SECTION 08710
HARDWARE

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Finish hardware for doors as specified and as listed in "Hardware Groups" and required by actual conditions.

1. Include screws, special screws, bolts, special bolts, expansion shields, and other devices for proper application of hardware.

B. Related Sections:

1. Section 06101: Carpentry
2. Section 08110 , Section 08120 (08 12 00), and Section 08211 (08 21 00) - Certain hardware items installed with doors.
3. Division 16: Electrical.

1.02 GENERAL REQUIREMENTS

A. Provide items, articles, materials, operations and methods listed, mentioned or scheduled herein or on drawings, in quantities as required to complete project. Provide hardware that functions properly. Prior to furnishing hardware, advise Architect of items that will not operate properly, are improper for conditions, or will not remain permanently anchored.

1.03 SUBMITTALS

A. Hardware Schedule: Submit 5 copies of hardware schedule in vertical format as illustrated by the Sequence of Format for the Hardware Schedule as published by the Door and Hardware Institute. Schedules which do not comply will be returned for correction before checking.

B. Hardware schedule shall clearly indicate architect's hardware group and manufacturer of each item proposed.

C. The schedule shall be reviewed prior to submission by a certified Architectural Hardware Consultant (AHC), who shall attest to the completeness and correctness of the schedule.

1. Provide 2 copies of illustrations from manufacturer' s catalogs and data in brochure form.
2. Check specified hardware for suitability and adaptability to details and surrounding conditions. Indicate unsuitable or incompatible items and proposed substitutions in hardware schedule.
3. Provide listing of manufacturer's template numbers for each item of hardware in hardware schedule.
4. Furnish other Contractors and Subcontractors concerned with copies of final approved hardware schedule. Submit necessary templates and schedules as soon as possible to hollow metal, wood door, and aluminum door fabricators in accordance with schedule they require for fabrication.
5. Samples: Lever design or finish sample: Provide 3 samples if requested by architect.

D. Wiring Diagrams: Provide complete and detailed system operation and elevation diagrams specially developed for each opening requiring electrified hardware, except openings where only magnetic hold-opens or door position switches are specified. Provide these diagrams with hardware schedule submittal for approval. Provide detailed wiring diagrams with hardware delivery to jobsite.

E. Installation Instructions: Provide manufacturer's written installation and adjustment instructions for finish hardware. Send installation instructions to site with hardware.

F. Templates: Submit templates and "reviewed Hardware Schedule" to door and frame supplier and others as applicable to enable proper and accurate sizing and locations of cutouts and reinforcing.

G. Contract Closeout Submittals: Comply with Section 01700 including specific requirements indicated below.

1. Operating and maintenance manuals: Submit 3 sets containing the following:
2. Complete information in care, maintenance, and adjustment, and data on repair and replacement parts, and information on preservation of finishes.

3. Catalog pages for each product.
4. Name, address, and phone number of local representative for each manufacturer.
5. Parts list for each product.
6. Copy of final approved hardware schedule, edited to reflect "As installed".
7. Copy of final keying schedule.
8. As installed "Wiring Diagrams" for each opening connected to power, both low voltage and 110 volts.
9. One complete set of special tools required for maintenance and adjustment of hardware, including changing of cylinders.

1.04 QUALITY ASSURANCE

A. Manufacturer: Obtain each type of hardware (ie. latch and locksets, hinges, closers) from single manufacturer, although several may be indicated as offering products complying with requirements.

B. Supplier: Recognized architectural finish hardware supplier, with warehousing facilities, who has been providing hardware for period of not less than 3 years. The supplier shall be, or employ, a certified Architectural Hardware Consultant (AHC), who is registered in the continuing education program as administered by the Door and Hardware Institute. The hardware schedule shall be prepared and signed by a certified AHC.

C. Installer: Firm with 3 years experience in installation of similar hardware to that required for this project, including specific requirements indicated.

D. Regulatory Label Requirements: Provide nationally recognized testing agency label or stamp on hardware for labeled openings. Where UL requirements conflict with drawings or specifications, hardware conforming to UL requirements shall be provided. Conflicts and proposed substitutions shall be clearly indicated in hardware schedule.

E. Pre-Installation Conference: Prior to the installation of hardware, manufacturer's representatives for locksets, closers, and exit devices shall arrange and hold a jobsite meeting to instruct the installing contractor's personnel on the proper installation of their respective products. A letter of compliance, indicating when this meeting is held and who is in attendance, shall be sent to the Architect and Owner.

1.05 DELIVERY, STORAGE AND HANDLING

A. Deliver hardware to jobsite in manufacturer's original packaging, marked to correspond with approved hardware schedule. Do not deliver hardware until suitable locked storage space is available. Check hardware against reviewed hardware schedule. Store hardware to protect against loss, theft or damage.

B. Deliver hardware required to be installed during fabrication of hollow metal, aluminum, wood, or stainless steel doors prepaid to manufacturer.

1.06 WARRANTY

A. Guarantee workmanship and material provided against defective manufacture. Repair or replace defective workmanship and material appearing within period of one year after Substantial Completion.

B. Provide ten year factory warranty on door closer body against defects in material and workmanship from date of occupancy of Project.

C. Replace shortages and incorrect items with correct material at no additional cost to Owner.

D. At completion of project, qualified factory representative shall inspect closer installations. After this inspection, letter shall be sent to Architect reporting on conditions, verifying that closers have been properly installed and adjusted.

PART 2 PRODUCTS

2.1 BUTTS AND HINGES

A. Acceptable Manufacturers and Types:

McKinney	T4A3795	TA2714	TA2314	T4A3786	T4A3386

B. Application:

1. Provide NRP (non-removable pins) at out-swinging lockable doors.

C. Size:

1. 2-1/4 inch Doors — 5 inch by 5 inch
2. 1-3/4 inch Doors — 4-1/2 inch by 4-1/2 inch
3. 1-3/8 inch Doors — 3-1/3 inch by 3-1/2 inch

D. Quantity:

1. 2 - hinges per leaf for openings through 60 inches high.
2. 1 - additional hinge per leaf for each additional 30 inches in height or fraction thereof.
3. 4 - Dutch doors up to 90 inches in height.

E. Drill 5/32 inch hole and use No. 12, 1-1/4 inch steel threaded to the head wood screws for hinges on wood doors.

2.2 ELECTRIC HINGES

A. Acceptable manufacturers:

1. McKinney QC

B. Provide electric hinges with standardized wire colors and concealed plug connectors to accommodate up to 12 wires.

C. Coordinate plug connectors so that they plug directly into wiring harnesses for connection to electric locking devices and power supplies.

D. Provide sufficient number of concealed wires to accommodate electric function of specified hardware.

E. Locate electric hinges at second hinge from bottom. Where electric hinges are used in conjunction with exit devices, locate hinge nearest to exit device.

F. Provide mortar guard similar to McKinney MG-16 for each electric hinge specified.

2.3 CONTINUOUS GEARED HINGES

A. Acceptable manufacturers:

Manufacturer		
McKinney	MCK-12HD	MCK-25HD
Markar	FM101	FM111
Pemko	FM SLFHD	FM HD

B. Provide one of the above two models of continuous hinges as appropriate for the type, inset, and thickness of door where specified. Coordinate hinge types with the door supplier.

C. All hinges must be rated to meet the minimum requirements of ANSI/BHMA A156.26-2000 Grade 1-600.

D. Hinges must meet the requirements of UBC 7-2 1997 and UL10C. Hinges shall not require special pins of any type for fire ratings up to 90 minutes. Hinges shall be UL listed without restrictions for gauge of metal or wall type.

E. Continuous hinges with electrical through wire features shall be industry certified to meet a minimum of 5 million cycles and carry a minimum of 3.5 amperes at 24 volts per lead wire. Continuous hinges shall be serviceable and removable without de-mounting the door from the frame. Electric thru wire modification must be guaranteed for a minimum of five (5) years.

2.4 CONTINUOUS STAINLESS STEEL HINGES

A. Acceptable manufacturers:

Manufacturer					
McKinney	MCK-FM300	MCK-HG305	MCK-HG310	MCK-HG311	MCK-HG315
Markar	FM 300	HG 305	HG 310	HG 311	HG 315

B. Provide one of the above two models of continuous hinges as specified in Hardware Groups. Coordinate hinge types with the door supplier.

C. Where indicated in Hardware Groups, provide medical bearing (MB suffix) for continuous hinges.

2.5 FLUSH BOLTS AND DUSTPROOF STRIKES

A. Acceptable manufacturers:

Manufacturer					
McKinney	FB01M	FB06M	FB12WFB2	FB04MFB1	DPS3
Trimco	3915	3810	N/A	3917 X 3850	3911
Door Controls	780	842NH	940 X 9BFB	840 X 8BFB	82

B. Non-labeled Openings: Provide 2 flush bolts for inactive leaf of pairs of locked and latched doors. Locate centerline of top bolt not more than 78 inches from finished floor. Provide dustproof strike for bottom bolt.

C. Labeled Openings: Provide automatic flush bolt set for inactive leaf of pairs of doors. Provide dustproof strike for bottom bolt as required.

2.6 LOCKSETS – MORTISE

A. Acceptable Manufacturer and Series:

Manufacturer	Series
Sargent	8200
Yale	8800FL
Corbin/Russwin	ML2000

B. Provide lock functions specified in Hardware Groups, with following provisions:

1. Locksets shall meet the requirements of ANSI/BHMA A156.13-1994, Operational Grade 1, and Security Grade 1.
2. Backsets: 2-3/4 inches.
3. Strikes: Provide wrought boxes and strikes with proper lip length to protect trim but not to project more than 1/8 inch beyond trim, frame or inactive leaf. Where required, provide open back strike and protected to allow practical and secure operation.
4. All locksets and latches are to be BHMA Certified.

2.7 EXIT DEVICES

A. Acceptable Manufacturers:

Manufacturer	
Sargent	80 Series
Yale	7000 Series
Corbin/Russwin	ED5000 Series, ED4000 Series

B. Provide exit device series and functions as specified in Hardware Groups. Sargent product numbers are referenced in the Hardware Groups.

C. All exit devices shall be UL listed for panic. Exit devices for labeled doors shall be UL listed as "Fire Exit Hardware".

D. Where lever trim is specified, provide lever design to match lockset levers.

E. Provide cylinders for exit devices with locking trim, key removable mullions and cylinder dogging.

F. Provide cylinder dogging feature for non-rated exit devices.

G. Provide keyed removable mullions, as specified in the Hardware Groups.

H. All exit devices are to be BHMA Certified.

2.8 KEYING

A. Acceptable Manufacturers and Types:

Manufacturer	
Sargent	Standard
Yale	Standard
Corbin/Russwin	Standard

B. Master key or Grand master key cylinders and key in groups, unless otherwise specified. Factory masterkey with manufacturer retaining permanent keying records.

C. Provide 6 masterkeys for each masterkey set. Provide 3 change keys for each lock. Provide 2 control keys for core removal. Stamp keys "DO NOT DUPLICATE."

D. Submit proposed keying schedule to Architect. If requested, meet with Owner and Architect to review schedule.

E. Provide removable core cylinders for each lock with construction masterkeying. Permanent cores shall be installed upon completion of the project.

2.9 COORDINATORS

A. Acceptable Manufacturers:

Manufacturer	
McKinney	CSM 500 Series
Trimco	3094 Series
Quality	CMS 500 Series
Door Controls	600 Series

B. Provide coordinator for labeled pairs of doors equipped with automatic flush bolts and those with vertical rod/mortise lock fire exit device combinations with astragals.

C. Provide filler bars for total opening width, closer mounting brackets, carry bars, and special preparation for top latches where applicable.

2.10 DOOR TRIM

A. Acceptable Manufacturers and Types:

Manufacturer					

McKinney	DP503	P053	PB801	OP4513	OP810
Trimco	1013-3	1001-3	1741		1737
Quality	1510-5	40-5	473		484

B. Push Plates:

1. Push plates are to be 0.050" thick with four beveled edges.

C. Push Bars:

1. McKinney type PB801, unless otherwise indicated.

D. Pulls:

1. McKinney Series OP4015, unless otherwise indicated.
2. Where required, mount back to back with push bars.

E. Kick Plates and Armor Plates:

1. Minimum of 0.050 inch thick, beveled 4 edges.
2. Height of 10 inches, unless otherwise indicated.

F. Edge Guards:

1. Minimum .050" thick, stainless steel,
2. As noted in Hardware Groups.

2.11 DOOR CLOSERS

A. Acceptable Manufacturers and Types of Exposed Closers:

Manufacturer	
Norton	7500/PR7500
Sargent	351/351-P10
Yale	4400/PR4400
Corbin/Russwin	DC8000

B. Provide non-sized closers, adjustable to meet maximum opening force requirements of ADA.

C. Provide drop plates, brackets, or adapters for arms as required to suit details.

D. Mount closers on room side of corridor doors, inside of exterior doors, and stair side of stairway doors.

E. Provide back-check for closers.

F. Provide hold-open arms where indicated.

G. Provide closers for doors as noted in Hardware Groups and, in addition, provide closers for labeled doors whether or not specifically noted in group.

H. Provide closers meeting the requirements of UBC 7-2, 1997 and UL 10C positive pressure tests.

I. All door closers shall be BHMA Certified.

2.12 OVERHEAD STOPS

A. Acceptable Manufacturers

Manufacturer		
Rixson	9 Series	1 Series
Sargent	590 Series	690 Series

Yale	900V Series	100 Series

B. Provide overhead stops for doors equipped with regular arm surface type closer that swing more than 140 degrees before striking wall, and for doors that open against equipment, casework, sidelights, other objects that would make wall stops inappropriate.

C. Provide sex bolt attachments for mineral core door application.

2.13 WALL STOPS AND HOLDERS

A. Acceptable Manufacturers and Types:

Manufacturer					
McKinney	WS01	WS02	FS29	FS01	ADH02
Trimco	1270WXCP	1270SVCP	1214H	1211	1261
Rockwood	407	410	481H	441	531

B. Provide wall stop as applicable, for each door leaf. If a wall stop cannot be used, use a floor stop. If neither a wall stop nor a floor stop can be used, provide an overhead stop.

2.14 THRESHOLDS

A. Acceptable Manufacturers: McKinney, Pemko, and Reese Enterprises.

Manufacturer	
McKinney	MCK272A
Pemko	272A

B. Where thresholds are specified in hardware groups, provide MCK272A thresholds unless detailed otherwise.

C. Refer to drawings for special details. Provide accessories, shims and fasteners.

D. Where thresholds occur at openings with one or more mullions, they shall be cut for the mullions and extended continuously for the entire opening.

2.15 WEATHERSTRIPPING

A. Acceptable Manufacturers and Product:

Manufacturer	Sweep	Jamb	Raindrip
McKinney	MCK18061_NB	MCK303_PK	MCK346
Pemko	18061_NB	303_PK	346

B. Where weatherstripping is specified in hardware groups, provide MCK303_PK unless detailed otherwise.

C. Provide self-tapping fasteners for weatherstripping being applied to hollow metal frames.

D. Where sweeps are specified in hardware groups, provide MCK18061_NB unless detailed otherwise.

E. Where rain drips are specified in hardware groups, provide MCK346C x full frame width, unless detailed otherwise.

2.16 GASKETING

A. Acceptable Manufacturers: McKinney, Pemko, and Reese Enterprises. Refer to drawings for special details. Provide accessories, shims and fasteners.

Manufacturer		
McKinney	MCKS88D	MCKHSS 2000
Pemko	S88D	HSS 2000

B. Where smoke gasket is specified in hardware groups, provide MCKS88D, unless detailed otherwise.

C. Provide gaskets for 20-minute doors and doors designated for smoke and draft control.

D. Where frame applied intumescent seals are required by the manufacturer, provide gaskets that comply with UBC 7-2, 1997 and UL 10C positive pressure tests.

2.17 SOUND GASKETING

A. Acceptable Manufacturers:

1. Acoustical gasketing and door bottoms:

Manufacturer	Jamb	Door Bottom (Wood)	Door Bottom (Hollow Metal)
McKinney	MCKS88D (Double Row)	MCK411 PKL	MCK420 PKL
Pemko	S88D (Double Row	411 PKL	420 PKL

2.18 MAGNETIC HOLDERS

A. Acceptable Manufacturers and Types:

Manufacturer	
Rixson	998
HES	8837
Sargent	1561

B. Where magnetic holders are specified in the Hardware Groups, verify voltage with Electrical Contractor.

2.19 LATCH PROTECTORS

A. Acceptable Manufacturers and types:

Manufacturer	Mortise
McKinney	LP01

B. Latch protectors shall be stainless steel of the type required to work with the specified latch.

2.20 KEY CABINET

A. Provide key cabinets by Lund Equipment, Telkee Incorporated, or Key Control.

B. Lund Deluxe wall type cabinet, Series 1200.

C. Provide cabinet with one hook for each lock or cylinder plus at least 50 percent extra hooks.

D. Provide each hook with one non-removable security key tag and one snap-on link duplicate key tag.

E. Provide tools, instruction sheets and accessories required to complete installation.

F. Owner will place keys in key cabinet and complete index cards furnished with key system.

2.21 KEY MANAGEMENT SOFTWARE

A. Provide Key Wizard® key management software. Provide a single license version (KW-SS1) or New Masterkey Version (DLKW1) as required.

B. Software shall provide tracking, issuing, collecting and transferring information regarding keys, doors, and hardware.

C. Provide training for Owner's personnel on the proper operation and application of the key management software.

2.22 FASTENERS

A. Including, but not limited to, wood or machine screws, bolts, bolts, nuts, anchors, etc. of proper type, material, and finish required for installation of hardware.

B. Use only manufacturer supplied fasteners to anchor, attach or otherwise install all pieces of hardware.

C. Install all door closers and exit devices with machine screws, whether or not self-tapping (self-drilling) fasteners are offered by the manufacturer. Provide sex bolts (SNB) or through bolts (TB) at all fire rated wood doors unless proper blocking is provided by the door manufacturer.

D. Use phillips head for exposed screws. Do not use aluminum screws to attach hardware.

E. Provide self-tapping (TEC) screws for attachment of sweeps and stop-applied weatherstripping only.

F. Replace all fasteners that have damaged heads due to improper installation methods.

2.23 TYPICAL FINISHES AND MATERIALS

A. Finishes, unless otherwise specified:

1. Butts: Outswinging Exterior Doors
   a. US32D (BHMA 630) on Stainless Steel
2. Butts: Interior Doors and Inswinging Exterior Doors
   a. US26D (BHMA 652) on Steel
3. Continuous Hinges:
   a. US28 (BHMA 628) on Aluminum
4. Flush Bolts:
   a. US26D (BHMA 626) on Brass or Bronze
5. Exit Devices:
   a. US32D (BHMA 630) on Stainless Steel
6. Locks and Latches:
   a. US26D (BHMA 626) on Brass or Bronze
7. Push Plates, Pulls and Push Bars:
   a. US32D (BHMA 630) on Stainless Steel
8. Coordinators:
   a. USP (BHMA 600) on Steel
9. Kick Plates, Armor Plates, and Edge Guards:
   a. US32D (BHMA 630) on Stainless Steel
10. Overhead Stops and Holders:
    a. US26D (BHMA 626) on Brass or Bronze
11. Closers: Surface mounted.
    a. Sprayed Aluminum Lacquer.
12. Latch Protectors:
    a. US32D (BHMA 630) on Stainless Steel
13. Miscellaneous Hardware:
    a. US26D (BHMA 626) on Brass or Bronze
14. All hardware on aluminum storefront systems are to match Arcadia's "Standard Medium Bronze AB-5" finish.

2.24 ELECTRICAL SUBSTITUTIONS

A. The electrical products contained within this specification represent a carefully engineered system. If alternate electrical products are submitted, it is the responsibility of the distributor to bear the cost of providing a complete and working system including re-engineering of electrical diagrams, wiring diagrams and system layout, as well as power supplies, power transfers and all required electrical components. Coordinate with electrical engineer and electrician to ensure that line voltage and low voltage wiring is coordinated to provide a complete and working system.

PART 3 EXECUTION

3.1 EXAMINATION

A. Examine doors, frames, and related items for conditions that would prevent the proper application of finish hardware. Do not proceed until defects are corrected.

3.2 INSTALLATION

A. Prior to commencement of installation of the hardware, there shall be a pre-installation meeting of all installers with the factory representative or other appointed agent of hinges, door closers and exit devices to confirm that all installers are familiar with factory requirements for proper installation of the hardware. If the installers are factory trained and possess a current certification card, the pre-installation meeting is not required.

B. Install finish hardware in accordance with reviewed hardware schedule and manufacturer's printed instructions. Prefit hardware before finish is applied, remove and reinstall after finish is completed. Install hardware so that parts operate smoothly, close tightly and do not rattle.

C. Installation of hardware shall comply with NFPA 80 and NFPA 101 requirements.

D. Set units level, plumb and true to line and location. Adjust and reinforce attachment to 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 thresholds for exterior doors in full bed of butyl-rubber or polyisobutylene mastic sealant, forming tight seal between threshold and surface to which set. Securely and permanently anchor thresholds, using countersunk non-ferrous screws to match color of thresholds (stainless steel screws at aluminum thresholds).

G. Lead Protection: Lead wrap hardware penetrating lead-lined doors. Levers and roses to be lead lined. Apply kick and armor plates with 3M adhesive #1357, as recommended by 3M Co., on lead-lined doors.

3.3 FIELD QUALITY CONTROL

A. After installation has been completed, provide services of qualified hardware consultant to check Project to determine proper application of finish hardware according to schedule. Also check operation and adjustment of hardware items.

B. Adjust door control devices to compensate for final operation of heating and ventilating equipment.

3.4 ADJUSTING AND CLEANING

A. At final completion, hardware shall be left clean and free from disfigurement. Make final adjustment to door closers and other items of hardware. Where hardware is found defective repair or replace or otherwise correct as directed.

B. Adjust door closers to meet opening force requirements of Uniform Federal Accessibility Standards.

C. Final Adjustment: Wherever hardware installation is made more than one month prior to acceptance or occupancy of space or area, return to work during week prior to acceptance or occupancy, and make final check and adjustment of hardware items in such space or area. Clean operating items as necessary to restore proper function and finish of hardware and doors.

D. Instruct Owner's personnel in proper adjustment and maintenance of door hardware and hardware finishes.

E. Clean adjacent surfaces soiled by hardware installation.

3.5 PROTECTION

A. Provide for proper protection of items of hardware until Owner accepts Project as complete.

3.6 HARDWARE GROUPS

A. The following schedule of hardware groups shall be considered a guide only, and the supplier is cautioned to refer to general conditions, special conditions, and the preamble to this section. It shall be the hardware supplier's responsibility to furnish all required hardware.

3.7 HARDWARE GROUPS

SET #01

2	Continuous Hinge	MCK-12HD	DUR	MC
1	Deadlock	MS1850S	313	AD
2	Cylinder	1000-118-A03-6	613	CR
1	Header Bolt	4016		AD
1	Two-Point Converter	4015		AD
1	Exit Indicator	4089-00	RC121	AD
2	Push Bar	PB801	US10B	MC
2	Door Pull	OP4513	US10B	MC
2	Closer	PR7500	690	NO
2	Drop Plate	7788	690	NO
2	Door Stop	FS29	US10B	MC
2	Sweep	MCK18062 DNB		MW
1	Threshold	MCK272D MS&A		MW

NOTE: Seals are furnished by the door supplier.

SET #02

2	Continuous Hinge	MCK-12HD	DUR	MC
1	Exit Device	ED4800	613	CR
1	Exit Device	ED4800 x 0859 C6	613	CR
2	Door Pull	OP4513	US10B	MC
2	Closer	PR7500	690	NO
2	Drop Plate	7788	690	NO
2	Door Stop	FS29	US10B	MC
2	Sweep	MCK18062 DNB		MW
1	Threshold	MCK272D MS&A		MW

NOTE: Seals are furnished by the door supplier.

SET #04

3	Hinges	T4A3386 4 1/2 X 4 1/2 NRP	32D	MC
1	Exit Device	ED5200S C6	630	CR
1	Door Pull	VR02	US32D	MC
1	Closer	P7500	689	NO

1	Kickplate	KP50 10" X 2" LDW	US32D	MC
1	Door Stop & Holder	ADH02	US26D	MC
1	Raindrip	MCK346 C		MW
1	Weatherstrip	MCK303 APK (Head & Jamb)		MW
1	Sweep	MCK18062 CNB		MW
1	Threshold	MCK272A MS&A		MW

SET #05

3	Hinges	TA2314 4 1/2 X 4 1/2 NRP	32D	MC
1	Exit Device	ED5200S C6	630	CR
1	Cylinder Pull	CP01S	US32D	MC
1	Closer	P7500	689	NO
1	Wall Stop	WS01 (Convex)	US32D	MC
1	Raindrip	MCK346 C		MW
1	Weatherstrip	MCK303 APK (Head & Jamb)		MW
1	Sweep	MCK18062 CNB		MW
1	Threshold	MCK272A MS&A		MW

SET #06

1	Continuous Hinge	MCK-12HD	DUR	MC
1	Exit Device	ED4200S C6	613	CR
1	Door Pull	OP4513	US10B	MC
1	Closer	P7500	690	NO
1	Drop Plate	7788	690	NO
1	Door Stop	FS29	US10B	MC
1	Sweep	MCK18062 DNB		MW
1	Threshold	MCK272D MS&A		MW

NOTE: Seals are furnished by the door supplier.

SET #07

3	Hinges	TA2314 4 1/2 X 4 1/2 NRP	32D	MC
1	Push Plate	P053	US32D	MC
1	Door Pull	DP503	US32D	MC
1	Deadlock	ML2017 C6	626	CR
1	Closer	P7500	689	NO
1	Kickplate	KP50 10" X 2" LDW	US32D	MC
1	Wall Stop	WS01 (Convex)	US32D	MC
1	Raindrip	MCK346 C		MW
1	Weatherstrip	MCK303 APK (Head & Jamb)		MW
1	Sweep	MCK18062 CNB		MW
1	Threshold	MCK272A MS&A		MW

SET #08

3	Hinges	TA2714 4 1/2 X 4 1/2	26D	MC
1	Push Plate	P053	US32D	MC
1	Door Pull	DP503	US32D	MC
1	Deadlock	ML2017 C6	626	CR
1	Closer	7500	689	NO
1	Kickplate	KP50 10" X 2" LDW	US32D	MC
1	Wall Stop	WS01 (Convex)	US32D	MC
1	Weatherstrip	MCK303 APK (Head & Jamb)		MW
1	Sweep	MCK18062 CNB		MW
1	Threshold	MCK272A MS&A		MW

SET #09

3 Hinges	TA2714 4 1/2 X 4 1/2	26D	MC
1 Storeroom Lock	ML2057 PSA C6 M30	626	CR
1 Cylinder Pull	CP01S	US32D	MC
1 Closer	7500	689	NO
1 Wall Stop	WS01 (Convex)	US32D	MC
1 Weatherstrip	MCK303 APK (Head & Jamb)		MW
1 Sweep	MCK18062 CNB		MW
1 Threshold	MCK272A MS&A		MW

SET #10

3 Hinges	TA2314 4 1/2 X 4 1/2 NRP	32D	MC
1 Exit Device	ED5200S C6	630	CR
1 Door Pull	VR02	US32D	MC
1 Closer	P7500	689	NO
1 Kickplate	KP50 10" X 2" LDW	US32D	MC
1 Wall Stop	WS01 (Convex)	US32D	MC
1 Weatherstrip	MCK303 APK (Head & Jamb)		MW
1 Sweep	MCK18062 CNB		MW
1 Threshold	MCK272A MS&A		MW

SET #12

2 Continuous Hinge	MCK-12HD	DUR	MC
2 Push Bar	PB801	US10B	MC
2 Door Pull	OP4513	US10B	MC
2 Closer	PR7500	690	NO
2 Drop Plate	7788	690	NO
2 Door Stop	FS29	US10B	MC

NOTE: Seals are furnished by the door supplier.

SET #13

3 Hinges	TA2714 4 1/2 X 4 1/2	26D	MC
1 Push Plate	P053	US32D	MC
1 Door Pull	DP503	US32D	MC
1 Closer	PR7500	689	NO
1 Kickplate	KP50 10" X 2" LDW	US32D	MC
1 Wall Stop	WS01 (Convex)	US32D	MC
3 Door Silencers	S1M		MC

SET #14

3 Hinges	TA2714 4 1/2 X 4 1/2 NRP	26D	MC
1 Classroom Lock	ML2055 PSA C6	626	CR
1 Closer	P7500	689	NO
1 Kickplate	KP50 10" X 2" LDW	US32D	MC
1 Wall Stop	WS01 (Convex)	US32D	MC
3 Door Silencers	S1M		MC

SET #15

3 Hinges	TA2714 4 1/2 X 4 1/2 NRP	26D	MC
1 Storeroom Lock	ML2057 PSA C6	626	CR
1 Wall Stop	WS01 (Convex)	US32D	MC
3 Door Silencers	S1M		MC

SET #16

3 Hinges	TA2714 4 1/2 X 4 1/2	26D	MC
1 Privacy Latch	ML2020 PSA	626	CR
1 Wall Stop	WS01 (Convex)	US32D	MC
3 Door Silencers	S1M		MC

SET #17

3 Hinges	TA2714 4 1/2 X 4 1/2	26D	MC
1 Office Lock	ML2051 PSA C6	626	CR
1 Wall Stop	WS01 (Convex)	US32D	MC
3 Door Silencers	S1M		MC

SET #18

3 Hinges	TA2714 4 1/2 X 4 1/2	26D	MC
1 Storeroom Lock	ML2057 PSA C6	626	CR
1 Wall Stop	WS01 (Convex)	US32D	MC
3 Door Silencers	S1M		MC

SET #19

3 Hinges	TA2714 4 1/2 X 4 1/2	26D	MC
1 Passage Latch	ML2010 PSA	626	CR
1 Wall Stop	WS01 (Convex)	US32D	MC
3 Door Silencers	S1M		MC

SET #20

3 Hinges	TA2714 4 1/2 X 4 1/2	26D	MC
1 Storeroom Lock	ML2057 PSA C6	626	CR
1 Door Stop	FS29	US26D	MC
3 Door Silencers	S1M		MC

SET #22

ALL HARDWARE IS TO BE FURNISHED BY THE DOOR SUPPLIER.

SET #23

2 Hinges	TA2314 4 1/2 X 4 1/2 NRP	32D	MC
1 Deadlock	DL4012 C6	630	CR
1 Cylinder Pull	CP01S	US32D	MC
1 Wall Stop	WS01 (Convex)	US32D	MC
1 Raindrip	MCK346 C		MW
1 Weatherstrip	MCK303 APK (Head & Jamb)		MW

END OF SECTION

Opening List

Opening	Hdw Set	Opening Label	Door Type	Frame Type
A01	06	None	AL	AL
A02	01	None	AL	AL
A03	06	None	AL	AL
A04	07	None	HM	HM
A05	07	None	HM	HM
A06	06	None	AL	AL
A07	18	None	WD	HM
A08	17	None	WD	HM
A09	17	None	WD	HM
A10	18	None	WD	HM
A11	15	None	WD	HM
A12	19	None	WD	HM
A13	17	None	WD	HM
A14	17	None	WD	HM
A15	17	None	WD	HM
A16	22			
C01	08	None	HM	HM
C02	09	None	HM	HM
C03	10	None	HM	HM
C04	09	None	HM	HM
C05	08	None	HM	HM
C06	10	None	HM	HM
C07	20	None	WD	HM
C08	17	None	WD	HM
C09	20	None	WD	HM
C10	09	None	HM	HM
S01	02	None	AL	AL
S02	12	None	AL	AL
S03	02	None	AL	AL
S04	12	None	AL	AL
S05	02	None	AL	AL
S06	12	None	AL	AL
S07	02	None	AL	AL
S08	12	None	AL	AL
S09	02	None	AL	AL
S10	12	None	AL	AL
S11	09	None	HM	HM
S12	04	None	HM	HM
S13	05	None	HM	HM
S14	13	None	WD	HM
S15	13	None	WD	HM
S16	14	None	WD	HM
S17	15	None	WD	HM
S18	16	None	WD	HM
S19	15	None	WD	HM
S20	15	None	WD	HM
S21	15	None	WD	HM
S22	22			
S23	22			

Manufacturer List

Code	Name
AD	Adams Rite
CR	Corbin Russwin
MC	McKinney
MW	McKinney Weatherstrip
NO	Norton

Finish List

Code	Description
26D	Satin Chrome
32D	Satin Stainless Steel
626	Satin Chromium Plated
628	Satin Aluminum, Clear Anodized
630	Satin Stainless Steel
689	Aluminum Painted
CLEAR	Clear
RC130	RiteCoat Painted Satin Aluminum
US26D	Chromium Plated, Dull
US32D	Stainless Steel, Dull