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PROCUREMENT AND CONTRACTING REQUIREMENTS

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**SECTION 071616
CRYSTALLINE WATERPROOFING**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Crystalline waterproofing.
- B. Preparation of surfaces.

1.02 REFERENCE STANDARDS

- A. COE CRD-C 48 - Handbook for Concrete and Cement Standard Test Method for Water Permeability of Concrete; 1992.
- B. NSF 61 - Drinking Water System Components - Health Effects; 2021.
- C. UL (DIR) - Online Certifications Directory; Current Edition.
- D. NRCA (WM) - The NRCA Waterproofing Manual; 2021.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Crystalline Waterproofing:
 - 1. Euclid Chemical Company: www.euclidchemical.com/#sle.
 - 2. Penetron: www.penetron.com/#sle.
 - 3. SINAK Corporation: www.sinak.com/#sle.
 - 4. Basis of Design: Xypex Chemical Corporation; Xypex Concentrate: www.xypex.com/#sle.

2.02 ASSEMBLIES

- A. Crystalline Waterproofing for Concrete Building Surfaces:

2.03 MATERIALS

- A. Crystalline Waterproofing: Portland cement, quartz or silica sand, and other active chemicals that when applied to surface of concrete forms insoluble crystals in capillary pores preventing passage of liquids, while having no adverse effect on normal properties of concrete.
 - 1. Water Permeability of Applied Concrete: No measurable leakage or water flow at pressure ranging from 175 psi to 200 psi when tested in accordance with COE CRD-C 48, using at least 2-inch thick sample, and with applied surface preparation and installation in accordance with NRCA (WM).
 - 2. Toxicity: Non-toxic.
 - a. Potable Water and Drinking Water Safe: Provide UL (DIR) listed and labeled waterproofing; tested to be safe for use in potable and drinking water applications in accordance with NSF 61.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's written instructions, maintain environmental conditions required and recommended by manufacturer, and keep a copy of manufacturer's instructions on site.
- B. Coordinate waterproofing installation with installation of products that must penetrate waterproofed surfaces.
- C. Prevent excessive drying of surface.
 - 1. Cure waterproofing for at least three days, or length of time required by manufacturer, with water spray and adequate air circulation.
 - 2. Do not use chemical curing agents unless explicitly approved by waterproofing manufacturer.

- D. Do not backfill, fill water or liquid holding structures, or apply finish coatings until time period recommended by manufacturer has passed.

END OF SECTION 071616

**SECTION 096500
RESILIENT FLOORING**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Resilient base.
- B. Resilient tile flooring.
- ~~B.C.~~ Installation accessories.

1.02 RELATED REQUIREMENTS

- A. Section 096900 - Access Flooring: Raised access flooring.

1.03 REFERENCE STANDARDS

- A. ASTM D2047 - Standard Test Method for Static Coefficient of Friction of Polish-Coated Flooring Surfaces as Measured by the James Machine; 2017.
- B. ASTM D6329 - Standard Guide for Developing Methodology for Evaluating the Ability of Indoor Materials to Support Microbial Growth Using Static Environmental Chambers; 1998 (Reapproved 2015).
- ~~A.C.~~ ASTM E648 - Standard Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source; 2019a, with Editorial Revision (2020).
- ~~B.D.~~ ASTM F710 - Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring; 2022.
- E. ASTM F925 - Standard Test Method for Resistance to Chemicals of Resilient Flooring; 2013 (Reapproved 2020).
- F. ASTM F970 - Standard Test Method for Measuring Recovery Properties of Floor Coverings after Static Loading; 2022.
- G. ASTM F1303 - Standard Specification for Sheet Vinyl Floor Covering with Backing; 2004 (Reapproved 2021).
- H. ASTM F1700 - Standard Specification for Solid Vinyl Floor Tile; 2020.
- ~~C.I.~~ ASTM F1861 - Standard Specification for Resilient Wall Base; 2021.
- ~~D.J.~~ ASTM F1869 - Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride; 2022.
- ~~E.K.~~ ASTM F2170 - Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes; 2019a.
- ~~F.L.~~ NFPA 253 - Standard Method of Test for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source; 2023.
- M. RFCI (RWP) - Recommended Work Practices for Removal of Resilient Floor Coverings; 2011.
- N. UL 2824 - GREENGUARD Certification Program Method for Measuring Microbial Resistance from Various Sources Using Static Environmental Chambers; Current Edition, Including All Revisions.

1.04 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide data on specified products, describing physical and performance characteristics; including sizes, patterns and colors available; and installation instructions.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Upon receipt, immediately remove any shrink-wrap and check materials for damage and the correct style, color, quantity and run numbers.

- B. Store all materials off of the floor in an acclimatized, weather-tight space.
- C. Maintain temperature in storage area between 55 degrees F and 90 degrees F.
- D. Protect roll materials from damage by storing on end.
- E. Do not double stack pallets.

1.06 FIELD CONDITIONS

- A. Store materials for not less than 48 hours prior to installation in area of installation at a temperature of 70 degrees F to achieve temperature stability. Thereafter, maintain conditions above 55 degrees F.

PART 2 PRODUCTS

2.01 SHEET FLOORING

- A. Vinyl Sheet Flooring: Transparent or translucent vinyl wear layer over interlayer and backing.
 - 1. Manufacturers: Provide Basis of Design product as indicated on Drawings, or a comparable product of the same pattern and color by one of the following:
 - a. Armstrong Flooring: www.armstrongflooring.com/#sle.
 - b. Gerflor USA, Inc: www.gerflorusa.com/#sle.
 - c. Mannington Commercial: www.manningtoncommercial.com/#sle.
 - d. Tarkett USA: commercial.tarkett.com.
 - 2. Minimum Requirements: Comply with ASTM F1303, Type I, with Class A fibrous backing.
 - 3. Critical Radiant Flux (CRF): Minimum 0.45 watt per square centimeter, when tested in accordance with ASTM E648 or NFPA 253.
 - 4. Wear Layer Thickness: 0.020 inch minimum.
 - 5. Total Thickness: 0.080 inch minimum.
 - 6. Sheet Width: 108 inch minimum.
 - 7. Static Load Resistance: 75 psi minimum, when tested as specified in ASTM F970.
 - 8. Slip Resistance: Static Coefficient of Friction, minimum 0.5, ASTM D2047.
 - 9. Chemical Resist in compliance with ASTM F925.
 - 10. Pattern and Color: As indicated on drawings.

2.02 TILE FLOORING

- A. Vinyl Tile: Luxury vinyl tile with color and pattern throughout thickness.
 - 1. Manufacturers: Provide Basis of Design product as indicated on Drawings, or a comparable product of the same pattern and color by one of the following:
 - a. Armstrong Flooring: www.armstrongflooring.com/#sle.
 - b. Gerflor USA, Inc: www.gerflorusa.com/#sle.
 - c. Mohawk Industries / Mohawk Group: www.mohawkgroup.com
 - d. Mannington Commercial: www.manningtoncommercial.com/#sle.
 - e. Tarkett USA: commercial.tarkett.com.
- B. Minimum Requirements: Comply with ASTM F1700, of Class corresponding to type specified.
- C. Critical Radiant Flux (CRF): Minimum 0.45 watt per square centimeter, when tested in accordance with ASTM E648 or NFPA 253.
- D. Mold and Microbial Resistance: Highly resistant when tested in accordance with ASTM D6329; certified in accordance with UL 2824.
- E. Tile Size: As indicated on Drawings.
- F. Pattern: As indicated on Drawings.
- G. Color: As indicated on Drawings.

2.03 RESILIENT BASE

- A. Resilient Base: ASTM F1861, Type TP, rubber, thermoplastic; style as scheduled.

1. Manufacturers: Subject to compliance with requirements, provide product as indicated on Drawings, or a comparable Architect approved product by one of the following:
 - a. Johnsonite, a Tarkett Company: www.johnsonite.com/#sle.
 - b. Roppe Corporation: www.roppe.com/#sle.
2. Critical Radiant Flux (CRF): Minimum 0.45 watt per square centimeter, when tested in accordance with ASTM E648 or NFPA 253.
3. Height: As indicated in Finishes and Fixture Schedules.
4. Finish: Satin.
5. Length: Roll.
6. Color: As indicated on Drawings.
7. Accessories: Premolded external corners.

2.022.04 ACCESSORIES

- A. Subfloor Filler: White premix latex; type recommended by adhesive material manufacturer.
- B. Primers, Adhesives, and Seam Sealer: Waterproof; types recommended in writing by flooring manufacturer.
- C. Moldings, Transition and Edge Strips: Where indicated on Finish Schedule, provide the following:
 1. Same material as flooring.
 2. Metal.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that surfaces are flat to tolerances acceptable to flooring manufacturer, free of cracks that might telegraph through flooring, clean, dry, and free of curing compounds, surface hardeners, and other chemicals that might interfere with bonding of flooring to substrate.
- B. Verify that wall surfaces are smooth and flat within the tolerances specified for that type of work, are dust-free, and are ready to receive resilient base.
- C. Cementitious Subfloor Surfaces: Verify that substrates are ready for resilient flooring installation by testing for moisture and alkalinity (pH).
 1. Test as Follows:
 - a. Alkalinity (pH): ASTM F710.
 - b. Internal Relative Humidity: ASTM F2170.
 - c. Moisture Vapor Emission: ASTM F1869.
 2. Obtain instructions if test results are not within limits recommended by resilient flooring manufacturer and adhesive materials manufacturer.

D. Apply primer as required to prevent "bleed-through" or interference with adhesion by substances that cannot be removed.

3.02 PREPARATION

A. Remove existing resilient flooring and flooring adhesives; follow the recommendations of RFCI (RWP).

~~A.B.~~ Prepare floor substrates as recommended in writing by flooring and adhesive manufacturers.

~~B.C.~~ Remove subfloor ridges and bumps. Fill minor low spots, cracks, joints, holes, and other defects with subfloor filler to achieve smooth, flat, hard surface.

~~C.D.~~ Prohibit traffic until filler is fully cured.

~~D.E.~~ Clean substrate.

3.03 INSTALLATION - GENERAL

- A. Starting installation constitutes acceptance of subfloor conditions.

- B. Install in accordance with manufacturer's written instructions.
- C. Install edge strips at unprotected or exposed edges, where flooring terminates, and where indicated.
 - 1. Metal Strips: Attach to substrate before installation of flooring using stainless steel screws.
 - 2. Resilient Strips: Attach to substrate using adhesive.
- D. Scribe flooring to walls, columns, cabinets, floor outlets, and other appurtenances to produce tight joints.

3.04 INSTALLATION - SHEET FLOORING

- A. Lay flooring with joints and seams parallel to longer room dimensions, to produce minimum number of seams. Lay out seams to avoid widths less than 1/3 of roll width; match patterns at seams.
- B. Seams are prohibited in bathrooms, kitchens, toilet rooms, and custodial closets.
- C. Cut sheet at seams in accordance with manufacturer's instructions.

3.05 INSTALLATION - TILE FLOORING

- A. Mix tile from container to ensure shade variations are consistent when tile is placed, unless otherwise indicated in manufacturer's installation instructions.
- B. Install flooring in pattern as indicated on Drawings.

3.043.06 INSTALLATION - RESILIENT BASE

- A. Fit joints tightly and make vertical. Maintain minimum dimension of 18 inches between joints.
- B. Miter internal corners. At external corners, use premolded units. At exposed ends, use premolded units.
- C. Install base on solid backing. Bond tightly to wall and floor surfaces.
- D. Scribe and fit to door frames and other interruptions.

3.053.07 CLEANING

- A. Remove excess adhesive from floor, base, and wall surfaces without damage.
- B. Clean in accordance with manufacturer's written instructions.

3.063.08 PROTECTION

- A. Prohibit traffic on resilient flooring for 48 hours after installation.

END OF SECTION 096500

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DIVISION 21 – FIRE SUPPRESSION
SECTION 210000
FIRE SPRINKLER SYSTEMS

PART 1 - GENERAL

1.01 SCOPE

A. General:

1. Specification Section 220000, Plumbing General Requirements, is to be included as part of this Section of the specification.

B. Work Included:

1. This section covers the work necessary to design and install a complete, satisfactory, and ready to operate wet pipe fire protection system for heated areas and dry pipe fire protection system for non-heated areas (areas subject to freezing). Hazard classification shall be as required by the State Fire Marshal, local City, IBC, IFC, and applicable NFPA Standards.

C. Qualifications of Installer:

1. All work shall be performed by a qualified, competent, licensed Fire Sprinkler Contractor who can furnish a verified list of satisfactory installations of this type and size, for a period of 5 years or more. Fire sprinkler contractor shall be licensed by the Idaho State Fire Marshal, and shall have in his employ an Engineering Technician (Level III), certified by NICET (National Institute for Certification in Engineering Technologies).

D. System Responsibility:

1. All work required for the fire protection system, including design and installation, shall be the responsibility of the Fire Sprinkler Contractor. Coordination with other trades is critical. Contractor shall coordinate his work with all ductwork, piping, electrical, etc., to ensure that all systems can be installed with a minimum of interference. Sprinkler heads shall be located in the center of ceiling tiles in the 2' dimension and quarter spaced on 12" increments in the 4' dimension. All piping penetrations through finished walls shall be provided with chrome escutcheons. Submittals which are required are only for the purpose of general coordination. Architect/Engineer assumes no responsibility or liability for the design of the system.
2. All monitoring of valves not shown on the electrical drawings shall be within the scope of work for the fire sprinkler contractor. This shall include, but not be limited to, the following: All conduit and wiring as required to monitor post indicator valves, tamper switches, and any other devices required to be supervised by the fire alarm panel. The sprinkler contractor shall also provide all power, wiring and conduit required for a complete and operational dry-pipe system (if required), unless such electrical is shown on the electrical drawings.
3. All dry piping shall be graded to drain back to the riser, regardless of location or presence of heat. Where not possible, piping may be graded to auxiliary drum drip drains. All locations of drains are to be approved by the Architect/Engineer prior to installation. All exposed piping shall be installed as close to ceilings as possible while maintaining appropriate sprinkler deflector clearances and while providing minimum pipe grade per NFPA 13 requirements. Piping shall be designed and installed in a neat and symmetrical manor and shall be coordinated with all other trades and building features.
4. All wet piping may be installed flat and level but shall be installed so as to minimize the requirements for auxiliary drains. All exposed piping shall be installed as close to ceilings as possible while maintaining appropriate sprinkler deflector clearances. Piping shall be

designed and installed in a neat and symmetrical manor and shall be coordinated with all other trades and building features.

5. Existing buildings without sprinkler systems: If an existing building has not previously had a fire sprinkler system, the Sprinkler Contractor is responsible to consult with a Structural Engineer and verify, in writing, that the existing building structure is capable of supporting the required new active sprinkler system.
6. Submittals are required are only for the purpose of general coordination. Architect/Engineer assumes no responsibility or liability for the design of the system.
7. The fire sprinkler system engineering documents must include as a minimum:
 - a. The hazard classification, density, water flow and pressure requirements for the sprinkler system design.
 - b. The storage arrangement and classification of commodities to be protected.
 - c. Confirmation of adequate water supply based on water purveyor data.
 - d. Riser location and feed main routing.

1.02 CODES AND STANDARDS

- A. The sprinkler system is to be designed and installed in accordance with the latest applicable building codes, State and Local Fire Marshals requirements, and all applicable NFPA Standards.

PART 2 - PRODUCTS

2.01 SUBMITTALS

- A. The Engineering Technician shall prepare and submit the following submittal data:
 1. Complete equipment list of all equipment to be installed, including manufacturer's name and catalog number.
 2. Layout drawing of complete sprinkler system indicating relationship of all other overhead items, including ductwork, lights, and structural members.
 3. Complete details and sections as required to clearly define and clarify the design.
 4. Plot plan indicating location of all underground connections, piping, valves, and related items.
 5. Complete building section showing location of piping, sprinklers and applicable equipment in relation to other construction features.
 6. Grooved joint couplings and fittings shall be shown on drawings and product submittals, and be specifically identified with the applicable style or series number.
 7. Sprinklers shall be referred to on drawings, submittals and other documentation, by the sprinkler identification or model number as specifically published in the appropriate agency listing or approval. Trade names or other abbreviated designations shall not be allowed.
 8. Sprinklers valve and equipment model numbers shall be specifically identified on drawings and shall match submittal data provided.

2.02 MATERIALS AND EQUIPMENT

- A. All materials shall be as specified below, or in accordance with applicable NFPA Standards:
 1. Piping shall be black steel per NFPA 13 requirements and shall have a factory applied interior MIC or corrosion resistant coating. Piping shall be new and relatively free of exterior rust or corrosion. Piping with excessive rust or corrosion may be rejected. Threadable, thin wall piping will not be allowed. CPVC is allowed for underground only.
 2. Fittings shall be 125 psi screwed cast or malleable iron for all threaded piping.

3. Fittings shall be Victaulic FireLock®, Anvil Gruviok, Grinnell or Shurjoint fire protection products for all grooved or plain end piping. Couplings shall consist of two ductile iron housings conforming to ASTM A536, a pressure responsive elastomer gasket, and zinc electroplated carbon steel bolts and nuts. Rigid type or flexible type where necessary.
 - a. Rigid Type: Housings shall be cast to provide system rigidity and support and hanging in accordance with NFPA 13. Tongue and recess rigid type couplings shall only be permitted if the contractor uses a torque wrench for installation. Required torque shall be in accordance with the manufacturer's recommendations. Contractor shall remove and replace any improperly installed joints. 1 1/4" and Larger: Standard rigid joint equal to Victaulic FireLock® Style 009 or equal.
 - b. Flexible Type: Use in seismic areas where required by NFPA 13, Victaulic Style 75 or 77 or equal.
4. Dry pipe valves shall be installed in system risers per local water purveyor requirements.
 - a. Dry Pipe Valve: Reliable EX Low Pressure Dry Valve (or preapproved equal, prior to award) shall be provided. Low differential, latched clapper design, black enamel coated ductile iron body, aluminum bronze clapper, with external reset and nitrogen system trim package. Valve internal parts shall be replaceable without removing the valve from the installed position and be externally resettable. Valve shall be pre-trimmed with shut-off valve, 3-way ball valve, and actuator. Required system pressure shall be per manufacturer's requirements. Valve shall have grooved ends for vertical installation only.
 - b. Dry pipe systems shall not exceed 750 gallons of total system volume for any reason, regardless of code allowances. The Fire Sprinkler Contractor is to determine how many systems are required and provide the correct number of systems as determined by their design.
5. Wet pipe risers shall be equipped with a Reliable brand (or equal) alarm valve / system check valve.
6. Butterfly control valves with supervisory tamper devices shall be installed for system control.
7. All materials and equipment shall conform to the requirements of Underwriter Laboratories (UL) or Factory Mutual Global (FMG), and shall be so stamped.
8. Pressure switches (water flow device) shall be installed in each system riser (dry pipe systems).
9. Flow switches (water flow device) shall be installed in each system riser (wet pipe systems).
10. Alarm Bell shall be 10-inch outdoor electric bell. Furnish for installation by the electrical contractor.
11. Sway Bracing, both lateral and longitudinal, shall be required and shall be installed per applicable NFPA Standards.
12. Fire Department Connection shall be provided for each system riser or manifold assembly. Install a 90-degree elbow with drain connection at each fire department connection to allow for system drainage to prevent freezing.
13. Sprinkler heads in main entry type areas and main conference room type areas shall be concealed flush mounted style with white paintable covers. All other sprinkler

heads shall be Reliable Designer Model F1, (or equal), recessed with compression type escutcheon, below finished ceilings. Where surface mounted obstructions are installed, two-piece escutcheons and pendent sprinklers may be used, if required. Where sprinkler heads are subject to damage such as gymnasiums or mechanical lofts all sprinkler heads shall be provided with protective covers. Escutcheons shall be listed, supplied, and approved for use with the sprinkler by the sprinkler manufacturer. Where piping is exposed, install standard bronze upright or pendent sprinklers. Quick response dry sidewall sprinklers shall be used as required to comply with IBC requirements for exterior canopies.

14. Provide 12 extra sprinkler heads mounted together in a suitable cabinet. Include Reliable brand sprinkler head wrenches matching each type of sprinkler head. Include spares of all types of sprinklers installed in the building.
 15. Hangers, drains, and Inspectors Test Connections shall be installed in accordance with applicable NFPA Standards.
 16. Test and Drain Valve: Globe design valve providing test port with ½" integral orifice and drain port in one unit. Bronze body with copper alloy internals, polycarbonate sight glasses, Nitrile o-rings and EPDM valve seats.
 17. Back flow prevention as required by the State and Local Fire Marshall.
 18. Post indicator valves as required by the State and Local Fire Marshall, or as shown on plans.
 19. All piping penetrations through finished walls shall be provided with chrome escutcheons.
- B. Underground piping materials and installation shall comply with N.F.P.A. #24 and local water company specifications.

PART 3 - EXECUTION

3.01 INSPECTION

- A. Upon completion of the system, secure the inspection of the required authorities and perform such tests as may be required to demonstrate compliance with local and state standards. Upon acceptance of the system by the inspecting authority, inform the Architect/Engineer in writing, showing proof of acceptance. Submit all required test certificates to required authorities.
- B. The Fire Sprinkler Contractor shall monitor the nitrogen percentages until the system has reached 98% pure nitrogen and shall provide written verification, signed and acknowledged by the Owner's representative of such achievement. This shall occur each time that the system is taken in and out of service for any reason connected to the requirements of the project.

3.02 INSTALLATION

- A. Grooved joint piping systems shall be installed in accordance with the manufacturer's guidelines and recommendations. All grooved couplings, fittings, valves and specialties shall be supplied by a single manufacturer. The gasket style and elastomeric material (grade) shall be verified as suitable for the intended service as specified. Gaskets shall be supplied by grooved pipe manufacturer. Grooved end shall be clean and free from indentations, projections and roll marks in the area from pipe end to groove for proper gasket sealing. Contractor's field personnel shall be properly trained in the installation of the manufacturer's grooved piping products. A Factory trained representative shall periodically review the product installation. Contractor shall remove and replace any improperly installed products.
- B. The sprinkler bulb protector must remain in place until the sprinkler is completely installed and before the system is placed in service. Remove bulb protectors carefully by hand after installation. Do not use any tools to remove bulb protectors.

3.03 PROJECT CLOSEOUT

A. Operations & Maintenance Manual:

The Contractor shall provide an operations and maintenance manual at least thirty days prior to completion of work. The manual shall be of the three-ring binder type, entitled "Operations and Maintenance Manual", with the job name and year of completion also included. O & M manuals shall be submitted in a single package. In addition, the contractor shall provide two consolidated electronic versions on two separate thumb drives. Individual items will not be accepted independently unless approved by the Engineer. The manual shall be in accordance with NFPA 25 requirements.

END OF SECTION 210000

**SECTION 102800
TOILET, BATH, AND LAUNDRY ACCESSORIES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Commercial toilet accessories.
- B. Utility room accessories.

1.02 REFERENCE STANDARDS

- A. ASTM A269/A269M - Standard Specification for Seamless and Welded Austenitic Stainless Steel Tubing for General Service; 2015a (Reapproved 2019).
- B. ASTM A666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar; 2015.
- C. ASTM B456 - Standard Specification for Electrodeposited Coatings of Copper Plus Nickel Plus Chromium and Nickel Plus Chromium; 2017.
- D. ASTM C1036 - Standard Specification for Flat Glass; 2021.
- E. ASTM C1503 - Standard Specification for Silvered Flat Glass Mirror; 2018.

1.03 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Submit data on accessories describing size, finish, details of function, and attachment methods.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Commercial Toilet, Shower, and Bath Accessories: Provide products as indicated on Drawings, or a comparable product by one of the following:
 - 1. American Specialties, Inc: www.americanspecialties.com/#sle.
 - 2. Bobrick Washroom Equipment, Inc.: <https://www.bobrick.com/>
 - 3. Bradley Corporation: www.bradleycorp.com/#sle.
 - 4. Basis of Design: As indicated on Drawings.

2.02 MATERIALS

- A. Accessories - General: Shop assembled, free of dents and scratches and packaged complete with anchors and fittings, steel anchor plates, adapters, and anchor components for installation.
 - 1. Fabricate units made of metal sheet of seamless sheets with flat surfaces.
- B. Keys: Provide 3 keys for each accessory to Owner; master key lockable accessories.
- C. Stainless Steel Sheet: ASTM A666, Type 304.
- D. Stainless Steel Tubing: ASTM A269/A269M, Grade TP304 or TP316.
- E. Mirror Glass: Annealed float glass, ASTM C1036 Type I, Class 1, Quality Q2, with silvering, protective and physical characteristics complying with ASTM C1503.
- F. Adhesive: Two component epoxy type, waterproof.
- G. Fasteners, Screws, and Bolts: Hot dip galvanized; tamper-proof; security type.

2.03 FINISHES

- A. Stainless Steel: Satin finish, unless otherwise noted.
- B. Chrome/Nickel Plating: ASTM B456, SC 2, satin finish, unless otherwise noted.
- C. Powder-Coated Steel: Clean, degrease, and neutralize. Follow immediately with a phosphatizing treatment, prime coat, and two finish coats of powder coat enamel.

2.04 COMMERCIAL TOILET ACCESSORIES

- A. Provide toilet accessories as indicated on Drawings.
- B. Mirrors: Stainless steel framed, 1/4 inch thick annealed float glass; ASTM C1036.
 - 1. Annealed Float Glass: Silvering, protective and physical characteristics in compliance with ASTM C1503.
 - 2. Size: As indicated on drawings.
 - 3. Frame: 0.05 inch angle shapes, with mitered and welded and ground corners, and tamperproof hanging system; satin finish.
 - 4. Backing: Full-mirror sized, minimum 0.03 inch galvanized steel sheet and nonabsorptive filler material.
- C. Grab Bars: Stainless steel, smooth surface.
 - 1. Standard Duty Grab Bars:
 - a. Push/Pull Point Load: 250 pound-force, minimum.
 - b. Dimensions: 1-1/4 inch outside diameter, minimum 0.05 inch wall thickness, exposed flange mounting, 1-1/2 inch clearance between wall and inside of grab bar.
 - c. Finish: Satin.
 - d. Length and Configuration: As indicated on drawings.
 - 1) Custom configuration required on exterior wall at existing window opening.

2.05 UTILITY ROOM ACCESSORIES

- A. Combination Utility Shelf/Mop and Broom Holder: 0.05 inch thick stainless steel, Type 304, with 1/2 inch returned edges, 0.06 inch steel wall brackets.
 - 1. Drying rod: Stainless steel, 1/4 inch diameter.
 - 2. Hooks: Two, 0.06 inch stainless steel rag hooks at shelf front.
 - 3. Mop/broom holders: Three spring-loaded rubber cam holders at shelf front.
 - 4. Length: Manufacturer's standard length for number of holders/hooks.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify exact location of accessories for installation.

3.02 PREPARATION

- A. Deliver inserts and rough-in frames to site for timely installation.
- B. Provide templates and rough-in measurements as required.

3.03 INSTALLATION

- A. Install accessories in accordance with manufacturers' instructions in locations indicated on drawings.
- B. Install plumb and level, securely and rigidly anchored to substrate.
- C. Mounting Heights: As required by accessibility regulations, unless otherwise indicated.

3.04 PROTECTION

- A. Protect installed accessories from damage due to subsequent construction operations.

END OF SECTION 102800