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

D. 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.

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 or each type of hardware.

PART 2 - PRODUCTS

2.1 KEY SWITCHES:

A. Manufacturers:

1. Locknetics (640 series).
2. Von Duprin (SS-900 series).
3. 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.

THE LISTED PRODUCTS REPRESENT PREFERENCES FOR LISTED HARDWARE TYPES. UTILIZE LISTED ITEMS TO THE GREATEST EXTENT POSSIBLE TO MINIMIZE INVENTORY REQUIREMENTS. FOR EXPANSION OF EXISTING SYSTEMS, MATCH EXISTING. REVIEW DEVIATIONS FROM LISTED PRODUCTS WITH UCB ACCESS SERVICES STAFF AND OBTAIN CONCURRENCE.

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. H.E.S. (1003U series)/1006.
   2. HES 9600
   3. Von Duprin (6000 series).
   4. Contact UCB Access Services staff for specific upgrade options.

2.4 ELECTRO-MAGNETIC LOCKS:

A. Manufacturers:
   1. Locknetics 390 Series.
   2. Securitron
   3. Von Duprin 4000 Series.

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

2.5 POWER SUPPLYS

A. Manufacturers:
   1. Von Duprin PS873 x 2BB-For Von Duprin Applications
   2. Locknetics LSE510DCM SBP2-For electric strike apps and such

2.6 ELECTRICAL POWER TRANSFER:

A. Manufacturer:
   1. Von Duprin, Inc. EPT-2 and EPT-10. Use 18 gauge wire.

2.7 CCTV HARDWARE:

A. Digital Video Recorders
   1. Intellex 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 VI 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. 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

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

2.11 REX PIR

A. Manufactures
   1. Kantech
      a. T.REX

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. Demonstrate system operation to Owner's personnel. Instruct Owner's personnel in proper operation and maintenance of each item.

END OF SECTION 08740