

9.1 Residence House Entrance Upgrades for Card Access

SECTION 08 71 00 – DOOR HARDWARE

PART I – GENERAL

1.1 SUMMARY

A. SECTION INCLUDES

1. The work in this section includes furnishing all items of finish hardware as hereinafter specified or obviously necessary for all swinging, sliding, folding and other doors. Except items, which are specifically excluded from this section of the specification or of unique hardware, specified in the same sections as the doors and frames on which they are installed.

1.2 SUBMITTALS

A. GENERAL REQUIREMENTS

1. Submit copies of finish hardware schedule in accordance with Division 1, General Requirements.

B. SCHEDULES AND PRODUCT DATA

1. Schedules to be in vertical format, listing each door opening, and organized into “hardware sets” indicating complete designations of every item required for each door opening to function as intended. Hardware schedule shall be submitted within two (2) weeks from date the purchase order is received by the finish hardware supplier. Furnish four (4) copies of revised schedules after approval for field and file use. Note any special mounting instructions or requirements with the hardware schedule. Schedules to include the following information:
 - a. Location of each hardware set cross-referenced to indications on drawings, both on floor plans and in door and frame schedule.
 - b. Handing and degree of swing of each door.
 - c. Door and frame sizes and materials.
 - d. Keying information.
 - e. Type, style, function, size, and finish of each hardware item.
 - f. Elevation drawings and operational descriptions for all electronic openings.
 - g. Name and manufacturer of each hardware item.
 - h. Fastenings and other pertinent information.
 - i. Explanation of all abbreviations, symbols and codes contained in schedule
 - j. Mounting locations for hardware when varies from standard.
2. Submit catalog cuts and/or product data sheets for all scheduled finish hardware.
3. Submit separate detailed keying schedule for approval indicating clearly how the owner’s final instructions on keying of locks has been fulfilled.

C. TEMPLATES

1. Furnish a complete list and suitable templates, together with finish hardware schedule to contractor, for distribution to necessary trades supplying materials to be prepped for finish hardware.

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D. ELECTRONIC HARDWARE SYSTEMS

1. Provide complete wiring diagrams prepared by an authorized factory employee for each opening requiring electronic hardware, except openings where only magnetic hold-open devices are specified. Provide a copy with each hardware schedule submitted after approval.
2. Provide complete operational descriptions of electronic components listed by opening in the hardware submittals. Operational descriptions to detail how each electrical component functions within the opening incorporating all conditions of ingress and egress. Provide a copy with each hardware schedule submitted for approval.
3. Provide elevation drawings of electronic hardware and systems identifying locations of the system components with respect to their placement in the door opening. Provide a copy with each hardware schedule submitted for approval.
4. Prior to installation of electronic hardware, arrange conference between supplier, installers and related trades to review materials, procedures and coordinating related work.
5. The electrical products contained within this specification represent a complete engineered system. If alternate electrical products are submitted, it is the responsibility of the distributor to bear the cost of providing a complete and working system including re-engineering of electrical diagrams and system layout, as well as power supplies, power transfers and all required electrical components. Coordinate with electrical engineer and electrician to ensure that line voltage and low voltage wiring is coordinated to provide a complete and working system.
6. For each item of electrified hardware specified, provide standardized molex plug connectors to accommodate up to twelve (12) wires. Molex plug connectors shall plug directly into through-door wiring harnesses, frame wiring harnesses, electric locking devices and power supplies.

E. OPERATIONS AND MAINTENANCE MANUALS

1. Upon completion of construction and building turnover, furnish two (2) complete maintenance manuals to the owner. Manuals to include the following items:
 - a. Approved hardware schedule, catalog cuts and keying schedule.
 - b. Hardware installation and adjustment instructions.
 - c. Manufacturer's written warranty information.
 - d. Wiring diagrams, elevation drawings and operational descriptions for all electronic openings.

1.3 QUALITY ASSURANCE

1.4 FIRE-RATED OPENINGS

1. Provide door hardware for fire-rated openings that comply with NFPA 80 and requirements of authorities having jurisdiction. Provide only items of door hardware that are listed by Underwriters Laboratories (UL) or Warnock Hersey (WH) for use on types and sizes of doors indicated.

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2. Project requires door assemblies and components that are compliant with positive pressure and S-label requirements. Specifications must be cross-referenced and coordinated with door manufacturers to ensure that total opening engineering is compatible with UL10C Standard for Positive Pressure Fire Tests of Door Assemblies.
 - a. Hardware required for fire doors shall be listed with Underwriters Laboratories for ratings specified.
 - b. Certification(s) of compliance shall be made available upon request by the Authority Having Jurisdiction.

1.5 DELIVERY, STORAGE AND HANDLING

A. MARKING AND PACKAGING

1. Properly package and mark items according to the approved hardware schedule, complete with necessary screws and accessories, instructions and installation templates for spotting mortising tools. Contractor shall check deliveries against accepted list and provide receipt for them, after which he is responsible for storage and care. Any shortage or damaged good shall be made without cost to the owner.
2. Packaging of door hardware is the responsibility of the supplier. As hardware supplier receives material from various manufacturers, sort and repackage in containers clearly marked with appropriate hardware set and door numbers to match the approved hardware schedule. Two or more identical sets may be packed in same container.

B. DELIVERY

1. The supplier shall deliver all hardware to the project site; direct factory shipments are not allowed unless agreed upon beforehand. Hardware supplier shall coordinate delivery times and schedules with the contractor. Inventory door hardware jointly with representatives of hardware supplier and hardware installer/contractor until each is satisfied that count is correct.
2. No keys, other than construction master keys and/or temporary keys are to be packed in boxes with the locks.
3. At time of hardware delivery, door openings supplier in conjunction with the contractor shall check in all hardware and set up a hardware storage room.

C. STORAGE

1. Provide secure lock-up for door hardware delivered to the Project, but not yet installed. Control handling and installation of hardware items that are not immediately replaceable so that completion of work will not be delayed by hardware losses both before and after installation.

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1.6 WARRANTY

- A. All items, except as noted below, shall be warranted in writing by the manufacturer against failure due to defective materials and workmanship for a minimum period of one (1) year commencing on the date of final completion and acceptance. In the event of product failure, promptly repair or replace item with no additional cost to the owner.
 - 1. Mortise locksets: Seven (7) years
 - 2. Exit Devices: Five (5) years
 - 3. Door closers: Ten (10) years
 - 4. Securitron (and approved equals) electrified hardware: Unlimited Lifetime

PART II – PRODUCTS

2.1 MANUFACTURERS

- A. Only manufacturers as listed below shall be accepted. Obtain each type of finish hardware (hinges, latch and locksets, exit devices, door closers, etc.) from a single manufacturer.

2.2 MATERIALS

A. SCREWS AND FASTENERS

- 1. All required screws shall be supplied as necessary for securing finish hardware in the appropriate manner. Thru-bolts shall be supplied for exit devices and door closers where required by code and the appropriate blocking or reinforcing is not present in the door to preclude their use.

B. HANGING DEVICES

1. HINGES

- a. Hinges shall conform to ANSI A156.1 and have the number of knuckles as specified, with oil-impregnated bearings as specified with NRP (non-removable pin) feature, at all exterior reverse bevel doors and other doors as specified. Unless otherwise scheduled, supply one (1) hinge for every 30” of door height.

- 1) Specified Manufacturer: Stanley
- 2) Approved Substitutes: None

C. LOCKING DEVICES

1. MORTISE LOCKSETS

- a. All locksets shall be ANSI 156.13 Series 1000, Grade 1 Certified. All functions shall be manufactured in a single sized case formed from 12 gauge steel minimum. The lockset shall have a field-adjustable, beveled armored front, with a .125” minimum thickness and shall be reversible without opening the lock body. The lockset shall be 2 3/4” backset with a one-piece 3/4” anti-friction stainless steel latchbolt. The deadbolt shall be a full 1” throw made of stainless steel and have 2 hardened steel roller inserts. All strikes shall be

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non-handed with a curved lip. To insure proper alignment, all trim, shall be thru-bolted and fully interchangeable between rose and escutcheon designs and shall be the product of one manufacturer.

- 1) Specified Manufacturer: Corbin Russwin ML2000 Series
- 2) Approved Substitutes: None

2. ELECTRIFIED LOCKSETS

- a. Mechanical features of locksets shall conform to standards as specified above. Locksets shall be fail-secure unless otherwise specified. Where specified electrified locksets shall be provided with a switch to monitor inside or outside lever handle or signal remote location. Provide an in-line power controller with all electrified locksets.

- 1) Specified Manufacturers: Corbin Russwin
- 2) Approved Manufacturers: None

3. LOCKSET STRIKES

- a. Strikes shall be non-handed and available with curved lip, full lip or ASA type strikes as required. Provide strikes with lip-length required to accommodate jamb and/or trim detail and projection.

D. ELECTRIC STRIKES

1. STANDARD STRIKES

- a. All standard electric strikes shall meet BHMA standard 501, grade 1 and be UL Listed for Burglary Resistance, category 1034. Strikes shall be all stainless steel construction for corrosion resistance, strength and durability. Strikes shall have been tested to withstand a forcing strength of a minimum 2400 lbs. before releasing and perform with a minimum of one million cycles of operation. Strikes shall be 24VDC fail-secure unless otherwise specified. Provide an in-line power controller with all electric strikes.

- 1) Specified Manufacturers: HES 1006 Series
- 2) Approved Substitutes: None

E. EXIT DEVICES

1. CONVENTIONAL DEVICES – PUSH RAIL

- a. All exit devices shall be ANSI A156.3, Grade 1 Certified and shall be listed by Underwriters Laboratories and bear the UL label for life safety in full compliance with NFPA 80 and NFPA 101. Mounting rails shall be formed from a solid single piece of stainless steel, brass or bronze no less than 0.072” thick. Push rails shall be constructed of 0.062” thick material. Painted or anodized aluminum shall not be considered heavy duty and is not acceptable. Lever trim shall be available in finishes and designs to match that of the specified locksets.

- 1) Specified Manufacturer: Corbin Russwin ED5000 Series
- 2) Approved Substitutes: None

F. DOOR CLOSERS

1. SURFACE MOUNTED CLOSERS – HEAVY DUTY

- a. All door closers shall be ANSI 156.4, Grade 1 Certified. All closers shall have aluminum alloy bodies, forged steel arms, and separate valves for adjusting backcheck, closing and latching cycles and adjustable spring to provide up to 50% increase in spring power. Closers shall be furnished with parallel arms mounting on all doors opening into corridors or other public spaces and shall be mounted to permit 180 degrees door swing wherever wall conditions permit. Closers shall not be installed on exterior or corridor side of doors; where possible install closers on door for optimum aesthetics.

- 1) Specified Manufacturer: Norton 7500 Series
- 2) Approved Substitutes: None

2. AUTOMATIC DOOR OPERATORS – HEAVY DUTY

- a. All door closers shall be ANSI 156.19, Grade 1 Certified. Units shall have adjustments for door closing force and backcheck, motor assist from 0 to 30 seconds, motor start up delay, vestibule interface delay, electric lock delay, and door hold open delay up to 30 seconds. Operator units shall provide conventional door closer opening and closing forces unless the power operator motor is activated by an initiating device with door closer assembly having adjustable spring size, backcheck valve, sweep valve, latch valve, speed control valve, and pressure adjustment valve to control door closing. Operators shall have push and go function to activate power operator or power assist functions. Units shall have a presence detector input to prevent a closed door from opening or a door that is fully opened from closing and shall have a hold open toggle input to allow remote activation for indefinite hold open; door shall close the second time the input is activated. Operators shall have a SPDT relay for interfacing with latching or locking devices. All controlling operator switches shall be of radio-frequency design and not hard-wired.

- 1) Specified Manufacturer: Nabco Gyro Tech GT710 Series
- 2) Approved Substitutes: None

G. DOOR TRIM AND PROTECTIVE PLATES

1. Kick plates shall be .050 gauges and two (2) inches less full width of door at single doors and one (1) inch less full width of door at pairs unless otherwise specified. Push plates, pull plates, door pulls and miscellaneous door trim shall be as shown in the hardware schedule.

- a. Specified Manufacturer: Rockwood, Trimco
- b. Approved Substitutes: None

H. GASKETING AND THRESHOLDS

1. Provide continuous weatherseal on exterior doors and smoke, light, or sound seals on interior doors where indicated or scheduled. Provide only those units where resilient or flexible seal strip is easily replaceable and readily available from stocks maintained by manufacturer.

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- a. Specified Manufacturers: Pemko
- b. Approved Substitutes: McKinney, National Guard, Reese, Zero

I. SILENCERS

- 1. Furnish rubber door silencers all hollow metal frames; two (2) per pair and three (3) per single door frame.

J. ELECTRONIC PRODUCTS AND ACCESSORIES

1. POWER SUPPLIES

- a. Power supplies shall furnish regulated 24VDC and shall be UL class 2 listed. LED's shall monitor zone status (voltage/no voltage) and slide switches shall be provided to connect or disconnect the load from power; 1, 4 or 8 separate output circuit breakers shall be provided to divide the load. Power supplies shall have the internal capability of charging optional 24VDC sealed lead acid batteries in addition to operating the DC load. Power supplies shall be supplied complete requiring only 120VAC to the fused input and shall be supplied in an enclosure. Power supplies shall be provided with emergency release terminals that allow the release of all devices upon activation of the fire alarm system.
 - 1) Specified Manufacturer: Corbin Russwin, Securitron BPS
 - 2) Approved Substitutes: None

2.3 FINISHES

- A. The designations used in schedules and elsewhere to indicate hardware finishes are those listed in ANSI/BHMA A156.18 or traditional U.S. finishes shown by certain manufacturers for their products.
- B. Provide quality of finish, including thickness of plating or coating (if any), composition, hardness, and other qualities complying with manufacturer's standards, but in no case less than specified by referenced standards for the applicable units of hardware.
- C. Where specified hardware shall have an antimicrobial coating which permanently suppresses the growth of bacteria, algae, fungus, mold and mildew applied. The finish shall control the spread and growth of bacteria, mold and mildew and shall be FDA listed for use in medical and food preparation equipment.

PART III – EXECUTION

3.1 EXAMINATION

- A. Contractor shall ensure that the building is secured and free from weather elements prior to installing interior door hardware. Examine hardware before installation to ensure it is free of defects.

3.2 INSTALLATION

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- A. Mount hardware units at heights indicated in the following applicable publications, except as specifically indicated or required to comply with the governing regulations.
 - 1. “Recommended Locations for Builders Hardware for Standard Steel Doors and Frames” by the Door and Hardware Institute (DHI.)
 - 2. NWWDA Industry Standard I.S.1.7, “Hardware Locations for Wood Flush Doors.”
- B. All hardware shall be applied and installed in accordance with best trade practice by an experienced hardware installer. Care shall be exercised not to mar or damage adjacent work.
- C. Install each hardware item in compliance with the manufacturer's instructions and recommendations. Where cutting and fitting is required to install hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation or application of surface protection with finishing work specified in the Division 9 Sections. Do not install surface-mounted items until finishes have been completed on the substrates involved.
- D. All overhead stop/holders and all door closers with either stop, stop/hold open or hold open arms are to be templated to allow the maximum degree of door swing as the field conditions permit and which will prevent damage to the door, hardware and all adjacent materials.
- E. Provide a secure lock up for hardware delivered to the project but not yet installed. Control the handling and installation of hardware items so that the completion of the work will not be delayed by hardware losses before and after installation.

3.3 FIELD QUALITY CONTROL

- A. Provide the services of an Architectural Hardware Consultant duly certified by the Door and Hardware Industry prior to building completion to ensure that all hardware was correctly installed and is in proper working order.

3.4 ADJUSTING, CLEANING, AND DEMONSTRATING

- A. Adjust and check each operating item of hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate freely and smoothly or as intended for the application made.
- B. Where door hardware is installed more than one month prior to acceptance or occupancy of a space or area, return to the installation during the week prior to acceptance or occupancy and make final check and adjustment of all hardware items in such space or area. Clean operating items as necessary to restore to proper function and finish of hardware and doors. Adjust door control devices to compensate for final operation of heating and ventilating equipment.
- C. Instruct owner's personnel in the proper adjustment and maintenance of door hardware and hardware finishes and usage of any electronic devices.

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3.5 PROTECTION

- A. Contractor shall protect all hardware, as it is stored on construction site in a covered and dry place. Protect exposed hardware installed on doors during the construction phase. Install any and all hardware at the latest possible time frame.

3.6 HARDWARE SCHEDULE

- A. The following schedule is furnished for whatever assistance it may afford the Contractor; do not consider it as entirely inclusive. Should any particular door or item be omitted in any scheduled hardware heading, provide door or item with hardware same as required for similar purposes. Hardware supplier is responsible for handling and sizing all products as listed in the hardware heading. Quantities listed are for each pair of doors, or for each single door.
- B. Manufacturer's Abbreviations:

1. HS	HES
2. NA	Nabco
3. NO	Norton
4. PE	Pemko
5. RO	Rockwood
6. RU	Corbin Russwin
7. ST	Stanley
8. SU	Securitron
9. TC	Trimco

3.7 HARDWARE SETS

Set: 1.0

1 Exit Device (rim, exit only)	ED5200 M52 M92 M94	613	RU
1 Pull	1120	613	TC
1 Back Plate	BP1	613	TC
1 Electric Power Transfer	EL-EPTL		SU
1 Frame Wiring Harness	QC-C1500P		MK
1 Controller	781N-120		RU
2 Card Reader	By Security Contractor		

Notes: Reuse balance of existing hardware.

Set: 2.0

1 Anchor Hinge Set	FBB223 5" x 4-1-2"	10B	SN
1 Electrified Mortise Lock	ML20905 NSM M92 MR	612	RU

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1 Door Closer	CPS7500	691	NO
1 Kickplate	K1050 16" x 2" LDW 4BE CSK	US10	RO
1 Gasketing	45041DNB		PE
1 Sweep	18061DNB		PE
1 Electric Power Transfer	EL-EPTL		SU
1 Frame Wiring Harness	QC-C1500P		MK
1 Door Wiring Harness	QC-C As Required		MK
1 Power Supply	BPS-24-1		SU
1 Card Reader	By Security Contractor		

Set: 3.0

1 Exit Device (rim, exit only)	ED5200 M52 M92 M94	612	RU
1 Pull	1120	613	TC
1 Back Plate	BP1	613	TC
1 Electric Power Transfer	EL-EPTL		SU
1 Frame Wiring Harness	QC-C1500P		MK
1 Door Wiring Harness	QC-C As Required		MK
1 Controller	781N-120		RU
1 Card Reader	By Security Contractor		
1 Auto Operator	GT 710	DB	NA
2 Operator Wall Switch	59H	Blue	NA

Notes: Reuse balance of existing hardware.

Set: 4.0

1 Exit Device (rim, storeroom)	ED5200 TH957 M52 M92 M94	612	RU
1 Electric Power Transfer	EL-EPTL		SU
1 Frame Wiring Harness	QC-C1500P		MK
1 Door Wiring Harness	QC-C As Required		MK
1 Controller	781N-120		RU
1 Card Reader	By Security Contractor		
1 Auto Operator	GT 710	DB	NA
2 Operator Wall Switch	59H	Blue	NA

Notes: Reuse balance of existing hardware.

Set: 5.0

1 Exit Device (rim, storeroom)	ED5200 TH957 M52 M92 M94	613	RU
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1 Electric Power Transfer	EL-EPTL		SU
1 Frame Wiring Harness	QC-C1500P		MK
1 Door Wiring Harness	QC-C As Required		MK
1 Controller	781N-120		RU
1 Card Reader	By Security Contractor		

Notes: Reuse balance of existing hardware.

Set: 6.0

1 Electrified Mortise Lock	ML20905 NSM M92 MR	613	RU
1 Electric Power Transfer	EL-EPTL		SU
1 Frame Wiring Harness	QC-C1500P		MK
1 Door Wiring Harness	QC-C As Required		MK
1 Power Supply	BPS-24-1		SU
1 Card Reader	By Security Contractor		

Notes: Reuse balance of existing hardware.

Set: 7.0

1 Electrified Mortise Lock	ML20905 NSM M92 MR	612	RU
1 Electric Power Transfer	EL-EPTL		SU
1 Frame Wiring Harness	QC-C1500P		MK
1 Door Wiring Harness	QC-C As Required		MK
1 Power Supply	BPS-24-1		SU
1 Card Reader	By Security Contractor		

Notes: Reuse balance of existing hardware.

Set: 8.0

1 Electrified Mortise Lock	ML20905 NSM M92 MR	612	RU
1 Electric Strike	1006-12/24	612	HS
1 Electric Power Transfer	EL-EPTL		SU
1 Frame Wiring Harness	QC-C1500P		MK
1 Door Wiring Harness	QC-C As Required		MK
1 Power Supply	BPS-24-2		SU
1 Card Reader	By Security Contractor		
1 Auto Operator	GT 710	DB	NA
2 Operator Wall Switch	59H	Blue	NA

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Notes: Reuse balance of existing hardware.

Set: 9.0

1 Exit Device (rim, storeroom)	ED5200 TH957 M52 M92 M94	613	RU
1 Electric Power Transfer	EL-EPTL		SU
1 Frame Wiring Harness	QC-C1500P		MK
1 Door Wiring Harness	QC-C As Required		MK
1 Controller	781N-120		RU
1 Card Reader	By Security Contractor		
2 Operator Wall Switch	59H	Blue	NA

Notes: Reuse balance of existing hardware including auto operator.

Set: 10.0

1 Exit Device (rim, storeroom)	ED5200 TH957 M52 M92 M94	613	RU
1 Electric Power Transfer	EL-EPTL		SU
1 Frame Wiring Harness	QC-C1500P		MK
1 Door Wiring Harness	QC-C As Required		MK
1 Controller	781N-120		RU
1 Card Reader	By Security Contractor		
1 Auto Operator	GT 710	DB	NA
2 Operator Wall Switch	59H	Blue	NA

Notes: Reuse balance of existing hardware.

Set: 11.0

1 Exit Device (rim, storeroom)	ED5200 TH957 M52 M92 M94	612	RU
1 Electric Power Transfer	EL-EPTL		SU
1 Frame Wiring Harness	QC-C1500P		MK
1 Door Wiring Harness	QC-C As Required		MK
1 Controller	781N-120		RU
1 Card Reader	By Security Contractor		

Notes: Reuse balance of existing hardware.

Set: 12.0

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1 Exit Device (rim, storeroom)	ED5200 TH957 M52 M92 M94	612	RU
1 Electric Power Transfer	EL-EPTL		SU
1 Frame Wiring Harness	QC-C1500P		MK
1 Door Wiring Harness	QC-C As Required		MK
1 Controller	781N-120		RU
1 Card Reader	By Security Contractor		
1 Operator Wall Switch	59H	Blue	NA

Notes: Reuse balance of existing hardware including auto operator.

Set: 13.0

1 Exit Device (rim, storeroom)	ED5200 N957 M52 M92 M94	612	RU
1 Electric Power Transfer	EL-EPTL		SU
1 Frame Wiring Harness	QC-C1500P		MK
1 Door Wiring Harness	QC-C As Required		MK
1 Controller	781N-120		RU
1 Card Reader	By Security Contractor		

Notes: Reuse balance of existing hardware.

Set: 14.0

1 Exit Device (rim, exit only)	ED5200 M52 M92 M94	612	RU
1 Pull	1120	613	TC
1 Back Plate	BP1	613	TC
1 Electric Power Transfer	EL-EPTL		SU
1 Frame Wiring Harness	QC-C1500P		MK
1 Door Wiring Harness	QC-C As Required		MK
1 Controller	781N-120		RU
1 Card Reader	By Security Contractor		

Notes: Reuse balance of existing hardware.

Set: 15.0

1 Exit Device (rim, exit only)	ED5200 M52 M92 M94	612	RU
1 Pull	1120	613	TC
1 Back Plate	BP1	613	TC
1 Electric Power Transfer	EL-EPTL		SU
1 Frame Wiring Harness	QC-C1500P		MK

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1 Door Wiring Harness	QC-C As Required		MK
1 Controller	781N-120		RU
1 Card Reader	By Security Contractor		
2 Operator Wall Switch	59H	Blue	NA

Notes: Reuse balance of existing hardware including auto operator.

Set: 16.0

1 Exit Device (rim, storeroom)	ED4200 N859 M94 M92 M52	630	RU
1 Electric Power Transfer	EL-EPTL		SU
1 Frame Wiring Harness	QC-C1500P		MK
1 Door Wiring Harness	QC-C As Required		MK
1 Controller	781N-120		RU
1 Card Reader	By Security Contractor		
1 Auto Operator	GT 710	DB	NA
2 Operator Wall Switch	59H	Blue	NA

Notes: Reuse balance of existing hardware.

Set: 17.0

1 Electrified Mortise Lock	ML20905 NSM M92 MR	613	RU
1 Door Closer	CPS7500	690	NO
1 Electric Power Transfer	EL-EPTL		SU
1 Frame Wiring Harness	QC-C1500P		MK
1 Door Wiring Harness	QC-C As Required		MK
1 Power Supply	BPS-24-1		SU
1 Card Reader	By Security Contractor		

Notes: Reuse balance of existing hardware.

Set: 18.0

1 Exit Device (rim, storeroom)	ED5200 TH957 M52 M92 M94	605	RU
1 Door Closer	CPS7500	696	NO
1 Electric Power Transfer	EL-EPTL		SU
1 Frame Wiring Harness	QC-C1500P		MK
1 Door Wiring Harness	QC-C As Required		MK
1 Controller	781N-120		RU
1 Card Reader	By Security Contractor		

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Notes: Reuse balance of existing hardware.

Set: 19.0

1 Exit Device (rim, storeroom)	ED5200 TH957 M52 M92 M94	605	RU
1 Electric Power Transfer	EL-EPTL		SU
1 Frame Wiring Harness	QC-C1500P		MK
1 Door Wiring Harness	QC-C As Required		MK
1 Controller	781N-120		RU
1 Card Reader	By Security Contractor		
1 Auto Operator	GT 710	DB	NA
2 Operator Wall Switch	59H	Blue	NA

Notes: Reuse balance of existing hardware.

Set: 20.0

1 Exit Device (rim, storeroom)	ED5200 TH957 M52 M92 M94	606	RU
1 Electric Power Transfer	EL-EPTL		SU
1 Frame Wiring Harness	QC-C1500P		MK
1 Door Wiring Harness	QC-C As Required		MK
1 Controller	781N-120		RU
1 Card Reader	By Security Contractor		
2 Operator Wall Switch	59H	Blue	NA

Notes: Reuse balance of existing hardware including auto operator.

Set: 21.0

1 Electrified Mortise Lock	ML20905 NSM M92 MR	606	RU
1 Electric Power Transfer	EL-EPTL		SU
1 Frame Wiring Harness	QC-C1500P		MK
1 Door Wiring Harness	QC-C As Required		MK
1 Power Supply	BPS-24-1		SU
1 Card Reader	By Security Contractor		

Notes: Reuse balance of existing hardware.

Set: 22.0

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1 Exit Device (rim, storeroom)	ED5200 TH957 M52 M92 M94	606	RU
1 Electric Power Transfer	EL-EPTL		SU
1 Frame Wiring Harness	QC-C1500P		MK
1 Door Wiring Harness	QC-C As Required		MK
1 Controller	781N-120		RU
1 Card Reader	By Security Contractor		
2 Operator Wall Switch	59H	Blue	NA

Notes: Reuse balance of existing hardware including auto operator.

Set: 23.0

1 Exit Device (rim, storeroom)	ED5200 TH957 M52 M92 M94	606	RU
1 Electric Power Transfer	EL-EPTL		SU
1 Frame Wiring Harness	QC-C1500P		MK
1 Door Wiring Harness	QC-C As Required		MK
1 Controller	781N-120		RU
1 Card Reader	By Security Contractor		

Notes: Reuse balance of existing hardware.

Set: 24.0

1 Electrified Mortise Lock	ML20905 NSM M92 MR	626	RU
1 Electric Power Transfer	EL-EPTL		SU
1 Frame Wiring Harness	QC-C1500P		MK
1 Door Wiring Harness	QC-C As Required		MK
1 Power Supply	BPS-24-1		SU
1 Card Reader	By Security Contractor		

Notes: Reuse balance of existing hardware.

Set: 25.0

1 Exit Device (rim, dummy trim)	ED5200 TH950 M52 M92	630	RU
1 Exit Device (rim, storeroom)	ED5200 TH957 M52 M92 M94	630	RU
2 Electric Power Transfer	EL-EPTL		SU
2 Frame Wiring Harness	QC-C1500P		MK
2 Door Wiring Harness	QC-C As Required		MK
1 Controller	781N-120		RU
1 Card Reader	By Security Contractor		

9.1 Residence House Entrance Upgrades for Card Access

1 Auto Operator	GT 710	DB	NA
2 Operator Wall Switch	59H	Blue	NA

Notes: Reuse balance of existing hardware including removable mullion.

Set: 26.0

1 Exit Device (rim, dummy trim)	ED5200 TH950 M52 M92	630	RU
1 Exit Device (rim, storeroom)	ED5200 TH957 M52 M92 M94	630	RU
2 Electric Power Transfer	EL-EPTL		SU
2 Frame Wiring Harness	QC-C1500P		MK
2 Door Wiring Harness	QC-C As Required		MK
1 Controller	781N-120		RU
1 Card Reader	By Security Contractor		
1 Auto Operator	GT 710	DB	NA
2 Operator Wall Switch	59H	Blue	NA

Notes: Reuse balance of existing hardware.

Set: 27.0

1 Anchor Hinge Set	FBB223 5" x 4-1-2"	10B	SN
1 Exit Device (rim, exit only)	ED5200 M52 M92 M94	613	RU
1 Pull	1120	613	TC
1 Back Plate	BP1	613	TC
1 Door Closer	CPS7500	690	NO
1 Gasketing	45041DNB		PE
1 Sweep	18061DNB		PE
1 Electric Power Transfer	EL-EPTL		SU
1 Frame Wiring Harness	QC-C1500P		MK
1 Door Wiring Harness	QC-C As Required		MK
1 Controller	781N-120		RU
1 Card Reader	By Security Contractor		

Set: 28.0

1 Anchor Hinge Set	FBB223 5" x 4-1-2"	10B	SN
1 Exit Device (rim, exit only)	ED5200 M52 M92 M94	613	RU
1 Pull	1120	613	TC
1 Back Plate	BP1	613	TC
1 Gasketing	45041DNB		PE

9.1 Residence House Entrance Upgrades for Card Access

1 Sweep	18061DNB		PE
1 Electric Power Transfer	EL-EPTL		SU
1 Frame Wiring Harness	QC-C1500P		MK
1 Door Wiring Harness	QC-C As Required		MK
1 Controller	781N-120		RU
1 Card Reader	By Security Contractor		
1 Auto Operator	GT 710	DB	NA
2 Operator Wall Switch	59H	Blue	NA

Set: 29.0

1 Anchor Hinge Set	FBB223 5" x 4-1-2"	10B	SN
1 Exit Device (rim, exit only)	ED5200 M52 M92 M94	613	RU
1 Pull	1120	613	TC
1 Back Plate	BP1	613	TC
1 Door Closer	CPS7500	690	NO
1 Gasketing	45041DNB		PE
1 Sweep	18061DNB		PE
1 Electric Power Transfer	EL-EPTL		SU
1 Frame Wiring Harness	QC-C1500P		MK
1 Door Wiring Harness	QC-C As Required		MK
1 Controller	781N-120		RU
1 Card Reader	By Security Contractor		

Set: 30.0

1 Electrified Mortise Lock	ML20905 NSM M92 MR	612	RU
1 Electric Strike	1006-12/24	612	HS
1 Electric Power Transfer	EL-EPTL		SU
1 Frame Wiring Harness	QC-C1500P		MK
1 Door Wiring Harness	QC-C As Required		MK
1 Power Supply	BPS-24-2		SU
1 Auto Operator	GT 710	DB	NA
1 Operator Wall Switch	59H	Blue	NA

Notes: Reuse balance of existing hardware.

Set: 31.0

1 Electrified Mortise Lock	ML20905 NSM M92 MR	612	RU
1 Electric Strike	1006-12/24	612	HS

9.1 Residence House Entrance Upgrades for Card Access

1 Electric Power Transfer	EL-EPTL		SU
1 Frame Wiring Harness	QC-C1500P		MK
1 Door Wiring Harness	QC-C As Required		MK
1 Power Supply	BPS-24-2		SU
1 Card Reader	By Security Contractor		
1 Operator Wall Switch	59H	Blue	NA

Notes: Reuse balance of existing hardware.

Set: 32.0

1 Exit Device (rim, storeroom)	ED5200 TH957 M52 M92 M94	630	RU
1 Electric Power Transfer	EL-EPTL		SU
1 Frame Wiring Harness	QC-C1500P		MK
1 Door Wiring Harness	QC-C As Required		MK
1 Controller	781N-120		RU
1 Card Reader	By Security Contractor		
1 Operator Wall Switch	59H	Blue	NA

Notes: Reuse balance of existing hardware including auto operator and removable mullion.

Set: 33.0

1 Exit Device (rim, storeroom)	ED5200 TH957 M52 M92 M94	630	RU
1 Electric Power Transfer	EL-EPTL		SU
1 Frame Wiring Harness	QC-C1500P		MK
1 Door Wiring Harness	QC-C As Required		MK
1 Controller	781N-120		RU
1 Card Reader	By Security Contractor		

Notes: Reuse balance of existing hardware including auto operator and removable mullion.

Set: 34.0

1 Exit Device (rim, storeroom)	ED5200A N957 M92 M94	612	RU
1 Electric Power Transfer	EL-EPTL		SU
1 Frame Wiring Harness	QC-C1500P		MK
1 Door Wiring Harness	QC-C As Required		MK
1 Controller	781N-120		RU
1 Card Reader	By Security Contractor		

9.1 Residence House Entrance Upgrades for Card Access

Notes: Reuse balance of existing hardware.

Set: 35.0

1 Electrified Mortise Lock	ML20905 NSM M92 MR	613	RU
1 Electric Strike	1006-12/24	613	HS
1 Electric Power Transfer	EL-EPTL		SU
1 Frame Wiring Harness	QC-C1500P		MK
1 Door Wiring Harness	QC-C As Required		MK
1 Power Supply	BPS-24-2		SU
1 Card Reader	By Security Contractor		
1 Operator Wall Switch	59H	Blue	NA

Notes: Reuse balance of existing hardware including auto operator.

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