

ADDENDUM 2

COLONIAL HEIGHTS PUBLIC SCHOOLS COLONIAL HEIGHTS, VIRGINIA



INVITATION FOR BID: # 2022-8000-1

PROJECT: Switchboard Replacement

May 20, 2022

**COLONIAL HEIGHTS HIGH SCHOOL
COLONIAL HEIGHTS, VIRGINIA
ARCHITECT'S PROJECT NO: 611565.1**

1 **GENERAL:**

2 Planholders are requested to insert this Addendum in the front of their Project Manual. Inform all
3 concerned that the Bidding Documents are modified by this Addendum.

4 The following modifications and clarifications are hereby made a part of the Bidding Documents and
5 supersede or otherwise modify the provisions of the published *Project Manual* and *Drawings*, dated
6 [March 22, 2022](#), and [Addendum 01](#), dated [May 12, 2022](#)..

7 Refer to the Drawings, Specification Sections, or other Documents, if any, attached to this Addendum,
8 which are hereby made a part of this Addendum.

9 **MODIFICATIONS TO THE PROJECT MANUAL AND DRAWINGS:**

10 DELETE the previously issued Documents indicated below in their entirety and SUBSTITUTE the
11 revised Documents in their entirety, noted as [Addendum 02](#), dated [May 20, 2022](#)

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|----|--------------|--|
| 12 | DRAWING E0-1 | LEGENDS, ABBREVIATIONS AND GENERAL NOTES |
| 13 | DRAWING E1-1 | FIRST FLOOR PLAN – ELECTRICAL DEMOLITION |
| 14 | DRAWING E1-2 | FIRST FLOOR PLAN – OVERALL |
| 15 | DRAWING E3-1 | ENLARGED FLOOR PLANS |
| 16 | DRAWING E5-1 | POWER ONE-LINE DIAGRAM |

17 ADD new Documents in their entirety, noted as [Addendum 02](#), dated [May 20, 2022](#).

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| 18 | DRAWING E4-2 | ELECTRICAL DETAILS |
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END OF ADDENDUM NO 02

PROJECT NO:	811566
DATE:	APRIL 25, 2022
REVISIONS	
DATE	DESCRIPTION

GENERAL NOTES	
A.	THE CONTRACT DOCUMENTS ARE COMPLEMENTARY AND WHAT IS REQUIRED BY ONE SHALL BE AS BINDING AS IF REQUIRED BY ALL. IN THE CASE OF A CONFLICT, DISAGREEMENT, OR AMBIGUITY, PROVIDE THE BETTER QUALITY. IN THE CASE OF A CONFLICT, DISAGREEMENT, OR AMBIGUITY, PROVIDE THE GREATER QUANTITY OF WORK.
B.	FOLLOW MOUNTING HEIGHTS INDICATED IN THE ELECTRICAL LEGEND UNLESS OTHERWISE INDICATED. MEASURE ALL MOUNTING HEIGHTS FROM THE DEVICE CENTER LINE UNLESS OTHERWISE INDICATED.
C.	FIELD VERIFY EXACT FEEDER LOCATIONS FOR MECHANICAL EQUIPMENT PRIOR TO ROUGH-IN.
D.	EQUIPMENT CONNECTIONS ARE INDICATED IN THEIR APPROXIMATE LOCATIONS. VERIFY EXACT LOCATIONS OF ALL CONNECTIONS WITH OTHER TRADES SUPPLYING EQUIPMENT TO AVOID CONFLICTS AT INSTALLATION.
E.	LOCATED ALL SWITCHES FOR LOCAL CONTROL OF LIGHTING ON STRIKE SIDE OF SINGLE DOORS UNLESS OTHERWISE INDICATED.
F.	PROVIDE SPECIFIC BREAKER ARRANGEMENT FOR THE PANEL BOARDS WHEREVER PHYSICALLY POSSIBLE. PROVIDE AS-BUILT DRAWINGS INDICATING ACTUAL BRANCH CIRCUIT ARRANGEMENT. PROVIDE TYPE WRITTEN PANELBOARD DIRECTORIES INDICATING ACTUAL BRANCH CIRCUIT ARRANGEMENT.
G.	PROVIDE AS-BUILT DRAWINGS INDICATING ACTUAL BRANCH CIRCUIT ARRANGEMENT. PROVIDE TYPE WRITTEN PANELBOARD DIRECTORIES INDICATING ACTUAL BRANCH CIRCUIT ARRANGEMENT. HAND WRITTEN SCHEDULES ARE NOT ACCEPTABLE.
H.	ALL CONDUIT RUNS INDICATED ARE DIAGRAMMATIC. COORDINATE ROUTING IN ALL SPACES WITH OTHER TRADES.
I.	ALL PANELBOARDS INDICATED ARE HOUSED IN A SINGLE WIDTH ENCLOSURE. UNO, THE CONTRACTOR SHALL FIELD VERIFY ROOM LAYOUT AND ADJUST ACCORDINGLY, AT NO COST TO THE OWNER, IF PROVIDING ANY PANELBOARD ENCLOSURES.
J.	WHERE POWER AND COMMUNICATION OUTLETS ARE INDICATED IN CLOSE PROXIMITY ON THE DRAWINGS, FIELD COORDINATE THE LOCATIONS TO PLACE THE OUTLETS ADJACENT TO EACH OTHER.
K.	ALL EXTERIOR RECEPTACLES SHALL BE LABELED "WIR" - WEATHER RESISTANT.
L.	WHEN GROUPING MULTIPLE LINE TO NEUTRAL BRANCH CIRCUITS IN A CONDUIT, PROVIDE DEDICATED COLOR CODED NEUTRAL CONDUCTORS FOR EACH CIRCUIT. DO NOT USE BREAKER TIES AND SHARED NEUTRALS EVEN THOUGH PERMITTED BY NEC.
M.	PROVIDE A 2" WIDE YELLOW LINE PAINTED ON THE FLOOR INDICATING THE ELECTRICAL WORKING SPACE IN FRONT OF ALL ELECTRICAL PANELS IN ELECTRICAL ROOMS. REFER TO PLANS FOR ELECTRICAL WORKING SPACE DETAILS. STENCIL "NO STORAGE IN 2" HIGH, YELLOW LETTERS CENTERED IN THE OUTLINED AREA.

ABBREVIATIONS	
1P	SINGLE PHASE
3P	THREE PHASE
3R	WEATHERPROOF (NEMA 3R)
A	AMPS
AF	ABOVE FINISHED FLOOR
AL	ALUMINUM
ATS	AUTOMATIC TRANSFER SWITCH
BFC	BELOW FINISHED CEILING
BFG	BELOW FINISHED GRADE
BKR	BREAKER
C	CONDUIT
CATV	COMMUNITY ANTENNA TELEVISION (CABLE)
CB	CIRCUIT BREAKER
CBL	CABLE
CCTV	CLOSED CIRCUIT TELEVISION
CKT	CIRCUIT
CLG	CEILING
CLR	CLEAR
CO	COMPANY
COMB	COMBINATION
COMM	COMMUNICATIONS
CU	COPPER
DM	DIAMETER
DISC	DISCONNECT
DIV	DIVISION
DWG	DRAWING
EBH	ELECTRIC BASEBOARD HEATER
EC	EMPTY CONDUIT
ECS	EMERGENCY COMMUNICATIONS STATION
ELEC	ELECTRICAL
ELEV	ELEVATOR
EPO	EMERGENCY POWER OFF
EQ	EQUIPMENT
ETR	EXISTING TO REMAIN
EWC	ELECTRIC WATER COOLER
EX	EXISTING
EXT	EXTERIOR
FA	FIRE ALARM
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FAGP	FIRE ALARM GRAPHIC PANEL
FAXP	FIRE ALARM EXTENDER PANEL
FFSCP	FIRE FIGHTER'S SMOKE CONTROL PANEL
FLA	FULL LOAD AMPS
FFMR	FUSE PER MANUFACTURERS REQUIREMENTS/RECOMMENDATIONS
FPND	FUSE PER NAMEPLATE DATA
G	GROUND
GE	GROUND FAULT PROTECTION FOR EQUIPMENT, 5-50mA PER NEC 477.22 (PROVIDE ACCESSORY FOR INDICATED BREAKER)
GFCI	GROUND FAULT CIRCUIT INTERRUPT
GFP	GROUND FAULT PROTECTION FOR PERSONNEL, 4-6mA (PROVIDE ACCESSORY FOR INDICATED BREAKER)
HKP	HOUSEKEEPING PAD
HP	HORSEPOWER
HPS	HIGH PRESSURE SODIUM
Hz	HERTZ
IAW	IN ACCORDANCE WITH
IG	ISOLATED GROUND
J-BOX	JUNCTION BOX
KHFS	KITCHEN HOOD FIRE SUPPRESSION SYSTEM
KHz	KILOHERTZ
KVA	KILOVOLT AMPS
KW	KILOWATTS
KWH	KILOWATT HOURS
L	LOCKOUT TO PREVENT UNAUTHORIZED SWITCHING (PROVIDE ACCESSORY FOR INDICATED BREAKER)
LC	ROUTE CIRCUIT TO LOAD VIA LIGHTING CONTACTOR. REFER TO LC SCHEDULE
LED	LIGHT EMITTING DIODE
LTD	LIGHTING
LTS	LIGHTS
MAX	MAXIMUM
MCA	MINIMUM CIRCUIT AMPACITY
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MH	METAL HALIDE
MHz	MEGAHERTZ
MIN	MINIMUM
ML	MAINTENANCE LOCK (PROVIDE ACCESSORY FOR INDICATED BREAKER)
MLO	MAIN LUG ONLY
MMS	MASS NOTIFICATION SYSTEM
MOCP	MAXIMUM OVER CURRENT PROTECTION
MTD	MOUNTED
N	NEUTRAL
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NO	NUMBER
OCF	OWNER FURNISHED CONTRACTOR INSTALLED
P	PILOT LIGHT (AT THE SWITCH HANDLE)
PBD	PANELBOARD
PD	PROTECTIVE DEVICE
RCPT	RECEPTACLE
REC	RECEPTACLE
SEC	SECURITY
SPD	SURGE PROTECTIVE DEVICE
SPEC	SPECIFICATIONS
ST	SHUNT TRIP, 120V COIL, (PROVIDE ACCESSORY FOR INDICATED BREAKER)
SW	SWITCH
SWBD	SWITCHBOARD
TBB	TELECOMMUNICATIONS BONDING BACKBONE
TC	TELECOMMUNICATIONS CLOSET
TELECOM	TELECOMMUNICATIONS
TGB	TELECOMMUNICATIONS GROUNDING BUS BAR
TMGB	TELECOMMUNICATIONS MAIN GROUNDING BUS BAR
TYP	TYPICAL
UNO	UNLESS NOTED (INDICATED) OTHERWISE
V	VOLTS
VFD	VARIABLE FREQUENCY DRIVE
W	WATTS
WT	WITH
WG	WIRE GUARD
WP	WEATHERPROOF
XFER	TRANSFER
XFMR	TRANSFORMER

COMMUNICATIONS LEGEND	
SYMBOL	DESCRIPTION
▽	TELECOMMUNICATIONS JUNCTION BOX, PROVIDE 1.25" CONDUIT BUSHING TO ABOVE CEILING, MOUNT AT +1'-6" AFF.
▽	TELECOMMUNICATIONS JUNCTION, PROVIDE 1.25" CONDUIT BUSHING TO ABOVE CEILING, MOUNT AT +1'-6" AFF.
♀	INTERCOM CALL SWITCH LOCATION, MOUNT AT +4'-6" AFF.
⊗	MICROPHONE OUTLET, WALL MOUNT AT +1'-6" AFF, FLUSH FLOOR MOUNT.
⊗	SOUND SYSTEM CONSUMER DEVICE INPUT OUTLET AT 1'-6" AFF.
⊗	INTERCOM SOUND SYSTEM SPEAKER LOCATION, RECESS WALL MOUNT AT +7'-6" AFF.
⊗	INTERCOM SOUND SYSTEM SPEAKER LOCATION, RECESS CEILING MOUNT.
⊗	SOUND SYSTEM SPEAKER, RECESS WALL MOUNT AT +7'-6" AFF.
⊗	SOUND SYSTEM SPEAKER, RECESS CEILING MOUNT.
⊗	POWER/COMMUNICATIONS RECESSED FLOOR BOX. SUBSCRIPT LETTER INDICATES OUTLET TYPE. REFER TO TYPICAL COMMUNICATION OUTLET DETAIL FOR BOX AND CONDUIT REQUIREMENTS.
⊗	WIRELESS ACCESS POINT JUNCTION BOX
⊗	TELECOMMUNICATIONS EQUIPMENT RACK
⊗	2" EMT CONDUIT SLEEVE WITH NYLON BUSHING EACH END UNO, THRU WALL AT +6" ABOVE FINISHED CEILING
⊗	TELECOMMUNICATIONS MAIN GROUND BUS BAR, MOUNT AT +1'-6" AFF.
⊗	TELECOMMUNICATIONS MAIN GROUND BUS BAR, MOUNT AT +1'-6" AFF.
⊗	CABLE TRAY, MOUNT AT +6" ABOVE FINISHED CEILING.

LIGHTING LEGEND	
SYMBOL	DESCRIPTION
5	LIGHT SWITCH RATED 120/277 VOLTS, 20-AMPS, MOUNT AT +3'-10" AFF. SUBSCRIPT/SUPERSCRIPIT LETTERS, NUMBERS, AND SYMBOLS INDICATES SWITCH TYPE AS FOLLOWS:
3	INDICATES 3-WAY LIGHT SWITCH
4	INDICATES 4-WAY LIGHT SWITCH
D	INDICATES DIMMER SWITCH
P	INDICATES PILOT LIGHT, ON WHEN SWITCH IS ON
K	INDICATES KEY OPERATED LIGHT SWITCH
OS	INDICATES SWITCH WITH INTEGRAL OCCUPANCY SENSOR
OD	INDICATES DIMMER SWITCH WITH INTEGRAL OCCUPANCY SENSOR
OS 2	INDICATES DUAL RELAY INTEGRAL OCCUPANCY SENSOR, WIRED FOR MULTI-LEVEL SWITCHING
	LOWER CASE LETTER INDICATES LIGHT FIXTURE CONTROL DESIGNATION
⊗	OMNI-DIRECTIONAL LIGHTING CONTROL OCCUPANCY DETECTOR, CEILING MOUNT.
⊗	LIGHT FIXTURE, CEILING MOUNT.
⊗	LIGHT FIXTURE WITH BATTERY PACK, CEILING MOUNT.
⊗	LIGHTING FIXTURE.
⊗	LIGHTING FIXTURE ON WITH BATTERY PACK.
⊗	WALL WASHER LIGHTING FIXTURE.
⊗	LIGHT FIXTURE, WALL MOUNT, HEIGHT AS INDICATED.
⊗	EXIT SIGN WITH BATTERY PACK, CEILING MOUNT. DIRECTIONAL ARROWS AS INDICATED. SHADING INDICATES FACE(S) OF SIGN.
⊗	EXIT SIGN WITH BATTERY PACK, WALL MOUNT. DIRECTIONAL ARROWS AS INDICATED. SHADING INDICATES FACE(S) OF SIGN.
⊗	TRACK LIGHTS.

DEMOLITION LEGEND	
SYMBOL	DESCRIPTION
⊗	REMOVE DEVICES, EQUIPMENT, IN ACCORDANCE WITH THE GENERAL DEMOLITION NOTES.
⊗	DEVICES ARE EXISTING TO REMAIN.
⊗	WITHIN HATCHED AREAS, DISCONNECT AND REMOVE ALL ELECTRICAL MATERIALS INCLUDING BUT NOT LIMITED TO LIGHTS, DEVICES, EQUIPMENT, SPEAKERS, FIRE ALARM, COMMUNICATIONS, AND CIRCUITRY.

GENERAL DEMOLITION NOTES	
A.	PROVIDE ALL ELECTRICAL DEMOLITION WORK REQUIRED TO INSTALL THE WORK INDICATED. REMOVE, REROUTE, AND RECONNECT ALL BRANCH CIRCUITS THAT WILL REMAIN IN USE BUT INTERFERES WITH THE WORK.
B.	REMOVE ALL EXISTING CONDUITS THAT WILL NOT BE REUSED AND WHERE THEY WILL BE EXPOSED AFTER COMPLETION, ABANDON ALL OTHERS IN THE WALLS ONLY. DISCONNECT ALL WIRING INDICATED AND/OR REQUIRED TO BE REMOVED FROM ALL POWER SOURCES. REMOVE ALL WIRING FROM ABANDONED CONDUITS AND PROVIDE BLANK COVER PLATES FOR BOXES NOT UTILIZED FOR THE WORK.
C.	MAINTAIN CONTINUITY OF ALL EXISTING CIRCUITS TO REMAIN OR PORTIONS THEREOF AFFECTED BY THE WORK.
D.	BEFORE DEMOLITION, VERIFY WITH THE OWNER ALL EQUIPMENT TO BE SALVAGED TO OWNER AND NOT REMOVED FROM THE SITE. FOR ALL REMAINING EQUIPMENT INDICATED FOR REMOVAL (AND NOT RELOCATED), REMOVE AND DISPOSE IN A LEGAL MANNER.
E.	EXERCISE CARE IN REMOVING DEMOLITION ITEMS. REPAIR OR REPLACE ALL DAMAGE CAUSED TO EXISTING CONSTRUCTION AND EQUIPMENT TO REMAIN.
F.	DRAWINGS ARE BASED UPON EXISTING PLANS AND FIELD INVESTIGATION WITHOUT DEMOLITION. VISIT THE EXISTING BUILDING AND BECOME FAMILIAR WITH ALL EXISTING CONDITIONS AND EXAMINE ALL DRAWINGS TO AVOID CONFLICTS.
G.	WHERE DEMOLITION OF TELECOMMUNICATIONS DEVICES OCCUR, REMOVE CABLING NOT INDICATED TO REMAIN BACK TO POINT OF ORIGIN.
H.	DEMOLITION FLOOR PLANS ARE PROVIDED FOR REFERENCE ONLY TO AID IN DEFINING THE SCOPE OF DEMOLITION WORK.

POWER LEGEND	
SYMBOL	DESCRIPTION
⊗	APPLIANCE RECEPTACLE, MOUNT AT +1'-6" AFF. PROVIDE NEMA CONFIGURATION TO MATCH PLUG FOR EQUIPMENT SERVED.
⊗	DUPLEX RECEPTACLE, NEMA 5-20R, MOUNT AT +1'-6" AFF.
⊗	DUPLEX RECEPTACLE, NEMA 5-20R, MOUNT AT +3'-10" AFF.
⊗	DUPLEX RECEPTACLE, NEMA 5-20R, MOUNT AT +7'-6" AFF.
⊗	DUPLEX RECEPTACLE, NEMA 5-20R, RECESS FLOOR MOUNT.
⊗	GFCI DUPLEX RECEPTACLE, NEMA 5-20R, MOUNT AT +1'-6" AFF. PROVIDE NEMA 3R "WHILE IN USE" ENCLOSURE.
⊗	GFCI DUPLEX RECEPTACLE, NEMA 5-20R, MOUNT AT +1'-6" AFF.
⊗	GFCI DUPLEX RECEPTACLE, NEMA 5-20R, MOUNT AT +3'-10" AFF.
⊗	DOUBLE DUPLEX RECEPTACLE, NEMA 5-20R, MOUNT AT +1'-6" AFF.
⊗	DOUBLE DUPLEX RECEPTACLE, NEMA 5-20R, MOUNT AT +3'-10" AFF.
⊗	DOUBLE DUPLEX RECEPTACLE, NEMA 5-20R, RECESS FLOOR MOUNT.
⊗	POWER/COMMUNICATIONS RECESSED FLOOR BOX. SUBSCRIPT NUMBER INDICATES OUTLET TYPE. REFER TO DETAIL ON E4 SERIES DRAWINGS.
⊗	LINE VOLTAGE THERMOSTAT, DIVISION 23 FURNISH, DIVISION 26 INSTALL. REFER TO DIVISION 23 DRAWINGS FOR LOCATIONS AND QUANTITY.
⊗	PUSHBUTTON CONTROLLER.
⊗	PUSHBUTTON.
⊗	CORD REEL OUTLET, CEILING MOUNT.
⊗	(NON-)METALLIC SURFACE RACEWAY, DEVICES AS INDICATED, MOUNT AT +1'-6" AFF. UNO.
⊗	JUNCTION BOX, CONCEALED ABOVE CEILING, UNO.
⊗	JUNCTION BOX, UNDER FLOOR MOUNT.
⊗	ENCLOSED CIRCUIT BREAKER, CHARACTERISTICS AS INDICATED.
⊗	MUSHROOM SWITCH, HEAVY DUTY WITH LEGEND PLATE, MOUNT W/HANDLE AT +3'-10" AFF. UNO.
⊗	MANUAL MOTOR STARTER, OVERLOAD PROTECTION AS REQUIRED PER NAME PLATE RATINGS, WITH 'ON' INDICATOR PILOT LIGHT, FLUSH MOUNT W/HANDLE AT +3'-10" AFF. UNO.
⊗	DISCONNECT SWITCH, FUSIBLE OR NON-FUSIBLE AS INDICATED. MOUNT W/HANDLE AT +4'-6" AFF. UNO.
⊗	MAGNETIC MOTOR STARTER, WITH OVERLOAD RELAYS AS REQUIRED TO SERVE MANUFACTURER REQUIREMENTS OF EQUIPMENT SERVED. PROVIDE WITH HAND-OFF-AUTOMATIC SELECTOR SWITCH AND INDICATOR LIGHTS. MOUNT W/HANDLE AT +4'-6" AFF. UNO.
⊗	COMBINATION MAGNETIC STARTER AND DISCONNECT SWITCH, WITH OVERLOAD ELEMENTS AND FUSING AS REQUIRED TO SERVE MANUFACTURER REQUIREMENTS OF EQUIPMENT SERVED. PROVIDE WITH HAND-OFF-AUTOMATIC SELECTOR SWITCH AND INDICATOR LIGHTS. MOUNT W/HANDLE AT +4'-6" AFF. UNO.
⊗	EQUIPMENT POWER CONNECTION.
⊗	MOTOR CONNECTION.
⊗	CONNECTION TO DIV 23 MOTORIZED DAMPER, VERIFY LOCATION.
⊗	POWER FOR ELECTRIC DOOR LOCK CONNECTION.
⊗	POWER FOR ELECTRIC DOOR STRIKE CONNECTION.
⊗	BRANCH CIRCUIT RUN CONCEALED, UNO. DASHED INDICATES CIRCUITRY REQUIRED TO BE RUN BELOW SLAB.
⊗	STRAIGHT LINEWORK FOR CIRCUITRY INDICATES ON EMERGENCY POWER CIRCUIT. INDICATED FOR CLARITY ONLY, ACTUAL HOMERUN DESIGNATION OVERRIDES THIS SYMBOLOGY.
⊗	BRANCH CIRCUIT HOME RUN TO PANELBOARD AND CIRCUIT INDICATED.
⊗	PANELBOARD.
⊗	TRANSFORMER, PROVIDE CONCRETE HOUSEKEEPING PAD UNLESS NOTED OTHERWISE.
⊗	RELAY, NO OR NC AS INDICATED.
⊗	RELAY, NORMALLY OPEN.
⊗	RELAY, NORMALLY CLOSED.
⊗	FEEDER TAG. REFER TO FEEDER SCHEDULE ON DWG E5.1.

SECURITY LEGEND	
SYMBOL	DESCRIPTION
⊗	DIRECTIONAL SECURITY MOTION DETECTOR, WALL MOUNT 6" BFC.
⊗	OMNI-DIRECTIONAL SECURITY MOTION DETECTOR.
⊗	CCTV MOUNTING LOCATION, CEILING MOUNT.
⊗	CCTV MOUNTING LOCATION, WALL MOUNT.
⊗	DOOR POSITION SWITCH.
⊗	STATUS CONTACT.
⊗	CARD READER LOCATION, MOUNT AT 3'-10" AFF.
⊗	CARD READER WITH KEYPAD LOCATION, MOUNT AT 3'-10" AFF.
⊗	SECURITY KEYPAD LOCATION, MOUNT AT 3'-10" AFF.
⊗	REMOTE KEYPAD FOR SECURITY SYSTEM, MOUNT AT 3'-10" AFF.
⊗	ELECTRIC DOOR STRIKE.
⊗	ELECTRIC DOOR LOCK.
⊗	PNEUMATIC DOOR LOCK.
⊗	TALK THROUGH COMMUNICATOR.
⊗	DURESS ALARM PUSHBUTTON LOCATION.

FIRE ALARM LEGEND	
SYMBOL	DESCRIPTION
⊗	FIRE ALARM AUDIO/VISUAL NOTIFICATION DEVICE, MOUNT AT 80" AFF AND NOT MORE THAN 96". SUBSCRIPT NUMBER INDICATES STROBE CANDELA RATING.
⊗	FIRE ALARM VISUAL STROBE NOTIFICATION DEVICE, 80" AFF AND NOT MORE THAN 96". SUBSCRIPT NUMBER INDICATES STROBE CANDELA RATING.
⊗	FIRE ALARM AUDIO/VISUAL NOTIFICATION DEVICE WITH DEVICE GUARD, 80" AFF AND NOT MORE THAN 96". SUBSCRIPT NUMBER INDICATES STROBE CANDELA RATING. # / # INDICATES STROBE SETTING AND REDUCED EFFECTIVE OUTPUT WHEN DEVICE GUARD IS PRESENT.
⊗	FIRE ALARM VISUAL STROBE NOTIFICATION DEVICE, 80" AFF AND NOT MORE THAN 96". SUBSCRIPT NUMBER INDICATES STROBE CANDELA RATING. # / # INDICATES STROBE SETTING AND REDUCED EFFECTIVE OUTPUT WHEN DEVICE GUARD IS PRESENT.
⊗	FIRE ALARM AUDIO/VISUAL NOTIFICATION DEVICE, CEILING MOUNTED. SUBSCRIPT NUMBER INDICATES STROBE CANDELA RATING.
⊗	FIRE ALARM VISUAL STROBE NOTIFICATION DEVICE, CEILING MOUNTED. SUBSCRIPT NUMBER INDICATES STROBE CANDELA RATING.
⊗	FIRE ALARM AUDIO/VISUAL NOTIFICATION DEVICE WITH DEVICE GUARD, CEILING MOUNTED. SUBSCRIPT NUMBER INDICATES STROBE CANDELA RATING. # / # INDICATES STROBE SETTING AND REDUCED EFFECTIVE OUTPUT WHEN DEVICE GUARD IS PRESENT.
⊗	FIRE ALARM VISUAL STROBE NOTIFICATION DEVICE, CEILING MOUNTED. SUBSCRIPT NUMBER INDICATES STROBE CANDELA RATING. # / # INDICATES STROBE SETTING AND REDUCED EFFECTIVE OUTPUT WHEN DEVICE GUARD IS PRESENT.
F	FIRE ALARM MANUAL PULL STATION, MOUNT AT +3'-10" AFF.
FK	FIRE ALARM KEY OPERATED MANUAL PULL STATION, MOUNT AT +3'-10" AFF.
SD	FIRE ALARM SMOKE DETECTOR, FURNISH AND CONNECT UNDER DIVISION 28. INSTALL UNDER DIVISION 23. VERIFY LOCATION WITH DIVISION 23 PRIOR TO ROUGH-IN. PROVIDE ACCESSIBLE KEY OPERATED REMOTE TEST SWITCH FOR EACH DETECTOR.
SD	SMOKE DETECTOR, CEILING MOUNT. SUBSCRIPT 'G' WHEN PRESENT INDICATES PROVIDE DEVICE GUARD
SD	HEAT DETECTOR, CEILING MOUNT. SUBSCRIPT 'G' WHEN PRESENT INDICATES PROVIDE DEVICE GUARD
SD	FIRE ALARM TAMPER SWITCH, PROVIDE UNDER DIVISION 23. MONITOR UNDER DIVISION 28.
SD	FIRE ALARM FLOW SWITCH, PROVIDE UNDER DIVISION 23. MONITOR UNDER DIVISION 28.
SD	POST INDICATOR VALVE SWITCH, PROVIDE UNDER DIVISION 23. MONITOR UNDER DIVISION 28.
SD	FIRE ALARM PRESSURE SWITCH, PROVIDE UNDER DIVISION 23. MONITOR UNDER DIVISION 28.
SD	FIRE ALARM REMOTE INDICATOR, CEILING MOUNT.
SD	FIRE ALARM MONITOR MODULE. NOT ALL MONITOR MODULES ARE INDICATED ON DRAWINGS. PROVIDE QUANTITY AND IN LOCATIONS REQUIRED TO ACCOMPLISH SPECIFIED MONITORING FUNCTIONS.
SD	FIRE ALARM CONTROL MODULE. NOT ALL CONTROL MODULES ARE INDICATED ON DRAWINGS. PROVIDE QUANTITY AND IN LOCATIONS REQUIRED TO ACCOMPLISH SPECIFIED CONTROL FUNCTIONS.
SD	FIRE ALARM SPRINKLER BELL, MOUNT AT +10'-0" AFF.
SD	FIRE ALARM MAGNETIC DOOR HOLDER, WALL MOUNT DEVICE AT 6" BELOW TOP OF DOOR. PROVIDE HINGED MAGNETIC CATCH PLATE ON DOOR TO MATE WITH DEVICE. COORDINATE LOCATION AND LENGTH WITH DIVISION 08. PROVIDE CONCEALED 120-VOLT POWER CONNECTION AND FIRE ALARM CONTROL MODULE IF REQUIRED FOR PROPER OPERATION.
M	FIRE ALARM DOOR HOLDER/CLOSER HARDWARE UNDER DIVISION 08, MONITOR AND CONTROL INTERFACE WITH FIRE ALARM UNDER DIVISION 28.
⊗	FIRE ALARM/POWER CONNECTION TO DIVISION 23 SMOKE OR FIRE/SMOKE DAMPER. COORDINATE WITH DIVISION 23. REFER TO TYPICAL FIRE/SMOKE DAMPER DIAGRAM.

ONE LINE DIAGRAM LEGEND	
SYMBOL	DESCRIPTION
⊗	CIRCUIT BREAKER
⊗	FUSED SWITCH
⊗	TRANSFORMER
⊗	TRANSFER SWITCH
⊗	FEEDER DESIGNATION
⊗	CURRENT TRANSFORMER
⊗	POTENTIAL TRANSFORMER

AVERAGE MAINTAINED ILLUMINATION LEVELS	
TASK	FOOTCANDLES
CLASSROOMS	55
MEDIA CENTER	55
OFFICES	50
BUSINESS	55
STUDIO	60
SCIENCE LAB	70
ELECTRICAL ROOMS	30
MECHANICAL ROOMS	30
COMPUTER LABS	30
GYM	50
LOCKER ROOMS	20
LOBBIES/CORRIDORS	15
TOILETS	20
KITCHEN	70
DINING	40
AUDITORIUM	10-30
STORAGE ROOMS	20
WHITEBOARDS	30

**PROGRESS
 PRINT NOT FOR
 CONSTRUCTION**

**COLONIAL HEIGHTS HIGH SCHOOL
 RENOVATION/ADDITION**
 3600 Conduit Rd, Colonial Heights, VA 23834

PROJECT NO:	611565
DATE:	APRIL 25, 2022
REVISIONS	
DATE	DESCRIPTION

FIRST FLOOR PLAN -
 ELECTRICAL
 DEMOLITION

E1.1

GENERAL NOTES

- A. HATCHED AREAS ARE NOT IN CONTRACT.
- B. EXISTING INFORMATION ON THE DRAWING PER FIELD OBSERVATION AND EXISTING DRAWINGS. VERIFY THE INFORMATION IN FIELD.
- C. REFER TO ARCHITECTURAL, MECHANICAL, PLUMBING, AND FIRE PROTECTION PLANS FOR ADDITIONAL INFORMATION.
- D. ALL SYMBOLS WITH DASH LINE TO BE REMOVED UNO.
- E. ALL SYMBOLS WITH LIGHT LINE TO REMAIN UNO.
- F. MAINTAIN ANY CIRCUITS INCLUDING LOW VOLTAGE SYSTEMS TO ANY EQUIPMENT/DEVICES REQUIRED TO SERVE EXISTING-TO-REMAIN SPACES.

KEYNOTES

- APPLIES TO DRAWINGS E1.1
 REPRESENTED BY [1]
1. REMOVE ALL EXISTING ELECTRICAL SYSTEMS INCLUDING POWER, MECHANICAL POWER, LIGHTING, & LOW VOLTAGE SYSTEMS IN THIS ROOM/SPACE UNO.
 2. ALL EXISTING ELECTRICAL SYSTEM INCLUDING LOW VOLTAGE SYSTEMS IN THIS ROOM/SPACE SHALL REMAIN UNO.
 3. EXISTING TELECOM EQUIPMENT AND ACCESSORIES SHALL BE RELOCATED. REFER TO E2.3.1 FOR NEW LOCATION. COORDINATE THIS WITH THE OWNER.
 4. EXISTING DURESS ALARM PUSHBUTTON SHALL BE RELOCATED. REFER TO E2.3.1 FOR NEW LOCATION. COORDINATE THIS WITH THE OWNER.
 5. EXISTING DURESS PANEL SHALL BE RELOCATED. REFER TO E2.3.1 FOR NEW LOCATION. COORDINATE THIS WITH THE OWNER.
 6. EXISTING AIPHONE SYSTEM SHALL BE RELOCATED. REFER TO E2.3.1 FOR NEW LOCATION. COORDINATE THIS WITH THE OWNER.
 7. EXISTING ALERT PANEL SHALL BE RELOCATED. REFER TO E2.3.1 FOR NEW LOCATION. COORDINATE THIS WITH THE OWNER.
 8. EXISTING INDEX PHONE SHALL BE RELOCATED. REFER TO E2.3.1 FOR NEW LOCATION. COORDINATE THIS WITH THE OWNER.
 9. EXISTING FA/CP AND NAC SHALL BE RELOCATED. REFER TO E2.3.1 FOR NEW LOCATION. COORDINATE THIS WITH THE OWNER.
 10. EXISTING FA/CP AND PULL STATION SHALL BE RELOCATED. REFER TO E2.3.1 FOR NEW LOCATIONS. COORDINATE THIS WITH THE OWNER.
 11. EXISTING IT RACK SHALL BE RELOCATED. REFER TO E2.3.2 FOR NEW LOCATION. COORDINATE THIS WITH THE OWNER.
 12. ALL CEILING AND WALL MOUNT LIGHT FIXTURES WITHIN THE SOLID LINE SHALL BE REMOVED AND RETURNED BACK TO THE OWNER.
 13. EXISTING CAMERA SHALL BE RELOCATED. REFER TO E2.3.1 FOR NEW LOCATION.
 14. ALL CEILING MOUNT SPEAKERS, CAMERAS, SMOKE DETECTORS, AND OTHERS; NOT SHOWN ON THE PLAN; WITHIN THE SOLID LINE ARE RELOCATED UNO. REFER TO LIGHT PLANS, COMMUNICATIONS PLANS FOR NEW LOCATIONS.
 15. ALL WALL MOUNT ELECTRICAL DEVICES INCLUDING LOW VOLTAGE SYSTEM DEVICES WITHIN THE SOLID LINE SHALL REMAIN UNO.
 16. NO ELECTRICAL WORK IN THIS ROOM EXCEPT THAT EXISTING LIGHT SWITCH SHALL BE RELOCATED. REFER TO E2.1.2 FOR NEW LOCATION.
 17. EXISTING PANEL FP SHALL BE RELOCATED. REFER TO E3.1 FOR NEW LOCATION.



FIRST FLOOR PLAN - ELECTRICAL DEMOLITION
 1/16" = 1'-0"

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**PROGRESS
 PRINT NOT FOR
 CONSTRUCTION**

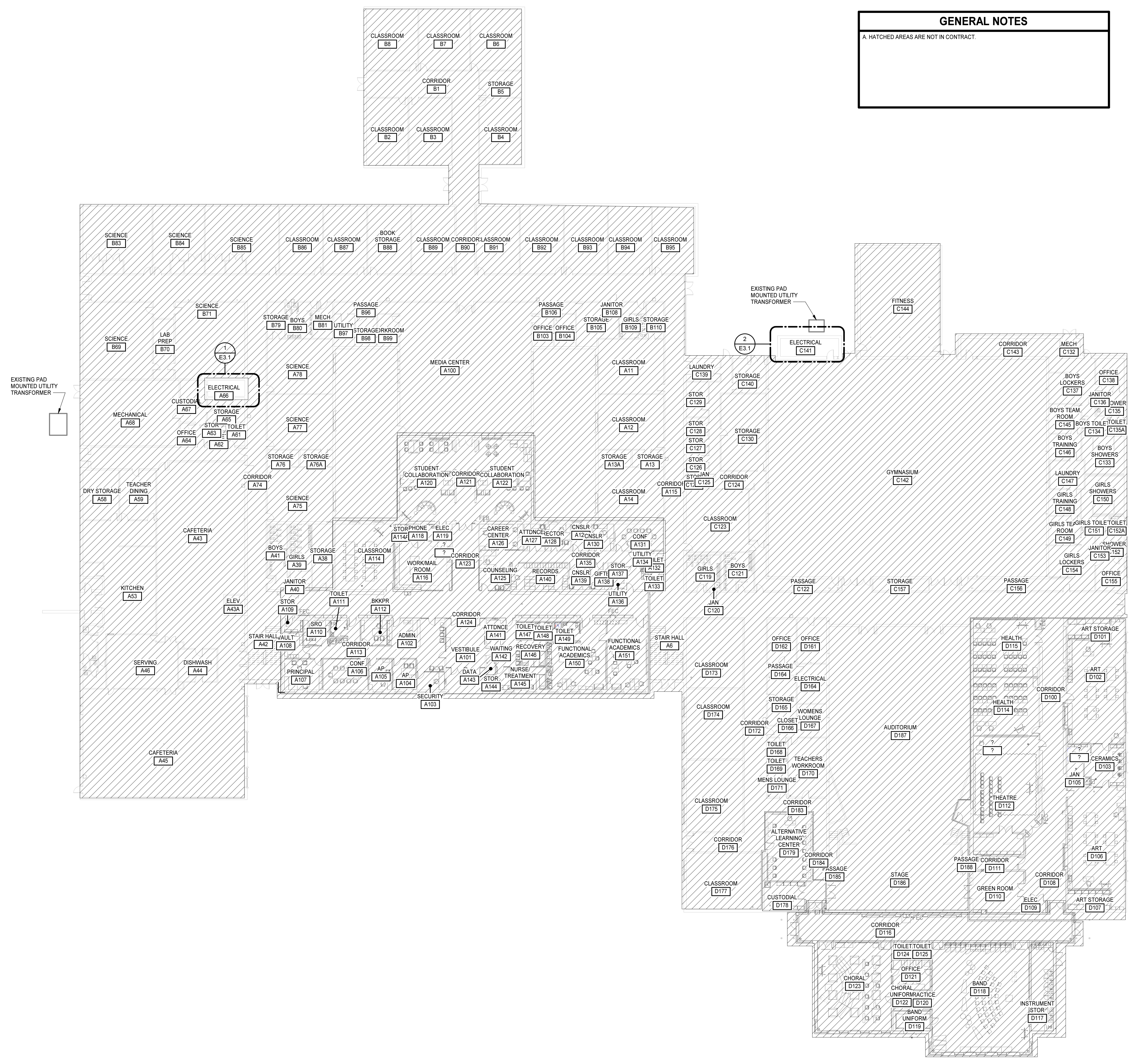
**COLONIAL HEIGHTS HIGH SCHOOL
 RENOVATION/ADDITION**
 3600 Conduit Rd, Colonial Heights, VA 23834

PROJECT NO:	811565
DATE:	APRIL 25, 2022
REVISIONS	
DATE	DESCRIPTION

FIRST FLOOR PLAN -
 OVERALL

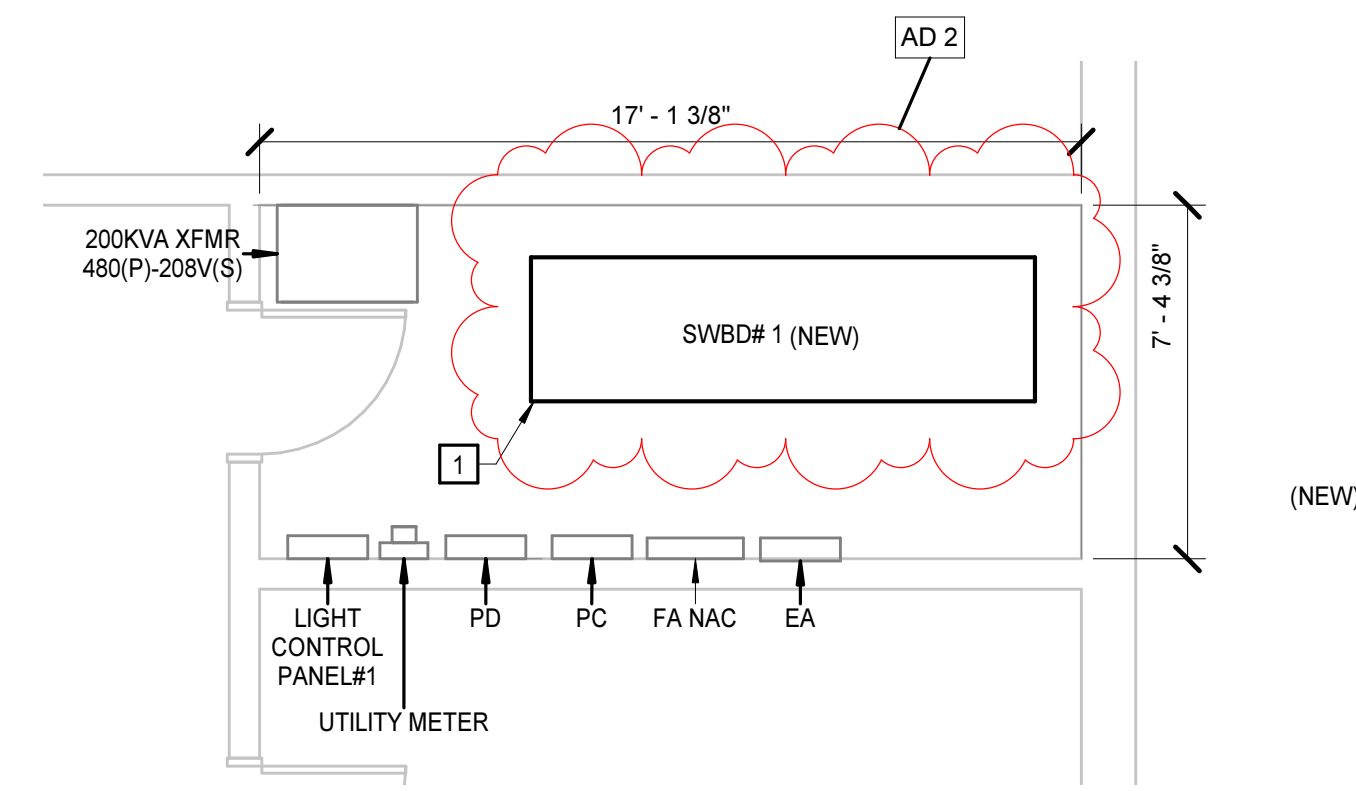
E1.2

GENERAL NOTES
 A. HATCHED AREAS ARE NOT IN CONTRACT.

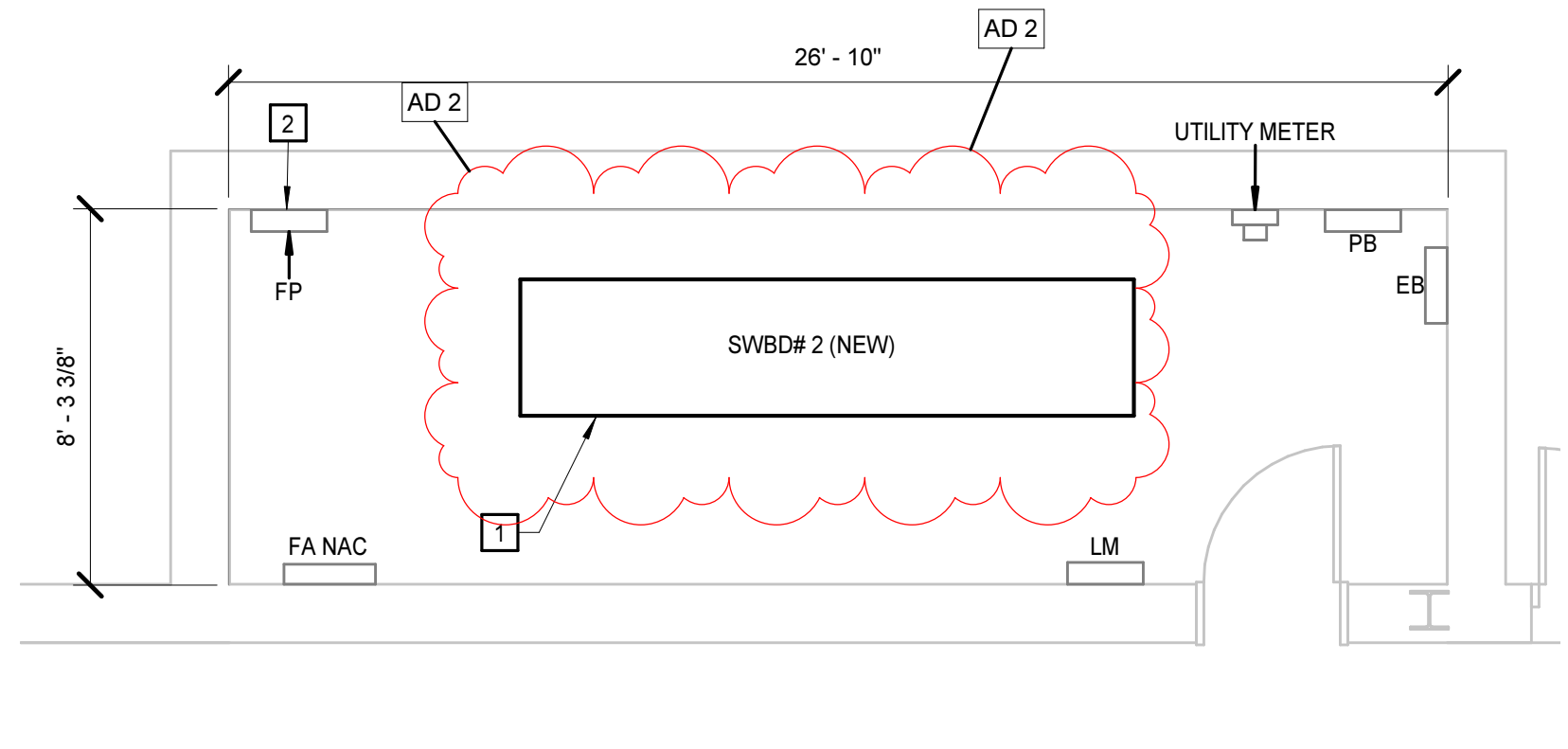


FIRST FLOOR PLAN - OVERALL
 1" = 20'-0"

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1 ENLARGED PLAN - ELECTRICAL / A66
 1/4" = 1'-0"



2 ENLARGED PLAN - ELECTRICAL / C141
 1/4" = 1'-0"

KEYNOTES	
APPLIES TO DRAWINGS E3.1 REPRESENTED BY [Symbol]	
1	REFER TO POWER ONE-LINE DIAGRAMS ON E5.1 AND DEMOLITION PLAN E1.1 FOR ADDITIONAL INFORMATION.
2	NEW LOCATION OF EXISTING PANEL FP. REFER TO KEYNOTE 17 ON E1.1 FOR A ADDITIONAL INFORMATION.

PROGRESS
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 CONSTRUCTION

**COLONIAL HEIGHTS HIGH SCHOOL
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 3600 Conduit Rd, Colonial Heights, VA 23834

PROJECT NO:	811565
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REVISIONS	
DATE	DESCRIPTION
5/18/22	AD 2

ENLARGED FLOOR
 PLANS

J
I
H
G
F
E
D
C
B
A

1 2 3 4 5 6 7 8 9 10

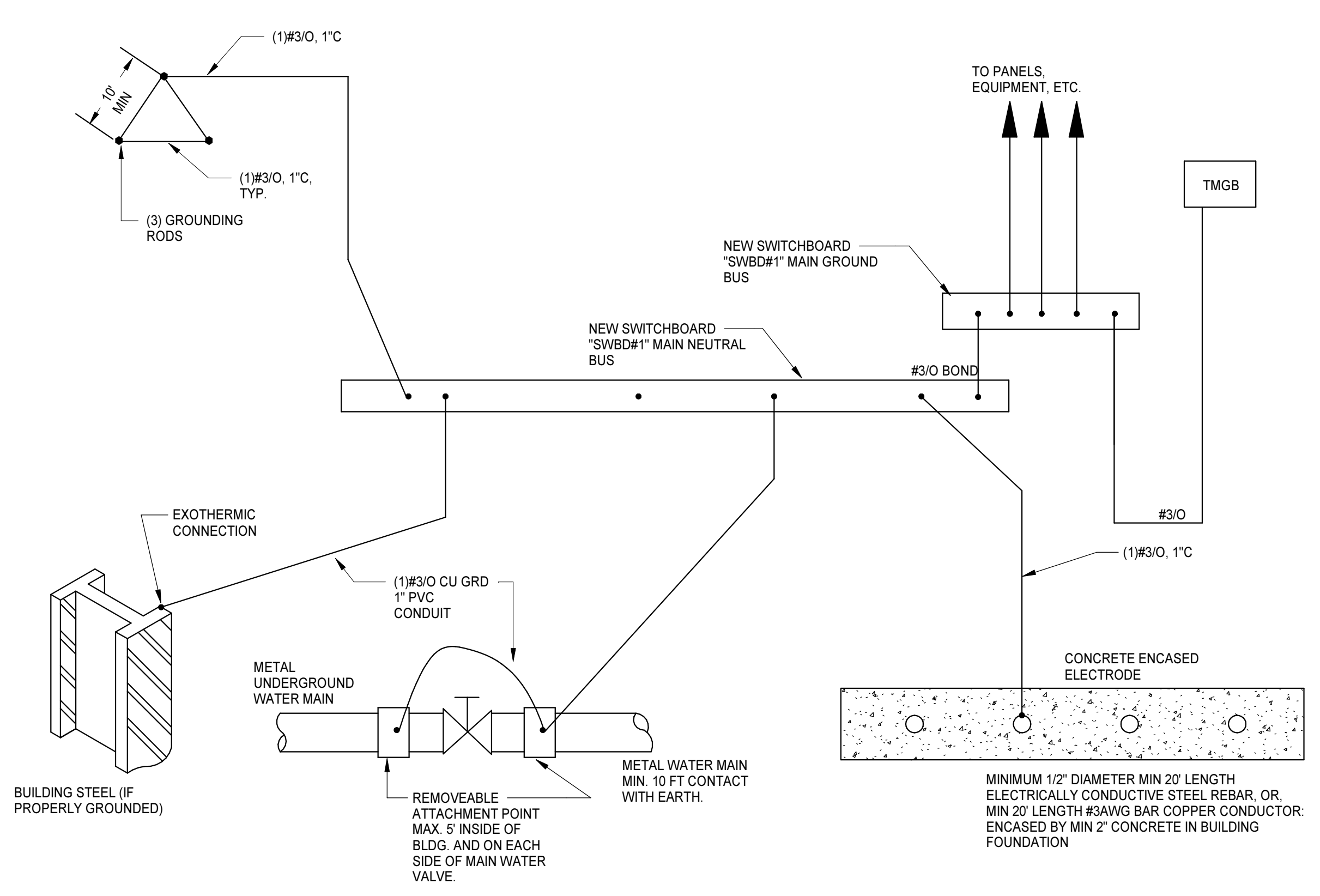
**PROGRESS
 PRINT NOT FOR
 CONSTRUCTION**

**COLONIAL HEIGHTS HIGH SCHOOL
 RENOVATION/ADDITION**
 3600 Conduit Rd, Colonial Heights, VA 23834

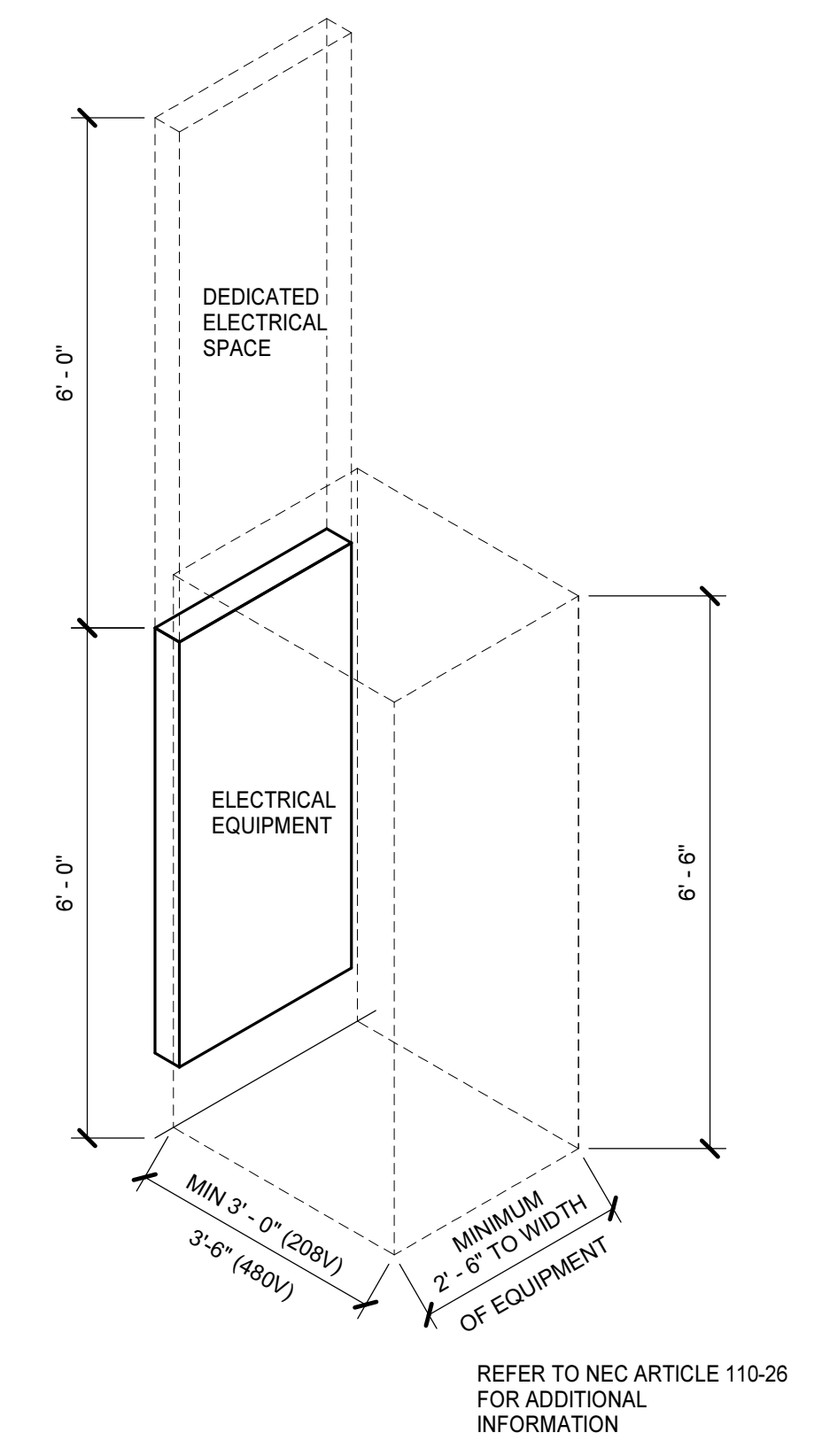
PROJECT NO:	811566
DATE:	APRIL 26, 2022
REVISIONS	
DATE	DESCRIPTION

ELECTRICAL DETAILS

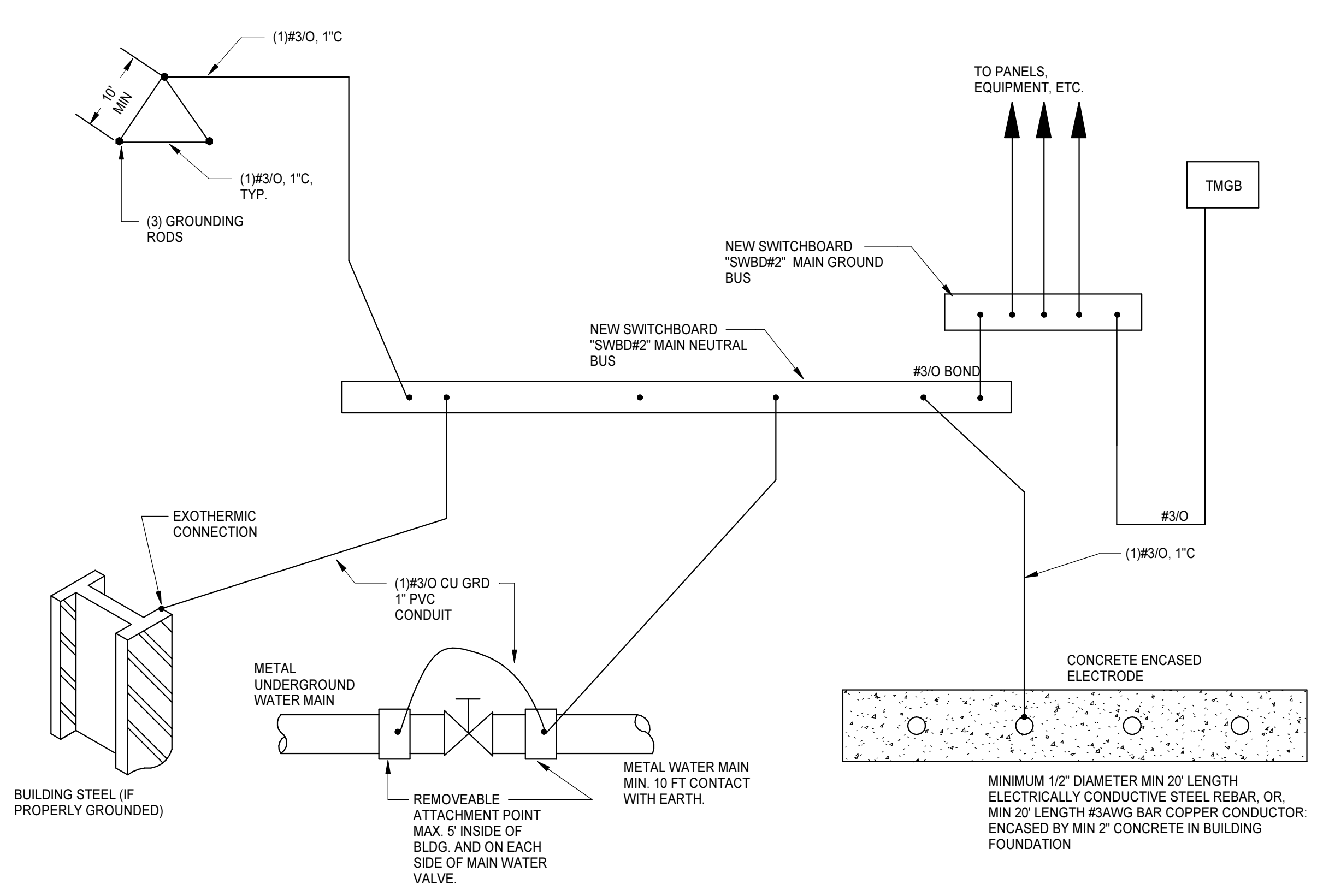
E4.2



GROUNDING SYSTEM DIAGRAM - SWBD#1
 NO SCALE



EQUIPMENT CLEARANCES
 NO SCALE



GROUNDING SYSTEM DIAGRAM - SWBD#2
 NO SCALE

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**PROGRESS
 PRINT NOT FOR
 CONSTRUCTION**

**COLONIAL HEIGHTS HIGH SCHOOL
 RENOVATION/ADDITION**
 3600 Conduit Rd, Colonial Heights, VA 23834

PROJECT NO:	611566
DATE:	APRIL 26, 2022
REVISIONS	
DATE	DESCRIPTION
5/18/22	AD 2

POWER ONE-LINE
 DIAGRAM

E5.1

COPPER FEEDER SCHEDULE

FEEDER ID	# OF SETS	BUILDING WIRE QUANTITY & SIZE TYPE THWN - DRY	MINIMUM CONDUIT SIZE	FEEDER ID	# OF SETS	BUILDING WIRE QUANTITY & SIZE TYPE THWN - DRY	MINIMUM CONDUIT SIZE
30	1	3#10,#10 G	3/4"	30Y	1	4#10,#10 G	3/4"
35	1	3#8,#10 G	3/4"	35Y	1	4#8,#10 G	3/4"
40	1	3#8,#10 G	3/4"	40Y	1	4#8,#10 G	3/4"
45	1	3#6,#10 G	1"	45Y	1	4#6,#10 G	1"
50	1	3#6,#10 G	1"	50Y	1	4#6,#10 G	1"
60	1	3#4,#10 G	1"	60Y	1	4#4,#10 G	1"
70	1	3#4,#8 G	1 1/4"	70Y	1	4#4,#8 G	1 1/4"
80	1	3#3,#8 G	1 1/4"	80Y	1	4#3,#8 G	1 1/4"
90	1	3#2,#8 G	1 1/4"	90Y	1	4#2,#8 G	1 1/4"
100	1	3#1,#8 G	1 1/4"	100Y	1	4#1,#8 G	1 1/4"
110	1	3#2,#6 G	1 1/2"	110Y	1	4#2,#6 G	1 1/2"
120	1	3#1,#6 G	1 1/2"	125Y	1	4#1,#6 G	1 1/2"
150	1	3#10,#6 G	2"	150Y	1	4#10,#6 G	2"
175	1	3#20,#6 G	2"	175Y	1	4#20,#6 G	2"
200	1	3#30,#6 G	2"	200Y	1	4#30,#6 G	2"
225	1	3#40,#4 G	2 1/2"	225Y	1	4#40,#4 G	2 1/2"
250	1	3-250KCM,#4 G	2 1/2"	250Y	1	4-250KCM,#4 G	2 1/2"
300	1	3-350KCM,#4 G	2 1/2"	300Y	1	4-350KCM,#4 G	2 1/2"
350	2	3#20,#3 G	2"	350Y	2	4#20,#3 G	2"
400	2	3#30,#3 G	2"	400Y	2	4#30,#3 G	2"
450	2	3#40,#2 G	2 1/2"	450Y	2	4#40,#2 G	2 1/2"
500	2	3-250KCM,#2 G	2 1/2"	500Y	2	4-250KCM,#2 G	2 1/2"
600	2	3-350KCM,#1 G	3"	600Y	2	4-350KCM,#1 G	3"
700	2	3-500KCM,#1/0 G	4"	700Y	2	4-500KCM,#1/0 G	4"
800	3	3-500KCM,#1/0 G	3"	800Y	3	4-500KCM,#1/0 G	3"
1000	3	3-500KCM,#2/0 G	4"	1000Y	3	4-500KCM,#2/0 G	4"
1200	4	3-350KCM,#3/0 G	3"	1200Y	4	4-350KCM,#3/0 G	3"
1600	5	3-500KCM,#4/0 G	4"	1600Y	5	4-500KCM,#4/0 G	4"
2000	6	3-500KCM,#250 G	4"	2000Y	6	4-500KCM,#250 G	4"
2500	7	3-500KCM,#350 G	4"	2500Y	7	4-500KCM,#350 G	4"

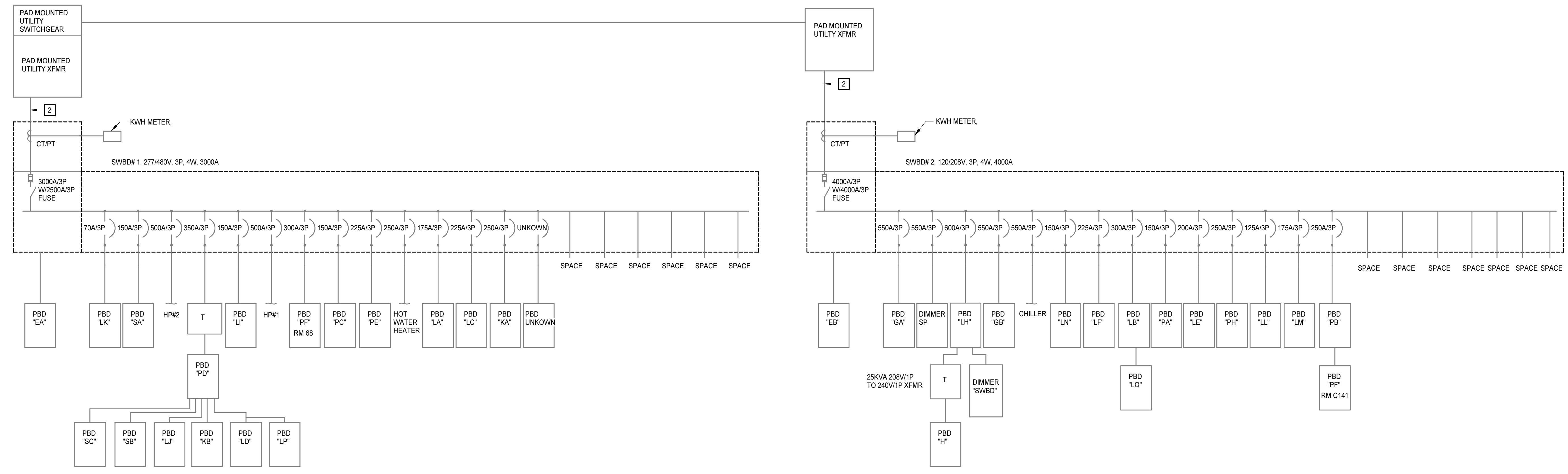
- NOTES:
 1. ELECTRICAL CONTRACTOR TO VERIFY CONDUIT SIZE REQUIRED IF WIRE TYPES OTHER THAN THOSE LISTED ABOVE ARE USED.
 2. FEEDER SIZES BASED ON TABLE 310.15(B)(16), 75° C.
 3. SIZES ADJUSTED PER NEC 110.14.

GENERAL NOTES

- A. EXISTING SWBD#1 & #2 SHALL BE REPLACED WITH NEW SWBD#1 & #2. DISCONNECT UTILITY FEEDERS, UTILITY METERS, AND ALL EXISTING PANEL/EQUIPMENT FEEDERS FROM THE EXISTING SWBD#1 & #2 AND RECONNECT THEM TO THE NEW SWBD#1 & #2.
- B. INFORMATION INDICATED ON EXISTING POWER ONE-LINE DIAGRAM ARE BASED ON FIELD OBSERVATION AND POWER ONE-LINE DIAGRAM & PANEL SCHEDULES SHOWN ON EXISTING DRAWINGS.
- C. VERIFY INFORMATION INDICATED ON EXISTING POWER ONE-LINE DIAGRAM IN FIELD.

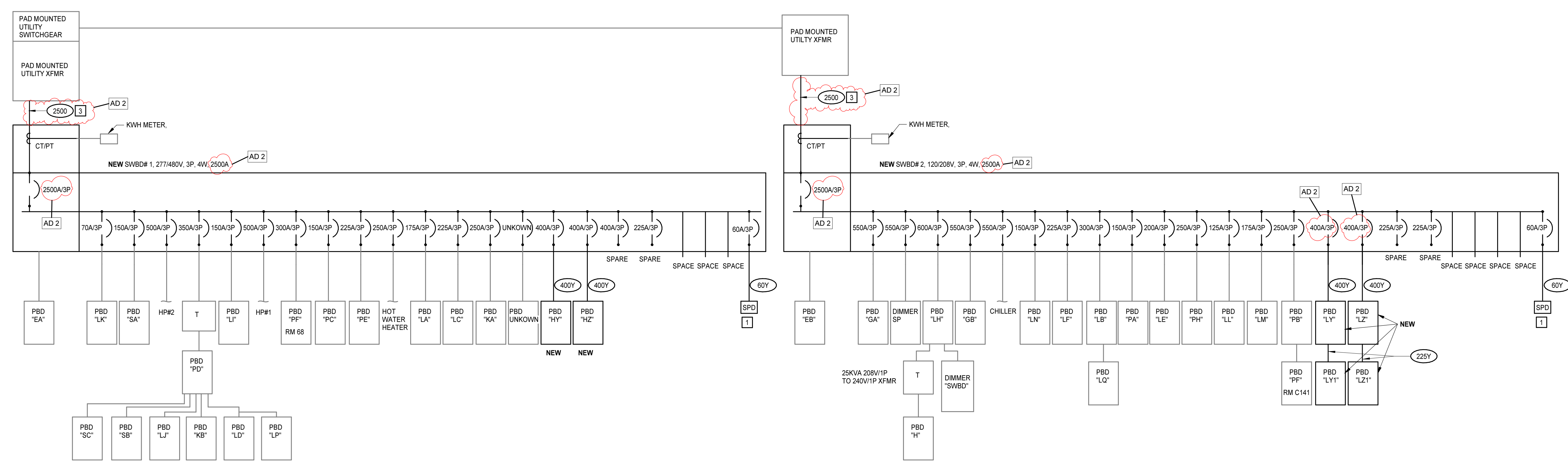
KEYNOTES

- APPLIES TO DRAWINGS E5.1 REPRESENTED BY [M]
1. COORDINATE WITH SPD MANUFACTURER FOR SPD BREAKER SIZE.
 2. REMOVE EXISTING BUSES FROM EXISTING BUS DUCT AND THE EXISTING BUS DUCT SHALL BE REUSED FOR NEW FEEDER AS INDICATED ON POWER ONE-LINE DIAGRAM - UPDATED.
 3. RUN CONDUITS AS INDICATED IN EXISTING BUS DUCT FROM EXISTING UTILITY TRANSFORMER TO NEW SWITCHBOARD.



POWER ONE-LINE DIAGRAM - EXISTING

NO SCALE



POWER ONE-LINE DIAGRAM - UPDATED

NO SCALE