SECTION 08740  
ELECTRO-MECHANICAL HARDWARE

PART 1 - GENERAL

1.1 SUMMARY:

A. Section Includes:

1. Items known commercially as electro-mechanical hardware, required for special applications at limited doors.

2. Types of electro-mechanical hardware:
   a. Key switches.
   b. Electronic access.
   c. Electrically activated locksets.
   d. Electric strikes.
   e. Electro-Magnetic locks.
   f. CCTV hardware.
   g. Asset tagging.
   h. Alarms.

B. Related Sections:

1. Section 06200 - Finish Carpentry: Installation of finish hardware.
2. Section 08100 - Metal Doors and Frames.
3. Section 08210 - Wood Doors.
4. Section 08710 - Finish Hardware: Including automatic door operators and electrically activated panic hardware.
5. Hardware for Special Door Units: Refer to applicable special door sections.
6. Divisions 6 and 12: Casework hardware.

1.2 REFERENCES:


B. Fire-Rated Openings:

1. National Fire Protection Association (NFPA) Standard No. 80. This requirement takes precedence over other requirements for such hardware.
2. Underwriters Laboratory (UL).
C. Emergency Exit Devices:

4. Fire-Rated Doors: Provide UL or WHI label on exit devices indicating "Fire Exit Hardware".

C. Wiring:

1. Perform all wiring and electrical work in accordance with NFPA No. 70, "National Electric Code".

1.3 SUBMITTALS:

A. Manufacturer's technical product data of each item of hardware.

B. Shop Drawings:

1. Submit shop drawings customized to this installation showing system design, layout and wiring diagrams.

C. Hardware Schedule:

1. Organize hardware schedule into "hardware sets" indicating complete designations of every item.
2. Coordinate with other hardware requirements of Section 08710.

D. Templates:

1. Hardware templates to fabricators of other work which is to receive electro-mechanical hardware.

E. Record Drawings:

1. Submit complete as-built CAD drawings identifying each component, system operation, and wiring system in accordance with Appendix 6 requirements to Access Services and the Department of Planning, Design & Construction.

1.4 QUALITY ASSURANCE:

A. Supplier Qualifications:

1. Recognized hardware or security system supplier, with warehousing facilities, who has been furnishing hardware and equipment of this type in the Denver-Metro area for a period of not less than 3 years.

2. Employs an experienced AHC certified hardware consultant with electronic hardware experience, available for consultation during the course of the work.

3. Factory authorization and certification for installation of certain brands of hardware and equipment is required.
1.5 WARRANTY:
   A. Failure on parts of all electro-mechanical hardware for 2 years.

1.6 MAINTENANCE:
   A. Maintenance Manuals:
      1. Submit maintenance manuals identifying operating procedures and normal
         maintenance required for each type of hardware required. Include a complete parts
         list.
   B. Maintenance Stock:
      1. Provide special tools or equipment required for adjusting or maintaining each type of
         hardware. Provide a two year supply of normal supplies required for each type of
         hardware.

PART 2 - PRODUCTS

2.1 KEY SWITCHES:
   A. Manufacturers:
      1. Securitron (MKA)
   B. Application for Automatic Door Operator: System design must
      provide mortise cylinder type key switch for two position (on/off)
      operation to enable security personnel to electrically unlock or lock the door
      latching mechanism. Also provide a power (110V) cut off switch near control panel.

2.2 ELECTRONIC ACCESS:
   A. Manufacturers:
      1. The University of Colorado campus working with Access Services utilizes an existing
         electronic access control system that operates with our campus OneCard. This system
         will be incorporated into the project. Hardware schedules will need to be
         created/revised in order to accommodate hardware integration. The campus standard
         system is the Sensormatic CCure 800 and only factory certified dealers are authorized
         to purchase and install such equipment. Access Services can provide the names of at
         least three such dealers for competitive bidding purposes. Further discussions with the
         Owner (Building Proctor and Access Services) will be required for proper
         specification and installation of access control and CCTV systems. The Owner is the
         Security Consultant for campus security systems.
      2. Contact UCB Access Services Staff for other application options.

2.3 ELECTRIC STRIKES:
A. Manufacturers:

1. HES 1006 series
2. HES 9600 (with approval by Access Services)
3. HES 2005 Smart Pac II must be utilized with the above items.
4. HES Option Plates must be used in conjunction with specific lock hardware.

2.4 ELECTRO-MAGNETIC LOCKS:

A. Manufacturers:

1. Schlage MagForce 392+ with DSM2\MBS2 finish to match existing.
2. RCI 8372 MiniMag (substitute for doors with minimal head clearance).

B. Holding Force: Devices must be supplied with a minimum holding force of 1500 pounds.

NO SHEAR LOCKS ACCEPTED.
MAG LOCKS SHOULD ONLY BE INSTALLED ON DOBULE DOORS WITH NO MULLION APPLICATIONS OR TO REPLACE EXTERNAL VERTICAL ROD MECHANISMS.

2.5 ELECTRICALLY ACTIVATED PANIC HARDWARE:

A. Manufacturers:

1. Von Duprin HD-RX EL99 or EL33 (finish to match existing or building lock hardware color specification and trim style).
2. Locknetics LSE510DCM SBP2-For electric strike apps and such

2.6 POWER SUPPLIES:

A. Manufacturers:

1. Von Duprin PS 873 X 2BB – For Von Duprin Applications
2. Altronix AL400 ALUACMCB with Battery Back Up and Batteries (one Power supply per eight (8) electric HES strikes).

2.7 CCTV HARDWARE:

A. Digital Video Recorders

1. Intellinx Digital Video Management System (contact Access Service for required software version)
B. Cameras

1. Panasonic Color CW 400 Series or better (must have SDII function).
2. Sensormatic Speed Dome Ultra VII series or better.
3. Contact UCB Access Services Staff for other options.

C. Accessories

1. Panasonic power supply, remote control units, mounts, lenses and enclosures.
2. Pelco power supply, mounts, and enclosures.
3. American Dynamics supply, mounts, and enclosures
4. Contact UCB Access Services staff for other options.

2.8 ASSET TAGGING:

A. Manufacturers:

1. Sensormatic

2.9 ALARM PANELS:

A. Manufacturers:

1. DSC
2. Ademco
3. FBI
4. Contact Access Services for approval.

2.10 ALARM ACCESSORIES:

A. Manufacturers:

1. Sentrol Magnetic Contacts
   a. 2505A Armored, wide gap magnetic contacts
   b. 1078W Wide gap concealed magnetic contacts
2. C & K (InelliSense)
3. DSC
4. Ademco
5. Contact Access Services for approval.
2.11 REX PIR or Swich Kit

A. Manufacturers
   1. Kantech T.REX
   2. Only use if RX Switch is not an option kit for specified lock or can not be installed in
      electric lock mechanism.

2.12 FINISHES:

A. Match the finish of the locksets specified in Section 08710.

B. Coordinate all the various manufactured items furnished on this work to ensure an
   acceptable uniform finish.

C. Coordinate finish of painted items or plastic items with Owner.

PART 3 - EXECUTION

3.1 SECURITY PRODUCT DESIGN AND IMPLEMENTATION:

A. Contact Access Services for security consultation.

3.2 START-UP AND DEMONSTRATION:

A. Perform start-up of system, a full system check-out and any required adjustments such that
   system meets Owner's operating requirements and any Code requirements.

B. Installation must be inspected and signed off by Access Services before security
   subcontractor invoices can be paid.

END OF SECTION 08740