
SECTION 08710 - FINISH HARDWARE

PART 1 GENERAL

1.01 SUMMARY

A. Section includes: Finish Hardware, Aluminum Door Hardware, Thresholds, Key Cabinet and Electro-Mechanical Devices.

1. Furnish, deliver and install the proper finish hardware necessary for all doors specified herein as enumerated in the “set numbers” and as required by actual conditions in the building. The hardware shall include the furnishing of all necessary screws, bolts, special bolts, expansion shields, drop plates and all other devices necessary for the proper application of the hardware.

B. Related Sections:

1. 08110 – Metal Doors and Frames
2. 08210 – Wood Doors
3. 08330 – Roll-Up Doors
4. 08410 – Aluminum Entrances
5. 10810 – Toilet Room Accessories
6. 10161 – Toilet Partition Hardware
7. Division 16 – Electrical

1.02 REFERENCE STANDARDS

A. The hardware supplier is responsible for coordination of all Local, State, and Federal Codes, including NFPA 101, Life Safety Code; NFPA 80, Fire Door & Window Code; ANSI A117.1; BOCA Building Code, latest Edition.

1.03 SUBMITTALS

A. Schedules: Submit six (6) copies of the complete hardware schedule identifying each item by set, location, manufacturer’s name and product number to the general Contractor for the Resident’s approval. Proposal must read, “In accordance with plans and specifications”, and is not to be qualified in any manner.

B. Product Data: Submit two (2) copies of manufacturers catalog cuts and/or product data sheets with the completed hardware schedule.

C. Samples: Samples shall be submitted complete with manufacturers, name, model

number, finish and product data.

- D. Templates: Furnish templates and approved hardware schedules to each related manufacturer of equipment, which requires same for fabrication of their material.
- E. Keying Schedule: Keying shall be as directed by the Owners representative or Resident and keyed into existing systems using proper keyways. Refer to DHI Manual "Keying Systems and Nomenclature" for proper symbols and sequencing.
- F. Operations and Maintenance Data: At the completion of the project furnish to the Owner two (2) copies of an Owners operation and maintenance manual. This manual shall consist of the following:
 - 1. Maintenance instructions for each item of hardware.
 - 2. Catalog cuts for each product.
 - 3. Parts list for each product.
 - 4. Name and phone number of the local representative of each manufacturer.
 - 5. Copy of the final approved hardware and keying schedules.
 - 6. Copies of manufacturers warranties and/or guarantees.

1.04 QUALITY ASSURANCE

- A. Substitutions: Manufacturers and model numbers listed are to establish a standard of quality. Similar items by approved manufacturers that are similar in design and equal in function and quality may be accepted upon prior approval of the Resident. Provided that required data and physical samples are submitted to the Resident at least ten days prior to the products bid date.
- B. Supplier Qualification: The hardware supplier must be located within a reasonable distance to the projects vicinity and have been in business for a period of not less than two (2) years. The supplier must have a certified Architectural Hardware Consultant (AHC) in his employ. The consultant shall be available to the Resident, General Contractor and Owner during the course of the work.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Marking and Packing: Hardware shall be delivered to the job site in the manufacturer's original packing, marked to correspond with the approved hardware schedule.
- B. Delivery: All hardware shall be delivered, transportation charges prepaid, to the job site, except for those items of hardware necessary to be shipped, as directed, to fabricators for factory installation.

- C. Storage: The Contractor for the protection of the material and finishes shall provide a locked storage area for finish hardware. The area shall be kept clean, dry and locked at all times.

1.06 WARRANTY

- A. Guarantee: The hardware supplier shall provide a written guarantee that all materials furnished under this section shall be free from defects in material and workmanship for a period of one (1) year from date of final inspection. Furnish a ten (10) year warranty on all door closers.
- B. Inspection: The hardware supplier shall make no less than two (2) inspections during the installation phase to insure the hardware is being installed as scheduled. These inspections will be as determined by the Resident. The hardware supplier shall also make a final inspection following completion of the building and prior to Owner taking possession.

1.07 MAINTENANCE

- A. Maintenance Service: Furnish copies of any and all maintenance contracts.

PART 2 PRODUCTS

2.01 ACCEPTED MANUFACTURERS

- A. Product numbers listed in the following specification are taken from the catalogs of these approved manufacturers.
1. The following manufacturers are accepted subject to requirements of this Section.
 - a. Hagar Hinge Co., St.Louis, Mo.
 - b. Von Duprin, Indianapolis, Indiana
 - c. Schlage Lock Co., San Francisco, Ca.
 - d. L.C.N. Door Closer, Princeton, Illinois
 - e. Glynn-Johnson Door Controls Indianapolis, Indiana
 - f. Rockwood Mfg. Co., Rockwood, Pa.
 - g. Pemko Mfg, Memphis, Tennessee

2.02 MATERIALS

A. Screws and Fasteners:

1. Provide concealed fasteners wherever possible.
2. Use of self-tapping or sheet metal screws are prohibited, except for the application of flush mounted protective plates.
3. Finishes shall match those of hardware being fastened.
4. Door closers and exit devices to be installed in wood or composite doors fire doors shall be attached with closed head through bolts (sex bolts).
5. Fasteners exposed to the weather shall be of non-ferrous metal or stainless steel.

B. Hinges:

1. The width of all hinges shall be sufficient to clear all trim.
2. Furnish one (1) pair of hinges for all doors up to 5'0" high. Furnish one (1) additional hinge for every additional 30 inches, or fraction thereof, of door height.
3. Exterior hinges shall be on non-ferrous material.
4. All exterior out swinging doors shall be furnished with non-removable pins (NRP).
5. All labeled doors shall be furnished with stainless steel or steel ball bearing hinges.
6. Doors 1-3/4" thick and up to 36" wide shall be furnished with 4-1/2" standard weight hinges unless otherwise specified in the hardware sets.

C. Exit Devices:

1. All exit devices shall be Von Duprin 99 series.
2. Exit device trim shall match lock trim in appearance and quality. Trim is to be provided for both the active and inactive leafs.
3. Furnish Von Duprin 994L break-a-way lever handle trim.
4. All labeled openings with fire exit hardware must have labels attached and be in strict accordance with the Underwriters Laboratories (UL) requirements.

D. Locks and Lock Trim:

1. All locks and latches shall be Schlage Lock Co, "D" series.
2. Lock trim shall be Schlage Rhodes design lever handles.
3. All levers shall conform to Florida State accessibility requirements.
4. All locks to be furnished with wrought box strikes.

E. Flush Bolts:

1. Furnish flush bolts in pairs (top and bottom door).

2. Furnish minimum 12-inch length for all rods, except top rod, which must be furnished in a length sufficient to locate the flush bolt operating no more than 72" above finished floor.
3. Provide dust proof strikes for bottom bolts, except on doors having metal thresholds.

F. Coordinators:

1. Coordinators should be furnished on pairs of doors with overlapping astragals.
2. Special mounting brackets or stop-mounted coordinators shall be furnished when necessary.

G. Door Closers

1. All door closers shall be L.C.N. 4041 as specified.
2. Closers shall be fully hydraulic, full rack and pinion with high strength cast iron cylinders.
3. Hydraulic fluid shall be of a type requiring no seasonal adjustment for temperatures from 120 degrees F (49 degrees C) to -30 degrees F (-35 degrees C).
4. Hydraulic regulation shall be tamper proof, non-critical valves, adjustable only with a hex wrench. Closers shall have separate adjustment valves for latch speed, general speed and back check.
5. Spring power of closers shall be adjustable from size 1 through size 5.
6. All closers shall have a ten (10) year warranty.
7. Parallel arm closer shall be furnished on all doors opening into corridors or other public spaces and shall be mounted to permit 180-degree swing whenever conditions permit.
8. All parallel arm closers shall have solid forged main arms and fore arms. All regular and top jamb mounted closers shall have solid forged main arms and adjustable fore arms.
9. All doors shall meet the ADA Florida Accessibility requirements of the opening force requirements of 8.5 pounds for exterior doors and 5 pounds for interior doors. (Note: Life Safety (NFPA) 101 and Fire Safety (NFPA) 80 supercede the accessibility requirement.)

H. Push Plates

1. Push plates to be 3-1/2" X 15", .050 thickness type 304 stainless steel.
2. Cut for cylinders or "T" turns where applicable and bevels all four sides.

3. Attachment holes are to be counter sunk and furnished with oval head screws.
- I. Door Pulls:
1. Door pull to be 3/4" round bent rod, 8" center to center, mounted on 3-1/2" X 15" plates.
 2. Door pull and Plate to match Push Plate, cut for cylinder or "T" turn where applicable and bevel all four sides.
- J. Protective Plates:
1. Protective plates shall be furnished in .050-inch thick type 304 stainless steel.
 2. All protective plates shall be 2" less full door width on single openings and 1" less full door width on double leaves.
 3. All kick plates shall be 8" high. Mop plates and stretcher plates shall be 6" high.
 4. Mop plates to be furnished on all doors susceptible to damage or marring during cleaning.
 5. Protective plates shall be factory cut so as not to conflict with any hardware or trim.
- K. Door Stops and Holders:
1. Door stops shall be furnished for all doors to prevent damage to doors, walls, equipment and/or hardware.
 2. Wrought wall bumpers similar to Glynn-Johnson 50W or 60W shall be provided where practical.
 3. Provide floor stops similar to Glynn-Johnson FB14 where wall stops are not practical.
 4. Where conditions prohibit the use of wall or floor stops furnish overhead stops similar to Glynn-Johnson 900 and 450 series or LCN Spring Cush arms as specified.
- L. Thresholds and Weather-stripping:
1. All exterior doors to be furnished with thresholds and properly weather-stripped to provide an effective seal.
 2. All thresholds shall be similar to Pemko 2005AS, unless otherwise noted, to conform to Florida Accessibility requirements.
 3. Provide PEMKO TM thresholds on openings where skid resistance and corrosion prevention may be required.
 4. All special material thresholds, marble, etc. to be supplied by others.

M. Silencers:

1. Provide all silencers on all doors not gasketed.
2. Provide silencers similar to Glynn-Johnson GJ64 for metal frames and GJ65 for wood frames.
3. Furnish three (3) silencers for each single opening and two (2) silencers for each double opening.

N. Signage:

1. All signage to be furnished under Section 10440 unless otherwise noted in hardware sets.

2.03 FINISHES

- A. The finish, in general, is to be Satin Nickel US15.
Door closers are to be BHMA 689 power coat.

2.04 KEYING

- A. All cylinders shall be keyed to a Grand Master Key system.
- B. All locks and cylinders shall be keyed as directed by the Resident and/or Owner.
- C. A proposed key schedule shall be submitted to the Resident and/or Owner for approval.
- D. All locks and cylinders to be construction master keyed.
- E. Furnish the following keys:
1. 6 each Grand Master Keys.
 2. 6 each Master Keys per set
 3. 2 each Change Keys per keyed different set.
 4. 4 each Change Keys per keyed alike set.
 5. 6 each Construction Master Keys
- F. All keys shall be packaged and marked with appropriate key symbol and door number.
- G. Deliver construction keys only to the Contractor. All permanent cores, change keys, master keys and grand master keys shall be personally delivered or sent registered mail directly to the Owner at the completion of the project

2.05 KEY CONTROL

- A. Provide a flush mounted key cabinet with sufficient hooks to accommodate and identify all keys.
 - 1. Furnish a cabinet with 100% expansion capabilities and a dual tag system as manufactured by Key Control Systems.
 - 2. Indexing shall be provided to record information alphabetically, numerically by hook, numerically by keys and master and grand master keys.

PART 3 EXECUTION

3.01 EXAMINATION

- A. The Contractor is required to examine the doors, frames and related items for conditions that would prevent proper application of finish hardware and shall not proceed with installation until defects are corrected or adjusted.

3.02 INSTALLATION

- A. Mounting Locations:
 - 1. All hardware to be mounted in accordance with the ADA Maine Accessibility requirements.
 - 2. Unless otherwise directed and/or approved by the Resident in writing, the following recommended location be from bottom of frame to center line of:

	<u>Standard</u>
a. Lock or Exit Device Strike	40-5/16"
b. Push & Pull Bars	42"
c. Hospital Arm Pull	45"
d. Push and Pull Plate	45"
e. Deadlock Strike	48"
 - 3. Install each item of hardware in compliance with the manufacturer's instructions and recommendations. Whenever cutting and fitting is required to install hardware onto or into surfaces, which require further painting and/or finishing, coordinate removal, storage and reinstallation or application of surface protection with finishing work in the painting section.
 - 4. Set units level, plumb and true to line and location. Adjust and reinforce the substrate as necessary for proper installation and operation.
 - 5. Drill and countersink units, which are not factory, prepared for anchors and anchorage fasteners.

3.03 FIELD QUALITY CONTROL

- A. Inspection: Provide the services of an Architectural Hardware Consultant, following the completion of installation, to verify the hardware is in accordance with the approved hardware and keying schedules and check operation and adjustment of all hardware items.

3.04 ADJUSTING AND CLEANING

- A. Adjust and check each operating item of hardware and each door, to ensure proper operation and function. Replace units, which cannot be adjusted to operate as intended for the application.
- B. Final adjustments are to be made during the week prior to the Owner's acceptance or occupancy. Check operation of all hardware and adjust door control devices to compensate for final adjustments to the heating and ventilating system.
- C. Instruct Owner's personnel in the proper adjustment and maintenance of hardware and finishes.
- D. Furnish the Owners personnel with all the special tools required to adjust and maintain hardware.
- E. Approximately six (6) months after acceptance of the hardware in each area, the installer, accompanied by representatives of the various manufacturers, shall return to the project to check and readjust every item of hardware to restore proper function. Consult with and instruct the Owner's personnel in recommended additions to the maintenance procedures. Replace hardware items, which have deteriorated or failed due to faulty design or materials. Prepare a written report of current predictable problems (of a substantial nature) in the performance of the hardware.

3.05 PROTECTION

- A. The Contractor is responsible, after acceptance of the finish hardware, for the proper protection of all items of finish hardware until the Owner accepts the project as complete.

3.06 HARDWARE SCHEDULE

- A. Provide hardware as specified in previous articles and in sets according to the following schedule:

A201-T/A202-T/A203-7 - A603-T

HARDWARE GROUP NO. 01

PR. EXT. ALUM. DOORS # 100, 101, 200, 201, 211

3	PR. BUTTS	BB1199	NRP	4-1/2 X 4-1/2	32D
1	EXIT DEVICE	9847NL	697NL-VR		26D
1	EXIT DEVICE	9847DT	697DT		26D
1	CYLINDER	20-021			26D
2	CLOSERS	4041	SPR. CUSH.		AL
1	THRESHOLD	2005			AS
1	WEATHERSTRIP	2891		*	AS

HARDWARE GROUP NO. 02

PR. EXT. ALUM. DOORS # 120

3	PR. BUTTS	BB1199	NRP	4-1/2 X 4-1/2	32D
1	EXIT DEVICE	9847NL	697NL-VR		26D
1	EXIT DEVICE	9847DT	697DT		26D
2	CYLINDERS	20-0-21			26D
1	CLOSER	4041	EDA	(RHR)	AL
1	CLOSER	4041	SPR. CUSH	(LHR)	AL
1	THRESHOLD	2005			AS
1	WEATHERSTRIP	2891		*	AS
1	WALL STOP	GJ50W		(RHR)	32D

HARDWARE GROUP NO. 03

SGL. EXT. ALUM. DOORS # 113, 207, 208, 209, 210

1-1/2	PR. BUTTS	BB1199	NRP	4-1/2 X 4-1/2	32D
1	EXIT DEVICE	9847NL	697NL-VR		26D
1	CYLINDER	20-021			26D
1	CLOSER	4041	SPR. CUSH		AL
1	THRESHOLD	2005			AS
1	WEATHERSTRIP	2891		*	AS

HARDWARE GROUP NO. 04

PR. EXT. DOORS # 125

3	PR. BUTTS	BB1199	NRP	4-1/2 X 4-1/2	32D
2	EXIT DEVICES	9847NL-F	697NL-VR		26D
2	CYLINDERS	20-021			26D
2	CLOSERS	4041	SPR. CUSH.		AL

2	KICK PLATES	8" x 1"	LDW	B3E	32D
1	THRESHOLD	2005			AS
1	WEATHERSTRIP	2891		*	AS

HARDWARE GROUP NO. 05

SGL. EXT. DOOR # 102

1-1/2	PR. BUTTS	BB1191	NRP	4-1/2 X 4-1/2	32D
1	EXIT DEVICE	98NL-F	994NL-R		26D
1	CYLINDER	20-021			26D
1	CLOSER	4041	EDA		AL
1	KICK PLATE	8" X 2"	LDW	B3E	32D
1	THRESHOLD	2005			AS
1	WEATHERSTRIP	2891			AS
1	WALL STOP	GJ50W			32D

HARDWARE GROUP NO. 06

PR. INT. DOORS # 212

3	PR. BUTTS	BB1191		4-1/2 X 4-1/2	32D
2	EXIT DEVICES	9847NL-F	697NL-VR		26D
2	CYLINDERS	20-021			26D
2	CLOSERS	4041	REG.		AL
2	KICK PLATES	8" X 1"	LDW	B3E	32D
1	WALL STOP	GJ50W			(RHR) 32D
1	OV'HD STOP	GJ450S			(LHR) 32D

HARDWARE GROUP NO. 07

SGL. INT. DOOR # 204

1-1/2	PR. BUTTS	BB1191		4-1/2 X 4-1/2	32D
1	EXIT DEVICE	98NL-F	994NL-R		26D
1	CYLINDER	20-021			26D
1	CLOSER	4041	EDA		AL

1	KICK PLATE	8" X 2"	LDW	B3E	32D
1	WALL STOP	GJ50W			(RHR) 32D

HARDWARE GROUP NO. 08

SGL. INT. DOOR # 206

1-1/2 PR.	BUTTS	BB1191		4-1/2 X 4-1/2	32D
1	EXIT DEVICE	98NL-F	994NL-VR		26D
1	CYLINDER	20-021			26D
1	CLOSER	4041	REG		AL
1	KICK PLATE	8" X 2"	LDW	B3E	32D
1	WALL STOP	GJ50W			32D

HARDWARE GROUP NO. 09

SGL. EXT. DOORS # 122, 123

1-1/2 PR.	BUTTS	BB1191	NRP	4-1/2 X 4-1/2	32D
1	LOCKSET	L9080L	03A		32D
1	CLOSER	4041	REG.		AL
1	KICK PLATE	8" X 2"	LDW	B3E	32D
1	THRESHOLD	2005			AS
1	WEATHERSTRIP	303			AS
1	WALL STOP	GJ50W			32D

HARDWARE GROUP NO. 10

SGL. INT. DOOR # 300

1-1/2 PR.	BUTTS	BB1191		4-1/2 X 4-1/2	32D
1	LOCKSET	L9080L	03A		32D
1	CLOSER	4041	REG.		AL
1	KICK PLATE	8" X 2"	LDW	B3E	32D
1	WALL STOP	GJ50W			32D

HARDWARE GROUP NO. 11

SGL. EXT. DOOR # 124

1-1/2 PR.	BUTTS	BB1191	NRP	4-1/2 X 4-1/2	32D
1	LOCKSET	L9080L	03A		32D
1	CLOSER	4041	REG.		AL
1	KICK PLATE	8" X 2"	LDW	B3E	32D

1	OV'HD STOP	GJ450S			32D
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HARDWARE GROUP NO. 12

SGL. EXT. DOOR # 215

1-1/2	PR. BUTTS	BB1191	NRP	4-1/2 X 4-1/2	32D
1	LOCKSET	L9080L	03A		32D
1	CLOSER	4041	SP. CUSH		AL
1	KICK PLATE	8" X 2"	LDW	B3E	32D
1	THRESHOLD	2005			AS
1	WEATHERSTRIP	2891		*	AS

HARDWARE GROUP NO. 13

SGL. INT. DOORS # 116, 117, 213, 214

1-1/2	PR. BUTTS	1191		4-1/2 X 4-1/2	32D
1	LOCKSET	L9080L	03A		32D
1	WALL STOP	GJ50W			32D

HARDWARE GROUP NO. 14

SGL. INT. DOORS # 103, 110

1-1/2	PR. BUTTS	1191		4-1/2 X 4-1/2	32D
1	LOCKSET	L9080L	03A		32D
1	OV'HD STOP	GJ450S			32D

HARDWARE GROUP NO. 15

SGL. EXT. DOOR # 121

1-1/2	PR. BUTTS	BB1199	NRP	4-1/2 X 4-1/2	32D
1	LOCKSET	L9070L	03A		32D
1	CLOSER	4041	SPR. CUSH.		AL
1	KICK PLATE	8" X 2"	LDW	B3E	32D

1	THRESHOLD	2005			AS
1	WEATHERSTRIP	2891		*	AS

HARDWARE GROUP NO. 16

PR. INT. DOOR # 105

3	PR. BUTTS	BB1191		4-1/2 X 4-1/2	32D
1	LOCKSET	L9070L	03A		32D
1	DUMMY TRIM	L9176	03A		32D
2	FLUSH BOLTS	GJ6W			26D
2	CLOSERS	4041	REG..	(ACT)	AL
2	KICK PLATES	8" X 1"	LDW	B3E	32D
2	WALL STOPS	GJ50W			32D

HARDWARE GROUP NO. 17

SGL. INT. DOORS # 104, 119, 205

1-1/2	PR. BUTTS	BB1191		4-1/2 X 4-1/2	32D
1	LOCKSET	L9070L	03A		32D
1	CLOSER	4041	REG.		AL
1	KICK PLATE	8" X 2"	LDW	B3E	32D
1	WALL STOP	GJ50W			32D

HARDWARE GROUP NO. 18

SGL. INT. DOORS # 107, 108, 118

1-1/2	PR. BUTTS	BB1191		4-1/2 X 4-1/2	32D
1	LOCKSET	L9070L	03A		32D
1	WALL STOP	GJ50W			32D

HARDWARE GROUP NO. 19

SGL. INT. DOORS # 106, 112

1-1/2	PR. BUTTS	BB1191		4-1/2 X 4-1/2	32D
1	PRIVACY SET	L9040	03A		32D
1	CLOSER	4041	REG.		AL
1	KICK PLATE	8" X 2"	LDW	B3E	32D

1	WALL STOP	GJ60W			32D
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HARDWARE GROUP NO. 20

SGL. INT. DOORS # 109, 111

1-1/2	PR. BUTTS	1191	NRP	4-1/2 X 4-1/2	32D
1	PUSH PLATE	70B		B4E	32D
1	CUP PULL	94			32D
1	ROLLER LATCH	GJ30			26D
1	MAGLOCK	DS4000			26D
1	POWER SUPPLY	PS861			
1	KEY SWITCH	KS920			26D
1	THRESHOLD	2005			AS
1	OV'HD STOP	GJ410H			32D

HARDWARE GROUP NO. 21

SGL. INT. DOORS # 114, 115

1-1/2	PR. BUTTS	1191	NRP	4-1/2 X 4-1/2	32D
1	PUSH PLATE	70B		B4E	32D
1	CUP PULL	94			32D
1	ROLLER LATCH	GJ30			26D
1	DEAD LOCK	L9464L			26D
1	CYLINDER	84-170			26D
1	PERM. CORE	5172			26D
1	SLIDE BOLT	GJ16322			26D
1	THRESHOLD	2005			AS
1	OV'HD STOP	GJ410H			32D

HARDWARE GROUP NO. 22

SGL. INT. DOORS # 202, 203

1-1/2	PR. BUTTS	BB1191		4-1/2 X 4-1/2	32D
1	PUSH PLATE	70B	C/TK	B4E	32D
1	DOOR PULL	107 X 70B	C/C	B4E	32D
1	DEADLOCK	B663P			26D

1	CLOSER	4041	EDA.		AL
1	KICK PLATE	8" X 2"	LDW	B3E	32D
1	WALL STOP	GJ50W			32D

A200-R/A201-R - A602-R

HARDWARE GROUP NO. 23

PR. EXT. ALUM. DOORS # 106, 107

3	PR. BUTTS	BB1199	NRP	4-1/2 X 4-1/2	32D
1	EXIT DEVICE	9847NL	697NL-VR		26D
1	EXIT DEVICE	9847DT	697DT		26D
1	CYLINDER	20-021			26D
2	CLOSERS	4041	SPR. CUSH.		AL
1	THRESHOLD	2005			AS
1	WEATHERSTRIP	2891		*	AS

HARDWARE GROUP NO. 24

SGL. EXT. ALUM. DOORS # 114, 115

1-1/2	PR. BUTTS	BB1199	NRP	4-1/2 X 4-1/2	32D
1	EXIT DEVICE	9847NL	697NL-VR		26D
1	CYLINDER	20-021			26D
1	CLOSER	4041	SPR. CUSH		AL
1	THRESHOLD	2005			AS
1	WEATHERSTRIP	2891		*	AS

HARDWARE GROUP NO. 25

SGL. EXT. DOOR # 102

1-1/2	PR. BUTTS	BB1191	NRP	4-1/2 X 4-1/2	32D
1	LOCKSET	L9080L	03A		32D
1	CLOSER	4041	EDA.		AL
1	KICK PLATE	8" X 2"	LDW	B3E	32D

1	WALL STOP	GJ50W			32D
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HARDWARE GROUP NO. 26

SGL. INT. DOORS # 103, 113, 200, 201

1-1/2	PR. BUTTS	BB1191		4-1/2 X 4-1/2	32D
1	LOCKSET	L9080L	03A		32D
1	CLOSER	4041	REG.		AL
1	KICK PLATE	8" X 2"	LDW	B3E	32D
1	WALL STOP	GJ50W			32D

HARDWARE GROUP NO. 27

SGL. EXT. DOOR # 202

1-1/2	PR. BUTTS	BB1191	NRP	4-1/2 X 4-1/2	32D
1	LOCKSET	L9080L	03A		32D
1	CLOSER	4041	SPR. CUSH		AL
1	KICK PLATE	8" X 2"	LDW	B3E	32D
1	THRESHOLD	2005			AS
1	WEATHERSTRIP	2891		*	AS

HARDWARE GROUP NO. 28

SGL. INT. DOOR # 112

1-1/2	PR. BUTTS	1191		4-1/2 X 4-1/2	32D
1	LOCKSET	L9080L	03A		32D
1	OV'HD STOP	GJ450S			32D

HARDWARE GROUP NO. 29

SGL. EXT. DOOR # 104

1-1/2	PR. BUTTS	BB1199	NRP	4-1/2 X 4-1/2	32D
1	LOCKSET	L9070L	03A		32D
1	CLOSER	4041	SPR. CUSH.		AL
1	KICK PLATE	8" X 2"	LDW	B3E	32D

1	THRESHOLD	2005			AS
1	WEATHERSTRIP	2891		*	AS

HARDWARE GROUP NO. 30

PR. INT. DOORS # 105

3	PR. BUTTS	BB1191		4-1/2 X 4-1/2	32D
1	LOCKSET	L9070L	03A		32D
1	DUMMY TRIM	L9176	03A		32D
2	FLUSH BOLTS	GJ6W			26D
2	CLOSERS	4041	REG..	(ACT)	AL
2	KICK PLATES	8" X 1"	LDW	B3E	32D
2	WALL STOPS	GJ50W			32D

HARDWARE GROUP NO. 31

SGL. INT. DOOR # 110, 111

1-1/2	PR. BUTTS	1191		4-1/2 X 4-1/2	32D
1	LOCKSET	L9050L	03A		32D
1	OV'HD STOP	GJ60W			32D

HARDWARE GROUP NO. 32

SGL. INT. DOORS # 108, 109

1-1/2	PR. BUTTS	BB1191		4-1/2 X 4-1/2	32D
1	PUSH PLATE	70B	C/C	B4E	32D
1	DOOR PULL	107 X 70B	C/TK	B4E	32D
1	DEADLOCK	B663P			26D
1	CLOSER	4041	EDA.		AL
1	KICK PLATE	8" X 2"	LDW	B3E	32D
1	WALL STOP	GJ50W			32D

HARDWARE GROUP NO. 33

OVERHEAD ROLL-DOORS # 100, 101

1	CYLINDER OR PADLOCK AS REQUIRED				
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BALANCE OF HARDWARE BY DOOR MANUFACTURER

A200-V - A600-V

HARDWARE GROUP NO. 34

SGL. INT. DOOR # 100

1-1/2 PR. BUTTS	BB1191	4-1/2 X 4-1/2	32D
1 PUSH BAR	47		32D
1 DOOR PULL	RM3040-18		32D
1 DEADLOCK	AR1850MS	L/CYL.	28
1 CYLINDER	20-001		26D
1 CLOSER	4041	SPR. CUSH.	AL

HARDWARE GROUP NO. 35

SGL. INT. DOOR # 105

1-1/2 PR. BUTTS	1191	4-1/2 X 4-1/2	32D
1 LOCKSET	L9070L	03A	32D
1 WALL STOP	GJ50W		32D

HARDWARE GROUP NO. 36

SGL. INT. DOORS # 106, 107, 108

1-1/2 PR. BUTTS	1191	4-1/2 X 4-1/2	32D
1 LOCKSET	L9070L	03A	32D
1 OV'HD STOP	GJ450S		32D

HARDWARE GROUP NO. 37

SGL. INT. DOORS # 101

1-1/2 PR. BUTTS	1191	4-1/2 X 4-1/2	32D
1 LOCKSET	L9050L	03A	32D
1 OV'HD STOP	GJ60W		32D

HARDWARE GROUP NO. 38

SGL. INT. DOORS # 109

1-1/2 PR. BUTTS	BB1191	4-1/2 X 4-1/2	32D
1 PRIVACY SET	L9040	03A	32D
1 CLOSER	4041	REG.	AL
1 KICK PLATE	8" X 2"	LDW B3E	32D

1 WALL STOP GJ60W 32D

HARDWARE GROUP NO. 39

SGL. INT. DOORS # 103

1-1/2 PR. BUTTS 1191 4-1/2 X 4-1/2 32D
1 LOCKSET L9010L 03A 32D
1 OV'HD STOP GJ60W 32D

HARDWARE GROUP NO. 40

SGL. INT. DOORS # 104

1-1/2 PR. BUTTS 1191 NRP 4-1/2 X 4-1/2 32D
1 PUSH PLATE 70B B4E 32D
1 CUP PULL 94 32D
1 ROLLER LATCH GJ30 26D
1 MAGLOCK DS4000 26D
1 POWER SUPPLY PS861
1 KEY SWITCH KS920 26D
1 THRESHOLD 2005 AS
1 OV'HD STOP GJ410H 32D

HARDWARE GROUP NO. 41

GL. INT. DOORS # 102

1-1/2 PR. BUTTS 1191 NRP 4-1/2 X 4-1/2 32D
1 PUSH PLATE 70B B4E 32D
1 CUP PULL 94 32D
1 ROLLER LATCH GJ30 26D
1 DEAD LOCK L9464L 26D
1 CYLINDER 84-170 26D
1 PERM. CORE 5172 26D
1 SLIDE BOLT GJ16322 26D
1 THRESHOLD 2005 AS
1 OV'HD STOP GJ410H 32D

* ATTACH CLOSER ARMS TO 2891 - DO NOT CUT

	HDWE		HDW E		HDW E		HDWE		
DR. #	SET #	DR. #	SET #	DR. #	SET #	DR. #	SET #		

A201-T			A200- R			A200- V					
100	1		100	33		100	34				
101	1		101	33		101	37				
102	5		102	25		102	41				
103	14		103	26		103	39				
104	17		104	29		104	40				
105	16		105	30		105	35				
106	19		106	23		106	36				
197	18		197	23		197	36				
108	18		108	32		108	36				
109	20		109	32		109	38				
110	14		110	31							
111	20		111	31							
112	19		112	28							
113	3		113	26							
114	21		114	24							
115	21		115	24							
116	13		A201- R								
117	13		200	26							
118	18		201	26							
119	17		202	27							
120	2										
121	15										
122	9										
123	9										
124	11										
125	4										
A202-T											
200	1										
201	1										
202	22										
203	22										
204	7										
205	17										
206	8										
207	3										
208	3										
209	3										
210	3										
211	1										
212	6										
213	13										
214	13										
215	12										
A203-T											

300	10										

END OF SECTION