



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER
DEFK10017

PAGE
1

ADDRESS CORRESPONDENCE TO ATTENTION OF
BUYER 32 304-558-2544

VENDOR	RFQ COPY
	TYPE NAME/ADDRESS HERE

SHIP TO	DIV ENGINEERING & FACILITIES
	ARMORY BOARD SECTION
	1707 COONSKIN DRIVE
	CHARLESTON, WV 25311-1099 304-341-6368

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
04/21/2010				

BID OPENING DATE: 04/29/2010 BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
ADDENDUM NO. 2						
TO CHANGE THE BID OPENING DATE FROM 4/22/10 TO 4/29/10 AT 1:30 PM. TO PROVIDE CLARIFICATIONS TO THE SPECIFICATIONS AND REVISED BID SCHEDULE PER THE ATTACHED						
0001	1	JB		968-20		
BUILDING CONSTRUCTION						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE
TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

GENERAL TERMS & CONDITIONS REQUEST FOR QUOTATION (RFQ) AND REQUEST FOR PROPOSAL (RFP)

1. Awards will be made in the best interest of the State of West Virginia.
2. The State may accept or reject in part, or in whole, any bid.
3. Prior to any award, the apparent successful vendor must be properly registered with the Purchasing Division and have paid the required \$125 fee.
4. All services performed or goods delivered under State Purchase Order/Contracts are to be continued for the term of the Purchase Order/Contracts, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise available for these services or goods this Purchase Order/Contract becomes void and of no effect after June 30.
5. Payment may only be made after the delivery and acceptance of goods or services.
6. Interest may be paid for late payment in accordance with the *West Virginia Code*.
7. Vendor preference will be granted upon written request in accordance with the *West Virginia Code*.
8. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.
9. The Director of Purchasing may cancel any Purchase Order/Contract upon 30 days written notice to the seller.
10. The laws of the State of West Virginia and the *Legislative Rules* of the Purchasing Division shall govern the purchasing process.
11. Any reference to automatic renewal is hereby deleted. The Contract may be renewed only upon mutual written agreement of the parties.
12. **BANKRUPTCY:** In the event the vendor/contractor files for bankruptcy protection, the State may deem this contract null and void, and terminate such contract without further order.
13. **HIPAA BUSINESS ASSOCIATE ADDENDUM:** The West Virginia State Government HIPAA Business Associate Addendum (BAA), approved by the Attorney General, is available online at www.state.wv.us/admin/purchase/vrc/hipaa.htm and is hereby made part of the agreement. Provided that the Agency meets the definition of a Cover Entity (45 CFR §160.103) and will be disclosing Protected Health Information (45 CFR §160.103) to the vendor.
14. **CONFIDENTIALITY:** The vendor agrees that he or she will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the agency's policies, procedures, and rules. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in <http://www.state.wv.us/admin/purchase/privacy/noticeConfidentiality.pdf>.
15. **LICENSING:** Vendors must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, and the West Virginia Insurance Commission. The vendor must provide all necessary releases to obtain information to enable the director or spending unit to verify that the vendor is licensed and in good standing with the above entities.
16. **ANTITRUST:** In submitting a bid to any agency for the State of West Virginia, the bidder offers and agrees that if the bid is accepted the bidder will convey, sell, assign or transfer to the State of West Virginia all rights, title and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the State of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the State of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to the bidder.

I certify that this bid is made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership, or person or entity submitting a bid for the same material, supplies, equipment or services and is in all respects fair and without collusion or fraud. I further certify that I am authorized to sign the certification on behalf of the bidder or this bid.

INSTRUCTIONS TO BIDDERS

1. Use the quotation forms provided by the Purchasing Division. Complete all sections of the quotation form.
2. Items offered must be in compliance with the specifications. Any deviation from the specifications must be clearly indicated by the bidder. Alternates offered by the bidder as **EQUAL** to the specifications must be clearly defined. A bidder offering an alternate should attach complete specifications and literature to the bid. The Purchasing Division may waive minor deviations to specifications.
3. Unit prices shall prevail in case of discrepancy. All quotations are considered F.O.B. destination unless alternate shipping terms are clearly identified in the quotation.
4. All quotations must be delivered by the bidder to the office listed below prior to the date and time of the bid opening. Failure of the bidder to deliver the quotations on time will result in bid disqualifications: Department of Administration, Purchasing Division, 2019 Washington Street East, P.O. Box 50130, Charleston, WV 25305-0130
5. Communication during the solicitation, bid, evaluation or award periods, except through the Purchasing Division, is strictly prohibited (W.Va. C.S.R. §148-1-6.6).

April 21, 2010

TO: All Bidders

REF: **WVARNG Armed Forces Reserve Center, Fairmont, West Virginia**
West Virginia Army National Guard
RFQ No: DEFK 10017

SUBJ: **Addendum Bulletin No. 2**

This Addendum Bulletin shall be incorporated in the Construction Documents including the Drawings and Specifications for the Project referenced above. All work amended as listed herein shall be included in your Bid Proposal and the bidder shall acknowledge this addendum bulletin in accordance with the Request for Quotation.

The Construction Contract Documents shall be amended as follows:

SPECIFICATIONS:

1. Addendum 2 - Bid Form Section II – Unit Prices (Revised 13 April 2010): REPLACE with Bid Form Section II Unit Prices (Revised 21 April 2010).
2. Addendum 2 - Division 01, Section 012100, 3.3, A: CHANGE Brick Allowance from \$900.00 to \$1,550.00 per thousand.
3. Addendum 2 - Division 07, Section 074213, 2.1, A, 1: ADD 0.028-inch (0.71-mm) nominal thickness.
4. Addendum 2 - Division 07, Section 077200: ADD Section 077200 Roof Accessories.
5. Addendum 2 - Division 08, Section 087100: REPLACE Section 087100 Door Hardware.
6. Addendum 2 - Geotechnical Engineering Report "Draft" dated 10 February 2010: DELETE from Specifications.

DRAWINGS:

1. Addendum 2 - Drawing A-1.1: CHANGE Alternate No. 6 Landscaping to Alternate No. 7 Landscaping to match Bid Form numbers.
2. Addendum 2 - Drawing A-1.1: CHANGE Alternate No. 7 Vestibule 100 to Alternate No. 6 Vestibule 100 to match Bid Form numbers.
3. Addendum 2 - Drawing C2-3, Typical Concrete Pavement Section: CHANGE note from 6" to '7" concrete pad, broom finish'.
4. Addendum 2 - Drawing C2-3, Detail 11 "Typical Concrete Pavement Section": ADD note - '7" concrete pad, broom finish'.

FOR CLARIFICATION / INFORMATION

1. Addendum 2 - All utility tap fees and other utility company charges will be paid by the Contractor.
2. Addendum 2 - The Contractor will pay for utility consumption during the progress of the work.
3. Addendum 2 - The geotechnical report has been removed from the contract documents and the contract documents are the basis of the contractor's responsibility for the work.
4. Addendum 2 - Payment for excavation of coal waste material was not changed. Coal waste material is included in Bid Item #15 "Unclassified Excavation". The coal waste disposal pit is identified on the plans and cross sections and should be the basis for determining the quantity of coal waste material.
5. Addendum 2 - Stockpiling of material on-site will be allowed. Off-site borrow will not be allowed.
6. Addendum 2 - The storm inlets need coated on the inside according to Specification Section 334100 "Storm Utility Drainage Piping", 2.7, A.
7. Addendum 2 - The contract documents require all inlets and basins to have an interior coating.
8. Addendum 2 - The City of Fairmont will inspect utility installations.
9. Addendum 2 - Inspection fees vary based on the contractors schedule, construction skills, weather conditions, and methods of construction.

10. Addendum 2 - You are required to meet the requirements set forth in the contract documents, which incorporate the City of Fairmont requirements.


THE OMNI ASSOCIATES - ARCHITECTS

Richard T. Forren, AIA, NCARB
Principal

END OF ADDENDUM

Enclosures:

1. Bid Form Section II – Unit Prices (Revised 21 April 2010)
2. Specification Section 077200 Roof Accessories
3. Specification Section 087100 Door Hardware

BID FORM - SECTION II – (Unit Prices)
Revised 21 April 2010

The costs indicated below are included in, and are a breakdown of, the Base Bid. In the event the total segregated prices shown below differ from the Base Bid indicated above, the Base Bid will govern.

In the event that unit quantities stated below differ from quantities required for completion of the Work, unit costs as stated below shall be the basis of adjustments in Contract Sum, in accordance with Contract Conditions, Section 012200 – Unit Prices.

Item No.	Quantity	Description	Unit	Unit Price	Amount
General Contract Administration					
1	1	Armed Forces Reserve Center (Zones A, B, C)	LS		
2	1	Maintenance Building (Zone D)	LS		
3	1	Mobilization/Demobilization	LS		
4	1	General Administration	LS		
5	1	Project Quality Control	LS		
Site General Contract Administration					
6	1	Sitework Mobilization/Demobilization	LS		
7	1	Sitework General Administration	LS		
8	1	Sitework Project Quality Control	LS		
9	1	WVDOH Encroachment Permit (Allowance No. 2)	LS		\$10,000.00
Site Preparation					
10	1	Site Preparation	LS		
11	1	Gas Line Relocation (Allowance No. 3)	LS		\$200,000.00
12	1	Sediment and Erosion Control	LS		
13	3	Sediment Pond	EA		
14	10	Waste Removal	TN		

Earthwork					
15	442,000	Unclassified Excavation	CY		
16	1	6" Lean Concrete Mat	LS		
17	1	Waterproof Coating	LS		
18	15,000	Subgrade Preparation	SY		
19	300	Soil Drying	TN		
20	3,000	Soil Conditioning-12"	SY		
21	1,000	Soil Conditioning-18"	SY		
22	3,000	Over-Excavation	SY		
23	2,300	6" Subsurface Drains	LF		
24	1,700	8" Subsurface Drains	LF		
Roads					
25	13,000	7" Concrete Paving	SY		
26	1,070	HMA Wearing Course	TN		
27	4,420	HMA Base Course	TN		
28	5,800	Free Draining Base	TN		
29	5,040	Free Draining Base Trench and Piping	LF		
30	25,900	Fabric Separation	SY		
31	4,500	Class 1 Stone	TN		
32	1	Pavement Marking	LS		
33	163	Wheel Stops	EA		
34	1,400	Concrete Curbing	LF		
35	1	Signage	LS		
36	170	Grass Pavers	SY		

37	730	Gravel Road	LF		
Miscellaneous					
38	400	Screening Berm	LF		
39	1,500	Sidewalk	SY		
40	1	Type I Lawn	LS		
41	1	Type II Lawn	LS		
42	1	Type III Ground Cover for Slopes	LS		
43	2	Force Protection Gate	EA		
44	3	24' Sliding Gate	EA		
45	2	16' Swing Gate	EA		
46	1,140	Security Fencing	LF		
47	1	Concrete Stairs	LF		
48	2	40' Flagpole	EA		
49	800	Retaining Wall	LF		
50	45	Loading Dock Wall	LF		
51	1	Vehicle Wash System	LS		
52	1	Oil/Water Separator	EA		
53	1	Loading Ramp	LS		
54	30	Bollards 8"	EA		
55	20	Bollards 12"	EA		
56	15	Bollards Removable	EA		
57	1	Trash Enclosure	LS		
Water					
58	20	2"DIP Water	LF		

59	160	2" PVC Water	LF		
60	330	4" PVC Water	LF		
61	1,400	6" PVC Water	LF		
62	200	6" DIP Water	LF		
63	200	8" PVC Water	LF		
64	800	12" PVC Water	LF		
65	600	12" DIP Water	LF		
66	1	PIV	EA		
67	4	Fire Hydrant	EA		
68	1	Water Vault	EA		
Sewer					
69	120	Manholes, Sanitary Sewer	VF		
70	17	Frame and Cover, Sanitary Sewer	EA		
71	1,250	6" PVC Sanitary Sewer	LF		
72	1,400	8" PVC Sanitary Sewer	LF		
73	3	Cleanout, Sanitary Sewer	EA		
Utility Extensions					
26	1,200	HMA Wearing Course	TN		
74	30	8" DIP Water	LF		
65	1,200	12" DIP Water	LF		
67	1	Fire Hydrant	EA		
69	35	Manholes, Sanitary Sewer	VF		
70	5	Frame and Cover, Sanitary Sewer	EA		
72	1,560	8" PVC Sanitary Sewer	LF		

75	850	Street Repair	LF		
76	4	Service Connections	EA		
GAS					
77	630	2" Gas Service Lines	LF		
78	700	3" Gas Service Lines	LF		
Storm Drainage					
79	800	6" PVC Storm	LF		
80	780	8" PVC Storm	LF		
81	900	12" PVC Storm	LF		
82	1,000	12" HDPE Storm	LF		
83	2,000	18" HDPE Storm	LF		
84	1,400	24" HDPE Storm	LF		
85	1,160	42" HDPE Storm	LF		
86	1,200	Type 1 Ditch	LF		
87	200	Type 2 Ditch	LF		
88	1,800	Type 4 Ditch	LF		
89	3,000	Type 5 Ditch	LF		
90	4	Junction Box	EA		
91	1	42" Junction Box	EA		
92	2	Modified Junction Box	EA		
93	35	Type "B" Drop Inlets	EA		
94	35	Type "B" Inlet Grate & Frame	EA		
95	2	Type "G" Drop Inlets	EA		
96	2	Type "G" Inlet Grate & Frame	LF		

97	1	Modified Inlet	EA		
98	1	Modified Grate & Frame	LF		
99	10	10" Yard Drains	LS		
100	12	12" In-Line Inlets	EA		
101	40	Trench Drain and Grate	LF		
102	3	Concrete Headwall	EA		
Power and Communications					
103	20	Electrical Duct Bank Type 1	LF		
104	43	Electrical Duct Bank Type 2	LF		
105	62	Electrical Duct Bank Type 3	LF		
106	36	Communications Duct Bank Type 1	LF		
107	1,640	Combined Duct Bank Type 1	LS		
108	1	Transformer Pad	LS		
109	1	Emergency Generator Pad	LS		
110	2	JICCS Pad	LS		
				Bid Total	
<i>ALTERNATE BID ITEM #1-Phase 2 Earthwork</i>					
Alternate Bid Item #1-Phase 2 Earthwork					
15	98,000	Unclassified Excavation	CY		
19	10	Soil Drying	TN		
20	100	Soil Conditioning - 12"	SY		
22	100	Over-Excavation	SY		
23	250	6" Subsurface Drain	LF		

				Total	
ALTERNATE BID ITEM #2 - Military Equipment Parking Expansion					
18	4,430	Subgrade Preparation	LF		
29	150	Free Draining Base Trench Piping	SY		
30	660	Fabric Separation	TN		
111	4,430	Fabric, Woven	SY		
112	3,000	AASHTO #1	TN		
31	980	Class 1 Stone	TN		
44	1	24' Sliding Gates	EA		
46	900	Security Fencing	LF	Total	
ALTERNATE BID ITEM #3 - Field Fencing					
113	3	24' Double Swing Farm Gate	EA		
114	3,900	Field Fencing	LF		
				Total	
ALTERNATE BID ITEM #4 - Civic Arena Parking Area					
21	9,900	Soil Conditioning-18"	SY		
26	800	HMA Wearing Course	TN		
27	2,125	HMA Base Course	TN		
28	2,230	Free Draining Base	TN		
29	1,800	Free Draining Base Trench & Piping	LF		
30	9,900	Fabric Separation	SY		
31	1,680	Class 1 Stone	TN		
115	1	Pavement Markings	LS		

116	1	Signage	LS		
33	279	Wheel Stops	EA		
				Total	
<i>ALTERNATE BID ITEM #5 - Fencing and Gate Upgrade</i>					
117	1	Fencing/Gate Upgrade	1	LS	
				Total	

SECTION 077200 - ROOF ACCESSORIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

- 1. Roof hatches.

B. Related Sections:

- 1. Division 05 Section "Metal Fabrications" for metal vertical ladders, ships' ladders, and stairs for access to roof hatches.
- 2. Division 07 Section "Metal Roof Panels" for ridge vents and snow guards for metal roof panels.
- 3. Division 07 Section "Sheet Metal Flashing and Trim" for shop- and field-formed metal flashing, roof-drainage systems, roof expansion-joint covers, and miscellaneous sheet metal trim and accessories.
- 4. Division 08 Section "Unit Skylights" for single- and double-glazed domed plastic skylights with curb frame.

1.3 PERFORMANCE REQUIREMENTS

- A. General Performance: Roof accessories shall withstand exposure to weather and resist thermally induced movement without failure, rattling, leaking, or fastener disengagement due to defective manufacture, fabrication, installation, or other defects in construction.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of roof accessory indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
- B. Shop Drawings: For roof accessories. Include plans, elevations, keyed details, and attachments to other work. Indicate dimensions, loadings, and special conditions. Distinguish between plant- and field-assembled work.
- C. Samples: For each exposed product and for each color and texture specified, prepared on Samples of size to adequately show color.

1.5 INFORMATIONAL SUBMITTALS

- A. Operation and Maintenance Data: For roof accessories to include in operation and maintenance manuals.

1.6 COORDINATION

- A. Coordinate layout and installation of roof accessories with roofing membrane and base flashing and interfacing and adjoining construction to provide a leakproof, weathertight, secure, and noncorrosive installation.
- B. Coordinate dimensions with rough-in information or Shop Drawings of equipment to be supported.

PART 2 - PRODUCTS

2.1 METAL MATERIALS

- A. Zinc-Coated (Galvanized) Steel Sheet: ASTM A 653/A 653M, G90 (Z275) coating designation.
 - 1. Exposed Coil-Coated Finish: Prepainted by the coil-coating process to comply with ASTM A 755/A 755M. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
 - a. Two-Coat Fluoropolymer Finish: AAMA 621. System consisting of primer and fluoropolymer color topcoat containing not less than 70 percent PVDF resin by weight.
 - 2. Concealed Finish: Pretreat with manufacturer's standard white or light-colored acrylic or polyester-backer finish consisting of prime coat and wash coat, with a minimum total dry film thickness of 0.5 mil (0.013 mm).
- B. Steel Shapes: ASTM A 36/A 36M, hot-dip galvanized according to ASTM A 123/A 123M unless otherwise indicated.
- C. Galvanized-Steel Tube: ASTM A 500, round tube, hot-dip galvanized according to ASTM A 123/A 123M.
- D. Steel Pipe: ASTM A 53/A 53M, galvanized.

2.2 MISCELLANEOUS MATERIALS

- A. General: Provide materials and types of fasteners, protective coatings, sealants, and other miscellaneous items required by manufacturer for a complete installation.
- B. Glass-Fiber Board Insulation: ASTM C 726, thickness as indicated.

- C. Polyisocyanurate Board Insulation: ASTM C 1289, thickness as indicated.
- D. Wood Nailers: Softwood lumber, pressure treated with waterborne preservatives for aboveground use, acceptable to authorities having jurisdiction, containing no arsenic or chromium, and complying with AWPA C2; not less than 1-1/2 inches (38 mm) thick.
- E. Bituminous Coating: Cold-applied asphalt emulsion complying with ASTM D 1187.
- F. Underlayment:
 - 1. Felt: ASTM D 226, Type II (No. 30), asphalt-saturated organic felt, nonperforated.
 - 2. Polyethylene Sheet: 6-mil- (0.15-mm-) thick polyethylene sheet complying with ASTM D 4397.
 - 3. Slip Sheet: Building paper, 3-lb/100 sq. ft. (0.16-kg/sq. m) minimum, rosin sized.
- G. Fasteners: Roof accessory manufacturer's recommended fasteners suitable for application and metals being fastened. Match finish of exposed fasteners with finish of material being fastened. Provide nonremovable fastener heads to exterior exposed fasteners. Furnish the following unless otherwise indicated:
 - 1. Fasteners for Zinc-Coated or Aluminum-Zinc Alloy-Coated Steel: Series 300 stainless steel or hot-dip zinc-coated steel according to ASTM A 153/A 153M or ASTM F 2329.
 - 2. Fasteners for Stainless-Steel Sheet: Series 300 stainless steel.
- H. Gaskets: Manufacturer's standard tubular or fingered design of neoprene, EPDM, PVC, or silicone or a flat design of foam rubber, sponge neoprene, or cork.
- I. Elastomeric Sealant: ASTM C 920, elastomeric polyurethane polymer sealant as recommended by roof accessory manufacturer for installation indicated; low modulus; of type, grade, class, and use classifications required to seal joints and remain watertight.
- J. Butyl Sealant: ASTM C 1311, single-component, solvent-release butyl rubber sealant; polyisobutylene plasticized; heavy bodied for expansion joints with limited movement.
- K. Asphalt Roofing Cement: ASTM D 4586, asbestos free, of consistency required for application.

2.3 ROOF HATCH

- A. Roof Hatches: Metal roof-hatch units with lids and insulated double-walled curbs, welded or mechanically fastened and sealed corner joints, continuous lid-to-curb counterflashing and weathertight perimeter gasketing, integral metal cant, and integrally formed deck-mounting flange at perimeter bottom.
 - 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. AES Industries, Inc.
 - b. Babcock-Davis.
 - c. Bilco Company (The).

- d. Custom Solution Roof and Metal Products.
 - e. Dur-Red Products.
 - f. Hi Pro International, Inc.
 - g. J. L. Industries, Inc.
 - h. Metallic Products Corp.
 - i. Milcor Inc.; Commercial Products Group of Hart & Cooley, Inc.
 - j. Nystrom.
 - k. O'Keeffe's Inc.
 - l. Pate Company (The).
 - m. Precision Ladders, LLC.
- B. Type and Size: Single-leaf lid, 30 by 36 inches (750 by 900 mm).
- C. Loads: Minimum 40-lbf/sq. ft. (1.9-kPa) external live load and 20-lbf/sq. ft. (0.95-kPa) internal uplift load.
- D. Hatch Material: Zinc-coated (galvanized) steel sheet, 0.079 inch (2.01 mm) thick.
- 1. Finish: Two-coat fluoropolymer.
 - 2. Color: As selected by Architect from manufacturer's full range.
- E. Construction:
- 1. Insulation: Glass-fiber board.
 - 2. Hatch Lid: Opaque, insulated, and double walled, with manufacturer's standard metal liner of same material and finish as outer metal lid.
 - 3. Curb Liner: Manufacturer's standard, of same material and finish as metal curb.
 - 4. On ribbed or fluted metal roofs, form flange at perimeter bottom to conform to roof profile.
 - 5. Fabricate curbs to minimum height of 12 inches (300 mm) unless otherwise indicated.
 - 6. Sloping Roofs: Where slope or roof deck exceeds 1:48, fabricate curb with perimeter curb height that is tapered to accommodate roof slope so that top surfaces of perimeter curb are level. Equip hatch with water diverter or cricket on side that obstructs water flow.
- F. Hardware: Galvanized-steel spring latch with turn handles, butt- or pintle-type hinge system, and padlock hasps inside and outside.
- 1. Provide two-point latch on lids larger than 84 inches (2130 mm).
- G. Ladder-Assist Post: Roof-hatch manufacturer's standard device for attachment to roof-access ladder.
- 1. Operation: Post locks in place on full extension; release mechanism returns post to closed position.
 - 2. Height: 42 inches (1060 mm) above finished roof deck.
 - 3. Material: Steel tube.
 - 4. Post: 1-5/8-inch- (41-mm-) diameter pipe.
 - 5. Finish: Manufacturer's standard baked enamel or powder coat.
 - a. Color: Same as hatch.

2.4 GENERAL FINISH REQUIREMENTS

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, to verify actual locations, dimensions, and other conditions affecting performance of the Work.
- B. Verify that substrate is sound, dry, smooth, clean, sloped for drainage, and securely anchored.
- C. Verify dimensions of roof openings for roof accessories.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. General: Install roof accessories according to manufacturer's written instructions.
 - 1. Install roof accessories level, plumb, true to line and elevation, and without warping, jogs in alignment, excessive oil canning, buckling, or tool marks.
 - 2. Anchor roof accessories securely in place so they are capable of resisting indicated loads.
 - 3. Use fasteners, separators, sealants, and other miscellaneous items as required to complete installation of roof accessories and fit them to substrates.
 - 4. Install roof accessories to resist exposure to weather without failing, rattling, leaking, or loosening of fasteners and seals.
- B. Metal Protection: Protect metals against galvanic action by separating dissimilar metals from contact with each other or with corrosive substrates by painting contact surfaces with bituminous coating or by other permanent separation as recommended by manufacturer.
 - 1. Underlayment: Where installing roof accessories directly on cementitious or wood substrates, install a course of felt underlayment and cover with a slip sheet, or install a course of polyethylene sheet.
 - 2. Bed flanges in thick coat of asphalt roofing cement where required by manufacturers of roof accessories for waterproof performance.
- C. Roof Curb Installation: Install each roof curb so top surface is level.
- D. Roof-Hatch Installation:
 - 1. Install roof hatch so top surface of hatch curb is level.

2. Verify that roof hatch operates properly. Clean, lubricate, and adjust operating mechanism and hardware.
 3. Attach ladder-assist post according to manufacturer's written instructions.
- E. Seal joints with elastomeric sealant as required by roof accessory manufacturer.

3.3 REPAIR AND CLEANING

- A. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas and repair galvanizing according to ASTM A 780.
- B. Touch up factory-primed surfaces with compatible primer ready for field painting according to Division 09 painting Sections.
- C. Clean exposed surfaces according to manufacturer's written instructions.
- D. Clean off excess sealants.
- E. Replace roof accessories that have been damaged or that cannot be successfully repaired by finish touchup or similar minor repair procedures.

END OF SECTION 077200

SECTION 087100 - DOOR HARDWARE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Commercial door hardware for the following:
 - a. Swinging doors.
 - b. Other doors to the extent indicated.
 - 2. Hardware for Aluminum Doors
 - 3. Electrified door hardware.
- B. Related Sections include the following:
 - 1. Division 8 Section "Flush Wood Doors" for integral intumescent seals provided as part of fire-rated labeled assemblies.
 - 2. Division 8 Section "Overhead Coiling Doors" for door hardware provided as part of overhead door assemblies, except cylinders specified in this Section.
 - 3. Division 8 Section "Aluminum-Framed Entrances and Storefronts" for entrance door hardware, except cylinders specified in this Section.
 - 4. Division 13 Section "Addressable Fire Alarm System" for connections to building fire alarm system.
 - 5. Division 16 Sections for connections to electrical power system and for low-voltage wiring work.
- C. Products furnished, but not installed, under this Section include the following. Coordinating, purchasing, delivering, and scheduling remain requirements of this Section.
 - 1. Hardware on aluminum and glass entrance doors.
 - 2. Cylinders for locks on counter shutters.

1.3 SUBMITTALS

- A. Product Data: Include construction and installation details, material descriptions, dimensions of individual components and profiles, and finishes.
- B. Shop Drawings: Details of electrified door hardware, indicating the following:
 - 1. Wiring Diagrams: Power, signal, and control wiring. Include the following:
 - a. System schematic.
 - b. Point-to-point wiring diagram.
 - c. Riser diagram.
 - d. Elevation of each door.
 - 2. Detail interface between electrified door hardware and fire alarm, access control system.
 - 3. Operation Narrative: Describe the operation of doors controlled by electrified door hardware.

- C. Product Certificates: For electrified door hardware, signed by product manufacturer.
 - 1. Certify that door hardware approved for use on types and sizes of labeled fire doors complies with listed fire door assemblies.
- D. Qualification Data: For Architectural Hardware Consultant.
- E. Product Test Reports: Based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified testing agency, for locks, latches, and closers.
- F. Maintenance Data: For each type of door hardware to include in maintenance manuals. Include final hardware and keying schedule.
- G. Warranty: Special warranty specified in this Section.
- H. Other Action Submittals:
 - 1. Door Hardware Sets: Prepared by or under the supervision of Architectural Hardware Consultant, detailing fabrication and assembly of door hardware, as well as procedures and diagrams. Coordinate the final door hardware sets with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.
 - a. Format: Comply with scheduling sequence and vertical format in DHI's "Sequence and Format for the Hardware Schedule." Double space entries, and number and date each page.
 - b. Content: Include the following information:
 - 1) Identification number, location, hand, fire rating, and material of each door and frame.
 - 2) Type, style, function, size, quantity, and finish of each door hardware item. Include description and function of each lockset and exit device.
 - 3) Complete designations of every item required for each door or opening including name and manufacturer.
 - 4) Fastenings and other pertinent information.
 - 5) Location of each door hardware set, cross-referenced to Drawings, both on floor plans and in door and frame schedule.
 - 6) Explanation of abbreviations, symbols, and codes contained in schedule.
 - 7) Mounting locations for door hardware.
 - 8) Door and frame sizes and materials.
 - 9) Description of each electrified door hardware function, including location, sequence of operation, and interface with other building control systems.
 - a) Sequence of Operation: Include description of component functions that occur in the following situations: authorized person wants to enter; authorized person wants to exit; unauthorized person wants to enter; unauthorized person wants to exit.
 - 10) List of related door devices specified in other Sections for each door and frame.
 - c. Submittal Sequence: Submit the final door hardware sets at earliest possible date, particularly where approval of the door hardware sets must precede fabrication of other work that is critical in Project construction schedule. Include Product Data, Samples, Shop Drawings of other work affected by door hardware, and other information essential to the coordinated review of the door hardware sets.

2. Keying Schedule: Prepared by or under the supervision of Architectural Hardware Consultant, detailing Owner's final keying instructions for locks. Include schematic keying diagram and index each key set to unique door designations.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: An employer of workers trained and approved by lock manufacturer.
 1. Installer's responsibilities include supplying and installing door hardware and providing a qualified Architectural Hardware Consultant available during the course of the Work to consult with Contractor, Architect, and Owner about door hardware and keying.
 2. Installer shall have warehousing facilities in Project's vicinity.
 3. Scheduling Responsibility: Preparation of door hardware and keying schedules.
- B. Architectural Hardware Consultant Qualifications: A person who is currently certified by DHI as an Architectural Hardware Consultant and who is experienced in providing consulting services for door hardware installations that are comparable in material, design, and extent to that indicated for this Project.
- C. Source Limitations: Obtain each type and variety of door hardware from a single manufacturer, unless otherwise indicated.
 1. Provide electrified door hardware from same manufacturer as mechanical door hardware, unless otherwise indicated. Manufacturers that perform electrical modifications and that are listed by a testing and inspecting agency acceptable to authorities having jurisdiction are acceptable.
- D. Fire-Rated Door Assemblies: Assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to NFPA 252.
 1. Positive Pressure Test: After 5 minutes into the test, the neutral pressure level in furnace shall be established at 40 inches (1000 mm) or less above the sill.
- E. Electrified Door Hardware: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- F. Keying Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination." In addition to Owner, Construction Manager, and Contractor, conference participants shall also include installer's Architectural Hardware Consultant[and Owner's security consultant]. Incorporate keying conference decisions into final keying schedule after reviewing door hardware keying system including, but not limited to, the following:
 1. Function of building, flow of traffic, purpose of each area, degree of security required, and plans for future expansion.
 2. Preliminary key system schematic diagram.
 3. Requirements for key control system.
 4. Address for delivery of keys.
- G. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination."
 1. **Preinstallation Conference is required for the coordination of all electrified door hardware and access controls.**

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Inventory door hardware on receipt and provide secure lock-up for door hardware delivered to Project site.
- B. Tag each item or package separately with identification related to the final door hardware sets, and include basic installation instructions, templates, and necessary fasteners with each item or package.
- C. Deliver keys to manufacturer of key control system for subsequent delivery to Owner.
- D. Deliver keys to Owner by registered mail or overnight package service.

1.6 COORDINATION

- A. Templates: Distribute door hardware 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.
- B. Electrical System Roughing-in: Coordinate layout and installation of electrified door hardware with connections to power supplies, fire alarm system and detection devices, access control system.

1.7 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of door hardware that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Structural failures including excessive deflection, cracking, or breakage.
 - b. Faulty operation of operators and door hardware.
 - c. Deterioration of metals, metal finishes, and other materials beyond normal weathering and use.
 - 2. Warranty Period: Three years from date of Substantial Completion, except as follows:
 - a. Exit Devices: Three years from date of Substantial Completion.
 - b. Manual Closers: Ten years from date of Substantial Completion.

1.8 MAINTENANCE SERVICE

- A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.

PART 2 - PRODUCTS

2.1 SCHEDULED DOOR HARDWARE

- A. General: Provide door hardware for each door to comply with requirements in this Section and door hardware sets indicated in Part 3 "Door Hardware Sets" Article.

1. Door Hardware Sets: Provide quantity, item, size, finish or color indicated, and named manufacturers' products.
 2. Sequence of Operation: Provide electrified door hardware function, sequence of operation, and interface with other building control systems indicated.
- B. Designations: Requirements for design, grade, function, finish, size, and other distinctive qualities of each type of door hardware are indicated in Part 3 "Door Hardware Sets" Article. Products are identified by using door hardware designations, as follows:
1. Named Manufacturers' Products: Manufacturer and product designation are listed for each door hardware type required for the purpose of establishing minimum requirements. Manufacturers' names are abbreviated in Part 3 "Door Hardware Sets" Article.
- C. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:
1. Manufacturers: Subject to compliance with requirements, provide products by the manufacturers specified.

2.2 HINGES, GENERAL

- A. Quantity: Provide the following, unless otherwise indicated:
1. Two Hinges: For doors with heights up to 60 inches (1524 mm).
 2. Three Hinges: For doors with heights 61 to 90 inches (1549 to 2286 mm).
 3. Four Hinges: For doors with heights 91 to 120 inches (2311 to 3048 mm).
 4. For doors with heights more than 120 inches (3048 mm), provide 4 hinges, plus 1 hinge for every 30 inches (750 mm) of door height greater than 120 inches (3048 mm).
- B. Template Requirements: Except for hinges and pivots to be installed entirely (both leaves) into wood doors and frames, provide only template-produced units.
- C. Hinge Sizes: Provide the following, unless otherwise indicated:
1. 4-1/2 inches high: For all doors with widths of 35 inches or less.
 2. 5 inches high: For all doors with widths greater than 35 inches.
- D. Hinge Base Metal Thickness: Provide the following, unless otherwise indicated:
1. Medium Weight Doors with Medium Frequency: 0.134 inches thick.
 2. Heavy Weight Doors with High Frequency: 0.180 inches thick.
- E. Hinge Base Metal: Unless otherwise indicated, provide the following:
1. Exterior Hinges: Stainless steel, with stainless-steel pin.
 2. Interior Hinges: Steel, with steel pin.
 3. Hinges for Fire-Rated Assemblies: Steel, with steel pin.
- F. Hinge Options: Where indicated in door hardware sets or on Drawings:
1. Nonremovable Pins: Provide set screw in hinge barrel that, when tightened into a groove in hinge pin, prevents removal of pin while door is closed; for outswinging exterior doors and outswinging corridor doors with locks.
 2. Corners: Square.
 3. Width of Hinges: Shall be sufficient to clear all trim.
- G. Fasteners: Provide Phillips flat-head screws comply with the following::
1. Machine Screws: For metal doors and frames. Install into drilled and tapped holes.

2. Wood Screws: For wood doors and frames.
3. Threaded-to-the-Head Wood Screws: For fire-rated wood doors.
4. Finish screw heads to match surface of hinges.

H. Finish: Except as otherwise indicated, provide finishes as follows:

1. Exterior Doors: US32D / 630
2. Interior Doors: US26D / 652

2.3 HINGES

- A. Butts and Hinges: BHMA A156.1,
- B. Template Hinge Dimensions: BHMA A156.7.
- C. Manufacturers:
 1. Bommer Industries, Inc. (BI).
 2. Hager Companies (HAG).
 3. Ives Hardware; an Ingersoll-Rand Company (IVE).

2.4 CONTINUOUS HINGES

- A. Standard: BHMA A156.26.
- B. General: Minimum 0.120-inch- (3.0-mm-) thick, hinge leaves with minimum overall width of 4 inches (102 mm); fabricated to full height of door and frame and to template screw locations; with components finished after milling and drilling are complete.
- C. Continuous, Gear-Type Hinges: Extruded-aluminum, pinless, geared hinge leaves; joined by a continuous extruded-aluminum channel cap; with concealed, self-lubricating thrust bearings.
 1. Manufacturers:
 - a. Hager Companies (HAG).
 - b. Ives Hardware; an Ingersoll-Rand Company (IVE).
 - c. Select Products Limited (SPL).
- D. Finish: Provide continuous gear-type hinges with clear anodized finish, unless noted otherwise.
- E. Coordinators:
 1. Soffit Mounted:
 - a. Door coordinator shall prevent the active door from closing before inactive door. Stop mounted channel 1-5/8" x 5/8" steel tubing x length to suit door opening. Coordinator shall be UL listed. Furnish filler bars to fill gap between end of coordinator and inactive door frame. Furnish mounting brackets for all stop mounted hardware such as exit device strikes, door closer PA shoes, etc. Coordinators shall be prepared (cutout) at the factory for surface applied or concealed vertical rod panic devices if required.
 - b. Furnish with carry bar CB1 when required for proper operation.
 - c. Manufacturers:
 - 1) Ives; an Ingersoll Rand Company, COR x length to suit (IVE).
 - 2) Equal products of any BHMA manufacturer.

2.5 LOCKS AND LATCHES, GENERAL

- A. Accessibility Requirements: Where indicated to comply with accessibility requirements, comply with the U.S. Architectural & Transportation Barriers Compliance Board's "Americans with Disabilities Act (ADA), Accessibility Guidelines for Buildings and Facilities (ADAAG)" and the FED-STD-795, "Uniform Federal Accessibility Standards."
 - 1. Provide operating devices that do not require tight grasping, pinching, or twisting of the wrist and that operate with a force of not more than 5 lbf (22 N).
- B. Latches and Locks for Means of Egress Doors: Comply with NFPA 101. Latches shall not require more than 15 lbf (67 N) to release the latch. Locks shall not require use of a key, tool, or special knowledge for operation.
- C. Electrified Locking Devices: BHMA A156.25.
- D. Lock Trim:
 - 1. Levers: Cast.
 - 2. Escutcheons (Roses): Wrought.
 - 3. Dummy Trim: Match lever lock trim and escutcheons.
- E. Backset: 2-3/4 inches (70 mm), unless otherwise indicated.
- F. Finish: Provide locks with US26D finish, unless noted otherwise.
- G. Strikes: Manufacturer's standard strike with strike box for each latchbolt or lock bolt, with curved lip extended to protect frame, finished to match door hardware set, and as follows:

2.6 MECHANICAL LOCKS AND LATCHES

- A. Lock Functions: Function numbers and descriptions indicated in door hardware sets comply with the following:
- B. Mortise Locks: Stamped steel case with steel or brass parts; BHMA A156.13, Grade 1; Series 1000.
 - 1. Products:
 - a. Schlage Commercial Lock Division; an Ingersoll-Rand Company (SCH).
 - 1) L9000 Series 17A Design (owner standard)

2.7 DOOR BOLTS

- A. Bolt Throw: Comply with testing requirements for length of bolts required for labeled fire doors, and as follows:
 - 1. Mortise Flush Bolts: Minimum 3/4-inch (19-mm) throw.
- B. Dustproof Strikes: BHMA A156.16, Grade 1.
- C. Automatic and Self-Latching Flush Bolts: BHMA A156.3, Grade 1; designed for mortising into door edge.
 - 1. Manufacturers:
 - a. Door Controls International (DCI).
 - b. Hager Companies (HAG).

- c. IVES Hardware; an Ingersoll-Rand Company (IVE).

2.8 EXIT DEVICES

- A. Exit Devices: BHMA A156.3, Grade 1.
- B. Accessibility Requirements: Where handles, pulls, latches, locks, and other operating devices are indicated to comply with accessibility requirements, comply with the U.S. Architectural & Transportation Barriers Compliance Board's "Americans with Disabilities Act (ADA), Accessibility Guidelines for Buildings and Facilities (ADAAG)" and FED-STD-795, "Uniform Federal Accessibility Standards."
 - 1. Provide operating devices that do not require tight grasping, pinching, or twisting of the wrist and that operate with a force of not more than 5 lbf (22 N).
- C. Exit Devices for Means of Egress Doors: Comply with NFPA 101. Exit devices shall not require more than 15 lbf (67 N) to release the latch. Locks shall not require use of a key, tool, or special knowledge for operation.
- D. Panic Exit Devices: Listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for panic protection, based on testing according to UL 305.
- E. Fire Exit Devices: Devices complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire and panic protection, based on testing according to UL 305 and NFPA 252.
- F. Removable Mullions: BHMA A156.3.
- G. Fire-Exit Removable Mullions: Provide removable mullions for use with fire exit devices complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire and panic protection, based on testing according to UL 305 and NFPA 252. Mullions shall be used only with exit devices for which they have been tested.
- H. Outside Trim: Lever with cylinder, unless indicated otherwise in Part 3 "Door Hardware Sets"; material and finish to match locksets, unless otherwise indicated.
 - 1. Match design for locksets and latchsets, unless otherwise indicated.
- I. Through Bolts: For exit devices and trim on metal doors, non-fire-rated wood doors, and fire-rated wood doors.
- J. Strikes: Unless otherwise indicated, provide the following:
 - 1. Roller Strikes: For rim & surface mounted vertical rod devices:
- K. Security Dead-Latching Feature: All devices are to be provided with a security dead-latching feature.
- L. Electronic Exit Bars: Electronic latch retraction device, activated by a control station, continuous duty solenoid; listed and labeled as panic exit hardware. Fabricate bar from extruded aluminum, and provide door and frame transfer device and 16 feet (4.9 m) of cord to route wiring off the door frame.
- M. Manufacturers:

1. Von Duprin; an Ingersoll-Rand Company (VON) – (owner standard)
 - a. 33A/99 Series

2.9 LOCK CYLINDERS

- A. Standard Lock Cylinders: BHMA A156.5, Grade 1.
- B. Cylinders: Manufacturer's standard tumbler type, constructed from brass or bronze, stainless steel, or nickel silver, and complying with the following:
 1. Number of Pins: Six or Seven to match existing system.
 2. Keyway: Match existing system - Primus Level 9N, national exclusivity.
 3. Mortise Type: Threaded cylinders with rings and straight- or clover-type cam.
 4. Rim Type: Cylinders with back plate, flat-type vertical or horizontal tailpiece, and raised trim ring.
- C. Permanent Cores: Manufacturer's standard; finish face to match lockset; complying with the following:
 1. Interchangeable Cores: Core insert, removable by use of a special key; usable with other manufacturers' cylinders.
- D. Construction Keying: Comply with the following:
 1. Construction Cores: Provide construction cores that are replaceable by permanent cores. Provide 10 construction master keys and two control keys.
 - a. Replace construction cores with permanent cores as indicated in keying schedule.
 - b. Permanent Cores shall be installed by General Contractor
- E. Manufacturer: Schlage; an Ingersoll Rand Company (SCH).

2.10 KEYING

- A. Keying System: Factory registered, complying with guidelines in BHMA A156.28, Appendix A. Incorporate decisions made in keying conference, and as follows:
 1. Great-Grand Master Key System: Cylinders are operated by a change key, a master key, a grand master key, and a great-grand master key.
- B. Keys: Nickel silver.
 1. Stamping: Permanently inscribe each key with a visual key control number and include the following notation:
 - a. Notation: "DO NOT DUPLICATE."
 2. Quantity: In addition to one extra key blank for each lock, provide the following:
 - a. Cylinder Change Keys: Three.
 - b. Master Keys: Six.
 - c. Grand Master Keys: Six.
 - d. Great-Grand Master Keys: Six.
 - e. Control Keys: Two.

2.11 KEY CONTROL SYSTEM

- A. Key Control Cabinet: BHMA A156.5, Grade 1; metal cabinet with baked-enamel finish; containing key-holding hooks, labels, 2 sets of key tags with self-locking key holders, key-gathering envelopes, and temporary and permanent markers; with key capacity of 150 percent of the number of locks.

1. Wall-Mounted Cabinet: Cabinet with hinged-panel door equipped with key-holding panels and pin-tumbler cylinder door lock.
- B. Cross-Index System: Single-index system for recording key information. Include three receipt forms for each key-holding hook. Set up by key control manufacturer.
 1. Available Manufacturers:
 - a. Key Control Systems, Inc. (KCS).
 - b. Lund Equipment Co., Inc. (LUN).
 - c. MMF Industries (MMF).
 - C. Key Control System Software: BHMA A156.5, Grade 1; multiple-index system for recording and reporting key-holder listings, tracking keys and lock and key history, and printing receipts for transactions. Include instruction manual.
 1. Manufacturers:
 - a. Best Access Systems; Div. of The Stanley Works (BAS).
 - b. Sargent Manufacturing Company; an ASSA ABLOY Group company (SGT).
 - c. Schlage Commercial Lock Division; an Ingersoll-Rand Company (SCH).

2.12 CLOSERS

- A. Accessibility Requirements: Where handles, pulls, latches, locks, and other operating devices are indicated to comply with accessibility requirements, comply with the U.S. Architectural & Transportation Barriers Compliance Board's "Americans with Disabilities Act (ADA), Accessibility Guidelines for Buildings and Facilities (ADAAG)" and FED-STD-795, "Uniform Federal Accessibility Standards."
 1. Comply with the following maximum opening-force requirements:
 - a. Interior, Non-Fire-Rated Hinged Doors: 5 lbf (22.2 N) applied perpendicular to door.
 - b. Fire Doors: Minimum opening force allowable by authorities having jurisdiction.
- B. Door Closers for Means of Egress Doors: Comply with NFPA 101. Door closers shall not require more than 30 lbf (133 N) to set door in motion and not more than 15 lbf (67 N) to open door to minimum required width.
- C. Power-Assist Closers: As specified in Division 8 Section "Power Door Operators" for access doors for people with disabilities or where listed in the door hardware sets.
- D. Size of Units: Unless otherwise indicated, comply with manufacturer's written recommendations for size of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Provide factory-sized closers, adjustable to meet field conditions and requirements for opening force.
- E. Surface Closers: BHMA A156.4, Grade 1. Provide type of arm required for closer to be located on non-public side of door, unless otherwise indicated.
 1. Manufacturers:
 - a. LCN; an Ingersoll-Rand Company (LCN) – (owner standard).
 - 1) 4100/4011 Series.

2.13 PROTECTIVE TRIM UNITS

- A. Size:

1. Single Door: 1 1/2 inches (50 mm) less than door width, by height specified in door hardware sets.
 2. Pair of Doors: 1/2 inch (25 mm) less than door width, by height specified in door hardware sets.
- B. Fasteners: Manufacturer's standard machine or self-tapping screws.
- C. Metal Protective Trim Units: BHMA A156.6; beveled top and 2 sides; fabricated from the following material, unless indicated in door hardware sets:
1. Material: 0.050-inch- (1.3-mm-) thick stainless steel.
 2. Manufacturers:
 - a. Hager Companies (HAG).
 - b. IVES Hardware; an Ingersoll-Rand Company (IVE).
 - c. Rockwood Manufacturing Company (RM).

2.14 STOPS AND HOLDERS

- A. Stops and Bumpers: BHMA A156.16, Grade 1.
1. Provide wall stops for doors unless not appropriate. Where wall stops are not appropriate, provide overhead holders.
 - a. Basis of Design Product:
 - 1) Wall Stop: WS402 as manufactured by Ives Manufacturing (IVE).
 - 2) Overhead Stop/Holder: 100 Series x US26D as manufactured by Glynn-Johnson; an Ingersoll-Rand Company (GLY).
 - a) Holder function shall not be included on units located on fire-rated or smoke-rated doors.

2.15 DOOR GASKETING

- A. Standard: BHMA A156.22.
- B. Exterior Doors, General: Provide continuous weather-strip gasketing on exterior doors where indicated or scheduled. Provide noncorrosive fasteners for exterior applications and elsewhere as indicated.
1. Perimeter Gasketing: Apply to head and jamb, forming seal between door and frame.
 2. Meeting Stile Gasketing: Fasten to meeting stiles, forming seal when doors are closed.
 3. Door Bottoms: Apply to bottom of door, forming seal with threshold when door is closed.
- C. Interior Doors, General: Provide continuous gasketing for smoke, fire, light, or sound gasketing on interior doors where indicated or scheduled.
- D. Air Leakage: Not to exceed 0.50 cfm per foot (0.000774 cu. m/s per m) of crack length for gasketing other than for smoke control, as tested according to ASTM E 283.
- E. Smoke-Labeled Gasketing: Assemblies complying with UL10C that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for smoke-control ratings indicated, based on testing according to UL 1784.
1. Provide Category 'H' smoke-labeled gasketing on 20-minute-rated doors and on smoke-labeled doors that comply with IBC 715.3.3.

- F. Fire-Labeled Gasketing: Assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to UL10C, UL 1784, and comply with IBC 715.3.3.
 - 1. Positive Test Pressure: After 5 minutes into the test, neutral pressure level in furnace shall be established at 40 inches (1016 mm) or less above the sill.
- G. Replaceable Seal Strips: Provide only those units where resilient or flexible seal strips are easily replaceable and readily available from stocks maintained by manufacturer.
- H. Gasketing Materials: ASTM D 2000 and AAMA 701/702.
- I. Door Bottoms: Provide solid neoprene wiper or nylon sweep seal. Provide only those units where resilient or flexible seal strips are easily replaceable and readily available from stocks maintained by manufacturer.
- J. Manufacturers:
 - 1. National Guard Products (NGP).
 - 2. Pemko Manufacturing Co. (PEM).
 - 3. Reese Enterprises (RE).

2.16 THRESHOLDS

- A. Standard: BHMA A156.21.
- B. Accessibility Requirements: Where thresholds are indicated to comply with accessibility requirements, comply with the U.S. Architectural & Transportation Barriers Compliance Board's "Americans with Disabilities Act (ADA), Accessibility Guidelines for Buildings and Facilities (ADAAG)" and FED-STD-795, "Uniform Federal Accessibility Standards."
 - 1. Bevel raised thresholds with a slope of not more than 1:2. Provide thresholds not more than 1/2 inch (13 mm) high.
 - 2. Bevel raised thresholds with a slope of not more than 1:2. Provide thresholds not more than 3/4 inch (19 mm) high for exterior sliding doors.
- C. Thresholds for Means of Egress Doors: Comply with NFPA 101. Maximum 1/2 inch (13 mm) high.
- D. Manufacturers:
 - 1. Hager Companies (HAG).
 - 2. National Guard Products (NGP).
 - 3. Pemko Manufacturing Co. (PEM).
 - 4. Reese Enterprises (RE).
 - 5. Zero International (ZRO).

2.17 FABRICATION

- A. Base Metals: Produce door hardware units of base metal, fabricated by forming method indicated, using manufacturer's standard metal alloy, composition, temper, and hardness. Furnish metals of a quality equal to or greater than that of specified door hardware units and BHMA A156.18. Do not furnish manufacturer's standard materials or forming methods if different from specified standard.

- B. Fasteners: Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. Provide screws according to commercially recognized industry standards for application intended, except aluminum fasteners are not permitted. Provide Phillips flat-head screws with finished heads to match surface of door hardware, unless otherwise indicated.
1. Concealed Fasteners: For door hardware units that are exposed when door is closed, except for units already specified with concealed fasteners. Do not use through bolts for installation where bolt head or nut on opposite face is exposed unless it is the only means of securely attaching the door hardware, unless specified. Where through bolts are used on hollow door and frame construction, provide sleeves for each through bolt.
 2. Steel Machine or Wood Screws: For the following fire-rated applications:
 - a. Mortise hinges to doors.
 - b. Strike plates to frames.
 - c. Closers to doors and frames.
 3. Steel Through Bolts: For the following fire-rated applications unless door blocking is provided:
 - a. Surface hinges to doors.
 - b. Closers to doors and frames.
 - c. Surface-mounted exit devices.
 4. Spacers or Sex Bolts: For through bolting of hollow-metal doors.
 5. Fasteners for Wood Doors: Comply with requirements in DHI WDHS.2, "Recommended Fasteners for Wood Doors."

2.18 FINISHES

- A. Standard: BHMA A156.18, as indicated in door hardware sets.
- B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- C. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.
- D. General: Refer to "Door Hardware Sets" Article in Part 3 and Articles for each hardware type in Part 2, for hardware finishes.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. 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.
- B. Examine roughing-in for electrical power systems to verify actual locations of wiring connections before electrified door hardware installation.

- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Steel Doors and Frames: Comply with DHI A115 Series.
 - 1. Surface-Applied Door Hardware: Drill and tap doors and frames according to ANSI A250.6.
- B. Wood Doors: Comply with DHI A115-W Series.

3.3 INSTALLATION

- A. Mounting Heights: Mount door hardware units at heights indicated as follows unless otherwise indicated or required to comply with governing regulations.
 - 1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
 - 2. Custom Steel Doors and Frames: DHI's "Recommended Locations for Builders' Hardware for Custom Steel Doors and Frames."
 - 3. Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."
- B. 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 specified in Division 9 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.
 - 1. Set units level, plumb, and true to line and location. Adjust and reinforce attachment substrates as necessary for proper installation and operation.
 - 2. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.
 - 3. All door hardware items are to be field installed. Shop installation of door hardware is not acceptable.
- C. Key Control System: Tag keys and place them on markers and hooks in key control system cabinet, as determined by final keying schedule.
- D. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."

3.4 ADJUSTING

- A. 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.
 - 1. Spring Hinges: Adjust to achieve positive latching when door is allowed to close freely from an open position of 30 degrees.
 - 2. Electric Strikes: Adjust horizontal and vertical alignment of keeper to properly engage lock bolt.
 - 3. Door Closers: Unless otherwise required by authorities having jurisdiction, adjust sweep period so that, from an open position of 70 degrees, the door will take at least 3 seconds

to move to a point 3 inches (75 mm) from the latch, measured to the leading edge of the door.

3.5 CLEANING AND PROTECTION

- A. Clean adjacent surfaces soiled by door hardware installation.
- B. Clean operating items as necessary to restore proper function and finish.
- C. Provide final protection and maintain conditions that ensure that door hardware is without damage or deterioration at time of Substantial Completion.

3.6 DEMONSTRATION

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain door hardware and door hardware finishes. Refer to Division 1 Section "Demonstration and Training."

3.7 DOOR HARDWARE SETS

- A. Catalog Numbers: Product designations are from the following manufacturers:
 - 1. Butts: Ives Manufacturing, an Ingersoll Rand Company (IVE)
 - 2. Continuous Hinges: Ives Manufacturing, an Ingersoll Rand Company (IVE)
 - 3. Lock Sets: Schlage; Commercial Lock Division; an Ingersoll-Rand Company (SCH).
 - 4. Exit Devices: Von Duprin; an Ingersoll-Rand Company (VON).
 - 5. Closers: LCN; an Ingersoll-Rand Company (LCN).
 - 6. Overhead Stops and Holders: Glynn-Johnson; an Ingersoll-Rand Company (GLY).
 - 7. Thresholds, Gasketing : National Guard Products, Inc. (NGP).
 - 8. Flush Bolts, Door Stops & Bumpers: Ives Manufacturing, an Ingersoll Rand Company (IVE).

HARDWARE SETS

HW SET: 01

DOOR NUMBER:

A100 A111

EACH TO HAVE:

2	EA	CONTINUOUS HINGE	112HD	628	IVE
1	EA	MULLION	KR4954	689	VON
2	EA	PANIC HARDWARE	CD33A-L 06	626	VON
5	EA	PRIMUS CORE ONLY	20-740	626	SCH
5	EA	CONSTRUCTION CORE	23-030-ICX	626	SCH
5	EA	MORTISE CYLINDER	26-064	626	SCH
2	EA	SURFACE CLOSER	4111 SCUSH	689	LCN
2	EA	MOUNTING PLATE	4110-18	689	LCN
2	EA	CUSH SHOE SUPPORT	4110-30	689	LCN
2	EA	BLADE STOP SPACER	4110-61	689	LCN
2	EA	DOOR SWEEP	95WH	AL	NGP
1	EA	THRESHOLD	896S	AL	NGP

NOTES:

1. WEATHERSTRIPPING BY DOOR MANUFACTURER.

HW SET: 02

DOOR NUMBER:

A100A A100B A101 A101A A111A A111B

EACH TO HAVE:

2	EA	CONTINUOUS HINGE	112HD	628	IVE
1	EA	MULLION	KR4954	689	VON
2	EA	PANIC HARDWARE	CD33A-L 06	626	VON
5	EA	PRIMUS CORE ONLY	20-740	626	SCH
5	EA	CONSTRUCTION CORE	23-030-ICX	626	SCH
5	EA	MORTISE CYLINDER	26-064	626	SCH
2	EA	SURFACE CLOSER	4111 SCUSH	689	LCN
2	EA	MOUNTING PLATE	4110-18	689	LCN
2	EA	CUSH SHOE SUPPORT	4110-30	689	LCN
2	EA	BLADE STOP SPACER	4110-61	689	LCN
2	EA	DOOR SWEEP	95WH	AL	NGP
1	EA	THRESHOLD	896S	AL	NGP

NOTES:

1. WEATHERSTRIPPING BY DOOR MANUFACTURER.

HW SET: 03

DOOR NUMBER:

A102H A102M

EACH TO HAVE:

1	EA	CONTINUOUS HINGE	224HD	628	IVE
1	EA	PANIC HARDWARE	CD99NL	626	VON
1	EA	RIM CYLINDER	20-079	626	SCH
2	EA	PRIMUS CORE ONLY	20-740	626	SCH
2	EA	CONSTRUCTION CORE	23-030-ICX	626	SCH
1	EA	MORTISE CYLINDER	26-064	626	SCH
1	EA	SURFACE CLOSER	4111 SCUSH	689	LCN
1	EA	KICK PLATE	8400 10" X 1-1/2" LDW	630	IVE
1	SET	SEALS	700SA	AL	NGP
1	EA	DRIP CAP	16A DOOR WIDTH + 4"	AL	NGP
1	EA	DOOR SWEEP	95WH	AL	NGP
1	EA	THRESHOLD	896S	AL	NGP

HW SET: 04
DOOR NUMBER:

A102E A102F A102G A102J A102K A102L

EACH TO HAVE:

1	EA	CONTINUOUS HINGE	224HD	628	IVE
1	EA	PANIC HARDWARE	CD99DT	626	VON
1	EA	PRIMUS CORE ONLY	20-740	626	SCH
1	EA	CONSTRUCTION CORE	23-030-ICX	626	SCH
1	EA	MORTISE CYLINDER	26-064	626	SCH
1	EA	SURFACE CLOSER	4111 SCUSH	689	LCN
1	EA	KICK PLATE	8400 10" X 1-1/2" LDW	630	IVE
1	SET	SEALS	700SA	AL	NGP
1	EA	DRIP CAP	16A DOOR WIDTH + 4"	AL	NGP
1	EA	DOOR SWEEP	95WH	AL	NGP
1	EA	THRESHOLD	896S	AL	NGP

HW SET: 05
DOOR NUMBER:

A112A

EACH TO HAVE:

2	EA	CONTINUOUS HINGE	224HD	628	IVE
1	EA	MULLION	KR4954	689	VON
1	EA	PANIC HARDWARE	CD99DT	626	VON
1	EA	PANIC HARDWARE	CD99NL	626	VON
1	EA	RIM CYLINDER	20-079	626	SCH
4	EA	PRIMUS CORE ONLY	20-740	626	SCH
4	EA	CONSTRUCTION CORE	23-030-ICX	626	SCH
3	EA	MORTISE CYLINDER	26-064	626	SCH
1	EA	MULLION SEAL	5100	BLK	NGP
2	EA	SURFACE CLOSER	4111 SCUSH	689	LCN
2	EA	MOUNTING PLATE	4110-18	689	LCN
2	EA	CUSH SHOE SUPPORT	4110-30	689	LCN
2	EA	BLADE STOP SPACER	4110-61	689	LCN
2	EA	KICK PLATE	8400 10" X 1-1/2" LDW	630	IVE
1	SET	SEALS	700SA	AL	NGP
1	EA	DRIP CAP	16A DOOR WIDTH + 4"	AL	NGP
2	EA	DOOR SWEEP	95WH	AL	NGP
1	EA	THRESHOLD	896S	AL	NGP

HW SET: 06
DOOR NUMBER:
A107

EACH TO HAVE:

2	EA	CONTINUOUS HINGE	224HD	628	IVE
1	EA	MULLION	KR4954	689	VON
1	EA	PANIC HARDWARE	CD33A-DT	626	VON
1	EA	PANIC HARDWARE	CD33A-NL	626	VON
4	EA	PRIMUS CORE ONLY	20-740	626	SCH
4	EA	CONSTRUCTION CORE	23-030-ICX	626	SCH
4	EA	MORTISE CYLINDER	26-064	626	SCH
1	EA	MULLION SEAL	5100	BLK	NGP
2	EA	SURFACE CLOSER	4111 SCUSH	689	LCN
2	EA	MOUNTING PLATE	4110-18	689	LCN
2	EA	KICK PLATE	8400 10" X 1/2" LDW	630	IVE
1	SET	SEALS	700SA	AL	NGP
1	EA	DRIP CAP	16A DOOR WIDTH + 4"	AL	NGP
2	EA	DOOR SWEEP	95WH	AL	NGP
1	EA	THRESHOLD	896S	AL	NGP

HW SET: 07
DOOR NUMBER:

A102 A102A A102B A102C A102D

EACH TO HAVE:

6	EA	HINGE	5BB1HW 4.5 X 4.5	652	IVE
1	EA	MULLION	KR4954	689	VON
2	EA	PANIC HARDWARE	CD33A-L 06	626	VON
2	EA	RIM CYLINDER	20-079	626	SCH
5	EA	PRIMUS CORE ONLY	20-740	626	SCH
3	EA	MORTISE CYLINDER	26-064	626	SCH
2	EA	SURFACE CLOSER	4111 SHCUSH	689	LCN
2	EA	MOUNTING PLATE	4110-18	689	LCN
2	EA	KICK PLATE	8400 10" X 1/2" LDW	630	IVE
2	EA	SILENCER	SR64	GRY	IVE

HW SET: 08
DOOR NUMBER:
B100 B100A

EACH TO HAVE:

6	EA	HINGE	5BB1HW 4.5 X 4.5	652	IVE
1	EA	MULLION	KR4954	689	VON
2	EA	PANIC HARDWARE	CD33A-L 06	626	VON
2	EA	RIM CYLINDER	20-079	626	SCH
5	EA	PRIMUS CORE ONLY	20-740	626	SCH
3	EA	MORTISE CYLINDER	26-064	626	SCH
2	EA	SURFACE CLOSER	4111 SHCUSH	689	LCN
2	EA	MOUNTING PLATE	4110-18	689	LCN
2	EA	CUSH SHOE SUPPORT	4110-30	689	LCN
2	EA	BLADE STOP SPACER	4110-61	689	LCN
2	EA	SILENCER	SR64	GRY	IVE

HW SET: 09
DOOR NUMBER:
A103

EACH TO HAVE:

6	EA	HINGE	5BB1HW 4.5 X 4.5	652	IVE
1	EA	MULLION	KR4954	689	VON
2	EA	PANIC HARDWARE	CD33A-L 06	626	VON
5	EA	PRIMUS CORE ONLY	20-740	626	SCH
5	EA	MORTISE CYLINDER	26-064	626	SCH
2	EA	SURFACE CLOSER	4111 SCUSH	689	LCN
2	EA	KICK PLATE	8400 10" X 1/2" LDW	630	IVE
2	EA	SILENCER	SR64	GRY	IVE

HW SET: 10
DOOR NUMBER:
A107A

EACH TO HAVE:

6	EA	HINGE	5BB1HW 4.5 X 4.5	652	IVE
1	EA	MULLION	KR4954	689	VON
2	EA	PANIC HARDWARE	CD33A-L 06	626	VON
5	EA	PRIMUS CORE ONLY	20-740	626	SCH
5	EA	CONSTRUCTION CORE	23-030-ICX	626	SCH
5	EA	MORTISE CYLINDER	26-064	626	SCH
2	EA	SURFACE CLOSER	4111 SCUSH	689	LCN
2	EA	MOUNTING PLATE	4110-18	689	LCN
2	EA	KICK PLATE	8400 10" X 1/2" LDW	630	IVE
2	EA	SILENCER	SR64	GRY	IVE

HW SET: 11
DOOR NUMBER:
B115

EACH TO HAVE:

2	EA	CONTINUOUS HINGE	224HD	628	IVE
1	EA	MULLION	KR4954	689	VON
1	EA	PANIC HARDWARE	CD99DT	626	VON
1	EA	PANIC HARDWARE	CD99NL	626	VON
1	EA	RIM CYLINDER	20-079	626	SCH
4	EA	PRIMUS CORE ONLY	20-740	626	SCH
4	EA	CONSTRUCTION CORE	23-030-ICX	626	SCH
3	EA	MORTISE CYLINDER	26-064	626	SCH
1	EA	MULLION SEAL	5100	BLK	NGP
2	EA	SURFACE CLOSER	4111 EDA	689	LCN
2	EA	WALL STOP	WS402CCV	626	IVE
1	SET	SEALS	700SA	AL	NGP
1	EA	DRIP CAP	16A DOOR WIDTH + 4"	AL	NGP
2	EA	DOOR SWEEP	95WH	AL	NGP
1	EA	THRESHOLD	896S	AL	NGP

NOTES:

1. WEATHERSTRIPPING BY DOOR MANUFACTURER.

HW SET: 12
DOOR NUMBER:
B101B

EACH TO HAVE:

3	EA	HINGE	5BB1 4.5 X 4.5 NRP	630	IVE
1	EA	OFFICE LOCK	L9050BDC 06A	626	SCH
1	EA	PRIMUS CORE ONLY	20-740	626	SCH
1	EA	SURFACE CLOSER	4111 EDA	689	LCN
1	EA	KICK PLATE	8400 10" X 1-1/2" LDW	630	IVE
1	EA	WALL STOP	WS402CCV	626	IVE
1	SET	SEALS	700SA	AL	NGP
1	EA	DRIP CAP	16A DOOR WIDTH + 4"	AL	NGP
1	EA	DOOR SWEEP	95WH	AL	NGP
1	EA	THRESHOLD	896S	AL	NGP

HW SET: 13
DOOR NUMBER:
B102A

EACH TO HAVE:

1	EA	CONTINUOUS HINGE	224HD	628	IVE
1	EA	PANIC HARDWARE	CD99L 996L 06	626	VON
1	EA	RIM CYLINDER	20-079	626	SCH
2	EA	PRIMUS CORE ONLY	20-740	626	SCH
2	EA	CONSTRUCTION CORE	23-030-ICX	626	SCH
1	EA	MORTISE CYLINDER	26-064	626	SCH
1	EA	SURFACE CLOSER	4111 EDA	689	LCN
1	EA	KICK PLATE	8400 10" X 1-1/2" LDW	630	IVE
1	EA	WALL STOP	WS402CCV	626	IVE
1	SET	SEALS	700SA	AL	NGP
1	EA	DRIP CAP	16A DOOR WIDTH + 4"	AL	NGP
1	EA	DOOR SWEEP	95WH	AL	NGP
1	EA	THRESHOLD	896S	AL	NGP

HW SET: 14

DOOR NUMBER:

C100A C111A C114B

EACH TO HAVE:

1	EA	CONTINUOUS HINGE	224HD	628	IVE
1	EA	PANIC HARDWARE	CD99L 996L 06	626	VON
1	EA	RIM CYLINDER	20-079	626	SCH
2	EA	PRIMUS CORE ONLY	20-740	626	SCH
2	EA	CONSTRUCTION CORE	23-030-ICX	626	SCH
1	EA	MORTISE CYLINDER	26-064	626	SCH
1	EA	SURFACE CLOSER	4111 SCUSH	689	LCN
1	EA	KICK PLATE	8400 10" X 1-1/2" LDW	630	IVE
1	SET	SEALS	700SA	AL	NGP
1	EA	DRIP CAP	16A DOOR WIDTH + 4"	AL	NGP
1	EA	DOOR SWEEP	95WH	AL	NGP
1	EA	THRESHOLD	896S	AL	NGP

HW SET: 15

DOOR NUMBER:

A106

EACH TO HAVE:

3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	CLASSROOM LOCK	L9070BDC 06A	626	SCH
1	EA	PRIMUS CORE ONLY	20-740	626	SCH
1	EA	WALL STOP	WS402CCV	626	IVE
3	EA	SILENCER	SR64	GRY	IVE

HW SET: 16

DOOR NUMBER:

B202

EACH TO HAVE:

3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	CLASSROOM LOCK	L9070BDC 06A	626	SCH
1	EA	PRIMUS CORE ONLY	20-740	626	SCH
1	EA	SURFACE CLOSER	4111 SCUSH	689	LCN
1	EA	KICK PLATE	8400 10" X 1-1/2" LDW	630	IVE
3	EA	SILENCER	SR64	GRY	IVE

HW SET: 17

DOOR NUMBER:

B129 B129A B137A

EACH TO HAVE:

3	EA	HINGE	5BB1 5 X 4.5	652	IVE
1	EA	CLASSROOM LOCK	L9070BDC 06A	626	SCH
1	EA	PRIMUS CORE ONLY	20-740	626	SCH
1	EA	WALL STOP & HOLDER	WS40	626	IVE
3	EA	SILENCER	SR64	GRY	IVE

HW SET: 18

DOOR NUMBER:

A112

EACH TO HAVE:

6	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	SET	AUTO FLUSH BOLT	FB31P	630	IVE
1	EA	DUST PROOF STRIKE	DP2	626	IVE
1	EA	MORTISE DEADBOLT	L460BDC	626	SCH
1	EA	PRIMUS CORE ONLY	20-740	626	SCH
1	EA	ROLLER LATCH	RL32 (TOP MOUNT)	626	IVE
1	EA	PUSH PLATE	8200 6" X 16"	630	IVE
1	EA	PULL PLATE	8302-8 4" X 16"	630	IVE
2	EA	KICK PLATE	8400 10" X 1/2" LDW	630	IVE
2	EA	WALL STOP & HOLDER	WS40	626	IVE
2	EA	SILENCER	SR64	GRY	IVE

NOTES:

1. INSTALL FLUSH BOLTS AND ROLLER LATCH ON SAME LEAF.
2. INSTALL LOCK AND PUSH/PULL PLATES ON OPPOSITE LEAF.

HW SET: 19

DOOR NUMBER:

A104B B131

EACH TO HAVE:

3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	STOREROOM LOCK	L9080BDC 06A	626	SCH
1	EA	PRIMUS CORE ONLY	20-740	626	SCH
1	EA	OVERHEAD STOP	100S	630	GLY
3	EA	SILENCER	SR64	GRY	IVE

HW SET: 20
DOOR NUMBER:
A105

EACH TO HAVE:

3	EA	HINGE	5BB1 4.5 X 4.5 NRP	652	IVE
1	EA	STOREROOM LOCK	L9080BDC 06A	626	SCH
1	EA	PRIMUS CORE ONLY	20-740	626	SCH
1	EA	SURFACE CLOSER	4111 SHCUSH	689	LCN
1	EA	KICK PLATE	8400 10" X 1-1/2" LDW	630	IVE
3	EA	SILENCER	SR64	GRY	IVE

HW SET: 21
DOOR NUMBER:

B139 C105 C110 C112

EACH TO HAVE:

3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	STOREROOM LOCK	L9080BDC 06A	626	SCH
1	EA	PRIMUS CORE ONLY	20-740	626	SCH
1	EA	SURFACE CLOSER	4011 ST-1544	689	LCN
1	EA	MOUNTING BRACKET	4020-18	689	LCN
1	EA	OVERHEAD STOP	100S	630	GLY
1	EA	KICK PLATE	8400 10" X 1-1/2" LDW	630	IVE
3	EA	SILENCER	SR64	GRY	IVE

HW SET: 22
DOOR NUMBER:

C121

EACH TO HAVE:

3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	STOREROOM LOCK	L9080BDC 06A	626	SCH
1	EA	PRIMUS CORE ONLY	20-740	626	SCH
1	EA	SURFACE CLOSER	4011 ST-1544	689	LCN
1	EA	MOUNTING BRACKET	4020-18	689	LCN
1	EA	OVERHEAD STOP	100S	630	GLY
1	EA	KICK PLATE	8400 10" X 1-1/2" LDW	630	IVE
1	SET	SEALS	2525B	BRN	NGP

HW SET: 23
DOOR NUMBER:
B139B

EACH TO HAVE:

3	EA	HINGE	5BB1 4.5 X 4.5 NRP	630	IVE
1	EA	PANIC HARDWARE	CD99NL	626	VON
1	EA	RIM CYLINDER	20-079	626	SCH
2	EA	PRIMUS CORE ONLY	20-740	626	SCH
2	EA	CONSTRUCTION CORE	23-030-ICX	626	SCH
1	EA	MORTISE CYLINDER	26-060	626	SCH
1	EA	SURFACE CLOSER	4111 SCUSH	689	LCN
1	EA	KICK PLATE	8400 10" X 1-1/2" LDW	630	IVE
1	SET	SEALS	700SA	AL	NGP
1	EA	DRIP CAP	16A DOOR WIDTH + 4"	AL	NGP
1	EA	DOOR SWEEP	95WH	AL	NGP
1	EA	THRESHOLD	896S	AL	NGP

HW SET: 24
DOOR NUMBER:
B130A

EACH TO HAVE:

3	EA	HINGE	5BB1 4.5 X 4.5 NRP	630	IVE
1	EA	STOREROOM LOCK	L9080BDC 06A	626	SCH
1	EA	PRIMUS CORE ONLY	20-740	626	SCH
1	EA	CONSTRUCTION CORE	23-030-ICX	626	SCH
1	EA	SURFACE CLOSER	4111 SCUSH	689	LCN
1	EA	KICK PLATE	8400 10" X 1-1/2" LDW	630	IVE
1	SET	SEALS	700SA	AL	NGP
1	EA	DRIP CAP	16A DOOR WIDTH + 4"	AL	NGP
1	EA	DOOR SWEEP	95WH	AL	NGP
1	EA	THRESHOLD	896S	AL	NGP
1	EA	VIEWER	U698	626	IVE

HW SET: 25
DOOR NUMBER:
B120

EACH TO HAVE:

6	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	SET	AUTO FLUSH BOLT	FB31P	630	IVE
1	EA	DUST PROOF STRIKE	DP2	626	IVE
1	EA	STOREROOM LOCK	L9080BDC 06A WITH 1" LIPPED STRIKE	626	SCH
1	EA	PRIMUS CORE ONLY	20-740	626	SCH
1	EA	COORDINATOR	COR52 X FL20	628	IVE
2	EA	SURFACE CLOSER	4011	689	LCN
2	EA	KICK PLATE	8400 10" X 1/2" LDW	630	IVE
2	EA	FLOOR STOP	FS13	626	IVE
1	SET	SEALS	2525B	BRN	NGP
1	EA	MEETING STILE SEAL	5060B 7'	BRN	NGP

HW SET: 26
DOOR NUMBER:
B119

EACH TO HAVE:

6	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	SET	CONST LATCHING BOLT	FB51P	630	IVE
1	EA	DUST PROOF STRIKE	DP2	626	IVE
1	EA	STOREROOM LOCK	L9080BDC 06A WITH 1" LIPPED STRIKE	626	SCH
1	EA	PRIMUS CORE ONLY	20-740	626	SCH
1	EA	SURFACE CLOSER	4011 ST-1544	689	LCN
1	EA	MOUNTING BRACKET	4020-18	689	LCN
2	EA	OVERHEAD HOLDER	100H	630	GLY
2	EA	KICK PLATE	8400 10" X 1/2" LDW	630	IVE
2	EA	SILENCER	SR64	GRY	IVE

NOTES:

1. INSTALL CLOSER AND LOCK ON SAME LEAF.

HW SET: 27
DOOR NUMBER:
B119A C112A B119B

EACH TO HAVE:

2	EA	CONTINUOUS HINGE	224HD	628	IVE
1	SET	CONST LATCHING BOLT	FB51P	630	IVE
1	EA	DUST PROOF STRIKE	DP2	626	IVE
1	EA	STOREROOM LOCK	L9080BDC 06A WITH 1" LIPPED STRIKE	626	SCH
1	EA	PRIMUS CORE ONLY	20-740	626	SCH
1	EA	SURFACE CLOSER	4111 SHCUSH	689	LCN
2	EA	KICK PLATE	8400 10" X 1/2" LDW	630	IVE
1	SET	SEALS	700SA	AL	NGP
1	SET	MEETING STILE SEAL	9605A	AL	NGP
1	EA	DRIP CAP	16A DOOR WIDTH + 4"	AL	NGP
2	EA	DOOR SWEEP	95WH	AL	NGP
1	EA	THRESHOLD	896S	AL	NGP

HW SET: 28
DOOR NUMBER:
C102

EACH TO HAVE:

3	EA	HINGE	5BB1 5 X 4.5	652	IVE
1	EA	STOREROOM LOCK	L9080BDC 06A	626	SCH
1	EA	PRIMUS CORE ONLY	20-740	626	SCH
1	EA	SURFACE CLOSER	4011	689	LCN
1	EA	KICK PLATE	8400 10" X 1-1/2" LDW	630	IVE
1	EA	WALL STOP	WS402CCV	626	IVE
1	SET	SEALS	2525B	BRN	NGP

NOTES:

1. PROVIDE INTUMESCENT SEALS IF NOT INTEGRATED IN DOOR CONSTRUCTION.

HW SET: 29
DOOR NUMBER:
C115 C120B D106

EACH TO HAVE:

3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	STOREROOM LOCK	L9080BDC 06A	626	SCH
1	EA	PRIMUS CORE ONLY	20-740	626	SCH
1	EA	WALL STOP	WS402CCV	626	IVE
3	EA	SILENCER	SR64	GRY	IVE

HW SET: 30
DOOR NUMBER:

B100B B205 D105

EACH TO HAVE:

3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	STOREROOM LOCK	L9080BDC 06A	626	SCH
1	EA	PRIMUS CORE ONLY	20-740	626	SCH
1	EA	SURFACE CLOSER	4011	689	LCN
1	EA	KICK PLATE	8400 10" X 1-1/2" LDW	630	IVE
1	EA	WALL STOP	WS402CCV	626	IVE
3	EA	SILENCER	SR64	GRY	IVE

HW SET: 31
DOOR NUMBER:

C122 C124

EACH TO HAVE:

3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	STOREROOM LOCK	L9080BDC 06A	626	SCH
1	EA	PRIMUS CORE ONLY	20-740	626	SCH
1	EA	SURFACE CLOSER	4111 EDA	689	LCN
1	EA	KICK PLATE	8400 10" X 1-1/2" LDW	630	IVE
1	EA	WALL STOP	WS402CCV	626	IVE
1	SET	SEALS	2525B	BRN	NGP

HW SET: 32
DOOR NUMBER:

C122G C123

EACH TO HAVE:

2	EA	CONTINUOUS HINGE	224HD	628	IVE
1	SET	CONST LATCHING BOLT	FB51P	630	IVE
1	EA	DUST PROOF STRIKE	DP2	626	IVE
1	EA	STOREROOM LOCK	L9080BDC 06A WITH 1" LIPPED STRIKE	626	SCH
1	EA	PRIMUS CORE ONLY	20-740	626	SCH
2	EA	KICK PLATE	8400 10" X 1/2" LDW	630	IVE
1	SET	SEALS	700SA	AL	NGP
1	SET	MEETING STILE SEAL	9605A	AL	NGP
2	EA	DOOR BOTTOM	154P	AL	NGP
1	EA	DRIP CAP	16A DOOR WIDTH + 4"	AL	NGP
1	EA	THRESHOLD	425	AL	NGP

HW SET: 33
DOOR NUMBER:
C124E

EACH TO HAVE:

6	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	SET	AUTO FLUSH BOLT	FB31P	630	IVE
1	EA	DUST PROOF STRIKE	DP2	626	IVE
1	EA	STOREROOM LOCK	L9080BDC 06A WITH 1" LIPPED STRIKE	626	SCH
1	EA	PRIMUS CORE ONLY	20-740	626	SCH
1	EA	COORDINATOR	COR52 X FL20	628	IVE
2	EA	MOUNTING BRACKET	MB2	600	IVE
2	EA	SURFACE CLOSER	4111 SCUSH	689	LCN
2	EA	KICK PLATE	8400 10" X 1/2" LDW	630	IVE
1	SET	SEALS	2525B	BRN	NGP
1	EA	MEETING STILE SEAL	5060B 7'	BRN	NGP

HW SET: 34
DOOR NUMBER:
C300

EACH TO HAVE:

3	EA	HINGE	5BB1 4.5 X 4.5	630	IVE
1	EA	STORE LOCK	L9466BDC 06A	626	SCH
2	EA	PRIMUS CORE ONLY	20-740	626	SCH
1	EA	SURFACE CLOSER	4111 SCUSH	689	LCN
1	EA	KICK PLATE	8400 10" X 1-1/2" LDW	630	IVE
1	SET	SEALS	700SA	AL	NGP
1	EA	DRIP CAP	16A DOOR WIDTH + 4"	AL	NGP
1	EA	DOOR SWEEP	95WH	AL	NGP
1	EA	THRESHOLD	896S	AL	NGP

HW SET: 35
DOOR NUMBER:

C128A D102A D102B D107

EACH TO HAVE:

3	EA	HINGE	5BB1 4.5 X 4.5 NRP	630	IVE
1	EA	POWER TRANSFER	EPT-10	689	VON
1	EA	STOREROOM LOCK	L9080BDC 06A	626	SCH
1	EA	PRIMUS CORE ONLY	20-740	626	SCH
1	EA	CONSTRUCTION CORE	23-030-ICX	626	SCH
1	EA	SURFACE CLOSER	4111 SCUSH	689	LCN
1	EA	KICK PLATE	8400 10" X 1-1/2" LDW	630	IVE
1	SET	SEALS	700SA	AL	NGP
1	EA	DRIP CAP	16A DOOR WIDTH + 4"	AL	NGP
1	EA	DOOR SWEEP	95WH	AL	NGP
1	EA	THRESHOLD	896S	AL	NGP

HW SET: 36
DOOR NUMBER:

D101A D101B

EACH TO HAVE:

1	EA	CONTINUOUS HINGE	224HD	628	IVE
1	EA	STOREROOM LOCK	L9080BDC 06A	626	SCH
1	EA	PRIMUS CORE ONLY	20-740	626	SCH
1	EA	SURFACE CLOSER	4111 EDA	689	LCN
1	EA	KICK PLATE	8400 10" X 1-1/2" LDW	630	IVE
1	EA	WALL STOP	WS402CCV	626	IVE
1	SET	SEALS	700SA	AL	NGP
1	EA	DRIP CAP	16A DOOR WIDTH + 4"	AL	NGP
1	EA	DOOR SWEEP	95WH	AL	NGP
1	EA	THRESHOLD	896S	AL	NGP

HW SET: 37
DOOR NUMBER:

B103 B104

EACH TO HAVE:

3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	OFFICE LOCK	L9050BDC 06A	626	SCH
1	EA	PRIMUS CORE ONLY	20-740	626	SCH
1	EA	WALL STOP	WS402CCV	626	IVE
3	EA	SILENCER	SR64	GRY	IVE

HW SET: 38

DOOR NUMBER:

B106	B107	B108	B110	B111	B112
B113	B121	B122	B126	B127	B203
B204					

EACH TO HAVE:

3	EA	HINGE	5BB1HW 4.5 X 4.5	652	IVE
1	EA	MORTISE DEADBOLT	L463BDC	626	SCH
1	EA	PRIMUS CORE ONLY	20-740	626	SCH
1	EA	PUSH PLATE	8200 6" X 16"	630	IVE
1	EA	PULL PLATE	8302-8 4" X 16"	630	IVE
1	EA	SURFACE CLOSER	4011	689	LCN
1	EA	KICK PLATE	8400 10" X 1-1/2" LDW	630	IVE
1	EA	WALL STOP	WS402CCV	626	IVE
3	EA	SILENCER	SR64	GRY	IVE

HW SET: 39

DOOR NUMBER:

B109	C108	C108A	C109
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EACH TO HAVE:

3	EA	HINGE	5BB1HW 4.5 X 4.5	652	IVE
1	EA	MORTISE DEADBOLT	L463BDC	626	SCH
1	EA	PRIMUS CORE ONLY	20-740	626	SCH
1	EA	PUSH PLATE	8200 6" X 16"	630	IVE
1	EA	PULL PLATE	8302-8 4" X 16"	630	IVE
1	EA	SURFACE CLOSER	4011 ST-1544	689	LCN
1	EA	MOUNTING BRACKET	4020-18	689	LCN
1	EA	OVERHEAD STOP	100S	630	GLY
1	EA	KICK PLATE	8400 10" X 1-1/2" LDW	630	IVE
3	EA	SILENCER	SR64	GRY	IVE

HW SET: 40
DOOR NUMBER:
A104C

EACH TO HAVE:

6	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	AUTO FLUSH BOLT	FB41B	630	IVE
1	EA	DUST PROOF STRIKE	DP2	626	IVE
1	EA	MORTISE DEADBOLT	L463BDC	626	SCH
1	EA	PRIMUS CORE ONLY	20-740	626	SCH
1	EA	FLUSH PULL	22	626	IVE
2	EA	WALL STOP	WS402CCV	626	IVE

HW SET: 41
DOOR NUMBER:
A108B A109B

EACH TO HAVE:

6	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	AUTO FLUSH BOLT	FB41B	630	IVE
1	EA	DUST PROOF STRIKE	DP2	626	IVE
1	EA	MORTISE DEADBOLT	L463BDC	626	SCH
1	EA	PRIMUS CORE ONLY	20-740	626	SCH
1	EA	FLUSH PULL	22	626	IVE
2	EA	WALL STOP	WS402CCV	626	IVE

HW SET: 42
DOOR NUMBER:
B133

EACH TO HAVE:

3	EA	HINGE	5BB1 4 X 4	652	IVE
1	EA	PASSAGE SET	L9010 06A	626	SCH
1	EA	WALL STOP	WS402CCV	626	IVE
3	EA	SILENCER	SR64	GRY	IVE

HW SET: 43

DOOR NUMBER:

C126 C127 C128

EACH TO HAVE:

3	EA	HINGE	5BB1 4 X 4	652	IVE
1	EA	PASSAGE SET	L9010 06A	626	SCH
1	EA	WALL STOP	WS402CCV	626	IVE
3	EA	SILENCER	SR64	GRY	IVE

HW SET: 44

DOOR NUMBER:

B137

EACH TO HAVE:

3	EA	HINGE	5BB1HW 4.5 X 4.5	652	IVE
1	EA	PUSH PLATE	8200 6" X 16"	630	IVE
1	EA	PULL PLATE	8302-8 4" X 16"	630	IVE
1	EA	SURFACE CLOSER	4111 EDA	689	LCN
1	EA	KICK PLATE	8400 10" X 1-1/2" LDW	630	IVE
1	EA	WALL STOP	WS402CCV	626	IVE
3	EA	SILENCER	SR64	GRY	IVE

HW SET: 45

DOOR NUMBER:

B133A D104

EACH TO HAVE:

3	EA	HINGE	5BB1 4 X 4	652	IVE
1	EA	PRIVACY SET	L9040 06A	626	SCH
1	EA	WALL STOP	WS402CCV	626	IVE
3	EA	SILENCER	SR64	GRY	IVE

HW SET: 46
DOOR NUMBER:
B117 B117A

EACH TO HAVE:

6	EA	HINGE	5BB1HW 4.5 X 4.5	652	IVE
2	EA	PUSH PLATE	8200 6" X 16"	630	IVE
2	EA	PULL PLATE	8302-8 4" X 16"	630	IVE
2	EA	SURFACE CLOSER	4011 ST-1544	689	LCN
2	EA	MOUNTING BRACKET	4020-18	689	LCN
2	EA	OVERHEAD STOP	100S	630	GLY
2	EA	KICK PLATE	8400 10" X 1/2" LDW	630	IVE
2	EA	SILENCER	SR64	GRY	IVE

HW SET: 47
DOOR NUMBER:
B123 B124

B134

EACH TO HAVE:

3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	DEADBOLT LOCK	MS1851S-4 (1-1/2" BACKSET)	628	ADA
1	EA	PRIMUS CORE ONLY	20-740	626	SCH
1	EA	CONSTRUCTION CORE	23-030-ICX	626	SCH
1	EA	MORTISE CYLINDER	26-060	626	SCH
1	EA	PULL/PUSHBAR	9190-8	630	IVE
1	EA	SURFACE CLOSER	4011	689	LCN
1	EA	WALL STOP & HOLDER	WS40	626	IVE

HW SET: 48
DOOR NUMBER:
B113A

EACH TO HAVE:

3	EA	HINGE	5BB1 4.5 X 4.5	630	IVE
1	EA	INSTITUTION LOCK	L9082BDC 06A	626	SCH
2	EA	PRIMUS CORE ONLY	20-740	626	SCH
1	EA	WALL STOP	WS402CCV	626	IVE
3	EA	SILENCER	SR64	GRY	IVE

HW SET: 49

DOOR NUMBER:

A104 A104A A108 A108A A109 A109A
A110 A110A

EACH TO HAVE:

3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	PANIC HARDWARE	CD99L 996L 06	626	VON
1	EA	RIM CYLINDER	20-079	626	SCH
2	EA	PRIMUS CORE ONLY	20-740	626	SCH
1	EA	MORTISE CYLINDER	26-064	626	SCH
1	EA	SURFACE CLOSER	4111 EDA	689	LCN
1	EA	KICK PLATE	8400 10" X 1/2" LDW	630	IVE
1	EA	WALL STOP	WS402CCV	626	IVE
3	EA	SILENCER	SR64	GRY	IVE

HW SET: 50

DOOR NUMBER:

B114 B116 C100 C114

EACH TO HAVE:

6	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
2	EA	PANIC HARDWARE	CD9927L 996L 06 LBR	626	VON
2	EA	RIM CYLINDER	20-079	626	SCH
4	EA	PRIMUS CORE ONLY	20-740	626	SCH
4	EA	CONSTRUCTION CORE	23-030-ICX	626	SCH
2	EA	MORTISE CYLINDER	26-064	626	SCH
2	EA	SURFACE CLOSER	4111 HEDA	689	LCN
2	EA	KICK PLATE	8400 10" X 1/2" LDW	630	IVE
2	EA	WALL STOP	WS402CCV	626	IVE
2	EA	SILENCER	SR64	GRY	IVE

HW SET: 51
DOOR NUMBER:
B102 C111

EACH TO HAVE:

3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	PANIC HARDWARE	CD99L 996L 06	626	VON
1	EA	RIM CYLINDER	20-079	626	SCH
2	EA	PRIMUS CORE ONLY	20-740	626	SCH
1	EA	MORTISE CYLINDER	26-064	626	SCH
1	EA	SURFACE CLOSER	4011	689	LCN
1	EA	KICK PLATE	8400 10" X 1/2" LDW	630	IVE
1	EA	WALL STOP	WS402CCV	626	IVE
3	EA	SILENCER	SR64	GRY	IVE

HW SET: 52
DOOR NUMBER:
B200

EACH TO HAVE:

3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	PANIC HARDWARE	99L-BE 996L-BE 06	626	VON
1	EA	SURFACE CLOSER	4011	689	LCN
1	EA	KICK PLATE	8400 10" X 1-1/2" LDW	630	IVE
1	EA	WALL STOP	WS402CCV	626	IVE
3	EA	SILENCER	SR64	GRY	IVE

HW SET: 53
DOOR NUMBER:
C200

EACH TO HAVE:

6	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
2	EA	PANIC HARDWARE	CD9927L 996L 06 LBR	626	VON
2	EA	RIM CYLINDER	20-079	626	SCH
4	EA	PRIMUS CORE ONLY	20-740	626	SCH
4	EA	CONSTRUCTION CORE	23-030-ICX	626	SCH
2	EA	MORTISE CYLINDER	26-064	626	SCH
2	EA	SURFACE CLOSER	4111 HEDA	689	LCN
2	EA	KICK PLATE	8400 10" X 1/2" LDW	630	IVE
2	EA	WALL STOP	WS402CCV	626	IVE
2	EA	SILENCER	SR64	GRY	IVE

HW SET: 54
DOOR NUMBER:
C209

EACH TO HAVE:

3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	PANIC HARDWARE	99L-BE 996L-BE 06	626	VON
1	EA	SURFACE CLOSER	4111 SCUSH	689	LCN
1	EA	KICK PLATE	8400 10" X 1-1/2" LDW	630	IVE
3	EA	SILENCER	SR64	GRY	IVE

HW SET: 55
DOOR NUMBER:

B123A	B124A	C103A	C103B	C103C	C103D
C103E				C107A	C107B
C107C	C114A	C116		C118	C120A
C122A	C122B	C124A	C200A	C201	C201A
C201B	C201C	C201D	C201E	C201F	C204
C204A	C204B	C204C	C204D	C204E	C205C
C205D	C205E	C206	C207	C207A	C207B
C207C	C207D	C207E	C207F	C207G	C208
C208A	C208B	C208C	C208D	C208E	C210
C210A	C210B	C210C	C210D	C210E	C212
C212A	C212B	C212C			

EACH TO HAVE:

3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	OFFICE LOCK	L9050BDC 06A	626	SCH
1	EA	PRIMUS CORE ONLY	20-740	626	SCH
1	EA	WALL STOP	WS402CCV	626	IVE
3	EA	SILENCER	SR64	GRY	IVE

HW SET: 56
DOOR NUMBER:

C107	C120	C120E	C122C	C124B
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EACH TO HAVE:

3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	OFFICE LOCK	L9050BDC 06A	626	SCH
1	EA	PRIMUS CORE ONLY	20-740	626	SCH
1	EA	SURFACE CLOSER	4011	689	LCN
1	EA	KICK PLATE	8400 10" X 1-1/2" LDW	630	IVE
1	EA	WALL STOP & HOLDER	WS40	626	IVE
3	EA	SILENCER	SR64	GRY	IVE

HW SET: 57
DOOR NUMBER:
C107G D103

EACH TO HAVE:

3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	OFFICE LOCK	L9050BDC 06A	626	SCH
1	EA	PRIMUS CORE ONLY	20-740	626	SCH
1	EA	SURFACE CLOSER	4111 SCUSH	689	LCN
1	EA	KICK PLATE	8400 10" X 1-1/2" LDW	630	IVE
3	EA	SILENCER	SR64	GRY	IVE

HW SET: 58
DOOR NUMBER:

C107D C107E C107F C205 C205A C205B

EACH TO HAVE:

3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	OFFICE LOCK	L9050BDC 06A	626	SCH
1	EA	PRIMUS CORE ONLY	20-740	626	SCH
1	EA	OVERHEAD STOP	100S	630	GLY
3	EA	SILENCER	SR64	GRY	IVE

HW SET: 59
DOOR NUMBER:
C103

EACH TO HAVE:

3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	OFFICE LOCK	L9050BDC 06A	626	SCH
1	EA	PRIMUS CORE ONLY	20-740	626	SCH
1	EA	SURFACE CLOSER	4011	689	LCN
1	EA	KICK PLATE	8400 10" X 1-1/2" LDW	630	IVE
1	EA	WALL STOP	WS402CCV	626	IVE
3	EA	SILENCER	SR64	GRY	IVE

HW SET: 60

DOOR NUMBER:

D108 D109 D110

EACH TO HAVE:

2	EA	CONTINUOUS HINGE	224HD	628	IVE
1	SET	CONST LATCHING BOLT	FB51P	630	IVE
1	EA	DUST PROOF STRIKE	DP1	626	IVE
1	EA	STOREROOM LOCK	L9080BDC 06A WITH 1" LIPPED STRIKE	626	SCH
1	EA	PRIMUS CORE ONLY	20-740	626	SCH
1	EA	CONSTRUCTION CORE	23-030-ICX	626	SCH
1	EA	SURFACE CLOSER	4111 SHCUSH	689	LCN
1	EA	OVERHEAD HOLDER	100H	630	GLY
2	EA	KICK PLATE	8400 10" X 1/2" LDW	630	IVE
1	SET	SEALS	700SA	AL	NGP
1	SET	MEETING STILE SEAL	9605A	AL	NGP
1	EA	DRIP CAP	16A DOOR WIDTH + 4"	AL	NGP
2	EA	DOOR SWEEP	95WH	AL	NGP
1	EA	THRESHOLD	896S	AL	NGP

HW SET: 61

DOOR NUMBER:

B139A B139C C122F D101 D101C
D102 D102C D107A

EACH TO HAVE:

2	EA	PRIMUS CORE ONLY	20-740	626	SCH
2	EA	MORTISE CYLINDER	26-064	626	SCH
					BALANCE OF HARDWARE BY DOOR SUPPLIER
					B/O

NOTES:

1. VERIFY LOCKING DEVICE TYPE AND QUANTITY WITH DOOR MANUFACTURE.

HW SET: 62

DOOR NUMBER:

B135 B136 C120C C120D C122D C122E
C124C C124D

EACH TO HAVE:

ALL HARDWARE BY DOOR MANUFACTURER B/O

HW SET: 63

DOOR NUMBER: All Caging Doors

EACH TO HAVE:

1	EA	PRIMUS CORE ONLY	20-740	626	SCH
1	EA	CYLINDER	Coordinate with Caging Manuf.	626	SCH
			BALANCE OF HARDWARE BY DOOR SUPPLIER		B/O

NOTES:

1. VERIFY LOCKING DEVICE TYPE AND QUANTITY WITH DOOR MANUFACTURE.

HW SET: 64

DOOR NUMBER:

CI04 CI17

EACH TO HAVE:

3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	GSA Approved Combination Lock – Federal Specification FF-L-2740A	OFFICE LOCK	626	SCH
			Lockmasters LKM7003X-09		
1	EA	PRIMUS CORE ONLY	20-740	626	SCH
1	EA	SURFACE CLOSER	4011	689	LCN
1	EA	WALL STOP	WS402CCV	626	IVE
3	EA	SILENCER	SR64	GRY	IVE

Operational Description:

1. Egress at all times.

HW SET: 65

DOOR NUMBER:

B101 B101A

EACH TO HAVE:

3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	OFFICE LOCK	L9050BDC 06A	626	SCH
1	EA	PRIMUS CORE ONLY	20-740	626	SCH
1	EA	WALL STOP	WS402CCV	626	IVE
3	EA	SILENCER	SR64	GRY	IVE
1	SET	SEALS	700SA	AL	NGP
1	EA	DOOR SWEEP	98V	AL	NGP

END OF SECTION 08710