

PROJECT MANUAL

FOR

MENLO PARK FIRE STATION NO. 77 DORM REMODEL

OWNER

MENLO PARK FIRE PROTECTION DISTRICT
170 Middlefield Road
Menlo Park, CA 94025

ARCHITECT

PBK-WLC
1110 IRON POINT ROAD, SUITE 200
FOLSOM, CA 95630
(916) 355-9922

PROJECT W2104600AR
APRIL 2022

PROJECT MANUAL
FOR
MENLO PARK FIRE STATION NO. 77 REMODEL

PROJECT W2104600AR

APRIL 2022

MENLO PARK FIRE PROTECTION DISTRICT
170 Middlefield Road
Menlo Park, CA 94025

PBK-WLC
1110 Iron Point Road, Suite 200
Folsom, CA 95630
(916) 355-9922

BILL LOUIE
ARCHITECT

C27933

PBK-WLC
1110 Iron Point Road, Suite 200
Folsom, CA 95630
Phone: (916) 355-9922
Fax: (916) 355-9950

**TABLE OF CONTENTS
SPECIFICATIONS GROUP**

MENLO PARK FIRE STATION NO. 77 REMODEL

**SPECIFICATIONS GROUP
GENERAL REQUIREMENTS SUBGROUP**

DIVISION 01 GENERAL REQUIREMENTS

Provided by Menlo Park Fire Protection District

**SPECIFICATION GROUP
FACILITY CONSTRUCTION SUBGROUP**

DIVISION 02 EXISTING CONDITIONS

Provided by Menlo Park Fire Protection District

DIVISION 06 WOOD, PLASTICS, AND COMPOSITES

06 10 00	Rough Carpentry
06 41 16	Plastic-Laminate-Clad Architectural Cabinets

DIVISION 07 THERMAL AND MOISTURE PROTECTION

07 13 53	Elastomeric Sheet Waterproofing
07 21 16	Blanket Insulation
07 92 00	Joint Sealants

DIVISION 08 OPENINGS

08 11 13	Hollow Metal Doors and Frames
08 14 00	Wood Doors
08 31 00	Access Doors and Frames
08 71 00	Door Hardware

DIVISION 09 FINISHES

09 21 16	Gypsum Board Assemblies
09 65 00	Resilient Flooring
09 68 13	Tile Carpentry
09 90 00	Painting

DIVISION 10 SPECIALTIES

10 14 00	Signage
10 44 00	Fire Protection Specialties

DIVISION 11 EQUIPMENT

11 90 00	Miscellaneous Equipment
----------	-------------------------

SECTION 06 10 00

ROUGH CARPENTRY

1. PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Structural wall and roof framing.
- B. Wall and roof sheathing.
- C. Wood furring, backing and grounds.
- D. Preservative treatment of wood.

1.2 REFERENCES

- A. CBC - California Building Code, (CCR) California Code of Regulations Title 24, Part 2.
- B. ALSC - American Lumber Standards Committee: Softwood Lumber Standards.
- C. ANSI/AF & PA NDS-12 - National Design Specifications for Wood Construction.
- D. ANSI/SDPWS - Special Design Provisions for Wind and Seismic.
- E. APA - The Engineered Wood Association.
- F. ASTM D6109 – Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastic Lumber.
- G. ASTM E84 - Standard Test Method for Surface burning Characteristics of Building Materials.
- H. AWPA - American Wood Preservers' Association: Book of Standards.
- I. FSC – Forest Stewardship Council.
- J. MS MIL-L-19140 - Fire Retardant Wood Preservative Chemicals.
- K. National Bureau of Standards - Product Standard PS-1-09 for Construction and Industrial Plywood.
- L. WCLIB - West Coast Lumber Inspection Bureau: Standard Grading Rules for West Coast Lumber.
- M. WWPA - Western Wood Products Association.

1.3 QUALITY ASSURANCE

- A. Lumber Grading Agency: Certified by ALSC.
- B. Plywood Grading Agency: Certified by APA.

1.4 REGULATORY REQUIREMENTS

- A. Conform to CBC, California Building Code, (CCR) California Code of Regulations, Title 24, Part 2, Chapter 23.
- B. Allowable stress design values shall be in compliance with the CBC, California Building Code, (CCR) California Code of Regulations, Title 24, Part 2, Section 2306, ANSI/AF & PA NDS-12 - National Design Specifications for Wood Construction, and ANSI/SDPWS - Special Design Provisions for Wind and Seismic.

1.5 SUBMITTALS

- A. Submit product data under provisions of Section 01 33 00.
- B. Provide technical data on wood preservative materials and application instructions.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Store and protect products under provisions of Section 01 61 00.
- B. Deliver materials free from pest infestation. Protect materials on site to prevent termite, beetle or other wood boring insect attacks.
- C. Stack lumber flat, off grade, with spacers between each bundle to promote air circulation. Provide for air circulation around and under coverings.

2. PART 2 PRODUCTS

2.1 LUMBER MATERIALS

- A. Lumber Grading Rules: WCLIB and WWPA. Lumber shall bear WCLIB grade stamp.
- B. 4x and 6x Framing: Douglas Fir species, Dense No. 1 grade.
- C. 2x Framing: Douglas Fir species, No. 2 grade.
- D. 2x and 3x Structural Framing, Studs, Plate and Blocking: Douglas Fir Species, No. 2 grade.
- E. Non-structural Light Framing Studs, Plate and Blocking: Douglas Fir species, construction grade.

2.2 MOISTURE CONTENT

- A. 2x and 3x material, 19 percent moisture content, S-Dry. Structural and non structural framing, beam, rafters, joists, studs, plates and blocking.
- B. 4x and 6x material, 19 percent moisture content at time of application of Architectural finishes. 22 percent maximum moisture content at time of delivery to project site. Materials to be air dried as required to achieve 22 percent moisture content prior to delivery to site. Structural and non structural framing, beam, rafters, joists, studs, plates and blocking.
- C. Lumber materials with a moisture content above 19 percent and less than 22 percent at the time of installation shall be tested for moisture content prior to covering with Architectural finishes. Moisture tests shall be performed under the provisions of Section 01 45 29.
- D. No lumber shall be covered with an Architectural finish until the moisture content of the lumber is 19 percent or below.

2.3 PLYWOOD MATERIALS

- A. Roof Sheathing: APA Structural I, Grade C-D, Exposure 1 minimum 5-ply construction, meeting product Standard PS-1-09.
- B. Wall Sheathing: APA Structural I, Grade C-D, Exposure 1 minimum 5-ply construction, meeting product standard PS-1-09.
- C. Telephone and Electrical Panel Boards: APA Grade C-D with exterior glue, minimum 5 ply, 3/4 inch thick, meeting PS-1-09.

2.4 ACCESSORIES

- A. Fasteners: Hot-dipped galvanized steel for exterior, high humidity, and treated wood locations; plain finish elsewhere; size and type to suit condition.
- B. Connectors: As indicated.
- C. Joist Hangers: Galvanized steel, sized to suit joists and framing conditions; manufactured by Simpson, USP Connectors or KC Metals.
- D. Anchors: Thru bolt or anchor bolt to concrete or masonry unless otherwise noted. Bolt for anchorage to steel unless otherwise noted.
- E. Building Paper: No. 15 asphalt felt. Plain untreated cellulosic building paper.

2.5 WOOD TREATMENT

- A. Preservative Treatment: Where lumber or plywood is indicated as treated or is specified herein to be treated, comply with applicable requirements of AWWA Standards C2 (Lumber) and C9 (Plywood).
- B. Pressure treat all lumber in contact with ground. After treatment kiln-dry lumber to a maximum moisture content of 19 percent.
- C. Pressure treat above ground items as indicated. After treatment, kiln-dry lumber and plywood to a maximum moisture content, respectively, of 19 percent and 15 percent. Treat indicated items and the following:
 - 1. Wood cants, nailers, curbs, equipment support bases, blocking, stripping and similar members in connection with roofing, flashing, vapor barriers and waterproofing.
 - 2. Horizontal wood sills, sleepers, blocking, furring, stripping and similar concealed members in contact with masonry or concrete.
 - 3. Horizontal wood framing members less than 18 inches above grade.
 - 4. Wood floor plates installed over concrete slabs directly in contact with earth.
 - 5. Ends of wood girders entering masonry or concrete walls.
 - 6. Framing members used in exterior door, window, or louver openings.
- D. Complete fabrication of treated items prior to treatment, where possible. If cut or drilled after treatment, coat cut or drilled surfaces with heavy brush coat of same chemical used for treatment and to comply with AWWA M4. Inspect each piece of lumber or plywood after drying and discard damaged or defective pieces.

3. PART 3 EXECUTION

3.1 FRAMING

- A. Erect wood framing members level and plumb.
- B. Place horizontal members laid flat, crown side-up.
- C. Construct framing members full length without splices.
- D. Double members at openings over 1 sq ft. Space short studs over and under opening to stud spacing.
- E. Construct double joist headers at floor and ceiling openings. Frame rigidly into joists.
- F. Construct double joists under wall studding.
- G. Bridge joists in excess of 8 feet span at mid-span members. Fit solid blocking at ends of members.

3.2 FURRING, BLOCKING AND GROUNDS

- A. Provide wherever shown and where required for attachment of other work. Coordinate with work of other sections.
- B. Item locations include but are not limited to toilet accessories, toilet partitions, door frames, window frames, hardware, access doors and ladders, cabinetry, miscellaneous equipment locations and mechanical, plumbing and electrical item locations and all other locations of wall mounted items.
- C. Install plywood backboards for telephone, data and other electrical equipment.
- D. Form to shapes as shown and cut as required for true line and level of work to be attached. Coordinate location with other work involved.
- E. Attach to substrates as required to support applied loading. Countersink bolts and nuts flush with surfaces, unless otherwise indicated.
- F. Build into masonry during installation of masonry work. Where possible, anchor to formwork before concrete placement.
- G. Install plumb and level with closure strips at edges and openings. Shim with wood as required for tolerance of finished work.
- H. Firestop all concealed spaces of wood stud walls, ceilings and floor levels at 10 foot intervals both vertically and horizontally.
- I. Firestop all concealed vertical and horizontal spaces as occur at soffits, vents, stair stringers, pipes and similar openings in compliance with CBC, (CCR) Title 24, Part 2, Section 718.
- J. Firestopping shall consist of closely fitted wood blocks of 2 inch nominal thickness lumber of same width as framing members.

3.3 SHEATHING

- A. Secure roof sheathing perpendicular to framing members with ends staggered. Secure sheet edges over firm bearing. Provide solid edge blocking between sheets. Space panels 1/8 inch apart at ends and edges.
- B. Secure wall sheathing perpendicular to wall studs, with ends staggered, over firm bearing.
- C. Install telephone and electrical panel back boards where required. Size of backboards to be 12 inches beyond size of electrical panel boards.

3.4 RECYCLING CONSTRUCTION WASTE

- A. Recycle lumber waste under the provisions of Section 01 74 19.

3.5 FIELD QUALITY CONTROL

- A. Field inspection and testing will be performed under provisions of Section 01 45 29.
- B. Lumber materials will be inspected for compliance with material grading rules, limitations for moisture content and pest infestation prior to any materials being concealed from view or being covered with an architectural finish.

3.6 TOLERANCES

- A. Framing Members: 1/4 inch maximum from true position.
- B. Surface Flatness of Floor: 1/4 inch in 10 feet maximum.

END OF SECTION

SECTION 06 41 16

PLASTIC-LAMINATE-CLAD ARCHITECTURAL CABINETS

1. PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Special fabricated cabinet units.
- B. Cabinet hardware.

1.2 REFERENCES

- A. WI - Woodwork Institute of California: North American Architectural Woodwork Standards 3.1. (NAAWS)
- B. ASTM A167 - Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip.
- C. ASTM A653 - Steel Sheet, Zinc Coated, (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
- D. ASTM A924 - General Requirements for Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process.
- E. ASTM C615 – Standard Specification for Granite Dimension Stone.
- F. ASTM E84 – Test Method for Surface Burning Characteristics of Building Materials.
- G. CBC – California Building Code, (CCR) California Code of Regulations, Title 24, Part 2.
- H. FSC – Forest Stewardship Council.

1.3 QUALITY ASSURANCE - MONITORED COMPLIANCE PROGRAM

- A. Manufacture casework items in accordance with quality standards of the North American Architectural Woodwork Standards of the Woodwork Institute.
- B. All millwork and the installation of millwork shall be monitored for compliance under the scope of the WI Monitored Compliance Program (MCP).
- C. Fees charged by the Woodwork Institute for their monitored compliance service are the responsibility of the casework manufacturer.
- D. Provide WI Inspection Service at the millwork fabricator. Provide to Architect a written report showing the results of the inspection.
- E. Provide WI Certified Compliance Labels on all items of casework and countertops.
- F. Provide WI Inspection Service at the job site. Provide to Architect a written report showing the results of the inspection.
- G. Self Certification by the millwork fabricator or inspection by other than an authorized representative of The Woodwork Institute is not acceptable.
- H. Upon completion of the installation, provide a WI Monitored Compliance Certificate.

1.4 QUALITY ASSURANCE - CERTIFIED SEISMIC INSTALLATION PROGRAM

- A. Install casework items in accordance with the Woodwork Institute's Certified Seismic Installation Program (CSIP).
- B. Install casework in accordance with the Office of Statewide Health Planning and Development (OSHDP) Preapproval of Fixed Equipment Anchorages (OPA-2649-10 and OPM-0092-13).
- C. Prior to walls being closed up and covered, provide a written Woodwork Institute Certified Seismic Installation report confirming that backing is provided in all locations required for casework installation. Identify those areas where backing is missing or improperly located.
- D. On completion of installation of casework provide a Woodwork Institute Certified Seismic Installation Program Certificate. Identify the work covered and certify that the work as installed is in compliance with the requirements of the Woodwork Institute's Certified Seismic Installation Program (CSIP).
- E. Fees charged by the Woodwork Institute for monitoring and compliance for their Certified Seismic Installation Program (CSIP) are the responsibility of the casework manufacturer and installer.

1.5 REGULATORY REQUIREMENTS

- A. Conform to CBC requirements for flame spread classification in accordance with CBC Section 803 and Table 803.11.
- B. Conform to Flame Spread Classifications for Interior Millwork for flame spread ratings as tested according to ASTM E84.
- C. Materials of this section shall meet the requirements for formaldehyde as specified in the California Air Resources Board's Air Toxics Control Measure (ATCM) for Composite Wood (17CCR 93120 et seq.).

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and protect products to site under provisions of Section 01 61 00.
- B. Conform to Section 2 of the North American Architectural Woodwork Standards for a climate controlled application.
- C. Delivery of casework shall be made only when the area of installation is enclosed, all plaster and concrete work is dry, the area is broom clean and environmental conditions are as specified.

1.7 ENVIRONMENTAL CONDITIONS

- A. Area of casework installation shall be fully enclosed, well ventilated, and protected from direct sunlight, excessive heat, rain and moisture.
- B. Relative humidity of the area of casework installation shall be maintained between 25 percent and 55 percent with a temperature range of between 60 degrees F to 90 degrees F.
- C. Casework shall be acclimated to the area of installation for a minimum of 72 hours prior to installation.

1.8 SUBMITTALS

- A. Submit shop drawings and product data under provisions of Section 01 33 00.

- B. Include materials, component profiles, fastening methods, assembly methods, joint details, accessory listings, schedule of finishes and keying plan.
- C. Provide WI Certified Compliance Label for the Certified Seismic Installation Program on the first page of shop drawings.
- D. Provide WI Certified Compliance label on first page of shop drawings. Include WI inspector's signature.
- E. Provide WI certificates of compliance and inspection reports.

2. PART 2 PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- A. Active member of the Woodwork Institute licensed by WI to provide WI Certified Compliance Certificates and Labels for the products and materials specified in this section www.woodworkinstitute.com.
- B. Substitutions: Under provisions of Section 01 25 13.

2.2 MATERIALS

- A. Material shall conform to standards of the North American Architectural Woodwork Standards as follows: Section 3, Section 4, Section 10, and Section 11.

2.3 CABINET DESIGN

- A. Individual cabinets are indicated on the drawings by the WI Cabinet Design Series (CDS) numbering system, Design Ideas.

2.4 MODULAR CASEWORK - LAMINATED PLASTIC COVERED

- A. Fabricate in accordance with Section 10 of the North American Architectural Woodwork Standards.
 - 1. WI Grade: Custom.
 - 2. Core Material: Combination Core, PureBond Classic Core, www.columbiaforestproducts.com or Pro-Core, www.timberproducts.com.
 - 3. Construction: Style - Frameless.
 - 4. Joinery: Doweled Joints.
 - 5. Cabinet Backs: Blind Dadoed.
 - 6. Cabinet Door Type: Flush overlay.
 - 7. Base: Moisture resistant.
 - 8. Shelves: 1-M-2 particle board, with HPDL two sides, 1 inch thick, MOE of 710,000, capable of supporting 50 lb/sq ft load with deflection of L/144.
 - 9. Shelf Edge Bands 0.028 inch high pressure plastic laminate in color to match shelf. All 4 edges of adjustable shelves to receive banding.

- | | | |
|-----|--|---|
| 10. | Door and Drawer Edge Bands: | 0.028 inch high pressure plastic laminate the same as exposed faces. |
| 11. | Exposed Surfaces
(Including shelves and interior of open front cabinets): | 0.028 inch high pressure plastic laminate, color and pattern as selected by Architect. A maximum of 5 colors and patterns to be selected. A minimum of 3 color combinations per room may be selected. |
| 12. | Semi-Exposed Surfaces
(Behind doors and inside drawers): | Low pressure decorative polyester or melamine laminate 0.020 inch thick in complimentary color to exposed surfaces as selected. |
| 13. | Security and Dust Panels: | Particle board, 3/4 inch. |
| 14. | Substitutions: | Under the provisions of Section 01 25 13. |

2.5 HARDWARE

- A. Finish: Satin Aluminum.
- B. Shelf Supports: Metal or molded polycarbonate clips set in drilled holes spaced 32 mm on center. Clips to have vertical locating pin for retention of shelf.
- C. Drawer and Door Pulls: Epco BP128-SS Bar Pull.
- D. Cabinet Locks: Olympus 700SC/800SC or CompXNational C9001SC/C9003SC.
- E. Drawer Slides for Drawers 24 inch Wide or Less: Accuride 7432.
- F. Drawer Slides for Drawers over 24 inch Wide: Accuride 3640.
- G. Drawer slides for File Drawers: Accuride 4034.
- H. Hinges: Rockford Process Control, No. 374, or Terry Hinge H08-99L60, heavy duty wrap-around, extended panel, tight pin butts of steel, 2-3/4 inch minimum width with companion magnetic door catch capable of a minimum 10 pound pull capacity. Hinges per leaf: 3'-0" high doors - 2 hinges, 3'-0" to 5'-0" high doors - 3 hinges, 5'-0" to 7'-4" high doors - 4 hinges, 7'-0" to 8'-0" - 5 hinges.
- I. Sliding Door Track Assemblies: Grant 2023N sheaves and Grant 2011 track.

2.6 FABRICATION

- A. Shop assemble casework for delivery to site in units easily handled and to permit passage through building openings.
- B. When necessary to cut and fit on site, provide materials with ample allowance for cutting. Provide trim for scribing and site cutting.
- C. Before installation, seal unfinished material installed for backs, bases, self-edge backing, stripping and other concealed portions with a water-repellant sealer.
- D. Install one adjustable shelf for each 1'-0" of height for all wall mounted cabinets.
- E. Provide stretcher at top face of all door and drawer fronts.
- F. Provide locks on all doors and drawers.

3. PART 3 EXECUTION

3.1 INSPECTION

- A. Verify adequacy of backing and support framing.

3.2 INSTALLATION

- A. Set and secure casework in place rigid, plumb, and level.
- B. Install casework in accordance with Section 10 of the North American Architectural Woodwork Standards.
- C. Install casework items in accordance with the Woodwork Institute's Certified Seismic Installation Program (CSIP)
- D. Install countertops in accordance with Section 11 of the North American Architectural Woodwork Standards.

3.3 ADJUSTING AND CLEANING

- A. Adjust doors, drawers, hardware, fixtures and other moving or operating parts to function smoothly and correctly.
- B. Clean casework, counters, shelves, hardware, fittings and fixtures.

END OF SECTION

SECTION 07 21 16

BLANKET INSULATION

1. PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Batt insulation and vapor barrier in exterior wall and roof construction.
- B. Batt insulation for filling perimeter window and door shim spaces, crevices in exterior wall and roof.
- C. Batt sound insulation in interior walls and partitions.

1.2 REFERENCES

- A. ASTM C665 - Mineral Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing.
- B. ASTM C1320 - Installation of Mineral Fiber Batt and Thermal Insulation for Light Frame Construction.
- C. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
- D. CBC - California Building Code, (CCR) California Code of Regulations, Title 24, Part 6.
- E. Business and Professions Code.

1.3 PERFORMANCE REQUIREMENTS

- A. Materials of this Section shall provide continuity of thermal and moisture barrier at building enclosure elements.
- B. Materials of this Section shall provide continuity of sound control where indicated or scheduled.

1.4 REGULATORY REQUIREMENTS

- A. Installation of insulation may only commence if insulation meets mandatory manufacturer certification to the California Energy Commission required by Title 24, Part 6, Section 110.8 of the CBC - California Building Code, (CCR) California Code of Regulations that insulation complies with Title 24, Part 12, Chapter 12-13, Article 3 of the California Quality Standards for Insulating Materials.
- B. Insulation products shall comply with the requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."
- C. Insulation materials to be certified in compliance with Business and Professions Code Section 19165.
- D. Insulation manufacturer to be licensed by the California Department of Consumer Affairs, Bureau of Home Furnishing and Thermal Insulation according to Business and Professions Code, Section 19059.7.

1.5 SUBMITTALS

- A. Submit manufacturer's certificates under provisions of Section 01 33 00 that materials meet or exceed specified regulatory requirements.

2. PART 2 PRODUCTS

2.1 MANUFACTURERS - INSULATION MATERIALS

- A. Certain Teed Corp., www.certainteed.com.
- B. Johns Manville Corp., www.jm.com.
- C. Knauf Insulation, www.knaufinsulation.us.
- D. Owens-Corning Fiberglass Corporation, www.owenscorning.com.
- E. Substitutions: Under provisions of Section 01 25 13.

2.2 MATERIALS

- A. Thermal Batt Insulation, Concealed Wall and Roof: ASTM C665 Preformed fiber glass batt, Type II Kraft Faced, Class C, Category 1 "SmartBatt", with stapling flange for attachment to applicable construction. Equivalent continuous roll membrane facing of "MemBrain" Continuous Air Barrier and Smart Vapor Retarder may be utilized in lieu of individual glass fiber batts. Provide R30 at roofs, R19 at walls.
- B. Acoustical Batt Sound Insulation, Concealed Wall and Ceiling: ASTM C665 preformed glass fiber batt, Type I unfaced, with flame spread of 25 or less, and a smoke density of 450 or less when tested in accordance with ASTM E84. Provide 3-1/2 inch thickness.
- C. Insulation to be formaldehyde-free.
- D. Nails or Staples: Steel wire; electroplated; type and size to suit application.
- E. Tape: Bright aluminum self-adhering type, mesh reinforced, 2 inch wide.
- F. Support Wire: 16 gauge steel wire.
- G. Support Rods: 13 gauge, pointed spring steel length as required for stud spacing.

3. PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that substrate, adjacent materials, and insulation are dry and ready to receive insulation.
- B. Verify that enclosed spaces are ventilated to dissipate humidity.
- C. Maximum relative humidity level of less than 50 percent shall be maintained during installation of insulation.

3.2 INSTALLATION

- A. Install insulation in accordance with insulation manufacturer's instructions and ASTM C1320.
- B. Install batt insulation in exterior walls and roof spaces without gaps or voids.
- C. Fill any small spaces around door frames, window frames, skylight frames, and other wall or roof openings with insulation.
- D. Fill hollow space of steel door frame, steel window frame and other wall or roof frame with insulation.
- E. Fill hollow space created by wall or roof framed headers and jamb spaces with insulation.
- F. Install batt sound insulation in interior walls full height of wall.
- G. Install batt sound insulation above ceilings in areas as indicated. Extend a minimum of 4'-0" beyond face of vertical dividing partitions of space to be insulated where partition terminates at ceiling.

- H. Install batt sound insulation at underside of floor decking between adjacent floor levels.
- I. Trim insulation neatly to fit spaces.
- J. Fit insulation tight in spaces and tight to exterior side of mechanical and electrical services within the plane of insulation. Leave no gaps or voids.
- K. Install with factory applied membrane facing warm side of building spaces.
- L. Lap ends and side flanges of vapor barrier membrane over face of framing members.
- M. Extend vapor barrier on to any adjacent construction and tape seal edge of vapor barrier.
- N. Seal butt ends, lapped flanges, and tears or cuts in membrane with tape or another layer of membrane.
- O. Seal joints in vapor barrier caused by pipes, conduits, electrical boxes, and similar items penetrating vapor barrier.
- P. Face staple flange over flange of adjacent blanket to wood studs at maximum 6 inches oc.
- Q. Friction fit sound insulation between studs and fill as required to completely fill space between the wall finishes.
- R. Retain unsupported roof insulation to metal or concrete substrate with spindle fasteners at 24 inches on center.
- S. Provide Lamtec WMP-10 standard duty white scrim between roof joists to cover exposed batt insulation.

END OF SECTION

SECTION 07 92 00

JOINT SEALANTS

1. PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Preparing sealant substrate surfaces.
- B. Sealant and backing.

1.2 SUMMARY OF SEALANT LOCATIONS

- A. Joints in horizontal surfaces.
 - 1. Expansion and isolation joints in cast-in-place concrete slabs.
 - 2. Control and expansion joints in ceramic and quarry tile.
 - 3. Control and expansion joints in soffits, ceilings and overhead surfaces.
 - 4. Perimeter joints in exterior openings.
 - 5. Joints between ceiling surfaces and frames for doors and windows.
 - 6. Joints in flashing and sheet metal.
 - 7. Perimeter joints of plumbing fixtures.
 - 8. Acoustical isolation joints between head and sill of walls and floor and ceiling surfaces.
 - 9. Joints between countertops and wall surfaces.
 - 10. Joints between thresholds and floors.
 - 11. Joints between dissimilar materials and those listed above.
 - 12. Other joints as indicated.
- B. Joints in vertical surfaces:
 - 1. Expansion and isolation joints in masonry.
 - 2. Control and expansion joints in ceramic and quarry tile.
 - 3. Perimeter joints in exterior openings.
 - 4. Joints in flashing and sheet metal.
 - 5. Perimeter joints of plumbing fixtures.
 - 6. Joints between cabinets and walls.
 - 7. Joints between wall surfaces and door and window frames.
 - 8. Joints between dissimilar materials and those listed above.
 - 9. Other joints as indicated.
 - 10. Joints between cabinets and walls.

- 11. Brick expansion joints.
- 12. Exterior electrical outlets and light fixtures.

1.3 REFERENCES

- A. ASTM C834 - Latex Sealing Compounds.
- B. ASTM C919 - Practices for Use of Sealants in Acoustical Applications.
- C. ASTM C920 - Elastomeric Joint Sealants.
- D. ASTM C1193 - Standard Guide for Use of Joint Sealants.
- E. ASTM D1056 - Flexible Cellular Materials - Sponge or Expanded Rubber.
- F. FS TT-S-001657 - Sealing Compound, Single Component, Butyl Rubber Based, Solvent Release Type.
- G. SWRI - (Sealant, Waterproofing and Restoration Institute) - Sealant and Caulking Guide Specification.

1.4 SUBMITTALS

- A. Submit product data under provisions of Section 01 33 00.
- B. Submit product data indicating sealant chemical characteristics, performance criteria, limitations, and color availability.
- C. Submit samples under provisions of Section 01 33 00.
- D. Submit two samples 4 inches long in size illustrating colors selected.

1.5 QUALITY ASSURANCE

- A. Manufacturer: Company specializing in manufacturing the products specified in this Section with minimum five years documented experience.
- B. Applicator: Company specializing in applying the Work of this Section with minimum three years documented experience, approved by sealant manufacturer.
- C. Conform to Sealant, Waterproofing, and Restoration Institute (SWRI) requirements for materials and installation.
- D. Perform Work in accordance with ASTM C1193.
- E. Perform acoustical sealant application work to provide maximum STC values in accordance with ASTM C919.

1.6 ENVIRONMENTAL REQUIREMENTS

- A. Do not install solvent curing sealants in enclosed building spaces.
- B. Do not install sealant when temperature is less than 40 degrees F.
- C. Maintain temperature and humidity recommended by the sealant manufacturer during and after installation.

1.7 OPERATION AND MAINTENANCE DATA

- A. Submit maintenance data under the provisions of Section 01 77 00.
- B. Submit recommended inspection intervals for sealant joints.
- C. Submit instructions for repairing and replacing failed sealant joints.

1.8 WARRANTY

- A. Provide 5 year warranty under provisions of Section 01 77 00.
- B. Include coverage for installed sealants and accessories which fail to achieve air and water seal and exhibit loss of adhesion or cohesion or do not cure.

2. PART 2 PRODUCTS

2.1 MATERIALS

- A. Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer, based on testing and field experience.
- B. VOC Content of Interior Sealants: Provide interior sealants and sealant primers that comply with the following limits for VOC content limits when calculated according to South Coast Air Quality Management District (SCAQMD) Rule 1168, and must meet or exceed the requirements for the Bay Area Quality Management District Regulation 8, Rule 5.
 - 1. Sealants: 250 g/L.
 - 2. Sealant Primers for Nonporous Substrates: 250 g/L.
 - 3. Sealant Primers for Porous Substrates: 775 g/L.

2.2 MANUFACTURERS

- A. Manufacturers and their products are listed for each type of sealant. Acceptable manufacturers include the following:
 - 1. Dow Consumer Solutions, www.consumer.dow.com.
 - 2. General Electric Co., www.gesealants.com.
 - 3. Pecora Corp., www.pecora.com.
 - 4. Sika Corp., www.sikausa.com.
 - 5. Sonneborn/ChemRex, www.chemrex.com.
 - 6. Tremco, Inc., www.tremcosealants.com.
 - 7. United States Gypsum Co., www.usg.com.
 - 8. W.R. Meadows, Inc., www.wrmeadows.com.
- B. Substitutions: Under provisions of Section 01 25 13.

2.3 SEALANTS

- A. Type A - Acrylic Latex: One-part, non-sag, mildew resistant acrylic emulsion compound complying with ASTM C834, Type S, Grade NS, formulated to be paintable.
 - 1. Tremco, Inc., Acrylic Latex Caulk.
 - 2. Pecora Corporation, AC-20.
 - 3. Sonneborn, Chemrex, Sonolac.

- B. Type B - Butyl Sealant: One-part, non-sag solvent-release-curing sealant complying with FS TT-S-001657 for Type 1 and formulated with a minimum of 75 percent solids.
1. Tremco, Inc., Tremco Butyl Sealant.
 2. Pecora Corporation, BC-158.
 3. Sonneborn, Chemrex, Multi-Purpose Sealant.
- C. Type C - Silicone Sealant: One-part nonacid-curing silicone sealant complying with ASTM C920, Type S, Grade NS, Class 25.
1. Dow Consumer Solutions, Dowsil 790.
 2. General Electric Co., Silpruf.
 3. Tremco, Inc., Spectrem 1.
 4. Pecora Corp., 864 or 890.
 5. Sonneborn/Chemrex, Omniseal.
- D. Type E - Neutral-Curing Silicone Sealant: One part medium modulus neutral-curing silicone sealant complying with ASTM C920, Type S, Grade NS, Class 25.
1. Dow Consumer Solutions, Dowsil 795.
 2. General Electric Co., Ultraglaze 4000.
 3. Tremco, Inc., Spectrum 3.
 4. Pecora Corp., 895.
- E. Type F - One-Part Mildew-Resistant Silicone Sealant: Complying with ASTM C920, Type S, Grade NS, Class 25.
1. Dow Consumer Solutions, Dowsil 786.
 2. General Electric Co., Sanitary 1700.
 3. Tremco, Inc., Tremsil 200.
 4. Pecora Corp., 863 or 898 White.
- F. Type G - Multi-Part Pourable Sealant: Complying with ASTM C920, Type M, Grade P, Class 25. Shore A hardness +40.
1. Tremco, Inc., THC900/901.
 2. Pecora Corp., Dynatred or Urexpan NR-200.
 3. Sika Corporation, Sikaflex 2c NS TG.
 4. W.R. Meadows, Pourthane NS/SL.

2.4 ACCESSORIES

- A. Primer: Non-staining type, recommended by sealant manufacturer to suit application.
- B. Joint Cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming materials.

- C. Joint Backing: ASTM D1056; round, closed cell polyethylene foam rod; oversized 30 to 50 percent larger than joint width.
- D. Bond Breaker: Pressure sensitive tape recommended by sealant manufacturer to suit application.

3. PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that joint openings are ready to receive Work and field measurements are as shown on Drawings and recommended by the manufacturer.
- B. Beginning of installation means installer accepts existing substrate.

3.2 PREPARATION

- A. Clean and prime joints in accordance with manufacturer's instructions. Prime if recommended by manufacturer.
- B. Remove loose materials and foreign matter which might impair adhesion of sealant.
- C. Verify that joint backing and release tapes are compatible with sealant.
- D. Perform preparation in accordance with ASTM C1193.
- E. Protect elements surrounding the Work of this Section from damage or disfiguration.

3.3 INSTALLATION

- A. Install sealant in accordance with manufacturer's instructions.
- B. Measure joint dimensions and size materials to achieve required width/depth ratios.
- C. Install joint backing to achieve a neck dimension no greater than 1/3 the joint width.
- D. Install bond breaker where joint backing is not used.
- E. Apply sealant within recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges.
- F. Install sealant free of air pockets, foreign embedded matter, ridges, and sags.
- G. Tool joints concave unless otherwise detailed.

3.4 CLEANING AND REPAIRING

- A. Clean work under provisions of Section 01 77 00.
- B. Clean adjacent soiled surfaces.
- C. Repair or replace defaced or disfigured finishes caused by Work of this Section.

3.5 PROTECTION OF FINISHED WORK

- A. Protect sealants until cured.
- B. Sprinkler fine silica sand on sealant of exterior concrete paving joints to reduce tracking of sealant.

3.6 SCHEDULE

<u>Type</u>	<u>Location</u>	<u>Color</u>
A. Type A - Acrylic Latex Cure	All interior joints not otherwise scheduled	To match adjacent surfaces
B. Type B - Butyl	Under thresholds	Black
C. Type C - One-Part Nonacid Curing Silicone	Exterior door, entrance and window frames. Exterior and Interior vertical joints in natural colored concrete and integral colored masonry prefinished metal flashing	To match adjacent material
D. Type E - Neutral-Curing Silicone	Joints within glass and glazing.	Translucent
E. Type F - Mildew-Resistant Silicone	Interior joints in ceramic tile and at plumbing fixtures.	White
F. Type G - Multi-part Pourable Urethane	Exterior and interior joints in horizontal surfaces of concrete.	To match adjacent material

END OF SECTION

SECTION 08 11 13

HOLLOW METAL DOORS AND FRAMES

1. PART 1 GENERAL

1.1 WORK INCLUDED

- A. Non-rated and fire rated rolled steel doors and frames.
- B. Louvers.

1.2 REFERENCES

- A. ANSI A250.8 - Recommended Specification for Standard Steel Doors and Frames.
- B. ANSI A250.3 - Test Procedure and Acceptance Criteria for Factory-Applied Finish Painted Steel Surfaces for Steel Doors and Frames.
- C. ANSI A250.10 - Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames.
- D. ASTM A653 - Steel Sheet, Zinc Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
- E. ASTM C665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation.
- F. ASTM A924 - General Requirements for Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process.
- G. ASTM E136 - Standard Test Method for Behavior of Materials in a Vertical Tube Furnace.
- H. CEC - California Energy Commission.
- I. NFPA 80 - Fire Doors and Windows.
- J. SDI-105 - Recommended Erection Instructions for Steel Frames.
- K. DHI - Door and Hardware Institute.
- L. CBC - California Building Code, (CCR) California Code of Regulations, Title 24, Part 2 and Part 6.
- M. UL 9 - Fire Tests of Window Assemblies.
- N. UL 10C - Fire Tests of Door Assemblies.

1.3 QUALITY ASSURANCE

- A. Conform to requirements of ANSI A250.8.
- B. Fire rated door and frame construction to conform to UL 9 and UL 10C.
- C. Installed frame and door assembly to conform to NFPA 80 for fire rated class indicated on Drawings.
- D. Installed exterior frame and door assembly to be weather tight.
- E. Manufacturer shall have both fabrication and assembly plant located within the continental United States or Canada. Products that are either fabricated or assembled outside the continental United States or Canada are not acceptable.

1.4 REGULATORY REQUIREMENTS

- A. Conform to CBC, California Building Code, (CCR) California Code of Regulations, Title 24, Part 2 for fire rated frames and doors.
- B. Conform to CBC, California Building Code, (CCR) California Code of Regulations, Title 24, Part 6, for U-value and solar heat gain coefficient.

1.5 SUBMITTALS

- A. Submit shop drawings and product data under provisions of Section 01 33 00.
- B. Indicate frame configuration, anchor types and spacings, location of cutouts for hardware, reinforcement, and finish.
- C. Submit two samples of exterior frame profile at mullion intersection.
- D. Submit Certificate NRCC-ENV-05-E, from the Nonresidential Compliance Manual documenting compliance with the CBC, California Building Code, (CCR) California Code of Regulations, Title 24, Part 6, Section 110, Table 110.6-A and 110.6-B.

1.6 DELIVERY, STORAGE AND PROTECTION

- A. Deliver, store, protect, and handle products under provisions of Section 01 61 00.
- B. Store products on site under cover.
- C. Place products on at least 4 inch wood sills to prevent rust and damage.
- D. Protect doors and frames with resilient packaging.

1.7 SEQUENCING AND SCHEDULING

- A. Sequence Work under the provisions of Section 01 11 00.
- B. Schedule delivery of all doors and frames so as not to delay progress of other trades.

2. PART 2 PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- A. Curries Mfg., Inc., www.curries.com.
- B. DCI Hollow Metal, www.dcihollowmetal.com.
- C. Fleming, www.flemingdoor.com.
- D. Krieger Steel Products Company, www.kriegersteel.com.
- E. Republic Builders Products Corporation, www.republicdoor.com.
- F. Security Metal Products, www.secmet.com.
- G. Steelcraft, www.steelcraft.com.
- H. Stiles Custom Metal, Inc., www.hollowmetal.com.
- I. Titan Metal Products, Inc., www.titanmetalinc.com.
- J. Substitutions: Under provisions of Section 01 25 13.

2.2 DOORS AND FRAMES

- A. Steel: Commercial quality cold rolled steel conforming to ASTM A653 galvanized to A60 or G60 coating class or Type B, A40 (ZF120) according to ASTM A924 with minimized spangle, mill phosphatized.
- B. Exterior Doors: ANSI A250.8, Level 3, extra heavy-duty, Model 2, continuous welded seam, beveled edges, minimum 0.053 inch thick faces.
- C. Interior Doors: ANSI A250.8, Level 2 heavy duty, Model 1, beveled edges, minimum 0.042 inch thick faces.
- D. Exterior Frames: ANSI A250.8, Level 3, 0.067 inch thick material, core thickness.
- E. Interior Frames: ANSI A250.8, Level 2, 0.053 inch thick material, core thickness.

2.3 DOOR CORE

- A. Exterior Core: Polystyrene insulation.
- B. Interior Door Core: Impregnated cardboard honeycomb.

2.4 ACCESSORIES

- A. Louvers: Roll formed steel, prime coated, inverted 'Y' blade, sightproof, with countersink, tamperproof fasteners.
- B. Rubber Silencers: Resilient rubber as supplied by Section 08 71 00.
- C. Glazing Stops: Rolled steel channel shape, mitered corners; prepared for countersink style tamperproof screws at door installations, square butt at light frames.
- D. Mineral-Fiber Insulation: ASTM C665, Type 1, without membrane facing; slag or rock wool fibers; with maximum flame spread and smoke developed indexes of 25 and 50; passing ASTM E136 for combustion characteristics.

2.5 FRAME ANCHORS

- A. Masonry Anchors: Adjustable T-strap, 0.053 inch thick steel, corrugated, 2 inch x 10 inch size. Fire rated frames to have UL listed perforated strap anchor permanently anchored to frame.
- B. Metal Stud Anchor: Z type anchor, welded to frame, 0.053 inch thick steel, UL listed as required for fire rating.
- C. Wood Stud Anchor: U-shaped anchor, welded to frame, 1 inch wide, 0.053 inch thick steel, with 2 pre-punched holes in nailing flange. UL listed as required for fire rating.
- D. Existing Wall Anchor: 0.053 inch thick pipe spacer with 2 inch x 0.053 inch thick steel plate sized to accommodate a 3/8 diameter countersunk flathead expansion anchor. UL listed as required for fire rating.
- E. Floor Clip: Angle anchor, full width of frame, 0.067 inch thick steel.

2.6 PROTECTIVE COATINGS

- A. Rubberized Coating: Corrosion proofing and sound deadener compound. Equivalent to Rust-Oleum Professional Grade Rubberized Undercoating, www.rustoleum.com.
- B. Primer: Clean and treat with three stage iron phosphate process. Provide baked-on shop coat of EPA compliant gray synthetic rust - inhibitive enamel primer meeting acceptance criteria of ANSI 250.10.
- C. The frame underneath the glazing stops and the inside of the glazing stop area shall be treated for maximum paint adhesion and prime painted with a rust inhibitive primer prior to installation of the frame.

2.7 HARDWARE REINFORCEMENT

- A. Fabricate frames and doors with hardware reinforcement plates welded in place.
- B. Hinge reinforcing shall be full width of frame profile.
- C. Provide spacers for all thru-bolted hardware.
- D. Reinforcement components shall be the following minimum thickness:

1. Hinge (door and frame)	3/16 inch
2. Mortise Lock or Deadbolt	0.093 inch
3. Bored Lock or Deadbolt	0.093 inch
4. Flush Bolt Front	0.093 inch
5. Surface Bolt	0.093 inch
6. Surface Applied Closer	0.093 inch
7. Hold Open Arm	0.093 inch
8. Pull Plates and Bars	0.067 inch
9. Surface Exit Device	0.093 inch
10. Floor Checking Hinge	0.167 inch
11. Pivot Hinge	0.167 inch

2.8 FABRICATION

- A. When shipping limitations so dictate, frames for large openings shall be fabricated in sections designed for splicing.
- B. All spliced joints shall occur on the interior side of exterior frames.
- C. Fabricate frames as full profile welded units.
- D. All face, rabbet and soffit joints between abutting members shall be continuously welded and finished smooth when exposed to exterior.
- E. Corner joints shall have all contact edges closed tight, with faces mitered and continuously welded.
- F. Frames with multiple openings shall have mullion members fabricated with no visible seams or joints. All face, rabbet and soffit joints between abutted members shall be continuously welded and finished smooth when exposed to exterior.
- G. Provide 3/8 inch back bend return on frames where gypsum board wall material occurs whether on one or both sides.
- H. Dust cover boxes or mortar guards of 0.016 inch thick steel shall be provided at all hardware mortises on frames.
- I. Reinforce frames wider than 48 inches with roll formed, 0.093 inch thick steel channels fitted tightly and welded into frame head, inverted U-shape profile.
- J. Prepare frame for silencers except for frames which receive weatherstripping. Provide three single rubber silencers for single doors on strike side, and two single silencers on frame head at double doors without mullions.

- K. Provide steel spreader temporarily attached to feet of both jambs as a brace during shipping and handling. Spreader is not to be used for installation purposes.
- L. Attach fire rated label to each frame and door unit.
- M. Close top edge of exterior door flush with inverted steel channel closure. Weld all joints watertight.

2.9 MANUFACTURING TOLERANCE

- A. Manufacturing tolerance shall be maintained within the following limits:

1. Frame width	+1/16 inch -1/32 inch
2. Frame height	+3/64 inch
3. Frame face	+1/32 inch
4. Frame stop	+1/32 inch
5. Frame rabbet	+1/64 inch
6. Frame depth	+1/32 inch
7. Frame throat	+1/16 inch
8. Door width and height	+3/64 inch
9. Door thickness	+1/16 inch
10. Hardware location	+1/32 inch
11. Door flatness	+1/16 inch

2.10 FINISH

- A. Primer: Baked on rust-inhibitive enamel.
- B. Finish: Site paint under provisions of Section 09 90 00.

3. PART 3 EXECUTION

3.1 INSTALLATION

- A. Install frames in accordance with SDI-105.
- B. Install doors in accordance with DHI.
- C. Install fire doors and frames in accordance with NFPA 80.
- D. Installation of exterior doors and frames to be weathertight and waterproof.
- E. Seal penetration of all surface applied screws on exterior face of frames at glass stops and hardware attachments.
- F. Coordinate installation with electrically controlled locks.
- G. Coordinate with wall construction and details for anchor placement. Provide anchors as follows:
 - 1. Frames up to 7'-6" height - 4 anchors each jamb.
 - 2. Frames 7'-6" to 8'-0" height - 5 anchors each jamb. Plus an additional anchor for each 2' or fraction thereof over 8'-0".
 - 3. Frames for Double Doors: Minimum of 2 anchors in head approximately 12 inches from each jamb.

4. Borrowed Lite Frames: 2 anchors each jamb plus 1 for each 18 inches or fraction thereof over 3'-0". Minimum 2 anchors in head and sill approximately 12 inches from each jamb plus 1 for each 30 inches of length or fraction thereof.
- H. Frames installed in masonry walls to be fully grouted with masonry grout.
- I. Exposed field welds to be finished smooth and touched up.
- J. Primed or painted surfaces which are scratched or marred shall be touched up.
- K. Hardware to be applied in accordance with hardware manufacturer's templates and instructions.
- L. Coordinate installation of glass and glazing.
- M. Install door louvers.
- N. Install roll formed steel reinforcement channels between two abutting frames. Anchor to structure and floor.
- O. Solidly pack mineral-fiber insulation into frames installed in exterior walls that are not solid grouted. For vertical and horizontal frame mullions that are inaccessible after frame assembly place insulation into frame before joining members together.

3.2 INSTALLATION TOLERANCES

- A. Edge clearance for swinging doors shall not exceed the following:

1. Between door and frame at head and jamb	1/8 inch
2. Between edge of pair of doors	1/8 inch
3. At door sill with threshold (From bottom of door to top of threshold)	3/8 inch
4. At door sill with no threshold	1/2 inch
5. At door bottom and rigid floor covering per NFPA 80	1/2 inch
6. At door bottom and nominal floor covering per NFPA 80	5/8 inch
- B. Frame installation tolerance shall not exceed the following:

1. Squareness	+-1/16 inch
2. Alignment	+-1/16 inch
3. Plumbness	+-1/16 inch
4. Diagonal Distortion	+-1/32 inch

END OF SECTION

SECTION 08 14 00

WOOD DOORS

1. PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Flush faced wood doors.
- B. Door louvers.

1.2 REFERENCES

- A. ANSI/WDMA - Wood Door Manufacturers Association I.S. 1-A-04-Architectural Wood Flush Doors.
- B. CBC - California Building Code, (CCR) California Code of Regulations, Title 24, Part 2.
- C. NFPA 80 - Fire Doors and Windows.
- D. NWWDA I.S.1 - Industry Standard For Wood Flush Doors (Includes Standards I.S.1.1 through I.S.1.7).
- E. FSC - Forest Stewardship Council.
- F. UL 10C - Fire Tests of Door Assemblies.
- G. WI - Woodwork Institute North American Architectural Woodwork Standards 3.0.

1.3 QUALITY ASSURANCE

- A. Conform to requirements of The WI North American Architectural Woodwork Standards, Section 9 Custom Grade except where otherwise indicated.
- B. All wood doors and the installation of wood doors shall be monitored for compliance under the scope of the WI Certified Compliance Program (CCP).
- C. Issue a WI Certified Compliance Certificate prior to delivery of doors certifying that doors meet all requirements of WI Grade specified.
- D. After completion issue a WI Certified Compliance Certificate for Installation.

1.4 SUBMITTALS

- A. Submit shop drawings under provisions of Section 01 33 00. Shop drawings shall bear the WI Certified Compliance Label on the first page of each set.
- B. Indicate door elevations, stile and rail reinforcement, internal blocking for hardware attachment, and cutouts for louvers.
- C. Submit samples under provisions of Section 01 33 00.
- D. Submit two samples 12 x 12 inch in size illustrating each species and finish.

1.5 DELIVERY, STORAGE, AND PROTECTION

- A. Protect products under provisions of Section 01 61 00.
- B. Package, deliver, and store doors in accordance with WI requirements as set forth in Section 2 of The WI North American Architectural Woodwork Standards.

1.6 WARRANTY

- A. Provide manufacturer's standard lifetime warranty for interior doors under provisions of Section 01 77 00 for solid core doors.
- B. Provide 1 year manufacturer's warranty under provisions of Section 01 77 00 for Stile and Rail Doors.

2. PART 2 PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS, FLUSH FACED DOORS

- A. Algoma Hardwoods, www.algomahardwoods.com.
- B. Door America-American Building Supply, Inc., www.dooramerican.com.
- C. Eggers Industries, www.eggersindustries.com.
- D. Haley Architectural Doors, www.haleybros.com.
- E. Oshkosh Door Co., www.oshkoshdoor.com.
- F. Marshfield Door Systems, Inc., www.marshfielddoors.com.
- G. V.T. Industries, www.vtindustries.com.
- H. Substitutions: Under provisions of Section 01 25 13.

2.2 ACCEPTABLE MANUFACTURERS, STILE AND RAIL DOORS

- A. Algoma Hardwoods, www.algomahardwoods.com.
- B. Door America-American Building Supply, Inc., www.dooramerican.com.
- C. Eggers Industries, www.eggersindustries.com.
- D. Pinecrest, www.pinecrestinc.com.
- E. Simpson Door Co., www.simpsondoor.com.
- F. Sun-Dor-Co., www.sundorco.com.
- G. The Maiman Co., www.maiman.com.
- H. Marshfield Door Systems, Inc., www.marshfielddoors.com.
- I. Substitutions: Under provisions of Section 01 25 13.

2.3 DOOR CONSTRUCTION

- A. Solid Non-rated Core: Solid wood block, framed block glued, or solid particleboard.
- B. Hollow Core: NWWDA I.S.1; mesh or cellular core including lock blocks, vertical edge bands, and top and bottom rails.
- C. Solid, Special Function Core: Labeled fire performance type, UL 10C, Category A. Intumescent seals concealed by outer stile in matching veneer.
- D. Construction: WI, Custom grade, ANSI/WDMA extra heavy duty, 5 ply, manufactured as an edge bonded, sanded core assembly, laminated in a one-step, hot pressed operation. Cold-press method is not acceptable.

E. Flush Interior Door Veneer:

1. White Birch species; plain sliced with book matched grain, for transparent clear finish. Satin sheen. factory finish. Color as selected.

F. Flush Exterior Door Veneer: Medium density overlay face veneer for opaque paint finish. Site finish.

2.4 ADHESIVES

A. Exterior Doors: WI Type I.

B. Interior Doors: WI Type I.

2.5 ACCESSORIES

A. Louvers: Roll formed 20 gage galvanized steel; factory primed; inverted 'Y' blade; sightproof.

2.6 FABRICATION

A. Fabricate non-rated wood doors to requirements of The WI North American Architectural Woodwork Standards, Section 9, in the WI Grade specified.

B. Fabricate fire rated doors per manufacturer's standard construction, and labeling agency requirements.

C. Premachine doors for finish hardware.

D. For fire rated doors with mineral cores, provide solid wood blocks for hardware reinforcement at lock edge and at top of door for closer.

E. For fire rated doors with mineral cores, provide solid wood blocking for thru-bolted hardware.

3. PART 3 EXECUTION

3.1 INSTALLATION

A. Install doors in accordance with The WI North American Architectural Woodwork Standards Section 9.

B. Conform to WI and NFPA requirements for fit tolerances.

C. Coordinate installation of glass and glazing.

D. Install door louvers.

E. Adjust doors for smooth and balanced movements.

F. Install fire doors in accordance with NFPA 80.

3.2 INSTALLATION TOLERANCES

A. Edge clearance for swinging doors shall not exceed the following as required by WI and NFPA 80:

- | | |
|---|----------|
| 1. Between door and frame at head and jamb | 1/8 inch |
| 2. Between edge of pair of doors | 1/8 inch |
| 3. Diagonal distortion | 1/8 inch |
| 4. At door sill with threshold. (From bottom of door to top of threshold) | 3/8 inch |
| 5. At door sill with no threshold | 1/2 inch |
| 6. At door bottom and rigid floor covering per NFPA 80 | 1/2 inch |
| 7. At door bottom and nominal floor covering per NFPA 80 | 5/8 inch |

END OF SECTION

SECTION 08 31 00

ACCESS DOORS AND FRAMES

1. PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Non-rated access doors and frames.
- B. Installation schedule.

1.2 REFERENCES

- A. UL - Underwriters Laboratories.

1.3 QUALITY ASSURANCE

- A. Manufacture fire rated access doors and frames to conform to UL requirements.
- B. Provide labels indicating rating.

1.4 SUBMITTALS

- A. Submit product data under provisions of Section 01 33 00.
- B. Include sizes, types, finishes, scheduled locations, and details of adjoining work.

2. PART 2 PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- A. Elmdor Manufacturing Co., www.elmdorstoneman.com.
- B. Karp Associates Inc., www.karpinc.com.
- C. J.L. Industries, www.jlindustries.com.
- D. MIFAB, www.mifab.com.
- E. Milcor Incorporated, www.milcorinc.com.
- F. Nystrom Incorporated, www.nystrom.com.
- G. Substitutions: Under provisions of Section 01 25 13.

2.2 ACCESS UNITS

- A. Non-Rated Wall Units: Equivalent to Milcor Flush Panel Style M.
- B. Non-Rated Gypsum Board Ceiling Units: Equivalent to Milcor recessed panel Style ATR.
- C. Size: As required for proper access.

2.3 FABRICATION

- A. Fire Rated Units: Fabricate frame of 0.0538 inch thick steel and door panels 0.0329 inch thick steel pans insulated with non-combustible filler.
- B. Non-Rated Units: Fabricate frames of 0.0538 inch thick steel and door panels of 0.0329 inch thick steel.
- C. Weld, fill, and grind joints to assure flush and square unit.

- D. Hardware: Continuous type steel hinges with stainless steel pin, screw driver slot, quarter turn cam lock.
- E. Anchors: Provide masonry anchors where required for wall construction.

2.4 FINISH

- A. Stainless steel.

3. PART 3 EXECUTION

3.1 INSPECTION

- A. Verify rough openings for door and frame are correctly sized and located.
- B. Beginning of installation means acceptance of existing conditions.

3.2 INSTALLATION

- A. Install frame plumb, level, and flush in wall and ceiling openings.
- B. Position to provide convenient access to concealed work requiring access.
- C. Secure rigidly in place in accordance with manufacturer's instructions.
- D. Install sealant material around units as specified in Section 07 92 00.

3.3 INSTALLATION SCHEDULE

- A. Provide access doors in locations and in sizes required for all mechanical, plumbing and electrical equipment for proper adjustment, maintenance and general access required by code.
- B. Install stainless steel units at all toilets, kitchens, showers, and similar spaces.

END OF SECTION

SECTION 08 71 00

DOOR HARDWARE

1. PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Hardware for doors.
- B. Thresholds.
- C. Gasketting.
- D. Keying.

1.2 REFERENCES

- A. ADA - Americans with Disabilities Act Standards for Accessible Design.
- B. ANSI - American National Standards Institute.
- C. BHMA - Builders' Hardware Manufacturers Association.
- D. CBC - California Building Code, (CCR) California Code of Regulations, Title 24, Part 2, California State Accessibility Standards.
- E. DHI - Door and Hardware Institute.
- F. NFPA 80 - Fire Doors and Windows.
- G. UL - Underwriters Laboratories.

1.3 COORDINATION

- A. Coordinate work of this Section with other directly affected Sections involving manufacturer of any internal reinforcement for door hardware.

1.4 QUALITY ASSURANCE

- A. Manufacturers: Companies specializing in manufacturing door hardware with minimum five years experience. Obtain each kind of hardware from only one manufacturer.
- B. Hardware Supplier: Company specializing in supplying commercial door hardware with five years documented experience.
- C. Hardware Installer: Company specializing in the installation of commercial door hardware with five years documented experience.
- D. Hardware Supplier Personnel: Employ an Architectural Hardware Consultant (AHC) to assist in the work of this Section.

1.5 REGULATORY REQUIREMENTS

- A. Fire-Rated Openings: Comply with CBC Section 716 and NFPA Standard No. 80. Provide only hardware tested and listed by UL for the type and size of each door required, which complies with the requirements of the door and frame labels.
 - 1. Where exit devices are required on fire-rated doors, provide supplementary marking on door UL label indicating "Fire Door to be Equipped with Fire Exit Hardware", and provide UL Label on exit device indicating "Fire Exit Hardware".

2. Exit device touchpad shall be compliant with State Fire Marshall Standard 12-10-3, Section 12-10-302.
- B. Conform to applicable requirements of the Americans with Disabilities Act Standards for Accessible Design regarding accessibility requirements for door and entrance hardware.
- C. Doors and doorways that are part of an accessible route shall comply with CBC Sections 11B-404.
- D. The clear opening width for a door shall be 32 inches minimum. For a swinging door it shall be measured between the face of the door and the stop, with the door open 90 degrees. There shall be no projections into the opening below 34 inches and 4 inches maximum projections into the opening between 34 inches and 80 inches above the finish floor or ground. Door closers and stops shall be permitted to be 78 inches minimum above the finish floor or ground. CBC Section 11B-404.2.3.
- E. Handles, pulls, latches, locks, and other operable parts on accessible doors shall comply with CBC Section 11B-309.4 and shall be operable with one hand and not require tight grasping, pinching, or twisting of the wrist. Operable parts of such hardware shall be 34 inches minimum and 44 inches maximum above the finish floor or ground. Where sliding doors are in the fully open position, operating hardware shall be exposed and usable from both sides. CBC Section 11B-404.2.7.
- F. The force for pushing or pulling open a door shall be as follows: CBC Section 11B-404.2.9.
1. Interior hinged doors, sliding or folding doors, and exterior hinged doors: 5 lbs. (22.2N) maximum.
 2. Required fire doors: the minimum opening force allowable by the Authority having Jurisdiction, not to exceed 15 lbs. (66.7N). These forces do not apply to the force required to retract latch bolts or disengage other devices that hold the door in a closed position.
 3. The force required for activating any operable parts, such as lever hardware, or disengaging other devices shall be 5 lbs. (22.2N) maximum to comply with CBC Section 11B-309.4.
- G. Door closing speeds shall be as follows: CBC Section 11B-404.2.8.
1. Closer shall be adjusted so that the required time to move a door from an open position of 90 degrees to a position of 12 degrees from the latch is 5 seconds minimum.
 2. Spring hinges shall be adjusted so that the required time to move a door from an open position of 70 degrees to the closed position is 1.5 seconds minimum.
- H. Thresholds shall comply with CBC Section 11B-404.2.5.
- I. Pair of doors: Limit swing of one leaf to 90 degrees so that a clear floor space is provided beyond the arc of the swing for the wall-mounted tactile sign. CBC Section 11B-703.4.2.1.

1.6 SUBMITTALS

- A. Submit schedule under provisions of Section 01 33 00.
- B. Submit schedule at earliest possible date along with essential product data where acceptance of hardware schedule must precede fabrication of other work.
- C. Organize hardware schedule into "hardware sets" indicating complete designations of every item required for each door or opening. Include the following:
1. Type, style, function, size and finish of each hardware item. Use BHMA finish codes as per ANSI A156.18.
 2. Name and manufacturer of each item.
 3. Fastenings and other pertinent information.
 4. Location of hardware set cross-referenced to indications on Drawings both on floor plans and in door and frame schedule.

5. Explanation of all abbreviations, symbols, codes, etc., contained in schedule.
 6. Mounting locations for hardware.
 7. Door and frame sizes and materials.
- D. Provide product data on specified hardware.
 - E. Keying Schedule: Submit separate detailed schedule indicating clearly how the Owner's final instructions on keying of locks has been fulfilled.
 - F. Furnish hardware templates to each fabricator of doors, frames, and other work to be factory-prepared for the installation of hardware.

1.7 OPERATION AND MAINTENANCE DATA

- A. Submit operation and maintenance data under provisions of Section 01 77 00.
- B. Include data on operating hardware, lubrication requirements, and inspection procedures related to preventative maintenance.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to site and to other Sections under provisions of Section 01 61 00.
- B. Store and protect products under provisions of Section 01 61 00.
- C. Package hardware items individually; label and identify package with door opening code to match hardware schedule.
- D. Deliver keys to Owner by security shipment direct from hardware supplier.

1.9 WARRANTY

- A. Provide five year warranty for closers, two year warranty for all other hardware under provisions of Section 01 77 00.

1.10 MAINTENANCE MATERIALS

- A. Provide special wrenches and tools applicable to each different or special hardware component.
- B. Provide maintenance tools and accessories supplied by hardware component manufacturer.

2. PART 2 PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

<u>Item</u>	<u>Manufacturer</u>	<u>Acceptable Substitute</u>
A. Butt Hinges	Hager	McKinney Ives
B. Locksets	Schlage	Owners standard
C. Cylinders	Schlage	Owners standard
D. Keypad Locksets	Schlage	Owners standard
E. Exit Devices	Von Duprin	Owners standard
F. Surface Closers	LCN	Owners standard
G. Protection Plates	Trimco	Rockwood Ives

<u>Item</u>	<u>Manufacturer</u>	<u>Acceptable Substitute</u>	
H. Stops and Holders	Trimco	Rockwood	Ives
I. Thresholds/Sweeps/Seals	Pemko	Reese	NGP

2.2 MATERIALS

- A. Locksets: Cylindrical type. 16 gage curved steel, bronze or brass strikes with 2 inch deep box construction, with curved lips of sufficient length to clear trim and protect clothing.
 - 1. Comply with requirements of local security ordinances.
 - 2. Locks shall be of such construction that when locked, the door may be opened from within by using lever and without the use of a key or special knowledge.
 - 3. Lock series and design: Schlage ND series Sparta lever and CO series Sparta lever.
- B. Butt Hinges: Outswinging exterior doors shall have non-removable (NRP) pin. Hinge open widths shall be minimum, but of sufficient size to permit door to swing 180 degrees. Furnish hinges with stainless steel pins and ball bearings.
 - 1. Furnish 3 hinges per leaf to 7'-5" height. Add one for each additional 2 foot height.
 - 2. Provide 5 inch heavy weight hinges on doors over 3'-4" width.
- C. Panic Hardware: Furnish exit devices with sex bolts at wood doors. Lever handle trim shall match locksets. Device shall bear UL label for fire and or panic as may be required.
 - 1. Provide glass bead kits of proper thickness where the rail assembly of the exit device crosses a lite.
- D. Surface Door Closers: Full rack and pinion type with removable non-ferrous case. Provide closers with sex bolts and grommets at wood doors. Place closers inside building, stairs, rooms, etc. Closers shall be non-handed, non-sized and adjustable. Closers shall be installed to permit door to swing 180 degrees.
 - 1. Flush transom offset brackets shall be used where parallel arm closers are listed for doors with fixed panels over.
 - 2. Provide drop brackets, shoe supports, and blade stop spacers as required at narrow top rails.
- E. Protection Plates: Fabricate kick or mop with diamond pattern as shown in detail 10/A-8.2. Furnish with countersunk stainless steel machine screws to match other hardware.
- F. Floor Stops: Floor mounted door stops are prohibited where located in the path of travel. Where provided, install maximum 4 inches from wall surface.
- G. Seals: Solid neoprene to be MIL Spec. R6855-CL III, Grade 40. Sponge neoprene to be MIL Spec. R6130, Type II, Group C. UL label shall be applied on all rated doors.
- H. Silencers: Furnish silencers for interior hollow metal frames, 3 for single doors, 2 for pairs of doors. Omit where sound or light seals occur, or for fire-resistive-rated door assemblies.
- I. Thresholds: Change in level between 1/4 inch and 1/2 inch shall be beveled with a slope no greater than 1 unit vertical to 2 units horizontal (50 percent slope). The floor or landing shall not be more than 1/2 inch lower than the threshold of the doorway.

2.3 KEYING

- A. Contact the Facilities Department with the Menlo Park Fire Protection District for keying requirements. Keying system shall be coordinated with the Owner and approved by Owner's representative in writing. Furnish construction key system in accordance with lock manufacturers' standard. Where interchangeable core systems are used, provide temporary cores for construction keying.

- B. Key system shall be Schlage I/C core cylinder, "C" keyway, 6-pin.
- C. For protection of the Owner, cylinders shall be keyed at the factory of the cylinder manufacturer where permanent records are maintained. Provide three station master keys and zero grand master keys.
- D. Permanent keys and cylinder cores shall be delivered only to Owner's representative via registered mail. Stamp keys "DO NOT DUPLICATE".

2.4 LOCK BOX

- A. Model No. 3200 lock box manufactured by the Knox Company, www.knoxbox.com.
- B. Surface or recess mounted as required.
- C. Polyester powder coated finish in black color.
- D. UL listed tamper switch.

2.5 FINISHES

- A. Generally to be BHMA 626 Satin Chromium.
- B. Areas using BHMA 626 shall have push, pulls and kick plates of BHMA 630, Satin Stainless Steel, unless otherwise noted.
- C. Factory paint door closers to match other hardware, unless otherwise noted.
- D. Aluminum items to be finished AL unless otherwise noted.

2.6 FASTENERS

- A. Screws for strikes, face plates and similar items shall be flathead, countersunk type; provide machine screws for metal and standard wood screws for wood.
- B. Screws for butt hinges shall be flathead, countersunk, full-thread type.
- C. Fastening of closer bases or closer shoes to doors shall be by means of sex bolts and spray painted to match closer finish.
- D. Provide expansion anchors for attaching hardware items to concrete or masonry.
- E. All exposed fasteners shall have a phillips head.
- F. Finish of exposed screws to match surface finish of hardware or other adjacent work.

2.7 OTHER MATERIAL

- A. All other materials not specifically described, but required for a complete and proper finish hardware installation shall be selected by Architect as required at no additional cost.

3. PART 3 EXECUTION

3.1 INSPECTION

- A. Verify that doors and frames are ready to receive work and dimensions are as instructed by the manufacturer.
- B. Beginning of installation means acceptance of existing conditions.

3.2 INSTALLATION

- A. Pre-Installation Meetings: Initiate and conduct with supplier, installer, and related trades, coordinate materials and techniques, and sequence complex hardware items and systems installation. Include manufacturers' representatives of locks, panic hardware, and door closers in the meetings. Convene at least one week prior to commencement of related work.
- B. Install hardware in accordance with manufacturer's instructions and requirements of DHI.
- C. Wherever cutting and fitting is required to install hardware onto or into surfaces which are later to be painted or finished in another way, coordinate removal, storage and reinstallation or application of surface protection with finishing work specified in Division 9. Do not install surface-mounted items until finishes have been completed on the substrate.
- D. Set units level, plumb and true to line and location. Adjust and reinforce the attachment substrate as necessary for proper installation and operation.
- E. Drill and countersink units which are not factory-prepared for anchorage fasteners. Space fasteners and anchors in accordance with industry standards.
- F. Set exterior door thresholds with full-width bead of elastomeric sealant on each point of contact with floor, providing a continuous weather seal. Anchor thresholds with stainless steel countersunk screws.
- G. If handle of door is changed during construction, make necessary changes in hardware at no additional cost.
- H. Mount lock box in accordance with manufacturers' instructions. Connect to building security system. Mount at 4'-0" from finished grade to center of box.

3.3 ADJUST AND CLEAN

- A. Adjust and check each operating item of hardware and each door, to ensure proper operation or function of every unit. Replace units which cannot be adjusted to operate freely and smoothly as intended for the application made.
- B. Clean adjacent surfaces soiled by hardware installation.
- C. Final Adjustment: Wherever hardware installation is made more than one month prior to acceptance or occupancy of a space or area, return to the work during the week prior to acceptance or occupancy, and make final check and adjustment of all hardware items in such space or area. Clean operating items as necessary to restore proper function and finish of hardware and doors. Adjust door control devices to compensate for final operation of heating and ventilating equipment.
- D. Instruct Owner's Personnel in proper adjustment and maintenance of hardware finishes, during the final adjustment of hardware.
- E. Continued Maintenance Service: Approximately six months after the completion of the project, the Contractor, accompanied by the Finish Hardware Installer, shall return to the project and re-adjust every item of hardware to restore proper function of doors and hardware. Consult with and instruct Owner's personnel in recommended additions to the maintenance procedures. Replace hardware items which have deteriorated or failed due to faulty design, materials or installation of hardware units. Prepare a written report of current and predictable problems (of substantial nature) in the performance of the hardware.

3.4 HARDWARE LOCATIONS

- A. Lockset: 34 to 44 inches above finished floor. Verify manufacturers' template with door design.
- B. Panic Device: 36 to 44 inches above finished floor. Verify manufacturers' template with door design.
- C. Floor Stop: 4 inches maximum distance from any adjacent wall surface.
- D. Conform to CBC, CCR, Title 24, Part 2, and ADA regarding positioning requirements for accessibility.

3.5 FIELD QUALITY CONTROL

- A. Architectural Hardware Consultant (AHC) to inspect installation and certify that hardware and its installation have been furnished and installed in accordance with manufacturer's instructions and as specified herein.

3.6 SCHEDULE

- A. Legend of listed manufacturers. The last column in the Schedule of Door Hardware refers to the manufacturer listed in the following schedule:

HAG	Hager
LCN	LCN
PEM	Pemko
SCH	Schlage
TRM	Trimco
VON	Von Duprin

- B. The items listed in the following schedule shall conform to the requirements of the foregoing specification.
- C. The Door Schedule on the Drawings indicates which hardware set is used with each door.
- D. Schedule of Door Hardware:

HW-1

Each single door to have

3	HINGE	BB1199 - 4.5 x 4.5 x NRP	630	HAG
1	EXIT DEVICE	AX-PA-LD-98EO	626	VON
1	KEYPAD EXIT TRIM	CO-100-993R-70-KP-SPA-JD	626	SCH
1	CONSTRUCTION CORE	23-030-ICX	626	SCH
1	PERMANENT CORE	23-030	626	SCH
1	LOCK ASTRAGAL	5000-T	626	TRM
1	SURFACE CLOSER	4040XP-HEDA	689	LCN
1	KICK PLATE	K0125 - 10 x 2 LDW x DIAMOND x RC	628	TRM
1	FLOOR STOP	1209	626	TRM
1 SET	DOOR SEALS	2893V HEAD & JAMBS	628	PEM
1	DOOR SWEEP	57V	628	PEM
1	THRESHOLD	195 x 193 x 196 x WELD x MSES	628	PEM

Note: Install door seals before closer and rim strike

Note: Adjust exit device backset to compensate for strike jamb seal

HW-2

Each single door to have

3	HINGE	BB1168 - 4.5 x 4.5	652	HAG
1	EXIT DEVICE	AX-PA-98L-BE x 996L-17	626	VON
1	SURFACE CLOSER	4040XP-HEDA	689	LCN
1	KICK PLATE	K0125 - 10 x 2 LDW x DIAMOND x RC	628	TRM
1	KICK PLATE	K0125 - 10 x 1 LDW x DIAMOND x RC	628	TRM
1	WALL BUMPER	1270WV	630	TRM
3	SILENCERS	1229A	GRY	TRM

HW-3

Each single door to have

3	HINGE	BB1279 - 4.5 x 4.5	652	HAG
1	PRIVACY	ND40S x SPA x K510-066	626	SCH
1	KICK PLATE WALL	K0125 - 10 x 2 LDW x DIAMOND x RC	628	TRM
1	BUMPER	1270WV	630	TRM
1 SET	SMOKE SEALS	S88 HEAD & JAMBS	BLK	PEM

END OF SECTION

SECTION 09 21 16

GYPSUM BOARD ASSEMBLIES

1. PART 1 GENERAL

1.1 WORK INCLUDED

- A. Gypsum board.
- B. Glass mat gypsum sheathing.
- C. Shaft wall coreboard.
- D. Gypsum soffit board.
- E. Abuse/Impact resistant gypsum board.
- F. Acoustically enhanced gypsum board.
- G. Taped and sanded joint treatment.
- H. Surface primer.
- I. Texture finish.
- J. Resilient furring channels.
- K. Metal channel ceiling framing.

1.2 REFERENCES

- A. ASTM A641 - Zinc-Coated (Galvanized) Carbon Steel Wire.
- B. ASTM C11 - Standard Terminology Relating to Gypsum and Related Building Materials and Systems.
- C. ASTM C79 - Standard Specification for Treated Core and Nontreated Core Gypsum Sheathing Board.
- D. ASTM C475 - Joint Treatment Materials for Gypsum Wallboard Construction.
- E. ASTM C514 - Nails for the Application of Gypsum Wallboard.
- F. ASTM C557 - Adhesives for Fastening Gypsum Wallboard to Wood Framing.
- G. ASTM C645 - Non-Load (Axial) Bearing Steel Studs, Runners (Track), and Rigid Furring Channels for Screw Application of Gypsum Board.
- H. ASTM C754 - Installation of Steel Framing Members to Receive Screw Attached Gypsum Wallboard, Backing Board, or Water Resistant Backing Board.
- I. ASTM C840 - Application and Finishing of Gypsum Board.
- J. ASTM C919 - Use of Sealants in Acoustical Applications.
- K. ASTM C1002 - Steel Drill Screws for the Application of Gypsum Board.
- L. ASTM C1177 - Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing.
- M. ASTM C1396 - Standard Specification for Gypsum Board.
- N. ASTM C1629 - Standard Specification for the Abuse-Resistant Nondecorated Interior Gypsum Panel Products and Fiber-Reinforced Cement Panels.

- O. ASTM D226 - Asphalt-Saturated Felt Used in Roofing and Waterproofing.
- P. ASTM D1037 - Test Methods for Evaluating Properties of Wood-Based Fiber and Particle Panel Materials.
- Q. ASTM D3273 - Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber.
- R. ASTM D3274 - Standard Test Method for Evaluating Degree of Surface Disfiguration of Paint Films in Fungal or Algal Growth, or Soil and Dirt Accumulation.
- S. ASTM D4977 - Standard Test Method for Granular Adhesion to Mineral Surfaced Roofing by abrasion (modified).
- T. ASTM D5420 - Standard Test Method for Impact Resistance of Flat, Rigid Plastic Specimen by Means of a Striker Impacted by a Falling Weight (Gardner Impact).
- U. ASTM E90 - Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions.
- V. ASTM E695 - Standard Method of Measuring Relative Resistance of Wall, Floor, and Roof Construction to Impact Loading.
- W. CBC - California Building Code, (CCR) California Code of Regulations, Title 24, Part 2.
- X. GA 201 - Using Gypsum Board for Walls and Ceilings.
- Y. GA 214 - Levels of Gypsum Board Finish.
- Z. GA 216 - Application and Finishing of Gypsum Board.
- AA. GA 253 - Application of Gypsum Sheathing.
- BB. GA 600 - Fire Resistance Design Manual.
- CC. ISO 14040 - Environmental Management - Life cycle assessment - Principals and Framework.
- DD. UL - Underwriters Laboratories.

1.3 QUALITY ASSURANCE

- A. Applicator: Company specializing in gypsum board systems work with five years documented experience.

1.4 REGULATORY REQUIREMENTS

- A. Conform to CBC, California Building Code, (CCR) California Code of Regulations, Title 24, Part 2, Chapter 7, and UL and GA requirements for fire rated assemblies as indicated on the drawings
- B. Conform to UL No. 2079 for cyclical design at head of fire rated walls.

1.5 ENVIRONMENTAL REQUIREMENTS

- A. Maintain uniform temperature of minimum 60 degrees F and humidity of 30 to 50 percent prior to, during, and after installation of the Work of this Section.

1.6 DEFINITIONS

- A. Refer to ASTM C11 for definitions of terms related to gypsum board assemblies.

1.7 FIELD SAMPLES

- A. Provide field samples under provisions of Section 01 33 00.

- B. On wall and ceiling surface duplicate specified texture finish on at least 100 sq.ft. of surface area.
- C. Provide complete finish including surface primer.
- D. Simulate finished lighting conditions for review of field sample.
- E. After surface texture is accepted, the accepted surface will remain as part of the Work and will be used to evaluate subsequent applications of finish texture.

2. PART 2 PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS - GYPSUM BOARD SYSTEM

- A. American Gypsum Corp., www.americangypsum.com.
- B. Certainteed, www.certainteed.com.
- C. Georgia Pacific Corp., www.gp.com.
- D. National Gypsum Co., www.nationalgypsum.com.
- E. PABCO Gypsum, www.pabcogypsum.com.
- F. United States Gypsum Co., www.usg.com.
- G. Substitutions: Under provisions of Section 01 25 13.

2.2 FRAMING MATERIALS

- A. Metal Furring: ASTM C645, hat-shaped, 7/8 inch deep, 0.0329 inch thick.
- B. Resilient Furring Channel: Manufacturer's standard product designed to reduce sound transmission, complying with ASTM C645 for material, finish and widths of face and fastening flange; 1/2 inch deep x 0.0179 inch thick asymmetric-shaped channel with face connected to single flange by slotted leg (web).
- C. Furring Channel: ASTM C754, 1-1/2 inch x 0.475 lb./ft. channel.
- D. Fasteners: ASTM C1002.
- E. Hanger Wire: ASTM A641, Class 1 coating (galvanized) soft temper, 9 gauge.
- F. Tie Wire: ASTM A641, Class 1 coating (galvanized) soft temper, 16 and 18 gauge.
- G. Adhesive: ASTM C557.

2.3 GYPSUM BOARD MATERIALS

- A. Standard Gypsum Board: ASTM C1396; 5/8 inch thick unless otherwise indicated, maximum permissible length; ends square cut, tapered and beveled edges. Similar to Sheetrock Brand EcoSmart Panels manufactured by United States Gypsum Company.
- B. Mold and Mildew Resistant Gypsum Board: ASTM C1396; 5/8 inches thick unless otherwise indicated, maximum length; ends square cut, tapered and beveled edges. Mold and mildew resistant core and paper facing, meeting ASTM D3273, with a score of 10 as rated according to ASTM D3274. Similar to Sheetrock Brand EcoSmart Mold Tough Panels manufactured by United States Gypsum Company.
- C. Moisture Resistant Gypsum Board: ASTM C1396 with a score of 10 as rated according to ASTM D3274; 5/8 inch thick unless otherwise indicated, water resistant core; water resistant paper on front, back, and long edges; maximum permissible length; ends square cut, tapered and beveled edges.

- D. Abuse/Impact Resistant Gypsum Board: ASTM C1629 ; 5/8 inch thick, maximum permissible lengths; ends square cut, tapered and beveled edges; with additives and fiberglass mat facings to enhance indentation resistance, abrasion, and impact resistance. Similar to Sheetrock Brand VHI Panels manufactured by United States Gypsum Company meeting the following characteristics:
1. Surface Abrasion: ASTM C1629 / D 4977, Level 2.
 2. Indentation Resistance: ASTM C1629 / D5420, Level 1.
 3. Soft-Body Impact: ASTM C1629 / E695, Level 3.
 4. Hard-Body Impact: ASTM C1629, Level 3.
 5. Mold / Mildew Resistance: ASTM D3273, with a score of 10.

2.4 ACCESSORIES

- A. Acoustical Sealant: Non-hardening, non-skinning, for use in conjunction with gypsum board: As specified in Section 07 92 00.
- B. Corner Beads: Metal, hot dip galvanized.
- C. Edge Trim: GA 201 and GA 216; Type LC bead, unless otherwise indicated.
- D. Control Joints: Roll-formed zinc, Type USG No. 093.
- E. Spot Grout: ASTM C475, setting-type joint compound.
- F. Joint Materials Interior: ASTM C475; reinforcing tape, joint compound, adhesive, water, and fasteners. Use tapes and compound recommended by gypsum board manufacturer for the use intended. Use ready mixed, drying type compounds. Use taping compound for embedding tape and first coat over fasteners and flanges of corner beads and trim. Use topping compound for fill and finish coats.
- G. Primer: Flat latex basecoat paint equivalent to First Coat manufactured by United States Gypsum Company.
- H. Primer-Surfacer: Vinyl acrylic latex-based primer and surfacer equivalent to Tuff-Hide manufactured by United States Gypsum Company.
- I. Spray Texture Finish: Equivalent to USG Spray Texture Finish, orange peel texture, manufactured by United States Gypsum Company.
- J. Membrane: ASTM D226; No. 15 asphalt saturated roofing felt.

3. PART 3 EXECUTION

3.1 INSPECTION

- A. Verify that site conditions are ready to receive Work.
- B. Beginning of installation means acceptance of substrate.

3.2 CEILING FRAMING INSTALLATION

- A. Install in accordance with ASTM C754 and CBC, California Building Code, (CCR) California Code of Regulations, Title 24, Part 2, Chapter 25.
- B. Coordinate locations of hangers with other Work.
- C. Install ceiling framing independent of walls and columns.
- D. Space 9 gauge hanger wires 3'-0" o.c. along 1-1/2 inch furring channels and within 6 inches of end of furring channel.

- E. Install 1-1/2 inch furring channels at 4'-0" o.c. and within 6 inches of parallel walls. Provide 1 inch clearance between end of channels and abutting walls.
- F. Position furring channels for proper ceiling height, level, and secure with hanger wire saddle-tied along channel.
- G. At channel splices, interlock flanges, overlap ends 12 inches and secure each end with double-strand of 16 gauge tie wire.
- H. Erect metal furring at right angles to 1-1/2 inch furring channels. Space metal furring 16 inches o.c.
- I. Install metal furring within 6 inches of parallel walls. Provide 1 inch clearance between end of furring and abutting wall.
- J. Secure metal furring to furring channel with clips or saddle tie with double strand of 18 gauge tie wire.
- K. At splices of metal furring nest furring at least 8 inches and securely wire-tie each end with double strand of 16 gauge tie-wire.
- L. Reinforce openings in ceiling suspension system which interrupt main furring channels or metal furring with lateral channel bracing. Extend bracing minimum 24 inches past each end of openings.

3.3 GYPSUM BOARD INSTALLATION

- A. Install gypsum board in accordance with ASTM C840 and manufacturer's instructions.
- B. Erect single layer standard gypsum board in most economical direction, with ends and edges occurring over firm bearing except those ends and edges which are perpendicular to framing.
- C. Erect single layer fire rated gypsum board vertically, with edges and ends occurring over firm bearing except those ends and edges which are perpendicular to framing members. Comply with required UL, CBC, or GA fire rated assembly.
- D. Erect double layer gypsum board with standard gypsum board for first layer placed in most economical direction with second layer placed parallel to face layer with adhesive and supplementary fasteners. Off-set joints of second layer from joints of first layer by at least 12 inches.
- E. Erect double layer fire rated gypsum board in accordance with required UL, CBC, or GA fire rated assembly.
- F. Use screws when fastening gypsum board to metal furring.
- G. Use screws when fastening gypsum board to wood furring or framing except where nails are required for UL or UBC fire rated assembly.
- H. Install fire stop sealant and fiber stuffing at wall penetrations and terminations in accordance with required UL, CBC, or GA fire rated assembly in accordance with Section 07 84 00.
- I. Install acoustical sealant at wall penetrations and terminations as specified in this section and in accordance with Section 07 92 00.
- J. Isolate perimeter of gypsum board applied to non-load bearing partitions at structural abutments. Provide ½ inch wide space and trim with metal edge. Seal joint between metal edge and structural surface with acoustical sealant.
- K. Where partitions intersect structural members projecting below underside of floor / roof slabs and decks, cut gypsum panels to fit profile formed by structural member. Allow ½ inch wide space and install acoustical sealant.
- L. Treat cut edges and holes in moisture resistant gypsum board with sealant.
- M. Install gypsum board with mold and mildew-resistant core and paper facing at exterior locations on the interior face of all exterior walls.

- N. Place control joints not to exceed 30 feet maximum in either direction for partitions and ceilings. Provide adequate seal or safin insulation behind control joints to maintain sound or fire ratings.
- O. Place corner beads at external corners. Use longest practical length. Place edge trim where gypsum board abuts dissimilar materials.
- P. Spot grout metal door frames. Apply spot grout at each jamb anchor clip just before inserting board into frame.

3.4 CURVED PARTITIONS

- A. Install panels horizontally and unbroken across curved surface.
- B. Wet gypsum panels on surface that will become compressed.
- C. On convex side of partition, begin installation at one end of curved surface and fasten panels to studs as they are wrapped around curve.
- D. On concave side of partition, start fastening panels at center of curve and work outward to panel ends.
- E. Allow wetted panels to dry before applying joint treatment.

3.5 CEILING INSTALLATION

- A. Apply gypsum soffit board panels perpendicular to supports with end joints staggered and located over supports.
- B. Install panels with 1/4 inch open space where panels abut other construction or penetrations.
- C. Fasten with corrosion-resistant screws.

3.6 GLASS MAT GYPSUM SHEATHING INSTALLATION

- A. Install glass mat gypsum sheathing in accordance with manufacturer's instructions and in accordance with GA-253.
- B. Install glass mat gypsum sheathing with gold side out.
- C. Install glass mat gypsum parapet sheathing with blue low-perm side out.
- D. Install glass mat gypsum sheathing with long dimension parallel to framing members.
- E. Fasten with corrosion-resistant screws.
- F. Install fire rated glass mat gypsum sheathing in accordance with listed assembly indicated from UL, CBC or GA.

3.7 SHAFT WALL ASSEMBLY INSTALLATION

- A. Shaft wall assemblies shall be installed to comply with requirements of fire-resistance-rated assemblies indicated from UL, CBC or GA.
- B. Do not bridge building expansion joints with shaft-wall assemblies. Frame both sides of joint with furring and other supports.
- C. At penetrations in shaft wall, maintain fire-resistive rating by installing supplemental fire protection behind boxes, elevator call buttons, elevator floor indicators and similar items.
- D. Isolate gypsum finish panels from building structure to prevent cracking while maintaining continuity of fire-rated construction.

- E. Seal gypsum board shaft walls with fire rated sealant at perimeter of assembly where it abuts other work and at joints and penetrations.
- F. Where shaft wall assemblies cannot be positioned within 2 inches of the shaft wall face of structural beams, floor edges and similar projections into shaft, install 5/8 inch thick gypsum board cants covering tops of projections.
- G. Install multiple layers of gypsum board materials as specified for double layer installation.

3.8 JOINT TREATMENT

- A. Tape, fill, and sand joints, edges, and corners in accordance with GA-214.
- B. Feather successive coats a minimum of 2 inches onto adjoining surfaces for each coat.
- C. Where fire resistance rating is required, detail of joint treatment shall meet fire rating requirement.
- D. Level 1 Treatment:
 - 1. All joints and angles shall have tape embedded in joint compound.
 - 2. Surface shall be free of excess joint compound.
 - 3. Tool marks and ridges are acceptable.
 - 4. Use for plenum areas above ceiling, in areas that are generally concealed and other areas not normally open to view.
- E. Level 2 Treatment:
 - 1. All joints and angles shall have tape embedded in joint compound and one separate coat of joint compound shall be applied over all fastener heads and accessories.
 - 2. Surface shall be free of excess joint compound.
 - 3. Tool marks and ridges are acceptable.
 - 4. Use where surface is substrate to ceramic tile, acoustic tile, or tackable wallboard system.
- F. Level 3 Treatment:
 - 1. Not used.
- G. Level 4 Treatment:
 - 1. All joints and angles shall have tape embedded in joint compound with three separate coats of topping compound applied over all joints, angles, fasteners, and accessories.
 - 2. All compound shall be smooth and free of tool marks and ridges.
 - 3. Sand lightly between coats, taking care not to roughen face paper.
 - 4. Use for all surfaces that are scheduled to receive a textured and painted finish, except areas of food service and preparation, or a surface applied wallcovering.
- H. Level 5 Treatment:
 - Not Used.

3.9 FINISHING

- A. Roller apply surface primer to all gypsum board surfaces scheduled to receive a painted and textured finish prior to application of paint or texture finish.
- B. Spray apply textured finish to all surfaces scheduled to receive a paint finish except surfaces of food service and preparation areas.
- C. Remove any overspray of texture finish from door frames, windows, and other adjoining construction.

3.10 TOLERANCES

- A. Maximum Variation from True Flatness: 1/8 inch in 10 feet in any direction.

3.11 PROTECTION

- A. Protect adjacent surfaces from joint compound. Promptly remove from floors and other surfaces. Repair stained and marred surfaces damaged during gypsum board application.
- B. Protect work of this section from weather, condensation, direct sunlight, and other detrimental causes during the construction period.
- C. Remove and replace gypsum panels that become wet, moisture damaged and mold damaged.

END OF SECTION

SECTION 09 65 00

RESILIENT FLOORING

1. PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Resilient top set base.

1.2 REFERENCES

- A. 2010 Americans with Disabilities Act (ADA) Standards for Accessible Design.
- B. CBC - California Building Code, (CCR) California Code of Regulations, Title 24, Part 2, California State Accessibility Standards.
- C. CDH - California Department of Health Standard Practice Method V1.1-2010 for the Testing of Volatile Organic Emissions.
- D. ASTM D2047 - Static Coefficient of Friction of Polish-Coated Floor Surfaces as Measured by the James Machine.
- E. ASTM E648 - Test Method for Critical Radiant Flux of Floor-Covering Systems using a Radiant Energy Source.
- F. ASTM E662 - Test Method for Specific Optical Density of Smoke Generated by Solid Materials.
- G. ASTM F710 - Practice for Preparing Concrete Floors and other Monolithic Floors to Receive Resilient Flooring.
- H. ASTM F1066 - Specification for Vinyl Composition Floor Tile.
- I. ASTM F1303 - Specification for Sheet Vinyl Floor Covering
- J. ASTM F1344 - Specification for Rubber Floor Tile.
- K. ASTM F1700 - Standard Specification for Solid Vinyl Floor Tile.
- L. ASTM F1861 - Standard Specification for Resilient Wall Base.
- M. ASTM F1869 - Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride.
- N. ASTM F2170 - Determining Relative Humidity in Concrete Floor Slabs Using In Situ Probe.
- O. FS RR-T-650 - Treads, Metallic and Non-metallic, Non-skid.
- P. FS SS-T-312b - Tile, Floor: Asphalt, Rubber, Vinyl, Vinyl Composition.

1.3 REGULATORY REQUIREMENTS

- A. Resilient flooring to comply with the following fire performance characteristics as determined by testing products per ASTM test method indicated below:
 - 1. Critical Radiant Flux: 0.45 watts per sq cm or more per ASTM E648.
 - 2. Smoke Density: Less than 450 per ASTM E662.
- B. Maximum volatile organic compound (VOC) emissions shall meet the CDPH test results obtained at the 14 day time period when tested by Method V1.1-2010.

- C. Resilient flooring products shall have a coefficient of friction when tested according to ASTM D2047 of 0.60 for flat floors and 0.80 for ramped surfaces.
- D. Conform to CBC, California Building Code, (CCR) Title 24, Part 2, and the 2010 ADA Standards for Accessible Design for accessibility requirements.

1.4 SUBMITTALS

- A. Submit two 2 inch long samples of base material for each material specified.
- B. Submit manufacturer's written installation instructions.

1.5 OPERATION AND MAINTENANCE DATA

- A. Submit cleaning and maintenance data under provisions of Section 01 77 00.
- B. Include maintenance procedures, recommended maintenance materials, and suggested schedule for cleaning, stripping, and re-waxing.

1.6 ENVIRONMENTAL REQUIREMENTS

- A. Concrete subfloor to be allowed to cure for a minimum of 90 days to achieve acceptable dryness.
- B. Store materials for three days prior to installation in area of installation to achieve temperature stability.
- C. Maintain ambient temperature required by adhesive manufacturer three days prior to, during, and 24 hours after installation of materials.
- D. Moisture Testing: Perform tests as recommended by manufacturer and as follows. Proceed with installation only after substrates pass testing.
 - 1. Subfloor Moisture Conditions: Moisture emission rate of no more than 3 lb/1000 sq. ft./24 hours when tested by the Quantitative Anhydrous Calcium Chloride Test, ASTM F1869, with subfloor temperature not less than 65 degrees F.
 - 2. Subfloor Humidity Conditions: Relative humidity level of no more than 75 percent when tested by in situ drilled probes according to ASTM F2170.
 - 3. Subfloor Alkalinity Conditions: pH range of between 5 to 9 when subfloor is wetted with potable water and pHdriion paper is applied.

2. PART 2 PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS - BASE MATERIALS

- A. Allstate Rubber Corporation, www.allstaterubber.com.
- B. Armstrong World Industries, www.armstrong.com.
- C. Burke Flooring Products, www.burkeflooring.com.
- D. Flexco Company, www.flexcofloors.com.
- E. Roppe Corporation, www.roppe.com.
- F. VPI, LLC; www.vpiflooring.com.
- G. Substitutions: Under provisions of Section 01 25 13.

2.2 BASE MATERIALS

- A. Base: ASTM F1861, Type TS rubber; Group 1 solid; Style B coved; 4 inch high; 0.125 inch thick; top set, in maximum practical lengths.

3. PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that concrete slabs comply with ASTM F710 and are as specified herein.
- B. Verify concrete floors exhibit acceptable moisture emission rate and humidity level; and exhibit negative alkalinity, carbonization, or dusting.
- C. Verify that surfaces are smooth and flat and are ready to receive Work.
- D. Beginning of installation means acceptance of existing substrate and site conditions.

3.2 INSTALLATION - BASE MATERIAL

- A. Fit joints tight and vertical.
- B. Install material in maximum practical lengths.
- C. Maintain minimum measurement of 18 inches between joints, and minimize the total number of joints to the greatest extent possible.
- D. Miter internal corners.
- E. Field wrap external corners with longest practical lengths. "V" cut back surface to 2/3 its thickness.
- F. Install base on solid backing. Bond tight to wall and floor surfaces.
- G. Scribe and fit to door frames and other interruptions.

3.3 CLEANING

- A. Remove excess adhesive from base without damage.

END OF SECTION

SECTION 09 68 13

TILE CARPETING

1. PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Modular carpet tile installed by fully adhered method.
- B. Accessories.

1.2 REFERENCES

- A. ASTM D1335 - Tuft Bind of Pile Floor Coverings.
- B. ASTM E648 - Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source.
- C. ASTM E662 - Specific Optical Density of Smoke Generated by Solid Materials.
- D. ASTM F1869 - Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride.
- E. ASTM F2170 - Determining Relative Humidity in Concrete Floor Slabs Using In-Situ Probe.
- F. CRI 104 - Carpet and Rug Institute Standard for Installation of Commercial Textile Floorcovering Materials.
- G. FTC - Federal Trade Commission Guides, Part 260, Guides for Use of Environmental Marketing Claims.
- H. NFPA - National Fire Protection Association.
- I. NSF / ANSI 140-2007e Sustainable Carpet Assessment.

1.3 SUBMITTALS

- A. Submit product data under provisions of District's Division 01 Requirements.
- B. Provide product data on specified products, describing physical characteristics; sizes, patterns, colors available, and method of installation.
- C. Submit samples under provisions of District's Division 01 Requirements.
- D. Submit two samples minimum 18 x 18 inch in size illustrating color and pattern for each carpet material specified.

1.4 OPERATION AND MAINTENANCE DATA

- A. Submit maintenance data under provisions of District's Division 01 Requirements.
- B. Include maintenance procedures, recommended maintenance materials, and suggested schedule for cleaning and shampooing.

1.5 QUALITY ASSURANCE

- A. Perform work in accordance with CRI 104.
- B. Maintain one copy of document on site.
- C. Carpet shall have an average tuft bind of 20 pounds when tested in accordance with ASTM D1335.
- D. Carpet shall bear CRI Indoor Air Quality Carpet Testing Program Green Label Plus.

1.6 REGULATORY REQUIREMENTS

- A. Floor covering to have an NFPA Class I rating with a minimum radiant flux of 0.45 watt per square centimeter when tested in accordance with ASTM E648.
- B. Floor covering to have a smoke developed rating of less than 450 when tested in accordance with ASTM E662.

1.7 DELIVERY, STORAGE AND HANDLING

- A. Deliver, store, and protect products to site under provisions of District's Division 01 Requirements.
- B. Comply with requirements of CRI 104 Section 4.0.

1.8 PROJECT/SITE CONDITIONS

- A. Comply with requirements of CRI 104, Section 7.0.
- B. Concrete subfloor to be allowed to cure for a minimum of 90 days to achieve acceptable dryness.
- C. Store materials for three days prior to installation in area of installation to achieve temperature stability.
- D. Moisture Testing: Perform tests as recommended by manufacturer and as follows. Proceed with installation only after substrates pass testing.
 - 1. Subfloor Moisture Conditions: Moisture emission rate of no more than 3 lb/1000 sq. ft./24 hours when tested by the Quantitative Anhydrous Calcium Chloride Test, ASTM F1869, with subfloor temperature not less than 65 degrees F.
 - 2. Subfloor Humidity Conditions: Relative humidity level of no more than 75 percent when tested by in situ drilled probes according to ASTM F2170.
 - 3. Subfloor Alkalinity Conditions: pH range of between 5 to 9 when subfloor is wetted with potable water and pHdrion paper is applied.

1.9 WARRANTY

- A. Provide manufacturer's standard lifetime or 20 year non-prorated warranty under provisions of District's Division 01 Requirements.
- B. Performance Warranty: Manufacturer's warranty covering delamination of secondary backing, edge ravel and tuft bind of carpet under both wet and dry conditions.
- C. Wear Warranty: Manufacturer's warranty that carpet will lose no more than 10 percent by weight of face yarn.

1.10 EXTRA MATERIALS

- A. Provide full modular tiles equal to 5 percent of amount installed for each type and color but not less than 10 square yards under the provisions of District's Division 01 Requirements.

2. PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Lees Mohawk Enthralled II GT314, color selected is 802 Gratified - installed quarter turn.
- B. Substitutions: Under provisions of District's Division 01 Requirements.

2.2 MATERIALS

- A. Carpet shall conform to published specification characteristics of named manufacturer as modified by requirements specified in this section.
- B. Size: 24 x 24 inches.
- C. Fiber Type: Invista Antron Legacy, Antron Lumena or Universal Nylon Type 6, 6.
- D. Pile Height: Maximum 1/2 inch.
- E. Backing: Synthetic, non-woven, 100 percent recycled content. No latex backing to be used.
- F. Soil-Resistance Treatment: Manufacturer's standard integral stain resistant treatment.
- G. Pattern: Quarter-Turn.

2.3 ACCESSORIES

- A. Sub-Floor Filler: White premix portland cement and latex; type as recommended by carpet manufacturer.
- B. Primers and Adhesives: Waterproof; releasable type recommended by carpet manufacturer.

3. PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine subfloors and conditions for compliance with requirements for moisture content, humidity levels, alkalinity range and other conditions affecting performance of carpet.
- B. Verify that subfloor surfaces are smooth and flat and are ready to receive work.
- C. Beginning of installation means acceptance of subfloor and site conditions.

3.2 PREPARATION

- A. Remove subfloor coatings, including curing compounds, and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone.
- B. Remove subfloor ridges and bumps. Fill low spots, cracks, joints, holes, and other defects with sub-floor filler.
- C. Apply, trowel, and float filler to leave smooth, flat, hard surface.
- D. Prohibit traffic until filler is cured.
- E. Apply subfloor primer compatible with adhesive where recommended by carpet manufacturer.
- F. Vacuum floor surface.

3.3 INSTALLATION

- A. Apply carpet and adhesive in accordance with manufacturer's instructions and CRI 104, Section 10.2.
- B. Fully adhere carpet tile to substrate.
- C. Lay carpet on floors with tiles laid in quarter turn pattern.
- D. Install pattern parallel to walls.
- E. At doorways, center seams under door in closed position.

- F. Fit seams straight, not crowded or peaked, free of gaps.
- G. Extend carpet into toe spaces, door reveals, open-bottomed obstructions, alcoves and similar openings.
- H. Cut and fit carpet around interruptions.
- I. Fit carpet tight to intersection with vertical surfaces without gaps.

3.4 CLEANING

- A. Remove excess adhesive from floor, base, and wall surfaces without damage.
- B. Vacuum carpet surfaces.

3.5 PROTECTION

- A. Comply with requirements of CRI 104, Section 13.7.
- B. Prohibit traffic from carpet areas for 24 hours after installation.

END OF SECTION

SECTION 09 90 00

PAINTING

1. PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Surface preparation.
- B. Products and application.
- C. Surface finish schedule.

1.2 SUMMARY OF PAINTED SUBSTRATES

- A. Section includes the application of paint systems on the following interior substrates:
 - 1. Primed or unprimed steel.
 - 2. Galvanized metal.
 - 3. Steel doors, frames and lights.
 - 4. Horizontal and vertical gypsum board.
 - 5. Electrical panel board covers.
- B. Section includes the application of paint systems on the following exterior substrates:
 - 1. Primed or unprimed steel.
 - 2. Sheet metal flashing and trim.
 - 3. Sheet metal gutters and downspouts.
 - 4. Steel pipe downspouts.
 - 5. Steel doors, frames and lights.
- C. Substrate listings are for principal surfaces only. Refer to drawings, details and individual specification sections for items, surfaces, and substrates not specifically listed.

1.3 REFERENCES

- A. ASTM D16 - Definitions of Terms Relating to Paint, Varnish, Lacquer, and Related Products.
- B. SSPC - The Society for Protective Coatings.

1.4 SYSTEM DESCRIPTION

- A. Preparation of all surfaces to receive final finish.
- B. Painting and finishing work of this section using coating systems of materials including primers, sealers, fillers, and other applied materials whether used as prime, intermediate, or finish coats.
- C. Surface preparation, priming, and finish coats specified in this Section are in addition to shop-priming and surface treatment specified under other Sections.
- D. Painting and finishing all exterior and interior surfaces of materials including structural, mechanical, and electrical work on site, in building spaces, and above or on the roof.

- E. Paint exposed surfaces except where a surface or material is specifically indicated not to be painted or is to remain natural. Where an item or surface is not specifically mentioned, paint the same as similar adjacent materials or surfaces.

1.5 DEFINITIONS

- A. Conform to ASTM D16 for interpretation of terms used in this Section.

1.6 QUALITY ASSURANCE

- A. Product Manufacturer: Company specializing in manufacturing quality paint and finish products with five years experience.
- B. Applicator: Company specializing in commercial painting and finishing with five years documented experience.
- C. Coats: The number of coats specified is the minimum number acceptable. If full coverage is not obtained with the specified number of coats, apply such additional coats as are necessary to produce the required finish.
- D. Employ coats and undercoats for all types of finishes in strict accordance with the recommendations of the paint manufacturer.
- E. Provide primers and undercoat paint produced by the same manufacturer as the finish coat.
- F. The minimum dry film thickness of each coat of paint shall comply with the manufacturer's recommendations for each type of paint used.

1.7 REGULATORY REQUIREMENTS

- A. Comply with applicable codes and regulations of governmental agencies having jurisdiction including those having jurisdiction over airborne emissions and industrial waste disposal. Where those requirements conflict with this specification, comply with the more stringent provisions.
- B. Comply with the current applicable regulations of the California Air Resources Board (CARB) and the Environmental Protection Agency (EPA).
- C. In the South Coast Air Quality Management District (SCAQMD), where lower VOC contents are specified for a number of categories, certain products may be covered under the manufacturer's SCAQMD - approved Averaging Program. As a result, certain products may be fully compliant with SCAQMD Rule 1113, despite having VOC contents higher than specified limits.

1.8 SUBMITTALS

- A. Submit product data under provisions of Section 01 33 00.
- B. Product data for each coating type shall include as a minimum the following items. Listing shall be by manufacturer's catalog number:
 - 1. Solvent type.
 - 2. Resin type and percentage.
 - 3. Prime pigments by percent of weight.
 - 4. Reinforcing pigment by percent of weight
 - 5. Solids and volume by weight.
 - 6. VOC and RAVOC limits.
 - 7. Coverage rates and film thickness both wet and dry.

8. Conformance to environmental standards listed.
 9. Surface preparation recommendations.
 10. Application, storage, clean up and disposal recommendations.
 11. Special instructions from the manufacturer for proper preparation and application.
- C. Provide manufacturer's technical information and instructions for application of each material proposed for use by catalog number.
 - D. List each material by catalog number and cross-reference specific coating with specified finish system.
 - E. Technical data sheets and all container labels must match and shall contain the same product identification numbers. The term "Series " is not acceptable.
 - F. Provide manufacturer's written and signed certificate that products proposed meet or exceed specified materials.
 - G. Submit samples under provisions of Section 01 33 00.
 - H. Submit two samples 8-1/2 x 11 inch in size of each paint color and texture applied to cardboard. Resubmit samples until acceptable color, sheen and texture is obtained.
 - I. On same species and quality of wood to be installed, submit two 4 x 8 inch samples showing system to be used for varnishes and stains.

1.9 FIELD SAMPLES

- A. Provide field samples under provisions of Section 01 33 00.
- B. On wall surfaces and other exterior and interior components, duplicate specified finishes on at least 100 sq.ft. of surface area.
- C. Provide full-coat finishes until required coverage, sheen, color and texture are obtained.
- D. Simulate finished lighting conditions for review of field samples.
- E. After finishes are accepted, the accepted surface may remain as part of the work and will be used to evaluate subsequent coating systems applications of a similar nature.

1.10 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to site and store and protect under provisions of Section 01 61 00.
- B. Deliver products to site in sealed and labeled containers; inspect to verify acceptance.
- C. Container labeling to include manufacturer's name, type of paint, brand name, brand code, coverage, surface preparation, drying time, cleanup, color designation, and instructions for mixing and reducing. Paint containers not displaying product identification will not be acceptable.
- D. Store paint materials at minimum ambient temperature of 50 degrees F and a maximum of 90 degrees F, in well ventilated area, unless required otherwise by manufacturer's instructions.
- E. Take precautionary measures to prevent fire hazards and spontaneous combustion.

1.11 ENVIRONMENTAL REQUIREMENTS

- A. Provide continuous ventilation and heating facilities to maintain interior surface and ambient temperatures above 50 degrees F with a maximum humidity level of 50 percent for 24 hours before, during, and 48 hours after application of finishes, unless required otherwise by manufacturer's instructions.

- B. Do not apply exterior coatings during rain or snow, or when relative humidity is above 50 percent, unless required otherwise by manufacturer's instructions.
- C. Minimum Application Temperatures for Latex Paints: 50 degrees F for interiors; 50 degrees F for exterior; unless required otherwise by manufacturer's instructions.
- D. Minimum Application Temperature for Varnish and Urethane Finishes: 65 degrees F for interior or exterior, unless required otherwise by manufacturer's instructions.
- E. Provide lighting level of 80 foot candles measured mid-height at substrate surface.

1.12 EXTRA MATERIAL

- A. Provide a one gallon unopened container of each color and surface texture to Owner.
- B. Label each container with color, texture, and room locations in addition to the manufacturer's label.

2. PART 2 PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS - PAINT

- A. Unless specifically identified otherwise, product designations included in this section are those that are manufactured and distributed by the Dunn-Edwards Corporation, www.dunnedwards.com and shall serve as the basis of design standard for kind, quality, performance and function.
- B. Subject to full compliance with specified requirements, other manufacturers offering equivalent products are:
 - 1. Behr Process Corp., www.behrpaint.com.
 - 2. Benjamin Moore Paints, www.benjaminmoore.com.
 - 3. Glidden Professional, www.gliddenprofessional.com.
 - 4. Kelly-Moore Paint Company, www.kellymoore.com.
 - 5. Pittsburgh Paints, www.ppg.com.
 - 6. Sherwin Williams, www.sherwin-williams.com.
 - 7. Tnemec Company, Inc., www.tnemec.com.
 - 8. Vista Paint Corporation, www.vistapaint.com.
- C. Substitutions: Under provisions of Section 01 25 13.

2.2 ACCEPTABLE MANUFACTURERS - MULTICOLORED PAINT COATING

- A. Bollen International, Inc., (Crafton), www.bolleninternational.com.
- B. Dunn-Edwards Corporation (Multispec), www.dunnedwards.com.
- C. Textured Coatings of America (Tex-Cote), www.texcote.com.
- D. Trikes (Polomyx and Zolatone), www.zolatone.com.
- E. Substitutions: Under provisions of Section 01 25 13.

2.3 ACCEPTABLE MANUFACTURERS - CERAMIC EPOXY COATING

- A. Tnemec Company, Inc. www.tnemec.com.

- B. Vitrocem, www.vitrocem.com.

2.4 ACCEPTABLE MANUFACTURER - HEAT REFLECTIVE COATING

- A. Textured Coatings of America (Tex-Cote), www.texcote.com.

2.5 MATERIALS

- A. Ready mixed, except field catalyzed coatings. Process pigments to a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating.
- B. Good flow and brushing properties; capable of drying or curing free of streaks or sags.
- C. "Deep Tone" colors to be composed of 100 percent acrylic pigments with a colored base.
- D. Accessory Materials: Linseed oil, shellac, turpentine, paint thinners and other materials not specifically indicated but required to achieve the finishes specified, of commercial quality.

2.6 FINISHES

- A. Refer to schedule at end of Section for surface finish schedule.

3. PART 3 EXECUTION

3.1 INSPECTION

- A. Verify that surfaces are ready to receive work as instructed by the product manufacturer.
- B. Examine surfaces to be finished prior to commencement of work. Report any condition that may potentially affect proper application.
- C. Beginning of installation means acceptance of existing surfaces.

3.2 SURFACE PREPARATION - GENERAL

- A. Remove electrical plates, hardware, light fixture trim, and fittings prior to preparing surfaces or finishing.
- B. Remove all finish hardware from doors and frames prior to preparing surfaces or finishing.
- C. Correct minor defects and clean surfaces which affect work of this Section.
- D. Shellac and seal marks which may bleed through surface finishes.
- E. Impervious Surfaces: Remove mildew by scrubbing with solution of tri-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.
- F. Gypsum Board: Repair all voids, nicks, cracks and dents with patching materials and finish flush with adjacent surface. Latex fill minor defects. Spot prime defects after repair.
- G. Galvanized Surfaces: Remove surface contamination and oils and wash with solvent. Pretreat with phosphoric acid etch or vinyl wash. Apply coat of etching primer the same day as pretreatment is applied.
- H. Shop Primed Steel: Sand and scrape to remove loose primer and rust. Feather edges to make touch-up patches inconspicuous. Clean surfaces with solvent. Prime paint steel surfaces.

3.3 PROTECTION OF ADJACENT WORK

- A. Protect elements surrounding the work of this Section from damage or disfiguration.
- B. Repair damage to other surfaces caused by work of this Section.

- C. Furnish drop cloths, shields, and protective methods to prevent spray or droppings from disfiguring other surfaces.
- D. Remove empty paint containers from site.

3.4 WORK NOT TO BE PAINTED

- A. Painting is not required on surfaces in concealed and inaccessible areas such as furred spaces, foundation spaces, utility tunnels, pipe spaces and duct shafts.
- B. Do not paint metal surfaces such as stainless steel, chromium plate, brass, bronze, and similar finished metal surfaces.
- C. Do not paint anodized aluminum or other surfaces which are specified to be factory pre-finished.
- D. Do not paint sandblasted or architecturally finished concrete surfaces.
- E. Do not paint prefinished acoustic materials or acoustic suspension systems.
- F. Do not paint over Underwriters Laboratories, Factory Mutual or other code-required labels or identifications.

3.5 APPLICATION

- A. Apply products in accordance with manufacturer's instructions.
- B. Do not apply finishes to surfaces that are not dry.
- C. Apply prime coat to surfaces which are to be painted or finished.
- D. Apply each coat to uniform finish.
- E. Apply each coat of paint slightly darker than preceding coat unless otherwise approved.
- F. Sand lightly between coats to achieve required finish.
- G. Allow applied coat to dry before next coat is applied.
- H. The number of coats specified is the minimum that shall be applied. Apply additional coats when undercoats, stains or other conditions show through final paint coat, until paint film is of uniform finish, color and appearance.
- I. Where clear finishes are required, tint fillers to match wood. Work fillers into the grain before set. Wipe excess from surface.
- J. Prime back surfaces of interior and exterior woodwork with primer paint.
- K. Prime back surfaces of interior woodwork scheduled to receive stain or varnish finish with gloss varnish reduced 25 percent with mineral spirits.
- L. Paint mill finished door seals to match door or frame.
- M. Paint primed steel glazing stops in doors to match door or frame.
- N. Cloudiness, spotting, lap marks, brush marks, runs, sags, spikes and other surface imperfections will not be acceptable.
- O. Where spray application is used, apply each coat of the required thickness. Do not double back to build up film thickness of two coats in one pass.
- P. Where roller application is used, roll and redistribute paint to an even and fine texture. Leave no evidence of roller laps, irregularity of texture, skid marks, or other surface imperfections.

3.6 CLEANING

- A. As Work proceeds, promptly remove paint where spilled, splashed, or spattered.
- B. During progress of Work maintain premises free of unnecessary accumulation of tools, equipment, surplus materials, and debris.
- C. Collect cotton waste, cloths, and material which may constitute a fire hazard, place in closed metal containers and remove daily from site.

3.7 PROTECTION OF COMPLETED WORK

- A. Protect finished installation under provisions of Section 01 61 00.
- B. Erect barriers and post warning signs. Maintain in place until coatings are fully dry.
- C. Confirm that no dust generating activities will occur following application of coatings.

3.8 PATCHING

- A. After completion of painting in any one room or area, repair surfaces damaged by other trades.
- B. Touch-up or re-finish as required to produce intended appearance.

3.9 FIELD QUALITY CONTROL

- A. Field inspection and testing will be performed under provisions of Section 01 45 29.
- B. The Owner reserves the right to invoke the following test procedure at any time and as often as the Owner deems necessary.
- C. The Owner will engage the services of an independent testing agency to sample paint material being used.
- D. Samples of material delivered to the Project will be taken, identified, sealed, and certified in the presence of the Contractor.
- E. The testing agency will perform appropriate quantitative materials analysis and other characteristic testing of materials as required by the Owner.
- F. If test results show materials being used and their installation do not comply with specified requirements or manufacturer's recommendations, the Contractor may be directed to stop painting, remove noncomplying paint, pay for testing and repaint surfaces to acceptable condition.

3.10 COLOR SCHEDULE

- A. Paint and finish colors shall be selected by the Architect from manufacturer's entire range of standard and custom color selections and special colors selected to match or compliment the colors of other materials, equipment, or components which comprise the work.
- B. Access doors, registers, exposed piping, electrical conduit and mechanical/electrical panels: Generally the same color as adjacent walls.
- C. Exterior and interior steel doors, frames and trim: Generally a contrasting color to adjacent walls.
- D. Doors generally are all the same color, but of a contrasting color from frame and trim.
- E. Exterior and interior steel fabrications: Generally a contrasting color to adjacent walls.
- F. Exposed interior mechanical/ductwork: Generally a contrasting color to adjacent walls or ceiling.
- G. Ceilings are generally to be painted a different color than walls.

- H. Approximately 20 percent of overall painting work will be required to be "Deep Tone" colors. This work will require one additional coat of paint beyond that as specified.

3.11 SCHEDULE - EXTERIOR SURFACES

- A. Steel-Primed or Unprimed (Flat Acrylic)
- | | |
|-----------|--------------------------|
| 1st coat: | BRPR00 Bloc-Rust Premium |
| 2nd coat: | EVSH10 Evershield |
| 3rd coat: | EVSH10 Evershield |
- B. Steel - Primed or Unprimed (Eggshell Urethane Alkyd Enamel)
- | | |
|-----------|--------------------------|
| 1st coat: | BRPR00 Bloc-Rust Premium |
| 2nd coat: | ASHL30 Aristoshield |
| 3rd coat: | ASHL30 Aristoshield |
- C. Steel - Primed or Unprimed (Semi-Gloss Urethane Alkyd Enamel)
- | | |
|-----------|--------------------------|
| 1st coat: | BRPR00 Bloc-Rust Premium |
| 2nd coat: | ASHL50 Aristoshield |
| 3rd coat: | ASHL50 Aristoshield |
- D. Steel - Primed or Unprimed (Gloss Urethane Alkyd Enamel)
- | | |
|-----------|--------------------------|
| 1st coat: | BRPR00 Bloc-Rust Premium |
| 2nd coat: | ASHL70 Aristoshield |
| 3rd coat: | ASHL70 Aristoshield |
- E. Steel - Galvanized (Flat Acrylic)
- | | |
|-----------|---|
| 1st coat: | Pre Treat - Supreme Chemical Metal Clean and Etch SCME-01 |
| 2nd coat: | ULGM00 Ultrashield Galvanized Metal Primer |
| 3rd coat: | EVSH10 Evershield |
| 4th coat: | EVSH10 Evershield |
- F. Steel - Galvanized (Eggshell Urethane Alkyd Enamel)
- | | |
|-----------|---|
| 1st coat: | Supreme Chemical Metal Clean and Etch SCME-01 |
| 2nd coat: | ULGM00 Ultrashield Galvanized Metal Primer |
| 3rd coat: | ASHL30 Aristoshield |
| 4th coat: | ASHL30 Aristoshield |
- G. Steel - Galvanized (Semi-Gloss Urethane Alkyd Enamel)
- | | |
|-----------|---|
| 1st coat: | Supreme Chemical Metal Clean and Etch SCME-01 |
| 2nd coat: | ULGM00 Ultrashield Galvanized Metal Primer |
| 3rd coat: | ASHL50 Aristoshield |
| 4th coat: | ASHL50 Aristoshield |

- H. Steel - Galvanized (Gloss Urethane Alkyd Enamel)
- | | |
|-----------|---|
| 1st coat: | Supreme Chemical Metal Clean and Etch SCME-01 |
| 2nd coat: | ULGM00 Ultrashield Galvanized Metal Primer |
| 3rd coat: | ASHL70 Aristoshield |
| 4th coat: | ASHL70 Aristoshield |

3.12 SCHEDULE - INTERIOR SURFACES

- A. Wood - Painted (Eggshell, Acrylic)
- | | |
|-----------|---------------------------|
| 1st coat: | UGPROO Ultra-Grip Premium |
| 2nd coat: | SPMA30 Suprema |
| 3rd coat: | SPMA30 Suprema |
- B. Wood - Painted (Semi-Gloss Acrylic)
- | | |
|-----------|---------------------------|
| 1st coat: | UGPROO Ultra-Grip Premium |
| 2nd coat: | SPMA50 Suprema |
| 3rd coat: | SPMA50 Suprema |
- C. Wood-Painted (Gloss Acrylic)
- | | |
|-----------|---------------------------|
| 1st coat: | UGPROO Ultra-Grip Premium |
| 2nd coat: | SSHL60 Spartashield |
| 3rd coat: | SSHL60 Spartashield |
- D. Wood - Transparent (Stain - Semi-Gloss Polyurethane)
- | | |
|-------------------------------------|------------------------------------|
| 1st coat: | V109 Stainseal - Minwax Stain |
| Filler coat (Open grain wood only): | Valspar Wood Filler VSP 0109 |
| 2nd coat: | Cabot W.B. Polyurethane CAB 8087-1 |
| 3rd coat: | Cabot W.B. Polyurethane CAB 8087-1 |
| 4th coat: | Cabot W.B. Polyurethane CAB 8087-1 |
- E. Wood-Transparent (Stain-Semi-Gloss Lacquer)
- | | |
|-----------|-----------------------------------|
| 1st coat: | Valspar Stainseal V-QYB and V-QYR |
| 2nd coat: | Contractors Edge CE-275PROSS |
| 3rd coat: | Contractors Edge CE-275PRO60 |
| 4th coat: | Contractors Edge CE-275PRO60 |
- F. Steel - Primed or Unprimed (Flat Acrylic)
- | | |
|-----------|--------------------------|
| 1st coat: | BRPR00 Bloc-Rust Premium |
| 2nd coat: | SPMA10 Suprema |
| 3rd coat: | SPMA10 Suprema |

- G. Steel - Primed or Unprimed (Eggshell, Urethane Alkyd Enamel)
- 1st coat: BRPR00 Bloc-Rust Premium
- 2nd coat: ASHL30 Aristoshield
- 3rd coat: ASHL30 Aristoshield
- H. Steel - Primed or Unprimed (Semi-Gloss Urethane Alkyd Enamel)
- 1st coat: BRPR00 Bloc-Rust Premium
- 2nd coat: ASHL50 Aristoshield
- 3rd coat: ASHL50 Aristoshield
- I. Steel - Primed or Unprimed (Gloss Urethane Alkyd Enamel)
- 1st coat: BRPR00 Bloc-Rust Premium
- 2nd coat: ASHL70 Aristoshield
- 3rd coat: ASHL70 Aristoshield
- J. Steel - Galvanized (Flat Acrylic)
- 1st coat: ULGM00 Ultrashield Galvanized Metal Primer
- 2nd coat: SPMA10 Suprema
- 3rd coat: SPMA10 Suprema
- K. Steel - Galvanized (Eggshell, Urethane Alkyd Enamel)
- 1st coat: ULGM00 Ultrashield Galvanized Metal Primer
- 2nd coat: ASHL30 Aristoshield
- 3rd coat: ASHL30 Aristoshield
- L. Steel - Galvanized (Semi-Gloss Urethane Alkyd Enamel)
- 1st coat: ULGM00 Ultrashield Galvanized Metal Primer
- 2nd coat: ASHL50 Aristoshield
- 3rd coat: ASHL50 Aristoshield
- M. Steel - Galvanized (Gloss Urethane Alkyd Enamel)
- 1st coat: ULGM00 Ultrashield Galvanized Metal Primer
- 2nd coat: ASHL70 Aristoshield
- 3rd coat: ASHL70 Aristoshield
- N. Gypsum Board (Flat Acrylic)
- 1st coat: VNPROO Vinylastic Premium
- 2nd coat: SPMA10 Suprema
- 3rd coat: SPMA10 Suprema
- O. Gypsum Board (Eggshell Acrylic)
- 1st coat: VNPROO Vinylastic Premium
- 2nd coat: SPMA30 Suprema
- 3rd coat: SPMA30 Suprema

P. Gypsum Board (Semi-Gloss Acrylic)

1st coat:	VNPROO Vinylastic Premium
2nd coat:	SPMA50 Suprema
3rd coat:	SPMA50 Suprema

Q. Gypsum Board (Gloss Acrylic)

1st coat:	VNPROO Vinylastic Premium
2nd coat:	SSHL60 Spartashield
3rd coat:	SSHL60 Spartashield

R. Gypsum Board (Gloss Epoxy)

1st coat:	Carboline Sanitile 120
2nd coat:	Carboline Carboguard 890 VOC

END OF SECTION

SECTION 10 44 00

FIRE PROTECTION SPECIALTIES

1. PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Fire extinguishers.
- B. Non-rated cabinets.
- C. Accessories.

1.2 REFERENCES

- A. ASTM E814 - Fire Tests of Through-Penetration Fire Stops.
- B. NFPA 10 - Portable Fire Extinguishers.
- C. CFC - California Fire Code, (CCR) California Code of Regulations, Title 24, Part 9.
- D. Title 19, State Fire Marshal Regulations.

1.3 QUALITY ASSURANCE

- A. Conform to NFPA 10 requirements.

1.4 REGULATORY REQUIREMENTS

- A. Conform to requirements of the CFC, Section 906, and Title 19 - State Fire Marshal Regulations, Chapter 3.

1.5 SUBMITTALS

- A. Submit product data under provisions of Section 01 33 00.
- B. Include physical dimensions, operational features, color and finish, mounting and anchorage details, rough-in measurements, location, and details.
- C. Submit manufacturer's installation instructions under provisions of Section 01 33 00.

1.6 OPERATION AND MAINTENANCE DATA

- A. Submit manufacturer's operation and maintenance data under provisions of Section 01 77 00.
- B. Include test, refill or recharge schedules, procedures, and re-certification requirements.

1.7 ENVIRONMENTAL REQUIREMENTS

- A. Do not install extinguishers when ambient temperatures may cause freezing.

2. PART 2 PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- A. Amerex Corporation, www.amerex-fire.com.
- B. J. L. Industries, www.jlindustries.com.
- C. Larsen's Mfg. Co., www.larsensmfg.com.

- D. Potter-Roemer, Inc., www.potterroemer.com.
- E. Substitutions: Under provisions of Section 01 25 13.

2.2 EXTINGUISHERS

- A. Dry Chemical Type: Equivalent to J.L. Industries Cosmic Model 5E, UL 2A:10B:C nominal capacity with multi-purpose chemical agent and inert material in enameled-steel container, with pressure-indicating gage.

2.3 CABINETS

- A. Non-rated cabinets equivalent to J.L. Industries Panorama Model No. 1835P48.

2.4 FABRICATION

- A. Form body of cabinet with tight inside corners and seams.
- B. Fabricate body of fire rated cabinet of double wall construction filled with a 5/8 inch thick layer of protective fire barrier insulation.
- C. Predrill holes for anchorage.
- D. Form perimeter trim by welding, filling, and grinding smooth.
- E. Hinge doors for 180 degree opening with continuous piano hinge. Provide nylon catch with pull handle.
- F. Glaze doors with resilient channel gasket glazing.

2.5 ACCESSORIES

- A. Steel Cable Theft Device: Model STI 6200 as manufactured by STI Inc., www.sti-usa.com.

2.6 FINISHES

- A. Extinguisher: Red enamel.
- B. Cabinet Trim and Door: Type 304 stainless steel with No. 4 finish.

3. PART 3 EXECUTION

3.1 INSPECTION

- A. Verify rough openings for cabinet are correctly sized and located.
- B. Beginning of installation means acceptance of existing conditions.

3.2 INSTALLATION

- A. Install cabinets plumb and level in wall openings.
- B. Secure rigidly in place in accordance with manufacturer's instructions.
- C. Install fire rated cabinets in strict conformance with manufacturer's instructions and listing requirements of Warnock-Hersey.
- D. Attach steel cable theft device to each extinguisher. Locate inside cabinet.

END OF SECTION

SECTION 11 90 00

MISCELLANEOUS EQUIPMENT

1. PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Television Mount.

1.2 REFERENCES

- A. 2010 Americans with Disabilities Act (ADA) Standards for Accessible Design.
- B. CBC - California Building Code, (CCR) California Code of Regulations, Title 24, Part 2.

1.3 SUBMITTALS

- A. Submit product data and manufacturer's installation instructions for each item under provisions of Section 01 33 00.

1.4 REGULATORY REQUIREMENTS

- A. Conform to CBC, California Building Code, (CCR), Title 24, Part 2 and the 2010 ADA Standards for Accessible Design for accessibility.

1.5 OPERATION AND MAINTENANCE DATA

- A. Submit operation and maintenance data under provisions of Section 01 77 00.

2. PART 2 PRODUCTS

2.1 PRODUCTS

- A. Television Mount: Mounting Dream product; Wall mount MD2296 with full motion dual articulating arm (1 required).

3. PART 3 EXECUTION

3.1 INSTALLATION

- A. Install equipment in accordance with manufacturer's printed instructions and as indicated on the drawings.
- B. Furnish all necessary hardware, anchors, inserts, connections, and embedded items necessary for proper installation. Coordinate with work of other sections.

END OF SECTION