

- A. Pre-drill holes for attachment.
- 2.04 SOURCE QUALITY CONTROL**
- A. Provide wall and door protection systems of each type from a single source and manufacturer.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that rough openings, concealed blocking, and anchors are correctly sized and located.
- B. Verify that field measurements are as indicated on drawings.
- C. Verify that substrate surfaces for adhered items are clean and smooth.
- D. Start of installation constitutes acceptance of project conditions.

3.02 INSTALLATION

- A. Install components in accordance with manufacturer's instructions, level and plumb, secured rigidly in position to supporting construction.
- B. Position corner guard 4 inches (102 mm) above finished floor to 48 inches high (1 219 mm high).

3.03 TOLERANCES

- A. Maximum Variation From Required Height: 1/4 inch (6 mm).

3.04 CLEANING

- A. Clean wall and door protection items of excess adhesive, dust, dirt, and other contaminants.

END OF SECTION

**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 A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products; 2017.
- B. ASTM A269/A269M - Standard Specification for Seamless and Welded Austenitic Stainless Steel Tubing for General Service; 2022.
- C. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2025a.
- D. ASTM A666/A666M - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar; 2024.
- E. ASTM B86 - Standard Specification for Zinc and Zinc-Aluminum (ZA) Alloy Foundry and Die Castings; 2023.
- F. ASTM B456 - Standard Specification for Electrodeposited Coatings of Copper Plus Nickel Plus Chromium and Nickel Plus Chromium; 2017 (Reapproved 2022).
- G. ASTM C1038 - Standard Specification for Flat Glass; 2025.
- H. ASTM C1503 - Standard Specification for Silvered Flat Glass Mirror; 2018.

1.03 ADMINISTRATIVE REQUIREMENTS

- A. Coordinate the work with the placement of internal wall reinforcement and reinforcement of toilet partitions to receive anchor attachments.

1.04 SUBMITTALS

- A. Product Data: Submit data on accessories describing size, finish, details of function, and attachment methods.
- B. Samples: Submit two samples of each accessory, illustrating color and finish.
- C. Manufacturer's Installation Instructions: Indicate special procedures and conditions requiring special attention.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Commercial Toilet, Shower, and Bath Accessories:
1. American Specialties, Inc.: www.american-specialties.com/#/se.
 2. Bobrick Washroom Equipment, Inc.: www.bobrick.com/#/se.
 3. Bradley Corporation: www.bradleycorp.com/#/se.
 4. Georgia-Pacific Professional: www.gppro.com/#/se.
 5. Seachrome Corporation: www.seachrome.com/#/se.
 6. TrippNT: www.trippnt.com.
 7. Uline: www.uline.com.
 8. Substitutions: Section 016000 - Product Requirements.
- B. Provide products of each category type by single manufacturer.

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. Grind welded joints smooth.
 2. Fabricate units made of metal sheet of seamless sheets with flat surfaces.
- B. Keys: Provide two keys for each accessory to Owner; master key lockable accessories.
- C. Stainless Steel Sheet: ASTM A666/A666M, Type 304.
- D. Stainless Steel Tubing: ASTM A269/A269M, Grade TP304 or TP316.
- E. Galvanized Steel Sheet: Hot-dipped galvanized steel sheet, ASTM A653/A653M, with G90/Z275 coating.
- F. Zinc Alloy: Die cast, ASTM B86.
- G. Mirror Glass: Annealed float glass, ASTM C1036 Type I, Class 1, Quality Q2, with silvering, protective and physical characteristics complying with ASTM C1503.
- H. Adhesive: Two component epoxy type, waterproof.
- I. Fasteners, Screws, and Bolts: Hot dip galvanized; tamper-proof, security type.
- J. Expansion Shields: Fiber, lead, or rubber as recommended by accessory manufacturer for component and substrate.

2.03 FINISHES

- A. Stainless Steel: Brushed finish finish, unless otherwise noted.
- B. Chrome/Nickel Plating: ASTM B456, SC 2, polished finish, unless otherwise noted.
- C. Baked Enamel: Pretreat to clean condition, apply one coat primer and minimum two coats epoxy baked enamel.
- D. Powder-Coated Steel: Clean, degrease, and neutralize. Follow immediately with a phosphating treatment, prime coat, and two finish coats of powder coat enamel.
- E. Galvanizing for Items Other than Sheet: Comply with ASTM A123/A123M; galvanize ferrous metal and fastening devices.
- F. Shop Primed Ferrous Metals: Pretreat and clean, spray apply one coat primer and bake.
- G. Back paint components where contact is made with building finishes to prevent electrolysis.

2.04 COMMERCIAL TOILET ACCESSORIES

- A. As scheduled on drawings.

2.05 UTILITY ROOM ACCESSORIES

- A. Mop and Brom Holder: 0.06 inch (1.3 mm) thick stainless steel, Type 304, hat-shaped channel.
1. Holders: Three spring-loaded rubber cam holders.
 2. Length: Manufacturer's standard length for number of holders.
 3. Products:
 - a. Basis of Design: Bradley Corporation; Model 9854.
 - b. Substitutions: 016000 - Product Requirements.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify exact location of accessories for installation.
- C. Verify that field measurements are as indicated on drawings.

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

**SECTION 104300
EMERGENCY AID SPECIALTIES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Automated external defibrillators (AEDs).
- B. Automated external defibrillator (AED) cabinets.
- C. Accessories.

1.02 DEFINITIONS

- A. Automated External Defibrillator (AED): A Food and Drug Administration (FDA)-approved portable device, which automatically analyzes the heart rhythm and recognizes the presence of ventricular fibrillation and/or tachycardia. If defibrillation is warranted, the AED automatically charges and prompts (visual and/or audio) the operator to deliver an electrical shock.

1.03 REFERENCE STANDARDS

- A. ASTM E814 - Standard Test Method for Fire Tests of Penetration Firestop Systems; 2023a.

1.04 SUBMITTALS

- A. Product Data: Provide AED operational features, color and finish, anchorage details, and installation instructions.
- B. Shop Drawings: Indicate locations of cabinets and cabinet physical dimensions.
- C. Manufacturer's Installation Instructions: Indicate special criteria and wall opening coordination requirements.
- D. Maintenance Data: Include test schedules and recertification requirements.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Automated External Defibrillators (AEDs):
1. Philips Medical Systems: www.usa.philips.com/#/se.
 2. Stryker Corporation: www.stryker.com/#/se.
 3. Zoll Medical Corporation: www.zoll.com/#/se.
 4. Substitutions: See Section 016000 - Product Requirements.
- B. Emergency Aid Cabinets and Accessories:
1. Basis of Design: Activar Construction Products Group, Inc. - JL Industries; LifeStart 1400 Series AED Cabinet: www.activarpg.com/#/se.
 2. Substitutions: See Section 016000 - Product Requirements.

2.02 AUTOMATED EXTERNAL DEFIBRILLATORS (AEDS)

- A. Automated External Defibrillators (AEDs) - General: FDA approval required.
1. Provide automated external defibrillators (AEDs) as indicated.

2.03 EMERGENCY AID CABINETS

- A. Type: Automated external defibrillator (AED).

- B. Fire Rating: Listed and labeled in accordance with ASTM E814 requirements for fire resistance rating of walls where being installed.
- C. Cabinet Construction: Non-fire-rated.
1. Formed primed steel sheet; 0.036 inch (0.9 mm) thick base metal.
- D. Fire-Rated Cabinet Construction: One-hour fire rated.
1. Steel; double wall or outer and inner boxes with 5/8 inch (15.9 mm) thick fire barrier material.
- E. Cabinet Configuration: Recessed type.
1. Provide cabinet enclosure with right angle inside corners and seams, and with formed perimeter trim and door stiles.
- F. Door: 0.036 inch (0.9 mm) metal thickness, reinforced for flatness and rigidity with wire pull handle and nylon catch. Hinge door for 180 degree opening with two butt hinges.
- G. Fabrication: Weld, fill, and grind components smooth.
- H. Finish of Cabinet Interior: White powder coat.

2.04 ACCESSORIES

- A. Cabinet Door Signage: "AED" decal, or vinyl self-adhering, prespaced black lettering and identifying graphic in accordance with authorities having jurisdiction (AHJ).

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify rough openings for cabinet are correctly sized and located.

3.02 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Secure rigidly in place.
- C. Place AEDs in cabinets.
- D. Cabinet Lettering:
1. Location: Face of door framing.
 2. Apply lettering on factory-finished cabinets either at the factory or just prior to Substantial Completion.

3.03 ADJUSTING AND CLEANING

- A. Remove temporary protective coverings and strippable films, if any, as cabinets are installed unless otherwise indicated in manufacturer's written installation instructions.
- B. Adjust cabinet doors to operate smoothly without binding. Verify that alarms and integral locking devices operate properly.
- C. On completion of cabinet installation, clean interior and exterior surfaces as recommended by manufacturer.
- D. Touch up marred finishes. Replace cabinets that cannot be restored to factory-finished appearance. Use materials and procedures recommended by cabinet manufacturer.

3.04 CLOSEOUT ACTIVITIES

- A. Demonstrate proper operation of AED to Owner's designated representative.

3.05 SCHEDULE

- A. Locate AEDs and cabinets in locations indicated on drawings.

END OF SECTION

**SECTION 104400
FIRE PROTECTION SPECIALTIES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Fire extinguishers.
- B. Fire extinguisher cabinets.
- C. Accessories.

1.02 REFERENCE STANDARDS

- A. ASTM E814 - Standard Test Method for Fire Tests of Penetration Firestop Systems; 2023a.
- B. FM (AG) - FM Approval Guide; Current Edition.
- C. NFPA 10 - Standard for Portable Fire Extinguishers; 2022.
- D. UL (DIR) - Online Certifications Directory; Current Edition.

1.03 SUBMITTALS

- A. Product Data: Provide extinguisher operational features.
- B. Shop Drawings: Indicate locations of cabinets and cabinet physical dimensions.
- C. Manufacturer's Installation Instructions: Indicate special criteria and wall opening coordination requirements.
- D. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.
- E. Maintenance Data: Include test, refill or recharge schedules and re-certification requirements.

1.04 FIELD CONDITIONS

- A. Do not install extinguishers when ambient temperature may cause freezing of extinguisher ingredients.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Fire Extinguishers:
1. Activar Construction Products Group, Inc. - JL Industries: www.activarpg.com/#/se.
 2. Ansul, a Tyco Business: www.ansul.com/#/se.
 3. Kidde, a unit of United Technologies Corporation: www.kidde.com/#/se.
 4. Nystrom, Inc.: www.nystrom.com/#/se.
 5. Pyro-Chem, a Tyco Business: www.pyrochem.com/#/se.
 6. Substitutions: See Section 016000 - Product Requirements.
- B. Fire Extinguisher Cabinets and Accessories:
1. Activar Construction Products Group, Inc. - JL Industries: www.activarpg.com/#/se.
 2. Kidde, a unit of United Technologies Corporation: www.kidde.com/#/se.
 3. Larsen's Manufacturing Co.: www.larsensmfg.com/#/se.
 4. Nystrom, Inc.: www.nystrom.com/#/se.
 5. Potter-Roemer: www.potterroemer.com/#/se.
 6. Substitutions: See Section 016000 - Product Requirements.

2.02 FIRE EXTINGUISHERS

- A. Fire Extinguishers - General: Comply with product requirements of NFPA 10 and applicable codes, whichever is more stringent.
1. Provide extinguishers labeled by UL (DIR) or FM (AG) for purpose specified and as indicated.
- B. Multipurpose Dry Chemical Type Fire Extinguishers: Carbon steel tank, with pressure gauge.
1. Class: A:B:C type.
 2. Size: 10 pound (4.54 kg).
 3. Finish: Baked polyester powder coat, color as selected.
 4. Temperature range: Minus 40 degrees F (Minus 40 degrees C) to 120 degrees F (49 degrees C).

2.03 FIRE EXTINGUISHER CABINETS

- A. Fire Rating: Listed and labeled in accordance with ASTM E814 requirements for fire resistance rating of walls where being installed.
- B. Cabinet Construction: Non-fire rated.
1. Formed primed steel sheet; 0.036 inch (0.9 mm) thick base metal.
- C. Fire Rated Cabinet Construction: Two-hour fire rated.
1. Steel; double wall or outer and inner boxes with 5/8 inch (15.9 mm) thick fire barrier material.
- D. Cabinet Configuration: Surface mounted, semi-recessed, and recessed type.
1. Size to accommodate accessories.
 2. Projected Trim: Returned to wall surface, with 1-1/2 inch (39 mm) projection, and 1-1/2 inch (39 mm) wide face.
 3. Provide cabinet enclosure with right angle inside corners and seams, and with formed perimeter trim.
- E. Door: 0.036 inch (0.9 mm) metal thickness, reinforced for flatness and rigidity with nylon catch. Hinge doors for 180 degree opening with two butt hinges.
- F. Door Glazing: Tempered glass, clear, 1/8 inch (3 mm) thick, and set in resilient channel glazing gasket.
- G. Cabinet Mounting Hardware: Appropriate to cabinet, with pre-drilled holes for placement of anchors.
- H. Fabrication: Weld, fill, and grind components smooth.
- I. Finish of Cabinet Exterior Trim and Door: No. 4 - Brushed stainless steel.
- J. Finish of Cabinet Interior: White colored enamel.

2.04 ACCESSORIES

- A. Extinguisher Brackets: Formed steel, chrome-plated.
- B. Lettering: "FIRE EXTINGUISHER" decal, or vinyl self-adhering, prespaced black lettering in accordance with authorities having jurisdiction (AHJ).

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify rough openings for cabinet are correctly sized and located.

3.02 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install cabinets plumb and level in wall openings, distance from finished floor to inside bottom of cabinet as indicated on drawings.
- C. Secure rigidly in place.
- D. Place extinguishers in cabinets and on wall brackets.

3.03 MAINTENANCE

- A. Provide a separate maintenance contract for specified maintenance service.

3.04 MAINTENANCE - SELF-SERVICE FIRE EXTINGUISHERS

- A. Monthly Inspections: Inspect self-service fire extinguishers on monthly basis in accordance with manufacturer's instructions, and requirements of the authorities having jurisdiction (AHJ).
- B. Annual Inspections: Inspect self-service fire extinguishers on annual basis in accordance with manufacturer's instructions, and requirements of the authorities having jurisdiction (AHJ).
- C. Inspection Certification Tag: Provide new tag indicating acceptable condition of fire extinguisher, date of inspection, and name of self-service inspector for each inspection.

END OF SECTION

**SECTION 105129
PHENOLIC LOCKERS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Phenolic lockers.

1.02 REFERENCE STANDARDS

- A. ADA Standards - 2010 ADA Standards for Accessible Design; 2010.
- B. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2024.
- C. ICC A117.1 - Accessible and Usable Buildings and Facilities; 2017.

1.03 SUBMITTALS

- A. Product Data: Manufacturer's published data on locker construction, sizes and accessories.
- B. Shop Drawings: Indicate locker plan layout, numbering plan and combination lock code.
- C. Full Size Sample: One full-size locker of each construction specified for evaluation of construction.
- D. Samples: Submit two samples 6 by 6 inches (152 by 152 mm) in size, of each color scheduled.
- E. Manufacturer's Installation Instructions: Indicate component installation assembly.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Protect locker finish and adjacent surfaces from damage.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Phenolic Lockers:
1. Basis of Design: List Industries, Inc.: www.listindustries.com/#/se.
 2. Substitutions: See Section 016000 - Product Requirements.

2.02 LOCKER APPLICATIONS

- A. Wardrobe Lockers: Phenolic lockers, wall mounted for base indicated on drawings.
1. Location: Bunk rooms.
 2. Accessibility: Comply with ICC A117.1 and ADA Standards.
 3. Width: 15 inches (381 mm).
 4. Depth: 18 inches (457 mm).
 5. Height: 60 inches (1524 mm).
 6. Locker Configuration: Single tier.
 7. Fittings: Size and configuration as indicated on drawings.
 - a. Top storage compartment.
 - b. Upper shelf.
 - c. Coat rod.
 - d. Hooks: Four single prong.
 - e. Foot Locker: Padlock hasp.
 - f. Name/number plates.
 8. Door Configuration: Single, solid with standard horizontal louvers top and bottom.
 9. Latching: Multiple-point, with finger lift handle.
 10. Locking: Padlock hasps, for padlocks provided by Owner; stainless steel.
 - a. Locking Action: Positive, automatic type, so that locker can be locked when open, then closed without unlocking.

2.03 PHENOLIC LOCKERS

- A. Lockers: Factory assembled, made of phenolic core panels with mortise and tenon joints and stainless steel mechanical joint fasteners; fully finished inside and out; each locker capable of standing alone.
1. Doors: Full overlay, covering full width and height of locker body; square edges.
 2. Panel Core Exposed at Edges: Machine polished, without chips or tool marks; square edge unless otherwise indicated.
 3. Where locker ends or sides are exposed, finish the same as fronts or provide extra panels to match fronts.
 4. Provide filler strips where indicated, securely attached to lockers.
 5. Door Color: As selected by Architect; allow for 2 different colors.
 6. Body Color: Manufacturer's standard white or light color.
 7. Fasteners for Accessories and Locking Mechanisms: Tamperproof type.
- B. Component Thicknesses:
1. Doors: 1/2 inch (13 mm) minimum thickness.
 2. Locker Body:
 - a. Tops, bottoms, and shelves 3/8 inch (10 mm); sides and backs 5/16 inch (8 mm); minimum.
 3. End Panels and Filler Panels: 1/2 inch (13 mm) minimum thickness.
- C. Phenolic Core Panels: Nonporous phenolic resin and paper core formed under high pressure, with natural colored finished edges, integral melamine surface, matte finish, and uniform surface appearance; glued laminated panels not acceptable.
1. Surface Burning Characteristics: Flame spread index of 75 or less, and smoke developed index of 450 or less; when tested in accordance with ASTM E84.
- D. Hinges: Stainless steel, black powder coat finish; minimum of 180 degree opening; either exposed barrel 5-knuckle hinge attached to back of door and inside of body with tamperproof screws, or concealed cabinetwork style hinge attached with tamperproof screws.
- E. Coat Hooks: Stainless steel or reinforced nylon; attached with tamperproof screws.
- F. Number Plates: Manufacturer's standard, minimum 4-digit, permanently attached with adhesive; may be field installed.
- G. Handles: Manufacturer's standard finger pull type.
- H. Built-in Lock Boxes: Same material as locker, manufacturer's standard size, with padlock hasps, for padlocks provided by Owner.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that prepared bases are in correct position and configuration.
- B. Verify bases are properly sized.

3.02 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Place and secure on prepared base.
- C. Install lockers plumb and square.
- D. Secure lockers with anchor devices to suit substrate materials. Minimum Pullout Force: 100 pounds (445 N).
- E. Bolt adjoining locker units together to provide rigid installation.
- F. Install end panels and filler panels.
- G. Install accessories.
- H. Replace components that do not operate smoothly.

3.03 CLEANING

- A. Clean locker interiors and exterior surfaces.

END OF SECTION

**SECTION 107500
FLAGPOLES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Aluminum flagpoles.

1.02 REFERENCE STANDARDS

- A. AASHTO M 36 - Standard Specification for Corrugated Steel Pipe, Metallic-Coated, for Sewers and Drains; 2016 (Reapproved 2020).
- B. ASTM B241/B241M - Standard Specification for Aluminum and Aluminum-Alloy Seamless Pipe and Seamless Extruded Tube; 2022.
- C. NAAMM FP 1001 - Guide Specifications for Design Loads of Metal Flagpoles; 2007.

1.03 SUBMITTALS

- A. Product Data: Provide data on pole, accessories, and configurations.
- B. Shop Drawings: Indicate detailed dimensions, base details, anchor requirements, and imposed loads.
- C. Samples: Submit two samples, 6-by 6-inch (152 by 152 mm) in size, illustrating pole material, color, and finish.
- D. Design Calculations: Signed and sealed by designer registered in the state in which the Project is located.
- E. Designer's Qualification Statement.
- F. Maintenance Data: Provide lubrication and periodic maintenance requirement schedules and list of parts.

1.04 QUALITY ASSURANCE

- A. Designer Qualifications: Design flagpole foundation under direct supervision of a Professional Structural Engineer experienced in design of this Work and licensed the State in which the Project is located.
- B. Products Requiring Electrical Connection: Listed and classified by Underwriters Laboratories Inc., as suitable for the purpose specified and indicated.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Spiral wrap flagpole with protective covering and pack in protective shipping tubes or containers.
- B. Protect flagpole and accessories from damage or moisture.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Flagpoles:
1. Concord American Flagpole: www.concordamericanflagpole.com/#/se.
 2. Morgan-Francis Flagpoles & Accessories: www.morgan-francis.com/#/se.
 3. Pole-Tech Co, Inc.: www.poletech.com/#/se.
 4. Substitutions: See Section 016000 - Product Requirements.

2.02 FLAGPOLES

- A. Flagpoles: Designed in accordance with NAAMM FP 1001
1. Material: Aluminum.
 2. Design: Cone tapered.
 3. Mounting: Ground mounted type.
 4. Nominal Height: 35 ft (10.7 m); measured from nominal ground elevation.
 5. Halyard: Internal type, cam cleat.
- B. Performance Requirements:
1. Wind Pressure Loading on Flagpole with Flag: Resistant without permanent deformation to 130 miles/hr (209 km/hr) wind speed, in accordance with NAAMM FP 1001; the factor of safety used is 2.5.

2.03 POLE MATERIALS

- A. Aluminum: ASTM B241/B241M, 6063 alloy, T6 temper.

2.04 ACCESSORIES

- A. Beacon Light: Aluminum, 1