DIVISION 08 – OPENINGS

08 00 00 Openings

08 01 00 Operation and Maintenance of Openings

08 01 10 Operation and Maintenance of Doors and Frames
08 01 11 Operation and Maintenance of Metal Doors and Frames
08 01 14 Operation and Maintenance of Wood Doors
08 01 15 Operation and Maintenance of Plastic Doors
08 01 16 Operation and Maintenance of Composite Doors
08 01 17 Operation and Maintenance of Integrated Door Opening Assemblies
08 01 30 Operation and Maintenance of Specialty Doors and Frames
08 01 32 Operation and Maintenance of Sliding Glass Doors
08 01 33 Operation and Maintenance of Coiling Doors and Grilles
08 01 34 Operation and Maintenance of Special Function Doors
08 01 35 Operation and Maintenance of Folding Doors and Grilles
08 01 36 Operation and Maintenance of Panel Doors
08 01 39 Operation and Maintenance of Traffic Doors
08 01 40 Operation and Maintenance of Entrances, Storefronts, and Curtain Walls
08 01 41 Operation and Maintenance of Entrances
08 01 42 Operation and Maintenance of Storefronts
08 01 44 Operation and Maintenance of Curtain Walls
08 01 50 Operation and Maintenance of Windows
08 01 51 Operation and Maintenance of Metal Windows
08 01 52 Operation and Maintenance of Wood Windows
08 01 52.61 Wood Window Repairs
08 01 52.71 Wood Window Rehabilitation
08 01 52.81 Wood Window Replacement
08 01 52.91 Wood Window Restoration
08 01 52.93 Historic Treatment of Wood Windows
08 01 53 Operation and Maintenance of Plastic Windows
08 01 54 Operation and Maintenance of Composite Windows
08 01 56 Operation and Maintenance of Special Function Windows
08 01 60 Operation and Maintenance of Skylights and Roof Windows
08 01 61 Operation and Maintenance of Roof Windows
08 01 62 Operation and Maintenance of Unit Skylights
08 01 63 Operation and Maintenance of Metal –Framed Skylights
08 01 64 Operation and Maintenance of Plastic-Framed Skylights
08 01 70 Operation and Maintenance of Hardware
08 01 71 Operation and Maintenance of Door Hardware
08 01 74 Operation and Maintenance of Access Control Hardware
08 01 75 Operation and Maintenance of Window Hardware
08 01 80 Maintenance of Glazing
08 01 81 Maintenance of Glass Glazing
08 01 84 Maintenance of Plastic Glazing
08 01 88 Maintenance of Special Function Glazing
08 01 90 Operation and Maintenance of Louvers and Vents
CONSULTANT DESIGN GUIDELINE

It is the desire of the University that all doors to be at least 3-0 x 7-0 if design considerations allow it.
Mullions, where utilized on exterior doors, shall be removable.

CONSULTANT DESIGN GUIDELINE

All door hardware to be ADA compliant

CONSULTANT DESIGN GUIDELINE

Double glazed – 1” insulating glass
CONSULTANT DESIGN GUIDELINE

Metal Frames. Provide metal frames with wrought box, strike cover and hinge reinforcement covers. Fabricate hinge reinforcement from plate stock (1/4" x 9") or (3/16" x 9") C1018 steel 160-scale Brinell hardness. Detail reinforcement to be securely attached to the frame with a minimum of four contacts each side of opening.

Hollow metal frames shall be minimum 16 Gauge with all visible joints welded and ground smooth.

Anchor all metal doorframesseven (7) feet or less to masonry or concrete wall with a minimum of three (3) jamb anchors. Doors over seven (7) feet shall have a minimum of four (4) jamb anchors.

Holders And Closers. Detail reinforcing for holders and closers to be a box type or double channel of not less than 10 gauge steel for three-bolt attachment. Reinforcing for field attachment of corner brackets is to be not less than eight (8)gauge steel.

Mullions. All interior and exterior double doors shall have keyed removable mullions.

Metal Doors. Prep all metal doors not requiring exit devices for full mortise locksets.

INCLUDE IN CONSTRUCTION DOCUMENTS

Metal Frames. Slush all metal frames in masonry walls full of mortar as adjacent masonry walls are laid.

END SECTION
Aluminum Storefronts. Aluminum entrance and storefront system members shall not be less than 3 1/2” deep. Provide all frames scheduled to receive closers or holders with head bar for attaching hardware.

Aluminum Storefront Doors. All aluminum storefront doors shall be medium or wide stile doors. All aluminum storefront doors shall have butt hinges. Do not allow pivot hinges.
08 13 73 Sliding Metal Doors
08 13 76 Bifolding Metal Doors

08 14 00 Wood Doors
08 14 13 Carved Wood Doors
08 14 16 Flush Wood Doors
08 14 23 Clad Wood Doors
08 14 23.13 Metal-Faced Wood Doors
08 14 23.16 Plastic-Laminate-Faced Wood Doors
08 14 23.19 Molded-Hardboard-Faced Wood Doors

08 15 00 Plastic Doors
08 15 13 Laminated Plastic Doors
08 15 16 Solid Plastic Doors
08 15 66 Plastic Screen Doors
08 15 69 Plastic Storm Doors
08 15 73 Sliding Plastic Doors
08 15 76 Bifolding Plastic Doors

08 16 00 Composite Doors
08 16 13 Fiberglass Doors
08 16 73 Sliding Composite Doors
08 16 76 Bifolding Composite Doors

08 17 00 Integrated Door Opening Assemblies
08 17 13 Integrated Metal Door Opening Assemblies
08 17 23 Integrated Wood Door Opening Assemblies
08 17 33 Integrated Plastic Door Opening Assemblies
08 17 43 Integrated Composite Door Opening Assemblies

08 30 00 SPECIALTY DOORS AND FRAMES
08 31 00 Access Doors and Panels
08 31 13 Access Doors and Frames
08 31 13.53 Security Access Doors and Frames
08 31 16 Access Panels and Frames

08 32 00 Sliding Glass Doors
08 32 13 Sliding Aluminum-Framed Glass Doors
08 32 16 Sliding Plastic-Framed Glass Doors
08 32 19 Sliding Wood-framed Glass Doors

08 33 00 Coiling Doors and Grilles
08 33 13 Coiling Counter Doors
08 33 16 Counter Grilles
08 33 23 Overhead Coiling Doors
08 33 26 Overhead Coiling Grilles
08 33 33 Side Coiling Doors
08 33 36 Side Coiling Grilles

08 34 00 Special Function Doors
08 34 13 Cold Storage Doors
08 34 16 Hangar Doors
08 34 19 Industrial Doors
08 34 33 Lightproof Doors
08 34 36 Darkroom Doors
08 34 46 Radio-Frequency-Interference Shielding Doors
08 34 49 Radiation Shielding Doors and Frames
   08 34 49.13 Neutron Shielding Doors and Frames
08 34 53 Security Doors and Frames
08 34 56 Security Gates
08 34 59 Vault Doors and Day Gates
08 34 63 Detention Doors and Frames
   08 34 63.13 Steel Detention Doors and Frames
   08 34 63.16 Steel Plate Detention Doors and Frames
   08 34 63.33 Detention Door Frame Protection
08 34 73 Sound Control Door Assemblies

08 35 00 Folding Doors and Grilles
08 35 13 Folding Doors
   08 35 13.13 Accordion Folding Doors
   08 35 13.23 Folding Fire Doors
   08 35 13.33 Panel Folding Doors
08 35 16 Folding Grilles
   08 35 16.13 Accordion Folding Grilles

08 36 00 Panel Doors
08 36 13 Sectional Doors
08 36 16 Single-Panel Doors
08 36 19 Multi-Leaf Vertical Lift Doors
08 36 23 Telescoping Vertical Lift Doors

08 38 00 Traffic Doors
08 38 13 Flexible Strip Doors
08 38 16 Flexible Traffic Doors
08 38 19 Rigid Traffic Doors

08 39 00 Pressure-Resistant Doors
08 39 13 Airtight Doors
08 39 19 Watertight Doors
08 39 53 Blast-Resistant Doors

08 40 00 ENTRANCES, STOREFRONTS, AND CURTAIN WALLS

08 41 00 Entrances and Storefronts
Aluminum-Framed Entrances and Storefronts
Bronze-Framed Entrances and Storefronts
Stainless-Steel-Framed Entrances and Storefronts
Steel-Framed Entrances and Storefronts
All-Glass Entrances and Storefronts
Automatic Entrances
Folding Automatic Entrances
Sliding Automatic Entrances
Swinging Automatic Entrances
Revolving Door Entrances
Security Revolving Entrances
Balanced Door Entrances
Pressure-Resistant Entrances
Intensive Care Unit/Critical Care Unit Entrances
Aluminum-Framed Storefronts
Bronze-Framed Storefronts
Stainless-Steel-Framed Storefronts
Steel-Framed Storefronts
All-Glass Storefronts
Sliding Storefronts
Glazed Aluminum Curtain Walls
Glazed Bronze Curtain Walls
Glazed Stainless-Steel Curtain Walls
Structural Glass Curtain Walls
Structural Sealant Glazed Assemblies
Sloped Glazing Assemblies
Structured-Polycarbonate-Panel Assemblies
Fiberglass-Sandwich Panel Assemblies
TRANSIENT WALL AND ROOF ASSEMBLIES
Translucent Wall and Roof Assemblies
CONSULTANT DESIGN GUIDELINE
Operable windows (awning, sliding, or casement) to be utilized in appropriate locations.
Aluminum Windows
Bronze Windows
Stainless-Steel Windows
08 51 23 Steel Windows
08 51 66 Metal Window Screens
08 51 69 Metal Storm Windows

08 52 00 Wood Windows
08 52 13 Metal-Clad Wood Windows
08 52 16 Plastic-Clad Wood Windows
08 52 66 Wood Window Screens
08 52 69 Wood Storm Windows

08 53 00 Plastic Windows
08 53 13 Vinyl Windows
08 53 66 Vinyl Window Screens
08 53 69 Vinyl Storm Windows

08 54 00 Composite Windows
08 54 13 Fiberglass Windows
08 54 66 Fiberglass Window Screens
08 54 69 Vinyl Storm Windows

08 55 00 Pressure-Resistant Windows

08 56 00 Special Function Windows
08 56 19 Pass Windows
08 56 46 Radio-Frequency-Interference Shielding Windows
08 56 49 Radiation Shielding Windows
08 56 53 Security Windows
08 56 56 Security Window Screens
08 56 59 Service and Teller Window Units
08 56 63 Detention Windows
08 56 66 Detention Window Screens
08 56 73 Sound Control Windows

08 60 00 ROOF WINDOWS AND SKYLIGHTS
08 61 00 Roof Windows
08 61 13 Metal Roof Windows
08 61 16 Wood Roof Windows

08 62 00 Unit Skylights
08 62 13 Domed Unit Skylights
08 62 16 Pyramidal Unit Skylights
08 62 19 Vaulted Unit Skylights

08 63 00 Metal-Framed Skylights
08 63 13 Domed Metal-Framed Skylights
08 63 16 Pyramidal Metal-Framed Skylights
08 63 19 Vaulted Metal-framed Skylights
08 63 23 Ridge Metal-Framed Skylights
08 63 53 Motorized Metal-Framed Skylights

08 64 00 Plastic-Framed Skylights

08 67 00 Skylight Protection and Screens

08 70 00 HARDWARE
CONSULTANT DESIGN GUIDELINE

Submit all finish hardware selections to Facilities Management for approval.

The University door lock system is a mortise lockset system Corbin Russwin 2000 series with mortise lock cylinders.

Specify seven pin Corbin Russwin Pyramid mortise type cylinder, on all new construction except where it is necessary to match an existing lock system, Corbin Russwin key way, Standard 1000 Series, or IC cores where specified.

The University will not accept floor closers or overhead-concealed closers.

Concealed rod panics and surface mounted panic devices will not be used. Only Von Duprin 99NL rim panics will be used. Where double doors are used, a keyed removable mullion with the Von Duprin 99NL rim panic shall be used. No concealed closers of any kind shall be used.

INCLUDE IN CONSTRUCTION DOCUMENTS

Locks:
- **Type:** Corbin Russwin 2000 Series with mortise lock cylinders.
- **Cylinders:** Seven pin Corbin Russwin mortise type.
- **Finishes:** Lock finish will be selected by the University.

*Note: The above section (Locks) is under review at this time (03/26/2018), check with FAMA Lock Shop*

Closers:
- **Interior Use:** LCN 4041 Super Smoothee, surface mount.
- **Exterior Use:** LCN 4041 Super Smoothee, surface mount.

Exit Devices:
- **For Metal Doors:** Von Duprin Series 99NL.
- **For Wood Doors:** Von Duprin Series 99NL.
- **For Single Doors:** Von Duprin 99NL series center latch where applicable.

Automatic Door Openers: Use LCN Auto Equalizer automatic door model 4642 for push side and 4630 for pull side.

Hinges: All doors opening out from a space considered a secure space shall have non-removable hinge pins regardless whether the door is interior or exterior.

Keyways. All key systems for new construction will be IC core Corbin/Russwin, Pyramid. For
renovation, match existing keyway unless specified differently by the Facilities Management Construction Coordinator.

Key Schedule. Obtain a key schedule from Facilities Management. After reviewing the key schedule with the key vendor, submit a project key schedule along with key biting to Facilities Management for approval.

Coordination. A representative of Corbin Russwin, Facilities Management, and building users shall work directly to formulate a keying system and delivery requirements.

Security During Construction. Key lock cylinders to the appropriate Grand Master, Master, day keys and to a construction master key that will operate all Russwin or Corbin cylinders while the building is under construction, but will NOT operate once the construction key has been VOIDED by change of master or Grand Master key without removal of the cylinders from the locks. The hardware vendor shall furnish lock cylinders and keys. Deliver the Grand Master, Master, and day key to Facilities Management.

Cylinders: All cylinders shall be subject to a grand master "A" a master "AA", "AB", "AC", "AD", "AE", "AF", "AG", or "AH", a change key, and a construction master, as directed by Facilities Management.

EXECUTION

Delivery. The cylinder manufacturer shall deliver the keyed cylinders to the job contractor for installation by the contractor.

Note: The above section (Execution) & section below (Keys) are under review at this time (03/26/2018), check with FAMA Lock Shop

Keys:

Key Bows. Stamp key bows with applicable change key room number as directed by Facilities Management, and with "Univ. of Ark. Do Not Duplicate."

Key Quantities. Provide the following quantity of keys:

Grand Master stamped "GMK A": 10
Master stamped "AA": 15
Master stamped "AB": 15
Master stamped "AC": 15
Master stamped "AD": 15
Change keys stamped with the applicable key room numbers: 7
Key blanks in the proper key way: 200

Additional keys as directed by Facilities Management.

Delivery. Deliver keys by registered or certified mail to Key Office, University of Arkansas Facilities Management, 521 S. Razorback Road, Fayetteville, Arkansas 72701.

Note: Housing Projects may have different requirements. Please check with UofA
Construction Coordinator to confirm.

END SECTION

08 71 13 Automatic Door Operators
08 71 53 Security Door Hardware
08 71 63 Detention Door Hardware
CONSULTANT DESIGN GUIDELINE

Access control hardware has an IDIQ contract (see attachment) that specifies the facility commander system. No other access control hardware will be acceptable.

EXECUTION

Installation Guidelines:

Install card access on auditorium if the doors also have key access and the ability to disable the access control system.

Install Corbin Russwin Access 800 Keypads on all Laboratory and Classroom doors.

The access control equipment is considered the property of the installing department or college. Maintenance of these systems will be the sole responsibility of the installing department.

Install systems on exterior doors of a building only after review by Department of Public Safety and Facilities Management. Maintain fire egress. A system of control and reporting of who has card access to a building, for those buildings controlled by Facilities Management, must be worked out between the department and Facilities Management before the installation of an access control system.

Do not install access control systems on mechanical or custodial rooms, restrooms, service areas, or roof access without the approval of Facilities Management.

Any room or building with an access control system, and where the key lock is no longer functional, must have at least one door that is accessible with a building master key.

 Guarantee the integrity of the fire system by providing a delay in the access control system that will break the circuit controlling the locking system whenever there is a fire signal.

END SECTION
08 74 13 Card Key Access Control Hardware
08 74 16 Keypad Access Control Hardware
08 74 19 Biometric Identity Access Control Hardware

08 75 00 Window Hardware
08 75 13 Automatic Window Equipment
08 75 16 Window Operators

SECTION 08 78 00
SPECIAL FUNCTION HARDWARE
08 79 00 Hardware Accessories
08 79 13 Key Storage Equipment

08 80 00 GLAZING
GLASS GLAZING

CONSULTANT DESIGN GUIDELINE

Specify all windows to have dual pane glass with low emissive coatings on third surface. Furnish metal windows with thermal break. All classroom windows, unless otherwise advised by Facilities Management, shall be equipped with audio-visual blinds or other approved window coverings.

Maximum transmission allowable to meet Arkansas Energy Code. No reflective glass.

END SECTION

08 81 13 Decorative Glass Glazing

08 83 00 Mirroring
08 83 13 Mirrored Glass Glazing
08 83 16 Mirrored Plastic Glazing

08 84 00 Plastic Glazing
08 84 13 Decorative Plastic Glazing

08 85 00 Glazing Accessories

08 87 00 Glazing Surface Films
08 87 13 Solar Control Films
08 87 16 Safety Films
08 87 53 Security Films

08 88 00 Special Function Glazing
08 88 19 Hurricane-Resistant Glazing
08 88 23 Cable Suspended Glazing
08 88 33 Transparent Mirrored Glazing
08 88 39 Pressure-Resistant Glazing
08 88 49 Radiation-Resistant Glazing
08 88 53 Security Glazing
08 88 56 Ballistics-Resistant Glazing

08 90 00 LOUVERS AND VENTS

08 91 00 Louvers
08 91 13 Motorized Wall Louvers
08 91 16 Operable Wall Louvers
08 91 19 Fixed Louvers
08 91 26 Door Louvers

08 92 00 Louvered Equipment Enclosures

08 95 00 Vents
08 95 13 Soffit Vents
08 95 16 Wall Vents
### Access Control

#### DESCRIPTION OF EQUIPMENT

<table>
<thead>
<tr>
<th>Description</th>
<th>Price Installed/per each</th>
<th>Total Price</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>M5 Enclosures</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PXNplus CPU requires Facility Commander Wnx</td>
<td>$1,891.62</td>
<td></td>
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<tr>
<td>M5 PXNplus, FC Wnx, Secure Perfect - Serial &amp; Ethernet, 10/100Mb</td>
<td></td>
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<tr>
<td><strong>M5 &amp; M3000 Reader, Input and Output Option Boards</strong></td>
<td></td>
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</tr>
<tr>
<td>16 Digital Output with relays, 16 - 04A @ 24VDC (max.), Micro/5-All versions</td>
<td>$531.89</td>
<td></td>
</tr>
<tr>
<td>20 Digital Input, 20 supervised points, 1K supervision resistors supplied, Micro/5-All versions</td>
<td>$531.89</td>
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</tr>
<tr>
<td>BBP Reader Interface, 12VDC F/F and Supervised F/F readers, No provision for REX or Door Status contacts, M/5-all versions, not in combination with 2RP or 2SRP</td>
<td>$867.63</td>
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</tr>
<tr>
<td><strong>Power Supply and Battery Backup</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power Supply 3 amp, 110VAC to 12VDC, (UL listed)</td>
<td>$104.12</td>
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</tr>
<tr>
<td>Battery Back-Up and Power Supply, 6-amp, 110/220VAC,UL294, FCC, CE listed, 7-Ah battery. Enclosure: 10 x 12 x 6 inches. Recommended for M/5-PX, M/5-PXN, and M/5-PXNplus microcontrollers. Not required for M/2000-PX(N) or M/3000-PX(N).</td>
<td>$422.06</td>
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<tr>
<td><strong>Readers and Door Hardware</strong></td>
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<tr>
<td>Model T-520SW reader kit, gray single-width, F/F and Wiegand formats, 18” pigtail, with MR/J Box.</td>
<td>$457.65</td>
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<tr>
<td><strong>Proximity Cards with external ID, Single Side Printing.</strong></td>
<td>$3.05</td>
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<tr>
<td><strong>Proximity Key Fobs</strong></td>
<td>$4.60</td>
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<tr>
<td><strong>Push to Exit Buttons</strong></td>
<td>$101.70</td>
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<tr>
<td><strong>Egress Motions for Doors</strong></td>
<td>$166.79</td>
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<tr>
<td><strong>Single Mag-locks (PROVIDED AND INSTALLED BY DOOR HARDWARE CONTRACTOR)</strong></td>
<td>$0.00</td>
<td></td>
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<tr>
<td><strong>Single Mag-locks (PROVIDED AND INSTALLED BY TRIPLE-S ALARM)</strong></td>
<td>$289.85</td>
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<tr>
<td><strong>Double Mag-locks (PROVIDED AND INSTALLED BY DOOR HARDWARE CONTRACTOR)</strong></td>
<td>$0.00</td>
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<td><strong>Double Mag-locks (PROVIDED AND INSTALLED BY TRIPLE-S ALARM)</strong></td>
<td>$625.46</td>
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<td><strong>Door Strikes (PROVIDED AND INSTALLED BY DOOR HARDWARE CONTRACTOR)</strong></td>
<td>$0.00</td>
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<td><strong>Door Strikes (PROVIDED AND INSTALLED BY TRIPLE-S ALARM)</strong></td>
<td>$274.59</td>
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<tr>
<td><strong>Service outside of warranty</strong></td>
<td>$80.00 / Per Hour</td>
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<tr>
<td><strong>After Hour Service Call outside of warranty 8 AM TO 5 PM Normal Business Hours</strong></td>
<td>$120.00 / Per Hour</td>
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</tr>
<tr>
<td><strong>Factory Training As described in Specs (Current Prices of Hotel and Air Fare)</strong></td>
<td>$5,125.00 each person</td>
<td></td>
</tr>
<tr>
<td><strong>Response Time</strong></td>
<td>1 hrs / 24 hrs system working</td>
<td></td>
</tr>
<tr>
<td><strong>Access Control Maintenance Agreement (Devices for this building only) (See Attached)</strong></td>
<td>$11,278.00</td>
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</tr>
<tr>
<td>Maintenance Agreement Calculated Not to EXCEED 7.5% of System Total Price On 1st Year add 5% every year there after.</td>
<td>$11,278.00</td>
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<tr>
<td><strong>Access 3 Year Warranty Only (Without Maintenance Agreement)</strong></td>
<td>$0.00</td>
<td></td>
</tr>
<tr>
<td><strong>Access Additional 2 Year Warranty Only (Without Maintenance Agreement)</strong></td>
<td>$14,847.00</td>
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<tr>
<td><strong>Access Control 18awg 8 conductor Power</strong> (enter numerical value per thousand feet)</td>
<td>$0.58 cents per foot</td>
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<tr>
<td><strong>Access Control 22/4 awg (enter numerical value per thousand feet)</strong></td>
<td>$0.09 cents per foot</td>
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<tr>
<td><strong>Line Items Include (Labor, P/P Bond, Design Consultant, Shipping, Plans) Line Item Prices Reflect Change Orders, Future Budget Pricing. Sales Tax Is Not Included.</strong></td>
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<tr>
<td><strong>Line Items Total Cost</strong></td>
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</tr>
<tr>
<td><strong>Material and Installation Cost</strong></td>
<td>$0.00</td>
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**TAXES WILL BE ADDED AT TIME OF CONTRACT SIGNING**