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SECTION 104413 - FIRE PROTECTION CABINETS

TIPS:

To view non-printing **Editor's Notes** that provide guidance for editing, click on MasterWorks/Single-File Formatting/Toggle/Editor's Notes.

To read **detailed research, technical information about products and materials, and coordination checklists**, click on MasterWorks/Supporting Information.

Access Product MasterSpec Sections:

PART 1 - GENERAL

0.1 SUMMARY

A. Section Includes:

1. Fire-protection cabinets for the following:
 - a. Portable fire extinguisher.
 - b. Portable fire extinguisher and fire-hose valve.
 - c. Portable fire extinguisher, fire hose, rack, and fire-hose valve.
 - d. Fire-hose valve.
 - e. Fire hose, rack, and fire-hose valve.

B. Related Requirements:

1. Section 104416 "Fire Extinguishers" for portable, hand-carried fire extinguishers accommodated by fire-protection cabinets
2. Section 211200 "Fire-Suppression Standpipes" for fire-hose connections.

0.2 ACTION SUBMITTALS

A. Sustainable Design Submittals:

1. Product Data: For recycled content, indicating postconsumer and preconsumer recycled content and cost.
2. Environmental product declaration.
3. Product Certificates: For regional materials, indicating location of material manufacturer and point of extraction, harvest, or recovery for each raw material. Include distance to Project and cost for each regional material.
4. Environmental Product Declaration (EPD): For each product.
5. Product Certificates: For indigenous materials, indicating location of material manufacturer and point of extraction, harvest, or recovery for each raw material. Include distance to Project, means of transportation, and cost for each indigenous material.
6. Environmental Product Declaration: For each product.
7. Product Certificates: For regional materials, indicating location of material manufacturer and point of extraction, harvest, or recovery for each raw material. Include distance to Project, means of transportation, and cost for each regional material.
8. Environmental Product Declaration: For each product.
9. Environmental Product Declaration: For each product.
10. Third-Party Certifications: For each product.
11. Third-Party Certified Life Cycle Assessment: For each product.

0.3 ALLOWANCES

- A. Fire-protection cabinets are part of **<Insert name of allowance>**.

0.4 UNIT PRICES

- A. Work of this Section is affected by **<Insert name of unit price>**.

0.5 PREINSTALLATION CONFERENCE

- A. Preinstallation Conference: Conduct conference at [**Project site**] **<Insert location>**.
1. Review methods and procedures related to fire-protection cabinets, including, but not limited to, the following:
 - a. Schedules and coordination requirements.

0.6 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Show 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.
 - 2. Show location of knockouts for hose valves.
- B. Shop Drawings: For fire-protection cabinets.
 - 1. Include plans, elevations, sections, details, and attachments to other work.
- C. Samples: For each type of exposed finish required.
- D. Samples for Initial Selection: For each type of exposed finish required.
- E. Samples for Verification: For each type of exposed finish required, prepared on samples **6 by 6 inches (150 by 150 mm)** square.
- F. Product Schedule: For fire-protection cabinets. Indicate whether recessed, semi-recessed, or surface mounted. Coordinate final fire-protection cabinet schedule with fire-extinguisher schedule to ensure proper fit and function. [**Use same designations indicated on Drawings.**]

0.7 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For fire-protection cabinets to include in maintenance manuals.

0.8 COORDINATION

- A. Coordinate size of fire-protection cabinets to ensure that type and capacity of [**fire extinguishers**] [**fire hoses, hose valves, and hose racks**] indicated are accommodated.
- B. Coordinate sizes and locations of fire-protection cabinets with wall depths.

PART 2 - PRODUCTS

0.1 MANUFACTURERS

- A. Source Limitations: Obtain fire-protection cabinets, accessories, and fire extinguishers from single source from single manufacturer.
- B. Basis-of-Design Product: Subject to compliance with requirements, provide Activar Construction Products Group, Inc. - JL Industries products as specified below or comparable products by one of the following.
 - 1. Guardian Fire Equipment, Inc.

2. Modern Metal Products, Division of Technico Inc.
3. Potter Roemer LLC; a Division of Morris Group International.
4. Strike First Corporation of America (The).
5. **<Insert manufacturer's name>**.

0.2 PERFORMANCE REQUIREMENTS

- A. Fire-Rated Fire-Protection Cabinets: Listed and labeled to comply with requirements in ASTM E814 for fire-resistance rating of walls where they are installed.
- B. 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.

0.3 FIRE-PROTECTION CABINET **<Insert drawing designation>**

- A. Flush Door, Continuous Hinge Cabinet: Suitable for fire extinguisher.
 1. Basis-of-Design Product: Subject to compliance with requirements, provide Activar Construction Products Group, Inc. - JL Industries; [**Academy**] [**Ambassador**] [**Cosmopolitan**] Series extinguisher or comparable product.
 2. Cabinet Construction: [**Nonrated**] [**Two-hour fire rated**].
 - a. Fire-Rated Cabinets: [**JL Industries, "FX2" foil faced Firespan 90 attached directly to tub exterior**] [**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**].
 3. Cabinet Material: [**Cold-rolled steel sheet**] [**Aluminum sheet**] [**Stainless steel sheet**].
 4. Recessed Cabinet:
 - a. Trimless with Concealed Flange: Surface of surrounding wall finishes flush with exterior finished surface of cabinet frame and door, without overlapping trim attached to cabinet. Provide recessed flange, of same material as box, attached to box, to act as [**plaster stop**] [**drywall bead**].
 - b. Trimless with Hidden Flange: Flange of same metal and finish as box overlaps surrounding wall finish and is concealed from view by an overlapping door.
 - c. Exposed Flat Trim: One-piece combination trim and perimeter door frame overlapping surrounding wall surface, with exposed trim face and wall return at outer edge (backbend).
 5. 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).
 - a. Flat Trim: **3/8-inch (9.5-mm)**.
 - b. Square-Edge Trim: **1-1/4- to 2-1/2-inch (32- to 64-mm)** backbend depth.

- c. Rolled-Edge Trim: [**2-1/2-inch (64-mm)**] [**3-inch (76-mm)**] [**4-inch (102-mm)**] [**4-1/2-inch (114-mm)**] <Insert dimension> backbend depth.
- 6. Surface-Mounted Cabinet: Cabinet box fully exposed and mounted directly on wall with no trim.
- 7. Door Style: [**Fully glazed panel with frame**] [**Horizontal duo panel with frame**] [**Vertical duo panel with frame**] [**Small view window with frame**].
- 8. Door Glazing: [**Acrylic**] [**Clear wire glass with safety film**] [**Laminated safety glass**] [**Tempered float glass (clear)**].
 - a. Acrylic Sheet Color: [**Clear**] [**Bronze**] [**Gray**] transparent acrylic sheet.
- 9. Door Hardware: Manufacturer's standard door-operating hardware of proper type for cabinet type, trim style, and door material and style indicated.
 - a. Pull Handle: [**Manufacturer's standard**] [**Recessed, flush**].
 - b. Provide continuous hinge, of same material and finish as trim,, permitting door to open 180 degrees.
 - c. Door Lock: [**Pull handle with roller catch**] [**Saf-T-Lok**] [**Cam lock that allows door to be opened during emergency by pulling sharply on door handle**] [**Manufacturer's standard**].
- 10. Optional Accessories:
 - a. Identification: Lettering complying with authorities having jurisdiction for letter style, size, spacing, and location. Locate [**as indicated**] [**as directed by Architect**] <Insert location>.
 - 1) Identify fire extinguisher in fire-protection cabinet with the words "[**FIRE EXTINGUISHER**] <Insert identification>."
 - a) Location: Applied to [**cabinet door**] [**cabinet glazing**] [**location indicated on Drawings**].
 - b) Application Process: [**Silk-screened**] [**Engraved**] [**Etched**] [**Decals**] [**Pressure-sensitive vinyl letters**].
 - c) Lettering Color: [**Red**] [**Black**] [**White**].
 - d) Orientation: [**Vertical**] [**Horizontal**] [**As indicated on Drawings**].
 - b. Alarm: Activar Construction Products Group, Inc. - JL Industries "Commander Alarm (CA)" or comparable audible alarm that sounds when fire-protection cabinet door is opened and that is powered by batteries.
- B. Recessed, Trimless, Concealed Hinge Cabinet: Suitable for fire extinguisher.
 - 1. Basis-of-Design Product: Subject to compliance with requirements, provide Activar Construction Products Group, Inc. - JL Industries; Embassy Series extinguisher cabinet or comparable product.
 - 2. Cabinet Construction: [**Nonrated**] [**Two-hour fire rated**].
 - a. Fire-Rated Cabinets: [**JL Industries, "FX2" Foil faced Firespan 90 attached directly to tub exterior**] [**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].

3. Cabinet Material: [Aluminum] [Brass] [Bronze] [Stainless steel] [Steel].
 4. Door Style: [Vertical duo panel with frame] [Solid panel with frame].
 5. Door Glazing: [Acrylic] [Clear wire glass with safety film] [Laminated safety glass] [Tempered float glass (clear)].
 - a. Acrylic Sheet Color: [Clear] [Bronze] [Gray] transparent acrylic sheet.
 6. Door Hardware: Manufacturer's standard concealed handle operating hardware of proper type for cabinet type, trim style, and door material and style indicated.
 - a. Pull Handle: [Concealed in bottom edge of door] [Pull on face of cabinet door].
 - b. Provide concealed hinge, permitting door to open 180 degrees.
 - c. Door Lock: [Pull handle] [Saf-T-Lok] [Cam lock that allows door to be opened during emergency by pulling sharply on door handle].
 7. Optional Accessories:
 - a. Identification: Lettering complying with authorities having jurisdiction for letter style, size, spacing, and location. Locate [as indicated] [as directed by Architect] <Insert location>.
 - 1) Identify fire extinguisher in fire-protection cabinet with the words "[FIRE EXTINGUISHER] <Insert identification>."
 - a) Location: Applied to [cabinet door] [cabinet glazing] [location indicated on Drawings].
 - b) Application Process: [Silk-screened] [Engraved] [Etched] [Decals] [Pressure-sensitive vinyl letters].
 - c) Lettering Color: [Red] [Black] [White].
 - d) Orientation: [Vertical] [Horizontal] [As indicated on Drawings].
 - b. Alarm: Activar Construction Products Group, Inc. - JL Industries "Commander Alarm (CA)" or comparable audible alarm that sounds when fire-protection cabinet door is opened and that is powered by batteries.
- C. Molded-Acrylic Bubble Front Door, Continuous Hinge Cabinet: Suitable for fire extinguisher.
1. Basis-of-Design Product: Subject to compliance with requirements, provide Activar Construction Products Group, Inc. - JL Industries; [Clear VU] [SMB] Series extinguisher cabinet or comparable product.
 2. Cabinet Construction: [Nonrated] [Two-hour fire rated].
 - a. Fire-Rated Cabinets: [JL Industries, "FX2" Foil faced Firespan 90 attached directly to tub exterior] [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].

3. Cabinet Material: [**Cold-rolled steel sheet**] [**Aluminum sheet**] [**Stainless steel sheet**].
 4. Door Style: Full acrylic bubble with frame.
 5. Door Glazing: Molded acrylic bubble.
 - a. Acrylic Bubble Color: [**Clear**] [**Bronze**] [**Red**] transparent acrylic sheet.
 6. Door Hardware: Manufacturer's standard pull handle and roller catch door-operating hardware of proper type for cabinet type, trim style, and door material and style indicated.
 - a. Pull Handle: Manufacturer's standard, with finish to match door.
 - b. Provide concealed hinge, permitting door to open 180 degrees.
 - c. Door Lock: [**Pull handle**] [**Saf-T-Lok**] [**Cam lock that allows door to be opened during emergency by pulling sharply on door handle**].
 7. Semirecessed Cabinet: One-piece combination trim and perimeter door frame overlapping surrounding wall surface, with exposed trim face and wall return at outer edge (backbend).
 - a. Square-Edge Trim: **1-1/4- to 1-1/2-inch (32- to 38-mm)** backbend depth.
 - b. Rolled-Edge Trim: [**2-1/2-inch (64-mm)**] [**3-inch (76-mm)**] <Insert dimension> backbend depth.
 8. Surface-Mounted Cabinet: Cabinet box fully exposed and mounted directly on wall with no trim.
 9. Cabinet Trim Material: Same material and finish as door.
 10. Optional Accessories:
 - a. Lettered Door Handle: One-piece, cast-iron door handle with the word "FIRE" embossed into face.
 - b. Alarm: Activar Construction Products Group, Inc. - JL Industries "Commander Alarm (CA)" or comparable audible alarm that sounds when fire-protection cabinet door is opened and that is powered by batteries.
- D. Acrylic Frameless Front Door, Continuous Hinge Cabinet: Suitable for fire extinguisher.
1. Basis-of-Design Product: Subject to compliance with requirements, provide Activar Construction Products Group, Inc. - JL Industries; Panorama Series extinguisher cabinet or comparable product.
 2. Cabinet Construction: [**Nonrated**] [**Two-hour fire rated**].
 - a. Fire-Rated Cabinets: [**JL Industries, "FX2" Foil faced Firespan 90 attached directly to tub exterior**] [**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**].

3. Cabinet Material: [**Cold-rolled steel sheet**] [**Aluminum sheet**] [**Stainless steel sheet**].
 4. Door Style: Acrylic, frameless.
 5. Door Glazing Acrylic: [**Clear**] [**Textured, Obscure with Lettering**].
 - a. Lettering Color: [**Black**] [**Red**] [**White**].
 - b. Acrylic Color: [**Black**] [**Red**] [**White**].
 - c. Letter Orientation: [**Ascending**] [**Horizontal**] [**Vertical**].
 6. Door Hardware: Manufacturer's standard handle and roller catch door-operating hardware of proper type for cabinet type, trim style, and door material and style indicated.
 - a. Pull Handle: [**Manufacturer's standard, with finish to match door**] [**Recessed**].
 - b. Provide concealed hinge, permitting door to open 180 degrees.
 - a. Door Lock: [**Pull handle with roller catch**] [**Saf-T-Lok**] [**Cam lock that allows door to be opened during emergency by pulling sharply on door handle**].
 7. Semirecessed Cabinet: One-piece combination trim and perimeter door frame, with exposed trim face.
 - a. Square-Edge Trim: **1-1/4- to 1-1/2-inch (32- to 38-mm)** backbend depth.
 - b. Rolled-Edge Trim: [**2-1/2-inch (64-mm)**] [**3-inch (76-mm)**] [**4-inch (102-mm)**] [**4-1/2-inch (114-mm)**] <Insert dimension> backbend depth.
 8. Cabinet Trim Material: [**Aluminum**] [**Steel**] [**Stainless Steel**].
 9. Optional Accessories:
 - a. Lettered Door Handle: One-piece, cast-iron door handle with the word "FIRE" embossed into face.
 - b. Identification: Lettering complying with authorities having jurisdiction for letter style, size, spacing, and location. Locate [**as indicated**] [**as directed by Architect**] <Insert location>.1) Identify fire extinguisher in fire-protection cabinet with the words "[**FIRE EXTINGUISHER**] <Insert identification>."
 - a) Location: Applied to [**cabinet door**] [**cabinet glazing**] [**location indicated on Drawings**].
 - b) Application Process: [**Decals**] [**Pressure-sensitive vinyl letters**].
 - c) Lettering Color: [**Red**] [**Black**] [**White**].
 - d) Orientation: [**Vertical**] [**Horizontal**] [**As indicated on Drawings**].
 - c. Alarm: Activar Construction Products Group, Inc. - JL Industries "Commander Alarm (CA)" or comparable audible alarm that sounds when fire-protection cabinet door is opened and that is powered by batteries.
- E. Heavy-Duty, School Cabinet: Suitable for fire extinguisher.
1. Basis-of-Design Product: Subject to compliance with requirements, provide Activar Construction Products Group, Inc. - JL Industries; CS Series school extinguisher cabinet or comparable product.

2. Cabinet Construction: [**Nonrated**] [**Two-hour fire rated**].
 - a. Fire-Rated Cabinets: Manufacturer's standard 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.
3. Cabinet Material: [**Cold-rolled steel sheet**] [**Stainless steel sheet**].
4. Recessed Cabinet:
 - a. Exposed Flat Trim: One-piece combination trim and perimeter door frame overlapping surrounding wall surface, with exposed trim face and wall return at outer edge (backbend).
5. Semirecessed Cabinet: One-piece combination trim and perimeter door frame overlapping surrounding wall surface, with exposed trim face and wall return at outer edge (backbend).
 - a. Square-Edge Trim: **1-1/4- to 1-1/2-inch (32- to 38-mm)** backbend depth.
6. Surface-Mounted Cabinet: Cabinet box fully exposed and mounted directly on wall with no trim.
7. Cabinet Trim Material: Same material and finish as door.
8. Door Material: [**Steel sheet**] [**Stainless steel sheet**].
9. Door Style: [**Fully glazed panel with frame**] [**Solid panel with frame**] [**Horizontal Duo**] [**Vertical Duo**].
10. Door Glazing: [**Clear Acrylic**] [**Laminated Safety Glass**] [**Polycarbonate**] [**Tempered float glass (clear)**].
11. Door Hardware: Manufacturer's standard door-operating hardware of proper type for cabinet type, trim style, and door material and style indicated.
 - a. Pull Handle: Manufacturer's standard, with finish to match door.
 - b. Provide continuous hinge, of same material and finish as trim, permitting door to open 180 degrees.
 - c. Door Lock: [**Saf-T-Lok**] [**Cam lock that allows door to be opened during emergency by pulling sharply on door handle**] [**Manufacturer's standard**].
12. Optional Accessories:
 - a. Identification: Lettering complying with authorities having jurisdiction for letter style, size, spacing, and location. Locate [**as indicated**] [**as directed by Architect**] **<Insert location>**.
 - 1) Identify fire extinguisher in fire-protection cabinet with the words "**[FIRE EXTINGUISHER]** **<Insert identification>**."
 - a) Location: Applied to [**cabinet door**] [**cabinet glazing**] [**location indicated on Drawings**].
 - b) Application Process: [**Silk-screened**] [**Engraved**] [**Etched**] [**Decals**] [**Pressure-sensitive vinyl letters**].

- c) Lettering Color: **[Red]** **[Black]** **[White]**.
 - d) Orientation: **[Vertical]** **[Horizontal]** **[As indicated on Drawings]**.
- b. Alarm: Activar Construction Products Group, Inc. - JL Industries "Commander Alarm (CA)" or comparable audible alarm that sounds when fire-protection cabinet door is opened and that is powered by batteries.
- F. ABS Plastic Cabinet: Suitable for fire extinguisher.
- 1. Basis-of-Design Product: Subject to compliance with requirements, provide Activar Construction Products Group, Inc. - JL Industries; ABS Series extinguisher cabinet or comparable product.
 - 2. Cabinet Construction: Nonrated.
 - 3. Cabinet and Door Material: Injection-molded ABS plastic.
 - a. Door Lock: Manufacturer's standard brass lock.
 - 4. Surface-Mounted Cabinet: Cabinet box fully exposed and mounted directly on wall with no trim.
 - 5. Extinguisher Access: Integral cabinet face hand-pull labeled "PULL HERE only IN CASE OF FIRE" applied on pull-handle.
 - 6. Optional Accessories:
 - a. Identification: Lettering complying with authorities having jurisdiction for letter style, size, spacing, and location. Locate **[as indicated]** **[as directed by Architect]** **<Insert location>**.
 - 1) Identify fire extinguisher in fire-protection cabinet with the words "**[FIRE]** **<Insert identification>**."
 - a) Location: Applied to cabinet side.
 - b) Application Process: **[Decals]** **[Pressure-sensitive vinyl letters]**.
 - c) Lettering Color: **[Red]** **[Black]** **[White]**.
 - d) Orientation: Vertical.
- G. Slide-In Acrylic Front Cabinet: Suitable for fire extinguisher.
- 1. Basis-of-Design Product: Subject to compliance with requirements, provide Activar Construction Products Group, Inc. - JL Industries; **[Classic]** **[Decorline]** **[Economyline]** **[SM]** Series extinguisher cabinet or comparable.
 - 2. Cabinet Construction: Nonrated.
 - 3. Cabinet Material: **[Cold-rolled steel sheet]** **[Aluminum sheet]**.
 - 4. Semirecessed Cabinet: One-piece combination trim and perimeter door frame overlapping surrounding wall surface, with exposed trim face and wall return at outer edge (backbend).
 - a. Square-Edge Trim: **[1-1/4- to 1-1/2-inch (32- to 38-mm)]** **[2-3/4-inch (70-mm)]** **[3-inch (76-mm)]** **[4-1/2-inch (114-mm)]** backbend depth.

5. Surface-Mounted Cabinet: Cabinet box fully exposed and mounted directly on wall with no trim.
 6. Door Style: [**Full acrylic front with retainer clip**] [**Full breakaway acrylic with center pull handle**].
 - a. Break-Glass Strike: Manufacturer's standard metal strike, complete with chain and mounting clip, secured to cabinet.
 - b. Break-Glass Door Handle: Manufacturer's standard, integral to glass with the words "PULL TO BREAK GLASS" applied to glazing face.
 7. Door Glazing: Break acrylic.
 - a. Acrylic Sheet Color: Clear transparent acrylic sheet.
 - b. Door Lock: [**Saf-T-Lok**] [**Cam lock that allows door to be opened during emergency by pulling sharply on door handle**] [**Manufacturer's standard**].
 - c. Identification: Lettering complying with authorities having jurisdiction for letter style, size, spacing, and location. Locate [**as indicated**] [**as directed by Architect**] [**<Insert location>**].
 - 1) Identify fire extinguisher in fire-protection cabinet with the words "[**FIRE EXTINGUISHER**] [**<Insert identification>**]."
 - a) Location: Applied to [**cabinet door**] [**cabinet glazing**] [**location indicated on Drawings**].
 - b) Application Process: [**Decals**] [**Pressure-sensitive vinyl letters**].
 - c) Lettering Color: [**Red**] [**Black**] [**White**].
 - d) Orientation: [**Vertical**] [**Horizontal**] [**As indicated on Drawings**].
- H. Low Profile Cabinet: Suitable for fire extinguisher.
1. Basis-of-Design Product: Subject to compliance with requirements, provide Activar Construction Products Group, Inc. - JL Industries; Orbit Series extinguisher cabinet or comparable product.
 2. Cabinet Construction: Two-hour fire rated.
 - a. Fire-Rated Cabinets: [**JL Industries, "FX2" Foil faced Firespan 90 attached directly to tub exterior**] [**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**].
 3. Cabinet Material: [**Cold-rolled steel sheet**] [**Aluminum sheet**] [**Stainless steel sheet**].
 - a. Shelf: Same metal and finish as cabinet.
 4. Recessed Cabinet:
 - a. Exposed Flat Trim: **3/8-inch (9.5-mm)**, one-piece combination trim and perimeter door frame overlapping surrounding wall surface, with exposed trim face and wall return at outer edge (backbend).

5. Surface-Mounted Cabinet: Cabinet box fully exposed and mounted directly on wall with no trim.
6. Cabinet Trim Material: [**Steel sheet**] [**Aluminum sheet**] [**Extruded-aluminum shapes**] [**Stainless steel sheet**] [**Copper-alloy brass sheet**] [**Copper-alloy bronze sheet**] [**Same material and finish as door**].
7. Door Material: [**Copper-alloy brass sheet**] [**Copper-alloy bronze sheet**] [**Steel sheet**] [**Aluminum sheet**] [**Extruded-aluminum shapes**] [**Stainless steel sheet**].
8. Door Style: [**Fully glazed panel with frame**] [**Horizontal duo panel with frame**] [**Vertical duo panel with frame**] [**Small view window with frame**] [**Solid door**].
9. Door Glazing: Acrylic.
 - a. Acrylic Sheet Color: Clear transparent acrylic sheet.
10. Door Hardware: Manufacturer's standard door-operating hardware of proper type for cabinet type, trim style, and door material and style indicated.
 - a. Provide zinc-plated handle and roller catch to match door finish.
 - b. Provide [**continuous hinge, of same material and finish as trim,**] [**concealed hinge**] [**pivot hinge**] [**manufacturer's standard hinge**], permitting door to open 180 degrees.
 - c. Door Lock: [**Cam lock that allows door to be opened during emergency by pulling sharply on door handle**] [**Saf-T-Lok**].
11. Optional Accessories:
 - a. Identification: Lettering complying with authorities having jurisdiction for letter style, size, spacing, and location. Locate [**as indicated**] [**as directed by Architect**] [**<Insert location>**].
 - 1) Identify fire extinguisher in fire-protection cabinet with the words "[**FIRE EXTINGUISHER**] [**<Insert identification>**]."
 - a) Location: Applied to [**cabinet door**] [**cabinet glazing**] [**location indicated on Drawings**].
 - b) Application Process: [**Decals**] [**Pressure-sensitive vinyl letters**].
 - c) Lettering Color: [**Red**] [**Black**] [**White**].
 - d) Orientation: [**Vertical**] [**Horizontal**] [**As indicated on Drawings**].
 - b. Alarm: Manufacturer's standard alarm that actuates when fire-protection cabinet door is opened and that is powered by [**batteries**] [**low voltage, complete with transformer**].
- I. Decorative Cabinet: Suitable for fire extinguisher.
 1. Basis-of-Design Product: Subject to compliance with requirements, provide Activar Construction Products Group, Inc. - JL Industries; Cavalier Series extinguisher cabinet or comparable product.
 2. Cabinet Construction: Two-hour fire rated.
 - a. Fire-Rated Cabinets: [**JL Industries, "FX2" Foil faced Firespan 90 attached directly to tub exterior**] [**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].

3. Cabinet Material: [US10 Bronze, satin] [US3 Brass, polished] [US10B Bronze, oil rubbed].
4. Tub: Cold rolled steel.
5. Recessed Cabinet:
 - a. Exposed Flat Trim: 3/8-inch (9.5-mm), one-piece combination trim and perimeter door frame overlapping surrounding wall surface, with exposed trim face and wall return at outer edge (backbend).
6. Semirecessed Cabinet: One-piece combination trim and perimeter door frame overlapping surrounding wall surface, with exposed trim face and wall return at outer edge (backbend).
 - a. Square-Edge Trim: 1-1/4- to 1-1/2-inch (32- to 38-mm) backbend depth.
 - b. Rolled-Edge Trim: 3-inch (76-mm) backbend depth.
7. Surface-Mounted Cabinet: Cabinet box fully exposed and mounted directly on wall with no trim.
8. Cabinet Trim Material: Same material and finish as door.
9. Door Material: [Copper-alloy brass sheet] [Copper-alloy bronze sheet].
10. Door Style: [Fully glazed panel with frame] [Horizontal duo panel with frame] [Vertical duo panel with frame] [Small view window with frame] [Solid door].
11. Door Glazing: [Acrylic] [Clear wire glass with safety film] [Laminated safety glass] [Tempered float glass (clear)].
 - a. Acrylic Sheet Color: [Clear] [Bronze] [Gray] transparent acrylic sheet.
12. Door Hardware: Manufacturer's standard door-operating hardware of proper type for cabinet type, trim style, and door material and style indicated.
 - a. Provide zinc-plated handle and roller catch to match door finish.
 - b. Provide [continuous hinge, of same material and finish as trim,] [concealed hinge] [pivot hinge] [manufacturer's standard hinge], permitting door to open 180 degrees.
 - c. Door Lock: [Cam lock that allows door to be opened during emergency by pulling sharply on door handle] [Saf-T-Lok].
13. Optional Accessories:
 - a. Identification: Lettering complying with authorities having jurisdiction for letter style, size, spacing, and location. Locate [as indicated] [as directed by Architect] <Insert location>.
 - 1) Identify fire extinguisher in fire-protection cabinet with the words "[FIRE EXTINGUISHER] <Insert identification>."

- a) Location: Applied to [**cabinet door**] [**cabinet glazing**] [**location indicated on Drawings**].
 - b) Application Process: [**Silk-screened**] [**Engraved**] [**Etched**] [**Decals**] [**Pressure-sensitive vinyl letters**].
 - c) Lettering Color: [**Red**] [**Black**] [**White**].
 - d) Orientation: [**Vertical**] [**Horizontal**] [**As indicated on Drawings**].
- b. Alarm: Activar Construction Products Group, Inc. - JL Industries "Commander Alarm (CA)" or comparable audible alarm that sounds when fire-protection cabinet door is opened and that is powered by batteries.
- J. Exterior Snap Latch Closure Cabinet: Suitable for fire extinguisher.
1. Basis-of-Design Product: Subject to compliance with requirements, provide Activar Construction Products Group, Inc. - JL Industries; FB Series fiberglass extinguisher cabinet or comparable product.
 2. Cabinet Construction: Nonrated.
 3. Cabinet and Door Material: Fiberglass.
 4. Surface-Mounted Cabinet: Cabinet box fully exposed and mounted directly on wall with no trim.
 5. Door Style: **6 by 9-inch (152 by 228-mm)** acrylic view window.
 6. Door Glazing: Acrylic sheet.
 - a. Acrylic Sheet Color: Clear transparent acrylic sheet.
 7. Door Hardware: Manufacturer's standard door-operating hardware of proper type for cabinet type, trim style, and door material and style indicated.
 - a. Provide corrosion resistant aluminum handle.
 - b. Snap latch: Stainless steel.
 - c. Provide full-length stainless steel hinge, permitting door to open 180 degrees.
 8. Identification: Identify fire extinguisher in fire-protection cabinet with the words "FIRE EXTINGUISHER."
 - a. Lettering Color: White.
- K. Fire Hose and Valve Cabinet: Suitable for fire extinguisher and hose valve.
1. Basis-of-Design Product: Subject to compliance with requirements, provide Activar Construction Products Group, Inc. - JL Industries; Crownline Series fire hose and valve cabinet or comparable product.
 2. Cabinet Construction: [**Nonrated**] [**Two-hour fire rated**].
 - a. Fire-Rated Cabinets: [**JL Industries, "FX2" Foil faced Firespan 90 attached directly to tub exterior**] [**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**].

3. Cabinet Material: [**Cold-rolled steel sheet**] [**Aluminum sheet**] [**Stainless steel sheet**].
4. Recessed Cabinet:
 - a. Trimless with Hidden Flange: Flange of same metal and finish as box overlaps surrounding wall finish and concealed from view by an overlapping door.
 - b. Exposed Flat Trim: **3/8-inch (9.5-mm)**, one-piece combination trim and perimeter door frame overlapping surrounding wall surface, with exposed trim face and wall return at outer edge (backbend).
5. Semirecessed Cabinet: One-piece combination trim and perimeter door frame overlapping surrounding wall surface, with exposed trim face and wall return at outer edge (backbend).
 - a. Square-Edge Trim: **1-1/4-inch (32-mm)** backbend depth.
 - b. Rolled-Edge Trim: **2-1/2-inch (64-mm)** backbend depth.
6. Surface-Mounted Cabinet: Cabinet box fully exposed and mounted directly on wall with no trim.
7. Cabinet Trim Material: Same material and finish as door.
8. Door Style: [**Fully glazed panel with frame**] [**Horizontal duo panel with frame**] [**Vertical duo panel with frame**] [**Center duo panel with frame**] [**Small view window with frame**] [**Solid door**].
9. Door Glazing: [**Acrylic**] [**Clear wire glass with safety film**] [**Laminated safety glass**] [**Tempered float glass (clear)**].
 - a. Acrylic Sheet Color: [**Clear**] [**Bronze**] [**Gray**] transparent acrylic sheet.
10. Door Hardware: Manufacturer's standard door-operating hardware of proper type for cabinet type, trim style, and door material and style indicated.
 - a. Pull Handle: [**Manufacturer's Standard, with finish to match door**] [**Recessed**].
 - b. Provide continuous hinge, of same material and finish as trim, permitting door to open 180 degrees.
 - c. Door Lock: [**Cam lock that allows door to be opened during emergency by pulling sharply on door handle**] [**Saf-T-Lok**].
11. Optional Accessories:
 - a. Identification: Lettering complying with authorities having jurisdiction for letter style, size, spacing, and location. Locate [**as indicated**] [**as directed by Architect**] <**Insert location**>.
 - 1) Identify fire extinguisher in fire-protection cabinet with the words "[**FIRE EXTINGUISHER**] <**Insert identification**>."
 - a) Location: Applied to [**cabinet door**] [**cabinet glazing**] [**location indicated on Drawings**].
 - b) Application Process: [**Silk-screened**] [**Engraved**] [**Etched**] [**Decals**] [**Pressure-sensitive vinyl letters**].
 - c) Lettering Color: [**Red**] [**Black**] [**White**].

- d) Orientation: **[Vertical]** **[Horizontal]** **[As indicated on Drawings]**.
- b. Alarm: Activar Construction Products Group, Inc. - JL Industries "Commander Alarm (CA)" or comparable audible alarm that sounds when fire-protection cabinet door is opened and that is powered by batteries.
- L. Fire Blanket Cabinet: Suitable for fire **[extinguisher and fire blanket]** **[blanket]**.
1. Basis-of-Design Product: Subject to compliance with requirements, provide Activar Construction Products Group, Inc. - JL Industries; **[Royal 3600]** **[Royal 9500]** **[Royal 9600]** **[Royal]** Series or comparable product.
 2. Cabinet Construction: Two-hour fire rated.
 - a. Fire-Rated Cabinets: **[JL Industries, "FX2" Foil faced Firespan 90 attached directly to tub exterior]** **[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]**.
 3. Cabinet Material: **[Cold-rolled steel sheet]** **[Aluminum sheet]** **[Stainless steel sheet]**.
 - a. Shelf: Same metal and finish as cabinet.
 4. Recessed Cabinet:
 - a. Exposed Flat Trim: **3/8-inch (9.5-mm)**, one-piece combination trim and perimeter door frame overlapping surrounding wall surface, with exposed trim face and wall return at outer edge (backbend).
 5. Semirecessed Cabinet: One-piece combination trim and perimeter door frame overlapping surrounding wall surface, with exposed trim face and wall return at outer edge (backbend).
 - a. Square-Edge Trim: **1-1/2-inch (38-mm)** backbend depth.
 - b. Rolled-Edge Trim: **[2-1/2-inch (64-mm)]** **[4-inch (102-mm)]** **[4-1/2-inch (114-mm)]** backbend depth.
 6. Surface-Mounted Cabinet: Cabinet box fully exposed and mounted directly on wall with no trim.
 7. Cabinet Trim Material: **[Steel sheet]** **[Aluminum sheet]** **[Extruded-aluminum shapes]** **[Stainless steel sheet]** **[Copper-alloy brass sheet]** **[Copper-alloy bronze sheet]** **[Same material and finish as door]**.
 8. Door Material: **[Steel sheet]** **[Aluminum sheet]** **[Extruded-aluminum shapes]** **[Stainless steel sheet]** **[Copper-alloy brass sheet]** **[Copper-alloy bronze sheet]**.
 9. Door Style: **[Vertical duo panel with frame]** **[Solid door]** **[Roller blanket]** **[Drop blanket]**.
 10. Door Glazing: **[Acrylic]** **[Clear wire glass with safety film]** **[Laminated safety glass]** **[Tempered float glass (clear)]**.
 - a. Acrylic Sheet Color: **[Clear]** **[Bronze]** **[Gray]** transparent acrylic sheet.

11. Door Hardware: Manufacturer's standard concealed handle and roller catch door-operating hardware of proper type for cabinet type, trim style, and door material and style indicated.
 - a. Handle: [**Manufacturer's standard, with finish to match door**] [**Recessed**].
 - b. Provide continuous hinge, of same material and finish as trim, permitting door to open 180 degrees.
 - c. Door Lock: [**Pull handle with roller catch**] [**Saf-T-Lok**] [**Cam lock that allows door to be opened during emergency by pulling sharply on door handle**].
 12. Identification: Lettering complying with authorities having jurisdiction for letter style, size, spacing, and location. Locate [**as indicated**] [**as directed by Architect**] <Insert location>.
 - a. Identification: Identify fire blanket in fire-protection cabinet with the words "**FIRE BLANKET**."
 - 1) Application Process: [**Decals**] [**Pressure-sensitive vinyl letters**].
 - 2) Lettering Color: White.
 13. Alarm: Activar Construction Products Group, Inc. - JL Industries "Commander Alarm (CA)" or comparable audible alarm that sounds when fire-protection cabinet door is opened and that is powered by batteries.
- M. Fire Hose Equipment Cabinet: Suitable for fire hose equipment.
1. Basis-of-Design Product: Subject to compliance with requirements, provide Activar Construction Products Group, Inc. - JL Industries; Fire Hose Equipment Cabinet or comparable product.
 2. Cabinet Construction: Nonrated. Sloped top, louvered sides.
 3. Cabinet Material: [**Cold-rolled steel sheet**] [**Galvanized steel**].
 - a. Shelf: Same metal and finish as cabinet.
 4. Surface-Mounted Cabinet: Cabinet box fully exposed and mounted directly on wall with no trim.
 5. Door Style: Flush solid door panel with no exposed hinges.
 6. Door Hardware: Manufacturer's standard door-operating hardware of proper type for cabinet type, trim style, and door material and style indicated.
 - a. Provide hasp and lever handle with cam-action latch.
 7. Optional Accessories:
 - a. Door Lock: Chrome locking handle.
 - b. Legs: [**18-inch (457-mm)**] [**24-inch (610-mm)**].
 - c. Identification: Lettering complying with authorities having jurisdiction for letter style, size, spacing, and location. Locate [**as indicated**] [**as directed by Architect**] <Insert location>.

- 1) Identify fire extinguisher in fire-protection cabinet with the words "[**FIRE HOSE**] <Insert identification>."
 - a) Location: Applied to [**cabinet door**] [**cabinet glazing**] [**location indicated on Drawings**].
 - b) Application Process: [**Decals**] [**Pressure-sensitive vinyl letters**].
 - c) Lettering Color: [**Red**] [**Black**] [**White**].
 - d) Orientation: [**Vertical**] [**Horizontal**] [**As indicated on Drawings**].
- d. Alarm: Activar Construction Products Group, Inc. - JL Industries "Commander Alarm (CA)" or comparable audible alarm that sounds when fire-protection cabinet door is opened and that is powered by batteries.

0.4 SECURITY FIRE-PROTECTION CABINET <Insert drawing designation>

- A. Cabinet: Suitable for fire [**extinguisher**] [**extinguisher and hose valve**] [**hose**].
 1. Basis-of-Design Product: Subject to compliance with requirements, provide Activar Construction Products Group, Inc. - JL Industries; Security Series or comparable product.
- B. Cabinet Construction: [**Nonrated**] [**Two-hour fire rated**].
 1. Fire-Rated Cabinets: Manufacturer's standard 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.
- C. Cabinet Material: [**0.068-inch- (1.72-mm-)** thick steel sheet] [**0.097-inch- (2.45-mm-)** thick steel sheet] [**0.078-inch- (1.98-mm-)** thick stainless steel sheet].
- D. Recessed Cabinet:
 1. Exposed Flat Trim: One-piece combination trim and perimeter door frame overlapping surrounding wall surface, with exposed trim face and wall return at outer edge (backbend).
- E. Semirecessed 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. Square-Edge Trim: **1-1/2-inch (32- to 38-mm)** backbend depth.
- F. Surface-Mounted Cabinet: Cabinet box fully exposed and mounted directly on wall with no trim.
- G. Cabinet Trim Material: [**Steel sheet**] [**Stainless steel sheet**] [**Same material and finish as door**].
- H. Door Material: [**0.097-inch- (2.45-mm-)** thick steel] [**0.078-inch- (1.98-mm-)** thick stainless steel] [**0.109-inch- (2.78-mm-)** thick stainless steel] sheet.

- I. Door Style: Solid opaque panel with frame.
- J. Door Hardware: Manufacturer's standard door-operating hardware of proper type for cabinet type, trim style, and door material and style indicated, and as follows:
 - 1. Continuous Hinge: Same material and finish as trim, permitting door to open 180 degrees.
 - 2. Mechanical Deadlock: Manufacturer's standard detention deadlock, keyed one side.
 - 3. Mechanical Deadlock: As specified in Section 119814 "Detention Door Hardware."
 - 4. Mechanical Slam Lock: Manufacturer's standard detention slam lock; keyed one side.
 - 5. Mechanical Mortise Cylinder: [**Manufacturer's standard**] [**Custom lock**].
- K. Optional Accessories:
 - 1. Identification: Lettering complying with authorities having jurisdiction for letter style, size, spacing, and location. Locate [**as indicated**] [**as directed by Architect**] <Insert location>.
 - a. Identify fire extinguisher in fire-protection cabinet with the words "[**FIRE HOSE, FIRE EXTINGUISHER, FIRE DEPARTMENT VALVE**] <Insert identification>."
 - 1) Location: Applied to [**cabinet door**] [**cabinet glazing**] [**location indicated on Drawings**].
 - 2) Application Process: [**Decals**] [**Pressure-sensitive vinyl letters**].
 - 3) Lettering Color: [**Red**] [**Black**] [**White**].
 - 4) Orientation: [**Vertical**] [**Horizontal**].

0.5 FIRE HOSE RACK ASSEMBLY

- A. Fire Hose Pin Rack Assembly: FM approved. Single jacket **1-1/2-inch- (38-mm-)** hose pin rack assembly designed for one-person operation. Manufacturer's standard size rack for class and length of hose specified. 100 GPM at 65 PSI at nozzle. Industrial fog nozzle, angle valve and pin rack shall be UL-rated.
 - 1. Basis-of-Design Product: Subject to compliance with requirements, provide Activar Construction Products Group, Inc. - JL Industries; HRA Series fire hose rack assembly or comparable product.
 - 2. NFPA/NEMA Class of Service: [**Class II**] [**Class II and III**].
 - 3. Valve Size: [**1-1/2- inch (38- mm)**] [**2-1/2- inch (63.5- mm)**].
 - 4. Hose Length: [**50**] [**75**] [**100**] [**125**] ft.
 - 5. Fittings Finish Options: [**Cast Brass**] [**Chrome-Plated Brass**]

0.6 MATERIALS

- A. Cold-Rolled Steel: ASTM A1008/A1008M, Commercial Steel (CS), Type B.
 - 1. Finish: [**Factory primed for field painting**] [**Baked enamel or powder coat**].

2. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
 3. Color: [**Match Architect's sample**] [**As selected by Architect from manufacturer's full range**] <Insert color>.
- B. Aluminum: **ASTM B221** (**ASTM B221M**) for extruded shapes and aluminum sheet, with strength and durability characteristics of not less than Alloy 6063-T5 for aluminum sheet.
1. Finish: [**Clear anodic**] [**Color anodic**] [**Baked enamel or powder coat**].
 2. Color: [**Light bronze**] [**Medium bronze**] [**Dark bronze**] [**Match Architect's sample**] [**As selected by Architect from full range of industry colors and color densities**] <Insert color>.
- C. Stainless Steel: ASTM A240/A240M or ASTM A666, Type 304.
1. Finish: [**ASTM A480/A480M No. 4 directional satin finish**] [**ASTM A480/A480M No. 8 mirror like reflective, nondirectional polish**].
- D. Copper Alloy, Brass: ASTM B36/B36M.
1. Finish: [**Polished**] [**Satin**] [**As selected by Architect from full range of industry finishes**].
 2. Copper Alloy, Bronze: ASTM B36/B36M.
 - a. Finish: [**Mirror polish**] [**Satin polish**] [**Satin oxidized oil rub**] [**Clear baked enamel**] [**As selected by Architect from full range of industry finishes**].
- E. Clear Float Glass: ASTM C1036, Type I, Class 1, Quality q3, [**3**] [**6**] mm thick.
- F. Tempered Float Glass: ASTM C1048, Kind FT, Condition A, Type I, Quality q3, 3 mm thick, [**Class 1 (clear)**] [**Class 2 (tinted, heat absorbing, and light reducing), bronze tint**].
- G. Break Glass: Clear annealed float glass, ASTM C1036, Type I, Class 1, Quality q3, 1.5 mm thick, single strength.
- H. Tempered Break Glass: ASTM C1048, Kind FT, Condition A, Type I, Quality q3, 1.5 mm thick.
- I. Wire Glass: ASTM C1036, Type II, Class 1, Form 1, Quality q8, Mesh m1 (diamond), 6 mm thick.
- J. Transparent Acrylic Sheet: ASTM D4802, Category A-1 (cell-cast sheet), [**1.5**] [**3**] [**6**] mm thick, with [**Finish 1 (smooth or polished)**] [**Finish 2 (patterned, textured)**].

0.7 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. Prepare doors and frames to receive locks.
 - 5. Install door locks at factory.
- B. Cabinet Doors: Fabricate doors in accordance with manufacturer's standards, from materials indicated and coordinated with cabinet types and trim styles.
 - 1. Fabricate door frames with tubular stiles and rails and hollow-metal design, minimum **1/2 inch (13 mm)** thick.
 - 2. Fabricate door frames of one-piece construction with edges flanged.
 - 3. 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.

0.8 GENERAL 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 they are within the range of approved Samples and are assembled or installed to minimize contrast.

PART 3 - EXECUTION

0.1 EXAMINATION

- A. Examine roughing-in for hose [**valves**] [**racks**] and cabinets to verify actual locations of piping connections before cabinet installation.
- B. Examine walls and partitions for suitable framing depth and blocking where [**recessed**] [**and**] [**semirecessed**] cabinets will be installed.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

0.2 PREPARATION

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

0.3 INSTALLATION

- A. General: Install fire-protection cabinets in locations and at mounting heights indicated[**or, if not indicated, at height indicated below:**][**or, if not indicated, at heights acceptable to authorities having jurisdiction.**]

1. Fire-Protection Cabinet Mounting Height: [**42 inches (1067 mm)**] <Insert dimension> 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. Provide inside latch and lock for break-glass panels.
3. Fasten mounting brackets to inside surface of fire-protection cabinets, square and plumb.
4. Fire-Rated [**Hose and Valve**] [**Hose-Valve**] Cabinets:
 - a. Install cabinet with not more than **1/16-inch (1.6-mm)** tolerance between pipe OD and knockout OD. Center pipe within knockout.
 - b. Seal through penetrations with firestopping sealant as specified in Section 078413 "Penetration Firestopping."

- C. Identification:

1. Apply [**decals**] [**vinyl lettering**] at locations indicated.
2. Apply [**decals**] [**vinyl lettering**] on field-painted fire-protection cabinets after painting is complete.

0.4 ADJUSTING AND CLEANING

- A. Remove temporary protective coverings and strippable films, if any, 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 104413

