjacent construction, to provide a neat, uniform appearance. Prepare joints for sealant application, where indicated.

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- C. In-Progress Cleaning: Clean unit masonry as work progresses by dry brushing to remove mortar fins and smears before tooling joints.
 - D. Final Cleaning: After mortar is thoroughly set and cured, clean exposed masonry as follows:
 - 1. Remove large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels.
 - 2. Test cleaning methods on sample wall panel; leave one-half of panel uncleaned for comparison purposes. Obtain Design Professional's approval of sample cleaning before proceeding with cleaning of masonry.
 - 3. Protect adjacent stone and non-masonry surfaces from contact with cleaner by covering them with liquid strippable masking agent or polyethylene film and waterproof masking tape.
 - 4. Wet wall surfaces with water before applying cleaners; remove cleaners promptly by rinsing surfaces thoroughly with clear water.
 - 5. Clean brick by bucket-and-brush hand-cleaning method described in BIA Technical Notes 20.
 - 6. Clean masonry with a proprietary acidic cleaner applied according to manufacturer's written instructions.

3.13 MASONRY WASTE DISPOSAL

- A. Salvageable Materials: Unless otherwise indicated, excess masonry materials are Construction Professional's property. At completion of unit masonry work, remove from Project site.
- B. Waste Disposal as Fill Material: Dispose of clean masonry waste, including excess or soil-contaminated sand, waste mortar, and broken masonry units, by crushing and mixing with fill material as fill is placed.
 - 1. Crush masonry waste to less than 4 inches in each dimension.
 - 2. Mix masonry waste with at least two parts of specified fill material for each part of masonry waste. Fill material is specified in Section 312000 "Earth Moving."
 - 3. Do not dispose of masonry waste as fill within 18 inches of finished grade.
- C. Excess Masonry Waste: Remove excess clean masonry waste that cannot be used as fill, as described above or recycled, and other masonry waste, and legally dispose of off Owner's property.

END OF SECTION 042613

10 73 01 – ALUMINUM WALL HUNG CANOPY

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes: Design, fabrication, and installation of welded extruded aluminum canopy systems.

1.2 REFERENCES

A. The Aluminum Association (AA):

1. The Aluminum Design Manual 2000, Specifications & Guidelines for Aluminum Structures.

B. American Architectural Manufacturers Association (AAMA):

1. AAMA 611, Voluntary Specification for Anodized Architectural Aluminum.

2. AAMA 2603, Voluntary Specification, Performance Requirements and Test Procedures for Pigmented Organic Coatings on Aluminum Extrusions and Panels.

3. AAMA 2605, Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels.

C. American Society of Civil Engineers (ASCE):

1. ASCE 7, Minimum Design Loads for Buildings and Other Structures.

D. American Society for Testing and Materials (ASTM):

1. ASTM B 209, Specification for Aluminum and Aluminum- Alloy Sheet and Plate.

2. ASTM B 221, Specification for Aluminum and Aluminum- Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.

3. ASTM C 150, Specification for Portland Cement.

4. ASTM C 404, Specification for Aggregates for Masonry Grout.

E. American Welding Society (AWS):

1. ANSI/AWS D1.2, Structural Welding Code – Aluminum.

1.3 SYSTEM DESCRIPTION

A. Design Requirements:

1. Design Walkways in accordance with The Aluminum Design Manual 2000.
2. Comply with the wind requirements of ASCE 7.
3. Provide an all welded extruded aluminum canopy system complete with internal drainage. Non-welded systems are not acceptable.
4. Provide expansion joints to accommodate temperature changes of 120 degrees F. Provide expansion joints with no metal to metal contact.

1.4 SUBMITTALS

A. Product Data: Manufacturer's product information, specifications, and installation instructions for canopy components and accessories.

B. Shop Drawings: Include plan dimensions, elevations, and details.

C. Samples:

1. Selection: Manufacturer's standard range of colors for the finishes selected.
2. Verification: 2-inch-square samples of each finish selected on the substrate specified.

D. Design Data: Design calculations bearing the seal of a Registered Professional Engineer, licensed in the state where the project is located. Design calculations shall state that the canopy system design complies with the wind requirements of ASCE 7, the stability criteria of applicable building code, and all other governing criteria.

1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications: At least ten years of experience in the design, fabrication, and erection of extruded aluminum canopy systems.

B. Installer Qualifications: Have canopy installed by manufacturer, third party installation is not acceptable.

PART 2 PRODUCT

2.1 MANUFACTURERS

A. The design is based on products fabricated by: Peachtree Protective Covers, Inc., 3255 South Sweetwater Rd., Lithia Springs, GA 30122, 770-439-2120, fax 770-439-2122.

1. Comparable products by the following manufacturers also will be acceptable:

- a. Mapes Canopies.
- b. Dittmer Architectural Aluminum.
- c. Avadek Walkway Cover Systems.

2. Substitutions: Comparable products of other manufacturers will be considered under standard substitution procedures.

2.2 MATERIALS

- A. Aluminum Members: Extruded aluminum, ASTM B 221, 6063 alloy, T6 temper.
- B. Fasteners: Aluminum, 18-8 stainless steel, or 300 series stainless steel.
- C. Protective Coating for Aluminum Columns Embedded in Concrete: Clear acrylic.
- D. Gaskets: Dry seal santoprene pressure type.
- E. Aluminum Flashing: ASTM B 209, Type 3003 H14, 0.040 inch, minimum.

2.3 FABRICATION

A. General:

- 1. Shop Assembly: Assemble components in shop to greatest extent possible to minimize field assembly.
- 2. Welding: In accordance with ANSI/AWS D1.2.
- 3. Gutter Frame Construction: Factory assemble gutter fascia frames to form a one-piece welded frame. Make welds smooth and uniform using an inert gas shielded arc. Perform suitable edge preparation to assure 100% penetration. Grind welds only where interfering with adjoining structure to allow for flush connection. Field welding is not permitted. Gutter frames constructed by mechanically fastening components together are not acceptable.
- 4. Deck Construction: Fabricate from extruded modules that interlock in a self-flashing manner. Positively fasten interlocking joints creating a monolithic structural unit capable of developing the full strength of the sections. The fastenings must have minimum shear strength of 350 pounds each.

B. Beams: Where applicable provide open-top tubular extrusion, top edges thickened for strength and designed to receive deck members in self-flashing manner.

C. Deck: Extruded self-flashing sections interlocking into a composite unit.

D. Gutter Fascia: Where applicable provide “j-shaped” gutter fascia capable in manufacturer’s standard sizes.

E. Fascia: Where applicable provide manufacturer’s standard fascia in standard sizes.

F. Hanger Assemblies: Provide extruded aluminum hanger rods in manufacturer's standard shapes and sized to meet the loads seen by canopy.

H. Factory Finishing: Finish designations prefixed by AA comply with system established by the AAMA for designating aluminum finishes.

1. Class II, Clear Anodic Finish: AA-M12C22A31 (Mechanical Finish: nonspecular as fabricated; Chemical Finish: etched, medium matte; Anodic Coating: Architectural Class II, clear coating 0.4 mils to 0.7 mils thick), complying with AAMA 611.

2. Class I, Clear Anodic Finish: AA-M12C22A41 (Mechanical Finish: nonspecular as fabricated; Chemical Finish: etched, medium matted, Anodic Coating: Architectural Class I, clear coating 0.7 mils or thicker), complying with AAMA 611.

3. Class I, Color Anodic Finish: AA-M12C22A42/A44 (Mechanical Finish: nonspecular as fabricated; Chemical Finish: etched, medium matte; Anodic Coating: Architectural Class I, integrally colored or electrolytically deposited color coating 0.7 mils or thicker), complying with AAMA 611

4. Baked-Enamel Finish: AA-C12C42R1x (Chemical Finish: cleaned with inhibited chemicals; Chemical Finish: acid-chromate-fluoride-phosphate conversion coating; Organic Coating: Thermosetting, modified-acrylic enamel primer/topcoat system, except with a minimum dry film thickness of 1.5 mils (0.04 mm), medium gloss), complying with AAMA 2603. Apply baked enamel complying with paint manufacturer's specifications for cleaning, conversion coating, and painting.

5. High performance Organic Coating Finish: AA-C12C42R1x (Chemical Finish: cleaned with inhibited chemicals; Chemical Finish: acid-chromate-fluoride-phosphate conversion coating; Organic Coating: as specified below). Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturer's written instructions.

a. Fluoropolymer Two-Coat Coating System: Manufacturer's standard two-coat, thermocured system consisting of specially formulated inhibitive primer and fluoropolymer color topcoat containing not less than 70 percent polyvinylidene fluoride resin by weight; complying with AAMA 2605.

b. Fluoropolymer Three-Coat Coating System: Manufacturer's standard three-coat, thermocured system consisting of specially formulated inhibitive primer, fluoropolymer color coat, and clear fluoropolymer topcoat, with both color coat and clear topcoat containing not less than 70 percent polyvinylidene fluoride resin by weight; complying with AAMA 2605.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verification of Conditions: Verify that all concrete, masonry, and roofing work in the vicinity is complete and cleaned.

3.2 ERECTION

A. Erect canopy true to line, level, and plumb.

B. Provide hairline miters and fitted joints.

3.3 CLEANING

A. Clean all canopy components promptly after installation.

3.4 PROTECTION

A. Protect materials during and after installation.

END OF SECTION 10 73 01

SECTION 123661.16 - SOLID SURFACING COUNTERTOPS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:

- 1. Solid surface material countertops.
- 2. Solid surface material backsplashes.
- 3. Solid surface material end splashes.

- B. Related Requirements:

- 1. See Section 064116 – “Plastic-Laminate-Clad Architectural Cabinets”

- C. Product Data: For countertop materials and sinks.

- D. Shop Drawings: For countertops. Show materials, finishes, edge and backsplash profiles, methods of joining, and cutouts for plumbing fixtures.

- 1. Show locations and details of joints.
- 2. Show direction of directional pattern, if any.

- E. Samples for Initial Selection: For each type of material exposed to view.

- F. Samples for Verification: For the following products:

- 1. Countertop material, 6 inches square.

1.3 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For fabricator.

1.4 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For solid surface material countertops to include in maintenance manuals. Include Product Data for care products used or recommended by Installer and names, addresses, and telephone numbers of local sources for products.

1.5 QUALITY ASSURANCE

- A. Fabricator Qualifications: Shop that employs skilled workers who custom-fabricate countertops similar to that required for this Project, and whose products have a record of successful in-service performance.
- B. Installer Qualifications: Fabricator of countertops.

1.6 FIELD CONDITIONS

- A. Field Measurements: Verify dimensions of countertops by field measurements after base cabinets are installed but before countertop fabrication is complete.

1.7 COORDINATION

- A. Coordinate locations of utilities that will penetrate countertops or backsplashes.

PART 2 - PRODUCTS

2.1 SOLID SURFACE COUNTERTOP MATERIALS

- A. Solid Surface Material: Homogeneous-filled plastic resin complying with ICPA SS-1.
 - 1. Type: Provide Standard type unless Special Purpose type is indicated.
 - 2. Colors and Patterns: As indicated on Drawings.
- B. Particleboard: ANSI A208.1, Grade M-2.
- C. Plywood: Exterior softwood plywood complying with DOC PS 1, Grade C-C Plugged, touch sanded.

2.2 COUNTERTOP FABRICATION

- A. Fabricate countertops according to solid surface material manufacturer's written instructions and to the AWI/AWMAC/WI's "Architectural Woodwork Standards."
 - 1. Grade: Custom.
- B. Configuration:
 - 1. Front: Straight, slightly eased at top.
 - 2. Backsplash: Straight, slightly eased at corner.
 - 3. End Splash: Matching backsplash.
- C. Countertops: 1/2-inch-thick, solid surface material with front edge built up with same material.
- D. Backsplashes: 3/4-inch-thick, solid surface material.

- E. Fabricate tops with shop-applied edges and backsplashes unless otherwise indicated. Comply with solid surface material manufacturer's written instructions for adhesives, sealers, fabrication, and finishing.
 - 1. Fabricate with loose backsplashes for field assembly.
- F. Joints: Fabricate countertops without joints.
- G. Joints: Fabricate countertops in sections for joining in field.
 - 1. Joint Locations: Not within 18 inches of a sink or cooktop and not where a countertop section less than 36 inches long would result, unless unavoidable.
- H. Cutouts and Holes:
 - 1. Undercounter Plumbing Fixtures: Make cutouts for fixtures in shop using template or pattern furnished by fixture manufacturer. Form cutouts to smooth, even curves.
 - 2. Counter-Mounted Plumbing Fixtures: Prepare countertops in shop for field cutting openings for counter-mounted fixtures. Mark tops for cutouts and drill holes at corners of cutout locations. Make corner holes of largest radius practical.
 - 3. Fittings: Drill countertops in shop for plumbing fittings, undercounter soap dispensers, and similar items.

2.3 INSTALLATION MATERIALS

- A. Adhesive: Product recommended by solid surface material manufacturer.
 - 1. Verify adhesives have a VOC content of 70 g/L or less.
 - 2. Verify adhesive complies with the testing and product requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."
- B. Sealant for Countertops: Comply with applicable requirements in Section 079200 "Joint Sealants."

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates to receive solid surface material countertops and conditions under which countertops will be installed, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of countertops.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Install countertops level to a tolerance of 1/8 inch in 8 feet, 1/4 inch maximum. Do not exceed 1/64-inch difference between planes of adjacent units.
- B. Fasten subtops to cabinets by screwing through subtops into cornerblocks of base cabinets. Shim as needed to align subtops in a level plane.
- C. Secure countertops to subtops with adhesive according to solid surface material manufacturer's written instructions. Align adjacent surfaces and, using adhesive in color to match countertop, form seams to comply with manufacturer's written instructions. Carefully dress joints smooth, remove surface scratches, and clean entire surface.
- D. Bond joints with adhesive and draw tight as countertops are set. Mask areas of countertops adjacent to joints to prevent adhesive smears.
- E. Install backsplashes and end splashes by adhering to wall and countertops with adhesive. Mask areas of countertops and splashes adjacent to joints to prevent adhesive smears.
- F. Install aprons to backing and countertops with adhesive. Mask areas of countertops and splashes adjacent to joints to prevent adhesive smears. Fasten by screwing through backing. Predrill holes for screws as recommended by manufacturer.
- G. Complete cutouts not finished in shop. Mask areas of countertops adjacent to cutouts to prevent damage while cutting. Make cutouts to accurately fit items to be installed, and at right angles to finished surfaces unless beveling is required for clearance. Ease edges slightly to prevent snipping.
 - 1. Seal edges of cutouts in particleboard subtops by saturating with varnish.
- H. Apply sealant to gaps at walls; comply with Section 079200 "Joint Sealants."

END OF SECTION 123661.16

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Bid Package Introduction

Construction Manager:



McKnight Construction Company
635 NW Frontage Road
Augusta, GA 30907
Phone: (706) 863-7784

Architect:

Pond & Company
3500 Parkway Lane, Suite 500
Peachtree Corners, GA 30092

Owner:

Georgia State Financing and Investment Commission
270 Washington St, SE
Atlanta, GA 30334

Bid Documents

- Important Notes from the Construction Manager
- Schedule of Work
- Instructions to Bidders
- Subcontractor Proposal Form
- Bid Package Table of Contents
- Descriptions of Bid Packages
- Drawings
- Specifications
- All addenda as issued by the Architect and Construction Manager.

**PLEASE COMPLETE A THOROUGH REVIEW OF ALL DOCUMENTS
PRIOR TO BID SUBMISSION.**

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Important Notes from the Construction Manager



1. Important Notes on Bid Preparation

- It is the responsibility of the proposers to check for Addenda issued and to include all Addenda in their pricing.
- Specification sections referenced to in the bid package descriptions are for the convenience of bidders and in no way eliminate work required under the described package. Prospective bidders shall notify the Construction Manager if inconsistencies or discrepancies are discovered. Clarifications will be made upon written receipt prior to the deadline for questions.
- Special attention is called to the General Requirements in Division 01 of the Project Manual, as these requirements are to be followed for all bid packages.
- Bidders of all packages shall include the pricing of any alternates affecting their work.
- Bidders certify that in submitting their proposal that they have thoroughly reviewed the contract documents, compared all documents to each other, visited the site, made allowances for the cost of the work and reported any discrepancy prior to submitting their proposal.
- **Payment & Performance Bond** – Special attention is called to bid packages requiring payment and performance bonds. All bonds are 100% Performance and Payment Bonds and the bonding company shall be a surety company certified on the United States Department of the Treasury's Listing of Approved Sureties (Department Circular 570), and rated no less than "A" by A.M. Best ratings agency and acceptable to the Construction Manager. Bonds to be submitted with Seven (7) Days of award of contract.
- All proposals shall include applicable business licenses, permits, impact fees, tie-in fees, and other requirements of the local and state governing authority.
- All proposals for the bid packages shall include competent supervision, material, taxes, installation, permits, fees, cleanup, debris removal and incidental items of cost to perform the work as described in the packages. Although reference is made to the specification sections in the package descriptions, all bids for the designated packages shall include all Bid Documents and subsequent addenda.
- All bid packages shall include progressive clean up and debris removal from the site daily, assistance in composite cleanup one (1) day per week with one (1) laborer per ten (10) workers for a minimum of one (1) hour but until necessary to complete cleanup, and final job clean up.
- All proposers must comply with the bid package description.

2. Important Notes concerning subcontractor behavior following contract award

- Any contractor penetrating a partition, floor or other work shall be responsible for the coordination, patching, and fire stopping.
- Any contractor who demolishes a surface to install new work shall patch back to the surface's original condition if no new work is to be installed on that surface. If new work is to be installed on the patched surface, patching is required to adequately receive the new finish.
- Any contractor disturbing any exterior work is responsible for its replacement.

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Important Notes from the Construction Manager

- Any contractor disturbing a grassed or finished site area shall restore the area to its original condition.
- Any contractor disturbing existing soils shall compact areas back per the Project Specifications – Earthwork.
- Trade contractors shall provide an onsite supervisor acceptable to the Construction Manager. This onsite supervisor is the only person the Construction Manager's Job Superintendent will give instructions to and coordinate all the work on this project. This onsite supervisor must be onsite at all times while work is being performed by his staff and/or his subcontractors. This site supervisor must be able to speak and understand the English language fluently. The Trade Contractor's Supervisor cannot be replaced without the consent of the Construction Manager.
- All subcontractors must furnish Twenty-Four (24) Hour telephone numbers for Proposer's Project Manager and Job Superintendent in case of emergency.
- All subcontractors must develop and maintain a safety program as well as follow the safety program of the Construction Manager.
- All subcontractors must provide a Drug-Free and Alcohol-Free Workplace.
- In the event OSHA or other inspecting authority levies a fine against Construction Manager due to violation(s) of a subcontractor, the subcontractor in violation of codes and regulations shall be responsible for the fine levied against the Construction Manager.
- All subcontractors must abide by all laws, ordinances, codes, and schedule inspections through Local Inspection Department and the Architect/Engineer.

3. Important Notes on Payment Terms after contract award

- Retainage of Five Percent (5%) will be held on all bid packages. A reduction in retainage may occur per state law and with consent of the Architect, Construction Manager & Owner.
- Pay Requests are DUE to the Construction Manager on the 25th of each month. Each pay request must be accompanied by an interim release of lien.
- **Change Orders:** All change orders will include the cost of the work on site plus a maximum of 20% overhead and profit for work performed with a contractor's own forces. If a subcontractor is used to perform a portion of the Change Order, the total markup shall not exceed 20% of the cost of work performed.
- Completion Date: See Schedule of Work.

4. Important Notes on Schedule

- Subcontractor will execute subcontracts and provide certificates of insurance and required payment and performance bond within **Ten (10) Days** of contract award.
- Subcontractor will submit all closeout documents within **Ten (10) Days** of Substantial Completion.
- Subcontractor will attend weekly or bi-weekly onsite progress meetings with the Proposer's Project Manager and Job Superintendent as scheduled by the Construction Manager.
- Subcontractor will advise and consult with Construction Manager regarding the availability of materials, cost analysis, scheduling, and value engineering.
- Subcontractor will arrange for after hours or overtime work if necessary, to meet mutually agreed upon milestone dates
- Subcontractor will provide Construction Manager with SDS Data as well as your Safety Plan within **Ten (10) Days** of Contract Award. Must be provided prior to personnel

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Important Notes from the Construction Manager

being onsite.

- Liquidated Damages are \$1,150 per day. Liquidated damages shall be assessed against the Subcontractor only to the extent caused by the Subcontractor or any person or entity for whose acts the Subcontractor may be liable, and in no case for delays arising outside the scope of this Subcontract.

5. Important Notes on Insurance

Subcontractor will furnish all insurance as required by law, the Project Manual, Bid Documents and per the following:

Workers' Compensation & Employers Liability Insurance

This insurance will pay the subcontractor's obligations under appropriate worker's compensation statutes, covering all employees who perform any of the obligations of the Subcontractor under this Subcontract.

Employers Liability coverage shall provide limits of at least \$1,000,000 each accident for bodily injury and \$1,000,000 each employee for disease.

A group insurer must submit a certificate of authority from the Insurance Commissioner approving the group insurance plan.

Commercial General Liability Insurance

The insurance must be written on an "occurrence" basis, responding to claims arising out of occurrences which take place during the policy period. The commercial general liability form should provide limits of at least the following:

- \$1,000,000 each occurrence for bodily injury and property damage
- \$1,000,000 each occurrence for personal and advertising injury
- \$1,000,000 each occurrence products-completed operations
- \$2,000,000 general aggregate

The general aggregate limit shall apply separately to each project. The products and completed operations coverage are to be maintained for a period of at least 2 years following the completion of the work. ISO Form CG 22 94 or its equivalent language (removing the subcontractor exception from the "Your Work" exclusion) shall not be used. There shall be no separate exclusion for liability arising out of explosion, collapse, and underground hazards (XCU) or subsidence, if the scope of Subcontractors work involves digging, excavation, grading, or use of explosives. Any deductibles under this policy must be disclosed and will be fully assumed by the subcontractor. Coverage shall comply with the provisions of standard ISO endorsement forms CG2010 (07/04) for ongoing operations and GC 2037 (07/04) for completed operations or their equivalent. Forms that are limited to "liability arising out of your ongoing operations" or that do not extend to Products and Completed Operations are not acceptable. Said insurance shall name Owner and McKnight Construction Company, Inc. and their respective officers, directors, and employees as additional insureds.

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Important Notes from the Construction Manager

Business Automobile Liability Insurance

This insurance shall apply to any auto, including all owned, hired and non-owned vehicles to a combined single limit of at least \$1,000,000 each accident. Any deductibles under this policy must be disclosed and will be fully assumed by the subcontractor. Said insurance shall name Owner and McKnight Construction Company, Inc. and their respective officers, directors, and employees as additional insureds.

Commercial Umbrella Excess Liability

Umbrella Excess Liability coverage with the following minimum limits:

Each Occurrence \$10,000,000

General Aggregate: \$10,000,000

Said insurance shall name Owner and McKnight Construction Company, Inc. and their respective officers, directors, and employees as additional insureds.

Other Insurance Provisions

Certificates of insurance, as evidence of the insurance required by this Agreement and including the required “additional insured” and “primary insurance” endorsements, shall be furnished by Subcontractor to Contractor before any work here under is commenced by Subcontractor. The certificates of insurance shall provide that there will be no cancellation or reduction of coverage without 30 days prior written notice to the Contractor. Failure of McKnight Construction Company, Inc. to demand such certificates or other evidence of full compliance with these insurance requirements or failure of McKnight Construction Company, Inc. to identify a deficiency from evidence that is provided shall not be construed as a waiver of Subcontractor’s obligation to maintain such insurance. McKnight Construction will have the right, but not the obligation, to prohibit Subcontractor or one of its subcontractors from entering the project site until such certificates or other evidence that insurance has been placed in complete compliance with these requirements is received and approved by McKnight Construction Company, Inc.

The Subcontractor, in its agreements with subcontractors, shall require subcontractors to obtain insurance meeting the minimum limits and incorporating the contractual requirements prescribed by this Section.

McKnight Construction Company, Inc., the owner and (other requested entities) are Additional Insureds under the Commercial General Liability, AutoLiability and Umbrella Policies on a primary and non-contributory basis.

A Waiver of Subrogation in favor of the Owner and McKnight Construction Company, Inc. and their respective officers, directors, and employees shall apply to all policies required under the Subcontract.

Insurance shall be placed with insurers with an A.M. Best rating of not less than A-

- **Proposer must participate in a federal work authorization program in accordance with the applicability provisions and deadlines established in**

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Important Notes from the Construction Manager

O.C.G.A. 13-10-91 and upon contract award, must execute a Subcontractor's Affidavit verifying compliance. Affidavit shall be provided by Construction Manager. A copy is available upon request.

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Schedule of Work



This document describes key dates in the proposed schedule for this project.

- **11/02/2023: Pre-Bid Walk at proposed project site (11:00am)**
- **11/14/2023: Bids for all bid packages due to the Construction Manager (2:00PM)**
- **12/22/2023: Anticipated date of Notice to Proceed**
- **01/08/2024: Construction begins**
- **05/08/2024: Building Roof complete and Dried-in.**
- **08/08/2024: Interior is temperature controlled. Finishes to begin.**
- **11/22/2024: Material Completion**

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Instructions to Bidders



Instructions to Qualify

- Direct all questions to Nathan Heigle (Nathan@McknightConstructionCo.com).
- The deadline for all questions is 2:00PM on Tuesday, November 7th.
- Project will be awarded to the most competitive, qualified subcontractor.
- Forms should be submitted to the Construction Manager via email.
 - All proposal forms and required bid bonds for must be **received by 2:00PM on November 14th**.
 - All Proposal Forms and Required Bid Bonds should be e-mailed to bids@mcknightconstructionco.com
- Please complete the proposal form in its entirety and include all requested attachments. Any form(s) that appears not to contain enough information will be sent back for resubmission and may risk missing the bid deadline.

Checklist for Bid Day

- Completed Subcontractor Proposal Form (including any exclusions and alternates)

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PROPOSAL FORM



1. Please indicate the bid package(s) for which you are interested in qualifying:

2. Company Name:

3. Base Bid Costs

A. Base Bid Cost: \$_____

4. Bidder acknowledges receipt of the Addenda checked on the list below and confirms that the information within these addenda has been incorporated into the bid amount. *Please note that there may be more boxes than actual addenda. Do not check boxes that do not apply.*

- Addendum 1
- Addendum 2
- Addendum 3
- Addendum 4

5. Bid Alternates

- Alternate #1: Additional Parking

ADD \$_____

- Alternate #2: Revised Landscape Plan

ADD \$_____

- Alternate #3: Added Bollard Lights

ADD \$_____

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PROPOSAL FORM

- Alternate #4: Added Dining Patio

ADD \$ _____

- Alternate #5: Epoxy in lieu of Polished Concrete in High-Bay

ADD / DEDUCT \$ _____

- Alternate #6: Additional Interior Windows

ADD / DEDUCT \$ _____

- Alternate #7: Quartz Countertops in lieu of Solid Surface

ADD / DEDUCT \$ _____

- Alternate #8: Training Room C & Storage 1013 Build Out

ADD / DEDUCT \$ _____

6. Allowances & Unit Prices for Site Package Proposal:

Item	Description	Unit Price	Quantity	Total
A	Unsatisfactory soil Excavation and off-site disposal & Replacement with satisfactory soil material from off-site.		2,000 cy	
B	Mass Rock Removal & Replacement with satisfactory soil material		1,000 cy	
C	Trench Rock Removal & Replacement with satisfactory soil material from off-site		10 cy	
D	Rippable Rock Removal & Replacement with satisfactory soil material from off-site		10 cy	
E	Caisson Rock Removal & Replacement with satisfactory soil material from off-site		10 cy	

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PROPOSAL FORM

7. Signatures:

Authorized Signature

Title

Print Name

Date

8. Main Office Locations & Company Contacts, please complete the table below.

Company Name	
Mailing Address	
Office Phone Number	
Project Contact	
Email Address	
Cell Phone Number	

9. Please list 3 similar projects that your company has completed in the last 5 years.

Project #1	
Name of Project	
Description of Work Performed	
Owner Name Owner Phone Number Owner Email	
Architect Name Architect Phone Number Architect Email	
GC or CM Name GC or CM Phone Number GC or CM Email	
Final Contract Dollar Value	
Date Complete	

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PROPOSAL FORM

Project #2	
Name of Project	
Description of Work Performed	
Owner Name Owner Phone Number Owner Email	
Architect Name Architect Phone Number Architect Email	
GC or CM Name GC or CM Phone Number GC or CM Email	
Final Contract Dollar Value	
Date Complete	

Project #3	
Name of Project	
Description of Work Performed	
Owner Name Owner Phone Number Owner Email	
Architect Name Architect Phone Number Architect Email	
GC or CM Name GC or CM Phone Number GC or CM Email	
Final Contract Dollar Value	
Date Complete	

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PROPOSAL FORM

10. Please list your safety EMR for the past 5 years.

Present Rate	
Last Rate	
Year Before Rate	
Year Before Rate	
Year Before Rate	

11. Has your company filed any claims against a CM at Risk or General Contractor in the past five (5) years, whether resolved or still pending resolution?

Yes No

If yes, state the project name(s), year(s), and reason why:

**Quick Start EV Training Center - Pooler Expansion
Bid Package Table of Contents**

Bid Package #	Title
1	Concrete
2	Masonry
3	Steel
4	Cabinets & Countertops
5	Metal Stud Partitions, Gypsum Board and Ceilings
6	Joint Sealants
7	Foamed in Place Insulation
8	Metal Wall Panels & Roofing
9	Doors, Frames & Hardware Supplier
10	Doors, Frames & Hardware Installer
11	Overhead Coiling Doors
12	Storefront & Glass
13	Tile, Resilient and Carpet Flooring
14	Polished Concrete
15	Painting
16	Pre-Manufactured Canopies
17	Signage
18	Toilet Compartment Supplier
19	Toilet Compartment Installer
20	Wall and Door Protection Supplier
21	Wall and Door Protection Installer
22	Toilet Accessories Supplier
23	Toilet Accessories Installer
24	Fire Protection Specialties Supplier
25	Fire Protection Specialties Installer
26	Loading Dock Bumper Supplier & Installer
27	Fire Suppression
28	Plumbing
29	HVAC
30	Electrical & Fire Alarm
31	Earthwork, Exterior Improvements & Utilities
32	Landscaping
33	Densified Aggregated Piers
34	Communications
35	Audio Visual

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Bid Package #1

DIVISION 3 – 031000 Concrete Forming and Accessories

032000 Concrete Reinforcing

033000 Cast-In-Place Concrete

- Subcontractor to provide all labor, materials, tools, and equipment necessary to furnish and install all 031000 Concrete Forming and Accessories, 032000 Concrete Reinforcing, 033000 Cast-In-Place Concrete required for the entire building.
- Subcontractor to provide all surveyed layout, batter boards, formwork, and all permanent materials including, but not limited to, capillary barriers, vapor barriers, welded wire fabric, concrete reinforcing, concrete, concrete admixtures, nonshrinking grout, water stops, pour stops, expansion fiber, curing compound, saw cut joints, tooled joints, formed equipment pads and locker bases, stairs, and any other concrete accessories or materials required per Division 3.
- Subcontractor to include pumps / lights for pours as necessary.
- Subcontractor to dig and pour all foundations for building, set anchor bolts, pour all stairs attached to building, backfill all foundations and foundation walls, prep/pour/finish/cure all slab on grades and slab on decks, form/pour equipment pads, grout base plates, fill column block outs, sawcut concrete joints, and any other activity required to place concrete inside or outside the structure per the contract plans and specs.
- Subcontractor responsible for dewatering of footings to make concrete pours.
- All nonshrinking grout to be installed under column base plates shall be completed as soon as approved by the steel erector.
- Subcontractor responsible for properly fixing any damage caused to existing materials required to remain during installation of said work.
- Subcontractor shall provide and install aggregate base under slab on grade as shown on plans.
- Subcontractor to furnish and install all concrete trenches shown in the new slab.
- Subcontractor to furnish and install grating with cover required at floor trenches.
- Space and laydown area around the project are minimal. Subcontractor to plan deliveries, installation, and phasing accordingly. Subcontractor will be responsible for getting equipment and materials in and out of the site while other construction activities take place.
- Subcontractor shall coordinate deliveries with suppliers and McKnight's superintendent.
- Subcontractor agrees to work and provide manpower to fulfill project needs including working non-standard work week hours.
- Subcontractor will provide completed submittals within 14 days of contract award.
- Subcontractor required to keep a full-time superintendent on site during installation of its work.
- Subcontractor will clean up daily.
- Subcontractor responsible for labor force to practice and perform all safety requirements per OSHA for said work.
- Subcontractor agrees to complete all punchlist items within 20 days of Substantial Completion or a portion (based on number of punchlist items remaining per subcontractor) of liquidated damages will be deducted from Subcontractor's retainage.
- Subcontractor to provide all warranties, as-builts, and closeout documents per the contract plans and specs.

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Bid Package #2

DIVISION 4 – 042613 Masonry Veneer

DIVISION 7 – 072100 Thermal Insulation (For Masonry Only)

- Subcontractor to provide all labor, materials, tools, and equipment necessary to furnish and install all Division 4 Masonry and masonry insulation described in 07 21 00 Thermal Insulation for the entire project per the plans and specs.
- Subcontractor to furnish and install all brick, CMU, grout, masonry rebar, flashing, termination bars, wall ties, column/steel ties, joint reinforcement, masonry accessories, precast, masonry lintels, rigid thermal insulation in wall cavity.
- Subcontractor to install the following items provided by others: hollow metal frames (in masonry openings), steel embeds, lintel beams, and brick lintels.
- Subcontractor to include Dumpster Pad detailed on Drawing C-502
- Subcontractor to layout all walls and brick patterns, point up CMU, clean brick, clean foundations prior to laying CMU if needed and provide equipment for scaffolding.
- Subcontractor to provide all lifts and scaffolding required to complete the job.
- Subcontractor to protect adjacent materials during installation and cleanup any mortar or grout spilled on other surfaces.
- Subcontractor to include all thermally broken masonry wall ties as required by plans and specifications.
- Space and laydown area around the project are minimal. Subcontractor to plan deliveries, installation, and phasing accordingly. Subcontractor will be responsible for getting equipment and materials in and out of the site while other construction activities take place.
- Subcontractor shall coordinate deliveries with suppliers and McKnight's superintendent
- Subcontractor agrees to work and provide manpower to fulfill project needs including working non-standard work week hours
- Subcontractor required to keep a full-time superintendent on site
- Subcontractor will clean up daily
- Subcontractor to provide and install brick mockup panel for owner's review and approval prior to starting brick installation.
- Subcontractor responsible for labor force to practice and perform all safety requirements per OSHA for said work.
- Subcontractor agrees to complete all punchlist items within 20 days of Substantial Completion or a portion (based on number of punchlist items remaining per subcontractor) of liquidated damages will be deducted from Subcontractor's retainage
- Subcontractor to provide submittals within 10 days of award of contract.
- Subcontractor to provide all warranties, as-builts, and closeout documents per the contract plans and specs.

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Bid Package #3

DIVISION 5 - 051200 Structural Steel Framing

051213 Architecturally Exposed Structural Steel Framing

052200 Steel Joist Framing

053100 Steel Decking

055000 Metal Fabrications

- Subcontractor to provide all labor, materials, tools, and equipment necessary to furnish and install all 051200 Structural Steel, 051213 Architecturally Exposed Structural Steel Framing, 052200 Steel Joist Framing, 053100 Steel Decking, and 055000 Metal Fabrications required for the entire project per the contract plans and specs.
- Subcontractor to furnish and install all steel, joists, deck, handrails, wall rails, guardrails, lintels, misc. angle, deck edging, nelson studs, anchor bolts, grating, roof access ladders, interior access ladders, plate steel, channel tracks, bollards, metal handrails and guardrails, stair nosing, and all other items required in Division 5 per the contract plans and specs.
- Subcontractor to pay special attention to Delegated Design Requirements in plans and specifications.
- Subcontractor to provide and protect Acoustical Deck material. Acoustical Deck material to be installed by roofer.
- Subcontractor to furnish and install frames for equipment, roof drains and coordinate sizes and locations with associated trade subcontractor.
- Subcontractor to clean and paint all welds.
- Subcontractor to provide all bollards. Installation of Bollards to be performed by Site Subcontractor.
- Space and laydown area around the project are minimal. Subcontractor to plan deliveries, installation, and phasing accordingly. Subcontractor will be responsible for getting equipment and materials in and out of the site while other construction activities take place.
- Subcontractor to sequence steel delivery and erection as coordinated with McKnight Construction and provide adequate manpower to maintain the project schedule.
- Subcontractor to provide and install safety cabling on elevated working platforms as required to work safely.
- Subcontractor to weld all CMU anchors and weldable rebar required to attach to steel.
- Subcontractor responsible for labor force to practice and perform all safety requirements per OSHA for said work. Subcontractor to provide and install safety cabling for handrails on elevated work platforms per OSHA as building is erected.
- Subcontractor agrees to complete all punchlist items within 20 days of Substantial Completion or a portion (based on number of punchlist items remaining per subcontractor) of liquidated damages will be deducted from Subcontractor's retainage.
- Subcontractor to provide all warranties, as-builts, and closeout documents required per the contract plans and specs.
- Subcontractor to provide all submittals within 20 days of receipt of this subcontract.
- Subcontractor to provide performance and payment bonds.

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Bid Package #4

DIVISION 6 – 64116 Plastic-Laminate-Clad Architectural Cabinets

DIVISION 12 –123661.16 Solid Surface Countertops

- Subcontractor to provide all labor, materials, tools, and equipment necessary to furnish and install all 064116 Plastic-Laminate-Clad Architectural Cabinets and 123661.16 Solid Surface Countertops for the entire project per the contract plans and specs.
- Subcontractor to provide all layout, installation, lifts, and equipment required for installation, protection of adjacent finishes, and final connection to power.
- Subcontractor to coordinate electrical requirements for said work with contract documents and electrical subcontractor, layout drawings for coordination with other trades.
- Subcontractor to field measure prior to fabrication.
- Subcontractor to include all solid surface window stools per plans and specs.
- Subcontractor to install caulk on all dissimilar surfaces.
- Space and laydown area around the project are minimal. Subcontractor to plan deliveries, installation, and phasing accordingly. Subcontractor will be responsible for getting equipment and materials in and out of the site while other construction activities take place.
- Subcontractor shall coordinate deliveries with suppliers and McKnight's superintendent.
- Subcontractor agrees to work and provide manpower to fulfill project needs including working non-standard work week hours.
- Subcontractor required to keep a full-time superintendent on site.
- Subcontractor will clean up daily.
- Subcontractor responsible for labor force to practice and perform all safety requirements per OSHA for said work.
- Subcontractor agrees to complete all punchlist items within 20 days of Substantial Completion or a portion (based on number of punchlist items remaining per subcontractor) of liquidated damages will be deducted from Subcontractor's retainage.
- Subcontractor to provide all warranties, as-builts, and closeout documents.
- Subcontractor to provide submittals within 20 days of award of contract.

Quick Start EV Training Center Pooler, GA

Bid Package #5

DIVISION 5 – 054000 Cold-Formed Metal Framing

DIVISION 6 – 061000 Rough Carpentry (Wall Blocking only)

DIVISION 7 – 072100 Thermal Insulation

DIVISION 8 – 083113 Access Doors & Frames

DIVISION 9 – 092216 Non-Structural Metal Framing

092900 Gypsum Board

095123 Acoustical Tile Ceilings

- Subcontractor to provide all labor, tools, materials, and equipment necessary to furnish and install all 054000 Cold-Formed Metal Framing, 061000 Rough Carpentry (Wall Blocking only) 072100 Thermal Insulation, 083113 Access Doors & Frames, 092216 Non-Structural Metal Framing, 092900 Gypsum Board, and 095123 Acoustical Tile Ceilings for the entire project per the plans and specs.
- Subcontractor to install all hollow metal frames in metal frame walls and top out all walls.
- Subcontractor to layout metal stud walls based on points and locations provided from steel, concrete, and masonry control points provided to Subcontractor.
- Subcontractor to provide all Wall Blocking (061000 Rough Carpentry) per plans and specs for all casework, toilet accessories, toilet partitions, division 10 accessories (including marker and tack boards, TV displays, etc.). Subcontractor to coordinate layout with G.C. and other trades.
- Subcontractor to pay special attention to Delegated Design Requirements in plans and specifications.
- Subcontractor to provide and install exterior sheathing on metal studs, exterior soffit framing, and gypsum board as shown on plans.
- Subcontractor to provide finish level for walls and ceilings as shown on plans and specs.
- Subcontractor responsible for providing required lifts/staging of materials in building.
- Subcontractor to provide acoustical caulking at wall joints as required on plans.
- Subcontractor to install all ceiling tile around MEP and fire penetrations with the exception of sprinkler heads. Subcontractor shall provide ceiling tiles for fire suppression subcontractor to use at sprinkler heads.
- Subcontractor to provide and install all ceiling hanger wires for lights as required.
- Subcontractor shall make partitions "smoke-tight" where shown on plans, including sealing / finishing around MEP penetrations.
- Space and laydown area around the project are minimal. Subcontractor to plan deliveries, installation, and phasing accordingly. Subcontractor will be responsible for getting equipment and materials in and out of the site while other construction activities take place.
- Subcontractor shall coordinate deliveries with suppliers and McKnight's superintendent.
- Subcontractor agrees to work and provide manpower to fulfill project needs including working non-standard work week hours.
- Subcontractor required to keep a full-time superintendent on site.
- Subcontractor will clean up daily.
- Subcontractor responsible for labor force to practice and perform all safety requirements per OSHA for said work.
- Subcontractor agrees to complete all punchlist items within 20 days of Substantial Completion or a portion (based on number of punchlist items remaining per subcontractor) of liquidated damages will be deducted from Subcontractor's retainage
- Subcontractor to provide all warranties, as-builts, and closeout documents.
- Subcontractor to provide submittals within 20 days of award of contract.

Quick Start EV Training Center Pooler, GA

Bid Package #6

DIVISION 7 - 07 92 00 Joint Sealants

- Subcontractor to provide all labor, materials, tools, and equipment necessary to furnish and install all 079200 Joint Sealants for the entire project per the contract plans and specs.
- Subcontractor to provide all materials, equipment, dampproofing, waterproofing, joint sealants, backer rods, joint prep, and any other accessories required by the contract plans and specs to complete said scope of work.
- Subcontractor responsible for protection of adjacent finishes.
- Subcontractor to include labor, materials, tools, and equipment necessary to install joint sealants as required at exterior brick control joints, interior CMU masonry control joints, exterior louvers, hollow metal doors and frames, and sidewalk building joints.
- Subcontractor to provide and install backer rod as required.
- Subcontractor to exclude the cost of caulking around storefront windows.
- Space and laydown area around the project are minimal. Subcontractor to plan deliveries, installation, and phasing accordingly. Subcontractor will be responsible for getting equipment and materials in and out of the site while other construction activities take place.
- Subcontractor shall coordinate deliveries with suppliers and McKnight's superintendent.
- Subcontractor agrees to work and provide manpower to fulfill project needs including working non-standard work week hours.
- Subcontractor required to keep a full-time superintendent on site.
- Subcontractor will clean up daily.
- Subcontractor responsible for labor force to practice and perform all safety requirements per OSHA for said work.
- Subcontractor agrees to complete all punchlist items within 20 days of Substantial Completion or a portion (based on number of punchlist items remaining per subcontractor) of liquidated damages will be deducted from Subcontractor's retainage
- Subcontractor to provide all warranties, as-builts, and closeout documents.
- Subcontractor to provide submittals within 10 days of award of contract.

Quick Start EV Training Center Pooler, GA

Bid Package #7

DIVISION 7 – 072119 Foamed-in-Place Insulation

- Subcontractor to provide all labor, materials, tools, and equipment necessary to furnish and install all 072119 Foamed-in-Place Insulation for the entire project per the contract plans and specs.
- Subcontractor responsible for protection of adjacent finishes.
- Subcontractor to include all cost associated with multiple mobilizations in order to satisfy the project schedule and as requested by the project superintendent.
- Subcontractor to install mockups as requested by the architect.
- Subcontractor to attend coordination meetings as requested by the General Contractor in order to coordinate design details and installation.
- Space and laydown area around the project are minimal. Subcontractor to plan deliveries, installation, and phasing accordingly. Subcontractor will be responsible for getting equipment and materials in and out of the site while other construction activities take place.
- Subcontractor shall coordinate deliveries with suppliers and McKnight's superintendent.
- Subcontractor agrees to work and provide manpower to fulfill project needs including working non-standard work week hours.
- Subcontractor required to keep a full-time superintendent on site.
- Subcontractor will clean up daily.
- Subcontractor responsible for labor force to practice and perform all safety requirements per OSHA for said work.
- Subcontractor agrees to complete all punchlist items within 20 days of Substantial Completion or a portion (based on number of punchlist items remaining per subcontractor) of liquidated damages will be deducted from Subcontractor's retainage
- Subcontractor to provide all warranties, as-builts, and closeout documents.
- Subcontractor to provide submittals within 10 days of award of contract.

Quick Start EV Training Center Pooler, GA

Bid Package #8

DIVISION 7 – 074213.13 Formed Metal Wall Panels

074213.19 Insulated Metal Wall Panels

075423 Thermoplastic Polyolefin (TPO) Roofing

076200 Sheet Metal Flashing and Trim

077200 Roof Accessories

DIVISION 6 – 061000 Rough Carpentry (Roof Blocking only)

- Subcontractor to provide all labor, materials, tools, and equipment necessary to furnish and install all 074212.13 Formed Metal Wall Panels, 074213.19 Insulated Metal Wall Panels, 075423 Thermoplastic Polyolefin (TPO) Roofing, 076200 Sheet Metal Flashing and Trim, 077200 Roof Accessories and Division 6 – 061000 Rough Carpentry (Roof Blocking only) required for the entire project per the contract plans and specs.
- Subcontractor to furnish and install all roof insulation including tapered package, roofing, coping, flashings and counterflashing, gutters, downspouts, trims, roof hatches, safety rails, furring strips for soffits or fascia, walk pads as required, composite wall panels, metal furring strips for wall panels, metal soffit panels and associate furring strips, divider curbs, and roof expansion control assemblies per the contract plans and specs. Subcontractor to turn roof membrane up to top of all parapet walls where required. Subcontractor to flash around all roof drains and overflow drains.
- Subcontractor to furnish and install all Roof Blocking as required per contract plans and specs.
- Subcontractor to pay special attention to Delegated Design Requirements in plans and specifications.
- Subcontractor to install all Acoustical Decking. Acoustical material provided by Steel subcontractor.
- Subcontractor responsible for protecting adjacent construction materials during roof installation.
- Subcontractor responsible for ensuring roofing system drains properly per the contract documents and manufacturer's requirements.
- Subcontractor responsible for labor force to practice and perform all safety requirements per OSHA for said work.
- Subcontractor agrees to complete all punchlist items within 30 days of Substantial Completion or a portion (based on number of punchlist items remaining per subcontractor) of liquidated damages will be deducted from Subcontractor's retainage
- Subcontractor to provide all warranties, as-builts, and closeout documents required per the contract plans and specs.
- Subcontractor to provide submittals within 14 days of receipt of this subcontract.
- Subcontractor to provide performance and payment bonds.

Quick Start EV Training Center Pooler, GA

Bid Package #9

DIVISION 8 – Doors, Frames & Hardware Supplier

081113 Hollow Metal Doors and Frames

081416 Flush Wood Doors

087100 Door Hardware

- Supplier shall provide all materials required to furnish all 081113 Hollow Metal Doors and Frames, 081416 Flush Wood Doors, and 087100 Door Hardware for the entire project per the plans and specs.
- Supplier shall coordinate submittals with hardware schedule, plans and specs.
- Supplier responsible for coordinating wall thicknesses shown between the door frame schedule, elevations, details, wall sections, and wall types throughout the contract documents when generating submittals and shall highlight any discrepancies found.
- Supplier shall provide submittals within 14 days of receipt of PO.
- Supplier shall provide temporary construction cores and keys.
- Supplier shall attend keying meeting with owner, architect, and GC to coordinate final keying schedule.
- Supplier shall coordinate deliveries with McKnight. Due to limited laydown space, multiple deliveries may be required.
- Supplier shall provide warranties and O&Ms per the specs.

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Bid Package #10

DIVISION 8 – Doors, Frames & Hardware Installer

081113 Hollow Metal Doors and Frames

081416 Flush Wood Doors

087100 Door Hardware

- Subcontractor to provide all labor and equipment required to install all 081113 Hollow Metal Doors and Frames, 081416 Flush Wood Doors, and 087100 Door Hardware for the entire project per the plans and specs.
- Subcontractor to unload and properly store materials in the building as they are delivered. Subcontractor responsible for keeping inventory and ensuring proper types and quantities of materials are delivered to the job.
- Subcontractor to make final adjustments on doors and hardware as needed, including shimming, planning, sanding, etc.
- Subcontractor responsible for labor force to practice and perform all safety requirements per OSHA for said work.
- Subcontractor to protect adjacent materials during installation and cleanup any materials left on other surfaces.
- Space and laydown area around the project are minimal. Subcontractor to plan deliveries, installation, and phasing accordingly. Subcontractor will be responsible for getting equipment and materials in and out of the site while other construction activities take place.
- Subcontractor shall coordinate deliveries with suppliers and McKnight's superintendent.
- Subcontractor agrees to work and provide manpower to fulfill project needs including working non-standard work week hours.
- Subcontractor required to keep a full-time superintendent on site while their work is occurring.
- Subcontractor will clean up daily.
- Subcontractor agrees to complete all punchlist items within 20 days of Substantial Completion or a portion (based on number of punchlist items remaining per subcontractor) of liquidated damages will be deducted from Subcontractor's retainage
- Subcontractor to provide all warranties, as-builts, and closeout documents. Subcontractor shall anticipate making door/hardware adjustments throughout the warranty period.

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Bid Package #11

Division 8 – 083323 Overhead Coiling Doors

- Subcontractor shall provide all labor and equipment required to furnish and install all 083323 Overhead Coiling Doors for the entire project per the plans and specs.
- Subcontractor shall unload and properly store materials in the building as they are delivered. Subcontractor responsible for keeping inventory and ensuring proper types and quantities of materials are delivered to the job.
- Subcontractor to pay special attention to Delegated Design Requirements in plans and specifications.
- Subcontractor responsible for labor force to practice and perform all safety requirements per OSHA for said work.
- Subcontractor to protect adjacent materials during installation and cleanup of any materials left on other surfaces.
- Space and laydown area around the project are minimal. Subcontractor to plan deliveries, installation, and phasing accordingly. Subcontractor will be responsible for getting equipment and materials in and out of the site while other construction activities take place.
- Subcontractor shall coordinate deliveries with suppliers and McKnight's superintendent.
- Subcontractor agrees to work and provide manpower to fulfill project needs including working non-standard work week hours.
- Subcontractor required to keep a full-time superintendent on site while their work is occurring.
- Subcontractor will clean up daily.
- Subcontractor agrees to complete all punchlist items within 20 days of Substantial Completion or a portion (based on number of punchlist items remaining per subcontractor) of liquidated damages will be deducted from Subcontractor's retainage.
- Subcontractor to provide all warranties, as-builts, and closeout documents.
- Subcontractor to provide submittals within 10 days of award of contract.

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Bid Package #12

DIVISION 8 – 084113 Aluminum-Framed Entrances and Storefronts

088000 Glazing

088300 Mirrors

- Subcontractor to provide all labor, tools, materials, and equipment necessary to furnish and install all 084113 Aluminum-Framed Entrances and Storefronts, 088000 Glazing and 088300 Mirrors for the entire project per the plans and specs.
- Subcontractor to furnish and install all aluminum frames, aluminum framed assemblies, glazing, glass for HM Frames/Doors/Wood Doors, frameless mirrors.
- Subcontractor to pay special attention to Delegated Design Requirements in plans and specifications.
- Subcontractor shall caulk all work on exterior and interior.
- Subcontractor to coordinate and install hardware for storefront that will be purchased by hardware supplier.
- Subcontractor to field verify openings prior to fabrication.
- Subcontractor to protect adjacent materials during installation and cleanup any material spilled on other surfaces.
- Space and laydown area around the project are minimal. Subcontractor to plan deliveries, installation, and phasing accordingly. Subcontractor will be responsible for getting equipment and materials in and out of the site while other construction activities take place.
- Subcontractor shall coordinate deliveries with suppliers and McKnight's superintendent.
- Subcontractor agrees to work and provide manpower to fulfill project needs including working non-standard work week hours
- Subcontractor required to keep a full-time superintendent on site while their work is occurring
- Subcontractor will clean up daily
- Subcontractor responsible for labor force to practice and perform all safety requirements per OSHA for said work.
- Subcontractor agrees to complete all punchlist items within 20 days of Substantial Completion or a portion (based on number of punchlist items remaining per subcontractor) of liquidated damages will be deducted from Subcontractor's retainage
- Subcontractor to provide all warranties, as-builts, and closeout documents.
- Subcontractor to provide submittals within 20 days of award of contract.

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Bid Package #13

DIVISION 9 – FLOORING

093013 Ceramic Tiling

096513 Resilient Base & Accessories

096519 Resilient Tile Flooring

096536 Static-Control Resilient Flooring

096813 Tile Carpeting

- Subcontractor to provide all labor, tools, materials, and equipment necessary to furnish and install all 093013 Ceramic Tiling, 096513 Resilient Base and Accessories, 096519 Resilient Tile Flooring, 096536 Static-Control Resilient Flooring, and 096813 Tile Carpeting for the entire project per the plans and specs.
- Subcontractor to furnish and install all flooring, base, flooring accessories, transition strips, minor floor prep, thin set, thick set, and stair treads required per the plans and specs.
- Subcontractor to furnish and install all concrete sealing.
- Subcontractor to perform all concrete moisture/RH/PH testing required per the contract plans and spec, as well as manufacturer's recommendations for both flooring and adhesive products prior to installation and shall provide those results to McKnight Construction.
- Subcontractor to protect adjacent materials during installation and cleanup any material spilled on other surfaces.
- Subcontractor to supply and install all Porcelain Wall Tile as required by Plans & Specs.
- Space and laydown area around the project are minimal. Subcontractor to plan deliveries, installation, and phasing accordingly. Subcontractor will be responsible for getting equipment and materials in and out of the site while other construction activities take place.
- Subcontractor shall coordinate deliveries with suppliers and McKnight's superintendent.
- Subcontractor agrees to work and provide manpower to fulfill project needs including working non-standard work week hours
- Subcontractor required to keep a full-time superintendent on site while their work is occurring
- Subcontractor will clean up daily
- Subcontractor responsible for labor force to practice and perform all safety requirements per OSHA for said work.
- Subcontractor agrees to complete all punchlist items within 20 days of Substantial Completion or a portion (based on number of punchlist items remaining per subcontractor) of liquidated damages will be deducted from Subcontractor's retainage
- Subcontractor to provide all warranties, as-builts, and closeout documents.
- Subcontractor to provide submittals within 20 days of award of contract.

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Bid Package #14

Division 3 – 033543 Polished Concrete Finishing

- Subcontractor to provide all labor, tools, materials, and equipment necessary to furnish and install all Polished Concrete Flooring for the entire project per the plans and specs.
- Subcontractor to perform all concrete moisture/RH/PH testing required per the contract plans and spec, as well as manufacturer's recommendations and provide those results to McKnight Construction.
- Subcontractor to protect adjacent materials during installation and cleanup any material spilled on other surfaces.
- Subcontractor to remove all Shotblast & Grinding material from building and dispose of in G.C.'s dumpster.
- Power shall be provided by Others.
- Subcontractor to attend concrete preparatory meeting with G.C. and Concrete Installer.
- Subcontractor to provide and install temporary floor covering after installation of floor polishing.
- Subcontractor to perform minor floor prep and crack infill/mitigation for said work.
- Space and laydown area around the project are minimal. Subcontractor to plan deliveries, installation, and phasing accordingly. Subcontractor will be responsible for getting equipment and materials in and out of the site while other construction activities take place.
- Subcontractor shall coordinate deliveries with suppliers and McKnight's superintendent.
- Subcontractor agrees to work and provide manpower to fulfill project needs including working non-standard work week hours
- Subcontractor required to keep a full-time superintendent on site while their work is occurring
- Subcontractor will clean up daily
- Subcontractor responsible for labor force to practice and perform all safety requirements per OSHA for said work.
- Subcontractor agrees to complete all punchlist items within 20 days of Substantial Completion or a portion (based on number of punchlist items remaining per subcontractor) of liquidated damages will be deducted from Subcontractor's retainage
- Subcontractor to provide all warranties, as-builts, and closeout documents.
- Subcontractor to provide submittals within 20 days of award of contract.

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Bid Package #15

DIVISION 9 – 099113 Exterior Painting 099123 Interior Painting

- Subcontractor to provide all labor, tools, materials, and equipment necessary to furnish and install all 099113 Exterior Painting and 099123 Interior Painting for the entire project per the plans and specs.
- Subcontractor to prep all surfaces for paint.
- Subcontractor to exclude the cost of joint sealants as required within metal framing assemblies.
- Subcontractor to include the cost of joint sealants around the interior perimeter of door frames.
- Subcontractor to include the cost of joint sealants around the perimeters of all accessories that are mounted directly to the walls; including but not limited to, fire extinguisher cabinets, defibrillator cabinets, and mirrors.
- Subcontractor to paint all interior and exterior paintable surfaces, exposed structure, piping, conduit, wiring and ductwork as required per the contract plans and specs.
- Subcontractor to anticipate the use of multiple colors of paints and the application of multiple mockups during the selection of final paint colors.
- Subcontractor to protect adjacent surfaces including windows, ceilings, floors, and all other finished materials while painting.
- Space and laydown area around the project are minimal. Subcontractor to plan deliveries, installation, and phasing accordingly. Subcontractor will be responsible for getting equipment and materials in and out of the site while other construction activities take place.
- Subcontractor shall coordinate deliveries with suppliers and McKnight's superintendent.
- Subcontractor agrees to work and provide manpower to fulfill project needs including working non-standard work week hours
- Subcontractor required to keep a full-time superintendent on site while their work is occurring
- Subcontractor will clean up daily
- Subcontractor responsible for labor force to practice and perform all safety requirements per OSHA for said work.
- Subcontractor agrees to complete all punchlist items within 20 days of Substantial Completion or a portion (based on number of punchlist items remaining per subcontractor) of liquidated damages will be deducted from Subcontractor's retainage
- Subcontractor to provide all warranties, as-builts, and closeout documents.
- Subcontractor to provide submittals within 20 days of award of contract.

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Bid Package #16

DIVISION 10 – 107301 Aluminum Wall Hung Canopies

- Subcontractor to provide all materials, labor, tools, and equipment necessary to furnish &
- install all 107301 Aluminum Wall Hung Canopies for the entire project per the plans and specs.
- Subcontractor to furnish and install all wall canopies, column canopies, columns, beams, purlins, decking, furring channels, soffits, wall supports, thru bolts, fascia, metal trim, gutters, downspouts, flashings, fasteners to masonry/steel/aluminum, layout, provide embeds for attachment to masonry, required for installation of said scope.
- Subcontractor to grout fill all column bases if required by the contract plans and specs.
- Space and laydown area around the project are minimal. Subcontractor to plan deliveries, installation, and phasing accordingly. Subcontractor will be responsible for getting equipment and materials in and out of the site while other construction activities take place.
- Subcontractor shall coordinate deliveries with suppliers and McKnight's superintendent.
- Subcontractor agrees to work and provide manpower to fulfill project needs including working non-standard work week hours.
- Subcontractor required to keep a full-time superintendent on site while their work is occurring.
- Subcontractor will clean up daily.
- Subcontractor responsible for labor force to practice and perform all safety requirements per OSHA for said work.
- Subcontractor agrees to complete all punchlist items within 20 days of Substantial Completion or a portion (based on number of punchlist items remaining per subcontractor) of liquidated damages will be deducted from Subcontractor's retainage.
- Subcontractor to provide all warranties, as-builts, and closeout documents.
- Subcontractor to provide submittals within 20 days of award of contract.

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Bid Package #17

DIVISION 10 – 101423.16 Room-Identification Panel Signage

- Subcontractor to provide all materials, labor, tools, and equipment necessary to furnish & install all 101423.16 Room-Identification Panel Signage for the entire project per the plans and specs.
- Space and laydown area around the project are minimal. Subcontractor to plan deliveries, installation, and phasing accordingly. Subcontractor will be responsible for getting equipment and materials in and out of the site while other construction activities take place.
- Subcontractor agrees to work and provide manpower to fulfill project needs including working non-standard work week hours
- Subcontractor required to keep a full-time superintendent on site while their work is occurring
- Subcontractor will clean up daily
- Subcontractor responsible for labor force to practice and perform all safety requirements per OSHA for said work.
- Subcontractor agrees to complete all punchlist items within 20 days of Substantial Completion or a portion (based on number of punchlist items remaining per subcontractor) of liquidated damages will be deducted from Subcontractor's retainage
- Subcontractor to provide all warranties, as-builts, and closeout documents.
- Subcontractor to provide submittals within 20 days of award of contract.

Quick Start EV Training Center Pooler, GA

Bid Package #18

DIVISION 10 – Toilet Compartment Supplier

102113.19 Plastic Toilet Compartments

- Supplier shall provide all materials required to furnish all 102113.19 Plastic Toilet Compartments for the entire project per the plans and specs.
- Supplier shall provide submittals within 20 days of receipt of PO.
- Supplier shall coordinate deliveries with McKnight. Due to limited laydown space, multiple deliveries may be required.
- Supplier shall provide warranties and O&Ms per the specs.

Quick Start EV Training Center Pooler, GA

Bid Package #19

DIVISION 10 – Toilet Compartment Installer

102113.19 Plastic Toilet Compartments Toilet Compartments

- Subcontractor to provide all labor, tools, and equipment necessary to install all 102113.19 Plastic Toilet Covers for the entire project per the plans and specs.
- Subcontractor to unload and properly store materials in the building as they are delivered. Subcontractor responsible for keeping inventory and ensuring correct types / quantities of materials are delivered to the job.
- Subcontractor to protect adjacent surfaces during installation and cleanup any material spilled on other surfaces
- Space and laydown area around the project are minimal. Subcontractor to plan deliveries, installation, and phasing accordingly. Subcontractor will be responsible for getting equipment and materials in and out of the site while other construction activities take place.
- Subcontractor shall coordinate deliveries with suppliers and McKnight's superintendent.
- Subcontractor agrees to work and provide manpower to fulfill project needs including working non-standard work week hours
- Subcontractor required to keep a full-time superintendent on site while their work is occurring
- Subcontractor will clean up daily
- Subcontractor responsible for labor force to practice and perform all safety requirements per OSHA for said work.
- Subcontractor agrees to complete all punchlist items within 20 days of Substantial Completion or a portion (based on number of punchlist items remaining per subcontractor) of liquidated damages will be deducted from Subcontractor's retainage
- Subcontractor to provide all warranties, as-builts, and closeout documents.

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Bid Package #20

DIVISION 10 –Wall and Door Protection Supplier

102600 Wall and Door Protection

- Supplier shall provide all materials required to furnish 102600 Wall and Door Protection for the entire project per the plans and specs.
- Supplier will provide completed submittals within 14 days of purchase order, and complete any revisions based on architect comments within two weeks of receipt.
- Supplier to coordinate deliveries with Construction Manager. Due to limited laydown space, multiple deliveries may be required.
- Supplier shall provide warranties and O&Ms per the specs.

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Bid Package #21

DIVISION 10 –Wall and Door Protection Installer

102600 Wall and Door Protection

- Subcontractor shall provide all labor, tools and equipment required to install all 102600 Wall and Door Protection for the entire project per the plans and specs.
- Subcontractor responsible for unloading all material deliveries related to this scope of work and shall inventory said materials to ensure proper quantities were delivered to complete the project.
- Subcontractor to furnish all layout, fasteners, caulking against dissimilar materials, and any other items required to install said work.
- Space and laydown area around the project are minimal. Subcontractor to plan deliveries, installation, and phasing accordingly. Subcontractor will be responsible for getting equipment and materials in and out of the site while other construction activities take place.
- Subcontractor shall coordinate deliveries with suppliers and McKnight's superintendent.
- Subcontractor agrees to work and provide manpower to fulfill project needs including working non-standard work week hours
- Subcontractor required to keep a full-time superintendent on site while their work is occurring
- Subcontractor will clean up daily
- Subcontractor responsible for labor force to practice and perform all safety requirements per OSHA for said work.
- Subcontractor agrees to complete all punchlist items within 20 days of Substantial Completion or a portion (based on number of punchlist items remaining per subcontractor) of liquidated damages will be deducted from Subcontractor's retainage
- Subcontractor to provide all warranties, as-builts, and closeout documents.

Quick Start EV Training Center Pooler, GA

Bid Package #22

DIVISION 10 -Toilet Accessories Supplier

102800 Toilet, Bath, and Laundry Accessories

- Supplier shall provide all materials required to furnish 102800 Toilet Accessories for the entire project per the plans and specs.
- Supplier will provide completed submittals within 14 days of purchase order, and complete any revisions based on architect comments within two weeks of receipt.
- Supplier to coordinate deliveries with Construction Manager. Due to limited laydown space, multiple deliveries may be required.
- Supplier shall provide warranties and O&Ms per the specs.

Quick Start EV Training Center Pooler, GA

Bid Package #23

DIVISION 10 –Toilet Accessories Installer

102800 Toilet, Bath, and Laundry Accessories

- Subcontractor shall provide all labor, tools and equipment required to install all 102800 Toilet Accessories for the entire project per the plans and specs.
- Subcontractor responsible for unloading all material deliveries related to this scope of work and shall inventory said materials to ensure proper quantities were delivered to complete the project.
- Subcontractor to furnish all layout, fasteners, caulking against dissimilar materials, and any other items required to install said work.
- Space and laydown area around the project are minimal. Subcontractor to plan deliveries, installation, and phasing accordingly. Subcontractor will be responsible for getting equipment and materials in and out of the site while other construction activities take place.
- Subcontractor shall coordinate deliveries with suppliers and McKnight's superintendent.
- Subcontractor agrees to work and provide manpower to fulfill project needs including working non-standard work week hours
- Subcontractor required to keep a full-time superintendent on site while their work is occurring
- Subcontractor will clean up daily
- Subcontractor responsible for labor force to practice and perform all safety requirements per OSHA for said work.
- Subcontractor agrees to complete all punchlist items within 20 days of Substantial Completion or a portion (based on number of punchlist items remaining per subcontractor) of liquidated damages will be deducted from Subcontractor's retainage
- Subcontractor to provide all warranties, as-builts, and closeout documents.

Quick Start EV Training Center Pooler, GA

Bid Package #24

DIVISION 10 –Fire Protection Specialties Supplier

104413 Fire Protection Cabinets

104416 Fire Extinguishers

- Supplier shall provide all materials required to furnish 104413 Fire Protection Cabinets and 104416 Fire Extinguishers for the entire project per the plans and specs.
- Supplier will provide completed submittals within 14 days of purchase order, and complete any revisions based on architect comments within two weeks of receipt.
- Supplier to coordinate deliveries with Construction Manager. Due to limited laydown space, multiple deliveries may be required.
- Supplier shall provide warranties and O&Ms per the specs.

Quick Start EV Training Center Pooler, GA

Bid Package #25

DIVISION 10 – Fire Protection Specialties Installer

104413 Fire Protection Cabinets

104416 Fire Extinguishers

- Subcontractor shall provide all labor, tools and equipment required to install all 104413 Fire Protection Cabinets and 104416 Fire Extinguishers for the entire project per the plans and specs.
- Subcontractor responsible for unloading all material deliveries related to this scope of work and shall inventory said materials to ensure proper quantities were delivered to complete the project.
- Subcontractor to furnish all layout, fasteners, caulking against dissimilar materials, and any other items required to install said work.
- Space and laydown area around the project are minimal. Subcontractor to plan deliveries, installation, and phasing accordingly. Subcontractor will be responsible for getting equipment and materials in and out of the site while other construction activities take place.
- Subcontractor shall coordinate deliveries with suppliers and McKnight's superintendent.
- Subcontractor agrees to work and provide manpower to fulfill project needs including working non-standard work week hours
- Subcontractor required to keep a full-time superintendent on site while their work is occurring
- Subcontractor will clean up daily
- Subcontractor responsible for labor force to practice and perform all safety requirements per OSHA for said work.
- Subcontractor agrees to complete all punchlist items within 20 days of Substantial Completion or a portion (based on number of punchlist items remaining per subcontractor) of liquidated damages will be deducted from Subcontractor's retainage
- Subcontractor to provide all warranties, as-builts, and closeout documents.

Quick Start EV Training Center Pooler, GA

Bid Package #26

DIVISION 11 – 111313 Loading Dock Bumpers

- Subcontractor to provide all materials, labor, tools, and equipment necessary to furnish & install all 111313 Loading Dock Bumpers for the entire project per the plans and specs.
- Subcontractor to field measure prior to fabrication of all materials.
- Subcontractor to provide all layout, installation, lifts, and equipment required for installation, protection of adjacent finishes, caulking of all materials which install against dissimilar finishes and materials.
- Space and laydown area around the project are minimal. Subcontractor to plan deliveries, installation, and phasing accordingly. Subcontractor will be responsible for getting equipment and materials in and out of the site while other construction activities take place.
- Subcontractor shall coordinate deliveries with suppliers and McKnight's superintendent.
- Subcontractor agrees to work and provide manpower to fulfill project needs including working non-standard work week hours
- Subcontractor required to keep a full-time superintendent on site while their work is occurring
- Subcontractor will clean up daily
- Subcontractor responsible for labor force to practice and perform all safety requirements per OSHA for said work.
- Subcontractor agrees to complete all punchlist items within 20 days of Substantial Completion or a portion (based on number of punchlist items remaining per subcontractor) of liquidated damages will be deducted from Subcontractor's retainage
- Subcontractor to provide all warranties, as-builts, and closeout documents.
- Subcontractor to provide submittals within 20 days of award of contract.

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Bid Package #27

DIVISION 21 – Fire Suppression

210513 General Duty Valves for Water-Based Fire Suppression Piping

210529 Hangers and Supports for Fire-Suppression Piping and Equipment

211119 Fire Department Connections

211313 Wet-Pipe Sprinkler Systems

- Subcontractor to provide all labor, tools, materials, and equipment (including lifts) necessary to furnish and install all Division 21 – Fire Suppression for the entire project per the plans and specs in order to have a complete fire suppression system. Scope of work shall include a fire pump and begin 5’ outside of the building.
- Subcontractor shall be responsible for providing, installing, and testing the fire riser into the building.
- Subcontractor to provide shop drawings showing all MEP materials layout within the ceiling systems including a ceiling grid layout.
- Subcontractor responsible for all seismic requirements for said system.
- Subcontractor to pay special attention to Delegated Design Requirements in plans and specifications.
- Subcontractor responsible for either providing blockouts/sleeves and patching or core drilling and patching for installation of said system. All penetrations to be sealed by subcontractor compatible with the associated wall rating.
- Subcontractor to layout and form all equipment pads needed.
- Subcontractor responsible for all testing required of said system.
- Subcontractor shall attend and participate in an overhead coordination meeting(s). Subcontractor to coordinate all above ceiling rough in heights with other trades.
- Subcontractor shall install ceiling material provided by ceiling contractor around sprinkler heads except in hard ceilings.
- Subcontractor shall be present for all required 3rd party, building inspector, and fire marshal inspections.
- Subcontractor to protect adjacent materials during installation and cleanup any material spilled on other surfaces.
- Space and laydown area around the project are minimal. Subcontractor to plan deliveries, installation, and phasing accordingly. Subcontractor will be responsible for getting equipment and materials in and out of the site while other construction activities take place.
- Subcontractor shall coordinate deliveries with suppliers and McKnight’s superintendent.
- Subcontractor agrees to work and provide manpower to fulfill project needs including working non-standard work week hours
- Subcontractor required to keep a full-time superintendent on site while their work is occurring
- Subcontractor will clean up daily
- Subcontractor responsible for labor force to practice and perform all safety requirements per OSHA for said work.
- Subcontractor agrees to complete all punchlist items within 20 days of Substantial Completion or a portion (based on number of punchlist items remaining per subcontractor) of liquidated damages will be deducted from Subcontractor’s retainage
- Subcontractor to provide all warranties, as-builts, and closeout documents.
- Subcontractor to provide submittals within 28 days of award of contract.

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Bid Package #28

DIVISION 22 - Plumbing

- Subcontractor to provide all labor, tools, materials, and equipment necessary to furnish and install all Division 22 - Plumbing for a complete plumbing system per the plans and specs.
- Subcontractor's scope of work shall begin 5' outside the building.
- Subcontractor shall be responsible for excavating and backfilling of all underground lines per the contract plans and specs.
- Subcontractor to coordinate all electrical requirements for all equipment requiring power to ensure equipment supplied matches the electrical design.
- Subcontractor to pay special attention to Delegated Design Requirements in plans and specifications.
- Subcontractor responsible for either providing blockouts/sleeves and patching or core drilling and patching for installation of said system. All penetrations to be sealed by subcontractor compatible with the associated wall rating.
- Subcontractor shall attend and participate in an overhead coordination meeting with McKnight and MEP trades.
- Subcontractor to provide and install temporary water supply to jobsite office trailer and for use on site during construction.
- Subcontractor to layout and form all equipment pads
- Subcontractor shall be present for all required 3rd party, building inspector, and fire marshal inspections.
- Subcontractor to coordinate with MEP Commissioning Agent.
- Subcontractor to protect adjacent materials during installation and cleanup of any material spilled on other surfaces.
- Space and laydown area around the project are minimal. Subcontractor to plan deliveries, installation, and phasing accordingly. Subcontractor will be responsible for getting equipment and materials in and out of the site while other construction activities take place.
- Subcontractor shall coordinate deliveries with suppliers and McKnight's superintendent.
- Subcontractor agrees to work and provide manpower to fulfill project needs including working non-standard work week hours
- Subcontractor required to keep a full-time superintendent on site while their work is occurring
- Subcontractor will clean up daily
- Subcontractor responsible for labor force to practice and perform all safety requirements per OSHA for said work.
- Subcontractor agrees to complete all punchlist items within 20 days of Substantial Completion or a portion (based on number of punchlist items remaining per subcontractor) of liquidated damages will be deducted from Subcontractor's retainage
- Subcontractor to provide all warranties, as-builts, and closeout documents.
- Subcontractor to provide performance and payment bonds.
- Subcontractor to provide submittals within 20 days of award of contract.

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Bid Package #29

DIVISION 23 – Heating, Ventilation, and Air Conditioning (HVAC)

- Subcontractor to provide all labor, tools, materials, and equipment necessary to furnish and install all Division 23 – Heating, Ventilation, and Air Conditioning (HVAC) for a complete HVAC system per the plans and specs.
- Subcontractor to exclude the cost of supplying RTU-1 & RTU-2. General Contractor will be pre-purchase RTU-1 and RTU-2 prior to execution of the Subcontractor's contract. Once subcontract is executed, the equipment will be put under Subcontractors scope and responsibility. Subcontractor will be responsible for reviewing submittals, coordinating delivery, installation, and startup.
- Subcontractor is responsible for furnishing & installing roof curbs for rooftop equipment.
- Subcontractor shall coordinate rooftop curbs with steel subcontractor and roofer.
- Subcontractor shall form and layout all equipment pads.
- Subcontractor shall provide all required startup of HVAC equipment.
- Subcontractor to provide and install temporary HVAC filters during construction.
- Subcontractor to provide Controls as listed in the drawings and specifications.
- Subcontractor responsible for either providing blockouts/sleeves and patching or core drilling and patching for installation of said system. All penetrations to be sealed by subcontractor compatible with the associated wall rating.
- Subcontractor shall attend and participate in an overhead coordination meeting with McKnight and MEP trades.
- Subcontractor to pay special attention to Delegated Design Requirements in plans and specifications.
- Subcontractor responsible for providing access doors in walls and ceilings as required to access HVAC system.
- Subcontractor shall be present for all required 3rd party, building inspector, and fire marshal inspections.
- Subcontractor to coordinate with MEP Commissioning Agent.
- Subcontractor to protect adjacent materials during installation and cleanup any material spilled on other surfaces.
- Space and laydown area around the project are minimal. Subcontractor to plan deliveries, installation, and phasing accordingly. Subcontractor will be responsible for getting equipment and materials in and out of the site while other construction activities take place.
- Subcontractor shall coordinate deliveries with suppliers and McKnight's superintendent.
- Subcontractor agrees to work and provide manpower to fulfill project needs including working non-standard work week hours.
- Subcontractor required to keep a full-time superintendent on site while their work is occurring.
- Subcontractor will clean up daily.
- Subcontractor responsible for labor force to practice and perform all safety requirements per OSHA for said work.
- Subcontractor agrees to complete all punchlist items within 20 days of Substantial Completion or a portion (based on number of punchlist items remaining per subcontractor) of liquidated damages will be deducted from Subcontractor's retainage
- Subcontractor to provide all warranties, as-builts, and closeout documents.
- Subcontractor to provide submittals within 20 days of award of contract.
- Subcontractor to provide performance and payment bonds.

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Bid Package #30

DIVISION 26 – Electrical

DIVISION 27 – 270528 Pathways for Communications Systems

DIVISION 28 – 284621.11 Addressable Fire-Alarm System

- Subcontractor to provide all labor, tools, materials, and equipment necessary to furnish and install all Division 26 – Electrical, Division 27 – 270528 Pathways for Communications Systems, and Division 28 – 284621.11 Addressable Fire-Alarm system for complete electrical and fire alarm systems per the plans and specs.
- Subcontractor to exclude the cost of supplying MDPA. General Contractor will be pre-purchase 1200 Amp MDPA prior to execution of the Subcontractor's contract. Once subcontract is executed, the equipment will be put under Subcontractors scope and responsibility. Subcontractor will be responsible for reviewing submittals, coordinating delivery, install and startup.
- Subcontractor responsible for coordinating and cross-referencing electrical, lighting, EPS, and PS drawings to ensure raceways and conduit is installed properly for each system to properly function.
- Subcontractor shall provide and install wire for each of its systems.
- Subcontractor to pay special attention to Delegated Design Requirements in plans and specifications.
- Subcontractor to provide all pathways for Communications & Audio-Visual Systems and install pull strings in all conduits.
- Subcontractor to include Notes 16, 17 and 18 on drawing CU101. Boring and Conduit for COMM line.
- Subcontractor to provide all conduit, wire, devices, etc. as required to complete the electrical scope of work.
- Subcontractor to coordinate electrical requirements for all electrical components provided by other trades.
- Subcontractor shall participate in an overhead coordination meeting with McKnight and MEP trades.
- Subcontractor to include re-routed Power & Comm lines on Drawing CD101.
- Subcontractor to include removal and relocation of Lighting and/or Camera Poles on Drawing CD101.
- Subcontractor shall install temporary power and lighting during construction.
- Subcontractor shall install temporary power for the jobsite office trailer.
- Subcontractor shall excavate, install, and backfill all underground utilities required adhering to the specs.
- Subcontractor shall coordinate requirements with McKnight and GA Power on permanent power, transformers, and lighting systems.
- Subcontractor to furnish and install all electrical reels as required by plans and specifications.
- Subcontractor to furnish and install all required site power as shown on drawings, including power to Pump Station.
- Subcontractor responsible for providing access doors in walls and ceilings as required to access electrical/communication systems.
- Subcontractor shall be present for all required 3rd party, building inspector, and fire marshal inspections.
- Subcontractor to coordinate with MEP Commissioning Agent.
- Subcontractor to protect adjacent materials during installation and cleanup any material spilled on other surfaces.
- Space and laydown area around the project are minimal. Subcontractor to plan deliveries, installation, and phasing accordingly. Subcontractor will be responsible for getting equipment and materials in and out of the site while other construction activities take place.
- Subcontractor shall coordinate deliveries with suppliers and McKnight's superintendent.
- Subcontractor agrees to work and provide manpower to fulfill project needs including working non-standard work week hours.
- Subcontractor required to keep a full-time superintendent on site while their work is occurring.

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- Subcontractor will clean up daily.
- Subcontractor responsible for labor force to practice and perform all safety requirements per OSHA for said work.
- Subcontractor agrees to complete all punchlist items within 20 days of Substantial Completion or a portion (based on number of punchlist items remaining per subcontractor) of liquidated damages will be deducted from Subcontractor's retainage
- Subcontractor to provide all warranties, as-builts, and closeout documents.
- Subcontractor to provide submittals within 20 days of award of contract.
- Subcontractor to provide performance and payment bonds.

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Bid Package #31

DIVISION 31 - Earthwork

311000 - Site Clearing

312000 - Earth Moving

315000 - Excavation Support and Protection

DIVISION 32 - Exterior Improvements

321216 - Asphalt Paving

321313 - Concrete Paving

321373 - Concrete Paving Joint Sealants

321713 - Parking Bumpers

321723 - Pavement Markings

321726 - Tactile Warning Surfacing

329113 - Soil Preparation

DIVISION 33 - Utilities

331415 - Site Water Distribution Piping

334200 - Stormwater Conveyance

- Subcontractor to provide all labor, tools, materials, and equipment necessary to furnish and install all DIVISION 31 - Earthwork (311000 - Site Clearing, 312000 - Earth Moving, and 315000 - Excavation Support and Protection), DIVISION 32 - Exterior Improvements (321216 - Asphalt Paving, 321313 - Concrete Paving, 321373 - Concrete Paving Joint Sealants, 321713 - Parking Bumpers, 321723 - Pavement Markings, 321726 - Tactile Warning Surfacing and 329113 - Soil Preparation) and DIVISION 33 - Utilities (331415 - Site Water Distribution Piping and 334200 - Stormwater Conveyance) per the plans and specs.
- Subcontractor to furnish and install all site clearing, site demolition, earth moving, excavation and fill, erosion & sedimentation control, water utilities, fire water utilities, low pressure utility sewerage, storm drainage utilities, hydrants, meters, vaults, and backflows.
- Subcontractor to furnish and install all fine grading, base materials, asphalt paving, concrete paving, concrete sidewalks, curb and gutter, concrete steps, site cast-in-place retaining walls, reinforcing required, WWF as required, formwork, finish materials, and all other items required to complete said scopes of work.
- Subcontractor to furnish and install all wheel stops, exterior signage, and striping.
- Subcontractor to install all bollards, including concrete. Bollards will be provided by Steel Subcontractor.
- Subcontractor to furnish and install all Bioretention Structures.
- Subcontractor to furnish and install all mitered Drain Outlets detailed on page C-511.
- Subcontractor to include all Site Demolition.
- Subcontractor responsible for obtaining all utility locates in order to maintain existing utility supply without interruption unless proper scheduling has occurred for an outage.
- Subcontractor to include haul off for all footing spoils, backfill of building pad, and roof drain leaders.
- Subcontractor shall provide pins, set by a Surveyor, at each building corner. Pins to be used by G.C. and other trades to locate the building and act as a reference point for other trades.
- Subcontractor responsible for maintaining erosion control BMPs for the duration of the project.
- Subcontractor to abide by Erosion Control Notes and Phasing plans included in the drawings. Erosion Control measure to be in place prior to beginning work and to be maintained throughout the duration of the project.
- Subcontractor responsible for correcting any cracking throughout the warranty period not caused by damage from others.

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- Subcontractor to furnish and install temporary construction drive and regularly maintain entrance as needed throughout the duration of the project to allow vehicular access to the jobsite. Subcontractor shall include the cost of removing the temporary access road at the end of the project.
- Subcontractor shall supply and install downspout boots as required for all downspouts.
- Subcontractor to furnish and install sleeves under new sidewalks and paving as shown on Plans and Specs.
- Subcontractor to furnish and install pump station and force main as shown on Utility Plans.
- Subcontractor to furnish and install trench drains as required by Site Plans and specs.
- Space and laydown area around the project are minimal. Subcontractor to plan deliveries, installation, and phasing accordingly. Subcontractor will be responsible for getting equipment and materials in and out of the site while other construction activities take place.
- Subcontractor shall coordinate deliveries with suppliers and McKnight's superintendent.
- Subcontractor agrees to work and provide manpower to fulfill project needs including working non-standard work week hours.
- Subcontractor required to keep a full-time superintendent on site while their work is occurring.
- Subcontractor will clean up daily.
- Subcontractor responsible for labor force to practice and perform all safety requirements per OSHA for said work.
- Subcontractor agrees to complete all punchlist items within 20 days of Substantial Completion or a portion (based on number of punchlist items remaining per subcontractor) of liquidated damages will be deducted from Subcontractor's retainage
- Subcontractor to provide all warranties, as-builts, and closeout documents.
- Subcontractor to provide submittals within 20 days of award of contract.
- Subcontractor to provide performance and payment bonds.

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Bid Package #32

DIVISION 32 – LANDSCAPING

- Subcontractor to provide all labor, tools, materials, and equipment necessary to furnish and install all Division 32 - Landscaping per the plans and specs.
- Subcontractor to pay special attention to all Landscape Plans, Notes and Details.
- Subcontractor to furnish and install all soil prep., seeding, sodding, plantings, mulch, planting bed trim materials, irrigation, any grow-in and maintenance described, and fertilizers required per the contract plans and specs.
- Subcontractor shall furnish and install all details of the Bioretention System including the washed stone, filter fabric, perforated underdrain and engineered soil per the plans and specs.
- Subcontractor to pay special attention to Delegated Design, as irrigation system shall be designed by subcontractor and approved via submittal by the architect.
- Subcontractor responsible to include irrigation sleeves required for irrigation system.
- Subcontractor responsible for screening any topsoil that is stockpiled onsite prior to respreading per the contract plans and specs.
- Space and laydown area around the project are minimal. Subcontractor to plan deliveries, installation, and phasing accordingly. Subcontractor will be responsible for getting equipment and materials in and out of the site while other construction activities take place.
- Subcontractor shall coordinate deliveries with suppliers and McKnight's superintendent.
- Subcontractor agrees to work and provide manpower to fulfill project needs including working non-standard work week hours.
- Subcontractor required to keep a full-time superintendent on site while their work is occurring.
- Subcontractor will clean up daily.
- Subcontractor responsible for labor force to practice and perform all safety requirements per OSHA for said work.
- Subcontractor agrees to complete all punchlist items within 20 days of Substantial Completion or a portion (based on number of punchlist items remaining per subcontractor) of liquidated damages will be deducted from Subcontractor's retainage
- Subcontractor to provide all warranties, as-builts, and closeout documents.
- Subcontractor to provide submittals within 20 days of award of contract.

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Bid Package #33

DIVISION 31 – 316250 – Densified Aggregated Piers

- Subcontractor to provide all labor, tools, materials, and equipment necessary to design, furnish, and install all 316250 – Densified Aggregated Piers per the plans and specs.
- Subcontractor shall be responsible for layout of aggregate piers based on control points set by Others.
- Space and laydown area around the project are minimal. Subcontractor to plan deliveries, installation, and phasing accordingly. Subcontractor will be responsible for getting equipment and materials in and out of the site while other construction activities take place.
- Subcontractor shall coordinate deliveries with suppliers and McKnight's superintendent.
- Subcontractor agrees to work and provide manpower to fulfill project needs including working non-standard work week hours.
- Subcontractor required to keep a full-time superintendent on site while their work is occurring.
- Subcontractor will clean up daily.
- Subcontractor responsible for labor force to practice and perform all safety requirements per OSHA for said work.
- Subcontractor agrees to complete all punchlist items within 20 days of Substantial Completion or a portion (based on number of punchlist items remaining per subcontractor) of liquidated damages will be deducted from Subcontractor's retainage.
- Subcontractor to provide all warranties, as-builts, and closeout documents.
- Subcontractor to provide submittals within 20 days of award of contract.

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Bid Package #34

DIVISION 27 –Communications (excluding 270528 Pathways for Communications Systems & 277400 Audio Visual Systems)

- Subcontractor to provide all labor, tools, materials, and equipment necessary to furnish and install all Division 27 – Communications (excluding 270528 Pathways for Communications Systems & 277400 Audio Visual Systems) for a complete communications system per the plans and specs.
- Subcontractor responsible for coordinating and cross-referencing electrical, lighting, EPS, and PS drawings to ensure raceways and conduit are installed properly for each system to properly function.
- Subcontractor shall provide and install wire for each of its systems in raceways and conduit for systems installed by others.
- Pathways for Communications Systems (specification 270528) to be provided by Others.
- Subcontractor to coordinate electrical requirements for all electrical components provided by other trades.
- Subcontractor shall participate in an overhead coordination meeting with McKnight and MEP trades.
- Subcontractor shall excavate, install, and backfill all underground utilities required adhering to the specs.
- Subcontractor shall be present for all required 3rd party, building inspector, and fire marshal inspections.
- Subcontractor to protect adjacent materials during installation and cleanup of any material.
- spilled on other surfaces.
- Space and laydown area around the project are minimal. Subcontractor to plan deliveries, installation, and phasing accordingly. Subcontractor will be responsible for getting equipment and materials in and out of the site while other construction activities take place.
- Subcontractor shall coordinate deliveries with suppliers and McKnight's superintendent.
- Subcontractor agrees to work and provide manpower to fulfill project needs including working non-standard work week hours.
- Subcontractor required to keep a full-time superintendent on site while their work is occurring.
- Subcontractor will clean up daily.
- Subcontractor responsible for labor force to practice and perform all safety requirements per OSHA for said work.
- Subcontractor agrees to complete all punchlist items within 20 days of Substantial Completion or a portion (based on number of punchlist items remaining per subcontractor) of liquidated damages will be deducted from Subcontractor's retainage.
- Subcontractor to provide all warranties, as-builts, and closeout documents.
- Subcontractor to provide submittals within 20 days of award of contract.

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Bid Package #35

DIVISION 27 – 277400 Audio Visual Systems

- Subcontractor to provide all labor, tools, materials, and equipment necessary to furnish and install all 277400 Audio Visual Systems per the plans and specs.
- Subcontractor responsible for coordinating and cross-referencing electrical, lighting, EPS, and PS drawings, including electrical shop drawings, to ensure raceways and conduit are installed properly for each system to properly function.
- Subcontractor shall provide and install wire for each of its systems.
- Subcontractor shall provide and install all tracks, all wood blocking/misc. support steel/all thread/Unistrut and any other materials required to attach equipment to the structure.
- Subcontractor to coordinate electrical design for all electrical components it is providing.
- Subcontractor shall attend and participate in an overhead coordination meeting with McKnight and MEP trades.
- Subcontractor shall be present for all required 3rd party, building inspector, and fire marshal inspections.
- Subcontractor to protect adjacent materials during installation and cleanup of any material.
- spilled on other surfaces.
- Subcontractor responsible for protecting its equipment once installed until building is turned over to the owner.
- Subcontractor responsible for assisting in testing and commissioning of its systems during project closeout.
- Space and laydown area around the project are minimal. Subcontractor to plan deliveries, installation, and phasing accordingly. Subcontractor will be responsible for getting equipment and materials in and out of the site while other construction activities take place.
- Subcontractor shall coordinate deliveries with suppliers and McKnight's superintendent.
- Subcontractor agrees to work and provide manpower to fulfill project needs including working non-standard work week hours.
- Subcontractor required to keep a full-time superintendent on site while their work is occurring.
- Subcontractor will clean up daily.
- Subcontractor responsible for labor force to practice and perform all safety requirements per OSHA for said work.
- Subcontractor agrees to complete all punchlist items within 20 days of Substantial Completion or a portion (based on number of punchlist items remaining per subcontractor) of liquidated damages will be deducted from Subcontractor's retainage.
- Subcontractor to provide all warranties, as-builts, and closeout documents.
- Subcontractor to provide submittals within 20 days of award of contract.

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GMP Alternate Narrative



Alternate #1 – Additional Parking - Subcontractor to furnish and install additional parking per the pink highlights on the attached Alternate #1 drawing. Scope of work includes curb and gutter, asphalt base & paving & striping.

Alternate #2 – Revised Landscape Plan - Subcontractor to furnish and install revised Landscape Plan LP101. Revised LP101 Alternate #2 drawing attached.

Alternate #3 – Added Bollard Lights - Subcontractor to furnish and install lighted bollards highlighted in Yellow on the attached Alternate #3 drawing. Install per specification 26 56 19 LED Lighting attached. 8” Round LED Bollard, 42” high. Full cutoff, zero up light. Model: DSXB LED 16C 350 50K SYM MVOLT PE SF DDBXD or approved equal.

Alternate #4 – Added Dining Patio – Subcontractor to furnish and install Dining Patio highlighted in blue on the attached Alternate #4 drawing. Match Detail C3 on Drawing C501 for Standard Sidewalk & Joint Detail.

Alternate #5 – Epoxy in lieu of Polished Concrete in High Bay – Subcontractor to furnish and install Epoxy floor in lieu of Polished Concrete in High-Bay area (4,357sqft). Specification 096723 for Resinous Floors attached.

Alternate #6 – Additional Interior Windows – Subcontractor to furnish and install interior store front windows per the yellow highlights on attached Alternate #6 Drawings (A101 & A622)

Alternate #7 – Quartz Countertops in lieu of Solid Surface – Subcontractor to furnish and install Quartz Countertops in lieu of Solid Surface countertops throughout the project. Specification 123661.19 for Quartz Agglomerate Countertops attached.

Alternate #8 – next page

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GMP Alternate Narrative

Alternate #8 – Training Room C & Storage Room 1013 Build Out

Subcontractor to furnish and install the following systems in rooms Training Room C & Storage Room 1013 in lieu of leaving them unfinished as currently drawn on the Construction Documents. Training Room C to match Training Room A and Supply Room 1013 to match Consolidated Supply Room 1010.

What is included in the main contract bid for these spaces:

- Exterior walls and windows.
- Interior doors and hardware.
- Gypsum wallboard (unpainted)
- Lighting and exit sign (required to be installed for egress)
- VAV unit (1 per room)
- Sprinkler
- Fire Alarms
- Power runs and outlets
- Data conduit only
- Ductwork, and compressed air to be capped at wall
- Building electrical and mechanical equipment is designed to handle this future build-out

What is not included in the main contract for these spaces and should be included in alternate bid:

- Finishes
- FFE
- Data outlets
- Paint
- Ductwork and registers
- Cable Trays
- Power and data lines and above drops
- Air compressor piping and reels
- Audio/Visual

PLANT SCHEDULE						
TREES	QTY	BOTANICAL / COMMON NAME	CONT	CALIPER	SPACING	REMARKS
ERI JAP	6	ERIOBOTRYA JAPONICA / LOQUAT	B&B	2.5" CAL. B&B	AS SHOWN	FULL AND MATCHED. NO SPLIT LEADERS ACCEPTED. FREE OF WEEDS, DISEASES, AND INSECTS.
MAG SWE	2	MAGNOLIA VIRGINIANA / SWEETBAY MAGNOLIA	B&B	2.5" CAL. B&B	AS SHOWN	FULL AND MATCHED. NO SPLIT LEADERS ACCEPTED. FREE OF WEEDS, DISEASES, AND INSECTS.
QUE VIR	6	QUERCUS VIRGINIANA / SOUTHERN LIVE OAK	B&B	2.5" CAL. B&B	AS SHOWN	FULL AND MATCHED. NO SPLIT LEADERS ACCEPTED. FREE OF WEEDS, DISEASES, AND INSECTS.
SAB SAB	5	SABAL PALMETTO / CABBAGE PALMETTO	7 GAL		AS SHOWN	FULL AND MATCHED. NO SPLIT LEADERS ACCEPTED. FREE OF WEEDS, DISEASES, AND INSECTS.
UMB CAL	6	UMBELLULARIA CALIFORNICA / BAY LAUREL	B&B	2.5" CAL. B&B	AS SHOWN	FULL AND MATCHED. NO SPLIT LEADERS ACCEPTED. FREE OF WEEDS, DISEASES, AND INSECTS.
SHRUBS	QTY	BOTANICAL / COMMON NAME	CONT	SPACING		REMARKS
AV	69	ANDROPOGON VIRGINICUS / BROOMSEDGE BLUESTEM	3G	48" O.C.		FREE OF WEEDS, DISEASES, AND INSECTS.
CL2	74	CHASMANTHIUM LATIFOLIUM / NORTHERN SEA OATS	3G	48" O.C.		FREE OF WEEDS, DISEASES, AND INSECTS.
ILE AME	7	ILEX OPACA / AMERICAN HOLLY	7 GAL	60" O.C.		FREE OF WEEDS, DISEASES, AND INSECTS.
LOR GRE	15	LOROPETALUM CHINENSE / CHINESE FRINGE FLOWER	3 GAL	48" O.C.		FREE OF WEEDS, DISEASES, AND INSECTS.
MUH CAP	185	MUHLENBERGIA CAPILLARIS / PINK MUHLY GRASS	3 GAL	48" O.C.		FREE OF WEEDS, DISEASES, AND INSECTS.
SAB SER	112	SABAL SERRULATA / SAW PALMETTO	3G	48" O.C.		FREE OF WEEDS, DISEASES, AND INSECTS.
EVERGREEN SHRUBS	QTY	BOTANICAL / COMMON NAME	CONT	SPACING		REMARKS
VM	55	VIBURNUM OBOVATUM 'MISS SHILLERS DELIGHT' / WALTER'S VIBURNUM	3G	36" O.C.		FREE OF WEEDS, DISEASES, AND INSECTS.
SHRUB AREAS	QTY	BOTANICAL / COMMON NAME	CONT	SPACING		REMARKS
AG	137	ANDROPOGON GLOMERATUS / BUSHY BLUESTEM	1 GAL	30" o.c.		FREE OF WEEDS, DISEASES, AND INSECTS.
ES	458	ERAGROSTIS SPECTABILIS / PURPLE LOVEGRASS	1 GAL	24" o.c.		FREE OF WEEDS, DISEASES, AND INSECTS.
GROUND COVERS	QTY	BOTANICAL / COMMON NAME	CONT/TYPE	SPACING		REMARKS
CE	140,034 SF	CYNODON DACTYLON X TRANSVALENSIS 'DT-1' / TIFTUF™ BERMUDAGRASS	SOD			

GENERAL SHEET NOTES

- REFER TO SHEET C-001 AND FOR GENERAL CIVIL NOTES, LEGENDS, AND ABBREVIATIONS.
- THIS SHEET IS PART OF A MULTI-SHEET SET OF CONSTRUCTION PLANS AND SHALL BE READ WITH THE FULL SET TO BEST ENSURE PROPER INTERPRETATION.
- REFER TO SHEET CD101 FOR DEMOLITION PLAN.
- CONTRACTOR SHALL HAVE ALL UTILITIES FIELD LOCATED PRIOR TO START OF CONSTRUCTION
- SEE L-501 FOR PLANTING DETAILS AND SCHEDULE.
- REFER TO CS101 FOR ADDITIONAL INFORMATION.

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EOR/AOR SEAL
 CONSULTANT

CLIENT INFORMATION
QUICKSTART TCSG
Technical Consulting Services Group, Inc.

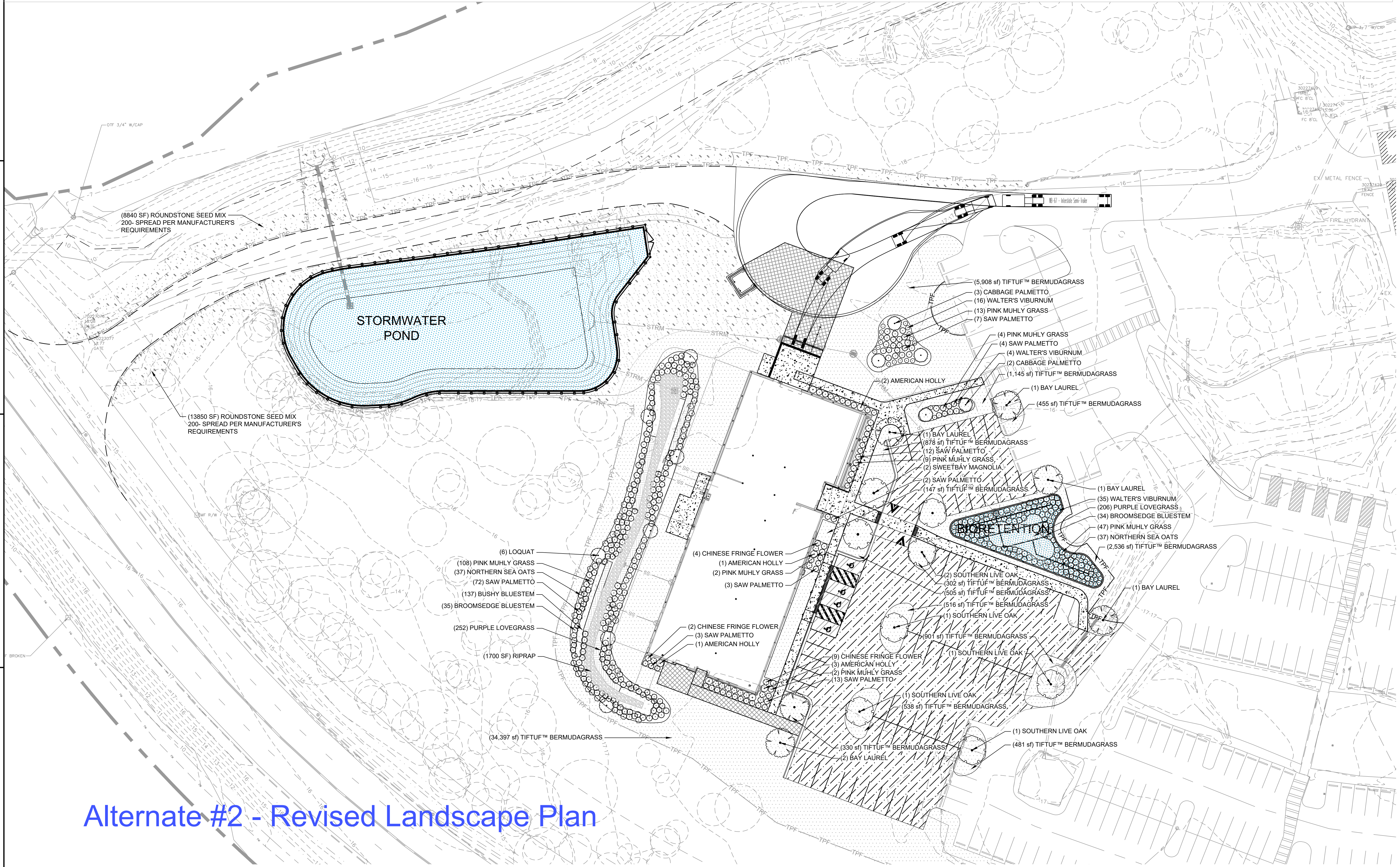
PROJECT NAME
TCSG 399 - QUICK START EV TRAINING CENTER - POOLER EXPANSION
 1500 PINE MEADOW DRIVE
 CHATHAM COUNTY, GA

DRAWING ISSUE	DATE	DESCRIPTION	MARK

DESIGNED BY: XXX
 DRAWN BY: XXX
 CHECKED BY: XXX
 SUBMITTED BY: XXX
 DATE: 00/00/0000
 PROJECT # 1230219

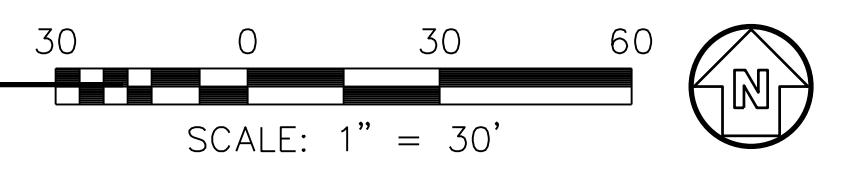
SHEET TITLE
LANDSCAPE PLAN

SHEET NUMBER
LP101
 ORIGINAL SHEET SIZE:
 30" X 42"



Alternate #2 - Revised Landscape Plan

A1 LANDSCAPE PLAN



FILE PATH: X:\FY23\1230219\CAD\BIM\04\02\CAD\LP101.PLOT PLOTTED BY: OWENBY, CODY. DATE: 5/19/21

SECTION 26 56 19 – LED EXTERIOR LIGHTING

PART 1 - GENERAL

Alternate #3 - Added Bollard Lights

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Exterior solid-state luminaires that are designed for and exclusively use LED lamp technology.
2. Luminaire supports.
3. Luminaire-mounted photoelectric relays.

B. Related Requirements:

1. Section 26 09 23"Lighting Control Devices" for automatic control of lighting, including time switches, photoelectric relays, occupancy sensors, and multipole lighting relays and contactors.
2. Section 26 09 26"Lighting Control Panelboards" for panelboard-based lighting control.

1.3 DEFINITIONS

- A. CCT: Correlated color temperature.
- B. CRI: Color rendering index.
- C. Fixture: See "Luminaire."
- D. IP: International Protection or Ingress Protection Rating.
- E. Lumen: Measured output of lamp and luminaire, or both.
- F. Luminaire: Complete lighting unit, including lamp, reflector, and housing.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of luminaire.
 1. Arrange in order of luminaire designation.
 2. Include data on features, accessories, and finishes.

3. Include physical description and dimensions of luminaire.
 4. Lamps, include life, output (lumens, CCT, and CRI), and energy-efficiency data.
 5. Photometric data and adjustment factors based on laboratory tests, complying with IES Lighting Measurements Testing and Calculation Guides, of each luminaire type. The adjustment factors shall be for lamps and accessories identical to those indicated for the luminaire as applied in this Project.
 - a. Manufacturer's Certified Data: Photometric data certified by manufacturer's laboratory with a current accreditation under the NVLAP for Energy Efficient Lighting Products.
 - b. Testing Agency Certified Data: For indicated luminaires, photometric data certified by a qualified independent testing agency. Photometric data for remaining luminaires shall be certified by manufacturer.
 6. Wiring diagrams for power, control, and signal wiring.
 7. Photoelectric relays.
 8. Means of attaching luminaires to supports and indication that the attachment is suitable for components involved.
- B. Shop Drawings: For nonstandard or custom luminaires.
1. Include plans, elevations, sections, and mounting and attachment details.
 2. Include details of luminaire assemblies. Indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
 3. Include diagrams for power, signal, and control wiring.
- C. Samples: For each luminaire and for each color and texture indicated with factory-applied finish.
- D. Product Schedule: For luminaires and lamps. Use same designations indicated on Drawings.
- E. Delegated-Design Submittal: For luminaire supports.
1. Include design calculations for luminaire supports.
- 1.5 INFORMATIONAL SUBMITTALS
- A. Coordination Drawings: Plans, drawn to scale, on which the following items are shown and coordinated with each other, using input from installers of the items involved:
1. Luminaires.
 2. Structural members to which equipment and luminaires will be attached.
 3. Underground utilities and structures.
 4. Existing underground utilities and structures.
 5. Above-grade utilities and structures.
 6. Existing above-grade utilities and structures.
 7. Building features.

8. Vertical and horizontal information.
- B. Qualification Data: For testing laboratory providing photometric data for luminaires.
- C. Seismic Qualification Data: For luminaires, accessories, and components, from manufacturer.
 1. Basis for Certification: Indicate whether withstand certification is based on actual test of assembled components or on calculation.
 2. Dimensioned Outline Drawings of Equipment Unit: Identify center of gravity and locate and describe mounting and anchorage provisions.
 3. Detailed description of equipment anchorage devices on which the certification is based and their installation requirements.
- D. Product Certificates: For each type of the following:
 1. Luminaire.
 2. Photoelectric relay.
- E. Product Test Reports: For each luminaire, for tests performed by manufacturer and witnessed by a qualified testing agency.
- F. Source quality-control reports.
- G. Sample warranty.

1.6 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: For luminaires and photoelectric relays to include in operation and maintenance manuals.
 1. Provide a list of all lamp types used on Project. Use ANSI and manufacturers' codes.
 2. Provide a list of all photoelectric relay types used on Project; use manufacturers' codes.

1.7 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 1. Lamps: Ten for every 100 of each type and rating installed. Furnish at least one of each type.
 2. Glass, Acrylic, and Plastic Lenses, Covers, and Other Optical Parts: One for every 100 of each type and rating installed. Furnish at least one of each type.
 3. Diffusers and Lenses: One for every 100 of each type and rating installed. Furnish at least one of each type.
 4. Globes and Guards: One for every 20 of each type and rating installed. Furnish at least one of each type.

1.8 QUALITY ASSURANCE

- A. Luminaire Photometric Data Testing Laboratory Qualifications: Luminaire manufacturers' laboratory that is accredited under the NVLAP for Energy Efficient Lighting Products.
- B. Luminaire Photometric Data Testing Laboratory Qualifications: Provided by an independent agency, with the experience and capability to conduct the testing indicated, that is an NRTL as defined by OSHA in 29 CFR 1910.7, accredited under the NVLAP for Energy Efficient Lighting Products and complying with applicable IES testing standards.
- C. Provide luminaires from a single manufacturer for each luminaire type.
- D. Each luminaire type shall be binned within a three-step MacAdam Ellipse to ensure color consistency among luminaires.
- E. Installer Qualifications: An authorized representative who is trained and approved by manufacturer.
- F. Mockups: For exterior luminaires, complete with power and control connections.
 - 1. Obtain Architect's approval of luminaires in mockups before starting installations.
 - 2. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed work.
 - 3. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
 - 4. Approved mockups may become part of the completed Work if undisturbed at time of Material Completion.

1.9 DELIVERY, STORAGE, AND HANDLING

- A. Protect finishes of exposed surfaces by applying a strippable, temporary protective covering prior to shipping.

1.10 FIELD CONDITIONS

- A. Verify existing and proposed utility structures prior to the start of work associated with luminaire installation.
- B. Mark locations of exterior luminaires for approval by Architect prior to the start of luminaire installation.

1.11 WARRANTY

- A. Warranty: Manufacturer and Installer agree to repair or replace components of luminaires that fail in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, the following:
 - a. Structural failures, including luminaire support components.
 - b. Faulty operation of luminaires and accessories.
 - c. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
2. Warranty Period: 2 year(s) from date of Material Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Seismic Performance: Luminaires shall withstand the effects of earthquake motions determined according to ASCE/SEI 7.
- B. Seismic Performance: Luminaires and lamps shall be labeled vibration and shock resistant.
 1. The term "withstand" means "the luminaire will remain in place without separation of any parts when subjected to the seismic forces."

2.2 LUMINAIRE REQUIREMENTS

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. NRTL Compliance: Luminaires shall be listed and labeled for indicated class and division of hazard by an NRTL.
- C. FM Global Compliance: Luminaires for hazardous locations shall be listed and labeled for indicated class and division of hazard by FM Global.
- D. UL Compliance: Comply with UL 1598.
- E. Lamp base complying with ANSI C81.61.
- F. Bulb shape complying with ANSI C79.1.
- G. CRI of 80. CCT of 4000 K.
- H. L70 lamp life of 50,000 hours.
- I. Lamps dimmable from 100 percent to 0 percent of maximum light output.
- J. Internal driver.
- K. Nominal Operating Voltage: 277 V ac.

- L. In-line Fusing: On the primary for each luminaire.
- M. Lamp Rating: Lamp marked for outdoor use.
- N. Source Limitations: Obtain luminaires from single source from a single manufacturer.
- O. Source Limitations: For luminaires, obtain each color, grade, finish, type, and variety of luminaire from single source with resources to provide products of consistent quality in appearance and physical properties.

2.3 LUMINAIRE-MOUNTED PHOTOELECTRIC RELAYS

- A. Manufacturers: Provide products by one of the following approved manufacturers:
 - 1. Atlas Lighting Products.
 - 2. Cooper Lighting, an Eaton business.
 - 3. Deco Lighting.
 - 4. Eaton.
 - 5. GE Lighting Solutions.
 - 6. Intelligent Illuminations, Inc.
 - 7. Intermatic, Inc.
 - 8. Lithonia Lighting; Acuity Brands Lighting, Inc.
 - 9. Philips Lighting Company.
 - 10. Schneider Electric USA, Inc.
 - 11. Siemens Building Technologies, Inc.
- B. Comply with UL 773 or UL 773A.
- C. Contact Relays: Factory mounted, single throw, designed to fail in the on position, and factory set to turn light unit on at 1.5 to 3 fc and off at 4.5 to 10 fc with 15-second minimum time delay. Relay shall have directional lens in front of photocell to prevent artificial light sources from causing false turnoff.
 - 1. Relay with locking-type receptacle shall comply with ANSI C136.10.
 - 2. Adjustable window slide for adjusting on-off set points.

2.4 LUMINAIRE TYPES

- A. Bollard:
 - 1. Manufacturers: Provide products by one of the following approved manufacturers:
 - a. Architectural Area Lighting.
 - b. Cooper Lighting, an Eaton business.
 - c. GE Lighting Solutions.
 - d. H.E. Williams.
 - e. Howard Lighting Products.
 - f. KIM Lighting.
 - g. Lightolier; a Philips group brand.

- h. Lithonia Lighting; Acuity Brands Lighting, Inc.
 - i. Luraline Lighting.
 - j. Neenah Foundry Company.
 - k. OSRAM SYLVANIA.
 - l. RAB Lighting.
 - m. Selux Corporation.
 - 2. See Drawings for luminaire physical attributes.
- B. Border:
 - 1. Manufacturers: Provide products by one of the following approved manufacturers:
 - a. Architectural Area Lighting.
 - b. Cooper Lighting, an Eaton business.
 - c. H.E. Williams.
 - d. Howard Lighting Products.
 - e. KIM Lighting.
 - f. Lightolier; a Philips group brand.
 - g. Lithonia Lighting; Acuity Brands Lighting, Inc.
 - h. Luraline Lighting.
 - i. OSRAM SYLVANIA.
 - j. RAB Lighting.
 - k. Selux Corporation.
 - l. Visa Lighting.
 - 2. See Drawings for luminaire physical attributes.
- C. Canopy:
 - 1. Manufacturers: Provide products by one of the following approved manufacturers:
 - a. Cooper Lighting, an Eaton business.
 - b. Gallium Lighting, LLC.
 - c. H.E. Williams.
 - d. Howard Lighting Products.
 - e. Juno Lighting Group by Schneider Electric.
 - f. KIM Lighting.
 - g. Lightolier; a Philips group brand.
 - h. Lithonia Lighting; Acuity Brands Lighting, Inc.
 - i. OSRAM SYLVANIA.
 - j. RAB Lighting.
 - k. Selux Corporation.
 - 2. See Drawings for luminaire physical attributes.

2.5 MATERIALS

- A. Metal Parts: Free of burrs and sharp corners and edges.

- B. Sheet Metal Components: Corrosion-resistant aluminum. Form and support to prevent warping and sagging.
- C. Doors, Frames, and Other Internal Access: Smooth operating, free of light leakage under operating conditions, and designed to permit relamping without use of tools. Designed to prevent doors, frames, lenses, diffusers, and other components from falling accidentally during relamping and when secured in operating position. Doors shall be removable for cleaning or replacing lenses.
- D. Diffusers and Globes:
 - 1. Acrylic Diffusers: 100 percent virgin acrylic plastic, with high resistance to yellowing and other changes due to aging, exposure to heat, and UV radiation.
 - 2. Glass: Annealed crystal glass unless otherwise indicated.
 - 3. Lens Thickness: At least 0.125 inch minimum unless otherwise indicated.
- E. Lens and Refractor Gaskets: Use heat- and aging-resistant resilient gaskets to seal and cushion lenses and refractors in luminaire doors.
- F. Reflecting surfaces shall have minimum reflectance as follows unless otherwise indicated:
 - 1. White Surfaces: 85 percent.
 - 2. Specular Surfaces: 83 percent.
 - 3. Diffusing Specular Surfaces: 75 percent.
- G. Housings:
 - 1. Rigidly formed, weather- and light-tight enclosure that will not warp, sag, or deform in use.
 - 2. Provide filter/breather for enclosed luminaires.
- H. Factory-Applied Labels: Comply with UL 1598. Include recommended lamps. Labels shall be located where they will be readily visible to service personnel, but not seen from normal viewing angles when lamps are in place.
 - 1. Label shall include the following lamp characteristics:
 - a. "USE ONLY" and include specific lamp type.
 - b. Lamp diameter, shape, size, wattage and coating.
 - c. CCT and CRI for all luminaires.

2.6 FINISHES

- A. Variations in Finishes: Noticeable variations in same piece are unacceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

- B. Luminaire Finish: Manufacturer's standard paint applied to factory-assembled and - tested luminaire before shipping. Where indicated, match finish process and color of pole or support materials.
- C. Factory-Applied Finish for Aluminum luminaires: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
 - 1. Finish designations prefixed by AA comply with the system established by the Aluminum Association for designating aluminum finishes.
 - 2. Natural Satin Finish: Provide fine, directional, medium satin polish (AA-M32); buff complying with AA-M20 requirements; and seal aluminum surfaces with clear, hard-coat wax.
 - 3. Class I, Clear-Anodic Finish: AA-M32C22A41 (Mechanical Finish: Medium satin; Chemical Finish: Etched, medium matte; Anodic Coating: Architectural Class I, clear coating 0.018 mm or thicker) complying with AAMA 611.
 - 4. Class I, Color-Anodic Finish: AA-M32C22A42/A44 (Mechanical Finish: Medium satin; Chemical Finish: Etched, medium matte; Anodic Coating: Architectural Class I, integrally colored or electrolytically deposited color coating 0.018 mm or thicker), complying with AAMA 611.
 - a. Color: Dark bronze, unless otherwise specified on Drawings.
- D. Factory-Applied Finish for Steel luminaires: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
 - 1. Surface Preparation: Clean surfaces to comply with SSPC-SP 1, to remove dirt, oil, grease, and other contaminants that could impair paint bond. Grind welds and polish surfaces to a smooth, even finish. Remove mill scale and rust, if present, from uncoated steel, complying with SSPC-SP 5/NACE No. 1 or SSPC-SP 8.
 - 2. Exterior Surfaces: Manufacturer's standard finish consisting of one or more coats of primer and two finish coats of high-gloss, high-build polyurethane enamel.
 - a. Color: As selected from manufacturer's standard catalog of colors.
 - b. Color: Match Architect's sample of manufacturer's standard color.
 - c. Color: As selected by Architect from manufacturer's full range.

2.7 LUMINAIRE SUPPORT COMPONENTS

- A. Comply with requirements in Section 26 05 29 "Hangers and Supports for Electrical Systems" for channel and angle iron supports and nonmetallic channel and angle supports.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Examine roughing-in for luminaire electrical conduit to verify actual locations of conduit connections before luminaire installation.
- C. Examine walls, roofs, and canopy ceilings for suitable conditions where luminaires will be installed.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 TEMPORARY LIGHTING

- A. If approved by the Architect, use selected permanent luminaires for temporary lighting. When construction is Materially Complete, clean luminaires used for temporary lighting and install new lamps.

3.3 GENERAL INSTALLATION REQUIREMENTS

- A. Comply with NECA 1.
- B. Use fastening methods and materials selected to resist seismic forces defined for the application and approved by manufacturer.
- C. Install lamps in each luminaire.
- D. Fasten luminaire to structural support.
- E. Supports:
 - 1. Sized and rated for luminaire weight.
 - 2. Able to maintain luminaire position after cleaning and relamping.
 - 3. Support luminaires without causing deflection of finished surface.
 - 4. Luminaire-mounting devices shall be capable of supporting a horizontal force of 100 percent of luminaire weight and a vertical force of 400 percent of luminaire weight.
- F. Wall-Mounted Luminaire Support:
 - 1. Attached to structural members in walls or attached to a minimum 1/8 inch backing plate attached to wall structural members.
- G. Wiring Method: Install cables in raceways. Conceal raceways and cables.

- H. Install luminaires level, plumb, and square with finished grade unless otherwise indicated. Install luminaires at height and aiming angle as indicated on Drawings.
- I. Coordinate layout and installation of luminaires with other construction.
- J. Adjust luminaires that require field adjustment or aiming. Include adjustment of photoelectric device to prevent false operation of relay by artificial light sources, favoring a north orientation.
- K. Comply with requirements in Section 26 05 19 "Low-Voltage Electrical Power Conductors and Cables" and Section 26 05 33 "Raceways and Boxes for Electrical Systems" for wiring connections and wiring methods.

3.4 BOLLARD LUMINAIRE INSTALLATION:

- A. Align units for optimum directional alignment of light distribution.

3.5 CORROSION PREVENTION

- A. Aluminum: Do not use in contact with earth or concrete. When in direct contact with a dissimilar metal, protect aluminum by insulating fittings or treatment.
- B. Steel Conduits: Comply with Section 26 05 33 "Raceways and Boxes for Electrical Systems." In concrete foundations, wrap conduit with 0.010-inch-thick, pipe-wrapping plastic tape applied with a 50 percent overlap.

3.6 IDENTIFICATION

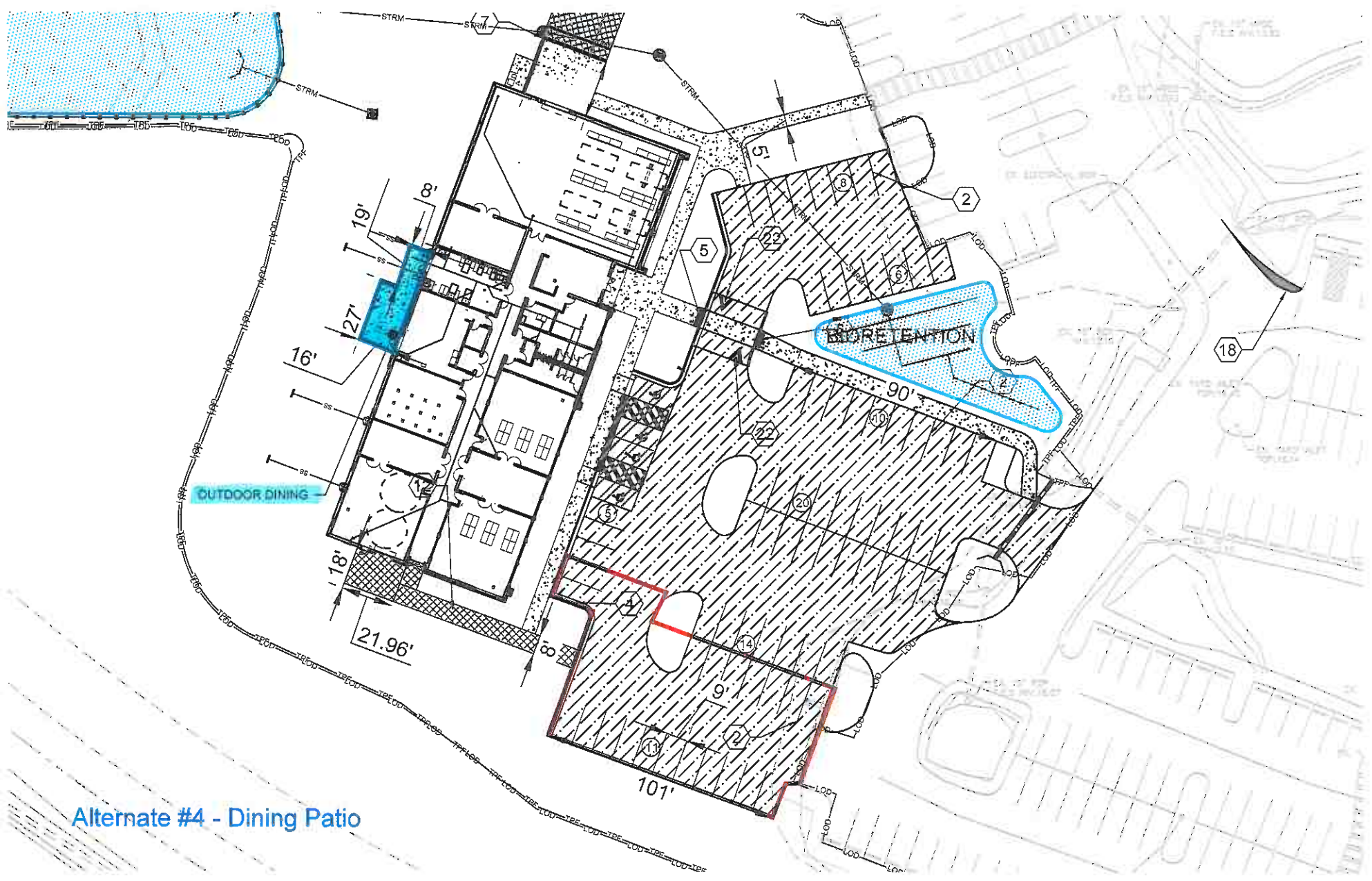
- A. Identify system components, wiring, cabling, and terminals. Comply with requirements for identification specified in Section 26 05 53 "Identification for Electrical Systems."

3.7 FIELD QUALITY CONTROL

- A. Inspect each installed luminaire for damage. Replace damaged luminaires and components.
- B. Perform the following tests and inspections with the assistance of a factory-authorized service representative:
 - 1. Operational Test: After installing luminaires, switches, and accessories, and after electrical circuitry has been energized, test units to confirm proper operation.
 - 2. Verify operation of photoelectric controls.
- C. Illumination Tests:
 - 1. Measure light intensities at night. Use photometers with calibration referenced to NIST standards. Comply with the following IES testing guide(s):

- a. IES LM-5.
 - b. IES LM-50.
 - c. IES LM-52.
 - d. IES LM-64.
 - e. IES LM-72.
2. Operational Test: After installing luminaires, switches, and accessories, and after electrical circuitry has been energized, test units to confirm proper operation.
- D. Luminaire will be considered defective if it does not pass tests and inspections.
 - E. Prepare a written report of tests, inspections, observations, and verifications indicating and interpreting results. If adjustments are made to lighting system, retest to demonstrate compliance with standards.
- 3.8 DEMONSTRATION
- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain luminaires and photocell relays.
- 3.9 ADJUSTING
- A. Occupancy Adjustments: When requested within 12 months of date of Material Completion, provide on-site assistance in adjusting the direction of aim of luminaires to suit occupied conditions. Make up to two visits to Project during other-than-normal hours for this purpose. Some of this work may be required during hours of darkness.
 1. During adjustment visits, inspect all luminaires. Replace lamps or luminaires that are defective.
 2. Parts and supplies shall be manufacturer's authorized replacement parts and supplies.
 3. Adjust the aim of luminaires in the presence of the Architect.

END OF SECTION 26 56 19



Alternate #4 - Dining Patio

SECTION 096723 - RESINOUS FLOORING

PART 1 - GENERAL

Alternate #5 - Epoxy in lieu of Polished Concrete in High Bay

1.1 SUMMARY

A. Section Includes:

1. Resinous flooring.

1.2 PREINSTALLATION MEETINGS

- ##### A. Preinstallation Conference: Conduct conference at Project site.

1.3 ACTION SUBMITTALS

- ##### A. Product Data: For each type of product.

- ##### B. Samples: For each resinous floor system required and for each color and texture specified.

1.4 INFORMATIONAL SUBMITTALS

- ##### A. Material certificates.

- ##### B. Material test reports.

1.5 CLOSEOUT SUBMITTALS

- ##### A. Maintenance data.

1.6 QUALITY ASSURANCE

- ##### A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for installation of flooring systems required for this Project.

1. Engage an installer who is approved in writing by resinous flooring manufacturer as qualified to apply resinous flooring systems indicated.
2. Installer Letter of Qualification: Installer to provide letter stating that they have been in business for at least 5 years and listing 5 projects in the last 2 years of similar scope. For each project provide: project name, location, date of installation, contact information, size of project, and manufacturer of materials with system information.

- ##### B. Source Limitations: Obtain primary resinous flooring materials, including primers, resins, hardening agents, grouting coats, and topcoats, from single source from single manufacturer.

Provide secondary materials, including patching and fill material, joint sealant, and repair materials, of type and from source recommended by manufacturer of primary materials.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. VOC Content of Resinous Flooring: Provide resinous flooring systems, for use inside the weatherproofing system, that comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
 - 1. Resinous Flooring: 100 g/L.
- B. Flammability: Self-extinguishing in accordance with ASTM D635.

2.2 RESINOUS FLOORING EPF-1

- A. Resinous Flooring System: Abrasion-, impact-, and chemical-resistant, aggregate-filled, resin-based monolithic floor surfacing designed to produce a seamless floor and integral cove base.
 - 1. Basis of Design but not limited to Sherwin Williams Resufloor Deco Quartz BC23, 1/8" nominal thickness.
- B. System Characteristics:
 - 1. Color and Pattern: As indicated on Finish Legend.
 - 2. Wearing Surface: Textured for slip resistance.
 - 3. Overall System Thickness: 1/8 inch (3.2 mm).
- C. Primer: Type recommended in writing by resinous flooring manufacturer for substrate and resinous flooring system indicated.
 - 1. Primer: High Solids, pigmented epoxy primer.
- D. Body Coats: Epoxy Resin Glaze
 - 1. Coat 1
 - a. Resin: Epoxy.
 - b. Formulation Description: High solids.
 - c. Type: Pigmented.
 - d. Installation Method: Self-leveling slurry Troweled or screeded.
 - e. Thickness of Coats: as recommended by the manufacturer.
 - f. Aggregates: Colored quartz (ceramic-coated silica).
 - 2. Coat 2
 - a. Resin: Epoxy.
 - b. Formulation Description: High solids.

- c. Type: Pigmented.
 - d. Installation Method: Self-leveling slurry Troweled or screeded.
 - e. Thickness of Coats: As recommended by the manufacturer.
 - f. Aggregates: Colored quartz (ceramic-coated silica).
- E. Grout Coat: High-Performance Epoxy
- 1. Resin: Epoxy.
 - 2. Type: Clear.
 - 3. Thickness of Coat: As recommended by the manufacturer.
- F. Topcoats: Sealing or finish coats.
- 1. Resin: Epoxy.
 - 2. Type: Clear.
 - 3. Thickness of Coat: As recommended by the manufacturer.
 - 4. Finish: Gloss.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Prepare and clean substrates in accordance with resinous flooring manufacturer's written instructions for substrate indicated to ensure adhesion. All applicators and all other personnel in the area of the installation shall take all required and necessary safety precautions. All manufacturers' installation instructions shall be implicitly instructions shall be implicitly followed.
- B. Concrete Substrates: Provide sound concrete surfaces free of laitance, glaze, efflorescence, curing compounds, form-release agents, dust, dirt, grease, oil, and other contaminants incompatible with resinous flooring.
- 1. Roughen concrete substrates as follows:
 - a. Comply with requirements in SSPC-SP 13/NACE No. 6, with a Concrete Surface Profile of 3 or greater in accordance with ICRI Technical Guideline No. 310.2R, unless manufacturer's written instructions are more stringent.
 - 2. Repair damaged and deteriorated concrete in accordance with resinous flooring manufacturer's written instructions.
 - 3. Moisture Testing: Perform tests so that each test area does not exceed **1000 sq. ft. (304.8 sq. m)**, and perform no fewer than three tests in each installation area and with test areas evenly spaced in installation areas.
 - a. Anhydrous Calcium Chloride Test: ASTM F1869. Proceed with installation only after substrates have maximum moisture-vapor-emission rate of **3 lb of water/1000 sq. ft. (1.36 kg of water/92.9 sq. m)** in 24 hours.

- b. Relative Humidity Test: Using in-situ probes, ASTM F2170. Proceed with installation only after substrates have a maximum 75 percent relative humidity level measurement.
 4. Alkalinity and Adhesion Testing: Perform tests recommended in writing by resinous flooring manufacturer. Proceed with installation only after substrate alkalinity is not less than 6 or more than 8 pH unless otherwise recommended in writing by flooring manufacturer,
- C. Patching and Filling: Use patching and fill material to fill holes and depressions in substrates in accordance with manufacturer's written instructions.
 1. Control Joint Treatment: Treat control joints and other nonmoving substrate cracks to prevent cracks from reflecting through resinous flooring in accordance with manufacturer's written instructions.
- D. Resinous Materials: Mix components and prepare materials in accordance with resinous flooring manufacturer's written instructions.

3.2 INSTALLATION

- A. Install resinous floor over properly prepared concrete surface in strict accordance with the manufacturer's directions.
 1. Install the primer and/or base coats over thoroughly cleaned and prepared concrete.
 2. Install topcoat over flooring after excess aggregate has been removed.
 3. Maintain a slab temperature of 60°F to 80°F for 24 hours minimum before applying floor topping, or as instructed by manufacturer.
- B. Apply components of resinous flooring system according to manufacturer's written instructions to produce a uniform, monolithic wearing surface of thickness indicated.
 1. Coordinate application of components to provide optimum adhesion of resinous flooring system to substrate, and optimum intercoat adhesion.
 2. Cure resinous flooring components according to manufacturer's written instructions. Prevent contamination during application and curing processes.
 3. At substrate expansion and isolation joints, comply with resinous flooring manufacturer's written instructions.
- C. Sealant: Saw cut resinous floor topping at expansion joints in concrete slab. Fill sawcuts with sealant prior to final seal coat application. Follow manufacturer's written recommendations.
- D. Apply primer over prepared substrate at manufacturer's recommended spreading rate.
- E. Slip Resistant Finish: Provide grit for slip resistance.
- F. Apply topcoats in number indicated for flooring system and at spreading rates recommended in writing by manufacturer.

- G. Field-Formed Integral Cove Base: Apply cove base mix to wall surfaces before applying flooring coats. Apply in accordance with manufacturer's written instructions and details, including those for taping, mixing, priming, troweling, sanding, and topcoating of cove base. Round internal and external corners.
 - 1. Integral Cove Base: 6 inches high.
- H. Protect resinous flooring from damage and wear during the remainder of construction period. Use protective methods and materials, including temporary covering, recommended in writing by resinous flooring manufacturer.
- I. Contractor shall insure that coating is protected from any traffic until it is fully cured to the satisfaction of the coating manufacturer.

END OF SECTION 096723

Alternate #6 - Additional Interior Windows

SHEET NOTES

- SEE CIVIL, STRUCTURAL, INTERIORS, FIRE PROTECTION, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.
- SEE SHEET A-001 FOR GENERAL NOTES, ABBREVIATIONS & SYMBOLS.
- SEE SHEET A-002 FOR TYPICAL HEIGHTS, LOCATIONS AND DETAILS.
- SEE SHEET A-003 FOR ADA DETAILS.
- SEE SHEET A-005 FOR PARTITION TYPES.
- SEE SHEET A-601 FOR DOOR SCHEDULE AND DOOR TYPES.
- SEE SHEET A-621 FOR GLAZING ELEVATIONS.
- SEE INTERIOR SHEETS FOR ROOM FINISH SCHEDULE.
- DOOR OPENINGS SHALL BE LOCATED 5' FROM FACE OF PARTITION IN STUD AND PANEL PARTITIONS, U.N.O.
- CONTRACTOR SHALL LOCATED BLOCKING AND BACKING AS REQUIRED FOR WALL MOUNTED EQUIPMENT, CASEWORK/MILLWORK AND FURNISHINGS.

KEYNOTES

- DRINKING FOUNTAIN - SEE PLUMBING DRAWINGS
- EMERGENCY EYE WASH STATION - SEE PLUMBING DRAWINGS
- EMERGENCY EYE WASH & SHOWER STATION - SEE PLUMBING DRAWINGS
- PREFINISHED SCUPPER WITH DOWNSPOUT - CONNECT TO STORMWATER; IRON BOOTS AT THE BOTTOM OF THE DOWNSPOUT
- STEEL LADDER - ACCESS TO ROOF
- BUILT-IN CASEWORK
- LOBBY DESK - SEE INTERIOR ELEVATIONS
- KNOX BOX
- UTILITY TRENCH - SEE STRUCTURAL DRAWINGS
- MECHANICAL EQUIPMENT - SEE MECHANICAL DRAWINGS

POND

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BORROR SEAL

CLIENT INFORMATION

QuickStart
TCSG

GEORGIA
QUICKSTART /
TECHNICAL
COLLEGE SYSTEM
OF GEORGIA

PROJECT NAME

TCSG 399 -
QUICK START
EV TRAINING
CENTER
POOLER
EXPANSION
POOLER, GA

DRAWING ISSUE

DATE

DESCRIPTION

MARK

DESIGNED BY: BW
DRAWN BY: JI
CHECKED BY: RE
SUBMITTED BY: DH
DATE: JULY 31, 2023
PROJECT #: 1230219

SHEET TITLE

REFERENCE
FLOOR PLAN

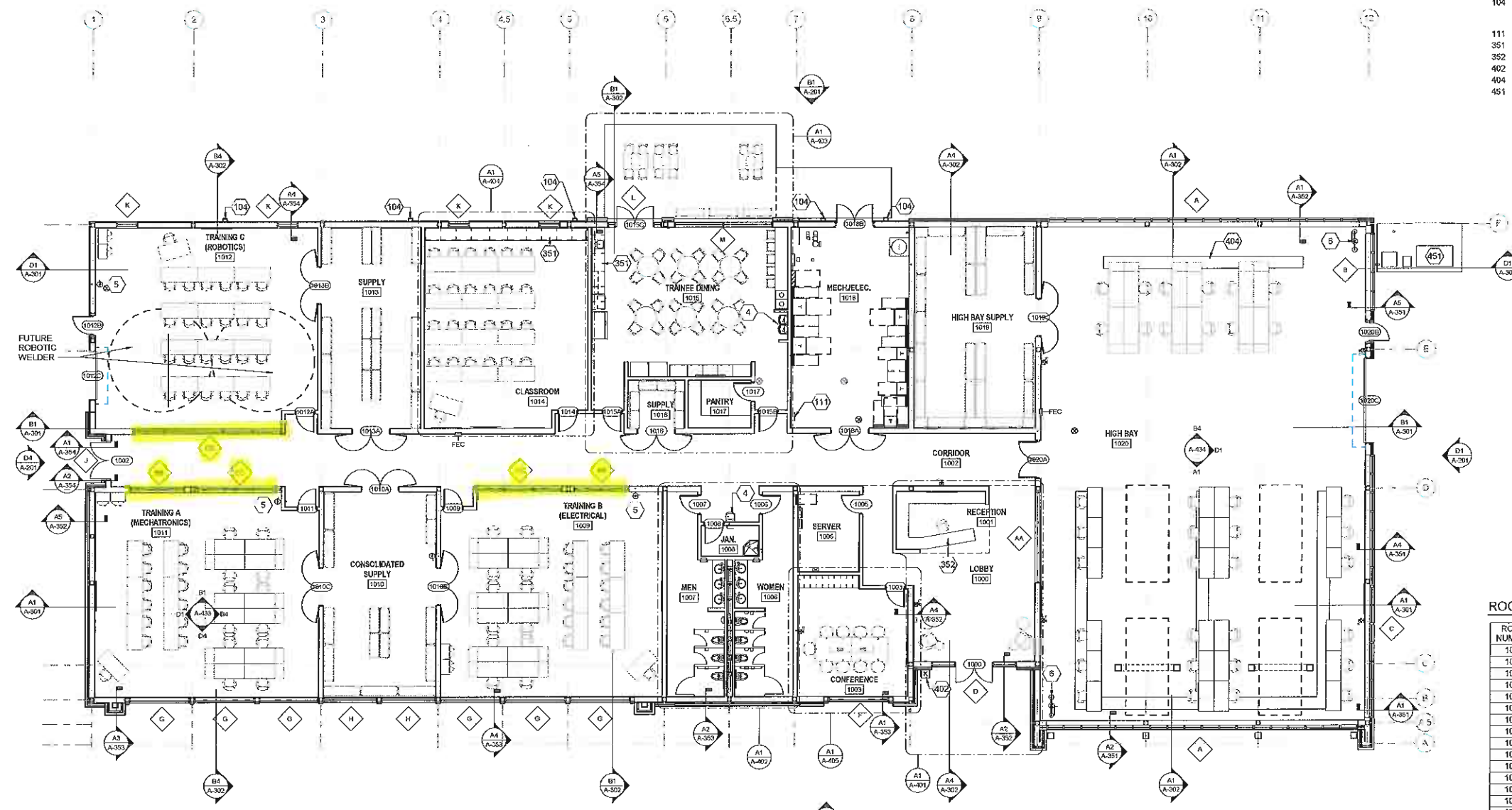
SHEET NUMBER

A-101

ORIGINAL SHEET SIZE
30" X 42"

ROOM INFORMATION

ROOM NUMBER	ROOM NAME	NET SF
1000	LOBBY	541 SF
1001	RECEPTION	151 SF
1002	CORRIDOR	1485 SF
1003	CONFERENCE	344 SF
1005	SERVER	133 SF
1006	WOMEN	272 SF
1007	MEN	272 SF
1008	JAN.	48 SF
1009	TRAINING B (ELECTRICAL)	1216 SF
1010	CONSOLIDATED SUPPLY	828 SF
1011	TRAINING A (MECHATRONICS)	1233 SF
1012	TRAINING C (ROBOTICS)	1169 SF
1013	SUPPLY	543 SF
1014	CLASSROOM	873 SF
1015	TRAINEE DINING	882 SF
1016	SUPPLY	74 SF
1017	PANTRY	82 SF
1018	MECH/ELEC.	640 SF
1019	HIGH BAY SUPPLY	662 SF
1020	HIGH BAY	4357 SF
		15907 SF



A1 REFERENCE FLOOR PLAN
SCALE 1/8" = 1'-0"

0 4 8 16
SCALE 1/8" = 1'-0"



Alternate #6 - Additional Interior Windows

SHEET NOTES

1. SEE GLAZING SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. REFER TO GLAZING LEGEND FOR ALL GLAZING TYPES.
3. STC RATED WINDOWS SHALL HAVE NOISE CONTROL SEALANTS AND STRAGALS PER MANUFACTURERS' SPECIFICATIONS.
4. HEAD, JAMB, AND SILL DETAILS MAY VARY PER STOREFRONT LOCATION. REFER TO FLOOR PLANS AND EXTERIOR ELEVATIONS FOR ADDITIONAL INFORMATION.

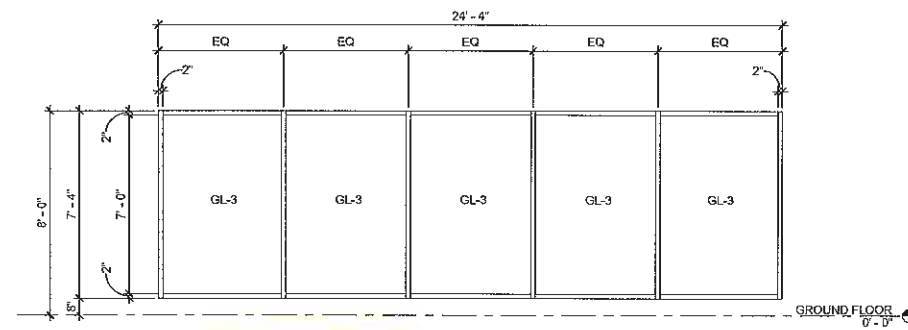
SHEET LEGEND

- GL-1 EXTERIOR VISION GLAZING - INSULATED
- GL-2 EXTERIOR SPANDREL GLAZING - INSULATED
- GL-3 INTERIOR VISION GLAZING - TEMPERED
- GL-4 EXTERIOR VISION GLAZING - INSULATED SAFETY GLASS W/ LABEL

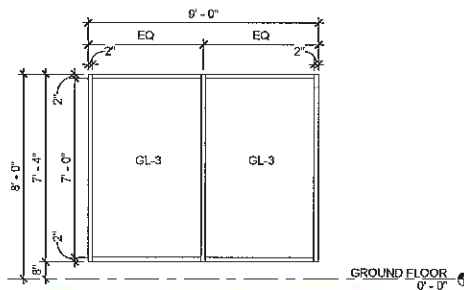
POND
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 Suite 500
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 EDWARD SEAL

CLIENT INFORMATION
QuickStart
TCSG
 GEORGIA
 QUICKSTART /
 TECHNICAL
 COLLEGE SYSTEM
 OF GEORGIA

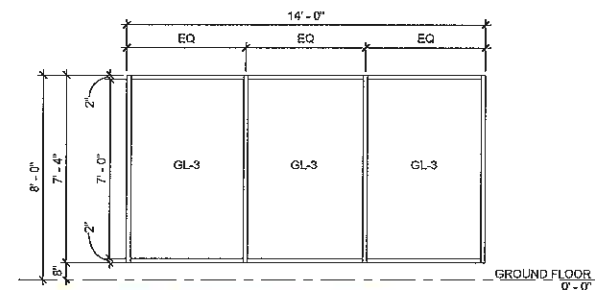
PROJECT NAME
 TCSG 399 -
 QUICK START
 EV TRAINING
 CENTER
 POOLER
 EXPANSION
 POOLER, GA



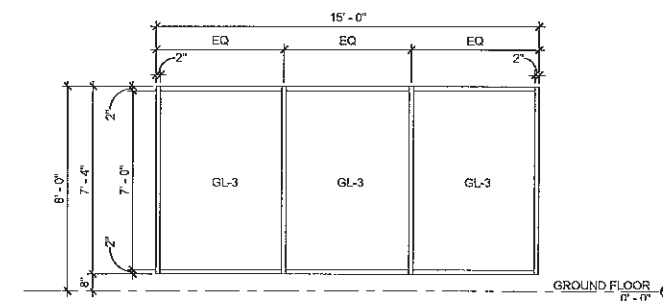
C3 GLAZING ELEVATION
 SCALE: 3/8" = 1'-0"



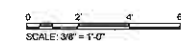
B3 GLAZING ELEVATION
 SCALE: 3/8" = 1'-0"



B4 GLAZING ELEVATION
 SCALE: 3/8" = 1'-0"



A3 GLAZING ELEVATION
 SCALE: 3/8" = 1'-0"



DRAWING ISSUE	
DATE	DESCRIPTION

DESIGNED BY	BW
DRAWN BY	JL
CHECKED BY	RE
SUBMITTED BY	DH
DATE	JULY 31, 2023
PROJECT #	1230219

SHEET TITLE
 INTERIOR
 GLAZING
 ELEVATIONS

SHEET NUMBER
A-622

ORIGINAL SHEET SIZE
 30" X 42"

7/26/2023 3:04:48 PM Autodesk Civil 3D 2023.10 Quick Start EV Training Center - Pooler (Design) 7/26/2023 Quick Start Pooler_ARCH_UGA.rvt

SECTION 123661.19 - QUARTZ AGGLOMERATE COUNTERTOPS

PART 1 - GENERAL

Alternate #7 - Quartz Countertops in lieu of Solid Surface

1.1 SUMMARY

- A. Section Includes:
1. Quartz agglomerate countertops.
 2. Quartz agglomerate backsplashes.
 3. Quartz agglomerate end splashes.

1.2 ACTION SUBMITTALS

- A. Product Data: For countertop materials.
- B. Sustainable Design Submittals:
1. [Product Data](#): For adhesives, indicating VOC content.
 2. Laboratory Test Reports: For adhesives, indicating compliance with requirements for low-emitting materials.
- C. Shop Drawings: For countertops. Show materials, finishes, edge and backsplash profiles, methods of joining, and cutouts for plumbing fixtures.
- D. Samples: For each type of material exposed to view.

PART 2 - PRODUCTS

2.1 QUARTZ AGGLOMERATE COUNTERTOP MATERIALS

- A. Quartz Agglomerate: Solid sheets consisting of quartz aggregates bound together with a matrix of filled plastic resin and complying with ISFA 3-01.
1. Colors and Patterns: As indicated on finish legend .
- B. Particleboard: ANSI A208.1, Grade M-2-Exterior Glue.
- C. Plywood: Exterior softwood plywood complying with DOC PS 1, Grade C-C Plugged, touch sanded.

2.2 FABRICATION

- A. Fabricate countertops according to quartz agglomerate manufacturer's written instructions and the AWI/AWMAC/WI's "Architectural Woodwork Standards."
1. Grade: Premium.

- B. Configuration:
 - 1. Front: Straight, slightly eased at top **1-1/2-inch (38-mm)** laminated bullnose.
 - 2. Backsplash: Straight, slightly eased at corner.
 - 3. End Splash: Matching backsplash.
- C. Countertops: **3/4-inch- (19-mm-)** thick, quartz agglomerate with front edge built up with same material.
- D. Backsplashes: **3/4-inch- (19-mm-)** thick, quartz agglomerate.
- E. Joints:
 - 1. Fabricate countertops without joints.
- F. Cutouts and Holes:
 - 1. Undercounter Plumbing Fixtures: Make cutouts for fixtures in shop using template or pattern furnished by fixture manufacturer. Form cutouts to smooth, even curves.

2.3 INSTALLATION MATERIALS

- A. Adhesive: Product recommended by quartz agglomerate manufacturer.
 - 1. Verify adhesives have a VOC content of 70 g/L or less.
 - 2. Verify adhesive complies with the testing and product requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."
- B. Sealant for Countertops: Comply with applicable requirements in Section 079200 "Joint Sealants."

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Fasten subtops to cabinets by screwing through subtops into cornerblocks of base cabinets. Shim as needed to align subtops in a level plane.
- B. Secure countertops to subtops with adhesive according to quartz agglomerate manufacturer's written instructions.
- C. Bond joints with adhesive and draw tight as countertops are set. Mask areas of countertops adjacent to joints to prevent adhesive smears.
- D. Install backsplashes and end splashes by adhering to wall and countertops with adhesive.
- E. Install aprons to backing and countertops with adhesive.

- F. Complete cutouts not finished in shop. Mask areas of countertops adjacent to cutouts to prevent damage while cutting. Make cutouts to accurately fit items to be installed, and at right angles to finished surfaces unless beveling is required for clearance. Ease edges slightly to prevent snipping.
- G. Apply sealant to gaps at walls; comply with Section 079200 "Joint Sealants."

END OF SECTION 123661.19