ABBREVIATIONS LIST

1P	ONE POLE
2P	TWO POLE
3P	THREE POLE
ø	PHASE
A	AMPERE
A/V	AUDIO/VISUAL
ACT	ARCHITECTURAL CEILING TILE
AF	AMP FRAME
AFC	ABOVE FINISHED CEILING
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AIC	AMPERE INTERRUPTING CAPACITY
AL	ALUMINUM
ARMS	ARC REDUCTION MAINTENANCE SWITCH
AT	AMP TRIP
ATC	AUTOMATIC TEMPERATURE CONTROL
BET	BUILDING ENTRANCE TERMINAL
BFC	BELOW FINISHED CEILING
BFF	BELOW FINISHED FLOOR
C	CONDUIT
C/B	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CKT	CIRCUIT
CM	CONSTRUCTION MANAGER
CMH	COMMUNICATIONS MANHOLE
CR	CONVENIENCE RECEPTACLE
CT	CURRENT TRANSFORMER
DFA	DOWN FROM ABOVE
DR	DUPLEX RECEPTACLE
DWG	DRAWING
(E)	EXISTING
EC	ELECTRICAL CONTRACTOR
EMH	ELECTRICAL MANHOLE
EOF	ELECTRICAL OUT OF FLOOR
EOW	ELECTRICAL OUT OF WALL
F/A	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FLA	FULL LOAD AMPS
FPC	FIRE PROTECTION CONTRACTOR
FU	FUSE
GC	GENERAL CONTRACTOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFI	GROUND FAULT INTERRUPTER
GND	GROUND
GP	GENERAL PURPOSE
HP	HORSEPOWER
IDF	INTERMEDIATE DISTRIBUTION FRAME
IG	ISOLATED GROUND
IR	INFRARED
JB	JUNCTION BOX
KEC	KITCHEN EQUIPMENT CONTRACTOR
KVA	KILOVOLT AMPERE
KW	KILOWATT
LLC	WIRE TO LOCAL LIGHTING CIRCUIT
LSI	LONG TIME, SHORT TIME AND INSTANTANEOUS PROTECTION
MC	MECHANICAL CONTRACTOR
MCA	MINIMUM CIRCUIT AMPACITY
MCB	MAIN CIRCUIT BREAKER
MDF	MAIN DISTRIBUTION FRAME
MDP	MAIN DISTRIBUTION PANEL
MH	MOUNTING HEIGHT
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MP	MEGA PIXEL
(N)	NEW
NE	WIRED ON NORMAL EMERGENCY CIRCUIT
NIC	NOT IN CONTRACT
OCC	OCCUPANCY
OOF	OUT OF FLOOR
OOW	OUT OF WALL
PA	PUBLIC ADDRESS
PC	PLUMBING CONTRACTOR
PROV	PROVISION
(RAR)	REMOVE AND REPLACE
(REL)	RELOCATE/RELOCATED
S	SINGLE POLE SWITCH
SR	SIMPLEX RECEPTACLE
S_3	THREE WAY SWITCH
S_K	KEY OPERATED SWITCH
SPDT	SINGLE POLE DOUBLE THROW
TYP	TYPICAL
UC	UNDER COUNTER
V	VOLT
W	WATT
WG	WIRE GUARD
WP	WEATHERPROOF

LIST OF DRAWINGS

E001	ELECTRICAL COVER SHEET
E002	ELECTRICAL COVER SHEET
ED101	ELECTRICAL DEMOLITION FLOOR PLAN
E101	ELECTRICAL LIGHTING NEW WORK-FLOOR PLAN
E201	ELECTRICAL POWER NEW WORK FLOOR PLAN
E301	ELECTRICAL FIRE/COMM NEW WORK FLOOR PLAN
E401	ELECTRICAL SCHEDULES
E402	ELECTRICAL DETAILS

RESPONSIBILITY MATRIX

CONTRACTOR RESPONSIBILITY CHART

MATERIAL	PROVIDED BY	DEMOLISHED BY	INSTALLED BY	LOW VOLTAGE WIRING BY	120V POWER, BACKBOX AND CONDUIT BY	PROGRAMMING/ HEAD END TERMINATIONS
CARD ACCESS (CARD READERS, DOOR CONTACTS, LOCAL DOOR ALARMS, ETC)	SECURITY VENDOR	SECURITY VENDOR	SECURITY VENDOR	ELECTRICAL CONTRACTOR	ELECTRICAL CONTRACTOR	SECURITY VENDOR
DOOR HARDWARE (LATCH RETRACTION, STRIKES, POWER SUPPLIES, DOOR OPENERS, ETC)	GENERAL CONTRACTOR	ELECTRICAL CONTRACTOR	GENERAL CONTRACTOR	ELECTRICAL CONTRACTOR	ELECTRICAL CONTRACTOR	-
INTRUSION & MONITORING DEVICES & EQUIPMENT	SECURITY VENDOR	SECURITY VENDOR	SECURITY VENDOR	ELECTRICAL CONTRACTOR	ELECTRICAL CONTRACTOR	SECURITY VENDOR
CCTV CAMERAS, CABLES, CCTV NETWORK SWITCHES, NVR, ETC.	SECURITY VENDOR	SECURITY VENDOR	SECURITY VENDOR	TELECOM VENDOR	ELECTRICAL CONTRACTOR	SECURITY VENDOR
CABLE TRAY, LADDER RACK	ELECTRICAL CONTRACTOR	-	ELECTRICAL CONTRACTOR	-	ELECTRICAL CONTRACTOR	-
DATA RACKS, PATCH PANELS, PATCH CABLES	TELECOM VENDOR	-	TELECOM VENDOR	TELECOM VENDOR	ELECTRICAL CONTRACTOR	TELECOM VENDOR
NETWORK SWITCHES (EXCEPT FOR CCTV SYSTEM)	OWNER	-	OWNER	-	ELECTRICAL CONTRACTOR	OWNER
FIBER CABLES, FIBER SHELVES, PATCH CABLES	TELECOM VENDOR	-	TELECOM VENDOR	TELECOM VENDOR	ELECTRICAL CONTRACTOR	TELECOM VENDOR
DATA JACKS, CAT6A CABLING, FACEPLATES, RACKS, ETC.	TELECOM VENDOR	TELECOM VENDOR	TELECOM VENDOR	TELECOM VENDOR	ELECTRICAL CONTRACTOR	TELECOM VENDOR
WIRELESS ACCESS POINTS	OWNER	OWNER	OWNER	TELECOM VENDOR	ELECTRICAL CONTRACTOR	OWNER
CLASSROOM & OFFICE TELEPHONES	OWNER	OWNER	OWNER	TELECOM VENDOR	ELECTRICAL CONTRACTOR	OWNER
PUBLIC ADDRESS (PA) SYSTEM, SPEAKERS, AMPLIFIERS, ETC.	ELECTRICAL CONTRACTOR	ELECTRICAL CONTRACTOR	ELECTRICAL CONTRACTOR	ELECTRICAL CONTRACTOR	ELECTRICAL CONTRACTOR	ELECTRICAL CONTRACTOR
WIRELESS CLOCKS (DIGITAL WITH MESSAGING)	ELECTRICAL CONTRACTOR	ELECTRICAL CONTRACTOR	ELECTRICAL CONTRACTOR	ELECTRICAL CONTRACTOR	ELECTRICAL CONTRACTOR	ELECTRICAL CONTRACTOR
AUDIO/VISUAL (PROJECTORS, SCREENS, MONITORS, CABLES)	A/V VENDOR	A/V VENDOR	A/V VENDOR	A/V VENDOR	ELECTRICAL CONTRACTOR	A/V VENDOR
POWER, LIGHTING, FIRE ALARM	ELECTRICAL CONTRACTOR	ELECTRICAL CONTRACTOR	ELECTRICAL CONTRACTOR	ELECTRICAL CONTRACTOR	ELECTRICAL CONTRACTOR	ELECTRICAL CONTRACTOR

NOTES:
1. THIS CHART SHALL SUPERSEDE ANY OTHER LOCATIONS DESCRIBING CONTRACTOR RESPONSIBILITIES.
2. THE TELECOMM, SECURITY AND A/V VENDORS WILL BE HIRED WITH STATE-CONTRACTS DIRECT WITH THE OWNER. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL NECESSARY COORDINATION OF WORK BETWEEN PARTIES ABOVE.

GENERAL NOTES

1. FOR LOCATIONS OF ALL MECHANICAL, PLUMBING, AND FIRE PROTECTION EQUIPMENT, REFER TO THE RESPECTIVE MECHANICAL AND PLUMBING DRAWINGS. REFER TO ELECTRICAL MOTOR WIRING SCHEDULE FOR DETAILED REQUIREMENTS.
2. ALL DEVICE LOCATIONS SUCH AS RECEPTACLE, DATA JACK, TV JACK, AND FLOOR OUTLETS, ETC., ARE APPROXIMATE. FINAL LOCATIONS AND MOUNTING HEIGHTS SHALL BE FIELD LOCATED BY THE ARCHITECT. THE CONTRACTOR SHALL INSTALL ALL DEVICES AT LOCATIONS AS DIRECTED BY THE ARCHITECT WITHOUT ADDITIONAL COMPENSATION.
3. ALL BRANCH WIRING SHALL BE MINIMUM 3/4"C-2#12+1#12GND. MC-CABLE MAY BE USED IN APPLICATIONS AND AREAS WHERE ALLOWED BY SPECIFICATIONS.
4. ALL LIGHTING WIRING FOR LED DIMMABLE LIGHTING BRANCH CIRCUITS SHALL BE 2#12+1#12GND +2#16 0-10V IN 3/4"C (ALL 600V RATED WIRING) OR MC-PCS CABLE WHERE ALLOWABLE IN THE SPECIFICATION
5. COORDINATE OCCUPANCY SENSOR, AND FIRE ALARM DEVICE LOCATIONS WITH LIGHTING FIXTURES, SPRINKLERS, AIR DIFFUSERS, AND OTHER CEILING MOUNTED EQUIPMENT. COORDINATE WITH THE REFLECTED CEILING PLAN.
6. ALL EQUIPMENT ON FIRE ALARM DRAWINGS ARE APPROXIMATE, FINAL LOCATIONS SHALL BE COORDINATED WITH THE ARCHITECT. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT SHOWN, AT LOCATIONS AS DIRECTED BY THE ARCHITECT WITHOUT ADDITIONAL COMPENSATION.
7. FOLLOW DIMENSIONS WHERE SHOWN, DO NOT SCALE DRAWINGS.
8. ALL WORK SHALL BE IN ACCORDANCE WITH THE 2020 NATIONAL ELECTRICAL CODE AND OTHER APPLICABLE CODES AND STANDARDS.
9. ALL CONDUCTORS SHALL BE COPPER.
10. RECEPTACLES, DATA JACKS AND OTHER FLUSH MOUNTED DEVICES MOUNTED ON OPPOSITE SIDES OF SAME WALL MUST BE STAGGERED IN SEPARATE JOISTS FOR ACOUSTICS. ALL LOCATIONS ON SHARED WALLS SHALL BE PROVIDED WITH SPECSEAL SSP PUTTY PADS OR EQUAL ON EACH BACKBOX.
11. DEVICES LOCATED IN FIRE RATED WALLS THAT ARE GREATER THAN 16 SQ/IN SHALL BE PROVIDED WITH SPECSEAL SSP PUTTY PADS OR EQUAL ON EACH BACKBOX.
12. FIRE STOPPING: WHERE CONDUITS PENETRATE FIRE AND SMOKE BARRIERS INCLUDING WALLS, PARTITIONS, FLOORS, AND CEILINGS, INSTALL FIRE-STOPPING AT PENETRATIONS AFTER CABLES ARE INSTALLED.
13. MATERIALS FOR FIRE STOPPING SHALL BE UL LISTED AND LABELED AND FM APPROVED FOR FIRE RATINGS CONSISTENT WITH PENETRATED BARRIERS. SLEEVES SHALL BE SCHEDULE 40, WELDED, BLACK STEEL PIPE SLEEVES. SIZES AS REQUIRED FOR EQUIVALENT AREA AS THE WIREWAYS. SEALING FITTINGS SHALL BE SUITABLE FOR SEALING CABLES IN SLEEVES OR CORE DRILLED HOLES. TWO-PART SEALANT: FORMED-IN-PLACE SEALANT FIRE-RESISTANT JOINT SEALERS.
14. UNLESS OTHERWISE NOTED ALL INDOOR ELECTRICAL EQUIPMENT SHALL BE PROVIDED WITH, AND HOUSED IN, A NEMA 1 ENCLOSURE. ALL OUTDOOR ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN NEMA 3R ENCLOSURE.
15. COMMON NEUTRALS ARE NOT ACCEPTABLE.
16. ELECTRICAL CONTRACTOR SHALL EXAMINE THE DRAWINGS OF ALL TRADES AND COORDINATE THEIR WORK TO AVOID INTERFERENCE WITH STRUCTURE, AND ALL EQUIPMENT ABOVE AND BELOW THE CEILING.
17. THE ELECTRICAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT THE SITE BEFORE PROCEEDING WITH THE WORK.
18. THE ELECTRICAL CONTRACTOR SHALL COORDINATE THE MOUNTINGS AND NUMBER OF FACES FOR THE EXIT SIGNS. THE LIGHTING FIXTURE SHOP DRAWING SUBMISSION SHALL REFLECT THIS COORDINATION.
19. CONTRACTOR MUST COORDINATE ROOMS NAMES ON THE PANEL SCHEDULES WITH THE FINAL ROOM NAMES, IN THE FIELD. ALL PANELS SHALL BE PROVIDED WITH TYPED PANEL SCHEDULE.
20. PROVIDE FIBER BUSHINGS ON THE ENDS OF ALL CONDUIT STUBS.
21. ALL OF THE NOTES UNDER THE "GENERAL NOTES" SHALL APPLY TO ALL OF THE ELECTRICAL DRAWINGS.
22. ALL SWITCHES, RECEPTACLES, PANELBOARDS, FIRE ALARM PANELS, POWER SUPPLIES, DISCONNECTS, AND EQUIPMENT SHALL BE LABELED WITH SOURCE PANEL AND CIRCUIT.
23. THESE DRAWINGS SHOW EXISTING CONDITIONS AT THE TIME OF DESIGN. ACTUAL FIELD CONDITIONS MAY CHANGE PRIOR TO CONSTRUCTION. ALL DISCREPANCIES AFFECTING THE COMPLETION OF WORK SHALL BE REPORTED TO ENGINEER FOR RESOLUTION.
24. ALL DEVICES/BOXES IN BLOCK WALLS SHALL HAVE MIN 3/4"C (UNLESS OTHERWISE NOTED) FROM BOX TO ABOVE AN ADJACENT ACCESSIBLE CEILING.
25. COORDINATE FINAL LOCATIONS OF ALL EQUIPMENT IN ELEVATOR MACHINE ROOM AND ELEVATOR PIT WITH ELEVATOR EQUIPMENT MANUFACTURER'S LAYOUT AND REQUIREMENTS.
26. ALL EXTERIOR RECEPTACLES SHALL BE PROVIDED WITH A LOCKABLE CAST ALUMINUM WHILE-IN-USE COVER.
27. ALL SPARE CONDUITS SHALL BE PROVIDED WITH A PULL STRING.
28. EXISTING FIRE ALARM FACP IN MAIN BUILDING IS A SIMPLEX/GRINNELL 4100ES FULLY ADDRESSABLE PANEL. EXISTING FIRE ALARM PANEL SYSTEM SHALL BE EXPANDED WITH NEW STROBES AND HORN/STROBE(S) AS NOTED ON THE DRAWINGS AND HEREIN. FIRE ALARM SYSTEM SHALL BE EXPANDED AS REQUIRED TO ACCOMMODATE THE NEW DEVICES AND EXTENDED TO ACCOMMODATE RELOCATING DEVICES AS SHOWN ON THE DRAWINGS. FIRE ALARM SYSTEM SHALL BE RE-PROGRAMMED TO REFLECT THE DEMOLISHED, RELOCATED AND NEW DEVICES IN THE SYSTEM. FIRE ALARM SYSTEM SHALL BE RE-TESTED IN ACCORDANCE WITH NFPA 72 AND THE LOCAL FIRE MARSHAL PRIOR TO ACCEPTANCE AND OCCUPANCY. CONTRACTOR SHALL HIRE JCI/SIMPLEX TO PROVIDE TO PERFORM THE FIRE ALARM WORK.

DEMOLITION NOTES

1. ELECTRICAL CONTRACTOR SHALL REVIEW ALL MECHANICAL DEMOLITION PLANS FOR MECHANICAL EQUIPMENT TO BE DEMOLISHED. THE EC SHALL REMOVE ALL WIRING AND CONDUIT FOR DEMOLISHED MECHANICAL EQUIPMENT BACK TO SOURCE.
2. ALL WORK UNDER THIS SECTION SHALL BE COORDINATED WITH ALL OTHER TRADES PRIOR TO INSTALLATION.
3. ALL DEVICES SHOWN TO BE DEMOLISHED SHALL HAVE ASSOCIATED WIRING REMOVED BACK TO SOURCE PANEL, UNLESS CONNECTED TO EXISTING-TO-REMAIN DEVICES/EQUIPMENT (NOT ALL DEVICES ARE SHOWN). AS NEEDED, MAINTAIN CIRCUIT INTEGRITY BY RE-WIRING OR MAINTAINING EXISTING WIRING TO KEEP EXISTING DEVICE(S) ACTIVE.
4. ALL WIRING IN THE EXPOSED AREAS MUST BE FISHED THROUGH THE WALL WITH MC CABLE. WHERE EXISTING DEVICES WERE REMOVED, FILL IN MASONRY HOLES TO MATCH EXISTING WALL FINISH. WHERE CABLE IS NOT ABLE TO BE FISHED THRU THE WALLS, USE OF WIREMOLD, COLOR TO MATCH WALLS, IS ACCEPTABLE WITH APPROVAL OF ARCHITECT OR OWNER. WIRING IN NEW WALLS SHALL BE CONCEALED IN CONDUIT.
5. EXISTING CONDUITS MAY BE REUSED ABOVE THE CEILING AND IN THE EXISTING WALLS. HOWEVER, ALL WIRING MUST BE NEW. EXISTING CONDUITS MAY BE ABANDONED IN PLACE IN NON-ACCESSIBLE AREAS, BUT ALL WIRING MUST BE REMOVED. EXISTING EXPOSED CONDUITS, DESIGNATED TO BE REMOVED WITH WIRING, IN OCCUPIED SPACES MUST BE REMOVED IF NOT REUSED.
6. DEMOLITION/RELOCATIONS: EACH TRADE CONTRACTOR SHALL BE RESPONSIBLE FOR DEMOLITION AND RELOCATIONS OF SERVICES, EQUIPMENT, AND MATERIAL RELATING TO THEIR RESPECTIVE TRADE.
7. PRIOR TO DEMOLITION CONTRACTOR SHALL REVIEW WITH OWNER ALL MATERIALS TO BE REMOVED. SHOULD THE OWNER OPT TO KEEP ANY MATERIALS, THE CONTRACTOR SHALL REMOVE AND DELIVER THE PARTS TO THE OWNER ON THE SITE WHERE SO DIRECTED. OTHERWISE, ALL DEMOLISHED OR REMOVED MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR, SHALL BE REMOVED FROM THE SITE, AND BE DISPOSED OF IN A LEGAL MANNER.
8. DEMOLITION SHALL INCLUDE REMOVAL OF ALL PARTS AND PIECES IN THEIR ENTIRETY BACK TO THE POINTS INDICATED OR IF NOT INDICATED BACK TO THEIR POINT OF SOURCE. WHERE CONDITIONS PROHIBIT TOTAL REMOVAL OF THE WORK, THE REMAINING PORTION SHALL BE CUT FLUSH WITH THE SURROUNDING SURFACE SHALL BE REFINISHED IN AN APPROVED MANNER.
9. MAINTAIN EXISTING UTILITIES INDICATED OR WHERE REQUIRED TO REMAIN, KEEP IN SERVICE, AND PROTECT AGAINST DAMAGE DURING DEMOLITION OPERATIONS. DO NOT INTERRUPT EXISTING UTILITIES SERVING OCCUPIED OR USED FACILITIES, EXCEPT WHEN SCHEDULED WITH THE OWNER.
10. DO NOT REMOVE EXISTING STRUCTURAL WORK. DO NOT REMOVE OPERATIONAL ELEMENTS AND SAFETY-RELATED COMPONENTS IN A MANNER RESULTING IN A REDUCTION OF CAPACITIES TO PERFORM IN THE MANNER INTENDED OR RESULTING IN DECREASED OPERATIONAL LIFE, INCREASED MAINTENANCE, OR DECREASED SAFETY.
11. REMOVALS, DISCONNECTIONS, AND RELOCATIONS SHALL BE PERFORMED BY WORKMEN SKILLED IN THE TRADE INVOLVED AND SHALL BE EMPLOYED BY A CONTRACTOR LICENSED IN THE TRADE INVOLVED. ALL WORK SHALL BE DONE IN ACCORDANCE WITH ACCEPTED TRADE PRACTICES.
12. PROVIDE ADEQUATE TEMPORARY SUPPORT FOR WORK TO REMAIN TO PREVENT FAILURE. DO NOT ENDANGER OTHER WORK.
13. PROTECTION: PROVIDE ADEQUATE PROTECTION WHERE REQUIRED FOR THE PRESENT BUILDING AND ITS CONTENTS. TEMPORARY DUSTPROOF BARRIERS AND BARRICADES SHALL BE ERECTED WHERE REQUIRED FOR PROTECTION OF PERSONNEL, PROTECTION FROM DUST AND DIRT, FOR SECURITY, FIRE AND WEATHER PROTECTIVE REASONS. CONTRACTOR SHALL TAKE EVERY PRECAUTION AGAINST FIRE BY EMPLOYING FIRE DEPARTMENT TYPE HOSES AND PORTABLE FIRE EXTINGUISHERS AS REQUIRED BY OSHA AND/OR THE OWNER'S INSURANCE UNDERWRITER.
14. ALL EXISTING EQUIPMENT REQUIRED TO BE REUSED SHALL BE CLEANED, RECONDITIONED, CALIBRATED AND ADJUSTED BY OTHERS. IN ALL INSTANCES WHERE CONTRACTOR FINDS THAT EXISTING EQUIPMENT IS DEFECTIVE TO THE POINT WHERE IT CANNOT BE PROPERLY RESTORED AND WILL NOT OPERATE PROPERLY, THEY SHALL REPORT THE SPECIFIC INSTRUMENTS OR EQUIPMENT TO THE ENGINEER FOR DIRECTIONS.
15. EXTREME CARE SHALL BE EXERCISED FOR ALL EXISTING ITEMS THAT ARE TO REMAIN IN SERVICE UNTIL NEW ITEMS ARE INSTALLED FOR THE SAME SERVICE. ALL SHUTDOWNS OF ANY SYSTEM SHALL BE COORDINATED WITH THE OWNER.
16. ALL DRAWINGS ARE DIAGRAMMATIC. CONTRACTOR SHALL CAREFULLY EXAMINE EXISTING CONDITIONS PRIOR TO STARTING WORK.
17. REFER TO MECHANICAL AND PLUMBING DRAWINGS FOR ALL EQUIPMENT TO BE DEMOLISHED. EC SHALL DEMOLISH ALL ELECTRICAL WIRING, FIRE ALARM, AND DISCONNECTS/STARTERS FOR ALL EQUIPMENT TO BE DEMOLISHED ON THE MECHANICAL DRAWINGS. ALL EQUIPMENT SHALL HAVE NEW WIRING, FIRE ALARM WIRING, AND DISCONNECTS/STARTERS.

AGCS STATE ROAD ADMINISTRATION

110 E State Rd, West Grove, PA 19390

HSA PROJECT # :26-004

Heckendorn Shiles Architects

PROJECT TEAM

CLIENT
Avon Grove Charter School
110 E State Rd
West Grove, PA 19390
484-667-5000

ARCHITECTURAL
Heckendorn Shiles Architects
347 East Conestoga Road
Wayne, PA 19087
610-994-3500

STRUCTURAL
Orndorf & Associates, Inc
8600 West Chester Pike, Suite 201
Upper Darby, PA 19802

MEPFP
Schiller & Hersh Associates, Inc.
636 Skippack Pike, Suite 200
Blue Bell, PA 19422
215-886-8947

ISSUE HISTORY

Δ	DATE	ISSUED FOR
1	11-09-2026	BID ISSUE

SHEET TITLE

ELECTRICAL COVER SHEET

DRAWING NUMBER

E001

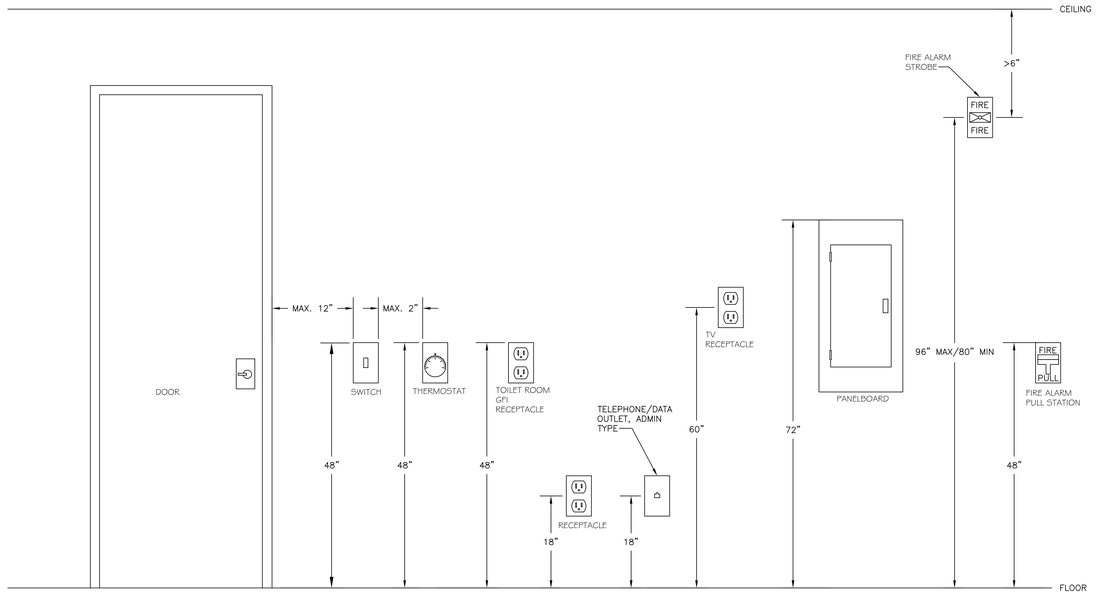
HECKENDORN SHILES ARCHITECTS expressly reserves its common law copyright and other property rights in these plans. These are not to be reproduced, nor are they to be assigned to any third party, without first obtaining the expressed written consent of HECKENDORN SHILES ARCHITECTS

1/4/2026 3:32:46 PM

SYMBOL LIST

	EXIT SIGNS (CONTRACTOR TO COORDINATE # OF FACES AND THE FINAL MOUNTING REQUIREMENTS).
	LED LIGHT FIXTURE. REFER TO LIGHTING SCHEDULE ON DWG E101 FOR FURTHER DETAILS.
	LED LIGHT PROVIDING EMERGENCY ILLUMINATION VIA GENERATOR POWER VIA UL924 DEVICE.
e/2	LIGHTING CIRCUITING INFORMATION. IN THIS EXAMPLE, EC SHALL WIRE FIXTURE TO CIRCUIT #2, AND FIXTURE SHALL BE CONTROLLED BY SWITCH LEG "e".
CS a,b,c	CEILING MOUNTED VACANCY/OCCUPANCY SENSOR AND ASSOCIATED DIGITAL ROOM CONTROLLER. IN THIS EXAMPLE, SENSOR SHALL CONTROL FIXTURES ON CONTROL LEG "a", "b" AND "c".
WS a,b,c	WALL MOUNTED VACANCY/OCCUPANCY SENSOR AND ASSOCIATED DIGITAL ROOM CONTROLLER. IN THIS EXAMPLE, SENSOR SHALL CONTROL FIXTURES ON CONTROL LEG "a", "b" AND "c".
S_{oa}	WALL MOUNTED SWITCH TYPE OCCUPANCY SENSOR, CONTROLLING SWITCH LEG "a". PROVIDE SWITCH EQUAL TO CURRENT/HLI SOLUTIONS #LHMTS1-N-XX
S_{va}	WALL MOUNTED SWITCH TYPE VACANCY SENSOR, CONTROLLING SWITCH LEG "a". PROVIDE SWITCH EQUAL TO CURRENT/HLI SOLUTIONS #LHMTS1-N-XX-M
S_{1B} a	ONE BUTTON DIGITAL SWITCH, CONTROLLING SWITCH LEG "a" WITH ON/OFF FUNCTION.
S_{4B} a	FOUR BUTTON DIGITAL DIMMER SWITCH, CONTROLLING SWITCH LEG "a" WITH ON/OFF/RAISE/LOWER FUNCTIONS.
S_{6B} a	SIX BUTTON DIGITAL DIMMER SWITCH, CONTROLLING SWITCH LEG "a" WITH ON/OFF/SCENE 1/SCENE 2/RAISE/LOWER FUNCTIONS.
Sa	SINGLE POLE SWITCH, CONTROLLING SWITCH LEG "a".
DD1;12	ELECTRICAL CIRCUITING INFORMATION. IN THIS EXAMPLE, EC SHALL WIRE DEVICE TO CIRCUIT #12 IN PANEL "DD1".
e/2	LIGHTING CIRCUITING INFORMATION. IN THIS EXAMPLE, EC SHALL WIRE FIXTURE TO CIRCUIT #2, VIA SWITCH LEG "e".
COX	LIGHTING CONTROL INFORMATION. EC SHALL PROVIDE ALL PARTS AND PIECES TO CONTROL LIGHTS IN THE SPACES. REFER TO LIGHTING CONTROL SCHEDULE ON DWG E101.
	EXISTING ELECTRICAL PANEL
	NEW ELECTRICAL PANEL
J	JUNCTION BOX
J IR	CEILING JUNCTION BOX FOR 120V POWER TO LOW VOLTAGE TRANSFORMER FOR HARDWIRED PLUMBING FAUCETS. CONCEAL JUNCTION BOX ABOVE ACCESSIBLE CEILING. TRANSFORMER AND LOW-VOLTAGE WIRING TO BE PROVIDED AND INSTALLED BY PC.
	STANDARD 20A DUPLEX TAMPER-RESISTANT RECEPTACLE WALL MOUNTED AT 18" AFF, UNLESS OTHERWISE NOTED. INSTALL IN RECESSED DOUBLE GANG BACKBOX WITH SINGLE GANG FACEPLATE, RECEPTACLES LOCATED ON NEW OR EXISTING DRYWALL WALLS SHALL HAVE MC-CABLE CONCEALED/FISHED IN DRYWALL. RECEPTACLE SHOWN ON NEW CMU/BLOCK WALLS SHALL HAVE 3/4" CONDUIT INSTALLED FROM BACKBOX TO ABOVE FINISHED CEILING.
	STANDARD 20A QUAD TAMPER-RESISTANT RECEPTACLE WALL MOUNTED AT 18" AFF, UNLESS OTHERWISE NOTED. INSTALL IN RECESSED DOUBLE GANG BACKBOX WITH DOUBLE GANG FACEPLATE, RECEPTACLES LOCATED ON NEW OR EXISTING DRYWALL WALLS SHALL HAVE MC-CABLE CONCEALED/FISHED IN DRYWALL. RECEPTACLE SHOWN ON NEW CMU/BLOCK WALLS SHALL HAVE 3/4" CONDUIT INSTALLED FROM BACKBOX TO ABOVE FINISHED CEILING.
GFI	DUPLEX CONVENIENCE TAMPER RESISTANT GFI RECEPTACLE. REFER TO STANDARD DUPLEX RECEPTACLE DESCRIPTION ABOVE FOR ADDITIONAL REQUIREMENTS.
GFI/WP	EXTERIOR WEATHER RESISTANT DUPLEX CONVENIENCE TAMPER RESISTANT GFI RECEPTACLE WITH CAST ALUMINUM WHILE IN USE COVER, HUBBELL TAYMAC MX4280S. REFER TO STANDARD DUPLEX RECEPTACLE DESCRIPTION ABOVE FOR ADDITIONAL REQUIREMENTS.
USB	DUPLEX CONVENIENCE RECEPTACLE WITH (2) USB (A&C TYPE) CHARGING PORTS. REFER TO STANDARD DUPLEX RECEPTACLE DESCRIPTION ABOVE FOR ADDITIONAL REQUIREMENTS.
TV	DUPLEX RECEPTACLE FOR WALL MOUNTED TELEVISION OR INTERACTIVE DISPLAY. RECEPTACLE TO BE MOUNTED IN TOP (FACING DOWN) IN FIELD INSTALLED SINGLE GANG BACKBOX IN 9"X14" STEEL IN-WALL TV BOX, EQUAL TO CHIEF #PAC525, AS NOTED IN "AV2" AUDIO VISUAL SYMBOL BELOW. COORDINATE FINAL MOUNTING HEIGHT IN FIELD WITH AUDIO/VISUAL VENDOR.
PD	SIMPLEX RECEPTACLE FOR PAPER TOWEL DISPENSER BY GC. RECEPTACLE TO BE MOUNTED IN PAPER TOWEL DISPENSERS CABINET. HEIGHT TO BE COORDINATED WITH PAPER TOWEL DISPENSER REQUIREMENTS.
	SPECIAL RECEPTACLE. PROVIDE NEMA RATING AS INDICATED ON DRAWING. COORDINATE FINAL REQUIREMENTS WITH APPLIANCES IN THE FIELD
TV CP	CEILING PANEL FOR TV MOUNTING, EQUAL TO PEERLESS MFG #CMJ450. PROVIDE 20A DUPLEX RECEPTACLE MOUNTED IN PANEL OPENING. DATA CABLES AND JACKS TO BE INSTALLED IN PANEL OPENING BY TELECOM VENDOR. SUPPORT MOUNT FROM (4) POINTS TO BUILDING STRUCTURE ABOVE.
S	FIRE ALARM STROBE, WALL MOUNT. APPLIANCE SHALL HAVE CLEAR STROBE LENS.
F S	ALERT ALARM SPEAKER AND STROBE, WALL MOUNT. APPLIANCE SHALL HAVE CLEAR STROBE LENS.
S	ALERT ALARM STROBE, CEILING MOUNT. APPLIANCE SHALL HAVE CLEAR STROBE LENS WITH WHITE HOUSING.
F S	ALERT ALARM SPEAKER AND STROBE, CEILING MOUNT. APPLIANCE SHALL HAVE CLEAR STROBE LENS WITH WHITE HOUSING.
F	FIRE ALARM MANUAL PULL STATION.
S	FIRE ALARM SMOKE DETECTOR
H	FIRE ALARM HEAT DETECTOR
IAM R	FIRE ALARM INTERFACE ADDRESSABLE MODULE WITH RELAY.
IAM	FIRE ALARM INTERFACE ADDRESSABLE MONITOR MODULE.
S	PA SYSTEM CEILING SPEAKER. WIRE TO PA SYSTEM RACK IN UTILITY 113 WITH 18/2 TWISTED, SHIELDED, PLENUM RATED SPEAKERS CABLE. WIRE SPEAKER VIA VOLUME CONTROL DEVICE "VC", WHERE VC IS SHOWN IN SAME SPACE.
VC	VOLUME CONTROL FOR PA SYSTEM. PROVIDE AND INSTALL ROTARY TYPE EQUAL TO BOGEN #ATP10, FOR PA SYSTEM SPEAKER VOLUME CONTROL. WIRE SPEAKERS VIA VOLUME CONTROL DEVICES, WHERE SHOWN ON DWGS. PROVIDE 1-GANG LOCKABLE WALL BOX TO COVER VOLUME CONTROL, EQUAL TO FSR MODEL #WB-MSXG. MOUNT TOP OF BACKBOX AT 48"AFF FOR VOLUME CONTROL, AND BACKBOX FOR CALL BUTTON AT 42"AFF TO TOP OF BOX.
XD	(X) CAT6A RJ-45 DATA JACKS WITH DOUBLE GANG BACKBOX WITH SINGLE GANG FACEPLATE AND CATEGORY 6A PLENUM RATED CABLE FOR EACH JACK TO PATCH PANEL IN DATA RACK IN DATA CENTER ROOM 31. MOUNT BACKBOX AT 18" AFF UNLESS OTHERWISE NOTED. DATA JACKS INSTALLED IN DRYWALL SHALL HAVE RECESSED DOUBLE GANG BACKBOX WITH BUSHINGS AND CABLES CONCEALED IN DRYWALL. DATA JACKS INSTALLED IN CMU WALLS SHALL HAVE RECESSED DOUBLE GANG BACKBOX WITH 1" CONDUIT TO ABOVE FINISHED CEILING. JACK, FACEPLATE, AND CABLE TO BE FURNISHED AND INSTALLED BY TELECOM VENDOR.
1D/AV2	CAT6A RJ-45 DATA JACK IN SURFACE BISCUIT AND CATEGORY 6A PLENUM RATED CABLE TO PATCH PANEL IN DATA RACK IN DATA CENTER ROOM 31. DATA BISCUIT TO BE INSTALLED IN IN 9"X14" STEEL IN-WALL BACKBOX IS TO BE INSTALLED AS PART OF THE "AV2" AUDIO VISUAL BACKBOX. CABLE TO BE ROUTED THROUGH PLASTIC BUSHING IN BOX. JACK, BISCUIT, BUSHING AND CABLE TO BE FURNISHED AND INSTALLED BY TELECOM VENDOR.
WAP	WIRELESS ACCESS POINT, (1) CAT6A DATA JACK WITH CATEGORY 6A PLENUM RATED CABLE TO PATCH PANEL IN DATA RACK IN DATA CENTER ROOM 31 BY TELECOM VENDOR. COIL 20' CABLE SLACK IN ACCESSIBLE AREA ABOVE FINISHED CEILING.
W	(1) RJ-45 TELEPHONE JACK WITH BACKBOX AND FACEPLATE, WITH CATEGORY 6A PLENUM RATED CABLE BACK TO WIRING RACK IN DATA CENTER ROOM 31, BY TELECOM VENDOR. ELECTRICAL CONTRACTOR TO INSTALL RECESSED DOUBLE GANG BACKBOX WITH SINGLE GANG FACEPLATE WITH PLASTIC BUSHING, MOUNT AT 44" AFF.
12:00	WALL MOUNTED WIRELESS DIGITAL MESSAGING CLOCK. WIRE 120V BRANCH CIRCUIT WIRING TO NEAREST RECEPTACLE CIRCUIT WITHIN ROOM.
AV1	AUDIO/VISUAL CONNECTION LOCATION FOR INSTRUCTOR'S A/V INTERFACE. INSTALL RECESSED 4-11/16" SQUARE DEEP AV BACKBOX, MOUNTED AT 18" AFF, WITH 1" CONDUIT CONCEALED IN WALL UP TO ABOVE FINISHED CEILING. COORDINATE ALL WORK WITH AUDIO/VISUAL VENDOR PRIOR TO INSTALLATION.
AV2	AUDIO/VISUAL CONNECTION LOCATION FOR WALL MOUNTED TELEVISION OR INTERACTIVE DISPLAY. PROVIDE AND INSTALL 9"X14" STEEL IN-WALL TV BOX, EQUAL TO CHIEF #PAC525, COORDINATE MOUNTING HEIGHT WITH AV SHOP DRAWINGS, WITH 1" CONDUIT CONCEALED IN WALL UP TO ABOVE FINISHED CEILING. COORDINATE FINAL LOCATION AND MOUNTING HEIGHT IN FIELD WITH AUDIO/VISUAL VENDOR.
CR	CARD READER. EC SHALL INSTALL PLENUM RATED COMPOSITE CABLE FROM ACCESS CONTROL PANEL IN DATA CENTER ROOM 31 TO DOOR ACCESS JUNCTION BOX ABOVE OR NEAR CARD READER CONTROLLED DOOR. CABLE SHALL BE EQUAL TO WINDY CITY WIRE #4461060. EC TO PROVIDE 1/2"C FROM JUNCTION BOX TO CARD READER BACKBOX WITH (3) PAIR TWISTED SHIELDED CABLE. PROVIDE AND INSTALL RECESSED SINGLE GANG BACKBOX FOR CARD READER, UNLESS SHOWN ON STOREFRONT MULLION.
EL	ELECTRIC LOCKING DEVICE BY GC. EC TO INSTALL 1/2"C FROM JUNCTION BOX ABOVE OR NEAR DOOR, INTO DOOR FRAME, WITH CONDUIT CONCEALED IN WALL, WITH 4C/18AWG CABLE FOR LOCKING DEVICE AND 2C/22AWG CABLE FOR REQUEST-TO-EXIT CONTACTS. WHERE DOOR IS INSTALLED IN ARCHITECTURAL STOREFRONT, CONDUIT MAY NEED TO BE ROUTED BELOW FLOOR FROM DOOR FRAME TO WALL WITH JUNCTION BOX FOR DOOR ACCESS. WIRING FROM JUNCTION BOX TO DOOR HARDWARE TO BE BY SECURITY VENDOR.
ADA	ADA PUSH PLATE FOR ELECTRIC DOOR OPENER, FURNISHED AND INSTALLED BY GC, WIRED BY EC. INSTALL 2#18AWG IN 1/2"C FROM PUSHPLATE TO CARD ACCESS PANEL IN DATA CENTER 31. ALSO INSTALL 2#18AWG IN 1/2"C FROM GREETER/RECEPTION 101 CEILING TO EXISTING AUTOMATIC DOOR OPENER, INSTALL IN SURFACE METALLIC RACEWAY IF WIRING CANNOT BE CONCEALED IN WALLS AND EXISTING STOREFRONT SYSTEM.
DO	AUTOMATIC ELECTRIC DOOR OPENER, EXISTING TO REMAIN. EC IS RESPONSIBLE TO WIRE EXISTING DOOR OPENER WITH CONTROL WIRING AND 120V BRANCH CIRCUIT FOR POWER.
DR	DOOR RELEASE STATION, TO BE REMOVED AND RELOCATED. COORDINATE SURFACE MOUNT LOCATION AND HEIGHT WITH OWNER AND ARCHITECT IN FIELD TO COORDINATE WITH CASEWORK.
PB	EMERGENCY PANIC BUTTON, EQUAL TO STI #SS2409EM-EN. COORDINATE BACKBOX LOCATION AND HEIGHT WITH OWNER AND ARCHITECT IN FIELD TO COORDINATE WITH CASEWORK. WIRE WITH PLENUM RATED 4C/18AWG CABLE TO ACCESS CONTROL PANEL IN DATA CENTER 31.
C	CCTV CAMERA TO BE REMOVED AND REINSTALLED. UPON REINSTALLATION, CONTRACTOR SHALL COORDINATE AIMING OF CAMERA WITH SECURITY VENDOR.
VIS	VIDEO INTERCOM STATION, WALL MOUNTED. INSTALL 2-GANG RECESSED BACKBOX AT 46" AFF, WITH 3/4" CONDUIT DOWN WALL TO BELOW FLOOR TO DATA CENTER 31 FOR CAT6A PLENUM RATED CABLE BY TELECOM VENDOR. CONTRACTOR SHALL INSTALL ADDITIONAL 3/4" CONDUIT FROM INTERCOM BACKBOX TO NEAREST DOOR ACCESS JUNCTION BOX WITH 2C/18AWG PLENUM RATED CABLE.
VMS	VIDEO INTERCOM MASTER STATION, DESK MOUNTED. FURNISHED AND INSTALLED BY SECURITY VENDOR UTILIZING NEAREST DATA JACK SHOWN ON PLANS.

	POINT OF CONNECTION BETWEEN NEW AND EXISTING WORK
	POINT OF CONNECTION BETWEEN DEMOLITION AND EXISTING WORK
	EXISTING WORK
	NEW WORK
	DEMOLITION WORK
	WIRING & CONDUIT



1 E002 TYPICAL MOUNTING HEIGHTS OF ELECTRICAL EQUIPMENT
SCALE: NOT TO SCALE

AGCS STATE ROAD ADMINISTRATION

110 E State Rd, West Grove, PA 19390

HSA PROJECT # :26-004

Heckendorn Shiles Architects

PROJECT TEAM

CLIENT
Avon Grove Charter School
110 E State Rd
West Grove, PA 19390
484-667-5000

ARCHITECTURAL
Heckendorn Shiles Architects
347 East Conestoga Road
Wayne, PA 19087
610-994-3500

STRUCTURAL
Orndorf & Associates, Inc
8600 West Chester Pike, Suite 201
Upper Darby, PA 19802

MEPFP
Schiller & Hersh Associates, Inc.
636 Skippack Pike, Suite 200
Blue Bell, PA 19422
215-886-8947

ISSUE HISTORY

Δ	DATE	ISSUED FOR
1	11-09-2026	BID ISSUE

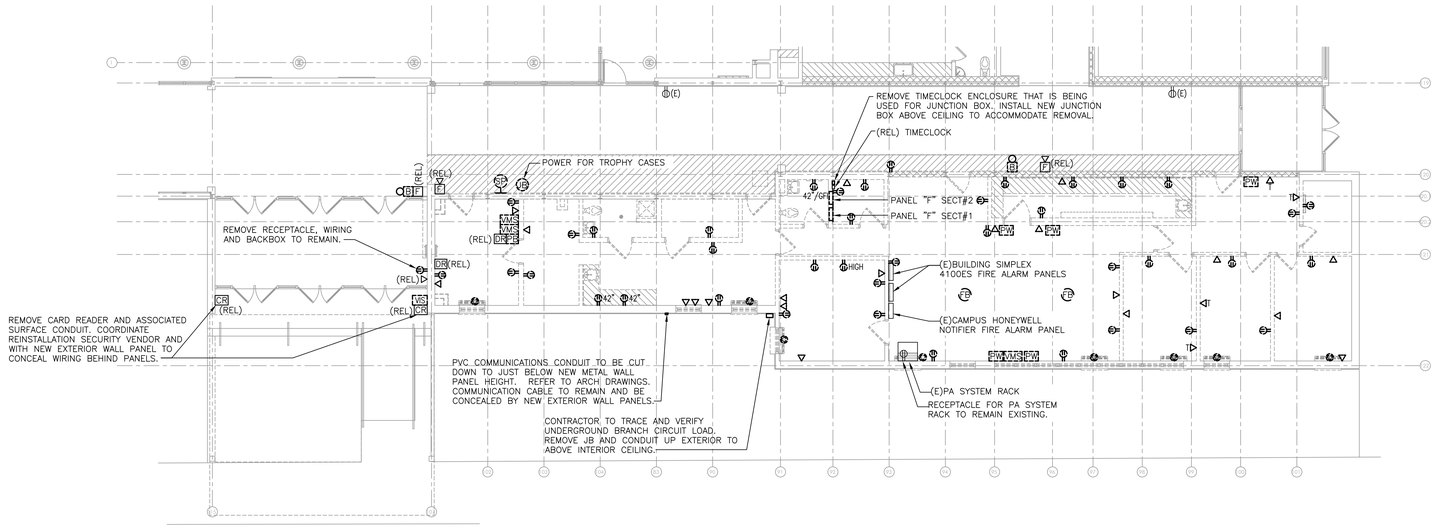
SHEET TITLE

ELECTRICAL COVER SHEET

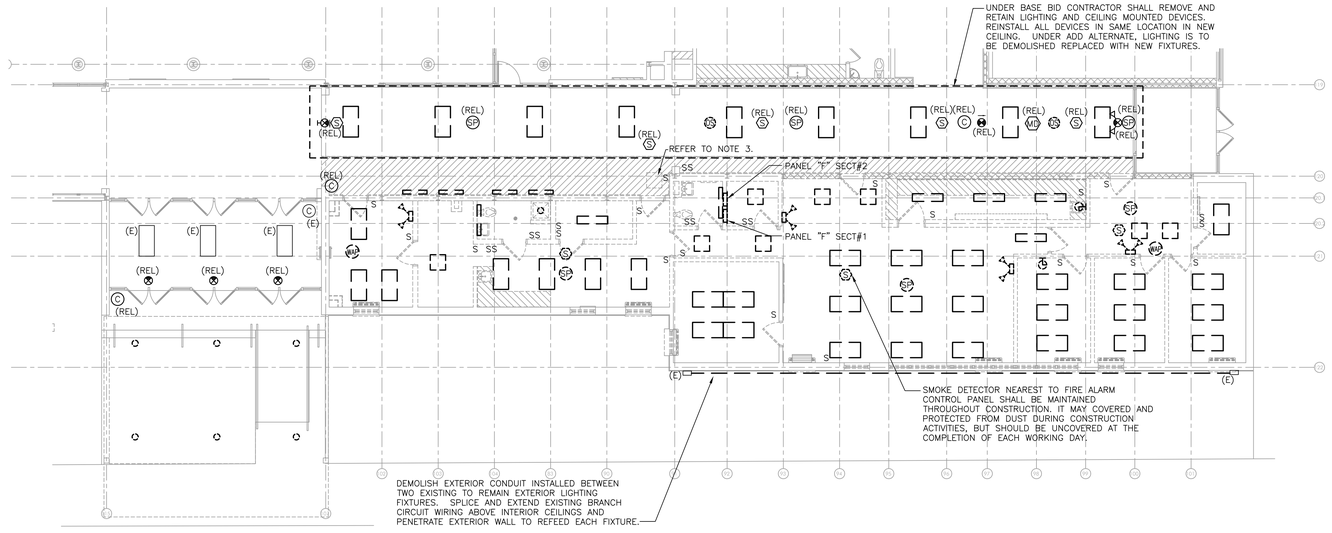
DRAWING NUMBER

E002

1/4/2026 3:32:46 PM HECKENDORN SHILES ARCHITECTS expressly reserves its common law copyright and other property rights in these plans. These are not to be reproduced, nor are they to be assigned to any third party, without first obtaining the expressed written consent of HECKENDORN SHILES ARCHITECTS



2 ED101 ELECTRICAL DEMOLITION FLOOR PLAN
SCALE: 1/8" = 1'-0"



1 ED101 ELECTRICAL DEMOLITION RCP PLAN
SCALE: 1/8" = 1'-0"

NOTES:

1. REFER TO DRAWINGS E001 AND E002 FOR LEGEND, ABBREVIATIONS, AND GENERAL NOTES.
2. ALL WORK SHOWN IS DEMOLISHED UNLESS OTHERWISE NOTED AS EXISTING (E) OR RELOCATED (REL).
3. WITHIN FLOOR ACCESS PANEL TO EXISTING PIPE TUNNEL BELOW, CONTRACTOR SHALL RELOCATE SWITCH FROM EXISTING LOCATION TO NEW ACCESS PANEL LOCATION. SPLICE AND EXTEND BRANCH CIRCUIT WIRING. PIPE TUNNEL LIGHTING TO BE REPLACED WITH NEW LIGHTING. REFER TO DWG E101 FOR ADDITIONAL DETAILS.
4. ALL DEVICES SHOWN TO BE DEMOLISHED SHALL HAVE ASSOCIATED WIRING REMOVED BACK TO SOURCE PANEL, UNLESS CONNECTED TO EXISTING–TO–REMAIN DEVICES/EQUIPMENT (NOT ALL DEVICES ARE SHOWN). AS NEEDED, MAINTAIN CIRCUIT INTEGRITY BY RE–WIRING OR MAINTAINING EXISTING WIRING TO KEEP EXISTING DEVICE(S) ACTIVE.
5. CONTRACTOR SHALL IDENTIFY, CLEARLY TAG/MARK, RESUPPORT FROM BUILDING STRUCTURE, AND PROTECT THE FOLLOWING EXISTING WIRING DURING DEMOLITION AND NEW CONSTRUCTION IN THE RENOVATION AREAS:
   A. ALL WIRING ASSOCIATED WITH EXISTING TO REMAIN MECHANICAL EQUIPMENT. COORDINATE WITH MECHANICAL CONTRACTOR TO IDENTIFY ALL MECHANICAL EQUIPMENT TO REMAIN.
   B. ALL TELEPHONE AND DATA CABLING AND DEVICES SHOWN TO BE REMOVED SHALL BE REMOVED BACK TO SOURCE. ALL OTHER TELEPHONE AND DATA CABLING SHALL BE RESUPPORTED FROM STRUCTURE, AND PROTECTED DURING CONSTRUCTION.
   C. ALL LOW–VOLTAGE AND POWER WIRING AND CABLES ASSOCIATED WITH EQUIPMENT IN OTHER AREAS AND OTHER FLOORS THAT IS TO REMAIN OPERATIONAL THROUGHOUT CONSTRUCTION WITHOUT INTERRUPTION OF SERVICE, UNLESS SPECIFICALLY COORDINATED WITH OWNER MINIMUM 14–DAYS IN ADVANCE.
5. CONTRACTOR IS RESPONSIBLE TO REPLACE ANY WIRING NOTED ABOVE, THAT IS DAMAGED OR REMOVED BY THE CONTRACTOR.
6. CONTRACTOR IS RESPONSIBLE TO PATCH ALL HOLES OR OPENINGS IN EXISTING WALLS AFTER DEMOLITION, INCLUDING EXISTING FIRE RATED WALLS, ABOVE AND BELOW CEILING, TO MAINTAIN INTEGRITY OF THE FIRE RATED WALLS. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF FIRE RATED WALLS.
7. REFER TO MECHANICAL DEMOLITION DRAWINGS FOR COMPLETE SCOPE OF EQUIPMENT TO BE DEMOLISHED. EC SHALL REMOVE ALL WIRING AND CONDUIT FOR DEMOLISHED MECHANICAL EQUIPMENT BACK TO SOURCE.

AGCS STATE ROAD ADMINISTRATION

110 E State Rd, West Grove, PA 19390

HSA PROJECT # :26-004

Heckendorn Shiles Architects

PROJECT TEAM

CLIENT
Avon Grove Charter School
110 E State Rd
West Grove, PA 19390
484-667-5000

ARCHITECTURAL
Heckendorn Shiles Architects
347 East Conestoga Road
Wayne, PA 19087
610-994-3500

STRUCTURAL
Orndorf & Associates, Inc
8600 West Chester Pike, Suite 201
Upper Darby, PA 19802

MEPFP
Schiller & Hersh Associates, Inc.
636 Skippack Pike, Suite 200
Blue Bell, PA 19422
215-886-8947

PLAN NORTH

ISSUE HISTORY

Δ	DATE	ISSUED FOR
1	11-09-2026	BID ISSUE

SHEET TITLE
ELECTRICAL DEMOLITION PLANS

DRAWING NUMBER
ED101

HECKENDORN SHILES ARCHITECTS expressly reserves its common law copyright and other property rights in these plans. These are not to be reproduced, nor are they to be assigned to any third party, without first obtaining the expressed written consent of HECKENDORN SHILES ARCHITECTS

1/4/2026 3:32:46 PM

LIGHTING FIXTURE SCHEDULE

FIXTURE TYPE	MANUFACTURER	CATALOG NUMBER	VOLTS	LIGHT ENGINE					DRIVER	MOUNTING	WARRANTY	REMARKS
				LUMENS	WATTS	COLOR	HOURS@L70	TYPE				
A1	FINELITE	HPR-SL-ANR-2X4-H-835-DCO-96LG-120V-SC-FC-10%-XX-96LG	120V	5,241	35.2	3500K	100,000@L90	LED	0-10V DIMMING	RECESSED	10 YEARS	2X4 LED ARCHITECTURAL CENTER-CHANNEL LENSED TROFFER WITH FLAT SIDE LENSES. FIXTURE SHALL BE A MAX OF 4" DEEP. FIXTURE SHALL HAVE SMOOTH FLAT IMPACT MODIFIED ACRYLIC DIFFUSER AND HINGED DOOR. CONTRACTOR SHALL COORDINATE MOUNTING WITH SPECIFIED CEILING TYPE.
A2	FINELITE	HPR-SL-ANR-2X2-B-835-DCO-96LG-120V-SC-FC-10%-XX-96LG	120V	4,314	30	3500K	100,000@L90	LED	0-10V DIMMING	RECESSED	10 YEARS	SAME AS FIXTURE TYPE "A1", EXCEPT FIXTURE TO BE 2'X2' AND REDUCED LUMEN OUTPUT.
B4	JLC-TECH	TBSL-MW-4-24-D-X-W	120V	2,740	21.4	4000K	-	LED	0-10V DIMMING	CEILING GRID	5 YEARS	1" WIDE X 4' LONG LED T-GRID FIXTURE. FIXTURE SHALL BE CERTIFIED BY ARMSTRONG FOR DIRECT INSTALL INTO ARMSTRONG CEILINGS WITHOUT ADDITIONAL MOUNTING SUPPORTS. FIXTURE SHALL BE MADE IN USA.
C1	HE WILLIAMS	4DRTL-L20-835-DIM1-UNV-LM-OF-CC	120V	1,794	19.8	3500K	55,000	LED	0-10V DIMMING	RECESSED	5 YEARS	4.5" LED ROUND RECESSED DOWNLIGHT FIXTURE WITH MEDIUM DISTRIBUTION AND DIE-CAST ALUMINUM FRAME WITH PRISMATIC, ACRYLIC LENS. FIXTURE SHALL HAVE A MAXIMUM DEPTH OF 5-3/4". FIXTURE FINISH SHALL BE SELECTED BY THE ARCHITECT.
D"X"	FINELITE	HP-XP-ID-8'-S-H-835-WSO-F-96LG-120V-DC-FC-10%-FA50--XX-FE-FB	120V	436'/LF↑ 775/LF↓	10/LF	3500K	100,000@L90	LED	0-10V DIMMING	PENDANT	10 YEARS	2.5"W x 2.5"D LINEAR PENDANT DIRECT/INDIRECT LED FIXTURE WITH ACRYLIC LENSES. NOMINAL FIXTURE LENGTH IS INDICATED BY "X" IN THE FIXTURE TYPE, AS SHOWN ON DRAWINGS.FIXTURES SHALL BE A CONTINUOUS RUN OF AS INDICATED ON THE DRAWINGS. FIXTURE SHALL BE CONSTRUCTED OF EXTRUDED ALUMINUM BODY, WITH SINGLE PIECE EXTRUDED FLUSH FROSTED WHITE SNAP-IN DIFFUSER.
E1	EMERGI-LITE	LX-1/2-N-R-M-UA-C	120V	-	1.5	-	-	LED	-	WALL/CEILING	5 YEARS	LED EDGE-LIT EXIT SIGN, AC-ONLY RECESSED AND UNIVERSAL MOUNT WITH UNIVERSAL FIELD INSTALLED ARROWS. CONTRACTOR SHALL DETERMINE THE NUMBER OF 1 AND 2 FACE SIGNS ON THE PROJECT AND SHALL DETERMINE THE ARROWS BASED ON THE CONTRACT DRAWINGS.
F 'X'	LUMINII	LIN-XXX"-HE64MO-F-DHS-XX-XX-CJB	120V	281/FT	3.8/FT	3500K	-	LED	0-10V DIMMING	RECESSED	7 YEARS	LOW-PROFILE LED PERIMETER FIXTURE. FIXTURE IS TO BE MAXIMUM 5/8" DEEP, WITH MUD-IN FLANGE ON ONE SIDE, AND ATTACHMENT TO HARD SURFACE ON OTHER SIDE, WITH OVERALL FIXTURE WITH OF APPROX. 3". PROVIDE FIXTURE WITH CONTINUOUS RUN LENGTHS, INCLUDING CORNER FITTINGS, WITH THE NECESSARY QUANTITY OF POWER SUPPLIES. ALL NECESSARY CABLES AND COMPONENTS SHALL BE PROVIDED FOR COMPLETE INSTALLATION.
G 'X'	LUMINII	LIN-XXX"-HE64SO-F-DHS-XX-XX-CJB	120V	397/FT	2.9/FT	3500K	-	LED	0-10V DIMMING	RECESSED	7 YEARS	LOW-PROFILE LED LINEAR FIXTURE. FIXTURE IS TO BE MAXIMUM 0.88" DEEP, WITH RECESS MOUNT IN GYPSUM BOARD CEILING. FIXTURES TO BE CONDTINUOUS FOR LENGTH OF FIXTURE SHOWN ON PLANS, WITH THE REMOTE POWER SUPPLY. ALL NECESSARY CABLES AND COMPONENTS SHALL BE PROVIDED FOR COMPLETE INSTALLATION. ARCHITECT TO SELECT FINISH FOR STANDARD OR PREMIUM FINISH OPTIONS.
H4	COLUMBIA	CVT4-LSCS-MV	120V	6,500	46	4000K	100,000	LED	NON-DIMMING	SURFACE	5 YEARS	4' VAPORTITE FIXTURE WITH SWITCHABLE LUMEN OUTPUT. FIXTURE TO BE IP65 RATED WITH POLYCARBONATE HOUSING AND FROSTED POLYCARBONATE LENS, AND STAINLESS STEEL LATCHES.
DS1	HE WILLIAMS	4DRTL-L20-840-SCA10-DIM1-UNV-LW-OF-CC-WET/CC	120V	1,352	19.8	4000K	55,000	LED	0-10V DIMMING	RECESSED	5 YEARS	4.5" LED ROUND RECESSED DOWNLIGHT FIXTURE WITH WIDE DISTRIBUTION, SLOPED CEILING ADAPTER (10 DEGREES), AND DIE-CAST ALUMINUM FRAME WITH PRISMATIC, ACRYLIC LENS. FIXTURE SHALL HAVE A MAXIMUM DEPTH OF 5-3/4". FIXTURE FINISH SHALL BE SELECTED BY THE ARCHITECT. FIXTURE SHALL BE UL LISTED FOR WET LOCATIONS.
DS2	HE WILLIAMS	4DRTL-L20-840-DIM1-UNV-LW-OF-CC-WET/CC	120V	1,352	19.8	4000K	55,000	LED	0-10V DIMMING	RECESSED	5 YEARS	SAME AS FIXTURE TYPE "DS1", EXCEPT FIXTURE WILL BE WITHOUT SLOPED CEILING ADAPTER.
DS3	TBD	TBD	120V	TBD	TBD	4000K	-	LED	-	-	-	TO BE DETERMINED (TBD)
SS1	INSIGHT	PS3-SO-40K-20-SM-120-DIM-CC-VS-IHL	120V	1,316	12	4000K	75,000	LED	0-10V DIMMING	SURFACE	5 YEARS	SURFACE MOUNTED LED 20 DEGREE ADJUSTABLE SPOT LIGHT WITH 4" DIAMETER WITH INTEGRAL DRIVER, VISOR, AND INTEGRAL HEX LOUVER. FIXTURE SHALL HAVE DIE-CAST ALUMINUM HOUSING AND TEMPERED GLASS LENS. FIXTURE SHALL BE UL LISTED FOR WET LOCATION AND IP66 RATED. FIXTURE FINISH SHALL BE SELECTED BY THE ARCHITECT.

IN ORDER FOR A FIXTURE TO BE CONSIDERED EQUAL BY THE ENGINEER, THE FIXTURE QUALITY, AESTHETICS, AND PERFROMANCE MUST BE FULLY EQUAL. FULL INTERIOR AND EXTERIOR LIGHTING ILLUMINATION CALCULATIONS FOR EACH SPACE WILL BE REQUIRED TO BE PROVIDED AS PART OF THE SUBMITALL REVIEW PROCESS, IF OTHER THAN BASIS OF DESIGN FIXTURES ARE SUBMITTED.

3 E101 ELECTRICAL LIGHTING-FIXTURE SCHEDULE
SCALE:NOT TO SCALE

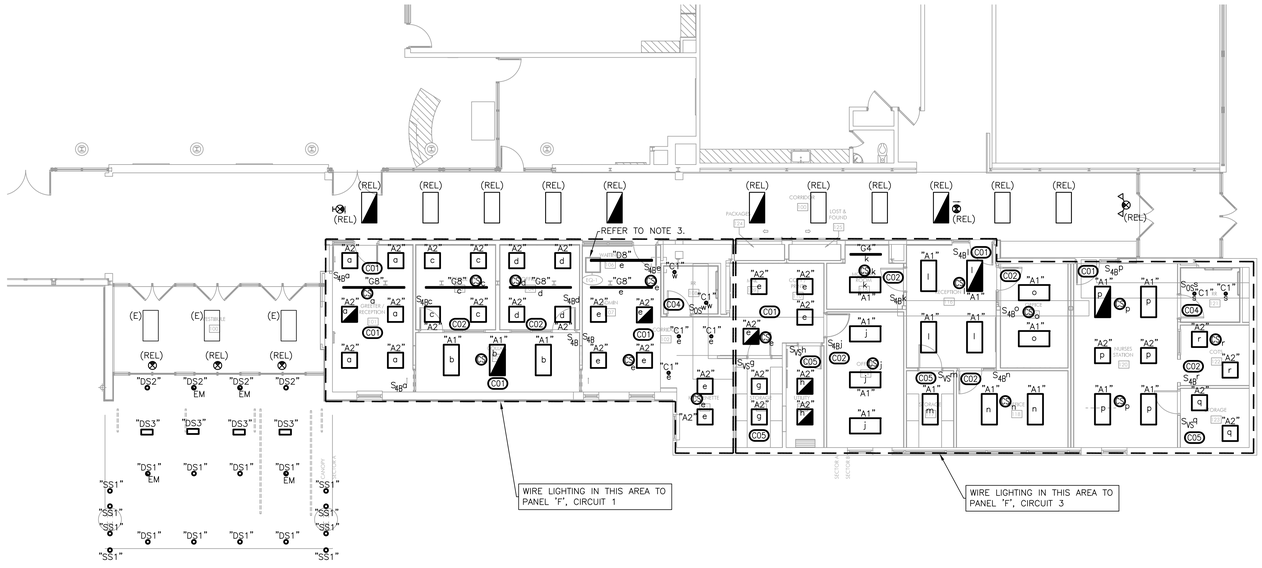
NOTES:

1. REFER TO DRAWINGS E001 AND E002 FOR LEGEND, ABBREVIATIONS, AND GENERAL NOTES.
2. ALL WORK SHOWN IS NEW WORK UNLESS OTHERWISE NOTED AS EXISTING (E) OR RELOCATED (REL).
3. WITHIN NEW FLOOR ACCESS PANEL TO EXISTING PIPE TUNNEL BELOW, CONTRACTOR SHALL RELOCATE SWITCH FROM EXISTING LOCATION TO NEW LOCATION. PROVIDE AND INSTALL (5) TYPE "H4" FIXTURES ALONG APPROXIMATELY 80' OF TUNNEL. COORDINATE FINAL LOCATIONS IN FIELD.
4. PROVIDE EMERGENCY LIGHTING TRANSFER DEVICE FOR NORMAL/EMERGENCY CIRCUIT. WIRE NORMAL CIRCUIT TO (E)NORMAL CIRCUIT IN CORRIDOR AHEAD OF ANY SWITCHING OR CONTROLS VIA NEW LIGHTING CONTROLS. WIRE EMERGENCY CIRCUIT TO (E)EMERGENCY CIRCUIT IN CORRIDOR AHEAD OF ANY SWITCHING OR CONTROLS VIA NEW LIGHTING CONTROLS. CONFIRM NORMAL LIGHTING CIRCUIT IS MONITORED BY (E)AREA PROTECTION RELAY PANEL IN MAIN ELECTRICAL ROOM. REFER TO DETAIL 1/E402 FOR ADDITIONAL INFORMATION.
5. WIRE NEW EXTERIOR LIGHTING TO PANEL "F", CKT #9 VIA NEW LIGHTING CONTROLS. REFER TO DETAIL 2/E402 FOR ADDITIONAL INFORMATION.
6. WIRE ALTERNATE–BID LIGHTING TO EXISTING CORRIDOR LIGHTING CIRCUIT(S) AHEAD OF ANY SWITCHING VIA NEW LIGHTING CONTROLS AS INDICATED.

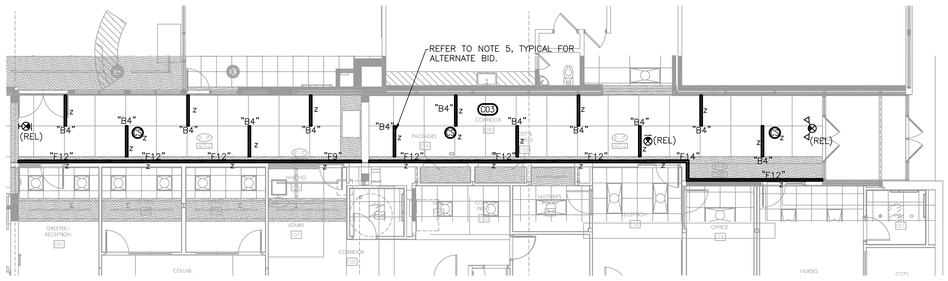
LIGHTING CONTROL SCHEDULE

	OCCUPANCY SENSOR	VACANCY SENSOR	DAYLIGHT SENSOR	OTHER	AUTOMATIC SHUT OFF BY	WALL CONTROLS	LIFE SAFETY EMERGENCY LIGHTING	SEQUENCE	LOCATION
C01	YES	-	-	-	OCCUPANCY SENSOR	4-BUTTON DIGITAL SWITCH(ES) (ON, OFF, RAISE, LOWER)	CONTROLLED WITH NORMAL LIGHTING. ON TO 100% DURING POWER OUTAGE.	LIGHTS ON BY OCCUPANCY SENSOR. LIGHTS OFF BY OCCUPANCY SENSOR OR USER. LIGHTS DIMMED BY USER. THE "ON" FUNCTION OF THE DIMMER SHALL RECALL THE LAST DIMMED SETTING.	OPEN OFFICES, NURSES STATION
C02	-	YES	-	-	VACANCY SENSOR	4-BUTTON DIGITAL SWITCH(ES) (ON, OFF, RAISE, LOWER)	-	LIGHTS ON BY USER. LIGHTS OFF BY VACANCY SENSOR OR USER. LIGHTS DIMMED BY USER. THE "ON" FUNCTION OF THE DIMMER SHALL RECALL THE LAST DIMMED SETTING.	OFFICES
C03	YES	-	-	-	OCCUPANCY SENSOR	-	-	LIGHTS ON AND OFF BY OCCUPANCY SENSOR.	CORRIDOR AND VESTIBULES
C04	YES	-	-	-	OCCUPANCY SENSOR	1-BUTTON DIGITAL SWITCH (ON/OFF) WITH INTEGRAL SENSOR AT SWITCH.	-	LIGHTS ON AND OFF BY OCCUPANCY SENSOR. MANUAL OFF BY USER IF DESIRED.	INDIVIDUAL TOILET ROOMS
C05	-	YES	-	-	VACANCY SENSOR	1-BUTTON DIGITAL SWITCH (ON/OFF) WITH INTEGRAL SENSOR AT SWITCH.	-	LIGHTS ON BY USER. LIGHTS OFF BY VACANCY SENSOR OR USER.	STORAGE, UTILITY ROOMS

4 E101 ELECTRICAL LIGHTING-CONTROL SCHEDULE
SCALE: NOT TO SCALE



1 E101 ELECTRICAL LIGHTING-NEW WORK FLOOR PLAN (BASE-BID)
SCALE:1/8" = 1'-0"



2 E101 ELECTRICAL LIGHTING-NEW WORK FLOOR PLAN (ALTERNATE-BID)
SCALE:1/8" = 1'-0"

PLAN NORTH

AGCS STATE ROAD ADMINISTRATION

110 E State Rd, West Grove, PA 19390

HSA PROJECT # :26-004

Heckendorn Shiles Architects

PROJECT TEAM

CLIENT
Avon Grove Charter School
110 E State Rd
West Grove, PA 19390
484-667-5000

ARCHITECTURAL
Heckendorn Shiles Architects
347 East Conestoga Road
Wayne, PA 19087
610-994-3500

STRUCTURAL
Orndorf & Associates, Inc
8600 West Chester Pike, Suite 201
Upper Darby, PA 19802

MEPFP
Schiller & Hersh Associates, Inc.
636 Skippack Pike, Suite 200
Blue Bell, PA 19422
215-886-8947

ISSUE HISTORY

Δ	DATE	ISSUED FOR
1	11-09-2026	BID ISSUE

SHEET TITLE
ELECTRICAL LIGHTING NEW WORK-FLOOR PLAN

DRAWING NUMBER
E101

HECKENDORN SHILES ARCHITECTS expressly reserves its common law copyright and other property rights in these plans. These are not to be reproduced, nor are they to be assigned to any third party, without first obtaining the expressed written consent of HECKENDORN SHILES ARCHITECTS

1/4/2028 3:32:46 PM

NOTES:

1. REFER TO DRAWINGS E001 AND E002 FOR LEGEND, ABBREVIATIONS, AND GENERAL NOTES.
2. ALL WORK SHOWN IS NEW WORK UNLESS OTHERWISE NOTED AS EXISTING (E) OR RELOCATED (REL).
3. NEW FEEDER FOR PANEL "AM" SHALL BE WIRED TO SPARE 3P-225A CIRCUIT BREAKER IN (E)SWITCHBOARD "DS1".
4. CONTRACTOR IS RESPONSIBLE FOR REMOVING AND REINSTALLING EXISTING CEILING TILES AS NECESSARY FOR WORK OUTSIDE OF THE RENOVATION AREA.

(E)FUSED DISC. FOR PANEL "PP-5-1"
(E)ENCL. C/B
(E)ENCL. C/B
(E)ATS "OS"
(E)ATS "LS"
(E)PANEL "N1"
(E)PANEL "NE"
(E)PANEL "EM"
(E)SWITCHBOARD "DS1", REFER TO NOTE 3.
(E)PANEL "B"
(E)PANEL "N2"
(2) SETS OF 2-1/2"C-4#4/0+1#4GND, ROUTED ABOVE EXISTING CEILINGS.
(E)PANEL "D"
(E)PANEL "EM"
(E)PANEL "CLAB"
TO BE FLUSH MOUNTED IN REAR OF CASEWORK. COORDINATE INSTALLATION IN FIELD WITH GC.
INSTALL NEW RECEPTACLE , WIRING AND BACKBOX TO REMAIN.
(E)PANEL "F" SECT#2
(E)PANEL "F" SECT#1
(REL)MECHANICAL TIMECLOCK SWITCH
HVAC CONTROL PANEL, BY MC
PANEL "AM"
COORDINATE LOCATION/HEIGHT WITH OWNER FOR MARQUEE SIGN TRANSMITTER.
2-CHANNEL SURFACE METALLIC RACEWAY DOWN FROM CEILING ABOVE.
WIRING FOR 2-CHANNEL SURFACE METALLIC RACEWAY SHALL BE ROUTED THROUGH ADJACENT STUD WALL.

1 E201 ELECTRICAL POWER-NEW WORK FLOOR PLAN
SCALE:1/8"=1'-0"

PLAN NORTH

AGCS STATE ROAD ADMINISTRATION

110 E State Rd, West Grove, PA 19390

HSA PROJECT # :26-004

Heckendorn Shiles Architects

PROJECT TEAM

CLIENT
Avon Grove Charter School
110 E State Rd
West Grove, PA 19390
484-667-5000

ARCHITECTURAL
Heckendorn Shiles Architects
347 East Conestoga Road
Wayne, PA 19087
610-994-3500

STRUCTURAL
Orndorf & Associates, Inc
8600 West Chester Pike, Suite 201
Upper Darby, PA 19802

MEPFP
Schiller & Hersh Associates, Inc.
636 Skippack Pike, Suite 200
Blue Bell, PA 19422
215-886-8947

ISSUE HISTORY

Δ	DATE	ISSUED FOR
1	11-09-2026	BID ISSUE

SHEET TITLE
ELECTRICAL POWER NEW WORK- FLOOR PLAN

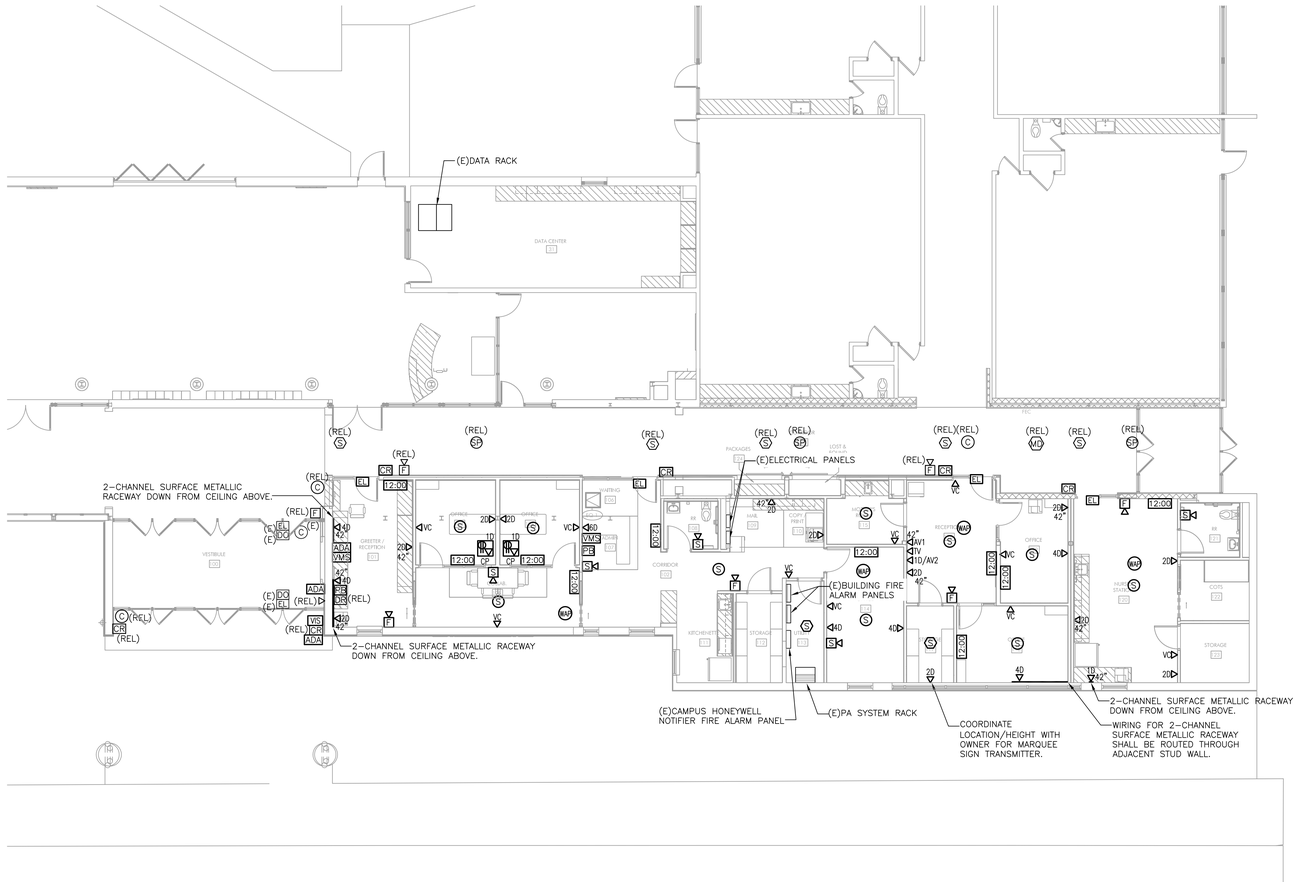
DRAWING NUMBER
E201

HECKENDORN SHILES ARCHITECTS expressly reserves its common law copyright and other property rights in these plans. These are not to be reproduced, nor are they to be assigned to any third party, without first obtaining the expressed written consent of HECKENDORN SHILES ARCHITECTS

1/4/2026 3:32:46 PM

NOTES:

1. REFER TO DRAWINGS E001 AND E002 FOR LEGEND, ABBREVIATIONS, AND GENERAL NOTES.
2. ALL WORK SHOWN IS NEW WORK UNLESS OTHERWISE NOTED AS EXISTING (E) OR RELOCATED (REL).
3. EXISTING FIRE ALARM FACP IN MAIN BUILDING IS A SIMPLEX/GRINNELL 4100ES FULLY ADDRESSABLE PANEL. EXISTING FIRE ALARM PANEL SYSTEM SHALL BE EXPANDED WITH NEW STROBES AND HORN/STROBE(S) AS NOTED ON THE DRAWINGS AND HEREIN. FIRE ALARM SYSTEM SHALL BE EXPANDED AS REQUIRED TO ACCOMMODATE THE NEW DEVICES AND EXTENDED TO ACCOMMODATE RELOCATING DEVICES AS SHOWN ON THE DRAWINGS. FIRE ALARM SYSTEM SHALL BE RE-PROGRAMMED TO REFLECT THE DEMOLISHED, RELOCATED AND NEW DEVICES IN THE SYSTEM. FIRE ALARM SYSTEM SHALL BE RE-TESTED IN ACCORDANCE WITH NFPA 72 AND THE LOCAL FIRE MARSHAL PRIOR TO ACCEPTANCE AND OCCUPANCY. CONTRACTOR SHALL HIRE JCI/SIMPLEX TO PROVIDE AND PERFORM THE FIRE ALARM WORK.



1 E301 ELECTRICAL FIRE/COMM-NEW WORK FLOOR PLAN
SCALE: 1/8" = 1'-0"

AGCS STATE ROAD ADMINISTRATION

110 E State Rd, West Grove, PA 19390

HSA PROJECT # :26-004

Heckendorn Shiles Architects

PROJECT TEAM

CLIENT
Avon Grove Charter School
110 E State Rd
West Grove, PA 19390
484-667-5000

ARCHITECTURAL
Heckendorn Shiles Architects
347 East Conestoga Road
Wayne, PA 19087
610-994-3500

STRUCTURAL
Orndorf & Associates, Inc
8600 West Chester Pike, Suite 201
Upper Darby, PA 19802

MEPFP
Schiller & Hersh Associates, Inc.
636 Skippack Pike, Suite 200
Blue Bell, PA 19422
215-886-8947

PLAN NORTH

ISSUE HISTORY

Δ	DATE	ISSUED FOR
1	11-09-2026	BID ISSUE

SHEET TITLE

ELECTRICAL FIRE/COMM NEW WORK-FLOOR PLAN

DRAWING NUMBER

E301

HECKENDORN SHILES ARCHITECTS expressly reserves its common law copyright and other property rights to these plans. These are not to be reproduced, nor are they to be assigned to any third party, without first obtaining the expressed written consent of HECKENDORN SHILES ARCHITECTS

1/4/2026 3:32:46 PM

LOCATION: MAIL 109	PANEL SCHEDULE FOR EXISTING PANEL: "F" SECTION #1 120/208V, 3PH, 4W, 225A BUS, 225A MLO, 10,000A RMS								RECESSED/FLUSH MOUNTED		
CKT NO	CIRCUIT POLE	AMP	REMARKS	A	B	C	A	B	C	REMARKS	AMP	CIRCUIT POLE	CKT NO
1	1	20	LIGHTING, INTERIOR BUILDING	1050			800			(E)LIGHTS LOBBY	20	1	2
3	1	20	LIGHTING, INTERIOR BUILDING		1050			800		(E)LIGHTS LOBBY	20	1	4
5	1	20	(E)LIGHTS VESTIBULE-LOBBY			900			360	(E)RECEPTACLES B156	20	1	6
7	1	20	(E)RECEPTACLES, B154, B160	720			720			(E)FAN B156, RECPT. B156, B152, B154	20	1	8
9	1	20	LIGHTING, EXTERIOR OVERHANG		314			360		(E)RECEPTACLE CLERICAL	20	1	10
11	1	20	(E)RECEPTACLE, LOBBY			360			720	(E)RECEPTACLES, B158, B159, B160	20	1	12
13	1	20	(E)RECEPTACLE, A158	540			900			RECEPTACLES, GREETER/RECEPTION RM. 101	20	1	14
15	1	20	RECEPTACLE, COPIER RM. 101		1200			900		RECEPTACLES, GREETER/RECEPTION RM. 101	20	1	16
17	1	20	RECEPTACLES, OFFICE RM. 103			900			900	RECEPTACLES, OFFICE RM. 104	20	1	18
19	1	20	RECEPTACLES, TV'S IN RMS 103&104 AND RECPT. RM. 105	720			540			RECEPTACLES, WAITING RM. 106, ADMIN. RM. 107	20	1	20
21	1	20	RECEPTACLES, CORRIDOR		540			540		RECEPTACLES, RR RM. 08	20	1	22
23	1	20	RECEPTACLE, COPIER RM. 110			1200			0	RECEPTACLES, ROOMS 111,112&113	20	1	24
25	1	20	RECEPTACLE, MICROWAVE, KITCHENETTE RM. 111	1600			1200			RECEPTACLE, REFRIGERATOR, KITCHENETTE RM. 111	20	1	26
27	1	20	SPARE		0			1260		RECEPTACLES, OFFICE RM. 114	20	1	28
29	1	20	(E)LIGHTS, A158			800			720	RECEPTACLES, MOTHER'S ROOM RM. 115	20	1	30
31	1	20	RECEPTACLES, RECEPTION RM. 116	720			720			RECEPTACLES, OFFICE RM. 119	20	1	32
33	1	20	(E)LIGHTS, LIBRARY		800			900		RECEPTACLES, OFFICE RM. 118	20	1	34
35	1	20	(E)LIGHTS, SECURITY, POST			800			800	(E)LIGHTS, A160, A161, A163	20	1	36
37	1	20	(E)RECEPTACLES, A163, A165	540			800			(E)REFRIGERATOR A163	20	1	38
39	1	20	RECEPTACLES, RR RM. 121		540			360		(E)RECEPTACLES, LIBRARY	20	1	40
41	1	20	(E)RECEPTACLES, LIBRARY			360			360	RECEPTACLES, COTS RM. 122	20	1	42
				5890	4444	5320	5680	5120	3860				

NOTES: CIRCUIT BREAKERS SHOWN AS SHADED/GRAY ARE TO REPLACE EXISTING 2-POLE CIRCUIT BREAKERS THAT WILL BE SPARE AFTER DEMOLITION. PROVIDE AND INSTALL NEW 1-POLE CIRCUIT BREAKERS AS SHOWN, TO MATCH EXISTING TYPE AND RATING TO MATCH EXISTING SQUARE D CIRCUIT BREAKERS.

PHASE A: 11.57 kVA
PHASE B: 9.56 kVA
PHASE C: 9.18 kVA
TOTAL: 30.31 kVA

LOCATION: MAIL 109	PANEL SCHEDULE FOR EXISTING PANEL: "F" SECTION #2 120/208V, 3PH, 4W, 225A BUS, 225A MLO, 10,000A RMS WITH FEED-THRU LUGS								RECESSED/FLUSH MOUNTED		
CKT NO	CIRCUIT POLE	AMP	REMARKS	A	B	C	A	B	C	REMARKS	AMP	CIRCUIT POLE	CKT NO
43	1	20	(E)SHOW CASE LIGHTS/VESTIBULE RECEPTACLE	360				750		(E) LOAD	20	1	36
45	1	20	RECEPTACLE, REFRIGERATOR, NURSES STATION RM. 120		1500				750	(E) LOAD	20	1	38
47	1	20	RECEPTACLES, NURSES STATION RM. 120			900				6360			
49	1	20	SPARE	0			6360			(E)CLAB RTU 1	70	3	40
51	1	20	SPARE		0				6360				
53	1	20	MAIN ENTRANCE DOOR OPENERS			800				2400			
55	1	20	(E)SIGN STATE ROAD	750			2400			(E) LOAD	30	2	42
57	1	20	(E)MASTER CLOCK		500			750		(E) LOAD	20	1	44
59	1	20	(E)FEEZER RECEPTACLE			1000			750	(E) LOAD	20	1	46
61	1	20	(E) LOAD	750			750			(E) LOAD	20	1	48
63	1	20	(E) LOAD		750			750		(E) LOAD	20	1	50
65	1	20	(E) LOAD			750			750	(E) LOAD	20	1	52
67	1	20	(E) LOAD	750			750			(E) LOAD	20	1	54
69	1	20	(E) LOAD		750			750		(E) LOAD	20	1	56
71	1	20	(E) LOAD			750			750	(E) LOAD	20	1	58
73				6000			750			(E) LOAD	20	1	60
75	3	100	(E)CLAB PANEL		6000			750		(E) LOAD	20	1	62
77						6000			3000	(E)CC-1	35	2	64
79	1	20	SPARE	0			3000						
81	1	20	SPARE		0			0		(E)CC-2 [NOT USED]	35	2	66
83	1	20	SPARE			0			0				
				8610	9500	10200	14760	10110	14010				

NOTES: CIRCUIT BREAKERS SHOWN AS SHADED/GRAY ARE TO REPLACE EXISTING 2-POLE CIRCUIT BREAKERS THAT WILL BE SPARE AFTER DEMOLITION. PROVIDE AND INSTALL NEW 1-POLE CIRCUIT BREAKERS AS SHOWN, TO MATCH EXISTING TYPE AND RATING TO MATCH EXISTING SQUARE D CIRCUIT BREAKERS.

PHASE A: 23.37 kVA
PHASE B: 19.61 kVA
PHASE C: 24.21 kVA
TOTAL: 67.19 kVA

3 E401 ELECTRICAL PANEL SCHEDULES "F"
SCALE: NOT TO SCALE

LOCATION: UTILITY 113	PANEL SCHEDULE FOR NEW PANEL: "AM" 208/120 V, 3PH, 4W, 225A BUS, 225A M.L.O. WITH DOUBLE LUGS, 10,000A RMS								SURFACE MOUNT		
CKT NO	CIRCUIT POLE	AMP	REMARKS	A	B	C	A	B	C	REMARKS	AMP	CIRCUIT POLE	CKT NO
1				7704			7140						2
3	3	80	OHRU-2		7704			7140		DOAS-1	70	3	4
5						7704			7140				6
7	2	15	CC-1 TO CC-10	420			420			CC-11 TO CC-19	15	2	8
9					420			420					10
11	1	15	CUH-6 AND CUH-7			60			768	EF-5 AND EF-6	20	1	12
13	2	15	IHRU-2-1 TO IHRU-2-4	912			3504			IWH-1A	*40	1	14
15					912			3504		IWH-1B	*40	1	16
17	2	*50	IWH-2A			2394			2394	IWH-2B	*50	2	18
19				2394			2394						20
21	2	*50	IWH-2C		2394			1500		EWH-1	20	1	22
23						2394			996	RCP-2	20	1	24
25	1	20	HVAC CONTROL PANEL	500			0			SPARE	20	1	26
27	1	20	SPARE		0			0		SPARE	20	1	28
29	1	20	SPARE			0			0	SPARE	20	1	30
31	1	20	SPARE	0			0			SPARE	20	1	32
33	1	20	SPARE		0			0		SPARE	20	1	34
35	1	20	SPARE			0			0	SPARE	20	1	36
37	1	20	SPARE	0			0			SPARE	20	1	38
39	1	20	SPARE		0			0		SPARE	20	1	40
41	1	20	SPARE			0			0	SPARE	20	1	42
				11930	11430	12552	13458	12564	11298				

PHASE A: 25.39 KVA
PHASE B: 23.99 KVA
PHASE C: 23.85 KVA
TOTAL: 73.23 KVA

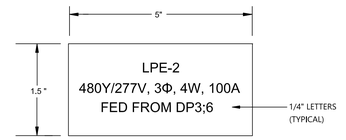
2 E401 ELECTRICAL PANEL SCHEDULE "AM"
SCALE: NOT TO SCALE

MECHANICAL EQUIPMENT - ELECTRICAL DATA SCHEDULE									
EQUIPMENT NAME	V-Φ-Hz	HP/kVA	WIRE AND CONDUIT	CIRCUIT BREAKER	PANEL:CKT #(S)	STARTER/ DISCONNECT FURNISHED BY MC, INSTALLED BY EC	STARTER/ DISCONNECT FURNISHED BY EC, INSTALLED BY EC	THERMAL MOTOR SWITCH FURNISHED BY EC, INSTALLED BY EC	REMARKS
CC-1	208-1-60	.4 MCA	3/4"C-2#12+1#12GND	2P-15A	AM;7,9	-	-	UNIT MOUNT	-
CC-2	208-1-60	.3 MCA	3/4"C-2#12+1#12GND	2P-15A	AM;7,9	-	-	UNIT MOUNT	-
CC-3	208-1-60	.3 MCA	3/4"C-2#12+1#12GND	2P-15A	AM;7,9	-	-	UNIT MOUNT	-
CC-4	208-1-60	.3 MCA	3/4"C-2#12+1#12GND	2P-15A	AM;7,9	-	-	UNIT MOUNT	-
CC-5	208-1-60	.6 MCA	3/4"C-2#12+1#12GND	2P-15A	AM;7,9	-	-	UNIT MOUNT	-
CC-6	208-1-60	.3 MCA	3/4"C-2#12+1#12GND	2P-15A	AM;7,9	-	-	UNIT MOUNT	-
CC-7	208-1-60	.3 MCA	3/4"C-2#12+1#12GND	2P-15A	AM;7,9	-	-	UNIT MOUNT	-
CC-8	208-1-60	.3 MCA	3/4"C-2#12+1#12GND	2P-15A	AM;7,9	-	-	UNIT MOUNT	-
CC-9	208-1-60	.3 MCA	3/4"C-2#12+1#12GND	2P-15A	AM;7,9	-	-	UNIT MOUNT	-
CC-10	208-1-60	.4 MCA	3/4"C-2#12+1#12GND	2P-15A	AM;7,9	-	-	UNIT MOUNT	-
CC-11	208-1-60	.3 MCA	3/4"C-2#12+1#12GND	2P-15A	AM;8,10	-	-	UNIT MOUNT	-
CC-12	208-1-60	.4 MCA	3/4"C-2#12+1#12GND	2P-15A	AM;8,10	-	-	UNIT MOUNT	-
CC-13	208-1-60	.3 MCA	3/4"C-2#12+1#12GND	2P-15A	AM;8,10	-	-	UNIT MOUNT	-
CC-14	208-1-60	.4 MCA	3/4"C-2#12+1#12GND	2P-15A	AM;8,10	-	-	UNIT MOUNT	-
CC-15	208-1-60	.3 MCA	3/4"C-2#12+1#12GND	2P-15A	AM;8,10	-	-	UNIT MOUNT	-
CC-16	208-1-60	.3 MCA	3/4"C-2#12+1#12GND	2P-15A	AM;8,10	-	-	UNIT MOUNT	-
CC-17	208-1-60	.3 MCA	3/4"C-2#12+1#12GND	2P-15A	AM;8,10	-	-	UNIT MOUNT	-
CC-18	208-1-60	.3 MCA	3/4"C-2#12+1#12GND	2P-15A	AM;8,10	-	-	UNIT MOUNT	-
CC-19	208-1-60	.3 MCA	3/4"C-2#12+1#12GND	2P-15A	AM;8,10	-	-	UNIT MOUNT	-
CUH-6	120-1-60	.5 FLA	3/4"C-2#12+1#12GND	1P-15A	AM;11	UNIT MOUNT	-	-	
CUH-7	120-1-60	.5 FLA	3/4"C-2#12+1#12GND	1P-20A	AM;11	UNIT MOUNT	-	-	
DOAS-1	208-3-60	59.5 MCA	1"C-3#4+1#8GND	3P-70A	AM;2,4,6	UNIT MOUNT	-	-	UNIT PROVIDED WITH MANUFACTURER'S WIRED RECEPTACLE
EF-5	120-1-60	1/15 HP	3/4"C-2#12+1#12GND	1P-20A	AM;12	UNIT MOUNT	-	-	-
EF-6	120-1-60	1/6 HP	3/4"C-2#12+1#12GND	1P-20A	AM;12	UNIT MOUNT	-	-	-
EWH-1	120-1-60	12.5 A	3/4"C-2#12+1#12GND	1P-20A	AM;22	UNIT MOUNT	-	-	-
IHRU-2-1	208-1-60	1.9 A	3/4"C-2#12+1#12GND	2P-15A	AM;13,15	-	-	UNIT MOUNT	UNITS SERVED CC-1 TO CC-5
IHRU-2-2	208-1-60	1.9 A	3/4"C-2#12+1#12GND	2P-15A	AM;13,15	-	-	UNIT MOUNT	UNITS SERVED CC-6 TO CC-11
IHRU-2-3	208-1-60	1.9 A	3/4"C-2#12+1#12GND	2P-15A	AM;13,15	-	-	UNIT MOUNT	UNITS SERVED CC-12 TO CC-15
IHRU-2-4	208-1-60	1.9 A	3/4"C-2#12+1#12GND	2P-15A	AM;13,15	-	-	UNIT MOUNT	UNITS SERVED CC-16 TO CC-19
IWH-1A	120-1-60	29.2A	3/4"C-2#8+1#10GND	1P-40A	AM;14	-	-	UNIT MOUNT	-
IWH-1B	120-1-60	29.2A	3/4"C-2#8+1#10GND	1P-40A	AM;16	-	-	UNIT MOUNT	-
IWH-2A	208-1-60	39.9A	3/4"C-2#6+1#10GND	2P-50A	AM;17,19	-	-	UNIT MOUNT	-
IWH-2B	208-1-60	39.9A	3/4"C-2#6+1#10GND	2P-50A	AM;18,20	-	-	UNIT MOUNT	-
IWH-2C	208-1-60	39.9A	3/4"C-2#6+1#10GND	2P-50A	AM;21,23	-	-	UNIT MOUNT	
OHRU-2	208-3-60	64.2 MCA	1"C-3#4+1#8GND	3P-80A	AM;1,3,5	-	UNIT MOUNT	-	REFER TO DETAIL 3/E402
RCP-2	120-1-60	8.3 FLA	3/4"C-2#12+1#12GND	1P-20A	AM;24	-	-	UNIT MOUNT	-

1 E401 ELECTRICAL MOTOR WIRING SCHEDULE
SCALE: NOT TO SCALE

NOTES:

1. REFER TO DRAWINGS E001 AND E002 FOR LEGEND, ABBREVIATIONS, AND GENERAL NOTES.
2. VERIFY IN FIELD, IF NOT DEMOLISHED BY DEMO WORK ALL CIRCUITS INDICATED AS (E) OR (E) LOAD TO BE TRACED, IDENTIFIED AS TO ITS SPECIFIC PURPOSE, AND MARKED ON THE CIRCUIT DIRECTORY.
3. CIRCUIT DESCRIPTIONS THAT ARE GREY/SHADED REPRESENT NEW CIRCUIT BREAKER TO BE FURNISHED AND INSTALLED IN EXISTING PANELS. NEW CIRCUIT BREAKERS SHALL MATCH TYPE AND AVAILABLE FAULT CURRENT RATING AS EXISTING CIRCUIT BREAKERS IN SAME PANEL.
4. ASTERISK INDICATES CIRCUIT BREAKER TO BE PROVIDED WITH PADLOCK HASP.
5. PROVIDE NEW TYPED CIRCUIT DIRECTORY CARDS FOR EACH PANEL.
6. PROVIDE NEW NAME PLATE FOR ALL PANELS, BOTH EXISTING AND NEW. REFER TO DETAIL BELOW FOR REQUIREMENTS.



NAME PLATE NOTES:

1. REFER TO SPECIFICATIONS FOR ADDITIONAL NAMEPLATE REQUIREMENTS.
2. NAMEPLATE TO BE 1/16" THICK WHITE LAMINATED ACRYLIC OR MELAMINE LABEL WITH BLACK CENTER LAMINATE. FACE SHALL BE WHITE, ENGRAVED LETTERS SHALL BE BLACK.
3. NAMEPLATE INFORMATION SHALL INCLUDE PANEL NAME, SUPPLY VOLTAGE, AMPERAGE AND SOURCE PANEL NAME AND CIRCUIT NUMBER.

4 E401 TYPICAL PANEL LABEL DETAIL
SCALE: NOT TO SCALE

AGCS STATE ROAD ADMINISTRATION

110 E State Rd, West Grove, PA 19390

HSA PROJECT # :26-004

Heckendorn Shiles Architects

PROJECT TEAM

CLIENT
Avon Grove Charter School
110 E State Rd
West Grove, PA 19390
484-667-5000

ARCHITECTURAL
Heckendorn Shiles Architects
347 East Conestoga Road
Wayne, PA 19087
610-994-3500

STRUCTURAL
Orndorf & Associates, Inc
8600 West Chester Pike, Suite 201
Upper Darby, PA 19802

MEPFP
Schiller & Hersh Associates, Inc.
636 Skippack Pike, Suite 200
Blue Bell, PA 19422
215-886-8947

ISSUE HISTORY

Δ	DATE	ISSUED FOR
1	11-09-2026	BID ISSUE

SHEET TITLE

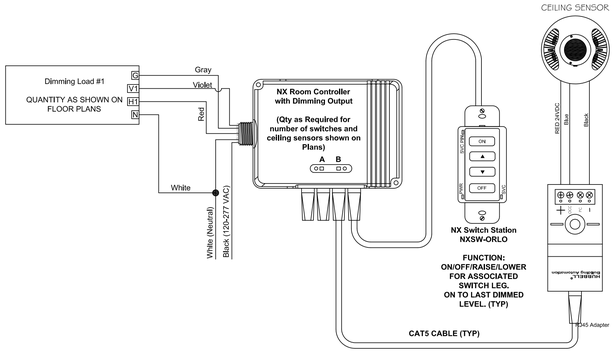
ELECTRICAL SCHEDULES

DRAWING NUMBER

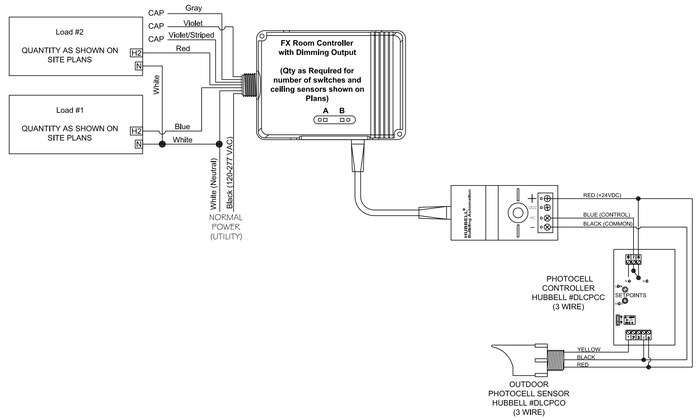
E401

HECKENDORN SHILES ARCHITECTS expressly reserves its common law copyright and other property rights in these plans. These are not to be reproduced, nor are they to be assigned to any third party, without first obtaining the expressed written consent of HECKENDORN SHILES ARCHITECTS

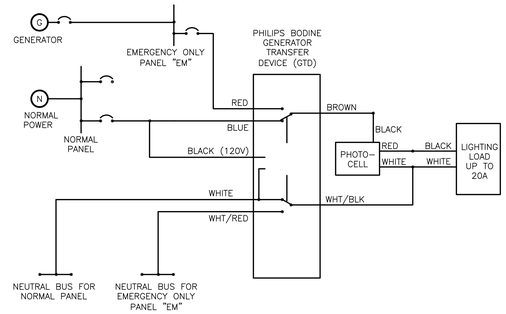
1/4/2026 3:32:46 PM



C02 OFFICE DIGITAL LIGHTING ROOM CONTROLLER DETAIL
NOT TO SCALE



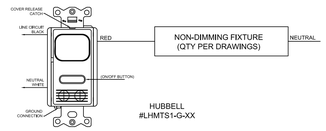
2 EXTERIOR NORMAL LIGHTING CONTROL DIAGRAM
E402 SCALE: NO SCALE



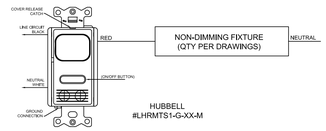
NORMAL OPERATION – (SHOWN ABOVE) AC LED LIGHTING DRIVER SUPPLIED BY NORMAL PANEL & CONTROLLED BY WALL SWITCH. CONFIRM NORMAL POWER PANEL IS MONITORED BY AREA OF PROTECTION PANEL.

GENERATOR OPERATION – AC LED LIGHTING DRIVER SUPPLIED BY GENERATOR THROUGH EMERGENCY PANEL AND INDEPENDANT OF WALL SWITCH.

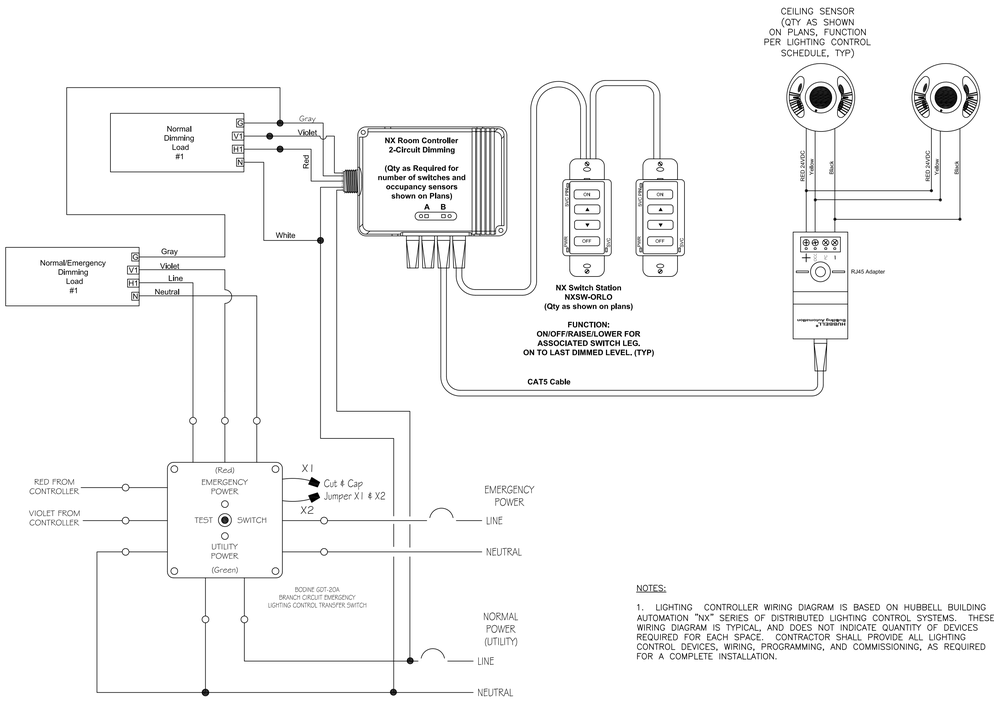
1 EXTERIOR EMERGENCY LIGHTING WIRING DIAGRAM
E402 SCALE: NO SCALE



C04 INDIVIDUL TOILET RM. LIGHTING CONTROL DIAGRAM TYPICAL
SCALE: NOT TO SCALE



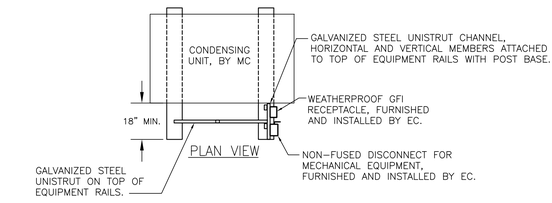
C05 STORAGE, UTILITY RM. LIGHTING CONTROL DIAGRAM TYPICAL
SCALE: NOT TO SCALE

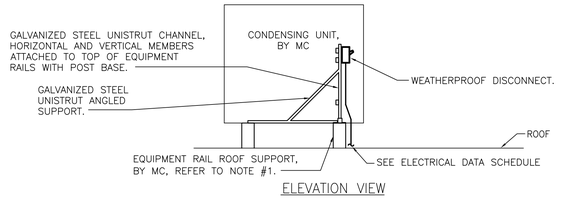


NOTES:

1. LIGHTING CONTROLLER WIRING DIAGRAM IS BASED ON HUBBELL BUILDING AUTOMATION "NX" SERIES OF DISTRIBUTED LIGHTING CONTROL SYSTEMS. THESE WIRING DIAGRAM IS TYPICAL AND DOES NOT INDICATE QUANTITY OF DEVICES REQUIRED FOR EACH SPACE. CONTRACTOR SHALL PROVIDE ALL LIGHTING CONTROL DEVICES, WIRING, PROGRAMMING, AND COMMISSIONING, AS REQUIRED FOR A COMPLETE INSTALLATION.

C01 OPEN OFFICES, NURSES STATION DIGITAL LIGHTING ROOM CONTROLLER DETAIL
NOT TO SCALE





NOTES:

1. MC PROVIDED EQUIPMENT RAIL ROOF SUPPORTS SHALL EXTEND MINIMUM 18" BEYOND END OF UNIT ON ONE SIDE FOR MOUNTING AND INSTALLATION OF UNISTRUT STRUCTURE FOR ELECTRICAL EQUIPMENT. COORDINATE FINAL MOUNTING OF UNITSTRUT AND ELECTRICAL EQUIPMENT TO ENSURE IT DOES NOT INHIBIT ACCESS AND REQUIRED CLEARANCES TO THE MECHANICAL EQUIPMENT.
2. PROVIDE CONDUIT SUPPORTS, AS NEEDED, BETWEEN PIPE CURB CONDUITS PENETRATE ROOF AND EQUIPMENT. ELECTRICAL CONDUITS SHALL NOT BE SUPPORTED FROM MECHANICAL PIPING, THOUGH USE OF MECHANICAL ROOF MOUNTED PIPE SUPPORTS IS ALLOWED WHEN COORDINATED WITH MC IN FIELD.
3. ALL GALVANIZED STEEL SUPPORTS FOR DISCONNECT ARE FURNISHED AND INSTALLED BY THE EC.

3 ROOF MOUNTED CONDENSING UNIT RECEPTACLE & DISCONNECT DETAIL
E402 SCALE: NOT TO SCALE

HECKENDORN SHILES ARCHITECTS expressly reserves its common law copyright and other property rights to these plans. These are not to be reproduced, nor are they to be assigned to any third party, without first obtaining the expressed written consent of HECKENDORN SHILES ARCHITECTS

1/4/2026 3:32:46 PM

AGCS STATE ROAD ADMINISTRATION

110 E State Rd, West Grove, PA 19390

HSA PROJECT # :26-004

Heckendorn Shiles Architects

PROJECT TEAM

CLIENT
Avon Grove Charter School
110 E State Rd
West Grove, PA 19390
484-667-5000

ARCHITECTURAL
Heckendorn Shiles Architects
347 East Conestoga Road
Wayne, PA 19087
610-994-3500

STRUCTURAL
Orndorf & Associates, Inc
8600 West Chester Pike, Suite 201
Upper Darby, PA 19802

MEPFP
Schiller & Hersh Associates, Inc.
636 Skippack Pike, Suite 200
Blue Bell, PA 19422
215-886-8947

ISSUE HISTORY

Δ	DATE	ISSUED FOR
1	11-09-2026	BID ISSUE

SHEET TITLE

ELECTRICAL DETAILS

DRAWING NUMBER

E402