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RGA No. 17050
12 June, 2018

ADDENDUM NO. 3

STATE OF DELAWARE OMB/DFM
OMB/DFM Contract No. MC3806000013
Sussex Work Release Center – Security Upgrades
Sussex Community Corrections Center
23207 DuPont Blvd. Georgetown, De 19947

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BIDS DUE:

2:30 p.m. local time on Thursday, June 21, 2018

LOCATION:

THOMAS COLLINS BUILDING
Division of Facilities Management Office
540 S. DuPont Highway, Suite 1 (Third Floor)
Dover, Delaware 19901
Attn: Mr. J. Dean Seely

NOTICE TO ALL BIDDERS

1.0 GENERAL NOTES:

- 1.1 Bidders are hereby notified that this Addendum shall be and hereby becomes part of their Contract Documents, and shall be attached to the Project Manual for this project.
- 1.2 The following items are intended to revise and clarify the Drawings and Project Manual, and shall be included by the Bidder in their proposal.
- 1.3 Bidders shall verify that their Sub-bidders are in full receipt of the information contained herein.
- 1.4 A copy of the current bid set register is available upon request indicating individuals that have purchased project documents from R G architects.
- 1.5 All addenda will be sent out to the registered plan holders via email (or fax). Contractors are encouraged to keep an eye on their email accounts during the bidding period for such updates.
- 1.6 The owner has offered the contractors a tour of the facility, with the escort of the design team, on **Thursday, June 14, 2018 at 10:00 a.m.** Contractors who wish to attend are asked to complete their Security Clearance Forms (attached) and return them ASAP (in order to be approved on time) to Rick Ward at RichardW.Ward@state.de.us
- 1.7 Addendum No.2 errata on title, page 1. Correct title to read “ADDENDUM NO. 2”.

2.0 Revisions to the SPECIFICATIONS

- 2.1 Section 00 01 10 - TABLE OF CONTENTS
- 2.2 Section 08 71 00 - DOOR HARDWARE
- 2.3 Section 13 10 10 - BULLET RESISTANT EQUIPMENT
- 2.4 Section 26 51 00 - INTERIOR LIGHTING

3.0 Revisions to the DRAWINGS

- 3.1 None with this addendum.

4.0 Questions

- 4.1 Question – 1. Please provide a door hardware schedule
 - 4.1.1 Answer – See attached Section 087100 Door Hardware.

6.0 ATTACHMENT LIST:

- A. Section 00 01 10 - TABLE OF CONTENTS
- B. Section 08 71 00 - DOOR HARDWARE
- C. Section 13 10 10 - BULLET RESISTANT EQUIPMENT
- D. Section 26 51 00 - INTERIOR LIGHTING

SECTION 00 01 10**TABLE OF CONTENTS**

- A. Specifications for this project are arranged in accordance with the Construction Specification Institute numbering system and format. Section numbering is discontinuous and all numbers not appearing in the Table of Contents are not used for this Project.
- B. DOCUMENTS BOUND HEREWITH

DIVISION 00 - PROCUREMENT AND CONTRACT REQUIREMENTSINTRODUCTORY INFORMATION

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PROCUREMENT REQUIREMENTS

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00 41 13	BID FORM
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CONTRACTING REQUIREMENTS

00 52 13	STANDARD FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR (SAMPLE AIA A101)
00 54 13	SUPPLEMENT TO AGREEMENT BETWEEN OWNER & CONTRACTOR A101-2007
00 61 13.13	PERFORMANCE BOND
00 61 13.16	PAYMENT BOND
00 62 76	APPLICATION AND CERTIFICATE FOR PAYMENT FORMS (SAMPLE AIA G702 & G703)
00 72 13	GENERAL CONDITIONS TO THE CONTRACT (SAMPLE AIA A201)
00 73 13	SUPPLEMENTARY GENERAL CONDITIONS
00 73 46	WAGE DETERMINATION SCHEDULE
00 81 13	GENERAL REQUIREMENTS
00 81 14	DRUG TESTING FORMS

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01 11 00	SUMMARY OF WORK
01 21 00	ALLOWANCES
01 23 00	ALTERNATES
01 25 00	SUBSTITUTION PROCEDURES
01 26 00	CONTRACT MODIFICATION PROCEDURES
01 29 00	PAYMENT PROCEDURES
01 31 00	PROJECT MANAGEMENT AND COORDINATION
01 32 00	CONSTRUCTION PROGRESS DOCUMENTATION
01 33 00	SUBMITTAL PROCEDURES
01 33 01	SUBMITTAL COVER SHEET FORM
01 35 53	SECURITY PROCEDURES

01 35 54 SECURITY CLEARANCE APPLICATION DE DOC
01 40 00 QUALITY REQUIREMENTS
01 50 00 TEMPORARY FACILITIES AND CONTROLS
01 60 00 PRODUCT REQUIREMENTS
01 73 00 EXECUTION
01 73 29 CUTTING AND PATCHING
01 74 19 CONSTRUCTION WASTE MANAGEMENT
01 77 00 CLOSEOUT PROCEDURES
01 77 10 CLOSEOUT CHECKLIST
01 78 39 PROJECT RECORD DOCUMENTS

DIVISION 02 - EXISTING CONDITIONS

02 41 19 SELECTIVE DEMOLITION

DIVISION 06 - WOOD, PLASTICS AND COMPOSITES

06 10 53 MISCELLANEOUS ROUGH CARPENTRY
06 40 20 INTERIOR ARCHITECTURAL WOODWORK

DIVISION 08 - OPENINGS

08 71 00 DOOR HARDWARE

DIVISION 09 - FINISHES

09 21 15 GYPSUM BOARD ASSEMBLIES
09 51 23 ACOUSTICAL TILE CEILINGS
09 91 00 PAINTING

DIVISION 10 - SPECIALTIES

10 26 41 BULLET RESISTANT PANELS

DIVISION 11 - EQUIPMENT

11 19 10 HOLLOW METAL (SECURITY & COMMERCIAL)

DIVISION 13 - SPECIAL CONSTRUCTION

13 10 10 BULLET RESISTANT EQUIPMENT

DIVISION 26 - ELECTRICAL

26 27 26 WIRING DEVICES
26 51 00 INTERIOR LIGHTING

END OF SECTION

SECTION 08 71 00

DOOR HARDWARE

PART 1 - GENERAL

1.1 CONDITIONS

Conditions of the contract (General and Supplementary Conditions) and Division One General Requirements, govern the work of this section.

This section includes all material, and related service necessary to furnish all finish hardware indicated on the drawings, or specified herein.

Furnish UL listed hardware for all labeled and 20 min. openings in conformance with the requirements for the class of opening scheduled. Underwriters' requirements shall have precedence over specification where conflicts exist.

All work shall be in accordance with all applicable state and local building codes. Code requirements shall have precedence over this specification where conflicts exist.

1.2 WORK INCLUDED

This section includes the following:

1. Furnish door hardware (for hollow metal, and wood doors) specified herein, listed in the hardware schedule, and/or required by the drawings.
2. Cylinders for Aluminum Doors
3. Thresholds and Weather-stripping (Aluminum frame seals to be provided by aluminum door supplier)
4. Electro-Mechanical Devices
5. Access Control components and or systems specified within this section.

Where items of hardware are not definitely or correctly specified and is required for the intended service, such omission, error or other discrepancy should be directed to the Architect prior to the bid date for clarification by addendum. Otherwise furnish such items in the type and quantity established by this specification for the appropriate service intended.

1.3 RELATED WORK IN OTHER SECTIONS

1. Division 06 Section 06 10 53 "Miscellaneous rough carpentry" for wood furring, blocking, shims, and hanging strips required for installing woodwork and concealed within other construction before woodwork installation.
2. Division 06 Section 06 40 20 "Interior Architectural Woodwork" for interior woodwork not specified in this Section.
3. Division 09 Section 09 91 00 "Painting": Priming and final field paint finish
4. Division 11 Section 11 19 10 "Hollow Metal (Security & Commercial)"

1.4 REFERENCES

Publications of agencies and organizations listed below form a part of this specification section to the extent referenced.

1. DHI - Recommended Locations for Builders' Hardware.
2. NFPA 80 - Standards for Fire Doors and Windows.
3. NFPA 101 - Code for Safety to Life from Fire in Buildings and Structures.
4. UL - Building Material Directory.
5. DHI - Door and Hardware Institute
6. WHI - Warnock Hersey
7. BHMA - Builders Hardware Manufacturers Association
8. International Building Code 2006 Edition (as amended by local building code)

1.5 SUBMITTALS

Within ten days after award of contract, submit detailed hardware schedule in quantities as required by Division 1 - General Conditions.

Schedule format shall be consistent with recommendations for a vertical format as set forth in the Door & Hardware Institute's (DHI) publication "Sequence and Format for the Hardware Schedule". Hardware sets shall be consolidated to group multiple door openings which share similar hardware requirements. Schedule shall include the following information:

1. Door number, location, size, handing, and rating.
2. Door and frame material, handing.
3. Degree of swing.
4. Manufacturer
5. Product name and catalog number
6. Function, type and style
7. Size and finish of each item
8. Mounting heights
9. Explanation of abbreviations, symbols, etc.
10. Numerical door index, indicating the hardware set/ group number for each door.

When universal type door closers are to be provided, the schedule shall indicate the application method to be used for installation at each door: (regular arm, parallel arm, or top jamb).

The schedule will be prepared under the direct supervision of a certified Architectural Hardware Consultant (AHC) employed by the hardware distributor. The hardware schedule shall be signed and embossed with the DHI certification seal of the supervising AHC. The supervising AHC shall attend any meetings related to the project when requested by the architect.

Check the specified hardware for suitability and adaptability to the details and surrounding conditions.

Review drawings from related trades as required to verify compatibility with specified hardware. Indicate unsuitable or incompatible items, and proposed substitutions in the hardware schedule.

Provide documentation for all hardware to be furnished on labeled fire doors indicating compliance with positive pressure fire testing UL 10C.

Furnish manufacturers' catalog data for each item of hardware in quantities as required by Division 1 - General Conditions.

Submit a sample of each type of hardware requested by the architect. Samples shall be of the same finish, style, and function as specified herein. Tag each sample with its permanent location so that it may be used in the final work.

Furnish with first submittal, a list of required lead times for all hardware items.

After final approved schedule is returned, transmit corrected copies for distribution and field use in quantities as required by Division 1 - General Conditions.

Furnish approved hardware schedules, template lists, and pertinent templates as requested by related trades.

Furnish necessary diagrams, schematics, voltage and amperage requirements for all electro-mechanical devices or systems as required by related trades. Wiring diagrams shall be opening specific and include both a riser diagram and point to point diagram showing all wiring terminations.

After receipt of approved hardware schedule, Hardware supplier shall initiate a meeting including the owner's representative to determine keying requirements. Upon completion of the initial key meeting, hardware supplier shall prepare a proposed key schedule with symbols and abbreviations as set forth in the door and hardware institute's publication "Keying Procedures, Systems, and Nomenclature". Submit copies of owner approved key schedule for review and field use in quantities as required by Division 1 - General Conditions. Wiring diagrams shall be included in final submittals transmitted for distribution and field use.

1.6 QUALITY ASSURANCE

Manufacturers and model numbers listed are to establish a standard of function and quality. Similar items by approved manufacturers that are equal in design, function, and quality, may be considered for prior approval of the architect, provided the required data and physical samples are submitted for approval as set forth in Division One General Requirements.

Obtain each type of hardware (hinges, latch & locksets, exit devices, closers, etc.) from a single manufacturer, although several may be indicated as offering products complying with requirements.

Hardware supplier shall be factory trained and certified by the manufacture to provide and support all computer managed locks and system components.

Installation of hardware shall be installed or directly supervised and inspected by a skilled installer certified by the manufacturer of locksets, door closers, and exit devices used on the project, or with not less than 3 years experience in successful completion of projects similar in size and scope.

Provide hardware for all labeled fire doors, which complies with positive pressure fire testing UL 10C. Comply with all applicable provisions of the standards referenced within section 1.4 of this specification.

Hardware supplier shall participate when reasonably requested to meet with the contractor and or architect to inspect any claim for incorrect or non-functioning materials; following such inspection, the hardware supplier shall provide a written statement documenting the cause and proposed remedy of any unresolved items.

1.7 DELIVERY, STORAGE AND HANDLING

Hardware supplier shall deliver hardware to the job site unless otherwise specified.

All hardware shall be delivered in manufacturers' original cartons and shall be clearly marked with set and door number.

Coordinate with contractor prior to hardware delivery and recommend secure storage and protection against loss and damage at job site.

Contractor shall receive all hardware and provide secure and proper protection of all hardware items to avoid delays caused by lost or damaged hardware. Contractor shall report shortages to the Architect and hardware supplier immediately after receipt of material at the job site.

Coordinate with related trades under the direction of the contractor for delivery of hardware items necessary for factory installation.

1.8 PRE-INSTALLATION MEETING

Schedule a hardware pre-installation meeting on site to review and discuss the installation of continuous hinges, locksets, door closers, exit devices, overhead stops, and electromechanical door hardware.

Meeting attendees shall be notified 7 days in advance and shall include: Architect, Contractor, Door Hardware Installers (including low voltage hardware), Manufacturers representatives for above hardware items, and any other effected subcontractors or suppliers.

All attendees shall be prepared to distribute installation manuals, hardware schedules, templates, and physical hardware samples.

1.9 WARRANTY

All hardware items shall be warranted against defects in material and workmanship as set forth in Division One General Requirements.

Repair, replace, or otherwise correct deficient materials and workmanship without additional cost to owner.

PART 2 - PRODUCTS

2.1 FASTENERS

All exposed fasteners shall be Phillips head or as otherwise specified, and shall match the finish of the adjacent hardware. All fasteners exposed to the weather shall be non-ferrous or stainless steel. Furnish correct fasteners to accommodate surrounding conditions.

Where torx tamper resistant fasteners have been specified for a specific hardware group, provide torx head fasteners with center pin on ALL exposed fasteners.

Coordinate required reinforcements for doors and frames. Seek approval of the architect prior to furnishing through-bolts. Furnish through-bolts as required for materials not readily reinforced.

2.2 BUTT HINGES

Acceptable manufacturers and respective catalog numbers:

	<u>Stanley</u>	<u>Hager</u>	<u>McKinney</u>
1. Standard Weight, Plain Bearing	F179	1279	T2714
2. Standard Weight, Ball Bearing	FBB179	BB1279	TB2714
3. Standard Weight, Ball Bearing, Non-Ferrous	FBB191	BB1191	TB2314
4. Heavy Weight, Ball Bearing	FBB168	BB1168	T4B3786
5. Heavy Weight, Ball Bearing, Non-Ferrous	FBB199	BB1199	T4B3386

Unless otherwise specified, furnish the following hinge quantities for each door leaf.

6. 3 hinges for doors up to 90 inches.
7. 1 additional hinge for every 30 inches on doors over 90 inches.
8. 4 hinges for Dutch door applications.

Unless otherwise specified, top and bottom hinges shall be located as specified in division 8 Section "Hollow Metal Doors and Frames". Intermediate hinges shall be located equidistant from others.

Unless otherwise specified, furnish hinge weight and type as follows:

- 9. Standard weight: ball bearing hinge FBB179 for interior opening over 36 through 40 inches wide without a door closer, and for interior openings through 40 inches wide with a door closer.
- 10. Heavyweight: 4 ball bearing hinge FBB168 for interior openings over 40 inches wide, and for all vestibule doors.
- 11. Heavyweight: 4 ball bearing hinge Fbb199 ss for exterior openings unless otherwise listed in groups.

Unless otherwise specified, furnish hinges for exterior doors, fabricated from brass, bronze, or stainless steel. Unless otherwise specified, hinges for interior doors may be fabricated from steel.

Unless otherwise specified, furnish hinges in the following sizes:

- 12 5" x 5" 2-1/4" thick doors
- 13 4-1/2" x 4-1/2" 1-3/4" thick doors
- 14 3-1/2" x 3-1/2" 1-3/8" thick doors

Furnish hinges with sufficient width to accommodate trim and allow for 180-degree swing.

Unless otherwise specified, furnish hinges with flat button tips with non-rising pins at interior doors, non-removable loose pins (NRP) at exterior and out-swinging interior doors.

Unless otherwise specified, furnish all hinges to template standards.

2.3 LOCKS AND LATCHES

Acceptable manufacturers and respective catalog numbers:

1.

Grade 1	BEST*	Sargent	Dorma	Schlage
Extra Heavy	45H Series	8200 Series	M9000	L Series
Duty				

Unless otherwise specified, all locks and latches to have:

- 1. 2-3/4" Backset
- 2. 1/2" minimum throw latchbolt
- 3. 1" throw deadbolt
- 4. 6 pin cylinders
- 5. ANSI A115.2 strikes

Provide guarded latch bolts for all locksets, and latch bolts with sufficient throw to maintain fire rating of both single and paired door assemblies.

Length of strike lip shall be sufficient to clear surrounding trim.

Provide wrought boxes for strikes at inactive doors, wood frames, and metal frames without integral mortar covers.

2.4 CLOSERS

Acceptable manufacturers and respective catalog numbers:

- 1. Stanley
Comercial* LCN Sargent Norton
QDC100 4040 281 7500

Obtain door closers from a single manufacturer, although several may be indicated as offering products complying with requirements.

Provide extra heavy-duty arm (EDA / HD) when closer is to be installed using parallel arm mounting.

Unless otherwise specified, all door closers shall have full covers and separate adjusting valves for sweeps, latch, and backcheck.

Provide closers for all labeled doors. Provide closer series and type consistent with other closers for similar doors specified elsewhere on the project.

Provide closers with adjustable spring power. Size closers to insure exterior and fire rated doors will consistently close and latch doors under existing conditions. Size all other door closers to allow for reduced opening force not to exceed 5 lbs.

Install closers on the room side of corridor doors, stair side of stairways and interior side of exterior doors.

Closers shall be furnished complete with all mounting brackets and cover plates as required by door and frame conditions, and by adjacent hardware.

2.5 KICK PLATES AND MOP PLATES

Furnish protective plates as specified in hardware groups.

Where specified, provide 5" kick plates, 36" armor plates, and 4" mop plates. Unless otherwise specified, metal protective plates shall be .050" thick; plastic plates shall be 1/8" thick.

Protective plates shall be 2" less door width, or 1" less door width at pairs. All protective plates shall be beveled 4 sides and counter sunk. Protection plates over 16" shall not be provided for labeled doors unless specifically approved by door manufacturers listing.

Where required by adjacent hardware, protection plates shall be factory drilled for cylinders or other mortised hardware.

2.6 WALL STOPS AND HOLDERS

Acceptable manufacturers and respective catalog numbers:

- | | |
|-----------------------------|---------------|
| | <u>Trimco</u> |
| 1. Cast Concave Wall Bumper | 1270CXPV |

Furnish a stop or holder for all doors. Furnish floor stops only where specifically specified.

Where wall stops are not applicable, furnish overhead stops.

Do not provide holder function for labeled doors.

2.7 FINISHES AND BASE MATERIALS

Unless otherwise indicated in the hardware groups or herein, hardware finishes shall be applied over base metals as specified in the following finish schedule:

- | <u>HARDWARE ITEM</u> | <u>BHMA
FINISH AND
BASE
MATERIAL</u> |
|--------------------------|--|
| 1. Butt Hinges: Interior | 652 (US26D -
Satin Chromium) |

- | | | |
|----|----------------------------|---|
| 2. | Locks and Latches | 626 (US26D -
Satin Chrom-
mium) |
| 3. | Pulls and Push Plates/Bars | 630 (US32D -
Satin Stain-
less Steel) |
| 4. | Closers | 689 (Powder
Coat Alumi-
num) |
| 5. | Protective Plates | 630 (US32D -
Satin Stain-
less Steel) |
| 6. | Wall Stops and Holders | 630 (US32D -
Satin Stain-
less Steel) |

2.8 KEYING

Acceptable manufacturers and respective catalog numbers:

1. Best Cormax

Provide all locks and cylinders in keyways as required to accommodate owners existing Best master key system.

All locks under this section shall be keyed as directed by the owner to an existing Best master key system.

Keying shall be by lock manufacturer where permanent records shall be kept.

Provide temporary brass construction cores for all exterior lock cylinders. Provide 10% additional temporary cores and or cylinders as required to provide secure storage locations during construction.

Furnish a total of 2 keys per cylinder. Actual cut keys to be determined by owner.

Permanent cylinder cores shall be installed by the owner, or owner's representative. Temporary cylinders and cores shall be returned to the distributor once permanent cores have been installed.

Permanent master keys, control keys, and change keys shall be delivered by registered mail to the owner. Construction keys shall be delivered to the contractor.

PART 3 - EXECUTION

3.1 EXAMINATION

Prior to installation of hardware, installer shall examine door frame installation to insure frames have been set square and plumb. Installer shall examine doors, door frames, and adjacent wall, floor, and ceiling for conditions, which would adversely effect proper operation and function of door assemblies. Do not proceed with hardware installation until such deficiencies have been corrected.

3.2 INSTALLATION

- A. Before hardware installation, general contractor/construction manager shall coordinate a hardware installation seminar with a 1-week notice to all parties involved. The seminar is to be conducted on the installation of hardware, specifically of locksets, closers, exit devices, continuous hinges and overhead stops. Manufacturer's representative of the above products to present seminar. Seminar to be held at the job site and attended by installers of hardware (including low voltage hardware) for aluminum, hollow metal and wood doors. Training to include use of installation manuals, hardware schedule, templates and physical products samples.
- B. Install all hardware in accordance with the approved hardware schedule and manufacturers instructions for installation and adjustment.
- C. Set units level, plumb and true to the line and location. Adjust and reinforce the attachment substrate as necessary for proper installation and operation.
- D. Drill and countersink units which are not factory-prepared for anchorage fasteners. Space fasteners and anchors in accord with industry standards.
- E. Drill appropriate size pilot holes for all hardware attached to wood doors and frames.
- F. Shim doors as required to maintain proper operating clearance between door and frame.
- G. Unless otherwise specified, locate all hardware in accordance with the recommended locations for builder's hardware for standard doors and frames as published by the Door and Hardware Institute.
- H. Use only fasteners supplied by or approved by the manufacturer for each respective item of hardware.
- I. Mortise and cut to close tolerance and conceal evidence of cutting in the finished work.
- J. Conceal push and pull bar fasteners where possible. Do not install through bolts through push plates.
- K. Install hardware on UL labeled openings in accordance with manufacturer's requirements to maintain the label.
- L. Apply self-adhesive gasketing on frame stop at head & latch side and on rabbet of frame at hinge side.
- M. Install hardware in accordance with supplemental "S" label instructions on all fire rated openings.
- N. Install wall stops to contact lever handles or pulls. Do not mount wall stops on casework, or equipment.

- O. Where necessary, adjust doors and hardware as required to eliminate binding between strike and latchbolt. Doors should not rattle.
- P. Overhead stops used in conjunction with electrified hold open closers shall be templated and installed to coincide with engagement of closer hold open position.
- Q. Install door closers on corridor side of lobby doors, room side of corridor doors, and stair side of stairways.
- R. Adjust spring power of door closers to the minimum force required to insure exterior and fire rated doors will consistently close and latch doors under existing conditions. Adjust all other door closers to insure opening force does not to exceed 5 lbs.
- S. Adjust "sweep", "latch", & "back check" valves on all door closers to properly control door through out the opening and closing cycle. Adjust total closing speed as required to comply with all applicable state and local building codes.
- T. Install "hardware compatible" (bar stock) type weatherstripping continuously for an uninterrupted seal. Adjust templating for parallel arm door closers, exit devices, etc., as required to accommodate weatherstripping.
- U. Unless otherwise specified or detailed, install thresholds with the bevel in vertical alignment with the outside door face. Notch and closely fit thresholds to frame profile. Set thresholds in full bed of sealant.
- V. Compress sweep during installation as recommended by sweep manufacturer to facilitate a water-resistant seal.
- W. Deliver to the owner 1 complete set of installation and adjustment instructions, and tools as furnished with the hardware.

3.3 FIELD QUALITY CONTROL

After installation has been completed, the hardware supplier and manufacturers representative for locksets, door closers, exit devices, and overhead stops shall check the project and verify compliance with installation instructions, adjustment of all hardware items, and proper application according to the approved hardware schedule. Hardware supplier shall submit a list of all hardware that has not been installed correctly.

After installation has been completed, the hardware supplier and manufacturers representative shall meet with the owner to explain the functions, uses, adjustment, and maintenance of each item of hardware. Hardware supplier shall provide the owner with a copy of all wiring diagrams. Wiring diagrams shall be opening specific and include both a riser diagram and point to point diagram showing all wiring terminations.

3.4 ADJUSTMENT AND CLEANING

At final completion, and when H.V.A.C. equipment is in operation, installer shall make final adjustments to and verify proper operation of all door closers and other items of hardware. Lubricate moving parts with type lubrication recommended by the manufacturer.

All hardware shall be left clean and in good operation. Hardware found to be disfigured, defective, or inoperative shall be repaired or replaced.

3.5 HARDWARE SCHEDULE

The following schedule of hardware groups are intended to describe opening function. The hardware supplier is cautioned to refer to the preamble of this specification for a complete description of all materials and services to be furnished under this section.

SET #01

Door: 001

3ea.	Hinges	FBB179 4 ½ x 4 ½ TRX	652	STN
1ea.	Lockset	47H7AT 14H x 1E7J4	630	BST
1ea.	Door Closer w/ Stop	QDC111 TRX	689	STCH
1ea.	Kick Plate	KO050 5" x 2" LDW B4E CSS TRX	630	TRM
1ea.	Floor/ Wall Stop	1214CK x 1268CK / 1270CXPV	630	TRM
1set	Gasketing	5075B	BRN	NGP

SET #2

Door: 002

1ea.	Hinges	Continues Hinge by door manufacturer	628	STN
1ea.	Lockset	47H7R 14H x 1E7J4	630	BST
1ea.	Door Closer	QDC119 TRX	689	LCN
1ea.	Kick Plate	KO050 5" x 2" LDW B4E CSS TRX	630	TRM
1set	Gasketing	5075B	BRN	NGP

END OF SECTION

SECTION 13 10 10**BULLET RESISTANT EQUIPMENT****PART 1 GENERAL****1.1 SECTION INCLUDES**

- A. Bullet Resistant Cash Tray.
- B. Thru-Wall Pass through Drawer:
- C. CPU holder:
- D. Printer Stand:
- E. Countertop communication system:

1.2 RELATED SECTIONS

- A. Division 06 Section 06 10 53 "Miscellaneous rough carpentry" for wood furring, blocking, shims, and hanging strips required for installing woodwork and concealed within other construction before woodwork installation.
- B. Division 06 Section 06 40 20 "Interior Architectural Woodwork" for interior woodwork not specified in this Section.
- C. Division 09 Section 09 91 00 "Painting": Priming and final field paint finish
- D. Division 10 Section 10 26 41 "Bullet Resistant Panels"
- E. Division 11 Section 11 19 10 "Hollow Metal (Security & Commercial)"

1.3 REFERENCES

- A. ASTM A 666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless
- C. NIJ Standard 0108.01 - (National Institute of Justice) Standard for Ballistic Resistant Protective Materials.
- D. Underwriters Laboratories: UL 752 - Standard for Bullet Resisting Equipment.

1.4 PERFORMANCE REQUIREMENTS

- A. Design, fabricate and install all partition materials specified in this section to meet or exceed the requirements of UL 752.

1.5 SUBMITTALS

- A. Submit under provisions of Section 01 33 00.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.

3. Installation methods.
- C. Shop Drawings: Submit Manufacturer approved shop drawings detailing plan, section and elevation views as necessary to ensure proper field installation procedures. Coordinate locations with those listed in the Contract Drawings.
- D. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.
- E. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square, representing actual product, color, and patterns.

1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: All primary products specified in this section will be supplied by a single manufacturer with a minimum of ten (10) years experience.
- B. Installer Qualifications: All products listed in this section are to be installed by a single installer with a minimum of five (5) years demonstrated experience in installing products of the same type and scope as specified.
- C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
 1. Finish areas designated by Architect.
 2. Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.
 3. Refinish mock-up area as required to produce acceptable work.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Store and dispose of hazardous materials, and materials contaminated by hazardous materials, in accordance with requirements of local authorities having jurisdiction.

1.8 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits Recommended by manufacturer for optimum results. Do not install products under Environmental conditions outside manufacturer's absolute limits.

1.9 WARRANTY

- A. At project closeout, provide to Owner or Owners Representative an executed copy of the Manufacturer's standard limited warranty against manufacturing defect, outlining its terms, Conditions, and exclusions from coverage.

PART 2 PRODUCTS

1. Requests for substitutions will be considered in accordance with provisions of Section 01 25 00

A. Cash Tray:

1. Mounting: Recessed Mount.
2. Finish: Brushed Stainless Steel.
3. Acceptable Manufacturer: (Basis of Design) Total Security Solutions, Inc, 170 National Park Drive, Fowlerville, MI 48836, 800-513-1468. Attn: Sales Department, info@tssbulletproof.com. Web: www.tssbulletproof.com, or approved equal.

B. Thru-Wall Pass through Drawer:

1. Mounting: Through Wall.
2. Finish: Brushed Stainless Steel.
3. Shursafe Model 670198, Acceptable Manufacturer: (Basis of Design) ShureSafe Security; 1800-2274873; www.shureusa.com 1901 West Main Street Washington, MO 63090, or approved equal.

C. CPU holder:

1. Under desk adjustable CPU holder
2. Finish: TBD.
3. CPU555SEC – Acceptable Manufacturer: (Basis of Design) HUMANSIZE, 5675 DTC Blvd Suite 100 Greenwood Village, CO 80111; +1 800 400 0625; info@humansize.com or approved equal.

D. Printer Stand:

1. Under desk metal stand
2. Finish: TBD.
3. VF52005; Acceptable Manufacturer: (Basis of Design) Vertiflex Underdesk or approved equal.

E. Countertop communication system:

1. Countertop mounted
2. Vandal resistant.
3. TTU-3X Counter-top 2-way talk thru - Acceptable Manufacturer: (Basis of Design) Norcon Communications Inc.; 510 Burnside Avenue Inwood, LI, NY 11096 or approved equal.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions.

3.4 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

SECTION 26 51 00
INTERIOR LIGHTING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Interior luminaires.

1.02 RELATED REQUIREMENTS

- A. Division 26 Section 26 27 26 "Wiring Devices": Manual wall switches and wall dimmers.

1.03 REFERENCE STANDARDS

- A. IEEE C62.41.2 -Recommended Practice on Characterization of Surges in Low-Voltage (1000 V and less) AC Power Circuits; 2002 (Cor 1, 2012).
- B. IESNA LM-63 -ANSI Approved Standard File Format for Electronic Transfer of Photometric Data and Related Information; 2002 (Reaffirmed 2008).
- C. IES LM-79 -Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products; 2008.
- D. IES LM-80 -Approved Method: Measuring Luminous Flux and Color Maintenance of LED Packages, Arrays, and Modules; Illuminating Engineering Society; 2015.
- E. NECA 1 -Standard for Good Workmanship in Electrical Construction; 2010.
- F. NECA/IESNA 500 -Standard for Installing Indoor Commercial Lighting Systems; 2006.
- G. NECA/IESNA 502 -Standard for Installing Industrial Lighting Systems; 2006.
- H. NEMA 410 -Performance Testing for Lighting Controls and Switching Devices with Electronic Drivers and Discharge Ballasts; 2011.
- I. NFPA 70 -National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- J. NFPA 101 -Life Safety Code; 2015.
- K. UL 924 -Emergency Lighting and Power Equipment; Current Edition, Including All Revisions.
- L. UL 1598 -Luminaires; Current Edition, Including All Revisions.
- M. UL 8750 -Light Emitting Diode (LED) Equipment for Use in Lighting Products; Current Edition, Including All Revisions.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:

- 1. Coordinate the installation of luminaires with mounting surfaces installed under other

sections or by others. Coordinate the work with placement of supports, anchors, etc. required for mounting. Coordinate compatibility of luminaires and associated trims with mounting surfaces at installed locations.

2. Coordinate the placement of luminaires with structural members, ductwork, piping, equipment, diffusers, fire suppression system components, and other potential conflicts installed under other sections or by others.
3. Coordinate the placement of exit signs with furniture, equipment, signage or other potential obstructions to visibility installed under other sections or by others.
4. Notify Architect of any conflicts or deviations from the contract documents to obtain direction prior to proceeding with work.

1.05 SUBMITTALS

A. See Section 01 33 00 -Administrative Requirements, for submittal procedures.

B. Shop Drawings:

1. Indicate dimensions and components for each luminaire that is not a standard product of the manufacturer.
2. Provide photometric calculations where luminaires are proposed for substitution.

C. Shop Drawings: Indicate dimensions and components for each fixture that is not a standard product of the manufacturer.

D. Product Data: Provide manufacturer's standard catalog pages and data sheets including detailed information on luminaire construction, dimensions, ratings, finishes, mounting requirements, listings, service conditions, photometric performance, installed accessories, and ceiling compatibility; include model number nomenclature clearly marked with all proposed features.

1. LED Luminaires:

- a. Include estimated useful life, calculated based on IES LM-80 test data.
- b. Include IES LM-79 test report for proposed substitutions.

2. Provide electronic files of photometric data certified by a National Voluntary Laboratory Accreditation Program (NVLAP) lab or independent testing agency in IESNA LM-63 standard format upon request.

3. Lamps: Include rated life, color temperature, color rendering index (CRI), and initial and mean lumen output.

E. Maintenance Materials: Furnish the following for State of Delaware OMB -Department of Corrections' use in maintenance of project.

1. See Section 01 60 00 -Product Requirements, for additional provisions.
2. Extra Lenses and Louvers: Two percent of total quantity installed for each type, but not less than one of each type.

F. Project Record Documents: Record actual connections and locations of luminaires and any associated remote components.

1.06 QUALITY ASSURANCE

A. Conform to requirements of NFPA 70.

B. Maintain at the project site a copy of each referenced document that prescribes execution requirements.

- C. Conform to requirements of NFPA 70 and NFPA 101.
- D. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.
- E. Products: Listed and classified by Underwriters Laboratories Inc. or testing firm acceptable to the authority having jurisdiction as suitable for the purpose specified and indicated.
- F. Product Listing Organization Qualifications: An organization recognized by OSHA as a Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.

1.07 DELIVERY, STORAGE, AND PROTECTION

- A. Receive, handle, and store products according to NECA/IESNA 500 (commercial lighting), NECA/IESNA 502 (industrial lighting), and manufacturer's written instructions.
- B. Keep products in original manufacturer's packaging and protect from damage until ready for installation.

1.08 FIELD CONDITIONS

- A. Maintain field conditions within manufacturers required service conditions during and after installation.

1.09 WARRANTY

- A. See Section 01 77 00 -Closeout Submittals, for additional warranty requirements.
- B. Provide five year manufacturer warranty for all LED luminaires, including drivers.
- C. Provide five year pro-rata warranty for batteries for emergency lighting units.
- D. Provide ten year pro-rata warranty for batteries for self-powered exit signs.
- E. Products: Listed and classified by Underwriters Laboratories Inc. or testing firm acceptable to the authority having jurisdiction as suitable for the purpose specified and indicated.

PART 2 PRODUCTS

2.01 LUMINAIRE TYPES

- A. Provide products as indicated in the Luminaire Schedule included on the drawings.
- B. Substitutions: See Section 01 60 00 -Product Requirements.

2.02 LUMINAIRES

- A. Provide products that are listed and labeled as complying with UL 1598, where applicable.
- B. Provide products that comply with requirements of NFPA 70 and NFPA 101.
- C. Provide products listed, classified, and labeled as suitable for the purpose intended.
- D. Unless otherwise indicated, provide complete luminaires including lamp(s) and all sockets, ballasts, reflectors, lenses, housings and other components required to position, energize and protect the lamp and distribute the light.

- E. Unless specifically indicated to be excluded, provide all required conduit, boxes, wiring, connectors, hardware, supports, trims, accessories, etc. as necessary for a complete operating system.
- F. Provide products suitable to withstand normal handling, installation, and service without any damage, distortion, corrosion, fading, discoloring, etc.
- G. LED Luminaires:
1. Components: UL 8750 recognized or listed as applicable.
 2. Tested in accordance with IES LM-79 and IES LM-80.
 3. LED Estimated Useful Life: Minimum of 50,000 hours at 70 percent lumen maintenance, calculated based on IES LM-80 test data.
- H. Luminaires Mounted in Continuous Rows: Provide quantity of units required for length indicated, with all accessories required for joining and aligning.

3.04 FIELD QUALITY CONTROL

- A. See Section 01 40 00 -Quality Requirements, for additional requirements.
- B. Inspect each product for damage and defects.
- C. Perform field inspection in accordance with Section 01 40 00.
- D. Operate each luminaire after installation and connection to verify proper operation.
- E. Test self-powered exit signs and emergency lighting units to verify proper operation upon loss of normal power supply.
- F. Correct wiring deficiencies and repair or replace damaged or defective products. Repair or replace excessively noisy ballasts as determined by Architect.

3.05 ADJUSTING

- A. Aim and position adjustable emergency lighting unit lamps to achieve optimum illumination of egress path as required or as directed by Architect or authority having jurisdiction.
- B. Exit Signs with Field-Selectable Directional Arrows: Set as indicated or as required to properly designate egress path as directed by Architect or authority having jurisdiction.

3.06 CLEANING

- A. Clean surfaces according to NECA 500 (commercial lighting), NECA 502 (industrial lighting), and manufacturer's instructions to remove dirt, fingerprints, paint, or other foreign material and restore finishes to match original factory finish.
- B. Clean electrical parts to remove conductive and deleterious materials.
- C. Remove dirt and debris from enclosures.
- D. Clean finishes and touch up damage.

3.07 CLOSEOUT ACTIVITIES

- A. See Section 01 78 00 -Closeout Submittals, for closeout submittals.
- C. Just prior to Substantial Completion, replace all lamps that have failed.

3.08 PROTECTION

A. Protect installed luminaires from subsequent construction operations.

3.09 SCHEDULE -SEE DRAWINGS

END OF SECTION

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