RENOVATION/ UPGRADE OF FIRE STATION 2 (BLDG. 1203)

US ARMY GARRISON

WEST POINT, NEW YORK

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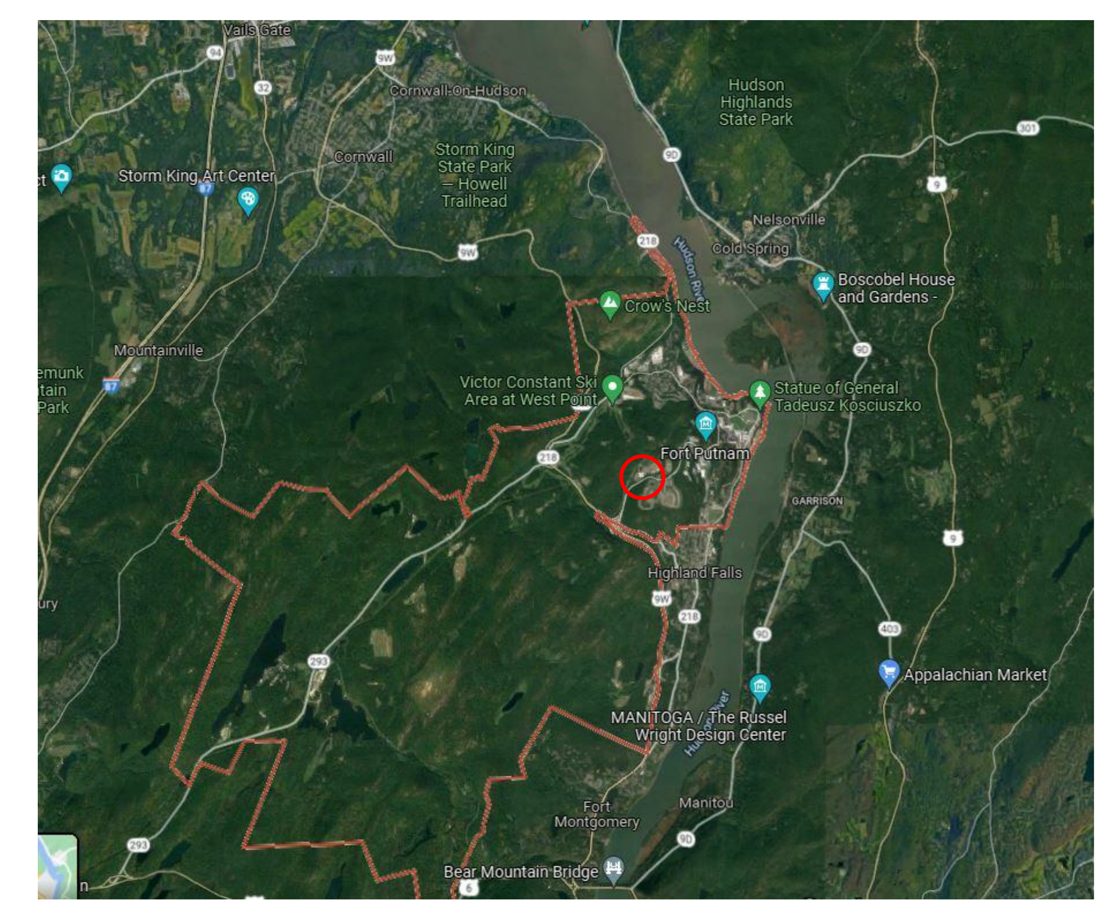
VICINITY MAP



LOCATION MAP

100% DESIGN SUBMISSION

PROJECT: W911SD-21-D-0007-MICC WP FP 1

Date: May 18, 2022

EYP
500 SUMMIT LAKE DRIVE SUITE 180
VALHALLA, NEW YORK10595-1352

DPW Directorate of Public Works

EYP
500 SUMMIT LAKE DRIVE, SUITE 500
VALHALLA, NEW YORK 10595-1352

SCALE:
DATE: MAY 18, 2022
DRAWN: BM
DESIGNED: BM
P.M.:
CHECKED: AS
SUBMITTED:
APPROVED:

REVISIONS

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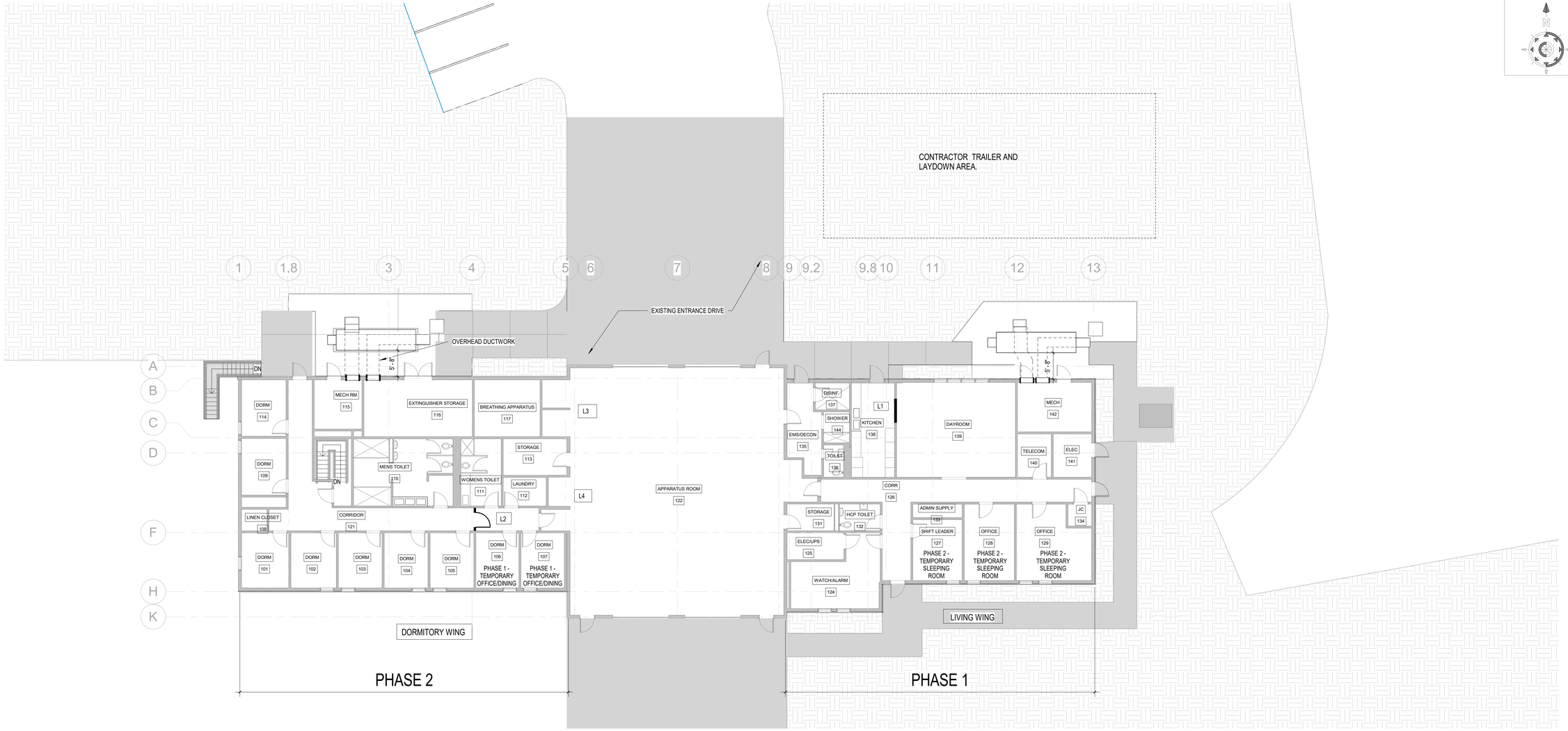
RENOVATION/ UPGRADE OF FIRE STATION 2 (BLDG 1203)
US ARMY GARRISON WEST POINT, NY

COVER SHEET

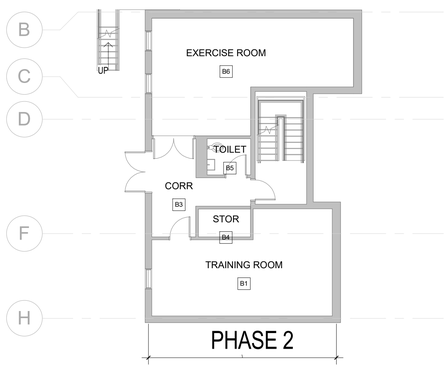
SHEET NUMBER:

G000

SHEET OF



1 LOGISTICS PLAN
3/32" = 1'-0"



2 BASEMENT LOGISTICS PLAN
3/32" = 1'-0"

PHASING/ LOGISTICS NOTES

GENERAL :

1. THE FIRE HOUSE WILL CONTINUE IN OPERATION 24 HOURS PER DAY/ 7 DAYS PER WEEK DURING THE ENTIRE PROJECT.
2. THE LOGISTICS PLAN (ABOVE) SHOWS A DESIGNATED TRAILER AND LAYDOWN SPACE FOR THE CONTRACTOR.. IN ADDITION, TWO PARKING SPACES WILL BE MADE AVAILABLE IN THE PARKING AREA BEHIND THE FIRESTATION. AS A PRECONSTRUCTION SUBMITTAL, THE CONTRACTOR SHALL SUBMIT A LAYDOWN PLAN FOR USE OF THIS AREA. THE LAYDOWN PLAN SHALL BE REVIEWED AND APPROVED BY WEST POINT PRIOR TO ANY SET UP OR SITE DISTURBANCE. THE LAYDOWN AREA IS TO REMAIN OUTSIDE OF TREE DRIPLINES. AT PROJECT COMPLETION, RETURN SITE TO PRE DISTURBANCE CONDITION.
3. THE WORK CONSISTS OF TWO PHASES:
   - A. PHASE 1: COMPLETE WORK IN THE LIVING WING. FIREFIGHTERS WILL PRIMARILY OPERATE OUT OF THE DORMITORY WING
   - B. PHASE 2: COMPLETE WORK IN DORMITORY WING AND BASEMENT. FIREFIGHTERS WILL PRIMARILY OPERATE OUT OF THE LIVING WING.
4. THE APPARATUS ROOM, WATCH ROOM , AND ELECTRIC / UPS ROOM 125 TO REMAIN FULLY OPERATIONAL AT ALL TIMES. PROVIDE TEMPORARY CIRCUIT(S) TO EXISTING GENERATOR FOR WATCH ROOM, ELECTRIC/ UPS ROOM 125 , AND APPARATUS ROOM OVERHEAD DOORS FOR ENTIRE CONSTRUCTION PERIOD. REFER TO THE ELECTRICAL DRAWINGS.
5. ALL FIRE LANES, INCLUDING ENTRANCE AND EXIT DRIVE LANES TO AND FROM THE APPARATUS BAYS, SHALL NOT BE BLOCKED. THEY SHALL REMAIN CLEAR AT ALL TIMES. STONY LONESOME ROAD SHALL NOT BE BLOCKED OR PARKED ON AT ANY TIME.
6. FURNITURE AND EQUIPMENT WILL REMAIN IN PLACE FOR THE DURATION OF THE WORK. PROTECT ALL FURNITURE AND EQUIPMENT AS REQUIRED FOR THE COMPLETION OF THE WORK. CONTRACTORS OPTION TO PROVIDE A TEMPORARY TRAILER AND MOVE FURNITURE AND EQUIPMENT TO THIS LOCATION. RETURN ALL FURNITURE AND EQUIPMENT TO ORIGINAL LOCATION UPON COMPLETION OF WORK.
7. RELOCATE SELECT FURNITURE AND EQUIPMENT AS REQUIRED FOR FIREFIGHTERS TEMPORARY LIVING CONDITIONS DURING CONSTRUCTION. RETURN ALL EQUIPMENT AND FURNITURE TO ORIGINAL LOCATION UPON COMPLETION OF EACH PHASE.

   TO SUPPORT PHASE 1:
   - A. MOVE COMMERCIAL REFRIGERATOR FROM KITCHEN TO APPARATUS BAY
   - B. REMOVE FURNITURE FROM TWO BEDROOMS DESIGNATED FOR FOR ALTERNATE USE. STORE FURNITURE IN ANOTHER BEDROOM DESIGNATED BY OWNER. FURNITURE TO BE MOVED IN EACH OF TWO BEDROOMS INCLUDES: BED, NIGHTSTAND, CHEST , DESK, CHAIR
   - C. MOVE TWO DESKS AND CHAIRS TO EMPTIED BEDROOM FROM LIVING WING
   - D. MOVE CONFERENCE / DINING TABLE TO EMPTIED BEDROOM FROM LIVING WING
   - E. MOVE 6 RECLINERS AND TELEVISION FROM DAYROOM TO BASEMENT TRAINING/ CONFERENCE ROOM.
   - F. REMOVE LEGS FROM TABLES IN BASEMENT TRAINING ROOM AND STACK LEGS,TABLE TOPS AND CHAIRS WITHIN ROOM AS DIRECTED BY OWNER. REATTACH LEGS TO TABLE TOPS AND REASSEMBLE FURNITURE IN ORIGINAL CONFIGURATION AT COMPLETION OF WORK WITHIN THE ROOM

   TO SUPPORT PHASE 2:
   - A. MOVE FURNITURE IN 6 BEDROOMS TO LIVING WING OFFICES. FURNITURE TO BE MOVED FROM EACH BEDROOM INCLUDES: BED, NIGHTSTAND, CHEST, DESK, CHAIR.

PHASE 1 SPECIAL REQUIREMENTS:

1. COMPLETE WORK IN THE KITCHEN WITHIN A TWO WEEK PERIOD IN THIS PHASE. THE KITCHEN SHALL REMAIN OPERATIONAL AND AVAILABLE FOR CONTINUED USE AT OTHER TIMES DURING THIS PHASE. PROVIDE RESIDENTIAL ELECTRIC RANGE IN APPARATUS BAY FOR THIS TWO WEEK PERIOD. PROVIDE TEMPORARY HOOK UP PER KEY NOTES BELOW.

PHASE 2 SPECIAL REQUIREMENTS:

1. COMPLETE WORK IN THE WOMENS TOILET ROOM AND LAUNDRY ROOM WITHIN A TWO PERIOD IN THIS PHASE (WORK IN THE LAUNDRY ROOM SHALL INCLUDE ONLY ONE WEEKEND). WOMENS ROOM AND LAUNDRY TO REMAIN IN USE BY FIREFIGHTERS AT OTHER TIMES DURING THIS PHASE. PROVIDE TEMPORARY WASHER AND DRYER SETUP/ HOOKUPS PER KEY NOTE BELOW IF WORK IN LAUNDRY ROOM CANNOT BE COMPLETED WITHIN SPECIFIED TIMEFRAME .
2. COMPLETE WORK IN THE BASEMENT WITHIN A 3 WEEK PERIOD DURING THIS PHASE. THE BASEMENT WILL REMAIN IN USE BY THE FIREFIGHTERS AT OTHER TIMES DURING THIS PHASE .

TEMPORARY HOOKUPS:

PROVIDE HOOKUPS FOR KITCHEN EQUIPMENT AT TEMPORARY LOCATION IDENTIFIED ABOVE. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS. UPON END OF TEMPORARY USE, RELOCATE EQUIPMENT BACK TO ORIGINAL LOCATION AND RESTORE PERMANENT HOOKUPS. REMOVE TEMPORARY HOOKUPS AND RESTORE ANY DISTURBED AREAS BACK TO ORIGINAL CONDITIONS.

KEY NOTES:

- L1 PROVIDE TEMPORARY PARTITION SEPARATING THE KITCHEN AND DAYROOM. ACCESS TO KITCHEN DURING PHASE 1 WILL BE THE EXTERIOR DOOR.
- L2 PROVIDE TEMPORARY PARTITION AND DOOR TO SEPARATE WOMENS ROOM ACCESS FROM CONSTRUCTION AREA
- L3 PROVIDE TEMPORARY POWER FOR ELECTRIC RANGE AND REFRIGERATOR. REFER TO ELECTRICAL DRAWINGS
- L4 PROVIDE TEMPORARY WATER CONNECTION, EXHAUST, AND POWER FOR WASHER AND DRYER. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS

0 4' 8' 16'
SCALE: 1/8" = 1'-0"

DPW Directorate of Public Works
500 SUMMIT LAKE DRIVE, SUITE 500
VALHALLA, NEW YORK 10595-1352
EYP

REVISIONS

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SCALE: 3/32" = 1'-0"
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DRAWN: NP
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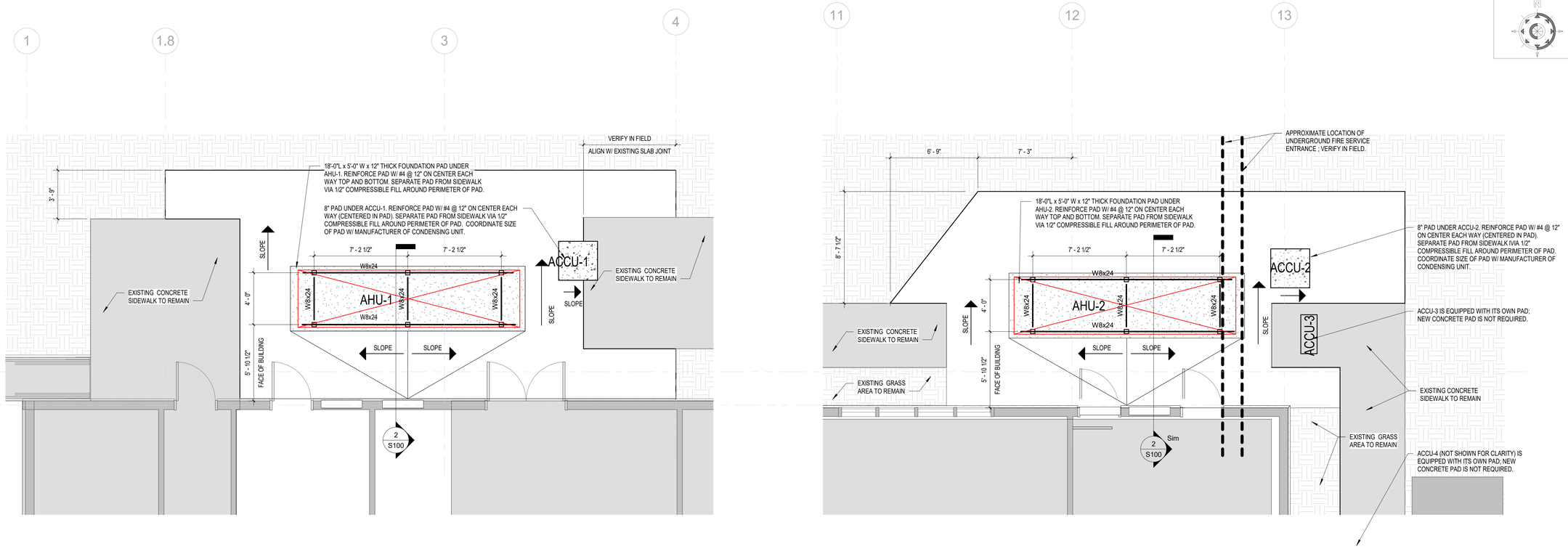
SUBMITTED:
APPROVED:

RENOVATION/ UPGRADE OF
FIRE STATION 2 (BLDG 1203)
US ARMY GARRISON WEST POINT, NY

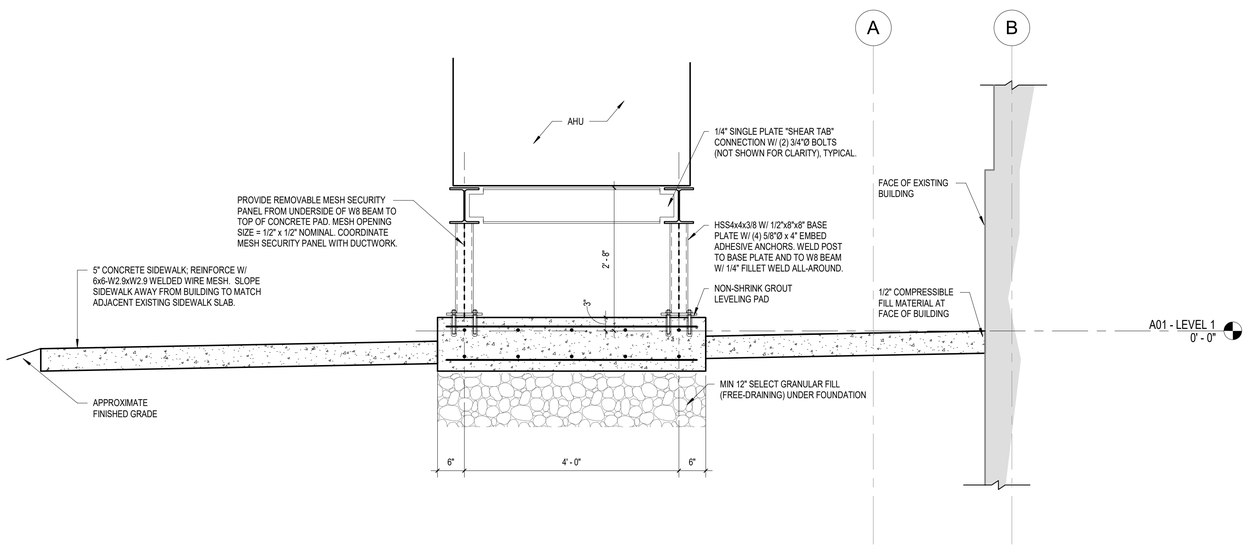
LOGISTICS PLAN

SHEET NUMBER:
L100

SHEET OF



1 AIR-HANDLER UNIT FOUNDATION PLAN
1/4" = 1'-0"



2 STRUCTURAL SECTION
3/4" = 1'-0"

AIR-HANDLING UNIT FOUNDATION NOTES:

1. AHU-1 & AHU-2:
   - ASSUMED DIMENSIONS: 17'-2" L x 4'-3" W x 3'-8" H, TYPICAL
   - ASSUMED WEIGHT: 2550 lbs
   - NOTIFY ARCHITECT IF ACTUAL DIMENSIONS AND/OR WEIGHT DIFFER FROM WHAT WAS ASSUMED
2. BUILDING CODE: 2020 BUILDING CODE OF NEW YORK STATE.
3. GROUND SNOW LOAD: 30 psf
4. WIND DATA:
   - BASIC 3-SECOND GUST: 130 mpf (ULTIMATE)
   - RISK CATEGORY: IV
   - WIND IMPORTANCE FACTOR, Iw: 1.00
   - WIND EXPOSURE CATEGORY: B
5. SEISMIC DATA:
   - RISK CATEGORY: IV
   - SEISMIC IMPORTANCE FACTOR, Ie: 1.50
   - SEISMIC DESIGN CATEGORY C
6. ASSUMED MINIMUM SOIL BEARING PRESSURE: 2000 psf
7. CONCRETE DATA:
   - COMPRESSIVE STRENGTH: 4000 psi
   - ENTRAINED AIR: 5% TO 7%
8. STEEL DATA:
   - WIDE FLANGE SHAPES: ASTM A992
   - HOLLOW STRUCTURAL SHAPES: ASTM A500
   - PLATES: ASTM A36
   - BOLTS: ASTM F3125, GRADE A325
   - WELDING ELECTRODES: E70XX
   - HOT-DIP GALVANIZE ALL MEMBERS AFTER FABRICATION

18 May 2022

DPW
Directorate of Public Works
500 SUMMIT LAKE DRIVE, SUITE 500
VALHALLA, NEW YORK 10595-1352
EYP

SCALE: As 1/8" = 1'-0"
DATE: MAY 18, 2022
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REVISIONS

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RENOVATION/ UPGRADE OF
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US ARMY GARRISON WEST POINT, NY

AHU FOUNDATIONS

SHEET NUMBER:
S100
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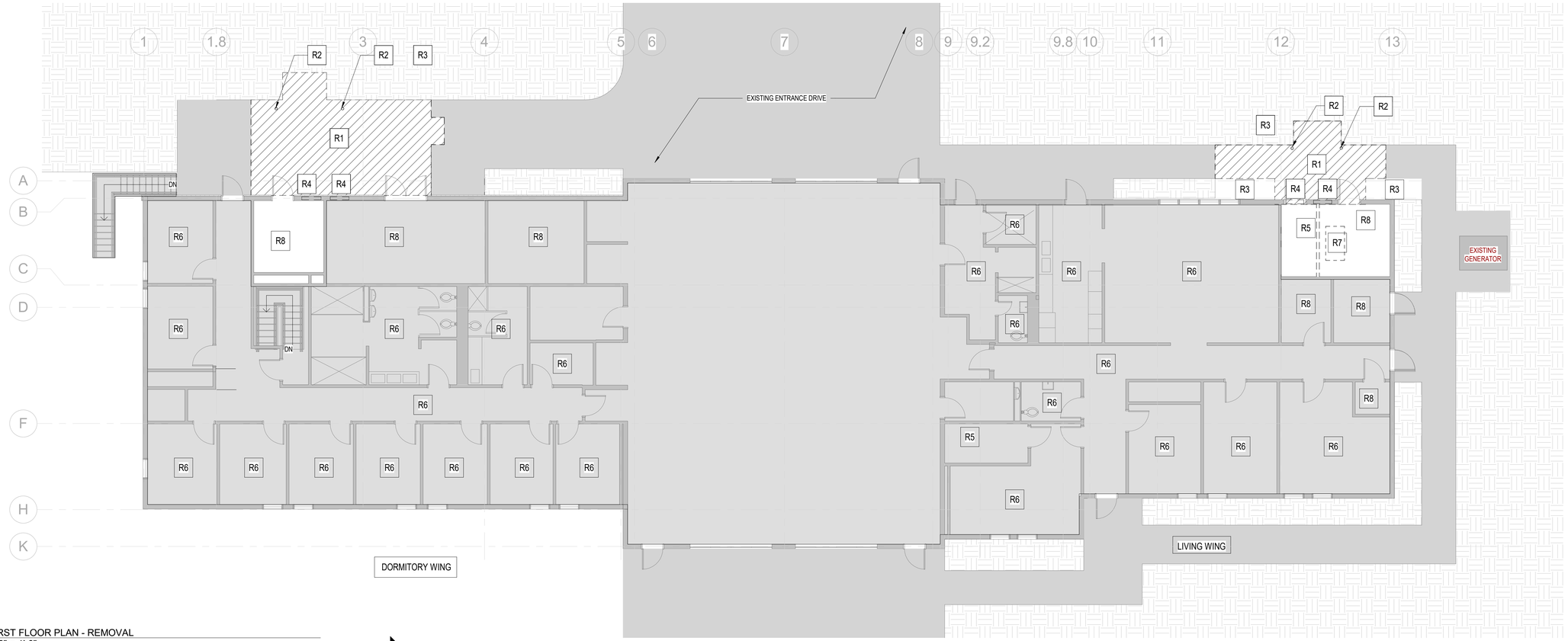
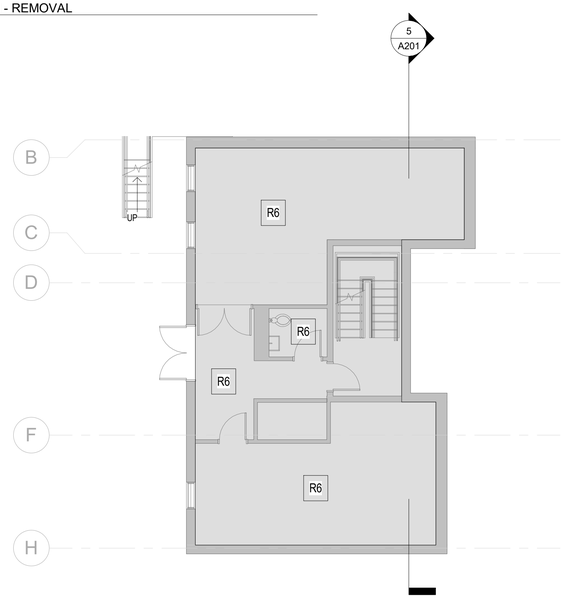
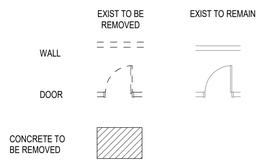


1 FIRST FLOOR PLAN - REMOVAL
1/8" = 1'-0"



2 BASEMENT PLAN - REMOVAL
1/8" = 1'-0"

KEYNOTE LEGEND	
Key Value	**Keynote Text**
R1	REMOVE EXISTING CONCRETE SIDEWALK AS REQUIRED FOR NEW CONSTRUCTION. EXTEND REMOVALS TO NEXT CONTROL / EXPANSION JOINT.
R2	REMOVE EXISTING BOLLADS COMPLETELY
R3	REMOVE EXISTING GRASS/ SOD/ SOIL AS REQUIRED FOR NEW CONCRETE.
R4	REMOVE EXISTING EXTERIOR WALL ASSEMBLY AS REQUIRED FOR PENETRATION OF NEW DUCTWORK.
R5	REMOVE EXISTING METAL STUD PARTITION IN ITS ENTIRETY. PATCH EXISTING WALL AND CEILING SURFACES TO MATCH EXISTING AT REMOVALS.
R6	REMOVE EXISTING ACT CEILING COMPLETE, INCLUDING BUT NOT LIMITED TO GRID, ACOUSTICAL TILE AND HANGERS. REMOVE FROM CEILING AND PROVIDE TEMPORARY SUPPORT OF EXISTING LIGHT FIXTURES, SMOKE DETECTORS. SPEAKERS, IT EQUIPMENT AND OCCUPANCY SENSORS. REINSTALL ALL DEVICES IN NEW CEILING IN SAME CONFIGURATION AS PREVIOUSLY PLACED. SMOKE DETECTION TO REMAIN OPERATIONAL DURING CONSTRUCTION, AND BE TESTED FOLLOWING REINSTALLATION.
R7	REMOVE EXISTING CONCRETE PAD. FOLLOWING REMOVAL, PATCH FLOOR SMOOTH AND LEVEL WITH ADJACENT CONCRET FLOOR SURFACE. CONTRACTOR OPTION TO REUSE FOR NEW WORK.
R8	REMOVE EXISTING LIGHT FIXTURES, SMOKE DETECTORS. SPEAKERS, IT EQUIPMENT, AND OCCUPANCY SENSORS AS REQUIRED FOR NEW WORK. REINSTALL FOLLOWING DUCTWORK INSTALLATION. MODIFYING LOCATIONS AS REQUIRE BY DUCTWORK. SMOKE DETECTION TO REMAIN OPERATIONAL DURING CONSTRUCTION, AND BE TESTED FOLLOWING REINSTALLATION.



REGISTERED ARCHITECT
ROBERT A. MUSCARELLO
STATE OF NEW YORK
11/10/22

0 4' 8' 16'
SCALE: 1/8" = 1'-0"

DPW
Directorate of Public Works
500 SUMMIT LAKE DRIVE, SUITE 500
VALHALLA, NEW YORK 10595-1352
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US ARMY GARRISON WEST POINT, NY

REMOVAL PLAN

SHEET NUMBER:

AD100

SHEET OF

ARCHITECTURAL ABBREVIATIONS

A	
AAF	ABOVE ACCESS FLOOR
ABV	ABOVE
ACCES	ACCESSIBLE
ACOUS	ACOUSTICAL
ACT	ACOUSTICAL CEILING TILE
AD	AREA DRAIN, ACCESS DOOR
ADJ	ADJACENT
AFF	ABOVE FINISHED FLOOR
AFL	ACCESS FLOOR(ING)
AGGR	AGGREGATE
AHU	AIR HANDLING UNIT
ALT	ALTERNATE
ALUM	ALUMINUM
ANOD	ANODIZED
AP	ACCESS PANEL
APPD	APPROVED
APPROX	APPROXIMATE
ARCH	ARCHITECTURE (URE,URAL)
AS	ABOVE SLAB
ASPH	ASPHALT
AUTO	AUTOMATIC
AUX	AUXILIARY
AVG	AVERAGE
B/C	BOTTOM OF CURB
BALC	BALCONY
BD	BOARD
BEL	BELOW
BET	BETWEEN
BKBD	BACKBOARD
BLDG	BUILDING
BLKG	BLOCKING
BLKHD	BULKHEAD
BM	BEAM
BOD	BASIS OF DESIGN
BOT	BOTTOM
BRG	BEARING
BRK	BRICK
BRKT	BRACKET
BSMT	BASEMENT
BUR BYD	BUILT-UP ROOF BEYOND
C	CONDUIT
CAB	CABINET
CAP	CAPACITY
CAT	CATALOG
CB	CATCH BASIN
CEM	CEMENT
CF	CUBIC FOOT
CI	CAST IRON
CJ	CONTROL JOINT
CLG	CEILING (SEE ALSO MECH ABBREVIATIONS)
CLL	CONTRACT LIMIT LINE
CLOS	CLOSET
CLR	CLEAR(ANCE)
CMU	CONCRETE MASONRY UNIT
CO	CLEAN OUT
COL	COLUMN
CONC	CONCRETE
COND	CONDENS(ATE,ER,ING,ATION)
CONF	CONFERENCE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINU(OUS,ATION)
CONTR	CONTRACTOR
COORD	COORDINATE
CPT	CARPET
CRS	COURSE
CT	CERAMIC TILE
CW	COLD WATER
CWR	COLD WATER RETURN
CY	CUBIC YARD
CYL	CYLINDER
DET	DETAIL
DRWR	DRAWER
DS	DOWNSPOUT
DWGS	DRAWINGS
EF	EXHAUST FAN
EHD	ELECTRIC HAND DRYER
EIFS	EXTERIOR INSULATION & FINISH SYSTEM
EJ	EXPANSION JOINT
ELEC	ELECTRICAL
EMER	EMERGENCY
ENCL	ENCLO(ES,SURE)
EOS	EDGE OF SLAB
EP	ELECTRICAL PANEL
EPX	EPOXY
EQ	EQUAL
EQUIP/EQPT	EQUIPMENT
ETR	EXISTING TO REMAIN
ETRL	EXISTING TO BE RELOCATED
EW	EACH WAY
EWC	ELECTRIC WATER COOLER
EXH	EXHAUST
EXP	EXPANSION
F/C	FLOOR TO CEILING
FAI	FRESH AIR INTAKE
FB	FOILBACKED
FBR	FABRIC
FD	FLOOR DRAIN, FIRE DAMPER
FDN, FOUND	FOUNDATION
FDVC	FIRE DEPT. VALVE CABINET
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FH	FIRE HYDRANT
FIN	FINISH(ED)
FL, FLR	FLOOR
FLAM	FLAMMABLE
FLOUR	FLOURECENT
FO	FIBER OPTIC(S)
FOB	FACE OF BRICK
FOC	FACE OF CONCRETE
FOP	FACE OF PILASTER
FP	FIRE PROTECTION, FILLER PANEL
FRT	FIRE RETARDANT TREAT(ED,MENT)
FS	FLOOR SINK

ARCHITECTURAL ABBREVIATIONS

FSACCP	FLAT SEAM ALLOY - COATED COPPER PANEL
FT	FEET, FOOT, FULL TIME
FTG	FOOTING
GC	GENERAL CONTRACTOR
HTR	HEATER
HVAC	HEATING,VENTILATION, AIR CONDITIONING
HW	HOT WATER
HWD	HARDWOOD
HWR	HOT WATER RETURN
I.E.	THAT IS
ID	INSIDE DIAMETER
IN	INTERIOR
INV	INVERT(ED)
JB	JUNCTION BOX
JC	JANITOR'S CLOSET
JG	JAMB GUARD
JT	JOINT
JTS	JOINTS
KS	KNEE SPACE, KICK SPACE
LAM	LAMINATED
LAV	LAVATORY
LGMF	LIGHT GAUGE METAL FRAMING
LIN	LINEN
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LP	LOW POINT
MB	MARKER BOARD
MEJ	MASONRY EXPANSION JOINT
MTD	MOUNT(ED)
MTL	METAL
N.I.C.	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
OA	OVERALL
OC	ON CENTER
OD	OUTSIDE DIAMETER
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED OWNER INSTALLED
OH	OVERHEAD
OPG	OPENING
OPP	OPPOSITE
OZ	OUNCE
P	POLE
PB	PULL BOX
PCC	PRECAST CONCRETE
PD	PRESSURE DROP
PH	PHASE
PL	PLATE
PLAM	PLASTIC LAMINATE
PLAS	PLASTER
PLMB	PLUMBING
PLYWD	PLYWOOD
PNL	PANEL
POLY	POLYCARBONATE
PS	PROJECTION SCREEN
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	PRESSURE TREATED
PTD	PAINTED
PTN	PARTION
PVC	POLYVINYL CHLORIDE
QT	QUARRY TILE
QTY	QUANTITY
R_	RISER LINE
RAD	RADIUS
RB	RUBBER BASE
RD	ROOF DRAIN
REF	REFERENCE
REINF	REINFORCED
REQ'D	REQUIRED
RESIL	RESILIENT
RLE	RELOCATE EXISTING
RM	ROOM
RTU	ROOF TOP UNIT
S&R	SHELF & ROD
SB	SMART BOARD
SC	SPECIAL COATING, SOLID CORE
SD	SOAP DISPENSER
SF	SQUARE FOOT/FEET
SG	SAFTEY GLASS
SHT	SHEET
SIM	SIMILAR
SLD	SEALED
SOG	SLAB ON GRADE
SP	SUMP PUMP
SPEC	SPECIFICATION
SQ	SQUARE
SS	STAINLESS STEEL
ST	STORM SEWER, STONE, STAIN
STD	STANDARD
STL	STEEL
STOR	STORAGE
STRUCT	STRUCUR(E, AL)
SUSP	SUSPEND(ED)
SYS	SYSTEM
T	THREAD
T&B	TOP & BOTTOM
T&G	TOUNGE & GROOVE
T/	TOP OF
T/C	TOP OF CONCRETE
T/F	TOP OF FRAME
T/S	TOP OF STEEL
T/W	TOP OF WALL
TB	TACKBOARD

ARCHITECTURAL ABBREVIATIONS

TEL	TELEPHONE
TEMP	TEMPERATURE
TER	TERRAZO
THK	THICK
THR	THRESHOLD
TOIL	TOILET
TV	TELEVISION
TYP	TYPICAL
UC	UNDERCUT
UG	UNDERGROUND
UNFIN	UNFINISHED
UNO	UNLESS NOTED OTHERWISE
UPS	UNINTERRUPTABLE POWER SUPPLY
UTIL	UTILITY
VAR	VARIABLE
VB	VINYL BASE
VCT	VINYL COMPOSITE TILE
VEN	VENEER
VERT	VERTICAL
VEST	VESTIBULE
VIF	VERIFY IN FEILD
VIN	VINYL
VT	VAPOR TIGHT
VTR	VENT THROUGH ROOF
VWC	VINYL WALL COVERING
W	WIDE, WIDTH, WATER
W/	WITH
W/O	WITHOUT
WC	WATER CLOSET
WD	WOOD
WH	WATER HEATER
WP	WATERPROOF
WT	WEIGHT
WTC	WATER COOLER
WTR	WATER

BUILDING CODE NOTES

1. EXISTING BUILDING AREA, HEIGHT, OCCUPANCY, OCCUPANT COUNT, EGRESS REMAIN UNCHANGED.

2. EXISTING BUILDING AREA: 10,032 SF

3. CONSTRUCTION TYPE: TYPE VB, FULLY SPRINKLERED

4. OCCUPANCY: B - BUSINESS, ACCESSORY R2 (DORMITORY ROOMS)

SCOPE OF WORK LIMITED TO WORK LIMITED TO LIVING AND DORM WINGS
ALTERATION LEVEL 1 WORK 7,393 SF
REPLACEMENT OF IMPROPERLY OPERATING HVAC EQUIPMENT AND DUCTWORK
REPLACEMENT OF SUSPENDED CEILINGS
ALTERATION LEVEL 2 WORK, 165 SF
REMOVAL OF SINGLE PARTITION AT MECHANICAL ROOM 142

ALTERATION LEVEL 2 WORK AREA OF 165 SF LESS THAN 50% OF BUILDING AREA, ALTERATION LEVEL 3 NOT APPLICABLE

GENERAL CONSTRUCTION NOTES

1 TERMINATE NEW PARTITIONS AT UNDERSIDE OF STRUCTURE ABOVE.

2 PATCH AND REPAIR ALL EXISTING CONDITIONS DAMAGED FROM REMOVALS TO MATCH ADJACENT EXISTING.

3 COORDINATE RATED CONSTRUCTION WITH THE FLOOR PLAN.

GENERAL NOTES

1 EXISTING CONDITIONS NOTED ARE AS OF SURVEY. VERIFY ALL EXISTING CONDITIONS PRIOR TO BEGINNING WORK. RESOLVE ANY DISCREPANCY BETWEEN CONSTRUCTION DOCUMENTS AND ACTUAL CONDITIONS WITH THE ARCHITECT. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO BEGINNING WORK. ANY DISCREPANCY BETWEEN CONSTRUCTION DOCUMENTS AND ACTUAL CONDITIONS SHALL BE COORDINATED AND RESOLVED BY THE CONTR.

2 DO NOT SCALE THE DRAWINGS. DIRECT DIMENSIONAL DISCREPANCIES AND QUESTIONS TO THE ARCHITECT. CENTER PARTITIONS ON COLUMNS OR MULLIONS UNLESS OTHERWISE NOTED, OR USE "EQUAL/EQUAL" AND ALIGN SURFACES TO LOCATE PARTITIONS. OBTAIN DIRECTION BEFORE PROCEEDING WITH THE WORK.

3 NOT USED

4 FULLY COORDINATE ALL ARCHITECTURAL, MECHANICAL, PLUMBING, ELECTRICAL AND STRUCTURAL WORK.

5 LOCATE ALL EXISTING UTILITIES AND SERVICES PRIOR TO START OF WORK AND/ OR DISTURBANCE OF SOIL.

6 PROTECT FROM DAMAGE ALL ADJACENT AREAS AND PROPERTIES, SUCH AS LANDSCAPING AND EXTERIOR & INTERIOR BUILDING SURFACES.

7 RESTORE ALL EXISTING WORK AFFECTED BY THESE CONTRACT DOCUMENTS TO MATCH EXISTING CONDITIONS.

8 ALL DIMENSIONS SHOWN ARE FROM FACE OF STUD TO FACE OF STUD UNLESS OTHERWISE NOTED, MASONRY WALLS WHICH ARE DIMENSIONED FACE OF MASONRY TO FACE OF MASONRY. FIELD VERIFY ALL DIMENSIONS. DIMENSIONS NOTED "CLEAR" ARE NOT TO BE ADJUSTED WITHOUT APPROVAL OF ARCHITECT. ALL DIMENSIONS ARE IN FEET AND INCHES.

9 THESE DRAWINGS ARE PREPARED AND COORDINATED WITH THE PROJECT MANUAL WHICH INCLUDES TECHNICAL SPECIFICATIONS. TOGETHER THESE FORM THE CONSTRUCTION DOCUMENTS.

10 THE OWNER RESERVES THE RIGHT TO KEEP ANY SALVAGABLE MATERIALS. THE CONTRACTOR SHALL DISPOSE OF ANY REMOVED MATERIALS NOT KEPT BY THE OWNER OFF SITE

11 PATCH ANY OPENINGS CREATED BY DEMOLITION WORK AND NOT REUSED FOR NEW CONSTRUCTION TO MATCH ADJACENT WALL CONSTRUCTION.

12 PROVIDE 3/4" FRT PLYWOOD AT ALL NEW PANELS IN TRICAL AND TELEPHONE CLOSETS. REFER TO ELECTRICAL DRAWINGS FOR EXACT LOCATIONS.

13 NOT USED

14 PROVIDE FIRESTOPPING SYSTEMS TO MEET THE MINIMUM FIRE RESISTANCE RATING OF FLOOR OR WALL ELEMENT PENETRATED AND AROUND BUILDING SERVICE EQUIPMENT THAT PASSES THROUGH FIRE RATED CONSTRUCTION. FOR NON-FIRE RATED FLOORS PROVIDE SYSTEM FOR RATED FLOOR.

15 NOT USED

16 DURING CONSTRUCTION, ALTERATION AND DEMOLITION, COMPLY WITH THE REQUIREMENTS OF THE IFC 2009 (INTERNATIONAL FIRE CODE) CHAPTER 14, (FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION.)

17 RESTORE DISTURBED LAWN AREAS WITH TOPSOIL AND SEED . BLEND EXISTING GRADES WITH NEW CONCRETE SURFACES TO MAINTAIN DRAINAGE PATTERNS

GENERAL REMOVAL NOTES

1. GENERAL REMOVAL NOTES ARE TYPICAL FOR ALL DRAWINGS.
2. WALL PARTITION REMOVALS INCLUDE BUT ARE NOT LIMITED TO MASONRY, EIFS, METAL STUD AND GWB.
3. NOTIFY ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES IN THE DRAWINGS REGARDING THE REMOVAL OF POTENTIALLY LOAD BEARING STRUCTURAL ELEMENTS NOT DOCUMENTED OR DETAILED AS SUCH.
4. SEE REMOVAL KEY NOTES FOR SPECIFIC REMOVALS.
5. ITEMS LISTED/NOTED FOR REMOVAL ARE TO BE REMOVED IN THEIR ENTIRETY, UNLESS OTHERWISE NOTED.
6. AT ALL PARTITIONS, STRUCTURAL, AND FLOOR REMOVALS, PROVIDE TEMPORARY SHORING/BRACING AS REQUIRED TO MAINTAIN STABILITY AND SOUNDNESS OF EXISTING CONSTRUCTION THAT IS TO REMAIN.
7. ALL REMOVAL SHALL BE DONE IN A NEAT, WORKABLE MANNER, AVOIDING DAMAGE TO ADJACENT SURFACES TO REMAIN AND TO FACILITATE THE SUBSEQUENT PATCHING AND RESTORATION OF SURFACES TO REMAIN.
8. ALL EXISTING CONSTRUCTION TO REMAIN SHALL BE APPROPRIATELY PROTECTED FOR THE DURATION OF THE CONSTRUCTION PERIOD. ANY DAMAGES INCURRED DURING CONSTRUCTION SHALL BE REPAIRED TO MATCH EXISTING CONSTRUCTION AND FINISHES.
9. REMOVE, PROTECT, STORE, AND RE-INSTALL ANY ITEMS AS NOTED ON THE DRAWINGS.
10. AT ALL CEILING REMOVALS, REMOVE ALL LAYERS OF EXISTING CEILINGS, HARDWARE, AND ACCESSORIES. EXISTING CEILING SYSTEM TO BE REMOVED INCLUDES BUT NOT LIMITED TO: METAL FRAMING SUPPORT SYSTEM AND TILE. REMOVE BACK TO EXISTING STRUCTURE ABOVE.
11. COORDINATE ALL REMOVAL WORK WITH OVERALL PROJECT PHASING AND EXTENT OF ALL NEW WORK.
12. FIELD VERIFY ALL REMOVAL SCOPE. SOME ITEMS TO BE REMOVED MAY NOT BE REPRESENTED GRAPHICALLY.
13. OBJECTS SHOWN ON SPECIFIC REMOVAL PLANS WITH A "DASHED" LINE, INCLUDING BUT LIMITED TO PARTITIONS, DOORS, FRAMES, ARE TO BE REMOVED IN THEIR ENTIRETY BACK TO SOUND STRUCTURE . ADEQUATE CARE SHALL BE TAKEN TO PRESERVE ALL ADJACENT FINISHES/WALLS ETC. TO REMAIN.
14. WHERE PARTITION REMOVALS INTERSECT EXISTING WALLS TO BE REFINISHED, PATCH AND PAINT EXISTING PARTITIONS TO REMAIN TO MATCH ADJACENT SURFACES.
15. ALL ITEMS OF SALVAGEABLE VALUE SLATED FOR REMOVALS, SHALL REMAIN THE PROPERTY OF THE OWNER. REVIEW ITEMS TO SALVAGED WITH THE OWNER PRIOR TO START OF WORK.
16. PROPERLY DISPOSE OF ALL REMOVED MATERIALS.
17. REMOVE ALL MISCELLANEOUS WALL BRACKETS AND ATTACHMENTS. PATCH WALLS AS REQUIRED FOR NEW CONSTRUCTION.

ALUMINUM
BATT INSULATION
BRICK
COMPACTED BACKFILL
CONCRETE
CONCRETE MASONRY UNITS
EARTH
FINISH WOOD
GLASS IN ELEVATION
GRANULAR FILL
GYPSUM WALL BOARD OR GROUT
PARTICLE BOARD/ FIBER BOARD
PLYWOOD
RIGID INSULATION / ROOF INSULATION
ROUGH WOOD BLOCKING (CONTINUOUS)
ROUGH WOOD BLOCKING (INTERRUPTED)
STEEL
STONE (CUT OR CAST)

1 MATERIAL INDICATIONS
1 : 1

OFFICE 100A 150 SF — ROOM NAME & NUMBERS
101 — DOOR NUMBERS
A1.4 — COLUMN NUMBERS
00.00 — ELEVATION TARGET
2 — WINDOW/ LOUVER TYPE
1 — REVISION NUMBER
B60A — WALL/ PARTITION TYPES
CPT-1 — MATERIAL KEY NOTE
02 — CONSTRUCTION KEY NOTE
FD — FLOOR DRAIN

PLAN SYMBOLS
1/8" = 1'-0"

	EXIST TO BE REMOVED	EXIST TO REMAIN
WALL		
DOOR		
CONCRETE TO BE REMOVED		

DEMOLITION LEGEND
1/8" = 1'-0"

REGISTERED ARCHITECT ROBERT A. MUSCATELLO STATE OF NEW YORK

DPW Directorate of Public Works

EYP

500 SUMMIT LAKE DRIVE, SUITE 500
VALHALLA, NEW YORK 10595-1352

SCALE:	As indicated
DATE:	MAY 18, 2022
DRAWN:	NP
DESIGNED:	BM
P.M.:	
CHECKED:	AS
SUBMITTED:	
APPROVED:	

REVISIONS

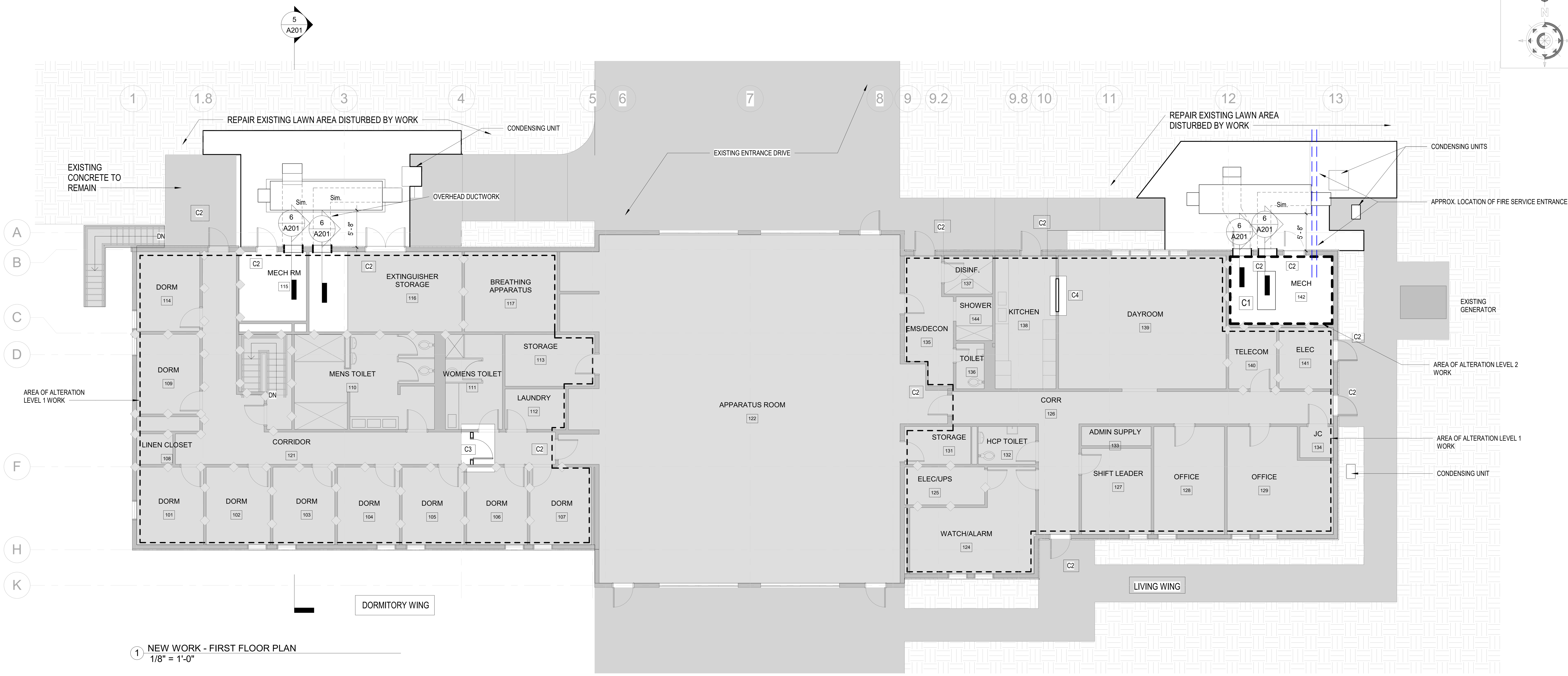
#	DESCRIPTION	DATE	BY

RENOVATION/ UPGRADE OF FIRE STATION 2 (BLDG 1203)
US ARMY GARRISON WEST POINT, NY

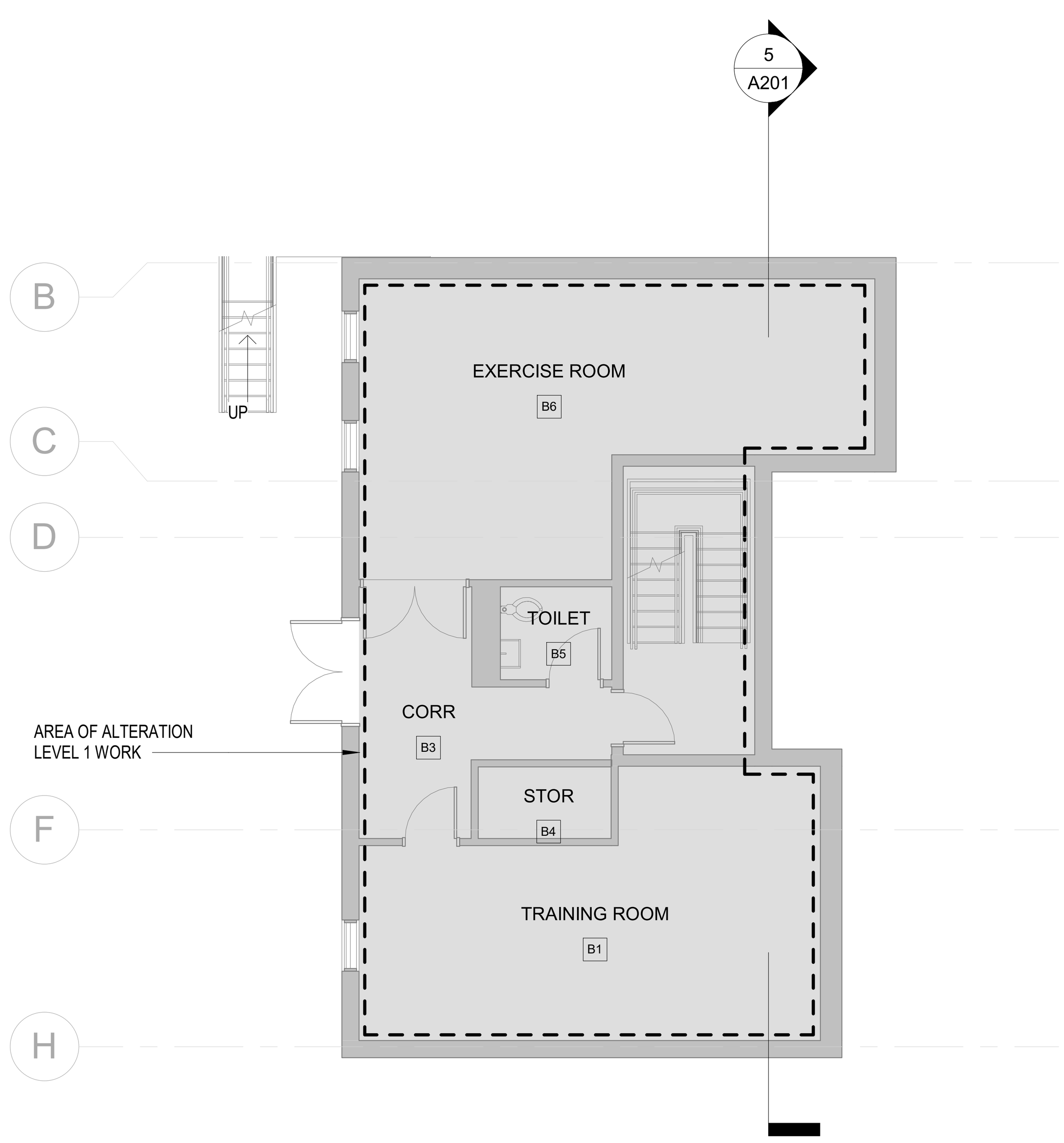
NOTES & ABBREVIATIONS

SHEET NUMBER:
A001

SHEET OF



1 NEW WORK - FIRST FLOOR PLAN
1/8" = 1'-0"



2 BASEMENT PLAN
1/8" = 1'-0"

NEW WORK PLAN NOTES

PLAN CONSTRUCTION NOTES

C1	EXISTING 4" CONCRETE CURB, APPROX 3'-6 X 6'-0. CONTRACTOR OPTION TO REUSE OR REMOVE TO ACCOMODATE NEW EQUIPMENT LAYOUT
C2	PROVIDE WEATHER STRIPPING ON EXISTING DOOR
C3	PROVIDE TEMPORARY PARTITION AND DOOR TO MAINTAIN ACCESS TO TOILET ROOM AND LAUNDRY IN
C4	PROVIDE TEMPORARY PARTITION TO ISOLATE KITCHEN IN PHASE 1

LEGEND

EXISTING 1 HOUR RATED PARTITION

AREA OF NO ARCHITECTURAL PLAN WORK

	NEW CONSTRUCTION	EXIST TO REMAIN
WALL		
DOOR		

SCALE: 1/8" = 1'-0"

DPW Directorate of Public Works

EYP

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VALHALLA, NEW YORK 10595-1352

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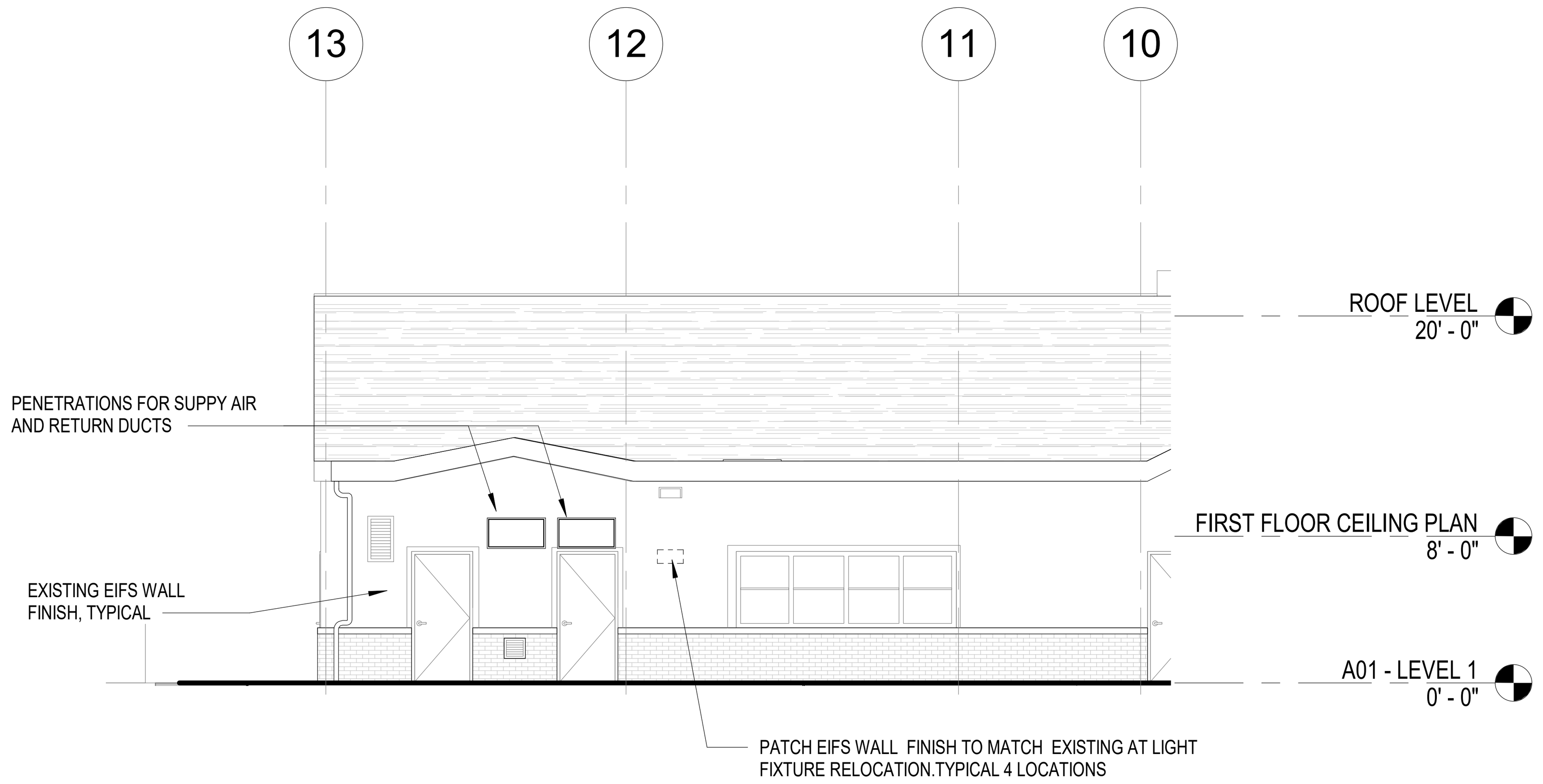
RENOVATION/ UPGRADE OF
FIRE STATION 2 (BLDG 1203)
US ARMY GARRISON WEST POINT, NY

FLOOR PLANS

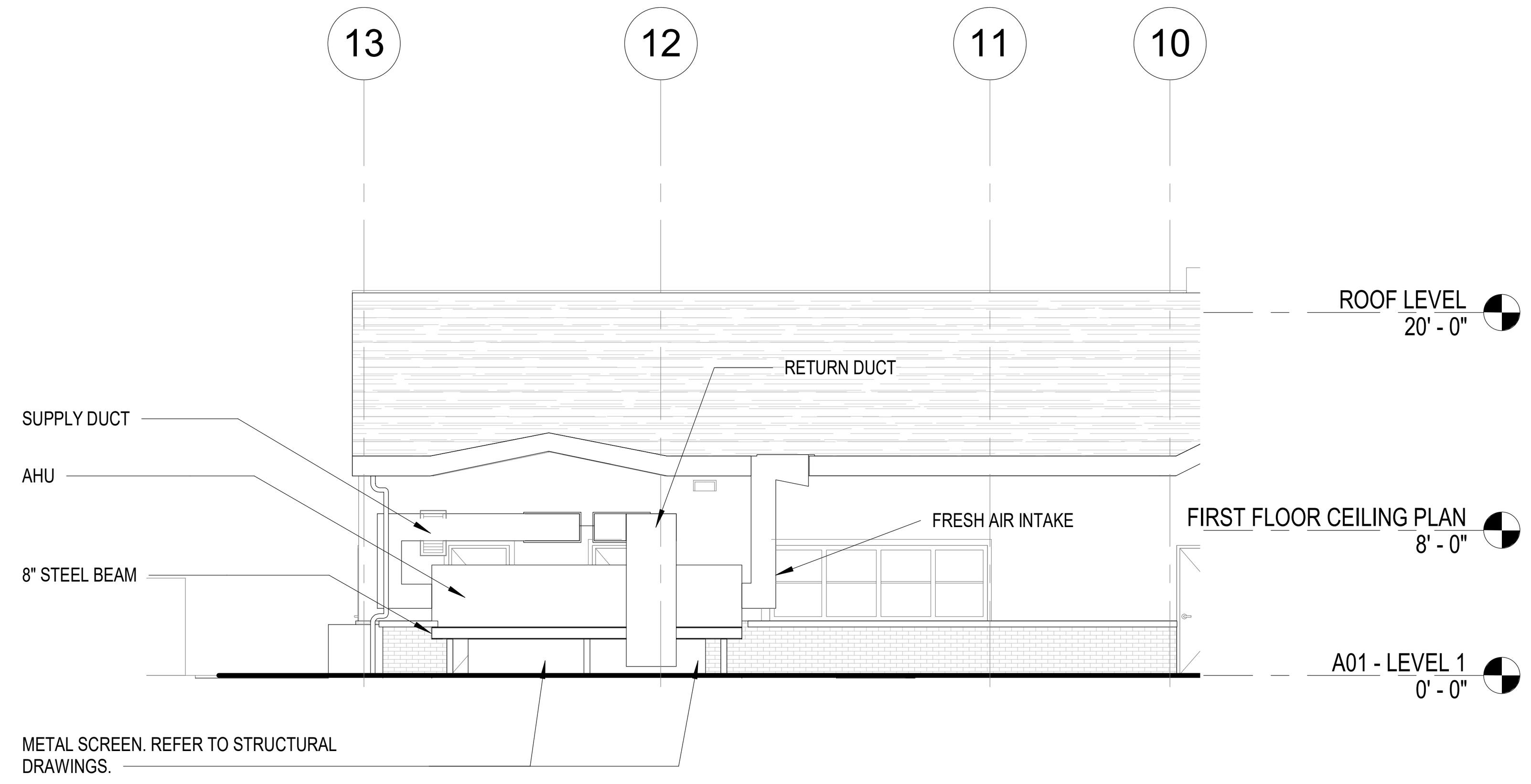
SHEET NUMBER:

A101

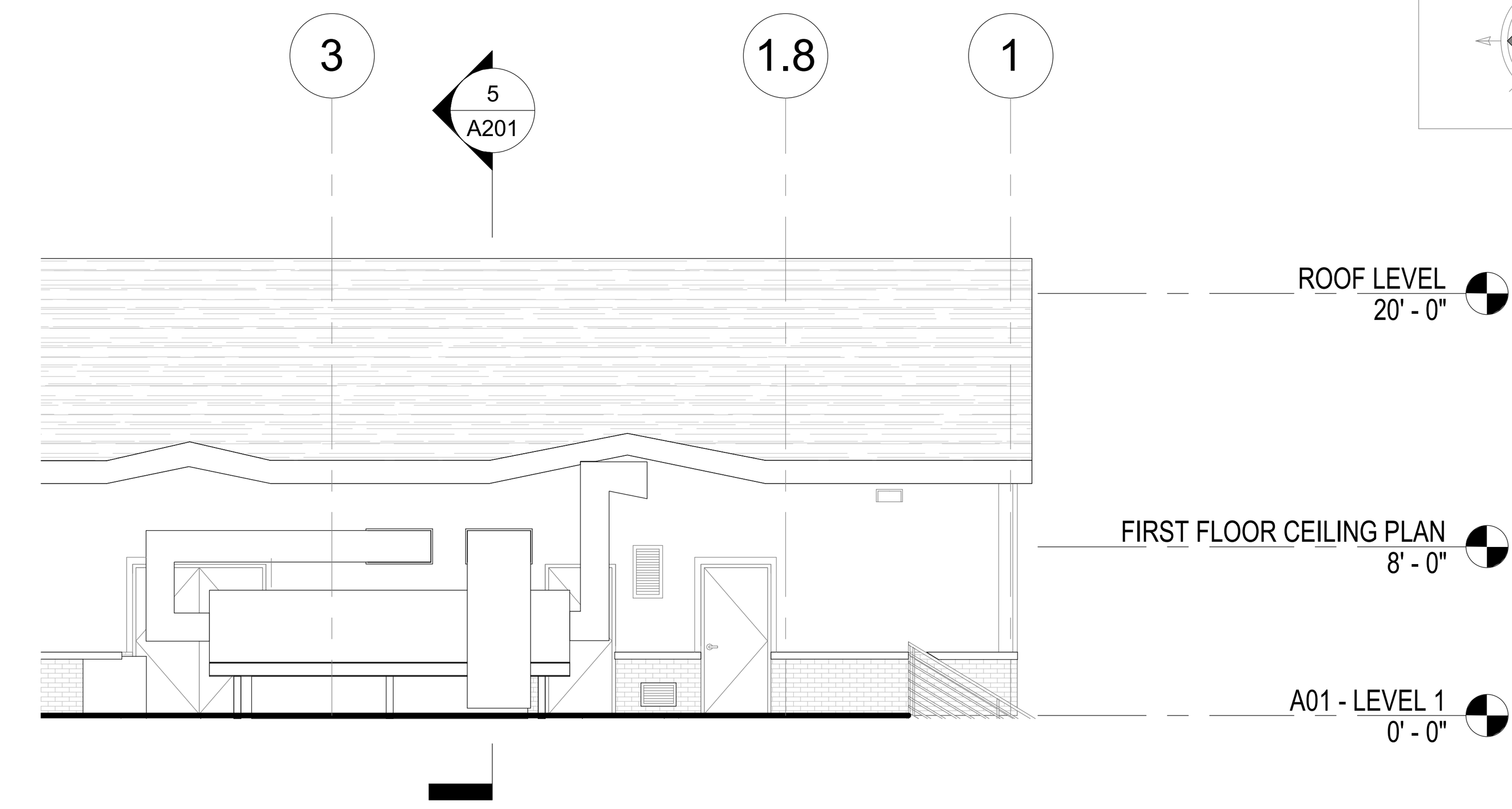
SHEET OF



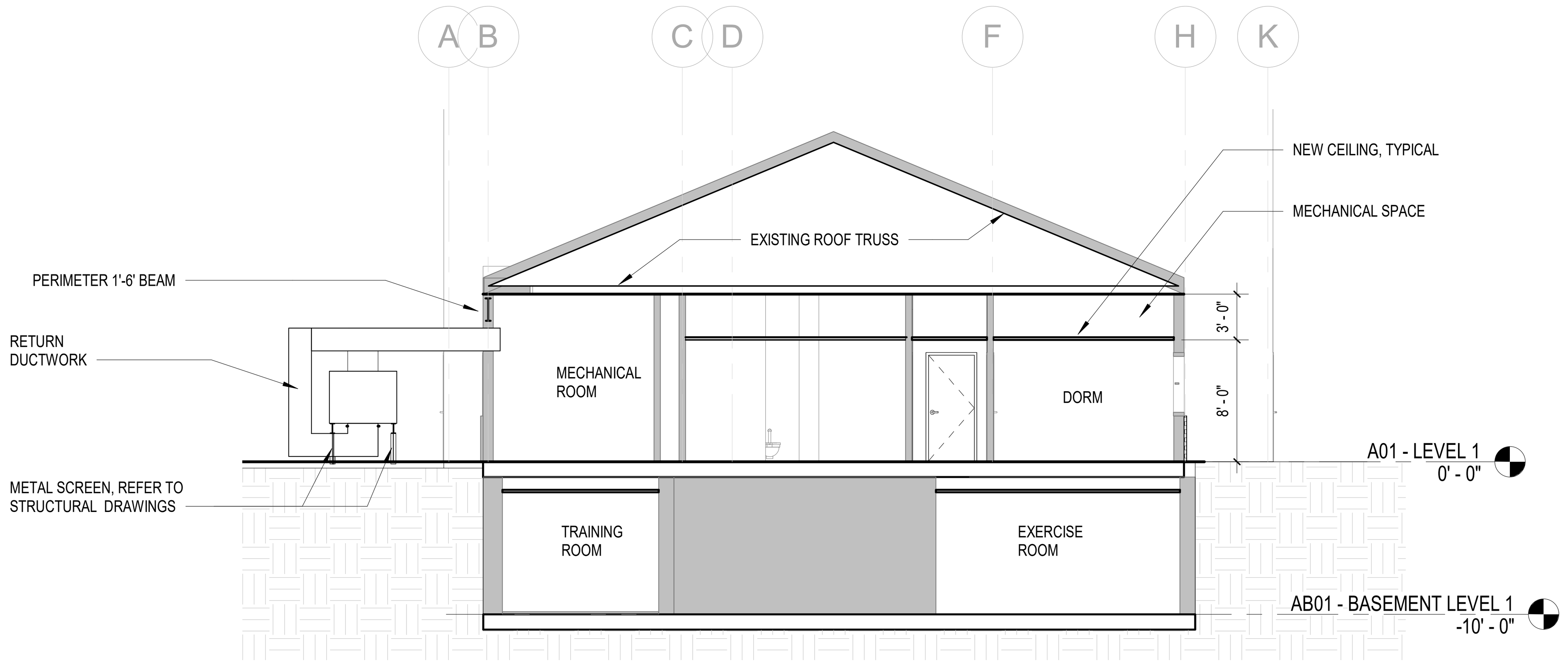
3 NORTH LIVING WING PENETRATIONS
1/8" = 1'-0"



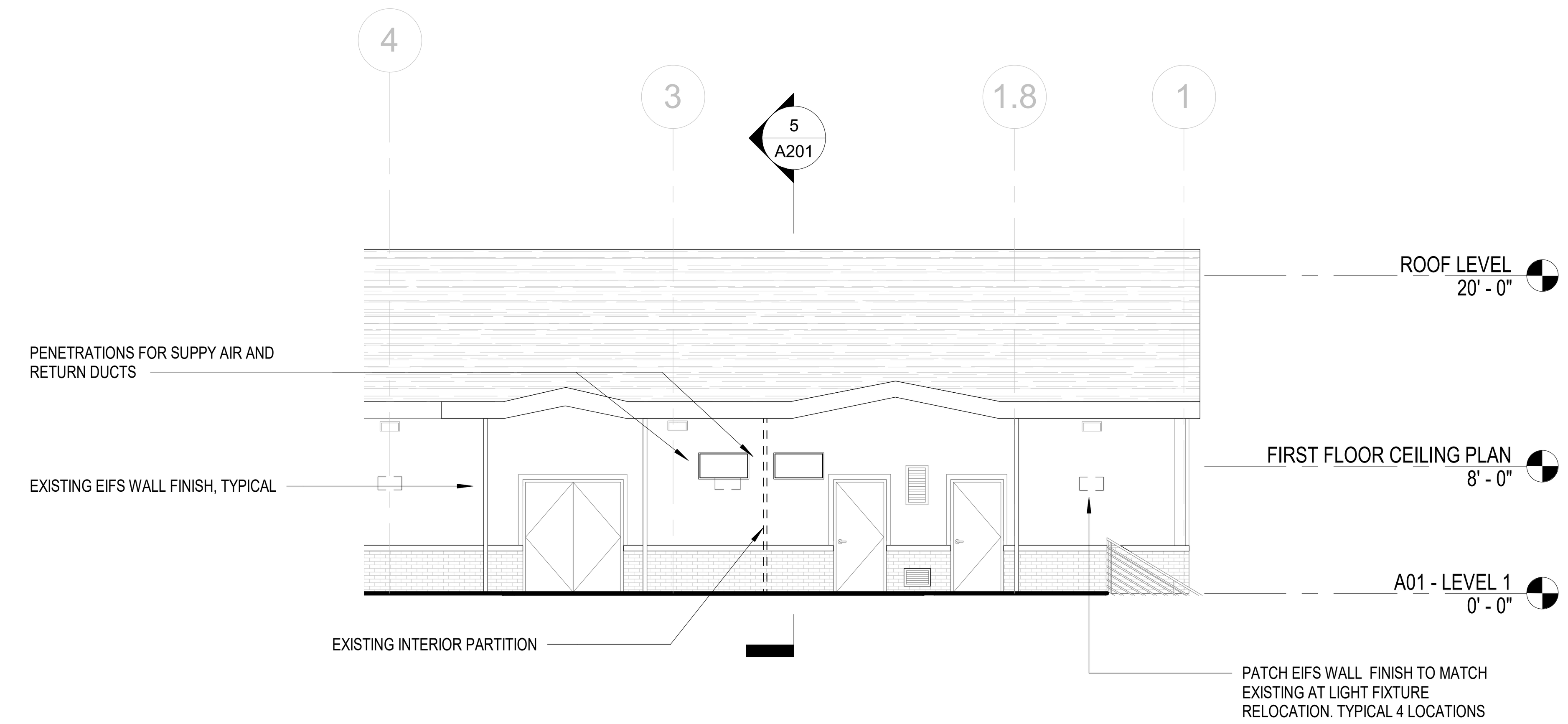
2 NORTH LIVING WING
1/8" = 1'-0"



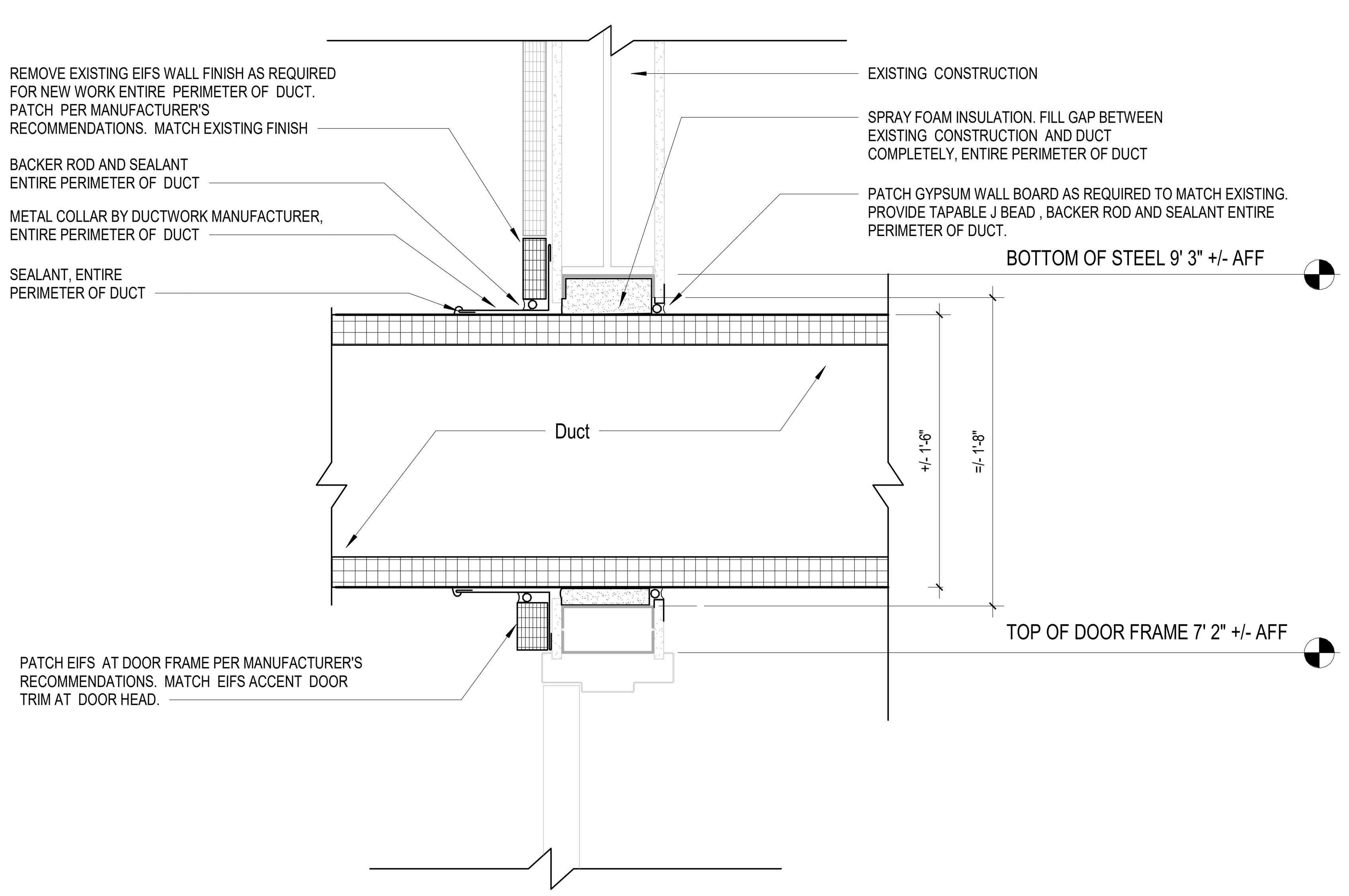
1 NORTH DORM WING
1/8" = 1'-0"



5 MECH ROOM SECTION
1/8" = 1'-0"



4 NORTH DORM WING PENETRATIONS
1/8" = 1'-0"



6 Ductwork Penetration
1 1/2" = 1'-0"

DPW Directorate of Public Works

EYP

500 SUMMIT LAKE DRIVE, SUITE 500
VALHALLA, NEW YORK 10595-1352

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REVISIONS

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RENOVATION/ UPGRADE OF FIRE STATION 2 (BLDG 1203)
US ARMY GARRISON WEST POINT, NY

EXTERIOR ELEVATIONS

REGISTERED ARCHITECT ROBERT A. MUSCATELLO STATE OF NEW YORK

0 4' 8' 16'
SCALE: 1/8" = 1'-0"

SHEET NUMBER:
A201

SHEET OF

1 FIRST FLOOR REFLECTED CEILING PLAN
1/8" = 1'-0"

2 BASEMENT REFLECTED CEILING PLAN
1/8" = 1'-0"

LEGEND

- EXISTING GYPSUM WALLBOARD CEILING AT UNDERSIDE OF STRUCTURE TO REMAIN
- NEW 2' x 4' ACOUSTIC CEILING TILE
- NEW 2' x 2' ACOUSTIC CEILING TILE
- 8" x 4' RECESSED LIGHT
- 2'X2' RECESSED LIGHT
- 2'X4' RECESSED LIGHT
- RECESSED LIGHT
- SPRINKLER HEAD
- EXIT SIGN
- RETURN DIFFUSER
- SUPPLY GRILL
- SPEAKER
- SMOKE DETECTOR
- CABINET UNIT HEATER — CH

GENERAL REFLECTED CEILING NOTES

1 NEW CEILINGS WILL MATCH EXISTING CEILING HEIGHT OF 8'-0" AFF UNLESS NOTED OTHERWISE. ALL CEILING HEIGHTS INDICATED ARE FROM TOP OF FINISH FLOOR TO BOTTOM OF FINISH CEILING.

2 ALL DEVICES, REGISTERS AND FIXTURES ARE TO BE INSTALLED CENTERED IN TILE. UNLESS OTHERWISE SHOWN OR NOTED. DEVICES TO BE PLACED AT QUARTER POINTS IN 2 X 4 CEILING PANELS IF REQUIRED TO MEET REQUIRED DISTANCE SEPARATIONS.

SCALE: 1/8" = 1'-0"

DPW
Directorate of Public Works
500 SUMMIT LAKE DRIVE, SUITE 500
VALHALLA, NEW YORK 10595-1352
EYP

SCALE: 1/8" = 1'-0"
DATE: MAY 18, 2022
DRAWN: NP
DESIGNED: BM
P.M.:
CHECKED: AS
SUBMITTED:
APPROVED:

REVISIONS

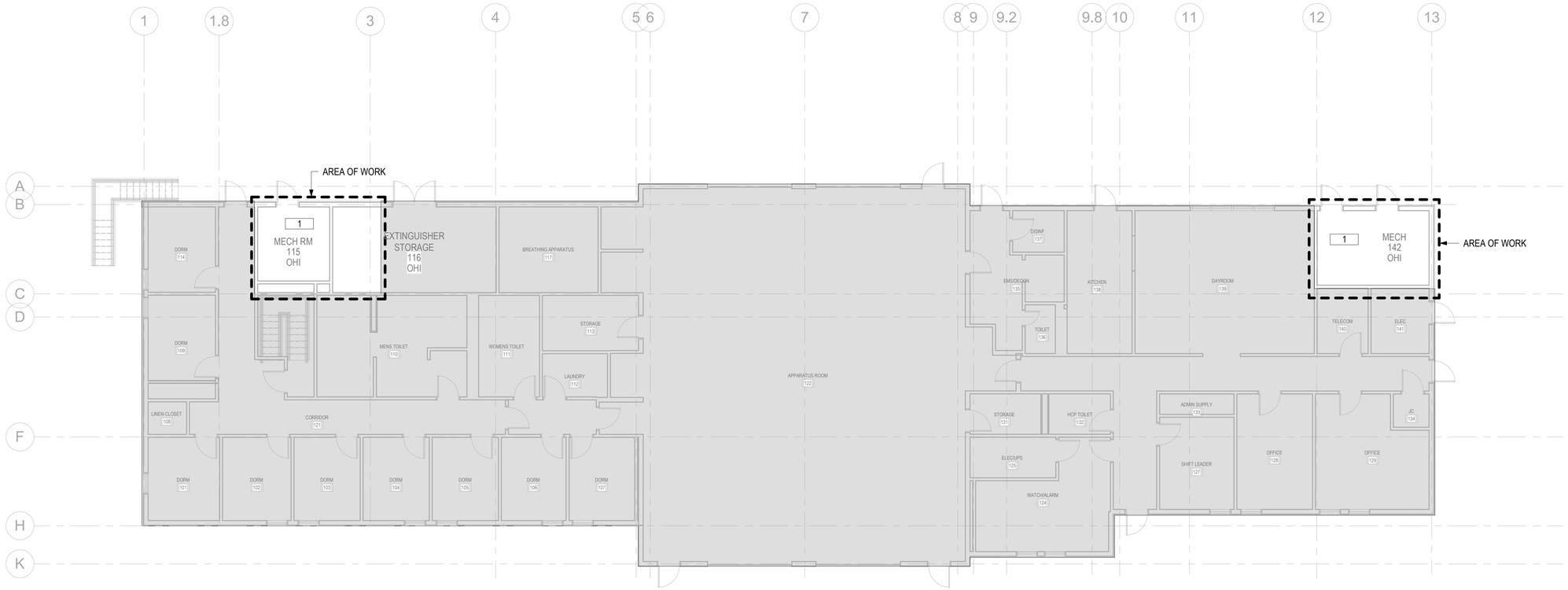
#	DESCRIPTION	DATE	BY

RENOVATION/ UPGRADE OF
FIRE STATION 2 (BLDG 1203)
US ARMY GARRISON WEST POINT, NY

REFLECTED CEILING PLAN

SHEET NUMBER:
A 801
SHEET OF

Fire Protection Keynote Legend	
Key Value	Keynote Text
1	SPRINKLER SYSTEM PIPING AND SPRINKLER LOCATION SHALL REVISED TO PROVIDE ORDINARY HAZARD GROUP I COVERAGE IN SCOPE AREA. COORDINATE WITH MECHANICAL SYSTEM WORK TO AVOID OBSTRUCTIONS.



1 A01 - LEVEL 1
1/8" = 1'-0"

ABBREVIATIONS

ABV	ABOVE
AFF	ABOVE FINISED FLOOR
BEL	BELOW
BLDG	BUILDING
CONT	CONTINUED
DN	DOWN
DWG	DRAWING
ELEC	ELECTRIC OR ELECTRICAL
FHV	FIRE HOSE VALVE
FM	FM GLOBAL (FACTORY MUTUAL)
FT	FOOT (FEET)
GPM	GALLONS PER MINUTE
HSW	HORIZONTAL SIDEWALL (SPRINKLER)
IBC	INTERNATIONAL BUILDING CODE
IFC	INTERNATIONAL FIRE CODE
IN	INCH(ES)
ITC	INSPECTOR'S TEST CONNECTION
LPM	LITERS PER MINUTE
M	METER(S)
mm	MILLIMETER(S)
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NH	NATIONAL HOSE THREAD
NIC	NOT IN CONTRACT
NPS	NATIONAL PIPE THREAD - STRAIGHT
NPT	NATIONAL PIPE THREAD - TAPERED
NTS	NOT TO SCALE
OHI	ORDINARY HAZARD GROUP 1
PSI	POUNDS PER SQUARE INCH
SF	SQUARE FOOT (FEET)
TYP	TYPICAL
U/F	UNDERFLOOR
UL	UNDERWRITERS' LABORATORIES
W/	WITH
W/O	WITHOUT
*NOTE	NOT ALL ABBREVIATIONS MAY BE USED

1. SPRINKLER AND ASSOCIATED PIPING INDICATED ON THE PLAN VIEW DRAWINGS ARE FOR REFERENCE AND DESIGN LEVEL HYDRAULIC CAPABILITY VERIFICATION CALCULATION ONLY. THE FIRE SPRINKLER CONTRACTOR SHALL BE RESPONSIBLE FOR SHOP LEVEL SYSTEM LAYOUT, DRAWINGS, AND ASSOCIATED CALCULATIONS DESIGNED AND PREPARED IN ACCORDANCE WITH ALL APPLICABLE CODES AND STANDARDS.
2. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF SYSTEM REQUIREMENTS WITH ALL CONDITIONS OF THE BUILDING AND SITE INCLUDING, BUT NOT LIMITED TO, BLIND SPACES, SHELVING, LIGHTS, GRILLES AND DIFFUSERS, PIPING, DUCT WORK, DOORS, WINDOWS, EQUIPMENT PLATFORMS, WALLS (FIRE RATED AND NON-FIRE-RATED), BEAMS, JOISTS, COLUMNS, HVAC EQUIPMENT, ELECTRICAL PANELS AND EQUIPMENT, CEILINGS, AREAS WITHOUT CEILINGS, WALL CONSTRUCTION, FLOORS AND ALL CONSTRUCTION, EQUIPMENT AND BUILDING APPURTENANCES.
3. QUICK-RESPONSE SPRINKLERS SHALL BE USED ON WET-PIPE SYSTEMS.
4. ALL PENETRATIONS OF ELECTRICAL, TELECOM, AND SIMILAR ROOMS SHALL BE LIMITED TO LOCATIONS ABOVE THE ACCESS DOORS TO THOSE ROOMS TO THE MAXIMUM EXTENT POSSIBLE. IN CASES WHERE THE PENETRATION IS NOT ABOVE THE DOOR, THE FIRE SUPPRESSION CONTRACTOR SHALL COORDINATE THE LOCATION WITH OTHER TRADES TO ENSURE THAT AT LEAST SIX FEET OF CLEARANCE IS PROVIDED ABOVE ALL PANELS.
5. MECHANICAL COUPLINGS SHALL BE OF THE SAME MANUFACTURER AS THE CONNECTED FITTINGS, OR SHALL BE SPECIFICALLY LISTED FOR USE WITH THE CONNECTED FITTINGS.
6. FIRE SPRINKLER HANGERS SHALL BE LOCATED AND INSTALLED IN ACCORDANCE WITH NFPA 13.
7. FIRE SPRINKLER CONTRACTOR SHALL PROVIDE AND INSTALL ALL NECESSARY WATERFLOW, PRESSURE, AND TAMPER SWITCHES FOR MONITORING BY THE BUILDING FAS. MONITORING PROVIDED BY THE FIRE ALARM CONTRACTOR.
8. ALL SPRINKLERS SHALL BE INSTALLED AFTER THE PIPING HAS BEEN INSTALLED AT ITS FINAL ELEVATION AND NOT WHILE THE PIPING IS AT THE FLOOR LEVEL.
9. ALL LOW POINT AREAS SHALL BE PROVIDED WITH LOW-POINT DRAIN CONNECTIONS AND VALVES. TO THE EXTENT POSSIBLE, THESE DRAINS SHALL BE ROUTED TO THE BUILDING EXTERIOR, OTHERWISE CAPS OR PLUGS SHALL BE PROVIDED.

2 GENERAL NOTES
12" = 1'-0"

DPW Directorate of Public Works
500 SUMMIT LAKE DRIVE, SUITE 500
VALHALLA, NEW YORK 10595-1352
EYP

SCALE: As indicated
DATE: MAY 18, 2022
DRAWN: SPK
DESIGNED: SPK
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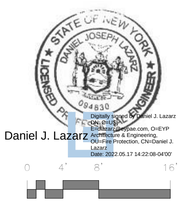
REVISIONS

#	DESCRIPTION	DATE	BY

RENOVATION/ UPGRADE OF
FIRE STATION 2 (BLDG 1203)
US ARMY GARRISON WEST POINT, NY

Fire Protection Plan and Notes

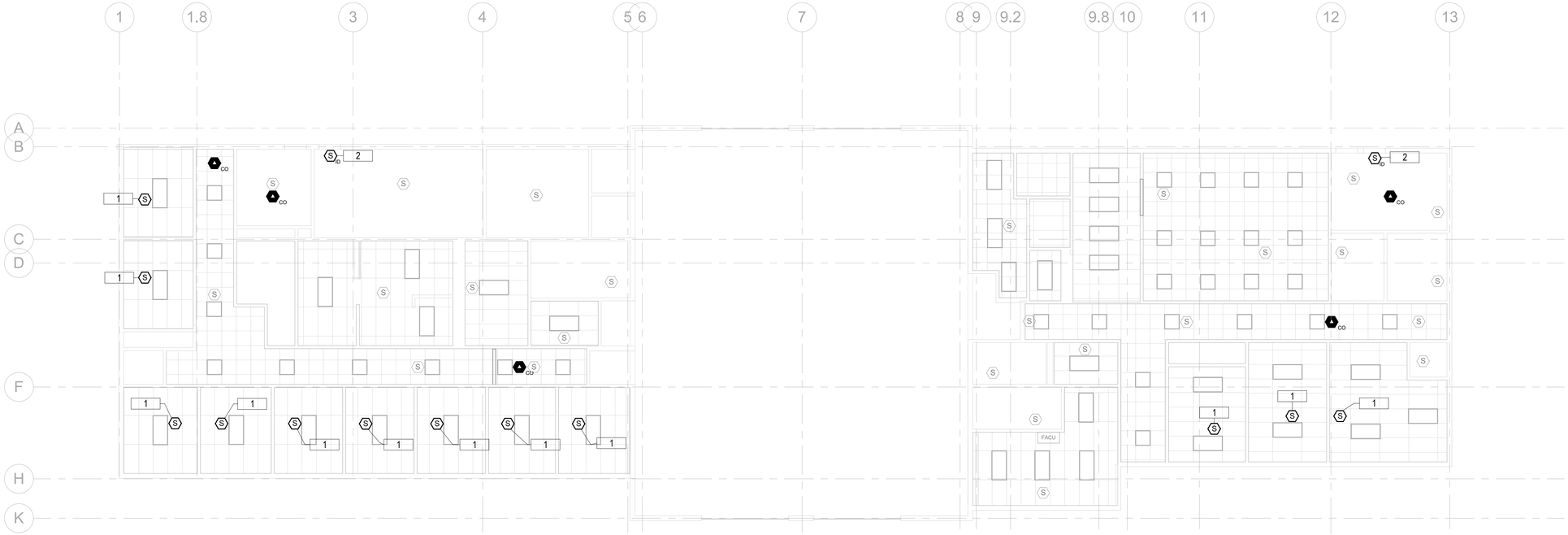


Daniel J. Lazarz
Digitally signed by Daniel J. Lazarz
DN: cn=Daniel J. Lazarz, o=EYP Architecture & Engineering, ou=Fire Protection, cn=Daniel J. Lazarz
Date: 2022.05.17 14:22:08-04'00'

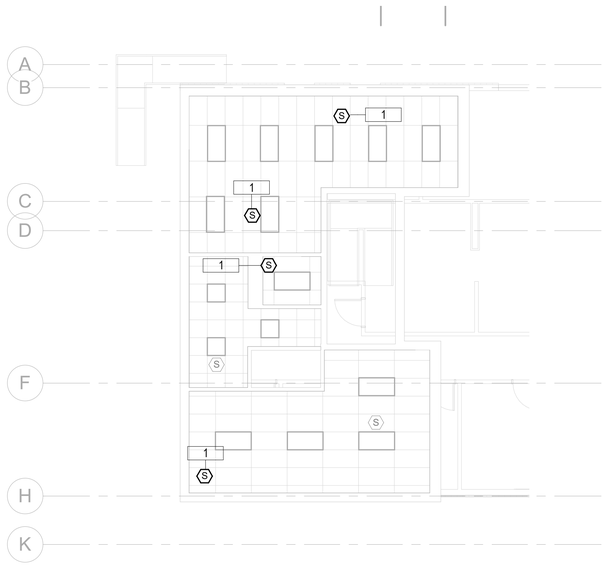
0 4' 8' 16'
SCALE: 1/8" = 1'-0"

SHEET NUMBER:
F001
SHEET OF

Fire Alarm Keynote Legend	
Key Value	Keynote Text
1	COORDINATE SMOKE DETECTOR LOCATIONS WITH MECHANICAL AIR TERMINALS. RELOCATE AS NECESSARY TO COMPLY WITH NFPA 72 REQUIREMENTS. TYPICAL THROUHOUT SCOPE AREA.
2	IN-DUCT SMOKE DETECTOR AT AHU SUPPLY FOR UNIT SHUT-DOWN.



1 F01 - LEVEL 1
1/8" = 1'-0"



2 FB01 - BASEMENT LEVEL 1
1/8" = 1'-0"

1. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF SYSTEM REQUIREMENTS WITH ALL CONDITIONS OF THE BUILDING AND SITE INCLUDING, BUT NOT LIMITED TO, BLIND SPACES, SHELVING, LIGHTS, GRILLES AND DIFFUSERS, PIPING, DUCT WORK, DOORS, WINDOWS, EQUIPMENT PLATFORMS, WALLS (FIRE RATED AND NON-FIRE-RATED), BEAMS, JOISTS, COLUMNS, HVAC EQUIPMENT, ELECTRICAL PANELS AND EQUIPMENT, CEILINGS, AREAS WITHOUT CEILINGS, WALL CONSTRUCTION, FLOORS AND ALL CONSTRUCTION, EQUIPMENT AND BUILDING APPURTENANCES.
2. END-OF-LINE DEVICES ARE NOT SHOWN AND SHALL BE PROVIDED AS REQUIRED BY THE SYSTEM MANUFACTURER.
3. AN INTELLIGENT / ANALOG FIRE ALARM SIGNALING SYSTEM SHALL BE PROVIDED AS INDICATED. THE FIRE ALARM SYSTEM SHALL BE SITE PROGRAMMABLE. THE SYSTEM SHALL MONITOR ALL MANUAL PULL STATION(S), SMOKE DETECTOR(S), WATER FLOW SWITCHES, VALVE TAMPER SUPERVISORY SWITCHES, ETC. AND PROVIDE NOTIFICATION IN ACCORDANCE WITH THE DRAWINGS, SPECIFICATIONS, AND APPLICABLE CODES AND STANDARDS.
4. THE FIRE ALARM SYSTEM SHALL BE UL-LISTED FOR CENTRAL STATION SERVICE.
5. ALL INITIATING DEVICES SHALL BE INTELLIGENT / ANALOG WHERE POSSIBLE. SEPARATE ADDRESSABLE MONITOR MODULES SHALL BE PROVIDED FOR EACH CONVENTIONAL INPUT DEVICE SUCH THAT EACH DEVICE IS INDIVIDUALLY INDICATED AT THE FACP AS A DISTINCT INPUT.
6. ALL WIRES SHALL BE CHECKED FOR GROUNDS, SHORTS, OPENS, AND CORRECT RESISTANCE, CAPACITANCE, AND OTHER APPLICABLE PARAMETERS PRIOR TO INSTALLATION OF DEVICES AND PRIOR TO TERMINATION OF THE CIRCUITS AT THE FACP OR SUBPANELS.
7. THE CIRCUIT CONFIGURATIONS SHALL COMPLY WITH THE NFPA 72 REQUIREMENTS FOR THE FOLLOWING:
   - THE SLC SHALL BE CLASS B
   - THE NAC SHALL BE CLASS B
   - THE IDC SHALL BE CLASS B
8. ALL WIRING SHALL BE IN METALLIC CONDUIT. ALL CONDUIT SHALL BE 3/4-IN. MINIMUM. IDENTIFY ALL CONDUCTORS INDIVIDUALLY WITH PERMANENT MARKINGS. PAINT ALL FIRE ALARM JUNCTION BOXES AND COVERS RED IN UNFINISHED AREAS. ALL CONDUIT SHALL HAVE 0.75-INCH WIDE PAINTED RED BANDS AT MINIMUM 25-FOOT INTERVALS AND ON BOTH SIDES OF FLOOR, WALL, CEILING, SLAB PENETRATIONS.
9. PULL ALL CONDUCTORS SPLICE FREE. THE USE OF WIRE NUTS, CRIMPED CONNECTORS, OR TWISTING OF CONDUCTORS IS PROHIBITED. ALL TERMINATIONS MUST BE AT A TERMINAL STRIP OR DEVICE SCREW TERMINAL. RUN ALL WIRING TO CONTROL PANELS AND OTHER CABINETS IN THE VERTICAL OR HORIZONTAL PLANE, MAKE ALL TURNS AT 90-DEGREE ANGLES, AND TIGHTLY BUNDLE AND WRAP ALL WIRE. ALL WIRING MUST BE SOLID COPPER, EXCEPT FOR SPEAKER CIRCUITS OR CIRCUITS REQUIRING SHIELDING. ALL SLC AND IDC SHALL BE MINIMUM 16-GAUGE. UNDER NO CIRCUMSTANCES SHALL CONDUCTORS BE SIZED SMALLER THAN THE MANUFACTURERS' REQUIREMENTS.
10. COORDINATE THE LOCATION OF CEILING MOUNTED SMOKE DETECTORS WITH HVAC DIFFUSERS. DETECTORS SHALL NOT BE CLOSER THAN 3 FT. TO ANY AIR SUPPLY DIFFUSER OR RETURN AIR OPENING. SUSPENDED CEILING-MOUNTED DETECTORS SHALL BE CENTERED IN THE TILE.
11. SYSTEM SMOKE DETECTOR HEADS SHALL NOT BE INSTALLED UNTIL AFTER FINAL CLEAN UP BY ALL TRADES. ALL SYSTEM SMOKE DETECTORS SHALL BE PROTECTED BY DUST COVERS UP UNTIL THE TIME OF FINAL ACCEPTANCE TESTING.
12. FOR DUCT-TYPE SMOKE DETECTION, THE DETECTOR AND APPROPRIATE SAMPLE TUBING SHALL BE FURNISHED BY THE FIRE ALARM CONTRACTOR, INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS AND LISTING BY THE MECHANICAL CONTRACTOR, AND CONNECTED TO THE FAS BY THE FIRE ALARM CONTRACTOR. FOR DAMPER CLOSURE ASSOCIATED WITH THE DETECTOR, THE OUTPUT MODULE (AND RELAY, IF NECESSARY) SHALL BE FURNISHED, INSTALLED, AND CONNECTED TO THE FAS BY THE FIRE ALARM CONTRACTOR; POWER SHALL BE CONNECTED BY THE ELECTRICAL CONTRACTOR; AND DAMPER CONNECTION SHALL BE MADE BY THE MECHANICAL CONTRACTOR. IT SHALL BE THE RESPONSIBILITY OF THE FAS CONTRACTOR TO ENSURE THAT THERE IS NO DAMAGE TO THE FAS AS A RESULT OF CONNECTION TO AC POWER.

3 GENERAL NOTES
12" = 1'-0"

- PHOTOELECTRIC SMOKE DETECTOR - NEW/RELOCATED
- PHOTOELECTRIC SMOKE DETECTOR - ETR
- IN-DUCT SMOKE DETECTIOR
- CARBON MONOXIDE DETECTOR
- FACU — FIRE ALARM CONTROL UNIT - ETR

FA legend
1/8" = 1'-0"

Daniel J. Lazarz

0 4' 8' 16'
SCALE: 1/8" = 1'-0"

DPW Directorate of Public Works
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RENOVATION/ UPGRADE OF
FIRE STATION 2 (BLDG 1203)
US ARMY GARRISON WEST POINT, NY

Fire Alarm Plan and Notes

SHEET NUMBER:
FA001
SHEET OF

ABBREVIATIONS & DESCRIPTIONS | N.T.S. | 1

ABBR.	DESCRIPTION
%	PERCENT
°C	DEGREE CELSIUS
°F	DEGREE FAHRENHEIT
A	COMPRESSOR AIR
AB	ABOVE
A/C	AIR CONDITIONING
AAV	AUTOMATIC AIR VENT
ACC	AIR COOLED CONDENSER
ACCH	AIR COOLED CHILLER
ACCU	AIR COOLED CONDENSING UNIT
ACU	AIR-CONDITIONING UNIT(S)
AD	ACCESS DOOR/AREA DRAIN
AF	AIR FILTER
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AFM	AIR FLOW MEASURING STATION
AHU	AIR HANDLING UNIT
AG	ABOVEGROUND
AI	ANALOG INPUT
AMP	AMPERE
AO	ANALOG OUTPUT
AP	ACCESS PANEL
APD	AIR PRESSURE DROP
APPD	APPROVED
APPROX	APPROXIMATE
AS	AIR SEPARATOR
ATV	ATMOSPHERIC VENT
AUTO	AUTOMATIC
AV	AIR VENT (MANUAL)
B&S	BELL & SPIGOT
BAS/BMS	BUILDING AUTOMATION/MANAGEMENT SYSTEM
BD	BLOW DOWN
BDD	BACKDRAFT DAMPER
BEL	BELOW
BFP	BACKFLOW PREVENTER
BG	BOTTOM GRILLE
BHP	BRAKE HORSEPOWER
BI	BACKWARD INCLINED
BLDG	BUILDING
BSB	BRANCH SELECTOR BOX
BOS	BOTTOM OF SLAB
BR	BOTTOM REGISTER
BTUH	BRITISH THERMAL UNITS PER HOUR
BV	BUTTERFLY VALVE
C/C	CENTER TO CENTER
CA	COMBUSTION AIR
CAC	CONTROL AIR COMPRESSOR
CC	COOLING COIL
CCW	COUNTERCLOCKWISE ROTATION
CD	CONDENSATE DRAIN/CEILING DIFFUSER
CF	CUBIC FEET
CFM	CUBIC FEET PER MINUTE
CFCI	CONTRACTOR FURNISH, CONTRACTOR INSTALL
CFOI	CONTRACTOR FURNISH, OWNER INSTALL
CG	CEILING GRILLE
CH	CHILLER
CHW	CHILLED WATER
CHWP	CHILLED WATER PUMP
CHWPP	CHILLED WATER PRIMARY PUMP
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CHWSP	CHILLED WATER SECONDARY PUMP
CI	CAST IRON
CLG	CEILING
CO	CLEAN OUT
COP	COEFFICIENT OF PERFORMANCE
COV	CHAINED OPERATED VALVE
CONC	CONCRETE
CONN	CONNECTION
CONT	CONTINUOUS
CP	CONDENSATE PUMP
CRAC	COMPUTER ROOM AIR CONDITIONER
CRAH	COMPUTER ROOM AIR HANDLING UNIT
CT	COOLING TOWER
CU	CONDENSING UNIT
CUH	CABINET UNIT HEATER
CV	CONTROL VALVE/CHECK VALVE
CW	DOMESTIC COLD WATER/CLOCKWISE ROTATION
CWP	CONDENSER WATER PUMP
CWR	CONDENSER WATER RETURN
CWS	CONDENSER WATER SUPPLY
D	DROP/DRAIN
DAC	DUPLEX AIR COMPRESSOR
dB	DECIBEL(S)
DB	DRY BULB
DBT	DRY-BULB TEMPERATURE
DC	DIRECT CURRENT
DD	DISCHARGE DAMPER
DDC	DIRECT DIGITAL CONTROL
DET	DETAIL
DG	DOOR GRILLE
DH	DUCT HEATER
DI	DIGITAL INPUT
DIW	DEIONIZED WATER
DIA	DIAMETER
DIL	DYNAMIC INSERTION LOSS
DN	DOWN
DO	DIGITAL OUTPUT
DP	DROP
DPS	DIFFERENTIAL PRESSURE SENSOR
DPT	DEW POINT TEMPERATURE
DV	DRAIN VALVE
DWG	DRAWING
DX	DIRECT EXPANSION
(E)/EX	EXISTING
EA	EACH
EAD	EXHAUST AIR DAMPER / DISCHARGE
EAT	ENTERING AIR TEMPERATURE
EC	EC MOTOR
ECM	ELECTRONICALLY COMMUTATED MOTOR
EDH	ELECTRICAL DUCT HEATER
EE	EMERGENCY EYE WASH
EER	ENERGY EFFICIENCY RATIO
EF	EXHAUST FAN
EFC	EVAPORATIVE FLUID COOLER
EFF	EFFICIENCY
EFT	ENTERING FLUID TEMPERATURE
EH	EXHAUST HOOD
EHC	ELECTRIC HEATING COIL
ELEC	ELECTRICAL
EL/ELEV	ELEVATION
EPO	EMERGENCY POWER OFF
EQPT	EQUIPMENT
ER	EXHAUST REGISTER
ERC	ELECTRIC REHEAT COIL
ESP	EXTERNAL STATIC PRESSURE
ET	EXPANSION TANK
ETR	EXISTING TO REMAIN
ETRD	EXISTING TO BE REMOVED
ETRL	EXISTING TO BE RELOCATED
EWB	ENTERING WETBULB TEMPERATURE
EWT	ENTERING WATER TEMPERATURE

ABBR.	DESCRIPTION
(F)/FUT	FUTURE
FA	FACE AREA
FAD	FRESH AIR DAMPER
FC	FAIL CLOSED
FCU	FAN COIL UNIT
FD	FIRE DAMPER/FLOOR DRAIN
FIN	FINISHED
FLR	FLOOR
FLA	FULL LOAD AMPS
FM	FLOW METER
FP	FIRE PROTECTION
FPF	FINS PER FOOT
FPI	FINS PER INCH
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FSD	COMBINATION FIRE & SMOKE DAMPER
FT	FEET/FLASH TANK
FTR	FINNED TUBE RADIATION
FT LB	FOOT-POUND
FV	FACE VELOCITY
G	NATURAL GAS
GA	GAUGE
GAL	GALLON(S)
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GPD	GALLONS PER DAY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GR	GRILLE
GV	GATE VALVE
H	HEIGHT
HC	HEATING COIL
HCP	HANDICAPPED
HDP	HYDROGEN DETECTION PANEL
HD	PRESSURE DROP (HEAD)
HG	PRESSURE DROP (MERCURY)
HGB	HOT GAS BYPASS
HEPA	HIGH EFFICIENCY PARTICULATE AIR (FILTER)
HOA	HAND, OFF, AUTO STATION/SWITCH
HP	HORSEPOWER
HR	HOUR
HUM	HUMIDIFIER
HMW	HUMIDIFIER MAKEUP WATER
HX	HEAT EXCHANGER
HZ	FREQUENCY (HERTZ)
ID	INSIDE DIAMETER
IH	INTAKE HOOD
IN	INCHES
IN. O.D.	INCHES OF OUTSIDE DIAMETER
IN WC	INCHES OF WATER COLUMN
KW	KILOWATTS
L	LENGTH
LAT	LEAVING AIR TEMPERATURE/LATENT
LBS	POUNDS
LBS/HR	POUNDS PER HOUR
LD	LINEAR DIFFUSER
LF	LINEAR FEET
LFT	LEAVING FLUID TEMPERATURE
LRA	LOCKED ROTOR AMPS
LWB	LEAVING WETBULB TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
M	METER
MAX	MAXIMUM
MBH	THOUSAND BRITISH THERMAL UNITS PER HR
MCA	MINIMUM CIRCUIT AMPACITY
MCC	MOTOR CONTROL CENTER
MD	MOTORIZED DAMPER
MECH	MECHANICAL
MFR	MANUFACTURER
MHP	MOTOR HORSE POWER
MIN	MINIMUM
MISC	MISCELLANEOUS
MOP	MAXIMUM OVERCURRENT PROTECTION
MOCP	MAX. OVER CURRENT PROTECTION
MTD	MOUNTED
MTR	MANUFACTURER
MU	MAKE UP WATER
MV	MOTORIZED VALVE
N/A, NA	NOT APPLICABLE
NC	NORMALLY CLOSED/NOISE CRITERIA
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NO.	NUMBER
NOM	NORMAL
NPSH	NET POSITIVE SUCTION HEAD
NPW	NON POTABLE WATER
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OAI	OUTSIDE AIR INTAKE
OBD	OPPOSED BLADE DAMPER
OC	ON CENTER
OD	OUTSIDE DIAMETER
ODP	OPEN DRIP PROOF
OED	OPEN END DUCT
OFCI	OWNER FURNISH, CONTRACTOR INSTALL
OFOI	OWNER FURNISH, OWNER INSTALL
OP	OPERATING
P	PUMP
PC	PUMPED CONDENSATE
PRI	PRIMARY
PCHP	PRIMARY CHILLED WATER PUMP
PCHWR	PRIMARY CHILLED WATER RETURN
PCHWS	PRIMARY CHILLED WATER SUPPLY
PD	PRESSURE DROP/PRESSURE DIFFERENCE
PG	PRESSURE GAUGE
PH	PHASE
PLMB	PLUMBING
POC	POINT OF CONNECTION
POD	POINT OF DISCONNECTION
PPM	PARTS PER MILLION
PRV	PRESSURE REDUCING VALVE
PS	PRESSURE SWITCH
PSI	POUNDS/SQUARE INCH
PSIA	POUNDS/SQUARE INCH ABSOLUTE
PSIG	POUNDS/SQUARE INCH GAGE
PTAC	PACKAGED TERMINAL AIR CONDITIONER

ABBR.	DESCRIPTION
R	RISE
RA	RETURN AIR
RAD	RADIUS
RD	REFRIGERANT DISCHARGE
REQD	REQUIRED
RF	RETURN FAN
RG	RETURN GRILLE
RH	RELATIVE HUMIDITY
RL	REFRIGERANT LIQUID
RLA	RUNNING LOAD AMPS
RM	ROOM
RO	REVERSE OSMOSIS
RS	REFRIGERANT SUCTION
RPM	REVOLUTIONS PER MINUTE
RPZ	REDUCED PRESSURE BACKFLOW PREVENTOR
RR	RETURN REGISTER
RTU	ROOF TOP UNIT
SA	SUPPLY AIR/SOUND ATTENUATOR
SAT	SATURATED
SCHP	SECONDARY CHILLED WATER PUMP
SCHWR	SECONDARY CHILLED WATER RETURN
SCHWS	SECONDARY CHILLED WATER SUPPLY
SCP	STAND-ALONE CONTROL PANEL
SD	SUPPLY DIFFUSER/SMOKE DAMPER
SEC	SECONDARY
SENS	SENSIBLE
SF	SUPPLY FAN/SAFETY FACTOR/SQUARE FT
SP	STATIC PRESSURE
SP HT	SPECIFIC HEAT
SP GR	SPECIFIC GRAVITY
SPEC	SPECIFICATION
SQ FT	SQUARE FEET
SR	SUPPLY REGISTER/SUCTION RETURN
SS	STAINLESS STEEL
ST/ST	STAINLESS STEEL
STL	STEEL
STM	STEAM
SUSP	SUSPEND
SW	SWITCH
TAB	TEST, ADJUST & BALANCE/TABULATE
TEMP	TEMPERATURE
TDH	TOTAL DYNAMIC HEAD
TG	TRANSFER GRILLE
TK	TANK
TR	TOP REGISTER
TSP	TOTAL STATIC PRESSURE
TSTAT	THERMOSTAT
TYP	TYPICAL
UG	UNDERGROUND
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE
UST	UNDERGROUND STORAGE TANK
V	VOLT/VENT/VALUE
VAC	VACCUM
VAV	VARIABLE AIR VOLUME
VB	VACUUM BREAK
VD	VOLUME DAMPER (MANUAL)
VERT	VERTICAL
VEL	VELOCITY
VFD	VARIABLE FREQUENCY DRIVE
VRF	VARIABLE REFRIGERANT FLOW
VIF	VERIFY IN FIELD
W	WATT/WIDTH/WIDE
W/	WITH
W/O	WITHOUT
WB	WET BULB
WBT	WET-BULB TEMPERATURE
WC	WATER COLUMN
WFS	WATER FLOW SWITCH
WH	WATER HEATER
WG	WATER GAUGE
WMS	WIRE MESH SCREEN
WT	WEIGHT

VENTILATION SYMBOLS | N.T.S. | 2

- TRANSFER GRILLE (TG)
- TOP REGISTER (TR)
- ACCESS DOOR
- ACOUSTICALLY LINED DUCTWORK
- CHANGE IN ELEVATION WITH RELATION TO AIR FLOW (R/D)
- CONICAL TAP TO RECTANGULAR DUCT AND VOLUME DAMPER (VD)
- EXISTING DUCTWORK TO BE REMOVED
- FIRE DAMPER (FD)/SMOKE DAMPER (SD) OR COMBINATION FIRE SMOKE DAMPER (FSD) (FD/SD/FSD)
- FLEXIBLE CONNECTOR
- FLEXIBLE DUCTWORK
- FUTURE DUCTWORK
- RADIUS ELBOW
- RADIUS TEE
- RECTANGULAR DUCTWORK (WIDTH X DEPTH) (10x8)
- RECTANGULAR DUCTWORK (WIDTH X DEPTH) FLAT OVAL DUCTWORK (10x8)
- RECTANGULAR-TO-ROUND TRANSITION
- RETURN/EXHAUST DUCT RISER IN PLAN
- ROUND DUCTWORK (SIZE, DIAMETER) (8 ø)
- RETURN DIFFUSER WITH TAG (TAG INCLUDES DIFFUSER TYPE, CFM AND NECK SIZE, IF APPLICABLE) (DIFF. TYPE / CFM / NECK SIZE)
- SHEETMETAL TRANSFER ASSEMBLY WITH ACOUSTIC LINING (REFER TO PLANS FOR SIZES)
- SQUARE-THROATED ELBOW W/TURNING VANES
- SQUARE-THROATED TEE
- SUPPLY DIFFUSER WITH TAG (TAG INCLUDES DIFFUSER TYPE, CFM AND NECK SIZE, IF APPLICABLE) (DIFF. TYPE / CFM / NECK SIZE)
- SUPPLY DUCT RISER IN PLAN
- TAKE-OFF TAP TO RECTANGULAR DUCT AND VOLUME DAMPER
- TRANSITION ON CENTER
- TRANSITION WITH FLAT SIDE
- VOLUME DAMPER

HYDRONIC SYMBOLS | N.T.S. | 3

- AIR SEPARATOR
- ALIGNMENT GUIDE
- ANCHOR
- AUTOMATIC AIR VENT (AV)
- AUTOMATIC FLOW CONTROL VALVE
- BALL VALVE
- BUTTERFLY VALVE
- CALIBRATED BALANCING VALVE
- CHECK VALVE
- DIRECTION
- DOUBLE LINE PIPE CONTINUES
- EXPANSION JOINT
- FLEX CONNECTION
- FLOW SWITCH (FS)
- FUTURE PIPING
- GATE VALVE
- GLOBE VALVE
- HOSE END DRAIN VALVE WITH CHAIN AND CAP
- LUBRICATED PLUG VALVE
- MANUAL AIR VENT (MV)
- MOTORIZED 2 WAY VALVE
- MOTORIZED 3 WAY VALVE
- PIPING TO BE REMOVED
- PRESSURE GAUGE AND SHUT-OFF COCK
- PRESSURE REDUCING VALVE
- PUMP
- RELIEF VALVE
- SELFCONTAINED CONTROL VALVE
- STRAINER
- STRAINER WITH BLOW OFF VALVE W/CAP AND CHAIN

FITTING SYMBOLS | N.T.S. | 4

- BLIND FLANGE
- CAP
- CLEANOUT WITH PLUG (CO)
- 90 DEGREE ELBOW (SIDE)
- ELBOW TURNED DOWN
- ELBOW TURNED UP
- FLANGE
- HOSE END CONNECTION
- PIPE/DUCT CONTINUES
- RISE OR DROP IN PIPE
- TEE TURNED DOWN
- TEE (SIDE)
- TEE TURNED UP
- UNION

DRAWING SUBMISSION INDEX | N.T.S. | 5

SHEET NUMBER	SHEET TITLE	50% SUBMISSION	90% SUBMISSION	100% SUBMISSION	
M001	HVAC ABBREVIATIONS, SYMBOLS & GENERAL NOTES	X	X	X	
MD101	HVAC DEMOLITION PLANS	X	X	X	
MD102	HVAC ROOF DEMOLITION PLANS	-	X	X	
M101	HVAC DUCTWORK PLANS	X	X	X	
M102	HVAC ROOF PLAN	-	X	X	
M201	HVAC PIPING PLANS	X	X	X	
M301	HVAC PART PLANS AND SECTIONS	-	X	X	
M401	HVAC DIAGRAMS	-	-	X	
M501	HVAC DETAILS	-	-	X	
M502	HVAC DETAILS	-	-	X	
M503	HVAC DETAILS	-	-	X	
M601	HVAC SCHEDULES	X	X	X	
M602	HVAC SCHEDULES	X	X	X	
M603	HVAC SCHEDULES	-	X	X	
M604	HVAC SCHEDULES	-	X	X	

CONTROL SYMBOLS | N.T.S. | 6

- AIR FLOW MONITORING STATION (AFM)
- AVERAGING TEMPERATURE SENSOR (T)
- BAROMETRIC DAMPER (WITH ACCESS DOOR) (B)
- CARBON DIOXIDE SENSOR (CO2) MOUNT 48" A.F.F. UNLESS OTHERWISE NOTED
- CARBON MONOXIDE SENSOR (CO) MOUNT 48" A.F.F. UNLESS OTHERWISE NOTED
- DEW POINT SENSOR (DP)
- DIFFERENTIAL PRESSURE SENSOR (DP)
- DUCT HUMIDISTAT (H)
- DUCT SMOKE DETECTOR (SD)
- END SWITCH (ES)
- FLOW METER (FM / TYPE)
- FLOW SWITCH (FS)
- HUMIDITY SPACE SENSOR (H)
- HYDROGEN DETECTION SENSOR (HD)
- HYDROGEN ALARM HORN AND STROBE
- HYDROGEN DETECTION PANEL (HDP)
- HYDROGEN DETECTOR (H2)
- INSERTION TEMPERATURE SENSOR (T)
- LEVEL TRANSMITTER (L)
- MOTOR STARTER (MS)
- MOTORIZED DAMPER (WITH ACCESS DOOR) (M)
- PNEUMATIC DAMPER (WITH ACCESS DOOR) (P)
- BAROMETRIC PRESSURE RELIEF DAMPER (WITH ACCESS DOOR) (B)
- PRESSURE SENSOR WITH THERMWELL (P)
- SMOKE DETECTOR (SD)
- STATIC PRESSURE SENSOR (SP)
- TEMPERATURE SENSOR (TS) MOUNT 48" A.F.F. UNLESS OTHERWISE NOTED
- TEMPERATURE SENSOR WITH THERMWELL (T)
- THERMOSTAT WITH SPACE ADJUSTMENT MOUNT 48" A.F.F. UNLESS OTHERWISE NOTED (T)
- VENTURI FLOWMETER

GENERAL SYMBOLS | N.T.S. | 7

- COLUMN GRID IDENTIFIER (1.2)
- ELEVATION TARGET
- KEYED NOTES (X)
- POINT OF CONNECTION
- POINT OF DISCONNECTION
- REFERENCE NOTES (#?)
- REVISION NUMBER (1)
- CLOUD ENCLOSES REVISED AREA OF DRAWING
- ROOM IDENTIFIER (ROOM NAME / 2034)

MISCELLANEOUS SYMBOLS

- DIRECTION OF VIEW
- BUILDING SECTION NUMBER (2 / M-402)
- DRAWING NUMBER WHERE SECTION IS DRAWN

BUILDING SECTION INDICATION

- DETAIL NUMBER (X / M-XXX)
- DETAIL LOCATION

DETAIL INDICATION

MATCH LINE INDICATION

STATE OF NEW YORK · SCOTT A. WILSON · 077777 · LICENSED PROFESSIONAL ENGINEER

DPW Directorate of Public Works

500 SUMMIT LAKE DRIVE, SUITE 500
VALHALLA, NEW YORK 10595-1552

EYP

SCALE: NONE
DATE: MAY 18, 2022
DRAWN: VS
DESIGNED: SW
P.M.:
CHECKED:
SUBMITTED:
APPROVED:

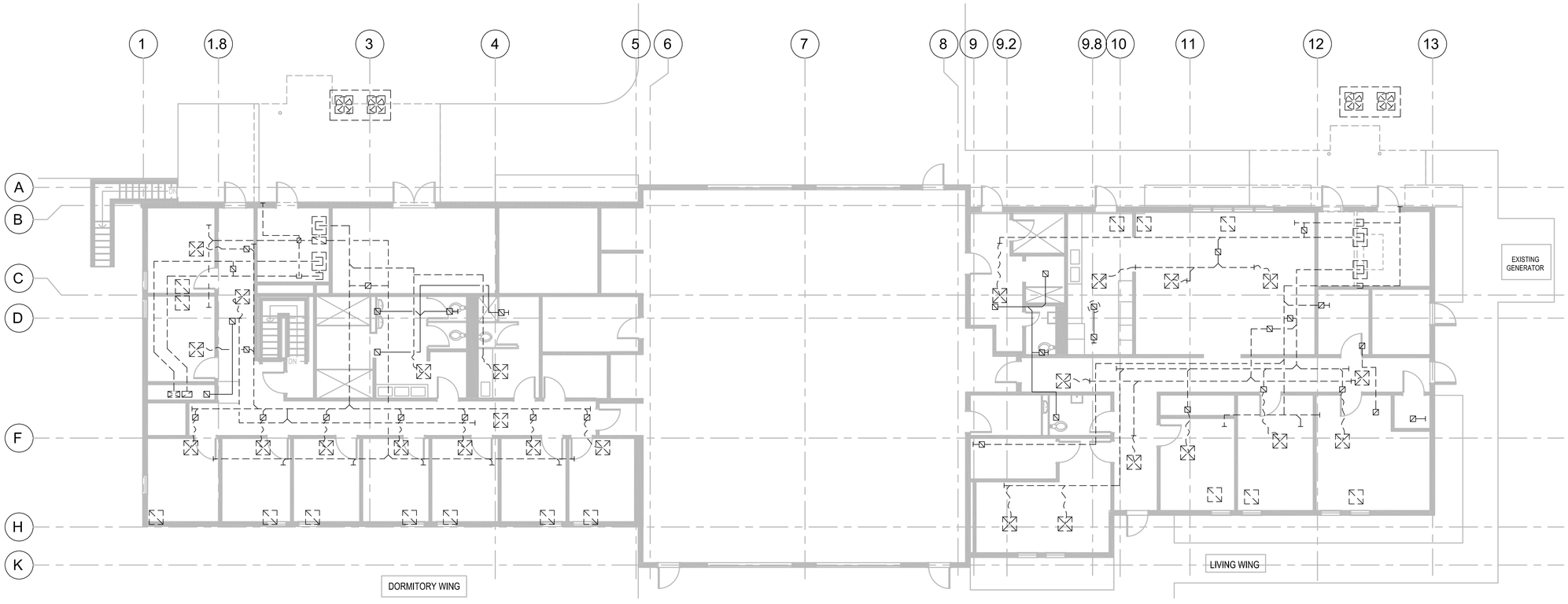
REVISIONS

#	DESCRIPTION	DATE	BY

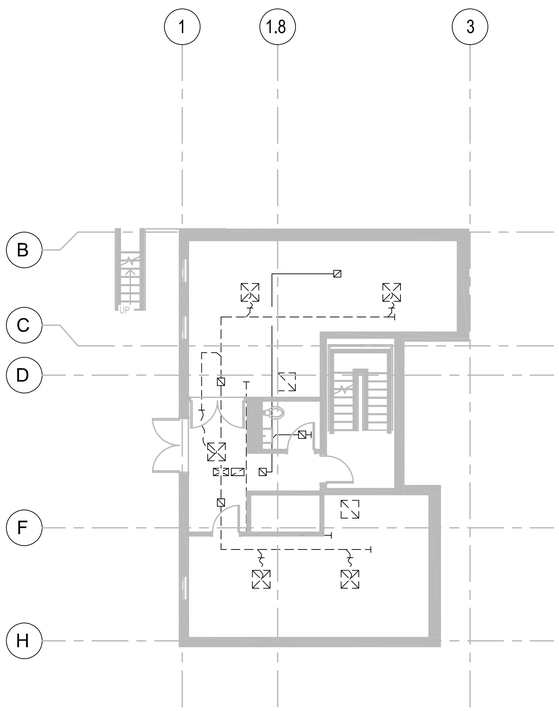
RENOVATION/ UPGRADE OF
FIRE STATION 2 (BLDG 1203)
US ARMY GARRISON WEST POINT, NY

HVAC ABBREVIATIONS, SYMBOLS & GENERAL NOTES

SHEET NUMBER:
M001



1 MD01 - LEVEL 1
1/8"=1'-0"



2 MDB01 - BASEMENT LEVEL 1
1/8"=1'-0"

DPW
Directorate of Public Works
500 SUMMIT LAKE DRIVE, SUITE 500
VALHALLA, NEW YORK 10595-1552
EYP

P.M.:
CHECKED:
SUBMITTED:
APPROVED:

REVISIONS

#	DESCRIPTION	DATE	BY

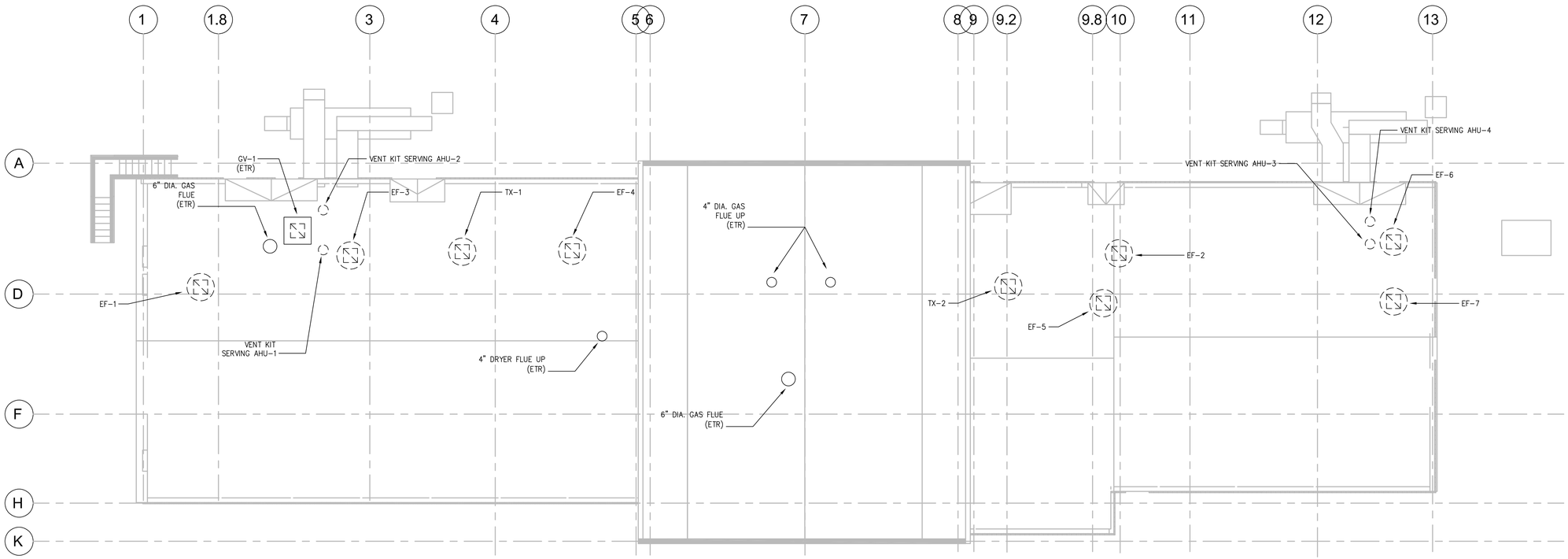
SCALE: 1/8"=1'-0
DATE: MAY 18, 2022
DRAWN: VS
DESIGNED: SW

RENOVATION/ UPGRADE OF
FIRE STATION 2 (BLDG 1203)
US ARMY GARRISON WEST POINT, NY

HVAC DEMOLITION PLANS

STATE OF NEW YORK
SCOTT A WILSON
077777
LICENSED PROFESSIONAL ENGINEER

SHEET NUMBER:
MD101



1 MD03 - ROOF LEVEL

1/8"=1'-0"

N

DPW Directorate of Public Works

500 SUMMIT LAKE DRIVE, SUITE 500
VALHALLA, NEW YORK 10595-1552

EYP

SCALE: 1/8" = 1'-0
DATE: MAY 18, 2022
DRAWN: VS
DESIGNED: SW

P.M.:
CHECKED:
SUBMITTED:
APPROVED:

REVISIONS

#	DESCRIPTION	DATE	BY

STATE OF NEW YORK
SCOTT A WILSON
077777
LICENSED PROFESSIONAL ENGINEER

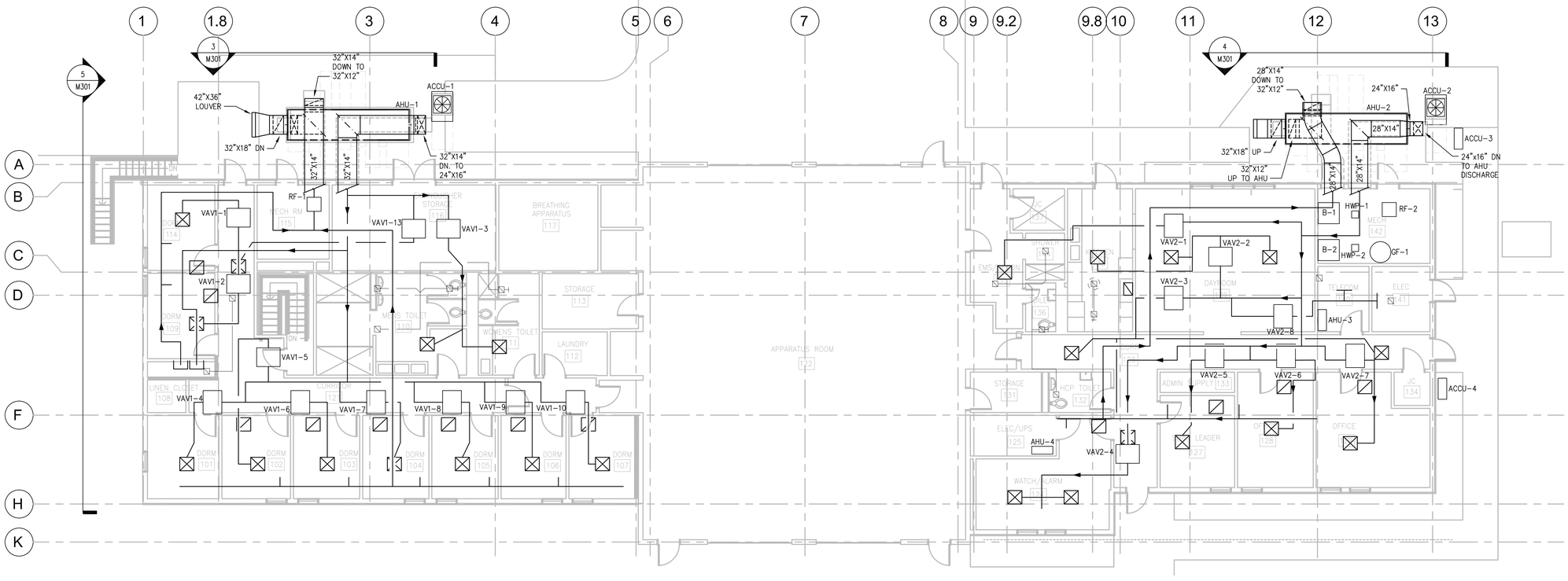
RENOVATION/ UPGRADE OF
FIRE STATION 2 (BLDG 1203)

US ARMY GARRISON WEST POINT, NY

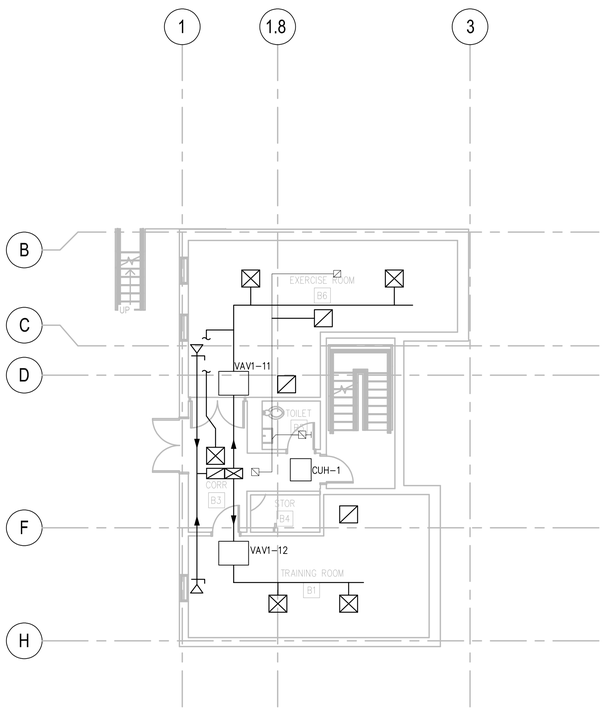
HVAC ROOF DEMOLITION PLANS

SHEET NUMBER:

MD102



1 M01 - LEVEL 1
1/8"=1'-0"



2 MB01 - BASEMENT LEVEL 1
1/8"=1'-0"

DPW
Directorate of Public Works
500 SUMMIT LAKE DRIVE, SUITE 500
VALHALLA, NEW YORK 10595-1552
EYP

P.M.:
CHECKED:
SUBMITTED:
APPROVED:

SCALE: 1/8" = 1'-0
DATE: MAY 18, 2022
DRAWN: VS
DESIGNED: SW

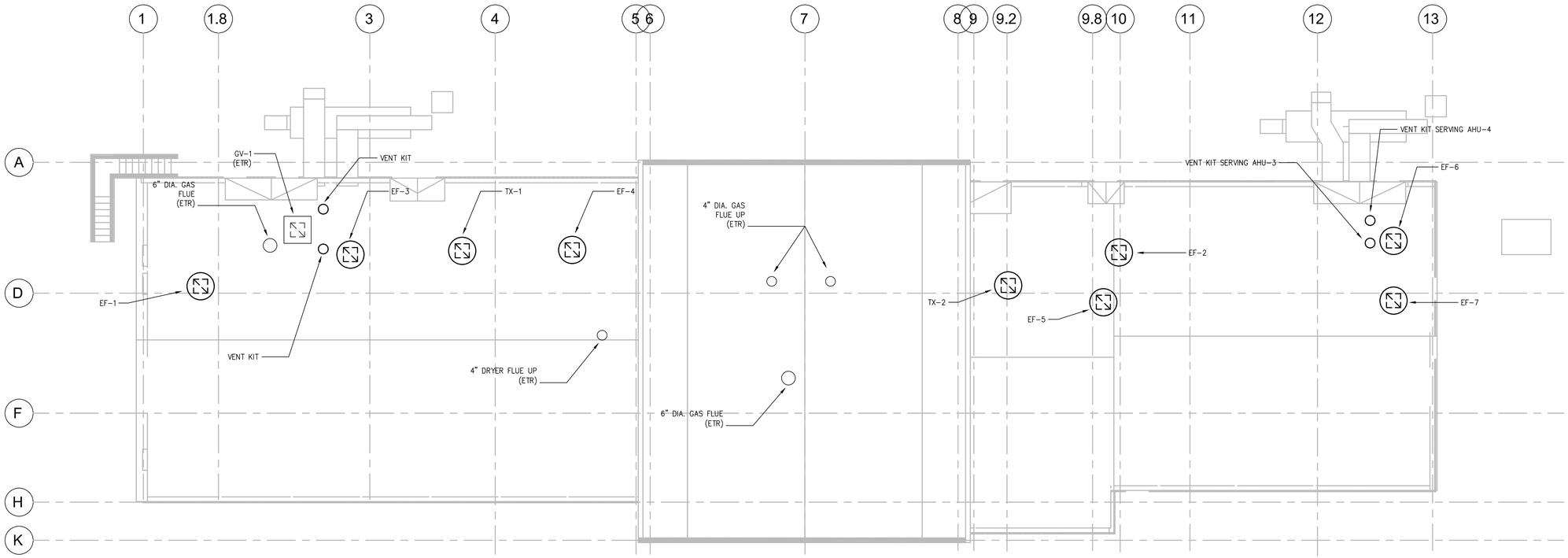
#	DESCRIPTION	DATE	BY
	REVISIONS		

RENOVATION/ UPGRADE OF
FIRE STATION 2 (BLDG 1203)
US ARMY GARRISON WEST POINT, NY

HVAC DUCTWORK PLANS

STATE OF NEW YORK
SCOTT A WILSON
077777
LICENSED PROFESSIONAL ENGINEER

SHEET NUMBER:
M101



1 M03 - ROOF LEVEL

1/8"=1'-0"

DPW Directorate of Public Works

500 SUMMIT LAKE DRIVE, SUITE 500
VALHALLA, NEW YORK 10595-1552

EYP

SCALE: 1/8" = 1'-0
DATE: MAY 18, 2022
DRAWN: VS
DESIGNED: SW

P.M.:
CHECKED:
SUBMITTED:
APPROVED:

REVISIONS

#	DESCRIPTION	DATE	BY

STATE OF NEW YORK
SCOTT A WILSON
077777
LICENSED PROFESSIONAL ENGINEER

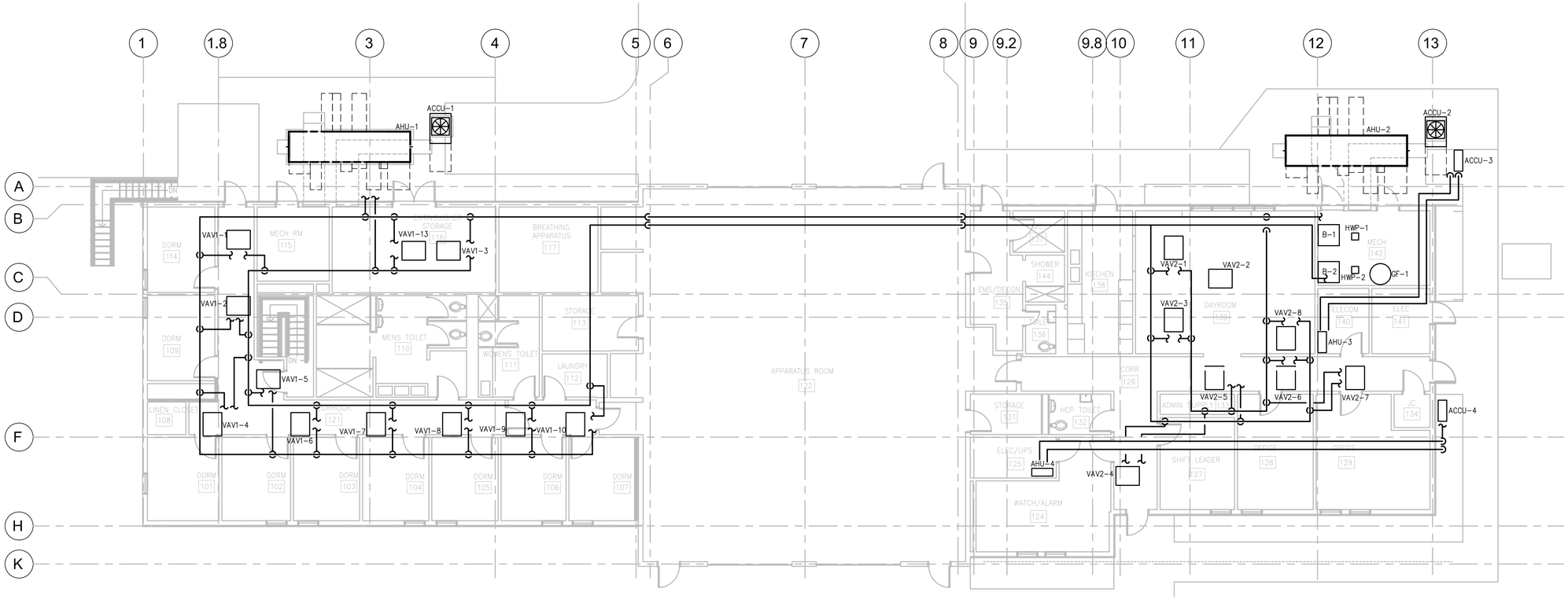
RENOVATION/ UPGRADE OF
FIRE STATION 2 (BLDG 1203)

US ARMY GARRISON WEST POINT, NY

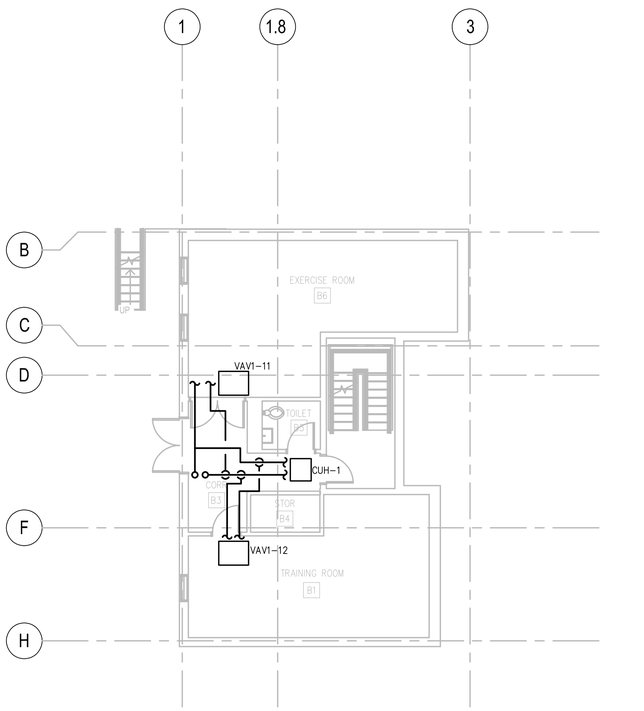
HVAC ROOF PLAN

SHEET NUMBER:

M102



1 M01 - LEVEL 1
1/8"=1'-0"



2 MB01 - BASEMENT LEVEL 1
1/8"=1'-0"

DPW
Directorate of Public Works
500 SUMMIT LAKE DRIVE, SUITE 500
VALHALLA, NEW YORK 10595-1552
EYP

P.M.:
CHECKED:
SUBMITTED:
APPROVED:

REVISIONS

#	DESCRIPTION	DATE	BY

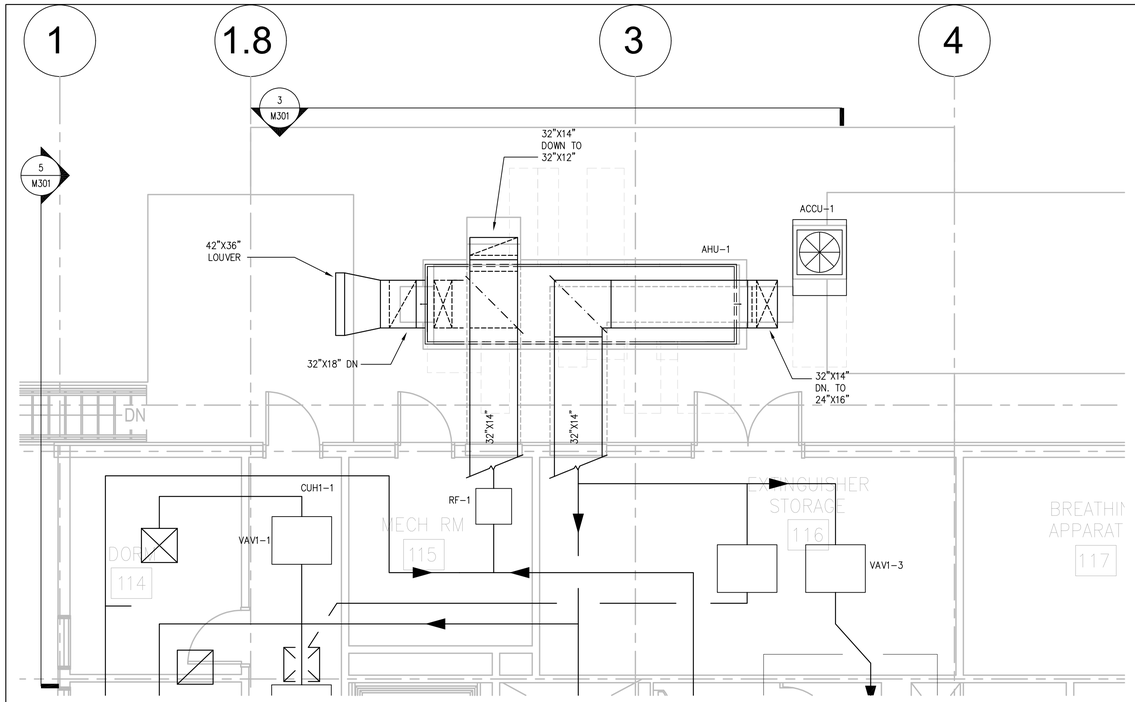
SCALE: 1/8" = 1'-0
DATE: MAY 18, 2022
DRAWN: VS
DESIGNED: SW

RENOVATION/ UPGRADE OF
FIRE STATION 2 (BLDG 1203)
US ARMY GARRISON WEST POINT, NY

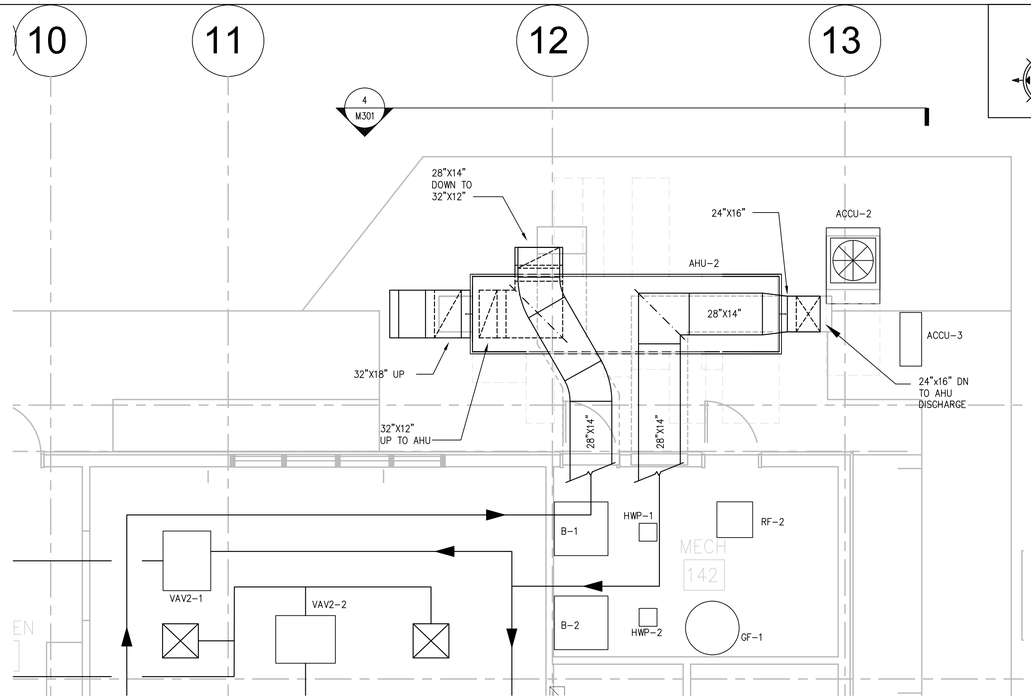
HVAC PIPING PLANS

STATE OF NEW YORK
SCOTT A WILSON
077777
LICENSED PROFESSIONAL ENGINEER

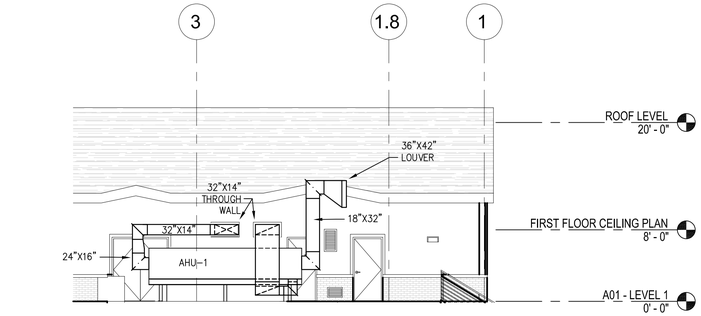
SHEET NUMBER:
M201



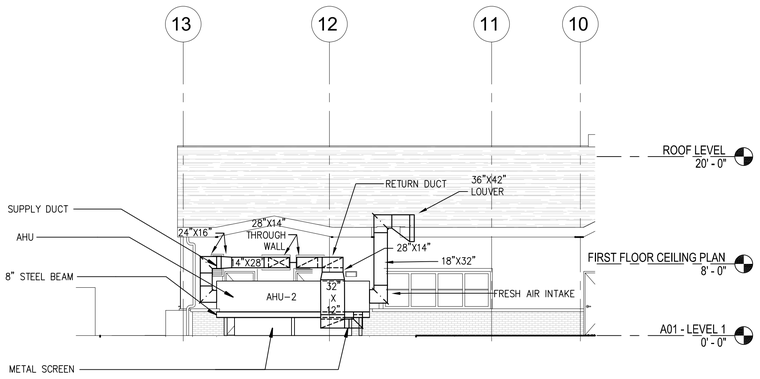
1 M01 - ENLARGED LEVEL 1 DORM WING PLAN
1/4"=1'-0"



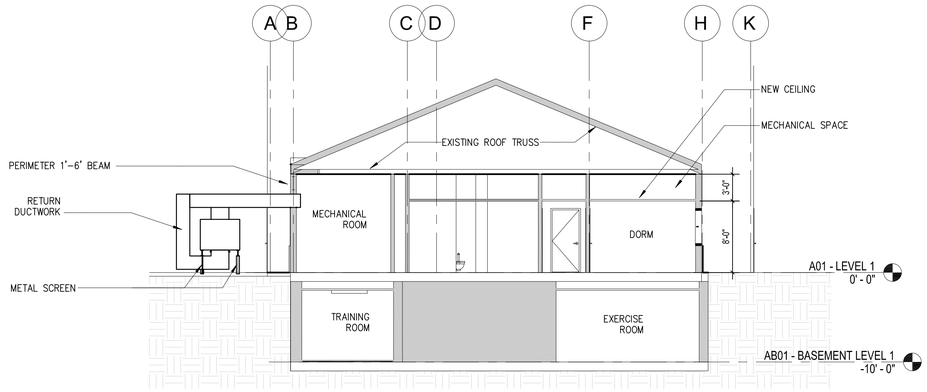
2 M01 - ENLARGED LEVEL 1 LIVING WING PLAN
1/4"=1'-0"



3 NORTH ELEVATION - DORM WING
1/8"=1'-0"



4 NORTH ELEVATION - LIVING WING
1/8"=1'-0"



5 MECH ROOM SECTION
1/8"=1'-0"

DPW
Directorate of Public Works
500 SUMMIT LAKE DRIVE, SUITE 500
VALHALLA, NEW YORK 10595-1552
EYP

SCALE: 1/8" = 1'-0
DATE: MAY 18, 2022
DRAWN: VS
DESIGNED: SW

P.M.:
CHECKED:
SUBMITTED:
APPROVED:

REVISIONS

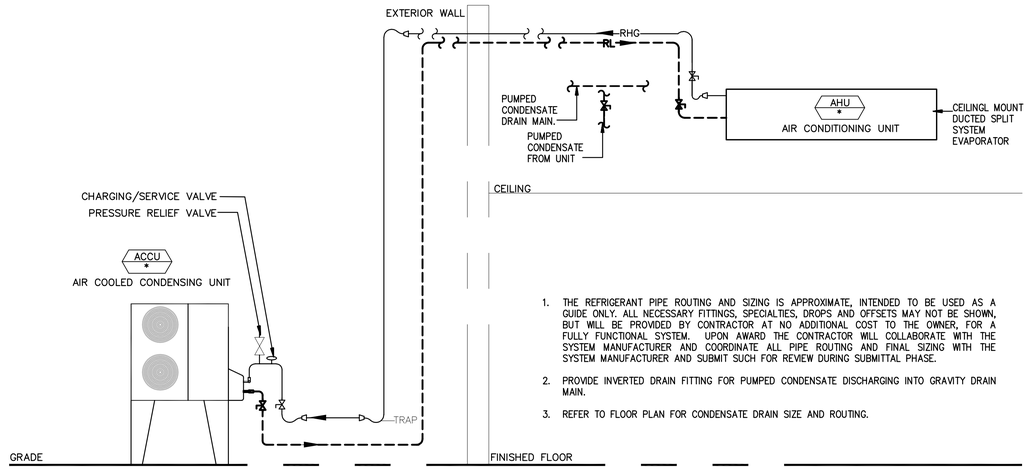
#	DESCRIPTION	DATE	BY

RENOVATION/ UPGRADE OF
FIRE STATION 2 (BLDG 1203)
US ARMY GARRISON WEST POINT, NY

HVAC ENLARGED PLANS
AND SECTIONS

STATE OF NEW YORK
SCOTT A WILSON
LICENSED PROFESSIONAL ENGINEER
077777

SHEET
NUMBER:
M301



1. THE REFRIGERANT PIPE ROUTING AND SIZING IS APPROXIMATE, INTENDED TO BE USED AS A GUIDE ONLY. ALL NECESSARY FITTINGS, SPECIALTIES, DROPS AND OFFSETS MAY NOT BE SHOWN, BUT WILL BE PROVIDED BY CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER, FOR A FULLY FUNCTIONAL SYSTEM. UPON AWARD THE CONTRACTOR WILL COLLABORATE WITH THE SYSTEM MANUFACTURER AND COORDINATE ALL PIPE ROUTING AND FINAL SIZING WITH THE SYSTEM MANUFACTURER AND SUBMIT SUCH FOR REVIEW DURING SUBMITTAL PHASE.
2. PROVIDE INVERTED DRAIN FITTING FOR PUMPED CONDENSATE DISCHARGING INTO GRAVITY DRAIN MAIN.
3. REFER TO FLOOR PLAN FOR CONDENSATE DRAIN SIZE AND ROUTING.

1 MINI-SPLIT SYSTEM
N.T.S

DPW Directorate of Public Works

500 SUMMIT LAKE DRIVE, SUITE 500
VALHALLA, NEW YORK 10595-1552

EYP

P.M.:
CHECKED:
SUBMITTED:
APPROVED:

REVISIONS

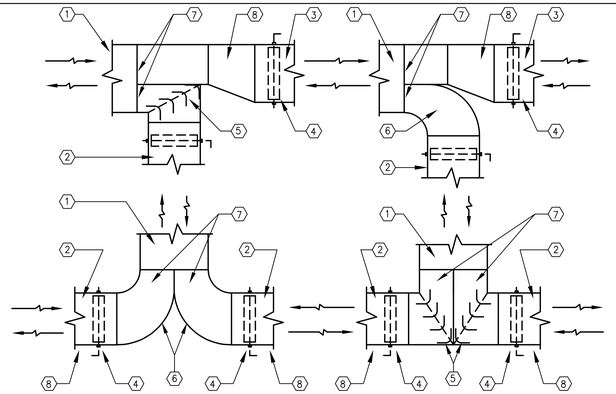
#	DESCRIPTION	DATE	BY

SCALE: NONE
DATE: MAY 18, 2022
DRAWN: VS
DESIGNED: SW

RENOVATION/ UPGRADE OF
FIRE STATION 2 (BLDG 1203)
US ARMY GARRISON WEST POINT, NY

HVAC DIAGRAMS

SHEET NUMBER:
M401



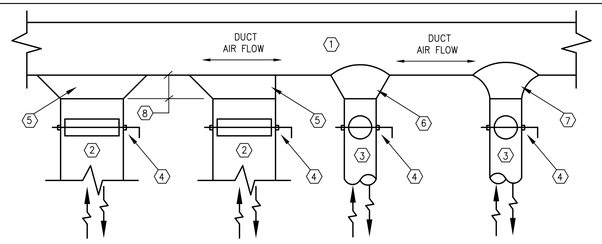
1. MAIN SUPPLY, RETURN OR EXHAUST DUCT (LOW OR MEDIUM PRESS.)
2. RECTANGULAR BRANCH DUCT (DIVERGING OR CONVERGING FLOW)
3. MAIN OR BRANCH DUCT W/ DIVERGING OR CONVERGING FLOW
4. VOLUME DAMPER AS INDICATED ON PLANS (TYP)
5. RECTANGULAR ELBOW TRANSITION W/ TURNING VANES
6. RADIUS ELBOW TRANSITION
7. DIMENSIONS OF SPLIT PER SMACNA DUCT MANUAL OR AS ON PLANS
8. TRANSITION AS REQUIRED

NOTE:

1. FABRICATE SPLIT FITTINGS, ELBOWS, TRANSITIONS, ETC. PER LATEST EDITION OF SMACNA DUCT CONSTRUCTION MANUAL, AS INDICATED ON PLANS, OR AS DESCRIBED IN SPECIFICATION. PROVIDE DUCT SPLIT ARRANGEMENT AS SHOWN ON PLANS.

1 SPLIT DUCT DETAIL

N.T.S.



1. MAIN SUPPLY, RETURN OR EXHAUST DUCT (LOW OR MEDIUM PRESS.)
2. RECTANGULAR BRANCH TAKE-OFF DUCT (LOW OR MEDIUM PRESS.)
3. ROUND BRANCH TAKE-OFF DUCT (LOW OR MEDIUM PRESS.)
4. VOLUME DAMPER AS INDICATED ON PLANS
5. 45 DEGREE ENTRY FITTING
6. CONICAL DUCT TAKE-OFF FITTING
7. BELLMOUTH DUCT TAKE-OFF FITTING
8. DISTANCE = (1/4) x (DUCT WIDTH); 4" MINIMUM DISTANCE

NOTE:

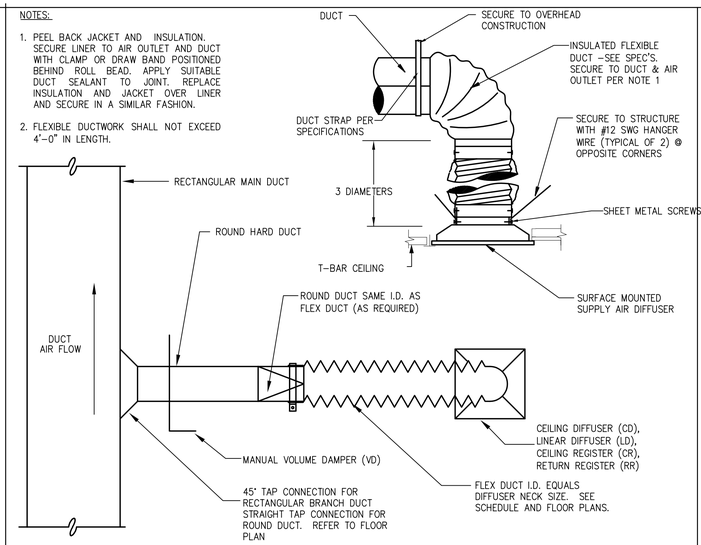
1. SPIN-IN DUCT TAKE-OFF FITTINGS MAY BE USED IN LIEU OF CONICAL OR BELLMOUTH FITTINGS ONLY WHERE MAIN DUCT DIMENSIONS ARE NOT SUFFICIENT TO ALLOW THE USE OF A CONICAL OR BELLMOUTH. SEAL ALL TAKE-OFF & OTHER DUCT FITTINGS AIR TIGHT AS PER SPEC. FABRICATE BRANCH DUCT TAKE-OFF FITTINGS PER LATEST EDITION OF SMACNA DUCT CONSTRUCTION MANUAL, AS INDICATED ON PLANS, OR AS DESCRIBED IN SPECIFICATION.

2 DUCT BRANCH DETAIL

N.T.S.

NOTES:

1. PEEL BACK JACKET AND INSULATION. SECURE LINER TO AIR OUTLET AND DUCT WITH CLAMP OR DRAW BAND POSITIONED BEHIND ROLL BEAD. APPLY SUITABLE DUCT SEALANT TO JOINT. REPLACE INSULATION AND JACKET OVER LINER AND SECURE IN A SIMILAR FASHION.
2. FLEXIBLE DUCTWORK SHALL NOT EXCEED 4'-0" IN LENGTH.



3 AIR OUTLET DETAIL

N.T.S.

4 REGISTER / GRILLE DETAIL

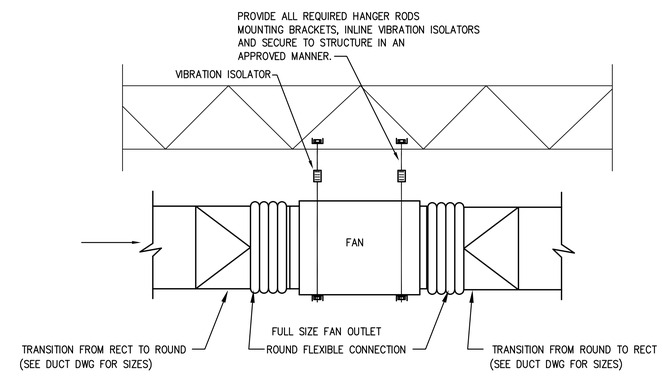
N.T.S.

5 ROOF EXHAUST FAN DETAIL

N.T.S.

6 TRANSFER DUCT DETAIL

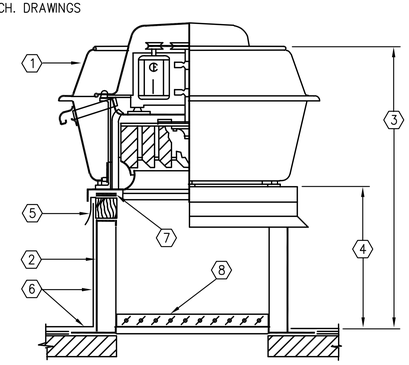
N.T.S.



7 INLINE FAN DETAIL

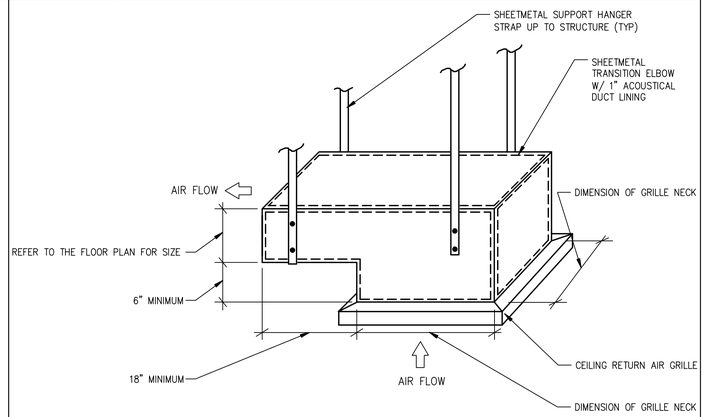
N.T.S.

1. UP-BLAST SPUN ALUMINUM ROOF EXHAUSTER
2. PREFABRICATED CURB
3. 40" MINIMUM TO SUIT NFPA 96
4. AS REQUIRED
5. FLASHING
6. ROOFING - REFER TO ARCH. DRAWINGS
7. GASKET
8. NEW BACKDRAFT DAMPER



8 UPBLAST EXHAUST FAN DETAIL

N.T.S.



9 AIR OUTLET W / TRANSFER DUCT DETAIL

N.T.S.

DPW Directorate of Public Works
500 SUMMIT LAKE DRIVE, SUITE 500
VALHALLA, NEW YORK 10595-1552
EYP

REVISIONS		
#	DESCRIPTION	DATE	BY

P.M.:
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SCALE:
DATE: MAY 18, 2022
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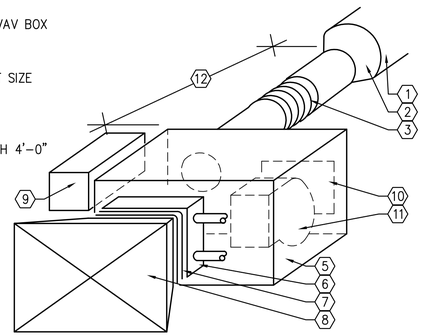
RENOVATION/ UPGRADE OF
FIRE STATION 2 (BLDG 1203)
US ARMY GARRISON WEST POINT, NY

HVAC DETAILS

STATE OF NEW YORK
SCOTT A WILSON
077777
LICENSED PROFESSIONAL ENGINEER

SHEET NUMBER:
M501

1. SUPPLY AIR DUCT (SIZE AS SHOWN ON PLANS)
2. TRANSITION TO VAV BOX INLET DIMENSION
3. MEDIUM PRESSURE FLEXIBLE DUCT CONNECTION
4. NOT USED
5. PARALLEL FAN POWERED TYPE VAV BOX
6. H.W. REHEAT COIL (SEE DETAIL)
7. FLEXIBLE DUCT CONNECTION
8. TRANSITION TO DISCHARGE DUCT SIZE
9. UNIT MOUNTED CONTROLS
10. PLENUM AIR INLET
11. PARALLEL FAN
12. MIN. LENGTH 1'–6"; MAX. LENGTH 4'–0"

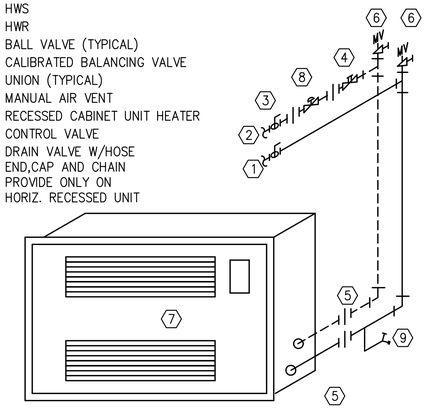


NOTES:
1) MAXIMUM INSTALLED FLEXIBLE DUCT LENGTH SHALL BE 3'–0". FLEX. DUCT AT BOX INLET SHALL BE STRAIGHT; AVOID RADIUSED FLEX. DUCT AT VAV BOX INLET. MAINTAIN FLEX. DUCT CROSS–SECTIONAL AREA.
2) VAV BOXES SHALL BE SUPPORTED FROM BLDG. STRUCTURE W/ VIBRATION ISOLATOR HANGERS.

1 FAN POWERED VAV DETAIL

N.T.S.

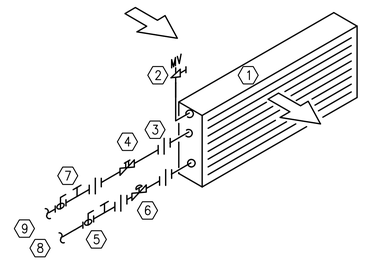
1. HWS
2. HWR
3. BALL VALVE (TYPICAL)
4. CALIBRATED BALANCING VALVE
5. UNION (TYPICAL)
6. MANUAL AIR VENT
7. RECESSED CABINET UNIT HEATER
8. CONTROL VALVE
9. DRAIN VALVE W/HOSE END,CAP AND CHAIN PROVIDE ONLY ON HORIZ. RECESSED UNIT



2 CABINET UNIT HEATER DETAIL

N.T.S.

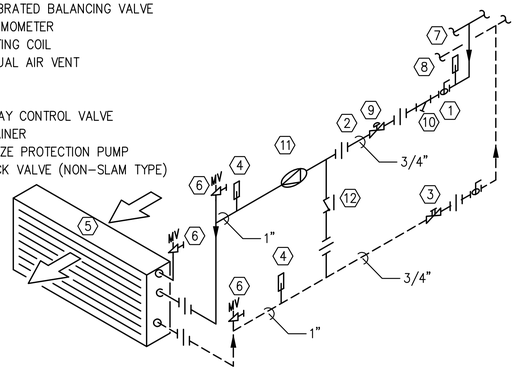
1. HEATING COIL
2. MANUAL AIR VENT (TYPICAL)
3. UNION (TYPICAL)
4. CALIBRATED BALANCING VALVE
5. BALL VALVE (TYPICAL)
6. TWO WAY CONTROL VALVE
7. TEMPERATURE / PRESSURE CONNECTOR PLUG (TYPICAL)
8. HWS
9. HWR



3 VAV HEATING COIL DETAIL

N.T.S.

1. BALL VALVE FOR 2" AND SMALLER BUTTERFLY VALVE FOR 2 1/2" AND LARGER.
2. UNION
3. CALIBRATED BALANCING VALVE
4. THERMOMETER
5. HEATING COIL
6. MANUAL AIR VENT
7. HWS
8. HWR
9. 2–WAY CONTROL VALVE
10. STRAINER
11. FREEZE PROTECTION PUMP
12. CHECK VALVE (NON–SLAM TYPE)

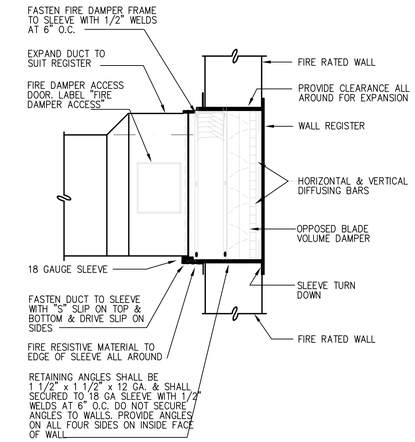


4 AHU HEATING COIL DETAIL

N.T.S.

5 NOT USED

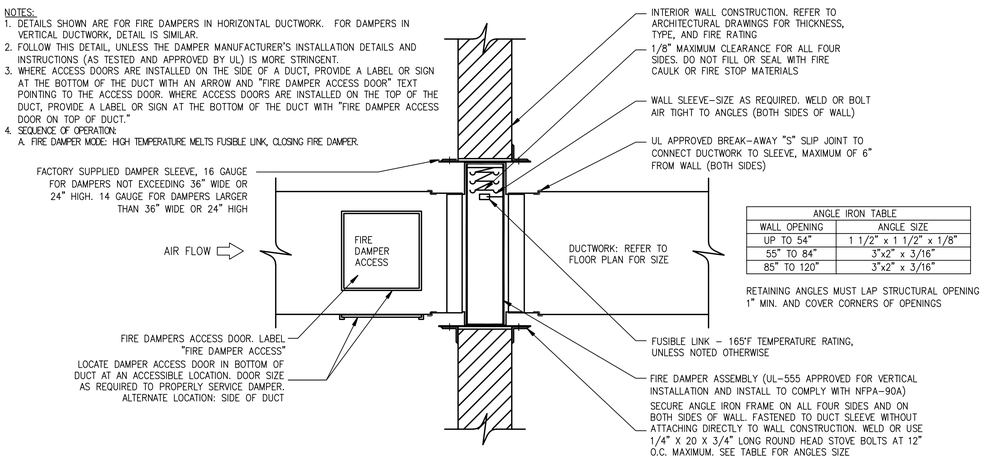
N.T.S.



6 FIRE DAMPER (FD) AT RATED WALL DETAIL

N.T.S.

NOTES:
1. DETAILS SHOWN ARE FOR FIRE DAMPERS IN HORIZONTAL DUCTWORK. FOR DAMPERS IN VERTICAL DUCTWORK, DETAIL IS SIMILAR.
2. FOLLOW THIS DETAIL, UNLESS THE DAMPER MANUFACTURER'S INSTALLATION DETAILS AND INSTRUCTIONS (AS TESTED AND APPROVED BY UL) IS MORE STRINGENT.
3. WHERE ACCESS DOORS ARE INSTALLED ON THE SIDE OF A DUCT, PROVIDE A LABEL OR SIGN AT THE BOTTOM OF THE DUCT WITH AN ARROW AND "FIRE DAMPER ACCESS DOOR" TEXT POINTING TO THE ACCESS DOOR. WHERE ACCESS DOORS ARE INSTALLED ON THE TOP OF THE DUCT, PROVIDE A LABEL OR SIGN AT THE BOTTOM OF THE DUCT WITH "FIRE DAMPER ACCESS DOOR ON TOP OF DUCT."
4. SEQUENCE OF OPERATION:
   A. FIRE DAMPER MODE: HIGH TEMPERATURE MELTS FUSIBLE LINK, CLOSING FIRE DAMPER.



ANGLE IRON TABLE	
WALL OPENING	ANGLE SIZE
UP TO 54"	1 1/2" x 1 1/2" x 1/8"
55" TO 84"	3"x2" x 3/16"
85" TO 120"	3"x2" x 3/16"

RETAINING ANGLES MUST LAP STRUCTURAL OPENING 1" MIN. AND COVER CORNERS OF OPENINGS

7 FIRE DAMPER (FD) AT RATED WALL DETAIL

N.T.S.

8 NOT USED

N.T.S.

DPW Directorate of Public Works

500 SUMMIT LAKE DRIVE, SUITE 500
VALHALLA, NEW YORK 10595-1552

EYP

P.M.:
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APPROVED:

REVISIONS

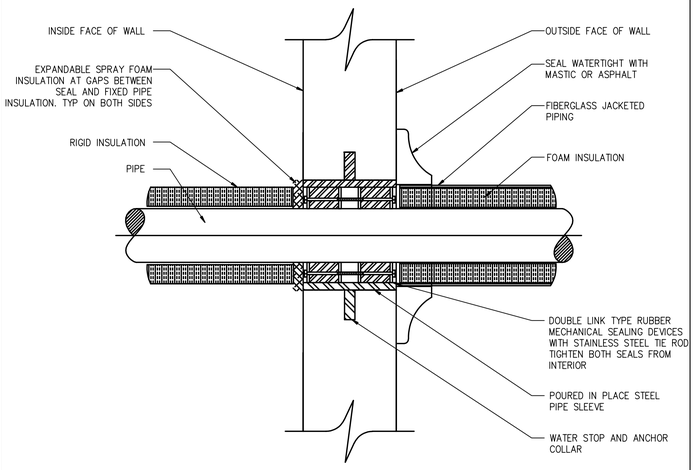
#	DESCRIPTION	DATE	BY

SCALE:
DATE: MAY 18, 2022
DRAWN:
DESIGNED:

RENOVATION/ UPGRADE OF
FIRE STATION 2 (BLDG 1203)
US ARMY GARRISON WEST POINT, NY

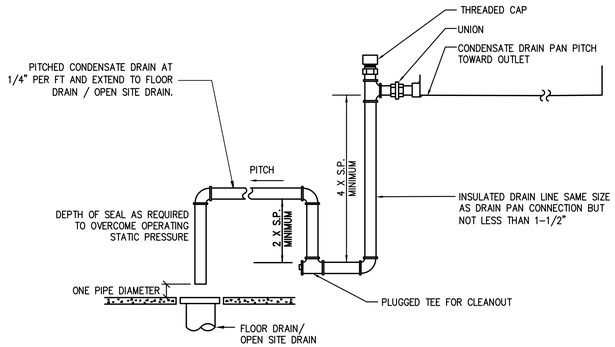
HVAC DETAILS

SHEET NUMBER:
M502



1 PIPE SLEEVE THRU EXTERIOR WALL DETAIL

N.T.S.



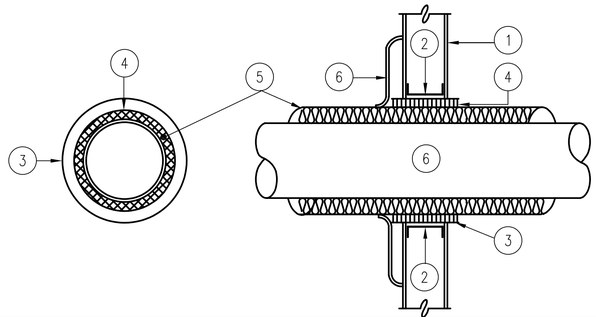
NOTES:

1. CONDENSATE DRAIN SYSTEM SHOWN APPLIES TO BOTH BLOW THROUGH AND DRAW THROUGH TYPE AIR HANDLING UNITS.
2. DRAIN PIPING OF SCHEDULE 40 PVC PIPING WITH SOLVENT CEMENT TYPE FITTINGS OR HARD DRAWN TYPE L COPPER TUBING WITH SWEAT FITTINGS.
3. DRAIN PIPING TO BE 1-1/2 IN. MINIMUM OR LARGER AS REQUIRED TO MAINTAIN MAXIMUM PRESSURE DROP OF 1.0" W.C. AT MAXIMUM CONDENSATE FLOW RATE.
4. S.P. STANDS FOR DIFFERENTIAL STATIC PRESSURE BETWEEN INTERIOR OF AIR HANDLING UNIT DRAIN PAN OUTLET AND EXTERNAL ATMOSPHERIC PRESSURE (INCHES WATER COLUMN).

2 CONDENSATE DRAIN PIPING DETAIL

N.T.S.

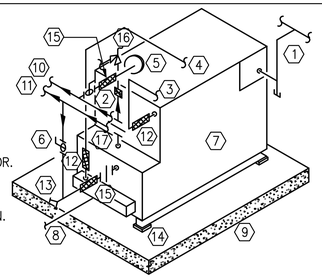
1. INTERIOR WALL OR PARTITION
2. FRAMING FOR SLEEVE OPENING, 4 SIDES OF SLEEVE BY FRAMING CONTRACTOR.
3. 14 GA GALVANIZED SLEEVE WITH BUTT WELDED JOINTS
4. 1" ANNULAR SPACE FOR FIRESTOPPING THROUGH FIRE & SMOKE BARRIER, OR 1" ANNULAR SPACE FOR AIRTIGHT ACOUSTIC CAULK SEAL FOR ALL OTHER INTERIOR WALL OR PARTITION PENETRATIONS.
5. FULL THICK INSULATION WITH SPECIFIED JACKETING CARRIED THROUGH SLEEVE
6. ESCUTCHEONS: PROVIDE FOR ALL PIPING PENETRATIONS EXPOSED TO VIEW.



3 PIPE THRU INTERIOR WALL DETAIL

N.T.S.

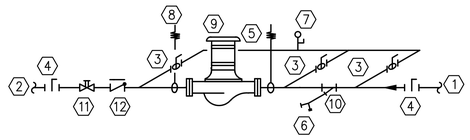
1. GAS PIPING PROVIDED BY OTHERS
2. LOW WATER CUTOFF.
3. 3" SCHEDULE 40 PVC INTAKE AIR PIPING. EXTEND 1'6" ABOVE ROOF.
4. 3" SCHEDULE 40 STAINLESS STEEL EXHAUST AIR PIPING. EXTEND 2'-6" ABOVE ROOF.
5. COMBINATION TEMPERATURE/PRESSURE INDICATOR.
6. SHUTOFF VALVE(TYPICAL)
7. BOILER
8. 1/4" CONDENSATE DRAIN. PIPE TO FLOOR DRAIN.
9. 4" HOUSEKEEPING PAD.
10. 1 1/2" HWS
11. 1 1/2" HWR
12. VIBRATION ISOLATOR. (DOUBLE SPHERE CONSTRUCTED OF MULTIPLE VIBRATION ELIMINATOR COUPLING (NEOPRENE NO-HUB COUPLING WITH CORRIGATED STAINLESS STEEL
13. 3/4" HOSE END DRAIN VALVE.
14. 4"X4"X1/2" NEOPRENE VIBRATION PAD AT EACH CORNER OF BOILER.
15. VIBRATION ELIMINATOR COUPLING (NEOPRENE NO-HUB COUPLING WITH CORRUGATED STAINLESS STEEL REMOVED. REUSE STAINLESS STEEL CLAMPS.
16. PRESSURE RELIEF VALVE. PIPE TO FLOOR DRAIN.
17. UNION (TYPICAL)



4 GAS FIRED BOILER DETAIL

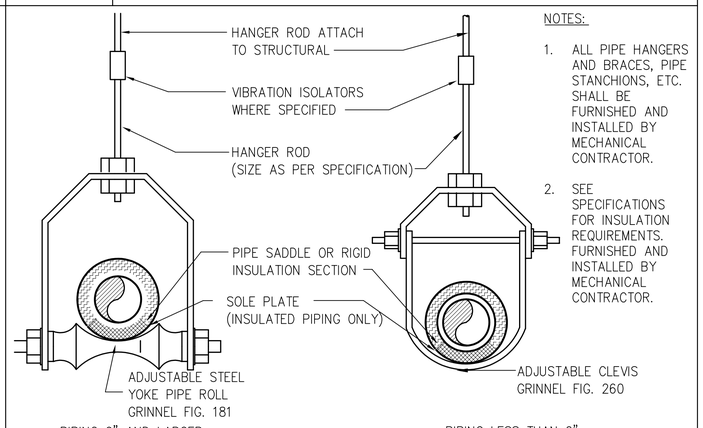
N.T.S.

1. SUCTION PIPING
2. DISCHARGE PIPING
3. GAUGE COCK
4. BALL VALVE FOR 2" AND SMALLER BUTTERFLY VALVE FOR 2 1/2" AND LARGER.
5. GAUGE MANIFOLD
6. DRAIN VALVE W/HOSE END
7. PRESSURE GAGE
8. VIBRATION ISOLATORS (TYPICAL)
9. PUMP
10. STRAINER
11. CALIBRATED BALANCING VALVE
12. LIFT CHECK VALVE



5 INLINE PUMP DETAIL

N.T.S.



PIPING 6" AND LARGER

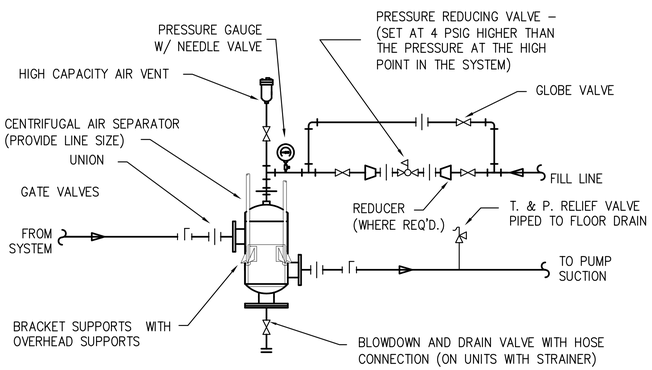
PIPING LESS THAN 6"

NOTES:

1. ALL PIPE HANGERS AND BRACES, PIPE STANCHIONS, ETC. SHALL BE FURNISHED AND INSTALLED BY MECHANICAL CONTRACTOR.
2. SEE SPECIFICATIONS FOR INSULATION REQUIREMENTS. FURNISHED AND INSTALLED BY MECHANICAL CONTRACTOR.

6 SUSPENDED PIPING SUPPORT DETAIL

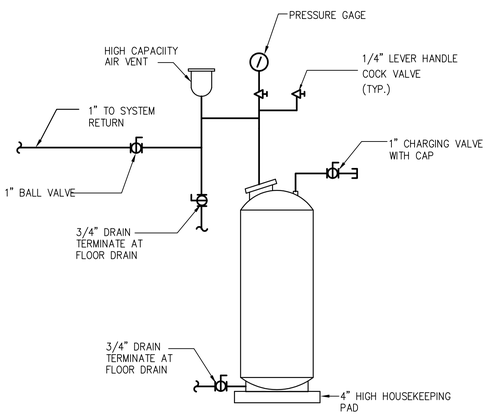
N.T.S.



NOTE: PROVIDE FULL LINE SIZE AIR SEPARATOR BYPASS PIPE WITH SHUTOFF VALVE.

7 AIR SEPARATOR DETAIL

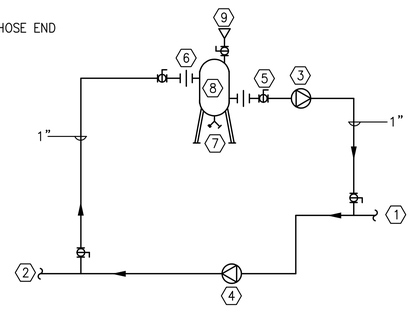
N.T.S.



8 EXPANSION TANK DETAIL

N.T.S.

1. SYSTEM SUCTION
2. SYSTEM DISCJHARGE
3. GLYCOL FEED PUMP
4. MAIN SYSTEM PUMP
5. BALL VALVE (TYP)
6. UNION (TYP)
7. DRAIN VALVE W/ HOSE END
8. GLYCOL FEED UNIT
9. FUNNEL



9 GLYCOL FEED UNIT DETAIL

N.T.S.

DPW Directorate of Public Works
500 SUMMIT LAKE DRIVE, SUITE 500
VALHALLA, NEW YORK 10595-1552
EYP

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RENOVATION/ UPGRADE OF FIRE STATION 2 (BLDG 1203)
US ARMY GARRISON WEST POINT, NY

HVAC DETAILS

SHEET NUMBER:
M503

GAS FIRED BOILER SCHEDULE

TAG	LOCATION	SERVES	DESCRIPTION	FUEL				NORMINAL CAPACITY			ACTUAL CAPACITY			WATER TEMPERATURE		EQUIPMENT EFFICIENCY	TURNDOWN RATIO	FLUID	WATER VOLUME	FLOW RATE	MAXIMUM WORKING	PRESSURE DROP	COMBUSTION AIR		FLUE EXHAUST		ELECTRICAL				PHYSICAL SIZE		MANUFACTURER	MODEL	STATUS	REMARKS
				TYPE	CONNECTION SIZE	INLET PRESSURE MINIMUM W.C.	INLET PRESSURE MAXIMUM W.C.	INPUT MBH	OUTPUT MBH	BOILER HP	INPUT MBH	OUTPUT MBH	BOILER HP	ENTERING DEG F	LEAVING DEG F	%			GALS	GPM	PSI	FT. W.C.	FLOW RATE CFM	SIZE INCES	FLOW RATE CFM	SIZE INCES	VOLT	PH	HZ	FLA	SHIPPING LBS	OPERATING LBS				
B-1	EAST MER 142	HEATING	WATER TUBE BOILER	NATURAL GAS	1	4	14	500	485	14.5	500	485	14.5	160	180	97	10:1	30% PG	4.9	50	160	15		4		4	120	1	60	3.1			LOCHINVAR	KNIGHT XL	NEW	NOTES 1
B-2	EAST MER 142	HEATING	WATER TUBE BOILER	NATURAL GAS	1	4	14	500	485	14.5	500	485	14.5	160	180	97	10:1	30% PG	4.9	50	160	15		4		4	120	1	60	3.1			LOCHINVAR	KNIGHT XL	NEW	NOTES 1

PRESSURE FILL STATION SCHEDULE

TAG	LOCATION	SERVES	PERFORMANCE				PUMP		ELECTRICAL					PHYSICAL SIZE					MANUFACTURER	MODEL	STATUS	REMARKS
			FLUID	PURPOSE	FLOW RATE GPM	FILL PRESSURE PSI	ROTATION SPEED RPM	MOTOR SIZE HP	VOLT	PH	HZ	CONTROLLER TYPE	UPS POWERED	UNIT HEIGHT INCHES	TANK DIA INCHES	TANK VOLUME GAL	SHIPPING WEIGHT LBS	OPERATING WEIGHT LBS				
GF-1	EAST MER	HOT HATER HEATING SYSTEM	30% PG	FLUID MAKEUP	1.5	100		1/2	120	1	60	INTERGAL	NO			50			NEPTUNE	G-50-1A	NEW	NOTES 1,2,3

NOTES:

1. PACKAGED AND ASSEMBLED MAKE-UP ASSEMBLY INCLUDING 55 GALLON TANK , PUMP, PRV VALVE, CHECK VALVE, AND CONTROL PANEL WITH ALARM OUTPUTS.
2. TANK FILLED FROM THE TOP WITH PREMIXED 30% PROPYLENE GLYCOL (PG) SOLUTION.
3. PROVIDE UNIT WITH LOW LEVEL ALARM CONTACT.

AIR HANDLING UNIT SCHEDULE

TAG	LOCATION	SERVE	COOLING COIL	HEATING COIL	HUMIDIFIER	HUMIDIFIER	OUTSIDE AIR SETTING		SUPPLY FAN CAPACITY			SUPPLY FAN MOTOR					SUPPLY FAN						PRE-FILTER			FINAL FILTER			PHYSICAL SIZE		DISCHARGE SOUND DATA								MANUFACTURER	MODEL	STATUS	REMARKS
							MINIMUM FLOWRATE CFM	MAXIMUM FLOWRATE CFM	FLOW RATE CFM	PRESSURE DROP E.S.P. IN. WC.	PRESSURE DROP T.S.P. IN. WC.	SIZE BHP	SIZE HP	VOLT	PH	HZ	RPM	TYPE	CLASS	CONTROLLER TYPE	DUAL FEED	UPS POWERED	FILTRATION EFFICIENCY MERV	PRESSURE DROP CLEAN IN. WC.	PRESSURE DROP DIRTY IN. WC.	FILTRATION EFFICIENCY MERV	PRESSURE DROP CLEAN IN. WC.	PRESSURE DROP DIRTY IN. WC.	SHIPPING WEIGHT LBS.	OPERATING WEIGHT LBS.	63 HZ	125 HZ	250 HZ	500 HZ	1000 HZ	2000 HZ	4000 HZ	8000 HZ				
AHU-1	OUTSIDE WEST WING	WEST WING	CC-1	HC-1	H-1	CC-1	600	4,000	4,000	1.5	3.5	3.8	5	308	3	60	1800	IND	PREM	VFD	NO	NO	8	.65	1.00	11.00	0.65	1.00	2254	2534									TRANE	CSAA008	NEW	NOTES 1-6
AHU-2	OUTSIDE EAST WING	EAST WING	CC-2	HC-2	H-2	CC-2	600	3,500	3,500	1.5	3.5	3.3	5	308	1	60	1800	IND	PREM	VFD	NO	NO	8	0.65	1.00	11.00	0.65	1.00	2254	2534									TRANE	CSAA008	NEW	NOTES 1-6
AHU-3	TELCOM RM 140	RM 140	NOTE 7	NOTE 7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									SAMSUNG	RNS09YBT	NEW	NOTE 7
AHU-4	ELEC/UPS RM 125	RM 125	NOTE 7	NOTE 7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									SAMSUNG	RNS09YBT	NEW	NOTE 7

NOTES:

1. FAN TOTAL STATIC PRESSURE DROP SHALL BE BASED ON DIRTY FILTER RATING OF 1.0 IN.W.G.
2. PROVIDE LEFT HAND SIDE ACCESS DOORS AND RIGHT HAND SIDE COIL CONNECTIONS. COIL REMOVAL FROM THE RIGHT HAND SIDE.
3. PROVIDE PREMIUM HIGH EFFICIENCY DIRECT DRIVE FAN MOTOR COMPATIBLE WITH VFD
4. PROVIDE TWO SPARE SETS OF AIR FILTERS
5. VFD SHALL BE PROVIDED BY MECHANICAL CONTRACTOR AND SHALL COMPLY WITH SPECIFICATION 232923- VARIABLE FREQUENCY MOTOR CONTROLLERS
6. PROVIDE AIR HANDLING UNIT SECTIONS IN THE FOLLOWING ORDER: OA (BACK) AND RA (BOTTOM) MIXING SECTION, FILTER SECTION, HEATING COIL SECTION, HUMIDIFIER SECTION, ACCESS SECTION, COOLING COIL SECTION, VFD/CONTROL PANEL SECTION AND FRONT TOP DISCHARGE FAN SECTION
7. AHU-3 AND AHU-4 ARE THE FAN COIL SIDE OF TWO MINI SPLIT SYSTEMS. REFER TO SPLIT SYSTEM AIR COOLED CONDENSING UNIT SCHEDULE FOR ADDITIONAL REQUIREMENTS.

AIR SEPARATOR SCHEDULE

TAG	LOCATION	SERVES	CAPACITY		PHYSICAL SIZE			MANUFACTURER	MODEL	STATUS	REMARKS
			FLOW RATE GPM	CONNECTION SIZES INCHES	HEIGHT INCHES	DIAMETER INCHES	OPERATING WEIGHT LBS				
AS-1	EAST MER	HEATING HOT WATER SYSTEM	60	3	27	11	188	BELL & GOSSETT	R-3F	NEW	NOTES 1,2

NOTES:

1. FIELD FABRICATE FLOOR STAND CAPABLE OF SUPPORTING THE AIR SEPARATOR AND ACCESSORIES.
2. AIR SEPARATOR AND CONNECTING PIPING SHALL BE BOTH SUPPORTED THRU MINIMIZE THE SHEAR STRESS AT THE CONNECTION LOCATION.
3. FLUID IS 30% PROPYLENE GLYCOL SOLUTION.

HEATING COIL SCHEDULE

TAG	UNIT	CAPACITY TOTAL MBH	AIR SIDE							WATER SIDE (30% PROPYLENE GLYCOL SOLUTION)								MANUFACTURER	MODEL	STATUS	REMARKS
			FLOW RATE CFM	PRESSURE DROP IN W.C.	VELOCITY FT/MIN	ENTERING AIR TEMP DB DEG F	ENTERING AIR TEMP WB DEG F	LEAVING AIR TEMP DB DEG F	LEAVING AIR TEMP WB DEG F	FLOW RATE GPM	PRESSURE DROP FT	EWT DEG F	LWT DEG F	FLUID	NO. OF COIL	NO. OF ROW	FIN DENSITY FPI				
HC-1	AHU-1	186	4,000	0.15	547	7		50		19.5	1.5	180	160	30% PG	1	1	9.8	AHU MANUFACTURER	5W	NEW	NOTES 1
HC-2	AHU-2	178	3,500	0.15	478	7		50		17	1.3	180	160	30% pg	1	1	9.8	AHU MANUFACTURER	5W	NEW	NOTES 1

NOTES:

1. REFER TO AIR HANDLING UNIT DETAIL DRAWING FOR COIL PULL SIDE AND ACCESS.
2. .

DPW Directorate of Public Works

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SCALE: NONE
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DRAWN: VS
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CHECKED:
SUBMITTED:
APPROVED:

REVISIONS

#	DESCRIPTION	DATE	BY

RENOVATION/ UPGRADE OF
FIRE STATION 2 (BLDG 1203)
US ARMY GARRISON WEST POINT, NY

HVAC SCHEDULES

SHEET NUMBER:
M601

AIR FLOW MEASURING STATION SCHEDULE

TAG	LOCATION	SERVICE	LOCATION	AIRFLOW CFM	MANUFACTURER	MODEL	STATUS	REMARKS
AFM-SA-1	NEAR AHU-1	AHU-1	DUCTWORK	4,000	AIR MONITOR	FAN E/VELTRON II	NEW	NOTES 1
AFM-RA-1	NEAR RF-1	AHU-1	DUCTWORK	4,000	AIR MONITOR	FAN E/VELTRON II	NEW	NOTES 1
AFM-OA-1	NEAR AHU-1	AHU-1	DUCTWORK	4,000	AIR MONITOR	FAN E/VELTRON II	NEW	NOTES 1
AFM-SA-2	NEAR AHU-2	AHU-2	DUCTWORK	3,500	AIR MONITOR	FAN E/VELTRON II	NEW	NOTES 1
AFM-RA-2	NEAR RF-1	AHU-2	DUCTWORK	3,500	AIR MONITOR	FAN E/VELTRON II	NEW	NOTES 1
AFM-OA-2	NEAR AHU-2	AHU-2	DUCTWORK	3,500	AIR MONITOR	FAN E/VELTRON II	NEW	NOTES 1

NOTES:

1. PROVIDE FACTORY ASSEMBLED UNIT WITH FLOW CONDITIONER, DUCT SLEEVE AND AIR FLOW MEASURING STATION.

PUMP SCHEDULE

TAG	LOCATION	TYPE	SERVICE	CAPACITY			MOTOR					ELECTRICAL DATA			PHYSICAL DATA		MANUFACTURER	MODEL	REMARKS
				FLUID	FLOW RATE GPM	TDH FT	ROTATION SPEED RPM	MOTOR SIZE DESIGNED BHP	MOTOR SIZE RATED HP	CONTROLLER TYPE	UPS POWERED	VOLT	PH	HZ	SUCTION INCHES	DISCHARGE INCHES			
HWP-1	EAST MER	CENTRIFUGAL	HEATING HOT WATER	30% PROPLYLENE GYLCOL	60	50	1,800	1.4	2.0	VFD	NO	208	3	60	1.5	1.5	BELL & GOSSETT	E60	NOTES 1,2
HWP-2	EAST MER	CENTRIFUGAL	HEATING HOT WATER	30% PROPLYLENE GYLCOL	60	50	1,800	1.4	2.0	VFD	NO	208	3	60	1.5	1.5	BELL & GOSSETT	E60	NOTES 1,2

REMARKS:

1. VFD SHALL BE PROVIDED BY MECHANICAL CONTRACTOR AND SHALL COMPLY WITH SPECIFICATION 232923- VARIABLE FREQUENCY MOTOR CONTROLLERS
2. PUMP DISCONNECT SHALL HAVE INDIVIDUAL, PERMANENT, LOCK OUT / TAG OUT FUNCTION IN COMPLIANCE WITH NEC 70E, ARTICLE 430.102, EXCEPTION A.

FAN SCHEDULE

TAG	LOCATION	SERVICE	FLOWRATE	TOTAL STATIC PRESSURE	TYPE	MOUNTING	FAN SPEED	RADIATED	ROOF / WALL OPENING	ROOF CURB	MOTOR								DRIVE	WEIGHT	MANUFACTURER	MODEL	REMARKS
											BHP	HP	VOLT	PH	HZ	TYPE	DISCONNECT SWITCH	UPS					
RF-1	ROOF	RETURN	3,500	1.0	IN-LINE CENTRIFUGAL	HUNG			NA	NA		2	208	3	60	ODP	VFD	NO	DIRECT		PENN		1,2
RF-2	ROOF	RETURN	3,500	1.0	IN-LINE CENTRIFUGAL	HUNG			NA	NA		2	208	3	60	ODP	VFD	NO	DIRECT		PENN		1,2
EF-1	ROOF	EXERSIZE RM AND TOI LET	350	0.375	ROOF EXHAUST - CENTRIF	ROOF			NA	EXISTING		1/4	115	1	60	ODP	YES	NO	BELT		PENN		1,2,3
EF-2	ROOF	KITCHEN HOOD	2,000	0.5	ROOF EXHAUST - CENTRIF	ROOF			NA	EXISTING		2	208	3	60	ODP	YES	NO	BELT		PENN		1,2,3
EF-3	ROOF	EXTINGUSIER RM AND	425	0.25	ROOF EXHAUST - CENTRIF	ROOF			NA	EXISTING		1/2	208	1	60	ODP	YES	NO	BELT		PENN		1,2,3
EF-4	ROOF	BREATHING APARATUS RM	500	0.25	ROOF EXHAUST - CENTRIF	ROOF			NA	EXISTING		1/2	208	1	60	ODP	YES	NO	BELT		PENN		1,2,3
EF-5	ROOF	KITCHEN Rm 38	75	0.25	ROOF EXHAUST - CENTRIF	ROOF			NA	EXISTING		1/4	115	1	60	ODP	YES	NO	BELT		PENN		1,2,3
EF-6	ROOF	MECH RM 143	250	0.25	ROOF EXHAUST - CENTRIF	ROOF			NA	EXISTING		1/4	115	1	60	ODP	YES	NO	BELT		PENN		1,2,3
EF-7	ROOF	ELECTRICAL RM 141	250	0.25	ROOF EXHAUST - CENTRIF	ROOF			NA	EXISTING		1/4	115	1	60	ODP	YES	NO	BELT		PENN		1,2,3
TX-1	ROOF	MEN AND WOMENS	400	0.375	ROOF EXHAUST - CENTRIF	ROOF			NA	EXISTING		1/2	208	1	60	ODP	YES	NO	BELT		PENN		1,2,3
TX-2	ROOF	EMS AND HCP TOILETS	225	0.375	ROOF EXHAUST - CENTRIF	ROOF			NA	EXISTING		1/4	115	1	60	ODP	YES	NO	BELT		PENN		1,2,3
TX-3	CEILING	JANITOR CLOSET	50	0.1	IN-LINE	HUNG			NA	WALL		1/6	115	1	60	ODP	YES	NO	BELT		PENN		1,2

REMARKS:

1. INSTALL IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS.
2. REFER TO DIVISION 23 SPECIFICATION SECTIONS FOR ADDITIONAL REQUIREMENTS.
3. INSTALL CURB ADAPTER TO SUPPORT NEW FAN ON THE EXISTING CURB.

SPLIT SYSTEM AIR COOLED CONDENSING UNIT (CU) SCHEDULE

TAG	LOCATION	SERVICE	ELEVATION FT	PERFORMANCE						COMPRESSOR				CONDENSER			ELECTRICAL DATA						PHYSCIAL SIZE						NOISE RATING dBA	MANUFACTURER	MODEL	NOTES
				NOMINAL CAPACITY TONS	EER RATING COP	IEER RATING COP	COOLING CAPACITY MBH	HEATING CAPACITY MBH	CONNECTION RATIO %	TYPE	REFRIGERANT	NO. OF CIRCUIT	CHARGE LBS	TOTAL AIR FLOW CFM	FAN ESP INCHES	DESIGN AMBIENT DEG F	MIN. CIRCUIT AMPS	VOLT	PH	HZ	SAFETY DISCONNECT SWITCH	UPS POWERED	LENGTH INCHES	WIDTH INCHES	HEIGHT INCHES	DRY WEIGHT LBS	OPERATING WEIGHT LBS				
ACCU-1	GRADE	AHU-1	CC-1																												1 THRU 3
		CC-1	4 FT ABOVE	10			120.00	0.00																					AHU UNIT MANUFACTURER		1 THRU 3
			ACCU-1							INVERTER	R410A			STD	STD	105	41.0	208	3	60	BY MECH	NO								1 THRU 3
ACCU-2	GRADE	AHU-2	CC-2																												1 THRU 3
		CC-2	4 FT ABOVE	10			120.00	0.00																					AHU UNIT MANUFACTURER		1 THRU 3
			ACCU-2							INVERTER	R410A			STD	STD	105	41.0	208	3	60	BY MECH	NO								1 THRU 3
ACCU-3	GRADE	AHU-3	AHU-3																											RNS09YBT	1 THRU 3
		AHU-3	7 FT ABOVE	0.75			9.00	11.00																					SAMSUNG		1 THRU 3
			ACCU-3							INVERTER	R410A	-		STD	STD	105	12.0	208	1	60	BY MECH	NO								RXS09YBT	1 THRU 3
ACCU-4	GRADE	AHU-4	CC-2																											RNS09YBT	1 THRU 3
		AHU-4	7 FT ABOVE	0.75			9.00	11.00																					SAMSUNG		1 THRU 3
			ACCU-4							INVERTER	R410A	-		STD	STD	105	12.0	208	1	60	BY MECH	NO								RXS09YBT	1 THRU 3

NOTES:

1. PROVIDE MANUFACTURER'S HAIL GUARD PROTECTION KIT, MULTI-UNIT PIPING CONNECTION KIT, DIGITIAL INPUT / OUTPUT UNITS, CENTRAL REMOTE CONTROLLER AND BMS (LON) INTERFACE GATEWAY.
2. UNIT TO BE MOUNTED ON GRADE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. MAINTAIN MINIMUM MANUFACTURER REQUIRED CLEARANCE BETWEEN THE UNITS.
3. MANUFACTURER FOR THE AIR HANDLING UNIT AND THE AIR COOLED CONDENSING UNIT SHALL BE THE SAME.

STATE OF NEW YORK
SCOTT A WILSON
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LICENSED PROFESSIONAL ENGINEER

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SCALE: NONE
DATE: MAY 18, 2022
DRAWN: VS
DESIGNED: SW
P.M.:
CHECKED:
SUBMITTED:
APPROVED:

REVISIONS

#	DESCRIPTION	DATE	BY

RENOVATION/ UPGRADE OF FIRE STATION 2 (BLDG I203)
US ARMY GARRISON WEST POINT, NY

HVAC SCHEDULES

SHEET NUMBER:
M602

FAN POWERED TERMINAL SCHEDULE

TAG	TERMINAL TYPE	PRIMARY AIRFLOW		FAN								CONNECTION			HOT WATER COIL (30% PROPYLENE GLYCOL SOLUTION)						SOUND		MANUFACTURER	MODEL	REMARKS
												PRIMARY INLET		OUTLET	FLOW	PRESSURE				NO.	FIN	MAX	MAX			
		MIN	MAX	MIN	MAX	MOTOR	TYPE	FLA	VOLT	PH	HZ	PRESSURE	SIZE	SIZE	RATE	DROP	EWT	LWT	FLUID	OF	DENSITY	DISCHARGE	RADIATED			
		CFM	CFM	CFM	CFM	HP						IN W.C.	INCHES	INCHES	GPM	FT	DEG F	DEG F		ROW	FPI	NC	NC			
VAV1-1	PARALLEL	135	185	135	185	1/8	PSC	1.6	110	1	60	0.5	5	15.5"x20"	1.0	0.22	180		30% PG	1	12	21	19	TRANE	VP	NOTES 1-5
VAV1-2	PARALLEL	55	170	55	170	1/8	PSC	1.6	110	1	60	0.5	5	15.5"x20"	1.0	0.22	180		30% PG	1	12	25	13	TRANE	VP	NOTES 1-5
VAV1-3	PARALLEL	45	480	45	480	1/3	PSC	4.3	110	1	60	0.5	8	17.5"x20"	1.0	0.22	180		30% PG	1	12	24	17	TRANE	VP	NOTES 1-5
VAV1-4	PARALLEL	70	180	70	180	1/8	PSC	1.6	110	1	60	0.5	5	15.5"x20"	1.0	0.22	180		30% PG	1	12	27	15	TRANE	VP	NOTES 1-5
VAV1-5	PARALLEL	50	175	50	175	1/8	PSC	1.6	110	1	60	0.5	5	15.5"x20"	1.0	0.22	180		30% PG	1	12	21	19	TRANE	VP	NOTES 1-5
VAV1-6	PARALLEL	50	170	50	170	1/8	PSC	1.6	110	1	60	0.5	5	15.5"x20"	1.0	0.22	180		30% PG	1	12	21	19	TRANE	VP	NOTES 1-5
VAV1-7	PARALLEL	75	170	75	170	1/8	PSC	1.6	110	1	60	0.5	5	15.5"x20"	1.0	0.22	180		30% PG	1	12	21	19	TRANE	VP	NOTES 1-5
VAV1-8	PARALLEL	75	170	75	170	1/8	PSC	1.6	110	1	60	0.5	5	15.5"x20"	1.0	0.22	180		30% PG	1	12	21	19	TRANE	VP	NOTES 1-5
VAV1-9	PARALLEL	75	170	75	170	1/8	PSC	1.6	110	1	60	0.5	5	15.5"x20"	1.0	0.22	180		30% PG	1	12	21	19	TRANE	VP	NOTES 1-5
VAV1-10	PARALLEL	75	170	75	170	1/8	PSC	1.6	110	1	60	0.5	5	15.5"x20"	1.0	0.22	180		30% PG	1	12	21	19	TRANE	VP	NOTES 1-5
VAV1-11	PARALLEL	370	860	370	860	1/3	PSC	4.3	110	1	60	0.5	10	17.5"x20"	1.0	0.22	180		30% PG	1	12	34	24	TRANE	VP	NOTES 1-5
VAV1-12	PARALLEL	285	600	285	600	1/3	PSC	4.3	110	1	60	0.5	8	17.5"x20"	1.0	0.22	180		30% PG	1	12	21	19	TRANE	VP	NOTES 1-5
VAV1-13	PARALLEL	155	290	155	290	1/3	PSC	4.3	110	1	60	0.5	6	17.5"x20"	1.0	0.22	180		30% PG	1	12	25	13	TRANE	VP	NOTES 1-5
VAV2-1	PARALLEL	115	200	115	200	1/8	PSC	1.6	110	1	60	0.5	6	15.5"x20"	1.0	0.22	180		30% PG	1	12	24	17	TRANE	VP	NOTES 1-5
VAV2-2	PARALLEL	375	1050	375	1050	1/3	PSC	4.3	110	1	60	0.5	10	17.5"x20"	1.0	0.22	180		30% PG	1	12	27	15	TRANE	VP	NOTES 1-5
VAV2-3	PARALLEL	225	225	225	225	1/3	PSC	4.3	110	1	60	0.5	6	17.5"x20"	1.0	0.22	180		30% PG	1	12	34	24	TRANE	VP	NOTES 1-5
VAV2-4	PARALLEL	185	630	185	630	1/3	PSC	4.3	110	1	60	0.5	8	17.5"x20"	1.0	0.22	180		30% PG	1	12	21	19	TRANE	VP	NOTES 1-5
VAV2-5	PARALLEL	85	180	85	180	1/8	PSC	1.6	110	1	60	0.5	5	15.5"x20"	1.0	0.22	180		30% PG	1	12	21	19	TRANE	VP	NOTES 1-5
VAV2-6	PARALLEL	95	250	95	250	1/3	PSC	4.3	110	1	60	0.5	6	17.5"x20"	1.0	0.22	180		30% PG	1	12	25	13	TRANE	VP	NOTES 1-5
VAV2-7	PARALLEL	145	340	145	340	1/3	PSC	4.3	110	1	60	0.5	8	17.5"x20"	1.0	0.22	180		30% PG	1	12	25	13	TRANE	VP	NOTES 1-5
VAV2-8	PARALLEL	55	150	55	150	1/8	PSC	1.6	110	1	60	0.5	5	15.5"x20"	1.0	0.22	180		30% PG	1	12	25	13	TRANE	VP	NOTES 1-5

NOTES:

1. PROVIDE SINGLE POINT POWER CONNECTION.
2. PROVIDE 24 V AC INTERNAL CONTROL TRANSFORMER.
3. PROVIDE SCR FAN SPEED CONTROLLER.
4. PROVIDE UNIT DISCONNECT.
5. FAN POWERED BOXES HAVE A 915mm INLET AND 915mm DISCHARGE ATTENUATOR TO ACHIEVE THE NC LISTED ON THE SCHEDULE. THESE ARE STANDARD NON-BAFFLED ATTENUATORS.

HOT WATER CABINET UNIT HEATER SCHEDULE

TAG	LOCATION	AIR FLOW RATE CFM	HOT WATER COIL (40% PROPYLENE GLYCOL SOLUTION)						ELECTRICAL DATA				MOUNTING	MANUFACTURER	MODEL	REMARKS
			FLOW RATE GPM	PRESSURE DROP FT	EWT DEG F	LWT DEG F	FLUID	NO. OF ROW	FIN DENSITY FPI	VOLT	PH	HZ	SAFETY DISCONNECT SWITCH				
CUH1-1	CORRIDOR B3	250	2	0.5	180		30%PG	2	12	120	1	60	BY MECH	CEILING MOUNT	TRANE	E	1, 2, 3

REMARKS:

1. ENCLOSURES AND ACCESSORIES COLOR SHALL BE SELECTED AND APPROVED BY ARCHITECT.
2. PROVIDE INTEGRAL THERMOSTAT AND CONTROLS.

DIRECT EXPANSION (DX) COIL SCHEDULE

TAG	UNIT	COOLING										MANUFACTURER	AIR COOLED CONDENSING UNIT	STATUS	REMARKS
		SENSIBLE MBH	TOTAL MBH	PRESSURE DROP IN W.C.	VELOCITY FT/MIN	AIRFLOW CFM	ENTERING AIR TEMP DB DEG F	ENTERING AIR TEMP WB DEG F	LEAVING AIR TEMP DB DEG F	LEAVING AIR TEMP WB DEG F	REFRIGERANT TYPE				
CC-1	AHU-1	117	177	0.4	500	4000	80.0	67.0	53.0	52.5	R410A	AHU MANUFACTURER	ACCU-1	NEW	NOTES 1
CC-2	AHU-2	102	152	0.3	438	3500	80.0	67.0	53.0	52.5	R410A	AHU MANUFACTURER	ACCU-2	NEW	NOTES 1

NOTES:

1. COIL IS PART OF MATCHED SPLIT SYSTEM WITH AIR COOLER CONDENSING UNIT SUITIBLE FOR VAV AHU OPERATION AND PROVIDED BY THE AHU MANUFACTURER.

EXPANSION TANK SCHEDULE

TAG	LOCATION	SERVE	TYPE	CAPACITY					PHYSICAL SIZE				MOUNTING	POSITION	MANUFACTURER	MODEL	STATUS	REMARKS
				TANK VOLUME GAL	SYSTEM PRESSURE MINIMUM PSI	SYSTEM PRESSURE MAXIMUM PSI	TEMPERATURE MINIMUM DEG F	TEMPERATURE MAXIMUM DEG F	HEIGHT INCHES	DIAMETER INCHES	WEIGHT DRY LBS	WEIGHT OPERATING LBS						
ET-1	EAST MER	HEATING HOT WATER SYSTEM	BLADDER TANK	36.99	30	100	70	180	36	24	240	500	H/V	H/V	BELL & GOSSETT	b165	NEW	NOTES 1,2

NOTES:

1. EXPANSION TANKS SHALL BE REPLACEABLE HEAVY DUTY BLADDER TYPE.
2. EXPANSION TANKS MUST BE CONSTRUCTED WITH SECTION VIII OF THE ASME BOILER AND PRESSURE VESSEL CODE.
3. FLUID IS 30% PROPYLENE GLYCOL SOLUTION.

STATE OF NEW YORK
SCOTT A WILSON
077777
LICENSED PROFESSIONAL ENGINEER

DPW Directorate of Public Works
500 SUMMIT LAKE DRIVE, SUITE 500
VALHALLA, NEW YORK 10595-1552
EYP

SCALE: NONE
DATE: MAY 18, 2022
DRAWN: VS
DESIGNED: SW
P.M.:
CHECKED:
SUBMITTED:
APPROVED:

REVISIONS

#	DESCRIPTION	DATE	BY

RENOVATION/ UPGRADE OF
FIRE STATION 2 (BLDG I203)
US ARMY GARRISON WEST POINT, NY

HVAC SCHEDULES

SHEET NUMBER:
M603

DIFFUSER - REGISTER - GRILLE SCHEDULE

MARK	TYPE	SERVICE	NECK SIZE	FACE SIZE	MANUFACTURER MODEL NUMBER	DIRECTION DISCHARGE	DAMPER TYPE	FINISH	REMARKS
EG-1	EXHAUST REGISTER SURFACE MOUNT ALUMINUM	EXHAUST	8"X6"	Nominal 10"x8"	35/L/0	1-WAY LONG	YES	STANDARD WHITE	NOTES 1,2
EG-2	EXHAUST REGISTER SURFACE MOUNT ALUMINUM	EXHAUST	12"X6"	Nominal 14"x8"	35/L/0	1-WAY LONG	YES	STANDARD WHITE	SEE 1,2
SD-2	CEILING DIFFUSER LAY-IN CEILING ALUMINUM	SUPPLY	6" DIA.	24"X24"	EPLA	4-WAY	YES	STANDARD WHITE	SEE 1,2
SD-3	CEILING DIFFUSER LAY-IN CEILING ALUMINUM	SUPPLY	8" DIA.	24"X24"	EPLA	4-WAY	YES	STANDARD WHITE	SEE 1,2
SD-4	CEILING DIFFUSER LAY-IN CEILING ALUMINUM	SUPPLY	10" DIA.	24"X24"	EPLA	4-WAY	YES	STANDARD WHITE	SEE 1,2
SD-5	CEILING DIFFUSER LAY-IN CEILING ALUMINUM	SUPPLY	12" DIA.	24"X24"	EPLA	4-WAY	YES	STANDARD WHITE	SEE 1,2
RG-1	RETURN EGGCRATE LAY-IN CEILING ALUMINUM	RETURN	23"X23"	24"X24"	GC5L	1-WAY	NONE	STANDARD WHITE	NOTES 1,2

NOTES

1. EQUAL TO ANEMOSTAT (SCHEDULED MANUFACTURER MODEL NUMBER)
2. INSTALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS

DPW
Directorate of Public Works
500 SUMMIT LAKE DRIVE, SUITE 500
VALHALLA, NEW YORK 10595-1552
EYP

SCALE: NONE
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#	DESCRIPTION	DATE	BY

REVISIONS

RENOVATION/ UPGRADE OF
FIRE STATION 2 (BLDG 1203)
US ARMY GARRISON WEST POINT, NY

HVAC SCHEDULES

SHEET NUMBER:
M604

1 ABBREVIATIONS

N.T.S.

A	AMPERES
AB	ABOVE
AC	ALTERNATING CURRENT
AF	AMPERE FRAME
AFC	AVAILABLE FAULT CURRENT
AFF	ABOVE FINISHED FLOOR
AHC	ABOVE HUNG CEILING
AHU	AIR HANDLING UNIT
AIC	AMPERE INTERRUPTING CAPACITY
ALT	ALTERNATE
ANN	ANNUNCIATOR
ASSD	AIR SAMPLING SMOKE DETECTION
AT	AMPERE TRIP
ASTS	AUTOMATIC STATIC TRANSFER SWITCH
ATS	AUTOMATIC TRANSFER SWITCH
AUTO	AUTOMATIC
AUX	AUXILIARY
AWG	AMERICAN WIRE GAUGE
BB	BACKBOARD
BFF	BELOW FINISHED FLOOR
BC	BARE COPPER
BC/BF	BELOW SUSPENDED CEILING
BATT	BATTERY
BF	BELOW RAISED FLOOR
BW	BOTH WAYS
BTM	BOTTOM
BKR	BREAKER
BLDG	BUILDING
	CONDUIT
CAB	CABINET
CB	CIRCUIT BREAKER
CATV	CABLE TELEVISION
CKT	CIRCUIT
L	CENTER LINE
CLG	CEILING
CMH	COMMUNICATION MANHOLE
CO	COMPANY
COL	COLUMN
COMM	COMMUNICATIONS
CONC	CONCRETE
CONN	CONNECTION, CONNECT
COORD	COORDINATE
CONTR	CONTRACTOR
CRAC	COMPUTER ROOM AIR CONDITION UNIT
CUH	CABINET UNIT HEATER
CW	COOL WHITE
CT	CURRENT TRANSFORMER
△	DELTA CONNECTION
D	DEEP
DB	DECIBEL
DC	DIRECT CURRENT
DET	DETECTOR
DIA	DIAMETER
DISC	DISCONNECT
DIST	DISTRIBUTION
DIV	DIVISION
DN	DOWN
DP	DISTRIBUTION PANEL
DWG	DRAWING
EA	EACH
EF	EXHAUST FAN
EG	EQUIPMENT GROUND
EL	ELEVATION
ELEC	ELECTRIC(AL)
ELU	EMERGENCY LIGHT UNIT
EMER	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
ENCL	ENCLOSURE
EO	ELECTRONICALLY OPERATED
EPO	EMERGENCY POWER OFF
EPR	ETHYLENE PROPYLENE RUBBER INSULATION
EQUIP	EQUIPMENT
EUH	ELECTRIC UNIT HEATER
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WALL HEATER
EX(IST)	EXISTING
EXT	EXTERIOR
F	FUSE(D)
FA	FIRE ALARM
FAA	FIRE ALARM ANNUNCIATOR
FACP	FIRE ALARM CONTROL PANEL
FCU	FAN COIL UNIT
FIXT	FIXTURE
FL(R)	FLOOR
FLA	FULL LOAD AMPERES
FLEX	FLEXIBLE
FLUOR	FLUORESCENT
FO	FIBER OPTIC
FUT	FUTURE
FURN	FURNISH
G, GND	GROUND
GALV	GALVANIZE(D)
GC	GROUND LOOP CABLE SPLICE
GEN	GENERATOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFP	GROUND FAULT PROTECTION

IC	INTERCOMMUNICATION
IECU	INDIRECT EVAPORATIVE COOLING UNIT
ID	IDENTIFY, IDENTIFICATION
IMC	INTERMEDIATE METAL CONDUIT
INCAND	INCANDESCENT
INSUL	INSULATION
IPS	INTERRUPTABLE POWER SUPPLY
IR	PASSIVE INFRARED
ISC	SHORT CIRCUIT INTERRUPTING RATING
JB	JUNCTION BOX
J-BOX	JUNCTION BOX
JCT	JUNCTION
KILO	THOUSAND
KA	KILO AMPERES
KCMIL	THOUSAND CIRCULAR MILS
KVA	KILOVOLT-AMPERES
KVAR	KILOVARS
KV	KILOVOLTS
KW	KILOWATTS
LBC	LOAD BANK CONTROLLER
LCP	LIGHTING CONTROL PANEL
LP	LIGHTING PANELBOARD
LTG	LIGHTING
LT(S)	LIGHT(S)
LSI	LONG TIME, SHORT TIME, INSTANTANEOUS
LSIG	LONG TIME, SHORT TIME, INSTANTANEOUS, GROUND
MA	MILLIAMPERE
MAINT	MAINTAINED
MAN	MANUAL
MAX	MAXIMUM
MC	METAL CLAD CABLE
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCCB	MOLDED CASE CIRCUIT BREAKER
MCM	THOUSAND CIRCULAR MILS
MCS	MOLDED CASE SWITCH
MDP	MAIN DISTRIBUTION PANEL
M	MEGA, MILLION
MFR	MANUFACTURER
MH	METAL HALIDE
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MO	MANUALLY OPERATED
MTD	MOUNT(ED)
MTR	MOTOR
MTS	MANUAL TRANSFER SWITCH
MSB	MAIN SWITCHBOARD
MV	MEDIUM VOLTAGE
MW	MEGA WATTS
N	NORTH
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRIC CODE
NF	NON-FUSED
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NO	NORMALLY OPEN
OH	OVERHEAD
OHD	OVERHEAD DOOR OPERATOR
OL	OVERLOAD
P	POLE(S)
PC	PHOTOCELL
PCM	POWER CONDITIONING MODULE
PB	PUSHBUTTON
PDU	POWER DISTRIBUTION UNIT
PEC	PHOTOELECTRIC CELL
PF	POWER FACTOR
PFR	PREFERRED
PL	PILOT LIGHT
PMH	PAD MOUNTED HIGH VOLTAGE SOURCE
PNL	PANEL
POB	POWER OUTLET BOX
PP	POWER PANELBOARD
PR	PAIR
PREP	PREPARED
PRI	PRIMARY
PSP	POWER SHUTDOWN PANEL
PVC	POLYVINYL CHLORIDE
PWR	POWER
ø PH	PHASE
REC	RECEPTACLE
RECT	RECTIFIER
REFR	REFRIGERATOR
RGS	RIGID GALVANIZED STEEL CONDUIT
RHW	EPR INSULATED WIRE
RM	ROOM
RP	RECEPTACLE PANELBOARD
RPP	REMOTE POWER PANEL
HD	HEAVY DUTY
HGT	HEIGHT
HH	HAND HOLE
HID	HIGH INTENSITY DISCHARGE
HO	HIGH OUTPUT
HOA	HAND-OFF-AUTOMATIC
HP	HORSEPOWER
HPF	HIGH POWER FACTOR
HPS	HIGH PRESSURE SODIUM
HTR	HEATER
HV	HIGH VOLTAGE

SCH	SCHEDULE
SEC	SECONDARY
SFL	SUB-FEED LUGS
SHT	SHEET
SKRU	SOLENOID KEY RELEASE UNIT
ST	SHUNT TRIP
SPC	SPACE
SPD	SURGE PROTECTION DEVICE (TVSS)
SPKR	SPEAKER
SPR	SPARE
SQ	SQUARE
SS	STAINLESS STEEL
STP	SHIELDED TWISTED PAIR
SUSP	SUSPEND(ED)
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
T, TEL, TELE	TELEPHONE
TBB	TELECOMMUNICATIONS BACKBOARD
TC	TIME CLOCK
TBD	TO BE DETERMINED
TEMP	TEMPORARY
TERM	TERMINAL, TERMINATE
THW	PVC INSULATED WIRE
THWN/THHN	PVC & NYLON INSULATED WIRE
T-STAT	THERMOSTAT
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
TWU	THROUGH-THE-WALL UNIT
TYP	TYPICAL
U	ULTRASONIC
UC	UNDER COUNTER
UG	UNDERGROUND
UGC	UNDERGROUND COMMUNICATION
UGP	UNDERGROUND PANEL
UH	UNIT HEATER
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERUPTABLE POWER SUPPLY
UTIL	UTILITY
UTP	UNSHIELDED TWISTED PAIR
V	VOLT, VOLTS
VA	VOLT-AMPERES
VAR	REACTIVE VOLT AMPS
VAV	VARIABLE AIR VOLUME
VDT	VIDEO DISPLAY TERMINAL
W	WIRE
W	WATTS
W/	WITH
WG	WIRE GUARD
WP	WEATHERPROOF
WT	WATERTIGHT
XP	EXPLOSION PROOF
XHHW	CROSS LINKED POLYETHELENE INSULATED WIRE
XFMR	TRANSFORMER
Y	WYE CONNECTION

2 ELECTRICAL SYMBOLS

N.T.S.

- WP — WEATHERPROOF GFI RECEPTACLE, 20A SUITABLE FOR USE IN WET/DAMP LOCATIONS, SHALL BE LISTED AND IDENTIFIED AS EXTRA DUTY, WEATHER RESISTANT.
- OL — OVERLOAD RELAY
- XkV — SURGE ARRESTOR
- DG — DIESEL GENERATOR
- TG — TURBINE GENERATOR
- X — CIRCUIT BREAKER PROTECTIVE RELAY
- FEEDER TAG
  "xxx" – AMPACITY
  xxx-3G — "3G" – 3-WIRE & GROUND (3P,G)
  xxx-4G — "4G" – 4-WIRE & GROUND (3P,N,G)
  xxx-5G — "5G" – 5-WIRE & GROUND (3P,2N,G)
- RECTIFIER (AC TO DC)
- INVERTER (DC TO AC)
- STATIC SWITCH
- FW — FLYWHEEL
- SIGNAL CONTROL WIRING
- ELECTRIC HEATER WITH DISCONNECT SWITCH
- SHIELDED TRANSFORMER
- BATTERY CHARGER
- xxAF / xxAT — ENCLOSED CIRCUIT BREAKER
- xxAF / xxAT — CIRCUIT BREAKER
- xxAF / xxAT — MEDIUM VOLTAGE CIRCUIT BREAKER
- xxAF / xxAT — DRAW OUT MEDIUM VOLTAGE CIRCUIT BREAKER
- xxAF / xxAT, zzA — DRAW OUT FUSED CIRCUIT BREAKER
- < > — SPACE – DRAW OUT
- < — SPACE – PLUGIN
- FUSED DISCONNECT SWITCH 3 POLE U.O.N.
- DISCONNECT SWITCH
- LOAD BREAKER DISCONNECT SWITCH – NON FUSED
- FUSED DISCONNECT SWITCH IN SWBD/SWGR
- ENCLOSED FUSED DISCONNECT SWITCH
- FUSE
- CIRCUIT CONTINUED OR CONNECTED TO EQUIPMENT INDICATED
- © — ELECTRICAL CONNECTION, i.e. CONNECTION TO VAV OR HEATER DISCONNECT
- 1 / E601 — NUMBER/LETTER: DETAIL DESIGNATION; SHEET
- (x) — CURRENT TRANSFORMER (x) INDICATES QUANTITY – NO NUMBER AS 1
- V, A, Ak — ATS-x "ATS" – AUTOMATIC; MTS-x "MTS" – MANUAL; BP
- SIZE — MOTOR SIZE (HP) AS INDICATED
- CIRCUIT BREAKER W/OL
- FUSED DISCONNECT SWITCH W/OL
- MAGNETIC STARTER WITH NEMA SIZE INDICATED
- CONTACT, NORMALLY OPEN (NO). ("TC"-WITH TIMED CLOSING)
- CONTACT, NORMALLY CLOSED (NC). ("TO"-WITH TIMED OPENING)
- E — INTERLOCK
- 50 — RELAY – NUMBER INDICATES TYPE
- W — WATT METER
- A — AMP METER
- VAR — VAR METER
- PQ — POWER QUALITY METER
- V — VOLT METER
- AS — AMMETER SWITCH
- VS — VOLTMETER SWITCH
- V, A, Ak — PANEL BOARD
- VFD — VFD
- AC FILTER
- BATTERY
- GROUND WIRE – BURIED
- GROUND WIRE – BARE STRANDED COPPER
- GROUND ROD
- GROUND WIRE TO GROUND WIRE EXOTHERMIC WELD.
- BOLTED CONNECTION TO EQUIPMENT
- GROUNDING CONNECTION-SYSTEM AND/OR EQUIPMENT
- LIGHTNING ARRESTER
- SURGE ARRESTER WITH CAPACITOR
- G, N — NEUTRAL TO GROUND BOND
- △ xxxV, xxxkVA, Y xxxV — 3 PHASE TRANSFORMER DELTA PRIMARY GROUNDED WYE SECONDARY
- PPA-1-XX.X — BRANCH CIRCUIT NUMBER; DESIGNATES PANEL NAME

EACH BRANCH CIRCUIT SHALL BE #12 CU WITH DEDICATED #12 NEUTRAL, #12 GROUND IN 3/4" CONDUIT, UON.

STATE OF NEW YORK · STEVEN SHAPIRO · 073725 · LICENSED PROFESSIONAL ENGINEER

N

DPW Directorate of Public Works

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P.M.:
CHECKED: SS
SUBMITTED:
APPROVED:

SCALE: N.S.
DATE: MAY 18, 2022
DRAWN: MK
DESIGNED: MK

REVISIONS

#	DESCRIPTION	DATE	BY

RENOVATION/ UPGRADE OF
FIRE STATION 2 (BLDG 1203)
US ARMY GARRISON WEST POINT, NY

LEGEND, SYMBOLS, AND ABBREVIATIONS

SHEET NUMBER:
E002

1. ALL WORK SHALL BE PERFORMED SAFELY AND IN SUCH A MANNER SO AS NOT TO DISTURB THE WORK IN THE REMAINDER OF THE AREA AND THE BUILDING. PROVIDE ALL PROTECTIVE SCAFFOLDING BARRIERS, SIGNS, ETC., SUBJECT TO APPROVAL OF CLIENT.

2. CONDUIT RUNS SHOWN ARE DIAGRAMMATIC. EXACT LOCATION OF ALL CONDUIT RUNS SHALL BE DETERMINED IN THE FIELD. LOCATE ALL CONDUIT RUNS TO CLEAR PIPING, DUCTWORK, ACCESS DOORS, ACCESS FLOOR PEDESTALS AND OTHER OBSTRUCTIONS. COORDINATE CONDUIT RUNS WITH WORK OF OTHER TRADES AND ALTER WHERE NECESSARY TO AVOID INTERFERENCE. SUBMIT FOR APPROVAL, PRIOR TO ACTUAL INSTALLATION, INSTALLATION DRAWINGS SHOWING THE LOCATION OF ALL NEW EQUIPMENT/DEVICES TO BE INSTALLED AND INDICATING EXACT CIRCUITRY. DRAWINGS SHALL INCLUDE ALL WIRING, PULLBOXES, FITTINGS, WIRING DEVICES AND COORDINATE DRAWINGS WITH OTHER TRADES PRIOR TO SUBMITTAL.

3. PROVIDE IDENTIFICATION TAGS FOR ALL WIRING, INSTALL TAGS AT EACH END AND IN ALL INTERMEDIATE PULL/JUNCTION BOXES, CABINETS, HOUSINGS, ETC. INDICATE ON TAGS, LEGIBLY, MINIMUM 3/8" HIGH LETTERS, THE POINTS OF ORIGIN AND TERMINATION OF EACH CIRCUIT AND CONDUIT RUN. INCLUDE DATE OF INSTALLATION.

4. VERIFY EXACT DIMENSIONS, REQUIREMENTS, AND LOCATIONS OF ALL EQUIPMENT IN FIELD PRIOR TO PERFORMING ANY WORK.

5. ALL CONDUIT RUNS SHALL BE INSTALLED AS CLOSE TO CEILING SLAB AS POSSIBLE. PROVIDE ALL REQUIRED CONDUITS, ELBOWS, FITTINGS, OFFSETS, PULLBOXES, APPURTENANCES, SUPPORTS, ETC. TO FACILITATE INSTALLATION OF NEW CONDUIT.

6. ALL CONDUCTORS IN PARALLEL SHALL BE SAME LENGTH, TYPE AND SHARE EQUAL DISTRIBUTION OF LOAD AND SHALL BE INSTALLED IN STRICT ACCORDANCE WITH NEC, STATE, AND LOCAL CODES. PROVIDE A FULL LOAD TEST ON EACH CABLE TO ASCERTAIN THE EQUAL DIVISION CURRENT AMONG THE CABLES ON THE SAME PHASE, NO MORE THAN 5% DEVIATION OF CURRENT WILL BE ACCEPTABLE.

7. THE PLANS GENERALLY DO NOT INDICATE THE BRANCH CIRCUIT WIRING AND CONDUIT FOR FIXTURES AND OUTLETS, OR THE CONDUIT SIZE FOR FEEDERS. PROVIDE THE CORRECT WIRING QUANTITY AND SIZE, INSTALLED IN CONDUIT, AS REQUIRED BY THE INDICATED CIRCUITRY AND APPLICABLE REQUIREMENTS OF THE N.E.C.

8. WORK SHALL BE COORDINATED BETWEEN ALL TRADES AND THE OPERATIONAL REQUIREMENTS FOR WORKING WITHIN A 'LIVE/ACTIVE' FACILITY/DATA CENTER.

9. PROVIDE ALL POWER WIRING FOR ALL MECHANICAL AND ELECTRICAL EQUIPMENT. WIRING DIAGRAM FOR MECHANICAL EQUIPMENT SHALL BE OBTAINED FROM THE MECHANICAL SUBCONTRACTOR. THE MECHANICAL SUBCONTRACTOR SHALL PROVIDE ALL CONTROL WIRING, CONDUIT AND CONNECTIONS. ALL POWER WIRING TO MECHANICAL EQUIPMENT SHALL BE CIRCUITED VIA THE ASSOCIATED STARTERS OR CONTACTORS.

10. LABEL ALL CIRCUIT BREAKERS IN ALL ELECTRICAL POWER AND DISTRIBUTION PANELS AND SWITCHBOARDS. TYPE WRITTEN PANEL DIRECTORY SHALL BE SECURELY FASTENED TO THE INSIDE OF EACH PANEL DOOR.

11. PROVIDE PERMANENT ENGRAVED NAMEPLATE FOR ALL ELECTRICAL EQUIPMENT AND ALL EQUIPMENT HAVING AN ELECTRICAL POWER SOURCE TO IT. THIS INCLUDES ALL UPS'S, BYPASS CABINETS, BATTERY CABINETS, ATS'S, SWITCHGEAR/SWITCHBOARDS, STS/PDU'S, CIRCUIT BREAKERS, JUNCTION BOXES, WIREWAYS, CONTROL PANELS, ETC. INDICATE VOLTAGE, PHASE, AMPERAGE, AND NAME OF EQUIPMENT OR DESCRIPTION OF THE FUNCTION OF THE EQUIPMENT. LABEL SHALL BE COLOR-CODED PER CLIENT REQUIREMENTS WITH A MINIMUM 1/2" HIGH, WHITE LETTERING AND AS APPROVED BY CLIENT. ALL TEXT SHALL BE CLEARLY VISIBLE WHEN LOOKING AT SAID EQUIPMENT.

12. PROVIDE WIRING DIAGRAMS ON THE INSIDE OF EACH CABINET/ENCLOSURE DOOR INDICATING EQUIPMENT AND CONDUCTORS CONNECTED TO CABINET/ENCLOSURE. CABINET SHALL BE VACUUM CLEANED UPON COMPLETION OF INSTALLATION.

13. ALL EQUIPMENT SHALL BE RATED FOR THE SHORT CIRCUIT CURRENT AVAILABLE, FUSES SHALL BE BUSMAN OF AN APPROVED TYPE. FUSES SHALL BE PROVIDED IN ACCORDANCE WITH THESE DRAWINGS AND/OR THE COORDINATION STUDY. ALL PERTINENT FUSE DATA SHALL BE INCORPORATED ON THE AS-BUILT DRAWINGS TO ALLOW FOR PROPER FUSE REPLACEMENT COORDINATION.

14. MAKE CONNECTIONS TO MOTORS AND EQUIPMENT WITH FLEXIBLE METALLIC CONDUIT AND CONNECTORS. MINIMUM SIZE 3/4" FOR MOTOR CONNECTIONS, USE MINIMUM 1/2" FLEXIBLE METAL CONDUIT FOR LIGHTING FIXTURES. PROVIDE SUFFICIENT LENGTH OF FLEXIBLE CONDUIT TO AVOID TRANSMISSION OF VIBRATION. PROVIDE CONNECTIONS WITH EXTERNAL GROUND CONDUCTOR AND GROUND FITTINGS. USE LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT WHERE APPLICABLE.

15. COORDINATE LOCATIONS AND MOUNTING HEIGHTS OF OUTLET BOXES, JUNCTION BOXES, AND EQUIPMENT DISCONNECTS TO AGREE WITH REQUIRED LOCATIONS OF FURNISHINGS OR EQUIPMENT SERVED. GENERALLY, RECEPTACLES SHALL BE MOUNTED 18" ABOVE FINISHED FLOOR AND LIGHT SWITCHES AT 48" ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED.

16. WIRING METHODS SHALL BE SUITABLE FOR USE IN AN ENVIRONMENTAL AIR PLENUM WHERE SUCH EXISTS.

17. PROVIDE STENCILED/PRINTED LABELS ON CONDUIT, 3/8" HIGH FOR 1/2" CONDUIT AND 1" HIGH FOR CONDUIT 1" IN DIAMETER OR LARGER, APPLIED AT A PANEL AND PULL BOX LOCATIONS, WITHIN EACH ROOM AND AT 50' ON CENTER WITHIN AN AREA. LABELS SHALL INDICATE THE VOLTAGE CONTAINED, CONDUIT ORIGIN AND DESTINATION AND SHALL BE OF A COLOR WHICH CONTRASTS THE COLOR OF THE CONDUIT, AND AS APPROVED BY CLIENT.

18. DO NOT INSTALL OUTLET BOXES BACK TO BACK IN SAME WALL. MINIMUM SPACING BETWEEN BOXES IN ADJOINING ROOM WALLS SHALL BE 12".

19. COORDINATE WITH OTHER TRADES TO AVOID CONFLICTS WITH LOCATIONS OF FIXTURES, APPURTENANCES OR EQUIPMENT.

20. CONTRACTOR SHALL SURVEY AND PLAN ENTIRE PROJECT PRIOR TO CONSTRUCTION. WHERE DRAWINGS AND FIELD CONDITIONS DIFFER, CONTRACTOR SHALL NOTIFY ENGINEER AND ARCHITECT AND SUBMIT PROPOSED SOLUTION TO ENGINEER FOR APPROVAL.

21. ALL VERTICAL FEEDER RUNS SHALL BE SUPPORTED AS NECESSARY ACCORDING TO THE NATIONAL AND LOCAL CODES. PROVIDE EXPANSION JOINTS WHERE PASSING THRU BUILDINGS EXPANSION JOINTS.

22. PROVIDE A SEPARATE GROUND CONDUCTOR IN EACH RACEWAY. EACH BRANCH CIRCUIT SHALL HAVE A DEDICATED NEUTRAL CONDUCTOR.

23. ALL CONDUITS SHALL BE RIGID STEEL WITH THREADED FITTINGS UNLESS OTHERWISE NOTED OR REQUIRED BY CODE.

24. MINIMUM CONDUIT SIZE SHALL BE 3/4".

25. PROVIDE CHANNEL SUPPORT FOR ALL WALL PANEL MOUNTED AND FREE STANDING EQUIPMENT. PROVIDE FLOOR, CEILING AND WALL ANCHORING FOR SUPPORTS. COORDINATE EXACT REQUIREMENTS WITH GENERAL CONTRACTOR AND EQUIPMENT VENDORS.

26. ELECTRICAL CONTRACTOR TO PROVIDE AND MAINTAIN TEMPORARY LIGHT AND POWER FOR THE CONSTRUCTION AREAS, IN ACCORDANCE WITH ACCEPTED STANDARDS ESTABLISHED BY O.S.H.A. TEMPORARY LIGHT AND POWER SHALL BE MAINTAINED FOR START TIME OF EARLIEST TRADE TO LATEST TRADES QUITTING TIME, FOR THE ENTIRE PERIOD OF CONSTRUCTION. CONTRACTOR SHALL PAY COST ASSOCIATED WITH THE UTILITY Co. AND/OR BUILDING TENANT DEMAND AND ENERGY CHANGES.

27. ELECTRICAL PENETRATIONS (CONDUITS, WIRING ETC.) THROUGH WALL(S), PARTITION(S) AND/OR FLOOR CONSTRUCTION SHALL HAVE THE ANNULAR SPACE AROUND PENETRATION SEALED AND/OR FIRESTOPPED WITH UL APPROVED SYSTEM TO MATCH RATING OF EXISTING CONSTRUCTION ASSEMBLY. PATCH ALL DISTURBED SURFACES TO MATCH ADJACENT SPACES.

28. ELECTRICAL CONTRACTOR SHALL VERIFY WITH THE MECHANICAL, PLUMBING, SECURITY, FIRE PROTECTION, ETC. CONTRACTORS ALL EQUIPMENT LOCATIONS, NAMEPLATE INFORMATION (FOR UNIT LINE VOLTAGE AND CONTROL WIRING REQUIREMENTS) PRIOR TO CONNECTION. ELECTRICAL CONTRACTOR TO PROVIDE POWER CIRCUITING ACCORDINGLY. MECHANICAL SUBCONTRACTOR TO PROVIDE CONTROLS AND MONITORING CIRCUITRY ACCORDINGLY.

29. NATIONAL ELECTRIC, STATE AND LOCAL CODE CLEARANCE REQUIREMENTS SHALL BE MAINTAINED FOR ALL ELECTRICAL EQUIPMENT INCLUDING BUT NOT LIMITED TO UPS'S, BYPASS CABINETS, BATTERY CABINETS, ATS'S, SWITCHGEAR/SWITCHBOARDS, PANELBOARDS, STS/PDU'S, ASTS'S, ETC.

30. COORDINATE AND SCHEDULE ACTIVITIES, PROVISIONS AND DIVISION RESPONSIBILITIES WITH OTHER DISCIPLINES AND TRADES PRIOR TO COMMENCING ANY WORK.

31. EQUIPMENT LOCATIONS SHOWN ARE APPROXIMATE. THIS CONTRACTOR SHALL PROVIDE AS-BUILT DRAWINGS OF THE ACTUAL LOCATIONS OF EQUIPMENT AND CONDUIT ROUTING UPON COMPLETION OF THIS WORK IN AUTO CAD VERSION 2005.

32. TEST ALL PANELBOARD'S, SWITCHGEAR/SWITCHBOARD'S, CABLES, CIRCUIT BREAKER'S, AUTOMATIC TRANSFER SWITCH'S (ATS) UPS'S, BYPASS CABINETS, BATTERY CABINETS, ETC. IN ACCORDANCE WITH NETA ACCEPTANCE TEST STANDARDS AND CLIENT'S STANDARDS. PRIMARY AND SECONDARY INJECTION TEST ALL CIRCUIT BREAKERS. PROVIDE 3 COPIES OF REPORT TO OWNER.

33. PROVIDE ALL LOAD BANK(S), TEST EQUIPMENT AND PERSONNEL AS PART OF THE CONTRACT AND INCLUDE COSTS IN THE BID. SUBMIT IN WRITTEN FORM THE RESULTS OF TEST. ALL TESTS MUST BE WITNESSED BY THE OWNER OR THEIR REPRESENTATIVE AND THE ARCHITECT/ENGINEER.

34. ALL FEEDERS (POWER AND CONTROL) TO EQUIPMENT INDICATED SHALL BE ROUTED IN INDIVIDUAL/INDEPENDENT/DIVERSE RACEWAYS. CABLES SHALL NEVER SHARE THE SAME RACEWAY, WIRING TROUGH, PULLBOX, ETC.

35. ALL WORK SHALL COMPLY WITH NFPA 70 ELECTRICAL AND NFPA 72 FIRE ALARM CODES.

36. ALL "A" AND "B" FEEDERS, ALL "PRIMARY" AND "RESERVE" FEEDERS, ALL "UTILITY" AND "GENERATOR" FEEDERS, ETC. SHALL BE SEGREGATED FROM EACH OTHER AND INSTALLED IN DIVERSE PATHWAYS.

37. CONTRACTOR SHALL REPAIR ALL DAMAGES TO THE BUILDING BACK TO ITS ORIGINAL CONDITION.

38. DRAWINGS ARE INTENDED TO BE DIAGRAMMATIC. EXISTING CONDITIONS ARE INCLUDED FOR REFERENCE ONLY.

39. TEMPORARY SUPPORT OF LIGHTING, AUDIO, SMOKE DETECTORS, AND ALL MISCELLANEOUS DEVICES SHALL BE COORDINATED SO AS TO MINIMIZE IMPACT TO FACILITY DURING ALL WORK. REFER TO OTHER TRADES FOR DESIGN OF SUPPORT STRUCTURES.

40. CONTRACTOR IS REQUIRED TO PROVIDE COORDINATION DRAWINGS OF ALL TRADES AND SUBMIT AS A SHOP DRAWING FOR REVIEW.

41. DISCONNECT EXISTING LIGHT FIXTURES PRIOR TO CEILING DEMOLITION. RECONNECT AND REINSTALL IN SAME LOCATION ONCE NEW CEILING IS IN PLACE. AFFECTED LIGHT FIXTURES SHALL BE CLEANED & RELAMPED PRIOR TO REINSTALLATION.

42. MINIMIZE DISRUPTIONS AND DOWNTIME REQUIRED FOR BASEMENT DURING PHASE 2. COORDINATE WITH BUILDING MANAGEMENT AND/OR ON SITE ENGINEERS.

43. INSTALL SUFFICIENT LENGTH OF GROUND WIRE AT ALL EQUIPMENT LOCATIONS TO GROUND EQUIPMENT WITHOUT SPLICES.

44. ALL CONNECTIONS IN THE BURIED GROUNDING SYSTEM ARE TO BE MADE BY EXOTHERMIC WELDING PROCESS. SIMILAR METHODS IF APPROVED, CAN BE USED. ALL OTHER EXPOSED CONNECTIONS AS SHOWN ON DETAILS.

45. NO BACKFILL SHALL BE PLACED AROUND THE GROUNDING SYSTEM UNTIL AUTHORIZED BY THE CLIENT'S REPRESENTATIVE.

46. WHERE BURIED CONNECTION IS MADE BETWEEN DISSIMILAR METALS, I.E. BRONZE CONNECTOR TO GALVANIZED STEEL, THE COMPLETE CONNECTION SHALL BE COVERED WITH A PLASTIC SEALER. ALL OTHER BURIED CONNECTIONS SHALL BE COMPLETELY COVERED WITH APPROVED COMPOUND.

47. GROUND ROD INSTALLATION SHALL MEET REQUIREMENTS OF ALL LOCAL, CITY, STATE, AND NATIONAL ELECTRICAL CODES.

48. SPLICES AND TAPS TO EXTERNAL BURIED RING LOOP MUST BE MADE DIRECTLY TO THE GROUND WIRE AND SHALL NOT BE MADE TO THE GROUND RODS.

49. AVOID BENDS OF LESS THAN 1'-0" DIAMETER FOR #2 WIRE OR LARGER.

50. BOND STRUCTURAL STEEL TO GROUND.

51. NEW WORK SHALL BE COORDINATED SO AS TO MINIMIZE IMPACT TO FACILITY OPERATIONS.

52. CONTRACTOR SHALL PROVIDE UPDATED VOLTAGE DROP CALCULATIONS AND INCREASE WIRE SIZES AS NECESSARY AND REQUIRED, BASED UPON CONDITIONS IN FIELD.

53. CONTRACTOR OR QUALIFIED ELECTRICIAN SHALL TRACE ALL EXISTING CIRCUITRY FROM PANELS TO LOADS AND UPDATE BOTH DRAWINGS AND SCHEDULE TO REFLECT ACCURATE FIELD CONDITIONS. THIS INCLUDES REMOVING DEAD FRONTS OF PANELS TO RECLAIM ABANDONED CIRCUITS AND TRACE WIRES BACK TO SOURCES.

54. WIRE SIZES ARE SHOWN ON PANEL SCHEDULES, UON.

55. ALL DISCONNECT SWITCHES AND REQUIRED APPURTENANCES FOR MECHANICAL EQUIPMENT SHALL BE FURNISHED BY MECHANICAL CONTRACTOR, UNLESS OTHERWISE STATED BY MECHANICAL DRAWINGS. REFER TO MECHANICAL DRAWINGS, DETAILS, SCHEDULES, SPECIFICATIONS, AND MANUFACTURER DOCUMENTATION.

56. EXISTING CONDITIONS ON PANEL SCHEDULES ARE INCLUDED FOR REFERENCE ONLY. ELECTRICIAN SHALL TRACE ALL CIRCUITS AND WIRING IN FIELD PRIOR TO START OF WORK. ELECTRICIAN SHALL PROVIDE UPDATED LABELS TO DESIGNATE UNUSED CIRCUITS AS SPARE. ELECTRICIAN SHALL PROVIDE WEST POINT WITH DIGITAL AND HARD COPIES OF UPDATED PANEL SCHEDULES BASED UPON FINDINGS. HARD COPY PRINTOUTS ARE TO BE HOSTED WITHIN DIRECT VICINITY OF EACH PANEL.

57. COORDINATE WITH FACILITY MANAGEMENT TO PROVIDE EMERGENCY GENERATOR POWER TO CERTAIN CIRCUITS OR EQUIPMENT. CONTRACTOR SHALL COORDINATE WITH CLIENT PRIOR TO WORK BEGINNING.

58. COORDINATE DISCONNECT REQUIREMENTS WITH EQUIPMENT VENDOR.

CONTRACTOR MUST SUBMIT A 'METHOD OF PROCEDURE' FOR ANY AND ALL WORK WHICH MAY IMPACT THE BUILDING, ITS ELECTRICAL SERVICES, ELECTRICAL DISTRIBUTION SYSTEM, ETC. THIS WORK INCLUDES TEMPORARY CONNECTIONS, EQUIPMENT REMOVAL AND INSTALLATION, UPS'S, BYPASS CABINETS, BATTERY CABINETS, AUTOMATIC TRANSFER SWITCHES, SWITCHGEAR/SWITCHBOARDS, PDU'S, EQUIPMENT TESTING, ETC. THIS 'METHOD OF PROCEDURE' MUST BE SUBMITTED TWO (2) WEEKS PRIOR TO THE START OF ANY WORK IN WRITING TO THE CLIENT FOR APPROVAL. NO WORK SHALL BE UNDERTAKEN WITHOUT WRITTEN CLIENT APPROVAL. CONTRACTOR MAY NEED TO PROVIDE ALTERNATE/TEMPORARY 'POWER PATHS' AT THE REQUEST OF THE CLIENT OF OFF-HOUR WORK AT NO ADDITIONAL COST.

1. RENOVATION, REPLACEMENT AND ADDITION OF HVAC EQUIPMENT/SYSTEMS SERVING FIRE STATION #2 WORK INCLUDES BUT NOT LIMITED TO:
   1. ADDITION OF CONDENSING UNITS AND AIR HANDLERS AND ASSOCIATED POWERING MEANS AND DISCONNECTS.
   2. ADDITION OF OUTDOOR WEATHERPROOF RECEPTACLES FOR MAINTENANCE ASSOCIATED WITH NEW EQUIPMENT.
   3. ADDITION OF VAV BOXES AND ASSOCIATED POWER AND CONTROL WIRING AND DISCONNECTING MEANS.
   4. ADDITION OF TWO (2) NEW ELECTRICAL PANELS.
   5. REMOVAL AND REPLACEMENT OF EXISTING HVAC EQUIPMENT AS SHOWN.
   6. REPURPOSING OF CIRCUITS TO INCLUDE ADDING EQUIPMENT TO THE EXISTING EMERGENCY GENERATOR PANEL AS SHOWN ON THE ELECTRICAL DRAWINGS.
2. REMOVAL AND REPLACEMENT OF CEILINGS. ALL EXISTING FIXTURES AND EQUIPMENT SHALL BE REPLACED IN KIND AND LOCATION UNLESS OTHERWISE NOTED BY THE ARCHITECT. ANY FIXTURES/HOUSING BEING REUSED SHALL BE CLEANED AND RELAMPED PRIOR TO REINSTALLATION.
3. APPARATUS ROOM, WATCH ROOM, AND ELECTRIC/TELECOM 125 TO REMAIN FULLY OPERATIONAL AT ALL TIMES,. PROVIDE TEMPORARY CIRCUIT(S) AND EMERGENCY GENERATOR FOR WATCH ROOM, ELECTRIC/ TELECOM ROOM 125, AND APPARATUS ROOM OVERHEAD DOORS FOR ENTIRE CONSTRUCTION PERIOD. REFER TO ELECTRICAL DRAWINGS.
4. PHASE 1 SPECIAL REQUIREMENTS:

   1. COMPLETE WORK IN THE KITCHEN TO WITHIN A TWO WEEK PERIOD IN THIS PHASE. THE KITCHEN SHALL REMAIN OPERATIONAL AND AVAILABLE FOR CONTINUED USE AT OTHER TIMES DURING THIS PHASE. PROVED TEMPORARY MEASURE PER KEY NOTES BELOW.

5. PHASE 2 SPECIAL REQUIREMENTS:

   1. COMPLETE WORK IN THE WOMENS TOILET ROOM AND LAUNDRY ROOM TO TAKE IN A TWO WEEK PERIOD IN THIS PHASE. WOMENS ROOM AND LAUNDRY TO REMAIN IN USE BY FIREFIGHTERS AT OTHER TIMES DURING THIS PHASE. PROVED TEMPORARY MEASURE PER KEY NOTES BELOW.

   2. COMPLETE WORK IN THE BASEMENT WITHIN A 3 WEEK PERIOD DURING THIS PHASE. THE BASEMENT WILL REMAIN IN USE BY THE FIREFIGHTERS AT OTHER TIMES DURING THIS PHASE.

STATE OF NEW YORK
STEVEN SHAPIRO
073725
LICENSED PROFESSIONAL ENGINEER

1	GENERAL NOTES
N.T.S.	

2	GENERAL SCOPE OF WORK
N.T.S.	

N

DPW Directorate of Public Works

500 SUMMIT LAKE DRIVE, SUITE 500
VALHALLA, NEW YORK 10595-1352

EYP

P.M.:
CHECKED: SS
SUBMITTED:
APPROVED:

SCALE: N.S.
DATE: MAY 18, 2022
DRAWN: MK
DESIGNED: MK

REVISIONS

#	DESCRIPTION	DATE	BY

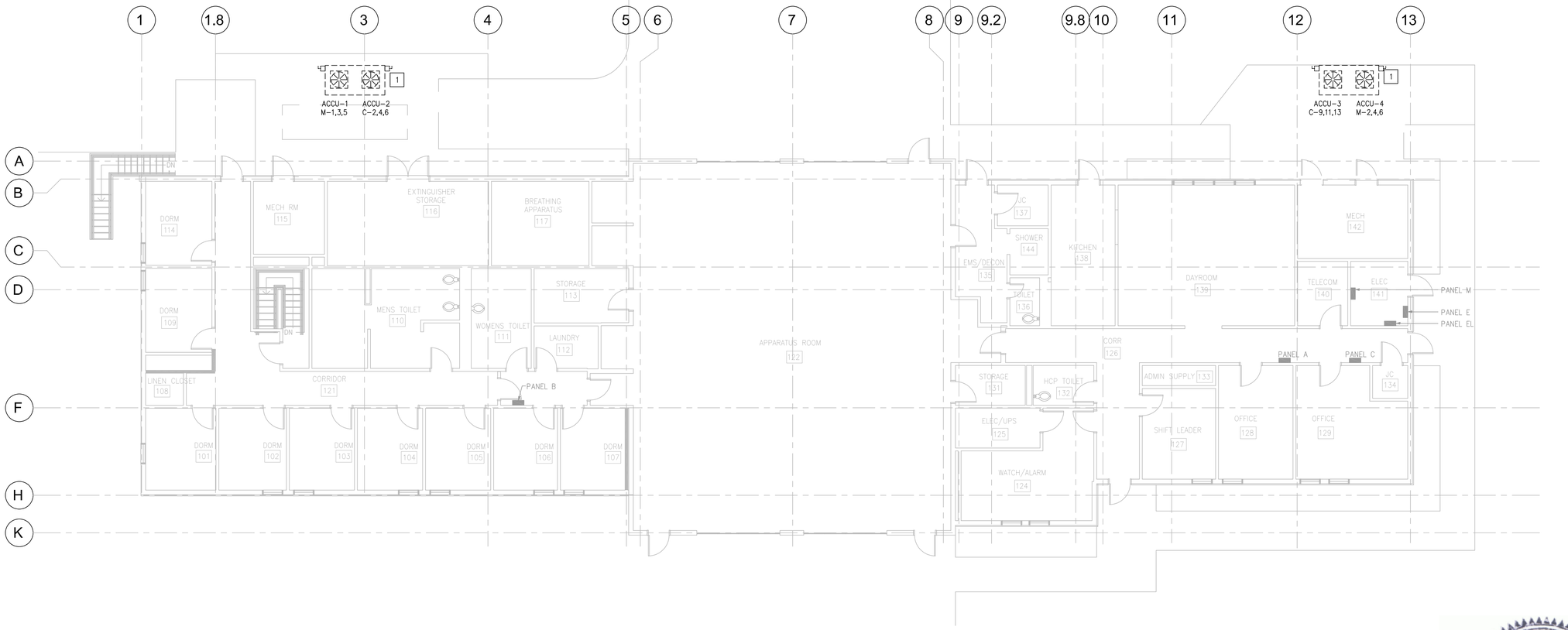
RENOVATION/ UPGRADE OF
FIRE STATION 2 (BLDG 1203)
US ARMY GARRISON WEST POINT, NY

GENERAL NOTES

SHEET NUMBER:
E003

KEYED NOTES

[1] ALL POWER AND CONTROL WIRING AND ASSOCIATED CONDUIT SHALL BE REMOVED BACK TO SOURCE. CORRESPONDING CIRCUIT BREAKER AT SOURCE PANEL SHALL BE LABELED AS SPARE.



1 ELECTRICAL DEMOLITION PLAN - LEVEL 1
1/8"=1'-0"

DPW Directorate of Public Works
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VALHALLA, NEW YORK 10595-1352
EYP

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SUBMITTED:
APPROVED:
SCALE: 1/8"=1'0"
DATE: MAY 18, 2022
DRAWN: MK
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RENOVATION/ UPGRADE OF
FIRE STATION 2 (BLDG 1203)
US ARMY GARRISON WEST POINT, NY

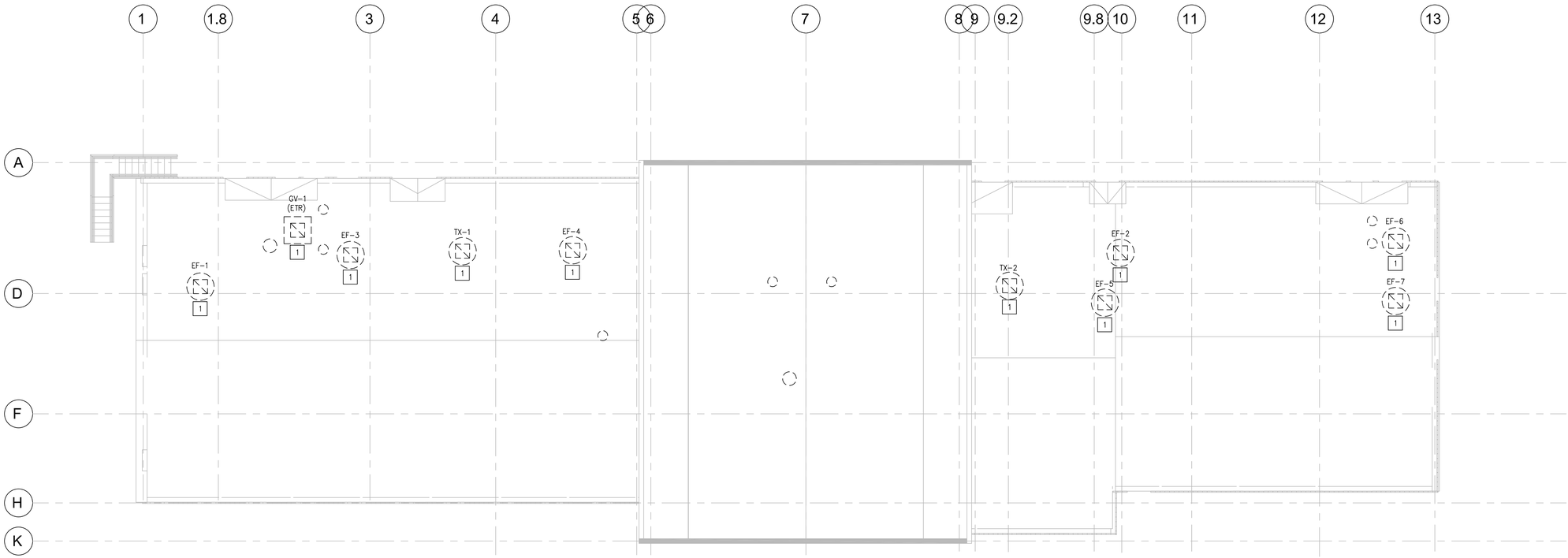
ELECTRICAL DEMOLITION PLAN LEVEL 1

STATE OF NEW YORK
STEVEN SHAPIRO
073725
LICENSED PROFESSIONAL ENGINEER

SHEET NUMBER:
ED201

KEYED NOTES

1 VERIFY EXISTING WIRING IS SUITABLE FOR LOAD AND OVERCURRENT PROTECTION. VERIFY WIRING IS IN ACCEPTABLE CONDITION FOR RE-USE. REUSE WHERE FEASIBLE AND EXTEND WHERE NECESSARY. DEMOLISH BACK TO SOURCE AND REPLACE WIRING WHERE DEEMED NECESSARY. IDENTIFY CIRCUITS FOR FUTURE USE AS APPROPRIATE.



1 ELECTRICAL DEMOLITION PLAN - ROOFTOP
1/8"=1'-0"

SCALE: 1/8" = 1'-0"

DPW Directorate of Public Works
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VALHALLA, NEW YORK 10595-1352
EYP

P.M.:
CHECKED: SS
SUBMITTED:
APPROVED:

SCALE: 1/8"=1'-0"
DATE: MAY 18, 2022
DRAWN: MK
DESIGNED: MK

REVISIONS

#	DESCRIPTION	DATE	BY
1	90% REVIEW SET	03312022	

RENOVATION/ UPGRADE OF
FIRE STATION 2 (BLDG 1203)
US ARMY GARRISON WEST POINT, NY

ELECTRICAL DEMOLITION PLAN - ROOF TOP

SHEET NUMBER:
ED202

STATE OF NEW YORK
STEVEN SHAPIRO
073725
LICENSED PROFESSIONAL ENGINEER

SHEET NOTES

1. PANEL LOADS ARE REPRESENTATIVE OF LOADS CALCULATED BEFORE EQUIPMENT IS REMOVED. VERIFY ALL CONDITIONS IN FIELD PRIOR TO ANY WORK BEING PERFORMED.

LOCATION:	EAST WING CORRIDOR						**REMARKS:** EXISTING PANEL. BREAKERS FOR DEMOLITION CIRCUITS SHALL BE LABELED SPARE.							**PANEL DESIGNATION:**
VOLTAGE:	208/120 **VOLTS,** 3 **PHASE,** 4 **WIRE**						**MAIN OVERCURRENT PROTECTION:**							**A**
MOUNTING TYPE:	FLUSH						**M.C.B.: 125 AMP**							
GROUNDING:														
							AIC: 22,000							
SERVICE TO:	**A(KVA)**	**B(KVA)**	**C(KVA)**	**WIRE**	**TRIP**	**POLE**	**POLE**	**TRIP**	**WIRE**	**A(KVA)**	**B(KVA)**	**C(KVA)**		**SERVICE TO:**
CORR. ADMIN. SUPPLY RM LIGHTS	0.234			E	20	1	2	20	E	1.100				RECEPT DINING/DAY RM
KITCHEN, DISINFECTION FACILITY, EMG/DECON LIGHTS		0.790		E	20	3	4	20	E		0.540			ELECT RM, MECH EQUIPT STORAGE RECEPT
JAN CLOSET, STORAGE, OFFICES, SHIFT LEADER LIGHTS			0.896	E	20	5	6	20	E			0.180		RECEPT. COMM. CLOSET
DINING/DAY ROOM LIGHTS	0.340			E	20	7	8	20	E	0.180				RECEPT. COMM. CLOSET
COMM. CLOSET ELECTRICAL ROOM, MECH RM LIGHTS		0.192		E	20	9	10	20	E		0.180			RECEPT. COMM. CLOSET
REFRIGERATOR			1.500	E	20	11	12	20	E			0.180		RECEPT. COMM. CLOSET
KITCHEN COUNTER TOP LIGHTS	0.100			E	20	13	14	20	E	1.440				CORRIDOR, BATH RM SHIFT LEADER RECPT.
RECEPT. OFFICES 128,129 JAN CLOSET		1.620		E	20	15	16	20	E		1.840			DISHWASHER
KITCHEN RECEPTS.			0.540	E	20	17	18					1.840		
RANGE	1.840			E	20	19	20	20	E	0.720				KITCHEN/EMS DECON
ICE MACHINE		1.000		E	20	21	22	20	**E**		**0.506**			**EF-5 (1/6 HP)**
RECEPT. APPARATUS ROOM			0.720	E	20	23	24	20	E			1.840		GARBAGE DISPOSAL
12 OUTLET POWER STRIP AT PATCH PNL RACK	0.180			E	20	25	26	20	**E**	**0.506**				**EF-6 (1/6 HP)**
CATV AMPLIFIER		0.100		E	20	27	28	20	**E**		**0.506**			**EF-7 (1/6 HP)**
SPARE					20	29	30	20	E			0.506		TX-2 (1/6 HP)
SPARE					20	31	32	20						SPARE
SPARE					20	33	34	20						SPARE
SPACE						35	36							SPACE
SPACE						37	38							SPACE
SPACE						39	40							SPACE
SPACE						41	42							SPACE
SUBTOTALS	2.694	3.702	3.656	**KVA**						3.946	3.572	4.546	**KVA**	
TOTAL LOADS:	6.64	**KVA PHASE A**		31.92	**A PHASE A**									
	7.27	**KVA PHASE B**		34.97	**A PHASE B**									
	8.20	**KVA PHASE C**		39.43	**A PHASE C**									
TOTAL CONNECTED LOAD:	22.12	**KVA**												
VOLTAGE:	208	**V**												

LOCATION:	EAST WING CORRIDOR						**REMARKS:** EXISTING PANEL. BREAKERS FOR DEMOLITION CIRCUITS SHALL BE LABELED SPARE.							**PANEL DESIGNATION:**
VOLTAGE:	208/120 **VOLTS,** 3 **PHASE,** 4 **WIRE**						**MAIN OVERCURRENT PROTECTION:**							**B**
MOUNTING TYPE:	FLUSH						**M.C.B.: 225 AMP**							
GROUNDING:														
							AIC: 22,000							
SERVICE TO:	**A(KVA)**	**B(KVA)**	**C(KVA)**	**WIRE**	**TRIP**	**POLE**	**POLE**	**TRIP**	**WIRE**	**A(KVA)**	**B(KVA)**	**C(KVA)**		**SERVICE TO:**
BASEMENT TRAINING ROOM, STORAGE, HALL LTG	0.482			E	20	1	2	20	E	1.110				BREATHING APPARATUS, LAUNDRY STOR/MED SUPPLY RM, TOILETS
1ST FLOOR CORRIDOR AND JANITOR LTG		0.234		E	20	3	4	20	E		0.135			DORMITORY LIGHTING TO WATCH/ALARM ROOM
BASEMENT EXERCISE ROOM LTG			0.576	E	20	5	6	20	E			0.720		WOMENS & MENS TOILETS MED SUPPLY/MECH STOR
1ST FLR EXTINGUISHER STORAGE, MECH RM LTG	0.448			E	20	7	8	20	E	0.900				MECH RM, EXTING STOR RECEPTS
RECEPT. DORMS 109, 101, & EXTERIOR RECEPT.		1.440		E	20	9	10	20	E		0.900			DORM 114 & CORRIDOR
RECEPT. DORMS 102, 103, & 104.			1.620	E	20	11	12	20	E			1.500		WASHER/DRYER LAUNDRY RM
RECEPT. DORMS 105, 106, & 107.	1.620			E	20	13	14	20	E	1.500				SPECIAL PURPOSE RECEPT. RM 117
RECEPT. EXERCISE RM		1.440		E	20	15	16	20	E		1.500			SPECIAL PURPOSE RECEPT. RM 86
RECEPT. TRAINING RM, TOILET			1.620	E	20	17	18	20	E			0.220		COMP. C-1 AIR DRYER
EF-3	**0.506**			**E**	20	19	20			0.264				SUMP PUMP SEP-1 CONTROL PNL (1/2 HP)
TX-1		**0.506**		**E**	20	21	22	20	E		0.264			
AHU-1			**1.622**	**E**	20	23	24					0.264		
AHU-2	**1.645**			**E**	20	25	26	20	**E**	**0.506**				**GEF-1**
EBB-1 & EBB-2		1.125		E	20	27	28	20	E		0.200			CCTV CAMERAS
			1.125			29	30	20	E			0.150		FIREHOUSE OVERHEAD DOOR OPEN GREEN LIGHTS
SF-1	**0.506**			**E**	20	31	32	20						SPARE
EF-4		**0.506**		**E**	20	33	34	20						SPARE
SPARE					20	35	36	20						SPARE
SPARE					20	37	38	20						SPARE
SPACE						39	40							SPACE
SPACE						41	42							SPACE
SUBTOTALS	5.207	5.251	6.563	**KVA**						4.280	2.999	2.854	**KVA**	
TOTAL LOADS:	9.49	**KVA PHASE A**		45.61	**A PHASE A**									
	8.25	**KVA PHASE B**		39.66	**A PHASE B**									
	9.42	**KVA PHASE C**		45.27	**A PHASE C**									
TOTAL CONNECTED LOAD:	27.15	**KVA**												
VOLTAGE:	208	**V**												

LOCATION:	EAST WING CORRIDOR						**REMARKS:** EXISTING PANEL. BREAKERS FOR DEMOLITION CIRCUITS SHALL BE LABELED SPARE.							**PANEL DESIGNATION:**
VOLTAGE:	208/120 **VOLTS,** 3 **PHASE,** 4 **WIRE**						**MAIN OVERCURRENT PROTECTION:**							**C**
MOUNTING TYPE:	FLUSH						**M.C.B.: 125 AMP**							
GROUNDING:														
							AIC: 22,000							
SERVICE TO:	**A(KVA)**	**B(KVA)**	**C(KVA)**	**WIRE**	**TRIP**	**POLE**	**POLE**	**TRIP**	**WIRE**	**A(KVA)**	**B(KVA)**	**C(KVA)**		**SERVICE TO:**
EUH-1	1.737			E	20	1	2	30	**E**	**2.088**				**ACCU-2**
		1.737				3	4				**2.088**			
EUH-2			1.737	E	20	5	6					**2.088**		
	1.737					7	8	20	E	0.264				GEF-3
ACCU-3		**1.440**				9	10				0.264			
			1.440	**E**	25	11	12					0.264		
	1.440					13	14	20	E	1.737				EUH-3
AHU-4		**1.645**		**E**	20	15	16				1.737			
AHU-3			**1.622**	**E**	20	17	18	20	E			1.737		EUH-4
TX-3	**0.035**			**E**	20	19	20			1.737				
SPARE					20	21	22	20	E		0.750			EBB-3
						23	24					0.750		
						25	26	20	**E**	**0.506**				**GEF-2**
SPARE					20	27	28	20						SPARE
						29	30							
SPACE						31	32	20						SPARE
SPACE						33	34							SPACE
SPACE						35	36							SPACE
SPACE						37	38							SPACE
SPACE						39	40							SPACE
SPACE						41	42							SPACE
SUBTOTALS	4.949	4.822	4.799	**KVA**						6.332	4.839	4.839	**KVA**	
TOTAL LOADS:	11.28	**KVA PHASE A**		54.24	**A PHASE A**									
	9.66	**KVA PHASE B**		46.45	**A PHASE B**									
	9.64	**KVA PHASE C**		46.34	**A PHASE C**									
TOTAL CONNECTED LOAD:	30.58	**KVA**												
VOLTAGE:	208	**V**												

LOCATION:	EAST WING CORRIDOR						**REMARKS:** EXISTING PANEL. BREAKERS FOR DEMOLISHED CIRCUITS SHALL BE LABELED SPARE.							**PANEL DESIGNATION:**
VOLTAGE:	208/120 **VOLTS,** 3 **PHASE,** 4 **WIRE**						**MAIN OVERCURRENT PROTECTION:**							**M**
MOUNTING TYPE:	SURFACE						**M.C.B.:** 600 AMP							
GROUNDING:														
							AIC: 22,000							
SERVICE TO:	**A(KVA)**	**B(KVA)**	**C(KVA)**	**WIRE**	**TRIP**	**POLE**	**POLE**	**TRIP**	**WIRE**	**A(KVA)**	**B(KVA)**	**C(KVA)**		**SERVICE TO:**
~~ACCU-1 (15, 5A)~~	**1.860**					1	2			**1.860**				~~ACCU-4 (15, 5A)~~
		1.860			**25**	3	4	**25**			**1.860**			
			1.860			5	6					**1.860**		
AIR COMPRESSOR C-1 (5 HP)	2.004					7	8			5.374				FUTURE AIR COMPR. C2 (44.8A)
		2.004		E	30	9	10	60	E		5.374			
			2.004			11	12					5.374		
LIFTSTATION (5 HP)	2.004					13	14	30						SPARE
		2.004		E	30	15	16	30						SPARE
			2.004			17	18	30	E			1.000		GENERATOR 2KW
SPARE					20	19	20			1.000				
SPARE					20	21	22	20	E		0.500			GEN. ANTI-CONDENSATION HTR (500W)
SPARE					20	23	24	20						SPARE
PANEL A	6.640					25	26			12.966				PANEL E VIA TRANSFER SWITCH
		7.274		E	125	27	28	225	E		11.076			
			8.202			29	30					9.991		
PANEL B	9.487					31	32			3.000				PANEL S VIA LTG. CONTRACTOR
		8.250		E	225	33	34	60	E		1.500			
			9.417			35	36					1.400		
PANEL C	11.281					37	38							SPARE
		9.661		E	125	39	40	60						
			9.638			41	42							
SUBTOTALS	33.276	31.053	33.125	**KVA**						24.200	20.310	19.625	**KVA**	
TOTAL LOADS:	57.48	**KVA PHASE A**		276.33	**A PHASE A**									
	51.36	**KVA PHASE B**		246.94	**A PHASE B**									
	52.75	**KVA PHASE C**		253.61	**A PHASE C**									
TOTAL CONNECTED LOAD:	161.59	**KVA**												
VOLTAGE:	208	**V**												

DPW Directorate of Public Works

500 SUMMIT LAKE DRIVE, SUITE 500
VALHALLA, NEW YORK 10595-1352

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SCALE: N.S. DATE: MAY 18, 2022 DRAWN: MK DESIGNED: MK

REVISIONS

#	DESCRIPTION	DATE	BY

RENOVATION/ UPGRADE OF FIRE STATION 2 (BLDG 1203)
US ARMY GARRISON WEST POINT, NY

DEMOLITION PANEL SCHEDULES

SHEET NUMBER:
ED501

1 ELECTRICAL POWER PLAN - BASEMENT

1/8"=1'-0"

0 4' 8' 16'

SCALE: 1/8" = 1'-0"

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500 SUMMIT LAKE DRIVE, SUITE 500
VALHALLA, NEW YORK 10595-1352

EYP

SCALE: 1/8"=1'0"
DATE: MAY 18, 2022
DRAWN: MK
DESIGNED: MK

P.M.:
CHECKED: SS
SUBMITTED:
APPROVED:

REVISIONS

#	DESCRIPTION	DATE	BY

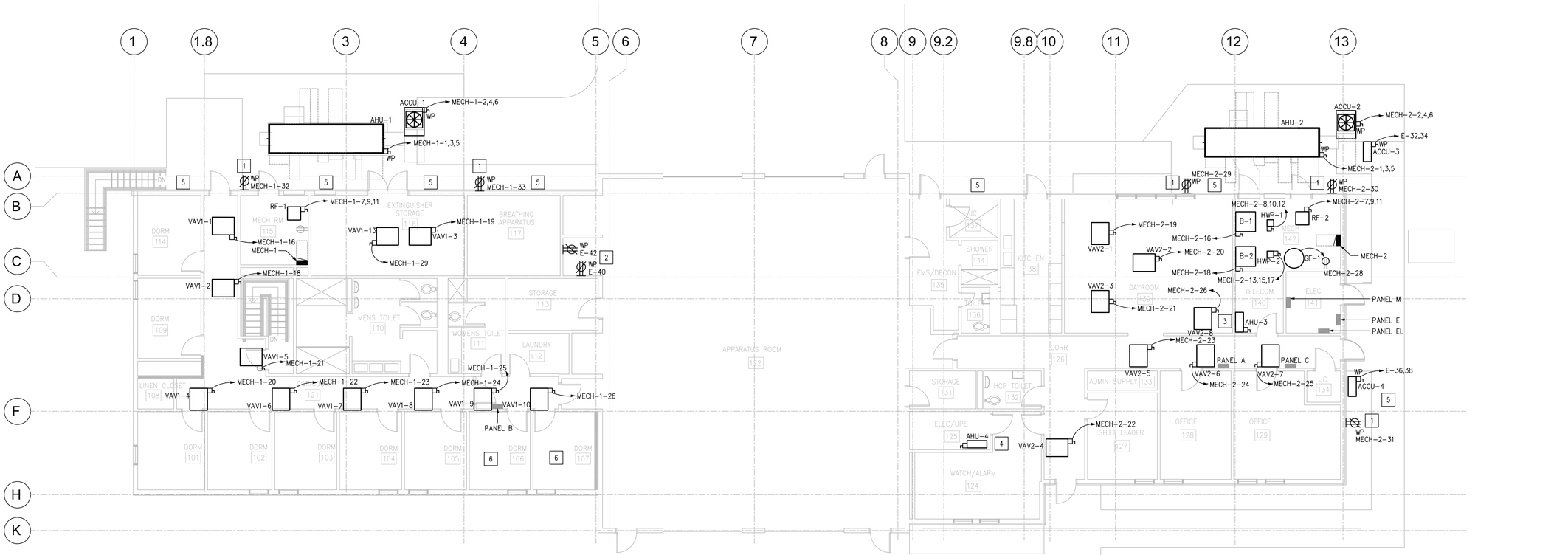
RENOVATION/ UPGRADE OF
FIRE STATION 2 (BLDG 1203)
US ARMY GARRISON WEST POINT, NY

ELECTRICAL POWER PLAN - BASEMENT

SHEET NUMBER:
E200

KEYED NOTES

1. RE-USE EXISTING OUTLET IF ABLE. OTHERWISE, DEMOLISH EXISTING AND PROVIDE NEW AS SHOWN.
2. TEMPORARY LOCATION OF RANGE AND REFRIGERATOR. ELECTRICAL REQUIREMENTS OF RANGE AND REFRIGERATOR HAVE NOT BEEN VERIFIED. VERIFY RANGE AND REFRIGERATOR REQUIREMENTS ON SITE PRIOR TO INSTALLATION OF WIRING, CONDUIT, BACK BOX AND RECEPTACLE.
3. POWER FED FROM ACCU-3.
4. POWER FED FROM ACCU-4.
5. EXISTING WALL MOUNTED EXTERIOR LIGHTS NEAR NEW EQUIPMENT LOCATIONS SHALL BE RAISED AS HIGH AS POSSIBLE. AVOID DISTURBING/DAMAGING FACIA. PROVIDE SPLICE BOX AT EXISTING LOCATION AND SURFACE MOUNTED CONDUIT TO BACK BOX AT NEW LOCATION. COORDINATE EXACT LOCATION IN FIELD.
6. TEMPORARILY CONNECT POWER CIRCUITING FOR DORMS 106 AND 107 TO EMERGENCY GENERATOR PANEL "E" CIRCUITS CURRENTLY SERVING WATCH/ALARM ROOM AND OTHER CRITICAL CIRCUITS FOR THE DURATION OF EAST WING CONSTRUCTION. ENSURE THAT CRUCIAL OPERATIONS ARE MAINTAINABLE THROUGHOUT CONSTRUCTION. COORDINATE WITH FACILITY PRIOR TO ANY WORK BEING DONE.



1 ELECTRICAL POWER PLAN - LEVEL 1
1/8"=1'-0"

SCALE: 1/8" = 1'-0"

DPW Directorate of Public Works
500 SUMMIT LAKE DRIVE, SUITE 500
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RENOVATION/ UPGRADE OF
FIRE STATION 2 (BLDG 1203)
US ARMY GARRISON WEST POINT, NY

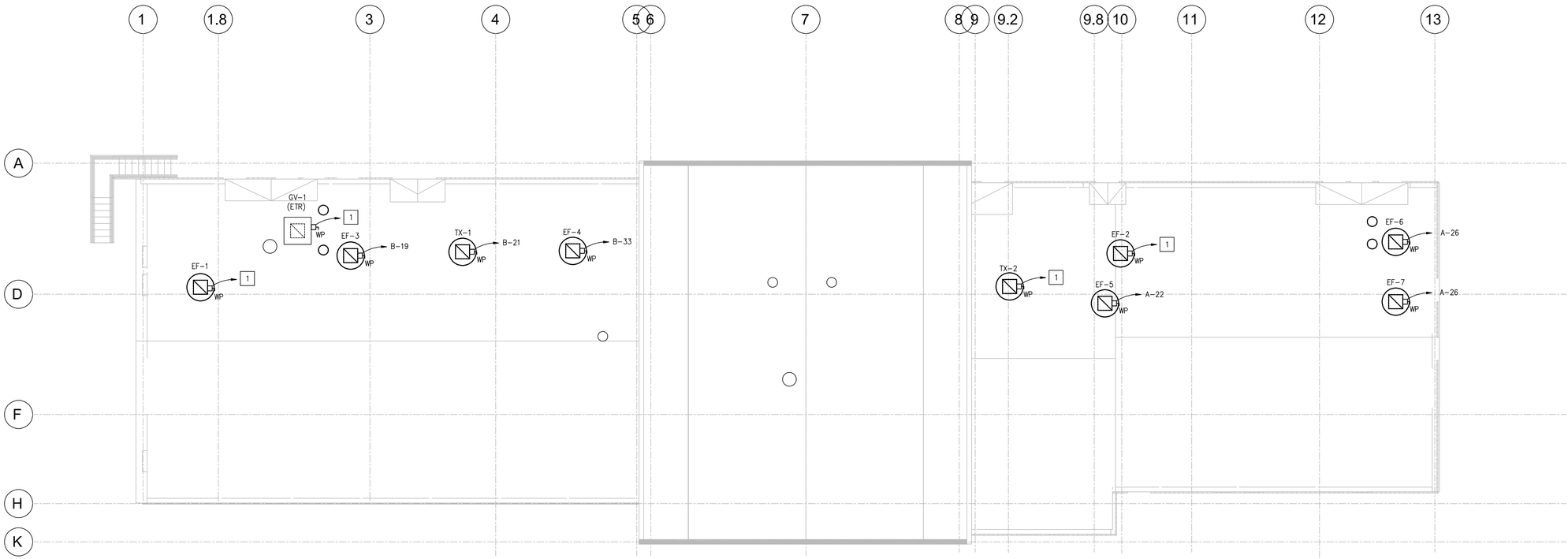
ELECTRICAL POWER PLAN - LEVEL 1

STATE OF NEW YORK
STEVEN SHAPIRO
073725
LICENSED PROFESSIONAL ENGINEER

SHEET NUMBER:
E201

KEYED NOTES

[1] POWER NEW EQUIPMENT FROM CIRCUIT THAT WAS PREVIOUSLY SERVING DEMOLISHED EQUIPMENT IN SAME LOCATION. VERIFY ALL CONDITIONS IN FIELD.



1 ELECTRICAL POWER PLAN - ROOFTOP
1/8"=1'-0"

SCALE: 1/8" = 1'-0"

STATE OF NEW YORK
STEVEN SHAPIRO
073725
LICENSED PROFESSIONAL ENGINEER

DPW Directorate of Public Works
500 SUMMIT LAKE DRIVE, SUITE 500
VALHALLA, NEW YORK 10595-1352
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SUBMITTED:
APPROVED:

SCALE: 1/8"=1'0"
DATE: MAY 18, 2022
DRAWN: MK
DESIGNED: MK

REVISIONS

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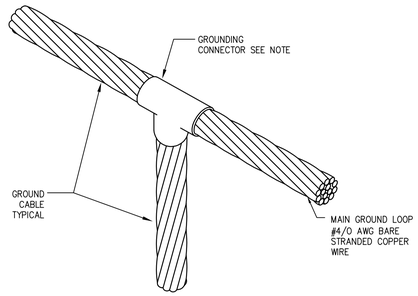
RENOVATION/ UPGRADE OF
FIRE STATION 2 (BLDG 1203)
US ARMY GARRISON WEST POINT, NY

ELECTRICAL POWER PLAN - ROOF TOP

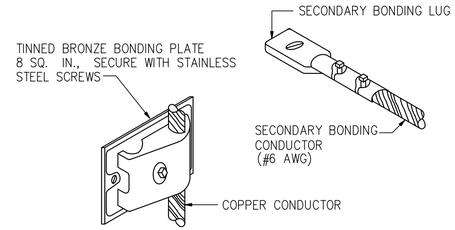
SHEET NUMBER:
E202



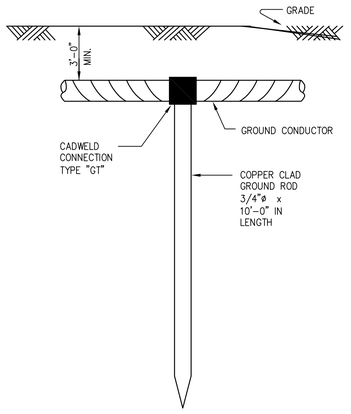
NOTE:

FOR ABOVE GROUND CABLE TAPS USE BURNDY TYPE "NYT" PRESSURE CONNECTOR AND FOR BELOW GROUND CABLE TAPS USE CADWELD TYPE "TA" WELD CONNECTION.

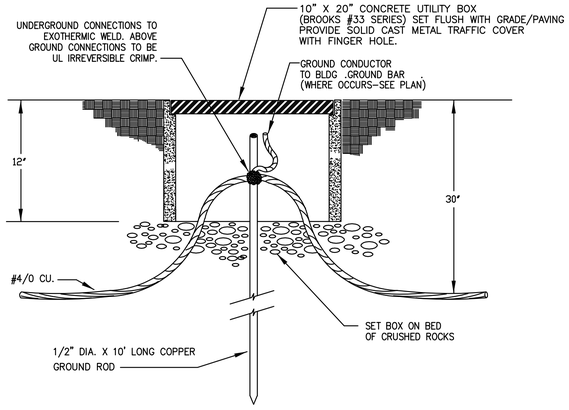
1 GROUND CABLE TAP
NTS



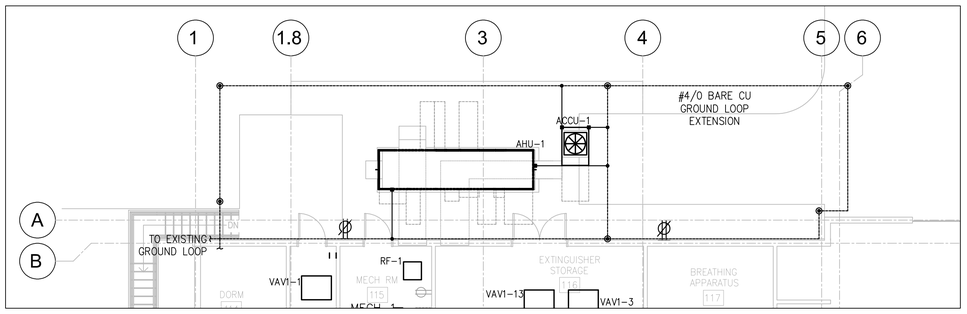
2 TYPICAL BONDING DETAIL
NTS



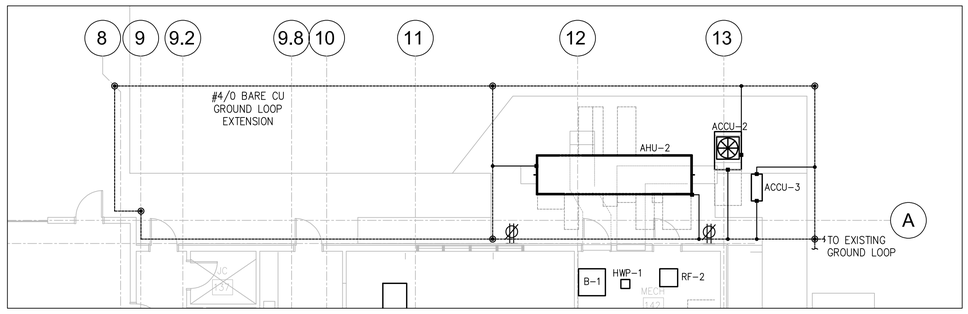
3 GROUND ROD CONNECTION DETAIL
NTS



4 GROUNDING ROD INSPECTION WELL
NTS



5 ELECTRICAL GROUNDING - LEVEL 1 - WEST WING PART PLAN
1/8"=1'-0"



6 ELECTRICAL GROUNDING - LEVEL 1 - EAST WING PART PLAN
1/8"=1'-0"

STATE OF NEW YORK
STEVEN SHAPIRO
073725
LICENSED PROFESSIONAL ENGINEER

0 4' 8' 16'
SCALE: 1/8" = 1'-0"

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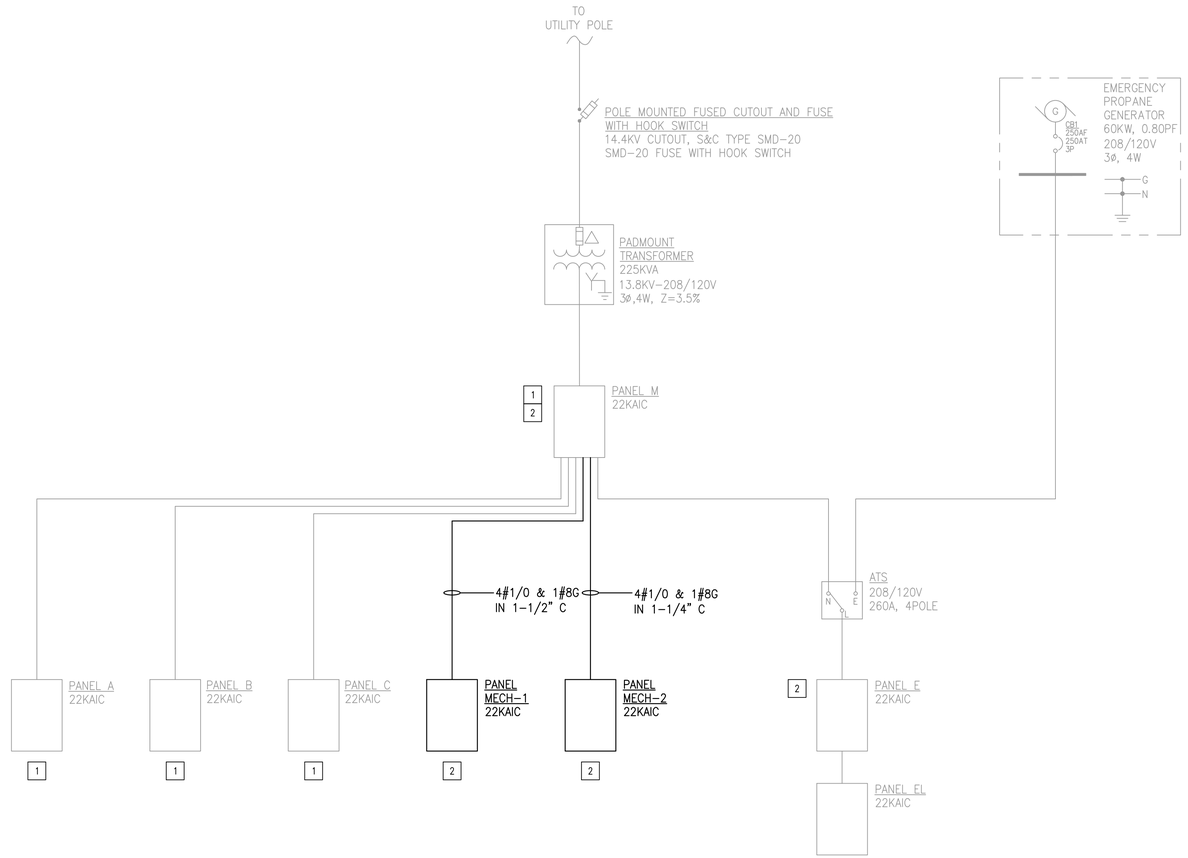
RENOVATION/ UPGRADE OF
FIRE STATION 2 (BLDG 1203)
US ARMY GARRISON WEST POINT, NY

ELECTRICAL GROUNDING PLAN - LEVEL 1

SHEET NUMBER:
E301

KEYED NOTES.

1. REFER TO DEMOLITION PANEL SCHEDULES FOR CIRCUITS TO BE REMOVED AND ADDITIONAL PANEL INFORMATION.
2. REFER TO PANEL SCHEDULES FOR CIRCUITS TO BE ADDED AND ADDITIONAL PANEL INFORMATION.



1 ELECTRICAL SINGLE LINE DIAGRAM
N.T.S.

STATE OF NEW YORK
STEVEN SHAPIRO
073725
LICENSED PROFESSIONAL ENGINEER

DPW Directorate of Public Works
500 SUMMIT LAKE DRIVE, SUITE 500
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DATE: MAY 18, 2022
DRAWN: MK
DESIGNED: MK

REVISIONS

#	DESCRIPTION	DATE	BY

RENOVATION/ UPGRADE OF
FIRE STATION 2 (BLDG 1203)
US ARMY GARRISON WEST POINT, NY

ELECTRICAL SINGLE LINE DIAGRAM
NEW WORK

SHEET NUMBER:
E401

LOCATION:	EAST WING ELECTRICAL ROOM 141			REMARKS: EXISTING PANEL. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CIRCUITS AND UPDATE ALL PANEL SCHEDULES ACCORDINGLY.									PANEL DESIGNATION:
VOLTAGE:	208/120 VOLTS, 3 PHASE, 4 WIRE			MAIN OVERCURRENT PROTECTION:									M
MOUNTING TYPE:	FLUSH			M.L.O.: 600 AMP									
GROUNDING:													
				AIC: 22,000									
SERVICE TO:	A(KVA)	B(KVA)	C(KVA)	WIRE	TRIP	POLE	POLE	TRIP	WIRE	A(KVA)	B(KVA)	C(KVA)	SERVICE TO:
MECH-1	6.090			1	225	1	2	225	1	6.850			MECH-2
		6.140				3	4				7.100		
			5.870			5	6					7.080	
AIR COMPRESSOR C-1 (5 HP)	2.004			E	30	7	8	60	E	5.374			FUTURE AIR COMPR. C2 (44.8A)
		2.004				9	10				5.374		
			2.004			11	12					5.374	
LIFTSTATION (5 HP)	2.004			E	30	13	14	30					SPARE
		2.004				15	16	30					SPARE
			2.004			17	18	30	E			1.000	GENERATOR 2KW
SPARE					20	19	20			1.000			
SPARE					20	21	22	20	E		0.500		GEN. ANTI-CONDENSATION HTR (500W)
SPARE					20	23	24	20					SPARE
PANEL A	6.640			E	125	25	26	225	E	9.140			PANEL E VIA TRANSFER SWITCH
		7.270				27	28				8.950		
			8.200			29	30					8.210	
PANEL B	7.750			E	225	31	32	60	E	3.000			PANEL S VIA LTG. CONTACTOR
		4.490				33	34				1.500		
			4.490			35	36					1.400	
PANEL C	7.750			E	125	37	38	60					SPARE
		4.490				39	40						
			4.490			41	42						
SUBTOTALS	32.238	26.398	27.058	KVA						25.364	23.424	23.064	KVA
TOTAL LOADS:	57.60	KVA PHASE A		276.93	A PHASE A								
	49.82	KVA PHASE B		239.53	A PHASE B								
	50.12	KVA PHASE C		240.97	A PHASE C								
TOTAL CONNECTED LOAD:	157.55	KVA											
VOLTAGE:	208	V		AMPERAGE:	437.628	A							

LOCATION:	WEST WING MECHANICAL ROOM 115			REMARKS:									PANEL DESIGNATION:
VOLTAGE:	208/120 VOLTS, 3 PHASE, 4 WIRE												MECH-1
MOUNTING TYPE:	SURFACE			MAIN OVERCURRENT PROTECTION:									
GROUNDING:	GROUND BUS: YES			M.C.B.: 150 AMP									
				BUS: 225 AMP									
				AIC: 22,000									
SERVICE TO:	A(KVA)	B(KVA)	C(KVA)	WIRE	TRIP	POLE	POLE	TRIP	WIRE	A(KVA)	B(KVA)	C(KVA)	SERVICE TO:
AHU-1	1.433			4#10 CU & 1#10 GND, 3/4" C	25	1	2	30	4#8 CU & 1#10 GND, 1" C	2.402			ACCU-1
		1.433				3	4				2.402		
			1.434			5	6					2.402	
RF-1	0.500			4#12 CU & 1#12 GND, 3/4" C	15	7	8	20	-				SPARE
		0.500				9	10						
			0.500			11	12						
SPARE				-	20	13	14	15	-				SPARE
						15	16	15	2#12 CU & 1#12 G, 1/2"C		0.246		VAV1-1
						17	18	15	2#12 CU & 1#12 G, 1/2"C			0.246	VAV1-2
VAV1-3	0.473			2#12 CU & 1#12 G, 1/2"C	15	19	20	15	2#12 CU & 1#12 G, 1/2"C	0.246			VAV1-4
VAV1-5		0.246		2#12 CU & 1#12 G, 1/2"C	15	21	22	15	2#12 CU & 1#12 G, 1/2"C		0.246		VAV1-6
VAV1-7			0.246	2#12 CU & 1#12 G, 1/2"C	15	23	24	15	2#12 CU & 1#12 G, 1/2"C			0.246	VAV1-8
VAV1-9	0.246			2#12 CU & 1#12 G, 1/2"C	15	25	26	15	2#12 CU & 1#12 G, 1/2"C	0.246			VAV1-10
VAV1-11		0.473		2#12 CU & 1#12 G, 1/2"C	15	27	28	15	2#12 CU & 1#12 G, 1/2"C		0.473		VAV1-12
VAV1-13			0.473	2#12 CU & 1#12 G, 1/2"C	15	29	30	15					SPARE
CUH-1	0.200			2#12 CU & 1#12 G, 1/2"C	15	31	32	20	2#10 CU & 1#10 G, 3/4"C	0.180			HVAC WP RECEPT.
HVAC WP RECEPT.		0.180		2#10 CU & 1#10 G, 3/4"C	20	33	34	20					SPARE
SPARE					20	35	36	20					SPARE
SPARE					20	37	38	20					SPARE
SPACE						39	40						SPACE
SPACE						41	42						SPACE
SUBTOTALS	2.852	2.832	2.653	KVA						3.074	3.367	2.894	KVA
TOTAL LOADS:	5.93	KVA PHASE A		28.49	A PHASE A								
	6.20	KVA PHASE B		29.80	A PHASE B								
	5.55	KVA PHASE C		26.67	A PHASE C								
TOTAL CONNECTED LOAD:	17.67	KVA											
VOLTAGE:	208	V		MINIMUM AMPERAGE:	61.3611	A							

LOCATION:	EAST WING MECHANICAL ROOM 142			REMARKS:									PANEL DESIGNATION:
VOLTAGE:	208/120 VOLTS, 3 PHASE, 4 WIRE												MECH-2
MOUNTING TYPE:	SURFACE			MAIN OVERCURRENT PROTECTION:									
GROUNDING:	GROUND BUS: YES			M.C.B.: 150 AMP									
				BUS: 225 AMP									
				AIC: 22,000									
SERVICE TO:	A(KVA)	B(KVA)	C(KVA)	WIRE	TRIP	POLE	POLE	TRIP	WIRE	A(KVA)	B(KVA)	C(KVA)	SERVICE TO:
AHU-2	1.433			4#10 CU & 1#10 GND, 3/4" C	25	1	2	30	4#8 CU & 1#10 GND, 1" C	2.402			ACCU-2
		1.433				3	4				2.402		
			1.434			5	6					2.402	
RF-2	0.500			4#12 CU & 1#12 GND, 3/4" C	15	7	8	15	4#12 CU & 1#12 GND, 3/4" C	0.500			HWP-1
		0.500				9	10				0.500		
			0.500			11	12					0.500	
HWP-2	0.500			4#12 CU & 1#12 GND, 3/4" C	15	13	14	20	-				SPARE
		0.500				15	16	25	2#10 CU & 1#10 GND, 3/4" C		0.400		B-1
			0.500			17	18	25	2#10 CU & 1#10 GND, 3/4" C			0.400	B-2
VAV2-1	0.246			2#12 CU & 1#12 G, 1/2"C	15	19	20	15	2#12 CU & 1#12 G, 1/2"C	0.473			VAV2-2
VAV2-3		0.473		2#12 CU & 1#12 G, 1/2"C	15	21	22	15	2#12 CU & 1#12 G, 1/2"C		0.473		VAV2-4
VAV2-5			0.246	2#12 CU & 1#12 G, 1/2"C	15	23	24	15	2#12 CU & 1#12 G, 1/2"C			0.473	VAV2-6
VAV2-7	0.473			2#12 CU & 1#12 G, 1/2"C	15	25	26	15	2#12 CU & 1#12 G, 1/2"C	0.246			VAV2-8
SPARE					15	27	28	20	2#10 CU & 1#10 G, 3/4"C		0.180		GF-1 RECEPT.
HVAC WP RECEPT.			0.180	2#10 CU & 1#10 G, 3/4"C	20	29	30	20	2#10 CU & 1#10 G, 3/4"C			0.180	HVAC WP RECEPT.
HVAC WP RECEPT.	0.180			2#10 CU & 1#10 G, 3/4"C	20	31	32	20					SPARE
SPARE					20	33	34	20					SPARE
SPARE					20	35	36	20					SPARE
SPACE						37	38						SPACE
SPACE						39	40						SPACE
SPACE						41	42						SPACE
SUBTOTALS	3.332	2.906	2.860	KVA						3.621	3.955	3.955	KVA
TOTAL LOADS:	6.95	KVA PHASE A		33.43	A PHASE A								
	6.86	KVA PHASE B		32.99	A PHASE B								
	6.82	KVA PHASE C		32.76	A PHASE C								
TOTAL CONNECTED LOAD:	20.63	KVA											
VOLTAGE:	208	V		MINIMUM AMPERAGE:	71.6285	A							

KEYED NOTES.

1 SEE SINGLE LINE DIAGRAM FOR WIRE AND CONDUIT INFORMATION TO NEW PANELS.

VOLTAGE DROP SCHEDULE

TO	FROM	NUMBER OF CONDUCTORS	FINAL AWG	LENGTH, FT	%Vd	LOAD, A
AHU-1	MECH-1	4 #	10 CU	39	0.740	19.0
AHU-2	MECH-2	4 #	10 CU	30	0.569	19.0
ACCU-1	MECH-1	4 #	8 CU	50	0.600	20.0
ACCU-2	MECH-2	4 #	8 CU	30	0.360	20.0
RF-1	MECH-1	4 #	12 CU	19	0.131	4.1
RF-2	MECH-2	4 #	12 CU	16	0.165	6.2
CP-1	MECH-1	2 #	10 CU	0	0.000	20.0
CP-2	MECH-2	2 #	10 CU	0	0.000	20.0
B-1	MECH-1	2 #	10 CU	24	0.959	20.0
B-2	MECH-1	2 #	10 CU	24	0.959	20.0
HWP-1	MECH-2	4 #	12 CU	21	0.073	2.1
HWP-2	MECH-2	4 #	12 CU	21	0.073	2.1
VAV1-1	MECH-1	2 #	12 CU	25.5	0.174	2.1
VAV1-2	MECH-1	2 #	12 CU	25.5	0.174	2.1
VAV1-3	MECH-1	2 #	12 CU	29	0.198	2.1
VAV1-4	MECH-1	2 #	12 CU	45	0.307	2.1
VAV1-5	MECH-1	2 #	12 CU	38	0.260	2.1
VAV1-6	MECH-1	2 #	12 CU	50	0.342	2.1
VAV1-7	MECH-1	2 #	12 CU	61	0.417	2.1
VAV1-8	MECH-1	2 #	12 CU	71	0.485	2.1
VAV1-9	MECH-1	2 #	12 CU	80.5	0.550	2.1
VAV1-10	MECH-1	2 #	12 CU	87	0.594	2.1
VAV1-11	MECH-1	2 #	12 CU	46	0.314	2.1
VAV1-12	MECH-1	2 #	12 CU	47	0.321	2.1
VAV2-1	MECH-2	2 #	12 CU	44	0.301	2.1
VAV2-2	MECH-2	2 #	12 CU	40	0.273	2.1
VAV2-3	MECH-2	2 #	12 CU	53	0.362	2.1
VAV2-4	MECH-2	2 #	12 CU	83	0.567	2.1
VAV2-5	MECH-2	2 #	12 CU	61	0.417	2.1
VAV2-6	MECH-2	2 #	12 CU	70.5	0.482	2.1
VAV2-7	MECH-2	2 #	12 CU	80	0.546	2.1
CUH1-1	MECH-1	2 #	12 CU	31.25	0.173	1.7
CUH1-2	MECH-1	2 #	12 CU	92	0.511	1.7
CUH1-3	MECH-1	2 #	12 CU	45	0.250	1.7
CUH2-1	MECH-2	2 #	12 CU	91.5	0.508	1.7
CUH2-2	MECH-2	2 #	12 CU	82	0.455	1.7
MECH-1	PNL-M	4 #	1/0 CU	185	2.380	71.7
MECH-2	PNL-M	4 #	1/0 CU	25.5	0.420	70.2

LOCATION:	EAST WING ELECTRICAL ROOM 141			REMARKS: EXISTING PANEL. BREAKERS FOR DEMOLITION CIRCUITS SHALL BE LABELED SPARE.									PANEL DESIGNATION:
VOLTAGE:	208/120 VOLTS, 3 PHASE, 4 WIRE												E
MOUNTING TYPE:	SURFACE			MAIN OVERCURRENT PROTECTION: M.C.B.: 225 AMP									
GROUNDING:													
				AIC: 22,000									
SERVICE TO:	A(KVA)	B(KVA)	C(KVA)	WIRE	TRIP	POLE	POLE	TRIP	WIRE	A(KVA)	B(KVA)	C(KVA)	SERVICE TO:
APPARATUS RM LIGHTS	0.750			E	20	1	2	20	E				UNDESIGNATED
APPARATUS RM LIGHTS		0.750		E	20	3	4	20	E				UNDESIGNATED
APPARATUS RM LIGHTS			0.750	E	20	5	6	20	E				UNDESIGNATED
EXTERIOR LIGHTING CONTROL	0.060			E	20	7	8	20	E				UNDESIGNATED
WATCH/ALARM LIGHTS		0.384		E	20	9	10	20	E		0.480		RTH-1 THRU RTH-4
EXIT SIGN LIGHTS			0.100	E	20	11	12	20	E			0.720	APPAR ROOM RECEPT.
RECEPTACLES CORR/DAYROOM	0.360			E	20	13	14	60	E				SPARE
WEF-1 (1/2 HP)		1.127		E	20	15	16						
SPARE				E	20	17	18						
APPARATUS ROOM OVERHEAD DOORS	0.800			E	20	19	20	20	E	0.800			APPARATUS ROOM OVERHEAD DOORS
		0.800		E	20	21	22				0.800		
			0.800	E	20	23	24					0.800	
SPARE				E	20	25	26	20	E	1.127			WEF-2 (1/2 HP)
						27	28	20	E		0.300		GENERATOR BATTERY CHARGER
						29	30	20	E			0.180	RECEPTACLE - CORR
PANEL 'EL'	1.646			E	20	31	32	20	-	1.000			ACCU-3
		1.012				33	34				1.000		
			1.218			35	36	20	-			1.000	ACCU-4
UNDESIGNATED						37	38			1.000			
SPACE						39	40	20	-		1.500		REFRIGERATOR TEMP. RECPT.
SPACE						41	42	20	-			1.840	RANGE TEMP. RECP.
SUBTOTALS	3.616	4.073	2.868	KVA						3.927	4.080	4.540	KVA
TOTAL LOADS:	7.54	KVA PHASE A		36.26	A PHASE A								
	8.15	KVA PHASE B		39.20	A PHASE B								
	7.41	KVA PHASE C		35.62	A PHASE C								
TOTAL CONNECTED LOAD:	23.10	KVA											
VOLTAGE:	208	V		AMPERAGE:	64.1778	A							

DPW Directorate of Public Works
500 SUMMIT LAKE DRIVE, SUITE 500
VALHALLA, NEW YORK 10595-1352
EYP

P.M.:
CHECKED: SS
SUBMITTED:
APPROVED:

REVISIONS

#	DESCRIPTION	DATE	BY

SCALE: N.S.
DATE: MAY 18, 2022
DRAWN: MK
DESIGNED: MK

RENOVATION/ UPGRADE OF FIRE STATION 2 (BLDG 1203)
US ARMY GARRISON WEST POINT, NY

PANEL SCHEDULES

SHEET NUMBER:
E501