

SECTION 00100 – INVITATION TO BID

The West Virginia Community and Technical College System invites proposals to provide all Work including, but not limited to, labor, material, equipment supplies and transportation for:

REQUEST FOR BIDS RFB 26239

Caperton Center & Vet Tech Security System
At Pierpont Community & Technical College

The Work of this Project is defined by the Contract Documents, and consists of the following:

West Virginia Community and Technical College System seeks to engage a highly qualified security integrator for the installation and maintenance of an Access Control and Alarm Monitoring System (ACAMS), Video Surveillance System (VSS) and security communications system at two separate and adjacent buildings in Clarksburg, West Virginia, occupied by Pierpont Community and Technical College:

- A. The Caperton Center
- B. Vet Tech Facility

All questions shall be directed to Jason Brown of Pickering Associates at jbrown@pickeringusa.com.

Bids must be submitted in accordance with Bidding Documents issued by the Architect and on the Form of Proposal provided.

Bidding Documents will be available Monday, March 23, 2026, and can be obtained as described below:

Bid Documents are available at no cost by going to: pickeringplanroom.com

Bidding documents may be examined at Viewing Depositories listed in the Bidding Documents.

The Invitation to Bid, Addenda and other relevant information concerning RFB 26239 will be posted at the following URL. It is the Bidder's obligation to check this website for current information:

<https://wvctcs.org/purchasing-and-finance>

A Pre-bid meeting is scheduled for:

Time: **10:00 a.m.**, Local Prevailing Time (LPT)
Date: **April 15, 2026**
Place: Pierpont Community and Technical College
Caperton Center, Room 148
501 West Main Street
Clarksburg, WV 26301

Attendance is: MANDATORY: All Bidders **MUST** attend the pre-bid meeting to familiarize themselves with the Project location, site conditions and other relevant information. Should a Bidder fail to attend, the Bid will be disqualified. Subcontractors and material suppliers are encouraged to attend the pre-bid meeting.

The Bidder, if successful and awarded a contract, will receive a purchase order and notice to proceed from the Owner after all contract documents are properly completed, executed, and returned to the Owner within ten days following receipt of the Owner's written notice of intent to award a contract. All Work shall start from date of Notice to Proceed and shall be Substantially Complete not later than the number of consecutive calendar days identified in the Contract. Bidder also agrees to achieve Final Completion within 30 days thereafter.

The Owner will suffer financial loss if the Work is not Substantially Complete within the Contract Time. For each calendar day of delay in achieving Substantial Completion, the Contractor shall be liable for and shall pay the Owner, not as a penalty but as liquidated damages, in accordance with the following schedule:

For each calendar day the project is not Substantially Complete, damages to be assessed at One Hundred and Fifty Dollars (\$150.00) per day.

For each calendar day of delay in achieving Final Completion, the Contractor shall be liable for and shall pay half the amount of liquidated damages stated above, plus any additional fees of the Architect and the Architect's consultants that may accrue. Allowances may be made for delays due to shortages of materials and/or energy resources, subject to proof by documentation, and for delays due to strikes or other delays beyond the control of the Contractor. The Contractor in accordance with the Contract Documents must properly document all delays and any claim for extension of the Contract Time.

Submitting Bids: Sealed Bids will be received by the OWNER at the following location until **1:00 p.m.**, LPT, **April 30, 2026**, in accordance with the Instructions to Bidders, and Supplementary Instructions to Bidders:

Director of Facilities and Capital Project Management
RFB 26239
West Virginia Community and Technical College System
2001 Union Carbide Drive, Building 2000
South Charleston, WV 25303

Special Instructions for Delivering Bids:

- A. Hand Delivered Bids: Deliver bids to the following address: 1st Floor, WV Community and Technical College System, 2001 Union Carbide Drive, Building 2000, South Charleston, WV 25303.

Late Bids and electronically transmitted bids will not be accepted. Owner reserves the right to accept or reject any/all Bids.

All applicable federal, state, and local laws, rules and regulations apply.

End Of Section

RFB #26239

WEST VIRGINIA COMMUNITY & TECHNICAL COLLEGE SYSTEM

501 W MAIN ST. CLARKSBURG, WV

PIERPONT CAPERTON SECURITY SYSTEM



INDEX LIST:

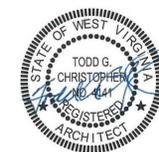
CAPERTON

- A110 FLOOR PLAN
- E000 GENERAL NOTES AND SPECIFICATIONS
- E001 SYMBOLS AND ABBREVIATIONS
- E130 SECURITY SYSTEM PLAN
- E500 DETAILS AND SCHEDULES

VET TECH

- A110 NOTES PLAN
- A600 ROOM, WINDOW & DOOR SCHEDULE
- E000 GENERAL NOTES AND SPECIFICATIONS
- E001 SYMBOLS AND ABBREVIATIONS
- E130 SECURITY SYSTEM PLAN
- E500 DETAILS AND SCHEDULES

ARCHITECTURAL
REGISTERED ARCHITECT:



03.04.26
DATE

ELECTRICAL
REGISTERED PE:



03.04.26
DATE



Architects • Engineers • Surveyors

11283 Emerson Avenue Phone: (304) 464-5305
Parkersburg, West Virginia 26104 Fax: (304) 464-4428

ISSUED FOR CONSTRUCTION
MARCH 04, 2026

GENERAL NOTES

1. PROVIDE NEW CAMERAS, SECURITY DEVICES AND HARDWARE ON EXTERIOR DOORS AS SPECIFIED.
2. VERIFY EXISTING CONDITIONS IN FIELD AND REPORT ANY DISCREPANCIES TO ARCHITECT.
3. PATCH & REPAIR ANY SURFACES THAT ARE DAMAGED DURING INSTALLATION TO ORIGINAL CONDITION TO MATCH EXISTING.

HARDWARE GROUP NO. 01
 FOR USE ON DOOR #(S):
 101 AND 102

PROVIDE EACH OPENING WITH THE FOLLOWING:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
2 EA	CONT. HINGE	112XY EPT	628	IVE
2 EA	POWER TRANSFER	EPT10	689	VON
1 EA	REMOVABLE MULLION	KR4954 STAB	689	VON
1 EA	ELEC PANIC HARDWARE	LD-LX-RX-99-EO	626	VON
1 EA	ELEC PANIC HARDWARE	LD-LX-RX-99-L-E996-17-FSE24 VDC	626	VON
1 EA	INTERFACE BOX	JB7 AS REQUIRED		VON
1 EA	RIM CYLINDER	AS REQUIRED MATCH EXISTING KEY SYSTEM	626	C-R
1 EA	MORTISE CYLINDER	AS REQUIRED MATCH EXISTING KEY SYSTEM	626	C-R
2 EA	OH STOP	100S	630	GLY
2 EA	SURFACE CLOSER	4050A EDA SRI	689	LCN
2 EA	MOUNTING PLATES	BRACKETS AS REQUIRED	689	LCN
1 EA	WEATHERSTRIP	INTEGRAL WEATHERSTRIP BY DOOR/FRAME MFR.		B/O
2 EA	DOOR SWEEP	8198AA	AA	ZER
1 EA	THRESHOLD	65A-223	A	ZER
1 EA	CONTROLLER	CARD READER BY OTHERS	B	SCE
2 EA	DOOR CONTACT	7764	628	SCE
1 EA	POWER SUPPLY	PS902 900-2RS	LGR	VON

1
 1
 OPERATION: DOORS CLOSED AND SECURED. VALID CREDENTIAL ALLOWS ENTRY. FREE EGRESS AT ALL TIMES. DURING FIRE EVENT OR POWER OUTAGE DOORS ARE SECURE.

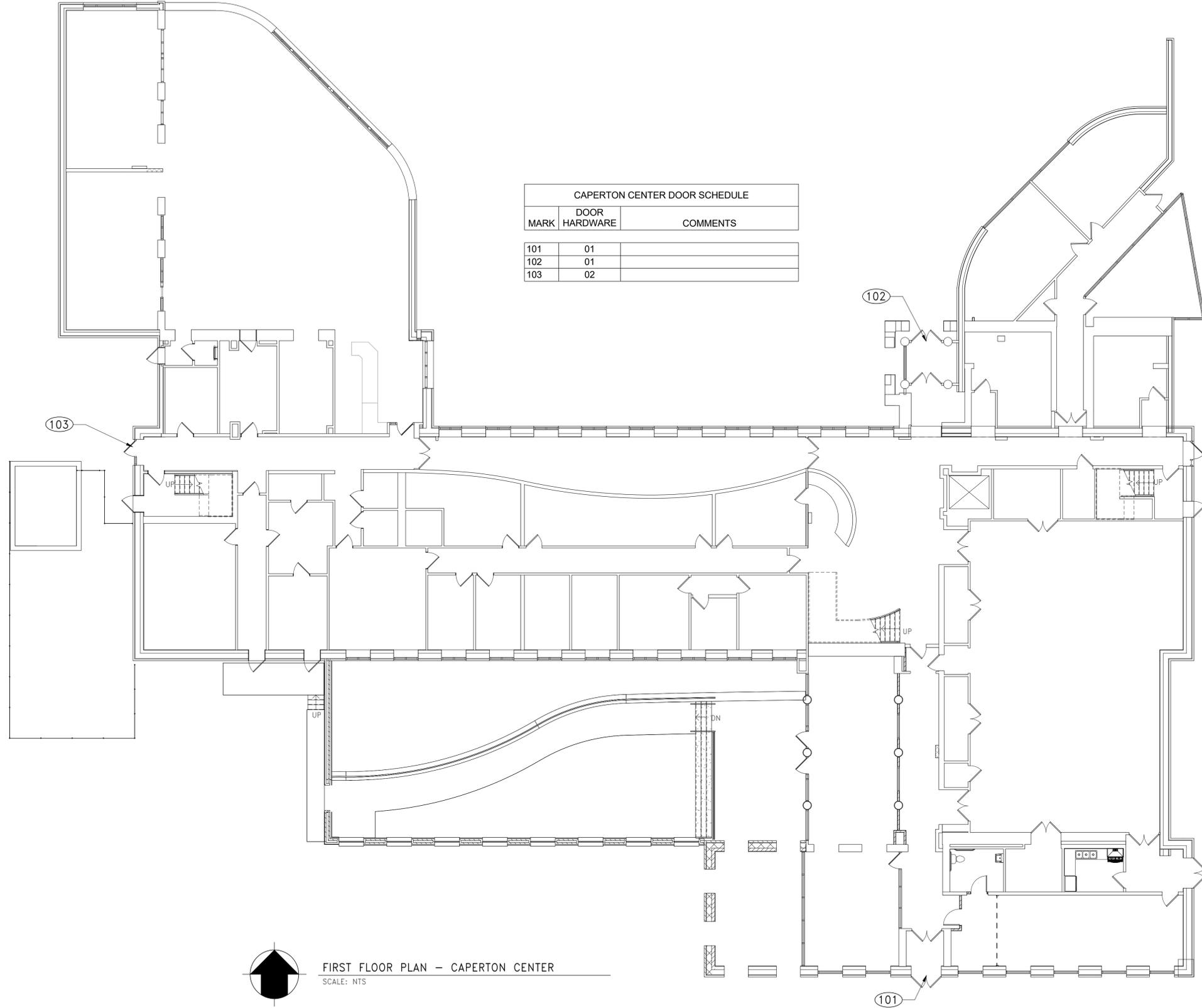
HARDWARE GROUP NO. 02
 FOR USE ON DOOR #(S):
 103

PROVIDE EACH OPENING WITH THE FOLLOWING:

QTY	DESCRIPTION	CATALOG NUMBER	FINISH	MFR
1 EA	CONT. HINGE	112XY EPT	628	IVE
1 EA	POWER TRANSFER	EPT10	689	VON
1 EA	ELEC PANIC HARDWARE	LX-RX-QEL-99-NL-OP-110MD 24 VDC	626	VON
1 EA	INTERFACE BOX	JB7 AS REQUIRED		VON
1 EA	RIM CYLINDER	AS REQUIRED MATCH EXISTING KEY SYSTEM	626	C-R
1 EA	90 DEG OFFSET PULL SURFACE CLOSER	8190EZHD 12" O	630-316	IVE
1 EA	KICK PLATE	4050A SCUSH SRI	689	LCN
1 EA	RAIN DRIP	8400 10" X 2" LDW B-CS	630	IVE
1 EA	GASKETING	142AA	AA	ZER
1 EA	DOOR SWEEP	429AA-S	AA	ZER
1 EA	THRESHOLD	8198AA	AA	ZER
1 EA	CONTROLLER	65A-223	A	ZER
1 EA	DOOR CONTACT	CARD READER BY OTHERS	B	SCE
1 EA	POWER SUPPLY	679-05WD/HM AS REQUIRED	BLK	SCE
1 EA	POWER SUPPLY	PS902 900-2RS	LGR	VON

1
 1
 OPERATION: DOOR NORMALLY CLOSED AND LOCKED. PRESENTING VALID CREDENTIAL TO READER MOMENTARILY RETRACTS PANIC DEVICE LATCH. PANIC DEVICE LATCHES ALSO CAPABLE OF BEING ELECTRONICALLY DOGGED DOWN (I.E. PUSH/PULL MODE) AS DESIGNATED BY ACCESS CONTROL SYSTEM SCHEDULE. EXIT DEVICES LATCH AND LOCK WITH ACTIVATION OF SECURITY SYSTEM. FREE EGRESS AT ALL TIMES. DURING FIRE EVENT OR POWER OUTAGE DOOR IS SECURE.

MARK	DOOR HARDWARE	COMMENTS
101	01	
102	01	
103	02	



FIRST FLOOR PLAN - CAPERTON CENTER
 SCALE: NTS

Date	By	Description
03/04/26		ISSUED FOR CONSTRUCTION
0		Rev.

Drawing Description
 PIERPONT COMMUNITY & TECHNICAL COLLEGE
 501 W MAIN ST. CLARKSBURG, WV
 PIERPONT CAPERTON SECURITY SYSTEM
 FLOOR PLAN



Project:	2268000
Designed By:	JGH
Drawn By:	JGH
Checked By:	TGC
Scale:	As indicated
Plot Date:	03/04/26
Revision:	0
Drawing Number:	A110

ELECTRICAL SYMBOL LEGEND

	ALL ITEMS SHOWN AS DASHED ON DEMOLITION PLANS SHALL BE REMOVED UNLESS NOTED OTHERWISE.
	FLUORESCENT, INCANDESCENT, OR LED TYPE LIGHTING FIXTURES COMPLETE WITH LAMPS. REFER TO LIGHT FIXTURE SCHEDULE FOR DETAILS.
	EXTERIOR POLE-MOUNTED LED FIXTURES
	COORDINATE NUMBER OF FACES AND THE DIRECTIONAL ARROWS, AS REQUIRED. CONNECTION TO THE EXIT LIGHT FIXTURE SHALL BE MADE AHEAD OF THE LOCAL LIGHT SWITCHING CIRCUIT.
	SINGLE AND DOUBLE LED REMOTE HEAD EMERGENCY EGRESS FIXTURES
	SINGLE POLE, 20A 120/277V SINGLE THROW SWITCH. MOUNT 46" A.F.F. TO CENTERLINE UNLESS NOTED OTHERWISE.
	20A 120/277V THREE-WAY, SINGLE THROW SWITCH. MOUNT 46" A.F.F. TO CENTERLINE UNLESS NOTED OTHERWISE.
	20A 120/277V FOUR-WAY, SINGLE THROW SWITCH. MOUNT 46" A.F.F. TO CENTERLINE UNLESS NOTED OTHERWISE.
	20A 120/277V LOCK TYPE, HUBBELL SINGLE THROW SWITCH. MOUNT 46" A.F.F. TO CENTERLINE UNLESS NOTED OTHERWISE.
	20A 120/277V SINGLE BUTTON ON/OFF OCCUPANCY SENSOR, MOUNT 46" A.F.F. TO CENTERLINE UNLESS NOTED OTHERWISE.
	CEILING MOUNT OCCUPANCY SENSOR, COORDINATE POWER PACK REQUIREMENTS AND QUANTITIES WITH THE MANUFACTURER.
	PHOTOCCELL LIGHTING CONTROLLER. NOTE DETAIL DRAWINGS FOR MOUNTING DETAIL.
	DUPLEX GROUNDING TYPE RECEPTACLE, 20A 120V. MOUNT 18" A.F.F. TO CENTERLINE UNLESS NOTED OTHERWISE. VERIFY EXACT LOCATION WITH ARCHITECTURAL DRAWINGS AND ARCHITECT. COORDINATE COLOR WITH OWNER.
	GROUND-FAULT CIRCUIT INTERRUPTER TYPE DUPLEX RECEPTACLE, 20A 120V. MOUNT 18" A.F.F. TO CENTERLINE UNLESS NOTED OTHERWISE. VERIFY EXACT LOCATION WITH ARCHITECTURAL DRAWINGS AND ARCHITECT.
	DUPLEX GROUNDING TYPE RECEPTACLE, 20A 120V. MOUNT 84" A.F.F. TO CENTERLINE UNLESS NOTED OTHERWISE. VERIFY EXACT LOCATION WITH ARCHITECTURAL DRAWINGS AND ARCHITECT.
	TWO (2) DUPLEX GROUNDING TYPE SPECIFICATION GRADE RECEPTACLE, 20A 120V. MOUNT IN COMMON BOX WITH COMMON PLATE AT 18" A.F.F. TO CENTERLINE UNLESS NOTED OTHERWISE. VERIFY EXACT LOCATION WITH ARCHITECTURAL DRAWINGS AND ARCHITECT.
	DUPLEX GROUNDING TYPE RECEPTACLE, 20A, 125V. MOUNT IN FLOOR BOX WITH COMMON PLATE. VERIFY EXACT LOCATION WITH ARCHITECTURAL DRAWINGS AND ARCHITECT.
	TWO (2) DUPLEX GROUNDING TYPE RECEPTACLES, 20A, 125V. MOUNT IN FLOOR BOX WITH COMMON PLATE. VERIFY EXACT LOCATION WITH ARCHITECTURAL DRAWINGS AND ARCHITECT.
	COMBINATION 3.1A/5VDC USB CHARGERS WITH 20A, 125V DUPLEX GROUNDING TYPE RECEPTACLES. MOUNT IN COMMON BOX WITH COMMON PLATE AT 18" A.F.F. TO CENTERLINE UNLESS NOTED OTHERWISE. VERIFY EXACT LOCATION WITH ARCHITECTURAL DRAWINGS AND ARCHITECT.
	TWO (2) COMBINATION 3.1A/5VDC USB CHARGERS WITH 20A, 125V DUPLEX GROUNDING TYPE RECEPTACLES. MOUNT IN COMMON BOX WITH COMMON PLATE AT 18" A.F.F. TO CENTERLINE UNLESS NOTED OTHERWISE. VERIFY EXACT LOCATION WITH ARCHITECTURAL DRAWINGS AND ARCHITECT.
	SUBSCRIPT "c" INDICATES DEVICE TO BE MOUNTED 6" ABOVE COUNTERTOP TO CENTERLINE.
	SUBSCRIPT "r" INDICATES RED DEVICE CONNECTED TO EMERGENCY POWER.
	SUBSCRIPT "wp" INDICATES DEVICE INSTALLATION AND ENCLOSURE SHALL BE WEATHER-PROOF
	SPECIAL RECEPTACLE OR FEED. REFER TO DRAWINGS FOR DESCRIPTION.
	480Y/277V, 3ø 4W PANELBOARD. REFER TO DRAWINGS AND/OR SPECIFICATIONS FOR DETAILS.
	208Y/120V, 3ø 4W PANELBOARD. REFER TO DRAWINGS AND/OR SPECIFICATIONS FOR DETAILS.
	240V, 3ø 3W PANELBOARD. REFER TO DRAWINGS AND/OR SPECIFICATIONS FOR DETAILS.
	240/120V, 1ø 3W PANELBOARD. REFER TO DRAWINGS AND/OR SPECIFICATIONS FOR DETAILS.
	POINT OF ELECTRICAL CONNECTION TO EQUIPMENT. CONFIRM EQUIPMENT CONNECTION REQUIREMENTS AND ARRANGEMENT PRIOR TO ROUGH-IN. VERIFY EXACT LOCATION WITH ARCHITECTURAL DRAWINGS AND ARCHITECT.
	ELECTRICAL CIRCUIT HOMERUN TO PANEL 'A' CIRCUIT #2 (EXAMPLE). ALL CIRCUIT WIRING SHALL BE (2) -#12 THHN/THWN CONDUCTORS AND (1)-#12 THHN/THWN GROUND CONDUCTOR IN 3/4" EMT, UNLESS NOTED OTHERWISE.
	NON-FUSED HEAVY-DUTY TYPE SAFETY DISCONNECT SWITCH. SIZE, POLES, AND NEMA TYPE AS INDICATED ON ELECTRICAL DRAWINGS.
	FUSED HEAVY-DUTY TYPE SAFETY DISCONNECT SWITCH. SIZE, POLES, FUSE SIZE, AND NEMA TYPE AS INDICATED ON ELECTRICAL DRAWINGS.
	COMBINATION MOTOR STARTER AND HEAVY-DUTY TYPE SAFETY DISCONNECT SWITCH. SIZE, POLES, FUSE SIZE, AND NEMA TYPE AS INDICATED ON ELECTRICAL DRAWINGS.
	STANDARD JUNCTION BOX WITH COVER. LOCATE AND CONNECT AS DIRECTED.
	HUBBELL QUAZITE 11"x18" PG STYLE POLYMER CONCRETE ENCLOSURE.

ELECTRICAL SYSTEM CONTROLS SYMBOL LEGEND

	CEILING SPEAKER, FLUSH MOUNTED DEVICE. REFER TO DRAWINGS AND/ OR SPECIFICATIONS FOR DETAILS.
	SECURITY CAMERA, CEILING MOUNTED DEVICE. REFER TO DRAWINGS AND/OR SPECIFICATIONS FOR CAMERA LOCATIONS AND/OR DETAILS.
	SECURITY CAMERA, WALL MOUNTED DEVICE. REFER TO DRAWINGS AND/OR SPECIFICATIONS FOR CAMERA LOCATIONS AND/OR DETAILS.
	WIRELESS COMMUNICATIONS ACCESS POINT.
	THERMOSTAT CONTROL JUNCTION BOX. E.C. IS RESPONSIBLE FOR INSTALLATION OF ROUGH-IN BOX AND CONDUIT FOR EQUIPMENT INSTALLATION. VERIFY EXACT LOCATION AND INSTALLATION REQUIREMENTS WITH THE MECHANICAL DRAWINGS AND THE MECHANICAL CONTRACTOR.
	SPEAKER, SURFACE-MOUNTED DEVICE. REFER TO DRAWINGS AND/ OR SPECIFICATIONS FOR DETAILS.
	SINGLE-FACED CEILING/WALL MOUNTED CLOCK. VERIFY EXACT LOCATION WITH THE ARCHITECTURAL DRAWINGS AND ARCHITECT PRIOR TO ROUGH-IN.
	ACCESS CONTROL PROXIMITY CARD READER. REFER TO DRAWINGS FOR DETAILS AND SPECIFICATIONS.
	ACCESS CONTROL DOOR RELEASE BUTTON. REFER TO DRAWINGS FOR DETAILS AND SPECIFICATIONS.
	JUNCTION BOX FOR TELEVISION CABLE OUTLET. MOUNT AT 84" A.F.F. TO CENTERLINE UNLESS NOTED OTHERWISE. PROVIDE 4-11/16" SQUARE BOX WITH SINGLE-GANG PLASTER RING AND PROVIDE 3/4"C WITH PULL STRING FROM BOX TO 1' ABOVE FINISHED CEILING. VERIFY EXACT LOCATION WITH THE ARCHITECTURAL DRAWINGS AND ARCHITECT.
	RJ45 TELEPHONE SYSTEM OUTLET. MOUNT AT 54" A.F.F. TO CENTERLINE UNLESS NOTED OTHERWISE. PROVIDE 4-11/16" SQUARE BOX WITH SINGLE-GANG PLASTER RING AND PROVIDE 3/4"C WITH PULL STRING FROM BOX TO 1' ABOVE FINISHED CEILING. INSTALL ONE (1) CAT 5e CABLE FROM OUTLET BOX TO COMMUNICATION ROOM AND TERMINATE AS DIRECTED BY THE OWNER. VERIFY EXACT LOCATION WITH THE ARCHITECTURAL DRAWINGS AND ARCHITECT.
	RJ11 TELEPHONE SYSTEM OUTLET. MOUNT AT 54" A.F.F. TO CENTERLINE UNLESS NOTED OTHERWISE. PROVIDE 4-11/16" SQUARE BOX WITH SINGLE-GANG PLASTER RING AND PROVIDE 3/4"C WITH PULL STRING FROM BOX TO 1' ABOVE FINISHED CEILING. INSTALL ONE (1) CAT 5e CABLE FROM OUTLET BOX TO COMMUNICATION ROOM AND TERMINATE AS DIRECTED BY THE OWNER. VERIFY EXACT LOCATION WITH THE ARCHITECTURAL DRAWINGS AND ARCHITECT.
	COMMUNICATION SYSTEM OUTLET. MOUNT AT 18" A.F.F. TO CENTERLINE UNLESS NOTED OTHERWISE. PROVIDE 4-11/16" SQUARE BOX WITH SINGLE-GANG PLASTER RING AND PROVIDE 3/4"C WITH PULL STRING FROM BOX TO 1' ABOVE FINISHED CEILING. PROVIDE RJ45 & VOIP JACKS & COVER PLATE WITH FINAL TERMINATIONS AT JACK. INSTALL CAT6 CABLES (UNLESS DESIGNATED OTHERWISE) FROM OUTLET BOX TO COMMUNICATION ROOM AND TERMINATE TO PUNCH-DOWN BLOCK (OR AS DIRECTED BY THE OWNER), LABEL, AND TEST. VERIFY EXACT LOCATION WITH THE ARCHITECTURAL DRAWINGS AND ARCHITECT. TYPICAL TWO COMMUNICATION WIRING (2) DROPS PER OUTLET LOCATION UNLESS OTHERWISE INDICATED BY SUBSCRIPT. (EXAMPLE: "3" INDICATES NUMBER THREE (3) NUMBER OF DROPS TO OUTLET LOCATION.)
	PUSH BUTTON. REFER TO DRAWINGS AND/OR SPECIFICATIONS FOR DETAILS.
	EMERGENCY STOP PUSH BUTTON. REFER TO DRAWINGS AND/OR SPECIFICATIONS FOR DETAILS.
	INTERCOM PAGING SYSTEM. REFER TO DRAWINGS FOR DETAILS AND SPECIFICATIONS.
	EMERGENCY LOCKDOWN KEYED SWITCH. REFER TO DRAWINGS FOR DETAILS AND SPECIFICATIONS.
	SECURITY MOTION DETECTOR.

FIRE ALARM AND DETECTION SYMBOL LEGEND

	AUDIBLE AND VISUAL SIGNAL. MOUNT AT 82" A.F.F. TO CENTERLINE UNLESS OTHERWISE NOTED.
	VISUAL SIGNAL ONLY. MOUNT AT 82" A.F.F. TO CENTERLINE UNLESS OTHERWISE NOTED.
	MANUALLY OPERATED PULL STATION MOUNT AT 46" A.F.F. TO CENTERLINE UNLESS NOTED OTHERWISE.
	CARBON MONOXIDE DETECTOR MOUNTED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS.
	AUTOMATIC SMOKE DETECTOR, PHOTOELECTRIC TYPE, CEILING MOUNTED.
	COMBINATION AUTOMATIC SMOKE AND CARBON MONOXIDE DETECTOR TYPE CEILING MOUNTED
	AUTOMATIC DUCT SMOKE DETECTOR, PHOTOELECTRIC TYPE, CEILING MOUNTED. CONNECT TO EXISTING SECURITY SYSTEM
	HEAT DETECTOR COMBINATION FIXED TEMP. AND RATE OF RISE, CEILING MOUNTED.
	FIRE ALARM SYSTEMS MAGNETIC DOOR HOLDER. MOUNT AT 84" A.F.F. TO CENTERLINE UNLESS NOTED OTHERWISE. VERIFY EXACT LOCATION WITH THE ARCHITECTURAL DRAWINGS AND ARCHITECT.
	REMOTE ANNUNCIATOR PANEL. MOUNT AT 54" A.F.F. TO CENTERLINE UNLESS NOTED OTHERWISE. VERIFY EXACT LOCATION WITH THE ARCHITECTURAL DRAWINGS AND ARCHITECT.
	FIRE ALARM CONTROL PANEL. MOUNT AT 54" A.F.F. TO CENTERLINE UNLESS NOTED OTHERWISE. VERIFY EXACT LOCATION WITH THE ARCHITECTURAL DRAWINGS AND ARCHITECT.
	SPRINKLER SYSTEM FLOW SWITCH. FURNISHED AND INSTALLED BY THE FIRE PROTECTION CONTRACTOR, CONNECTED TO THE FIRE ALARM AND DETECTION SYSTEM BY THE ELECTRICAL CONTRACTOR. VERIFY LOCATION AND EXACT QUANTITY WITH THE EQUIPMENT PROVIDER PRIOR TO ROUGH-IN AND ZONE ADDRESSABLE MONITOR MODULE ALLOCATION.
	SPRINKLER SYSTEM TAMPER SWITCH. FURNISHED AND INSTALLED BY THE FIRE PROTECTION CONTRACTOR, CONNECTED TO THE FIRE ALARM AND DETECTION SYSTEM BY THE ELECTRICAL CONTRACTOR. VERIFY LOCATION AND EXACT QUANTITY WITH THE EQUIPMENT PROVIDER PRIOR TO ROUGH-IN AND ZONE ADDRESSABLE MONITOR MODULE ALLOCATION.
	PUSH BUTTON. REFER TO DRAWINGS AND/OR SPECIFICATIONS FOR DETAILS.
	EMERGENCY STOP PUSH BUTTON. REFER TO DRAWINGS AND/OR SPECIFICATIONS FOR DETAILS.

ELECTRICAL DEMOLITION NOTES

- THE GENERAL DEMOLITION NOTES LISTED HERE APPLY TO THE ELECTRICAL DEMOLITION DRAWINGS IN ADDITION TO ANY CODED NOTES INDICATED ON THE DEMOLITION DRAWINGS.
- AN ATTEMPT HAS BEEN MADE TO SHOW ALL ELECTRICAL ITEMS TO REMAIN OR BE REMOVED. THE ELECTRICAL CONTRACTOR (EC) SHALL FIELD VERIFY EXISTING CONDITIONS AND REMOVE OR RELOCATE ANY ITEM WHICH INTERFERES WITH NEW CONSTRUCTION. THE SCHEDULED DEMOLITION IS BASED ON FIELD OBSERVATIONS AND EXISTING RECORD DOCUMENTS. THE ELECTRICAL CONTRACTOR SHALL REPORT DISCREPANCIES TO THE OWNER OR ENGINEER BEFORE DISTURBING EXISTING INSTALLATIONS.
- THE ELECTRICAL CONTRACTOR (EC) SHALL DISCONNECT AND REMOVE EXISTING ELECTRICAL DISTRIBUTION EQUIPMENT, ELECTRICAL DEVICES, CONDUIT AND WIRING, AND ALL EQUIPMENT ACCESSORIES IN THE AREA AS INDICATED ON THE DEMOLITION DRAWING. THE ELECTRICAL CONTRACTOR SHALL REMOVE UNUSED CONDUIT AND WIRING TO THE SOURCE OF ELECTRICAL DISTRIBUTION.
- THE ELECTRICAL CONTRACTOR (EC) SHALL PROTECT ALL EXISTING EQUIPMENT AND EXISTING INSTALLATIONS THAT ARE SCHEDULED TO REMAIN IN SERVICE FROM DAMAGE. REFEED ANY ITEM WHOSE WIRING IS INTERRUPTED DUE TO WORK IN ADJACENT AREAS.
- THE ELECTRICAL CONTRACTOR (EC) SHALL REMOVE ALL HANGERS AND SUPPORTS SERVING CONDUIT AND WIRE BEING DEMOLISHED. PROVIDE AND/OR ADJUST EXISTING HANGERS TO SUPPORT ANY REMAINING CONDUIT AND WIRE, OR EQUIPMENT ADJACENT TO DEMOLISHED AREAS AND EQUIPMENT.
- THE ELECTRICAL CONTRACTOR (EC) SHALL REMOVE ALL EXISTING WIRING AND CONDUITS BEING ABANDONED. ABANDONED CONDUITS SHALL BE CUT FLUSH AT CEILINGS AND FLOORS AND BE PROPERLY CLOSED.
- MAKE ALL ELECTRICAL DEMOLITION SAFE FOR ALL PARTICIPATING CONTRACTORS. PROTECT ALL WIRING AND ELECTRICAL CONNECTIONS THAT REMAIN IN SERVICE FROM DAMAGE.

ELECTRICAL CONSTRUCTION NOTES

- THE DRAWINGS INDICATE GENERAL ELECTRICAL INSTALLATIONS AND ASSOCIATED EQUIPMENT QUANTITIES. ALL NEW INSTALLATIONS SHALL BE COORDINATED WITH THE OWNER.
- THE OWNER SHALL BE NOTIFIED IMMEDIATELY OF ANY PRESENCE OF ASBESTOS MATERIAL DISCOVERED DURING CONSTRUCTION. ANY ASBESTOS MATERIAL SHALL BE REMOVED BY OTHERS.
- ALL BUILDING UTILITIES AND BUILDING STRUCTURES SHALL BE PROTECTED FROM DAMAGE DURING CONSTRUCTION. THE ELECTRICAL CONTRACTOR (EC) SHALL BE RESPONSIBLE FOR RESTORING ALL EXISTING FEATURES AND REPAIRING ANY UTILITIES DAMAGED BY CONSTRUCTION TO A CONDITION SATISFACTORY TO THE OWNER.
- ALL NEW ELECTRICAL INSTALLATIONS SHALL BE DOCUMENTED AND ELECTRICAL PANEL SCHEDULES UPDATED.
- THE ELECTRICAL DESIGN DRAWINGS ARE DIAGRAMMATIC AND ARE NOT INTENDED TO SHOW EXACT LOCATION OF EQUIPMENT AND DEVICES UNLESS DIMENSIONS ARE GIVEN OR OTHERWISE IMPLIED FOR CLEARANCES. ALL ELECTRICAL EQUIPMENT ARE TO BE INSTALLED ALONG WITH THE GENERAL PLANS. ALL LABOR AND MATERIALS AND OTHER RELATED WORK NECESSARY TO PROVIDE MINOR OFFSETS IN ELECTRICAL WORK AS REQUIRED TO AVOID CONFLICT WITH OTHER WORK OR CLEARANCES SHALL BE INCLUDED IN THE ELECTRICAL BID.
- THE ELECTRICAL CONTRACTOR (EC) SHALL PROVIDE FIRESEALING OF ALL OPENINGS THROUGH FIRE RATED WALLS AND ASSEMBLIES CREATED BY NEW ELECTRICAL INSTALLATIONS OR THE SCHEDULED REMOVAL OF EXISTING INSTALLATIONS.

SECURITY SYSTEM AND CONTROLS LEGEND

	KEYPAD		ACCESS CONTROL PANEL
	REQUEST-TO-EXIT MOTION SENSOR		SECURITY SYSTEM CONTROL PANEL
	ELECTRIC STRIKE		VIDEO SERVER
	DOOR CONTACT		NODE
	OVERHEAD DOOR CONTACT		EXIT LATCH RETRACTION
	CARD READER		AIPHONE INTERCOM & CARD READER

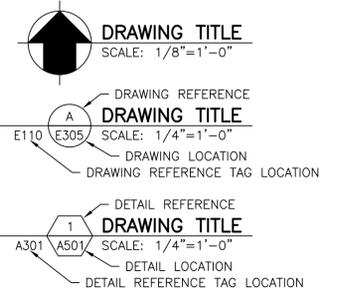
MATERIALS

	FIBER-REINFORCED CONCRETE
	CONCRETE
	CONCRETE MASONRY
	BRICK OR HOT MIX ASPHALT
	WELL-GRADED STONE/GRAVEL
	UNIFORM-GRADED STONE/GRAVEL
	WOOD BLOCKING
	RIGID INSULATION
	BATT INSULATION
	STEEL
	SOIL
	BEDROCK
	SAND
	CARPET (SURFACE)
	HARDWOOD FLOOR (SURFACE)
	WOOD SHEATHING (SURFACE)
	CERAMIC TILE (SURFACE)
	VCT (SURFACE)
	CLAY TILE FLOORING (SURFACE)
	SAND/GYPSUM/HOT MIX ASPHALT (SURFACE)

ANNOTATIONS

	CODED NOTE
	DEMOLITION NOTE
	REVISION TAG
	ELEVATION VIEW REFERENCE TAG
	INTERIOR ELEVATION REFERENCE TAG
	SECTION VIEW REFERENCE TAG
	DETAIL REFERENCE TAG
	CALLOUT AREA FOR VIEW (OPTIONAL)
	ROOM TAG
	LEVEL REFERENCE TAG
	COLUMN GRID TAG
	BEARING ELEVATION OR TOP SURFACE ELEVATION
	MARK TAG
	SLOPE
	TRUE NORTH
	PROJECT NORTH
	NORTH ARROWS

MATCHLINE MXXX
CALLOUT SHEET ON WHICH THE DRAWING CONTINUES



Architects-Engineers-Surveyors
11283 Emerson Avenue
Parkersburg, West Virginia 26104
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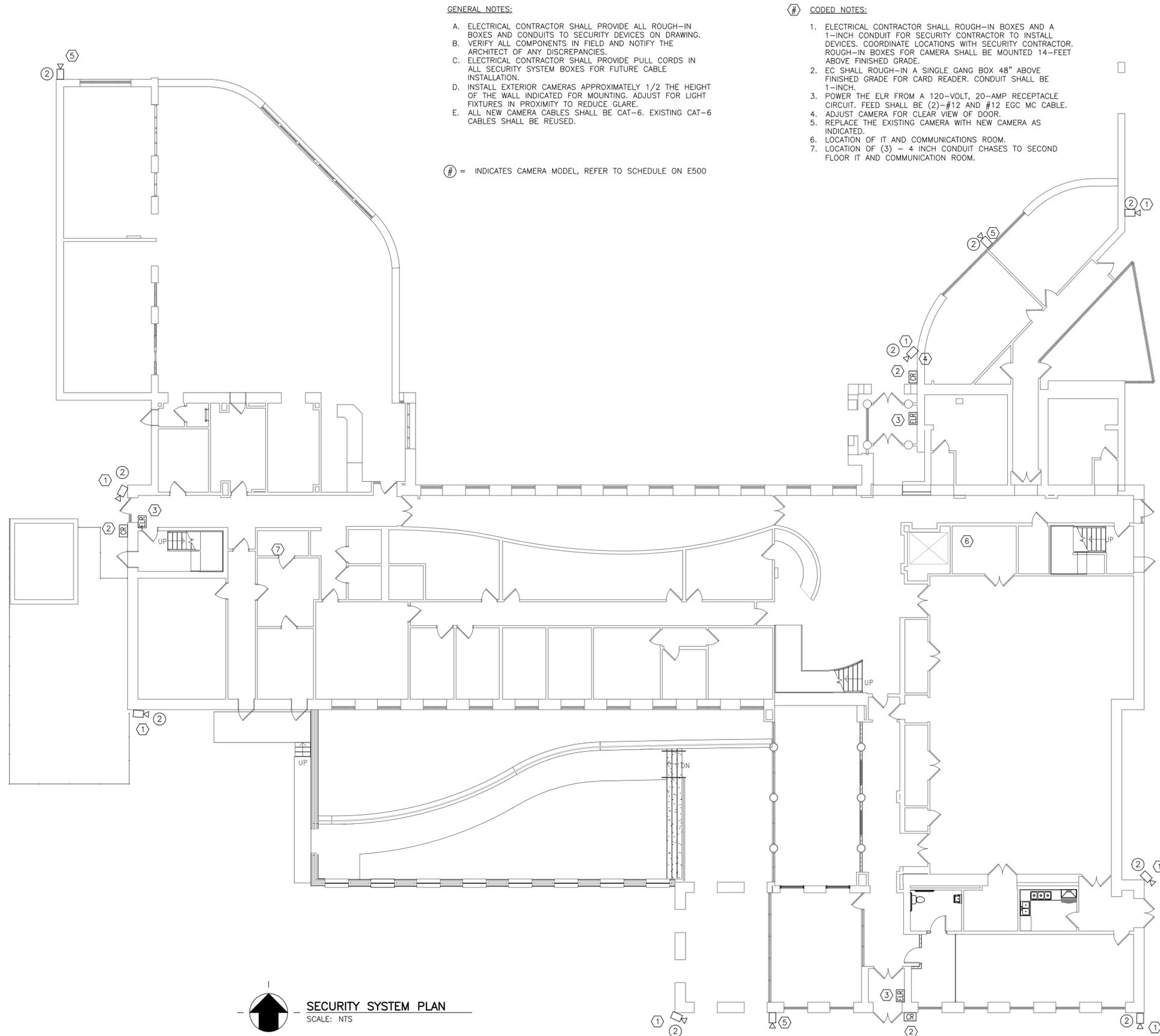
03/04/26	Date
CSH	By
ISSUED FOR CONSTRUCTION	Description
0	Rev.

Drawing Description
PIERPONT COMMUNITY & TECHNICAL COLLEGE
501 W MAIN ST. CLARKSBURG, WV
PIERPONT CAPERTON SECURITY SYSTEM
ELECTRICAL SYMBOL LEGEND AND ABBREVIATIONS



Project:	2268000
Designed By:	CSH
Drawn By:	BEM
Checked By:	CSH
Scale:	NTS
Plot Date:	03/04/26
Revision:	0

Drawing Number:
E001



GENERAL NOTES:

- A. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL ROUGH-IN BOXES AND CONDUITS TO SECURITY DEVICES ON DRAWING.
- B. VERIFY ALL COMPONENTS IN FIELD AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.
- C. ELECTRICAL CONTRACTOR SHALL PROVIDE PULL CORDS IN ALL SECURITY SYSTEM BOXES FOR FUTURE CABLE INSTALLATION.
- D. INSTALL EXTERIOR CAMERAS APPROXIMATELY 1/2 THE HEIGHT OF THE WALL INDICATED FOR MOUNTING. ADJUST FOR LIGHT FIXTURES IN PROXIMITY TO REDUCE GLARE.
- E. ALL NEW CAMERA CABLES SHALL BE CAT-6. EXISTING CAT-6 CABLES SHALL BE REUSED.

Ⓝ = INDICATES CAMERA MODEL, REFER TO SCHEDULE ON E500

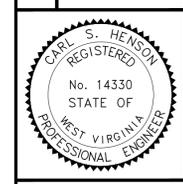
CODED NOTES:

- 1. ELECTRICAL CONTRACTOR SHALL ROUGH-IN BOXES AND A 1-INCH CONDUIT FOR SECURITY CONTRACTOR TO INSTALL DEVICES. COORDINATE LOCATIONS WITH SECURITY CONTRACTOR. ROUGH-IN BOXES FOR CAMERA SHALL BE MOUNTED 14- FEET ABOVE FINISHED GRADE.
- 2. EC SHALL ROUGH-IN A SINGLE GANG BOX 48" ABOVE FINISHED GRADE FOR CARD READER. CONDUIT SHALL BE 1-INCH.
- 3. POWER THE ELR FROM A 120-VOLT, 20-AMP RECEPTACLE CIRCUIT. FEED SHALL BE (2)-#12 AND #12 EGC MC CABLE.
- 4. ADJUST CAMERA FOR CLEAR VIEW OF DOOR.
- 5. REPLACE THE EXISTING CAMERA WITH NEW CAMERA AS INDICATED.
- 6. LOCATION OF IT AND COMMUNICATIONS ROOM.
- 7. LOCATION OF (3) - 4 INCH CONDUIT CHASES TO SECOND FLOOR IT AND COMMUNICATION ROOM.

SECURITY SYSTEM PLAN
SCALE: NTS

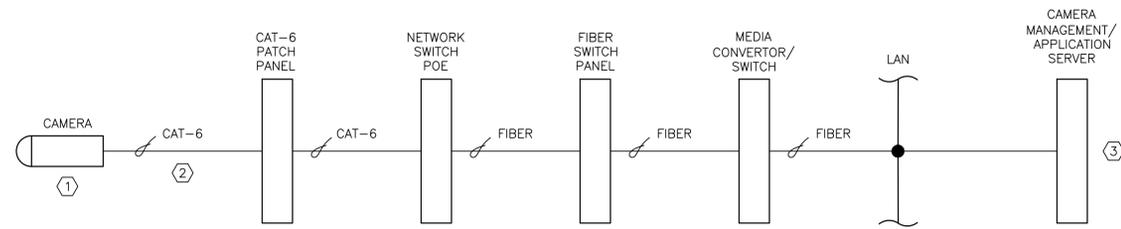
Rev.	By	Date	Description
0	CSH	03/04/26	ISSUED FOR CONSTRUCTION

Drawing Description	PIERPONT COMMUNITY & TECHNICAL COLLEGE
	501 W MAIN ST. CLARKSBURG, WV
	PIERPONT CAPERION SECURITY SYSTEM
	SECURITY SYSTEM PLAN



Project:	2268000
Designed By:	CSH
Drawn By:	BEM
Checked By:	CSH
Scale:	NTS
Plot Date:	03/04/26
Revision:	0

Drawing Number:
E130



CODED NOTES:

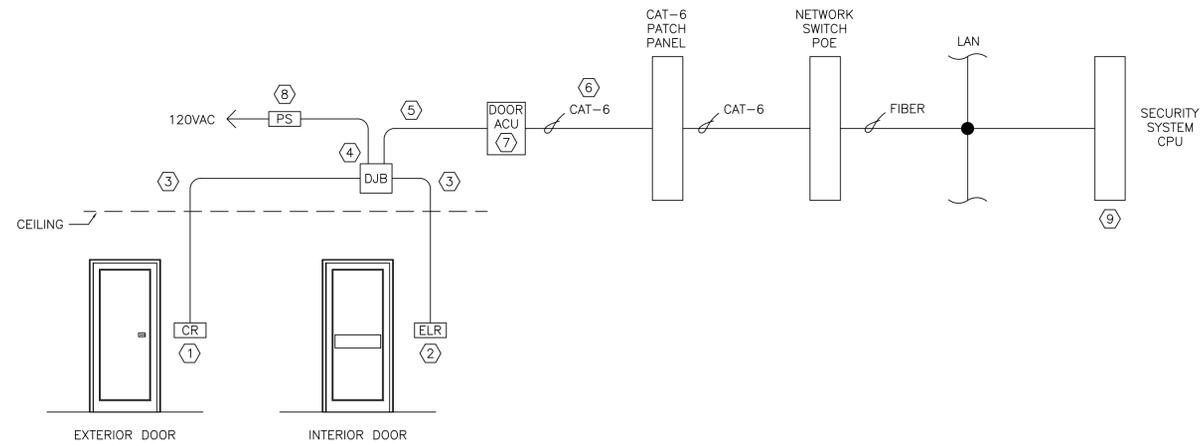
1. PURCHASE AND INSTALL CAMERA PER MANUFACTURERS INSTRUCTION. INSTALL MOUNTING HARDWARE AND WEATHER-PROOF DEVICE AS REQUIRED BY LOCATION.
2. PURCHASE AND INSTALL CAT-6 PLENUM RATED CABLE FROM CAMERA TO LOCAL AREA NETWORK (LAN) PATCH PANEL. ROUTE CABLE IN CONDUIT WHERE EXPOSED TO PHYSICAL DAMAGE, CONCEALED WALL, OR UNDER FLOOR.
3. PURCHASE AND INSTALL CAMERA MANAGEMENT AND APPLICATION SERVER EXACQVISION MODEL #IP04-06T-R2A. SUBSTITUTIONS NOT PERMITTED. INSTALLER SHALL BE RESPONSIBLE FOR INTERFACING SERVER ON LOCAL AREA NETWORK (LAN). PROVIDE ALL CAMERA LICENSES REQUIRED.

1 STANDARD CAMERA DIAGRAM
E500 SCALE: N.T.S.

ADMINISTRATION BUILDING SECURITY CAMERA EQUIPMENT LIST BASIS OF DESIGN SCHEDULE					
DESIGNATION	EQUIPMENT DESCRIPTION	MANUFACTURER	PRODUCT LINE	MODEL #	COMMENTS
1	12 MP 360 DEGREE IR PANORAMIC	AXIS	AXIS M43 SERIES	M4318-PLVE	SECURITY CONTRACTOR SHALL PROVIDE AND INSTALL ALL HARDWARE AND CABLES NECESSARY FOR A COMPLETE SYSTEM.
2	5 MP DOME, OUTDOOR, IR CAMERA	AXIS	AXIS P32 SERIES	P3267-LVE	SECURITY CONTRACTOR SHALL PROVIDE AND INSTALL ALL HARDWARE AND CABLES NECESSARY FOR A COMPLETE SYSTEM.

NOTES:

1	SUBSTITUTIONS ARE PERMITTED WITH APPROVAL FROM THE ENGINEER. MUST BE COMPATIBLE WITH S2 EQUIPMENT.
2	



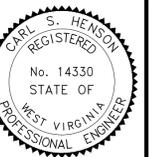
CODED NOTES:

1. INSTALL SINGLE GANG BOX FOR CARD READER.
2. INSTALL EXIT LATCH REFRACTION AND ALL ASSOCIATED HARDWARE.
3. INSTALL A 3/4 INCH CONDUIT FOR CABLE ROUTING.
4. INSTALL A 12 IN X 12 IN X 4 IN (MINIMAL) DOOR JUNCTION BOX.
5. INSTALL A 1 INCH CONDUIT FOR CABLE ROUTING.
6. ROUTE A CAT-6 PLENUM RATED CABLE FROM DOOR ACTUATOR CONTROLLER TO LOCAL AREA NETWORK (LAN). INSTALLER SHALL BE RESPONSIBLE FOR PROGRAMMING CONTROLLER AND LAN INTERFACING.
7. INSTALL A DOOR CONTROLLER ACTUATION (ACU) TO OPERATE ELECTRIC LATCH RELEASE.
8. INSTALL A POWER SUPPLY FOR DOOR OPERATORS. SUPPLY VOLTAGE SHALL BE FROM A 120-VOLT A.C. 20-AMP (MAX) CIRCUIT. PROVIDE A LOTO DEVICE.
9. INSTALLER SHALL PURCHASE AND INSTALL ALL HARDWARE NECESSARY TO INTERCONNECT THE NEW DOOR ACCESS CONTROL EQUIPMENT. INSTALLER SHALL BE RESPONSIBLE FOR WORKING WITH THE EXISTING SECURITY SYSTEM AND PROGRAMMING ACCESS CONTROL DEVICES INTO EXISTING SECURITY SYSTEM NETWORK.

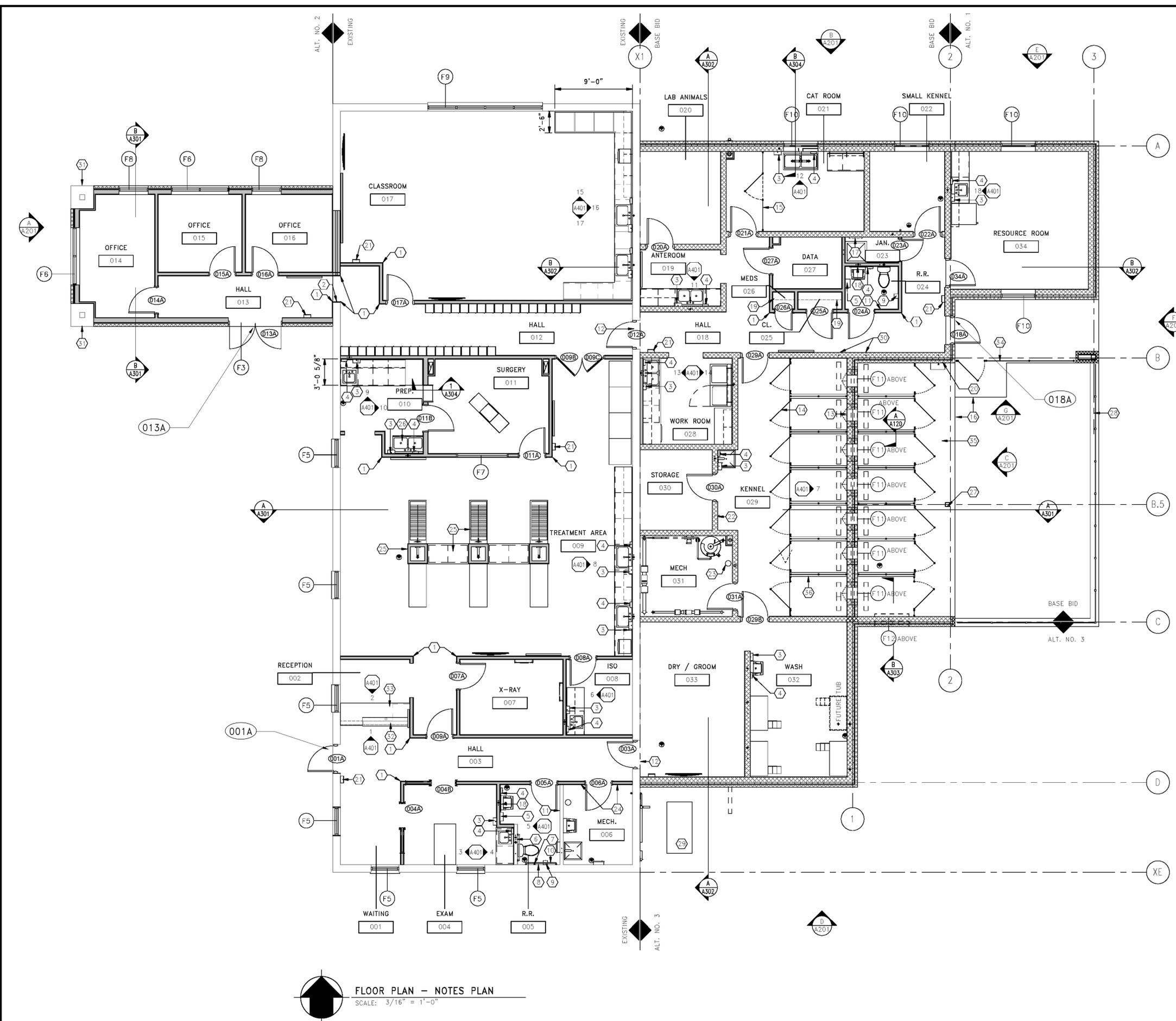
2 STANDARD SECURE ENTRANCE/EXIT DIAGRAM
E500 SCALE: N.T.S.

Date	By	Description	Rev.
03/04/26	CSH	ISSUED FOR CONSTRUCTION	0

Drawing Description
PIERPONT COMMUNITY & TECHNICAL COLLEGE
501 W MAIN ST. CLARKSBURG, WV
PIERPONT CAPERTON SECURITY SYSTEM
DETAILS AND SCHEDULES



Project:	2268000
Designed By:	CSH
Drawn By:	RCM
Checked By:	CSH
Scale:	NTS
Plot Date:	03/04/26
Revision:	0
Drawing Number:	E500



- GENERAL NOTES**
- COLUMN LINES REFER TO FACE OF CMU WALL, UNLESS NOTED OTHERWISE - TYP.
 - SEE SHEET A110.B FOR BASE BID PLAN WITHOUT ALTERNATES.
 - SEE SHEETS A140 & A141 FOR EQUIPMENT DETAILS.
 - ALL BASE CABINETS SHALL BE 24" DEEP UNLESS NOTE OTHERWISE.
 - ALL EXTERIOR CORNERS OF INTERIOR CMU WALLS SHALL BE BULLNOSE.
 - SEE DWG. A101 FOR TYP. MOUNTING HEIGHTS OF TOILETS ACCESSORIES.
 - SLOPE ALL SLABS TO FLOOR DRAINS - TYP.
 - PATCH & FINISH ALL EXISTING GYP. BOARD WALLS WHERE DAMAGED @ DEMOLISHED WALLS.

- CODED NOTES**
- 4'-0" HIGH ST. STL. CORNER GUARD.
 - COVER OPENING W/5/8" GYP. BD. OVER 7/8" MET. FURRING.
 - PAPER TOWEL DISPENSER-PROVIDED AND INSTALLED BY OWNER.
 - SOAP DISPENSER-PROVIDED AND INSTALLED BY OWNER.
 - ELEC. HAND DRYER.
 - 36" GRAB BAR.
 - 18" GRAB BAR (VERT.).
 - REMOVE EXIST. GYP. BD. AS REQ'D. TO PROVIDE BLOCKING IN EXIST. WALLS FOR WALL-MTD. ACCESSORIES.
 - TOILET TISSUE DISPENSER.
 - 42" GRAB BAR.
 - COAT HOOK.
 - CAREFULLY COORDINATE LOCATION OF DOOR OPENING WITH WALLS OF ADDITION, TOOTH-IN, REPAIR AND FINISH JAMBS TO MATCH EXIST. ADJ. WALLS.
 - 4" HIGH CONC. CURB & GUILLOTINE DOOR- TYP. @ 7 KENNELS.
 - 3'-0" WIDE X 6'-0" HIGH GATES, TYP. @ INTERIOR & EXTERIOR KENNELS. - PROVIDED BY OWNER & INSTALLED BY CONTRACTOR.
 - FULL HEIGHT METAL MESH ENCLOSURE W/ 3'-0" WIDE GATE. EDGE OF CONCRETE PAD.
 - MOP/BROOM HOLDER W/SHELF.
 - 24" X 40" MIRROR.
 - PLAS. LAM./PLYWOOD SHELVES ON ADJUSTABLE BRACKETS/STANDARDS; 16" DEEP X WIDTH OF CLOSET; FIVE HIGH.
 - WALL-MTD. PLASTIC HOSE HANGER.
 - SURFACE-MTD. FIRE EXTINGUISHER CABINET.
 - WALL-MTD. METAL HOSE REEL.
 - FIRE EXTINGUISHER.
 - LOCATION OF 1-HR. RATED WALL UNDER ALT. NO. 3.
 - SEE DWGS. A140 & A141 FOR EQUIPMENT- TYP.
 - PLUMBING EQUIPMENT - SEE PLUMBING DRAWINGS.
 - PTD. STL. COL. - SEE STRUCT. DWGS.
 - 42" HIGH PTD. STL. GUARDRAIL ON RETAINING WALL - SEE CIVIL DWGS.
 - GENERATOR & PAD - SEE ELEC. & CIVIL DWGS.
 - 8" x 8" ACCESS PANEL, 36" ABOVE FIN. FL. - COORD. W/ PLUMB. VALVE.
 - EXIST. MASONRY COLUMNS TO REMAIN.
 - 10" WIDE PLASTIC LAMINATE TRANSACTION COUNTER.
 - PLASTIC LAMINATE DESK & DRAWERS.
 - 6'-0" HIGH DECORATIVE ALUM. FENCE & GATE - SEE SPECS.
 - APPLY CONCRETE SEALER TO EXTERIOR KENNEL SLAB WITHIN FENCED IN AREA. SEE SPEC. SECTION 09 00 00.
 - 4'-0" HIGH 6" PTD. CMU W/2'-0" HIGH MESH PARTITION ABOVE. - PROVIDED BY OWNER & INSTALLED BY CONTRACTOR.

FLOOR PLAN - NOTES PLAN
SCALE: 3/16" = 1'-0"

DRAWING PROVIDED FOR REFERENCE ONLY.



Rev.	Description	By	Date
0	ISSUED FOR REBID	EW	01/16/2026
1	ISSUED FOR BID	EW	02/01/2022

Drawing Description
PIERPONT COMMUNITY & TECHNICAL COLLEGE
501 W MAIN ST. CLARKSBURG, WV
PIERPONT VET TECH RELOCATION
NOTES PLAN

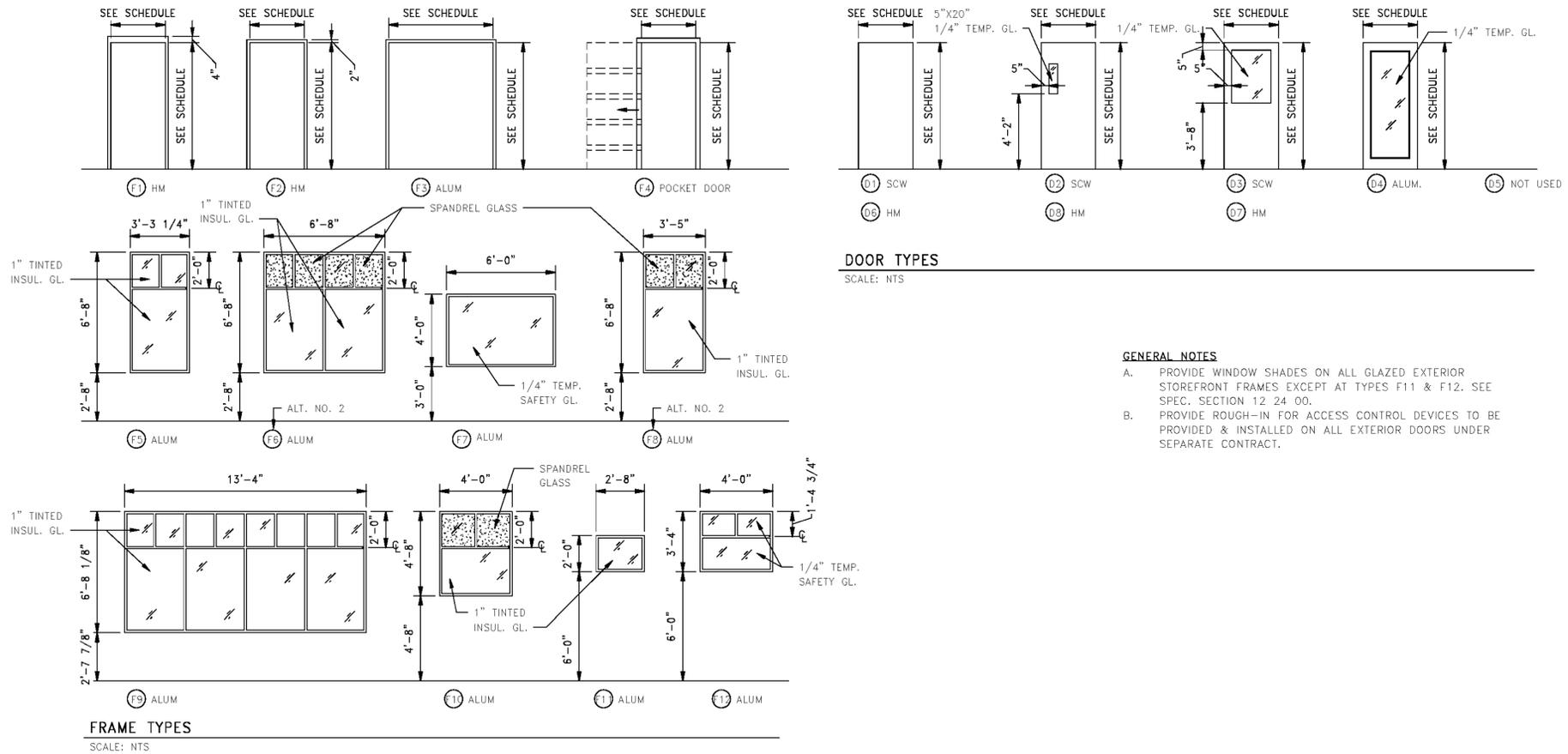
Project:	2201011
Designed By:	JGH
Drawn By:	JGH
Checked By:	PJW
Scale:	As indicated
Plot Date:	02/01/2022
Revision:	0

SHEET NUMBER	SHEET NAME
A101	ADA REQUIREMENTS
A102	WALL TYPES
A110	NOTES PLAN
A110.B	NOTES PLAN - BASE BID
A111	REFLECTED CEILING PLAN
A112	ROOF PLAN
A120	DIMENSION PLAN
A140	EQUIPMENT PLAN & SCHEDULE
A141	EQUIPMENT PLAN & SCHEDULE

Drawing Number:
A110

ROOM FINISH SCHEDULE						
ROOM #	NAME	FLOOR FINISH	BASE FINISH	WALL FINISH	CEILING FINISH	COMMENTS
001	WAITING	LVT	VINYL	PAINT	LAY-IN	
002	RECEPTION	LVT	VINYL	PAINT	LAY-IN	
003	HALL	LVT	VINYL	PAINT	LAY-IN	
004	EXAM	LVT	VINYL	PAINT	LAY-IN	
005	R.R.	LVT	VINYL	PAINT	LAY-IN	
006	MECH.	SEALED CONC.	VINYL	PAINT	LAY-IN	
007	X-RAY	LVT	VINYL	PAINT	LAY-IN	
008	ISO	SHEET VINYL	VINYL	PAINT	GYP.BD.	
009	TREATMENT AREA	SHEET VINYL	VINYL	PAINT	LAY-IN	
010	PREP.	SHEET VINYL	VINYL	PAINT	GYP.BD.	
011	SURGERY	SHEET VINYL	VINYL	PAINT	GYP.BD.	
012	HALL	LVT	VINYL	PAINT	LAY-IN	
013	HALL	LVT	VINYL	PAINT	LAY-IN	ALT. NO. 2
014	OFFICE	CARPET TILE	VINYL	PAINT	LAY-IN	ALT. NO. 2
015	OFFICE	CARPET TILE	VINYL	PAINT	LAY-IN	ALT. NO. 2
016	OFFICE	CARPET TILE	VINYL	PAINT	LAY-IN	ALT. NO. 2
017	CLASSROOM	LVT	VINYL	PAINT	LAY-IN	
018	HALL	SHEET VINYL	VINYL	PAINT	LAY-IN	
019	ANTEROOM	SHEET VINYL	VINYL	PAINT	GYP. BD.	
020	LAB ANIMALS	SHEET VINYL	VINYL	PAINT	GYP. BD.	
021	CAT ROOM	SHEET VINYL	VINYL	PAINT	GYP. BD.	
022	SMALL KENNEL	SHEET VINYL	VINYL	PAINT	GYP. BD.	
023	JAN.	SEALED CONC.	VINYL	PAINT	LAY-IN	
024	R.R.	LVT	VINYL	PAINT	LAY-IN	
025	CL.	LVT	VINYL	PAINT	LAY-IN	
026	MEDS	LVT	VINYL	PAINT	LAY-IN	
027	DATA	LVT	VINYL	PAINT	LAY-IN	
028	WORK ROOM	LVT	VINYL	PAINT	LAY-IN	
029	KENNEL	RESINOUS	RESINOUS	EPOXY PAINT	GYP. BD.	APPLY CONCRETE SEALER TO EXTERIOR SLAB @ KENNELS
030	STORAGE	VCT	NONE	PAINT	LAY-IN	
031	MECH	SEALED CONC.	NONE	PAINT	PTD. STRUCTURE	
032	WASH	SEALED CONC.	VINYL	PAINT	LAY-IN	ALT. NO. 3
033	DRY / GROOM	SEALED CONC.	VINYL	PAINT	LAY-IN	ALT. NO. 3
034	RESOURCE ROOM	LVT	VINYL	PAINT	LAY-IN	ALT. NO. 1

DOOR SCHEDULE											
MARK	SIGNAGE DISPLAY	DOOR TYPE	WIDTH	HEIGHT	DOOR HARDWARE	DOOR MATERIAL	FRAME TYPE	FRAME MATERIAL	FIRE RATING	COMMENTS	
001A	EXIT	D7	3'-0"	6'-8"	16	HM	F2	HM		VERIFY MASONRY OPNG. IN FIELD	
003A	TBD	D2	3'-0"	7'-0"	11 ALT	SCW	F1	HM	90 MIN.	ALT. NO.3 ONLY	
004A	EXAM ROOM	D1	3'-0"	7'-0"	14	SCW	F4	ALUM		POCKET DOOR : OPEN SIZE TO BE 3'-0"	
004B	EXAM ROOM	D1	3'-0"	7'-0"	15	SCW	F4	ALUM		POCKET DOOR : OPEN SIZE TO BE 3'-0"	
005A	RESTROOM	D1	3'-0"	7'-0"	13	SCW	F2	HM			
006A	MECH.	D1	3'-0"	7'-0"	1 ALT	SCW	F2	HM	60 MIN.	ALT. NO. 3 ONLY	
006A	MECH.	D1	3'-0"	7'-0"	1	SCW	F2	HM	60 MIN.	BASE BID ONLY	
007A	X-RAY	D2	3'-0"	7'-0"	12	SCW	F2	HM		LEAD LINED - NO CLOSER, LOCKABLE	
008A	ISOLATION	D3	3'-0"	7'-0"	3	HM	F2	HM			
009A	TREATMENT	D3	3'-0"	7'-0"	20	SCW	F2	HM			
009B	TREATMENT	D3	3'-0"	7'-0"	23	SCW	F2	HM			
009C	TREATMENT	D1	2'-6"	7'-0"	22	SCW	F2	HM		INACTIVE LEAF	
011A	SURGERY	D3	3'-0"	7'-0"	3	SCW	F2	HM			
011B	~	D3	3'-0"	7'-0"	4	SCW	F2	HM			
012A	TBD	D2	3'-0"	7'-0"	19	SCW	F1	HM	90 MIN.	ELECTRIC HOLD-OPEN	
012B	SEE NOTE**	D4	3'-0"	7'-0"	17	ALUM	F3	ALUM		BASE BID ONLY; **(2 SIGNS) STAFF ENTRANCE (EXTERIOR) & EXIT (INTERIOR)	
013A	SEE NOTE**	D4	6'-0"	7'-0"	18 ALT	ALUM	F3	ALUM		ALT. NO.2 ONLY; **(2 SIGNS) STAFF ENTRANCE (EXTERIOR) & EXIT (INTERIOR)	
014A	OFFICE	D2	3'-0"	7'-0"	10 ALT	SCW	F2	HM		ALT. NO.2 ONLY	
015A	OFFICE	D2	3'-0"	7'-0"	10 ALT	SCW	F2	HM		ALT. NO.2 ONLY	
016A	OFFICE	D2	3'-0"	7'-0"	10 ALT	SCW	F2	HM		ALT. NO.2 ONLY	
017A	CLASSROOM	D2	3'-0"	7'-0"	5	SCW	F2	HM			
018A	EXIT	D8	3'-0"	7'-0"	16	HM	F1	HM			
020A	LAB ANIMALS **	D8	3'-0"	7'-0"	2	HM	F1	HM		** ALSO PROVIDE SIGN "ANTEROOM" IN HALL	
021A	CAT ROOM	D3	3'-0"	7'-0"	8	HM	F1	HM			
022A	SMALL KENNEL	D3	3'-0"	7'-0"	9	HM	F1	HM			
023A	JANITOR	D1	2'-6"	7'-0"	6	SCW	F2	HM			
024A	RESTROOM	D1	3'-0"	7'-0"	7	SCW	F2	HM			
025A	CLOSET	D1	3'-0"	7'-0"	6	SCW	F2	HM			
026A	CLOSET	D1	2'-0"	7'-0"	6	SCW	F2	HM			
027A	DATA	D1	3'-0"	7'-0"	1	SCW	F2	HM			
029A	KENNEL	D3	3'-0"	7'-0"	9	HM	F1	HM			
029B	KENNEL	D2	3'-0"	7'-0"	21 ALT	HM	F1	HM		ALT. NO.3 ONLY	
030A	STORAGE	D1	3'-0"	7'-0"	1	SCW	F1	HM	60 MIN.		
031A	MECH.	D1	3'-0"	7'-0"	1	SCW	F1	HM	60 MIN.		
034A	RESOURCE ROOM	D3	3'-0"	7'-0"	2 ALT	SCW	F1	HM		ALT. NO.1 ONLY	



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Rev	Description	By	Date
1	ISSUED FOR REBID	EW	01/16/2026
0	ISSUED FOR BID	EW	02/01/2022

Drawing Description
PIERPONT COMMUNITY & TECHNICAL COLLEGE
501 W MAIN ST. CLARKSBURG, WV
PIERPONT VET TECH RELOCATION
ROOM, WINDOW & DOOR SCHEDULES

Project:	2201011
Designed By:	JGH
Drawn By:	JGH
Checked By:	PJW
Scale:	As indicated
Plot Date:	02/01/2022
Revision:	0

Drawing Number:
A600

ELECTRICAL SYMBOL LEGEND

	ALL ITEMS SHOWN AS DASHED ON DEMOLITION PLANS SHALL BE REMOVED UNLESS NOTED OTHERWISE.
	FLUORESCENT, INCANDESCENT, OR LED TYPE LIGHTING FIXTURES COMPLETE WITH LAMPS. REFER TO LIGHT FIXTURE SCHEDULE FOR DETAILS.
	EXTERIOR POLE-MOUNTED LED FIXTURES
	COORDINATE NUMBER OF FACES AND THE DIRECTIONAL ARROWS, AS REQUIRED. CONNECTION TO THE EXIT LIGHT FIXTURE SHALL BE MADE AHEAD OF THE LOCAL LIGHT SWITCHING CIRCUIT.
	SINGLE AND DOUBLE LED REMOTE HEAD EMERGENCY EGRESS FIXTURES
	SINGLE POLE, 20A 120/277V SINGLE THROW SWITCH. MOUNT 46" A.F.F. TO CENTERLINE UNLESS NOTED OTHERWISE.
	20A 120/277V THREE-WAY, SINGLE THROW SWITCH. MOUNT 46" A.F.F. TO CENTERLINE UNLESS NOTED OTHERWISE.
	20A 120/277V FOUR-WAY, SINGLE THROW SWITCH. MOUNT 46" A.F.F. TO CENTERLINE UNLESS NOTED OTHERWISE.
	20A 120/277V LOCK TYPE, HUBBELL SINGLE THROW SWITCH. MOUNT 46" A.F.F. TO CENTERLINE UNLESS NOTED OTHERWISE.
	20A 120/277V SINGLE BUTTON ON/OFF OCCUPANCY SENSOR, MOUNT 46" A.F.F. TO CENTERLINE UNLESS NOTED OTHERWISE.
	CEILING MOUNT OCCUPANCY SENSOR, COORDINATE POWER PACK REQUIREMENTS AND QUANTITIES WITH THE MANUFACTURER.
	PHOTOCCELL LIGHTING CONTROLLER. NOTE DETAIL DRAWINGS FOR MOUNTING DETAIL.
	DUPLEX GROUNDING TYPE RECEPTACLE, 20A 120V. MOUNT 18" A.F.F. TO CENTERLINE UNLESS NOTED OTHERWISE. VERIFY EXACT LOCATION WITH ARCHITECTURAL DRAWINGS AND ARCHITECT. COORDINATE COLOR WITH OWNER.
	GROUND-FULT CIRCUIT INTERRUPTER TYPE DUPLEX RECEPTACLE, 20A 120V. MOUNT 18" A.F.F. TO CENTERLINE UNLESS NOTED OTHERWISE. VERIFY EXACT LOCATION WITH ARCHITECTURAL DRAWINGS AND ARCHITECT.
	DUPLEX GROUNDING TYPE RECEPTACLE, 20A 120V. MOUNT 84" A.F.F. TO CENTERLINE UNLESS NOTED OTHERWISE. VERIFY EXACT LOCATION WITH ARCHITECTURAL DRAWINGS AND ARCHITECT.
	TWO (2) DUPLEX GROUNDING TYPE SPECIFICATION GRADE RECEPTACLE, 20A 120V. MOUNT IN COMMON BOX WITH COMMON PLATE 18" A.F.F. TO CENTERLINE UNLESS NOTED OTHERWISE. VERIFY EXACT LOCATION WITH ARCHITECTURAL DRAWINGS AND ARCHITECT.
	DUPLEX GROUNDING TYPE RECEPTACLE, 20A, 125V. MOUNT IN FLOOR BOX WITH COMMON PLATE. VERIFY EXACT LOCATION WITH ARCHITECTURAL DRAWINGS AND ARCHITECT.
	TWO (2) DUPLEX GROUNDING TYPE RECEPTACLES, 20A, 125V. MOUNT IN FLOOR BOX WITH COMMON PLATE. VERIFY EXACT LOCATION WITH ARCHITECTURAL DRAWINGS AND ARCHITECT.
	COMBINATION 3.1A/5VDC USB CHARGERS WITH 20A, 125V DUPLEX GROUNDING TYPE RECEPTACLES. MOUNT IN COMMON BOX WITH COMMON PLATE AT 18" A.F.F. TO CENTERLINE UNLESS NOTED OTHERWISE. VERIFY EXACT LOCATION WITH ARCHITECTURAL DRAWINGS AND ARCHITECT.
	TWO (2) COMBINATION 3.1A/5VDC USB CHARGERS WITH 20A, 125V DUPLEX GROUNDING TYPE RECEPTACLES. MOUNT IN COMMON BOX WITH COMMON PLATE AT 18" A.F.F. TO CENTERLINE UNLESS NOTED OTHERWISE. VERIFY EXACT LOCATION WITH ARCHITECTURAL DRAWINGS AND ARCHITECT.
	SUBSCRIPT "c" INDICATES DEVICE TO BE MOUNTED 6" ABOVE COUNTERTOP TO CENTERLINE.
	SUBSCRIPT "r" INDICATES RED DEVICE CONNECTED TO EMERGENCY POWER.
	SUBSCRIPT "wp" INDICATES DEVICE INSTALLATION AND ENCLOSURE SHALL BE WEATHER-PROOF
	SPECIAL RECEPTACLE OR FEED. REFER TO DRAWINGS FOR DESCRIPTION.
	480Y/277V, 3ø 4W PANELBOARD. REFER TO DRAWINGS AND/OR SPECIFICATIONS FOR DETAILS.
	208Y/120V, 3ø 4W PANELBOARD. REFER TO DRAWINGS AND/OR SPECIFICATIONS FOR DETAILS.
	240V, 3ø 3W PANELBOARD. REFER TO DRAWINGS AND/OR SPECIFICATIONS FOR DETAILS.
	240/120V, 1ø 3W PANELBOARD. REFER TO DRAWINGS AND/OR SPECIFICATIONS FOR DETAILS.
	POINT OF ELECTRICAL CONNECTION TO EQUIPMENT. CONFIRM EQUIPMENT CONNECTION REQUIREMENTS AND ARRANGEMENT PRIOR TO ROUGH-IN. VERIFY EXACT LOCATION WITH ARCHITECTURAL DRAWINGS AND ARCHITECT.
	ELECTRICAL CIRCUIT HOMERUN TO PANEL 'a' CIRCUIT #2 (EXAMPLE). ALL CIRCUIT WIRING SHALL BE (2) -#12 THHN/THWN CONDUCTORS AND (1) -#12 THHN/THWN GROUND CONDUCTOR IN 3/4" EMT, UNLESS NOTED OTHERWISE.
	NON-FUSED HEAVY-DUTY TYPE SAFETY DISCONNECT SWITCH. SIZE, POLES, AND NEMA TYPE AS INDICATED ON ELECTRICAL DRAWINGS.
	FUSED HEAVY-DUTY TYPE SAFETY DISCONNECT SWITCH. SIZE, POLES, FUSE SIZE, AND NEMA TYPE AS INDICATED ON ELECTRICAL DRAWINGS.
	COMBINATION MOTOR STARTER AND HEAVY-DUTY TYPE SAFETY DISCONNECT SWITCH. SIZE, POLES, FUSE SIZE, AND NEMA TYPE AS INDICATED ON ELECTRICAL DRAWINGS.
	STANDARD JUNCTION BOX WITH COVER. LOCATE AND CONNECT AS DIRECTED.
	HUBBEL QUAZITE 11"x18" PG STYLE POLYMER CONCRETE ENCLOSURE.

ELECTRICAL SYSTEM CONTROLS SYMBOL LEGEND

	CEILING SPEAKER, FLUSH MOUNTED DEVICE. REFER TO DRAWINGS AND/ OR SPECIFICATIONS FOR DETAILS.
	SECURITY CAMERA, CEILING MOUNTED DEVICE. REFER TO DRAWINGS AND/OR SPECIFICATIONS FOR CAMERA LOCATIONS AND/OR DETAILS.
	SECURITY CAMERA, WALL MOUNTED DEVICE. REFER TO DRAWINGS AND/OR SPECIFICATIONS FOR CAMERA LOCATIONS AND/OR DETAILS.
	WIRELESS COMMUNICATIONS ACCESS POINT.
	THERMOSTAT CONTROL JUNCTION BOX. E.C. IS RESPONSIBLE FOR INSTALLATION OF ROUGH-IN BOX AND CONDUIT FOR EQUIPMENT INSTALLATION. VERIFY EXACT LOCATION AND INSTALLATION REQUIREMENTS WITH THE MECHANICAL DRAWINGS AND THE MECHANICAL CONTRACTOR.
	SPEAKER, SURFACE-MOUNTED DEVICE. REFER TO DRAWINGS AND/ OR SPECIFICATIONS FOR DETAILS.
	SINGLE-FACED CEILING/WALL MOUNTED CLOCK. VERIFY EXACT LOCATION WITH THE ARCHITECTURAL DRAWINGS AND ARCHITECT PRIOR TO ROUGH-IN.
	ACCESS CONTROL PROXIMITY CARD READER. REFER TO DRAWINGS FOR DETAILS AND SPECIFICATIONS.
	ACCESS CONTROL DOOR RELEASE BUTTON. REFER TO DRAWINGS FOR DETAILS AND SPECIFICATIONS.
	JUNCTION BOX FOR TELEVISION CABLE OUTLET. MOUNT AT 84" A.F.F. TO CENTERLINE UNLESS NOTED OTHERWISE. PROVIDE 4-11/16" SQUARE BOX WITH SINGLE-GANG PLASTER RING AND PROVIDE 3/4"C WITH PULL STRING FROM BOX TO 1' ABOVE FINISHED CEILING. VERIFY EXACT LOCATION WITH THE ARCHITECTURAL DRAWINGS AND ARCHITECT.
	RJ45 TELEPHONE SYSTEM OUTLET. MOUNT AT 54" A.F.F. TO CENTERLINE UNLESS NOTED OTHERWISE. PROVIDE 4-11/16" SQUARE BOX WITH SINGLE-GANG PLASTER RING AND PROVIDE 3/4"C WITH PULL STRING FROM BOX TO 1' ABOVE FINISHED CEILING. INSTALL ONE (1) CAT 5e CABLE FROM OUTLET BOX TO COMMUNICATION ROOM AND TERMINATE AS DIRECTED BY THE OWNER. VERIFY EXACT LOCATION WITH THE ARCHITECTURAL DRAWINGS AND ARCHITECT.
	RJ11 TELEPHONE SYSTEM OUTLET. MOUNT AT 54" A.F.F. TO CENTERLINE UNLESS NOTED OTHERWISE. PROVIDE 4-11/16" SQUARE BOX WITH SINGLE-GANG PLASTER RING AND PROVIDE 3/4"C WITH PULL STRING FROM BOX TO 1' ABOVE FINISHED CEILING. INSTALL ONE (1) CAT 5e CABLE FROM OUTLET BOX TO COMMUNICATION ROOM AND TERMINATE AS DIRECTED BY THE OWNER. VERIFY EXACT LOCATION WITH THE ARCHITECTURAL DRAWINGS AND ARCHITECT.
	COMMUNICATION SYSTEM OUTLET. MOUNT AT 18" A.F.F. TO CENTERLINE UNLESS NOTED OTHERWISE. PROVIDE 4-11/16" SQUARE BOX WITH SINGLE-GANG PLASTER RING AND PROVIDE 3/4"C WITH PULL STRING FROM BOX TO 1' ABOVE FINISHED CEILING. PROVIDE RJ45 & VOIP JACKS & COVER PLATE WITH FINAL TERMINATIONS AT JACK. INSTALL CAT6 CABLES (UNLESS DESIGNATED OTHERWISE) FROM OUTLET BOX TO COMMUNICATION ROOM AND TERMINATE TO PUNCH-DOWN BLOCK (OR AS DIRECTED BY THE OWNER), LABEL, AND TEST. VERIFY EXACT LOCATION WITH THE ARCHITECTURAL DRAWINGS AND ARCHITECT. TYPICAL TWO COMMUNICATION WIRING (2) DROPS PER OUTLET LOCATION UNLESS OTHERWISE INDICATED BY SUBSCRIPT. (EXAMPLE: "3" INDICATES NUMBER THREE (3) NUMBER OF DROPS TO OUTLET LOCATION.)
	PUSH BUTTON. REFER TO DRAWINGS AND/OR SPECIFICATIONS FOR DETAILS.
	EMERGENCY STOP PUSH BUTTON. REFER TO DRAWINGS AND/OR SPECIFICATIONS FOR DETAILS.
	INTERCOM PAGING SYSTEM. REFER TO DRAWINGS FOR DETAILS AND SPECIFICATIONS.
	EMERGENCY LOCKDOWN KEYED SWITCH. REFER TO DRAWINGS FOR DETAILS AND SPECIFICATIONS.
	SECURITY MOTION DETECTOR.

FIRE ALARM AND DETECTION SYMBOL LEGEND

	AUDIBLE AND VISUAL SIGNAL. MOUNT AT 82" A.F.F. TO CENTERLINE UNLESS OTHERWISE NOTED.
	VISUAL SIGNAL ONLY. MOUNT AT 82" A.F.F. TO CENTERLINE UNLESS OTHERWISE NOTED.
	MANUALLY OPERATED PULL STATION MOUNT AT 46" A.F.F. TO CENTERLINE UNLESS NOTED OTHERWISE.
	CARBON MONOXIDE DETECTOR MOUNTED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS.
	AUTOMATIC SMOKE DETECTOR, PHOTOELECTRIC TYPE, CEILING MOUNTED.
	COMBINATION AUTOMATIC SMOKE AND CARBON MONOXIDE DETECTOR TYPE CEILING MOUNTED
	AUTOMATIC DUCT SMOKE DETECTOR, PHOTOELECTRIC TYPE, CEILING MOUNTED. CONNECT TO EXISTING SECURITY SYSTEM
	HEAT DETECTOR COMBINATION FIXED TEMP. AND RATE OF RISE, CEILING MOUNTED.
	FIRE ALARM SYSTEMS MAGNETIC DOOR HOLDER. MOUNT AT 84" A.F.F. TO CENTERLINE UNLESS NOTED OTHERWISE. VERIFY EXACT LOCATION WITH THE ARCHITECTURAL DRAWINGS AND ARCHITECT.
	REMOTE ANNUNCIATOR PANEL. MOUNT AT 54" A.F.F. TO CENTERLINE UNLESS NOTED OTHERWISE. VERIFY EXACT LOCATION WITH THE ARCHITECTURAL DRAWINGS AND ARCHITECT.
	FIRE ALARM CONTROL PANEL. MOUNT AT 54" A.F.F. TO CENTERLINE UNLESS NOTED OTHERWISE. VERIFY EXACT LOCATION WITH THE ARCHITECTURAL DRAWINGS AND ARCHITECT.
	SPRINKLER SYSTEM FLOW SWITCH. FURNISHED AND INSTALLED BY THE FIRE PROTECTION CONTRACTOR, CONNECTED TO THE FIRE ALARM AND DETECTION SYSTEM BY THE ELECTRICAL CONTRACTOR. VERIFY LOCATION AND EXACT QUANTITY WITH THE EQUIPMENT PROVIDER PRIOR TO ROUGH-IN AND ZONE ADDRESSABLE MONITOR MODULE ALLOCATION.
	SPRINKLER SYSTEM TAMPER SWITCH. FURNISHED AND INSTALLED BY THE FIRE PROTECTION CONTRACTOR, CONNECTED TO THE FIRE ALARM AND DETECTION SYSTEM BY THE ELECTRICAL CONTRACTOR. VERIFY LOCATION AND EXACT QUANTITY WITH THE EQUIPMENT PROVIDER PRIOR TO ROUGH-IN AND ZONE ADDRESSABLE MONITOR MODULE ALLOCATION.
	PUSH BUTTON. REFER TO DRAWINGS AND/OR SPECIFICATIONS FOR DETAILS.
	EMERGENCY STOP PUSH BUTTON. REFER TO DRAWINGS AND/OR SPECIFICATIONS FOR DETAILS.

ELECTRICAL DEMOLITION NOTES

- THE GENERAL DEMOLITION NOTES LISTED HERE APPLY TO THE ELECTRICAL DEMOLITION DRAWINGS IN ADDITION TO ANY CODED NOTES INDICATED ON THE DEMOLITION DRAWINGS.
- AN ATTEMPT HAS BEEN MADE TO SHOW ALL ELECTRICAL ITEMS TO REMAIN OR BE REMOVED. THE ELECTRICAL CONTRACTOR (EC) SHALL FIELD VERIFY EXISTING CONDITIONS AND REMOVE OR RELOCATE ANY ITEM WHICH INTERFERES WITH NEW CONSTRUCTION. THE SCHEDULED DEMOLITION IS BASED ON FIELD OBSERVATIONS AND EXISTING RECORD DOCUMENTS. THE ELECTRICAL CONTRACTOR SHALL REPORT DISCREPANCIES TO THE OWNER OR ENGINEER BEFORE DISTURBING EXISTING INSTALLATIONS.
- THE ELECTRICAL CONTRACTOR (EC) SHALL DISCONNECT AND REMOVE EXISTING ELECTRICAL DISTRIBUTION EQUIPMENT, ELECTRICAL DEVICES, CONDUIT AND WIRING, AND ALL EQUIPMENT ACCESSORIES IN THE AREA AS INDICATED ON THE DEMOLITION DRAWING. THE ELECTRICAL CONTRACTOR SHALL REMOVE UNUSED CONDUIT AND WIRING TO THE SOURCE OF ELECTRICAL DISTRIBUTION.
- THE ELECTRICAL CONTRACTOR (EC) SHALL PROTECT ALL EXISTING EQUIPMENT AND EXISTING INSTALLATIONS THAT ARE SCHEDULED TO REMAIN IN SERVICE FROM DAMAGE. REFEED ANY ITEM WHOSE WIRING IS INTERRUPTED DUE TO WORK IN ADJACENT AREAS.
- THE ELECTRICAL CONTRACTOR (EC) SHALL REMOVE ALL HANGERS AND SUPPORTS SERVING CONDUIT AND WIRE BEING DEMOLISHED. PROVIDE AND/OR ADJUST EXISTING HANGERS TO SUPPORT ANY REMAINING CONDUIT AND WIRE, OR EQUIPMENT ADJACENT TO DEMOLISHED AREAS AND EQUIPMENT.
- THE ELECTRICAL CONTRACTOR (EC) SHALL REMOVE ALL EXISTING WIRING AND CONDUITS BEING ABANDONED. ABANDONED CONDUITS SHALL BE CUT FLUSH AT CEILINGS AND FLOORS AND BE PROPERLY CLOSED.
- MAKE ALL ELECTRICAL DEMOLITION SAFE FOR ALL PARTICIPATING CONTRACTORS. PROTECT ALL WIRING AND ELECTRICAL CONNECTIONS THAT REMAIN IN SERVICE FROM DAMAGE.

ELECTRICAL CONSTRUCTION NOTES

- THE DRAWINGS INDICATE GENERAL ELECTRICAL INSTALLATIONS AND ASSOCIATED EQUIPMENT QUANTITIES. ALL NEW INSTALLATIONS SHALL BE COORDINATED WITH THE OWNER.
- THE OWNER SHALL BE NOTIFIED IMMEDIATELY OF ANY PRESENCE OF ASBESTOS MATERIAL DISCOVERED DURING CONSTRUCTION. ANY ASBESTOS MATERIAL SHALL BE REMOVED BY OTHERS.
- ALL BUILDING UTILITIES AND BUILDING STRUCTURES SHALL BE PROTECTED FROM DAMAGE DURING CONSTRUCTION. THE ELECTRICAL CONTRACTOR (EC) SHALL BE RESPONSIBLE FOR RESTORING ALL EXISTING FEATURES AND REPAIRING ANY UTILITIES DAMAGED BY CONSTRUCTION TO A CONDITION SATISFACTORY TO THE OWNER.
- ALL NEW ELECTRICAL INSTALLATIONS SHALL BE DOCUMENTED AND ELECTRICAL PANEL SCHEDULES UPDATED.
- THE ELECTRICAL DESIGN DRAWINGS ARE DIAGRAMMATIC AND ARE NOT INTENDED TO SHOW EXACT LOCATION OF EQUIPMENT AND DEVICES UNLESS DIMENSIONS ARE GIVEN OR OTHERWISE IMPLIED FOR CLEARANCES. ALL ELECTRICAL EQUIPMENT ARE TO BE INSTALLED ALONG WITH THE GENERAL PLANS. ALL LABOR AND MATERIALS AND OTHER RELATED WORK NECESSARY TO PROVIDE MINOR OFFSETS IN ELECTRICAL WORK AS REQUIRED TO AVOID CONFLICT WITH OTHER WORK OR CLEARANCES SHALL BE INCLUDED IN THE ELECTRICAL BID.
- THE ELECTRICAL CONTRACTOR (EC) SHALL PROVIDE FIRESEALING OF ALL OPENINGS THROUGH FIRE RATED WALLS AND ASSEMBLIES CREATED BY NEW ELECTRICAL INSTALLATIONS OR THE SCHEDULED REMOVAL OF EXISTING INSTALLATIONS.

AREA CLASSIFICATION LEGEND

	UNCLASSIFIED AREA, NEMA 4X EXCEPT IN MCC ROOMS AND CONTROL ROOMS WHERE IT IS NEMA 1
	CLASS I, DIV. 1, GROUP B, C & D
	CLASS I, DIV. 2, GROUP A, B, C & D
	CLASS I, DIV. 2, GROUP B, C & D, FROM SOURCE UP TO 18' ABOVE FLOOR OR GRADE
	CLASS II, DIV. 1, GROUP E, F & G
	CLASS II, DIV. 2, GROUP E, F, & G
	CLASS I, DIV. 2, GROUP B, C & D AND CLASS II, DIV. 2, GROUP E, F & G
	CLASS I, DIV. 2, GROUP B, C & D, INSIDE OF THE DIKE WALL AND UP TO THE TOP OF DIKE WALL, SINCE THE DIKE HEIGHT IS LESS THAN THE DISTANCE FROM THE DIKE TO THE TANK. NFPA-30 TABLE 5-9.5.3 AND NFPA-497 FIGURE 3-8.19

NOTES:

- HAZARD AREA CLASSIFICATION AND EXACT LOCATION OF BOUNDARIES TO BE VERIFIED/DETERMINED BY OWNER. ALL ELECTRICAL WORK IN HAZARDOUS (CLASSIFIED) LOCATIONS SHALL MEET ALL REQUIREMENTS OF THE LATEST EDITION OF THE N.E.C. ARTICLE 500.
- ANY SUMP PUMP OR TRENCH BELOW THE FLOOR LEVEL SHALL BE CONSIDERED TO BE CLASS I, DIV 1, GROUP D, HAZARDOUS LOCATION.
- THE AREA CLASSIFICATIONS SHOWN FOR INDOOR CLASS I AREAS ARE BASED ON THE PREMISE THAT THE INSTALLATION MEETS ADEQUATE VENTILATION AND APPLICABLE REQUIREMENTS OF NFPA-30 AND NFPA-497.
- NEC TEMPERATURE CLASSIFICATION CODE IS T1, MAX SURFACE TEMPERATURE OF 450 DEGREES CELSIUS (842 DEGREES FAHRENHEIT).

SECURITY SYSTEM AND CONTROLS LEGEND

	KEYPAD		ACCESS CONTROL PANEL
	REQUEST-TO-EXIT MOTION SENSOR		SECURITY SYSTEM CONTROL PANEL
	ELECTRIC STRIKE		VIDEO SERVER
	DOOR CONTACT		NODE
	OVERHEAD DOOR CONTACT		EXIT LATCH RETRACTION
	CARD READER		AIPHONE INTERCOM & CARD READER

MATERIALS

	FIBER-REINFORCED CONCRETE
	CONCRETE
	CONCRETE MASONRY
	BRICK OR HOT MIX ASPHALT
	WELL-GRADED STONE/GRAVEL
	UNIFORM-GRADED STONE/GRAVEL
	WOOD BLOCKING
	RIGID INSULATION
	BATT INSULATION
	STEEL
	SOIL
	BEDROCK
	SAND
	CARPET (SURFACE)
	HARDWOOD FLOOR (SURFACE)
	WOOD SHEATHING (SURFACE)
	CERAMIC TILE (SURFACE)
	VCT (SURFACE)
	CLAY TILE FLOORING (SURFACE)
	SAND/GYPSUM/HOT MIX ASPHALT (SURFACE)

ANNOTATIONS

	CODED NOTE
	DEMOLITION NOTE
	REVISION TAG
	ELEVATION VIEW REFERENCE TAG
	INTERIOR ELEVATION REFERENCE TAG
	SECTION VIEW REFERENCE TAG
	DETAIL REFERENCE TAG
	CALLOUT AREA FOR VIEW (OPTIONAL)
	ROOM TAG
	LEVEL REFERENCE TAG
	COLUMN GRID TAG
	BEARING ELEVATION OR TOP SURFACE ELEVATION
	MARK TAG
	SLOPE
	TRUE NORTH PROJECT NORTH NORTH ARROWS
	MATCHLINE MXXX
	CALLOUT SHEET ON WHICH THE DRAWING CONTINUES
	DRAWING TITLE SCALE: 1/8"=1'-0"
	DRAWING REFERENCE
	DRAWING TITLE SCALE: 1/4"=1'-0"
	DRAWING LOCATION
	DRAWING REFERENCE TAG LOCATION
	DETAIL REFERENCE
	DRAWING TITLE SCALE: 1/4"=1'-0"
	DETAIL LOCATION
	DETAIL REFERENCE TAG LOCATION



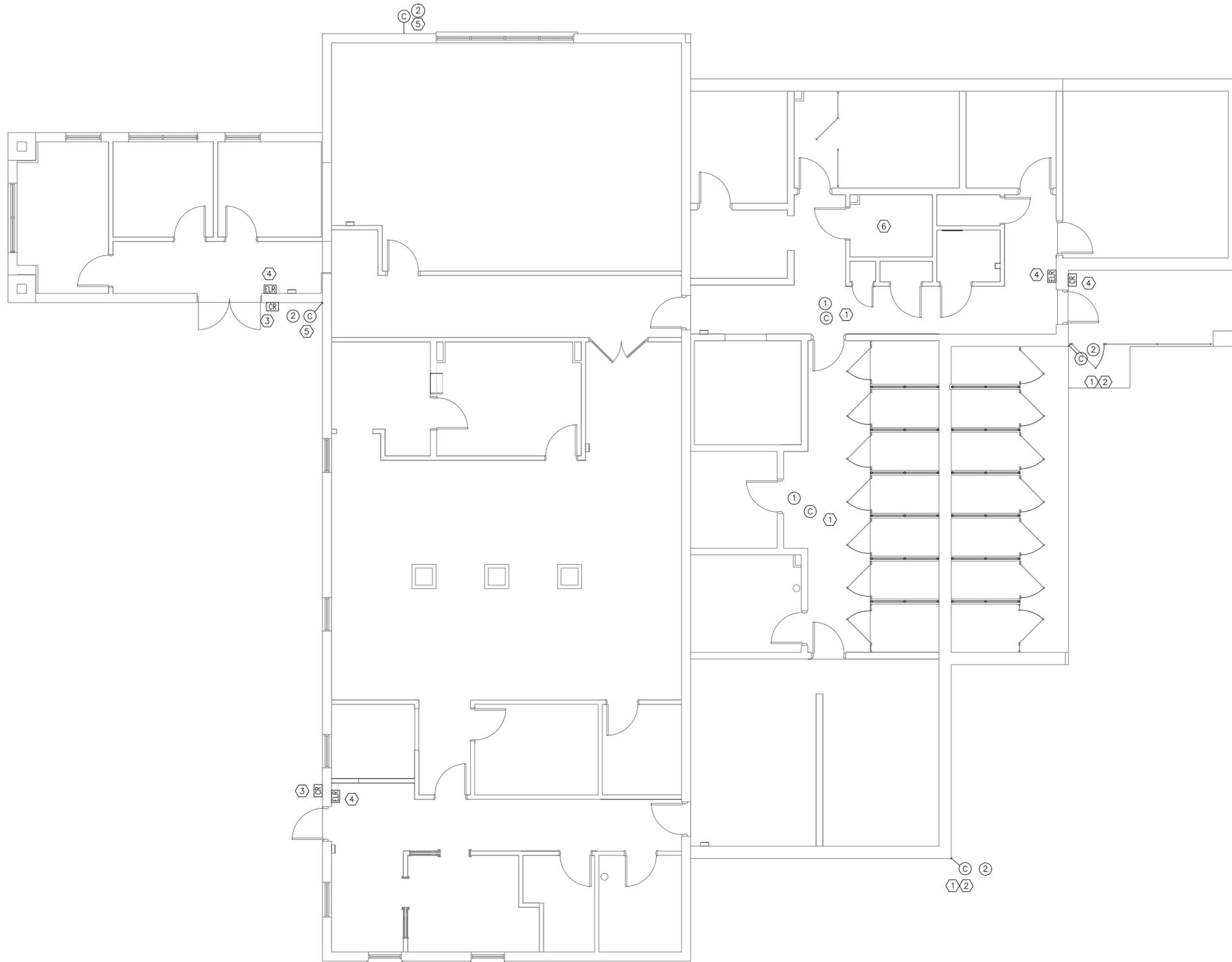
Pickering Associates
Architects-Engineers-Surveyors
11283 Emerson Avenue
Parkersburg, West Virginia 26104
Phone: (304) 464-5305
Fax: (304) 464-4428

03/04/26	Date
CSH	By
ISSUED FOR CONSTRUCTION	Description
0	Rev.

Drawing Description
PIERPONT COMMUNITY & TECHNICAL COLLEGE
501 W MAIN ST. CLARKSBURG, WV
PIERPONT VET TECH SECURITY SYSTEM
ELECTRICAL SYMBOL LEGEND AND ABBREVIATIONS



Project:	2268000
Designed By:	CSH
Drawn By:	BEM
Checked By:	CSH
Scale:	NTS
Plot Date:	03/04/26
Revision:	0
Drawing Number:	E001



- CODED NOTES:**
1. ELECTRICAL CONTRACTOR SHALL ROUGH-IN BOXES AND A 1-INCH CONDUIT FOR SECURITY CONTRACTOR TO INSTALL DEVICES. COORDINATE LOCATIONS WITH SECURITY CONTRACTOR.
 2. ROUGH-IN BOXES FOR CAMERA SHALL BE MOUNTED 1-FOOT BELOW COPING.
 3. EC SHALL ROUGH-IN A SINGLE GANG BOX 48" ABOVE FINISHED GRADE FOR CARD READER. CONDUIT SHALL BE 1-INCH.
 4. POWER THE ELR FROM A 120-VOLT, 20-AMP RECEPTACLE CIRCUIT. FEED SHALL BE (2)-#12 AND #12 EGC MC CABLE.
 5. REPLACE THE EXISTING CAMERA WITH NEW CAMERA AS INDICATED.
 6. LOCATION OF IT COMMUNICATIONS ROOM.

- GENERAL NOTES:**
- A. INSTALL EXTERIOR CAMERA APPROXIMATELY 1/2 THE HEIGHT OF THE WALL INDICATED FOR MOUNTING. ADJUST FOR LIGHT FIXTURES IN PROXIMITY TO REDUCE GLARE.
 - B. ALL NEW CAMERA CABLES SHALL BE CAT-6. EXISTING CAT-6 CABLES SHALL BE REUSED.

= INDICATES CAMERA MODEL, REFER TO SCHEDULE ON E500


SECURITY SYSTEM PLAN
 SCALE: 3/16" = 1'-0"

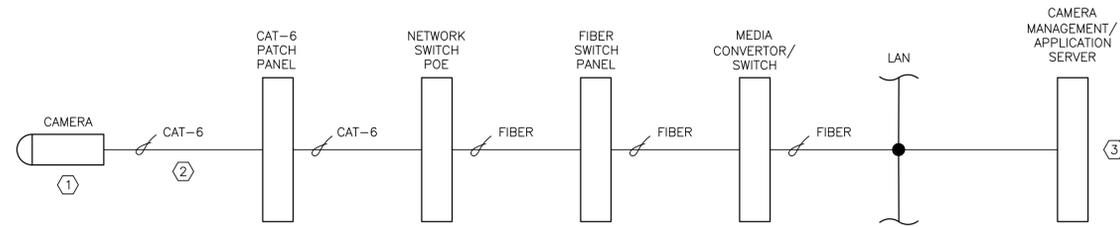
No.	Description	By	Date
0	ISSUED FOR CONSTRUCTION	CSH	03/04/26

Drawing Description PIERPONT COMMUNITY & TECHNICAL COLLEGE 501 W MAIN ST. CLARKSBURG, WV PIERPONT VET TECH SECURITY SYSTEM SECURITY SYSTEM PLAN	
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Project:	2268000
Designed By:	CSH
Drawn By:	BEM
Checked By:	CSH
Scale:	3/16" = 1'-0"
Plot Date:	03/04/26
Revision:	0

Drawing Number:
E130



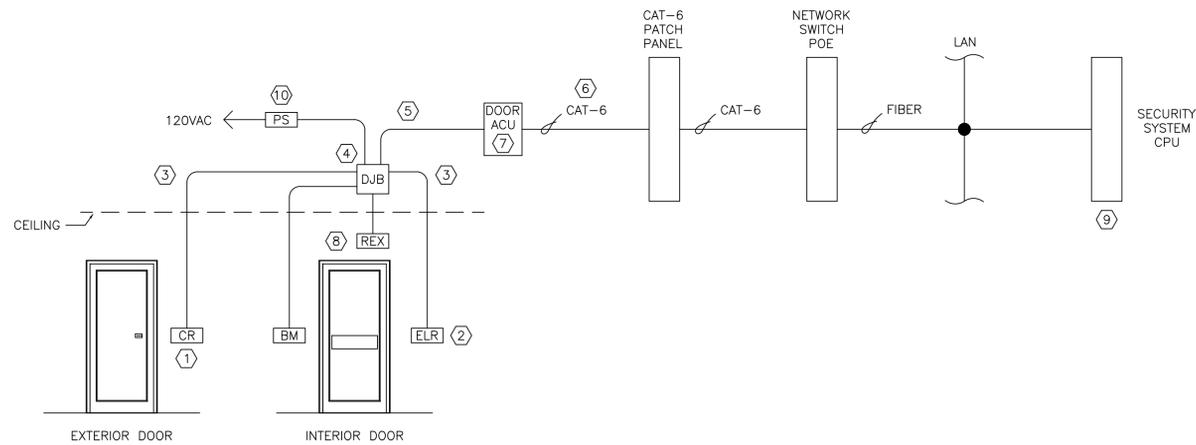
CODED NOTES:

1. PURCHASE AND INSTALL CAMERA PER MANUFACTURERS INSTRUCTION. INSTALL MOUNTING HARDWARE AND WEATHER-PROOF DEVICE AS REQUIRED BY LOCATION.
2. PURCHASE AND INSTALL CAT-6 PLENUM RATED CABLE FROM CAMERA TO LOCAL AREA NETWORK (LAN) PATCH PANEL. ROUTE CABLE IN CONDUIT WHERE EXPOSED TO PHYSICAL DAMAGE, CONCEALED WALL, OR UNDER FLOOR.
3. PURCHASE AND INSTALL CAMERA MANAGEMENT AND APPLICATION SERVER EXACOVISION MODEL #IP04-06T-R2A. SUBSTITUTIONS NOT PERMITTED. INSTALLER SHALL BE RESPONSIBLE FOR INTERFACING SERVER ON LOCAL AREA NETWORK (LAN). PROVIDE ALL CAMERA LICENSES REQUIRED.

1 STANDARD CAMERA DIAGRAM
E500 SCALE: N.T.S.

ADMINISTRATION BUILDING SECURITY CAMERA EQUIPMENT LIST BASIS OF DESIGN SCHEDULE					
DESIGNATION	EQUIPMENT DESCRIPTION	MANUFACTURER	PRODUCT LINE	MODEL #	COMMENTS
1	12 MP 360 DEGREE IR PANORAMIC	AXIS	AXIS M30 SERIES	M418-PLVE	EC SHALL PURCHASE MOUNTING HARDWARE APPLICABLE FOR AREA OF INSTALLATION.
2	5 MP DOME	AXIS	AXIS P32 SERIES	P3267-LVE	EC SHALL PURCHASE MOUNTING HARDWARE APPLICABLE FOR AREA OF INSTALLATION.
NOTES:					
1	SUBSTITUTIONS ARE PERMITTED WITH APPROVAL FROM THE ENGINEER.				
2					

① = CAMERA DESIGNATION



CODED NOTES:

1. INSTALL SINGLE GANG BOX FOR CARD READER.
2. INSTALL EXIT LATCH REFRACTION AND ALL ASSOCIATED HARDWARE.
3. INSTALL A 3/4 INCH CONDUIT FOR CABLE ROUTING.
4. INSTALL A 12 IN X 12 IN X 4 IN (MINIMAL) DOOR JUNCTION BOX.
5. INSTALL A 1 INCH CONDUIT FOR CABLE ROUTING.
6. ROUTE A CAT-6 PLENUM RATED CABLE FROM DOOR ACTUATOR CONTROLLER TO LOCAL AREA NETWORK (LAN). INSTALLER SHALL BE RESPONSIBLE FOR PROGRAMMING CONTROLLER AND LAN INTERFACING.
7. INSTALL A DOOR CONTROLLER ACTUATION (ACU) TO OPERATE ELECTRIC LATCH RELEASE.
8. INSTALL A SINGLE GANG BOX AND 3/4 INCH CONDUIT ROUTED TO DOOR ACTUATOR. MOUNT REQUEST TO EXIT DETECTOR OVER DOOR.
9. INSTALLER SHALL PURCHASE AND INSTALL ALL HARDWARE NECESSARY TO INTERCONNECT THE NEW DOOR ACCESS CONTROL EQUIPMENT. INSTALLER SHALL BE RESPONSIBLE FOR WORKING WITH THE EXISTING SECURITY SYSTEM AND PROGRAMMING ACCESS CONTROL DEVICES INTO EXISTING SECURITY SYSTEM NETWORK.
10. INSTALL A POWER SUPPLY FROM A 120-VOLT AC 20-AMP CIRCUIT. PROVIDE LOTO DEVICE.

2 STANDARD SECURE ENTRANCE/EXIT DIAGRAM
E500 SCALE: N.T.S.

Date	By	Description	Rev.
03/04/26	CSH	ISSUED FOR CONSTRUCTION	0

Drawing Description
PIERPONT COMMUNITY & TECHNICAL COLLEGE
501 W MAIN ST. CLARKSBURG, WV
PIERPONT VET TECH SECURITY SYSTEM
DETAILS AND SCHEDULES



Project:	2268000
Designed By:	CSH
Drawn By:	RCM
Checked By:	CSH
Scale:	N.T.S.
Plot Date:	03/14/26
Revision:	0
Drawing Number:	E500

RFB #26239
REQUEST FOR BIDS AND STATEMENT OF WORK
for
CAPERTON CENTER & VET TECH SECURITY SYSTEM
AT PIERPONT COMMUNITY & TECHNICAL COLLEGE

Prepared for



West Virginia Community and Technical College System



PREPARED BY:



Architects • Engineers • Surveyors

320 Adams Ave, Suite 102
Fairmont, WV 26554
Phone: 304-363-1004
Fax: 304-464-4428

March 4, 2026
Project No.: 2253021

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- Part 1: General
- Part 2: Project Description
- Part 3: Key Personnel Requirements
- Part 4: Offeror Questions and Proposals
- Part 5: Bid & Contract Requirements
- Part 6: Project Requirements
- Part 7: Project Documents

II. **Appendices:**

- Appendix A: Invitation to Bid, Bid Forms, Schedule of Values Forms, AIA 101-2017 Owner-Contractor Agreement, AIA 201-2017 General Conditions of the Contract for Construction, AIA 201-2017 Supplementary Conditions to Standard Form of Agreement Between Owner and Contractor
- Appendix B: Specifications
- Appendix C: Schedule of Values for Reference Only

III. **Exhibits:**

- Exhibit A: Instructions to Bidders
- Exhibit B: Terms and Conditions
- Exhibit C: Purchasing Affidavit (No-Debt Affidavit)
- Exhibit D: Drug Free Workplace Conformance Affidavit

SECTION I STATEMENT OF WORK

PART 1: GENERAL

- 1.01 West Virginia Community and Technical College System seeks to engage a highly qualified security integrator for the installation and maintenance of an Access Control and Alarm Monitoring Systems (ACAMS), Video Surveillance System (VSS) and security communications system at two separate and adjacent buildings in Clarksburg, West Virginia, occupied by Pierpont Community and Technical College:
- A. The Caperton Center
 - B. Vet Tech Facility
- 1.02 The new systems shall interface and/or be completely compatible with the current system installed at Pierpont Community and Technical College's Advanced Technology Center (ATC) located at 500 Galliher Dr., Fairmont, WV 26554, so that all building security systems can be monitored and controlled from a single location as if they were a single system. The ATC System is as follows:
- A. CCTV System: Exacq Vision
 - B. Camera model: Axis 3267
 - C. Access System: Lenel S2
- 1.03 This document describes the system requirements and the parameters of installation and maintenance needed for providing a bid for this Project. The Owner, West Virginia Community and Technical College System, shall be referred to as the "WVCTCS" or "Owner" hereinafter.
- 1.04 The facility will have a Using Agency that will be involved in project coordination. The Using Agency is Pierpont Community and Technical College ("PCTC"). PCTC and WVCTCS may be jointly referred to in this document as "PCTC/WVCTCS" and shall have the same meanings/definitions as stated above.
- 1.05 The Owner will be the General Contract holder and the company responding to this Request for Bids ("RFB") shall be the "Offeror." The Offeror shall agree to furnish and install the proposed products and services in accordance with the conditions, requirements and specifications of this RFB and the Offeror's Bid. The Offeror that is awarded the contract shall be the "Contractor."
- 1.06 The WVCTCS reserves the right to modify the requirements stated herein, or cancel this bid solicitation, without compensation due to any participants for work undertaken in preparation of a response to the RFB.
- 1.07 Owner's Contact Information:
- A. The Contracting Officer ("CO") for this contract is:

Barrow Koslosky, AIA, NCARB
Director of Facilities & Capital Project Management
West Virginia Community & Technical College System
2001 Union Carbide Drive, Building 2000
South Charleston, WV 25303
Phone: 304-558-0281 ext. 26384
Email: barrow.koslosky@wvhepc.edu

B. The PCTC/CTCS Technical Representative ("TR") is:

JT Bowers
CIO/Director of IT
Pierpont Community & Technical College
500 Galliher Drive
Fairmont, WV 26554
Phone: 304-368-7257
Email: jbowers15@pierpont.edu

1.08 Specifications and drawings have been prepared by the Owner's Design and Technical Consultant:

Pickering Associates
11283 Emerson Avenue
Parkersburg, WV 26104
Phone: 304-464-5305

1.09 Mandatory Pre-bid Meeting:

A Mandatory Prebid meeting is scheduled for:

Time/Date: 10:00 AM, Local Prevailing Time (LPT), April 15, 2026

Place: Pierpont Community and Technical College
Caperton Center, Room 148
501 West Main Street
Clarksburg, WV 26301

Prebid Meeting Attendance is MANDATORY: All Bidders MUST attend the prebid meeting to familiarize themselves with the Project location, site conditions and other relevant information. Should a Bidder fail to attend, the Bid will be disqualified.

Subcontractors and material suppliers are encouraged to attend the prebid meeting.

The complete Invitation to Bid, Addenda and other relevant information concerning RFB # 26239 will be posted at the following URL. It is the Bidder's obligation to check this website for current information: <https://wvctcs.org/purchasing-and-finance>

PART 2: PROJECT DESCRIPTION

2.01 General:

A. The project objective is to provide a new integrated security system for the PCTC Caperton Center and Vet Tech Facility that shall match, interface and/or be completely compatible with the current system installed at PCTC's Advanced Technology Center (ATC).

B. The project addresses are:

Caperton Center
501 W. Main Street
Clarksburg, WV 26301

Vet Tech Facility
211 S. Chestnut Street
Clarksburg, WV 26301

2.02 Description of Scope:

A. Furnish and install new Access Control and Alarm Monitoring System (ACAMS), Video Surveillance System (VSS), and security communications system for the buildings listed above.

B. Configure database connectivity for automatic download and update of system user information between the ACAMS and the PCTC IT system using Active Directory Control.

C. For the Vet Tech Facility, raceways and power were installed when the building was recently renovated, and an addition built. Unless otherwise indicated herein or in the specifications and drawings, cabling, provisioning, and installation of all security devices shall be included in the Bid.

D. Network provisioning and configuration will be provided by the Owner. The Contractor shall coordinate all network requirements with the Owner's TR.

E. Electric locking hardware at the Vet Tech Facility has been provided by others in a separate contract under the recently completed renovation and addition project. Unless otherwise indicated herein or in the specifications and drawings, cabling, wiring of locking hardware and connection to the ACAMS shall be included in the Bid.

F. Electric locking hardware shall be connected to existing door hardware at the Caperton Center shall be included Bid. Cabling, wiring of locking hardware and connection to the ACAMS shall be included in the Bid.

PART 3: KEY PERSONNEL REQUIREMENTS

- 3.01 Prior to receiving a contract/purchase order and becoming the Contractor, the successful Offeror (the low responsible and qualified bidder) shall identify "Key Personnel" (installers) for this contract that will be dedicated to this contract. However, if it becomes necessary for the Contractor to replace any of the individuals designated as Key Personnel, the Contractor shall request such substitutions and provide qualifications at least equal to those of the person being replaced. Key personnel installing the system shall have the work/installation experience (minimum three years), be fully qualified and certified by the manufacturer as an installer.
- 3.02 Except as provided in the paragraph below, at least 30 days in advance of the proposed substitution, all proposed substitutions of Key Personnel shall be submitted in writing to the CO, including the information required in paragraph below.
- 3.03 As a minimum (or as otherwise specified in the solicitation), the Offeror shall provide resumes to the CO which shall include the following:
- A. Name of person(s).
 - B. Functional responsibility.
 - C. Education/Technical Qualifications: Including, in reverse chronological order, colleges and/or technical schools attended (with dates), degree(s)/certification(s) received, major field(s) of study.
 - D. Professional certifications or licenses.
 - E. Required manufacturer's certifications.
 - F. Citizenship status.
 - G. Experience including, area(s) or work in which a person is qualified, company and title of position, approximate starting and ending dates (month/year), concise descriptions of experience for each position held including specific experience related to the requirements of this contract.
 - H. Certification that the information contained in the resume is correct and accurate (signature of key person and date signed, and signature of the supervisor or higher authority and date signed will be accepted as certification).

PART 4: OFFEROR QUESTIONS, ADDENDA, AND BIDS

- 4.01 Questions and requests for clarifications concerning the RFB shall be submitted via email to:

Jason Brown

jbrown@pickeringusa.com

- 4.02 No response will be made to telephone and verbal questions. Questions and requests for clarification will be received until 12:00 PM, LPT, April 21, 2026. Answers will be made by Addenda issued by the Architect. Addenda will also be posted at the following URL: <https://wvctcs.org/purchasing-and-finance>

- 4.03 Sealed Bids shall be enclosed and secured in a sealed envelope/package and properly marked and displayed on the outside of envelope/package bearing the name, address of proposer, RFB number and project identification. No other information shall be included or written on the outside of the proposal envelope/package. The WVCTCS shall not be responsible for unidentified bids. Bids will be received until 1:00 PM, LPT, April 30, 2026, and shall be delivered to:

Delivery by Hand:

Director of Facilities and Capitol Project Management

RFB 26239

West Virginia Community and Technical College System

2001 Union Carbide Drive, Building 2000

South Charleston, WV 25303

- 4.04 Bids received late, after the time and date for receipt of bids, will be returned unopened.
- 4.05 The WVCTCS reserves the right to reject any Bid that is incomplete or improperly formatted. The WVCTCS may also reject any Bid if the Offeror fails to respond to a request for clarification by the WVCTCS. The WVCTCS reserves the right to waive minor informalities or irregularities, or significant mistakes that can be waived or corrected without prejudice to other Offerors, which are evident after examining the Bid, are considered matters of form rather than substance; that is, the effect on price, quantity, quality, or terms and conditions is negligible. The WVCTCS may waive such informalities or irregularities or allow the Offeror to correct such mistakes and/or omissions, depending on which is in the best interest of the WVCTCS.

4.06 The WVCTCS will be the sole judge as to whether a Bid complies with the Technical Specifications and will afford comparable and equivalent performance. Any such decisions by the WVCTCS shall be final and conclusive.

4.07 In the event of a conflict between any of the RFB documents, resolution will be at the sole discretion of the WVCTCS.

4.10 The WVCTCS reserves the right to change the dates of the above activities and require further information or other considerations.

4.11 Important dates:

Release of RFB	March 23, 2026
Mandatory pre-bid meeting	April 15, 2026, 10:00 AM, LPT
Written questions due	April 21, 2026, 12:00 PM, LPT
Bids will be received until	April 30, 2026, 1:00 PM, LPT
PO Issued & Notice to proceed (estimated)	TBD

PART 5: BID & CONTRACT REQUIREMENTS

- 5.01 The Offeror is responsible for all expenses related to the preparation and submission of a response to this bid solicitation. The Owner shall incur no obligation except pursuant to the execution of a contract and the successful Offeror (Contractor).
- 5.02 The Offeror shall include all (if any) assumptions, conditions, and/or exceptions upon which the contractual and cost/price terms and conditions of the Offeror's bid is based. If not included, it will be assumed that none exists and that the Offeror agrees to comply with all terms and conditions set forth herein for this solicitation, including all requirements, specifications, and provisions.
- 5.03 Prepare your response with the headings and item numbers indicated below, and in the same order. The indicated supporting documents shall be included in an appendix.
- 5.04 The Offeror shall submit a single bid in response to this solicitation. Multiple and/or alternate quotes from the same Offeror may not be accepted.
- 5.05 Technology:
- A. Deviations from the specifications, if any: list the equipment that will be provided to meet each paragraph of the products section of the specification. This part of the response shall be organized in the same sequence as the specifications. Supporting data shall include catalog data on the major systems being proposed. If the proposed system deviates from these specifications, that deviation shall be noted and explained.
 - B. Features: the specifications represent the minimum level of requirements. Components or systems proposed should meet these requirements plus provide additional desirable functions and capabilities, which are unique to the particular product. Describe the additional benefits and features, beyond the minimum requirements specified herein, which the proposed systems will provide.
- 5.06 Support:
- A. Training plan: The Contractor shall provide a maximum of forty (40) hours of training and operation/service support to PCTC after completion and acceptance of installation.
 - B. Coordination with other trades: the Contractor will be required to provide documentation of raceway and power requirements for the security systems to the Owner's electrical contractor for implementation under a separate contract made directly with the Owner.
 - C. Availability: With the bid, provide a proposed schedule for completion of the work, with defined milestones in consecutive calendar days after receipt of a purchase order and/or notice to proceed.
 - D. Labor and equipment warranty shall, at a minimum, be for a period of one year after final acceptance. State any extended warranty offered at no additional cost.
- 5.07 Experience:

- A. Manufacturer: With the bid, indicate and provide evidence of current certification level with each of the manufacturers proposed. Indicate if you are an authorized or certified dealer, and level of certification. Reference only the local office performing the work for certification.

5.08 Bid/Pricing:

- A. General: visit the Project before preparing a bid. The specifications define the systems. The bid shall include taxes, permits and fees, shipping, insurance, guarantees, warranties, and service contracts.
- B. Offerors are required to guarantee their bid for a period of 45 days from the date for receipt of bids.
- C. The bid shall include all labor, materials, equipment, transportation, and incidentals required to install, test, and train personnel in accordance with the specifications.
- D. Bidders shall complete the enclosed Bid Form in Appendix A. Bid/Pricing shall include all materials, equipment, devices, labor, licenses, system updates (for one year), taxes, incidentals, and shipping to provide a turnkey system.
- E. Offerors shall provide pricing information for a maintenance agreement following the one-year warranty period. Include all materials, labor, and software upgraded. Pricing shall include manufacturer provided software maintenance.
- F. Offerors shall provide supporting documentation in the format of a schedule of values spreadsheet identifying system components for each of the base bid and each of the additive alternates (if any) in the format of the table provided in Appendix A. The spreadsheet will have tabs for the base bid and each alternate (if any). List quantities and types of equipment, cables, labor hours, and rate. Include manufacturer's part numbers only.

PART 6: PROJECT REQUIREMENTS

6.02 Terms and Conditions:

- A. Any information provided by the Owner or any contractor prior to the release of this RFB, verbally or in writing, is considered preliminary and is not binding for the Owner or the contractor.
- B. The Offeror shall neither make available, nor discuss, the RFB or any parts of the proposal to or with any employees of the Owner from the date of issuance of the RFP until the proposal submission date, unless allowed for purposes of clarification by the Owner's CO in writing.
- C. The Offeror shall neither make available, nor discuss, any costs information contained in the sealed copy of the bid to or with any employee of the Owner from the date of issuance of this RFP until the contract award has been announced, unless allowed by the Owner in writing for the purpose of clarification or evaluation.

6.03 Addenda:

- A. No interpretation of the meaning of the drawings, specifications, or other bidding documents, or correction of any apparent ambiguity, inconsistency, or error therein will be made verbally to any proposer. Every request for such interpretation or correction shall be in writing, as indicated previously herein. In case the Owner finds it expedient to supplement, modify, or interpret any portion of the bidding documents prior to the bid due date, such procedure will be accomplished by the issuance of written addenda to the RFB which will be issued by the Architect. Addenda will also be posted on the Owner's purchasing web site at the following URL: <https://wvctcs.org/purchasing-and-finance>
- B. All addenda will become part of this RFP and shall be responded to by each Offeror.
- C. All addenda shall be acknowledged in writing in the proposal submitted by the Offeror.
- D. This RFP, any subsequent addenda, and any written responses to questions takes precedence over any information previously provided.

6.04 Progress Payments: Progress payments may be made monthly for work successfully completed upon certification by the Architect and approval by WVCTCS. Progress payments shall be itemized according to the schedule of values and shall be invoiced in a format approved by the WVCTCS. Ten percent (10%) retainage shall be withheld from each progress payment. Retainage shall be paid upon successful completion of all work and requirements.

6.05 Shipping: shipping, rigging, and other destination charges shall be included in the cost of the proposed system.

6.06 Subcontracting: The Contractor may subcontract parts of the work to be performed but will retain responsibility for all the work associated with the contract for system installation. The Offeror must identify any subcontractors intended for use in the execution of this contract.

6.07 Software License: The Offeror shall disclose the terms and conditions of software licensing

and any limitations on the use of software in the bid.

6.08 Insurance

- A. The Contractor shall provide Workman's Compensation Insurance, General Liability Insurance, and Automobile Liability Insurance, and where applicable, Products Liability Insurance, with the Owner being included as a named insured on the liability insurance policies.
- B. Certificates of Insurance on all such insurance coverage carried by the Contractor shall be furnished to the Owner prior to commencement of any work.
- C. The minimum insurance limits the Contractor shall provide are as follows:
- Workers' Compensation (must be pursuant to West Virginia Code):
 - a. E.L. Each Accident \$ 500,000
 - b. E.L. Disease-Each Employee \$ 500,000
 - c. E.L. Disease-Policy Limit \$ 500,000
 - Commercial General Liability (per occurrence):
 - a. Each Occurrence \$ 1,000,000
 - b. Damage to Rented Premises \$ 1,000,000
 - c. MED EXP (anyone person) \$ 5,000
 - d. Personal & ADV Injury \$ 1,000,000
 - e. General Aggregate \$ 2,000,000
 - f. Products-COMP/OPP Aggregate \$ 2,000,000
 - Property Damage:
 - a. Each occurrence \$ 1,000,000
 - b. Aggregate \$ 1,000,000
 - Automobile Liability – Owned, Non-owned, and Hired:
 - a. Bodily injury, each person \$ 1,000,000
 - b. Bodily injury, each accident \$ 1,000,000
 - c. Property damage, each occurrence \$ 1,000,000
- D. The Owner shall be exempt from, and in no way liable for, any sums of money which may represent a deductible on any insurance policy. The payment of any deductible be the sole responsibility of the Contractor providing insurance.

6.09 AFFIDAVITS (see Exhibits) – TO BE SUBMITTED WITH BID OR AS OTHERWISE PERSCRIBED BY LAW

- A. PURCHASING AFFIDAVIT: West Virginia code §5A-3-10A states that no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and the debt owed is an amount greater than \$1,000 in the aggregate. The Bidder (vendor) shall execute and submit with its bid, or as otherwise prescribed by West Virginia Code, the Purchasing Affidavit provided in the Bidding Documents.

- B. DRUG-FREE WORKPLACE CONFORMANCE AFFIDAVIT: West Virginia Code §21-1D-5 requires each contractor that submits a bid for the work to submit an affidavit that the contractor has a written plan for a drug-free workplace policy prior to being awarded a contract. The contractor (bidder/vendor) shall execute and submit with its bid, or as otherwise prescribed by West Virginia Code, the Drug-Free Workplace Conformance Affidavit provided in the Bidding Documents.
- 6.10 CERTIFIED DRUG-FREE WORKPLACE REPORT: In accordance with West Virginia Code §21-1D-7b, no less than once per year, or upon completion of the project, every contractor shall provide a certified report to the public authority which let the contract. That report must include each of the items identified in the Required Report Content section of the Certified Drug-Free Workplace Report Coversheet.
- 6.11 WEST VIRGINIA CONTRACTOR'S LICENSE: West Virginia Code §30-42 requires that all persons desiring to perform contractual work in West Virginia must be duly licensed. The West Virginia Contractor Licensing Board is empowered to issue a contractor's license. Application for a contractor's license may be made by contacting the West Virginia Contractor Licensing Board, Building 3, Room 200, 1900 Kanawha Boulevard, East, Charleston, West Virginia 25305. Telephone: (304) 558-7890. West Virginia Code §30-42 requires any prospective Bidder to include the contractor's license number on or with its Bid. Successful Bidder will be required to furnish a copy of their contractor's license prior to issuance of a Purchase Order/Contract.
- 6.12 VENDOR REGISTRATION AND DISCLOSURE STATEMENT: The successful Offeror must be a registered vendor with the West Virginia Department of Administration, Purchasing Division, prior to receiving a contract/purchase order. Vendor Registration information is available at the following URL:
<http://www.state.wv.us/admin/purchase/forms.html>
- 6.13 Shipping: shipping, rigging, and other destination charges shall be included in the cost of the proposed system.
- 6.14 Royalties, Patents, and Licenses
- A. The Contractor shall defend or settle at its own expense, any claim or suit against the Owner alleging that any contractor products furnished under the Agreement infringe any United States patent or copyright. The contractor shall also pay all damages and costs that by final judgment may be assessed against the Owner due to such infringement. The Owner will promptly notify the Contractor in writing of such claim or suit and expect the contractor's obligation to be as sole control of the defense or settlement of such claim or suit. The Owner will cooperate with the Contractor in a reasonable way to facilitate the settlement or defense of such claim or suit. The contractor will not be responsible if the claim or suit arises from the Owner's modifications, or from combinations of products provided by the contractor with products provided by the Owner or others.
- B. If any contractor-provided products become, or in the Contractor's opinion, are likely to become the subject of an infringement suit, the Contractor shall:
- Procure for the Owner the right to continue using the applicable product;
 - Replace or modify the product to provide a no infringing product that is functionally

equivalent in all material respects; or

- Refund the purchase price or one-time software license fee less a reasonable allowance for use.

- 6.15 Assignment: Neither the contractor nor the Owner may assign this agreement without the prior written consent of the other party.
- 6.16 Subcontracting: The Contractor may subcontract the work to be performed but shall retain responsibility for all the work associated with the contract for system installation. The Offeror must identify any subcontractors intended for use in the execution of this contract in its bid.
- 6.17 Supplemental Terms and Conditions/Modifications: Any supplemental terms, conditions, modification, or waiver of these terms and conditions shall be in writing and signed by the Contractor and the Owner. The State of West Virginia terms and conditions shall prevail whenever there is a conflict.
- 6.18 Waiver of Rights or Remedy: If the Contractor or the Owner fails to enforce any rights or remedy available under this Agreement, that failure will not be construed as a waiver of any right or remedy with respect to any other breach or failure by the other party.
- 6.19 Statement of Intent: The Owner certifies the products acquired under this agreement are intended for internal use and not for the purpose of resale.
- 6.20 Project Closeout Documents: Upon completion of the project and prior to final payment, the Contractor shall provide a complete set of project closeout documents tabbed, indexed and bookmarked in PDF format which shall include but not necessarily be limited to:
- A. As built drawings.
 - B. Approved shop drawings and submittals.
 - C. Operation and maintenance manuals.
 - D. Warranties.
 - E. Software and license agreements.
- 6.21 Exhibits Applicable to this RFP and to the Contract
- A. The following is a list of Exhibits that are attached and are a binding part of this RFP:
 - Exhibit A, Instructions to Bidders
 - Exhibit B, Terms and Conditions
 - Exhibit C, No-Debt Affidavit – MUST BE SUBMITTED WITH BID OR AS REQUIRED BY WV Code
 - Exhibit D, Drug-Free Workplace Conformance Affidavit – MUST BE SUBMITTED WITH BID OR AS REQUIRED BY WV CODE

PART 7: PROJECT DOCUMENTS

7.01 The Bid shall include a complete turnkey installation of the systems indicated in the following documents:

7.02 Specifications:

- A. The specifications define performance criteria, selected specific installation requirements, and some specific performance requirements, which are to be provided under this contract. The level of detail contained within these documents is limited and is intended to be sufficient to obtain competitive Bids from multiple contractors. Detailed design and engineering, including, but not limited to, incidental equipment, ancillary equipment or interface devices, equipment rack layouts, control panel layouts, and equipment mounting details, shall be included in the scope of your work.

Section 01 30 00, Administrative Requirements
Section 08 71 00, Door Hardware (Caperton Center Only)
Section 26 05 26, Grounding and Bonding for Electrical Systems
Section 26 05 29, Hangers and Supports for Electrical Systems
Section 26 05 33.13, Conduit for Electrical Systems
Section 26 05 33.16, Boxes for Electrical Systems
Section 28 00 10, Security General
Section 28 00 90, Security Performance Verification
Section 28 10 00, Access Control
Section 28 20 00, Video Surveillance

7.03 Drawings:

DRAWING INDEX – PIERPONT CAPERTON SECURITY SYSTEM (MARCH 04, 2026):

CAPERTON

**A100 - FLOOR PLAN
E000 - GENERAL NOTES AND SPECIFICATIONS
E001 - SYMBOLS AND ABBREVIATIONS
E130 - SECURITY SYSTEM PLAN
E500 - DETAILS AND SCHEDULES**

VET TECH

**A110 - NOTES PLAN
A600 - ROOM, WINDOW & DOOR SCHEDULE
E000 - GENERAL NOTES AND SPECIFICATIONS
E001 - SYMBOLS AND ABBREVIATIONS
E130 - SECURITY SYSTEM PLAN
E500 - DETAILS AND SCHEDULES**

APPENDIX A

SECTION 00100 – INVITATION TO BID

The West Virginia Community and Technical College System invites proposals to provide all Work including, but not limited to, labor, material, equipment supplies and transportation for:

REQUEST FOR BIDS RFB 26239

Caperton Center & Vet Tech Security System
At Pierpont Community & Technical College

The Work of this Project is defined by the Contract Documents, and consists of the following:

West Virginia Community and Technical College System seeks to engage a highly qualified security integrator for the installation and maintenance of an Access Control and Alarm Monitoring System (ACAMS), Video Surveillance System (VSS) and security communications system at two separate and adjacent buildings in Clarksburg, West Virginia, occupied by Pierpont Community and Technical College:

- A. The Caperton Center
- B. Vet Tech Facility

All questions shall be directed to Jason Brown of Pickering Associates at jbrown@pickeringusa.com.

Bids must be submitted in accordance with Bidding Documents issued by the Architect and on the Form of Proposal provided.

Bidding Documents will be available Monday, March 23, 2026, and can be obtained as described below:

Bid Documents are available at no cost by going to: pickeringplanroom.com

Bidding documents may be examined at Viewing Depositories listed in the Bidding Documents.

The Invitation to Bid, Addenda and other relevant information concerning RFB 26239 will be posted at the following URL. It is the Bidder's obligation to check this website for current information:

<https://wvctcs.org/purchasing-and-finance>

A Pre-bid meeting is scheduled for:

Time: **10:00 a.m.**, Local Prevailing Time (LPT)
Date: **April 15, 2026**
Place: Pierpont Community and Technical College
Caperton Center, Room 148
501 West Main Street
Clarksburg, WV 26301

Attendance is: MANDATORY: All Bidders **MUST** attend the pre-bid meeting to familiarize themselves with the Project location, site conditions and other relevant information. Should a Bidder fail to attend, the Bid will be disqualified. Subcontractors and material suppliers are encouraged to attend the pre-bid meeting.

The Bidder, if successful and awarded a contract, will receive a purchase order and notice to proceed from the Owner after all contract documents are properly completed, executed, and returned to the Owner within ten days following receipt of the Owner's written notice of intent to award a contract. All Work shall start from date of Notice to Proceed and shall be Substantially Complete not later than the number of consecutive calendar days identified in the Contract. Bidder also agrees to achieve Final Completion within 30 days thereafter.

The Owner will suffer financial loss if the Work is not Substantially Complete within the Contract Time. For each calendar day of delay in achieving Substantial Completion, the Contractor shall be liable for and shall pay the Owner, not as a penalty but as liquidated damages, in accordance with the following schedule:

For each calendar day the project is not Substantially Complete, damages to be assessed at One Hundred and Fifty Dollars (\$150.00) per day.

For each calendar day of delay in achieving Final Completion, the Contractor shall be liable for and shall pay half the amount of liquidated damages stated above, plus any additional fees of the Architect and the Architect's consultants that may accrue. Allowances may be made for delays due to shortages of materials and/or energy resources, subject to proof by documentation, and for delays due to strikes or other delays beyond the control of the Contractor. The Contractor in accordance with the Contract Documents must properly document all delays and any claim for extension of the Contract Time.

Submitting Bids: Sealed Bids will be received by the OWNER at the following location until **1:00 p.m.**, LPT, **April 30, 2026**, in accordance with the Instructions to Bidders, and Supplementary Instructions to Bidders:

Director of Facilities and Capital Project Management
RFB 26239
West Virginia Community and Technical College System
2001 Union Carbide Drive, Building 2000
South Charleston, WV 25303

Special Instructions for Delivering Bids:

- A. Hand Delivered Bids: Deliver bids to the following address: 1st Floor, WV Community and Technical College System, 2001 Union Carbide Drive, Building 2000, South Charleston, WV 25303.

Late Bids and electronically transmitted bids will not be accepted. Owner reserves the right to accept or reject any/all Bids.

All applicable federal, state, and local laws, rules and regulations apply.

End Of Section

BID FORM

BID TO THE OWNER: West Virginia Community and Technical College System
2001 Union Carbide Drive, Building 2000
South Charleston, WV 25303

PROJECT: RFB 26239
Security System for Vet Tech Facility & Caperton Center
Pierpont Community and Technical College

Bidder's Name: _____

The undersigned, hereinafter called "Bidder," being familiar with and understanding the Bidding Documents, and also having examined the site and being familiar with all local conditions affecting the Project, hereby proposes to furnish all labor, material, equipment, supplies and transportation, and to perform all Work in accordance with the Bidding and Contract Documents within the time set forth below for the sum of:

VET TECH FACILITY BID: \$ _____

(Amount to be shown in both words and numbers. In the event of a difference between the written amount and the number amount, the written amount shall prevail.)

CAPERTON CENTER BID: \$ _____

(Amount to be shown in both words and numbers. In the event of a difference between the written amount and the number amount, the written amount shall prevail.)

TOTAL BID FOR BOTH: \$ _____

(Amount to be shown in both words and numbers. In the event of a difference between the written amount and the number amount, the written amount shall prevail.)

The Bidder, if successful and awarded a Contract, agrees that all Work is to be Substantially Complete within the below listed consecutive calendar days following receipt of Owner's written Notice to Proceed and agrees to achieve Final Completion within 30 consecutive calendar days thereafter.

CALENDAR DAYS FOR VET TECH: _____

(All amounts to be shown in both words and numbers)

CALENDAR DAYS FOR CAPERTON CENTER: _____

(All amounts to be shown in both words and numbers)

CALENDAR DAYS FOR BOTH: _____

(All amounts to be shown in both words and numbers)

RESPECTFULLY SUBMITTED:

SIGNATURE: _____

Signature In Ink

DATE: _____

NAME: _____

Please Type or Print

Corporate Seal if Applicable

TITLE: _____

BIDDERS NAME : _____

BIDDER'S ADDRESS: _____

TELEPHONE: _____

EMAIL: _____

CONTRACTOR'S
LICENSE NO: _____

CONTRACTOR'S LICENSE

West Virginia Code §21-11-2 requires that all persons desiring to perform contractual work in West Virginia must be duly licensed. The West Virginia Contractor's Licensing Board is empowered to issue the contractor's license. Application for a contractor's license may be made by contacting the West Virginia Department of Labor, 1900 Kanawha Boulevard, East, Charleston, West Virginia 25305. Telephone: (304) 558-7890. West Virginia Code §21-11 requires any prospective Bidder to include the contractor's license number on their Bid. Successful Bidder will be required to furnish a copy of their contractor's license prior to issuance of a Purchase Order/Contract. Please complete and attach EXHIBIT A to bid.

AFFIDAVITS (on the following pages) – TO BE SUBMITTED WITH BID OR AS OTHERWISE PRESCRIBED BY LAW

- PURCHASING AFFIDAVIT: West Virginia Code §5A-3-10A states that no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and the debt owed is an amount greater than \$1000 in the aggregate. Please include purchasing affidavit to the bid.
- DRUG-FREE WORKPLACE CONFORMANCE AFFIDAVIT: This affidavit must be submitted with the Bid to comply with West Virginia Code §21-1D-5. Failure to include this affidavit to the bid shall result in disqualification of the Bid.

DISCLOSURE OF INTERESTED PARTIES TO CONTRACTS

Pursuant to West Virginia Code §6D-1-2, a state agency may not enter into a contract, or a series of related contracts, that has/have an actual or estimated value of \$1 million or more until the business entity submits to the contracting state agency a Disclosure of Interested Parties to the applicable contract. In addition, the business entity awarded a contract is obligated to submit a supplemental Disclosure of Interested Parties reflecting any new or differing interested parties to the contract within 30 days following the completion or termination of the applicable contract.

The Disclosure Form is available at the following URL: <http://www.ethics.wv.gov/Pages/forms.aspx>

VENDOR REGISTRATION AND DISCLOSURE STATEMENT

The successful Bidder must be a registered vendor with the West Virginia Department of Administration, Purchasing Division, prior to receiving a contract/purchase order. Vendor registration information is available at the following URL: <http://www.state.wv.us/admin/purchase/vrc/wv1.pdf>

LIQUIDATED DAMAGES

The Owner will suffer financial loss if the Work is not Substantially Complete within the Contract Time following the date established for commencement of the Work in the notice to proceed and/or purchase order. As liquidated damages, and not as a penalty, the Contractor and the Contractor's surety shall be liable for and shall pay the Owner the sum of \$150.00 per day until Substantial Completion is achieved. Allowances may be made for delays due to shortages of materials and/or energy resources, subject to proof by documentation, and for delays due to strikes or other delays beyond the control of the Contractor. All delays and any claim for extension of Contract Time must be properly documented in accordance with the General Conditions of the Contract for Construction, AIA Document A201-1997, and the State of West Virginia Supplementary Conditions to AIA Document A201-1997.

ADDENDA ACKNOWLEDGMENT

The undersigned hereby acknowledges receipt of the following Addenda and has taken the information contained therein into full consideration in the formulation of this Bid.

Addenda No. 1 _____
 No. 2 _____
 No. 3 _____
 No. 4 _____

Failure to acknowledge receipt of each Addendum may be cause for rejection of the Bid.

SIGNATURE: _____ DATE: _____
Signature in Ink

LIST OF PROPOSED SUBCONTRACTORS (To Be Completed and Submitted with Bid)

List as designated below the proposed subcontractor for each major branch of work for this bid. Also, provide the subcontractor's license number as required by the West Virginia Contractors Licensing Act. If the branch of work is to be completed solely by the Bidder/Contractor, so indicate. If the acceptance of an alternate bid changes a subcontractor, indicate by notation below. The Bidder/Contractor may be requested

to change an unsatisfactory subcontractor. The Bidder/Contractor is responsible for selecting or changing subcontractors. The Owner and Architect/Engineer may indicate their concerns about any entity listed which they have reason to believe past experience indicates that poor performance may be expected. The Bidder/Contractor has full responsibility for satisfactory execution of all work in accordance with the Contract Documents. Any change of proposed subcontractors shall be at no additional cost to the Owner, as the Bidder/Contractor has full responsibility for execution of the work. Bidder/Contractor shall have up to two hours after the bid opening to make adjustments if necessary. Owner will suffer loss should Contractor change from those listed beyond the two-hour time stipulated. Please email adjustments/modifications to Chief Procurement Officer at: rich.donovan@wvhepc.edu.

Branch of Work / Material Category	Subcontractor/Supplier	Contractor License #
1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____

END OF FORM OF PROPOSAL

Pierpont Caperton Center & Vet Tech Security System
APPENDIX A- Schedule of Values Instructions to Complete

1. Enter the required information in the following cells:

Manufacturer: of the equipment provided Part No: of the equipment provided

Description – use standard abbreviations. Do not use punctuation such as periods, apostrophes, or quotations. (feet = ft, inches = in) (example: 3/4in copper DHW)

Unit – relevant unit (CAPS)

Quantity – whole number, no decimals (do not use truncation to hide decimal portion of value.)

Labor- whole number, no decimals (do not use truncation to hide decimal portion of value.)

Round value to nearest dollar.)

Material - whole number, no decimals (do not use truncation to hide decimal portion of value.)

Round value to nearest dollar.)

Total – no entry required; field will auto calculate. Shaded areas are auto calculating.

2. To add lines to the sheet, select the last empty formatted line (above the shaded Total line) on the sheet (click in the left most column, the one EXCEL numbers) and from the Edit menu or the popup menu (right mouse button) select COPY (or use Ctrl-C).

From the Insert menu select Copied Cells or from the popup menu select Insert Copied Cells.

- 3. Do not insert additional columns.**
- 4. Do not add lines below the Total line (shaded line).**
- 5. Do not use header lines (Bldg. names/numbers, floor numbers, elevation titles). Incorporate all titles in descriptions (example: Bld-1 Acc Ceilings)**
- 6. Do not hide columns or rows.**
- 7. The Bidder is responsible for the Excel formulas and arithmetic to prepare and submit a complete and accurate bid.**



AIA® Document A101® – 2017

Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum

AGREEMENT made as of the _____ day of _____ in the year _____
(In words, indicate day, month and year.)

BETWEEN the Owner:
(Name, legal status, address and other information)

WV Higher Education Policy Commission
2001 Union Carbide Drive
Building 2000
South Charleston, WV 25303

and the Contractor:
(Name, legal status, address and other information)

for the following Project:
(Name, location and detailed description)

Caperton Center & Vet Tech Security System- At Pierpont Community & Technical College
501 West Main Street
Clarksburg, WV 26301

Provide a new integrated security system for the PCTC Caperton Center and Vet Tech Facility that shall match, interface and/or be completely compatible with the current system installed at PCTC's Advanced Technology Center (ATC).

The Architect:
(Name, legal status, address and other information)

Pickering Associates
11283 Emerson Avenue
Parkersburg, WV 26104
3044645305

The Owner and Contractor agree as follows.

ADDITIONS AND DELETIONS:

The author of this document may have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

The parties should complete A101®–2017, Exhibit A, Insurance and Bonds, contemporaneously with this Agreement. AIA Document A201®–2017, General Conditions of the Contract for Construction, is adopted in this document by reference. Do not use with other general conditions unless this document is modified.

TABLE OF ARTICLES

- 1 THE CONTRACT DOCUMENTS
- 2 THE WORK OF THIS CONTRACT
- 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION
- 4 CONTRACT SUM
- 5 PAYMENTS
- 6 DISPUTE RESOLUTION
- 7 TERMINATION OR SUSPENSION
- 8 MISCELLANEOUS PROVISIONS
- 9 ENUMERATION OF CONTRACT DOCUMENTS

EXHIBIT A INSURANCE AND BONDS

ARTICLE 1 THE CONTRACT DOCUMENTS

The Contract Documents consist of this Agreement, Conditions of the Contract (General, Supplementary, and other Conditions), Drawings, Specifications, Addenda issued prior to execution of this Agreement, other documents listed in this Agreement, and Modifications issued after execution of this Agreement, all of which form the Contract, and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. An enumeration of the Contract Documents, other than a Modification, appears in Article 9.

ARTICLE 2 THE WORK OF THIS CONTRACT

The Contractor shall fully execute the Work described in the Contract Documents, except as specifically indicated in the Contract Documents to be the responsibility of others.

ARTICLE 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

§ 3.1 The date of commencement of the Work shall be:

(Check one of the following boxes.)

- The date of this Agreement.
- A date set forth in a notice to proceed issued by the Owner.
- Established as follows:
(Insert a date or a means to determine the date of commencement of the Work.)

If a date of commencement of the Work is not selected, then the date of commencement shall be the date of this Agreement.

§ 3.2 The Contract Time shall be measured from the date of commencement of the Work.

§ 3.3 Substantial Completion

§ 3.3.1 Subject to adjustments of the Contract Time as provided in the Contract Documents, the Contractor shall achieve Substantial Completion of the entire Work:

(Check one of the following boxes and complete the necessary information.)

[] Not later than () calendar days from the date of commencement of the Work.

[X] By the following date:

§ 3.3.2 Subject to adjustments of the Contract Time as provided in the Contract Documents, if portions of the Work are to be completed prior to Substantial Completion of the entire Work, the Contractor shall achieve Substantial Completion of such portions by the following dates:

Portion of Work	Substantial Completion Date
-----------------	-----------------------------

§ 3.3.3 If the Contractor fails to achieve Substantial Completion as provided in this Section 3.3, liquidated damages, if any, shall be assessed as set forth in Section 4.5.

ARTICLE 4 CONTRACT SUM

§ 4.1 The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor's performance of the Contract. The Contract Sum shall be (\$ 0.00), subject to additions and deductions as provided in the Contract Documents.

§ 4.2 Alternates

§ 4.2.1 Alternates, if any, included in the Contract Sum:

Item	Price
------	-------

§ 4.2.2 Subject to the conditions noted below, the following alternates may be accepted by the Owner following execution of this Agreement. Upon acceptance, the Owner shall issue a Modification to this Agreement. *(Insert below each alternate and the conditions that must be met for the Owner to accept the alternate.)*

Item	Price	Conditions for Acceptance
------	-------	---------------------------

§ 4.3 Allowances, if any, included in the Contract Sum: *(Identify each allowance.)*

Item	Price
------	-------

§ 4.4 Unit prices, if any:

(Identify the item and state the unit price and quantity limitations, if any, to which the unit price will be applicable.)

Item	Units and Limitations	Price per Unit (\$0.00)
------	-----------------------	-------------------------

§ 4.5 Liquidated damages, if any:

(Insert terms and conditions for liquidated damages, if any.)

The contractor agrees that from the compensation otherwise to be paid, the Owner may retain \$150.00 for each day thereafter, Sundays and holidays included, that the work remains uncompleted, which sum is agreed upon as the proper measure of liquidated damages which the Owner will sustain per diem, by the failure of the Contractor to complete the Work at the stipulated time, and the sum is not to be construed in any sense a penalty.

§ 4.6 Other:

(Insert provisions for bonus or other incentives, if any, that might result in a change to the Contract Sum.)

N/A

ARTICLE 5 PAYMENTS

§ 5.1 Progress Payments

§ 5.1.1 Based upon Applications for Payment submitted to the Architect by the Contractor and Certificates for Payment issued by the Architect, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents.

§ 5.1.2 The period covered by each Application for Payment shall be one calendar month ending on the last day of the month, or as follows:

§ 5.1.3 Provided that an Application for Payment is received by the Architect not later than the 5th day of a month, the Owner shall make payment of the amount certified to the Contractor not later than the 15th day of the following month. If an Application for Payment is received by the Architect after the application date fixed above, payment of the amount certified shall be made by the Owner not later than forty-five (45) days after the Architect receives the Application for Payment.

(Federal, state or local laws may require payment within a certain period of time.)

§ 5.1.4 Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor in accordance with the Contract Documents. The schedule of values shall allocate the entire Contract Sum among the various portions of the Work. The schedule of values shall be prepared in such form, and supported by such data to substantiate its accuracy, as the Architect may require. This schedule of values shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ 5.1.5 Applications for Payment shall show the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment.

§ 5.1.6 In accordance with AIA Document A201™-2017, General Conditions of the Contract for Construction, and subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

§ 5.1.6.1 The amount of each progress payment shall first include:

- .1 That portion of the Contract Sum properly allocable to completed Work;
- .2 That portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction, or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing; and
- .3 That portion of Construction Change Directives that the Architect determines, in the Architect's professional judgment, to be reasonably justified.

§ 5.1.6.2 The amount of each progress payment shall then be reduced by:

- .1 The aggregate of any amounts previously paid by the Owner;
- .2 The amount, if any, for Work that remains uncorrected and for which the Architect has previously withheld a Certificate for Payment as provided in Article 9 of AIA Document A201-2017;
- .3 Any amount for which the Contractor does not intend to pay a Subcontractor or material supplier, unless the Work has been performed by others the Contractor intends to pay;
- .4 For Work performed or defects discovered since the last payment application, any amount for which the Architect may withhold payment, or nullify a Certificate of Payment in whole or in part, as provided in Article 9 of AIA Document A201-2017; and
- .5 Retainage withheld pursuant to Section 5.1.7.

§ 5.1.7 Retainage

§ 5.1.7.1 For each progress payment made prior to Substantial Completion of the Work, the Owner may withhold the following amount, as retainage, from the payment otherwise due:

(Insert a percentage or amount to be withheld as retainage from each Application for Payment. The amount of retainage may be limited by governing law.)

Ten Percent (10%)

§ 5.1.7.1.1 The following items are not subject to retainage:
(Insert any items not subject to the withholding of retainage, such as general conditions, insurance, etc.)

N/A

§ 5.1.7.2 Reduction or limitation of retainage, if any, shall be as follows:
(If the retainage established in Section 5.1.7.1 is to be modified prior to Substantial Completion of the entire Work, including modifications for Substantial Completion of portions of the Work as provided in Section 3.3.2, insert provisions for such modifications.)

N/A

§ 5.1.7.3 Except as set forth in this Section 5.1.7.3, upon Substantial Completion of the Work, the Contractor may submit an Application for Payment that includes the retainage withheld from prior Applications for Payment pursuant to this Section 5.1.7. The Application for Payment submitted at Substantial Completion shall not include retainage as follows:
(Insert any other conditions for release of retainage upon Substantial Completion.)

N/A

§ 5.1.8 If final completion of the Work is materially delayed through no fault of the Contractor, the Owner shall pay the Contractor any additional amounts in accordance with Article 9 of AIA Document A201–2017.

§ 5.1.9 Except with the Owner’s prior approval, the Contractor shall not make advance payments to suppliers for materials or equipment which have not been delivered and stored at the site.

§ 5.2 Final Payment

§ 5.2.1 Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when

- .1 the Contractor has fully performed the Contract except for the Contractor’s responsibility to correct Work as provided in Article 12 of AIA Document A201–2017, and to satisfy other requirements, if any, which extend beyond final payment; and
- .2 a final Certificate for Payment has been issued by the Architect.
- .3 and all releases have been obtained

§ 5.2.2 The Owner’s final payment to the Contractor shall be made no later than 30 days after the issuance of the Architect’s final Certificate for Payment, or as follows:

§ 5.3 Interest

Payments due and unpaid under the Contract shall bear interest from the date payment is due at the rate stated below, or in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

(Insert rate of interest agreed upon, if any.)

0 % Zero Percent

ARTICLE 6 DISPUTE RESOLUTION

§ 6.1 Initial Decision Maker

The Architect will serve as the Initial Decision Maker pursuant to Article 15 of AIA Document A201–2017, unless the parties appoint below another individual, not a party to this Agreement, to serve as the Initial Decision Maker.

(If the parties mutually agree, insert the name, address and other contact information of the Initial Decision Maker, if other than the Architect.)

Sean G. Simon, AIA, NCARB
Principal Architect/ CA Group Manager
318 Lee Street, W., Suite 200

Charleston, WV 25302
Phone: 304-991-6275
Email: ssimon@pickeringusa.com

§ 6.2 Binding Dispute Resolution

For any Claim subject to, but not resolved by, mediation pursuant to Article 15 of AIA Document A201–2017, the method of binding dispute resolution shall be as follows:

(Check the appropriate box.)

- Arbitration pursuant to Section 15.4 of AIA Document A201–2017
- Litigation in a court of competent jurisdiction
- Other *(Specify)*

If the Owner and Contractor do not select a method of binding dispute resolution, or do not subsequently agree in writing to a binding dispute resolution method other than litigation, Claims will be resolved by litigation in a court of competent jurisdiction.

ARTICLE 7 TERMINATION OR SUSPENSION

§ 7.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document A201–2017.

§ 7.1.1 If the Contract is terminated for the Owner’s convenience in accordance with Article 14 of AIA Document A201–2017, then the Owner shall pay the Contractor a termination fee as follows:

(Insert the amount of, or method for determining, the fee, if any, payable to the Contractor following a termination for the Owner’s convenience.)

§ 7.2 The Work may be suspended by the Owner as provided in Article 14 of AIA Document A201–2017.

ARTICLE 8 MISCELLANEOUS PROVISIONS

§ 8.1 Where reference is made in this Agreement to a provision of AIA Document A201–2017 or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

§ 8.2 The Owner’s representative:

(Name, address, email address, and other information)

Barrow Koslosky, AIA, NCARB
Director of Facilities & Capital Project Management
West Virginia Community & Technical College System
2001 Union Carbide Drive, Building 2000
South Charleston, WV 25303
Phone: 304-558-0281 ext. 26384
Email: barrow.koslosky@wvhepc.edu

§ 8.3 The Contractor’s representative:

(Name, address, email address, and other information)

§ 8.4 Neither the Owner's nor the Contractor's representative shall be changed without ten days' prior notice to the other party.

§ 8.5 Insurance and Bonds

§ 8.5.1 The Owner and the Contractor shall purchase and maintain insurance as set forth in AIA Document A101™-2017, Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum, Exhibit A, Insurance and Bonds, and elsewhere in the Contract Documents.

§ 8.5.2 The Contractor shall provide bonds as set forth in AIA Document A101™-2017 Exhibit A, and elsewhere in the Contract Documents.

§ 8.6 Notice in electronic format, pursuant to Article 1 of AIA Document A201-2017, may be given in accordance with a building information modeling exhibit, if completed, or as otherwise set forth below:
(If other than in accordance with a building information modeling exhibit, insert requirements for delivering notice in electronic format such as name, title, and email address of the recipient and whether and how the system will be required to generate a read receipt for the transmission.)

N/A

§ 8.7 Other provisions:

N/A

ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS

§ 9.1 This Agreement is comprised of the following documents:

- .1 AIA Document A101™-2017, Standard Form of Agreement Between Owner and Contractor
- .2 AIA Document A201™-2017, General Conditions of the Contract for Construction

.3 Drawings

Number	Title	Date	Pages
.4	Specifications		

.5 Addenda, if any:

Number	Date	Pages
--------	------	-------

Portions of Addenda relating to bidding or proposal requirements are not part of the Contract Documents unless the bidding or proposal requirements are also enumerated in this Article 9.

.6 Other Exhibits:

(Check all boxes that apply and include appropriate information identifying the exhibit where required.)

AIA Document E204™-2017, Sustainable Projects Exhibit, dated as indicated below:
(Insert the date of the E204-2017 incorporated into this Agreement.)

[] The Sustainability Plan:

Title	Date	Pages
-------	------	-------

[] Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages
----------	-------	------	-------

.7 Other documents, if any, listed below:

(List here any additional documents that are intended to form part of the Contract Documents. AIA Document A201™-2017 provides that the advertisement or invitation to bid, Instructions to Bidders, sample forms, the Contractor's bid or proposal, portions of Addenda relating to bidding or proposal requirements, and other information furnished by the Owner in anticipation of receiving bids or proposals, are not part of the Contract Documents unless enumerated in this Agreement. Any such documents should be listed here only if intended to be part of the Contract Documents.)

This Agreement entered into as of the day and year first written above.

OWNER (Signature)

CONTRACTOR (Signature)

(Printed name and title)

(Printed name and title)



AIA® Document A201® – 2017

General Conditions of the Contract for Construction

for the following PROJECT:

(Name and location or address)

Caperton Center & Vet Tech Security System- At Pierpont Community & Technical College
501 West Main Street
Clarksburg, WV 26301

THE OWNER:

(Name, legal status and address)

WV Higher Education Policy Commission
2001 Union Carbide Drive
Building 2000
South Charleston, WV 25303

THE ARCHITECT:

(Name, legal status and address)

Pickering Associates
11283 Emerson Avenue
Parkersburg, WV 26104

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- 11 INSURANCE AND BONDS
- 12 UNCOVERING AND CORRECTION OF WORK

ADDITIONS AND DELETIONS:

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This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

For guidance in modifying this document to include supplementary conditions, see AIA Document A503™-2017, Guide for Supplementary Conditions.

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ARTICLE 1 GENERAL PROVISIONS

§ 1.1 Basic Definitions

§ 1.1.1 The Contract Documents

The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter the Agreement) and consist of the Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement, and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive, or (4) a written order for a minor change in the Work issued by the Architect. Unless specifically enumerated in the Agreement, the Contract Documents do not include the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor's bid or proposal, or portions of Addenda relating to bidding or proposal requirements.

§ 1.1.2 The Contract

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Contractor and the Architect or the Architect's consultants, (2) between the Owner and a Subcontractor or a Sub-subcontractor, (3) between the Owner and the Architect or the Architect's consultants, or (4) between any persons or entities other than the Owner and the Contractor. The Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Architect's duties.

§ 1.1.3 The Work

The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment, and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.

§ 1.1.4 The Project

The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner and by Separate Contractors.

§ 1.1.5 The Drawings

The Drawings are the graphic and pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules, and diagrams.

§ 1.1.6 The Specifications

The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, systems, standards and workmanship for the Work, and performance of related services.

§ 1.1.7 Instruments of Service

Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Architect and the Architect's consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, specifications, and other similar materials.

§ 1.1.8 Initial Decision Maker

The Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2. The Initial Decision Maker shall not show partiality to the Owner or Contractor and shall not be liable for results of interpretations or decisions rendered in good faith.

§ 1.2 Correlation and Intent of the Contract Documents

§ 1.2.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

§ 1.2.1.1 The invalidity of any provision of the Contract Documents shall not invalidate the Contract or its remaining provisions. If it is determined that any provision of the Contract Documents violates any law, or is otherwise invalid or unenforceable, then that provision shall be revised to the extent necessary to make that provision legal and enforceable. In such case the Contract Documents shall be construed, to the fullest extent permitted by law, to give effect to the parties' intentions and purposes in executing the Contract.

§ 1.2.2 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

§ 1.2.3 Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

§ 1.3 Capitalization

Terms capitalized in these General Conditions include those that are (1) specifically defined, (2) the titles of numbered articles, or (3) the titles of other documents published by the American Institute of Architects.

§ 1.4 Interpretation

In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

§ 1.5 Ownership and Use of Drawings, Specifications, and Other Instruments of Service

§ 1.5.1 The Architect and the Architect's consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and retain all common law, statutory, and other reserved rights in their Instruments of Service, including copyrights. The Contractor, Subcontractors, Sub-subcontractors, and suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with the Project is not to be construed as publication in derogation of the Architect's or Architect's consultants' reserved rights.

§ 1.5.2 The Contractor, Subcontractors, Sub-subcontractors, and suppliers are authorized to use and reproduce the Instruments of Service provided to them, subject to any protocols established pursuant to Sections 1.7 and 1.8, solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and suppliers may not use the Instruments of Service on other projects or for additions to the Project outside the scope of the Work without the specific written consent of the Owner, Architect, and the Architect's consultants.

§ 1.6 Notice

§ 1.6.1 Except as otherwise provided in Section 1.6.2, where the Contract Documents require one party to notify or give notice to the other party, such notice shall be provided in writing to the designated representative of the party to whom the notice is addressed and shall be deemed to have been duly served if delivered in person, by mail, by courier, or by electronic transmission if a method for electronic transmission is set forth in the Agreement.

§ 1.6.2 Notice of Claims as provided in Section 15.1.3 shall be provided in writing and shall be deemed to have been duly served only if delivered to the designated representative of the party to whom the notice is addressed by certified or registered mail, or by courier providing proof of delivery.

§ 1.7 Digital Data Use and Transmission

The parties shall agree upon written protocols governing the transmission and use of, and reliance on, Instruments of Service or any other information or documentation in digital form.

§ 1.8 Building Information Models Use and Reliance

Any use of, or reliance on, all or a portion of a building information model without agreement to written protocols governing the use of, and reliance on, the information contained in the model shall be at the using or relying party's sole risk and without liability to the other party and its contractors or consultants, the authors of, or contributors to, the building information model, and each of their agents and employees.

ARTICLE 2 OWNER

§ 2.1 General

§ 2.1.1 The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization. Except as otherwise provided in Section 4.2.1, the Architect does not have such authority. The term "Owner" means the Owner or the Owner's authorized representative.

§ 2.1.2 The Owner shall furnish to the Contractor, within fifteen days after receipt of a written request, information necessary and relevant for the Contractor to evaluate, give notice of, or enforce mechanic's lien rights. Such information shall include a correct statement of the record legal title to the property on which the Project is located, usually referred to as the site, and the Owner's interest therein.

§ 2.2 Evidence of the Owner's Financial Arrangements

§ 2.2.1 Prior to commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract. The Contractor shall have no obligation to commence the Work until the Owner provides such evidence. If commencement of the Work is delayed under this Section 2.2.1, the Contract Time shall be extended appropriately.

§ 2.2.2 Following commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract only if (1) the Owner fails to make payments to the Contractor as the Contract Documents require; (2) the Contractor identifies in writing a reasonable concern regarding the Owner's ability to make payment when due; or (3) a change in the Work materially changes the Contract Sum. If the Owner fails to provide such evidence, as required, within fourteen days of the Contractor's request, the Contractor may immediately stop the Work and, in that event, shall notify the Owner that the Work has stopped. However, if the request is made because a change in the Work materially changes the Contract Sum under (3) above, the Contractor may immediately stop only that portion of the Work affected by the change until reasonable evidence is provided. If the Work is stopped under this Section 2.2.2, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided in the Contract Documents.

§ 2.2.3 After the Owner furnishes evidence of financial arrangements under this Section 2.2, the Owner shall not materially vary such financial arrangements without prior notice to the Contractor.

§ 2.2.4 Where the Owner has designated information furnished under this Section 2.2 as "confidential," the Contractor shall keep the information confidential and shall not disclose it to any other person. However, the Contractor may disclose "confidential" information, after seven (7) days' notice to the Owner, where disclosure is required by law, including a subpoena or other form of compulsory legal process issued by a court or governmental entity, or by court or arbitrator(s) order. The Contractor may also disclose "confidential" information to its employees, consultants, sureties, Subcontractors and their employees, Sub-subcontractors, and others who need to know the content of such information solely and exclusively for the Project and who agree to maintain the confidentiality of such information.

§ 2.3 Information and Services Required of the Owner

§ 2.3.1 Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 3.7.1, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

§ 2.3.2 The Owner shall retain an architect lawfully licensed to practice architecture, or an entity lawfully practicing architecture, in the jurisdiction where the Project is located. That person or entity is identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number.

§ 2.3.3 If the employment of the Architect terminates, the Owner shall employ a successor to whom the Contractor has no reasonable objection and whose status under the Contract Documents shall be that of the Architect.

§ 2.3.4 The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

§ 2.3.5 The Owner shall furnish information or services required of the Owner by the Contract Documents with reasonable promptness. The Owner shall also furnish any other information or services under the Owner's control and relevant to the Contractor's performance of the Work with reasonable promptness after receiving the Contractor's written request for such information or services.

§ 2.3.6 Unless otherwise provided in the Contract Documents, the Owner shall furnish to the Contractor one copy of the Contract Documents for purposes of making reproductions pursuant to Section 1.5.2.

§ 2.4 Owner's Right to Stop the Work

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or repeatedly fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Section 6.1.3.

§ 2.5 Owner's Right to Carry Out the Work

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a ten-day period after receipt of notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such default or neglect. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect and the Architect may, pursuant to Section 9.5.1, withhold or nullify a Certificate for Payment in whole or in part, to the extent reasonably necessary to reimburse the Owner for the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Architect's additional services made necessary by such default, neglect, or failure. If current and future payments are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner. If the Contractor disagrees with the actions of the Owner or the Architect, or the amounts claimed as costs to the Owner, the Contractor may file a Claim pursuant to Article 15.

ARTICLE 3 CONTRACTOR

§ 3.1 General

§ 3.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed, if required in the jurisdiction where the Project is located. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" means the Contractor or the Contractor's authorized representative.

§ 3.1.2 The Contractor shall perform the Work in accordance with the Contract Documents.

§ 3.1.3 The Contractor shall not be relieved of its obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect in the Architect's administration of the Contract, or by tests, inspections or approvals required or performed by persons or entities other than the Contractor.

§ 3.2 Review of Contract Documents and Field Conditions by Contractor

§ 3.2.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed, and correlated personal observations with requirements of the Contract Documents.

§ 3.2.2 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.3.4, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the

purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Architect any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information in such form as the Architect may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents.

§ 3.2.3 The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Architect any nonconformity discovered by or made known to the Contractor as a request for information in such form as the Architect may require.

§ 3.2.4 If the Contractor believes that additional cost or time is involved because of clarifications or instructions the Architect issues in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3, the Contractor shall submit Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2 or 3.2.3, the Contractor shall pay such costs and damages to the Owner, subject to Section 15.1.7, as would have been avoided if the Contractor had performed such obligations. If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or Architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities.

§ 3.3 Supervision and Construction Procedures

§ 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences, and procedures, and for coordinating all portions of the Work under the Contract. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences, or procedures, the Contractor shall evaluate the jobsite safety thereof and shall be solely responsible for the jobsite safety of such means, methods, techniques, sequences, or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely notice to the Owner and Architect, and shall propose alternative means, methods, techniques, sequences, or procedures. The Architect shall evaluate the proposed alternative solely for conformance with the design intent for the completed construction. Unless the Architect objects to the Contractor's proposed alternative, the Contractor shall perform the Work using its alternative means, methods, techniques, sequences, or procedures.

§ 3.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors.

§ 3.3.3 The Contractor shall be responsible for inspection of portions of Work already performed to determine that such portions are in proper condition to receive subsequent Work.

§ 3.4 Labor and Materials

§ 3.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

§ 3.4.2 Except in the case of minor changes in the Work approved by the Architect in accordance with Section 3.12.8 or ordered by the Architect in accordance with Section 7.4, the Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect and in accordance with a Change Order or Construction Change Directive.

§ 3.4.3 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them.

§ 3.5 Warranty

§ 3.5.1 The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

§ 3.5.2 All material, equipment, or other special warranties required by the Contract Documents shall be issued in the name of the Owner, or shall be transferable to the Owner, and shall commence in accordance with Section 9.8.4.

§ 3.6 Taxes

The Contractor shall pay sales, consumer, use and similar taxes for the Work provided by the Contractor that are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect.

§ 3.7 Permits, Fees, Notices and Compliance with Laws

§ 3.7.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit as well as for other permits, fees, licenses, and inspections by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded.

§ 3.7.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work.

§ 3.7.3 If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

§ 3.7.4 Concealed or Unknown Conditions

If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner and the Architect before conditions are disturbed and in no event later than 14 days after first observance of the conditions. The Architect will promptly investigate such conditions and, if the Architect determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend that an equitable adjustment be made in the Contract Sum or Contract Time, or both. If the Architect determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall promptly notify the Owner and Contractor, stating the reasons. If either party disputes the Architect's determination or recommendation, that party may submit a Claim as provided in Article 15.

§ 3.7.5 If, in the course of the Work, the Contractor encounters human remains or recognizes the existence of burial markers, archaeological sites or wetlands not indicated in the Contract Documents, the Contractor shall immediately suspend any operations that would affect them and shall notify the Owner and Architect. Upon receipt of such notice, the Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations. The Contractor shall continue to suspend such operations until otherwise instructed by the Owner but shall continue with all other operations that do not affect those remains or features. Requests for adjustments in the Contract Sum and Contract Time arising from the existence of such remains or features may be made as provided in Article 15.

§ 3.8 Allowances

§ 3.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct,

but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.

§ 3.8.2 Unless otherwise provided in the Contract Documents,

- .1 allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
- .2 Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit, and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances; and
- .3 whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2.

§ 3.8.3 Materials and equipment under an allowance shall be selected by the Owner with reasonable promptness.

§ 3.9 Superintendent

§ 3.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor.

§ 3.9.2 The Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the name and qualifications of a proposed superintendent. Within 14 days of receipt of the information, the Architect may notify the Contractor, stating whether the Owner or the Architect (1) has reasonable objection to the proposed superintendent or (2) requires additional time for review. Failure of the Architect to provide notice within the 14-day period shall constitute notice of no reasonable objection.

§ 3.9.3 The Contractor shall not employ a proposed superintendent to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not change the superintendent without the Owner's consent, which shall not unreasonably be withheld or delayed.

§ 3.10 Contractor's Construction and Submittal Schedules

§ 3.10.1 The Contractor, promptly after being awarded the Contract, shall submit for the Owner's and Architect's information a Contractor's construction schedule for the Work. The schedule shall contain detail appropriate for the Project, including (1) the date of commencement of the Work, interim schedule milestone dates, and the date of Substantial Completion; (2) an apportionment of the Work by construction activity; and (3) the time required for completion of each portion of the Work. The schedule shall provide for the orderly progression of the Work to completion and shall not exceed time limits current under the Contract Documents. The schedule shall be revised at appropriate intervals as required by the conditions of the Work and Project.

§ 3.10.2 The Contractor, promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal schedule, shall submit a submittal schedule for the Architect's approval. The Architect's approval shall not be unreasonably delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule, and (2) allow the Architect reasonable time to review submittals. If the Contractor fails to submit a submittal schedule, or fails to provide submittals in accordance with the approved submittal schedule, the Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.

§ 3.10.3 The Contractor shall perform the Work in general accordance with the most recent schedules submitted to the Owner and Architect.

§ 3.11 Documents and Samples at the Site

The Contractor shall make available, at the Project site, the Contract Documents, including Change Orders, Construction Change Directives, and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and the approved Shop Drawings, Product Data, Samples, and similar required submittals. These shall be in electronic form or paper copy, available to the Architect and Owner, and delivered to the Architect for submittal to the Owner upon completion of the Work as a record of the Work as

constructed.

§ 3.12 Shop Drawings, Product Data and Samples

§ 3.12.1 Shop Drawings are drawings, diagrams, schedules, and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier, or distributor to illustrate some portion of the Work.

§ 3.12.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

§ 3.12.3 Samples are physical examples that illustrate materials, equipment, or workmanship, and establish standards by which the Work will be judged.

§ 3.12.4 Shop Drawings, Product Data, Samples, and similar submittals are not Contract Documents. Their purpose is to demonstrate how the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the Architect is subject to the limitations of Section 4.2.7. Informational submittals upon which the Architect is not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the Architect without action.

§ 3.12.5 The Contractor shall review for compliance with the Contract Documents, approve, and submit to the Architect, Shop Drawings, Product Data, Samples, and similar submittals required by the Contract Documents, in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of Separate Contractors.

§ 3.12.6 By submitting Shop Drawings, Product Data, Samples, and similar submittals, the Contractor represents to the Owner and Architect that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

§ 3.12.7 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples, or similar submittals, until the respective submittal has been approved by the Architect.

§ 3.12.8 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from the requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples, or similar submittals, unless the Contractor has specifically notified the Architect of such deviation at the time of submittal and (1) the Architect has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples, or similar submittals, by the Architect's approval thereof.

§ 3.12.9 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples, or similar submittals, to revisions other than those requested by the Architect on previous submittals. In the absence of such notice, the Architect's approval of a resubmission shall not apply to such revisions.

§ 3.12.10 The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures. The Contractor shall not be required to provide professional services in violation of applicable law.

§ 3.12.10.1 If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will specify all performance and design criteria that such services must satisfy. The Contractor shall be entitled to rely upon the adequacy and accuracy of the performance and design criteria provided in the Contract Documents. The

Contractor shall cause such services or certifications to be provided by an appropriately licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings, and other submittals prepared by such professional. Shop Drawings, and other submittals related to the Work, designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner and the Architect shall be entitled to rely upon the adequacy and accuracy of the services, certifications, and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor the performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review and approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.

§ 3.12.10.2 If the Contract Documents require the Contractor's design professional to certify that the Work has been performed in accordance with the design criteria, the Contractor shall furnish such certifications to the Architect at the time and in the form specified by the Architect.

§ 3.13 Use of Site

The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, lawful orders of public authorities, and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

§ 3.14 Cutting and Patching

§ 3.14.1 The Contractor shall be responsible for cutting, fitting, or patching required to complete the Work or to make its parts fit together properly. All areas requiring cutting, fitting, or patching shall be restored to the condition existing prior to the cutting, fitting, or patching, unless otherwise required by the Contract Documents.

§ 3.14.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or Separate Contractors by cutting, patching, or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter construction by the Owner or a Separate Contractor except with written consent of the Owner and of the Separate Contractor. Consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold, from the Owner or a Separate Contractor, its consent to cutting or otherwise altering the Work.

§ 3.15 Cleaning Up

§ 3.15.1 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials and rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery, and surplus materials from and about the Project.

§ 3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and the Owner shall be entitled to reimbursement from the Contractor.

§ 3.16 Access to Work

The Contractor shall provide the Owner and Architect with access to the Work in preparation and progress wherever located.

§ 3.17 Royalties, Patents and Copyrights

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and Architect harmless from loss on account thereof, but shall not be responsible for defense or loss when a particular design, process, or product of a particular manufacturer or manufacturers is required by the Contract Documents, or where the copyright violations are contained in Drawings, Specifications, or other documents prepared by the Owner or Architect. However, if an infringement of a copyright or patent is discovered by, or made known to, the Contractor, the Contractor shall be responsible for the loss unless the information is promptly furnished to the Architect.

§ 3.18 Indemnification

§ 3.18.1 To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the

Work, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss, or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity that would otherwise exist as to a party or person described in this Section 3.18.

§ 3.18.2 In claims against any person or entity indemnified under this Section 3.18 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, the indemnification obligation under Section 3.18.1 shall not be limited by a limitation on amount or type of damages, compensation, or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts, or other employee benefit acts.

ARTICLE 4 ARCHITECT

§ 4.1 General

§ 4.1.1 The Architect is the person or entity retained by the Owner pursuant to Section 2.3.2 and identified as such in the Agreement.

§ 4.1.2 Duties, responsibilities, and limitations of authority of the Architect as set forth in the Contract Documents shall not be restricted, modified, or extended without written consent of the Owner, Contractor, and Architect. Consent shall not be unreasonably withheld.

§ 4.2 Administration of the Contract

§ 4.2.1 The Architect will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative during construction until the date the Architect issues the final Certificate for Payment. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

§ 4.2.2 The Architect will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Architect will not have control over, charge of, or responsibility for the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents.

§ 4.2.3 On the basis of the site visits, the Architect will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and promptly report to the Owner (1) known deviations from the Contract Documents, (2) known deviations from the most recent construction schedule submitted by the Contractor, and (3) defects and deficiencies observed in the Work. The Architect will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect will not have control over or charge of, and will not be responsible for acts or omissions of, the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

§ 4.2.4 Communications

The Owner and Contractor shall include the Architect in all communications that relate to or affect the Architect's services or professional responsibilities. The Owner shall promptly notify the Architect of the substance of any direct communications between the Owner and the Contractor otherwise relating to the Project. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and suppliers shall be through the Contractor. Communications by and with Separate Contractors shall be through the Owner. The Contract Documents may specify other communication protocols.

§ 4.2.5 Based on the Architect's evaluations of the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

§ 4.2.6 The Architect has authority to reject Work that does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable, the Architect will have authority to require inspection or testing of the Work in accordance with Sections 13.4.2 and 13.4.3, whether or not the Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, suppliers, their agents or employees, or other persons or entities performing portions of the Work.

§ 4.2.7 The Architect will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data, and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5, and 3.12. The Architect's review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences, or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

§ 4.2.8 The Architect will prepare Change Orders and Construction Change Directives, and may order minor changes in the Work as provided in Section 7.4. The Architect will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.

§ 4.2.9 The Architect will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion pursuant to Section 9.8; receive and forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10; and issue a final Certificate for Payment pursuant to Section 9.10.

§ 4.2.10 If the Owner and Architect agree, the Architect will provide one or more Project representatives to assist in carrying out the Architect's responsibilities at the site. The Owner shall notify the Contractor of any change in the duties, responsibilities and limitations of authority of the Project representatives.

§ 4.2.11 The Architect will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness.

§ 4.2.12 Interpretations and decisions of the Architect will be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, the Architect will endeavor to secure faithful performance by both Owner and Contractor, will not show partiality to either, and will not be liable for results of interpretations or decisions rendered in good faith.

§ 4.2.13 The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.

§ 4.2.14 The Architect will review and respond to requests for information about the Contract Documents. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If appropriate, the Architect will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

ARTICLE 5 SUBCONTRACTORS

§ 5.1 Definitions

§ 5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a Separate Contractor or the subcontractors of a Separate Contractor.

§ 5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. The term “Sub-subcontractor” is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

§ 5.2 Award of Subcontracts and Other Contracts for Portions of the Work

§ 5.2.1 Unless otherwise stated in the Contract Documents, the Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the persons or entities proposed for each principal portion of the Work, including those who are to furnish materials or equipment fabricated to a special design. Within 14 days of receipt of the information, the Architect may notify the Contractor whether the Owner or the Architect (1) has reasonable objection to any such proposed person or entity or (2) requires additional time for review. Failure of the Architect to provide notice within the 14-day period shall constitute notice of no reasonable objection.

§ 5.2.2 The Contractor shall not contract with a proposed person or entity to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

§ 5.2.3 If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Architect has no reasonable objection. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor’s Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.

§ 5.2.4 The Contractor shall not substitute a Subcontractor, person, or entity for one previously selected if the Owner or Architect makes reasonable objection to such substitution.

§ 5.3 Subcontractual Relations

By appropriate written agreement, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor’s Work that the Contractor, by these Contract Documents, assumes toward the Owner and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies, and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

§ 5.4 Contingent Assignment of Subcontracts

§ 5.4.1 Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner, provided that

- .1 assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor; and
- .2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

When the Owner accepts the assignment of a subcontract agreement, the Owner assumes the Contractor’s rights and obligations under the subcontract.

§ 5.4.2 Upon such assignment, if the Work has been suspended for more than 30 days, the Subcontractor's compensation shall be equitably adjusted for increases in cost resulting from the suspension.

§ 5.4.3 Upon assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor contractor or other entity. If the Owner assigns the subcontract to a successor contractor or other entity, the Owner shall nevertheless remain legally responsible for all of the successor contractor's obligations under the subcontract.

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

§ 6.1 Owner's Right to Perform Construction and to Award Separate Contracts

§ 6.1.1 The term "Separate Contractor(s)" shall mean other contractors retained by the Owner under separate agreements. The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and with Separate Contractors retained under Conditions of the Contract substantially similar to those of this Contract, including those provisions of the Conditions of the Contract related to insurance and waiver of subrogation.

§ 6.1.2 When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.

§ 6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each Separate Contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with any Separate Contractors and the Owner in reviewing their construction schedules. The Contractor shall make any revisions to its construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, Separate Contractors, and the Owner until subsequently revised.

§ 6.1.4 Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner's own forces or with Separate Contractors, the Owner or its Separate Contractors shall have the same obligations and rights that the Contractor has under the Conditions of the Contract, including, without excluding others, those stated in Article 3, this Article 6, and Articles 10, 11, and 12.

§ 6.2 Mutual Responsibility

§ 6.2.1 The Contractor shall afford the Owner and Separate Contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

§ 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a Separate Contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly notify the Architect of apparent discrepancies or defects in the construction or operations by the Owner or Separate Contractor that would render it unsuitable for proper execution and results of the Contractor's Work. Failure of the Contractor to notify the Architect of apparent discrepancies or defects prior to proceeding with the Work shall constitute an acknowledgment that the Owner's or Separate Contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work. The Contractor shall not be responsible for discrepancies or defects in the construction or operations by the Owner or Separate Contractor that are not apparent.

§ 6.2.3 The Contractor shall reimburse the Owner for costs the Owner incurs that are payable to a Separate Contractor because of the Contractor's delays, improperly timed activities or defective construction. The Owner shall be responsible to the Contractor for costs the Contractor incurs because of a Separate Contractor's delays, improperly timed activities, damage to the Work or defective construction.

§ 6.2.4 The Contractor shall promptly remedy damage that the Contractor wrongfully causes to completed or partially completed construction or to property of the Owner or Separate Contractor as provided in Section 10.2.5.

§ 6.2.5 The Owner and each Separate Contractor shall have the same responsibilities for cutting and patching as are described for the Contractor in Section 3.14.

§ 6.3 Owner's Right to Clean Up

If a dispute arises among the Contractor, Separate Contractors, and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and the Architect will allocate the cost among those responsible.

ARTICLE 7 CHANGES IN THE WORK

§ 7.1 General

§ 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

§ 7.1.2 A Change Order shall be based upon agreement among the Owner, Contractor, and Architect. A Construction Change Directive requires agreement by the Owner and Architect and may or may not be agreed to by the Contractor. An order for a minor change in the Work may be issued by the Architect alone.

§ 7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents. The Contractor shall proceed promptly with changes in the Work, unless otherwise provided in the Change Order, Construction Change Directive, or order for a minor change in the Work.

§ 7.2 Change Orders

§ 7.2.1 A Change Order is a written instrument prepared by the Architect and signed by the Owner, Contractor, and Architect stating their agreement upon all of the following:

- .1 The change in the Work;
- .2 The amount of the adjustment, if any, in the Contract Sum; and
- .3 The extent of the adjustment, if any, in the Contract Time.

§ 7.3 Construction Change Directives

§ 7.3.1 A Construction Change Directive is a written order prepared by the Architect and signed by the Owner and Architect, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions, the Contract Sum and Contract Time being adjusted accordingly.

§ 7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

§ 7.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

- .1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
- .2 Unit prices stated in the Contract Documents or subsequently agreed upon;
- .3 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
- .4 As provided in Section 7.3.4.

§ 7.3.4 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Architect shall determine the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.4 shall be limited to the following:

- .1 Costs of labor, including applicable payroll taxes, fringe benefits required by agreement or custom, workers' compensation insurance, and other employee costs approved by the Architect;
- .2 Costs of materials, supplies, and equipment, including cost of transportation, whether incorporated or consumed;

- .3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;
- .4 Costs of premiums for all bonds and insurance, permit fees, and sales, use, or similar taxes, directly related to the change; and
- .5 Costs of supervision and field office personnel directly attributable to the change.

§ 7.3.5 If the Contractor disagrees with the adjustment in the Contract Time, the Contractor may make a Claim in accordance with applicable provisions of Article 15.

§ 7.3.6 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Architect of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

§ 7.3.7 A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.

§ 7.3.8 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Architect. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

§ 7.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The Architect will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Architect determines, in the Architect's professional judgment, to be reasonably justified. The Architect's interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15.

§ 7.3.10 When the Owner and Contractor agree with a determination made by the Architect concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and the Architect will prepare a Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

§ 7.4 Minor Changes in the Work

The Architect may order minor changes in the Work that are consistent with the intent of the Contract Documents and do not involve an adjustment in the Contract Sum or an extension of the Contract Time. The Architect's order for minor changes shall be in writing. If the Contractor believes that the proposed minor change in the Work will affect the Contract Sum or Contract Time, the Contractor shall notify the Architect and shall not proceed to implement the change in the Work. If the Contractor performs the Work set forth in the Architect's order for a minor change without prior notice to the Architect that such change will affect the Contract Sum or Contract Time, the Contractor waives any adjustment to the Contract Sum or extension of the Contract Time.

ARTICLE 8 TIME

§ 8.1 Definitions

§ 8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

§ 8.1.2 The date of commencement of the Work is the date established in the Agreement.

§ 8.1.3 The date of Substantial Completion is the date certified by the Architect in accordance with Section 9.8.

§ 8.1.4 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

§ 8.2 Progress and Completion

§ 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement, the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

§ 8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, commence the Work prior to the effective date of insurance required to be furnished by the Contractor and Owner.

§ 8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

§ 8.3 Delays and Extensions of Time

§ 8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by (1) an act or neglect of the Owner or Architect, of an employee of either, or of a Separate Contractor; (2) by changes ordered in the Work; (3) by labor disputes, fire, unusual delay in deliveries, unavoidable casualties, adverse weather conditions documented in accordance with Section 15.1.6.2, or other causes beyond the Contractor's control; (4) by delay authorized by the Owner pending mediation and binding dispute resolution; or (5) by other causes that the Contractor asserts, and the Architect determines, justify delay, then the Contract Time shall be extended for such reasonable time as the Architect may determine.

§ 8.3.2 Claims relating to time shall be made in accordance with applicable provisions of Article 15.

§ 8.3.3 This Section 8.3 does not preclude recovery of damages for delay by either party under other provisions of the Contract Documents.

ARTICLE 9 PAYMENTS AND COMPLETION

§ 9.1 Contract Sum

§ 9.1.1 The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

§ 9.1.2 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed so that application of such unit prices to the actual quantities causes substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

§ 9.2 Schedule of Values

Where the Contract is based on a stipulated sum or Guaranteed Maximum Price, the Contractor shall submit a schedule of values to the Architect before the first Application for Payment, allocating the entire Contract Sum to the various portions of the Work. The schedule of values shall be prepared in the form, and supported by the data to substantiate its accuracy, required by the Architect. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment. Any changes to the schedule of values shall be submitted to the Architect and supported by such data to substantiate its accuracy as the Architect may require, and unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's subsequent Applications for Payment.

§ 9.3 Applications for Payment

§ 9.3.1 At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 9.2, for completed portions of the Work. The application shall be notarized, if required, and supported by all data substantiating the Contractor's right to payment that the Owner or Architect require, such as copies of requisitions, and releases and waivers of liens from Subcontractors and suppliers, and shall reflect retainage if provided for in the Contract Documents.

§ 9.3.1.1 As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Architect, but not yet included in Change Orders.

§ 9.3.1.2 Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or supplier, unless such Work has been performed by others

whom the Contractor intends to pay.

§ 9.3.2 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage, and transportation to the site, for such materials and equipment stored off the site.

§ 9.3.3 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information, and belief, be free and clear of liens, claims, security interests, or encumbrances, in favor of the Contractor, Subcontractors, suppliers, or other persons or entities that provided labor, materials, and equipment relating to the Work.

§ 9.4 Certificates for Payment

§ 9.4.1 The Architect will, within seven days after receipt of the Contractor's Application for Payment, either (1) issue to the Owner a Certificate for Payment in the full amount of the Application for Payment, with a copy to the Contractor; or (2) issue to the Owner a Certificate for Payment for such amount as the Architect determines is properly due, and notify the Contractor and Owner of the Architect's reasons for withholding certification in part as provided in Section 9.5.1; or (3) withhold certification of the entire Application for Payment, and notify the Contractor and Owner of the Architect's reason for withholding certification in whole as provided in Section 9.5.1.

§ 9.4.2 The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluation of the Work and the data in the Application for Payment, that, to the best of the Architect's knowledge, information, and belief, the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and that the Contractor is entitled to payment in the amount certified. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion, and to specific qualifications expressed by the Architect. However, the issuance of a Certificate for Payment will not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work; (2) reviewed construction means, methods, techniques, sequences, or procedures; (3) reviewed copies of requisitions received from Subcontractors and suppliers and other data requested by the Owner to substantiate the Contractor's right to payment; or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

§ 9.5 Decisions to Withhold Certification

§ 9.5.1 The Architect may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Section 9.4.2 cannot be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Section 9.4.1. If the Contractor and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 3.3.2, because of

- .1 defective Work not remedied;
- .2 third party claims filed or reasonable evidence indicating probable filing of such claims, unless security acceptable to the Owner is provided by the Contractor;
- .3 failure of the Contractor to make payments properly to Subcontractors or suppliers for labor, materials or equipment;
- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 damage to the Owner or a Separate Contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay;

or
.7 repeated failure to carry out the Work in accordance with the Contract Documents.

§ 9.5.2 When either party disputes the Architect's decision regarding a Certificate for Payment under Section 9.5.1, in whole or in part, that party may submit a Claim in accordance with Article 15.

§ 9.5.3 When the reasons for withholding certification are removed, certification will be made for amounts previously withheld.

§ 9.5.4 If the Architect withholds certification for payment under Section 9.5.1.3, the Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or supplier to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the Owner makes payments by joint check, the Owner shall notify the Architect and the Contractor shall reflect such payment on its next Application for Payment.

§ 9.6 Progress Payments

§ 9.6.1 After the Architect has issued a Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Architect.

§ 9.6.2 The Contractor shall pay each Subcontractor, no later than seven days after receipt of payment from the Owner, the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

§ 9.6.3 The Architect will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Architect and Owner on account of portions of the Work done by such Subcontractor.

§ 9.6.4 The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven days, the Owner shall have the right to contact Subcontractors and suppliers to ascertain whether they have been properly paid. Neither the Owner nor Architect shall have an obligation to pay, or to see to the payment of money to, a Subcontractor or supplier, except as may otherwise be required by law.

§ 9.6.5 The Contractor's payments to suppliers shall be treated in a manner similar to that provided in Sections 9.6.2, 9.6.3 and 9.6.4.

§ 9.6.6 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

§ 9.6.7 Unless the Contractor provides the Owner with a payment bond in the full penal sum of the Contract Sum, payments received by the Contractor for Work properly performed by Subcontractors or provided by suppliers shall be held by the Contractor for those Subcontractors or suppliers who performed Work or furnished materials, or both, under contract with the Contractor for which payment was made by the Owner. Nothing contained herein shall require money to be placed in a separate account and not commingled with money of the Contractor, create any fiduciary liability or tort liability on the part of the Contractor for breach of trust, or entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.

§ 9.6.8 Provided the Owner has fulfilled its payment obligations under the Contract Documents, the Contractor shall defend and indemnify the Owner from all loss, liability, damage or expense, including reasonable attorney's fees and litigation expenses, arising out of any lien claim or other claim for payment by any Subcontractor or supplier of any tier. Upon receipt of notice of a lien claim or other claim for payment, the Owner shall notify the Contractor. If approved by the applicable court, when required, the Contractor may substitute a surety bond for the property against which the lien or other claim for payment has been asserted.

§ 9.7 Failure of Payment

If the Architect does not issue a Certificate for Payment, through no fault of the Contractor, within seven days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within seven days after the date established in the Contract Documents, the amount certified by the Architect or awarded by binding dispute resolution, then the Contractor may, upon seven additional days' notice to the Owner and Architect, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided for in the Contract Documents.

§ 9.8 Substantial Completion

§ 9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use.

§ 9.8.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

§ 9.8.3 Upon receipt of the Contractor's list, the Architect will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect to determine Substantial Completion.

§ 9.8.4 When the Work or designated portion thereof is substantially complete, the Architect will prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion; establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance; and fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

§ 9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in the Certificate. Upon such acceptance, and consent of surety if any, the Owner shall make payment of retainage applying to the Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

§ 9.9 Partial Occupancy or Use

§ 9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer and authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Architect as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Architect.

§ 9.9.2 Immediately prior to such partial occupancy or use, the Owner, Contractor, and Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

§ 9.9.3 Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

§ 9.10 Final Completion and Final Payment

§ 9.10.1 Upon receipt of the Contractor's notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make such inspection. When the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Architect's final Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

§ 9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect, (3) a written statement that the Contractor knows of no reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment, (5) documentation of any special warranties, such as manufacturers' warranties or specific Subcontractor warranties, and (6) if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts and releases and waivers of liens, claims, security interests, or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien, claim, security interest, or encumbrance. If a lien, claim, security interest, or encumbrance remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging the lien, claim, security interest, or encumbrance, including all costs and reasonable attorneys' fees.

§ 9.10.3 If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting final completion, and the Architect so confirms, the Owner shall, upon application by the Contractor and certification by the Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed, corrected, and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of the surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Architect prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

§ 9.10.4 The making of final payment shall constitute a waiver of Claims by the Owner except those arising from

- .1 liens, Claims, security interests, or encumbrances arising out of the Contract and unsettled;
- .2 failure of the Work to comply with the requirements of the Contract Documents;
- .3 terms of special warranties required by the Contract Documents; or
- .4 audits performed by the Owner, if permitted by the Contract Documents, after final payment.

§ 9.10.5 Acceptance of final payment by the Contractor, a Subcontractor, or a supplier, shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.1 Safety Precautions and Programs

The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Contract.

§ 10.2 Safety of Persons and Property

§ 10.2.1 The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury, or loss to

- .1 employees on the Work and other persons who may be affected thereby;

- 2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody, or control of the Contractor, a Subcontractor, or a Sub-subcontractor; and
- 3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction.

§ 10.2.2 The Contractor shall comply with, and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities, bearing on safety of persons or property or their protection from damage, injury, or loss.

§ 10.2.3 The Contractor shall implement, erect, and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards; promulgating safety regulations; and notifying the owners and users of adjacent sites and utilities of the safeguards.

§ 10.2.4 When use or storage of explosives or other hazardous materials or equipment, or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

§ 10.2.5 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Sections 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2 and 10.2.1.3. The Contractor may make a Claim for the cost to remedy the damage or loss to the extent such damage or loss is attributable to acts or omissions of the Owner or Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

§ 10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and Architect.

§ 10.2.7 The Contractor shall not permit any part of the construction or site to be loaded so as to cause damage or create an unsafe condition.

§ 10.2.8 Injury or Damage to Person or Property

If either party suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible, notice of the injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 21 days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter.

§ 10.3 Hazardous Materials and Substances

§ 10.3.1 The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials or substances. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and notify the Owner and Architect of the condition.

§ 10.3.2 Upon receipt of the Contractor's notice, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of the material or substance or who are to perform the task of removal or safe containment of the material or substance. The Contractor and the Architect will promptly reply to the Owner in writing stating whether or not either has reasonable objection to the persons or entities proposed by the Owner. If either the Contractor or Architect has an objection to a person or entity proposed

by the Owner, the Owner shall propose another to whom the Contractor and the Architect have no reasonable objection. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable additional costs of shutdown, delay, and start-up.

§ 10.3.3 To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area if in fact the material or substance presents the risk of bodily injury or death as described in Section 10.3.1 and has not been rendered harmless, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), except to the extent that such damage, loss, or expense is due to the fault or negligence of the party seeking indemnity.

§ 10.3.4 The Owner shall not be responsible under this Section 10.3 for hazardous materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents. The Owner shall be responsible for hazardous materials or substances required by the Contract Documents, except to the extent of the Contractor's fault or negligence in the use and handling of such materials or substances.

§ 10.3.5 The Contractor shall reimburse the Owner for the cost and expense the Owner incurs (1) for remediation of hazardous materials or substances the Contractor brings to the site and negligently handles, or (2) where the Contractor fails to perform its obligations under Section 10.3.1, except to the extent that the cost and expense are due to the Owner's fault or negligence.

§ 10.3.6 If, without negligence on the part of the Contractor, the Contractor is held liable by a government agency for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall reimburse the Contractor for all cost and expense thereby incurred.

§ 10.4 Emergencies

In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury, or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 15 and Article 7.

ARTICLE 11 INSURANCE AND BONDS

§ 11.1 Contractor's Insurance and Bonds

§ 11.1.1 The Contractor shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Contractor shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Owner, Architect, and Architect's consultants shall be named as additional insureds under the Contractor's commercial general liability policy or as otherwise described in the Contract Documents.

§ 11.1.2 The Contractor shall provide surety bonds of the types, for such penal sums, and subject to such terms and conditions as required by the Contract Documents. The Contractor shall purchase and maintain the required bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

§ 11.1.3 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

§ 11.1.4 Notice of Cancellation or Expiration of Contractor's Required Insurance. Within three (3) business days of the date the Contractor becomes aware of an impending or actual cancellation or expiration of any insurance required by the Contract Documents, the Contractor shall provide notice to the Owner of such impending or actual cancellation or expiration. Upon receipt of notice from the Contractor, the Owner shall, unless the lapse in coverage arises from an act or omission of the Owner, have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by the Contractor. The furnishing of notice by the Contractor shall not relieve

the Contractor of any contractual obligation to provide any required coverage.

§ 11.2 Owner's Insurance

§ 11.2.1 The Owner shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Owner shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located.

§ 11.2.2 Failure to Purchase Required Property Insurance. If the Owner fails to purchase and maintain the required property insurance, with all of the coverages and in the amounts described in the Agreement or elsewhere in the Contract Documents, the Owner shall inform the Contractor in writing prior to commencement of the Work. Upon receipt of notice from the Owner, the Contractor may delay commencement of the Work and may obtain insurance that will protect the interests of the Contractor, Subcontractors, and Sub-Subcontractors in the Work. When the failure to provide coverage has been cured or resolved, the Contract Sum and Contract Time shall be equitably adjusted. In the event the Owner fails to procure coverage, the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent the loss to the Owner would have been covered by the insurance to have been procured by the Owner. The cost of the insurance shall be charged to the Owner by a Change Order. If the Owner does not provide written notice, and the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain the required insurance, the Owner shall reimburse the Contractor for all reasonable costs and damages attributable thereto.

§ 11.2.3 Notice of Cancellation or Expiration of Owner's Required Property Insurance. Within three (3) business days of the date the Owner becomes aware of an impending or actual cancellation or expiration of any property insurance required by the Contract Documents, the Owner shall provide notice to the Contractor of such impending or actual cancellation or expiration. Unless the lapse in coverage arises from an act or omission of the Contractor: (1) the Contractor, upon receipt of notice from the Owner, shall have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by either the Owner or the Contractor; (2) the Contract Time and Contract Sum shall be equitably adjusted; and (3) the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent any loss to the Owner would have been covered by the insurance had it not expired or been cancelled. If the Contractor purchases replacement coverage, the cost of the insurance shall be charged to the Owner by an appropriate Change Order. The furnishing of notice by the Owner shall not relieve the Owner of any contractual obligation to provide required insurance.

§ 11.3 Waivers of Subrogation

§ 11.3.1 The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents, and employees, each of the other; (2) the Architect and Architect's consultants; and (3) Separate Contractors, if any, and any of their subcontractors, sub-subcontractors, agents, and employees, for damages caused by fire, or other causes of loss, to the extent those losses are covered by property insurance required by the Agreement or other property insurance applicable to the Project, except such rights as they have to proceeds of such insurance. The Owner or Contractor, as appropriate, shall require similar written waivers in favor of the individuals and entities identified above from the Architect, Architect's consultants, Separate Contractors, subcontractors, and sub-subcontractors. The policies of insurance purchased and maintained by each person or entity agreeing to waive claims pursuant to this section 11.3.1 shall not prohibit this waiver of subrogation. This waiver of subrogation shall be effective as to a person or entity (1) even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, (2) even though that person or entity did not pay the insurance premium directly or indirectly, or (3) whether or not the person or entity had an insurable interest in the damaged property.

§ 11.3.2 If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, to the extent permissible by such policies, the Owner waives all rights in accordance with the terms of Section 11.3.1 for damages caused by fire or other causes of loss covered by this separate property insurance.

§ 11.4 Loss of Use, Business Interruption, and Delay in Completion Insurance

The Owner, at the Owner's option, may purchase and maintain insurance that will protect the Owner against loss of use of the Owner's property, or the inability to conduct normal operations, due to fire or other causes of loss. The Owner waives all rights of action against the Contractor and Architect for loss of use of the Owner's property, due to

fire or other hazards however caused.

§11.5 Adjustment and Settlement of Insured Loss

§ 11.5.1 A loss insured under the property insurance required by the Agreement shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Section 11.5.2. The Owner shall pay the Architect and Contractor their just shares of insurance proceeds received by the Owner, and by appropriate agreements the Architect and Contractor shall make payments to their consultants and Subcontractors in similar manner.

§ 11.5.2 Prior to settlement of an insured loss, the Owner shall notify the Contractor of the terms of the proposed settlement as well as the proposed allocation of the insurance proceeds. The Contractor shall have 14 days from receipt of notice to object to the proposed settlement or allocation of the proceeds. If the Contractor does not object, the Owner shall settle the loss and the Contractor shall be bound by the settlement and allocation. Upon receipt, the Owner shall deposit the insurance proceeds in a separate account and make the appropriate distributions. Thereafter, if no other agreement is made or the Owner does not terminate the Contract for convenience, the Owner and Contractor shall execute a Change Order for reconstruction of the damaged or destroyed Work in the amount allocated for that purpose. If the Contractor timely objects to either the terms of the proposed settlement or the allocation of the proceeds, the Owner may proceed to settle the insured loss, and any dispute between the Owner and Contractor arising out of the settlement or allocation of the proceeds shall be resolved pursuant to Article 15. Pending resolution of any dispute, the Owner may issue a Construction Change Directive for the reconstruction of the damaged or destroyed Work.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

§ 12.1 Uncovering of Work

§ 12.1.1 If a portion of the Work is covered contrary to the Architect's request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by the Architect, be uncovered for the Architect's examination and be replaced at the Contractor's expense without change in the Contract Time.

§ 12.1.2 If a portion of the Work has been covered that the Architect has not specifically requested to examine prior to its being covered, the Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, the Contractor shall be entitled to an equitable adjustment to the Contract Sum and Contract Time as may be appropriate. If such Work is not in accordance with the Contract Documents, the costs of uncovering the Work, and the cost of correction, shall be at the Contractor's expense.

§ 12.2 Correction of Work

§ 12.2.1 Before Substantial Completion

The Contractor shall promptly correct Work rejected by the Architect or failing to conform to the requirements of the Contract Documents, discovered before Substantial Completion and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Architect's services and expenses made necessary thereby, shall be at the Contractor's expense.

§ 12.2.2 After Substantial Completion

§ 12.2.2.1 In addition to the Contractor's obligations under Section 3.5, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 9.9.1, or by terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of notice from the Owner to do so, unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner or Architect, the Owner may correct it in accordance with Section 2.5.

§ 12.2.2.2 The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

§ 12.2.2.3 The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Section 12.2.

§ 12.2.3 The Contractor shall remove from the site portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

§ 12.2.4 The Contractor shall bear the cost of correcting destroyed or damaged construction of the Owner or Separate Contractors, whether completed or partially completed, caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents.

§ 12.2.5 Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

§ 12.3 Acceptance of Nonconforming Work

If the Owner prefers to accept Work that is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

ARTICLE 13 MISCELLANEOUS PROVISIONS

§ 13.1 Governing Law

The Contract shall be governed by the law of the place where the Project is located, excluding that jurisdiction's choice of law rules. If the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4.

§ 13.2 Successors and Assigns

§ 13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to covenants, agreements, and obligations contained in the Contract Documents. Except as provided in Section 13.2.2, neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

§ 13.2.2 The Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project, if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate the assignment.

§ 13.3 Rights and Remedies

§ 13.3.1 Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights, and remedies otherwise imposed or available by law.

§ 13.3.2 No action or failure to act by the Owner, Architect, or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed upon in writing.

§ 13.4 Tests and Inspections

§ 13.4.1 Tests, inspections, and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules, and regulations or lawful orders of public authorities. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections, and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections, and approvals. The Contractor shall give the Architect timely notice of when and where tests and inspections are to be made so that the Architect may be present for such procedures. The Owner shall bear costs of tests, inspections, or approvals that do not become requirements until after bids are received or negotiations concluded. The Owner shall directly arrange and pay for tests, inspections, or

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approvals where building codes or applicable laws or regulations so require.

§ 13.4.2 If the Architect, Owner, or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection, or approval not included under Section 13.4.1, the Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection, or approval, by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Architect of when and where tests and inspections are to be made so that the Architect may be present for such procedures. Such costs, except as provided in Section 13.4.3, shall be at the Owner's expense.

§ 13.4.3 If procedures for testing, inspection, or approval under Sections 13.4.1 and 13.4.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure, including those of repeated procedures and compensation for the Architect's services and expenses, shall be at the Contractor's expense.

§ 13.4.4 Required certificates of testing, inspection, or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Architect.

§ 13.4.5 If the Architect is to observe tests, inspections, or approvals required by the Contract Documents, the Architect will do so promptly and, where practicable, at the normal place of testing.

§ 13.4.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

§ 13.5 Interest

Payments due and unpaid under the Contract Documents shall bear interest from the date payment is due at the rate the parties agree upon in writing or, in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 Termination by the Contractor

§ 14.1.1 The Contractor may terminate the Contract if the Work is stopped for a period of 30 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, for any of the following reasons:

- 1 Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped;
- 2 An act of government, such as a declaration of national emergency, that requires all Work to be stopped;
- 3 Because the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4.1, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents; or
- 4 The Owner has failed to furnish to the Contractor reasonable evidence as required by Section 2.2.

§ 14.1.2 The Contractor may terminate the Contract if, through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, repeated suspensions, delays, or interruptions of the entire Work by the Owner as described in Section 14.3, constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less.

§ 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed, as well as reasonable overhead and profit on Work not executed, and costs incurred by reason of such termination.

§ 14.1.4 If the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, or their agents or employees or any other persons or entities performing portions of the Work because the Owner has repeatedly failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven additional days' notice to the Owner and the Architect, terminate the Contract and recover from the Owner as provided in

§ 14.2 Termination by the Owner for Cause

§ 14.2.1 The Owner may terminate the Contract if the Contractor

- .1 repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- .2 fails to make payment to Subcontractors or suppliers in accordance with the respective agreements between the Contractor and the Subcontractors or suppliers;
- .3 repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or
- .4 otherwise is guilty of substantial breach of a provision of the Contract Documents.

§ 14.2.2 When any of the reasons described in Section 14.2.1 exist, and upon certification by the Architect that sufficient cause exists to justify such action, the Owner may, without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

- .1 Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
- .2 Accept assignment of subcontracts pursuant to Section 5.4; and
- .3 Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

§ 14.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

§ 14.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Initial Decision Maker, upon application, and this obligation for payment shall survive termination of the Contract.

§ 14.3 Suspension by the Owner for Convenience

§ 14.3.1 The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work, in whole or in part for such period of time as the Owner may determine.

§ 14.3.2 The Contract Sum and Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay, or interruption under Section 14.3.1. Adjustment of the Contract Sum shall include profit. No adjustment shall be made to the extent

- .1 that performance is, was, or would have been, so suspended, delayed, or interrupted, by another cause for which the Contractor is responsible; or
- .2 that an equitable adjustment is made or denied under another provision of the Contract.

§ 14.4 Termination by the Owner for Convenience

§ 14.4.1 The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause.

§ 14.4.2 Upon receipt of notice from the Owner of such termination for the Owner's convenience, the Contractor shall

- .1 cease operations as directed by the Owner in the notice;
- .2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and
- .3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

§ 14.4.3 In case of such termination for the Owner's convenience, the Owner shall pay the Contractor for Work properly executed; costs incurred by reason of the termination, including costs attributable to termination of Subcontracts; and the termination fee, if any, set forth in the Agreement.

ARTICLE 15 CLAIMS AND DISPUTES

§ 15.1 Claims

§ 15.1.1 Definition

A Claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, a change in the Contract Time, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim. This Section 15.1.1 does not require the Owner to file a Claim in order to impose liquidated damages in accordance with the Contract Documents.

§ 15.1.2 Time Limits on Claims

The Owner and Contractor shall commence all Claims and causes of action against the other and arising out of or related to the Contract, whether in contract, tort, breach of warranty or otherwise, in accordance with the requirements of the binding dispute resolution method selected in the Agreement and within the period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Contractor waive all Claims and causes of action not commenced in accordance with this Section 15.1.2.

§ 15.1.3 Notice of Claims

§ 15.1.3.1 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered prior to expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party and to the Initial Decision Maker with a copy sent to the Architect, if the Architect is not serving as the Initial Decision Maker. Claims by either party under this Section 15.1.3.1 shall be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.

§ 15.1.3.2 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party. In such event, no decision by the Initial Decision Maker is required.

§ 15.1.4 Continuing Contract Performance

§ 15.1.4.1 Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents.

§ 15.1.4.2 The Contract Sum and Contract Time shall be adjusted in accordance with the Initial Decision Maker's decision, subject to the right of either party to proceed in accordance with this Article 15. The Architect will issue Certificates for Payment in accordance with the decision of the Initial Decision Maker.

§ 15.1.5 Claims for Additional Cost

If the Contractor wishes to make a Claim for an increase in the Contract Sum, notice as provided in Section 15.1.3 shall be given before proceeding to execute the portion of the Work that is the subject of the Claim. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

§ 15.1.6 Claims for Additional Time

§ 15.1.6.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, notice as provided in Section 15.1.3 shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay, only one Claim is necessary.

§ 15.1.6.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated, and had an adverse effect on the scheduled construction.

§ 15.1.7 Waiver of Claims for Consequential Damages

The Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes

- .1 damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and
- .2 damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit, except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Section 15.1.7 shall be deemed to preclude assessment of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

§ 15.2 Initial Decision

§ 15.2.1 Claims, excluding those where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2 or arising under Sections 10.3, 10.4, and 11.5, shall be referred to the Initial Decision Maker for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required as a condition precedent to mediation of any Claim. If an initial decision has not been rendered within 30 days after the Claim has been referred to the Initial Decision Maker, the party asserting the Claim may demand mediation and binding dispute resolution without a decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner.

§ 15.2.2 The Initial Decision Maker will review Claims and within ten days of the receipt of a Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise, or (5) advise the parties that the Initial Decision Maker is unable to resolve the Claim if the Initial Decision Maker lacks sufficient information to evaluate the merits of the Claim or if the Initial Decision Maker concludes that, in the Initial Decision Maker's sole discretion, it would be inappropriate for the Initial Decision Maker to resolve the Claim.

§ 15.2.3 In evaluating Claims, the Initial Decision Maker may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Initial Decision Maker in rendering a decision. The Initial Decision Maker may request the Owner to authorize retention of such persons at the Owner's expense.

§ 15.2.4 If the Initial Decision Maker requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten days after receipt of the request, and shall either (1) provide a response on the requested supporting data, (2) advise the Initial Decision Maker when the response or supporting data will be furnished, or (3) advise the Initial Decision Maker that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim in whole or in part.

§ 15.2.5 The Initial Decision Maker will render an initial decision approving or rejecting the Claim, or indicating that the Initial Decision Maker is unable to resolve the Claim. This initial decision shall (1) be in writing; (2) state the reasons therefor; and (3) notify the parties and the Architect, if the Architect is not serving as the Initial Decision Maker, of any change in the Contract Sum or Contract Time or both. The initial decision shall be final and binding on the parties but subject to mediation and, if the parties fail to resolve their dispute through mediation, to binding dispute resolution.

§ 15.2.6 Either party may file for mediation of an initial decision at any time, subject to the terms of Section 15.2.6.1.

§ 15.2.6.1 Either party may, within 30 days from the date of receipt of an initial decision, demand in writing that the other party file for mediation. If such a demand is made and the party receiving the demand fails to file for mediation within 30 days after receipt thereof, then both parties waive their rights to mediate or pursue binding dispute resolution proceedings with respect to the initial decision.

§ 15.2.7 In the event of a Claim against the Contractor, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Owner

may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

§ 15.2.8 If a Claim relates to or is the subject of a mechanic's lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.

§ 15.3 Mediation

§ 15.3.1 Claims, disputes, or other matters in controversy arising out of or related to the Contract, except those waived as provided for in Sections 9.10.4, 9.10.5, and 15.1.7, shall be subject to mediation as a condition precedent to binding dispute resolution.

§ 15.3.2 The parties shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect on the date of the Agreement. A request for mediation shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the mediation. The request may be made concurrently with the filing of binding dispute resolution proceedings but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section 15.3.2, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.

§ 15.3.3 Either party may, within 30 days from the date that mediation has been concluded without resolution of the dispute or 60 days after mediation has been demanded without resolution of the dispute, demand in writing that the other party file for binding dispute resolution. If such a demand is made and the party receiving the demand fails to file for binding dispute resolution within 60 days after receipt thereof, then both parties waive their rights to binding dispute resolution proceedings with respect to the initial decision.

§ 15.3.4 The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

§ 15.4 Arbitration

§ 15.4.1 If the parties have selected arbitration as the method for binding dispute resolution in the Agreement, any Claim subject to, but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules in effect on the date of the Agreement. The Arbitration shall be conducted in the place where the Project is located, unless another location is mutually agreed upon. A demand for arbitration shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the arbitration. The party filing a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded.

§ 15.4.1.1 A demand for arbitration shall be made no earlier than concurrently with the filing of a request for mediation, but in no event shall it be made after the date when the institution of legal or equitable proceedings based on the Claim would be barred by the applicable statute of limitations. For statute of limitations purposes, receipt of a written demand for arbitration by the person or entity administering the arbitration shall constitute the institution of legal or equitable proceedings based on the Claim.

§ 15.4.2 The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

§ 15.4.3 The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly consented to by parties to the Agreement, shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

§ 15.4.4 Consolidation or Joinder

§ 15.4.4.1 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may consolidate an arbitration conducted under this Agreement with any other arbitration to which it is a party provided that (1) the arbitration agreement governing the other arbitration permits consolidation, (2) the arbitrations to be consolidated substantially involve common questions of law or fact, and (3) the arbitrations employ materially

similar procedural rules and methods for selecting arbitrator(s).

§ 15.4.4.2 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may include by joinder persons or entities substantially involved in a common question of law or fact whose presence is required if complete relief is to be accorded in arbitration, provided that the party sought to be joined consents in writing to such joinder. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of any claim, dispute or other matter in question not described in the written consent.

§ 15.4.4.3 The Owner and Contractor grant to any person or entity made a party to an arbitration conducted under this Section 15.4, whether by joinder or consolidation, the same rights of joinder and consolidation as those of the Owner and Contractor under this Agreement.

State of West Virginia

Supplementary Conditions to AIA Document A201-2017
General Conditions of the Contract for Construction

The following Supplementary Conditions modify the General Conditions of the Contract for Construction, AIA Document A201, 2017 Edition. Where a portion of the General Conditions is modified or deleted by these Supplementary Conditions, the unaltered portions of the General Conditions shall remain in effect.

Order of Precedence: The documents contained in the contract to which this document has been attached shall be interpreted in the following order of precedence:

First Priority – Documents developed by the State or agency and utilized to provide public notice of the solicitation, along with other general terms and conditions shall be first in priority.

Second Priority – This document "Supplementary Conditions to the AIA Document A201-2017 General Conditions of the Contract for Construction" shall be second in priority.

Third Priority – all other AIA documents including, but not limited to, the AIA Document A201-2017 General Conditions of the Contract for Construction and the A101-2017 Standard Form of Agreement Between Owner and Contractor (when utilized) shall be third or lower in priority.

**ARTICLE 1
GENERAL PROVISIONS**

§1.1.2 THE CONTRACT

§1.1.2 Make the following changes to Section 1.1.2:

In the last sentence, insert "and the Contractor" after "The Architect" and delete "the Architect's" and insert "their respective".

§1.2 Correlation and intent of Contract Documents

§1.2.1.1 In the second sentence, remove "any law" and insert "West Virginia law or any applicable federal law". In the last sentence, remove "by law" and insert "West Virginia law or any applicable federal law".

§1.7 Digital Data Use and Transmission

§1.7 Delete the last sentence of this section in its entirety.

§1.8 Building Information Models Use and Reliance

§ 1.8 Remove this section in its entirety and replace it with the following:

"Any use of, or reliance on, all or a portion of a building information model must be approved in advance by Owner and will only be permitted if the Parties have agreed upon and executed written documents to memorialize protocols governing the use of, and reliance on, the information contained in the model."

Add the following Section to Article 1:

§1.05 PARTY RELATIONS

§1.05 The Owner and their consultants, the Architect and their Consultants, and the Contractor and their Subcontractors agree to proceed with the Work on the basis of mutual trust, good faith and fair dealing.

§1.1 BASIC DEFINITIONS

§1.1.1 THE CONTRACT DOCUMENTS

§1.1.1 Delete the last sentence of this Section and substitute the following:

The Contract Documents also include the Bidding Documents (Advertisement or Invitation to Bid, Request for Quotations/Bids, Instructions to Bidders, Form of Proposal, Bid Bond and Sample Forms), Performance Bond, Payment Bond, Maintenance Bond (if applicable), Certificates of Insurance, Special Provisions For Disadvantaged and Women Business Enterprise Utilization (if bound herein).

ARTICLE 2
OWNER

§2.1 GENERAL

§ 2.1.1 Add the following after the last sentence:

Notwithstanding the foregoing, the parties understand that since Owner is a government entity, change orders will often require approval by entities in addition to owner. When owner is a state agency, those entities may include, but are not limited to, the West Virginia Attorney General's Office and the West Virginia Purchasing Division. Additionally, approval may be required by agencies providing project funding, including but not limited to, West Virginia School Building Authority and agencies of the United States federal government.

§2.1.2 Delete Section 2.1.2 in its entirety.

§2.1 Add the following Section to 2.1:

§2.1.3 The Owner and the agency funding the project reserve the right to maintain a full time or part time project representative (sometimes referred to as the "Clerk of the Works") at the project site who shall keep the Owner informed of the progress and quality of the Work and responsibilities. The Contractor shall cooperate and assist the Clerk of the Works in the performance of his/her duties. The Clerk of the Works will not interfere with or be responsible for the Contractor's supervision and direction of the Work, and the Contractor's means, methods, techniques, sequences, and procedures, and for coordinating all portions of the Work. The Clerk of the Works may facilitate communications between the Owner, Architect, and Contractor but has no authority to make decisions for the Owner, approve modifications to the Contract Documents, the Contract Time, or Contract Sum. Additionally, Contractor is not permitted to rely on or consider decisions made by the Clerk of the Works on behalf of Owner

§2.2 Evidence of the Owner's Financial Arrangements: Delete § 2.2 and all of its subsections in its entirety.

§2.3 Information and Services Required of Owner

§2.3.2 Make the following changes to Section 2.3.2:

In first sentence, delete the period and add ", when required pursuant to West Virginia Code §30-12-1 et seq." Add the following sentence at the end of Section 2.3.2: "If the Owner does not retain an architect lawfully licensed to practice architecture or an entity lawfully practicing architecture in the jurisdiction where the Project is located, the Owner will appoint an individual to assume the role and obligations of the Architect pursuant to this Agreement."

§2.3.3 Delete this section in its entirety.

§2.3.4 Delete the last sentence of Section 2.3.4 and substitute the following:

The Contractor shall confirm the locations of each utility. If the Owner has provided geotechnical and other tests to determine subsurface conditions, the Owner will provide such documents to the Contractor; the Contractor acknowledges that it will make no claims for any subsurface or any other conditions revealed by these tests.

ARTICLE 3
CONTRACTOR

§3.2 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

§3.2.2 Add the following sentence to the end of Section 3.2.2:

Claims by Contractor resulting from its failure to familiarize itself with the site shall be deemed waived. Additionally, by submitting a bid or otherwise entering into this contract, Contractor acknowledges that it has reviewed and understands the contract documents and the work required by those documents. Any claims arising from Contractor's failure to review and understand the contract documents shall be deemed waived.

§3.2.3 Delete Section 3.2.3 in its entirety and substitute the following:

§3.2.3 The Contractor acknowledges its continuing duty to review and evaluate the Construction Documents during performance of its services and shall immediately notify the Owner and the Architect about any problems, conflicts, defects, deficiencies, inconsistencies or omissions it discovers in or between the Construction Documents; and variances it discovers between the Construction Documents and applicable laws, statutes, building codes, rules and regulations.

§ 3.2.4 Add the following clauses to Section 3.2.4:

§3.2.4.1 If the Contractor performs any Work which it knows or should have known involves a recognized problem, conflict, defect, deficiency, inconsistency or omission in the Construction Documents; or a variance between the Construction Documents and requirements of applicable laws, statutes, building codes, rules and regulations, without notifying the Owner and the Architect prior to receiving written authorization from the Architect to proceed, the Contractor shall be responsible for the consequences of such performance.

§3.2.4.2 Before ordering any materials or doing any Work, the Contractor and Subcontractors shall verify all measurements at the site and shall be responsible for the correctness of same. Discrepancies shall be reported in writing to the Architect prior to proceeding with the Work. No extra charge or compensation will be

entertained due to differences between actual measurements and dimensions indicated on the drawings, if such differences do not result in a change in the scope of Work or if the Architect failed to receive written notice before the Work was performed.

§3.4 LABOR AND MATERIALS

§3.4.1 Vendor must review and comply with the following statutory requirements affecting public construction projects, as well as any other applicable laws that are not referenced herein:

- W. Va. Code § 5-19-1 et seq., relating to domestic steel preference.
- W. Va. Code § 5A-3-56 relating to domestic steel preference, provided that the Owner is a state agency subject to Chapter 5A, Article 3 of the W. Va. Code.
- W. Va. Code § §21-1C-1 et seq., relating to local hiring preference
- W. Va. Code §21-1D-1 et seq., relating to drug free workplace requirements.

§3.4 Add the following Sections to 3.4:

§3.4.4 Where materials and equipment are to be provided by the Owner under the Contract Documents, the Contractor shall notify the Owner in writing as to when materials and equipment are required on the project site in sufficient time to avoid delay in the Work.

§3.4.5 The Contractor shall employ labor on the Project or in connection with the Work, capable of working harmoniously with all trade crafts and any other individuals associated with the Project. The Contractor shall also use its best efforts and implement policies and practices to minimize the likelihood of any strike, work stoppage or other labor disturbance. Except as specifically provided in this Agreement, Contractor shall not be entitled to any adjustment in the Contract sum or Contract time and shall be liable to the Owner for all damages suffered by the Owner occurring as a result of work stoppages, slowdowns, disputes, or strikes by the work force of or provided by Contractor or its Subcontractors.

§3.5 WARRANTY

§3.5 Add the following sentence at the end of Section 3.5:

The Contractor agrees to assign to the Owner at time of Final Completion of the Work, any and all manufacturer's warranties relating to materials and labor used in the Work and further agrees to perform the Work in such a manner so as to preserve any and all such warranties.

§3.8 ALLOWANCES

§3.8.3 Make the following change to Section 3.8.3:

§3.8.3 Delete "with reasonable promptness" and insert "in sufficient time to avoid delay in the Work."

Add the following Section to 3.8:

§3.8.4 The Contractor shall promptly submit to the Owner an itemized account of any expenditure by the Contractor of the Contract allowance in sufficient detail to allow the Owner to properly account for such expenditure.

§3.9 SUPERINTENDENT/PROJECT MANAGER

§3.9.1 Add the following sentence to the end of Section 3.9.1:

The Contractor may also employ a competent project manager.

§3.9.2 Make the following changes to Section 3.9.2:

In the first sentence, add "and project manager, if applicable" after "superintendent." In the second sentence, add "or project manager, if applicable," after "superintendent."

§3.9.3 Make the following changes to Section 3.9.3:

In the first sentence, add "or project manager, if applicable," after "superintendent." In the second sentence, add "or project manager, if applicable," after "superintendent."

§3.9 Add the following Section to 3.9:

§3.9.4 The Owner shall have the right, at any time, to direct a change in the Contractor's representatives if their performance is deemed unsatisfactory.

§3.10 CONTRACTOR'S CONSTRUCTION SCHEDULES

§3.10.1 Make the following changes to Section 3.10.1:

In the first sentence, delete the word "promptly" and substitute "by the earliest reasonable date".

Add the following sentence to the end of Section 3.10.1: "The Contractor shall submit an updated construction schedule with each payment application, unless waived by the Owner."

Add the following Sections to 3.10:

§3.10.4 At any time after the first thirty (30) days of the Contract Time, if it is found that the project is two (2) weeks or more behind schedule, beyond approved time extensions, or if at any time during

the last thirty (30) days of the scheduled Contract Time the Contractor is one (1) week or more behind schedule, the Contractor shall immediately submit a plan to the Owner describing how the Work will be placed back on schedule within the remaining Contract Time.

§3.10.5 If the Owner and the Architect determine that the performance of the Work during any stage of the construction schedule last approved by the Owner has not progressed or reached the level of completion required by the Contract Documents, the Owner will have the right to order the Contractor to take corrective measures (hereinafter referred to collectively as Extraordinary Measures) necessary to expedite the progress of the Work, including, without limitation: (1) working additional shifts or overtime; (2) supplying additional manpower, equipment and facilities; and (3) other similar measures. Such Extraordinary Measures shall continue until the progress of the Work complies with the last approved construction schedule. The Owner's right to require Extraordinary Measures is solely for the purpose of ensuring the Contractor's compliance with the construction schedule after allowing for approved extensions of Contract Time as provided elsewhere in this Agreement. The Contractor is not entitled to an adjustment in the Contract Sum in connection with any Extraordinary Measures required by the Owner. The Owner may exercise its rights under this Section as frequently as the Owner deems necessary to ensure that the Contractor's performance of the Work will comply with the construction schedule.

§3.11 DOCUMENTS AND SAMPLES AT THE SITE

§3.11 Insert the following sentence at the end of Section 3.11:

The Contractor's compliance with this Section 3.11 shall be a condition precedent to any obligation of the Owner to make Final Payment pursuant to this Agreement.

§3.15 CLEANING UP

§3.15.2 Delete Section 3.15.2 in its entirety and substitute the following:

§3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and may withhold such reasonable costs as necessary for the fulfillment of the Contractor's obligation under this Section 3.15. If the reasonable costs of such cleaning exceed the Contract Sum then due the Contractor, the Contractor shall reimburse the Owner the difference within thirty (30) consecutive calendar days of the Owner's written request.

Any materials, tools, supplies, or other personal property left by the Contractor shall be deemed abandoned property and the Owner shall have no obligation to hold or store the property on behalf of Contractor and may dispose of the abandoned property as if it were property of the State of West Virginia. Provided however, that prior to treating property as abandoned and disposing of it, Owner must

first provide Contractor with 10 days notice of its intent to do so. If any materials, tools, supplies or other personal property belong to a subcontractor, then Contractor is obligated to communicate this notice to its subcontractor immediately.

§3.15 Add the following Section to 3.15:

§3.15.3 In order to achieve Substantial Completion, as defined by Section 9.8, for any portion of the Work, the Contractor must have the area where the Work is located fully cleaned and all materials and/or debris removed from site. The Certificate of Substantial Completion will not be issued until the Contractor has met this obligation.

ARTICLE 4 ARCHITECT

§4.1 GENERAL

§4.2 ADMINISTRATION OF THE CONTRACT

§4.2 Make the following changes to Section 4.2:

§4.2.1 In the first sentence of Section 4.2.1 after the word Architect add ", unless otherwise indicated by the Owner,".

§4.2.2 In the first sentence of Section 4.2.2 strike the word "generally."

§4.2.3 In the first sentence of Section 4.2.3 strike the word "reasonably."

§4.2.5 Add the following sentence at the end of Section 4.2.5:

The Architect upon receipt of an Application for Payment from the Contractor shall either review and certify such amounts due for payment or return such Application for Payment to the Contractor for correction(s) within five (5) consecutive business days of receipt.

§4.2.7 Delete the first sentence of Section 4.2.7 and substitute the following:

The Architect will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data and Samples for the purpose of checking for conformance with the Contract Documents.

Modify the second to last sentence by removing it in its entirety and replacing it with the following: The Architect's review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences, or procedures, unless the Architect has established the required construction means, methods, techniques, sequences, or procedures, or the Contract Documents require such approval.

§4.2.8 Make the following change to Section 4.2.8:

In the first sentence, after the word Architect add ", in consultation with the Owner,".

**ARTICLE 5
SUBCONTRACTORS**

§5.2 Award of Subcontracts and Other Contracts for Portions of Work

§5.2.1 Add the following sentence to Section 5.2.1.

This provision in no way limits the Contractor's legal obligations to report subcontractors and labor/material suppliers under W. Va. Code § 5-22-1(f) and obtain approval under W. Va. Code § 5-22-1(g) prior to any subcontractor substitution.

§5.4 Contingent Assignment of Subcontracts: This section is removed in its entirety and replaced with the following:

§5.4 Emergency Contracts with Subcontractors:

In the event that the general contractor fails to fulfill its contractual obligations and the performance bond has failed to provide an adequate remedy, Owner has the right to execute emergency contracts with subcontractors to ensure continuation of the work, provided that doing so is in compliance with the laws, rules, and procedures governing emergency contracting authority for Owner, and the emergency contract terms comply with all other applicable laws, rules, and procedures.

**ARTICLE 7
CHANGES IN THE WORK**

§7.1 General

§7.1.2. In Section 7.1.2. remove the word "alone" and insert "with approval by the Owner."

§7.2 CHANGE ORDERS

§7.2 Add the following Section to 7.2:

§7.2.2 A written Change Order as defined under 7.2.1 above constitutes a final settlement of all matters relating to the change in the Work which is the subject of the Change Order, including, but not limited to general conditions, all direct or indirect costs associated with such change and any and all adjustment to the Contract Sum and Contract Time. The parties also understand and agree that if Owner is a state agency, change orders may require approval by entities in addition to Owner. Those entities may include, but are not limited to, the West Virginia Purchasing Division, and the West Virginia Attorney General's Office. Owner

and Contractor must discuss the change order approval requirements prior to executing this agreement.

Add the following section to § 7.2

§7.2.3. Allowance for Overhead and Profit: Contractor's overhead and profit for a change order issued under this Article included in the total cost to the Owner shall not exceed based on the following schedule:

.1 For the Contractor, for any Work performed by the Contractor's own forces, fifteen percent (15%) of the cost.

.2 For the Contractor, for Work performed by the Contractor's Subcontractor, ten percent (10%) of the amount due the Subcontractor.

.3 For each Subcontractor or Sub-Subcontractor involved, for any Work performed by that Subcontractor's own forces, fifteen percent (15%) of the cost.

.4. For each Subcontractor, for Work performed by the Subcontractor's Sub-subcontractors, ten percent (10%) of the amount due the Sub-subcontractor.

.5 Cost to which overhead and profit is to be applied shall be determined in accordance with Section 7.3.7. Estimated labor hours shall include hours only for those workmen and working foremen directly involved in performing the Change Order work. Supervision above the level of working foremen (such as general foremen, superintendent, project manager, etc.) is considered to be included in the allowance for Overhead and Profit. Hand tools are defined as equipment with a value of \$1,000 or less. For Contractor owned equipment, the "bare" equipment rental rates allowed to be used for pricing Change Order proposals shall be not more than the monthly rate listed in the most current publication of The AED Green Book divided by 176 to arrive at a maximum hourly rate to be applied to the hours the equipment is used performing the Change Order work.

.6 In order to facilitate checking of quotations for extras or credits, all proposals, except those so minor that their propriety can be seen by inspection, shall be accompanied by a complete itemization of costs including labor, material, equipment and Subcontractors. Details to be submitted will include detailed line item estimates showing detailed materials quantity take-offs, material prices by item and related labor hour pricing information and extensions (by line item or by drawing as applicable.) Where major cost items are Subcontracts, they shall also be itemized as prescribed above. In no case will a change involving over \$10,000 be approved without such an itemization.

.7 Local Business and Occupation Taxes, if applicable, shall be calculated on the cost of the Work, overhead and profit.

.8 Overhead and profit shall not be calculated on changes in the Work involving unit prices. Unit prices are to have overhead and profit included in the price quoted.

.9 Under no circumstances is Contractor permitted to charge for the passage of time (often referred to as general conditions or winter conditions) without an identified, itemized, and concretely provable cost borne by Contractor. Contractor has a duty to mitigate costs during a delay period to the fullest extent possible and Contractor will not be paid for costs that could have been mitigated. Calculating a daily delay rate without properly identifying, itemizing, and proving actual, unmitigateable costs, is prohibited. Contractor understands and accepts that it has the responsibility to prove that costs could not be mitigated prior to submitting a request for payment.

§7.3 CONSTRUCTION CHANGE DIRECTIVES

§7.3.4 Make the following change in Section 7.3.4:

In the fourth line of the first sentence, delete the words "an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount" and substitute "an allowance for overhead and profit in accordance with clauses 7.3.11.1 through 7.3.11.9 below."

§7.3.7 Delete the word "recorded" and replace it with "processed".

§7.3.9 Delete Section 7.3.9 in its entirety and substitute the following:

§7.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, amounts not in dispute for such changes in the Work shall be included in Applications for Payment provided these amounts have been added to the Contract by Change Order and a purchase order has been issued for the Change Order.

§7.3.10 Add the following sentence to the end of Section 7.3.10:

The Parties will utilize their best efforts to issue a change order within 60 days of agreement being reached, but failure to do so will not give rise to grounds for contract cancellation, penalties, or any other cause of action.

Add the following Section to 7.3:

§7.3.11 In Section 7.3.7, the allowance for overhead and profit for a change directive issued under this Article included in the total cost to the Owner shall not exceed the following schedule:

.1 For the Contractor, for any Work performed by the Contractor's own forces, fifteen percent (15%) of the cost.

.2 For the Contractor, for Work performed by the Contractor's Subcontractor, ten percent (10%) of the amount due the Subcontractor.

.3 For each Subcontractor or Sub-Subcontractor involved, for any Work performed by that Subcontractor's own forces, fifteen percent (15%) of the cost.

.4. For each Subcontractor, for Work performed by the Subcontractor's Sub-subcontractors, ten percent (10%) of the amount due the Sub-subcontractor.

.5 Cost to which overhead and profit is to be applied shall be determined in accordance with Section 7.3.7. Estimated labor hours shall include hours only for those workmen and working foremen directly involved in performing the Change Order work. Supervision above the level of working foremen (such as general foremen, superintendent, project manager, etc.) is considered to be included in the allowance for Overhead and Profit. Hand tools are defined as equipment with a value of \$1,000 or less. For Contractor owned equipment, the "bare" equipment rental rates allowed to be used for pricing Change Order proposals shall be not more than the monthly rate listed in the most current publication of The AED Green Book divided by 176 to arrive at a maximum hourly rate to be applied to the hours the equipment is used performing the Change Order work.

.6 In order to facilitate checking of quotations for extras or credits, all proposals, except those so minor that their propriety can be seen by inspection, shall be accompanied by a complete itemization of costs including labor, material, equipment and Subcontractors. Details to be submitted will include detailed line item estimates showing detailed materials quantity take-offs, material prices by item and related labor hour pricing information and extensions (by line item or by drawing as applicable.) Where major cost items are Subcontracts, they shall also be itemized as prescribed above. In no case will a change involving over \$10,000 be approved without such an itemization.

.7 Local Business and Occupation Taxes, if applicable, shall be calculated on the cost of the Work, overhead and profit.

.8 Overhead and profit shall not be calculated on changes in the Work involving unit prices. Unit prices are to have overhead and profit included in the price quoted.

.9 Under no circumstances is Contractor permitted to charge for the passage of time (often referred to as general conditions or winter conditions) without an identified, itemized, and concretely provable cost borne by Contractor. Contractor has a duty to mitigate costs during a delay period to the fullest extent possible and Contractor will not be paid for costs that could have been mitigated. Calculating a daily delay rate

without properly identifying, itemizing, and proving actual, unmitigateable costs, is prohibited. Contractor understands and accepts that it has the responsibility to prove that costs could not be mitigated prior to submitting a request for payment.

§7.4 Minor Changes in Work. Insert the following sentence at the end of section 7.4:

"Contractor may request that Architect provide written confirmation that Owner has agreed to the minor change, and if requested, Architect will provide it."

**ARTICLE 8
TIME**

§8.3 DELAYS AND EXTENSIONS OF TIME

§8.3.1 In the first sentence, delete "unusual delay in deliveries," and add "unmitigatable costs attributable to" before the words "adverse weather conditions."

**ARTICLE 9
PAYMENTS AND COMPLETION**

§9.1 Contract Sum

§9.1.2 Add the following sentence to the end of section 9.1.2:

"Any equitable adjustment of unit prices must be processed as a change order to the contract"

§9.2 SCHEDULE OF VALUES

§9.2 Make the following changes to Section 9.2:

In the first sentence add "and the Owner" after the first reference to the Architect. In the second sentence add "or the Owner" after Architect. Remove the last sentence in its entirety and replace it with the following:

"Any changes to the schedule of values shall be submitted to the Architect and the Owner and supported by such data to substantiate its accuracy as the Architect or owner may require. This schedule, unless objected to by the Architect or the Owner, shall be used as a basis for reviewing the Contractor's subsequent Applications for Payment."

§9.3 APPLICATIONS FOR PAYMENT

§9.3 Make the following changes to Section 9.3:

§9.3.1 In the first sentence add "and the Owner" after the first reference to the Architect and add "and other required documents" after the words "schedule of values."

§9.3.1.1 Delete clause 9.3.1.1 in its entirety and substitute the following:

§9.3.1.1 Such applications may include requests for payment on account of changes in the Work authorized by Construction Change Directives and Change Orders only after a purchase order has been issued for the Work affected.

§9.3.1 Add the following clauses to Section 9.3.1:

§9.3.1.3 Until the Work is fifty percent (50%) complete, the Owner will withhold as retainage 10% of the amount due the Contractor on account of progress payments. At the time the Work is fifty percent (50%) complete and thereafter, if the manner of completion of the Work and its progress are and remain satisfactory to the Owner and Architect, and in the absence of other good and sufficient reasons, the Architect will, on presentation by the Contractor of Consent of Surety, authorize any remaining partial payments to be paid in full.

§9.3.1.4 The full Contract retainage may be reinstated if the manner of completion of the Work and its progress do not remain satisfactory to the Owner and Architect, if the Surety withholds its consent, or for other good and sufficient reasons.

§9.4 CERTIFICATES FOR PAYMENT

§9.4.1 After the phrase "in the full amount of the Application for Payment," insert the phrase "less any retainage withheld pursuant to section 9.3.1.3,"

§9.6 PROGRESS PAYMENTS

§9.6.7 Delete Section 9.6.7 in its entirety.

§9.6.8 Delete Section 9.6.8 in its entirety.

§9.7 FAILURE OF PAYMENT

§9.7 Make the following changes in Section 9.7:

In line two, change "seven days" to "sixty days." In line four, delete "binding dispute resolution" and substitute "the West Virginia Claims Commission"

§9.8 SUBSTANTIAL COMPLETION

§9.8.3 Add the following clause to Section 9.8.3:

If Architect is required to perform more than one inspection under this subsection, Contractor shall be responsible for paying the Owner for the cost of the additional inspection, which will be paid by Owner to Architect, at the hourly rate established in the contract between Owner and Architect.

§9.8.5 Add the following clause to Section 9.8.5:

§9.8.5.1 The payment of retainage shall be sufficient to increase the total payments to ninety-five percent (95%) for the Work or designated portion thereof being accepted as Substantially Complete, less any amounts as the Architect shall determine for any Work that is not complete, not in accordance with the Contract Documents, or for unsettled claims.

§9.10 FINAL COMPLETION AND FINAL PAYMENT

§9.10.1 Add the following to the end of Section 9.10.1:

If Architect is required to perform more than one inspection under this subsection, Contractor shall be responsible for paying the Owner for the cost of the additional inspection, which will be paid by Owner to Architect, at the hourly rate established in the contract between Owner and Architect.

§9.10.2 Make the following changes in Section 9.10.2:

In the first sentence, delete "for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner)."

Add the following clause to Section 9.10.2:

§9.10.2.1 Before final payment is due the Contractor, all applicable State and local taxes must be paid. If requested by the Owner, the Contractor shall present evidence that payment or satisfaction of all such tax obligations has been made.

§9.10.3 Add the following clause to Section 9.10.3:

9.10.3.1 Unless and to the extent final completion is delayed through no fault of the Contractor as provided in Section 9.10.3, the Owner shall be under no obligation to increase payments above ninety-five percent (95%) until final completion of the Work is Certified by the Architect.

§9.10.4 Make the following changes in Section 9.10.4:

In the first sentence, delete the word "the" and replace it with "Unless and until the Contractor makes a subsequent Claim against the Owner, the".

Add the following as the last sentence. "Neither the Owner's offer of a final payment nor its acceptance by the Contractor shall legally prevent or limit the Owner's right to assert any and all counterclaims in litigation filed by the Contractor as allowed in section 15.1.8."

Add the following Sections to Article 9:

§9.11 LIQUIDATED DAMAGES

§9.11.1 The Owner will suffer financial loss if the Work is not Substantially Complete within the Contract Time as defined in Article 8, and if final completion is not achieved within the specified time frame following Substantial Completion. As liquidated damages, and not as a penalty, the Contractor and the Contractor's surety shall be liable for and shall pay the Owner the sum(s) stated in this Agreement and/or purchase order.

§9.11.2 Allowances may be made for delays due to shortages of materials and/or energy resources, subject to proof by documentation, and also for delays due to strikes or other delays beyond the control of the Contractor. All delays and any claim for extension of Contract Time must be properly documented in accordance with Section 15.1.5 by the Contractor and must be made within the time limits stated in Section 15.1.2.

ARTICLE 10

PROTECTION OF PERSONS AND PROPERTY

§10.2.8 INJURY OR DAMAGE TO PERSON OR PROPERTY

§10.2.8 Make the following changes to Section 10.2.8:

In the first sentence, delete "within a reasonable time not exceeding 21 days" and substitute "immediately".

§10.3 HAZARDOUS MATERIALS

§10.3.3 Delete Section 10.3.3 in its entirety.

ARTICLE 11

INSURANCE AND BONDS

§11.1 CONTRACTOR'S LIABILITY INSURANCE

§11.1.2 Add the following to the end of §11.1.2.

At a minimum the Contract shall provide, at the Contractor's Expense:

§11.1.2.1. a Performance Bond and a Labor and Material Payment Bond for 100% of the Contract Sum and, if applicable, a two-year roofing Maintenance Bond for the full value of the roofing system.

§11.1.2.2 An attorney-in-fact who executes the bonds on behalf of the surety shall affix thereto a certified and current copy of power of attorney.

§11.1.2.3 The bonds shall be issued on State of West Virginia forms. The Contractor shall deliver the required bonds and all other contract documents to the Owner not later than 15 days following receipt of the Owner's notice of intent to award a Contract.

§11.2 Owner's Insurance Delete section 11.2 in its entirety.

§11.4 Loss of Use, Business Interruption, and Delay in Completion Insurance

§11.4 Section 11.4 is deleted in its entirety.

§11.5.1 Make the following changes in Section 11.5.1:

In the first sentence, substitute "Contractor" for "Owner" each time the latter word appears.

§11.5.2 Delete Section 11.5.2 in its entirety and substitute the following:

§11.5.2 Prior to settlement of insured loss, the Contractor shall notify the parties of the terms of the proposed settlement as well as the proposed allocation of the insurance proceeds. The parties shall have 14 days from the receipt of notice to object. If no objection is made, the Contractor shall proceed as proposed and allocate the settlement accordingly. If such objection is made, the dispute shall be resolved as provided in Section 15.4. The Contractor, in that case, shall make settlement with insurers in accordance with directions of the Court. If distribution of the insurance proceeds as directed by the Court is required, the Court will direct such distribution. Any work to repair the damage will be incorporated into the contract as a change order.

ARTICLE 13 MISCELLANEOUS PROVISIONS

§13.4 TESTS AND INSPECTIONS

§13.4.1 Remove the phrase "so require" and insert in its place "prohibit delegation of the test to Contractor"

§13.6 INTEREST

§13.6 Delete Section 13.5 in its entirety and substitute the following:

Notwithstanding any other provision in the Contract Documents, West Virginia Code does not authorize the payment of interest on late payments. Accordingly, interest charges for late payment are prohibited.

Add the following Sections to Article 13:

§13.6 WORKERS COMPENSATION

The Contractor shall provide proof of compliance with West Virginia Worker's Compensation laws and regulations.

§13.7 CONTRACTOR'S LICENSE

§13.7.1 West Virginia Code §21-11-2 requires that all persons desiring to perform contractual work in West Virginia shall be duly licensed. The West Virginia Contractor's Licensing Board is empowered to issue a contractor's license.

§13.7.2 West Virginia Code §21-11-11 requires any prospective Bidder to include the Bidder's contractor's license number on its Bid. The successful Bidder will be required to furnish a copy of its contractor's license in a classification appropriate to the Work prior to issuance of a purchase order/contract.

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§14.1 TERMINATION BY THE CONTRACTOR

§14.1.1 Make the following changes in Section 14.1.1:

At the end of clause 14.1.1.3 delete "; or" and insert a period.

Delete clause 14.1.1.4 in its entirety.

§14.1.3 Delete Section 14.1.3 in its entirety and substitute the following:

§14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exist, the Contractor may, upon seven days written notice to the Owner and Architect, terminate the Contract. In such event, the Contractor shall be paid for all Work performed in accordance with the Contract Documents, for reasonable and proven termination expenses and a reasonable allowance for overhead and profit. However, such payment, exclusive of termination expenses, shall not exceed the Contract Sum as reduced by other payments made to the Contractor and further reduced by the value of Work as yet not completed. The Contractor shall be entitled to reasonable overhead, but not profit, on Work not performed.

§14.2 TERMINATION BY THE OWNER FOR CAUSE

§14.2.4 Delete Section 14.2.4 in its entirety and substitute the following:

§14.2.4 If the unpaid balance of the Contract Sum exceeds the cost of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and other

damages incurred by the Owner and not expressly waived, such excess shall not be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Owner shall be certified by the Initial Decision Maker, upon application, and this obligation for payment shall survive termination of the Contract.

§14.4 TERMINATION BY THE OWNER FOR CONVENIENCE

§14.4.1 Delete Section 14.4.1 in its entirety and substitute the following:

§14.4.1 The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause upon thirty days written notice.

§14.4.3 Delete Section 14.4.3 in its entirety and substitute the following:

§14.4.3 In case of such termination for the Owner's convenience, the Contractor shall be entitled to receive payment from the Owner on the same basis provided in Section 14.1.3 above.

Add the following Section to Article 14:

§14.5 FISCAL YEAR FUNDING

§14.5 Work performed under this Contract is to continue in the succeeding fiscal year contingent upon funds being appropriated by the Legislature for this Work. In the event funds are not appropriated for this Work, this Contract becomes of no effect and is null and void after June 30.

ARTICLE 15 CLAIMS AND DISPUTES

§15.1 Claims

§15.1.2 TIME LIMITS ON CLAIMS

§15.1.2 Delete Section 15.1.2 in its entirety and substitute the following:

Any applicable statute of limitations shall be in accordance with West Virginia Code.

§15.1.3 NOTICE OF CLAIMS Add the following to § 15.1.3:

§15.1.3.3 All claims, and notice of claims that require an increase in contract time, contract scope, or contract sum must be made in writing.

§ 15.1.8 is added to the Contract as follows:

§ 15.1.8 Counterclaims – In the event that Contractor makes a claim, Owner reserves the right to make a counterclaim and will not be barred from doing so even if final payment has been made.

§15.2 INITIAL DECISION

§15.2.1 In the third sentence of Section 15.2.1, insert "or litigation" following the word "mediation" and remove the phrase "binding dispute resolution" and replace it with "or litigation".

§15.2.5 Delete the last sentence in Section 15.2.5 and substitute the following:

Approval or rejection of a claim by the Initial Decision Maker shall be final and binding on the parties unless it is pursued further by either party in accordance with Section 15.2.6.

§15.2.6 Make the following change to clause 15.2.6.1:

In the last sentence, delete "or pursue binding dispute resolution proceedings."

§15.2.8 Delete Section 15.2.8 in its entirety.

§15.3 MEDIATION

§15.3.1 Delete "binding dispute resolution" and substitute "litigation in a court of competent jurisdiction."

§15.3.2 Delete Section 15.3.2 in its entirety and substitute the following:

§15.3.2 The parties shall endeavor to resolve their Claims by non-binding mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect on the date of the Agreement.

§ 15.3.3 Remove section 15.3.3 in its entirety

§15.4 ARBITRATION

§15.4 Delete Section 15.4 in its entirety and substitute the following:

§15.4 SETTLEMENT OF CLAIMS

§15.4.1 The Constitution of West Virginia grants the State sovereign immunity from any and all Claims against the public treasury. This immunity applies and is extended to all agencies of the State, including the Owner. It shall be in full force and effect as it relates to this Contract. The West Virginia Legislature, recognizing that certain Claims against the State may constitute a moral obligation of the State and should be heard, has established the West Virginia Claims Commission for this purpose. The Parties understand that this sovereign immunity and the Constitution of the

State of West Virginia prohibit the State and Owner, from entering into binding arbitration. Notwithstanding any provision to the contrary in the Contract Documents, all references to arbitration, regardless of whether they are included in the AIA Document A201-2017 or another related document are hereby deleted and all Claims of the Contractor for monetary relief, and only of the Contractor, arising out of or related to this Contract shall be decided by the West Virginia Claims Commission. The following Sections have been rewritten to bring them into conformance with the foregoing.

§15.4.2 Claims by the Owner may be brought against the Contractor in the Circuit Court of Kanawha County, West Virginia, or in any other court that has jurisdiction, as the Owner may elect.

§15.4.3 Any Claim arising out of or related to the Contract, except Claims relating to aesthetic effect and except those waived as provided for in Sections 15.1.6, 9.10.4 and 9.10.5, shall, within 30 days after submission of the decision by the Initial Decision Maker, be settled for the Contractor by the West Virginia Claims Commission or, for the Owner, by the Circuit Court of Kanawha County or any other court of jurisdiction as the Owner may elect.

§15.4.4 Notice of such action shall be filed in writing with the other party to the Contract, and a copy of such notice shall be filed with the Initial Decision Maker and the Architect, if applicable.

§15.4.5 During court proceedings, the Owner and the Contractor shall comply with Section 15.1.3.

§15.4.6 Claims shall be made within the time limits specified in Section 15.2.6.1.

§15.4.7 The party filing a Claim must assert in the demand all Claims then known to that party on which action is permitted.

Add the following Article:

**ARTICLE 16
EQUAL OPPORTUNITY**

§16.1 COMPLIANCE WITH REGULATIONS UNDER TITLE VI OF THE FEDERAL CIVIL RIGHTS ACT OF 1964 AND EXECUTIVE ORDER 65-2 BY THE GOVERNOR OF WEST VIRGINIA DATED DECEMBER 15, 1965

§16.1.1 The Contractor agrees that it will comply with Title VI of the Federal Civil Rights Act of 1964 (P.L. 88352) and the regulations of the State of West Virginia, to the end that no person in the State, or in the United States, shall on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or otherwise subjected to discrimination under any program or activity for which the Contractor receives any recompense or other consideration of value, either directly or indirectly from the State; and HEREBY GIVES ASSURANCE THAT it will immediately take any measures necessary to effectuate this Agreement.

§16.1.2 If any real property or structure thereon is provided or improved, this assurance shall obligate the Contractor, or in the case of any transfer of such property, any transferee, for the period during which the real property or structure is used for a purpose for which any State payment is extended or for another purpose involving the provision of similar services or benefits. If any other goods or services are so provided, this assurance shall obligate the Contractor for the period during which it supplies such goods or services.

§16.1.3 The Contractor recognizes and agrees that such right to provide property, goods or services to the State will be extended in reliance on the representations and agreements made in assurance, and that the State shall have the right to seek judicial enforcement of this assurance. This is binding on the Contractor, its successors, transferee, and assignee, or any authorized person on behalf of the Contractor.

END OF SUPPLEMENTARY CONDITIONS TO AIA DOCUMENT A201-2017

Any provisions of the Contract Documents that conflict with these Supplementary Conditions shall be null and void unless they have been approved in writing by the applicable State purchasing officer and the Attorney General, and are clearly identified as such in the bid documents.

The Owner and Contractor hereby agree to the full performance of the covenants contained herein.

IN WITNESS WHEREOF, the Owner and Contractor have entered into this Agreement as of the effective date as stated in the A101-2017 (when utilized) or other Contract Documents.

Owner:

Contractor:

By:

By:

Title:

Title:

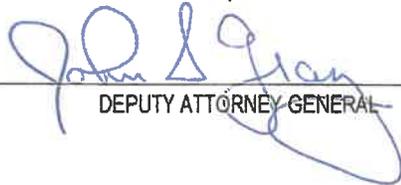
Date:

Date:

This Supplementary Conditions to AIA Document A201-2017, General Conditions of the Contract for Construction, has been approved as to form on this 20th day of February, 2019, by the West Virginia Attorney General's office as indicated in the signature line below. Any modification of this document is void unless expressly approved in writing by the West Virginia Attorney General's Office.

PATRICK MORRISEY, ATTORNEY GENERAL

BY:


DEPUTY ATTORNEY GENERAL

APPENDIX B

APPENDIX B

1. SECTION 013000 ADMINISTRATIVE REQUIREMENTS
2. SECTION 087100 DOOR HARDWARE (**CAPERTON CENTER ONLY**)
3. SECTION 260526 GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS
4. SECTION 260529 HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS
5. SECTION 260533.13 CONDUIT FOR ELECTRICAL SYSTEMS
6. SECTION 260533.16 BOXES FOR ELECTRICAL SYSTEMS
7. SECTION 280010 SECURITY – GENERAL
8. SECTION 280090 SECURITY PERFORMANCE VERIFICATION
9. SECTION 281000 ACCESS CONTROL
10. SECTION 282000 VIDEO SURVEILLANCE

**SECTION 013000
ADMINISTRATIVE REQUIREMENTS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. General administrative requirements.
- B. Submittals for review, information, and project closeout.
- C. Number of copies of submittals.
- D. Requests for Interpretation (RFI) procedures.
- E. Submittal procedures.

1.02 GENERAL ADMINISTRATIVE REQUIREMENTS

- A. Make the following types of submittals to Architect:
 - 1. Requests for Interpretation (RFI).
 - 2. Requests for substitution.
 - 3. Shop drawings, product data, and samples.
 - 4. Applications for payment and change order requests.
 - 5. Closeout submittals.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 REQUESTS FOR INTERPRETATION (RFI)

- A. Definition: A request seeking one of the following:
 - 1. An interpretation, amplification, or clarification of some requirement of Contract Documents arising from inability to determine from them the exact material, process, or system to be installed; or when the elements of construction are required to occupy the same space (interference); or when an item of work is described differently at more than one place in Contract Documents.
 - 2. A resolution to an issue which has arisen due to field conditions and affects design intent.
- B. Whenever possible, request clarifications at the next appropriate project progress meeting, with response entered into meeting minutes, rendering unnecessary the issuance of a formal RFI.
- C. Preparation: Prepare an RFI immediately upon discovery of a need for interpretation of Contract Documents. Failure to submit a RFI in a timely manner is not a legitimate cause for claiming additional costs or delays in execution of the work.
 - 1. Prepare a separate RFI for each specific item.
 - a. Review, coordinate, and comment on requests originating with subcontractors and/or materials suppliers.
 - 2. Prepare in a format and with content acceptable to Architect.
 - 3. Combine RFI and its attachments into a single electronic file. PDF format is preferred.
- D. Reason for the RFI: Prior to initiation of an RFI, carefully study all Contract Documents to confirm that information sufficient for their interpretation is definitely not included.
- E. Content: Include identifiers necessary for tracking the status of each RFI, and information necessary to provide an actionable response.
 - 1. Official Project name and number, and any additional required identifiers established in Contract Documents.
 - 2. Discrete and consecutive RFI number, and descriptive subject/title.
 - 3. Issue date, and requested reply date.
 - 4. Reference to particular Contract Document(s) requiring additional information/interpretation. Identify pertinent drawing and detail number and/or specification section number, title, and paragraph(s).
 - 5. Contractor's suggested resolution: A written and/or a graphic solution, to scale, is required in cases where clarification of coordination issues is involved, for example; routing, clearances, and/or specific locations of work shown diagrammatically in Contract

Documents. If applicable, state the likely impact of the suggested resolution on Contract Time or the Contract Sum.

- F. Attachments: Include sketches, coordination drawings, descriptions, photos, submittals, and other information necessary to substantiate the reason for the request.
- G. Review Time: Architect will respond and return RFIs to Contractor within seven calendar days of receipt. For the purpose of establishing the start of the mandated response period, RFIs received after 12:00 noon will be considered as having been received on the following regular working day.
- H. Responses: Content of answered RFIs will not constitute in any manner a directive or authorization to perform extra work or delay the project. If in Contractor's belief it is likely to lead to a change to Contract Sum or Contract Time, promptly issue a notice to this effect, and follow up with an appropriate Change Order request to Owner.
 - 1. Response may include a request for additional information, in which case the original RFI will be deemed as having been answered, and an amended one is to be issued forthwith. Identify the amended RFI with an R suffix to the original number.
 - 2. Upon receipt of a response, promptly review and distribute it to all affected parties, and update the RFI Log.
 - 3. Notify Architect within seven calendar days if an additional or corrected response is required by submitting an amended version of the original RFI, identified as specified above.

3.02 SUBMITTALS FOR REVIEW

- A. When the following are specified in individual sections, submit them for review:
 - 1. Product data.
 - 2. Shop drawings.
 - 3. Samples for selection.
 - 4. Samples for verification.
- B. Submit to Architect for review for the limited purpose of checking for compliance with information given and the design concept expressed in Contract Documents.
- C. After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES article below.

3.03 SUBMITTALS FOR INFORMATION

- A. When the following are specified in individual sections, submit them for information:
 - 1. Design data.
 - 2. Certificates.
 - 3. Manufacturer's instructions.
 - 4. Other types indicated.
- B. Submit for Architect's knowledge as contract administrator or for Owner.

3.04 SUBMITTALS FOR PROJECT CLOSEOUT

- A. Submit Correction Punch List for Substantial Completion.
- B. Submit Final Correction Punch List for Substantial Completion.
- C. Submit for Owner's benefit during and after project completion.

3.05 NUMBER OF COPIES OF SUBMITTALS

- A. Electronic Documents: Submit one electronic copy in PDF format; an electronically-marked up file will be returned. Create PDFs at native size and right-side up; illegible files will be rejected.

3.06 SUBMITTAL PROCEDURES

- A. General Requirements:
 - 1. Use a separate transmittal for each item.
 - 2. Sequentially identify each item. For revised submittals use original number and a sequential numerical suffix.

3. Identify: Project; Contractor; subcontractor or supplier; pertinent drawing and detail number; and specification section number and article/paragraph, as appropriate on each copy.
 4. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of products required, field dimensions, adjacent construction work, and coordination of information is in accordance with the requirements of the work and Contract Documents.
 - a. Submittals from sources other than the Contractor, or without Contractor's stamp will not be acknowledged, reviewed, or returned.
 5. Deliver each submittal on date noted in submittal schedule, unless an earlier date has been agreed to by all affected parties, and is of the benefit to the project.
 - a. Send submittals in electronic format via email to Architect.
 6. Schedule submittals to expedite the Project, and coordinate submission of related items.
 - a. For each submittal for review, allow 15 days excluding delivery time to and from the Contractor.
 - b. For sequential reviews involving Architect's consultants, Owner, or another affected party, allow an additional 7 days.
 7. Identify variations from Contract Documents and product or system limitations that may be detrimental to successful performance of the completed work.
 8. Provide space for Contractor and Architect review stamps.
 9. When revised for resubmission, identify all changes made since previous submission.
 10. Distribute reviewed submittals. Instruct parties to promptly report inability to comply with requirements.
 11. Incomplete submittals will not be reviewed, unless they are partial submittals for distinct portion(s) of the work, and have received prior approval for their use.
- B. Product Data Procedures:
1. Submit only information required by individual specification sections.
 2. Collect required information into a single submittal.
 3. Do not submit (Material) Safety Data Sheets for materials or products.
- C. Shop Drawing Procedures:
1. Prepare accurate, drawn-to-scale, original shop drawing documentation by interpreting Contract Documents and coordinating related work.
 2. Do not reproduce Contract Documents to create shop drawings.
 3. Use of reproductions of Contract Documents in digital data form to create shop drawings is only permitted as defined as approved by architect upon request by contractor.
 4. Generic, non-project-specific information submitted as shop drawings do not meet the requirements for shop drawings.
- D. Samples Procedures:
1. Transmit related items together as single package.
 2. Identify each item to allow review for applicability in relation to shop drawings showing installation locations.

3.07 SUBMITTAL REVIEW

- A. Submittals for Review: Architect will review each submittal, and approve, or take other appropriate action.
- B. Submittals for Information: Architect will acknowledge receipt and review. See below for actions to be taken.
- C. Architect's actions will be reflected by marking each returned submittal using virtual stamp on electronic submittals.
 1. Notations may be made directly on submitted items and/or listed on appended Submittal Review cover sheet.
- D. Architect's and consultants' actions on items submitted for review:
 1. Authorizing purchasing, fabrication, delivery, and installation:
 - a. "Approved", or language with same legal meaning.

- b. "Approved as Noted, Resubmission not required", or language with same legal meaning.
 - 1) At Contractor's option, submit corrected item, with review notations acknowledged and incorporated.
- c. "Approved as Noted, Resubmit for Record", or language with same legal meaning.
 - 1) Resubmit corrected item, with review notations acknowledged and incorporated. Resubmit separately, or as part of project record documents.
 - 2) Non-responsive resubmittals may be rejected.
- 2. Not Authorizing fabrication, delivery, and installation:
 - a. "Revise and Resubmit".
 - 1) Resubmit revised item, with review notations acknowledged and incorporated.
 - 2) Non-responsive resubmittals may be rejected.
 - b. "Rejected".
 - 1) Submit item complying with requirements of Contract Documents.
- E. Architect's and consultants' actions on items submitted for information:
 - 1. Items for which no action was taken:
 - a. "Received" - to notify the Contractor that the submittal has been received for record only.
 - 2. Items for which action was taken:
 - a. "Reviewed" - no further action is required from Contractor.

END OF SECTION

**SECTION 087100
DOOR HARDWARE**

PART 1 GENERAL

1.01 SUMMARY

- A. This Section includes the following:
 - 1. Commercial door hardware.
 - 2. Electrified door hardware.

1.02 SUBMITTALS

- A. Product Data: For each product indicated.
- B. Shop Drawings: Include details of electrified door hardware and wiring diagrams.
- C. Samples: For each exposed finish.
- D. Door Hardware Schedule: Organized into door hardware sets indicating type, style, function, size, label, hand, manufacturer, fasteners, location, and finish of each door hardware item. Include description of each electrified door hardware function, including sequence of operation.
- E. Product certificates.

1.03 QUALITY ASSURANCE

- A. Supplier Qualifications: Person who is or employs a qualified DHI Architectural Hardware Consultant.
- B. Source Limitations: Obtain electrified door hardware from same manufacturer as mechanical door hardware, unless otherwise indicated. Manufacturers that are listed to perform electrical modifications, by a testing and inspecting agency acceptable to authorities having jurisdiction, are acceptable.
- C. Pre-Installation Conference: Conduct conference at Project site.
- D. Templates: Obtain and distribute templates for doors, frames, and other work specified to be factory prepared for installing door hardware.
- E. Standards: Comply with BHMA A156 series standards, Grade 1.
- F. Certified Products: Provide door hardware that is listed in BHMA directory of certified products.

1.04 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of door hardware that fails in materials or workmanship within warranty period from date of Substantial Completion.
 - 1. Warranty Period for one year.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Product: Subject to compliance with requirements, provide the product named for each door hardware item indicated in Door Hardware Sets.
- B. Basis-of-Design Product: Product named for each door hardware item indicated in Door Hardware Sets establishes the basis of design. Provide either the named product or a comparable product by one of the manufacturers specified for each type of hardware item.
- C. Manufacturers Used in the specification:

<u>Products</u>	<u>Manufacture Specified</u>	<u>Acceptable Equals</u>
Card Readers/Keypads	By Others	No substitutions
Power Supplies	Von Duprin	No substitutions
Power Transfers	SCE (Schlage)	Locknetics, Securitron
QEL/RX kits	Von Duprin	No substitutions

2.02 DOOR HARDWARE

- A. Scheduled Door Hardware: Provide door hardware according to Door Hardware Sets at the end of Part 3. Manufacturers' names are abbreviated.

2.03 EXIT DEVICES PARTS

- A. Manufacturers:
 - 1. Scheduled Manufacturer: Von Duprin QEL/RX kits.
 - 2. Acceptable Manufacturers: No Substitutions.
- B. Provide kits with electrified options as scheduled in the hardware sets. Provide with number and gage of wires enough to accommodate electric function of specified hardware.

2.04 DOOR CORDS

- A. Manufacturers:
 - 1. Scheduled Manufacturer: Schlage 788/798 Series.
 - 2. Acceptable Manufacturers: Securitron TSB Series, Locknetics DC Series.
- B. Provide door cords with electrified options as scheduled in the hardware sets. Provide with number and gage of wires enough to accommodate electric function of specified hardware.
- C. Locate electric power transfer per manufacturer's template and UL requirements, unless interference with operation of door or other hardware.

2.05 POWER SUPPLIES

- A. Manufacturers and Products:
 - 1. Scheduled Manufacturer and Product: Schlage or Von Duprin PS900 series
 - 2. Acceptable Manufacturers and Products: No Substitutions
- B. Requirements:
 - 1. Provide power supplies, recommended and approved by manufacturer of electrified locking component, for operation of electrified locks, electrified exit devices, magnetic locks, electric strikes, and other components requiring power supply.
 - 2. Provide appropriate quantity of power supplies necessary for proper operation of electrified locking components as recommended by manufacturer of electrified locking components with consideration for each electrified component using power supply, location of power supply, and approved wiring diagrams. Locate power supplies as directed by Architect.
 - 3. Provide regulated and filtered 24 VDC power supply , and UL class 2 listed.
 - 4. Options:
 - 5. Provide power supply, where specified, with internal capability of charging sealed backup batteries 24 VDC, in addition to operating DC load.
 - 6. Provide sealed batteries for battery back-up at each power supply where specified.
 - 7. Provide keyed power supply cabinet.
 - 8. Provide power supply in an enclosure, complete, and requiring 120VAC to fused input.
 - 9. Provide power supply with emergency release terminals, where specified, that allow release of all devices upon activation of fire alarm system complete with fire alarm input for initiating "no delay" exiting mode.

2.06 FABRICATION

- A. Base Metals: Furnish metals of a quality equal to or greater than that of specified door hardware units and BHMA A156.18 for finishes. Do not furnish manufacturer's standard materials if different from specified standard.
- B. Fasteners: Phillips flat-head screws with finished heads to match surface of door hardware, unless otherwise indicated. Provide steel machine or wood screws or steel through bolts for fire-rated applications.
- C. Spacers or Sex Bolts: For through bolting of hollow metal doors.
- D. Fasteners for Wood Doors: Comply with requirements of DHI WDHS.2, "Recommended Fasteners for Wood Doors."

E. Finishes: Comply with BHMA A156.18.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Examine doors and frames for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance. Examine roughing-in for electrical power systems to verify actual locations of wiring connections before electrified door hardware installation.
- B. Steel Door and Frame Preparation: Comply with DHI A115 series. Drill and tap doors and frames for surface-applied hardware according to SDI 107.
- C. Wood Door Preparation: Comply with DHI A115-W series.
- D. Mounting Heights: Comply with the following requirements, unless otherwise indicated:
 - 1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
 - 2. Custom Steel Doors and Frames: DHI's "Recommended Locations for Builders' Hardware for Custom Steel Doors and Frames."
 - 3. Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."
- E. Adjust and reinforce attachment substrates as necessary for proper installation and operation. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.
 - 1. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."
- F. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with accessibility requirements.
 - 1. Door Closers: Adjust sweep period so that from an open position of 70 degrees, the door will take at least three seconds to move to a point 3 inches (75 mm) from the latch, measured to the leading edge of the door.

3.02 FIELD QUALITY CONTROL

- A. Inspections: Owner will engage a qualified independent Architectural Hardware Consultant to perform inspections and to prepare inspection reports.

DOOR HARDWARE SETS:

HARDWARE GROUP NO. 01

FOR USE ON DOOR (S):

101	102				
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PROVIDE EACH OPENING WITH THE FOLLOWING:

<u>QTY</u>		<u>DESCRIPTION</u>	<u>CATALOG NUMBER</u>	<u>FINISH</u>	<u>MFR</u>
1	EA	DOOR CORD	788	626	SCE
1	EA	LATCH RETRACTION KIT	958003/040065 QEL BASEPLATE CONVERSION KIT		VON
1	EA	SWITCH	SWITCH KIT-RX		VON
1	EA	CONTROLLER	CARD READER BY OTHERS	B	SCE
1	EA	POWER SUPPLY	PS902 900-4RL 120/240 VAC		VON

1			HDWE SUPPLIER/GC TO VERIFY COMPATIBILITY WITH EXISTING DOOR FOR NEW HDWE		
1			BALANCE OF HARDWARE EXISTING		

OPERATION: DOOR CLOSED AND SECURE. VALID CREDENTIAL ALLOWS ENTRY. FREE EGRESS AT ALL TIMES.

HARDWARE GROUP NO. 02

FOR USE ON DOOR (S):

103					
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PROVIDE EACH OPENING WITH THE FOLLOWING:

<u>QTY</u>		<u>DESCRIPTION</u>	<u>CATALOG NUMBER</u>	<u>FINISH</u>	<u>MFR</u>
1	EA	DOOR CORD	788	626	SCE
1	EA	LATCH RETRACTION KIT	958003/040065 QEL BASEPLATE CONVERSION KIT		VON
1	EA	SWITCH	SWITCH KIT-RX		VON
1	EA	CONTROLLER	CARD READER BY OTHERS	B	SCE
1	EA	POWER SUPPLY	PS902 900-4RL 120/240 VAC		VON
			HDWE SUPPLIER/GC TO VERIFY COMPATIBILITY WITH EXISTING DOOR FOR NEW HDWE		
			BALANCE OF HARDWARE EXISTING		

OPERATION: DOOR CLOSED AND SECURE. VALID CREDENTIAL ALLOWS ENTRY. FREE EGRESS AT ALL TIMES.

END OF SECTION

**SECTION 260526
GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Grounding and bonding requirements.
- B. Conductors for grounding and bonding.
- C. Connectors for grounding and bonding.
- D. Ground bars.
- E. Ground rod electrodes.
- F. Ground access wells.

1.02 REFERENCE STANDARDS

- A. IEEE 81 - IEEE Guide for Measuring Earth Resistivity, Ground Impedance, and Earth Surface Potentials of a Grounding System; 2012.
- B. NECA 1 - Standard for Good Workmanship in Electrical Construction; 2015.
- C. NEMA GR 1 - Ground Rod Electrodes and Ground Rod Electrode Couplings; 2017.
- D. NETA ATS - Acceptance Testing Specifications for Electrical Power Equipment and Systems; 2017.
- E. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- F. UL 467 - Grounding and Bonding Equipment; Current Edition, Including All Revisions.

1.03 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 - 1. Verify exact locations of underground metal water service pipe entrances to building.
 - 2. Coordinate the work with other trades to provide steel reinforcement complying with specified requirements for concrete-encased electrode.
 - 3. Notify Architect of any conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.
- B. Sequencing:
 - 1. Do not install ground rod electrodes until final backfill and compaction is complete.

1.04 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittals procedures.
- B. Product Data: Provide manufacturer's standard catalog pages and data sheets for grounding and bonding system components.
- C. Manufacturer's Instructions: Indicate application conditions and limitations of use stipulated by product testing agency. Include instructions for storage, handling, protection, examination, preparation, and installation of product.

1.05 QUALITY ASSURANCE

- A. Comply with requirements of NFPA 70.
- B. Maintain at the project site a copy of each referenced document that prescribes execution requirements.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Receive, inspect, handle, and store products in accordance with manufacturer's instructions.

PART 2 PRODUCTS

2.01 GROUNDING AND BONDING REQUIREMENTS

- A. Do not use products for applications other than as permitted by NFPA 70 and product listing.

- B. Unless specifically indicated to be excluded, provide all required components, conductors, connectors, conduit, boxes, fittings, supports, accessories, etc. as necessary for a complete grounding and bonding system.
- C. Where conductor size is not indicated, size to comply with NFPA 70 but not less than applicable minimum size requirements specified.
- D. Grounding System Resistance:
 - 1. Achieve specified grounding system resistance under normally dry conditions unless otherwise approved by Architect. Precipitation within the previous 48 hours does not constitute normally dry conditions.
 - 2. Grounding Electrode System: Not greater than 5 ohms to ground, when tested according to IEEE 81 using "fall-of-potential" method.
 - 3. Between Grounding Electrode System and Major Electrical Equipment Frames, System Neutral, and Derived Neutral Points: Not greater than 0.5 ohms, when tested using "point-to-point" methods.
- E. Grounding Electrode System:
 - 1. Provide connection to required and supplemental grounding electrodes indicated to form grounding electrode system.
 - a. Provide continuous grounding electrode conductors without splice or joint.
 - b. Install grounding electrode conductors in raceway where exposed to physical damage. Bond grounding electrode conductor to metallic raceways at each end with bonding jumper.
 - 2. Metal Underground Water Pipe(s):
 - a. Provide connection to underground metal domestic and fire protection (where present) water service pipe(s) that are in direct contact with earth for at least 10 feet (3.0 m) at an accessible location not more than 5 feet (1.5 m) from the point of entrance to the building.
 - b. Provide bonding jumper(s) around insulating joints/pipes as required to make pipe electrically continuous.
 - c. Provide bonding jumper around water meter of sufficient length to permit removal of meter without disconnecting jumper.
 - 3. Metal In-Ground Support Structure:
 - a. Provide connection to metal in-ground support structure that is in direct contact with earth in accordance with NFPA 70.
 - 4. Concrete-Encased Electrode:
 - a. Provide connection to concrete-encased electrode consisting of not less than 20 feet (6.0 m) of either steel reinforcing bars or bare copper conductor not smaller than 4 AWG embedded within concrete foundation or footing that is in direct contact with earth in accordance with NFPA 70.
 - 5. Ground Rod Electrode(s):
 - a. Provide single electrode unless otherwise indicated or required.
 - b. Space electrodes not less than 10 feet (3.0 m) from each other and any other ground electrode.
 - 6. Provide additional ground electrode(s) as required to achieve specified grounding electrode system resistance.
- F. Bonding and Equipment Grounding:
 - 1. Provide bonding for equipment grounding conductors, equipment ground busses, metallic equipment enclosures, metallic raceways and boxes, device grounding terminals, and other normally non-current-carrying conductive materials enclosing electrical conductors/equipment or likely to become energized as indicated and in accordance with NFPA 70.
 - 2. Provide insulated equipment grounding conductor in each feeder and branch circuit raceway. Do not use raceways as sole equipment grounding conductor.
 - 3. Where circuit conductor sizes are increased for voltage drop, increase size of equipment grounding conductor proportionally in accordance with NFPA 70.

4. Unless otherwise indicated, connect wiring device grounding terminal to branch circuit equipment grounding conductor and to outlet box with bonding jumper.
5. Terminate branch circuit equipment grounding conductors on solidly bonded equipment ground bus only. Do not terminate on neutral (grounded) or isolated/insulated ground bus.
6. Provide bonding jumper across expansion or expansion/deflection fittings provided to accommodate conduit movement.
7. Provide bonding for interior metal piping systems in accordance with NFPA 70. This includes, but is not limited to:
 - a. Metal water piping where not already effectively bonded to metal underground water pipe used as grounding electrode.
 - b. Metal gas piping.

2.02 GROUNDING AND BONDING COMPONENTS

- A. General Requirements:
 1. Provide products listed, classified, and labeled as suitable for the purpose intended.
 2. Provide products listed and labeled as complying with UL 467 where applicable.
- B. Conductors for Grounding and Bonding, in Addition to Requirements of Section 260526:
 1. Use insulated copper conductors unless otherwise indicated.
 - a. Exceptions:
 - 1) Use bare copper conductors where installed underground in direct contact with earth.
 - 2) Use bare copper conductors where directly encased in concrete (not in raceway).
- C. Connectors for Grounding and Bonding:
 1. Description: Connectors appropriate for the application and suitable for the conductors and items to be connected; listed and labeled as complying with UL 467.
 2. Unless otherwise indicated, use exothermic welded connections for underground, concealed and other inaccessible connections.
 3. Unless otherwise indicated, use mechanical connectors, compression connectors, or exothermic welded connections for accessible connections.
 4. Manufacturers - Mechanical and Compression Connectors:
 - a. Advanced Lightning Technology (ALT): www.altfab.com/#sle.
 - b. Burndy LLC: www.burndy.com/#sle.
 - c. Harger Lightning & Grounding: www.harger.com/#sle.
 5. Manufacturers - Exothermic Welded Connections:
 - a. Burndy LLC: www.burndy.com/#sle.
 - b. Cadweld, a brand of Erico International Corporation: www.erico.com/#sle.
 - c. thermOweld, subsidiary of Continental Industries; division of Burndy LLC: www.thermoweld.com/#sle.
- D. Ground Bars:
 1. Description: Solid copper rectangular ground bars with mounting brackets and insulators.
 2. Size: Minimum 6" x 0.75" x 0.25" ..
 3. Holes for Connections: Drilled and tapped 0.25-20 and 10-24 to terminate incoming conductors. .
- E. Ground Rod Electrodes:
 1. Comply with NEMA GR 1.
 2. Material: Copper-bonded (copper-clad) steel.
 3. Size: 3/4 inch (19 mm) diameter by 10 feet (3.0 m) length, unless otherwise indicated.
 4. Manufacturers:
 - a. Advanced Lightning Technology (ALT): www.altfab.com/#sle.
 - b. Erico International Corporation: www.erico.com/#sle.
 - c. Galvan Industries, Inc: www.galvanelectrical.com/#sle.
 - d. Harger Lightning & Grounding: www.harger.com/#sle.
- F. Ground Access Wells:

1. Description: Open bottom round or rectangular well with access cover for testing and inspection; suitable for the expected load at the installed location.
2. Size: As required to provide adequate access for testing and inspection, but not less than minimum size requirements specified.
 - a. Round Wells: Not less than 8 inches (200 mm) in diameter.
 - b. Rectangular Wells: Not less than 12 by 12 inches (300 by 300 mm).
3. Depth: As required to extend below frost line to prevent frost upheaval, but not less than 10 inches (250 mm).
4. Cover: Factory-identified by permanent means with word "GROUND".
5. Manufacturers:
 - a. Advanced Lightning Technology (ALT): www.altfab.com/#sle.
 - b. Erico International Corporation: www.erico.com/#sle.
 - c. Harger Lightning & Grounding: www.harger.com/#sle.
 - d. thermOweld, subsidiary of Continental Industries; division of Burndy LLC: www.thermoweld.com/#sle.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that work likely to damage grounding and bonding system components has been completed.
- B. Verify that field measurements are as indicated.
- C. Verify that conditions are satisfactory for installation prior to starting work.

3.02 INSTALLATION

- A. Install products in accordance with manufacturer's instructions.
- B. Perform work in accordance with NECA 1 (general workmanship).
- C. Ground Rod Electrodes: Unless otherwise indicated, install ground rod electrodes vertically. Where encountered rock prohibits vertical installation, install at 45 degree angle or bury horizontally in trench at least 30 inches (750 mm) deep in accordance with NFPA 70 or provide ground plates.
 1. Outdoor Installations: Unless otherwise indicated, install with top of rod 6 inches (150 mm) below finished grade.
 2. Indoor Installations: Unless otherwise indicated, install with 4 inches (100 mm) of top of rod exposed.
- D. Make grounding and bonding connections using specified connectors.
 1. Remove appropriate amount of conductor insulation for making connections without cutting, nicking or damaging conductors. Do not remove conductor strands to facilitate insertion into connector.
 2. Remove nonconductive paint, enamel, or similar coating at threads, contact points, and contact surfaces.
 3. Exothermic Welds: Make connections using molds and weld material suitable for the items to be connected in accordance with manufacturer's recommendations.
 4. Mechanical Connectors: Secure connections according to manufacturer's recommended torque settings.
 5. Compression Connectors: Secure connections using manufacturer's recommended tools and dies.

3.03 FIELD QUALITY CONTROL

- A. Inspect and test in accordance with NETA ATS except Section 4.
- B. Perform ground electrode resistance tests under normally dry conditions. Precipitation within the previous 48 hours does not constitute normally dry conditions.
- C. Investigate and correct deficiencies where measured ground resistances do not comply with specified requirements.

END OF SECTION

**SECTION 260529
HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Support and attachment requirements and components for equipment, conduit, cable, boxes, and other electrical work.

1.02 RELATED REQUIREMENTS

- A. Section 260533.13 - Conduit for Electrical Systems: Additional support and attachment requirements for conduits.
- B. Section 260533.16 - Boxes for Electrical Systems: Additional support and attachment requirements for boxes.

1.03 REFERENCE STANDARDS

- A. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products; 2017.
- B. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2016a.
- C. ASTM B633 - Standard Specification for Electrodeposited Coatings of Zinc on Iron and Steel; 2019.
- D. MFMA-4 - Metal Framing Standards Publication; 2004.
- E. NECA 1 - Standard for Good Workmanship in Electrical Construction; 2015.
- F. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- G. NFPA 101 - Life Safety Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- H. UL 5B - Strut-Type Channel Raceways and Fittings; Current Edition, Including All Revisions.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 - 1. Coordinate sizes and arrangement of supports and bases with the actual equipment and components to be installed.
 - 2. Coordinate the work with other trades to provide additional framing and materials required for installation.
 - 3. Coordinate compatibility of support and attachment components with mounting surfaces at the installed locations.
 - 4. Coordinate the arrangement of supports with ductwork, piping, equipment and other potential conflicts installed under other sections or by others.
 - 5. Notify Architect of any conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.
- B. Sequencing:
 - 1. Do not install products on or provide attachment to concrete surfaces until concrete has fully cured.

1.05 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide manufacturer's standard catalog pages and data sheets for channel (strut) framing systems, non-penetrating rooftop supports, and post-installed concrete and masonry anchors.

1.06 QUALITY ASSURANCE

- A. Comply with NFPA 70.

- B. Comply with applicable building code.
- C. Maintain at the project site a copy of each referenced document that prescribes execution requirements.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Receive, inspect, handle, and store products in accordance with manufacturer's instructions.

PART 2 PRODUCTS

2.01 SUPPORT AND ATTACHMENT COMPONENTS

- A. General Requirements:
 - 1. Provide all required hangers, supports, anchors, fasteners, fittings, accessories, and hardware as necessary for the complete installation of electrical work.
 - 2. Provide products listed, classified, and labeled as suitable for the purpose intended, where applicable.
 - 3. Where support and attachment component types and sizes are not indicated, select in accordance with manufacturer's application criteria as required for the load to be supported with a minimum safety factor of 2.0. Include consideration for vibration, equipment operation, and shock loads where applicable.
 - 4. Do not use products for applications other than as permitted by NFPA 70 and product listing.
 - 5. Do not use wire, chain, perforated pipe strap, or wood for permanent supports unless specifically indicated or permitted.
 - 6. Steel Components: Use corrosion resistant materials suitable for the environment where installed.
 - a. Zinc-Plated Steel: Electroplated in accordance with ASTM B633.
 - b. Galvanized Steel: Hot-dip galvanized after fabrication in accordance with ASTM A123/A123M or ASTM A153/A153M.
- B. Conduit and Cable Supports: Straps, clamps, etc. suitable for the conduit or cable to be supported.
 - 1. Conduit Straps: One-hole or two-hole type; steel or malleable iron.
 - 2. Conduit Clamps: Bolted type unless otherwise indicated.
 - 3. Manufacturers:
 - a. Cooper Crouse-Hinds, a division of Eaton Corporation: www.cooperindustries.com/#sle.
 - b. Erico International Corporation: www.erico.com/#sle.
 - c. HoldRite, a brand of Reliance Worldwide Corporation: www.holdrite.com/#sle.
 - d. O-Z/Gedney, a brand of Emerson Electric Co: www.emerson.com/#sle.
 - e. Thomas & Betts Corporation: www.tnb.com/#sle.
- C. Outlet Box Supports: Hangers, brackets, etc. suitable for the boxes to be supported.
 - 1. Manufacturers:
 - a. Cooper Crouse-Hinds, a division of Eaton Corporation: www.cooperindustries.com/#sle.
 - b. Erico International Corporation: www.erico.com/#sle.
 - c. HoldRite, a brand of Reliance Worldwide Corporation: www.holdrite.com/#sle.
 - d. O-Z/Gedney, a brand of Emerson Electric Co: www.emerson.com/#sle.
- D. Metal Channel (Strut) Framing Systems: Factory-fabricated continuous-slot metal channel (strut) and associated fittings, accessories, and hardware required for field-assembly of supports.
 - 1. Comply with MFMA-4.
 - 2. Channel (Strut) Used as Raceway (only where specifically indicated): Listed and labeled as complying with UL 5B.
 - 3. Channel Material:
 - a. Indoor Dry Locations: Use painted steel, zinc-plated steel, or galvanized steel.
 - b. Outdoor and Damp or Wet Indoor Locations: Use galvanized steel.

4. Minimum Channel Thickness: Steel sheet, 12 gauge, 0.1046 inch (2.66 mm).
 5. Minimum Channel Dimensions: 1-5/8 inch (41 mm) width by 13/16 inch (21 mm) height.
 6. Manufacturers:
 - a. Cooper B-Line, a division of Eaton Corporation: www.cooperindustries.com/#sle.
 - b. Thomas & Betts Corporation: www.tnb.com/#sle.
 - c. Unistrut, a brand of Atkore International Inc: www.unistrut.com/#sle.
 - d. Substitutions: See Section 016000 - Product Requirements.
 - e. Source Limitations: Furnish channels (struts) and associated fittings, accessories, and hardware produced by a single manufacturer.
- E. Hanger Rods: Threaded zinc-plated steel unless otherwise indicated.
1. Minimum Size, Unless Otherwise Indicated or Required:
 - a. Equipment Supports: 1/2 inch (13 mm) diameter.
 - b. Busway Supports: 1/2 inch (13 mm) diameter.
 - c. Single Conduit up to 1 inch (27 mm) trade size: 1/4 inch (6 mm) diameter.
 - d. Single Conduit larger than 1 inch (27 mm) trade size: 3/8 inch (10 mm) diameter.
 - e. Trapeze Support for Multiple Conduits: 3/8 inch (10 mm) diameter.
 - f. Outlet Boxes: 1/4 inch (6 mm) diameter.
 - g. Luminaires: 1/4 inch (6 mm) diameter.
- F. Non-Penetrating Rooftop Supports for Low-Slope Roofs: Steel pedestals with thermoplastic or rubber bases that rest on top of roofing membrane, not requiring any attachment to the roof structure and not penetrating the roofing assembly, with support fixtures as specified.
1. Base Sizes: As required to distribute load sufficiently to prevent indentation of roofing assembly.
 2. Attachment/Support Fixtures: As recommended by manufacturer, same type as indicated for equivalent indoor hangers and supports.
 3. Mounting Height: Provide minimum clearance of 6 inches (150 mm) under supported component to top of roofing.
 4. Manufacturers:
 - a. Cooper B-Line, a division of Eaton Corporation: www.cooperindustries.com/#sle.
 - b. Erico International Corporation: www.erico.com/#sle.
 - c. PHP Systems/Design: www.phpsd.com/#sle.
 - d. Unistrut, a brand of Atkore International Inc: www.unistrut.com/#sle.
- G. Anchors and Fasteners:
1. Unless otherwise indicated and where not otherwise restricted, use the anchor and fastener types indicated for the specified applications.
 2. Concrete: Use preset concrete inserts, expansion anchors, or screw anchors.
 3. Solid or Grout-Filled Masonry: Use expansion anchors or screw anchors.
 4. Hollow Masonry: Use toggle bolts.
 5. Hollow Stud Walls: Use toggle bolts.
 6. Steel: Use beam clamps, machine bolts, or welded threaded studs.
 7. Sheet Metal: Use sheet metal screws.
 8. Wood: Use wood screws.
 9. Plastic and lead anchors are not permitted.
 10. Powder-actuated fasteners are not permitted.
 11. Hammer-driven anchors and fasteners are not permitted.
 12. Preset Concrete Inserts: Continuous metal channel (strut) and spot inserts specifically designed to be cast in concrete ceilings, walls, and floors.
 - a. Comply with MFMA-4.
 - b. Channel Material: Use galvanized steel.
 - c. Minimum Channel Thickness: Steel sheet, 12 gauge, 0.1046 inch (2.66 mm) minimum base metal thickness.
 - d. Manufacturer: Same as manufacturer of metal channel (strut) framing system.
 13. Post-Installed Concrete and Masonry Anchors: Evaluated and recognized by ICC Evaluation Service, LLC (ICC-ES) for compliance with applicable building code.

14. Manufacturers - Mechanical Anchors:
 - a. Hilti, Inc: www.us.hilti.com/#sle.
 - b. ITW Red Head, a division of Illinois Tool Works, Inc: www.itwredhead.com/#sle.
 - c. Powers Fasteners, Inc: www.powers.com/#sle.
 - d. Simpson Strong-Tie Company Inc: www.strongtie.com/#sle.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field measurements are as indicated.
- B. Verify that mounting surfaces are ready to receive support and attachment components.
- C. Verify that conditions are satisfactory for installation prior to starting work.

3.02 INSTALLATION

- A. Install products in accordance with manufacturer's instructions.
- B. Perform work in accordance with NECA 1 (general workmanship).
- C. Install anchors and fasteners in accordance with ICC Evaluation Services, LLC (ICC-ES) evaluation report conditions of use where applicable.
- D. Provide independent support from building structure. Do not provide support from piping, ductwork, or other systems.
- E. Unless specifically indicated or approved by Architect, do not provide support from suspended ceiling support system or ceiling grid.
- F. Unless specifically indicated or approved by Architect, do not provide support from roof deck.
- G. Do not penetrate or otherwise notch or cut structural members without approval of Structural Engineer.
- H. Equipment Support and Attachment:
 1. Use metal fabricated supports or supports assembled from metal channel (strut) to support equipment as required.
 2. Use metal channel (strut) secured to studs to support equipment surface-mounted on hollow stud walls when wall strength is not sufficient to resist pull-out.
 3. Use metal channel (strut) to support surface-mounted equipment in wet or damp locations to provide space between equipment and mounting surface.
 4. Securely fasten floor-mounted equipment. Do not install equipment such that it relies on its own weight for support.
- I. Conduit Support and Attachment: Also comply with Section 260533.13.
- J. Box Support and Attachment: Also comply with Section 260533.16.
- K. Preset Concrete Inserts: Use manufacturer provided closure strips to inhibit concrete seepage during concrete pour.
- L. Secure fasteners according to manufacturer's recommended torque settings.
- M. Remove temporary supports.
- N. Identify independent electrical component support wires above accessible ceilings (only where specifically indicated or permitted) with color distinguishable from ceiling support wires in accordance with NFPA 70.

3.03 FIELD QUALITY CONTROL

- A. Inspect support and attachment components for damage and defects.
- B. Repair cuts and abrasions in galvanized finishes using zinc-rich paint recommended by manufacturer. Replace components that exhibit signs of corrosion.
- C. Correct deficiencies and replace damaged or defective support and attachment components.

END OF SECTION

SECTION 260533.13
CONDUIT FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Galvanized steel rigid metal conduit (RMC).
- B. Aluminum rigid metal conduit (RMC).
- C. Intermediate metal conduit (IMC).
- D. Flexible metal conduit (FMC).
- E. Liquidtight flexible metal conduit (LFMC).
- F. Electrical metallic tubing (EMT).
- G. Rigid polyvinyl chloride (PVC) conduit.
- H. Conduit fittings.
- I. Accessories.

1.02 RELATED REQUIREMENTS

- A. Section 260526 - Grounding and Bonding for Electrical Systems.
- B. Section 260529 - Hangers and Supports for Electrical Systems.
- C. Section 260533.16 - Boxes for Electrical Systems.
- D. Section 260533.23 - Surface Raceways for Electrical Systems.

1.03 REFERENCE STANDARDS

- A. ANSI C80.1 - American National Standard for Electrical Rigid Steel Conduit (ERSC); 2020.
- B. ANSI C80.3 - American National Standard for Electrical Metallic Tubing -- Steel (EMT-S); 2020.
- C. ANSI C80.5 - American National Standard for Electrical Rigid Metal Conduit -- Aluminum (ERMC-A); 2020.
- D. ANSI C80.6 - American National Standard for Electrical Intermediate Metal Conduit; 2018.
- E. NECA 1 - Standard for Good Workmanship in Electrical Construction; 2015.
- F. NECA 101 - Standard for Installing Steel Conduits (Rigid, IMC, EMT); 2013.
- G. NECA 102 - Standard for Installing Aluminum Rigid Metal Conduit; 2004.
- H. NECA 111 - Standard for Installing Nonmetallic Raceways (RNC, ENT, LFNC); 2017.
- I. NEMA FB 1 - Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit, Electrical Metallic Tubing, and Cable; 2014.
- J. NEMA TC 2 - Electrical Polyvinyl Chloride (PVC) Conduit; 2020.
- K. NEMA TC 3 - Polyvinyl Chloride (PVC) Fittings for Use with Rigid PVC Conduit and Tubing; 2021.
- L. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- M. UL 1 - Flexible Metal Conduit; Current Edition, Including All Revisions.
- N. UL 6 - Electrical Rigid Metal Conduit-Steel; Current Edition, Including All Revisions.
- O. UL 6A - Electrical Rigid Metal Conduit-Aluminum, Red Brass, and Stainless Steel; Current Edition, Including All Revisions.
- P. UL 360 - Liquid-Tight Flexible Metal Conduit; Current Edition, Including All Revisions.
- Q. UL 514B - Conduit, Tubing, and Cable Fittings; Current Edition, Including All Revisions.
- R. UL 651 - Schedule 40, 80, Type EB and A Rigid PVC Conduit and Fittings; Current Edition, Including All Revisions.

- S. UL 797 - Electrical Metallic Tubing-Steel; Current Edition, Including All Revisions.
- T. UL 1203 - Explosion-Proof and Dust-Ignition-Proof Electrical Equipment for Use in Hazardous (Classified) Locations; Current Edition, Including All Revisions.
- U. UL 1242 - Electrical Intermediate Metal Conduit-Steel; Current Edition, Including All Revisions.
- V. UL 1660 - Liquid-Tight Flexible Nonmetallic Conduit; Current Edition, Including All Revisions.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 1. Coordinate minimum sizes of conduits with the actual conductors to be installed, including adjustments for conductor sizes increased for voltage drop.
 2. Coordinate the arrangement of conduits with structural members, ductwork, piping, equipment and other potential conflicts installed under other sections or by others.
 3. Verify exact conduit termination locations required for boxes, enclosures, and equipment installed under other sections or by others.
 4. Coordinate the work with other trades to provide roof penetrations that preserve the integrity of the roofing system and do not void the roof warranty.
 5. Notify Architect of any conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.
- B. Sequencing:
 1. Do not begin installation of conductors and cables until installation of conduit is complete between outlet, junction and splicing points.

1.05 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittals procedures.
- B. Product Data: Provide manufacturer's standard catalog pages and data sheets for conduits and fittings.

1.06 QUALITY ASSURANCE

- A. Comply with requirements of NFPA 70.
- B. Maintain at the project site a copy of each referenced document that prescribes execution requirements.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Receive, inspect, handle, and store conduit and fittings in accordance with manufacturer's instructions.

PART 2 PRODUCTS

2.01 CONDUIT APPLICATIONS

- A. Do not use conduit and associated fittings for applications other than as permitted by NFPA 70 and product listing.
- B. Unless otherwise indicated and where not otherwise restricted, use the conduit types indicated for the specified applications. Where more than one listed application applies, comply with the most restrictive requirements. Where conduit type for a particular application is not specified, use galvanized steel rigid metal conduit.
- C. Underground:
 1. Under Slab on Grade: Use galvanized steel rigid metal conduit or rigid PVC conduit.
 2. Exterior, Direct-Buried: Use galvanized steel rigid metal conduit or rigid PVC conduit.
 3. Exterior, Embedded Within Concrete: Use galvanized steel rigid metal conduit or rigid PVC conduit.
 4. Where rigid polyvinyl (PVC) conduit is provided, transition to galvanized steel rigid metal conduit where emerging from underground.
 5. Where steel conduit is installed in direct contact with earth where soil has a resistivity of less than 2000 ohm-centimeters or is characterized as severely corrosive based on soils report or local experience, use corrosion protection tape to provide supplementary

corrosion protection or use PVC-coated galvanized steel rigid metal conduit.

- D. Embedded Within Concrete:
 - 1. Within Slab on Grade (within structural slabs only where approved by Structural Engineer): Use galvanized steel rigid metal conduit or rigid PVC conduit.
 - 2. Within Slab Above Ground (within structural slabs only where approved by Structural Engineer): Use galvanized steel rigid metal conduit or rigid PVC conduit.
- E. Concealed Within Masonry Walls: Use galvanized steel rigid metal conduit or electrical metallic tubing (EMT).
- F. Exposed, Interior, Not Subject to Physical Damage: Use galvanized steel rigid metal conduit, intermediate metal conduit (IMC), or electrical metallic tubing (EMT).
- G. Exposed, Interior, Subject to Physical Damage: Use galvanized steel rigid metal conduit or intermediate metal conduit (IMC).
- H. Exposed, Exterior: Use galvanized steel rigid metal conduit, intermediate metal conduit (IMC), or aluminum rigid metal conduit.
- I. Concealed, Exterior, Not Embedded in Concrete or in Contact With Earth: Use galvanized steel rigid metal conduit or intermediate metal conduit (IMC).
- J. Hazardous (Classified) Locations: Use galvanized steel rigid metal conduit or aluminum rigid metal conduit.
- K. Connections to Luminaires Above Accessible Ceilings: Use flexible metal conduit.
 - 1. Maximum Length: 6 feet (1.8 m).
- L. Connections to Vibrating Equipment:
 - 1. Dry Locations: Use flexible metal conduit.
 - 2. Damp, Wet, or Corrosive Locations: Use liquidtight flexible metal conduit.
 - 3. Maximum Length: 6 feet (1.8 m) unless otherwise indicated.
 - 4. Vibrating equipment includes, but is not limited to:
 - a. Transformers.
 - b. Motors.
- M. Fished in Existing Walls, Where Necessary: Use flexible metal conduit.

2.02 CONDUIT REQUIREMENTS

- A. Existing Work: Where existing conduits are indicated to be reused, they may be reused only where they comply with specified requirements, are free from corrosion, and integrity is verified by pulling a mandrel through them.
- B. Provide all conduit, fittings, supports, and accessories required for a complete raceway system.
- C. Provide products listed, classified, and labeled as suitable for the purpose intended.
- D. Where conduit size is not indicated, size to comply with NFPA 70 but not less than applicable minimum size requirements specified.

2.03 GALVANIZED STEEL RIGID METAL CONDUIT (RMC)

- A. Description: NFPA 70, Type RMC galvanized steel rigid metal conduit complying with ANSI C80.1 and listed and labeled as complying with UL 6.
- B. Fittings:
 - 1. Non-Hazardous Locations: Use fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B.
 - 2. Hazardous (Classified) Locations: Use fittings listed and labeled as complying with UL 1203 for the classification of the installed location.
 - 3. Material: Use steel or malleable iron.
 - 4. Connectors and Couplings: Use threaded type fittings only. Threadless set screw and compression (gland) type fittings are not permitted.

2.04 ALUMINUM RIGID METAL CONDUIT (RMC)

- A. Description: NFPA 70, Type RMC aluminum rigid metal conduit complying with ANSI C80.5 and listed and labeled as complying with UL 6A.
- B. Fittings:
 - 1. Non-Hazardous Locations: Use fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B.
 - 2. Hazardous (Classified) Locations: Use fittings listed and labeled as complying with UL 1203 for the classification of the installed location.
 - 3. Material: Use aluminum.
 - 4. Connectors and Couplings: Use threaded type fittings only. Threadless set screw and compression (gland) type fittings are not permitted.

2.05 INTERMEDIATE METAL CONDUIT (IMC)

- A. Description: NFPA 70, Type IMC galvanized steel intermediate metal conduit complying with ANSI C80.6 and listed and labeled as complying with UL 1242.
- B. Fittings:
 - 1. Non-Hazardous Locations: Use fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B.
 - 2. Hazardous (Classified) Locations: Use fittings listed and labeled as complying with UL 1203 for the classification of the installed location.
 - 3. Material: Use steel or malleable iron.
 - a. Do not use die cast zinc fittings.
 - 4. Connectors and Couplings: Use threaded type fittings only. Threadless set screw and compression (gland) type fittings are not permitted.

2.06 FLEXIBLE METAL CONDUIT (FMC)

- A. Description: NFPA 70, Type FMC standard wall steel flexible metal conduit listed and labeled as complying with UL 1, and listed for use in classified firestop systems to be used.
- B. Fittings:
 - 1. Description: Fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B.
 - 2. Material: Use steel or malleable iron.
 - a. Do not use die cast zinc fittings.

2.07 LIQUIDTIGHT FLEXIBLE METAL CONDUIT (LFMC)

- A. Description: NFPA 70, Type LFMC polyvinyl chloride (PVC) jacketed steel flexible metal conduit listed and labeled as complying with UL 360.
- B. Fittings:
 - 1. Description: Fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B.
 - 2. Material: Use steel or malleable iron.
 - a. Do not use die cast zinc fittings.

2.08 ELECTRICAL METALLIC TUBING (EMT)

- A. Description: NFPA 70, Type EMT steel electrical metallic tubing complying with ANSI C80.3 and listed and labeled as complying with UL 797.
- B. Fittings:
 - 1. Description: Fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B.
 - 2. Material: Use steel or malleable iron.
 - 3. Connectors and Couplings: Use compression (gland) or set-screw type.
 - a. Do not use indenter type connectors and couplings.
 - 4. Damp or Wet Locations (where permitted): Use fittings listed for use in wet locations.

2.09 RIGID POLYVINYL CHLORIDE (PVC) CONDUIT

- A. Description: NFPA 70, Type PVC rigid polyvinyl chloride conduit complying with NEMA TC 2 and listed and labeled as complying with UL 651; Schedule 40 unless otherwise indicated, Schedule 80 where subject to physical damage; rated for use with conductors rated 90 degrees C.
- B. Fittings:
 - 1. Manufacturer: Same as manufacturer of conduit to be connected.
 - 2. Description: Fittings complying with NEMA TC 3 and listed and labeled as complying with UL 651; material to match conduit.

2.10 LIQUIDTIGHT FLEXIBLE NONMETALLIC CONDUIT (LFNC)

- A. Description: NFPA 70, Type LFNC liquidtight flexible nonmetallic conduit listed and labeled as complying with UL 1660.
- B. Fittings:
 - 1. Manufacturer: Same as manufacturer of conduit to be connected.
 - 2. Description: Fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B; suitable for the type of conduit to be connected.

2.11 ACCESSORIES

- A. Corrosion Protection Tape: PVC-based, minimum thickness of 20 mil (0.51 mm).
- B. Conduit Joint Compound: Corrosion-resistant, electrically conductive; suitable for use with the conduit to be installed.
- C. Solvent Cement for PVC Conduit and Fittings: As recommended by manufacturer of conduit and fittings to be installed.
- D. Pull Strings: Use nylon cord with average breaking strength of not less than 200 pound-force (890 N).
- E. Sealing Compound for Sealing Fittings: Listed for use with the particular fittings to be installed.
- F. Modular Seals for Conduit Penetrations: Rated for minimum of 40 psig; Suitable for the conduits to be installed.
- G. Sealing Systems for Roof Penetrations: Premanufactured components and accessories as required to preserve integrity of roofing system and maintain roof warranty; suitable for conduits and roofing system to be installed; designed to accommodate existing penetrations where applicable.
- H. Flashing Panels for Exterior Wall Penetrations: Premanufactured components and accessories as required to preserve integrity of building envelope; suitable for conduits and facade materials to be installed.
- I. Duct Bank Spacers: Nonmetallic; designed for maintaining conduit/duct spacing for concrete encasement in open trench installation; suitable for the conduit/duct arrangement to be installed.
- J. Bore Spacers: Nonmetallic; designed for maintaining conduit/duct spacing for installation within casing; furnished with roller wheels to facilitate installation, openings to facilitate grout flow, and holes for stabilization cable; suitable for the casing and conduit/duct arrangement to be installed.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field measurements are as indicated.
- B. Verify that mounting surfaces are ready to receive conduits.
- C. Verify that conditions are satisfactory for installation prior to starting work.

3.02 INSTALLATION

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

- B. Perform work in accordance with NECA 1 (general workmanship).
- C. Install galvanized steel rigid metal conduit (RMC) in accordance with NECA 101.
- D. Install aluminum rigid metal conduit (RMC) in accordance with NECA 102.
- E. Install intermediate metal conduit (IMC) in accordance with NECA 101.
- F. Install rigid polyvinyl chloride (PVC) conduit in accordance with NECA 111.
- G. Install liquidtight flexible nonmetallic conduit (LFNC) in accordance with NECA 111.
- H. Conduit Routing:
 - 1. Unless dimensioned, conduit routing indicated is diagrammatic.
 - 2. When conduit destination is indicated without specific routing, determine exact routing required.
 - 3. Conceal all conduits unless specifically indicated to be exposed.
 - 4. Conduits in the following areas may be exposed, unless otherwise indicated:
 - a. Electrical rooms.
 - b. Mechanical equipment rooms.
 - c. Within joists in areas with no ceiling.
 - 5. Unless otherwise approved, do not route conduits exposed:
 - a. Across floors.
 - b. Across top of parapet walls.
 - c. Across building exterior surfaces.
 - 6. Conduits installed underground or embedded in concrete may be routed in the shortest possible manner unless otherwise indicated. Route all other conduits parallel or perpendicular to building structure and surfaces, following surface contours where practical.
 - 7. Arrange conduit to maintain adequate headroom, clearances, and access.
 - 8. Arrange conduit to provide no more than the equivalent of four 90 degree bends between pull points.
 - 9. Arrange conduit to provide no more than 150 feet (46 m) between pull points.
 - 10. Route conduits above water and drain piping where possible.
 - 11. Arrange conduit to prevent moisture traps. Provide drain fittings at low points and at sealing fittings where moisture may collect.
 - 12. Maintain minimum clearance of 6 inches (150 mm) between conduits and piping for other systems.
 - 13. Maintain minimum clearance of 12 inches (300 mm) between conduits and hot surfaces. This includes, but is not limited to:
 - a. Heaters.
 - b. Hot water piping.
 - 14. Group parallel conduits in the same area together on a common rack.
- I. Conduit Support:
 - 1. Secure and support conduits in accordance with NFPA 70 and Section 260529 using suitable supports and methods approved by the authority having jurisdiction.
 - 2. Provide independent support from building structure. Do not provide support from piping, ductwork, or other systems.
 - 3. Installation Above Suspended Ceilings: Do not provide support from ceiling support system. Do not provide support from ceiling grid or allow conduits to lay on ceiling tiles.
 - 4. Use conduit strap to support single surface-mounted conduit.
 - a. Use clamp back spacer with conduit strap for damp and wet locations to provide space between conduit and mounting surface.
 - 5. Use metal channel (strut) with accessory conduit clamps to support multiple parallel surface-mounted conduits.
 - 6. Use conduit clamp to support single conduit from beam clamp or threaded rod.
 - 7. Use trapeze hangers assembled from threaded rods and metal channel (strut) with accessory conduit clamps to support multiple parallel suspended conduits.

8. Use non-penetrating rooftop supports to support conduits routed across rooftops (only where approved).
 9. Use of wire for support of conduits is not permitted.
- J. Connections and Terminations:
1. Use approved zinc-rich paint or conduit joint compound on field-cut threads of galvanized steel conduits prior to making connections.
 2. Where two threaded conduits must be joined and neither can be rotated, use three-piece couplings or split couplings. Do not use running threads.
 3. Use suitable adapters where required to transition from one type of conduit to another.
 4. Provide drip loops for liquidtight flexible conduit connections to prevent drainage of liquid into connectors.
 5. Terminate threaded conduits in boxes and enclosures using threaded hubs or double lock nuts for dry locations and raintight hubs for wet locations.
 6. Provide insulating bushings or insulated throats at all conduit terminations to protect conductors.
 7. Secure joints and connections to provide maximum mechanical strength and electrical continuity.
- K. Penetrations:
1. Do not penetrate or otherwise notch or cut structural members, including footings and grade beams, without approval of Structural Engineer.
 2. Make penetrations perpendicular to surfaces unless otherwise indicated.
 3. Provide sleeves for penetrations as indicated or as required to facilitate installation. Set sleeves flush with exposed surfaces unless otherwise indicated or required.
 4. Conceal bends for conduit risers emerging above ground.
 5. Seal interior of conduits entering the building from underground at first accessible point to prevent entry of moisture and gases.
 6. Where conduits penetrate waterproof membrane, seal as required to maintain integrity of membrane.
 7. Make penetrations for roof-mounted equipment within associated equipment openings and curbs where possible to minimize roofing system penetrations. Where penetrations are necessary, seal as indicated or as required to preserve integrity of roofing system and maintain roof warranty. Include proposed locations of penetrations and methods for sealing with submittals.
 8. Install firestopping to preserve fire resistance rating of partitions and other elements, using materials and methods specified in Section 078400.
- L. Embedment Within Structural Concrete Slabs (only where approved by Structural Engineer):
1. Secure conduits to prevent floating or movement during pouring of concrete.
- M. Conduit Movement Provisions: Where conduits are subject to movement, provide expansion and expansion/deflection fittings to prevent damage to enclosed conductors or connected equipment. This includes, but is not limited to:
1. Where conduits cross structural joints intended for expansion, contraction, or deflection.
 2. Where calculated in accordance with NFPA 70 for rigid polyvinyl chloride (PVC) conduit installed above ground to compensate for thermal expansion and contraction.
 3. Where conduits are subject to earth movement by settlement or frost.
- N. Condensation Prevention: Where conduits cross barriers between areas of potential substantial temperature differential, provide sealing fitting or approved sealing compound at an accessible point near the penetration to prevent condensation. This includes, but is not limited to:
1. Where conduits pass from outdoors into conditioned interior spaces.
 2. Where conduits pass from unconditioned interior spaces into conditioned interior spaces.

3.03 FIELD QUALITY CONTROL

- A. Repair cuts and abrasions in galvanized finishes using zinc-rich paint recommended by manufacturer. Replace components that exhibit signs of corrosion.

- B. Where coating of PVC-coated galvanized steel rigid metal conduit (RMC) contains cuts or abrasions, repair in accordance with manufacturer's instructions.
- C. Correct deficiencies and replace damaged or defective conduits.

3.04 CLEANING

- A. Clean interior of conduits to remove moisture and foreign matter.

3.05 PROTECTION

- A. Immediately after installation of conduit, use suitable manufactured plugs to provide protection from entry of moisture and foreign material and do not remove until ready for installation of conductors.

END OF SECTION

**SECTION 260533.16
BOXES FOR ELECTRICAL SYSTEMS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Outlet and device boxes up to 100 cubic inches (1,650 cu cm), including those used as junction and pull boxes.
- B. Cabinets and enclosures, including junction and pull boxes larger than 100 cubic inches (1,650 cu cm).
- C. Boxes and enclosures for integrated power, data, and audio/video.
- D. Accessories.

1.02 RELATED REQUIREMENTS

- A. Section 260526 - Grounding and Bonding for Electrical Systems.
- B. Section 260529 - Hangers and Supports for Electrical Systems.
- C. Section 260533.13 - Conduit for Electrical Systems:
 - 1. Conduit bodies and other fittings.
 - 2. Additional requirements for locating boxes to limit conduit length and/or number of bends between pulling points.

1.03 REFERENCE STANDARDS

- A. NECA 1 - Standard for Good Workmanship in Electrical Construction; 2015.
- B. NECA 130 - Standard for Installing and Maintaining Wiring Devices; 2016.
- C. NEMA FB 1 - Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit, Electrical Metallic Tubing, and Cable; 2014.
- D. NEMA OS 1 - Sheet-Steel Outlet Boxes, Device Boxes, Covers, and Box Supports; 2013 (Reaffirmed 2020).
- E. NEMA OS 2 - Nonmetallic Outlet Boxes, Device Boxes, Covers and Box Supports; 2013 (Reaffirmed 2020).
- F. NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum); 2020.
- G. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- H. UL 50 - Enclosures for Electrical Equipment, Non-Environmental Considerations; Current Edition, Including All Revisions.
- I. UL 50E - Enclosures for Electrical Equipment, Environmental Considerations; Current Edition, Including All Revisions.
- J. UL 508A - Industrial Control Panels; Current Edition, Including All Revisions.
- K. UL 514A - Metallic Outlet Boxes; Current Edition, Including All Revisions.
- L. UL 514C - Nonmetallic Outlet Boxes, Flush-Device Boxes, and Covers; Current Edition, Including All Revisions.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 - 1. Coordinate the work with other trades to avoid placement of ductwork, piping, equipment, or other potential obstructions within the dedicated equipment spaces and working clearances for electrical equipment required by NFPA 70.
 - 2. Coordinate arrangement of electrical equipment with the dimensions and clearance requirements of the actual equipment to be installed.
 - 3. Coordinate minimum sizes of boxes with the actual installed arrangement of conductors, clamps, support fittings, and devices, calculated according to NFPA 70.

4. Coordinate minimum sizes of pull boxes with the actual installed arrangement of connected conduits, calculated according to NFPA 70.
5. Coordinate the placement of boxes with millwork, furniture, devices, equipment, etc. installed under other sections or by others.
6. Coordinate the work with other trades to preserve insulation integrity.
7. Coordinate the work with other trades to provide walls suitable for installation of flush-mounted boxes where indicated.
8. Notify Architect of any conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.

1.05 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide manufacturer's standard catalog pages and data sheets for cabinets and enclosures, boxes for hazardous (classified) locations, floor boxes, and underground boxes/enclosures.
- C. Manufacturer's Installation Instructions: Indicate application conditions and limitations of use stipulated by product testing agency. Include instructions for storage, handling, protection, examination, preparation, and installation of product.

1.06 QUALITY ASSURANCE

- A. Comply with requirements of NFPA 70.
- B. Maintain at the project site a copy of each referenced document that prescribes execution requirements.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Receive, inspect, handle, and store products in accordance with manufacturer's instructions.

PART 2 PRODUCTS

2.01 BOXES

- A. General Requirements:
 1. Do not use boxes and associated accessories for applications other than as permitted by NFPA 70 and product listing.
 2. Provide all boxes, fittings, supports, and accessories required for a complete raceway system and to accommodate devices and equipment to be installed.
 3. Provide products listed, classified, and labeled as suitable for the purpose intended.
 4. Where box size is not indicated, size to comply with NFPA 70 but not less than applicable minimum size requirements specified.
 5. Provide grounding terminals within boxes where equipment grounding conductors terminate.
- B. Outlet and Device Boxes Up to 100 cubic inches (1,650 cu cm), Including Those Used as Junction and Pull Boxes:
 1. Use sheet-steel boxes for dry locations unless otherwise indicated or required.
 2. Use cast iron boxes or cast aluminum boxes for damp or wet locations unless otherwise indicated or required; furnish with compatible weatherproof gasketed covers.
 3. Use cast iron boxes where exposed galvanized steel rigid metal conduit is used.
 4. Use nonmetallic boxes where exposed rigid PVC conduit is used.
 5. Use suitable concrete type boxes where flush-mounted in concrete.
 6. Use suitable masonry type boxes where flush-mounted in masonry walls.
 7. Use raised covers suitable for the type of wall construction and device configuration where required.
 8. Use shallow boxes where required by the type of wall construction.
 9. Do not use "through-wall" boxes designed for access from both sides of wall.
 10. Sheet-Steel Boxes: Comply with NEMA OS 1, and list and label as complying with UL 514A.

11. Cast Metal Boxes: Comply with NEMA FB 1, and list and label as complying with UL 514A; furnish with threaded hubs.
 12. Nonmetallic Boxes: Comply with NEMA OS 2, and list and label as complying with UL 514C.
 13. Boxes for Supporting Luminaires and Ceiling Fans: Listed as suitable for the type and weight of load to be supported; furnished with fixture stud to accommodate mounting of luminaire where required.
 14. Boxes for Ganged Devices: Use multigang boxes of single-piece construction. Do not use field-connected gangable boxes unless specifically indicated or permitted.
- C. Cabinets and Enclosures, Including Junction and Pull Boxes Larger Than 100 cubic inches (1,650 cu cm):
1. Comply with NEMA 250, and list and label as complying with UL 50 and UL 50E, or UL 508A.
 2. NEMA 250 Environment Type, Unless Otherwise Indicated:
 - a. Indoor Clean, Dry Locations: Type 1, painted steel.
 - b. Outdoor Locations: Type 3R, painted steel.
 3. Junction and Pull Boxes Larger Than 100 cubic inches (1,650 cu cm):
 - a. Provide screw-cover or hinged-cover enclosures unless otherwise indicated.

2.02 ACCESSORIES

- A. Flashing Panels for Exterior Wall Penetrations: Premanufactured components and accessories as required to preserve integrity of building envelope; suitable for boxes and facade materials to be installed.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field measurements are as indicated.
- B. Verify that mounting surfaces are ready to receive boxes.
- C. Verify that conditions are satisfactory for installation prior to starting work.

3.02 INSTALLATION

- A. Install products in accordance with manufacturer's instructions.
- B. Install boxes in accordance with NECA 1 (general workmanship) and, where applicable, NECA 130, including mounting heights specified in those standards where mounting heights are not indicated.
- C. Arrange equipment to provide minimum clearances in accordance with manufacturer's instructions and NFPA 70.
- D. Box Supports:
 1. Secure and support boxes in accordance with NFPA 70 and Section 260529 using suitable supports and methods approved by the authority having jurisdiction.
 2. Provide independent support from building structure except for cast metal boxes (other than boxes used for fixture support) supported by threaded conduit connections in accordance with NFPA 70. Do not provide support from piping, ductwork, or other systems.
- E. Install boxes plumb and level.
- F. Flush-Mounted Boxes:
 1. Install boxes in noncombustible materials such as concrete, tile, gypsum, plaster, etc. so that front edge of box or associated raised cover is not set back from finished surface more than 1/4 inch (6 mm) or does not project beyond finished surface.
 2. Install boxes in combustible materials such as wood so that front edge of box or associated raised cover is flush with finished surface.
 3. Repair rough openings around boxes in noncombustible materials such as concrete, tile, gypsum, plaster, etc. so that there are no gaps or open spaces greater than 1/8 inch (3 mm) at the edge of the box.

- G. Install boxes as required to preserve insulation integrity.
- H. Install permanent barrier between ganged wiring devices when voltage between adjacent devices exceeds 300 V.
- I. Install firestopping to preserve fire resistance rating of partitions and other elements.
- J. Close unused box openings.
- K. Install blank wall plates on junction boxes and on outlet boxes with no devices or equipment installed or designated for future use.
- L. Provide grounding and bonding in accordance with Section 260526.

3.03 CLEANING

- A. Clean interior of boxes to remove dirt, debris, plaster and other foreign material.

3.04 PROTECTION

- A. Immediately after installation, protect boxes from entry of moisture and foreign material until ready for installation of conductors.

END OF SECTION

**SECTION 280010
SECURITY GENERAL**

PART 1: GENERAL

1.01 DESCRIPTION:

- A. These Security Systems General provisions apply to the following:
 - 1. Section 28 10 00, Security Systems.
 - 2. Section 28 20 00, Video Surveillance Systems.
- B. Security systems Performance Verification is specified in Section 28 00 90, Security Performance Verification.
- C. The interfacing power of and grounding provisions with work provided under these Sections is covered under these Sections.
- D. Related Requirement.

1.02 DEFINITIONS:

- A. Words that are in common use are throughout the Drawings and Specifications, except:
 - 1. Words which have well-known technical or trade meanings are used in accordance with such recognized meanings.
 - 2. Whenever the following listed words and phrases are used, they shall be mutually understood to have the following respective meanings:
- B. The words "as indicated" means: as shown on the Drawings, and in accordance with the Specifications.
- C. The words "as required" means: as required to provide a complete and satisfactory Work in full conformance with the Drawings and Specifications.
- D. The word "New" means: new Work to be provided by Contractor.
- E. The word "Provide" means: furnish, install, connect, test and make ready for use.
- F. The words "Relocate existing" means: remove existing items from present location. Reinstall, re-connect, and test existing item and make ready for use at new location as shown on the Drawings.
- G. The words "Remove existing" means: remove existing item and return item to the Owner.
- H. The word "Replace" means: remove existing item and return item to the Owner. Provide new item as indicated.
- I. The word "Work" means: The Work is the completed construction required by the Drawings and Specifications, and includes all labor necessary to produce such construction, and all materials and equipment incorporated or to be incorporated in such construction.
- J. The word "Furnish" means: supply item as specified. Item to be installed by others.
- K. Infrastructure: As used herein shall mean conduit, raceway with all required boxes, fittings, connectors and accessories; completely installed.

1.03 QUALITY ASSURANCE:

- A. Provision of manufactured components, installation, wiring and testing shall be the responsibility of a single Contractor.
- B. Qualifications of Contractor:
 - 1. Contractor shall be an installation and service contractor regularly engaged in the sale, installation, maintenance, and service of access control systems.
 - 2. Contractor shall have ten years experience with the installation, start up and programming of systems of a similar size and complexity to the one proposed.
 - 3. Contractor shall be a factory authorized dealer of the system proposed for at least two years.
- C. Supervision of Work:

1. Contractor shall employ a competent Foreman to be in responsible charge of the Work. Foreman shall be on the project site daily during the execution of the Work.
 2. Contractor's Foreman shall a regular employee, principal, or officer of Contractor, who is thoroughly experienced in projects of a similar size and type. Contractor shall not use contract employees or Subcontractors as Foremen.
- D. Qualifications of Technicians:
1. All security systems Work shall be performed by electronic technicians thoroughly trained in the installation and service of specialty low-voltage electronic systems.
 2. Journeyman Wireman electrical workers may be used to install conduit, raceways, wiring, and the like, provided that final termination, hook-up, programming, and testing is performed by a qualified electronic technician, and that all such Work is supervised by the Contractor's Foreman.
 3. All incidental Work, such as cutting and patching, lock hardware installation, painting, carpentry, and the like, shall be accomplished by skilled craftsmen regularly engaged in such type of work. All such Work shall comply with the highest standards applicable to that respective industry or craft.
 4. All 120 VAC power wiring and connections are to be performed by a qualified Journeyman Wireman, licensed to perform such Work in the State of West Virginia.
- E. Subcontractors:
1. Definition: A subcontractor is a person or entity who has a direct contract with the Contractor to perform any of the Work at the site.
 2. Use of any Subcontractor is subject to the approval of the Owner. The Contractor shall identify all Subcontractors on the Bid Form. The Contractor shall make no substitution for any Subcontractor previously selected without approval from the Owner.
 3. Contractor's Foreman shall be on the project site daily during all periods when Subcontractors are performing any of the Work. Contractor's Foreman shall be in responsible charge of all Work, including any Work being performed by Subcontractors.
 4. By an appropriate written agreement, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by the terms of the Drawings and Specifications, and to assume toward the Contractor all the obligations and responsibilities which the Contractor, by these documents, assumes toward the Owner.
- F. Regulatory Requirements:
1. All Work is to conform to all building, fire, and electrical codes and ordinances applicable in the State of West Virginia. In case of conflict between the Drawings/ Specifications and codes, the codes shall govern. Notify the Owner's Project Manager of any such conflicts.
 2. Contractor shall secure and pay for all license, permits, plan reviews, engineering certifications, and inspections required by regulatory agencies. Contractor shall prepare, at Contractor's expense, any documents, including drawings that may be required by regulatory agencies.
 3. Specifications, standards and codes: all work shall be in accordance with the following:
 4. The 2017 edition of the National Electrical Code ((NFPA 70)).
 5. Telecommunications Industries Association (TIA)
 6. Electronic Industries Association (EIA)
 7. Underwriters Laboratories (UL)
 8. Occupational Safety and Health Administration (OSHA)
 9. Local city and county ordinances governing electrical work.
 10. In the event of conflicts, the more stringent provisions shall apply.
- G. Permits:
1. The Contractor shall apply for and obtain any and all permits required by federal, state, county, city, or other authority having jurisdiction over the work.
- H. Supply only new equipment, parts, and material currently manufactured at the time of submittal, and operate only for testing as part of installation procedure.

- I. Conduit sizes specified herein or indicated on the Drawings refer to the standard trade sizes, are for identification purposes only, and are not actual dimensions.
- J. Codes, standards, and regulations referred to are minimum standards. Where the requirements of these specifications or drawings exceed those of the codes, standards and regulations, the drawings or specifications govern.
- K. The drawings and specifications are complementary to each other and what is called for by one shall be as binding as of called for by both. If a discrepancy exists between the Drawing and Specifications, the higher cost shall be included, and the engineer shall be notified of the discrepancy.

1.04 DRAWINGS:

- A. Drawings are generally diagrammatic and show the arrangement and location of pathways, outlets, support structures and equipment. The Contractor shall carefully investigate the structural and finish conditions affecting his work and arrange his work accordingly. Should conditions on the job make it necessary to make adjustments to pathways or materials, the Contractor shall so advise the Engineer and secure approval before proceeding with such work.
- B. Where exact locations are required by equipment for stubbing-up and terminating conduit concealed in floor slabs, the Contractor shall request drawings, equipment location drawings, foundation drawings, and any other data required by him to locate the concealed conduit before the floor slab is poured.
- C. Materials, equipment, or labor not indicated but which can be reasonably inferred to be necessary for a complete installation shall be provided. Drawings and Specifications do not undertake to indicate every item of material, equipment or labor required to produce a complete and properly operating installation.
- D. The right is reserved to make reasonable changes in locations of equipment indicated on Drawings prior to rough-in without increase in contract cost.
- E. The Contractor shall not reduce the size or number of conduit runs indicated on the Drawings without the written approval of the Engineer.
- F. Any work installed contrary to Contract Drawings shall be subject to change as directed by the Engineer, and no extra compensation will be allowed for making these changes.
- G. The location of equipment, support structures, outlets, and similar devices shown on the Drawings are approximate only. Do not scale exact equipment locations off the Drawings. Obtain layout dimensions for equipment from the Architectural plans unless specifically indicated on Electronic Security plans.
- H. Schematic diagrams shown on the Drawings indicate the required functions only. The technology of a particular manufacturer may be used to accomplish the functions indicated without exact adherence to the schematic Drawings shown. Additional labor and materials required for such deviations shall be furnished at the Contractor's expense.
- I. Verify the ceiling type, ceiling suspension systems, and clearance above hung ceilings prior to ordering cabling and associated hardware. Notify the Engineer of any discrepancies.
- J. Portions of these Drawings and Specifications are abbreviated and may include incomplete sentences. Omissions of words or phrases such as "the Contractor shall," "shall be," "as indicated on the Drawings," "In accordance with," "a," "the" and "all are intended" shall be supplied by inference.

1.05 ENVIRONMENTAL REQUIREMENTS:

- A. Systems or equipment installed in environmentally controlled areas shall meet performance requirements specified herein in the following conditions:
 - 1. Temperature: 40 °F to 95 °F.
 - 2. Humidity: 20% to 80% RH.
 - 3. Air purity: systems shall be capable of continuous operation in an environment where the level of dust, lint, paper fiber, and other airborne particles is equal to that found in a standard office.

- B. Systems or equipment installed in indoor environmentally uncontrolled areas shall meet performance requirements specified herein in the following conditions:
 1. Temperature: 0 °F to 120 °F.
 2. Humidity: 5% to 95% RH.
- C. Systems in equipment installed in outdoor areas shall meet performance requirements specified herein in the following conditions:
 1. Wind-driven dust, dirt, sand, and snow for 6 hours.
 2. Rain at a maximum rate of 4" per hour.
 3. Ice loads up to 2" measured radially to exposed surfaces.
 4. Wind: 85 mph, maximum.
 5. Sleet with wind: 55 mph, maximum.
 6. Snow cover: 2' maximum, measured vertically.
 7. Humidity: 0% to 100% RH.
 8. Temperature: -30 °F to 150 °F.

1.06 SPACE CONDITIONS:

- A. Verify dimensions of equipment, equipment arrangements, space availability (including any millwork or cabinetry provided by others) and provide systems that work within the constraints of the space available. Notify the Engineer of any situation where space constraints are a problem, prior to the ordering or purchase of equipment. The Contractor shall bear the expense of providing alternate equipment, which will work within the available space, if space availability problems are discovered after equipment is ordered.
- B. Drawings are diagrammatic in nature and, unless explicitly dimensioned, indicate approximate locations of equipment and components. Changes in the location, and offsets, of same which are not shown on the Drawings but are necessary in order to accommodate building conditions and coordination with the work of other trades, shall be made prior to initial installation, without additional cost to the Owner.
- C. Provide access to equipment and components requiring operation, service or maintenance within the life of the system.

1.07 WARRANTY:

- A. Equipment shall be free of faulty workmanship and defects for a period of 1 year from date of substantial completion.
- B. Replace defective materials and repair faulty workmanship within 2 days of notification at no cost to the Owner during warranty period.
- C. In addition to warranty, provide maintenance service for the warranty period, including at least 2 semi-annual visits to site for checking and adjustment of equipment. During this period, answer service calls within 24 hours. During this period, maintenance calls shall be completed within 3 days of notification and at no cost to the Owner.
- D. Software/firmware maintenance: new releases or updates of hardware, software, applicable user manuals, technical and alert bulletins released by the access control manufacturer shall be applied to the system at no cost to the Owner during the warranty period.

PART 2: PRODUCTS

2.01 INTERIOR FLOOR-MOUNTED EQUIPMENT CABINETS:

- A. Minimum 16-gauge steel construction.
- B. Enclosed with ventilated side panels, square front and vertical corners.
- C. Minimum 18" deep.
- D. Configured for standard 19" rack panels.
- E. Coordinate height as indicated on the Drawings with the equipment used.
- F. Finish color shall be black.

- G. Manufacturer: Amco, Atlas/Soundolier, Hammond, Home, Lowell, Middle Atlantic Products, Stantron, or Winsted.

2.02 NETWORK EQUIPMENT:

- A. Patch Panels:
 - 1. Patch panels shall be rated to meet Category 6 channel warranty requirements.
 - 2. Integrated labels for front and rear.
 - 3. Maximum ports: 48.
 - 4. Rear cable manager.
 - 5. Panels shall be modular type and shall allow standard jacks to be utilized.
 - 6. Manufacturer: Panduit or approved equal.
- B. Data Patch Cords:
 - 1. Factory-assembled plug ended jumpers for patch panel blocks.
 - 2. Modular data patch cords shall meet Category 6 channel performance requirements specified herein, and shall be #24 AWG tinned-copper, stranded conductors insulated with solid polyolefin, tightly twisted into individual pairs and jacketed with flame-retardant PVC.
 - 3. Manufacturer: Panduit or approved equal.

2.03 AC POWER:

- A. General:
 - 1. Except as otherwise specified herein or indicated on the Drawings, grounding conductors shall be insulated. Insulation shall be rated 600 V. Conductors shall be continuous from connector to connector with no splices. Grounding connectors shall be solid bronze, compression type, designed for use intended.
 - 2. Power wiring for the extension of power circuits provided by others shall be #12 AWG THWN/THHN or XHHN, 600V, rated at 194°F.
 - 3. AC power equipment shall have LED or lamp status devices to provide indication that the systems are on.

2.04 UNINTERRUPTIBLE POWER SUPPLY (UPS):

- A. Desktop UPS:
 - 1. Line interactive topology. Capacity as required for the equipment powered.
 - 2. System shall be a self-contained unit designed for the support of computers.
 - 3. Batteries: lead-calcium, lead acid, or nickel-cadmium type sized to sustain the UPS at full rated load for 10 minutes, and half rated load for 30 minutes.
 - 4. Integral lightning and surge protection complying with IEEE C62.41.1-2002 (R2008), IEEE C62.41.2-2002, and UL 1449-2007.
 - 5. The UPS shall provide the following characteristics:
 - a. Nominal input voltage: 120 VAC.
 - b. Integral automatic current and overvoltage protection.
 - c. Electrical noise isolation: 5dB to 45 dB common mode, 28 dB to 80 dB normal mode.
 - d. Recharge time: less than 10 hours.
 - e. Transfer time: 0ms.
 - f. Efficiency: 95%
 - 6. Manufacturer: APC, Eaton, or Tripp-Lite.
- B. Rack-Mounted UPS:
 - 1. Line interactive topology. 2200 VA (1920 W) capacity.
 - 2. System shall be a self-contained rack mountable unit designed for the support of computers.
 - 3. Audible noise shall not exceed 52 dBA at 3'.
 - 4. Batteries: lead-calcium, lead-acid, or nickel-cadmium type sized to sustain the UPS at full rated load for 30 minutes, and half rated load for 60 minutes.
 - 5. Integral lightning and surge protection complying with IEEE C62.41.1-2002 (R2008), IEEE C62.41.2-2002, and UL 1449-2007.

6. The UPS Shall provide the following characteristics:
 - a. Nominal input voltage: 120 208 220 240 V AC.
 - b. Integral automatic current and overvoltage protection.
 - c. Electrical noise isolation: 5 dB to 45 dB common mode, 28 dB to 80 dB normal mode.
 - d. Recharge time: less than 10 hours.
 - e. Transfer time: 0ms.
 - f. Efficiency: 95%.
7. Manufacturer: APC, Eaton, or Tripp-Lite.

2.05 SLEEVES:

- A. Wall sleeves shall be galvanized rigid metal conduit or electrical metallic tubing.
- B. For floor slabs above grade, plastic core form block-outs shall be used.

2.06 PENETRATION SEALS:

- A. Firestops:
 1. Firestops shall consist of an asbestos-free fill material, forming/backing/damming materials, and accessories needed to complete a UL classified through-penetration firestopping system. Fill material shall not slump or sag and shall be the required thickness in the fully cured state.
 2. Firestops shall be designed to seal through-penetrations against flame, heat, smoke, and water in compliance with ASTM E84-2013a, ASTM E119-2012a, ASTM E814-2013, and UL 723-2008.
 3. Firestops shall be specifically designed and rated for the individual application, including movement, materials, moisture, penetrating item material, and fire and smoke ratings of the penetrated construction.
 4. Manufacturer: 3M, GE, Flammadur, Hilti, Nelson, Rectorseal, or Thomas & Betts.
- B. Expansion Seals:
 1. Waterproof, modular, mechanical expansion type consisting of synthetic rubber grommets or interlocking links shaped to continuously fill the annular space between the penetrating item and the opening. Sizing of links and sleeve shall be determined by the manufacturer.
 2. Manufacturer: Calpico, Pipe Linx, Metraflex MetraSeal, or Thunderline Link Seal.
- C. Seals Assemblies:
 1. Seal assemblies shall consist of a frame, compression mechanism, and insert modules. Assemblies shall be waterproof and shall be designed to allow easy addition or deletion of penetrating items.
 2. Seal assemblies for multicable penetrations of fire- and smoke-rated construction shall comply with the requirements of firestops as specified herein.
 3. Manufacturer: Nelson Multi-Plug.

2.07 CABLES, CONNECTORS AND MISCELLANEOUS EQUIPMENT:

- A. A General:
 1. Cable construction, insulation, and jacket shall comply with NFPA 70-2017, requirements for the application for which it is used. Provide type Cm or CMG for general use; type CMP for plenum use; and CMR for riser use.
 2. Cables and conductors installed in enclosures or raceways underground or in slabs on grade shall be UL listed for use in wet locations.
 3. Flame resistance: non-plenum rated cable shall comply with UL 1581-2001. Plenum-rated cable shall comply with NFPA 262-2011.
- B. Alarm Cabling:
 1. Two unshielded twisted pair, #22 AWG or larger cable (sized for voltage drop) for cabling between addressable alarm or sensor devices.
 2. Unshielded 4-conductor, #20 AWG or larger cable (sized for voltage drop) for cabling to motion detection devices.

3. Unshielded 2-conductor, #20 AWG or larger (sized for voltage drop) for cabling to door contacts.
 4. Manufacturer: Alpha, Belden, CommScope, or West Penn.
- C. RS-233 Cable:
1. Two twisted pairs, #22 AWG, stranded (7x30) tinned copper conductors, each pair individually shielded with aluminum foil-polyester tape to provide 100 percent shield coverage.
 2. Pairs shall be cabled on common axis with #24 AWG, stranded (7x32) tinned copper drain wire.
- D. RS-485 Cable:
1. Two unshielded twisted pairs, #22 AWG, stranded (7x30) tinned copper conductors.
- E. Control Cables:
- F. Multiconductor, color-coded type, #22 AWG or larger conductors (sized for voltage drop), stranded tinned-copper for energy limited control circuits. Multiconductor, color-coded typed, #14 AWG or larger conductors (sized for voltage drop), stranded tinned-copper for other control circuits.
- G. Network Cables:
1. UL listed and CSA certified.
 2. Category 6 cables meeting TIA/EIA 568-B1-B3, with addenda, requirements for category 6 cable.
 3. Additional Cable Performance Requirements:
 - a. Minimum power sum ACR: 9 dB at 155 MHz.
 - b. Maximum attenuation: 21 dB at 100 MHz per 100 m.
 - c. Minimum power sum near end crosstalk: 36 dB at 100 MHz.
 - d. Minimum power sum near end crosstalk: 36.3 dB at 250 MHz.
 - e. Minimum power sum equal level far end crosstalk: 16.8 dB at 250 MHz.
 - f. Maximum delay skew: 25 ns.

PART 3: EXECUTION

3.01 EQUIPMENT ENCLOSURES:

- A. Where controls or equipment are specified herein or indicated on the Drawings for future installation, space shall be provided in the control console and the equipment racks, and on the control panels.
- B. Provide ventilation according to equipment manufacturer's recommendations.
- C. Provide unused equipment enclosure panel space with blank or ventilation panels.

3.02 NETWORKED EQUIPMENT:

- A. Configure the network addresses, security settings, and other parameters per the Owner's requirements and as recommended by the manufacturer to support the security systems and video surveillance systems as indicated on the Drawings.

3.03 SLEEVES:

- A. Provide where conduits pass through elevated floor slabs if conduits are not a part of the slab pour and for future cable or conduit risers.
 1. Install in raised foundations at least 2" high.
- B. Provide where cables pass through walls and elevated floor slabs.
- C. Wall sleeves shall extend 4" from each side of the walls.
- D. Openings through slabs for busway risers shall be finished with a 4" wide x 2" high curb around the opening.
- E. Sleeves shall be secured in place. Provide insulating bushings on both sides of sleeves for cables.
- F. Provide ground bushings on both sides of sleeves containing separate ground conductors.

3.04 PENETRATION SEALS

- A. General:
 - 1. Install in accordance with the manufacturer's published instructions to achieve ratings and classifications specified herein. A copy of these instructions shall be maintained and available on site.
- B. Firestops:
 - 1. Close and firestop abandoned penetrations and penetrations through fire- and smoke-rated construction. Materials used to seal these penetrations shall continue the construction's fire and smoke resistance ratings uninterrupted and shall maintain an effective barrier against the spread of flame, smoke, water, and hot gases.
 - 2. Install after installation of raceways.
- C. Expansion Seals:
 - 1. Install to seal single conduit or cable penetrations of walls below grade.
- D. Seal Assemblies:
 - 1. Install to seal the penetration of walls below grade by multiple cables in the same opening.

3.05 CABLES, CONNECTORS AND MISCELLANEOUS EQUIPMENT:

- A. Network Cable:
 - 1. Security network cables shall be installed in a star topology from each security network patch panel to the security equipment being served on the same floor. The length of this cable shall not exceed 295'. Coordinate the cable routing as necessary to ensure distance requirements are not exceeded.
 - 2. Observe the bending radius and pulling strength requirements of the cables during handling and installation. Each run of cable between the patch panel and the network outlet serving the security equipment shall be continuous without joints or splices.
 - 3. Conceal security network cables within ceilings and walls, Complete work above ceiling prior to ceiling tile installation.
 - 4. Cables shall be routed at least 2' from any fluorescent ballast and at least 40" from any electric motors or other high-level source of EMI.
 - 5. Cabling routed above accessible ceiling where indicated on the Drawings.
 - a. In conduit where indicated on the Drawings, underground or finished floor, and/or exposed.
 - b. On J-hooks, above the drop ceiling.
 - 6. Cables, when not installed in conduit or cable tray, shall be bundled in groups of 25 and cable tied. Cable ties shall not be tight to the point of deforming the cable jackets.
 - 7. Provide temporary protection of cables before termination. Cables shall not be left lying on the floor. Bundle and use cable ties to provide protection.
 - 8. Provide clutch or shear pin protection for cables during cable pulling to ensure cable pulling tension is not exceeded.
 - 9. Jacks shall be wired per the pair assignments indicated in the TIA/EIA 568-B1-B3, with addenda, designation T568B wiring plan.
 - 10. Network cables shall be installed and terminated in accordance with the manufacturer's recommended procedures.
- B. Network cross-connects:
 - 1. Copper data cross-connects shall consist of 19" rack mounted patch panels. If more than 48 cables are to be terminated in a single rack, a patch cord organizer shall be placed between 48-port cross-connect units.
 - 2. If only one cross-connect panel is required a patch cord organizer shall be placed under the panel. Horizontal cables shall be terminated directly onto this modular panel.
 - 3. Provide 2 patch cords for each camera data jack. 50% shall be nominal 7', 50% shall be nominal 3' in length.

3.06 OPERATION AND MAINTENANCE DOCUMENTATION PACKAGE:

- A. These operation and maintenance manual requirements supplement operation and maintenance manual documentation requirements of other Sections of these specifications.
- B. Operation and maintenance documentation, in hardback 3-ring loose-leaf binders except full size drawings and CDs, shall cover the specialty systems. Documentation shall include operations and maintenance documentation directory, emergency information, operating manual, maintenance manual, test report, and construction documents.
- C. The operating and maintenance documentation package shall be submitted as one comprehensive package to the Owner 3 weeks before systems acceptance testing, and shall be updated, revised and completed during, and at completion of, Performance Verification.
- D. Documentation shall be type written and shall contain, at a minimum, the following information.
 - 1. Introduction:
 - a. Project name, contractors' and subcontractors' names, addresses, and telephone and facsimile numbers.
 - b. Index.
 - 2. Operations and Maintenance Documentation Directory:
 - a. Explanation of the identification system used, including lists of systems, equipment and component identifiers and names.
 - 3. Emergency Information:
 - a. Information for technical and nontechnical personnel about actions recommended during emergency situations to protect property and to minimize disruption to the building occupants. Emergencies shall, at a minimum, include:
 - 1) Power failure.
 - 2) Heating failure.
 - 3) Cooling failure.
 - 4. Operating Manual:
 - a. General information for each system as applicable.
 - 1) System features.
 - 2) System description.
 - 3) Simplified one-line diagrams.
 - 4) Settings for controls.
 - b. Technical information for each system as applicable.
 - 1) System specifications.
 - 2) Operating routines and procedures.
 - 3) User programming instructions.
 - 4) Special procedures.
 - 5) Basic troubleshooting.
 - 5. Maintenance Manual:
 - a. Descriptions (specifications) of the equipment and components.
 - b. Description of function, as applicable: the function of the equipment, functional parameters, and performance verification procedures.
 - c. Recommended maintenance procedures and their recommended frequency for this Project.
 - d. Name, address and contact of at least one qualified service company.
 - e. Recommended list of spare parts, part numbers, and the places(s) from which they can be obtained.
 - f. Original purchase order number; date of purchase; name, address, and the telephone number of the vendor; and warranty information.
 - g. Manufacturers recommended procedures.
 - h. Any other information needed for the preparation of documents supporting the management of operation and maintenance programs.
 - i. Copies of software configuration files and/or programming files, as applicable, on CDs.

6. Test Reports and Certifications:
 - a. Access control and alarm monitoring system test reports.
 - b. Video surveillance system test reports.
 - c. Network cable test reports.
7. Construction Documents:
 - a. Record drawings.
 - b. Approved submittals.
 - c. Warranty certificates.
 - d. Inspection certificates.
 - e. Performance Verification report.
 - f. Tools for tamper-resistant enclosures and tools for manual resetting devices.
- E. Submit a receipt signed by the Owner acknowledging receipt of the operation and maintenance documentation package.
- F. Provide metal cabinets mounted on the wall of the IDF room to house the operation and maintenance documentation package. Cabinets shall be approximately 12" wide x 18" high x 6" deep constructed of 18-gauge sheet metal with hinged door with latch.

3.07 RECORD DRAWINGS:

- A. Definition: Project Record Drawings are drawings that completely record and document all aspects and features of the Work. (Also known as "as-built" drawings.)
- B. The purpose of Project Record Drawings is to provide factual information regarding all aspects of the Work, to enable future service, modifications, and additions to the Work.
- C. Contractor shall accurately maintain Project Record Drawings throughout the course of this project. Project Record Drawings shall include documentation of all Work, including the documentation of existing equipment, wiring conduits, and raceways that are to be reused in the Work.
- D. Contractor shall maintain the working set of Project Record Drawings at the project site throughout the course of the Work. The working set shall be updated on a daily basis as the Work progresses.
- E. Project Record Drawings shall accurately show the physical placement of the following:
 1. Equipment and devices, including mode numbers.
 2. Conduit and raceways.
 3. Junction and pull box locations and routing.
 4. End-of-line resistor locations.
 5. Interfaces to external equipment.
 6. Connections to power and telephone circuits.
- F. Project Record Drawings shall show the physical placement of each device and conduit or aerial center line, to be accurate to within one foot (1') of the nearest landmark. Where the site plan furnished by Owner conflicts with actual conditions, Contractor shall amend site plan as required. Indicate exact description of conduit runs (above ground, two-foot trench, along outside wall of building, etc.)
- G. The Record Drawings shall show wire and cable runs, zone numbers, tamper circuit configuration, panel/circuit breaker numbers from which equipment is powered, and splice points.
- H. The Record Drawings shall be available for inspection by the Owner's Project Manager on a daily basis.
- I. Upon completion of Work. And prior to Final Acceptance, Contractor shall prepare and submit to the Owner's representative a final record set of Record Drawings. This set shall consist of all data transferred from the working set, supplemented by Riser Diagrams and other information. The final record set of Project Record Drawings shall be drafted by a skilled draftsman, under the supervision of Contractor. Submit the following:
 1. Two (2) sets of bound prints.

2. Two (2) copies of electronic drawings files prepared in AutoCAD DWG format and PDF plot of those on CDs.
3. Two (2) back-up copies of site-specific programs, electronics configuration files and other software to make the system operational.

J. Reproduction of design drawings shall not be used in the preparation of record drawings.

3.08 MAINTENANCE:

A. Equipment operated prior to the date of substantial completion shall be maintained in accordance with manufacturer's recommendations.

3.09 INSTRUCTION OF OPERATING PERSONNEL:

A. Conduct formal instruction sessions for operating personnel. Conduct two (2) similar sessions. The first session shall be conducted at the time of start-up and check-out and the second session shall be approximately two months later. Sessions shall be conducted at the site.

B. Prepare and submit a syllabus describing an overview of the program, describing how the program will be conducted, when and where meetings are to be held, names and company affiliations of lecturers, description of contents and outline for each lecture, and recommended reference material and outside reading. Obtain direction from the Owner on which operating personnel shall be instructed in each system.

C. Sessions shall include:

1. General familiarization and operating procedures for each specialty systems installation.
2. Routine maintenance procedures for equipment.
3. User level programming of programmable systems.
4. Factory-trained technicians shall give operating and maintenance instructions on the following specialty systems and equipment:

System/Equipment	Minimim Session Duration, Hours
Video Surveillance Systems	16
Security Systems	16

5. Provide DVD format video of training sessions and a complete record copy of training materials, handouts, and other printed materials used in each training session.
6. Obtain receipt acknowledging completion of each time of instruction.

END OF SECTION

**SECTION 280090
SECURITY PERFORMANCE VERIFICATION**

PART 1: GENERAL

1.01 DESCRIPTION:

- A. Performance verification is an ongoing process and shall be performed throughout construction. Performance verification verifies that systems are operating in a manner consistent with the Construction Documents.
- B. This Section covers specialty systems performance verification, as required to demonstrate that the equipment and systems of Section 28 10 00, Access Control and Section 28 20 00, Video Surveillance Systems, are ready for safe and satisfactory operation, as defined by the Construction Documents. Performance verification shall include, but shall not be limited to, identification specialty system devices, cabling and equipment, cleaning, check-out, testing and adjusting of systems, preparation of equipment and systems documentation and of maintenance and operation manuals, Owner training, and preparation of record drawings.
- C. Performance verification shall conclude with the completion of required testing, training, and system documentation as specified herein and required to demonstrate the proper operation of the specialty equipment and systems.
- D. Security systems covered by this Section are Section 28 10 00, Access Control, and Section 28 20 00, Video Surveillance Systems.

1.02 QUALITY ASSURANCE:

- A. Provide a Security Systems Performance Verification Supervisor for the security systems. The Security Systems Performance Verification Supervisor shall have ten years experience in security systems contracting. The Security Systems Performance Verification Supervisor shall become familiar with the Owner's project requirements and the requirements of the performance verification process as defined in this Section. The Security Systems Performance Verification Supervisor shall coordinate and execute the required performance verification activities.
- B. The Security Systems Performance Verification Supervisor shall review submittal data for conformance with the requirements of the Project, shall monitor compliance with the requirements specified herein for storage and protection of equipment during construction, shall oversee testing, and shall document that the scheduled and specified performance requirements of each system have been accomplished.

1.03 PERFORMANCE VERIFICATION RESPONSIBILITIES:

- A. The Security Systems Performance Verification Supervisor shall be responsible for scheduling, supervising, coordinating, and executing the testing and performance verification activities as specified herein.
- B. Security systems performance verification shall take place in three phases Performance verification requirements for each phase are as follows:
 - 1. Construction Phase:
 - a. During the construction phase of the Project, transmit a status update report upon request to the Engineer (via e-mail), using the form included herein. (The Engineer will e-mail an electronic version of the attached form to the Contractor upon request.) The status update report shall include digital photographs of areas where significant progress has been made. Digital photographs shall be minimum 1200 x 1600 pixels in resolution. Both the detail in the report and the detail in the photographs shall be sufficient for the Engineer to assess the progress made to date and respond appropriately to pay requests. Periods of inactivity will require only a retransmission of the most recent form (via e-mail), updated to reflect the new date, and that "no significant progress has been made since the last status report was submitted". Status reports will not be requested more than once every 2 weeks.
 - b. Provide documentation of installed systems and equipment and develop functional testing procedures, prior to normal operation and maintenance manual submittals.

This documentation shall include detailed manufacturer installation, operating, troubleshooting and maintenance procedures; full factory testing reports, if any; and full warranty information, including responsibilities of the Owner to keep the warranty in force. In addition, the installation, check-out materials that are actually shipped inside the equipment, and the actual field check-out sheet forms to be used by the factory or field technicians shall be submitted to the Engineer.

- c. Develop and submit to the Engineer for review and comment, prior to system functional testing a complete functional testing plan using manufacturer's testing procedures and functional testing checklists for equipment to be commissioned.
 - d. Assist in clarifying the proposed operation and control of equipment in areas where the specifications, drawings or equipment documentation is not sufficient for writing detailed testing procedures.
 - e. Review the proposed functional test procedures to ensure feasibility, safety, and equipment protection. Obtain approval from the Engineer for proposed functional test procedures.
 - f. Prepare a preliminary schedule for performance verification activities, including equipment testing and adjusting from start to completion, and update the schedule during the construction period, as appropriate. Notify the Engineer immediately when performance verification activities not yet performed, or not yet scheduled, will delay construction.
 - g. Provide functional testing for equipment and execute the security systems related portions of the functional checklists of all the equipment during the testing process.
 - h. Perform and document functional test results, providing a copy to the Engineer.
 - i. Correct noncompliance items before beginning acceptance testing. Discrepancies and problems shall be remedied before acceptance testing.
2. Acceptance Phase:
- a. Place equipment and systems into operation and continue their operation during each working day of the acceptance testing and performance verification activities, as required.
 - b. Provide skilled technicians to execute acceptance testing of each system. Technicians shall be available and present during the agreed upon schedule acceptance tests and for sufficient duration to complete the necessary tests, adjustments and problem-solving.
 - c. Perform acceptance testing for specified systems and equipment as directed by the Owner and interpret the test data as necessary.
 - d. Correct deficiencies (differences between specified and observed performance) as identified and interpreted by the Engineer and retest the equipment, as required to demonstrate proper operation and performance.
 - e. Prepare operation and maintenance manuals as specified, including clarifying and updating the original sequences of operation to as-built conditions.
 - f. Maintain marked-up record drawings and produce final record drawings of project drawings and contractor-generated coordination drawings.
 - g. Provide specified training of the Owner's operating personnel.
 - h. Coordinate with equipment manufacturers to determine specific requirements to maintain the validity of the warranty.
3. Warranty Period:
- a. Correct deficiencies and make necessary adjustments to operations and maintenance manuals, and as-built drawings system or equipment modifications made during the warranty period.

PART 2: PRODUCTS

2.01 TEST EQUIPMENT:

- A. Standard testing equipment required to perform the required testing shall be provided by the Contractor for the equipment or system being tested.
- B. Test equipment shall be of the quality and accuracy required to test and/or measure system performance with the tolerances specified and shall have been calibrated within the last 12

months, or as specified herein. Equipment shall be calibrated according to the manufacturer's recommended intervals and when dropped or damaged. Calibration tags shall be at least twice that of the instrumentation being tested.

PART 3: EXECUTION

3.01 SUBMITTALS:

- A. Submit additional documentation as required to support the performance verification process. This additional submittal documentation shall include, at a minimum, the proposed functional testing plan, and functional testing checklists.

3.02 FUNCTIONAL TESTING:

- A. General:
 - 1. Functional testing shall be performed as required to ensure that the equipment and systems are properly installed and ready for operation, so that acceptance testing may proceed without delays. Follow the approved functional testing procedures. Sampling strategies shall not be used for functional testing. The functional testing for equipment and subsystems of a given system shall be successfully completed and documented prior to acceptance testing of the system.
 - 2. Functional testing plan: develop the detailed functional testing plans for equipment and systems that are to be commissioned, as specified herein. Review the proposed procedures and functional testing documentation to ensure that there is written documentation that each of the manufacturer recommended procedures has been completed.
 - 3. The functional testing plan shall include the manufacturer's standard written check-out procedures copied from the installation manuals and manufacturer's normally used field check-out sheets. The plan shall include checklists and procedures with specific boxes or lines for recording and documenting the tests recommended by the equipment manufacturer, and as specified herein. Each checklist shall include a summary statement with a signature block at the end of the plan.
- B. Security Systems Tests:
 - 1. Access Control and Alarm Monitoring Systems:
 - a. Program an access card for each of the following clearances:
 - 1) Master access level to open all doors in the system.
 - 2) Program a second access card to open all doors in the system, but then classify the card as lost or stolen to test stolen card used event.
 - 3) Program an active access card with limited access to only main entry doors to test access denied events.
 - b. Attempt to access each door using the valid card first, and the card classified as lost or stolen card second and the limited.
 - c. Confirm that a valid card read performs the actions specified herein and indicated on the Drawings.
 - d. Print a report showing the activity of the valid card during the test period, as well as the alarm activity for the test period. Confirm that the report shows a valid access for each door in the system for the valid card, and that the card classified as lost or stolen generated an appropriate alarm or exception report for each door in the system. Present this report to the Engineer.
 - e. For each access-controlled door, the following alarm conditions shall be tested:
 - 1) Door forced open. A card reader-controlled door is opened without the use of a valid credential or an exit only monitored door is opened when armed.
 - 2) Door held open alarm. Door held open longer than the predetermined allowed time after a valid entry or exit.
 - f. For each of the above alarm conditions, test that the appropriate ACAMS system event and message is displayed on the operator workstation.
 - g. Test each door alarm condition reporting to the Central Station when the IDS system is armed.
 - h. Test each duress button to report to the Central Station 24/7.

- i. Print a report showing the alarm activity for the test period. Confirm that the report shows an alarm or exception appropriate for the zone and breach for each intrusion detection or duress alarm zone or device in the system. Present this report to the Engineer.
2. Video Surveillance Systems:
- a. Display each camera in the system on the operator workstation monitor in color. Where day/night type cameras are implemented, display each camera in the daytime in color, and at nighttime in black and white. Record a minimum of 5 minutes of video from each camera in the system at a minimum of 7 frames per second, between the hours of 9:00 am and 5:00 pm. Record a minimum of 5 minutes of video from each camera in the system at a minimum of 7 frames per second, between the hours of 11:00 pm and 3:00 am.
 - b. Demonstrate each feature of the video surveillance system. Confirm that each feature functions as specified herein. Demonstrate alarm monitor and moved to its preset pan-tilt-zoom position at the initiation of each intrusion detection or duress alarm event, valid and invalid access card read, initiation of an intercom call, and other events as indicated on the Drawings.
 - c. Demonstrate that the video recording system is operational and recording the appropriate video camera at the initiation of each intrusion detection or duress alarm event, valid and invalid access card read, initiation of an intercom call, and other events as indicated on the Drawings.
3. Cable Testing:
- a. General:
 - 1) Applies to Category 6 cables.
 - 2) Testing shall be accomplished using an Agilent Technologies, Fluke Networks, or Ideal Industries test instrument supporting an extended frequency range to 250 MHz.
 - 3) Test 100% of the cabling links.
 - 4) The tester shall support the following requirements:
 - (a) Level III accuracy as defined in TIA/EIA 568-C-2012.
 - (b) Digital with fault location capabilities.
 - (c) Measure ELFEXT and Power Sum ELFEXT.
 - (d) Distinguish external noise from NEXT.
 - 5) Input the test results into the test instrument manufacturer's reporting software, Tabulate and analyze results to ensure cabling systems meets requirements specified herein.
 - 6) Document failed pairs or strands. Replace cable, then retest. Repeat procedure until passes requirements.
 - 7) Upon completion provide a hard copy report in a 3-ring binder and on CD-ROM for review and approval.
 - 8) A representative of the Owner shall be invited to witness the field testing. The representative shall be notified of the start date of the testing phase at least 5 business days before testing commences.
 - b. Other Copper Cabling Testing:
 - 1) Each pair of other copper cabling shall be tested.
 - c. Twisted pair cable testing shall include:
 - 1) Cable length.
 - 2) Continuity.
 - 3) Proper connectivity.
 - 4) Open Pairs.
 - 5) Short circuits.
 - 6) Reversed pairs.
 - 7) EMI noise induction.
 - 8) Attenuation.
 - 9) Near end cross talk.

- d. Category 6 Testing:
- 1) Each category 6 outlet/cable shall be tested and certified in accordance with TIA/EIA 568-C-2009. Each pair shall be tested. A test cable shall be used at the test unit end. Testing shall occur in both directions.
 - 2) Each category 6 cabling link shall be tested in accordance with the field test specifications defined in TIA/EIA 568-C-2012.
 - 3) Category 6 cable wire map shall report pass if the wiring of each wire-pair is determined to be correct as defined in TIA/EIA 568-C-2012.
 - 4) Category 6 cable length test result shall report measured length of each pair of a basic link and channel based on the propagation delay measurement and the average value for nominal velocity of propagation. The physical length of the link shall be calculated using the pair with the shortest electrical delay. This length figure shall be reported and shall be used for making the pass/fail criteria are based on the maximum length allowed for the basic link configuration plus 10% to allow for the variation and uncertainty of the nominal velocity of propagation.
 - 5) Category 6 cable near end crosstalk loss shall be tested for each wire pair combination from each end of the link (a total of 12 pair combinations). This parameter shall be measured from 1 MHz through 250 MHz with a maximum step size of 0.50 MHz. For a pass condition, the worst-case NEXT margin and the worst value of NEXT shall be recorded for each case, the frequency at which it occurs, and the test limit value at this frequency.
 - 6) Category 6 cable power sum near end crosstalk loss shall be evaluated and reported for each wire pair from both ends of the link under test (a total of 8 results). Evaluate this parameter from 1MHz through 250 MHz with a maximum step size of 0.50 MHz. For a pass condition, the worst case PSNEXT margin and the worst PSNEXT value shall be recorded, the frequency at which it occurs, and the test limit value at this frequency.
 - 7) Category 6 cable equal level far end crosstalk pair-to-pair loss shall be measured for each wire pair combination from both ends of the link under test. ELFNEXT shall be measured from 1 MHz through 250 MHz with a maximum step size of 0.50 MHz. for a pass condition, the worst case ELFNEXT margin and the worst ELFNEXT value shall be recorded, the frequency at which it occurs, and the time limit value at this frequency.
 - 8) Category 6 cable power sum equal level far end crosstalk loss shall be calculated by combining the effects of the FEXT disturbance from 3 wire pairs on the fourth one. The test shall yield 8 wire pair combinations. Each wire pair shall be evaluated from 1 MHz through 250 MHz with a maximum step size of 0.50 MHz. for a pass condition, the worst case PSELFEXT margin and the worst PSELFEXT value shall be recorded, the frequency at which it occurs, and the test limit value at this frequency.
 - 9) Category 6 cable return loss shall be measured from both ends of the link under test from 1 MHz through 250 MHz with a maximum step size of 0.50 MHz. for a pass condition. The worst case RL margin and the worst RL value shall be recorded, the frequency at which it occurs, and the test limit value at this frequency.
 - 10) Category 6 cable attenuation-to-crosstalk ratio shall be calculated to determine the bandwidth for a two-wire pair network in terms of signal-to-noise ratio. This calculation yields 12 combinations (6 from each end of the link). For a pass condition, the worst case ACR margin and the worst ACR value shall be recorded, the frequency at which it occurs, and the test limit value at this frequency.

3.03 ACCEPTANCE TESTING:

- A. Before obtaining permission from the Owner to schedule the acceptance test, provide written verification that each system has been calibrated, tested and is ready to begin the 14-day burn-in period and acceptance testing.

- B. Conduct final acceptance test after a period of not less than 14 consecutive normal working days of trouble-free operation.
- C. During this burn-in period, each system shall operate continuously for 24 hours per day. During the acceptance test, demonstrate the correct operation of features and capabilities specified herein.
- D. The Owner reserves the right to witness the acceptance tests. Notify the Owner at least 10 days prior to the date scheduled for the tests.

3.04 RETESTING OF EQUIPMENT AND/OR SYSTEMS:

- A. Provide labor and materials required for retesting of any functional test found to be deficient.
- B. Prior to retesting, submit required data indicating that the deficient items have been completed and/or corrected to the Engineer for approval and rescheduling of the functional test. If during the retesting it becomes apparent that the deficient items have not been completed and/or corrected as indicated in the data provided by the Contractor, the retesting shall be stopped. Costs for the performance verification team to further supervise the retesting of a functional test shall be the responsibility of the Contractor.

3.05 TESTING DOCUMENTATION, NONCONFORMANCE, AND APPROVALS:

- A. Provide the Engineer with a list of outstanding items of the functional testing procedures that were not completed successfully within 2 days of test completion. The Engineer will then review the Contractor's functional testing reports and submit either a noncompliance report or an approval form to the Contractor. The Contractor shall work with the Engineer to retest deficiencies or uncompleted items. Correct items that are deficient or incomplete in the checklists and tests in a timely manner and notify the Engineer as soon as outstanding items have been corrected. Resubmit an updated report and a statement of correction on the original noncompliance report. When requirements are completed, the Engineer will recommend approval of the functional testing of each system and schedule the acceptance testing of the equipment or system.
- B. As acceptance testing progresses and deficiencies are identified, work with the Engineer to resolve the issues.

3.06 OPERATION AND MAINTENANCE DOCUMENT PACKAGE:

- A. The Security Systems Performance Verification Supervisor shall compile and prepare documentation for equipment and systems covered in these Security Specifications and deliver this documentation for inclusion in the operation and maintenance manuals prior to the training of the Owner's personnel. The Engineer shall receive a copy of the operation and maintenance manuals for review.

3.07 INSTRUCTION OF OPERATING PERSONNEL:

- A. The Security Systems Performance Verification Supervisor shall schedule, coordinate, assemble and deliver the documentation of the training required by these Security Specifications.

END OF SECTION

SECTION 281000 ACCESS CONTROL

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Access control system requirements.
- B. Access control units and software.
- C. Access control point peripherals, including readers and keypads.
- D. Accessories.

1.02 RELATED REQUIREMENTS

- A. Section 087100 - Door Hardware: Electrically operated door hardware, for interface with access control system.
- B. Section 260526 - Grounding and Bonding for Electrical Systems.
- C. Section 260533.13 - Conduit for Electrical Systems.

1.03 DEFINITIONS

- A. Access Control Cloud Services: Subscription-based hosted application utilizing Software as a Service (SaaS) delivery model in lieu of on-premises servers/software.

1.04 REFERENCE STANDARDS

- A. NECA 1 - Standard for Good Workmanship in Electrical Construction; 2015.
- B. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- C. UL 294 - Access Control System Units; Current Edition, Including All Revisions.
- D. UL 1076 - Proprietary Burglar Alarm Units and Systems; Current Edition, Including All Revisions.

1.05 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 - 1. Coordinate the work with other installers to provide suitable door hardware as required for both access control functionality and code compliance.
 - 2. Coordinate the placement of readers with millwork, furniture, equipment, etc. installed under other sections or by others.
 - 3. Coordinate the work with other installers to provide power for equipment at required locations.
 - 4. Notify Architect of any conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.
- B. Access Control Cloud Services:
 - 1. Subscription fees to be paid by Owner.

1.06 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide manufacturer's standard catalog pages and data sheets for each system component. Include ratings, configurations, standard wiring diagrams, dimensions, finishes, service condition requirements, and installed features.
- C. Evidence of qualifications for manufacturer.
- D. Evidence of qualifications for installer.
- E. Evidence of qualifications for maintenance contractor (if different entity from installer).
- F. Manufacturer's Installation Instructions: Indicate application conditions and limitations of use stipulated by product testing agency. Include instructions for storage, handling, protection, examination, preparation, installation, and operation of product.

- G. Manufacturer's detailed field testing procedures.
- H. Field quality control test reports.

1.07 QUALITY ASSURANCE

- A. Comply with the following:
 - 1. NFPA 70.
 - 2. The requirements of the local authorities having jurisdiction.
 - 3. Applicable TIA/EIA standards.
- B. Maintain at the project site a copy of each referenced document that prescribes execution requirements.
- C. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.
- D. Installer Qualifications: Company specializing in performing the work of this section with minimum five years documented experience with access control systems of similar size, type, and complexity and providing contract maintenance service as a regular part of their business; authorized manufacturer's representative. Installation company shall have a minimal of two permanently employed persons with current certification in their field office responsible for installation and ongoing maintenance of the project.
 - 1. Contract maintenance office located within 100 miles (160 km) of project site.
- E. Maintenance Contractor Qualifications: Same entity as installer.

1.08 DELIVERY, STORAGE, AND HANDLING

- A. Receive, inspect, handle, and store products in accordance with manufacturer's instructions.
- B. Store products in manufacturer's unopened packaging, keep dry and protect from damage until ready for installation.

1.09 FIELD CONDITIONS

- A. Maintain field conditions within manufacturer's required service conditions during and after installation.

1.10 WARRANTY

- A. Provide minimum one year manufacturer warranty covering repair or replacement due to defective materials or workmanship.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Access Control Units - Basis of Design: Identical as the existing manufactures equipment or Owner approved equal..
- B. Access Control Software - Basis of Design: Identical as the existing manufactures equipment or Owner approved equal..
- C. Readers and Keypads - Basis of Design: Identical as the existing manufactures equipment or Owner approved equal..

2.02 ACCESS CONTROL SYSTEM REQUIREMENTS

- A. Provide modifications and extensions to existing access control system consisting of required equipment, conduit, boxes, wiring, connectors, hardware, supports, accessories, software, system programming, etc. as necessary for a complete operating system that provides the functional intent indicated.
- B. Access Control Points:
 - 1. See article "ACCESS CONTROL POINT PERIPHERALS" below for device descriptions.
 - 2. Doors:
 - a. Location: as indicated on the drawings..
 - b. Function: Operational and emergency.
 - c. Access: Controlled entry, free exit.

- d. Peripherals on Secure Side:
 - 1) Reader/Keypad: Contactless smart card reader identical as the existing manufactures equipment or Owner approved equal..
- e. Locking Device: Electric strike.
 - 1) Configuration: Fail-secure.
- C. Interface with Other Systems:
 - 1. Provide products compatible with other systems requiring interface with access control system.
- D. Provide products listed, classified, and labeled as suitable for the purpose intended.
 - 1. Access Control Units and Readers: Listed and labeled as complying with UL 294.

2.03 ACCESS CONTROL UNITS AND SOFTWARE

- A. Provided access device compatible with current access control system equipment installed at the facility.
- B. Provide access control units and software compatible with readers to be connected.
- C. Unless otherwise indicated, provide software and licenses required for fully operational system.
- D. Access Control Unit:
 - 1. Basis of Design: Identical as the existing manufactures equipment or Owner approved equal..

2.04 ACCESS CONTROL POINT PERIPHERALS

- A. Provide devices compatible with control units and software.
- B. Provide devices suitable for operation under the service conditions at the installed location.
- C. Readers and Keypads:
 - 1. General Requirements:
 - a. Provide readers compatible with credentials to be used.
 - b. Color: To be selected by Architect from manufacturer's available standard colors.
 - c. Contactless Smart Card Readers:
 - 1) Utilize 13.56 MHz RF communication with compatible credentials.
 - 2) Utilize 64 bit authentication keys.
 - 3) Support ISO compliant credentials.
 - d. Proximity Readers:
 - 1) Utilize 125 kHz RF communication with compatible credentials.
- D. Door Locking Devices (Electric Strikes and Magnetic Locks): Comply with Section 087100.
- E. Provide Electric Latch Retraction devices for exit doors as indicated on drawings. Provide all hardware and accesories for retraction device installaion and operation.

2.05 ACCESSORIES

- A. Provide components as indicated or as required for connection of access control system to devices and other systems indicated.
- B. Unless otherwise indicated, credentials to be provided by Contractor.
 - 1. Provide credentials compatible with readers and control units/software to be used.
- C. Provide cables as indicated or as required for connections between system components.
- D. Provide accessory racks/cabinets as indicated or as required for equipment mounting.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field measurements are as indicated.
- B. Verify that ratings and configurations of system components are consistent with the indicated requirements.
- C. Verify that mounting surfaces are ready to receive system components.

- D. Verify that branch circuit wiring installation is completed, tested, and ready for connection to system.
- E. Verify that conditions are satisfactory for installation prior to starting work.

3.02 INSTALLATION

- A. Install access control system in accordance with NECA 1 (general workmanship).
- B. Install products in accordance with manufacturer's instructions.
- C. Wiring Method: Unless otherwise indicated, use cables (not in conduit).
 - 1. Use suitable listed cables in wet locations, including underground raceways.
 - 2. Use suitable listed cables for vertical riser applications.
 - 3. Use listed plenum rated cables in spaces used for environmental air.
 - 4. Install wiring in conduit for the following:
 - a. Where required for rough-in.
 - b. Where required by authorities having jurisdiction.
 - c. Where exposed to damage.
 - d. Where installed outside the building.
 - e. For exposed connections from outlet boxes to devices.
 - 5. Conduit: Comply with Section 260533.13.
 - 6. Conceal cables unless specifically indicated to be exposed.
 - 7. Use power transfer hinges complying with Section 087100 for concealed connections to door hardware.
 - 8. Route exposed cables parallel or perpendicular to building structural members and surfaces.
 - 9. Do not exceed manufacturer's recommended maximum cable length between components.
- D. Provide grounding and bonding in accordance with Section 260526.

3.03 FIELD QUALITY CONTROL

- A. Provide services of a manufacturer's authorized representative to observe installation and assist in inspection and testing. Include manufacturer's detailed testing procedures and field reports with submittals.
- B. Prepare and start system in accordance with manufacturer's instructions.
- C. Program system parameters according to requirements of Owner.
- D. Test for proper interface with other systems.
- E. Correct defective work, adjust for proper operation, and retest until entire system complies with Contract Documents.
- F. Submit detailed reports indicating inspection and testing results and corrective actions taken.

3.04 CLEANING

- A. Clean exposed surfaces to remove dirt, paint, or other foreign material and restore to match original factory finish.

3.05 CLOSEOUT ACTIVITIES

- A. Demonstration: Demonstrate proper operation of system to Owner, and correct deficiencies or make adjustments as directed.
- B. Training: Train Owner's personnel on operation, adjustment, and maintenance of system.
 - 1. Use operation and maintenance manual as training reference, supplemented with additional training materials as required.
 - 2. Provide minimum of four hours of training.
 - 3. Instructor: Manufacturer's authorized representative.
 - 4. Location: At project site.

3.06 PROTECTION

- A. Protect installed system components from subsequent construction operations.

END OF SECTION

**SECTION 282000
VIDEO SURVEILLANCE**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Video surveillance system requirements.
- B. Cameras.
- C. Accessories.

1.02 RELATED REQUIREMENTS

- A. Section 260526 - Grounding and Bonding for Electrical Systems.
- B. Section 260529 - Hangers and Supports for Electrical Systems.
- C. Section 260533.13 - Conduit for Electrical Systems.
- D. Section 281000 - Access Control: For interface with video surveillance system.

1.03 REFERENCE STANDARDS

- A. 47 CFR 15 - Radio Frequency Devices; current edition.
- B. AASHTO LTS - Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals; 2013, with Editorial Revision (2022).
- C. IEEE C2 - National Electrical Safety Code; 2017.
- D. NECA 1 - Standard for Good Workmanship in Electrical Construction; 2015.
- E. NECA 303 - Standard for Installing and Maintaining Closed-Circuit Television (CCTV) Systems; 2019.
- F. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 - 1. Coordinate the placement of cameras with structural members, ductwork, piping, equipment, luminaires, diffusers, fire suppression system components, and other potential conflicts installed under other sections or by others.
 - 2. Coordinate the work with other installers to provide power for cameras and equipment at required locations.
 - 3. Notify Architect of any conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.

1.05 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide manufacturer's standard catalog pages and data sheets for each system component. Include ratings, configurations, standard wiring diagrams, dimensions, finishes, service condition requirements, and installed features.
- C. Evidence of qualifications for installer.
- D. Evidence of qualifications for maintenance contractor (if different entity from installer).
- E. Manufacturer's Installation Instructions: Indicate application conditions and limitations of use stipulated by product testing agency. Include instructions for storage, handling, protection, examination, preparation, installation, and operation of product.
- F. Manufacturer's detailed field testing procedures.
- G. Field quality control test reports.
- H. Maintenance contracts.

1.06 QUALITY ASSURANCE

- A. Comply with the following:
 - 1. NFPA 70.
 - 2. Applicable TIA/EIA standards.
- B. Maintain at the project site a copy of each referenced document that prescribes execution requirements.
- C. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.
- D. Installer Qualifications: Company specializing in performing the work of this section with minimum three years documented experience with video surveillance systems of similar size, type, and complexity and providing contract maintenance service as a regular part of their business; authorized manufacturer's representative.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Receive, inspect, handle, and store products in accordance with manufacturer's instructions and NECA 303.
- B. Store products in manufacturer's unopened packaging, keep dry and protect from damage until ready for installation.

1.08 FIELD CONDITIONS

- A. Maintain field conditions within manufacturer's required service conditions during and after installation.

1.09 WARRANTY

- A. Provide minimum one year manufacturer warranty covering repair or replacement due to defective materials or workmanship.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Cameras - Basis of Design: Axis.

2.02 VIDEO SURVEILLANCE SYSTEM

- A. Integrate new cameras with modifications and extensions to existing video surveillance system consisting of all required equipment, conduit, boxes, wiring, connectors, hardware, supports, accessories, software, system programming, etc. as necessary for a complete operating system that provides the functional intent indicated.
- B. System Description: IP system with connection to network (IP) cameras.
- C. Cameras Required:
 - 1. Camera Identical as the existing camera manufacturer's equipment or Owner approved equal. :
 - a. Location: Install cameras in the positions indicated on the drawings..
 - b. Camera Type: Furnish cameras as indicated on the drawing camera list. .
 - c. Lens Type: Furnished with camera.
 - d. Mounting: Surface, ceiling, indoor and outdoor as applicable for the location as indicated on the drawings..
 - e. HDMI Output: 1080p.
 - f. Accessories:
 - 1) Provide weatherproof enclosure as required for location.
 - 2) Provide a minimal single-gang box for camera mounting.
 - 3) Provide a minimal 3/4 inch conduit to route camera cable from mounting box to insided building.
 - 4) Weatherproof and seal all exterior wall penetrations.
- D. Video Recording and Viewing Equipment Required:

1. See article "VIDEO RECORDING AND VIEWING EQUIPMENT" below for product descriptions.
- E. Provide products listed, classified, and labeled as suitable for the purpose intended.
- F. Electromagnetic Interference/Radio Frequency Interference (EMI/RFI) Limits: Comply with FCC requirements of 47 CFR 15, for Class B, consumer application.

2.03 ACCESSORIES

- A. Camera Enclosures: Where not factory-installed, provide camera enclosures suitable for operation under service conditions at installed location.
- B. Camera Mounting Supports: Where not factory installed, provide mounting supports necessary for installation.
- C. Camera Poles:
 1. Provide poles suitable for cameras, supports, and accessories to be installed.
 2. Structural Design Criteria:
 - a. Comply with AASHTO LTS.
 - b. Wind Load: Include effective projected area (EPA) of cameras, supports, and accessories to be installed.
 - c. Dead Load: Include weight of proposed cameras, supports, and accessories.
 3. Pole Configuration: As indicated on drawings.
 4. Provide ground lug, accessible from handhole.
- D. Provide components as indicated or as required for connection of video surveillance system to devices and other systems indicated.
- E. Provide components as indicated or as required for system power and network connections.
- F. Provide cables as indicated or as required for connections between system components.
- G. Provide accessory racks/cabinets as indicated or as required for equipment mounting.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field measurements are as indicated.
- B. Verify that ratings and configurations of system components are consistent with the indicated requirements.
- C. Verify that mounting surfaces are ready to receive system components.
- D. Verify that branch circuit wiring installation is completed, tested, and ready for connection to system where applicable.
- E. Verify that conditions are satisfactory for installation prior to starting work.

3.02 INSTALLATION

- A. Install video surveillance system in accordance with NECA 1 (general workmanship) and NECA 303.
- B. Install products in accordance with manufacturer's instructions.
- C. Provide required support and attachment in accordance with Section 260529.
- D. Wiring Method: Unless otherwise indicated, use cables (not in conduit).
 1. Use suitable listed cables in wet locations, including underground raceways.
 2. Use suitable listed cables for vertical riser applications.
 3. Use listed plenum rated cables in spaces used for environmental air.
 4. Install wiring in conduit for the following:
 - a. Where required for rough-in.
 - b. Where required by authorities having jurisdiction.
 - c. Where exposed to damage.
 - d. Where installed outside the building.
 - e. For exposed connections from outlet boxes to cameras.

5. Conduit: Comply with Section 260533.13.
 6. Conceal all cables unless specifically indicated to be exposed.
 7. Route exposed cables parallel or perpendicular to building structural members and surfaces.
- E. Pole-Mounted Cameras:
1. Maintain the following minimum clearances:
 - a. Comply with IEEE C2.
 - b. Comply with utility company requirements.
- F. Provide grounding and bonding in accordance with Section 260526.

3.03 FIELD QUALITY CONTROL

- A. Prepare and start system in accordance with manufacturer's instructions.
- B. Adjust cameras to provide desired field of view and produce suitable images under all service lighting conditions.
- C. Program system parameters according to requirements of Owner.
- D. Test for proper interface with other systems.
- E. Correct defective work, adjust for proper operation, and retest until entire system complies with Contract Documents.

3.04 CLEANING

- A. Clean exposed surfaces to remove dirt, paint, or other foreign material and restore to match original factory finish.

3.05 CLOSEOUT ACTIVITIES

- A. See Section 017800 - Closeout Submittals, for closeout submittals.
- B. See Section 017900 - Demonstration and Training, for additional requirements.
- C. Demonstration: Demonstrate proper operation of system to Owner, and correct deficiencies or make adjustments as directed.

3.06 PROTECTION

- A. Protect installed system components from subsequent construction operations.

3.07 MAINTENANCE

- A. Provide to Owner, a proposal as an alternate to the base bid, a separate maintenance contract for the service and maintenance of video surveillance system for two years from date of Substantial Completion; Include a complete description of preventive maintenance, systematic examination, adjustment, cleaning, inspection, and testing, with a detailed schedule.

END OF SECTION

APPENDIX C

APPENDIX C:

THE SCHEDULE OF VALUES INCLUDED IN APPENDIX C LISTS ITEMS PROVIDED IN THE PIERPONT COMMUNITY & TECHNICAL COLLEGE ADVANCED TECHNOLOGY CENTER (ATC) IN FAIRMONT, WV. THE LIST IS PROVIDED FOR REFERENCE ONLY AND IS NOT GUARANTEED TO BE ACCURATE. ACTUAL CONDITIONS SHALL BE CONFIRMED BY THE SECURITY SYSTEM CONTRACTOR.

PROVIDED FOR REFERENCE ONLY

SCHEDULE OF VALUES

Scope: Base Contract
 Project: CTCs of WV-Pierpont CTC - North Central Advanced Technology Center
 Contractor:

Manuf.	Part No.	DESCRIPTION	UM	QTY.	Labor	Material	SCHEDULED VALUE
S2	S2-EXT-16-WM	Netbox Extreme Controller	PC	1	\$	\$	\$
S2	S2-IDC-16	Identity Management	PC	1	\$	\$	\$
S2	S2-RMIK	Rack Mount Kit	PC	1	\$	\$	\$
Ultratech	IM-1270	S2 Battery	PC	1	\$	\$	\$
S2	S2-NN-E2R-WM	S2 Network Node 2 Reader Wall Mount	PC	3	\$	\$	\$
S2	S2-NN-E4R-WM	S2 Network Node 4 Reader Wall Mount	PC	1	\$	\$	\$
S2	S2-RU-AL	Remote Lock integration	PC	14	\$	\$	\$
Ultratech	IM-1270	S2 Battery	PC	4	\$	\$	\$
Securiftron	BPS-24-2	24V Power Supply - 2 amp output - 4 ports	PC	4	\$	\$	\$
Ultratech	IM-1270	S2 Battery	PC	8	\$	\$	\$
HID	6145CGN0000	Mullion Multiclass Reader	PC	1	\$	\$	\$
HID	6125CGN0000	Single Gang Multiclass Reader	PC	7	\$	\$	\$
HID	2001PGGMN	ICLASS 16/2K Cards	PC	200	\$	\$	\$
GE	1078-CN	Recessed Door Contacts	PC	28	\$	\$	\$
GE	2505A	Gargae Door Contact	PC	3	\$	\$	\$
GE	1138T-N	Surface Mount Door Contact	PC	1	\$	\$	\$
GE	3050	Panic Button	PC	4	\$	\$	\$
W Box	1GANGDRSR	Local Door Alarm	PC	5	\$	\$	\$
Fargo	CR-80	Fargo Ultra Card Blank White PVC	PC	1	\$	\$	\$
Fargo	DTC4250e	ID Card Printer/ Encoder	PC	1	\$	\$	\$
Fargo	FX-86177	Cleaning Kit	PC	1	\$	\$	\$
Fargo	FX-45210	Full Color Ribbon	PC	1	\$	\$	\$
Logitech	C920	HD Pro WebCam	PC	1	\$	\$	\$
Logitech	8" Mini Tripod	Polaroid 8" Heavy Duty Mini Tripod	PC	1	\$	\$	\$
Endital	Rack Mt PC	Rack Mount PC	PC	1	\$	\$	\$
Endital	Badging PC	Badging PC	PC	1	\$	\$	\$
S2	S2-INP	Supervised Input Blade	PC	4	\$	\$	\$
Leviton	62460-10	CAT6 - 10" Patch Cord - Orange	PC	5	\$	\$	\$
West Penn	AC2518228	Access Control Composite Cable	FT	6000	\$	\$	\$
West Penn	25221B	22-2C STR 1000' Reel Plenum	FT	2000	\$	\$	\$
S2	S2-VMS-B-EX	ExacqVision VMS Software Intergration	PC	1	\$	\$	\$
S2	S2-VMS-C-EX	ExacqVision VMS Software Intergration	PC	19	\$	\$	\$
Exacq	IP04-10T-R4A	IP-4UUNVR - 10TB (Comes with 4 licenses)	PC	1	\$	\$	\$
Exacq	5000-40110	Redundant Power Supply	PC	1	\$	\$	\$
Exacq	5000-40341	Raid5 Option	PC	1	\$	\$	\$
Exacq	5000-20060	26" Rackmount	PC	1	\$	\$	\$

Exacq	EVIP01	Exacq IP License	PC	15	\$	-	\$	-	\$	-
Triplite	SMART2200RM2U	2200VA/1600W RACKMOUNT UPS	PC	1	\$	-	\$	-	\$	-
Axis	M3005-V	Ultra-Compact, Indoor Fixed Mini Dome Camera, Vandal-resistant	PC	7	\$	-	\$	-	\$	-
Axis	M3024-LVE	Outdoor-ready, day/night HDTV fixed dome with IR illumination - 1.3mp	PC	1	\$	-	\$	-	\$	-
Axis	P3215-VE	Day/night fixed dome with an IK10 vandal-resistant outdoor casing. Vari-	PC	5	\$	-	\$	-	\$	-
Axis	P3214-VE	Outdoor P32 Network Cameras, HDTV 720p/1080p video quality	PC	6	\$	-	\$	-	\$	-
Axis	M3004-V	Ultra-Compact Indoor Fixed Mini Dome Camera, Vandal-resistant	PC	7	\$	-	\$	-	\$	-
Axis	M3025-VE	Compact, Day/Night Fixed Minidome, Vandal-resistant, Outdoor-ready.	PC	1	\$	-	\$	-	\$	-
Axis	T91E61	Wall Mount	PC	7	\$	-	\$	-	\$	-
Axis	T94F02D	Outdoor Pendant Kit	PC	2	\$	-	\$	-	\$	-
Axis	T94T01D	Outdoor Pendant Kit	PC	5	\$	-	\$	-	\$	-
ATEN	CL1000M	17" Rackmount LCD Console Support USB and PS2	PC	1	\$	-	\$	-	\$	-
Endital	AMS/VMS Wortsta	VMS Workstation	PC	1	\$	-	\$	-	\$	-
ViewZ	VZ24LED-E	24" LED Widescreen HD Monitor	PC	2	\$	-	\$	-	\$	-
Triplite	SMART500RT1U	500KVA LINEINTERACTIVE UPS	PC	1	\$	-	\$	-	\$	-
Middle Atlantic	DTRK1018	Security Equipment Cabinet Vented Door	PC	1	\$	-	\$	-	\$	-
Middle Atlantic	DTVFD-10	Security Equipment Cabinet Vented Door	PC	1	\$	-	\$	-	\$	-
Berk Tek	10032092	CAT6 Plenum Cable	FT	7000	\$	-	\$	-	\$	-
Leviton	62460-03	3" Patch Cords CAT6 - Green	PC	23	\$	-	\$	-	\$	-
Leviton	62460-07	7" Patch Cords CAT6 - Green	PC	23	\$	-	\$	-	\$	-
Leviton	41089-1WP	One port biscuit jack	PC	23	\$	-	\$	-	\$	-
Leviton	61110-RL6	Quickport RJ45 CAT6 Jacks	PC	23	\$	-	\$	-	\$	-
Leviton	69586-U48	CAT6 48 Port Patch Panel	PC	4	\$	-	\$	-	\$	-
Stentofon Turbine	1008111030	TCIS-3, Turbine Compact IP Standard-3 and Back Box	PC	4	\$	-	\$	-	\$	-
Total										
										\$

EXHIBITS

EXHIBIT A – Instructions to Bidders

EXHIBIT B – Terms and Conditions

EXHIBIT C – Purchasing Affidavit (No-Debt Affidavit)

EXHIBIT D – Drug Free Workplace Conformance Affidavit

INSTRUCTIONS TO BIDDERS

(Purchases greater than \$25,000)

West Virginia Community and Technical College System ("WVCTCS")

1. **BIDDER'S REPRESENTATIONS:** The bidder, by making a bid, represents that: (a) the bidder has read and understands the bidding documents, terms and conditions, and the bid is made in accordance therewith; and (b) the bid is based upon the materials, equipment, systems, printing and/or services specified.
2. **QUALITY STANDARDS:** Brand names, when identified, include the standard of quality, performance or use desired. Unless otherwise noted, bids by bidders on equivalents may be considered, provided the bidder furnishes descriptive literature and other proof required by the Institution. Samples, when required, must be furnished free of charge, including freight. In the event the Institution elects to contract for a brand purported to be an equivalent by the bidder, the acceptance of the item will be conditioned on the Institution's inspection and testing after receipt. If, in the sole judgment of WVCTCS, the item is determined not to be equivalent, the item will be returned at the Seller's expense and the contract terminated.
3. **SUBMISSION OF BIDS:** The bid, the bid security, if any, and other documents required to be submitted with the bid shall be enclosed in a sealed opaque envelope. The envelope shall be addressed to the party receiving the bids and shall be identified as a "Sealed Bid," and shall include the bid number, the bid opening time, and the bid opening date. Bids shall be delivered and deposited at the designated location prior to the time and date for receipt of bids. Bids received after the time and date for the bid opening will be returned unopened. The bidder shall assume full responsibility for timely delivery at the location designated for receipt of bids. Oral, telephonic, facsimile or telegraphic bids are invalid and will not receive consideration.
4. **MODIFICATION OR WITHDRAWAL OF BIDS:** Prior to the time and date designated for receipt of bids, a bid submitted may be modified or withdrawn by notice to the party receiving bids at the place designated for receipt of bids. Such notice shall be in writing over the signature of the bidder and shall be received prior to the designated time and date for receipt of bids. A modification shall be worded so as not to reveal the amount of the original bid. A withdrawal may be made by facsimile or electronic transmission. A modification may also be made by facsimile or electronic transmission if the final bid result is not revealed prior to the bid opening.
5. **OPENING OF BIDS:** Bids shall be publicly opened and read aloud at the designated location for receipt of bids shortly after the time and date bids are due.
6. **REJECTION OF BIDS:** WVCTCS shall have the right to reject any and all bids, in whole or part; to reject a bid not accompanied by a required bid security or other data required by the bidding documents; or reject a bid which is in any way incomplete or irregular.
7. **ACCEPTANCE OF BID (AWARD):** It is the intent of WVCTCS to award a contract/purchase order to the lowest responsible and responsive bidder provided the bid does not exceed the funds available. WVCTCS shall have the right to waive informalities or irregularities in a bid received and to accept the bid, which in WVCTCS' judgment, is in WVCTCS' own best interests. All bids are governed by West Virginia Code and the Procedural Rules of WVCTCS.
8. **VENDOR REGISTRATION:** Prior to award for purchases exceeding \$15,000, the apparent successful bidder must be properly registered with the W. Va. Department of Administration, Purchasing Division, and have paid the required vendor registration fee.
9. **FISCAL YEAR FUNDING:** All services performed or goods delivered under State Purchase Orders/Contracts are to be continued for the term of the Purchase Order/Contract, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise available for these services or goods, this Purchase Order/Contract becomes void and of no effect after June 30. If that occurs, the state may notify the vendor that an alternative source of funding has been obtained and thereby avoid the automatic termination. Non-appropriation or non-funding shall not be considered an event of default.
10. **GOVERNING LAW:** This contract/purchase order shall be governed by the laws of the State of West Virginia.
11. **PAYMENTS AND INTEREST ON LATE PAYMENTS:** Payment may only be made after the delivery and acceptance of goods or services. Interest may be paid for late payment in accordance with the West Virginia Code.
12. **RESIDENT VENDOR PREFERENCE:** A resident vendor preference will be granted upon written request in accordance with the West Virginia Code.
13. **TAX EXEMPTION:** The State of West Virginia, including WVCTCS, is exempt from federal and state taxes and will not pay or reimburse such taxes.

TERMS AND CONDITIONS

1. **ACCEPTANCE:** Vendor shall be bound by this Order and its terms and conditions upon receipt of this Order. This Order expressly limits acceptance to the terms and conditions stated herein. Additional or different terms proposed by the Vendor are objected to and are hereby rejected, unless otherwise provided for in writing by the Institution and approved by the WV Attorney General.
2. **APPLICABLE LAW:** The laws of the State of West Virginia and the Procedural Rules of the WV Community and Technical College System ("WVCTCS") shall govern all rights and duties under the Contract, including without limitation the validity of this Purchase Order/Contract.
3. **ASSIGNMENT:** Neither this Order nor any monies due, or to become due hereunder, may be assigned by the Vendor without the Institution's consent.
4. **INSTITUTION:** For the purposes of these Terms and Conditions, "Institution" means a state institution of higher education, the WV Higher Education Policy Commission, and the WV Council for Community and Technical College Education, each as define in W. Va. Code.
5. **CANCELLATION:** The Institution may cancel any Purchase Order/Contract upon 30 days written notice to the Vendor.
6. **COMPLIANCE:** Vendor shall comply with all federal, state and local laws, regulations and ordinances including, but not limited to, the prevailing wage rates of the W. Va. Division of Labor, if applicable.
7. **DELIVERY:** For exceptions to the delivery date as specified in the Order, the Vendor shall give prior notification and obtain the approval of the Institution. Time is of the essence of this Order and it is subject to termination by the Institution, and to liquidated damages if they are identified in the bidding documents for failure to deliver on time.
8. **DISPUTES:** Disputes by the Vendor arising out of the Contract/Purchase Order that cannot be settled by the parties shall be submitted to the West Virginia Claims Commission. Language binding the Institution to any arbitration or decision of any arbitration board, commission, panel, or other entity is void and of no effect.
9. **HOLD HARMLESS:** The Institution will not agree to hold the Vendor or any other party harmless because such agreement is not consistent with state law.
10. **MODIFICATIONS:** This writing is the parties' final expression of intent. No modification of this Order shall be binding unless agreed to in writing by the Institution.
11. **NON-FUNDING:** All services performed, or goods delivered under this Purchase Order/Contract are to be continued for the term of the Purchase Order/Contract, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise available for these services or goods, this Purchase Order/Contract becomes void and of no effect after June 30.
12. **ORDER NUMBERS:** Contract Order numbers or Purchase Order numbers shall be clearly shown on all acknowledgments, shipping labels, packing slips, invoices, and correspondence.
13. **PAYMENTS AND INTEREST ON LATE PAYMENTS:** Payments may only be made after the delivery of goods or services. Interest may be paid on late payments in accordance with the West Virginia Code.
14. **RENEWAL:** The Contract may be renewed only upon mutual written agreement of the parties.
15. **REJECTION:** All goods or materials purchased herein are subject to approval of the Institution. Any rejection of goods or materials resulting in nonconformity to the terms, conditions, or specifications of this Order, whether held by the Institution or returned to the Vendor, will be at the Vendor's risk and expense.
16. **VENDOR:** For the purposes of these Terms and Conditions, the "Vendor" means the vendor whose quotation, bid, proposal or expression of interest has been accepted and has received a lawfully issued Purchase Order from the Institution.
17. **SHIPPING, PACKING, BILLING & PRICING:** Unless otherwise stated, all goods are to be shipped prepaid, FOB destination. No charges will be allowed for special handling, packing, wrapping, bags, containers, etc., unless otherwise specified. All goods or services shall be shipped on or before the date specified in this Order. Prices are those that are stated in this Order. No price increase will be accepted without written authority from the Institution.
18. **TAXES:** The State of West Virginia (the Institution) is exempt from Federal and State taxes and will not pay or reimburse such taxes.
19. **TERMINATION:** In the event of a breach by the Vendor of any of the provisions of this Contract/Purchase Order, the Institution reserves the right to cancel and terminate this contract forthwith upon giving written notice to the Vendor. The Vendor shall be liable for damages suffered by the Institution resulting from the Vendor's breach of contract.
20. **WARRANTY:** The Vendor expressly warrants that the goods and/or services covered by this Order will: (a) conform to the specifications, drawings, samples or other description furnished or specified by the Institution; (b) be merchantable and fit for the purpose intended; (c) be free and clear of all liens, claims and encumbrances of any kind; and/or (d) be free from defect in material and workmanship.

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

CONSTRUCTION CONTRACTS: Under W. Va. Code § 5-22-1(i), the contracting public entity shall not award a construction contract to any bidder that is known to be in default on any monetary obligation owed to the state or a political subdivision of the state, including, but not limited to, obligations related to payroll taxes, property taxes, sales and use taxes, fire service fees, or other fines or fees.

ALL CONTRACTS: Under W. Va. Code §5A-3-10a, no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

EXCEPTION: The prohibition listed above does not apply where a vendor has contested any tax administered pursuant to chapter eleven of the W. Va. Code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

DEFINITIONS:

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Employer default" means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

"Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceeds five percent of the total contract amount.

AFFIRMATION: By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (*W. Va. Code §61-5-3*) that: (1) for construction contracts, the vendor is not in default on any monetary obligation owed to the state or a political subdivision of the state, and (2) for all other contracts, that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

WITNESS THE FOLLOWING SIGNATURE:

Vendor's Name: _____

Authorized Signature: _____ Date: _____

State of _____

County of _____, to-wit:

Taken, subscribed, and sworn to before me this ____ day of _____, 20__.

My Commission expires _____, 20__.

AFFIX SEAL HERE

NOTARY PUBLIC _____



**State of West Virginia
DRUG FREE WORKPLACE CONFORMANCE AFFIDAVIT
West Virginia Code §21-1D-5**

I, _____, after being first duly sworn, depose and state as follows:

1. I am an employee of _____; and,
(Company Name)
2. I do hereby attest that _____
(Company Name)

maintains a written plan for a drug-free workplace policy and that such plan and policy are in compliance with **West Virginia Code** §21-1D.

The above statements are sworn to under the penalty of perjury.

Printed Name: _____

Signature: _____

Title: _____

Company Name: _____

Date: _____

STATE OF WEST VIRGINIA,

COUNTY OF _____, TO-WIT:

Taken, subscribed and sworn to before me this _____ day of _____, _____.

By Commission expires _____

(Seal)

(Notary Public)