

# OUTLINE SPECIFICATION



CITY OF ATLANTA  
**PEYTON  
CENTER**  
Atlanta, Georgia



# OUTLINE SPECIFICATION

## **DIVISION 02: SITE CONSTRUCTION**

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### **Section 02000 Site Work**

Contractor shall perform site work consistent with this Specification and all other individual Specifications.

### **Section 02050 Demolition**

Furnish all labor, equipment and material required to remove, handle, crush and dispose of all equipment, materials and piping as shown on the Drawings, directed by the Engineer or required for the completion of the Work, including all necessary excavation and backfilling.

### **Section 02110 Clearing and Grubbing**

Furnish all labor, materials, equipment, tools and incidentals required for all clearing and grubbing including, but not limited to, the removal from the Site of trees, stumps, roots, brush, structures, abandoned utilities, trash, debris and all other materials found on or near the surface of the ground in the construction area and understood by generally accepted engineering practice not to be suitable for construction of the type contemplated.

### **Section 02125 Temporary and Permanent Erosion and Sedimentation Control**

Furnish all labor, materials, equipment and incidentals required to install and maintain temporary and permanent erosion and sedimentation controls as shown on the Drawings and as specified herein. Work under this Section also includes the subsequent removal of temporary erosion and sedimentation controls at completion of the project.

### **Section 02140 Dewatering**

Construct all permanent Work in areas free from water. Design, construct and maintain all dikes, levees, cofferdams and diversion and drainage channels as necessary to maintain the areas free from water and to protect the areas to be occupied by permanent work from water damage. Remove temporary works after they have served their purpose.

### **Section 02200 Earthwork**

Perform earthwork and related operations, including, but not limited to; excavating all classes of material encountered; trenching; handling; storage; transportation; and disposal of all excavated and unsuitable material; construction of fills and embankments; backfilling around structures; backfilling all pits; compacting; all sheeting; shoring and bracing; preparation of subgrades; surfacing and grading; and any other similar, incidental, or appurtenant earthwork operation which may be necessary to properly complete the Work.

### **Section 02310 Unit Pavers**

Furnish all labor, materials, equipment and incidentals required to provide and install brick pavers as shown and specified.

### **Section 02419 Selective Demolition**

Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations shall not be disrupted.

Contractor shall remove existing exterior door, framing and portion of existing exterior metal panel. A survey of existing conditions and correlate with requirements indicated to determine extent of selective demolition required.

Demolition and removal of selected portions of building or structure. These include architectural, structural, plumbing, fire protection, mechanical and electrical materials and equipment as indicated within the zone of demolition shown on drawings.

### **Section 02510 Asphalt Paving**

Furnish and install all asphalt paving materials and pavement base materials as indicated on the Drawings and as necessary for the proper performance of this work.

### **Section 02521 Concrete Sidewalks, Curbs and Gutters**

Furnish all labor, materials, equipment, tools and incidentals required for construction of concrete sidewalks, concrete monolithic sidewalk and curb, concrete header curb, concrete curb, concrete gutter and concrete combined curb and gutter, which shall consist of monolithic curb and gutter respectively, all constructed of Portland cement concrete, at the locations, and to the lines, grades, cross section, form and dimensions indicated on the Drawings.

### **Section 02535 Gravity Flow Sanitary Sewers**

Furnish all labor, equipment, and materials required to furnish, install, test, and inspect gravity flow sanitary sewers as shown on the Plans and specified in this section.

### **Section 02536 Reinforced Concrete Sanitary Sewer Pipe**

provide all services, labor, materials, and equipment required for all installation of reinforced concrete sanitary sewer pipe and related operations necessary or convenient to the Contractor for furnishing a complete Work as shown on the Plans or specified in these Specifications.

### **Section 02538 Sewer Service Connections**

Disconnect and Remove existing service connections from existing main line sanitary sewers that are to be abandoned and furnishing and installing new service connections to new main line sanitary sewers, all as shown on the Drawings and as specified herein and as directed by the Engineer.

### **Section 02600 Wastewater Flow Control**

Furnish all labor, materials, equipment, tools and incidentals required for a complete and operable installation of wastewater flow control; plugging and blocking; pumping and bypassing; flow control precautions; and any other similar, incidental, or appurtenant flow control operation which may be necessary to properly complete the Work as shown on the Drawings and Specified herein.

### **Section 02607 Manholes, Junction Boxes, Catch Basins and Inlets**

Furnish all labor, materials, equipment, tools and incidentals required to install cast-in-place, and precast concrete manholes, junction boxes, catch basins and inlets. The term manholes, as

used, herein and shown on the Drawings includes manholes, junction boxes, catch basins and inlets. All work shall be installed, adjusted, tested and placed in operation in accordance with these Specifications, the manufacturer's recommendations and as shown on the Drawings

**Section 02641 Precast Concrete Manholes**

Provide all services, labor, materials, and equipment required for all precast concrete manholes and related operations necessary or convenient to the Contractor for furnishing a complete Work as shown on the Plans or specified in these Specifications.

**Section 02642 Manhole Height Adjustment**

Provide all services, labor, materials, and equipment required for all manhole height adjustment and related operations necessary or convenient to the Contractor for furnishing a complete Work as shown on the Plans or specified in these Specifications.

**Section 02643 Manhole Frame and Cover Installation**

Provide all services, labor, materials, and equipment required for all manhole frames and covers installation and related operations necessary or convenient to the Contractor for furnishing a complete Work as shown on the Plans or specified in these Specifications

**Section 02644 Manhole Frame Sealing**

Provide all services, labor, materials, and equipment required for all manhole frame sealing and related operations necessary or convenient to the Contractor for furnishing a complete Work as shown on the Plans or specified in these Specifications.

**Section 02645 Fire Hydrants**

Furnish all labor, materials and equipment to install and test fire hydrants as specified herein and as shown on the Drawings.

**Section 02650 Testing for Acceptance of Sanitary and Storm Sewers**

Provide all labor, materials, and equipment required for all sanitary and storm sewers testing and related operations necessary or convenient for completing the Work as shown on the Drawings or specified herein.

**Section 02665 Water Mains and Accessories**

Furnish all labor, materials, equipment and incidentals required for the complete installation of water mains and accessories as shown on the Drawings and as specified herein, including hydraulic testing and disinfection of the completed water mains after installation.

**Section 02668 Water Service Connections**

Furnish all materials and equipment, providing all required labor and installing water service connections and all appurtenant work according to these Specifications and/or to the Water Connection Detail as shown schematically on the Drawings.

**Section 02675 Structural Reinforcement of Existing Piping**

Furnish and install structural pipe reinforcement by the method of spray lining utilizing spray line materials and methods for waterproofing, sealing, structural reinforcement and corrosion protection of existing stormwater corrugated metal, concrete pipe. Centrifugally cast concrete pipe (CCCP) over the specified length in a continuous structural concrete pipe within the pipe. Include all connections, joints, and other appurtenances as required.

#### **Section 02711 Security Fence and Gates**

Furnish all labor, materials, equipment and incidentals required to furnish and install security fencing, gates and appurtenances as shown on the Drawings and as specified herein.

#### **Section 02730 Sewers and Accessories**

Furnish all labor, materials, equipment, tools and incidentals required for a complete and operable installation of all sewers and accessories. All sewers and accessories shall be installed, adjusted, tested and placed in operation in accordance with these Specifications and the manufacturer's recommendations and as shown on the Drawings.

#### **Section 02735 Sewer Service Connections**

Furnish and installing service connections in the sewers, of the size and type shown on the Drawings and specified herein.

#### **Section 02795 Interlocking Permeable Concrete Pavers**

Furnish all labor, materials and equipment needed for the installation of interlocking permeable pavers including bedding and joint sand, crushed stone jointing material, base and subbase materials as specified herein.

#### **Section 02810 Spray Irrigation**

The Contractor shall provide scaled irrigation plans per these specifications for review and approval. The system shall efficiently and uniformly irrigate all areas as defined to be irrigated and perform as required by the Drawings and these specifications

#### **Section 02900 Trees, Plants and Ground Cover**

Provide soil preparation, trees, plants, and ground covers including planting mixes, mulch and planting accessories, existing tree care, filling around trees to remain and maintenance as directed by the Drawings and this Specification

#### **Section 02933 Seeding**

Furnish all labor, equipment and material required to place topsoil, seed, commercial fertilizer, agricultural limestone and mulch material, including seedbed preparation, harrowing, compacting and other placement operations on graded earthen areas as described herein and/or shown on the Drawings.

## **DIVISION 03: CONCRETE**

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### **Section 00320 - Geotechnical Data**

This Document with its referenced attachments is part of the Procurement and Contracting Requirements for Project. They provide Owner's information for Bidders' convenience and are intended to supplement rather than serve in lieu of Bidders' own investigations. They are made available for Bidders' convenience and information, but are not a warranty of existing conditions, interpretations, or recommendations. This Document and all attachments are not part of the Contract Documents.

- A. Soil-boring data for Project, based upon borings obtained by United Consulting, dated August 29, 2016, is available for viewing as appended to this Document.
- B. A geotechnical investigation report for Project, prepared by United Consulting, dated August 29, is available for viewing as appended to this Document.
  1. Contractor is expected to examine the site and all geotechnical data and investigation reports and then decide for himself the character of the materials to be encountered. Contractor shall employ a consultant qualified to interpret the geotechnical data and investigation reports if the Contractor does not feel qualified to interpret any part of the geotechnical data and investigation reports.
  2. The Owner, Tenant, Architect, and Architect's Consultants disclaim any responsibility for the accuracy, true location and extent of the geotechnical data and investigation reports that have been prepared by others. They further disclaim responsibility for interpretations and recommendations related to that data by Bidders, such as, but not limited to, predicting soils bearing values or the depth to soils bearing materials, rock profiles or hardness, soils stability and the presence, level and extent of underground water.

### **Section 03300 Cast-In-Place Concrete**

Contractor is responsible for providing the mix design. Use Grade 60 reinforcing steel (epoxy coated when required). Contractor is responsible for all concrete testing (strength, slump, and air content). Actual type and size of footing and foundation system used will be based on soil borings. Slab on grade floors.

## **DIVISION 04: MASONRY**

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### **Section 04200 Concrete Unit Masonry**

Concrete masonry units (CMU) shall conform to ASTM-C-90, normal weight, Grade N, Type II, in color; "natural gray", hollow, load bearing units of 8-in x 16-in nominal face size and bed dimension as shown on the Drawings. All exposed vertical corners shall be bull nosed,

## **DIVISION 05: METALS**

### **Section 05120 Structural Steel**

Structural steel frame (beams and columns) and miscellaneous members to conform to ASTM A992, 50 ksi. Bolts to conform to either ASTM A307 or A325. Painting to consist of 1-coat of rust-inhibitive primer.

## **DIVISION 06: CARPENTRY**

### **Section 06200 Finish Carpentry**

- A. Standards of the following as referenced:
  - 1. Architectural Woodwork Institute (AWI).
  - 2. American National Standards Institute (ANSI).
  - 3. National Electrical Manufacturer's Association (NEMA).
  - 4. LEED v4: Certified Wood, Forest Stewardship Council (FSC).

### **Section 06600 FRP Fabrications**

Fiberglass-reinforced material for railings, gratings and stairs shall be premium grade, fire retardant, isophthalic polyester resin which meets or exceeds the requirements for Class 1 flame rating of 25 or less when tested in accordance with ASTM E84 and self-extinguishing requirements of ASTM of ASTM D635. Color of products shall be gray, unless otherwise specified.

All structural members to meet all OSHA and ASTM requirements for FRP.

Grating: FRP floor grating shall be fabricated of FRP material specified above. The grating shall be designed for a uniformly distributed live load of 100 pounds per square foot, or as shown on the Drawings with a safety factor of 4 and a maximum deflection of 1/4 inch. The walking surface of grating shall have an anti-skid surface. Band all ends of each section. Hold-downs and midspan panel connectors shall be fiberglass wedges with Type 316 stainless steel bolt assemblies.

Railings: FRP railings and hand rails shall be fabricated of FRP materials specified above. The design shall conform to requirements of OSHA, the Drawings and jurisdictional agencies. Color shall be yellow.

Ladders: The ladder shall be capable of supporting a concentrated vertical load of 1200 pounds applied at the mid span of the rung.

## **DIVISION 07: THERMAL AND MOISTURE PROTECTION**

### **Section 07210 Building Insulation**

2-1/2-inch thick (R-11+) extruded polystyrene board perimeter insulation at foundations. R-19 batt insulation for exterior walls. R-30 batt insulation in roofs.

### **Section 07190 Vapor Barrier**

Provide a moisture barrier consisting of pre-molded, membrane meeting the standard of ASTM E-96, Method B, 1980 and ASTM D781, 1968, ASTM D1228, 1964.

### **Section 07500 Membrane Roofing**

#### **A. Membrane Roofing:**

1. Layer 1: Johns Manville Dynabase Fiber Glass-Reinforced SBS Base, cold applied, or approved equal.
2. Layer 2: Johns Manville SeamFree Liquid Membrane System, Elastomeric Liquid-Applied Roofing Membrane, or approved equal.

#### **B. Roof Coating:**

1. Johns Manville Topgard 5000, White, One-part acrylic elastomeric roof coating, or approved equal. Install over Liquid Applied Roofing Membrane and Flashing.

#### **C. Flashing:**

1. Johns Manville Permaflash System, Elastomeric Liquid Applied Flashing Membrane, or approved equal.

### **Section 07700 Roof Accessories**

#### **Combined Roof Drain and Secondary Overflow System**

MIFAB Series R1154-M-13-SPEC-U combined roof drain and secondary overflow system, consisting of a one piece lacquered cast iron roof drain body with integral sump receiver, no hub outlet, cast iron waterproofing membrane clamp rings with integral gravel stops, one 2-1/2" (64) high integral cast iron overflow standpipe and two self-locking metal dome strainers with a free area of 43 square inches each. Or approved equal.

#### **Roof Drain for Insulated Roof Deck**

MIFAB Series R1104-EU-13 lacquered cast iron roof drain with anchor flange, cast iron waterproofing membrane clamp ring with integral gravel stop, adjustable cast iron extension flange, underdeck clamp, no hub outlet, and standard self-locking galvanized dome strainer with a free area of 43 square inches. Or approved equal.

#### **Secondary Overflow Roof Drain for Insulated Roof Deck**

MIFAB Series R1104-EU-13-W lacquered cast iron roof drain with anchor flange, cast iron waterproofing membrane clamp ring with integral gravel stop, adjustable cast iron extension flange, underdeck clamp, no hub outlet, standard self-locking galvanized dome strainer with a free area of 43 square inches, and an adjustable water dam to be set at 2.5" above the primary roof drain level. Or approved equal.



### **Section 07920 Joint Sealants**

Use silicone or polyurethane sealants in color to match adjacent surfaces.

## **DIVISION 8: OPENINGS**

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### **Section 08110 Metal Doors and Frames**

A. Type and design:

Provide full-flush design, in dimensions and types shown on the Door Schedule in the Drawings, 16 gauge properly reinforced for the finish hardware.

B. Finish: Hot-dipped galvanized steel with zinc coating conforming to ASTM A525. Prime paint at the factory.

C. Manufacturers: Products of the following manufacturers, or equal, meeting these specifications, may be used on this project:

1. Amweld
2. The Steelcraft Mfg. Co.
3. The Ceco Corporation
4. Republic Steel Corporation
5. Or approved equal.

D. Door Classification:

1. Label fire-rated composite metal doors: (Class B, 1.5 hour doors and Class C, 3 hour doors) with mineral fiberboard core, 18 ga., 1-3/4" thickness.

### **Section 08210 Wood Doors**

#### **SOLID CORE WOOD-FACED DOORS**

A. Description:

1. Exterior door.
2. Faces: Closed-grain hardwood, manufacturer's standard.
3. Finish: Opaque finish specified elsewhere.
4. Grade: AWI Premium.
5. Construction: 5 ply.
6. Core: Particleboard, bonded to stiles and rails, sanded.

B. Manufacturers:

1. Products of the following manufacturers, provided they comply with requirements of the contract documents, will be among those considered acceptable:
  - a. Doors, Inc.
  - b. Eggers Industries.
  - c. Mohawk Flush Doors, Inc.
  - d. Weyerhaeuser Company.

### **Section 08330 Coiling Doors**

Overhead Coiling Doors shall be face or wall mounted, of the size indicated, and push button electrically operated with chain and chain wheel manual override:

1. Curtain shall be flat, insulated, type FIT-265, 24 ga. galvanized steel front and back designed to resist a wind pressure of 20 pounds per square foot; deflection shall not exceed 1/240 of the opening width. Curtain shall roll up on a bracket-supported drum, and shall be balanced with a helical spring.
2. Insulated vision lites will be provided within five rows of slats as indicated on the door schedule.
3. Endlocks shall be of the wind lock design.
4. Bottom rail angles to be aluminum of equal weight, and shall be securely fastened to each side of the bottom of the curtain.
5. All exterior facing doors shall be high wind load doors to meet maximum wind load per the building code.
6. All coiling doors shall be thermally insulated for a value of R-10.9 minimum.
7. Finish: Aluminum curtain slats, aluminum hood and all other miscellaneous aluminum parts shall be 5052-H32 alloy conforming to ASTM 8 (209) 1983, and shall have a factory finish Kynar 500 powder coat paint finish.
8. Furnish curtain with automatic safety switch of type indicated, and complying with UL 325. Extend switch full width of curtain bottom, and locate within neoprene or rubber astragal mounted to bottom curtain rail.

### **Section 08400 Aluminum Doors and Frames**

Provide aluminum-framed systems, including anchorage, capable of withstanding, without failure, the effects of the following:

Structural loads.

Thermal movements.

Movements of supporting structure, but not limited to, story drift and deflection from uniformly distributed and concentrated live loads.

Dimensional tolerances of building frame and other adjacent construction.

A. Basis of Design: Entrance Doors: Kawneer Company, Inc.; ISO-Glaze 450T

Member size: 2-1/4" by 4-1/2"

Interior Storefronts: Kawneer Company, Inc.: Trifab 400

Member size: 1-3/4" by 4"

Finish: Anodized finish for exterior and Interior

### **Section 08710 Hardware**

Latch sets, hinges, stops, plates, pulls etc. in oil rubbed and oxidized satin chrome. Use levers on all latch and lock sets, except at service or utility areas use spherical knobs. Master key all locks to the City's Master Key System.

### **088000 GLAZING**

Primary Glass Standard: Provide primary glass which complies with ASTM C 1036 requirements, including those indicated by reference to type, class, quality, and, if applicable, form, finish, mesh and pattern.

- B. Sizes: Fabricate glass to sizes required for glazing openings indicated, with edge clearances and tolerances complying with recommendations of glass manufacturer. Provide thicknesses indicated or, if not otherwise indicated, as recommended by glass manufacturer for application indicated.
- A. Clear Float Glass: 1/4" thickness, ASTM C1036-85, Type I, Class 1, Quality q3.
- B. Tempered clear float glass:
  - 1. Thickness: 1/4" thickness, ASTM C1048-85, Grade B, Style I, Type I, Quality q3; fully temper in accord with ANSI Z97.1-1984.
  - 2. Provide glass for butt joint glazing free of tong marks and surface defects on exposed edges.
- C. Tinted float glass:
  - 1. Thickness: 1/4" thickness, ASTM C1036-85, Type I, Class 2, Quality q3.
- D. Laminated tinted float glass:
  - 1. Thickness: 1/4" thickness, ASTM C1048-85, Grade B, Style I, Type I, Quality q3.
- E. Wire glass 1/4" thickness, diamond mesh, ASTM C1036-85, Type II, Class 1, Form 1, Quality q8, Mesh m1; meet ANSI Z97.1-1984; UL listed as fire-retardant.
- F. Fired rated glass, B-Label, 90 minute, 5/16" thickness, laminated, safety glass ceramic, color-clear, UL listed and labeled for fire rating, Impact safety rating - ANSI Z97.1.

## **DIVISION 9: FINISHES**

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### **Section 09100 Metal Support Assemblies**

Metal stud wall and ceiling framing.

### **Section 09200 Plaster and Gypsum Board**

Use 5/8" regular gypsum board on designated interior walls and on all ceilings. 5/8" water resistant gypsum board in wet areas. Use cementitious glass mesh mortar units on walls designated to have ceramic tile applied. Use Type X gypsum board on partitions requiring fire rating.

### **Section 09300 Tile**

Provide the following types of ceramic tile and unglazed porcelain pavers:

Unglazed ceramic mosaic tile: Meeting TCA 137.1, section 5.1, standard grade, porcelain type, impervious, maximum absorption 0.5% .

- a. Size: 2" x 2" x 1/4" thick

Glazed ceramic wall tile: Meeting TCA 137.1, section 6.1, standard grade, non-vitreous, bright glazed.

- b. Size: 4" x 16" x 5/16" thick  
Glazed ceramic wall cove base tile: Meeting TCA 137.1, section 5.3, standard grade, non-vitreous.
- c. Size: 6" x 12" x 5/16" thick  
Provide the required setting materials, setting accessories, grouting material, and miscellaneous materials to comply with the specifications, the manufacturer's recommendations for installation.

### **Section 09500 Ceilings**

Acoustical Panel Standard: ASME E1264, Type III, Form 2.

Surface Burning Characteristics: Class A (flame spread 25 or less); UL Labeled.

Provide the following types of acoustical ceiling panels:

ACT-01: suspended mineral ceiling panel with square edge, narrow tee grid, NRC 0.70

- a. Size: 24-inches x 24-inches x 3/4-inch thick
- b. LEED: low emissions, anti-microbial and high recycled content
- c. BOD: USG Mars acoustical panels

ACT-02: suspended water felted mineral ceiling panel with square edge, regular tee grid, NRC 0.55/ CAC 35

- a. Size: 24-inches x 24-inches x 5/8-inch thick
- b. LEED: low emissions, anti-microbial and high recycled content
- c. BOD: USG basic radar acoustical panels

ACT-03: suspended mineral wet formed mineral ceiling panel with square edge, regular tee grid, NRC 0.80/ CAC 35, light reflectance 0.90

- a. Size: 24-inches x 60-inches x 7/8-inch thick
- b. LEED: low emissions, anti-microbial and high recycled content
- c. BOD: USG Mars high-NRC acoustical planks

LPS-01: suspended perforated linear ceiling panel, engineered suspension grid system, 7-1/4" width in a wood grain film, backed with fiberglass

- a. BOD: USG paraline linear metal systems

LPS-02: suspended perforated linear ceiling panel, engineered suspension grid system, 7-1/4" width in flat white

- a. LEED: high recycled content, low VOC
- b. BOD: USG paraline linear metal systems

LPS-03: suspended metallic ceiling panel, engineered suspension system, fire rated

- a. Size: 24-inches x 72-inches
- b. LEED: high recycled content, low VOC
- c. BOD: Gordon exteriors soffit shield exterior soffit & fascia cladding, vented at exterior

WC1: suspended modular wood cube ceiling panel ceiling, tee bar grid, lighting pendants & mech HVAC is above. Panels shall allow air distribution without interference.

- a. Size: 48-inches x 48-inches x 4-inch deep  
Metal Suspension System Standard: Provide manufacturer's standard metal suspension systems of types, structural classifications, and finishes indicated that comply with applicable ASTM C 635 requirements.

Coordinate acoustical insulation sound absorptive pad material type, thickness, facing and width of units required for use herein with section 07 21 13, thermal insulation.

### **Section 095220 Acoustical Wall Panel Systems**

Acoustical wall panel standard: ASTM E 84, flame spread 25 or less, smoked developed 450 or less, NRC rating 0.80 for 1" thick, 1.00 for 2" per ASTM C-423-84.

Provide the following acoustical wall panel system:

The design is based on Sound Delete products as provided by Sound Management Group, LLC. Panel construction shall be back mounted, edge reinforced acoustical panels with facing stretched over face of panel and adhered to edge and reverse side of a glass fiber core without sagging or distortion. Panels will be in sizes as indicated on the drawings and will be seamless as facing widths permit. Edges will be square, radius or beveled as indicated on the drawings and shall be reinforced by means of resin impregnation resulting in a crisp damage resistant edge. Core material shall be 6 lbs. per cubic foot. The panels thickness is nominal 1" or 2" as indicated on the drawings. Fabric will be stretched over the face of the panel in such a manner as to provide inherent impact resistance.

### **Section 096113 Floor Sealers**

Provide the required floor sealer for sealed concrete and polished concrete.

### **Section 096400 Wood Flooring**

Provide engineered wood flooring.

### **Section 096500 Resilient Flooring**

Provide the following resilient vinyl composition tile flooring:

VCT-1: 12"x12" tile

VCT-2: 12"x24" tile (two colors, field color VCT-2A and accent color VCT-2B)

VCT-3: 18"x18" tile (two colors, field color VCT-3A and accent color VCT-3B)

Vinyl composition tile to meet Fed Spec SS-T-312B, Type IV, composition 1, asbestos free.

Provide through-chip material.

Provide rubber flooring and rubber stair treads.

Provide the required substrate, adhesives, primers, and sealants to comply with the specifications, the manufacturer's recommendations for installation.

### **Section 096513 Resilient Base and Accessories**

Provide rubber base: The material shall be 100% synthetic, unrecycled rubber, organic stabilizers, migrating wax, and dirt expelling agents.

a. Height: 4"

b. Thickness: 1/8"

Provide the required substrate, adhesives, primers, and sealants to comply with the specifications, the manufacturer's recommendations for installation.

Provide the appropriate thresholds, reducers, and transition metal stripes where needed per the drawings.

### **Section 096813 Carpet Tile**

Provide 18" square modular carpet tile.

### **Section 096816 Sheet Carpeting**

Provide broad loom carpet.

### **Section 096623 Epoxy Terrazzo Flooring**

Provide Morrocite epoxy terrazzo flooring with divider strips and base.

### **Section 096723 Resinous Flooring**

Provide pigmented chemical-resistant epoxy flooring and base.

### **Section 097200 Wall Covering**

Provide scrim backed, white pigmented vinyl capped with semi-gloss, dry erase wallcovering film. Provide required substrate, adhesives, and accessories to comply with the specifications, the manufacturer's recommendations for installation.

### **Section 099100 Painting**

Provide finish paint on all exposed surfaces except anodized or lacquered aluminum, fiberglass reinforced plastic, stainless steel and copper surfaces. Items to be left unfinished or to receive other types of finishes are specifically shown on the Drawings or specified. All paints, finishes, stains, primers, shellacs, sealants and coatings shall comply with the requirement of LEED 2009 IEQ Credit 4.2: Low-Emitting Materials – paintings and coatings comply with the specifications, the manufacturer's recommendations for installation. The interior surfaces require the following paint material:

- a. Ceilings:
  - gypsum board – Epoxy
  - Interior Masonry and concrete - Epoxy
- b. Walls:
  - Gypsum Board – Latex low luster enamel
  - Gypsum Board – Epoxy
  - Concrete – Epoxy
  - CMU Block – Epoxy
- c. Interior Structural Steel:
  - Galvanized Metal – None or Polyamide Epoxy as scheduled
  - Ferrous Metal – Polyamide Epoxy
- d. all other listed metal surfaces, except dumpsters:
  - Galvanized Metal – High Build Epoxy
  - Ferrous Metal – High Build Epoxy

## **DIVISION 10: SPECIALITIES**

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### **Section 10200 Louvers**

A. Acceptable Manufacturers:

1. Ruskin ELF375DXH Drainable Stationary Louvers with Ruskin TED50 Thermally Efficient, 6063T6 Aluminum Insulated Blade with or without Thermal Break Frame Damper; electrically actuated - Basis of Design as indicated on the louver schedule.
2. American Warming and Ventilating;
3. Greenheck;

4. Airolite
  5. Or equal.
- B. Characteristics:
1. Louver components (heads, jambs, sills, blades, etc.) shall be factory assembled by the manufacturer into a complete unit. Louver sizes too large for shipping shall be built up by the Contractor from factory assembled louver sections to provide the overall sizes required.
  2. Material: 6063-TS extruded aluminum alloy, meeting ASTM B221-79a, blades a minimum of 0.10-inch thick and frames a minimum of 0.120-inch thick. Frame depth shall be 4 inches. Provide extended sill on frame.
  3. Finish: KYNAR 500 with 20-year warranty for corrosion protection. Color to match roof or to match glass as scheduled and selected by Architect.
  4. Construction: Welded.
  5. Blade Design: Drainable blades.
  6. Fasteners: Stainless steel.
  7. Bird Screen: 5/8" x .040" (16x1) expanded, flattened aluminum bird screen in removable frame. Screen adds approximately 1/2" to louver depth.
  8. Louver frame shall be sleeveable as required to accommodate barometric relief damper installation.
- C. Furnish combination louvers and dampers with totally enclosed electric motor actuators suitable for a corrosive environment.

### **Section 10430 Exterior Signs**

- E.1: Parking Space Identity  
Polysign Series 4160.2. Size: Panel-1/4" x 12" x 12". Post-2" x 2" x 4'. Posts and panel to have painted finish. Pressure-sensitive graphics and field color to be chosen from standards. "Visitor", Low Emissions Vehicle", "Commuter", "Handicapped Parking" to be 2" high; "Symbol" to be 8" high. Format: center/center.
- E.2: Directional Sign  
Polysign Series 4120.1. size: 2" X 48" high x 24" wide. Posts and panel to have painted finish. Pressure-sensitive graphics and field color to be chosen from standards. Arrows to be 3"; lettering not to exceed 2" high. Units to have 6' posts furnished. Format: Flush left.
- E.3: Building ID  
Cast aluminum dimensional letters. Letters to have 6" cap height. Type style and Baked Enamel color to be chosen from manufacturer's standards. Letters to be stud mounted, projected from the wall surface 1/4". Format: center/center. Sign location to be determined by City and Architect/Engineer.
- E.4: Monument Sign

At front entry of site, made of granite stone, lighted, with cast aluminum dimensional letters. Letters to have 6" cap height and color to be chosen from manufacturer's standards by Architect. Letters to be stud mounted, projected from the wall surface 1/4". Format: center/center. Location to be determined by City and Architect/Engineer.

### **Section 10440 Identifying Devices**

Refer to signage plans.

### **Section 10500 Lockers**

Lockers shall be purchased out of owner allowance and installed by contractor.

### **Section 10800 Toilet and Bath Accessories**

A. Provide all accessories as product of one manufacturer except where certain special items are indicated. Key keyed accessories alike with exception of coin receiving boxes on vending equipment. Key vending equipment in accordance with Owner's requirements.

#### **B. Acceptable Manufacturers:**

1. Except as otherwise noted, products specified as standard of quality are manufactured by Bobrick Washroom Equipment, Inc.
2. Products of following manufacturers, similar in terms of design, size, function, materials, and quality are acceptable for use, subject to Engineer's prior approval of proposed product list:
  - a. Bobrick Washroom Equipment, Inc.
  - b. Parker.
  - c. Bradley.
  - d. Georgia Pacific.
  - e. Or equal.

#### **Accessories ( as indicated on the plans):**

1. Towel dispenser and waste.
  - a. Semi Recessed for drywall. . Georgia Pacific 59466 and 59451.
  - b. Surface. Bobrick #B-3949.
2. Feminine napkin/tampon vendor. Bobrick #B-352 by 2S.
3. Feminine napkin disposal. Bobrick #B-270.
4. Toilet tissue dispenser. Bobrick #B-2740 with shelf, Bobrick #B-298x18
5. Mirror units.
  - a. Framed without shelf. Bobrick #B-165 1830.
  - b. Full length framed. Bobrick #B-165 2460.
6. Liquid soap dispenser.
  - a. Surface mounted. Bobrick #B-2112.
7. Grab bars.



- a. Horizontal or vertical. Bobrick #B-5806x36".
- b. Horizontal w/brace. Bobrick #B-5806 by 48".
8. Mop and broom holder. Bobrick #B-223 by 36".
9. Clothes Hook, Bobrick #B-233, mounted at 48" and 54" as indicated on the plans.

### **Section 10520 Fire Extinguishers**

Manual extinguishing equipment located in accordance with NFPA 10.

## **DIVISION 11: EQUIPMENT**

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### **Section 11150 Parking Control Equipment**

Comply with governing codes and regulations. Provide products of acceptable manufacturers which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.

- A. Automatic barrier gates: Gate-arm units with wood gate-arm; Automatic Parking Devices, Inc or approved equal.
  - B. Vehicle detectors: Automatic vehicle sensing device in pavement.
  - D. Card control units: Card access units, cabinet, and automatic gate arm control.

### **Section 11160 Loading Dock Equipment**

Comply with governing codes and regulations. Provide products of acceptable manufacturers which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.

- A. Dock bumpers: Molded rubber bumpers and bumper risers; Kelley Company, Inc or approved equal.
- B. Dock levelers: Mechanical or hydraulic operation, permanent pit installation, with automatic vertical and lateral compensation, hinged lip, safety devices, with capacity rated for intended use; Rite-Hite Corp or approved equal.
- C. Dock seals: Fabric-covered compressible foam pads, adjustable head pad, nylon cover pad, and steel support frame; McGuire Company or approved equal.
- D. Dock shelters: Flexible side and head polyurethane-coated nylon curtain system with translucent fabric and metal framing; McGuire Company or approved equal.

### **Section 11201 Rainwater Harvesting**

Provide an assembly that collects, stores, and distributes rain water for use in situ; including water treatment as appropriate to intended use.

## **DIVISION 12: FURNISHINGS**

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### **Section 12492 Mini Horizontal Aluminum Blinds.**

Furnish and install 1” Mini Horizontal Aluminum Blinds (Premium Quality)

#### ACCEPTABLE MANUFACTURERS

- A. Hunter Douglas Contract, 13915 Danielson St., Ste. 100, Poway, CA 92064 Phone: 800-727-8953 Website: www.hunterdouglascontract.com
  
- B. Draper Inc., 411 South Pearl St., Spiceland, Indiana 47385  
Phone: 800-238-7999 Website: www.draperinc.com.
  
- C. Or Architect approved equivalent.

Product: Basis of Design: Hunter Douglas “CL62 1” Mini Aluminum Blind”

## **DIVISION 13: SPECIAL CONSTRUCTION**

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### **Section 13120 Pre-Engineered Structures**

Provide pre-engineered metal building work for Repair Shop, and the two guardhouses as shown on the drawings.

Provide a pre-engineered single span rigid frame metal building including primary and secondary structural framing, metal roofing and exterior wall covering, doors, windows, insulation, and miscellaneous metal building components and accessories necessary for a complete metal building.

### **Section 13550 Closed Circuit Television System**

Provide a closed circuit television (CCTV) system shall monitor the truck loading area, coarse bar screens, the drum screens, the equipment room corridors, and areas outside the environmental center.

The CCTV camera shall have high sensitivity over a broad range of lighting conditions and have selective frequency response boosters for extra-crisp resolution pictures.

- B. Lens selections shown on the Drawings are proposed to provide optimal coverage of camera zones targeted. Final selection of lenses shall be based on coverage required as determined by the Engineer.
- C. CCTV cameras shall meet the current city’ standards.

## **DIVISION 14: LOADING**

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### **Section 14210 Electric Elevators**

- A. Components and features; Dover, Otis, Westinghouse or approved equal:

1. Geared traction type operation (up to 400 fpm.)
1. Gearless traction type operation (400 fpm and over).
2. Door panels, stainless steel, No. 4 bright directional polish.
2. Door panels, bronze, alloy 220 commercial bronze, mirror polished.
2. Door panels, enamelled steel.
2. Door panels, Plastic laminate, 0.050" thick.
3. Hoistway entrances, stainless steel, No. 4 bright directional polish.
3. Hoistway entrances, bronze, alloy 220 commercial bronze, mirror polished.
3. Hoistway entrances, enamelled steel.
3. Hoistway entrances, plastic laminate, 0.050" thick.
4. Handrail, bronze, mirror polished finish.
4. Handrail, stainless steel, No. 4 bright directional polish.
4. Handrail, wood.

B. Control and cab features:

1. Key controlled car light switch and fan switch.
2. Alarm/emergency stop button.
3. Car position and direction indicators.
4. Audible signals.
5. Automatic leveling.
6. Key switches to lockout every floor individually.
7. Door nudging feature to discourage holding door open.
8. Ceiling hatch.
9. Liner blanket hooks and blankets.

**Section 14600 Bridge Crane and Hoist**

Contractor shall furnish all labor, materials, equipment, tools and incidentals required for a complete design and installation of all single and double girder bridge cranes, trolleys and hoists. All equipment shall be installed, adjusted, tested and placed in operation in accordance with the manufacturer's recommendations and as shown on the Drawings.

A. Supports and Auxiliaries: Crane assembly shall include all overhead track, trolley, hoist, end stops, and other track accessories as required for a complete system.

B. Runway beams, brackets, and associated framework will be furnished and installed under Section 05120, Structural Metals and as shown on the Drawings. Patented beams and associated framework, required for dewatering building hoist and any other equipment shall be included and installed under this Specification.

C. Design Parameters:

1. Design of travelling crane assembly shall be based upon the use of a safety factor of 5, with capacity load, on all mechanical parts of the system. The safety factors shall be based upon the ultimate strength of the materials used.

2. Calculations of all structural members shall include an allowance for vertical impact and an allowance for lateral impact in accordance with the Crane Manufacturers Association of America.
  3. Bridge girder deflection shall not exceed 1/600 of the span.
- D. All crane, hoist, trolley and monorail equipment shall be designed to occupy the space provided, as shown on the Drawings. All dimension shall be verified at the site.
- E. The indoor equipment shall be suitable for exposure to 95% relative humidity conditions and for operation in ambient air temperature ranging from 50<sup>0</sup> F to 110<sup>0</sup> F. The outdoor equipment shall be suitable for exposure to weather conditions.

## MANUFACTURERS

- A. Gillespie Corp., Model ML-CT.
- B. International Elevator, Inc.
- D. Or equal.

The maintenance lift assembly shall include track with wall mounting brackets, enclosed manlift car with gate, electric drive with brake, lifting cables controls, and other accessories as required for a complete system.

Design Parameters: Design of maintenance lift assembly shall be in full compliance with ANSI A17.1.

### **Section 14615 Maintenance Lift**

Contractor shall provide all labor, materials, equipment, tools and incidentals required for a complete design and installation of a maintenance lift as shown on the Drawings. All equipment shall be installed, adjusted, tested and placed in operation in accordance with these Specifications, the manufacturer's recommendations and as shown on the Drawings.

## **DIVISION 15: MECHANICAL SPECIFICATIONS**

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### **Section 15050 Basic Mechanical Material and Methods**

#### Codes and Standards

1. All mechanical work shall be performed in accordance with all applicable codes, ordinances, rules and regulations of local, state, federal or other authorities having jurisdiction. As a minimum, this shall include: (Verify with City of Atlanta Code Department for latest updates):
  - a. International Building Code 2018 with current Georgia Amendments.
  - b. International Mechanical Code 2018 with current Georgia Amendments

- c. International Plumbing Code 2018 with current Georgia Amendments
- d. International Fire Code 2018 with current Georgia Amendments
- e. International Fuel Gas Code 2018 with current Georgia Amendments
- f. National Electrical Codes, 2018 Edition, with no Georgia Amendments
- g. International Energy Conservation Code, 2018 Edition, with Georgia Supplements and Amendments
  
- h. Georgia State Energy Code
- i. National Fire Protection Association Codes, 2018 NFPA-101 Life Safety, ADA and UL.
- j. Unless otherwise specified on the Drawings, the latest edition of all codes, ordinances, etc. shall be followed. Where code or other requirements exceed the provisions shown on the Contract Documents, the Contractor shall notify the Engineer. Where provisions of the Contract Documents exceed code or other requirements, the Work shall be performed in accordance with the Contract Documents.
- k. Current Codes as Adopted by DCA- Permissive Codes
- l. Current Local Amendments as Adopted;  
 “The requirements in the proposed local amendment cannot be less stringent than the requirements in the state minimum standard code. If the proposed local amendment differs from state minimum standard code than the more stringent requirement shall apply”.

### **Section 15056 Pipe Supports**

Contractor shall design, and provide a complete system of pipe supports with inserts, bolts, nuts, restraining and hanger rods, washers, miscellaneous steel, sliding Teflon plates, and accessories as indicated and specified. The term pipe support includes hangers, guides, restraints, anchors and saddles.

Provide all support systems and the design of all support systems for all piping as specified herein. The Contractor shall provide pipe support locations, configurations and details through accepted shop drawing submittals stamped by a Registered Professional Engineer as specified herein.

The Contractor shall be responsible for the proper design, fabrication, location, shop drawings and installation of all pipe supports in accordance with the specified requirements.

### **Section 15300 Standpipe and Sprinkler System**

Design, furnish, install, and test automatic wet pipe fire sprinkler and standpipe systems for the entire building, including attics, crawl spaces, and concealed spaces in accordance with NFPA 13.

### **Section 15400 Plumbing**

Contractor shall furnish all labor, materials, equipment, tools and incidentals required for a complete and operable installation of all plumbing and associated appurtenances. All equipment shall be installed, adjusted, tested and placed in operation in accordance the manufacturer's recommendations.

Reference Standards. Comply with all Federal and State laws or ordinances, as well as the latest edition of all applicable codes, standards, regulations and/or regulatory agency requirements including the partial listing below:

1. ANSI, American National Standards Institute.
2. ASTM, American Society for Testing Materials.
3. AWS, American Welding Society.
4. AWWA, American Waterworks Association.
5. UL, Underwriters Laboratory.
6. NEC, National Electric Code.
7. ASHRAE, American Society of Heating , Refrigeration and Air Conditioning Engineers.
8. OSHA, Occupational, Health and Safety Act.
9. NFPA, National Fire Protection Association.

#### **SANITARY WASTE AND VENT SYSTEMS**

- A. All underground sanitary waste and vent piping shall be:
  1. Service weight hub and spigot cast iron soil pipe with lead and oakum or neoprene double-seal compression gaskets.
  2. Provide deduct alternate for PVC, DWV Schedule 40 with socket-type, solvent welded joints in sizes up to 12" for all non-exposed underground sanitary waste;
  3. All piping 15" and larger shall be cast iron soil pipe with lead and oakum or neoprene double-seal compression gaskets.
- B. Cleanouts shall be provided at the locations indicated and, as a minimum, where required by Code. Floor cleanouts shall be a minimum of 4" and shall be complete with a flush plug and removable, scoriated bronze floor plate. Provide carpet buttons in carpeted areas.
- C. All above ground sanitary, waste and vent piping shall be hubless cast iron soil pipe.
- D. Joints on hub-less cast iron soil pipe shall be made with neoprene couplings and stainless steel clamps.
- E. All aboveground sanitary, waste and vent piping shall be PVC DWV Schedule 40 with socket-type, solvent welded joints; except that sanitary, waste and vent piping located within return air plenums shall be hub-less cast iron soil pipe.

- F. The acid resistant waste and vent piping shall be threaded Schedule 80 IPS polypropylene. Piping shall conform with material Standard ASTM #D-2146 and ASTM Dimensional Standard #F-441 Teflon tape shall be used for all threaded connections..
- G. Floor drains in toilets and finished areas shall be J. R. Smith 2000 Series with 6" Type B square adjustable strainers finished in satin nickel bronze; or equal products by Josam or Zurn. Provide vandal-proof secured tops. All floor drains shall be provided with a trap primer.
- H. Floor drains in mechanical rooms and unfinished concrete floors shall be J. R. Smith 2131 Series with round 11 3/4" cast iron grate, sediment bucket and deep-seal P-trap; or equal products by Josam or Zurn. Provide vandal-proof secured tops. All floor drains shall be provided with a trap primer.

**Section 15450 Plumbing Fixtures**

- A. City standard; acceptable equivalent products considered.
- B. Provide fixture with valves, vacuum breakers, air gaps, faucets, flush valves, drains, traps, wall plates and escutcheons; stamped index on faucet handles.
- C. Exposed metal parts: heavy chrome-plated brass, polished surface.
- D. Pipe connections: minimum size listed in fixture-connection schedule.
- E. Schedule of Plumbing Fixtures:

Low-flow type plumbing fixtures and related trim, fittings, and valves meeting ADA requirements. Use plumbing fixtures and fittings in accordance with NPS guidelines as follows:

Water Closets -	1.6 gallons per flush (max)
Urinals -	Waterless
Showerheads -	2.5 gpm (max) at 80 psi
Kitchen Faucet -	2.2 gpm (max) at 60 psi
Lavatory Faucet (Public) -	0.5 gpm (max) at 60 psi
Lavatory Faucet (Private) -	2.2 gpm (max) at 60 psi

Wall-hung water closets in the public restrooms. Electronic sensor operated flush valves and faucets in toilets. Freeze-proof drinking fountains located on the exterior of the building with operating mechanisms accessible from the interior of the building. Electric tank-type water heaters located near points-of-use.

**Section 15620 Gas-Fired Boilers**

Modular, high efficiency, closed-combustion condensing type gas-fired boilers, flue gas vents, and vent terminations. AL29-4C stainless steel flue gas vents with sidewall vent terminations.

The basis of design is Laars Mighty Therm HH. Any proposed substitutions shall be proven equal in all respects to the equipment specified as the basis of design.

Acceptable substitute manufacturers are Raypak and A.O. Smith, provided that their pumps, performance, appearance and physical characteristics are equal in all respects to the basis of design for this specific project.

- I. The boiler shall be capable of operating with return hot water temperatures down to 105 degrees F. without sustaining condensation.
- J. The boiler shall be AGA design certified for a minimum efficiency of 82%.
- K. The boilers shall be equipped with ASME pressure relief valve(s).

Controls:

Meet requirements of ANSI Standard Z21.13 and include ignition safeguard, manual reset high limit, operating temperature control, gas pressure regulator, redundant electric gas valve, water-flow sensing, and manual gas shutoff valve. Standard control systems operate on 24 VAC power from class 2 transformer. Ignition safeguard reacting to flame failure in less than 0.8 second is standard on units above 400,000 BTU/hr. (117.2 kW).

#### **Section 15776 Self-Contained Air Conditioning Unit**

Provide packaged air conditioning equipment with indoor condensing units with centrifugal fans, suitable for ducted connections to exterior wall louvers. Provide coatings and fasteners suitable for providing longevity in a coastal environment. Provide ventilation air during all occupied hours.

The basis of design is Trane. Any proposed substitutions shall be proven equal in all respects to the equipment specified as the basis of design.

#### **Section 15790 Energy Recovery AHU**

Contractor shall provide all labor, equipment, appliances and materials, and performing all operations in connection with the construction and installation of the self-contained Energy Recovery AHU units as specified herein and as shown. This work includes, but is not limited to, the following:

- 1. Self-contained Energy Recovery AHU'S (designated HRV-1&2) including accessories.
- 2. Control system (interlocked to the units and ancillary equipment)

Units shall be self-contained, packaged type. The units shall be completely factory assembled as unitary packages complete with internal operating controls and shall be completely piped, internally wired and fully charged with refrigerant. Only one electrical power connection shall be required.



- A. Basis of design is Munters Corporation, or equal. Equal indicates that all capacities, dimensions, weights, materials, and performance criteria are equal or better than basis of design. All costs incurred by design deviation shall be the responsibility of the mechanical Units shall be self-contained, packaged type. The units shall be completely factory assembled as unitary packages complete with internal operating controls and shall be completely piped, internally wired and fully charged with refrigerant. Only one electrical power connection shall be required.
- B. Furnish energy recovery air handling systems that shall be provided with components and sections as specified herein. Systems shall be designed for outdoor installation and shall be in strict accordance with plans, performance schedule and specifications. System connected utility requirements cannot exceed scheduled values. Variances in connected utility requirements must be submitted in writing to owner for approval. Systems to be provided by Munters Corporation-Des Champs Products.

**Section 15890 Ductwork**

Ductwork and appurtenances in connection with HVAC. Spiral-wound round ductwork in exposed ceiling areas; rectangular ductwork in concealed locations such as the mechanical equipment room, chases, or above finished ceilings.

**Section 15910 Ductwork Accessories**

Registers, grilles, and diffusers in heating, ventilating, and air conditioning systems. All ductwork accessories shall be furnished by a single manufacturer who shall assume sole responsibility for providing a complete, operating system designed for long life with a minimum of required maintenance meeting the requirements specified herein and as shown on the Drawings.

**Section 15990 Testing, Adjusting and Balancing of HVAC Systems**

Provide testing apparatus and instruments, and perform all procedures to test, adjust, and balance the various air, fluid, mechanical, and electrical systems associated with the heating, ventilating, and air conditioning systems to optimum performance.

**DIVISION 16: ELECTRICAL**

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**Section 16000 Electrical Power and System**

- A. Conduit And Fittings: Rigid steel or intermediate metal conduits..
- B. Wiring: All copper

### **Section 16010 Basic Electrical Requirements**

Locate electrical equipment serving site utilities in the electrical equipment room. Locate transformer on concrete pad behind a safety barrier.

### **Section 16150 Motorized Security Gate**

Furnish and install a pre-wired, industrial parking fence gate operator for gates including all attachments, mounting, brackets, sensors and access control devices as specified within and shown on drawings.

- A. Flexible, pave-over loop vehicle detectors designed and configured to handle a drive thru system. Provide with sensitivity meter to optimize the proper sensitivity setting to detect all vehicles including motorcycles, and indicate delay timing, extension timing, power and loop faults. Boost function to help prevent dropouts during the passage of high bed vehicles.
- B. Vehicle Detection: For use in temperature range of -40 to 160 degrees F (-40 to 71 degrees C): to consist of detector unit in conjunction with sensing loop to activate card reader when vehicle enters or exits.

### **Section 16425 Switchboard**

Bolt-on type panelboards with ratings exceeding the connected loads and available fault current in accordance with applicable sections of the National Electric Code. Protect branch circuits serving exterior receptacles or circuits located in toilets, damp, or wet locations with ground fault circuit interrupters.

Switchboard: Factory-assembled; dead front; metal-enclosed; front accessible; self-supporting switchboard assembly conforming to NEMA PB-2; complete from incoming line terminals to load-side terminations.

### **Section 16470 Lighting and Power Distribution Panelboards**

Three phase, four wire 208Y/120 or 480Y/277 volt, dead front, circuit breaker type panelboard with current rating of 600amperes or less.

- B. Single phase, three wire 120/240 volt, dead front, circuit breaker type panelboards with current rating of 400amperes or less.
- C. Loop Wire: 14 gage, XHWN or THWN copper; loop size of 48 x 72 inches (1200 x 1800mm).

### **Section 16500 Led Interior Lighting**

Interior solid-state luminaires that use LED technology.

### **Section 16700 Communications and Program Systems**

Refer to Department of Watershed Management Standards 2018.

The Subcontractor shall be responsible for engineering, furnishing, and installing inside plant necessary for an operational system, including intra-building wiring and cabling, conduit, risers, connectors, terminals and jacks where specified, and grounding and interface equipment.

Flexibility:

The size and arrangement of conduits, raceways, and terminal and equipment closets shall provide adequate flexibility and spare capacity to permit relocation, extension, and interconnection of telecommunication circuits.

**Accessibility:**

To facilitate access to telecommunication and alarm system components for purpose of installation and maintenance, cable terminals and auxiliary station control equipment shall be located in closets or rooms outside regular working areas. Each closet and its contents shall be readily accessible, with adequate working space and clearance from hazardous objects. Doors to equipment rooms, closets, and cabinets shall be equipped with locks for access control.

**Spare Capacity:**

The cable riser and distribution system (including cable slots, sleeves, trays and racks; concealed and exposed conduits; raceways and structural wireways; pull, junction, and outlet boxes; and terminal, splicing, and wiring cabinets) and the terminal and equipment closets shall provide adequate spare capacity for projected increases in the circuit requirements of telecommunication circuits.

## **Section 16722 Fire Alarm and Detection System**

The system described in this specifications shall use digital transmissions between the CPU/transponder and the peripheral devices. Systems using non-digital technology as the principal means of supervision shall not be considered as meeting the requirements of this specification. Analog supervision of signaling devices and non-digital devices such as tamper switches and flow switches is acceptable.

The system shall conform to all applicable sections of the NFPA including, but not limited to sections 72-A, B, C, D, E, F and the Life Safety Code section 101. The system shall also comply with the National Electric Code (NEC), Standard Building Code, local codes, UL wiring criteria, Americans with Disabilities Act (ADA) and directions of the Fire Marshal.

Upon confirmation of an alarm from any initiation device, the following functions shall be performed without delay:

1. All alarm signaling devices shall sound until silenced by an operator at the fire alarm panel or after ten (10) minutes of operation. Silencing signals shall not prevent the signals from sounding on a subsequent alarm.
2. Display an alarm status on the alphanumeric display of the fire alarm panel and sound an audible signal at the panel. Signal shall sound until alarm is acknowledged by an operator.
3. Shut down all required air handling units. All smoke dampers shall be closed and the smoke removal system shall be activated.

4. Transmit a signal to the local fire department having responsibility by the most expedient method acceptable to the local authority having jurisdiction unless directed by a specific method within these specifications or drawings.
5. Cause doors held open electrically to close without time delay.

FIRE ALARM CONTROL PANEL MODEL 4100 with a MINIMUM OF 250 ACTIVE POINTS - expandable to (1000), capable of supporting alarm initiating appliances and alarm indicating appliances as required in this specification.

#### ARESSABLE SENSOR BASES

1. Each 4098-9792 sensor base shall contain a LED that will flash each time it is scanned by the control panel (once every 4 seconds). When the control panel determines that a sensor is in the alarm or a trouble condition, the control panel shall command the LED on that sensor's base to turn on steady indicating the abnormal condition. at the sensor location shall not be acceptable.
2. Sensors bases, as shown on the plans, shall be provided with a relay driver output that is to be controlled either automatically or manually from the control panel. This programmable output shall not require [1] of the [CPU] addresses.

Audio Visual Xenon Strobe/Horn- Model 4903-9417 Wall Mount Audio Visual Unit. All strobes shall be synchronized and shall be 15-cd minimum. Horns shall be rated 91-db at 10'-0".

Visual Only Xenon Strobe- Model 4904-9331 Wall Mount. Visual Only Xenon Strobe Unit. Strokes shall be synchronized and shall be 15-cd minimum. Strobe units shall mount to the same back box as the audio/visual combination unit.

Door Holders- Model2088-9608 Wall Mount 24VDC or Equal.

#### SYSTEM SERVICE SUPPORT

- A. The system's supplier must employ factory trained technicians and maintain a service organization within 50 miles of the job site. This organization must have a minimum of 10 years' experience selling and servicing fire alarm systems.

End of Outline Specifications



# **DWM TECHNOLOGY STANDARDS**