

1.GENERAL

1.1 SECTION INCLUDES:

- A. Builders hardware for doors.

1.2 RELATED SECTIONS:

- A. Wood Doors and Frames - Section 08350.

1.3 REFERENCES:

A. American National Standards Institute (ANSI):

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|-----|-------------|------|--|
| 1.  | ANSI 156.1  | 1988 | Butts and hinges.  |
| 2.  | ANSI 156.2  | 1983 | Bored & pre assembled locks.   |
| 3.  | ANSI 156.3  | 1984 | Exit devices.  |
| 4.  | ANSI 156.4  | 1986 | Door control (Closers).  |
| 5.  | ANSI 156.5  | 1984 | Auxiliary locks.   |
| 6.  | ANSI 156.6  | 1986 | Architectural trim.  |
| 7.  | ANSI 156.13 | 1987 | Mortise locks & latches.   |
| 8.  | ANSI 156.16 | 1989 | Auxiliary hardware.  |
| 9.  | ANSI 156.18 | 1987 | Materials & finishes.  |
| 10. | ANSI 117.1  | 1986 | Providing accessibility and usability for physically handicapped people. |

B. National Builders Hardware Association (NBHA):

- 1. Recommended Locations for Builders Hardware - 1975.
- 2. Basic Builders Hardware - October 1969.

C. Builders Hardware Manufacturers Association:

- 1. Directory of Certified Locks & Latches - June 1989.
- 2. Directory of Certified Door Closers - July 1989.

D. National Fire Protection Association (NFPA):

- 1. NFPA 80 — Fire Doors and Windows.
- 2. NFPA 101- Life Safety Code 1991.

E. Building Code “Reglamento de Edificación” - P.R.:

1.”Reglamento de Planificacion Num.7”.

2.”Enmiendas al Reglamento de Edificacion”.

F. Americans with Disabilities Act (ADA) — 1990.

#### 1.4 QUALITY ASSURANCE:

A. Hardware shall conform to the following standards:

1.Ball bearing butts shall comply with ANSI A-5112. Plain butts shall comply with ANSI A-5133.

a. Butts on out swinging exterior doors shall have non-removable pins (NRP).

b. All doors with closers shall have ball bearing butts.

2.Locksets and latches shall meet the following minimum ANSI standards:

a. Standard duty cylindrical locks — ANSI Series 4000, Grade 2, with lever handle trim.

b. Use UL approved locks on labeled fire doors.

3.Door closers shall comply with ANSI Series CO4021, Grade 1 with cast iron case and adjustable back check. Closers for reverse bevel doors and all doors opening towards a hallway shall comply with ANSI Series C02021, Grade 1 and be sized according to the manufacturer’s recommendation.

4.Exit devices shall be of the modern push bar type, ANSI Grade 1.All pair openings with a combination mortise and vertical rod device shall be equiped with an openback strike. Pair openings with a combination Rim and vertical rod device and door closers on each door, shall be equiped with a type 21 door coordinator.

#### 1.5 SUBMITTALS:

A. The hardware supplier shall submit seven (7) copies of a complete hardware schedule for approval. See Division 1 of the Specification.

1. Preface sheet listing category only and manufacturers name of items being furnished, as follows:

Category	Specified	Scheduled
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Hinges	Mfg."A"	Mfg."B"
Locksets	Mfg."C"	Mfg."D"
Kickplates	Open	Mfg."X"

2. For hardware locations, see Article 3.3 — Locations.
3. Open description: Single or pair, number, room locations, hand, active leaf, degree of opening, size, material, frame material, and fire rating.
4. Hardware description: Quantity, category, product number, fasteners, and finish.
5. Headings that refer to the specified Hardware Set Numbers.
6. Scheduling sequence shown in hardware sets
7. Product data of each hardware item and shop drawings, where required, for special conditions and specialty hardware.
8. Vertical scheduling format only. Horizontal schedules are not acceptable.
9. Typed copy.
10. Double spacing.
11. Eight and one-half by eleven inch (8 1/2" x 11") sheets.
12. U.S. Standards finish symbols.

B. Samples: Submit sample of each type of builders hardware item proposed for project. If approved, samples may be used in project.

C. Certification: Submit notarized certification indicating that hardware furnished for labeled doors and doors requiring physically handicapped access, complies with requirements of local governing authorities and applicable regulations.

#### 1.6 DELIVERY, STORAGE AND HANDLING:

A. Package and deliver hardware items separately and mark each to correspond with heading numbers on hardware schedule.

B. Include necessary instructions, templates, drawings and fasteners for proper installation. Include 10% extra fasteners.

- C. Master keys shall be delivered by the hardware supplier directly to the owner. General Contractor shall receive only the construction keys to be used during construction.

#### 1.7 JOB CONDITIONS:

- A. Furnish templates to the hollow metal and frame manufacturer as required for installing the hardware to avoid any delay in fabrication.
- B. See Article 3.3 - Locations, and coordinate with templates.
- C. Sub-contract the furnishing of builders hardware to a recognized local builders hardware representative for the lockset being furnished. The local hardware supplier must have been furnishing builders hardware for a period of not less than 5 years and must have in his employment an experienced hardware consultant who is available at all reasonable times during the course of the work for project hardware consultation to the owner or architect. The hardware supplier must carry a substantial inventory of the type and make of the lockset, closer, exit device, etc. being furnished. This inventory must be made available to the owner during the duration of this contract and for maintenance purposes.

## 2. PRODUCTS

### 2.1 MANUFACTURERS:

#### A. General:

1. Products are listed in a brand name to establish a standard of quality.
2. Equivalent products, as described in section 2.2 of these specifications, are acceptable substitutions. Other manufacturers which consider their products as equivalent to those specified, shall 20 prior to Bid opening date, submit to the architect samples, catalogs and any other documentation that will help the architect evaluate the same. If approved as an equivalent, the product will be added by addendum before Bid Date.

#### B. Lock and latches:

1. Corbin/Russwin.
2. Sargent.

#### C. Door Closers:

1. Corbin/Russwin.
2. LCN.
3. Dorma (Floor Closers Only).

D.Manufacturers of other items:

- 1.Butts: Hager,Stanley or McKinney.
2. Exit Devices: Corbin/Russwin, Sargent.
- 3.Floor Closers & Pivots: Dorma, Rixon, McKinney.
- 4.Overhead Door Holders: Corbin/Russwin, Sargent.
- 5.Door Pulls: Hager, Trimco.
6. Protective Plates: Hager , Trimco.
- 7 .Bolts: Hager,Trimco.
8. Stops: Hager, Trimco.
- 9.Electric Strikes: Folger Adam.
- 10.Thresholds & Weatherstripping: Pemko, National Guard.

2.2 MATERIALS:

A. Furnish each category with the products of only one (1) manufacturer; this requirement is mandatory whether various manufacturers are listed or not.

B.Hinges: Furnish one pair of hinges for doors up to 60 inches in height and one additional hinge for each additional 30 inches or fraction thereof. Use 4.5 inch hinges for all 1 3/4 inch thick swing doors up to 36 inches in width. Use 5.0 inch hinges for doors up to 42 inches and 5.0 inch heavy duty hinges for doors over 42 inches in width. Furnish non removable pins (NRP) at all reverse bevel doors with keysets. Furnish wide or special throw hinges where required to clear trims at all swing doors.

Type	Hager	Stanley	McKinney	ANSI
H-i	1191	F191	T2314	A—5133
H-2	BB1191	FBB191	TB2314	A—5112

C. Flush Bolts: Furnish with 12 inch rods for doors up to six feet high, and with 24 inch rods for doors higher than six feet.Provide two bolts per inactive leaf.

Type	Hager	Trimco
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B-i                    283D                    3916

D. Locksets and Latch sets:

1. Standard Duty cylindrical locks series and function designations are ANSI, acceptable manufacturers are:

Manufacturer	Series	Design
Corbin/Ruswin	CL3800	NZD
Sargent	65	KL

2. Mortise deadlocks series and function designations are ANSI, acceptable manufacturers are:

Manufacturer	Series
Corbin/Ruswin	DL4000
Sargent	4800

E. Exit Devices: Series and function designations are ANSI, acceptable manufacturers are:

Manufacturer	Series	Design
Corbin/Ruswin	ED5000	NSD
Sargent	80	ET

F. Closers:

1. Qualities: Fully hydraulic, full rack and pinion action with a high strength cast iron cylinder body. Furnish complete with full covers (when not concealed), forged steel arms, necessary brackets and fasteners. Concealed mounting on all hollow metal doors except on reverse bevel doors, where parallel mount shall be used. Furnish other scheduled accessories. Provide non-handed, non-sized closers at doors requiring handicapped access, adjustable to comply with handicapped opening force requirements.

Size closers in accordance with manufacturers directions.

<u>Type</u>	<u>Manufacturer</u>	<u>Series</u>	<u>Arm</u>	<u>ANSI</u>
C-1	LCN	330	Regular	C0402i
C-2	LCN	4040	Parallel	C0202i

C-3	LCN	4040	Regular	CO2Oii
C-2	Corbin/Russwin	DC32iO	Parallel	C0202i
C-3	Corbin/Russwin	DC3200	Regular	C0201i
C-4	Dorma	BTS8O	A	CO6Oii
C-S	Dorma	BTS8O	D	C0603i

G. Push and Pull Hardware:

1. Flush Pulls: Overall size 3 7/8" x 4 1/2", Base 3 3/8" x 4", depth 7/8" in stainless steel.

2. Push Plates: Plain design, with wrought plate 4" x 16" x 0.050", square corners, beveled edges.

Type	Manufacturer	Model
J300	Trimco	iOOi-3
J300	Hager	30S.
J303	Trimco	1820.
J303	Hager	i2OL.

H. Kick Plate: Furnish 10" x 0.050" x door width less 1 1/2" at single doors, and less 1" at pairs. Where glass or louver prevent this height, supply with height equal to height of bottom rail less 1". On fire rated openings, height of plate shall not exceed 6". Acceptable manufacturers are Hager and Trimco.

I. Armor Plates: Furnish 34" x 0.050" x door width less 3". Install prior to exit devices. Bevel top edges. Drill and countersink screw holes for oval head undercut screws. Acceptable manufacturers Hager and Trimco.

J. wall Stops: ANSI L02021. Acceptable manufacturers Hager and Trimco. Provide one per door leaf that has a wall at 90 degree or less of its opening path.

K. Wall Stop/Holder: ANSI L0i291 as manufactured by Hager and Trimco or previous to bid approved equal by architect.

L. Weather stripping: Apply to head and jamb stops with no cutouts for stop applied hardware.

1. Pemko 588D.

2. Pemko 350 (For light proof openings).

M. Thresholds: Cope at janibs. Furnish full wall opening width when frames are recessed.

1 Pemko i7i.

2. Pemko 277 (At sound retardant openings).

N. Automatic Door Bottom Seals: Shall be fully mortised on door.

1. Pemko 434AR.

O. Electric Strike: Shall be Folger Adam model 310-2 x LCBMA 24 VAC x U54. Operated from remote reception desk by Push Button PB-7. No substitutions allowed.

### 2.3 LABEL REQUIREMENTS:

A. Furnish Underwriters Laboratories, Inc. approved hardware items, meeting requirements of NFPA 80, at doors scheduled to be label doors.

### 2.4 FINISHES:

A. Butts and Pivots: 626.

B. Locksets, Deadlock and Latches: 626 (Except M5i852-628).

C. Exit Devices: 626.

D. Closers: Sprayed aluminum to match; 626 on Floor Type.

E. Pulls & Plates: 630.

F. Stops/ Holders: 626.

G. Thresholds: 628.

H. Flush Bolts: 626.

### 2.5-KEYING:

A. Key, masterkey and grandmaster key in accordance with owner's requirements and approved keying schedule. Furnish 2 change keys for each lock, 10 masterkeys and 2 grandmaster keys.

B. Provide cylinders of the removable core type. Core to be removed with the use of a control key that does not require the lock to be unassembled. Provide temporary construction cores to be used during the construction phase.

C. All cylinders shall be of the high security type with interlocking pins and skew-cut key biting.

D. Furnish a complete key control system that provides tags for each individual change key and a key cabinet that will hold 150% of the key capacity of the building.

### 3. EXECUTION



3.1 EXAMINATION:

- A. Examine door frames and related items for conditions that would prevent proper application of builders hardware.
- B. Do not proceed until defects are corrected, with approval obtained from owner or his designated representative.

3.2 INSTALLATION:

- A. Install hardware according to manufacturer's printed instructions and to template dimensions. See Article 1.6 Product Delivery and Storage regarding conversion of construction cores to final cores.
- B. All hardware shall be installed in a neat workmanlike manner by experienced workmen and left in perfect working condition. Any hardware lost or damaged shall be replaced at no additional cost to the owner.

3.3 LOCATIONS:

- A. Dimensions are from finish floor to center line of items. B. This list to be included in Hardware Schedule:

Category	Dimension
Hinges	Door manufacturer stdr.
Flush Bolt Levers	72" and 12"
Knobs	Door manufacturer stdr.
Exit Device Crossbars	Manufacturer's Template
Push Plates	52"
Pull Plates	42"
wall Stops	At Head.

3.4 Final Adjustment:

- A. Provide the services of a representative to inspect material furnished and its installation and adjustment, to make final hardware adjustment, and to instruct the Tenant's personnel in adjustment, care and maintenance of the hardware.

3.5 HARDWARE SETS:

SET A

- Hinges H-1 as required per specifications.
- Cylindrical lockset - F-86.
- Wall Stop L02021 (As required by these specifications).

For doors mkd.:

SET B

- Hinges H-1 as required per specifications.
- Cylindrical lockset - F-8i.
- Wall Stop L0202i (As required by these specifications).

For doors mkd:

SET C

- Hinges H-i as required per specifications.
- Cylindrical lockset - F-84.
- Wall Stop L02021 (As required by these specifications).

For doors mkd.:

SET D

- Hinges H-2 as required per specifications.
- Closer C-3.
- Push Plate J-30i.
- Pull Plate J—303.
- Kickplate.
- Mop Plate.
- Wall Stop L0202i (As required by these specifications).

For doors mkd.:

SET E

- Hinges H-2 as required per specifications.
- cylindrical lockset — F-84.
- Closer C-3.
- Wall Stop L0202i (As required by these specifications).
- For doors mkd.: -

SET F

- Hinges H-2 as required per specifications.
- Flush Bolt B-1.
- Cylindrical Lockset - F84.
- Closer C-2 ( 2 ea.).
- Wall Stop L02021 (As required by these specifications).
- For doors mkd.:

SET G

- Hinges H-1 as required per specifications.
- Flush Bolt B-1.
- Cylindrical Lockset - F84.
- Wall Stop L02021 (As required by these specifications).

For doors mkd.

SET H

- Hinges H-2 as required per specifications.
- Cylindrical lockset F-84.
- Closer C—2.
- Wall Stop L0202i (As required by these specifications).

For doors mkd.:

END OF SECTION