



Delivering water and power™

Construction Specification Manual

Salt River Project

Technical Specification Index – September 2021

Division 10

Division	Title	Updated
DIVISION 10: SPECIALTIES		
101453	Traffic and Parking Signage	Revised 08/21
102114	Metal Toilet Compartments	Revised 08/21
102117	Plastic Toilet Compartments	Revised 08/21
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SECTION 10 14 53
TRAFFIC AND PARKING SIGNAGE

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Post-mounted site traffic and parking signage.

B. Related Requirements:

1. Section 03 30 53 "Miscellaneous Cast-in-Place Concrete" for concrete foundations and setting sign posts in concrete foundations.

1.2 COORDINATION

- A.** Furnish templates and tolerance information for placement of sign-anchorage devices embedded in permanent construction by other installers.

1.3 ACTION SUBMITTALS

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

B. Shop Drawings: For signage.

1. Include fabrication and installation details and attachments to other work.
2. Show sign mounting heights, locations of supplementary supports to be provided by other installers, and accessories.
3. Show message list, typestyles, graphic elements, and layout for each sign at least half size.

1.4 INFORMATIONAL SUBMITTALS

- A.** Manufacturer's installation instructions.

1.5 QUALITY ASSURANCE

- A.** Manufacturer shall have a minimum of five years experience in the manufacturing of traffic and parking signage of the type specified for this Project.

1.6 DELIVERY, STORAGE, AND HANDLING

- A.** Deliver materials in factory packages with factory labels attached.

- B. Cover and protect sign materials in transit and at job site. Damaged or defaced signs will be rejected and shall be replaced at no additional cost to the Owner.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Codes and Standards, General: Comply with local municipality's Planning and Zoning Codes, Building Code, and other requirements of authorities having jurisdiction.
- B. On-Site traffic signs shall comply with Manual on Uniform Traffic Control Devices (MUTCD), latest edition.
- C. Off-Site signs located in roadway right-of-way shall comply with Arizona Department of Transportation (ADOT) Traffic Control Design Guidelines.
- D. Accessibility Requirements: For signage on or leading to an accessible route, comply with the USDOJ's "2010 ADA Standards for Accessible Design" and ICC A117.1.
- E. Signs indicated to be reflective shall comply with ASTM D4956.

2.2 METALS, GENERAL

- A. Metal Surfaces, General: Provide materials with smooth, flat surfaces unless otherwise indicated. For metal fabrications exposed to view in the completed Work, provide materials without seam marks, roller marks, rolled trade names, or blemishes.

2.3 MATERIALS

- A. Aluminum Sheet and Plate: ASTM B209 (ASTM B209M), alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated.
 - 1. Sign Blanks: Minimum 0.080-inch (2 mm) thick 5052-H38 aluminum sheet.
- B. Engineer Grade Prismatic Reflective Sheeting: ASTM D4956, and rotationally insensitive per AASHTO M 268.
 - 1. DOT Type I reflective omni-directional microprismatic film that incorporates tiles of microprisms arranged in multiple orientations for uniform visual reflectivity at all viewing angles.
 - 2. Basis of Design: T-2500 Series Prismatic Engineering Grade Retroreflective Film as manufactured by Avery Dennison®.
 - 3. Application to Sign Blanks: Permanent pressure-sensitive adhesive specifically suited for aluminum substrates.
- C. Sign Posts: ASTM A1011 Grade 50, telescoping square perforated hot-rolled steel tubing, length as required for proper mounting height and scheduled foundation embedment depth.

1. Tube Size: 2 by 2 inches (50 by 50 mm), 0.105-inch (2.67 mm) (12 gage).
 2. Perforations: 7/16-inch (11 mm) holes spaced on 1-inch (25 mm) centers.
 3. Coating: ASTM A-653 G90 (Z275) or equivalent.
 4. Basis of Design: Telespar System as manufactured by Unistrut® Service Co.
- D. Fasteners: Unless otherwise indicated, provide zinc-plated fasteners with coating complying with ASTM B633 or ASTM F1941/F1941M, Class Fe/Zn 5.
1. Include post manufacturers standard hex nuts and bolts, corner bolts, drive rivets, and lock pins as required to connect posts and mount sign panels for a complete installation.
- E. Concrete for Foundations: 2500 psi minimum, complying with Section 03 30 53 "Miscellaneous Cast-in-Place Concrete".

2.4 FABRICATION

- A. Sign Message Panels: Construct sign-panel surfaces to be smooth and to remain flat under installed conditions within a tolerance of plus or minus 1/16 inch (1.5 mm) measured diagonally from corner to corner.
1. Message Panel Text and Graphics: As indicated on Drawings.
 2. Message Panel Size: As indicated on Drawings.
- B. Post Fabrication: Fabricate posts designed for structural performance and of lengths required for installation method indicated for each sign.
1. Direct Burial: Fabricate posts 36 inches (910 mm) longer than height of sign to permit direct burial or embedment in concrete foundations or concrete-filled postholes.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Foundation Excavation: Excavate to neat clean lines in undisturbed soil. Remove loose soil and foreign matter from excavation and moisten earth before placing concrete.

- B. Provide forms where required due to unstable soil conditions and for perimeter of sign pole base at grade. Secure and brace forms and foundation tube, sleeve, or anchor bolts in position, to prevent displacement during concreting.
- C. Place concrete immediately after mixing. Compact concrete in place by using vibrators. Moist cure exposed concrete for not less than seven days or use non-staining curing compound.
- D. Trowel exposed concrete surfaces to a smooth, dense finish, free of trowel marks, and uniform in texture and appearance. Provide positive slope for water runoff to perimeter of concrete base.

3.3 INSTALLATION

- A. General: Install signs using installation methods indicated and according to manufacturer's written instructions.
 - 1. Install signs level, plumb, and at locations and heights indicated, with sign surfaces free of distortion and other defects in appearance.
 - 2. Install signs so they do not protrude or obstruct according to the accessibility standard.
 - 3. Before installation, verify that sign components are clean and free of materials or debris that would impair installation.
 - 4. Corrosion Protection: Coat concealed surfaces of exterior aluminum in contact with grout, concrete, masonry, wood, or dissimilar metals, with a heavy coat of bituminous paint.
- B. Setting in Cast-in-Place Concrete: Set post in position, support to prevent movement, and place concrete in posthole as indicated on Drawings.
- C. Installing Signs: Anchor sign panels securely to sign post or wall as scheduled, using fasteners suitable for application and as recommended by manufacturer.

3.4 FIELD QUALITY CONTROL

- A. Verify that signs are installed in accordance with manufacturer's instructions, MUTCD requirements, and ADOT requirements.
 - 1. Tolerances:
 - 2. 1. Out of level: $\pm 1/8$ ".
 - 3. 2. Out of plumb: $\pm 1/4$ ".

3.5 CLEANING AND PROTECTION

- A. Remove and replace damaged or deformed signs and signs that do not comply with specified requirements. Replace signs with damaged or deteriorated finishes or components that cannot be successfully repaired by finish touchup or similar minor repair procedures.

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- B. Remove temporary protective coverings and strippable films as signs are installed.
- C. On completion of installation, clean exposed surfaces of signs according to manufacturer's written instructions, and touch up minor nicks and abrasions in finish. Maintain signs in a clean condition during construction and protect from damage until acceptance by Owner.

END OF SECTION

SECTION 10 21 14
METAL TOILET COMPARTMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Painted steel toilet compartments configured as toilet enclosures and urinal screens.

B. Related Requirements:

1. Section 05 50 00 "Metal Fabrications" for supports that attach ceiling-hung compartments to overhead structural system.
2. Section 06 10 53 "Miscellaneous Rough Carpentry" for in-wall blocking.
3. Section 10 28 13 "Toilet Accessories" for toilet tissue dispensers, grab bars, purse shelves, and similar accessories mounted on toilet compartments.

1.2 COORDINATION

- A. Coordinate requirements for overhead supports, blocking, reinforcing, and other supports concealed within wall and ceiling.**

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for toilet compartments.

B. Shop Drawings: For toilet compartments.

1. Include plans, elevations, sections, and attachment details.
2. Show locations of cutouts for compartment-mounted toilet accessories.
3. Show locations of centerlines of toilet fixtures.
4. Show locations of floor drains.
5. Show ceiling grid, ceiling-mounted items, and overhead support or bracing locations.

C. Samples for Verification: Actual sample of finished products for each type of toilet compartment indicated.

1. Size: 6-inch- (152-mm-) square, of same thickness indicated for Work.
2. Each type of hardware and accessory.

- D. Product Schedule: For toilet compartments, prepared by or under the supervision of supplier, detailing location and selected colors for toilet compartment material.

1.4 INFORMATIONAL SUBMITTALS

- A. Product Certificates: For each type of toilet compartment.

1.5 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For toilet compartments to include in maintenance manuals.

1.6 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 1. Door Hinges: Four hinges with associated fasteners.
 2. Latch and Keeper: Four latches and keepers with associated fasteners.
 3. Door Bumper: Four bumpers with associated fasteners.
 4. Door Pull: Two door pulls with associated fasteners.
 5. Fasteners: 20 fasteners of each size and type.

1.7 QUALITY ASSURANCE

- A. Installer Qualifications: A company regularly engaged in installation of products specified in this Section, with a minimum of 10 years' experience, and authorized or approved by toilet compartment manufacturer.

1.8 FIELD CONDITIONS

- A. Field Measurements: Verify actual locations of toilet fixtures, walls, columns, ceilings, and other construction contiguous with toilet compartments by field measurements before fabrication.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 1. All American Metal Corp.
 2. American Sanitary Partition Corporation.
 3. Ampco by AJW.
 4. ASI Accurate Partitions; ASI Group.

5. ASI Global Partitions; ASI Group.
6. Bradley Corporation.
7. Flush Metal Partitions, LLC.
8. General Partitions Mfg. Corp.
9. Knickerbocker Partition Corporation.
10. Metpar Corp.

2.2 PERFORMANCE REQUIREMENTS

- A. Regulatory Requirements: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines for Buildings and Facilities for toilet compartments designated as accessible.

2.3 PAINTED STEEL TOILET COMPARTMENTS

- A. Toilet-Enclosure Style: Ceiling hung.
- B. Urinal-Screen Style: Wall hung, flat panel.
- C. Door, Panel, and Pilaster Construction: Provide with no-sightline system.
 1. Seamless, metal facing sheets pressure laminated to core material; with continuous, interlocking molding strip or lapped-and-formed edge closures; corners secured by welding or clips and exposed welds ground smooth. Exposed surfaces shall be free of pitting, seam marks, roller marks, stains, discolorations, telegraphing of core material, or other imperfections.
 2. Core Material: Manufacturer's standard sound-deadening honeycomb of resin-impregnated kraft paper in thickness required to provide finished thickness of 1 inch (25 mm) for doors and panels and 1-1/4 inches (32 mm) for pilasters.
 3. Grab-Bar Reinforcement: Provide concealed internal reinforcement for grab bars mounted on units of size and material adequate for panel to withstand applied downward load on grab bar of at least 250 lbf (1112 N), when tested according to ASTM F446, without deformation of panel.
 4. Tapping Reinforcement: Provide concealed reinforcement for tapping (threading) at locations where machine screws are used for attaching items to units.
- D. Urinal-Screen Construction:
 1. Flat-Panel Urinal Screen: Matching panel construction.
- E. Facing Sheets and Closures: Hot-dip galvanized-steel sheet with nominal base-metal (uncoated) thicknesses as follows:
 1. Pilasters, Unbraced at One End: Manufacturer's standard thickness, but not less than 0.048 inch (1.21 mm).
 2. Panels: Manufacturer's standard thickness, but not less than 0.036 inch (0.91 mm).

METAL TOILET COMPARTMENTS

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3. Doors: Manufacturer's standard thickness, but not less than 0.030 inch (0.76 mm).
 4. Flat-Panel Urinal Screens: Thickness matching the panels.
- F. Pilaster Sleeves (Caps): Stainless steel sheet, not less than 0.031-inch (0.79-mm) nominal thickness and 3 inches (76 mm) high, finished to match hardware.
- G. Brackets (Fittings):
1. Full-Height (Continuous) Type: Manufacturer's standard double-ear design; extruded aluminum or stainless steel.
- H. Steel Sheet Finish: Immediately after cleaning and pretreating, apply manufacturer's standard baked-on finish, including thermosetting, electrostatically applied, and powder coatings. Comply with coating manufacturer's written instructions for applying and baking.
1. Color: As selected by Architect from manufacturer's full range.
 - a. Allow for application of one color in each room.

2.4 HARDWARE AND ACCESSORIES

- A. Hardware and Accessories: Manufacturer's heavy-duty operating hardware and accessories.
1. Hinges: Manufacturer's minimum 0.062-inch- (1.59-mm-) thick, stainless steel continuous, cam type that swings to a closed or partially open position, allowing emergency access by lifting door. Mount with through-bolts.
 2. Latch and Keeper: Manufacturer's heavy-duty, surface-mounted, cast stainless steel latch unit designed to resist damage due to slamming, with combination rubber-faced door strike and keeper and with provision for emergency access. Provide units that comply with regulatory requirements for accessibility at compartments designated as accessible. Mount with through-bolts.
 3. Coat Hook: Manufacturer's heavy-duty, combination cast stainless steel hook and rubber-tipped bumper, sized to prevent in-swinging door from hitting compartment-mounted accessories. Mount with through-bolts.
 4. Door Bumper: Manufacturer's heavy-duty, rubber-tipped, cast stainless steel bumper at out-swinging doors. Mount with through-bolts.
 5. Door Pull: Manufacturer's heavy-duty cast stainless steel pull at out-swinging doors that complies with regulatory requirements for accessibility. Provide units on both sides of doors at compartments designated as accessible. Mount with through-bolts.
 6. Partition Privacy Strip: Full-height extruded aluminum visual screen to conceal gap between door and pilaster.
 - a. Size: 60 inches (1524 mm) long by 1 1/8 inches (28.5 mm) wide.
 - b. Suppliers:
 - 1) Partitions and Stalls; part number 9A1219.
 - 2) All Partitions and Parts; part number A121974.

- B. Anchorages and Fasteners: Manufacturer's standard exposed fasteners of stainless steel, finished to match the items they are securing, with theft-resistant-type heads. Provide sex-type bolts for through-bolt applications. For concealed anchors, use stainless steel, hot-dip galvanized steel, or other rust-resistant, protective-coated steel compatible with related materials.

2.5 MATERIALS

- A. Aluminum Castings: ASTM B26/B26M.
- B. Aluminum Extrusions: ASTM B221 (ASTM B221M).
- C. Steel Sheet: Commercial steel sheet for exposed applications; mill phosphatized and selected for smoothness.
 - 1. Hot-Dip Galvanized: ASTM A653/A653M, either hot-dip galvanized or galvanized.
- D. Stainless Steel Sheet: ASTM A240/A240M or ASTM A666, Type 304, stretcher-leveled standard of flatness.
- E. Stainless Steel Castings: ASTM A743/A743M.

2.6 FABRICATION

- A. Fabrication, General: Fabricate toilet compartment components to sizes indicated. Coordinate requirements and provide cutouts for through-partition toilet accessories, and solid blocking within panel where required for attachment of toilet accessories.
- B. Ceiling-Hung Units: Provide manufacturer's standard corrosion-resistant anchoring assemblies with leveling adjustment nuts at pilasters for connection to structural support above finished ceiling. Provide assemblies that support pilasters from structure without transmitting load to finished ceiling. Provide sleeves (caps) at tops of pilasters to conceal anchorage.
- C. Door Size and Swings: Unless otherwise indicated, provide 24-inch- (610-mm-) wide, in-swinging doors for standard toilet compartments and 36-inch- (914-mm-) wide, out-swinging doors with a minimum 32-inch- (813-mm-) wide, clear opening for compartments designated as accessible.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas and conditions, with Installer present, for compliance with requirements for fastening, support, alignment, operating clearances, and other conditions affecting performance of the Work.
 - 1. Confirm location and adequacy of blocking and supports required for installation.

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- B. Proceed with installation only after unsatisfactory conditions have been corrected.
- C. Coordinate layout and installation of supports, inserts, and anchors built into other units of work for toilet compartment anchorage.

3.2 INSTALLATION

- A. General: Comply with manufacturer's written installation instructions. Install units rigid, straight, level, and plumb. Secure units in position indicated with manufacturer's recommended anchoring devices.
 - 1. Maximum Clearances:
 - a. Between Pilasters and Panels: 1/2 inch (13 mm).
 - b. Between Panels and Walls: 1 inch (25 mm).
 - 2. Full-Height (Continuous) Brackets: Secure panels to walls and to pilasters with full-height double-ear brackets.
 - a. Locate bracket fasteners so holes for wall anchors occur in masonry or tile joints.
 - b. Align brackets at pilasters with brackets at walls.
- B. Ceiling-Hung Units: Secure pilasters to supporting structure and level, plumb, and tighten. Hang doors and adjust so bottoms of doors are level with bottoms of pilasters when doors are in closed position.
- C. Urinal Screens: Attach with anchoring devices to suit supporting structure. Set units level and plumb, rigid, and secured to resist lateral impact.
- D. Partition Privacy Strips: Install in accordance with manufacturer's installation instructions, with stainless steel screws. Provide two strips per toilet compartment door (hinge side and latch side).

3.3 ADJUSTING

- A. Hardware Adjustment: Adjust and lubricate hardware according to hardware manufacturer's written instructions for proper operation. Set hinges on in-swinging doors to hold doors open approximately 30 degrees from closed position when unlatched. Set hinges on out-swinging doors to return doors to fully closed position.

END OF SECTION

SECTION 10 21 17

PLASTIC TOILET COMPARTMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Solid-plastic toilet compartments configured as toilet enclosures and urinal screens.

B. Related Requirements:

1. Section 05 50 00 "Metal Fabrications" for supports that attach ceiling-hung compartments and post-to-ceiling screens to overhead structural system.
2. Section 06 10 53 "Miscellaneous Rough Carpentry" for in-wall blocking.
3. Section 10 28 13 "Toilet Accessories" for toilet tissue dispensers, grab bars, purse shelves, and similar accessories mounted on toilet compartments.

1.2 COORDINATION

- A. Coordinate requirements for overhead supports, blocking, reinforcing, and other supports concealed within wall and ceiling.

1.3 ACTION SUBMITTALS

A. Product Data:

1. Solid-plastic toilet compartments:
 - a. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for toilet compartments.

B. Shop Drawings: For solid-plastic toilet compartments.

1. Include plans, elevations, sections, details, and attachment details.
2. Show locations of cutouts for compartment-mounted toilet accessories.
3. Show locations of centerlines of toilet fixtures.
4. Show locations of floor drains.
5. Show ceiling grid, ceiling-mounted items, and overhead support or bracing locations.

C. Samples for Verification: Actual sample of finished products for each type of toilet compartment indicated.

1. Size: 6-inch- (152-mm-) square, of same thickness indicated for Work.
2. Include each type of hardware and accessory.

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- D. Product Schedule: For toilet compartments, prepared by or under the supervision of supplier, detailing location and selected colors for toilet compartment material.

1.4 INFORMATIONAL SUBMITTALS

- A. Product Certificates: For each type of toilet compartment.
- B. Sample warranties.

1.5 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For toilet compartments.

1.6 MAINTENANCE MATERIAL SUBMITTALS

- A. Extra Stock Material: Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1. Door Hinges: Four hinges with associated fasteners.
 - 2. Latch and Keeper: Four latches and keepers with associated fasteners.
 - 3. Door Bumper: Four bumpers with associated fasteners.
 - 4. Door Pull: Two door pulls with associated fasteners.
 - 5. Fasteners: 20 fasteners of each size and type.

1.7 QUALITY ASSURANCE

- A. Installer Qualifications: A company regularly engaged in installation of products specified in this Section, with a minimum of 10 years' experience, and authorized or approved by toilet compartment manufacturer.

1.8 FIELD CONDITIONS

- A. Field Measurements: Verify actual locations of toilet fixtures, walls, columns, ceilings, and other construction contiguous with toilet compartments by field measurements, and coordinate before fabrication.

1.9 WARRANTY

- A. Special Warranty: Manufacturers standard warranty for solid polymer HDPE material against breakage, corrosion, and delamination:
 - 1. Warranty Period: Not less than 25 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. Accurate Partitions Corp., an ASI Group Company.
 2. AJW Architectural Products.
 3. American Sanitary Partition Corporation.
 4. Ampco by AJW.
 5. General Partitions Mfg. Corp.
 6. Global Partitions Corp., an ASI Group Company.
 7. Hadrian Manufacturing Inc.
 8. Marlite.
 9. Scranton Products.

2.2 PERFORMANCE REQUIREMENTS

- A. Fire Resistance: Partition materials shall comply with the following requirements, when tested in accordance with ASTM E 84:
1. Class A flame spread/smoke developed rating.
 2. Class B flame spread/smoke developed rating.
- B. Fire Performance: Tested in accordance with, and pass the acceptance criteria of, NFPA 286.
- C. Regulatory Requirements: Comply with applicable provisions in the U.S. Department of Justice "2010 ADA Standards for Accessible Design," ICC A117.1, and Texas Accessibility Standards (TAS) for toilet compartments designated as accessible.

2.3 SOLID-PLASTIC TOILET COMPARTMENTS

- A. Basis of Design: "Hiny Hiders" as manufactured by Scranton Products.
- B. Toilet-Enclosure Style: Ceiling hung.
- C. Urinal-Screen Style: Wall hung, flat panel.
- D. Door, Panel, Screen, and Pilaster Construction: Solid, high-density polyethylene (HDPE) panel material, not less than 1 inch (25 mm) thick, seamless, with eased edges, no-sightline system, and with homogenous color and pattern throughout thickness of material.
1. Integral Hinges: Configure doors and pilasters to receive integral hinges.

2. Heat-Sink Strip: Manufacturer's standard continuous, extruded-aluminum or stainless steel strip fastened to exposed bottom edges of solid-plastic components to hinder malicious combustion.
 3. Color and Pattern: As selected by Architect from manufacturer's full range.
- E. Urinal-Screen Construction:
1. Flat-Panel Urinal Screen: Matching panel construction.
- F. Pilaster Sleeves (Caps): Manufacturer's standard design; stainless steel.
- G. Brackets (Fittings):
1. Full-Height (Continuous) Type: Manufacturer's standard double-ear design; extruded aluminum or stainless steel.
- H. Overhead Cross Bracing for Ceiling-Hung Units: As recommended by manufacturer and fabricated from solid polymer.
- I. No-Sightline Components and Assemblies: Manufacturer's standard.

2.4 HARDWARE AND ACCESSORIES

- A. Hardware and Accessories, Heavy Duty: Manufacturer's heavy-duty operating hardware and accessories.
1. Hinges: Manufacturer's minimum 0.062-inch- (1.59-mm-) thick stainless steel continuous, cam type that swings to a closed or partially open position, allowing emergency access by lifting door. Mount with through bolts.
 2. Latch and Keeper: Manufacturer's heavy-duty, surface-mounted, cast-stainless steel latch unit, designed to resist damage due to slamming, with combination rubber-faced door strike and keeper, and with provision for emergency access. Provide units that comply with regulatory requirements for accessibility at compartments designated as accessible. Mount with through bolts.
 3. Coat Hook: Manufacturer's heavy-duty combination cast-stainless steel hook and rubber-tipped bumper, sized to prevent inswinging door from hitting compartment-mounted accessories. Mount with through bolts.
 4. Door Bumper: Manufacturer's heavy-duty, rubber-tipped, cast-stainless steel bumper at outswinging doors. Mount with through-bolts.
 5. Door Pull: Manufacturer's heavy-duty, cast-stainless steel pull at outswinging doors that complies with regulatory requirements for accessibility. Provide units on both sides of doors at compartments designated as accessible. Mount with through-bolts.
 6. Partition Privacy Strip: Full-height extruded aluminum visual screen to conceal gap between door and pilaster.
 - a. Size: 60 inches (1524 mm) long by 1 1/8 inches (28.5 mm) wide.
 - b. Suppliers:
 - 1) Partitions and Stalls; part number 9A1219.
 - 2) All Partitions and Parts; part number A121974.

- B. Anchorages and Fasteners: Manufacturer's standard exposed fasteners of stainless steel, finished to match the items they are securing, with theft-resistant-type heads. Provide sex-type bolts for through-bolt applications. For concealed anchors, use stainless steel, hot-dip galvanized steel, or other rust-resistant, protective-coated steel compatible with related materials.

2.5 MATERIALS

- A. Aluminum Castings: ASTM B26/B26M.
- B. Aluminum Extrusions: ASTM B221 (ASTM B221M).
- C. Stainless Steel Sheet: ASTM A240/A240M or ASTM A666, Type 304, stretcher-leveled standard of flatness.
- D. Stainless Steel Castings: ASTM A743/A743M.

2.6 FABRICATION

- A. Fabrication, General: Fabricate toilet compartment components to sizes indicated. Coordinate requirements and provide cutouts for through-partition toilet accessories where required for attachment of toilet accessories.
- B. Ceiling-Hung Units: Provide manufacturer's standard corrosion-resistant anchoring assemblies with leveling adjustment nuts at pilasters for connection to structural support above finished ceiling. Provide assemblies that support pilasters from structure without transmitting load to finished ceiling. Provide sleeves (caps) at tops of pilasters to conceal anchorage.
- C. Door Size and Swings: Unless otherwise indicated, provide 24-inch- (610-mm-) wide, inswinging doors for standard toilet compartments and 36-inch- (914-mm-) wide, outswinging doors with a minimum 32-inch- (813-mm-) wide, clear opening for compartments designated as accessible.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and conditions, with Installer present, for compliance with requirements for fastening, support, alignment, operating clearances, and other conditions affecting performance of the Work.
 - 1. Confirm location and adequacy of blocking and supports required for installation.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.
- C. Coordinate layout and installation of supports, inserts, and anchors built into other units of work for toilet compartment anchorage.

3.2 INSTALLATION OF PLASTIC TOILET COMPARTMENTS

- A. General: Comply with manufacturer's written installation instructions. Install units rigid, straight, level, and plumb. Secure units in position with manufacturer's recommended anchoring devices.
 - 1. Maximum Clearances:
 - a. Panels and Walls: 1 inch (25 mm).
 - b. Pilasters and Panels: 1/2 inch (13 mm).
 - c. Doors and Pilasters: Per manufacturer's no-sightline system, but no greater than 3/8-inch (9.5 mm).
 - 2. Full-Height (Continuous) Double-Ear Brackets: Secure panels to walls and to pilasters with full-height brackets.
 - a. Locate bracket fasteners, so holes for wall anchors occur in masonry or tile joints.
 - b. Align brackets at pilasters with brackets at walls.
- B. Ceiling-Hung Units: Secure pilasters to supporting structure and level, plumb, and tighten. Hang doors and adjust, so bottoms of doors are level with bottoms of pilasters when doors are in closed position.
- C. Urinal Screens: Attach with anchoring devices to suit supporting structure. Set units level and plumb, rigid, and secured to resist lateral impact.
- D. Partition Privacy Strips: Install in accordance with manufacturer's installation instructions, with stainless steel screws. Provide two strips per toilet compartment door (hinge side and latch side).

3.3 ADJUSTING

- A. Hardware Adjustment: Adjust and lubricate hardware according to hardware manufacturer's written instructions for proper operation. Set hinges on inswinging doors to hold doors open approximately 30 degrees from closed position when unlatched. Set hinges on outswinging doors to return doors to fully closed position.

END OF SECTION

SECTION 10 22 39
FOLDING PANEL PARTITIONS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes the following:
 - 1. Manually operated, single-panel acoustical panel partitions.
 - 2. Manually operated, paired-panel acoustical panel partitions.
 - 3. Storage pocket doors.

- B. Related Requirements:
 - 1. Section 05 50 00 "Metal Fabrications" for supports that attach supporting tracks to overhead structural system.
 - 2. Section 09 72 00 "Wall Coverings" for finish material to be factory-applied to folding panel partitions.

1.2 DEFINITIONS

- A. NIC: Noise isolation class.
- B. NRC: Noise reduction coefficient.
- C. STC: Sound transmission class.

1.3 PREINSTALLATION MEETINGS

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

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: For operable panel partitions.
 - 1. Include plans, elevations, sections, attachment details, and numbered panel installation sequence.
 - 2. Indicate stacking and operating clearances. Indicate location and installation requirements for hardware and track, blocking, and direction of travel.
 - 3. Include diagrams for power, signal, and control wiring.

- C. Samples for Verification: For each type of exposed finish required, prepared on Samples of size indicated below and of same thickness and material indicated for the Work.

1.5 INFORMATIONAL SUBMITTALS

- A. Setting Drawings: For embedded items and cutouts required in other work, including support-beam, mounting-hole template.
- B. Qualification Data: For Installer.
- C. Field Test Reports: Indicate and interpret test results for compliance with performance requirements.
- D. Product Test Reports: From a qualified testing agency indicating that each operable panel partition complies with requirements, based on comprehensive testing of current products.
- E. Sample Warranty: For manufacturer's special warranty.

1.6 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: For operable panel partitions to include in maintenance manuals.
 - 1. In addition to items specified in Section 01 78 23 "Operation and Maintenance Data," include the following:
 - a. Panel finish facings and finishes for exposed trim and accessories. Include precautions for cleaning materials and methods that could be detrimental to finishes and performance.
 - b. Seals, hardware, track, carriers, and other operating components.

1.7 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials, from the same production run, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1. Panel Finish-Facing Material: Furnish full width in quantity to cover both sides of two panels when installed.

1.8 QUALITY ASSURANCE

- A. Installer Qualifications: An experienced installer who is certified in writing by the operable panel partition manufacturer as qualified to install the manufacturer's partition systems for work similar in material, design, and extent to that indicated for this Project.

1.9 DELIVERY, STORAGE, AND HANDLING

- A. Protectively package and sequence panels in order for installation. Clearly mark packages and panels with numbering system used on Shop Drawings. Do not use permanent markings on panels.

1.10 FIELD CONDITIONS

- A. Field Measurements: Verify operable panel partition openings and storage arrangements by field measurements before fabrication and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

1.11 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace components of operable panel partitions that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Faulty operation of operable panel partitions.
 - b. Deterioration of metals, metal finishes, and other materials beyond normal use.
 - 2. Warranty Period:
 - a. Partition Warranty: Two years from date of Substantial Completion.
 - b. Suspension System Warranty: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Foldoor/Holcomb & Hoke Mfg. Co., Inc.
 - 2. Hufcor Inc.
 - 3. Kwik-Wall Co.
 - 4. Modernfold, Inc.
 - 5. Panelfold, Inc.

2.2 PERFORMANCE REQUIREMENTS

- A. Acoustical Performance: Provide operable panel partitions tested by a qualified testing agency for the following acoustical properties according to test methods indicated:

1. Sound-Transmission Requirements: Operable panel partition assembly tested for laboratory sound-transmission loss performance according to ASTM E90, determined by ASTM E413, and rated for not less than the STC indicated.
 2. Noise-Reduction Requirements: Operable panel partition assembly, identical to partition tested for STC, tested for sound-absorption performance according to ASTM C423, and rated for not less than the NRC indicated.
 3. Noise-Isolation Requirements: Installed operable panel partition assembly, identical to partition tested for STC, tested for NIC according to ASTM E336, determined by ASTM E413, and rated for 10 dB less than STC value indicated.
- B. Fire-Test-Response Characteristics: Provide panels with finishes complying with one of the following as determined by testing identical products by a testing and inspecting agency acceptable to authorities having jurisdiction:
1. Surface-Burning Characteristics: Comply with ASTM E84; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
 - a. Flame-Spread Index: 25 or less.
 - b. Smoke-Developed Index: 450 or less.

2.3 FOLDING PANEL PARTITIONS

- A. Operable Acoustical Panels: Partition system, including panels, seals, finish facing, suspension system, operators, and accessories.
1. Operable Partition Type 1: Single-Panel.
 - a. Configuration: Series of individual flat panels, manually operated, top supported, with operable floor seals and automatic top seals.
 - b. Basis of Design Product: "Acousti-Seal" Encore manually operated single panel operable partition as manufactured by Modernfold, Inc.
 - c. Refer to Operable Panel Partition Schedule at the end of PART 3.
 2. Operable Partition Type 2: Paired-Panel.
 - a. Configuration: Series of paired flat panels hinged together in pairs, manually operated, top supported, with operable floor seals and automatic top seals.
 - b. Basis of Design Product: "Acousti-Seal" Encore manually operated paired-panel operable partition as manufactured by Modernfold, Inc.
 - c. Refer to Operable Panel Partition Schedule at the end of PART 3.

2.4 MATERIALS

- A. Steel Frame: Steel sheet, not less than 0.0598-inch(1.5-mm) nominal specified thickness for uncoated steel.
- B. Aluminum: Alloy and temper recommended by aluminum producer and finisher for type of use, corrosion resistance, and finish indicated; ASTM B 221 (ASTM B 221M) for extrusions; manufacturer's standard strengths and thicknesses for type of use.

FOLDING PANEL PARTITIONS

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1. Frame Reinforcing: Manufacturer's standard steel or aluminum.

C. Steel Face/Liner Sheets: Tension-levleed steel sheet, not less than 0.0359-inch (0.9-mm) nominal specified thickness for uncoated steel.

2.5 FOLDING PANEL PARTITIONS

A. Panel Construction: Provide top reinforcement as required to support panel from suspension components and provide reinforcement for hardware attachment. Fabricate panels with tight hairline joints and concealed fasteners. Fabricate panels so finished in-place partition is rigid; level; plumb; aligned, with tight joints and uniform appearance; and free of bow, warp, twist, deformation, and surface and finish irregularities.

B. Dimensions: Fabricate operable panel partitions, from manufacturer's standard sizes, to form an assembled system of dimensions indicated on Drawings and verified by field measurements.

C. Operable Panel Partition Characteristics: Comply with requirements indicated in the Operable Panel Partition Schedule at the end of PART 3.

D. Hardware: Manufacturer's standard as required to operate operable panel partition and accessories; with decorative, protective finish.

2.6 SEALS

A. General: Provide types of acoustical seals indicated that produce operable panel partitions complying with acoustical performance requirements and the following:

1. Seals made from materials and profiles that minimize sound leakage.
2. Seals fitting tight at contact surfaces and sealing continuously between adjacent panels and between operable panel partition perimeter and adjacent surfaces, when operable panel partition is extended, closed, and in place.

B. Vertical Seals: Deep-nesting, interlocking astragals mounted on each edge of panel, with continuous PVC acoustical seal.

C. Horizontal Top Seals: Resilient, mechanical, retractable, constant-force-contact seal exerting uniform constant pressure on track when extended.

D. Horizontal Bottom Seals: Resilient, mechanical, retractable, constant-force-contact seal exerting uniform constant pressure on floor when extended, ensuring horizontal and vertical sealing and resisting panel movement.

1. Mechanically Operated for Acoustical Panels: Extension and retraction of bottom seal by operating handle or built-in operating mechanism, with operating range not less than 2 inches (50 mm) between retracted seal and floor finish.
2. Provide two hand-crank tools to lower seals per each run of panels.

FOLDING PANEL PARTITIONS

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2.7 FINISH FACING

- A. General: Provide finish facings that comply with indicated fire-test-response characteristics and that are factory applied to operable panel partitions with appropriate backing, using mildew-resistant non-staining adhesive as recommended by facing manufacturer's written instructions.
1. Apply one-piece, seamless facings free from air bubbles, wrinkles, blisters, and other defects, with edges tightly butted, and with invisible seams complying with Shop Drawings for location, and with no gaps or overlaps. Horizontal seams are not permitted.
 - a. Tightly secure and conceal raw and selvage edges of facing for finished appearance.
 2. Where facings with directional or repeating patterns or directional weave are indicated, mark facing top and attach facing in same direction.
 3. Match facing pattern 72 inches (1830 mm) above finished floor.
- B. Vinyl-Coated Fabric Wall Covering: Mildew-resistant, washable, vinyl-coated fabric wall covering; complying with WA-101, Type II-Medium Duty; Class A.
1. Antimicrobial Treatment: Additives capable of inhibiting growth of bacteria, fungi, and yeasts.
 2. Color/Pattern: As Specified in Section 09 72 00 "Wall Coverings."

2.8 SUSPENSION SYSTEMS

- A. Suspension Tracks: Minimum 7-gage, 0.18-inch (4.57mm) roll-formed steel mounted directly to overhead structural support, designed for type of operation, size, and weight of operable panel partition indicated. Size track to support partition operation and storage without damage to suspension system, operable panel partitions, or adjacent construction. Limit track deflection to no more than 0.10 inch (2.5 mm) between bracket supports.
1. Provide a continuous system of track sections and accessories to accommodate configuration and layout indicated for partition operation and storage.
 2. Panel Guide: Aluminum; finished with factory-applied, decorative, protective finish.
 3. Head Closure Trim / Soffit: Steel, removable for service and maintenance, attached to track bracket without exposed fasteners; with factory-applied, decorative, protective finish.
- B. Carriers: All-steel trolley system as required for configuration type, size, and weight of partition and for easy operation; with steel-tired ball-bearing wheels.
1. Multidirectional Carriers: Capable of negotiating intersections without track switches.

- C. Track Intersections, Switches, and Accessories: As required for type of operation, storage, track configuration, and layout indicated for operable panel partition, and compatible with partition assembly specified. Fabricate track intersections and switches from steel or aluminum.
 - 1. L Intersections: Allow panels to change 90 degrees in direction of travel.
 - 2. T Intersections: Allow panels to pass through or change 90 degrees to another direction of travel.
 - 3. X Intersections: Allow panels to pass through or change travel direction full circle in 90-degree increments, and allow one partition to cross track of another.
 - 4. Center carrier stop.
- D. Aluminum Finish: Mill finish or manufacturer's standard, factory-applied, decorative finish, unless otherwise indicated.
- E. Steel Finish: Factory-applied, corrosion-resistant, protective coating, unless otherwise indicated.

2.9 ACCESSORIES

- A. Storage Pocket Door: Full height at end of partition runs to conceal stacked partition; of same materials, finish, construction, thickness, and acoustical qualities as panels; complete with operating hardware and acoustical seals at soffit, floor, and jambs. Hinges in finish to match other exposed hardware.
 - 1. Pocket Door Configuration: Manually operated double door hinged to a jamb on each side and closing in the center.
 - 2. Manufacturer's standard recessed pull and latch to secure storage pocket door in closed position.
- B. Work Surfaces: Quantities, placement, and size as indicated on Drawings.
 - 1. Surface: Porcelain steel marker/projection surface.
 - 2. Surface Color: As selected by Architect from manufacturer's full range.
 - 3. Size: Full width of panel by 48 inches (1219 mm).
 - 4. Trim: Aluminum horizontal slip-on or snap-on trim with no visible screws.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine flooring, structural support, and opening, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of operable panel partitions.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. General: Comply with ASTM E 557, operable panel partition manufacturer's written installation instructions, Drawings, and approved Shop Drawings.
- B. Install operable panel partitions and accessories after other finishing operations, including painting, have been completed in area of partition installation.
- C. Install panels in numbered sequence indicated on Shop Drawings.
- D. Broken, cracked, chipped, deformed, or unmatched panels are not acceptable.
- E. Broken, cracked, deformed, or unmatched gasketing or gasketing with gaps at butted ends is not acceptable.
- F. Light-Leakage Test: Illuminate one side of partition installation and observe vertical joints and top and bottom seals for voids. Adjust partitions for alignment and full closure of vertical joints and full closure along top and bottom seals.

3.3 ADJUSTING

- A. Adjust operable panel partitions to operate smoothly, easily, and quietly, free from binding, warp, excessive deflection, distortion, nonalignment, misplacement, disruption, or malfunction, throughout entire operational range. Lubricate hardware and other moving parts.
- B. Adjust pass doors and pocket doors to operate smoothly and easily, without binding or warping. Check and readjust operating hardware. Confirm that latches and locks engage accurately and securely without forcing or binding.

3.4 CLEANING AND PROTECTION

- A. Clean soiled surfaces, metal surfaces, on completing installation of operable panel partitions, to remove dust, loose fibers, fingerprints, adhesives, and other foreign materials according to manufacturer's written instructions.
- B. Provide final protection and maintain conditions, in a manner acceptable to manufacturer and Installer, that ensure operable panel partitions are without damage or deterioration at time of Substantial Completion.
- C. Replace panels that cannot be cleaned and repaired, in a manner approved by Architect, before time of Substantial Completion.

3.5 DEMONSTRATION

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain operable panel partitions.

1. Test and adjust seals, hardware, carriers, tracks, pass doors, pocket doors, exit signs, and other operable components. Replace damaged or malfunctioning operable components.
2. Train Owner's maintenance personnel on procedures and schedules for starting and stopping, troubleshooting, servicing, and maintaining equipment and schedules.
3. Review data in maintenance manuals. Refer to Division 01 Section "Operation and Maintenance Data."
4. Schedule training with Owner, through Architect, with at least seven days' advance notice.

3.6 OPERABLE PANEL PARTITION SCHEDULE

- A. Operable Panel Partition Type 1: Comply with the following:
1. Basis of Design Product: "Acousti-Seal" Encore Single Panel by Modernfold.
 2. Partition Operation and Configuration: Manually operated, single panels.
 3. Steel-Frame Panel Construction: Horizontal and vertical framing members fabricated from minimum 16-gage formed steel with overlapped and welded corners for rigidity. Reinforce top channel to support suspension system components. Design frame so that full vertical edges of panels are of formed steel and provide concealed protection of the edges of the panel skin.
 4. Panel Skin: Manufacturer's standard roll-formed steel wrapping around panel edge. Panel skins shall be lock formed and welded directly to the frame for unitized construction.
 5. STC: Not less than 54.
 6. Panel Weight: 9.5 lb/sq. ft.
 7. Panel Thickness: Not less than 4 1/4 inches (108 mm).
 8. Panel Edges: Trimless.
 9. Panel Hinges for Pocket Doors:
 - a. Hinges: SOSS® Invisible laminated hinge with antifriction segments mounted between each heat-treated link. Hinge to be attached directly to panel frame. Welded internal hinge bracket shall support the hinge and allow for adjustment of hinge plates.
 10. Vertical Interlocking Sound Seals: Roll-formed steel astragals, with tongue and groove configuration in each panel edge.
 11. Horizontal Seals:
 - a. Top Seals: Modernfold "SureSet" automatic operable top seals.
 - b. Bottom Seals: Modernfold SM2 - Manually activated seals providing nominal 2-inch (51 mm) operating clearance with an operating range of +1/2-inch (13 mm) to -1-1/2-inch (38 mm). Seal shall be operable from panel edge or face. Extended seal shall exert nominal 120 pounds (54 kg) downward force to the floor throughout operating range.
 12. Finish Facing: As Specified in Section 09 72 00 "Wall Coverings."

13. Hardware Color: As selected by Architect from manufacturer's complete line.

B. Operable Panel Partition Type 2: Comply with the following:

1. Basis of Design Product: "Acousti-Seal" Encore Paired Panel by Modernfold.
2. Partition Operation and Configuration: Manually operated, paired panels.
3. Steel-Frame Panel Construction: Horizontal and vertical framing members fabricated from minimum 16-gage formed steel with overlapped and welded corners for rigidity. Reinforce top channel to support suspension system components. Design frame so that full vertical edges of panels are of formed steel and provide concealed protection of the edges of the panel skin.
4. Panel Skin: Manufacturer's standard roll-formed steel wrapping around panel edge. Panel skins shall be lock formed and welded directly to the frame for unitized construction.
5. STC: Not less than 54.
6. Panel Weight: 9.5 lb/sq. ft.
7. Panel Thickness: Not less than 4 1/4 inches (108 mm).
8. Panel Edges: Trimless.
9. Panel Hinges for Panels, Closure Panels, and Pocket Doors:
 - a. Hinges: SOSS® Invisible laminated hinge with antifriction segments mounted between each heat-treated link. Hinge to be attached directly to panel frame. Welded internal hinge bracket shall support the hinge and allow for adjustment of hinge plates.
10. Vertical Interlocking Sound Seals: Roll-formed steel astragals, with tongue and groove configuration in each panel edge.
11. Horizontal Seals:
 - a. Top Seals: Modernfold "SureSet" automatic operable top seals.
 - b. Bottom Seals: Modernfold SM2 - Manually activated seals providing nominal 2-inch (51 mm) operating clearance with an operating range of +1/2-inch (13 mm) to -1-1/2-inch (38 mm). Seal shall be operable from panel edge or face. Extended seal shall exert nominal 120 pounds (54 kg) downward force to the floor throughout operating range.
12. Finish Facing: As Specified in Section 09 72 00 "Wall Coverings."
13. Hardware Color: As selected by Architect from manufacturer's complete line.

END OF SECTION

SECTION 10 26 13

CORNER GUARDS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following:
 - 1. Surface-mounted metal corner guards.
 - 2. Surface-mounted, opaque-plastic corner guards.

1.2 ACTION SUBMITTALS

- A. Product Data: Include physical characteristics, such as durability, resistance to fading, and flame resistance, for each corner guard component indicated.
- B. Shop Drawings: For each wall and corner guard unit showing locations and extent. Include sections, details, and attachments to other work.
- C. Samples for Verification: For the following products, showing the full range of color and texture variations expected in each component.
 - 1. Corner Guards: 12-inch-(300-mm-) long Samples of each type of corner guard required.

1.3 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For each type of corner guard product to include in maintenance manuals.
 - 1. Include recommended methods and frequency of maintenance for maintaining best condition of plastic covers under anticipated traffic and use conditions. Include precautions against using cleaning materials and methods that may be detrimental to finishes and performance.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Store corner guard materials in original undamaged packages and containers inside a well-ventilated area protected from weather, moisture, soiling, extreme temperatures, and humidity.
 - 1. Keep plastic materials out of direct sunlight.
 - 2. Store plastic wall- and door-protection components for a minimum of 72 hours, or until plastic material attains a minimum room temperature of 70 deg F (21 deg C).
 - a. Store corner-guard covers in a vertical position.

1.5 PROJECT CONDITIONS

- A. Field Measurements: Verify actual locations of walls, columns, and other construction contiguous with corner guard units by field measurements before fabrication and indicate measurements on Shop Drawings.

1.6 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials described below, before installation begins, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1. Corner Guard Units: Full-size units of maximum length, equal to 2 percent of each type, color, and texture of each type of unit installed, but not less than two units.
 - a. Include accessory components as required. Replacement materials shall be from the same production run as materials installed. Package replacement materials with protective covering, identified with appropriate labels.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Source Limitations: Obtain each color, grade, finish, and type of corner guard from a single source with resources to provide components of consistent quality in appearance and physical properties.

2.2 PERFORMANCE REQUIREMENTS

- A. Surface Burning Characteristics: Comply with ASTM E84 or UL 723; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
 - 1. Flame-Spread Index: 25 or less.
 - 2. Smoke-Developed Index: 450 or less.

2.3 PLASTIC CORNER GUARDS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Activar Construction Products.
 - 2. Babcock-Davis.
 - 3. Construction Specialties, Inc.
 - 4. Inpro Corporation.
 - 5. Korogard Wall Protection Systems.
 - 6. Pawling Corporation.

- B. Surface-Mounted, Opaque-Plastic Corner Guards: Fabricated as one piece from PVC-free plastic or acrylic-modified vinyl sheet; with formed edges; fabricated with 90- or 135-degree turn to match wall condition.
 - 1. Wing Size: Nominal 1-1/2 by 1-1/2 inches (38 by 38 mm).
 - 2. Corner Guard Length: 48 inches (1219 mm) unless otherwise indicated.
 - 3. Corner Radius: To suit partition types as follows:
 - a. Gypsum Board Assemblies: 1/8 inch (3 mm).
 - 4. Mounting: Adhesive.
 - 5. Color and Texture: As selected by Architect from manufacturer's full range.

2.4 METAL CORNER GUARDS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Activar Construction Products.
 - 2. Babcock-Davis.
 - 3. Balco, Inc.
 - 4. Construction Specialties, Inc.
 - 5. Inpro Corporation.
 - 6. Korogard Wall Protection Systems.
 - 7. Nystrom.
 - 8. Pawling Corporation.
- B. Surface-Mounted, Metal Corner Guards: Fabricated from 1-piece, formed or extruded metal with formed edges; with 90- or 135-degree turn to match wall condition, or custom radius or bullnose profile at cast-in-place or CMU corner locations as indicated below.
 - 1. Material: Stainless steel, Type 304.
 - a. Thickness: Minimum 0.0625 inch (1.6 mm).
 - b. Finish: Directional satin, No. 4.
 - 2. Wing Size: Nominal 3-1/2 by 3-1/2 inches (90 by 90 mm).
 - 3. Corner Guard Length: 48 inches (1219 mm) unless otherwise indicated.
 - 4. Corner Radius: To suit partition types as follows:
 - a. Gypsum Board Assemblies: 1/8 inch (3 mm).
 - 5. Mounting: Adhesive.

2.5 MATERIALS

- A. Plastic Materials: Chemical- and stain-resistant, high-impact-resistant plastic with integral color throughout; extruded and sheet material as required, in thickness as indicated.
- B. Stainless-Steel Sheet: ASTM A 240/A 240M.

- C. Fasteners: Provide nonmagnetic oval-head stainless-steel screws, countersunk.
- D. Adhesive: Type recommended by manufacturer for use with material being adhered to substrate indicated, with a VOC content of 70 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

2.6 FABRICATION

- A. General: Fabricate corner guards to comply with requirements indicated for design, dimensions, details, finish, and member sizes, including thicknesses of components.
- B. Fabricate components with tight seams and joints with exposed edges rolled. Provide surfaces free of wrinkles, chips, dents, uneven coloration, and other imperfections. Fabricate members and fittings to produce flush, smooth, and rigid hairline joints.

2.7 METAL FINISHES

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
 - 1. Remove tool and die marks and stretch lines or blend into finish.
 - 2. Grind and polish surfaces to produce uniform, directionally textured, polished finish indicated, free of cross scratches. Run grain with long dimension of each piece.
- B. When polishing is completed, passivate and rinse surfaces. Remove embedded foreign matter and leave surfaces chemically clean.
- C. Protect finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and wall areas, with Installer present, for compliance with requirements for installation tolerances, fire rating, and other conditions affecting performance of work.
- B. Examine walls to corner guards will be attached for blocking, grounds, and other solid backing that have been installed in the locations required for secure attachment of support fasteners.
 - 1. For corner guards attached with adhesive, verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Complete finishing operations, including painting, before installing wall protection system components.
- B. Before installation, clean substrate to remove dust, debris, and loose particles.

3.3 INSTALLATION

- A. Install wall protection components level, plumb, and true to line without distortions. Do not use materials with chips, cracks, voids, stains, or other defects that might be visible in the finished Work.
 - 1. Mounting Heights: Install wall and door protection in locations and at mounting heights indicated on Drawings. If not indicated on Drawings, set bottom of corner guard at top of scheduled base material.

3.4 CLEANING

- A. Immediately after completion of installation, clean plastic covers and accessories using a standard cleaning agent recommended by corner guard manufacturer. Clean metal components according to the manufacturer's written instructions.
- B. Remove excess adhesive using methods and materials recommended by the manufacturer.

END OF SECTION

Project Name
Project Number

Deliverable
Issue Date

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CORNER GUARDS
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Last Updated:

August 2021

SECTION 10 28 13
TOILET ACCESSORIES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
1. Washroom accessories.
 2. Hand dryers.
 3. Shower accessories.
 4. Breakroom accessories.
 5. Custodial accessories.
 6. Underlavatory guards.

1.2 COORDINATION

- A. Coordinate accessory locations with other work to prevent interference with clearances required for access by people with disabilities, and for proper installation, adjustment, operation, cleaning, and servicing of accessories.
- B. Deliver inserts and anchoring devices set into concrete or masonry as required to prevent delaying the work.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
 2. Include anchoring and mounting requirements, including requirements for cutouts in other work and substrate preparation.
 3. Include electrical characteristics.
- B. Samples: Submit full size units for each exposed product and for each finish specified.
- C. Product Schedule: Schedule indicating types, quantities, sizes, and installation locations by room of each accessory required.
1. Identify locations using room designations indicated.
 2. Identify accessories using designations indicated.

1.4 INFORMATIONAL SUBMITTALS

- A. Sample Warranty: For manufacturer's special warranties.

1.5 CLOSEOUT SUBMITTALS

- A. Maintenance Data: Submit data for accessories to include in maintenance manuals.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Deliver inserts and rough in frames at project site at appropriate time for building in. Provide templates and rough in measurements as required.
- B. Pack accessories individually to protect accessory and its finish.
- C. Remove damaged materials from the site.

1.7 WARRANTY

- A. Manufacturer's Special Warranty for Mirrors: Manufacturer agrees to repair or replace mirrors that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, visible silver spoilage defects.
 - 2. Warranty Period: 15 years from date of Substantial Completion.
- B. Manufacturer's Special Warranty for Hand Dryers: Manufacturer agrees to repair or replace hand dryers that fail in materials or workmanship within specified warranty period.
 - 1. Warranty Period: Two years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. Structural Performance: Design accessories and fasteners to comply with the following requirements:
 - 1. Grab Bars: Installed units are able to resist 250 lbf (1112 N) concentrated load applied in any direction and at any point.
 - 2. Shower Seats: Installed units are able to resist 360 lbf (1601 N) applied in any direction and at any point.

2.2 MANUFACTURERS

- A. Basis of Design: Indicated on Drawings. Subject to compliance with requirements, provide basis of design accessories or comparable by one of the following:

1. American Specialties, Inc. (ASI)
2. Bobrick Washroom Equipment Co.
3. Bradley Corporation.
4. GAMCO Specialty Accessories; a division of Bobrick.
5. Gatco, inc.

- B. Source Limitations: Obtain toilet accessories from single source from single manufacturer.

2.3 WASHROOM ACCESSORIES

- A. Toilet Tissue Dispenser: Surface mounted.
1. Basis of Design manufacturer: Bobrick.
 2. Basis of Design Product: B-3888.
- B. Toilet Tissue Dispenser, Alternate: Surface mounted.
1. Basis of Design manufacturer: Bobrick.
 2. Basis of Design Product: B-2892.
- C. Toilet Seat Cover Dispenser: Surface mounted.
1. Basis of Design manufacturer: Bobrick.
 2. Basis of Design Product: B-221.
- D. Sanitary Product Disposal: Surface mounted.
1. Basis of Design manufacturer: Bobrick.
 2. Basis of Design Product: B-270.
- E. Utility Shelf: Surface mounted.
1. Basis of Design manufacturer: Bobrick.
 2. Basis of Design Product: B-287.
- F. Clothes Hook with Bumper, Toilet Stalls: Surface mounted.
1. Basis of Design manufacturer: Bobrick.
 2. Basis of Design Product: B-212.
- G. Robe Hook, Restrooms: Surface mounted.
1. Basis of Design manufacturer: Bobrick.
 2. Basis of Design Product: B-6777.
- H. Framed Mirrors: Surface mounted.
1. Basis of Design manufacturer: Bobrick.
 2. Basis of Design Product: B-290 series.
 3. Size: As indicated on Drawings.

- I. Sanitary Product Vending:
 - 1. Basis of Design manufacturer: Bobrick.
 - 2. Basis of Design Product: B-3706.
 - 3. Mounting: Semi-recessed in wall; surface mounted at toilet partitions.

 - J. Combination Towel Dispenser / Waste Receptacle: Recessed.
 - 1. Basis of Design manufacturer: Bobrick.
 - 2. Basis of Design Product: B-3961.

 - K. Rolled Paper Towel Dispenser: Surface mounted.
 - 1. Basis of Design manufacturer: Bobrick.
 - 2. Basis of Design Product: B-2860.

 - L. Waste Receptacle: Semi-Recessed.
 - 1. Basis of Design manufacturer: Bobrick.
 - 2. Basis of Design Product: B-3644.

 - M. Liquid Soap Dispenser: Lavatory mounted.
 - 1. Basis of Design manufacturer: Rubbermaid.
 - 2. Basis of Design Product: FG401544 / RCPFG401544.

 - N. Liquid Soap Dispenser: Wall mounted.
 - 1. Basis of Design manufacturer: Bobrick.
 - 2. Basis of Design Product: B-2111.

 - O. Grab Bars: Surface mounted.
 - 1. Basis of Design manufacturer: Bobrick.
 - 2. Basis of Design Product: B-6806.
 - 3. Applications:
 - a. Accessible Toilet Stalls, Back Wall: 36-inches (914 mm) long.
 - b. Accessible Toilet Stalls, Side Wall: 42-inches (1070 mm) long.
- 2.4 ELECTRIC HAND DRYERS
- A. Source Limitations: Obtain hand dryers from single source from single manufacturer.

 - B. Description: High-speed, unheated-air hand dryer for rapid hand drying.
 - 1. Protrusion Limit: Installed unit protrudes maximum 4 inches (102 mm) from wall surface.
 - 2. Operation: Infrared-sensor activated with timed power cut-off switch.

 - C. Hand Dryer, Preference: Wall mounted.
 - 1. Basis of Design manufacturer: Dyson.
 - 2. Basis of Design Product: Airblade dB.

- D. Hand Dryer, Alternate: Wall mounted.
 - 1. Basis of Design manufacturer: Dyson.
 - 2. Basis of Design Product: Airblade V.

2.5 SHOWER ACCESSORIES

- A. Folding Shower Bench: Wall mounted.
 - 1. Basis of Design manufacturer: Bobrick.
 - 2. Basis of Design Product: B-5181.
- B. Grab Bars: Surface mounted.
 - 1. Basis of Design manufacturer: Bobrick.
 - 2. Basis of Design Product: B-6806.
 - 3. Length: As indicated on Drawings, based on shower stall size and configuration.
- C. Robe Hook, Shower Stalls: Surface mounted.
 - 1. Basis of Design manufacturer: Bobrick.
 - 2. Basis of Design Product: B-6777.
- D. Shower Curtain, Curtain Rod, and Hooks:
 - 1. Basis of Design manufacturer: Bobrick.
 - 2. Basis of Design Products:
 - a. Shower Curtain Rod: B-6047, length as indicated on Drawings.
 - b. Shower Curtain: B-204, width as required.
 - c. Shower Curtain Hooks: B-204-1.

2.6 BREAKROOM ACCESSORIES

- A. Rolled Paper Towel Dispenser: Surface mounted.
 - 1. Basis of Design manufacturer: Bobrick.
 - 2. Basis of Design Product: B-2860.
- B. Waste Receptacle: Semi-Recessed.
 - 1. Basis of Design manufacturer: Bobrick.
 - 2. Basis of Design Product: B-3644.
- C. Liquid Soap Dispenser: Lavatory mounted.
 - 1. Basis of Design manufacturer: Rubbermaid.
 - 2. Basis of Design Product: FG401544 / RCPFG401544.
- D. Liquid Soap Dispenser: Wall mounted.
 - 1. Basis of Design manufacturer: Bobrick.
 - 2. Basis of Design Product: B-2111.

2.7 CUSTODIAL ACCESSORIES

- A. Mop Holder and Shelf: Wall mounted.
 - 1. Basis of Design manufacturer: Bobrick.
 - 2. Basis of Design Product: B-239.

2.8 UNDERLAVATORY GUARDS

- A. Underlavatory Guard:
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Buckaroos, Inc.
 - b. Plumberex Specialty Products, Inc.
 - c. Truebro by IPS Corporation.
 - 2. Description: Insulating pipe covering for supply and drain piping assemblies that prevents direct contact with and burns from piping; allow service access without removing coverings.
 - 3. Material and Finish: Antimicrobial, molded plastic, white.

2.9 MATERIALS

- A. Stainless Steel: ASTM A666, Type 304, 0.031 inch (0.8 mm) minimum nominal thickness unless otherwise indicated.
- B. Steel Sheet: ASTM A1008/A1008M, Designation CS (cold rolled, commercial steel), 0.036 inch (0.9 mm) minimum nominal thickness.
- C. Galvanized Steel Sheet: ASTM A653/A653M, with G60 (Z180) hot dip zinc coating.
- D. Galvanized Steel Mounting Devices: ASTM A153/A153M, hot dip galvanized after fabrication.
- E. Fasteners: Screws, bolts, and other devices of same material as accessory unit and tamper and theft resistant where exposed, and of galvanized steel where concealed.
- F. Mirrors: ASTM C1503, Mirror Glazing Quality, clear-glass mirrors, nominal 6.0 mm thick.

2.10 FABRICATION

- A. Fabricate units with tight seams and joints, and exposed edges rolled. Hang doors and access panels with full length, continuous hinges. Equip units for concealed anchorage and with corrosion resistant backing plates.
- B. Keys: Provide universal keys for internal access to accessories for servicing and resupplying. Provide minimum of six keys to Owner's representative.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine openings scheduled to receive recessed units for dimensions, plumbness of blocking or frames and preparation that would affect installation of accessories.
- B. Verify spacing of plumbing fixtures and toilet compartments that affect installation of accessories. Verify location of accessories.
- C. Proceed with installation after correcting unsatisfactory conditions.

3.2 PREPARATION

- A. Protect adjacent or adjoining finished surfaces and work from damage during installation of accessories.

3.3 INSTALLATION

- A. Install accessories according to manufacturers' written instructions, using fasteners appropriate to substrate indicated and recommended by unit manufacturer. Install units level, plumb, and firmly anchored in locations and at heights indicated.
 - 1. Remove temporary labels and protective coatings.
 - 2. Mount accessories to gypsum board partitions with wood or sheet metal screws into solid wood blocking, or with toggle bolts through heavy duty sheet metal strap backing plates behind gypsum board, secured to studs.
 - 3. Mount accessories to hollow masonry walls with heavy duty toggle bolts.
- B. Grab Bars: Install to comply with specified structural-performance requirements.
- C. Shower Seats: Install to comply with specified structural-performance requirements.

3.4 PROTECTION

- A. Protect adjacent or adjoining finished surfaces and work from damage during installation of work.

3.5 ADJUSTING AND CLEANING

- A. Adjust accessories for unencumbered, smooth operation. Replace damaged or defective items.
- B. Clean and polish exposed surfaces according to manufacturer's written instructions.

END OF SECTION

TOILET ACCESSORIES
10 28 13 - 7

SECTION 10 41 16
EMERGENCY KEY CABINET

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Emergency key cabinet for Fire Department access.

1.2 COORDINATION

- A. Furnish inserts and anchorages which must be built into other work for installation of recessed emergency key cabinet. Coordinate delivery with other work to avoid delay.

1.3 SEQUENCING AND SCHEDULING

- A. Sequence delivery and installation of items until construction is ready for their installation to minimize possibility of damage.

1.4 ACTION SUBMITTALS

- A. Product Data: Technical data for each item including manufacturer, material descriptions including size and weight, finishes, performance data, manufacturer cut sheets, assembly and disassembly, storage instructions for portable items, and other available pertinent data.

1.5 QUALITY ASSURANCE

- A. Catalog Standards: Manufacturer's catalog numbers or names may be indicated on Drawings or specified for convenience in identifying miscellaneous specialties items. Unless otherwise indicated, manufacturer's current catalog description for indicated number and specified in options or accessories constitutes requirements for each type of item.
 - 1. Use of catalog numbers and specific requirements indicated on Drawings and in Specification are not intended to preclude use of comparable items by acceptable manufacturers, but are given for purpose of establishing standard of design and quality for materials, construction and workmanship.
- B. Source Limitations: Obtain each type of item from single source from single manufacturer.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials to site in original factory wrappings and containers, clearly labeled with identification of manufacturer, brand name, quality or grade, fire performance characteristics, and lot number.
- B. Store emergency key cabinet in original undamaged packages and containers, inside well ventilated area protected from weather, moisture, soiling, extreme temperatures, and humidity.
- C. Comply with instructions and recommendations of manufacturer for special delivery, storage, and handling requirements.

PART 2 - PRODUCTS

2.1 APPROVED MANUFACTURERS

- A. Manufacturer(s) listed included for convenience of Contractor in establishing quality, performance, function, and aesthetic appearance acceptable to Architect.
- B. Other manufacturers approved by Architect may be used whose qualities meet or exceed specified manufacturer.

2.2 EMERGENCY KEY CABINET

- A. Fire Control Key Box: Provide as follows:
 - 1. Capacity: Secures up to 10 keys
 - 2. Include alarm tamper switch.
 - 3. Mounting Type: Surface Mount.
 - 4. Mounting Location: To be determined by local Fire Department.
 - 5. Color: Aluminum.
 - 6. Basis of Design Product: KnoxBox® Model #KLS-3263 by Knox Company.
 - a. Contractor shall confirm with local fire department prior to ordering.

2.3 FABRICATION

- A. General: Provide emergency key cabinet manufactured as integral units ready for installation.
- B. Metal Surfaces: For metal surfaces exposed to view in the completed Work, provide materials with smooth, flat surfaces without blemishes. Do not use materials with exposed pitting, seam marks, roller marks, rolled trade names, or roughness.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Install units in accordance with manufacturer's instructions, using concealed fasteners appropriate to substrate and recommend by manufacturer of units.
- B. Install units level, plumb, and firmly anchored in locations and at heights indicated.

3.3 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 door to operate easily without binding. Verify that integral locking devices operate properly.
- C. On completion of cabinet installation, clean interior and exterior surfaces as recommended by manufacturer.
- D. Replace cabinets that have been damaged or have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

END OF SECTION

Project Name
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EMERGENCY KEY CABINET
10 41 16 - 4

Last Updated:

August 2021

SECTION 10 44 00
FIRE PROTECTION SPECIALTIES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
1. Fire protection cabinets
 2. Portable fire extinguisher.
 3. Mounting brackets.

1.2 ACTION SUBMITTALS

- A. Product Data: Submit product data including construction details, material descriptions, dimensions of individual components and profiles, and finishes for fire protection specialties.
1. Fire Extinguishers: Include rating and classification.
 2. Cabinets: Indicate door hardware, cabinet type, trim style, and panel style. Include roughing in dimensions and details showing recessed, semi-recessed, or surface mounting method and relationships of box and trim to surrounding construction.
- B. Shop Drawings: Submit plans, elevations, sections, details, and attachments of fire protection cabinets to other work.
- C. Samples: Submit samples for each exposed finish required, prepared on samples 6 inches by 6 inches (150 mm by 150 mm) square.

1.3 CLOSEOUT SUBMITTALS

- A. Maintenance Data: Submit data for fire protection cabinets to include in maintenance manuals.

1.4 QUALITY ASSURANCE

- A. NFPA Compliance: Fabricate and label fire extinguishers to comply with NFPA 10 *Standard for Portable Fire Extinguishers*.
- B. Fire Extinguisher Listing: UL listed with UL Listing Mark for type, rating, and classification of extinguisher.
- C. Source Limitations: Obtain fire extinguishers and fire protection cabinets through one source from a single manufacturer.

1.5 COORDINATION

- A. Coordinate size of fire protection cabinets to ensure that type and capacity of fire extinguishers indicated are accommodated.
- B. Coordinate sizes and locations of fire protection cabinets with wall depths.

1.6 WARRANTY

- A. Warranty, Fire Extinguisher: Written warranty in which manufacturer agrees to repair or replace components of portable fire extinguishers failing in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Failure of hydrostatic test according to NFPA 10.
 - b. Faulty operation of valves or release levers.
 - 2. Warranty Period: 5 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Fire Rated Fire Protection Cabinets: Listed and labeled to comply with requirements in ASTM E 814 for fire resistance rating of walls where installed.
- B. NFPA Compliance, Fire Extinguishers: Fabricate and label fire extinguishers to comply with NFPA 10 Portable Fire Extinguishers.
- C. Fire Extinguishers: Listed and labeled for type, rating, and classification by an independent testing agency acceptable to authorities having jurisdiction.

2.2 FIRE PROTECTION CABINET

- A. Cabinet Type: Suitable for fire extinguisher.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. JL Industries, Inc.; Activar Construction Products Group.
 - b. Larsens Manufacturing Company.
 - c. Nystrom, Inc.
 - d. Potter Roemer LLC.
- B. Cabinet Type: Suitable for fire extinguisher.
- C. Cabinet Construction: Rating to be same as wall in which cabinet is installed.
 - 1. Fire-Rated Cabinets: Construct fire rated cabinets with double walls fabricated from 0.043 inch (1.09 mm) thick cold rolled steel sheet lined with minimum 5/8 inch (16 mm) thick fire barrier material. Provide factory drilled mounting holes.

- D. Cabinet Material: Stainless steel sheet.
 - 1. Shelf: Same metal and finish as cabinet.
- E. Semi-recessed Cabinet: One-piece combination trim and perimeter door frame overlapping surrounding wall surface, with exposed trim face and wall return at outer edge (backbend).
 - 1. Rolled Edge Trim:
 - a. Non-Rated Cabinets: 1-1/2-inch (38-mm) backbend depth.
 - b. Fire-Rated Cabinets: 2-1/2-inch (64-mm) backbend depth.
- F. Basis-of-Design Products: Subject to compliance with requirements, provide the following or a comparable product:
 - 1. Architectural Series by Larsen's Manufacturing Company.
 - a. Non-rated Cabinet: Model SS 2409-5R.
 - b. Fire-Rated Cabinet: Model FS SS-2409-R3.
- G. Cabinet Trim Material: Stainless steel sheet.
- H. Door Material: Stainless steel sheet.
- I. Door Style: Fully glazed, frameless, backless, acrylic panel.
- J. Door Glazing: Acrylic sheet.
 - 1. Acrylic Sheet Color: Clear transparent acrylic sheet.
- K. Door Hardware: Door operating hardware of proper type for cabinet type, trim style, and door material and style indicated.
 - 1. Provide projecting door pull and friction latch.
 - 2. Continuous hinges are most common. Concealed hinges are used for flush panel doors. Pivots are sometimes used for fully glazed, frameless acrylic doors; verify availability with manufacturers.
 - 3. Provide Concealed hinge permitting door to open 180 degrees.
- L. Accessories:
 - 1. Mounting Bracket: Steel, designed to secure fire extinguisher to fire protection cabinet, of sizes required for types and capacities of fire extinguishers indicated, with plated or baked enamel finish.
 - 2. Identification: Lettering complying with authorities having jurisdiction for letter style, size, spacing, and location.
 - a. Identify fire extinguisher in fire protection cabinet with the words FIRE EXTINGUISHER.
 - 1) Location: Applied to cabinet glazing.
 - 2) Application Process: Decals.
 - 3) Lettering Color: Black.
 - 4) Orientation: Horizontal.

M. Materials:

1. Cold Rolled Steel: ASTM A 1008/A 1008M, Commercial Steel (CS), Type B.
 - a. Finish: Baked enamel, TGIC polyester powder coat, HAA polyester powder coat, epoxy powder coat, or polyester/epoxy hybrid powder coat, complying with AAMA 2603.
 - b. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
 - c. Color: Selected by Architect.
2. Stainless Steel: ASTM A240/A240M or ASTM A666, Type 304.
 - a. Finish: ASTM A480/A480M No. 4 directional satin finish.
3. Transparent Acrylic Sheet: ASTM D 4802, Category A-1 (cell cast sheet), 6 mm thick, with Finish 1 (smooth or polished).

2.3 FIRE EXTINGUISHERS

- A. Fire Extinguishers: Type, size, and capacity for each fire protection cabinet and mounting bracket indicated.
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. AMEREX Corp.
 - b. Ansul Incorporated; Tyco International.
 - c. JL Industries, Inc.; a division of the Activar Construction Products Group.
 - d. Kidde Residential and Commercial Division.
 - e. Larsens Manufacturing Company.
 - f. Nystrom, Inc.
 - g. Potter Roemer LLC.
 2. Valves: Nickel plated, polished brass body.
 3. Handles and Levers: Stainless steel.
 4. Instruction Labels: Include pictorial marking system complying with NFPA 10, Appendix B, and bar coding for documenting fire extinguisher location, inspections, maintenance, and recharging.
- B. Multipurpose Dry Chemical Type in Steel Container: UL rated 3-A:40-B:C, 5-lb (2.3-kg) nominal capacity, with monoammonium phosphate based dry chemical in enameled steel container.

2.4 MOUNTING BRACKETS

- A. Mounting Brackets: Galvanized steel, designed to secure fire extinguisher to wall or structure, of sizes required for types and capacities of fire extinguishers indicated, with plated or red baked enamel finish.
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Guardian Fire Equipment, Inc.
 - b. JL Industries, Inc.; a division of the Activar Construction Products Group.
 - c. Kidde Residential and Commercial Division.

- d. Larsens Manufacturing Company.
- e. Nystrom, Inc.
- f. Potter Roemer LLC.

2.5 IDENTIFICATION

- A. Identification: Lettering complying with authorities having jurisdiction for letter style, size, spacing, and location.
 - 1. Cabinet: Identify cabinet mounted fire extinguishers with the words FIRE EXTINGUISHER in letter decals applied to cabinet door.
 - a. Orientation: Vertical.
 - 2. Bracket: Identify bracket mounted fire extinguishers with the words FIRE EXTINGUISHER in letter decals applied to mounting surface.
 - a. Orientation: Horizontal.
- B. Three-Way Fire Extinguisher Sign: Two-faced wall-mounted angled sign, viewable from any direction within 180 degrees field of view.
 - 1. Material: 0.060-inch (1.5 mm) thick polystyrene plastic.
 - 2. Printed Graphics: Digital or silk screening UV inks.
 - 3. Message: FIRE EXTINGUISHER, with Down arrow symbol on each face.
 - 4. Panel Size: 10 by 12 inches (254 by 305 mm).
 - 5. Mounting Flanges: 1-inch (25 mm) wide on each side of sign, with predrilled holes
 - 6. Mounting: Surface mount to wall, directly above each fire protection cabinet and each fire extinguisher.
 - 7. Mounting Height: Bottom of sign at 6 1/2 feet (2.0 m) above floor.
 - 8. Suppliers:
 - a. Emedco; Style No. 42364.
 - b. Safety Signdco; Style No. 42364.

2.6 FABRICATION

- A. Fire Protection Cabinets: Provide manufacturer's standard box (tub) with trim, frame, door, and hardware to suit cabinet type, trim style, and door style indicated.
 - 1. Weld joints and grind smooth.
 - 2. Miter corners and grind smooth.
 - 3. Provide factory drilled mounting holes.
 - 4. Install door locks at factory.
- B. Cabinet Doors: Fabricate doors from materials indicated and coordinated with cabinet types and trim styles.
 - 1. Fabricate door frames of one-piece construction with edges flanged.
 - 2. Miter and weld perimeter door frames and grind smooth.

- C. Cabinet Trim: Fabricate cabinet trim in one piece with corners mitered, welded, and ground smooth.

2.7 FINISH REQUIREMENTS

- A. Comply with NAAMM's AMP 500 Metal Finishes Manual for Architectural and Metal Products for recommendations for applying and designating finishes.
- B. Protect mechanical finishes on exposed surfaces of fire protection cabinets from damage by applying a strippable, temporary protective covering before shipping.
- C. Finish fire protection cabinets after assembly.
- D. Appearance of Finished Work: Noticeable variations in same piece are unacceptable. Variations in appearance of adjoining components are acceptable if within the range of approved Samples and are assembled or installed to minimize contrast.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine walls and partitions for suitable framing depth and blocking where recessed and semirecessed cabinets will be installed.
- B. Examine fire extinguishers for proper charging and tagging.
 - 1. Remove and replace damaged, defective, or undercharged fire extinguishers.
- C. Proceed with installation after correcting unsatisfactory conditions.

3.2 PREPARATION

- A. Prepare recesses for recessed and semirecessed fire protection cabinets required by type and size of cabinet and trim style.

3.3 INSTALLATION

- A. General: Install fire protection cabinets in locations and at mounting heights indicated or at heights acceptable to authorities having jurisdiction.
 - 1. Fire Protection Cabinets: 42 inches (1067 mm) above finished floor to top of fire extinguisher.
- B. Fire Protection Cabinets: Fasten cabinets to structure, square and plumb.
 - 1. Unless otherwise indicated, provide recessed fire protection cabinets. If wall thickness is inadequate for recessed cabinets, provide semirecessed fire protection cabinets.

2. Fasten mounting brackets to inside surface of fire protection cabinets, square and plumb.
- C. Fire Extinguishers: Install fire extinguishers and mounting brackets in locations indicated and in compliance with requirements of authorities having jurisdiction.
 1. Mounting Brackets: Top of fire extinguisher shall be set at 42 inches (1067 mm) above finished floor.
- D. Mounting Brackets: Fasten mounting brackets to surfaces, square and plumb, at locations indicated.
- E. Identification: Apply decals at locations indicated.

3.4 ADJUSTING AND CLEANING

- A. Remove temporary protective coverings and strippable films as fire protection cabinets are installed unless otherwise indicated in manufacturer's written installation instructions.
- B. Adjust fire protection cabinet doors to operate easily without binding. Verify that integral locking devices operate properly.
- C. On completion of fire protection cabinet installation, clean interior and exterior surfaces as recommended by manufacturer.
- D. Touch up marred finishes or replace fire protection cabinets that cannot be restored to factory finished appearance. Use only materials and procedures recommended or furnished by fire protection cabinet and mounting bracket manufacturers.
- E. Replace fire protection cabinets that have been damaged or have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

END OF SECTION

Project Name
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Issue Date

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SECTION 10 51 13

METAL LOCKERS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Knocked-down corridor lockers.
 - 2. Locker benches.
- B. Related Requirements:
 - 1. Section 06 10 53 "Miscellaneous Rough Carpentry" for in-wall blocking.

1.2 COORDINATION

- A. Coordinate sizes and locations of framing, blocking, furring, reinforcements, and other related units of work specified in other Sections to ensure that metal lockers can be supported and installed as indicated.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each type of metal locker and bench.
- B. Shop Drawings: For metal lockers.
 - 1. Include plans, elevations, sections, and attachment details.
 - 2. Show locker trim and accessories.
 - 3. Include locker identification system and numbering sequence.
- C. Samples for Initial Selection: Manufacturer's color charts showing the full range of colors available.
- D. Product Schedule: For lockers. Use same designations indicated on Drawings.

1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer.
- B. Sample Warranty: For special warranty.

1.5 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For adjusting, repairing, and replacing locker doors and latching mechanisms to include in maintenance manuals.

1.6 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1. The following metal locker hardware items equal to 10 percent of amount installed for each type and finish installed, but no fewer than five units:
 - a. Blank identification plates.
 - b. Hooks.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Do not deliver metal lockers until spaces to receive them are clean, dry, and ready for their installation.

1.8 FIELD CONDITIONS

- A. Field Measurements: Verify actual dimensions of recessed openings by field measurements before fabrication.

1.9 COORDINATION

- A. Coordinate sizes and locations of framing, blocking, furring, reinforcements, and other related units of work specified in other Sections to ensure that metal lockers can be supported and installed as indicated.

1.10 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace components of metal lockers that fail in materials or workmanship, excluding finish, within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Structural failures.
 - b. Faulty operation of latches and other door hardware.
 - 2. Damage from deliberate destruction and vandalism is excluded.
 - 3. Warranty Period for Knocked-Down Metal Lockers: Two years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. Art Metal Products; Artisan Silent Lockers.
 2. General Storage Systems Ltd.; Decor Tri-Lok Eclipse II.
 3. List Industries Inc.; Standard Quiet KD Lockers.
 4. Lyon Workspace Products, LLC; Standard Lockers.
 5. Penco Products, Inc.; Guardian Medallion Lockers.
 6. Republic Storage Systems Company; Quiet Lockers.
- B. Source Limitations: Obtain metal lockers, locker benches, and accessories from single source from single locker manufacturer.

2.2 PERFORMANCE REQUIREMENTS

- A. Accessibility Standard: For lockers indicated to be accessible, comply with applicable provisions in the USDOJ's "2010 ADA Standards for Accessible Design" and ICC A117.1.

2.3 KNOCKED-DOWN CORRIDOR LOCKERS

- A. Locker Arrangement: *(Revise sizes below to suit project requirements)*
1. Size: 18 wide by 18 inches deep.
 2. Configuration: Double-tier, 72 inches high.
- B. Doors: One piece; fabricated from 0.075-inch (1.90-mm) nominal-thickness steel sheet; formed into channel shape with double bend at vertical edges and with right-angle single bend at horizontal edges.
1. Reinforcement: Manufacturer's standard reinforcing angles, channels, or stiffeners for doors more than 15 inches (381 mm) wide; welded to inner face of doors.
 2. Stiffeners: Manufacturer's standard full-height stiffener fabricated from 0.048-inch (1.21-mm) nominal-thickness steel sheet; welded to inner face of doors.
 3. Sound-Dampening Panels: Manufacturer's standard, designed to stiffen doors and reduce sound levels when doors are closed, of die-formed metal with full perimeter flange and sound-dampening material; welded to inner face of doors.
 4. Door Style:
 - a. Louvered Vents: Provide louvered doors in manufacturer's standard louver pattern.
- C. Body: Assembled by riveting or bolting body components together. Fabricate from unperforated steel sheet with thicknesses as follows:

1. Tops, Bottoms, and Intermediate Dividers: 0.024-inch (0.61-mm) nominal thickness, with single bend at sides.
 2. Backs and Sides: 0.024-inch (0.61-mm) nominal thickness, with full-height, double-flanged connections.
 3. Shelves: 0.024-inch (0.61-mm) nominal thickness, with double bend at front and single bend at sides and back.
- D. Frames: Channel formed; fabricated from 0.060-inch (1.52-mm) nominal-thickness steel sheet; lapped and factory welded at corners; with top and bottom main frames factory welded into vertical main frames. Form continuous, integral, full-height door strikes on vertical main frames.
- E. Hinges: Welded to door and attached to door frame with no fewer than two factory-installed rivets per hinge that are completely concealed and tamper resistant when door is closed; fabricated to swing 180 degrees.
1. Hinges: Manufacturer's standard, steel, continuous or knuckle type.
- F. Projecting Door Handle and Latch: Finger-lift latch control designed for use with either built-in combination locks or padlocks; positive automatic latching, chromium plated; pry and vandal resistant.
1. Latch Hooks: Equip doors 48 inches (1219 mm) and higher with three latch hooks and doors less than 48 inches (1219 mm) high with two latch hooks; fabricated from 0.105-inch (2.66-mm) nominal-thickness steel sheet; welded or riveted to full-height door strikes; with resilient silencer on each latch hook.
 2. Latching Mechanism: Manufacturer's standard, rattle-free latching mechanism and moving components isolated to prevent metal-to-metal contact, and incorporating a prelocking device that allows locker door to be locked while door is open and then closed without unlocking or damaging lock or latching mechanism.
- G. Recessed Door Handle and Latch: Stainless-steel cup with integral door pull, recessed so locking device does not protrude beyond door face; pry and vandal resistant.
1. Multipoint Latching: Finger-lift latch control designed for use with built-in combination locks, built-in key locks, or padlocks; positive automatic latching and prelocking.
 - a. Latch Hooks: Equip doors 48 inches (1219 mm) and higher with three latch hooks and doors less than 48 inches (1219 mm) high with two latch hooks; fabricated from 0.105-inch (2.66-mm) nominal-thickness steel sheet; welded or riveted to full-height door strikes; with resilient silencer on each latch hook.
 - b. Latching Mechanism: Manufacturer's standard, rattle-free latching mechanism and moving components isolated to prevent metal-to-metal contact, and incorporating a prelocking device that allows locker door to be locked while door is open and then closed without unlocking or damaging lock or latching mechanism.
- H. Identification Plates: Manufacturer's standard, etched, embossed, or stamped aluminum plates, with numbers and letters at least 3/8 inch (9 mm) high.

- I. Hooks: Manufacturer's standard ball-pointed hooks, aluminum or steel; zinc plated.
- J. Coat Rods: Manufacturer's standard.
- K. Continuous Zee Base: Fabricated from 0.075-inch (1.90-mm) nominal-thickness steel sheet.
 - 1. Height: 4 inches (102 mm).
- L. Continuous Sloping Tops: Fabricated from 0.048-inch (1.21-mm) nominal-thickness steel sheet.
 - 1. Closures: Vertical-end type.
 - 2. Sloping-top corner fillers, mitered.
- M. Individual Sloping Tops: Fabricated from 0.024-inch (0.61-mm) nominal-thickness steel sheet.
- N. Recess Trim: Fabricated from 0.048-inch (1.21-mm) nominal-thickness steel sheet.
- O. Filler Panels: Fabricated from 0.048-inch (1.21-mm) nominal-thickness steel sheet.
- P. Boxed End Panels: Fabricated from 0.060-inch (1.52-mm) nominal-thickness steel sheet.
- Q. Finished End Panels: Fabricated from 0.024-inch (0.61-mm) nominal-thickness steel sheet to cover unused penetrations and fasteners, except for perimeter fasteners, at exposed ends of nonrecessed metal lockers; finished to match lockers.
- R. Materials:
 - 1. Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, Commercial Steel (CS), Type B, suitable for exposed applications.
- S. Finish: Baked enamel or powder coat.
 - 1. Color: As selected by Architect from manufacturer's full range.

2.4 LOCKS

- A. Combination or Keyed Padlock: Provided by User.

2.5 LOCKER BENCHES

- A. Manufacturers: Obtain benches and accessories from the same manufacturer of lockers or manufacturers associated supplier.
 - 1. Obtain benches from single manufacturer.
- B. Provide bench units with overall assembly height of 17-1/2 inches (445 mm).
- C. Bench Tops: Manufacturer's standard one-piece units, with rounded corners and edges.

1. Size: Minimum 9-1/2 inches wide by 1-1/4 inches thick (241 mm wide by 32 mm thick) except provide 20- to 24-inch- (508- to 610-mm-) wide tops where accessible benches are indicated.
 2. Laminated clear hardwood with one coat of clear sealer on all surfaces and one coat of clear lacquer on top and sides.
- D. Fixed-Bench Pedestals: Manufacturer's standard supports, with predrilled fastener holes for attaching bench top and anchoring to floor, complete with fasteners and anchors, and as follows:
1. Tubular Steel: 1-1/2-inch- (38-mm-) diameter steel tubing threaded on both ends, with standard pipe flange at top and bell-shaped cast-iron base; with baked-enamel or powder-coat finish; anchored with exposed fasteners.
 - a. Color: Match metal lockers.
- E. Materials:
1. Steel Tube: ASTM A 500/A 500 M, cold rolled.

2.6 FABRICATION

- A. Fabricate metal lockers square, rigid, without warp, and with metal faces flat and free of dents or distortion. Make exposed metal edges safe to touch and free of sharp edges and burrs.
1. Form body panels, doors, shelves, and accessories from one-piece steel sheet unless otherwise indicated.
 2. Provide fasteners, filler plates, supports, clips, and closures as required for complete installation.
- B. Fabricate each metal locker with an individual door and frame; individual top, bottom, and back; and common intermediate uprights separating compartments.
- C. Equipment: Provide each locker with an identification plate and the following equipment:
1. Double-Tier Units: One double-prong ceiling hook and two single-prong wall hooks.
- D. Knocked-Down Construction: Fabricate metal lockers by preassembling at plant prior to shipping, using manufacturer's nuts, bolts, screws, or rivets.
- E. Accessible Lockers: Fabricate as follows:
1. Locate bottom shelf no lower than 15 inches (381 mm) above the floor.
 2. Where hooks, coat rods, or additional shelves are provided, locate no higher than 48 inches (1219 mm) above the floor.
- F. Continuous Sloping Tops: Fabricated in lengths as long as practical, without visible fasteners at splice locations; finished to match lockers.
1. Sloping-top corner fillers, mitered.

- G. Recess Trim: Fabricated with minimum 2-1/2-inch (64-mm) face width and in lengths as long as practical; finished to match lockers.
- H. Filler Panels: Fabricated in an unequal leg angle shape; finished to match lockers. Provide slip-joint filler angle formed to receive filler panel.
- I. Boxed End Panels: Fabricated with 1-inch- (25-mm-) wide edge dimension, and designed for concealing fasteners and holes at exposed ends of non-recessed metal lockers; finished to match lockers.
 - 1. Provide one-piece panels for double-row (back-to-back) locker ends.
- J. Finished End Panels: Fabricated to conceal unused penetrations and fasteners, except for perimeter fasteners, at exposed ends of non-recessed metal lockers; finished to match lockers.
 - 1. Provide one-piece panels for double-row (back-to-back) locker ends.
- K. Center Dividers: Full-depth, vertical partitions between bottom and shelf; finished to match lockers.

2.7 ACCESSORIES

- A. Fasteners: Zinc- or nickel-plated steel, slotless-type, exposed bolt heads; with self-locking nuts or lock washers for nuts on moving parts.
- B. Anchors: Material, type, and size required for secure anchorage to each substrate.
 - 1. Provide nonferrous-metal or hot-dip galvanized anchors and inserts on inside face of exterior walls, and elsewhere as indicated, for corrosion resistance.
 - 2. Provide toothed-steel or lead expansion sleeves for drilled-in-place anchors.
 - 3. Provide stainless steel anchors for anchoring to the floor or other wet areas

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine walls and floors or support bases, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Prepare written report, endorsed by Installer, listing conditions detrimental to performance of the Work.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Install lockers level, plumb, and true; shim as required, using concealed shims.

1. Anchor locker runs at ends and at intervals recommended by manufacturer, but not more than 36 inches (910 mm) o.c. Using concealed fasteners, install anchors through backup reinforcing plates, channels, or blocking as required to prevent metal distortion.
 2. Anchor single rows of metal lockers to walls near top and bottom of lockers of lockers and to floor.
 3. Anchor back-to-back metal lockers to floor.
- B. Knocked-Down Lockers: Assemble with manufacturer's standard fasteners, with no exposed fasteners on door faces or face frames.
- C. Welded Lockers: Connect groups together with manufacturer's standard fasteners, with no exposed fasteners on face frames.
- D. Equipment:
1. Attach hooks with at least two fasteners.
 2. Attach door locks on doors using security-type fasteners.
 3. Identification Plates: Identify metal lockers with identification indicated on Drawings.
 - a. Attach plates to each locker door, near top, centered, with at least two aluminum rivets.
 - b. Attach plates to upper shelf of each open-front metal locker, centered, with a least two aluminum rivets.
- E. Trim: Fit exposed connections of trim, fillers, and closures accurately together to form tight, hairline joints, with concealed fasteners and splice plates.
1. Attach recess trim to recessed metal lockers with concealed clips.
 2. Attach filler panels with concealed fasteners. Locate filler panels where indicated on Drawings.
 3. Attach sloping-top units to metal lockers, with closures at exposed ends.
 4. Attach boxed end panels using concealed fasteners to conceal exposed ends of non-recessed metal lockers.
 5. Attach finished end panels using fasteners only at perimeter to conceal exposed ends of non-recessed metal lockers.
- F. Fixed Benches: Provide no fewer than two pedestals for each bench, uniformly spaced not more than 72 inches (1830 mm) apart. Securely fasten tops of pedestals to undersides of bench tops, and anchor bases to floor.
- ### 3.3 ADJUSTING
- A. Clean, lubricate, and adjust hardware. Adjust doors and latches to operate easily without binding.

3.4 PROTECTION

- A. Protect metal lockers from damage, abuse, dust, dirt, stain, or paint. Do not permit use during construction.
- B. Touch up marred finishes, or replace metal lockers that cannot be restored to factory-finished appearance. Use only materials and procedures recommended or furnished by locker manufacturer.

END OF SECTION