SECTION 08 7110

DOOR HARDWARE - SLIDING DOOR SYSTEMS

1. GENERAL
   * + 1. GENERAL PROVISIONS
          1. Provisions of the Contract, General Conditions, Supplementary General Conditions, and specification section in Division 01 apply to and are a part of this section.
       2. DESCRIPTION OF WORK
          1. Work Included: Provide labor, materials and equipment necessary to complete the work of this Section, including but not limited to the following:

Sliding door system.

Sliding pocket door system.

Complete Strike, Jamb & Casing system.

* + - * 1. Related Work: The following items are not included in this Section and are specified under the designated Sections:

Section 08 1473 – Sliding Wood Doors.

Section 08 7100 - Door Hardware. For door hardware not specified in this Section.

Section 08 7120 – Door Hardware – Sliding Barn Door.

* + - 1. REFERENCE STANDARDS
         1. Comply with the following reference standards and publications as applicable to the project..
         2. American National Standards Institute (ANSI):

ANSI 156.18 Materials and Finishes

ANSI A117.1 Accessible and Usable Buildings and Facilities.

* + - * 1. BHMA – Builders Hardware Manufacturers Association
        2. Door and Hardware Institute (DHI):

ANSI/DHI A115.IG Installation Guide for Doors and Hardware.

DHI Sequence and Format for the Hardware Schedule.

* + - * 1. NFPA – National Fire Protection Association

NFPA 80 – Fire Doors and Windows

NFPA 101 – Life Safety code

NFPA 105 – Smoke and Draft Control Door Assemblies

NFPA 252 – Fire Tests of Doors Assemblies

* + - * 1. AWS – Architectural Woodwork Standards
      1. SUBMITTALS
         1. Comply with Section 01 3300 – Submittal Procedures
         2. Product Data: Include installation details, material descriptions, dimensions of individual components and profiles, and finishes.

Maintenance Data: For each type of sliding door hardware system.

* + - * 1. Shop Drawings: Submit details of construction and mounting.

Provide templates for hardware preparation of doors and frames to be performed in factory.

* + - * 1. Verification Samples: Submit samples of materials selected for use to verify color and finish.
        2. Warranties: Special warranties specified in this Section.
        3. Door Hardware Schedule: [**See Drawings**] [**See Section 087100 – Door Hardware**]
        4. Qualification Data: For firms and persons specified in "Quality Assurance" Article.

Include lists of completed projects with project names and addresses of architects and owners, and other information specified.

* + - 1. QUALITY ASSURANCE
         1. Installer Qualifications: An experienced installer who has completed door hardware similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.
         2. Door Hardware Supplier Qualifications: Warehousing facilities in Project's vicinity and employs a qualified Architectural Hardware Consultant, available during the course of the Work to consult with Contractor, Designer, and Owner about door hardware and keying.
         3. Architectural Hardware Consultant Qualifications: Door and Hardware Institute Certification as an Architectural Hardware Consultant. Experienced in providing consulting services for door hardware installations comparable to that indicated for this Project.
         4. Source Limitations: Obtain each type and variety of door hardware from a single manufacturer, unless otherwise indicated.
         5. Regulatory Requirements: Where indicated to comply with accessibility requirements:

[**Comply with Massachusetts Architectural Access Board.**]

Comply with Americans with Disabilities Act (ADA), "Accessibility Guidelines for Buildings and Facilities (ADAAG)."

* + - 1. PREINSTALLATION CONFERENCE:
         1. Conduct conference at Project site to comply with requirements in Division 01. Review methods and procedures related to electrified door hardware including, but not limited to, the following:

Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.

Review required testing, inspecting, and certifying procedures.

* + - 1. DELIVERY, STORAGE, AND HANDLING
         1. Deliver materials to site in manufacturer’s original, unopened containers and packaging, with labeling clearly identifying product name and manufacturer.

Inventory door hardware on receipt.

Tag item or package separately with identification related to final Door Hardware Schedule. Include basic installation instructions with each item or package.

Notify manufacturer immediately of any shipping damage.

Provide secure lock-up for door hardware delivered to Project site.

* + - * 1. Store and handle materials in accordance with manufacturer’s instructions.

Keep materials in manufacturer’s original, unopened containers and packaging until installation.

Store materials in clean, dry area indoors.

Protect materials and finish during storage, handling, and installation to prevent damage.

* + - 1. COORDINATION
         1. Coordination: Cast anchoring inserts into concrete. Concrete, reinforcement, and formwork requirements are specified in Section 033000 - Cast-In-Place Concrete.
         2. Templates: Obtain and distribute to the parties involved templates for doors, frames, and other work specified to be factory prepared for installing door hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.
      2. WARRANTY
         1. See Section 01 7700 – Closeout Procedures. For additional warranty requirements.
         2. General: Special Warranties specified in this Article shall not deprive Owner of other rights the Owner may have under other Contract Documents provisions and will be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.
         3. Special Warranties: Written warranties, executed by manufacturer agreeing to repair or replace components of door hardware that fail in materials or workmanship within specified warranty period. Failures include, but are not limited to, the following:

Structural failures including excessive deflection, cracking, or breakage.

Faulty operation of operators and door hardware.

Deterioration of metals, metal finishes, and other materials beyond normal weathering.

* + - * 1. Warranty Period: Three years from date of Substantial Completion, unless otherwise indicated.
        2. Warranty Period for Manual Closers: Ten years from date of Substantial Completion.
      1. MAINTENANCE SERVICE
         1. Maintenance Tools and Instructions: A complete set of specialized tools and maintenance instructions as needed for the Owner's continued adjustment, maintenance, removal, and installation replacement of door hardware.

1. PRODUCTS
   * + 1. MANUFACTURER
          1. Canada:

Manufacturer: K.N. Crowder Mfg. Inc.,1220 Burloak Drive, Burlington, Ontario L7L 6B3. Toll Free 1-866-999-1562. Toll Free Fax 1-800-567-0123.

* + - * 1. United States of America:

Manufacturer: K.N. CROWDER INC., 210 Eighth Street South Lewiston, New York 14092. Toll Free 1-866-999-1562. Toll Free Fax 1-800-567-0123.

* + - 1. PERFORMANCE REQUIREMENTS
         1. Standards Compliance:

ANSI/ BHMA A156.14 - Sliding and Folding Door Hardware.

ANSI/ DHI A115.IG - Installation Guide for Doors and Hardware.

American with Disabilities Act (ADA) 2010 Standards for Accessible Design.

ANSI A117.1 Accessibility Guidelines for Building and Facilities.

All state and local accessibility standards.

* + - * 1. Operating Hardware: Fully exposed and usable from both sides at all times.
        2. Doors Maximum Opening Force: 5 lbf (22.2 N) applied parallel to door at latch.
      1. CROWDER SLIDE AND CATCH ‘N’ CLOSE SLIDING DOOR HARDWARE SYSTEM
         1. Basis of Design: Complete opening system, Crowder Slide, CC-998 Heavy Duty Easy Connect Catch ‘N’ Close Hanger, side mount track system, strike, jamb, and casing by K.N. Crowder Mfg. Inc.:

Heavy Duty Easy Connect Catch ‘N’ Close Hanger System: Prevents bouncing and slamming of doors.

Nylon wheels with precision ground ball bearings, bottom guide system.

Editor’s Note: Choose one of the following two options for door weight.

Capacity: [**CC-2 for 200 lbs (91 kg)**] [**CC-3 for 300 lbs (136 kg)**] doors.

Hangers: CC-998. Heavy Duty Easy Connect Catch ‘N’ Close hanger

Stops: CC-101HD in-track stops.

Vertical Adjustment: 1/2 inch (13 mm).

Cycles: Tested to 150,000 cycles.

Material: Extruded 6063 aluminum alloy.

Editor’s Note: Choose one of the following. Clear anodized is standard.

Complete System Finish: **[Clear Anodized] [Bronze Anodized] [Black Anodized] [Powder coated. Colour: <Insert Colour>]**

* + - * 1. Door and Application:

Editor’s Note: Choose or fill in the following information required.

Doors: By others. See [**appropriate doors sections in Divisdion 08**] <**Insert Section Number**> - <**Insert Section title**>.

Door Thickness: 1-3/4 inches (44.5 mm)

Door Width: <**Insert Door Width**>.

Door Height: <**Insert Door Height**>.

Glazing: As detailed on the Drawings and Door Schedule.

**Door Protrusion into Opening:** <**Insert Size**>.

* + - * 1. Track and Fascia Components:

Side Mount Track: No. CS-98. 2-1/2 inch (64 mm) x 3-7/16 inch (87 mm) extruded.

Sloped Fascia: No. CS-99. 3 inch (76 mm) x 5-23/32 inch (145 mm) extruded.

End Caps: No. CS-9EC.

Editor’s Note: Delete the following paragraph if not required.

**Extra 2 inch (51 mm) Track & Fascia length for final on-site cutting.**

Editor’s Note: Choose one of the following two guide channel options.

Guide system, **[C-914 guide channel and C-913-2NRW Narrow Guide: 1 inch (25 mm) x 29/32 inch (23 mm), recessed into bottom of door. Finish: Mill.] [CS-ADB Automatic Door Bottom and CS-200-2 Guide: 1 1/8 inch (28.6 mm) x 1 1/4 inch (31.8 mm), recessed into bottom of door. Finish: Mill.]**

Requires minimum 4 inch (101.6 mm) overlap.

* + - * 1. Strike, Jamb and Casing Components:

Continuous aluminum strike, jamb and casing extrusions mounted to wall and around opening. Provide a complete finished and clean look with aluminum covers. No exposed fasteners.

Material: Extruded aluminum, 6063 alloy

Inserts: Silicone and Pile inserts reduce sound and light transmission.

Distance from Wall to Center of Strike : 1-5/8 inches (41.3 mm).

Editor’s Note: Choose one of the following wall thicknesses, handing & strike options.

Overall Wall Thickness: [**4-7/8 inch (124 mm), 3-5/8 inch stud with 5/8 inch drywall each side**] [**7-1/4 inch (184.2 mm), 6 inch stud with 5/8 inch drywall each side**] <**Insert wall thickness**>.

Handing: [**RH-Outside**] [**RH-Inside**] [**LH-Outside**] [**LH-Inside**]

Strike Cut Out: [**Strike plate**] [**and**] [**Dust proof box**]

Dust Proof Box Maximum Depth: 1-1/2 inches (38.1 mm).

Editor’s Note: Delete the following paragraph if not required.

**Extra 2 inch (51 mm) vertical lengths for final on-site cutting.**

* + - * 1. Door Lock and Pulls:

Editor’s Note: Delete the following paragraphs that are not applicable to the Project and choose one of the following locksets.

Barrier Free/ADA Compliant Locksets: [**C-92L-HL-DP Complete Privacy Lockset with occupancy indicator and handle pulls**] [**C-95SL-OIHL Self-Latching Privacy lockset with occupancy indicator and levers**] [**C-95SL-CHL Self-Latching Security lockset with levers**].

Self-Latching Flush Pull Locksets: [**C-95SL-OT Privacy Occupancy Indicator Lockset**] [**C-95SL-CT Security Lockset**].

Flush Pull Locksets: [**C-90L-ET Privacy Lockset**] [**C-90L-OT Privacy Occupancy Indicator Lockset**] [**C-90L-CT Security Lockset**].

<**Insert Lockset System**>: <**Insert Lockset System Description.**>

1. EXECUTION
   * + 1. EXAMINATION
          1. Examine doors and frames, with Installer present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance.
          2. Proceed with installation only after unsatisfactory conditions have been corrected.
       2. PREPARATION
          1. Steel Doors and Frames: Comply with DHI A115 series.

Surface-Applied Door Hardware: Drill and tap doors and frames according to SDI 107.

* + - * 1. Wood Doors: Comply with DHI A115-W series.
      1. INSTALLATION
         1. Mounting Heights: Mount door hardware units at heights indicated in following applicable publications, unless specifically indicated or required to comply with governing regulations:

Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."

Custom Steel Doors and Frames: DHI's "Recommended Locations for Builders' Hardware for Custom Steel Doors and Frames."

Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."

* + - * 1. Installation: Install each door hardware item to comply with manufacturer's written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work. Do not install surface-mounted items until finishes have been completed on substrates involved.

Set units level, plumb, and true to line and location. Adjust and reinforce attachment substrates as necessary for proper installation and operation.

Doors to close against walls without gaps.

Doors to open and close smoothly.

Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.

Anchor doors securely to supports. Fire treated 2 x 6 blocking where required, full length of track.

* + - 1. ADJUSTING
         1. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.
         2. Six-Month Adjustment: Approximately six months after date of Substantial Completion, Installer shall perform the following:

Examine and readjust each item of door hardware as necessary to ensure function of doors, door hardware, and electrified door hardware.

Consult with and instruct the Owner's personnel on recommended maintenance procedures.

Replace door hardware items that have deteriorated or failed due to faulty design, materials, or installation of door hardware units.

* + - * 1. Repair damage to finishes permanufacturer’s instructions and as approved by Architect.
      1. CLEANING AND PROTECTION
         1. Clean adjacent surfaces soiled by door hardware installation.
         2. Clean operating items as necessary to restore proper function and finish.
         3. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of Substantial Completion.
      2. HARDWARE SET SCHEDULE
         1. Refer to the Drawings.

END OF SECTION