### Definitions

<table>
<thead>
<tr>
<th>Facility</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vending Facility</td>
<td>Facility consisting of beverage and/or snack machines to be controlled by a card slot mounted on each machine and is controlled by the central system CPU.</td>
</tr>
<tr>
<td>Laundry Facility</td>
<td>Facility consisting of laundry machines (washers, driers) to be controlled by a card slot mounted on each machine and is controlled by the central system CPU.</td>
</tr>
<tr>
<td>Copy Facility</td>
<td>Facility consisting of at least one copy machine controlled by a card slot in same vicinity or on the machine itself and is controlled by the central system CPU.</td>
</tr>
<tr>
<td>Office/Retail Outlet</td>
<td>Any single gang RJ-45 type outlet for connection of point of sale device and controlled by central system CPU. (Not a standard PIC)</td>
</tr>
<tr>
<td>Door Switch</td>
<td>Flush mounted magnetic switch installed at the top of the door frame near the side opposite to the hinges for monitoring of door position.</td>
</tr>
<tr>
<td>Controlled Door</td>
<td>Any door consisting of at least one (1) door switch, but without a card slot near the controlled door and monitored by the central system CPU. (Referred to as a Point Door)</td>
</tr>
<tr>
<td>Card Reader Door</td>
<td>Any door consisting of at least one card slot, (1) door switch, (1) electrified piece of door hardware and that is monitored and controlled by the central system CPU.</td>
</tr>
<tr>
<td>LX Switch</td>
<td>Switch located in panic bar mounted on door or inside a mortise type latch to monitor position of the latch.</td>
</tr>
<tr>
<td>RX Switch</td>
<td>Switch located in magnetic lock panic bar mounted on door to monitor position of the panic bar (Request to Exit).</td>
</tr>
<tr>
<td>Power Transfer</td>
<td>Device connected to the door, on hinged side, and to the door frame for the purpose of transferring wires from the door frame to the door for monitoring and controlling the latches.</td>
</tr>
<tr>
<td>Mortise Type Non-Electrified Device (Electric Strike)</td>
<td>Device located in or on door frame, opposite the hinged side of door.</td>
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</tbody>
</table>

### Scope

2.1 The work required under this section consists of providing labor and material to install necessary conduit and junction box rough-in's for future access control of doors and for future point of sale control of vending facility, laundry facility, copy facility and office/retail point of sale device.

### Controlled Door Installations

3.1 Controlled door consists of (1) Hoffman #A-12N124 box and (1) Hoffman #A-12N12P backplate installed near door. Location of box should not be in front of or above the door.

3.1.1 When the box elevation would be higher than ten feet above finished floor, consider installing the box below the floor or contact the Construction Manager who is responsible to obtain a location that shall be determined by a University representative.

3.2 If door is equipped with ADA Auto Door Opener install 3/4" EMT from the operator to the 12"x12"x4" Hoffman box.

3.3 New Construction Wooden or Aluminum Doors

3.3.1 From the 12"x12"x4" Hoffman box to each door, (1) ½" EMT shall be installed inside the door frame to a box located at the top of the door frame, opposite of the hinged side for the magnetic door switch.

3.3.2 With Electrified Panic Hardware or Mortise Type Electrified Lock.

3.3.2.1 From the 12"x12"x4" Hoffman box to each door, (1) ½" EMT shall be installed inside the door frame to a box located inside the door frame, on the hinged side of the door, approximately 6" above the middle hinge for the power transfer.

3.3.3 With Mortise Type Non-Electrified Device (Electric Strike).

3.3.3.1 From the 12"x12"x4" Hoffman box to each door, (1) ½" EMT shall be installed inside the door frame to a box located inside the door frame, opposite the hinged side of the door, directly across from the latch in the door for an electrified door strike.

3.4 Existing Construction Wooden or Aluminum Doors

3.4.1 From the 12"x12"x4" Hoffman box,
Wiremold type #700 shall be either
- Installed to the door frame where it is converted to a Wiremold #5785 combination connector that is flush to the top of door frame, opposite of the hinge side for magnetic door switch. Only to be used if the door frame is hollow.
- Installed to a Wiremold #V57242 utility box mounted flush to the top of the door frame opposite to the hinged side with a path into the door frame for magnetic door switch. Only to be used if door frame is hollow.

3.4.2 With Electrified Panic Hardware or Mortise Type Electrified Latch.

3.4.2.1 From the 12"x12"x4"Hoffman box to each door, Wiremold type 700 shall be installed near the door frame to a Wiremold #V57242 utility box located near the door frame, on the hinged side of the door, approximately 6" above the middle hinge for the power transfer.

3.4.3 With Mortise Type Non-Electrified Device (Electric Strike).

3.4.3.1 From the 12"x12"x4" Hoffman box to each door, Wiremold type 700 shall be installed near the door frame to a Wiremold #V57242 utility box located near the door frame, opposite the hinged side of the door, directly across from the latch in the door for an electrified door strike.

4 Card Reader Door Installations

4.1 Controlled door consists of (1) Hoffman #A-12N124 box and (1) Hoffman #A-12N12P backplate installed near door. Location of box should not be in front of or above the door.

4.1.1 When the box elevation would be higher than ten feet above finished floor, consider installing the box below the floor or contact the Construction Manager who is responsible to obtain a location that shall be determined by a University representative.

4.2 If door is equipped with ADA Auto Door Opener install ¾” EMT from operator to the 12”x12”x4” Hoffman box.

4.3 New Construction Wooden or Aluminum Doors.

4.3.1 Card Reader door consists of flush mounted single gang junction box on latch side of door with (1) ¾” EMT in wall construction to new 12” x 12” x 4” Hoffman junction box.

4.3.2 With Electrified Panic Hardware or Mortise Type Electrified Lock

4.3.2.1 From the 12”x12”x4” Hoffman box to each door, (1) ½” EMT shall be installed inside the door frame to a box located inside the door frame, on the hinged side of the door, approximately 6” above the middle hinge for the power transfer.

4.3.3 With Mortise Type Non-Electrified Device (Electric Strike).

4.3.3.1 From the 12”x12”x4”Hoffman box to each door, (1) ½” EMT shall be installed inside the door frame to a box located inside the door frame, opposite the hinged side of the door, directly across from the latch in the door for an electrified door strike.

4.4 Existing Construction Wooden or Aluminum Doors

4.4.1 Card Reader door consists of a Wiremold #V57242 utility box or Owner supplied card slot back box install on latch side of door. Install Wiremold #700 from box to 12” x 12” x 4” Hoffman box.

4.4.2 From the 12”x12”x4”Hoffman box, Wiremold type #700 shall be either

- Installed to the door frame where it is converted to a Wiremold #5785 combination connector that is flush to the top of door frame, opposite of the hinge side for magnetic door switch. Only to be used if the door frame is hollow.
- Installed to a Wiremold #V57242 utility box mounted flush to the top of the door frame opposite to the hinged side with a path into the door frame. Only to be used if door frame is hollow.

4.4.3 With Electrified Panic Hardware.

4.4.3.1 From the 12”x12”x4” Hoffman box to each door, Wiremold type 700 shall be installed near the door frame to a Wiremold #V57242 utility box located near the door frame, on the hinged side of the door, approximately 6” above the middle hinge for the power transfer.

4.4.4 With Mortise Type Electrified Latch.

4.4.4.1 From the 12”x12”x4” Hoffman box, Wiremold type #700 shall be either

- Installed to the door frame where it is converted to a Wiremold #5785 combination connector that is flush to the door frame. Only to be used if the door frame is hollow.
- Installed to a Wiremold #V57242 utility box mounted flush to the top of the door frame opposite to the hinged side with a path into the door frame. Only to be used if door frame is hollow.
4.4.4.2  From the 12"x12"x4" Hoffman box to each door, Wiremold type 700 shall be installed near the door frame to a Wiremold #V57242 utility box located near the door frame, on the hinged side of the door, approximately 6" above the middle hinge for the power transfer.

4.4.5  With Mortise Type Non-Electrified Device (Electric Strike).

4.4.5.1  From the 12"x12"x4" Hoffman box, Wiremold type #700 shall be either
  • Installed to the door frame where it is converted to a Wiremold #5785 combination connector that is flush to the door frame. Only to be used if the door frame is hollow.
  • Installed to a Wiremold #V57242 utility box mounted flush to the top of the door frame opposite to the hinged side with a path into the door frame. Only to be used if door frame is hollow.

4.4.5.2  From the 12"x12"x4" Hoffman box to each door, Wiremold type 700 shall be installed near the door frame to a Wiremold #V57242 utility box located near the door frame, opposite of the hinged side of the door, directly across from the latch in the door for the electrified door strike.

5  Laundry Facility

5.1  Install 12"x12"x6" Hoffman #A12N126 box, location shall be determined by a University Representative. Vending Vendor is responsible for equipment connect to vending machine.

5.2  Install 4"x4" box behind the laundry machines. This equipment requires (1) 4"x4" box for every 4 laundry machines. Install ¾" EMT from each 4" x 4" box to new 12"x12"x6" Hoffman box.

5.3  Each 4"x4" box shall have ¾" seal-tite flexible conduit installed to each of the four laundry machines.

6  Vending Facility

6.1  New Vending Machines may utilize wireless credit card technology, therefore eliminating the need for connection to BLACKBOARD. Verify the type of Vending Machines to be utilized.

6.2  Existing Vending Machines still utilizing Blackboard

6.2.1  Install (1) Hoffman # A-12N124 box mounted near the vending machines. Location of Hoffman box shall be determined by a university representative. Vending vender is to be responsible for equipment connection to machine.

6.2.2  Existing Construction Blackboard Vending Facility

6.2.2.1  (1) Wiremold #5747 surface mount box for each machine with (1) Wiremold #700 type raceway to the Hoffman box.

6.2.3  New Construction Blackboard Vending Facility

6.2.4  (1) Single gang flush mount box for each machine with (1) ¾" EMT to the Hoffman box.

7  Copy Reader

7.1  (1) Wiremold #5747 surface mount box or Owner supplied card slot back box mounted on either the copy machine itself or on a box shown on Blackboard details.

7.2  (1) Wiremold #5747 surface mount boxes. First Wiremold #700 type raceway is to be installed from one of the 5747 boxes to discrete location where it can be converted to (1) ¾" EMT continuous from the box to within 18" to 24" from the hallway distribution system.

8  Office/Retail Outlet

8.1  New Construction outlet box shall be a 4 11/16" square flush mounted box. Boxes are to be 2 1/8" deep with single gang, square drawn extension or tile ring. Outlet box shall have (1) ¾" EMT continuous from the box to within 18" to 24" from the hallway distribution system.
NOTES:

1. LOCATE CARD READER CONTROL BOX AND JUNCTION BOXES ON WALL ADJACENT TO DOOR ON THE SECURE SIDE OF THE DOOR. BOXES ARE TO BE LOCATED ABOVE ACCESSIBLE CEILING WHEREVER POSSIBLE AND NO LOWER THAN 10'-0" A.F.F. IN AREAS WITHOUT ACCESSIBLE CEILINGS.

2. COORDINATE ROUGH-IN WITH PURDUE ELECTRONICS SHOP PRIOR TO PERFORMING ANY WORK TO ROUGH IN DOOR FOR ACCESS CONTROL EQUIPMENT. VERIFY ALL LOCATIONS FOR ACCESS EQUIPMENT BOXES AND ENCLOSURES WITH PURDUE ELECTRONICS SHOP.
NOTES:

1. LOCATE CARD READER CONTROL BOX AND JUNCTION BOXES ON WALL ADJACENT TO DOOR ON THE SECURE SIDE OF THE DOOR. BOXES ARE TO BE LOCATED ABOVE ACCESSIBLE CEILING WHEREVER POSSIBLE AND NO LOWER THAN 10'-0" A.F.F. IN AREAS WITHOUT ACCESSIBLE CEILINGS.

2. COORDINATE ROUGH-IN WITH PURDUE ELECTRONICS SHOP PRIOR TO PERFORMING ANY WORK TO ROUGH-IN DOOR FOR ACCESS CONTROL EQUIPMENT. VERIFY ALL LOCATIONS FOR ACCESS CONTROL BOXES AND ENCLOSURES WITH PURDUE ELECTRONICS SHOP.
PHYSICAL FACILITIES
2020 Consultant’s Handbook
Division 08 OPENINGS
7400 ACCESS CONTROL HARDWARE

ACCESS CONTROL SYSTEM
CONDUIT RISER DIAGRAM

(1) 1” CONDUIT WITH PULL STRING FOR FUTURE ACCESS CONTROL WIRING (TYPICAL)
TO THIRD FLOOR DOORS, SEE PLANS FOR LOCATIONS AND QUANTITIES

(1) 1” CONDUIT WITH PULL STRING FOR FUTURE ACCESS CONTROL WIRING (TYPICAL)
TO SECOND FLOOR DOORS, SEE PLANS FOR LOCATIONS AND QUANTITIES

(1) 1” CONDUIT WITH PULL STRING FOR FUTURE ACCESS CONTROL WIRING (TYPICAL)
TO FIRST FLOOR DOORS, SEE PLANS FOR LOCATIONS AND QUANTITIES

(1) 1” CONDUIT WITH PULL STRING TO ELEVATOR MACHINE ROOM BOX FOR RO READER IN ELEVATOR CAB.

DATA HORIZONTAL CABLE IN 1” CONDUIT TO CABLE TRAY, SEE TELECOM PLANS
36”x48”x8” SHEET METAL BOX WITH SUB-PLATE AND HINGED LOCKABLE COVER IN ROOM 218

DATA HORIZONTAL CABLE IN 1” CONDUIT TO CABLE TRAY, SEE TELECOM PLANS
36”x48”x8” SHEET METAL BOX WITH SUB-PLATE AND HINGED LOCKABLE COVER IN ROOM 204A

DATA HORIZONTAL CABLE IN 1” CONDUIT TO CABLE TRAY, SEE TELECOM PLANS
36”x48”x8” SHEET METAL BOX WITH SUB-PLATE AND HINGED LOCKABLE COVER IN ROOM 152

120V - SEE PLANS