DIVISION 28 - ELECTRONIC SECURITY

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28 05 00 Common Work Results for Electronic Safety and Security

1. Clemson University has deployed a centrally managed Physical Access Control System for all university facilities. This system is managed and administered by TigerOne – Division of Student Affairs.

2. The design of the access control system must be consistent in every way with the centralized system and comply with TigerOne's Access Control Standards and the University Access Control Policy.

3. The decision whether to have the access control system as part of the construction contract or to contract directly with the University-approved vendor will be made on a project-by-project basis. The Project Manager, in consultation with TigerOne, will provide that decision and supply all contact information.

4. The designer shall coordinate drawings and specifications with all other related trades to include Div. 8 (door/frame/hardware), Div.26 (pathways, power) and Division 27 (data cabling, MDF/IDF elevation). Coordinate system design with the Division 28 Access Control Vendor, CUPD and TigerOne.

28 05 07 Power Sources for Electronic Safety and Security

1. All access control power supplies shall be permanently wired to the building electrical system. Access control power supplies are not to be powered from a plug-in receptacle.

2. For new construction, renovations affecting over 50% of the building floor area, and upgrades to backup power supply systems, Access Control power supplies shall have a dedicated circuit that is connected to backup power from either a generator or UPC battery backup if either are present and serving the building. If both are present, connection to generator will take precedent.

3. All Access Control power supplies shall have an internal battery capable of operating all connected devices for a minimum of 3 hours independently of any other power source.

28 14 00 Access Control Hardware

1. All devices must be compatible and approved for use with the Genetec Security Center Synergis access control software.

2. All credential readers shall be capable of reading the HID Elite iClass SE and Elite SEOS credentials.

3. All controller hardware shall be Mercury brand and licensed for Genetec Security

Center.

4. All IP enabled locks shall be licensed for Genetec Security Center.

5. All electronic locking mechanisms must be 12 or 24 volt.

6. All electronic locking mechanisms shall be capable of being powered by centralized power supplies located in data closets with maximum distance of 300’ (size conductors according to manufacturer specification)

7. All exit devices equipped with electric latch retraction shall be of the quiet motor driven type. High amperage in-rush solenoids are not acceptable.

8. Instructional spaces, including classrooms and teaching labs, shall have credential readers on at least one entry door. There shall also be a lockdown button located beside the primary entry that disables the credential reader system and secures all ingress into the room including shutters and “roll up” doors. Activation of the button shall automatically contact Clemson University Emergency Dispatch via the Access Control system. See Section 08 71 00 for door hardware requirements.

9. All entryways with power operated doors shall have access control and door activation hardware installed in accordance with Powered Door Access Control Device Typical.

10. Hardware utilizing keypads for restricted access shall not be used. Any space requiring restricted access shall use a card reader.

28 14 19 Access Control Enclosures

1. All new construction and renovations affecting at least 50% of the building floor area shall consult Clemson’s Maintenance Building Security Shop regarding the need for the inclusion of an Electronic Key Storage Box for use by Maintenance and Custodial staff.

2. Electronic key storage boxes buildings shall have the following features:

    - Located in an inconspicuous area that is accessible to anyone with access to the building but avoiding high traffic or heavily used areas as much as possible.
    - Tamperproof, permanently wired 120V power connected to an emergency circuit, if present.
    - Tamperproof, hardwired network data connection
    - Credential reader connecting to access control hardware that provides primary access to key inventory.
    - Secondary manual key override capable of accepting small format interchangeable cylinder housing.
    - Video surveillance with a clear view of the key box

28 20 00 Video Surveillance

1. Video surveillance is employed in many existing facilities and is required in all new facilities for security purposes. These systems shall be designed and installed in accordance with Clemson's Electronic Surveillance Policy and Clemson's Telecommunications Distribution Design Guide.

2. All light pole mounted cameras are to be attached in accordance with Clemson's Pole Mounted Camera and Wifi Access Point Typical

3. Any elevator upgrades and new installations shall include a camera capable of continuous and uninterrupted monitoring of the inside of the car while providing a video feed over Clemson's network to Clemson University's Physical Security Operations Center. Specify that CUPD's Physical Security Program Coordinator is consulted in the selection of the camera. All cameras used shall be National Defense Authorization Act (NFAA) certified.

28 30 00 Electronic Detection and Alarm

Equipment Sole-Source Suppliers

1. When electronic fire detection and alarms systems are required by applicable codes as adopted by Chapter 5 of the OSE Manual or when specified by the University, the following will be decided by the University on a case-by case basis after consulting the local responding Fire Department:

    - Whether or not to have the fire detection and alarm system as part of the construction contract or to contract that work directly with the System Supplier.
    - Whether or not to the existing contract the University has in place with Johnson Controls.

2. If University's contract with Johnson Controls, Inc. is chosen to provide the fire alarm system as part of the construct contract, The contractor must complete the following:

    - Review and submit to Clemson for evaluation of the pricing received in accordance with the terms and conditions of that contract.
    - Include the following specific details in the project specifications; name, contact information, solicitation number, and expiration date.
    - Retain documentation of the pricing evaluation of pricing information in each procurement file for review by Audit and Certification.

System Requirements

1. All fire alarm and detection systems shall comply with all applicable codes as adopted by Chapter 5 of the OSE Manual and the most current version of ICC A117.1.

2. The design of fire alarm and detection systems for facilities at Clemson University shall provide for a fully addressable containing the following features:

- All new Fire Alarm and Detection Systems shall include voice evacuation functionality for all new construction, renovations affecting more than 50% of the building floor area and any fire alarm repairs or upgrades that include fire alarm panel replacement.

- All new FACP's shall have the capabilities mentioned directly above as well as being connected to the campus fiber network with the ability accurately communicate all supervisory, trouble, and alarm signal including per point device reporting to the University Public Safety Dispatch Center. If connection to the campus fiber network is technically infeasible, the FACP shall report to University Public Safety Dispatch Center by means approved by the Fire Code Official.

- All new FACP's are to have a dual line LCD information display and physical navigation and function selection buttons. The use of touch screens are not allowed.

- All fire alarm cabling shall be protected in appropriate conduit or cable tray systems.

3. The Authority Having Jurisdiction (AHJ) for the design and installation of fire alarm systems at Clemson is the University Fire Code Official.

PRODUCTS AND MATERIALS – DIVISION 28 – ELECTRONIC SECURITY

Classroom Lockdown Button

- Safety Technology Institute Model E02014KL or approved equal

Electrified Locking Devices and Accessories

Electrified Mortise Locks

- Sargent NAC Eco-Flex 8200 series electrified mortise locks or approved equal w/ integral request-to-exit switch and integral 'IDP' option for 3-point monitoring (door position, internal auxiliary latch, latch bolt position). Sample Part No.: NAC 82271-24V IDP LW1L (fail secure).
- Dormakaba Electrified mortise locks or approved equal w/ integral request-to-exit switch and door position switch. Sample Part No.: 45HW-7-DEU-15H-626-RQE-DS-C.

Electrified Cylindrical Locks

- Stanley electrified cylindrical locks or approved equal w/ integral request-to-exit switch Sample Part No.: 9KW-3-7-DEU-15-C-S3-626-RQE-C-12/24v

Electric Latch Retraction Exit Devices

- Sargent: 8000 series exit devices with '56' electric latch retraction and '55' integral request-to-exit switch. Sample Part Number: 55-56-8804F-PSB
- Von Duprin: 98/99 series exit devices with "QEL" electric latch retraction and "RX-LC" integral request-to-exit switch. Sample Part No.: RX-LC-QEL-99NL-06

Electric Door Strike

- For Housing and Residential Facilities Only: Assa Abloy HES 8300 or Allegion Locknetics NC 450.

IP Enabled

PoE

- IT Closets Only: Sargent IN220 w/BLE (mortise, cylindrical, trim)

Power Transfers

- New Construction: Securitron EL-CEPT, Von Duprin EPT-10 or approved equal

Retrofit: Securitron EL-EPT or approved equal.

Power Transfer Hinges

- McKinney or approved equal
- Ives or approved equal

Key Storage Boxes

- KSI Security Asset Manager 32, 64, and 96 Position or approved equal.