STUDIOS
ARCHITECTURE
MASTER PLANNING

410.344.1460
8098 Sandpiper Circle, Suite H
Nottingham, Maryland 21236

ADDENDUM 02

PROJECT:	Exeter Twp ESC	MWS PROJECT NO:	25-049
ADDRESS:	70 Gibraltar Road		
	Reading, PA 19606	ISSUE DATE:	10/15/2026

The following changes shall be incorporated into the work in accordance with all general requirements as if incorporated in the original documents.

GENERAL CHANGES: N/A

CHANGES TO DRAWINGS:

1.) Sheet LP-1 and SPE-1 were added at the end of the General series sheets. This is reflected in the sheet list on G000.

2.) A106: EQ7 comments verbiage adjusted to properly reflect the scope of the contractor's responsibility.

3.) A106: EQ55 clock locations have been updated.

4.) A707: Detail 11 is updated to include Z clips.

5.) A708: Detail 10 is updated to include sink bracing.

6.) M101: Revised view 1, keynote legend.

7.) M103: Revised EF-3.

8.) P101: Revised clean out locations.

9.) P201: Revised keynote 9 on plan and legend.

10.) P401: Trench drain added, revised clean out locations.

11.) P402: Trench drain added to detail 6.

12.) P403: Arch background updated in detail 1.

13.) P601: Revised detail 10.

14.) E000: Revised Symbol Legend.

15.) E301: Revised view 1.

16.) E602: Revised detail 2 and added 3.

17.) E604: Added detail 6.

CHANGES TO SPECIFICATIONS:

1.) Revised Section 00 0010 to list added specification Section 23 0923.

2.) Revised Section 00 0103 to include correct Township contact information.

3.) Revised Section 00 1100 per question 3 below.

4.) Revised Section 00 1930 per question 13 below.

5.) Added Section 23 0923 per question 5 below.

BIDDER QUESTIONS & RESPONSES:

(SEE PREVIOUS ADDENDA FOR PREVIOUS QUESTIONS AND RESPONSES)

3.) QUESTION: Specs vary for hard copies of bid form. one place says 1, another says 2. Please clarify what is required. Can a USB copy be provided after the bid? We usually hand write the bid form in a vehicle because we get numbers up to the last minute.

RESPONSE: Two (2) hard copies must be submitted at time of bid submission. No USB is required. 00 1100 "Instructions to Bidders" has been revised and reissued to reflect the requirement in this Addendum. All Bid Forms will be revised and reissued in future Addendum.

4.) QUESTION: Please confirm that the Owner's vendor will furnish and install all building-mounted exterior signage and electronic monument sign cabinets, while the General Contractor will provide the complete monument sign structure. Please also confirm that the General Contractor will furnish and install interior room identification, ADA, wayfinding, and code-required signage under Sections 10 1423 and 10 1423.16. Please clarify who is responsible for the dimensional lettering shown on the monument sign detail.

RESPONSE: The Owner's vendor will furnish and install all building-mounted exterior signage and electronic monument sign cabinets (see Notes on A200). The General Contractor will furnish and install interior room identification, ADA, wayfinding, and code-required signage under Sections 10 1423 and 10 1423.16 (see G005). The Owner's vendor is responsible for the dimensional lettering shown on the monument sign detail (see A002).

5.) QUESTION: I don't see an ATC spec within the specifications. Please provide ASAP.

RESPONSE: ATC Spec has been added in this addendum.

6.) QUESTION: Please confirm whether Electrical Contractor shall provide temporary construction power distribution throughout the project including temporary panels, receptacles, extension distribution, lighting and maintenance during construction, or if temporary distribution shall be provided by General Contractor. How many job trailers will need connections.

RESPONSE: Please refer to Specification Section 01 5000 Temporary Facilities and Controls for a detailed description of each Prime Contractor's Responsibilities. All Temporary electric is to be provided by the EC. Please refer to the Logistics Plan provided for temporary electrical service requested. There is (2) project job trailers anticipated for the project, please refer to Specification Section 01 5000 for details.

7.) QUESTION: Please confirm whether the Electrical Contractor shall provide their own Excavation costs.

RESPONSE: Please refer to Specification Section 01 1200 Multiple Contract Summary for a detailed description of each Prime Contractor's Responsibilities. Site Contractor will provide excavation for all MEP's outside of the building. Please carefully read this specification section for responsibilities, transfer of responsibilities within the building footprint, and all scope of work.

8.) QUESTION: Is there a list of equipment readily available from the Fire Station Alerting Vendor, Radio Communication vendor, and IT equipment vendor? The notes state for the EC to install the provided equipment.

RESPONSE: There is not a list of equipment readily available. See delineation of scope of work in general project notes on sheet G001 for scoping information. For IT items, the EC is responsible for providing and installing conduit, cable trays, and pathways for Owner provided and installed equipment.

9.) QUESTION: Mounting base detail for the M1 bollard lights?

RESPONSE: Lit bollard mounting detail has been added (see E604).

10.) QUESTION: L1 step light mounting details for in curb?

RESPONSE: Step light mounting detail has been added (see E602).

11.) QUESTION: Who is responsible for Card access cabling? Drawing G001 notes indicate vendor to provide turn key and then on E000 it indicates EC shall F&I.

RESPONSE: Legend has been revised to indicate security vendor to furnish and install low-voltage cabling with E.C. providing pathways and pull strings (see E000).

12.) QUESTION: Can the AISC certification can be waived for this project?

RESPONSE: The AISC Certifications for fabricator and installer may be relaxed at the discretion of the Construction Manager. However, all steel fabrication and erection shall comply with all AISC requirements.

13.) QUESTION: The Maintenance Bond form in the specs is titled "18 Month Maintenance Bond" but in the body of the bond it states its only for a period of twelve months. Also see Article A.4 of Exhibit A A132 states a 15%, 18-month maintenance bond is required. Will a 12-month or 18-month maintenance bond be required and, if an 18-month maintenance bond will be required, will you be revising the maintenance bond form in the specs to reflect so?

RESPONSE: 18-Month Maintenance bond will be required. 00 1930 "Maintenance Bond" has been revised and reissued to reflect the requirement in this Addendum.

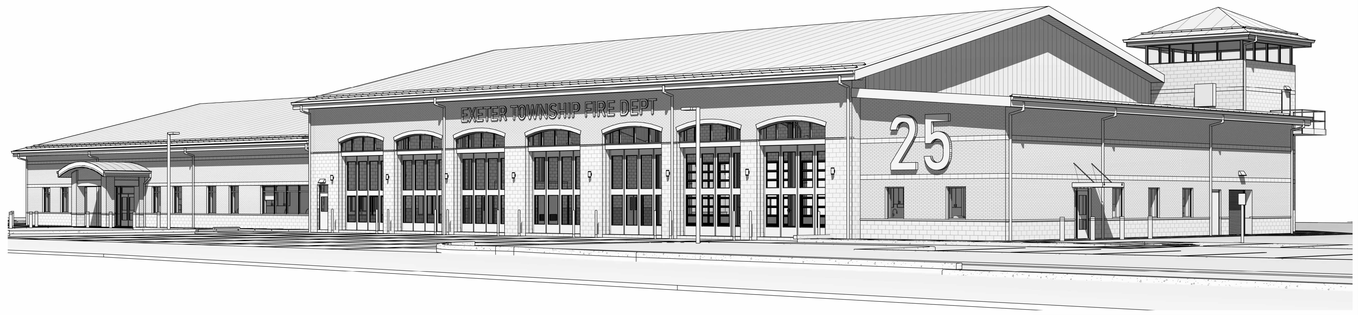
ATTACHMENTS:

1.) General sheets LP-1, SPE-1
2.) Architectural sheets G000, A106, A707, A708
3.) MEP sheets M101, M103, P101, P201, P401, P402, P403, P601, E000, E301, E602, E604.
4.) 00 0010 - Table of Contents
5.) 00 0103 - Project Directory
6.) 00 1100 - Instructions to Bidders
7.) 00 1930 - Maintenance Bond
8.) 23 0923 - Direct Digital Control System for HVAC

END OF ADDENDUM

EXETER TOWNSHIP
EMERGENCY SERVICES FACILITY
70 GIBRALTAR ROAD
READING, PA 19606

BID SET **10/01/2026**



SYMBOLS & TAGS LEGEND

TAG	DESCRIPTION
100A	DOOR TAG
CASEWORK SERIES — NUMBER OF SHELVES — CABINET DEPTH — 30.00 / 24.00 — 84.00 — CABINET WIDTH — CABINET HEIGHT	CASEWORK TAG *AS OUTLINED IN THE ARCHITECTURAL WOODWORK INSTITUTE (AWI) STANDARDS* *MINIMUM CLEAR CABINET DEPTH DIMENSION = DEPTH LESS 1"*
EQ-XX	SPECIALTY EQUIPMENT TAG
1 / A	COLUMN LINE DESIGNATION TAG
REFERENCE 0'-0"	LEVEL ELEVATION TAG
P / T	NORTH ARROW TAG T = TRUE NORTH P = PROJECT NORTH
ROOM 101	ROOM NAME & NUMBER TAG
1 / A101	SECTION TAG
1 / A101	CALLOUT / DETAIL
0'-0"	SPOT ELEVATION TAG
1 — DRAWING TITLE / DRAWING SCALE	DETAIL / DRAWING TITLE TAG
CLG-T2 — TYPE / 1'-0" — HEIGHT	CEILING TAG
92	PARTITION TAG
2	MATERIAL TAG
11	WINDOW TAG
12 / 6 — #"/12"	SLOPE ANNOTATION
1 / A101 — 0 / 0.00 / 0	ELEVATION TAG
9	SPECIFIC NOTE

KEY TO MATERIALS

SECTION PATTERN	DESCRIPTION
	BRICK
	CMU MASONRY
	CONCRETE
	POROUS FILL
	EARTH
	PLYWOOD
	GYPSUM BOARD
	RIGID INSULATION
	BATT INSULATION
	END GRAIN LUMBER
	WOOD BLOCK OR SHIM
	FINISH WOOD

COMMON ABBREVIATIONS

SYMBOLS
& - AND
@ - AT
∅ - DIAMETER
□ - SQUARE

A
AB - ANCHOR BOLT
ABV - ABOVE
ACOUST - ACOUSTICAL
ACT - ACOUSTIC CEILING TILE
AFF - ABOVE FINISH FLOOR
AHJ - AUTHORITY HAVING JURISDICTION
ALUM - ALUMINUM
AP - ACCESS PANEL
APPROX - APPROXIMATELY
ARCH - ARCHITECTURAL

B
B.C. - BOTTOM CHORD
BLK - BLOCK
BLDG - BUILDING
BLKG - BLOCKING
BLKHD - BULKHEAD
BM - BEAM
B.O. - BOTTOM OF
BOD - BASIS OF DESIGN
BOT - BOTTOM
B.R. - BULLET RESISTANT
BRNG - BEARING

C
℄ - CENTER LINE
CFCI - CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
CFOI - CONTRACTOR FURNISHED, OWNER INSTALLED
CFLS - COUNTER FLASHING
CJ - CONTROL JOINT
CL - CLOSET
CLG - CEILING
CMU - CONCRETE MASONRY UNIT
CND - CONDUIT
COL. - COLUMN
COOR - COORDINATE
CONC - CONCRETE
CONSTR - CONSTRUCTION
CONT - CONTINUOUS
C.T. / CT - CERAMIC TILE
CPT - CARPET / CARPET TILE
CTSK - COUNTERSUNK
CU - CUBIC
CU FT - CUBIC FOOT
CU YD - CUBIC YARD

D
D - DEEP / DEPTH
DEG - DEGREE
DIA - DIAMETER
DIM - DIMENSION
DL - DEAD LOAD
DMPR - DAMPER
DN - DOWN
DR - DOOR
DS - DOWNSPOUT
DTL - DETAIL
DWG - DRAWING

E
EA - EACH
EC - ELECTRICAL PRIME CONTRACTOR
EIFS - EXTERIOR INSULATION AND FINISHING SYSTEM
ELEC - ELECTRICAL
EL - ELEVATION
ELEV - ELEVATION
ELMA - ELEVATOR MACHINE ROOM
EJ - EXPANSION JOINT
ENT - ENTRANCE, ENTRY
EQ - EQUAL
EST - ESTIMATE
ETR - EXISTING TO REMAIN
EW - EACH WAY
EXST - EXISTING
EXT - EXTERIOR
EXP - EXPOSED
EXP JT - EXPANSION JOINT

F
F - FAHRENHEIT
FD - FLOOR DRAIN
F.E. - FIRE EXTINGUISHER
F.E.C. - FIRE EXTINGUISHER CABINET
FF - FINISHED FLOOR
FF EL - FINISHED FLOOR ELEVATION
FG - FINISHED GRADE
FHY - FIRE HYDRANT
FDC - FIRE DEPARTMENT CONNECTION
FIN - FINISH
FIN FL - FINISHED FLOOR
FL - FLOOR
FLEX - FLEXIBLE
FLUOR - FLUORESCENT
FND - FOUNDATION
FPM - FEET PER MINUTE
FRT - FIRE RETARDANT TREATED
FSK - FOIL SCRIM KRAFT
FT - FEET, FOOT
FT - FLOOR TRANSITION
FTG - FOOTING

G
GC - GENERAL PRIME CONTRACTOR
GA - GAGE, GAUGE
GALV - GALVANIZED
GL - GLASS, GLAZING
GND - GROUND
GRTG - GRATING
GWB - GYPSUM WALL BOARD

H
H - HIGH / HEIGHT
HC - HANDICAPPED
HD - HEAD
HM - HOLLOW METAL
HORIZ - HORIZONTAL
HR - HOUR
HT - HEIGHT

I
ID - INSIDE DIAMETER
IN - INCH
INFO - INFORMATION
INSUL - INSULATION

J
JB - JUNCTION BOX
JM - JAMB
JST - JOIST
JT - JOINT

L
LG - LONG
LL - LIVE LOAD
LSC - LIFE SAFETY CODE
LTG - LIGHTING

M
MACH - MACHINE
MATL - MATERIAL
MAX - MAXIMUM
MC - MECHANICAL PRIME CONTRACTOR
MBT - MARBLE THRESHOLD
MECH - MECH
MEP - MECHANICAL / ELECTRICAL / PLUMBING
MFGR - MANUFACTURER
MH - MANHOLE
MIN - MINIMUM
MO - MASONRY OPENING
MSNRY - MASONRY
M.T. - METAL THRESHOLD
MTL - METAL
MTD - MOUNTED

N
NA - NOT APPLICABLE
NIC - NOT IN CONTRACT
NO - NUMBER
NTS - NOT TO SCALE

O
O/C - ON CENTER
OD - OUTSIDE DIAMETER
OFCI - OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI - OWNER FURNISHED, OWNER INSTALLED
OPNG - OPENING
OPP - OPPOSITE
OPP HND - OPPOSITE HAND
OV - OVER
OVHD - OVERHEAD

P
P.LAM. - PLASTIC LAMINATE
PC - PLUMBING PRIME CONTRACTOR
PLY - PLYWOOD
PLYWD - PLYWOOD
PNLBD - PANELBOARD
PNT/ PT - PAINT
POLYISO - POLYISOCYANURATE
PRESS - PRESSURE
PROJ - PROJECT
PROP - PROPERTY
PSF - POUNDS PER SQUARE FOOT
PSI - POUNDS PER SQUARE INCH
PT - PRESSURE TREATED
PTD - PAINTED
PVC - POLYVINYL CHLORIDE
PVMT - PAVEMENT
PWT - PREFABRICATED WOOD TRUSS

R
R - RADIUS
RCP - REFLECTED CEILING PLAN
REINF - REINFORCING, REINFORCED
RES - RESINOUS
REQD - REQUIRED
REV - REVISION
RGD - RIGID
RM - ROOM
RO - ROUGH OPENING
RST - REINFORCING STEEL

S
SB - SMART BOARD
SC - SITE PRIME CONTRACTOR
SCHED - SCHEDULE
SD - STORM DRAIN
SECT - SECTION
SF - SQUARE FOOT
SI - SQUARE INCH
SIM - SIMILAR
SLP - SLOPE
SPCL - SPECIAL
SPEC - SPECIFICATIONS
SPLY - SUPPLY
SQ - SQUARE
SS - STAINLESS STEEL
ST - STREET
STD - STANDARD
STL - STEEL
STOR - STORAGE
STRUCT - STRUCTURAL
SURF - SURFACE
SUSP - SUSPENDED
SW - SWITCH
SYS - SYSTEM

T
T & B - TOP AND BOTTOM
T.B. - TACK BOARD
T.B.D. - TO BE DETERMINED
TEMP - TEMPERATURE
THK - THICK
THRES - THRESHOLD
T&G - TONGUE & GROOVE
T0 - TOP OF
TOB - TOP OF BEARING POINT
TOC - TOP OF CONCRETE
TOF - TOP OF FOOTING
TOM - TOP OF MASONRY
TOP - TOP OF PAVEMENT, PARAPET
TOS - TOP OF STEEL
TRTD - TREATED
T.S. - TRANSITION STRIP
TYP - TYPICAL

U
UGND - UNDERGROUND
UL - UNDERWRITERS LAB
UNO - UNLESS NOTED OTHERWISE
UON - UNLESS OTHERWISE NOTED

V
VB - VAPOR BARRIER
VCT - VINYL COMPOSITION TILE
VERT - VERTICAL
VIF - VERIFY IN FIELD
VOL - VOLUME

W
W - WIDE / WIDTH
W/ - WITH
W/0 - WITHOUT
W.B. - WHITEBOARD
WD - WOOD
WR - WATER RESISTANT
WTRPRF - WATERPROOF
WWF - WELDED WIRE FABRIC
WWM - WELDED WIRE MESH

THIS LIST OF ABBREVIATIONS IS A GUIDE TO ABBREVIATIONS WHICH MAY BE USED IN THESE DOCUMENTS. ABBREVIATIONS NOT LISTED MAY ALSO BE USED.

PROJECT TEAM

ARCHITECT
MANNS WOODWARD STUDIOS
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READING, PA 19606
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STRUCTURAL ENGINEER
PROVIDENCE ENGINEERING
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LANCASTER, PA 17603
PHONE: 717-509-7000
WEBSITE: PROVENG.COM

MEP ENGINEER
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315 SOUTH CHAPEL STREET
NEWARK, DELAWARE 19711
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WEBSITE: DEDC-ENG.COM

CIVIL ENGINEER
HERBERT, ROWLAND & GRUBIC
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CONSTRUCTION MANAGER
BOYLE CONSTRUCTION
3850 SIERRA CIRCLE, SUITE 400
CENTER VALLEY, PA 18034
PHONE: 484-223-0726
WEBSITE: BOYLECONSTRUCTION.COM

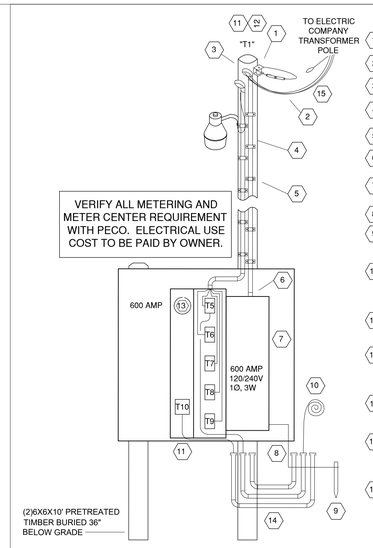
CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS

THE INTENT OF THE CONSTRUCTION DRAWINGS AND THE CONSTRUCTION SPECIFICATIONS/PROJECT MANUAL IS TO INCLUDE ALL ITEMS NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK BY THE CONTRACTOR. THE CONSTRUCTION DRAWINGS AND THE CONSTRUCTION SPECIFICATIONS/PROJECT MANUAL ARE COMPLEMENTARY, AND WHAT IS REQUIRED BY ONE SHALL BE AS BINDING AS IF REQUIRED BY ALL; PERFORMANCE BY THE CONTRACTOR SHALL BE REQUIRED ONLY TO THE EXTENT CONSISTENT WITH THE CONSTRUCTION DRAWINGS AND THE CONSTRUCTION SPECIFICATIONS/PROJECT MANUAL AND REASONABLY INFERABLE FROM THEM AS BEING NECESSARY TO PRODUCE THE INDICATED/INTENDED RESULTS. IN THE CASE OF INCONSISTENCIES BETWEEN THE CONSTRUCTION DRAWINGS AND THE CONSTRUCTION SPECIFICATIONS/PROJECT MANUAL OR WITHIN EITHER DOCUMENT NOT CLARIFIED BY ADDENDUM, THE BETTER QUALITY OR GREATER QUANTITY OF WORK SHALL BE PROVIDED IN ACCORDANCE WITH THE ARCHITECT'S INTERPRETATION.


Exeter Commons
APPROX. PROJECT LOCATION
Exeter Township Municipal Building
Exeter Township Community Park
Exeter Township Public Library
Exeter Township Fire Department
Exeter Township Police Department
Exeter Township Municipal Building (Rear)
Exeter Township Community Park (Rear)
Exeter Township Public Library (Rear)
Exeter Township Fire Department (Rear)
Exeter Township Police Department (Rear)

GENERAL NOTES: (APPLY TO ALL LOGISTIC DRAWINGS)

1. ALL WORK IN ALL PHASES MUST BE COMPLETED AS NOTED.
2. THE INTENT OF THE DRAWING IS TO GENERALLY SHOW AREAS AND SEQUENCES OF WORK, INCLUDING CONTRACTOR OCCUPIED AREAS AND STAGING AREAS. PLEASE REFER TO TRADE SPECIFIC DRAWINGS AND PROJECT SPECIFICATIONS FOR THE FULL SCOPE OF WORK INCLUDING ANY ADDITIONAL TEMPORARY CONDITIONS THAT MAY BE REQUIRED TO COMPLETE THE PROJECT.
3. E&S REQUIREMENTS AND PHASING MUST BE COMPLIED WITH AT ALL TIMES AND COMPLETED IN ACCORDANCE WITH THE APPROVED E&S PLANS. REFER TO THE CIVIL ENGINEERING DRAWINGS FOR SPECIFIC REQUIREMENTS AND PHASING.
4. WHERE FINISH DATES ARE NOTED FOR UTILITY INSTALLATION, THESE DATES INDICATE DEADLINES FOR A FULLY OPERATIONAL SYSTEM NOT SIMPLY A CONNECTED UTILITY.
5. EXISTING AND TEMPORARY UTILITIES MUST REMAIN OPERATIONAL UNTIL SUCH TIME THAT NEW UTILITIES ARE FULLY OPERATIONAL THROUGHOUT THE ENTIRE FACILITY.
6. 48 HOURS NOTICE MUST BE PROVIDED TO ALL PROPERTY OWNERS, ARCHITECTS, CM AND TOWNSHIPS PRIOR TO CONDUCTING ANY OFFSITE UTILITY INSTALLATIONS IN THE SPECIFIED EASEMENTS OR UTILITY SHUT DOWNS.
7. FOR CONSTRUCTION PHASING OF BUILDING REFER TO BUILDING PHASING SCHEDULE ON DRAWING __.
8. ALL UTILITY TRENCHES ARE TO BE SECURED WITH TEMPORARY FENCING OR FILLED AT THE END OF EACH DAYS WORK.
9. SEE CIVIL DRAWINGS FOR SITE WORK REQUIREMENTS AND DETAILS.
10. TEMPORARY TRAILER ELECTRIC REQUIREMENTS AS FOLLOWS:
    - 10.1. ELECTRICAL CONTRACTOR TO PROVIDE UTILITY POLE AND/OR UNDERGROUND SERVICE AS REQUIRED FOR TEMPORARY TRAILER SERVICES.
    - 10.2. ELECTRICAL CONTRACTOR SHALL PROVIDE TEMPORARY ELECTRIC OF NOT LESS THAN 600 AMP 120/208 3 PHASE, 4 WIRE WITH FUSED MAIN SWITCH AND DISTRIBUTION PANEL AT CONVENIENT LOCATION COORDINATED WITH THE TRAILER LAYOUT. ELECTRICAL CONTRACTOR SHALL EXTEND TEMPORARY SERVICE TO ALL TRAILER PANELS AND PROVIDE THE NECESSARY CONDUIT, WIRING AND CONNECTIONS TO EACH TRAILER AND OF THE REQUIRED LOAD CAPACITY.
11. ALL OPEN CEILINGS, WALLS AND UNEVEN FLOOR SURFACES MUST BE SECURED AT THE END OF EACH WORK DAY. LOOSE WIRING, DUCTWORK, PIPING OR STRUCTURES MUST BE SECURED AND ALL OPENINGS BARRICADED OR CLEARLY MARKED.
12. THE ELECTRICAL CONTRACTOR SHALL PROVIDE TEMPORARY LIGHTS AND POLES AS INDICATED ON DRAWINGS AND WR QUAD RECEPTACLES FOR POWER.
13. SITE CONTRACTOR SHALL PRESSURE WASH STORM PIPE AND SANITARY PIPE SYSTEMS PRIOR TO FINAL TIE-IN.
14. TEMPORARY CONSTRUCTION FENCE SHALL BE POST DRIVEN, MIN 24" INTO GROUND AND 72" HEIGHT (ABOVE FINISHED GRADE). FENCE MAY BE REMOVED NO EARLIER THAN WHEN THE BUILDING IS SECURED AND LOCKED WITH FINISHED DOORS, WINDOWS, LOUVERS, ETC.
15. SITE CONTRACTOR SHALL PROVIDE TREE PROTECTION FENCING TO PROTECT EXISTING TREES WITHIN AND ADJACENT TO THE PROJECT AND LIMIT OF DISTURBANCE.
16. SITE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING CONSTRUCTION ENTRANCES THROUGHOUT THE PROJECT.
17. EACH PRIME CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR OWN TRAFFIC CONTROL AT ALL TIMES WHEN CONSTRUCTION VEHICLES ARE ENTERING THE SITE.
18. SITE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ADJACENT PUBLIC ROADS IN A CLEAN AND MANAGEABLE MANNER.
19. REFER TO SPECIFICATION SECTION 00 1810 FOR MILESTONE SCHEDULE.
20. EC IS RESPONSIBLE TO PROVIDE TEMPORARY POWER UTILIZING TEMPORARY CONDUITS. EC HAS THE OPTION TO UTILIZE SECONDARY CONDUIT PATHWAYS FROM TRANSFORMER PAD TO ELECTRICAL ROOM. TEMP ELECTRIC IS TO BE REESTABLISHED FOR CONSTRUCTION USE INSIDE THE BUILDING.



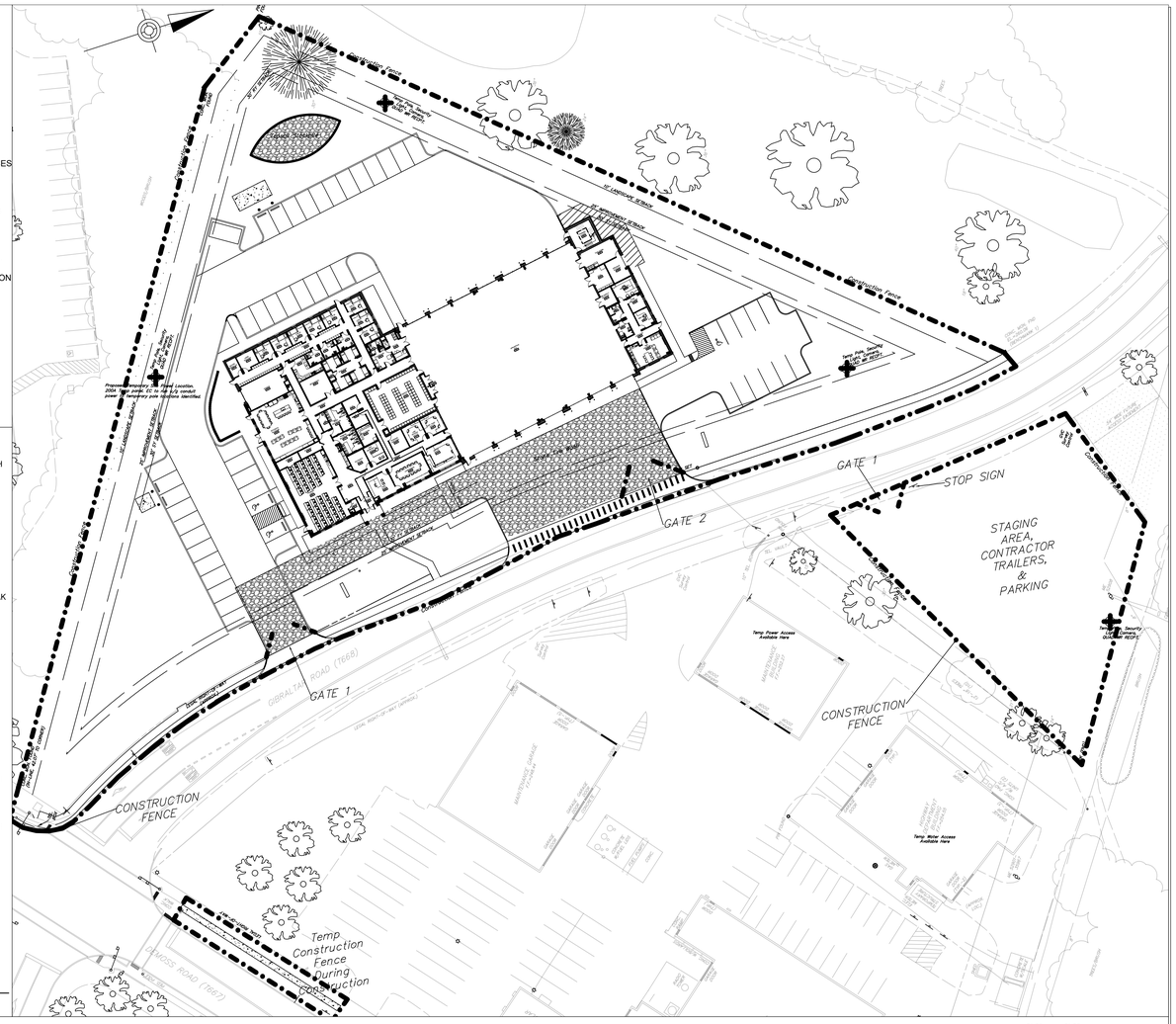
TEMPORARY CONSTRUCTION NOTES
ALL ITEMS BY ELECTRICAL CONTRACTOR

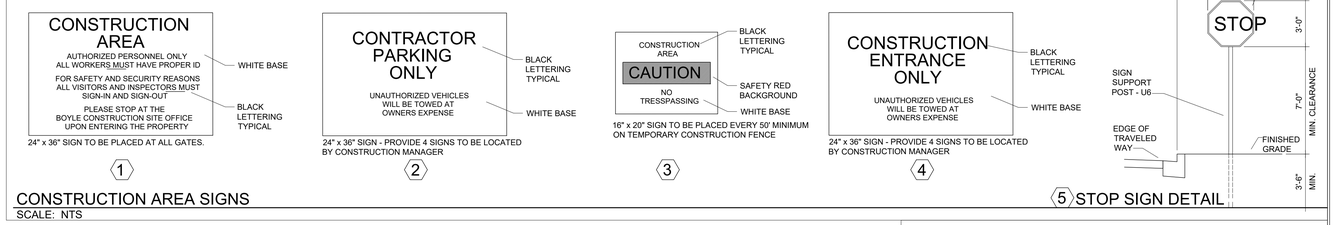
1. SERVICE ATTACHMENT-SPOOL AND CLEVIS WITH THRU BOLT
2. SERVICE TAPS- ALLOW ENDS 3' LONG
3. SERVICE HEAD
4. 800 AMP SERVICE CONDUIT AND WIRE
5. STRAPS- 30" MAXIMUM SPACING, 12" MAX. SERVICE HEAD AND METER SOCKET.
6. WATER TIGHT CONNECTOR
7. 600 AMP, 120/208V, 1Ø, 3W, SQUARE D METER-PAK METER CENTER WITH (4) 200 AMP METER SOCKETS AND CIRCUIT BREAKERS
8. GROUNDING AS PER N.E.C.
9. GROUND ROD
10. PROVIDE 2-1/2" SCH. 40 PVC CONDUIT FOR FEEDER CABLE TO CONTRACTOR'S TRAILER PANEL PROVIDE 150 AMP. FEEDER CABLE TO PRIME CONTRACTORS CONSTRUCTION TRAILERS.
11. REMOVE ALL TEMPORARY SERVICE WIRING AND POLES PRIOR TO XX/XX/XX
12. PROVIDE DUSK TO DAWN LUMINAIRE ON EACH POLE. CONNECT TO 50 AMP, 2 POLE CIRCUIT BREAKER IN GC CONTRACTOR CONSTRUCTION TRAILER.
13. PROVIDE 200 AMP, 120/240 VOLT, 1Ø, 3W ENCLOSED CIRCUIT BREAKER WITH NEMA 3R ENCLOSURE. PROIVDE 200 AMP FEEDER CABLE TO EACH PRIME CONTRACTOR'S TRAILER PANEL
14. PROVIDE 1-1/2" SCH. 40 PVC CONDUIT FOR CONTRACTOR COMMUNICATIONS CABLES.

BY POWER COMPANY

15. SERVICE GRIP, SERVICE DROP CONNECTORS, SERVICE CONNECTORS, METERS

TEMPORARY ELECTRIC DETAIL
SCALE: NTS





CONSTRUCTION AREA SIGNS
SCALE: NTS

5 STOP SIGN DETAIL

SIGN NOTES:

1. SIGNAGE BY G.C.
2. SUBMIT SHOP DRAWINGS OF ALL SIGNAGE FOR APPROVAL PRIOR TO MANUFACTURING.
3. MATERIAL: WHITE PAINTED ALUMINUM OR WHITE PLASTIC WITH VINYL WEATHERPROOF LETTERING.
4. ANY SIGNS WHICH BECOME DAMAGED OR MISSING MUST BE REPLACED BY CONTRACTOR AS NEEDED THROUGH EXTENT OF THE PROJECT.
5. SIGNAGE REQUIREMENTS ARE PROVIDED AS A MINIMUM GUIDELINE. CONTRACTOR MUST COMPLY WITH ALL APPLICABLE LAWS, CODES AND SPECIFICATIONS REGARDING SAFETY AND SITE PROTECTION.
6. ALL SIGNS MUST BE MINIMUM 16"X20" WITH MINIMUM 3" BLACK VINYL LETTERS ON RIGID WHITE VINYL OR PAINTED ALUMINUM SUBSTRATE. IN ADDITION TO QUANTITY SHOWN, PROVIDE 4 EXTRA SIGNS OF EACH TYPE TO BE PLACED AS DETERMINED BY OWNERS REPRESENTATIVE. SUBMIT SHOP DRAWINGS OF ALL SIGNAGE FOR APPROVAL PRIOR TO MANUFACTURING.

Boyle

SEAL:

EXETER TOWNSHIP
EMERGENCY SERVICES FACILITY
70 GIBRALTER ROAD
READING PA 19606

PROJECT NUMBER: 25-049

SUBMISSION:
-

ORIGINAL ISSUE DATE:
08/12/2026

SHEET REVISION SCHEDULE:
No. DATE

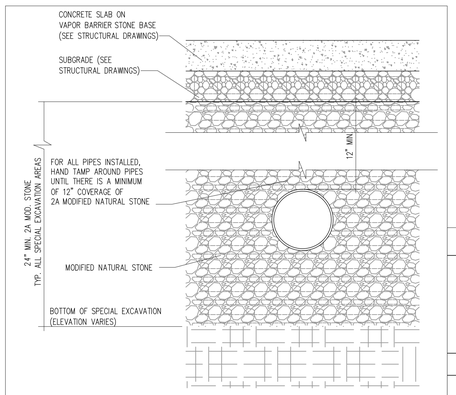
LOGISTICS PLAN

SHEET NUMBER:

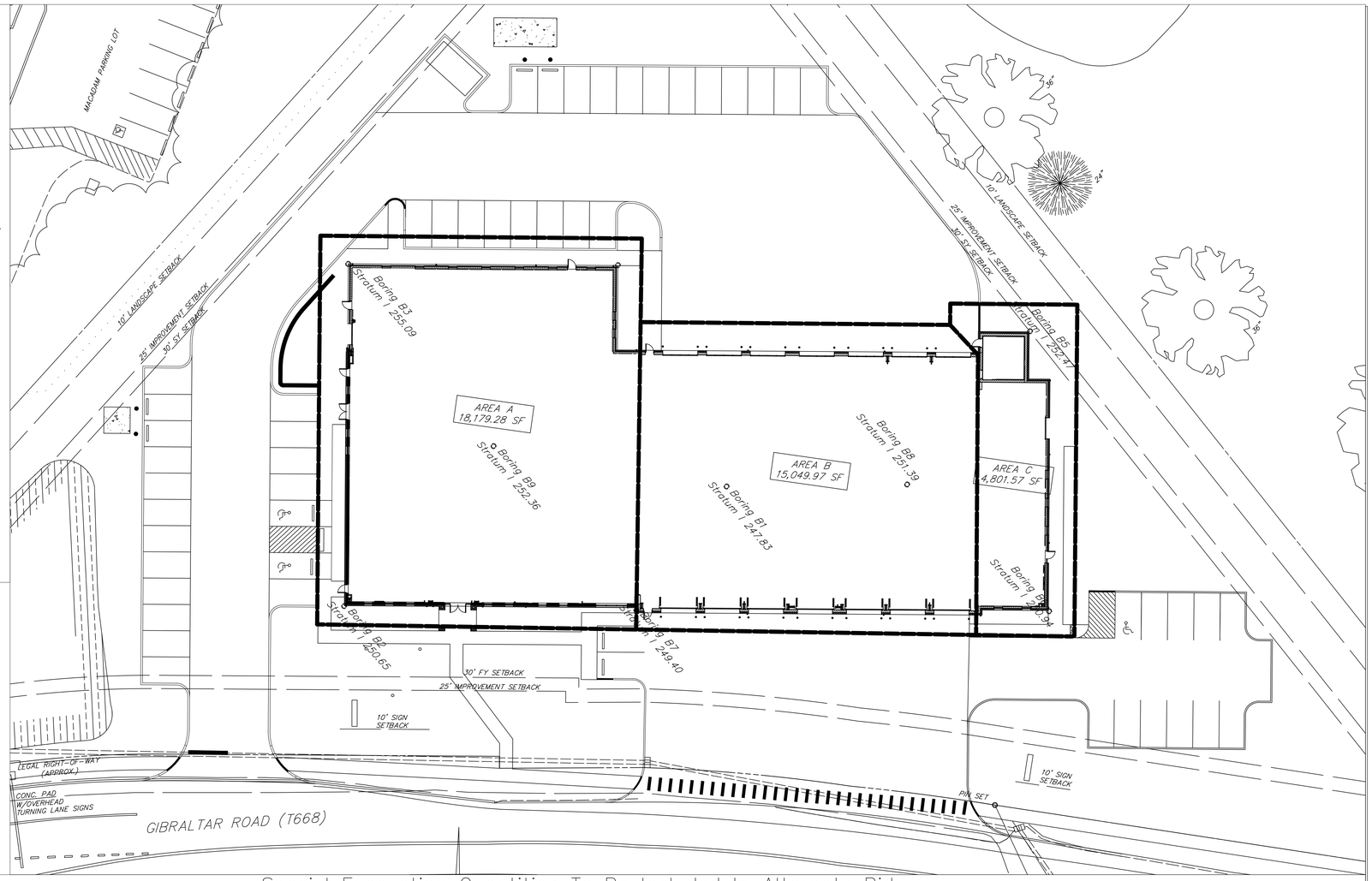
LP-1

NOTES:

1. THIS DRAWING DEFINES THE GENERAL CONTRACTORS SCOPE FOR SPECIAL EXCAVATION REQUIRED WITHIN TEN FEET OF THE BUILDING FOOTPRINT. ALL OTHER SITE AREA CUTS AND FILLS SHALL BE PROVIDED IN COMPLIANCE WITH THE CIVIL AND STRUCTURAL PLANS AND THE PROJECT SPECIFICATIONS. THE SPECIAL EXCAVATION DEPTHS IDENTIFIED ARE FOR THE PURPOSE OF QUANTIFYING THE ALTERNATE BID SCOPE OF REMOVAL OF SOILS AND ROCK AND REPLACEMENT WITH STONE AS IDENTIFIED IN THE EARTHWORK ANALYSIS CHART. THE CONTRACTOR IS ALSO REQUIRED TO EXCAVATE AND BACKFILL FOR SUBSURFACE CONSTRUCTION (UTILITIES, ETC.) TO THE DEPTHS SPECIFIED ON THE BID DOCUMENTS AS PART OF THEIR ALTERNATE BID. PERFORM ALL WORK IN CONJUNCTION WITH THE CIVIL, GRADING AND STRUCTURAL PLANS AND SPECIFICATIONS.
2. ALL QUANTITIES ARE BASED ON IN SITU OR IN PLACE COMPACTED QUANTITIES.
3. THE SITE CONTRACTOR SHALL PERFORM A MINIMUM 20' GRID SURVEY OF THE SPECIAL EXCAVATION SURFACE IN THE PRESENCE OF THE CONSTRUCTION MANAGER (CM) AND GEOTECHNICAL REPRESENTATIVE. THE SITE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE QUANTITY OF MATERIAL THAT IS TO BE REMOVED TO THE ELEVATIONS IDENTIFIED ON THE SPECIAL EXCAVATION PLAN. ONCE THE CONTRACTOR IS AT THE SPECIAL EXCAVATION ELEVATIONS ON THE SPECIAL EXCAVATION PLAN, THE CONTRACTOR SHALL PROOF ROLL THE AREAS TO DETERMINE IF ADDITIONAL REMOVAL IS REQUIRED BY GEOTECHNICAL REPRESENTATIVE OR CM, REMOVE THE SOIL IN TWELVE INCH (12") INTERVALS OF CUT IN THE PRESENCE OF THE GEOTECHNICAL REPRESENTATIVE AND THE CM. CONTRACTOR SHALL PROOF ROLE EACH TWELVE INCH (12") DEPTH CUT LAYER WITH TEN TON ROLLER OR OTHER EQUIPMENT REQUESTED BY CM OR GEOTECHICAL REPRESENTATIVE. FINAL DETERMINATION OF STABILITY AND DEPTH OF SUBGRADE SHALL BE DETERMINED BY THE GEOTECHNICAL REPRESENTATIVE AND THE CM. ONCE THIS DETERMINATION HAS BEEN MADE, THE G.C. SHALL SURVEY THE AREA TO DETERMINE THE FINAL SPECIAL EXCAVATION GRADE ELEVATION IN THE PRESENCE OF THE CM AND GEOTECHNICAL REPRESENTATIVE. THE S.C. SHALL RETAIN THE SERVICES OF A PROFESSIONALLY LICENSED SURVEYOR TO PERFORM ALL SURVEYS.
4. UPON APPROVAL OF SPECIAL EXCAVATION LIMITS, PROOF ROLL SUBGRADE IN PRESENCE OF GEOTECHNICAL REPRESENTATIVE AND CONSTRUCTION MANAGER.
5. ADJUST DEPTHS OF REMOVAL AS DIRECTED BY CONSTRUCTION MANAGER AND GEOTECHNICAL ENGINEER.
6. COMPACT ALL FILL IN COMPLIANCE WITH THE PROJECT SPECIFICATIONS.
7. CONTRACTOR TO PROVIDE BENCHING AND EXCAVATION SUPPORT REQUIRED FOR CONSTRUCTION AND TO PROTECT EXISTING STRUCTURES AND ROAD IMPROVEMENTS.
8. FOR ALL SPECIAL EXCAVATION CUTS GREATER THAN FOUR FEET DEEP, THE CONTRACTOR SHALL SLOPE THE GRADE FROM THE SPECIAL EXCAVATION DEPTH AT A 1:1 RATIO TO REACH THE EXISTING ADJOINING GRADE OR THE ADJACENT AREA OF SPECIAL EXCAVATION.
9. THE INFORMATION ON THIS DRAWING IS AN APPROXIMATION OF EXISTING SUBSURFACE MATERIALS TO BE REMOVED BASED ON THE GEOTECHNICAL REPORT PROVIDED WITH THE CONTRACT DOCUMENTS.
10. ALL TOPSOIL - SHOULD BE MANAGED AS INDICATED ON THE CIVIL DRAWINGS AND SPECIFICATIONS.
11. REUSE OF EXCAVATED MATERIALS MAY BE USED AS IDENTIFIED IN THE GEOTECHNICAL REPORT AND IN COMPLIANCE WITH THE PROJECT SPECIFICATIONS.
12. BACKFILL ALL SPECIAL EXCAVATION AREAS WITH ENGINEERED FILL OR STRUCTURAL FILL AS INDICATED ON DETAIL "A" ON THIS DRAWING AND AS INDICATED IN THE GEOTECHNICAL REPORT.
13. ALL FILL MATERIALS SHALL BE FROM A UNIFORM LOCATION AND MUST BE APPROVED BY ENGINEER AND GEOTECHNICAL REPRESENTATIVE, ALL FILL WILL REQUIRE OPTIMAL MOISTURE CONTENT FOR COMPACTION. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING OPTIMAL MOISTURE CONTENT.
14. S.C. IS RESPONSIBLE FOR DEWATERING AND FREEZE/THAW PROTECTION FOR ALL EXCAVATED AND SITE AREAS DURING EXCAVATION AND THROUGH PLACEMENT OF FILL. DEWATERING ACTIVITIES SHALL CONFORM WITH THE EROSION AND SEDIMENT CONTROL PLANS. S.C. IS RESPONSIBLE TO DEWATER ALL EXCAVATIONS AND MAINTAIN AREAS IN A DRY CONDITION AT ALL TIMES. S.C. TO PROVIDE GRADING AS REQUIRED TO DIRECT WATER AWAY FROM ALL EXCAVATIONS.
15. REFER TO CONTRACT DOCUMENTS FOR DIMENSIONAL INFORMATION ON BUILDING FOOTPRINT, SIZE AND LOCATION.
16. ANY ADJUSTMENTS REQUIRED TO THE ELEVATIONS LISTED ON THE SPECIAL EXCAVATION PLAN WILL BE MADE BY ADD/DEDUCT BASED ON THE UNIT PRICES AND A CHANGE EVENT (ADD OR CREDIT) WILL BE PROCESSED FOR THE FINAL QUANTITIES OF WORK.



SPECIAL EXCAVATION MATERIAL DETAIL 'A'



Special Excavation Quantities To Be Included In Alternate Bid

Special Excavation Area	Boring Number	Area Of Special Excavation (SF)	Finish Floor Elevation (FT)	Subgrade Elevation (FT)	Approximate Existing Grade Elevation (FT)	Top Of Footing Elevation (FT)	Special Excavation Elevation (FT)	Depth Of Special Excavation To Subgrade Elevation (FT)	Volume Of Special Excavation From Top Of Footing To Subgrade Elevation (CY)
A	B2, B3, B4, B7, B9	18,179.28	254.00	253.17	255.00	251.33	251.17	2.00	1,346
B	B1, B8	15,049.97	254.00	252.83	252.00	251.33	250.83	2.00	1,115
C	B5, B6	4,801.57	254.00	253.17	252.00	251.33	251.17	2.00	355
								Total:	2,816

Boyle

SEAL:

EXETER TOWNSHIP
EMERGENCY SERVICES FACILITY
70 GIBRALTER ROAD
READING PA 19606

PROJECT NUMBER: 25-049

SUBMISSION:
-

ORIGINAL ISSUE DATE:
08/12/2026

SHEET REVISION SCHEDULE:
No. DATE

SPECIAL EXCAVATION PLAN

SHEET NUMBER:

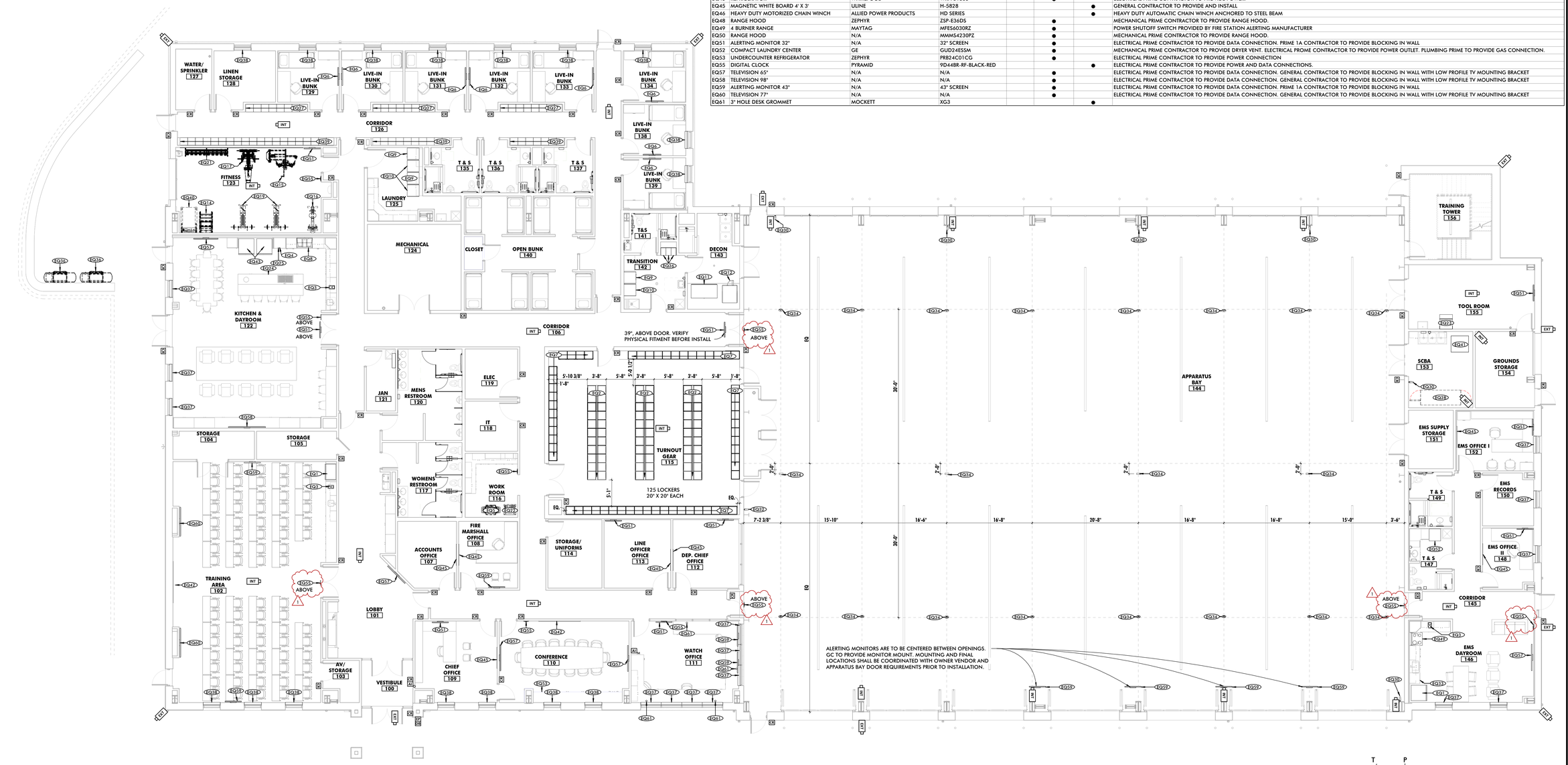
SPE-1

LEGEND - SPECIALTY SYSTEMS

TAG	FIXTURE / ACCESSORY	MANUFACTURER/MODEL
CR	CARD READER LOCATION	
AD	INTERCOM STATION - DOOR LOCATION	SYSTEM SHALL BE PROVIDED AND INSTALLED BY OWNER VENDOR, INCLUDING ALL ASSOCAITED DEVICES AND LOW-VOLTAGE WIRING. EC SHALL PROVIDE CONDUIT/CABLE TRAYS/PATHWAYS ONLY.
AM	INTERCOM STATION - MASTER LOCATION	SYSTEM SHALL BE PROVIDED AND INSTALLED BY OWNER VENDOR, INCLUDING ALL ASSOCAITED DEVICES AND LOW-VOLTAGE WIRING. EC SHALL PROVIDE CONDUIT/CABLE TRAYS/PATHWAYS ONLY.
EP	EMERGENCY PHONE LOCATION	
DB	DOOR BUZZER LOCATION	SYSTEM SHALL BE PROVIDED AND INSTALLED BY OWNER VENDOR, INCLUDING ALL ASSOCAITED DEVICES AND LOW-VOLTAGE WIRING. EC SHALL PROVIDE CONDUIT/CABLE TRAYS/PATHWAYS ONLY.
INT	CAMERA LOCATION - GENERAL INTERIOR	SYSTEM SHALL BE PROVIDED AND INSTALLED BY OWNER VENDOR, INCLUDING ALL ASSOCAITED DEVICES AND LOW-VOLTAGE WIRING. EC SHALL PROVIDE CONDUIT/CABLE TRAYS/PATHWAYS ONLY.
EXT	CAMERA LOCATION - GENERAL EXTERIOR	

SCHEDULE - EQUIPMENT

MARK	DESCRIPTION	BOD MANUFACTURER	BOD MODEL	OWNER FURNISH AND INSTALL	OWNER FURNISH CONTRACTOR INSTALL	CONTRACTOR FURNISH AND INSTALL	COMMENTS
EQ1	REFRIGERATOR	WHIRLPOOL	WRFF3536S		●		ELECTRICAL PRIME CONTRACTOR TO PROVIDE POWER. PLUMBING PRIME CONTRACTOR TO PROVIDE WATER CONNECTION
EQ2	STANDARD LOCKERS - TUBULAR FRAME - 20x20x83	GEAR GRID	STANDARD FIRE STATION FRAME MOUNT LOCKERS		●		ELECTRICAL PRIME CONTRACTOR TO PROVIDE POWER CONNECTION WITH POWER BAR ACCESSORY
EQ3	COFFEE MAKER	T.B.D.	T.B.D.		●		ELECTRICAL PRIME CONTRACTOR TO PROVIDE POWER OUTLETS ABOVE COUNTER.
EQ4	MICROWAVE	SHARP	SMC2266KS		●		ELECTRICAL PRIME CONTRACTOR TO PROVIDE POWER OUTLETS ABOVE COUNTER
EQ5	PRINTER	T.B.D.	T.B.D.	●			ELECTRICAL PRIME CONTRACTOR TO PROVIDE DATA CONNECTION
EQ6	TELEVISION 43"	T.B.D.	T.B.D.		●		ELECTRICAL PRIME CONTRACTOR TO PROVIDE DATA CONNECTION. GENERAL CONTRACTOR TO PROVIDE BLOCKING IN WALL WITH LOW PROFILE TV MOUNTING BRACKET
EQ7	WALL MOUNTED 20X20X74 1/2 TURNOUT GEAR LOCKERS	GEAR GRID	WALL MOUNTED STORAGE SYSTEM		●		ELECTRICAL PRIME CONTRACTOR TO PROVIDE POWER TO OWNER PROVIDED POWER BAR ACCESSORY 1
EQ8	6 BURNER GAS RANGE	BLUE STAR	RNB366BV2		●		GAS SHUTOFF SWITCH PROVIDED BY FIRE STATION ALERTING MANUFACTURER
EQ9	CLOTHES DRYER	GE	GFD65GSSVWW		●		MECHANICAL PRIME CONTRACTOR TO PROVIDE DRYER VENT. ELECTRICAL PROME CONTRACTOR TO PROVIDE POWER OUTLET. PLUMBING PRIME CONTRACTOR TO PROVIDE GAS CONNECTION.
EQ10	CLOTHES WASHER	GE	GFW655SSVWW		●		PLUMBING PRIME CONTRACTOR TO PROVIDE WATER CONNECTION
EQ11	PPE DRYING CABINET	CIRCUL-AIR-CORP	PPE EXPRESS 6		●		MECHANICAL PRIME CONTRACTOR TO PROVIDE DRYER VENT. ELECTRICAL PROME CONTRACTOR TO PROVIDE POWER OUTLET. PLUMBING PRIME CONTRACTOR TO PROVIDE GAS CONNECTION.
EQ12	WASHER EXTRACTOR	CIRCUL-AIR-CORP	CACMWHD-55		●		PLUMBING PRIME CONTRACTOR TO PROVIDE WATER CONNECTION
EQ14	CLIMBMILL	N/A	N/A	●			ELECTRICAL PRIME CONTRACTOR TO PROVIDE POWER OUTLET
EQ15	MULTI-PRESS	N/A	N/A	●			
EQ16	EXERCISE BIKE	N/A	N/A	●			ELECTRICAL PRIME CONTRACTOR TO PROVIDE POWER OUTLET
EQ17	LAT PULLDOWN/ LOW ROW	N/A	N/A	●			
EQ19	MULTI-ADJUST BENCHES	N/A	N/A	●			
EQ21	DUMBBELL RACK	N/A	N/A	●			
EQ22	OFFICE PAPER SHREDDER	N/A	N/A	●			ELECTRICAL PRIME CONTRACTOR TO PROVIDE POWER CONNECTION
EQ23	ICE MAKER	TRUE	TCIM-422		●		ELECTRICAL PRIME CONTRACTOR TO PROVIDE POWER. PLUMBING PRIME CONTRACTOR TO PROVIDE WATER CONNECTION
EQ24	DISHWASHER	MIELE	G 5056 SCVi		●		ELECTRICAL PRIME CONTRACTOR TO PROVIDE POWER. PLUMBING PRIME CONTRACTOR TO PROVIDE WATER CONNECTION
EQ25	UNDER-COUNTER ICE MAKER	WHIRLPOOL	P6WG2KL		●		ELECTRICAL PRIME CONTRACTOR TO PROVIDE POWER. PLUMBING PRIME CONTRACTOR TO PROVIDE WATER CONNECTION
EQ26	12"X12"X78" SIX-TIER PLASTIC LOCKERS	ASI STORAGE SOLUTIONS INC.	TRADITIONAL PLUS SERIES			●	RECESSED IN WALL 8" A.F.F., LATCHES TO RECEIVE OWNER PROVIDED LOCKS. GENERAL CONTRACTOR TO INSTALL/PROVIDE. LOCKERS TO BE THE ASI BURGUNDY FINISH
EQ27	18X18X72 SINGLE-TIER PLASTIC LOCKERS	ASI STORAGE SOLUTIONS INC.	TRADITIONAL PLUS SERIES			●	ELECTRICAL PRIME CONTRACTOR TO PROVIDE LED LIGHTING AT UNDERSIDE OF TOE KICK. LIGHTING TO BE TIED INTO FIRE STATION ALERTING SYSTEM. LOCKERS TO BE THE ASI BURGUNDY FINISH
EQ28	SCBA COMPRESSOR	STALLION AIR INC	CENTAUR 3 G2	●			ELECTRICAL PRIME CONTRACTOR TO PROVIDE POWER CONNECTION AND WALL MOUNT DISCONNECT SWITCH
EQ30	AIR HOSE PORT	HUBBELL WIRING DEVICE-KELLEMS	HBLHR3870			●	
EQ32	WATER HOSE REEL	HUBBELL WIRING DEVICE-KELLEMS	D83075OOLP			●	AT COLUMN LOCATIONS, MOUNT BOTTOM OF UNIT AT 7' A.F.F.
EQ33	DISHWASHER	FRIGIDAIRE	FFBD2420US		●		ELECTRICAL PRIME CONTRACTOR TO PROVIDE POWER. PLUMBING PRIME CONTRACTOR TO PROVIDE WATER CONNECTION
EQ34	ELECTRICAL CORD REEL	HUBBELL WIRING DEVICE-KELLEMS	HBLC25163C			●	
EQ35	VERTICAL COMPRESSOR - 60GAL	INGERSOLL RAND	2340L5			●	
EQ36	GAS GRILL	N/A	N/A	●			PLUMBING PRIME CONTRACTOR TO PROVIDE GAS CONNECTION. ELECTRICAL PRIME CONTRACTOR TO PROVIDE POWER CONNECTION. GAS SHUTOFF SWITCH PROVIDED BY FIRE STATION ALERTING MANUFACTURER
EQ37	MANUAL ROLLER SHADE	MECHO SHADE	MECHO/ 5X ECOVEIL SHEER 6855 CLAY			●	1% LIGHT FILTERING
EQ38	MANUAL DUAL ROLLER SHADE	MECHO SHADE	MECHO/ 5X ECHOVEIL SHEER 6855 CLAY AND CHELSEA 0262 SLATE			●	1% LIGHT FILTERING AND BLACKOUT, MOUNTING BRACKET #10
EQ39	18X18X72 (2) TIER PLASTIC LOCKERS	ASI STORAGE SOLUTIONS INC.	TRADITIONAL PLUS SERIES			●	ELECTRICAL PRIME CONTRACTOR TO PROVIDE LED LIGHTING AT UNDERSIDE OF TOE KICK. LIGHTING TO BE TIED INTO FIRE STATION ALERTING SYSTEM. LOCKERS TO BE THE ASI BURGUNDY FINISH
EQ40	TREADMILL			●			ELECTRICAL PRIME CONTRACTOR TO PROVIDE POWER OUTLET
EQ41	SCBA WASHER	CIRCUL-AIR-CORP	SCBA WASHER ROTO DECON		●		ELECTRICAL PRIME CONTRACTOR TO PROVIDE POWER. PLUMBING PRIME CONTRACTOR TO PROVIDE WATER CONNECTION
EQ42	MAGNETIC WHITE BOARD 8' X 4'	ULINE	H-5830			●	GENERAL CONTRACTOR TO PROVIDE AND INSTALL
EQ43	REFRIGERATOR	WHIRLPOOL	WRFF3136S		●		ELECTRICAL PRIME CONTRACTOR TO PROVIDE POWER.
EQ45	MAGNETIC WHITE BOARD 4' X 3'	ULINE	H-5828			●	GENERAL CONTRACTOR TO PROVIDE AND INSTALL
EQ46	HEAVY DUTY MOTORIZED CHAIN WINCH	ALLIED POWER PRODUCTS	HD SERIES			●	HEAVY DUTY AUTOMATIC CHAIN WINCH ANCHORED TO STEEL BEAM
EQ48	RANGE HOOD	ZEPHYR	ZSP-E36DS		●		MECHANICAL PRIME CONTRACTOR TO PROVIDE RANGE HOOD.
EQ49	4 BURNER RANGE	MAYTAG	MFES6030RZ		●		POWER SHUTOFF SWITCH PROVIDED BY FIRE STATION ALERTING MANUFACTURER
EQ50	RANGE HOOD	N/A	MMMS4230PZ		●		MECHANICAL PRIME CONTRACTOR TO PROVIDE RANGE HOOD.
EQ51	ALERTING MONITOR 32"	N/A	32" SCREEN		●		ELECTRICAL PRIME CONTRACTOR TO PROVIDE DATA CONNECTION. PRIME 1A CONTRACTOR TO PROVIDE BLOCKING IN WALL
EQ52	COMPACT LAUNDRY CENTER	GE	GUD24ESSM		●		MECHANICAL PRIME CONTRACTOR TO PROVIDE DRYER VENT. ELECTRICAL PROME CONTRACTOR TO PROVIDE POWER OUTLET. PLUMBING PRIME TO PROVIDE GAS CONNECTION.
EQ53	UNDERCOUNTER REFRIGERATOR	ZEPHYR	PRB24C01CG		●		ELECTRICAL PRIME CONTRACTOR TO PROVIDE POWER CONNECTION
EQ55	DIGITAL CLOCK	PYRAMID	9D448R-RF-BLACK-RED			●	ELECTRICAL PRIME CONTRACTOR TO PROVIDE POWER AND DATA CONNECTIONS.
EQ57	TELEVISION 65"	N/A	N/A		●		ELECTRICAL PRIME CONTRACTOR TO PROVIDE DATA CONNECTION. GENERAL CONTRACTOR TO PROVIDE BLOCKING IN WALL WITH LOW PROFILE TV MOUNTING BRACKET
EQ58	TELEVISION 98"	N/A	N/A		●		ELECTRICAL PRIME CONTRACTOR TO PROVIDE DATA CONNECTION. GENERAL CONTRACTOR TO PROVIDE BLOCKING IN WALL WITH LOW PROFILE TV MOUNTING BRACKET
EQ59	ALERTING MONITOR 43"	N/A	43" SCREEN		●		ELECTRICAL PRIME CONTRACTOR TO PROVIDE DATA CONNECTION. PRIME 1A CONTRACTOR TO PROVIDE BLOCKING IN WALL
EQ60	TELEVISION 77"	N/A	N/A		●		ELECTRICAL PRIME CONTRACTOR TO PROVIDE DATA CONNECTION. GENERAL CONTRACTOR TO PROVIDE BLOCKING IN WALL WITH LOW PROFILE TV MOUNTING BRACKET
EQ61	3" HOLE DESK GROMMET	MOCKETT	XG3			●	



1 **EQUIPMENT PLAN**
1/8" = 1'-0"

MW STUDIOS
ARCHITECTURE + MASTER PLANNING
8098 SANDPIPER CIR, SUITE H
NOTTINGHAM, MD 21236
410-344-1460
INFO@MWSARCH.COM
WWW.MWSARCH.COM

SEAL:

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ARCHITECT UNDER THE LAWS OF THE STATE OF PENNSYLVANIA.

LICENSE NUMBER: #RA405311
EXPIRATION DATE: 6-30-2027

EXETER TOWNSHIP
EMERGENCY SERVICES FACILITY
70 GIBRALTAR ROAD
READING, PA 19606

PROJECT NUMBER: 25-049

SUBMISSION:
BID SET

ORIGINAL ISSUE DATE:
10/01/2026

SHEET REVISION SCHEDULE:

No.	DATE
1	2026-10-15

LAST PROJECT REVISION: No 1 | 2026-10-15

EQUIPMENT PLAN

SHEET NUMBER:

A106

10/15/2026 11:10:07 AM

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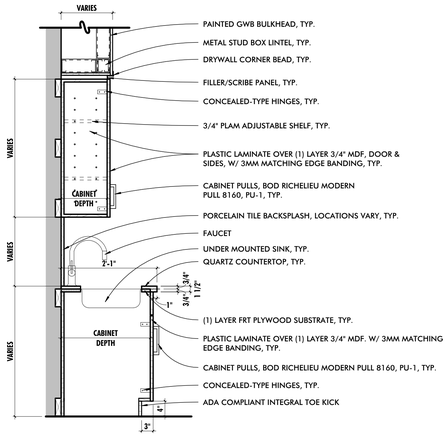
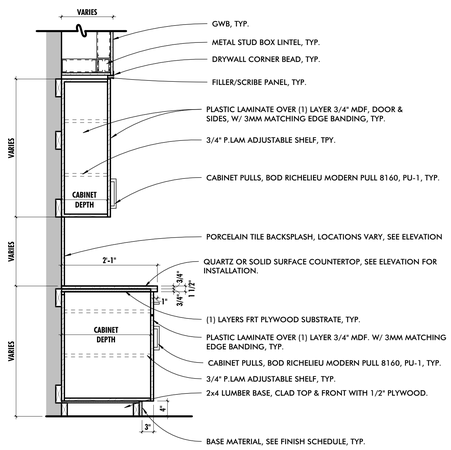
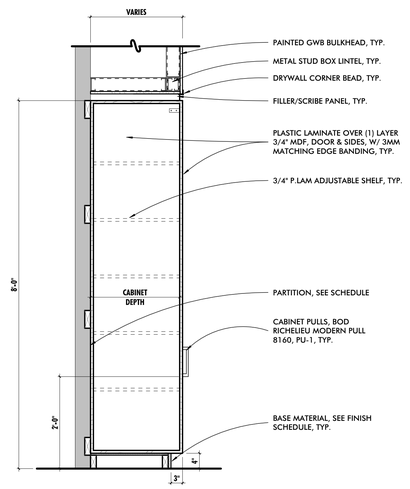


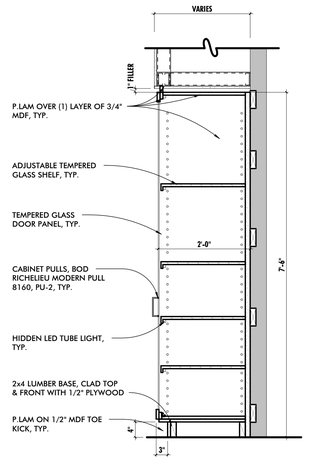
1 TYPICAL CASEWORK @ SINK
3/4" = 1'-0"



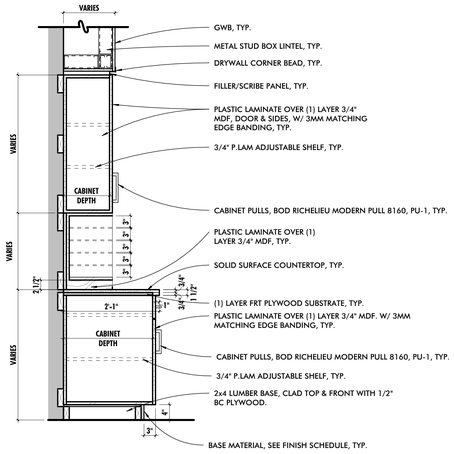
2 TYPICAL CASEWORK SECTION
3/4" = 1'-0"



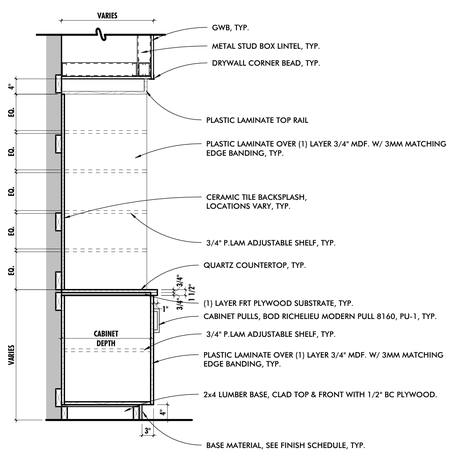
3 TYPICAL PANTRY SECTION
3/4" = 1'-0"



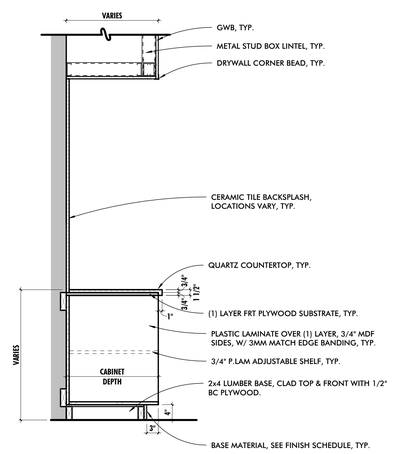
4 DISPLAY CASE SECTION DETAIL
3/4" = 1'-0"



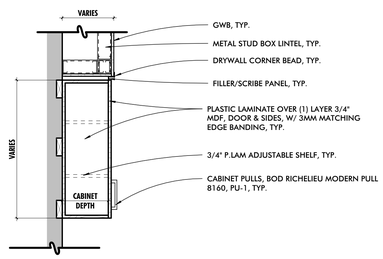
5 CUBBIES CASEWORK SECTION
3/4" = 1'-0"



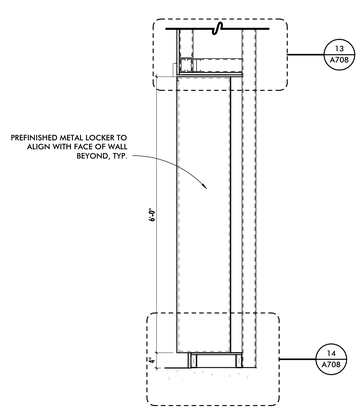
6 TYPICAL CABINET W/ OPEN SHELVING
3/4" = 1'-0"



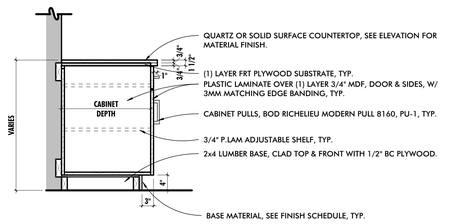
7 TYPICAL BASE BOOKCASE
3/4" = 1'-0"



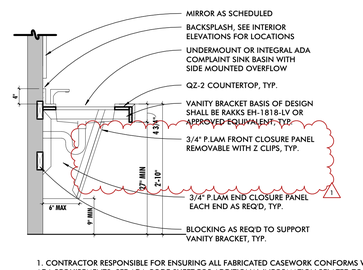
8 TYPICAL UPPER CABINET
3/4" = 1'-0"



9 TYPICAL LOCKER DETAIL - CONCRETE BASE
3/4" = 1'-0"



10 TYPICAL BASE CABINET
3/4" = 1'-0"

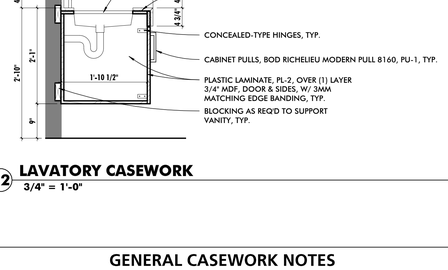


11 TYPICAL LAVATORY DETAIL
3/4" = 1'-0"

1. CONTRACTOR RESPONSIBLE FOR ENSURING ALL FABRICATED CASEWORK CONFORMS WITH ADA REQUIREMENTS. SEE ADA CODE SHEET FOR ADDITIONAL INFORMATION RELATED TO CLEARANCE REQUIREMENTS.

2. SEE INTERIOR ELEVATIONS FOR WALL FINISHES AND BACKSPLASH REQUIREMENTS.

3. ALL COUNTERS SHALL BE SEAMLESS UNLESS NOTED OTHERWISE.



12 LAVATORY CASEWORK
3/4" = 1'-0"

GENERAL CASEWORK NOTES

1	CONTRACTOR SHALL BE REQUIRED TO COORDINATE FINAL CASEWORK SHOP DRAWINGS AND INSTALLATION WITH ALL EQUIPMENT, INCLUDING EQUIPMENT PROVIDED BY OWNER. COORDINATION EFFORTS SHALL INCLUDE BUT ARE NOT LIMITED TO ENSURING PROPER CLEARANCES ARE PROVIDED FOR BOTH INSTALLATION AND OPERATION. EQUIPMENT SHALL BE AS TIGHT TO CASEWORK AS POSSIBLE AS PERMITTED BY EQUIPMENT REQUIREMENTS. PRIOR TO INSTALLATION OF CASEWORK EQUIPMENT CUT SHEETS & INSTALLATION INSTRUCTIONS SHALL BE POSTED WITH IN THE ROOM WHERE WORK IS BEING PERFORMED. CONTRACTOR SHALL VERIFY FINAL REVIEWED SHOP DRAWINGS CONFORM TO EQUIPMENT AND CLEARANCE REQUIREMENTS OF ACTUAL PURCHASED EQUIPMENT AS EQUIPMENT TYPES AND MODELS ARE SUBJECT TO FACTORY BASED CHANGES FROM THE TIME OF DESIGN TO THE TIME OF PURCHASE INSTALL.
2	CONTRACTOR SHALL REFER TO ARCHITECTURAL WOODWORK STANDARDS 2014, CABINET DESIGN SERIES (CDS) FOR FURTHER INFORMATION ABOUT CASEWORK
3	ALL BASE PROVIDED CASEWORK SHALL RECEIVE 7 1/2" CABINET PULL INSTALLED BOTH VERTICALLY AND HORIZONTALLY. CONTRACTOR PROVIDED UPPER CASEWORK LESS THAN 36" IN HEIGHT SHALL RECEIVE 7 1/2" CABINET PULL INSTALLED VERTICALLY. CONTRACTOR PROVIDED UPPER CASEWORK 36" IN HEIGHT OR GREATER SHALL RECEIVE 14 7 /16" CABINET PULL INSTALLED VERTICALLY.

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LICENSE NUMBER: #RA405311
EXPIRATION DATE: 6-30-2027

EXETER TOWNSHIP
EMERGENCY SERVICES FACILITY
70 GIBRALTAR ROAD
READING, PA 19606

PROJECT NUMBER: 25-049

SUBMISSION:
BID SET

ORIGINAL ISSUE DATE:
10/01/2026

SHEET REVISION SCHEDULE:

No.	DATE
1	2026-10-15

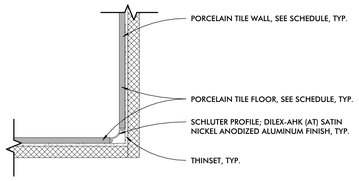
LAST PROJECT REVISION: No 1 | 2026-10-15

TYPICAL INTERIOR DETAILS

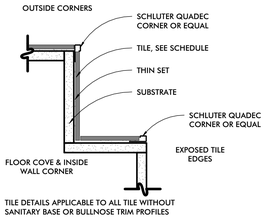
SHEET NUMBER:

A707

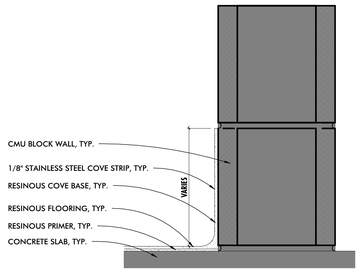
10/15/2026 11:10:09 AM



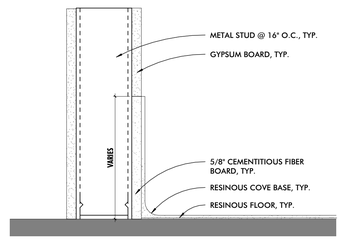
1 PORCELAIN TILE FLOOR @ PORCELAIN TILE WALL
3" = 1'-0"



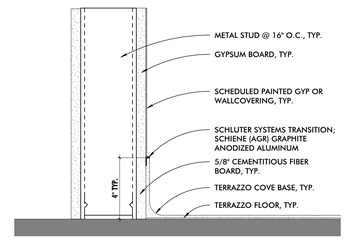
2 TYPICAL TILE EDGE DETAILS
3" = 1'-0"



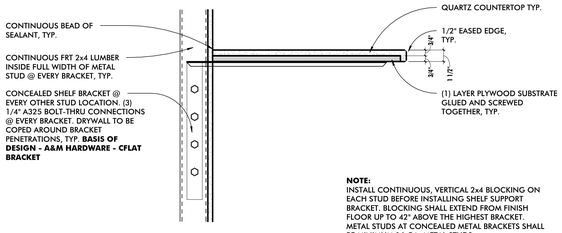
3 RESINOUS/ TERRAZZO COVE BASE @ MASONRY
3" = 1'-0"



4 RESINOUS/ TERRAZZO COVE BASE @ GYPSUM
3" = 1'-0"

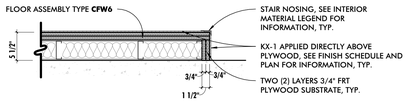


5 TERRAZZO COVE BASE @ WALLCOVERING
3" = 1'-0"

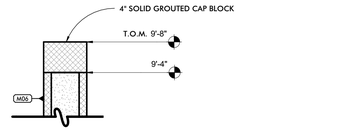


NOTE:
INSTALL CONTINUOUS, VERTICAL 2x4 BLOCKING ON EACH STUD BEFORE INSTALLING SHELF SUPPORT BRACKET. BLOCKING SHALL EXTEND FROM FINISH FLOOR UP TO 42" ABOVE THE HIGHEST BRACKET. METAL STUDS AT CONCEALED METAL BRACKETS SHALL BE MINIMUM 16 GA. METAL STUDS.

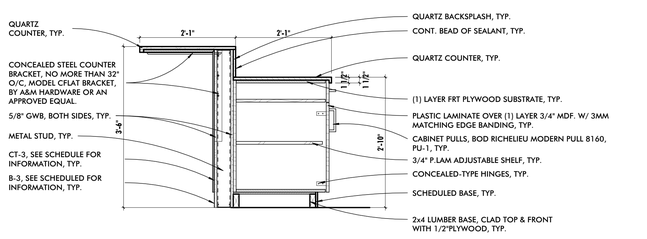
6 TYPICAL COUNTERTOP & BRACKET
1 1/2" = 1'-0"



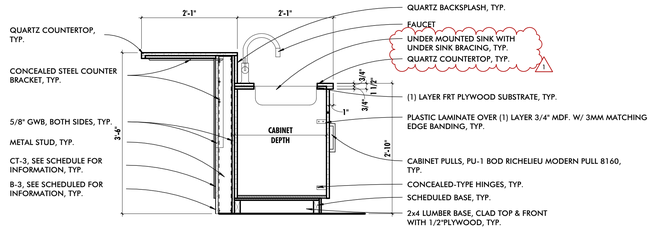
7 DAYROOM PLATFORM DETAIL
1" = 1'-0"



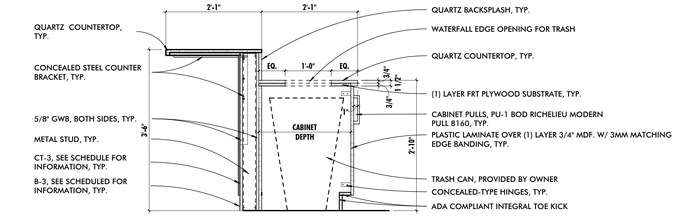
8 CLOSET ROOF SECTION
1 1/2" = 1'-0"



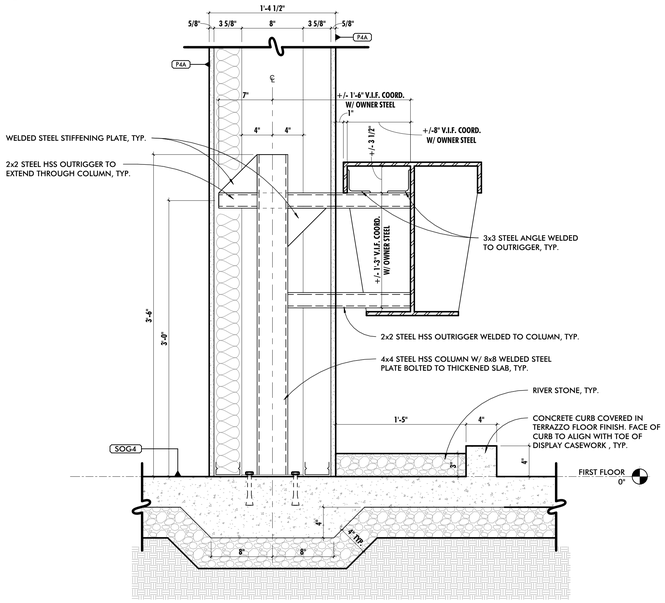
9 KITCHEN ISLAND DETAIL
3/4" = 1'-0"



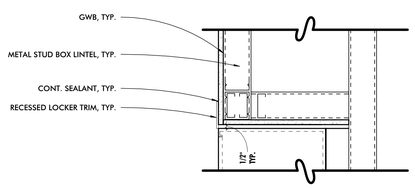
10 SINK AT KITCHEN ISLAND
3/4" = 1'-0"



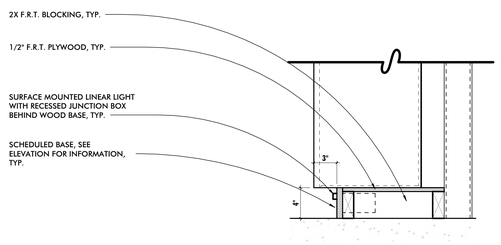
11 TYPICAL TRASH CAN CASEWORK DETAIL
3/4" = 1'-0"



12 MEMORIAL DETAIL
1 1/2" = 1'-0"



13 LOCKER HEAD DETAIL
1 1/2" = 1'-0"



14 LOCKER BASE DETAIL
1 1/2" = 1'-0"

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70 GIBRALTAR ROAD
READING, PA 19606

PROJECT NUMBER: 25-049

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10/01/2026

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No.	DATE
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TYPICAL INTERIOR DETAILS

SHEET NUMBER:
A708

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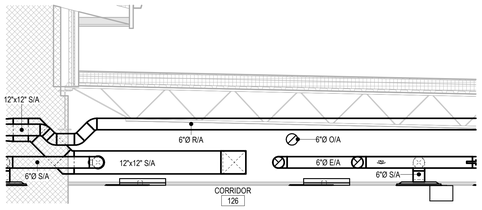
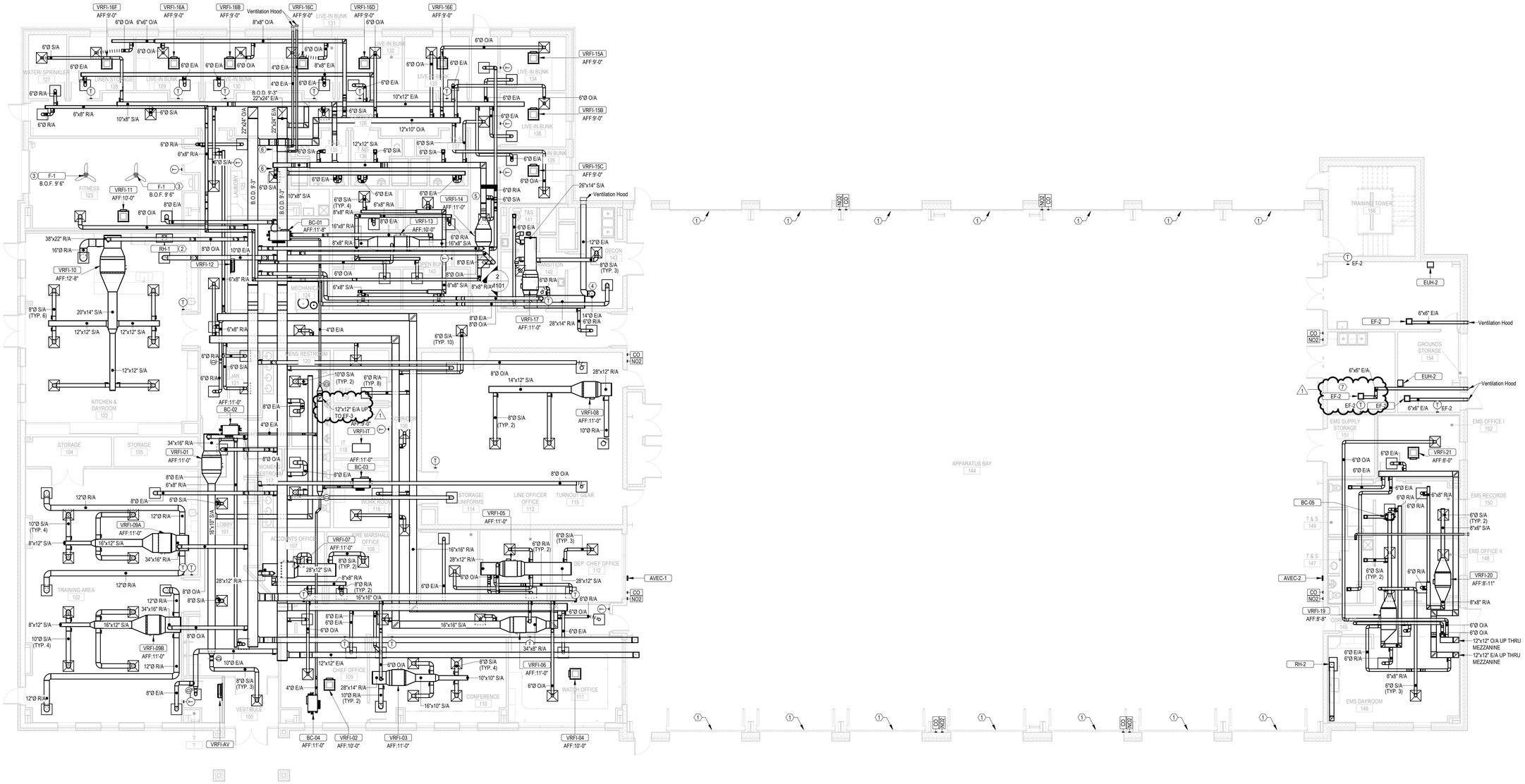


2 M101 DUCT SECTION VIEW
3/8" = 1'-0"

NOTE:
- CONTRACTOR TO INSTALL DUCT AND PIPING IN A WAY TO MAINTAIN CLEARANCE WITH DEEP JOIST.

KEYNOTES

1. APP BAY DOOR TO BE INSTALLED WITH TAKEX MODEL PB-30TK AND SHALL BE CONNECTED TO THE AIRVAC SYSTEM. CONTRACTOR TO COORDINATE W/AIRVAC VENDOR FOR WIRING AND CONNECTIONS.
2. RH-1 TO BE EXHAUSTED UP TO ROOF WITH 6'Ø DUCT CONNECTED TO INLINE BLOWER.
3. MECHANICAL CONTRACTOR TO COORDINATE EXACT FAN LOCATION WITH ELECTRICAL CONTRACTOR.
4. MC TO PROVIDE A 12" FAMCO WVEBP HOODED WALL VENT WITH SPRING LOADED DAMPER, GASKET, AND SCREEN AT THE EXTERIOR WALL. CONNECT 12'Ø EXHAUST DUCT TO PPE DRYING CABINET. TRANSITION TO 14'Ø AT CABINET CONNECTION.
5. REFER TO SECTION 2/M101.
6. COORDINATE LOCATION OF EF OVER COMPRESSOR IN FIELD
7. COORDINATE LOCATION OF EF OVER COMPRESSOR IN FIELD



1 M101 FIRST FLOOR - HVAC PLAN
1/8" = 1'-0"

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EXETER TOWNSHIP
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FIRST FLOOR - HVAC PLAN

SHEET NUMBER:
M101

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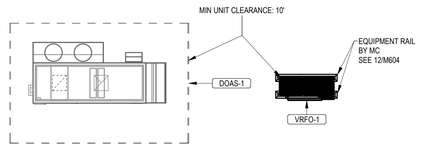
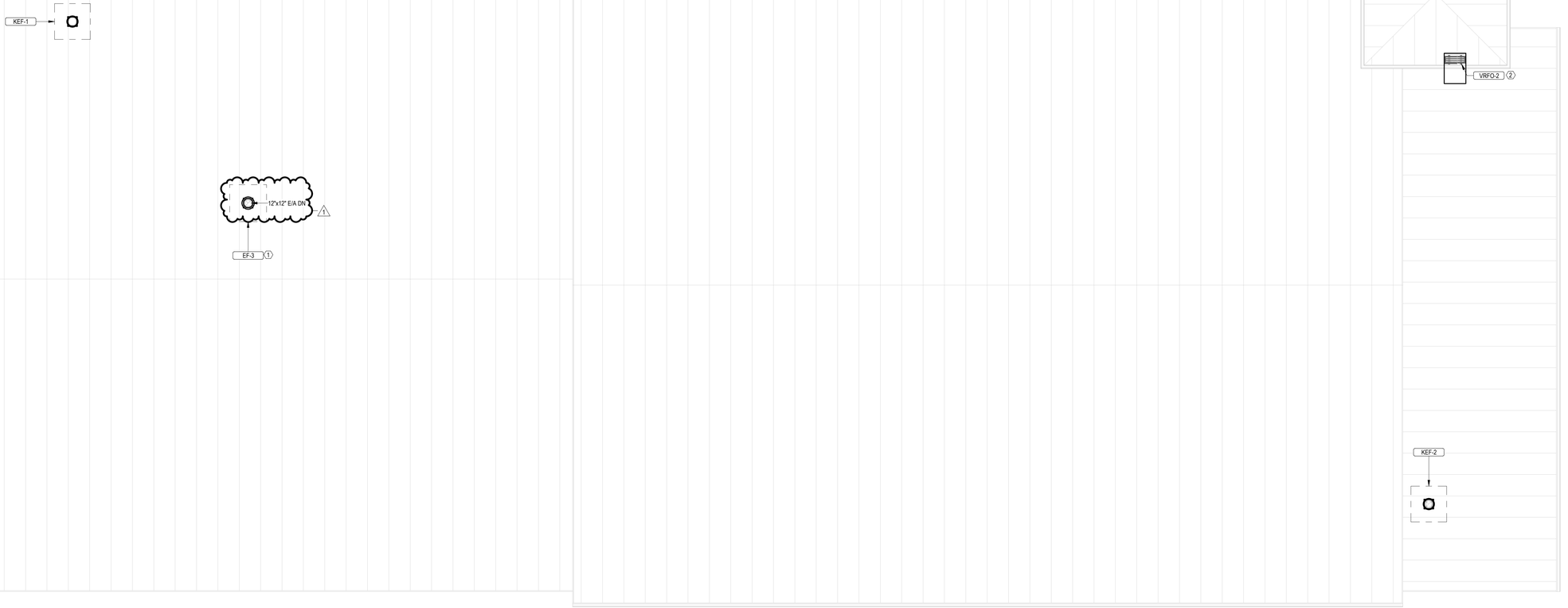
KEYNOTES

1	EXHAUST FAN TO SERVE REFRIGERANT BRANCH CONTROLLER ENCLOSURE: BC-1 THRU BC-4 LOCATED ON FIRST FLOOR IN THE EVENT OF A REFRIGERANT LEAK TO PREVENT ODOR FROM ESCAPING INTO OCCUPIED SPACES.
2	VRFO TO BE HUNG FROM TOWER WALL WITH QWIK-SLING WALL BRACKETS





1 M103 ROOF - HVAC PLAN
1/8" = 1'-0"

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ROOF - HVAC PLAN

SHEET NUMBER:

M103

10/15/2026 1:02:14 PM

KEYNOTES

1. 4" SAN TIE-POINT. SEE CIVIL SITE PLAN FOR CONTINUATION.
2. 3" SAN TIE-POINT. SEE CIVIL SITE PLAN FOR CONTINUATION.
3. 6" SAN TIE-POINT. SEE CIVIL SITE PLAN FOR CONTINUATION.
4. OSI PURCHASED AND INSTALLED BY SITE CIVIL CONTRACTOR. PLUMBING CONTRACTOR TO PROVIDE/INSTALL SS PIPING TO OSI AND ALL OSI VENT PIPING. PIPING DOWNSTREAM OF OSI BY SITE CIVIL. SEE 6/P601 FOR OSI INFORMATION.
5. PC TO PROVIDE TWO-WAY CLEANOUT TEE PIPED TO GRADE ON OSI INLET
6. SC TO PROVIDE TWO-WAY CLEANOUT TEE PIPED TO GRADE ON OSI OUTLET
8. RADON FAN (EF-RGC), IN-LINE ON VERTICAL PIPING AT 4'-0" AFF, WITH FLEXIBLE COUPLINGS AND VIBRATION ISOLATING SUPPORTS. DISCHARGE PIPING SOLVENT-WELDED DIRECT TO ROOF TERMINATION. NO CLEANOUTS OR MECHANICAL JOINTS ON DISCHARGE SIDE. BASIS OF DESIGN: FANTECH RxHEC, 120V/1PH, 175 WATTS MAX. FINAL MAKE, MODEL, VOLTAGE, AND AMPERAGE SHALL BE DETERMINED BY THE RADON DELEGATED DESIGNER AND SUBMITTED FOR REVIEW. FURNISH FINAL ELECTRICAL DATA TO THE ELECTRICAL CONTRACTOR BEFORE ROUGH-IN. SEE SPECIFICATION SECTION 22 38 00.
9. CONTRACTOR TO INSTALL ALL HORIZONTAL UNDERGROUND RADON LINES AT 4".



1 / P101 SANITARY PIPING PLAN - FIRST FLOOR
1/8" = 1'-0"

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FIRST FLOOR - SANITARY PIPING PLAN

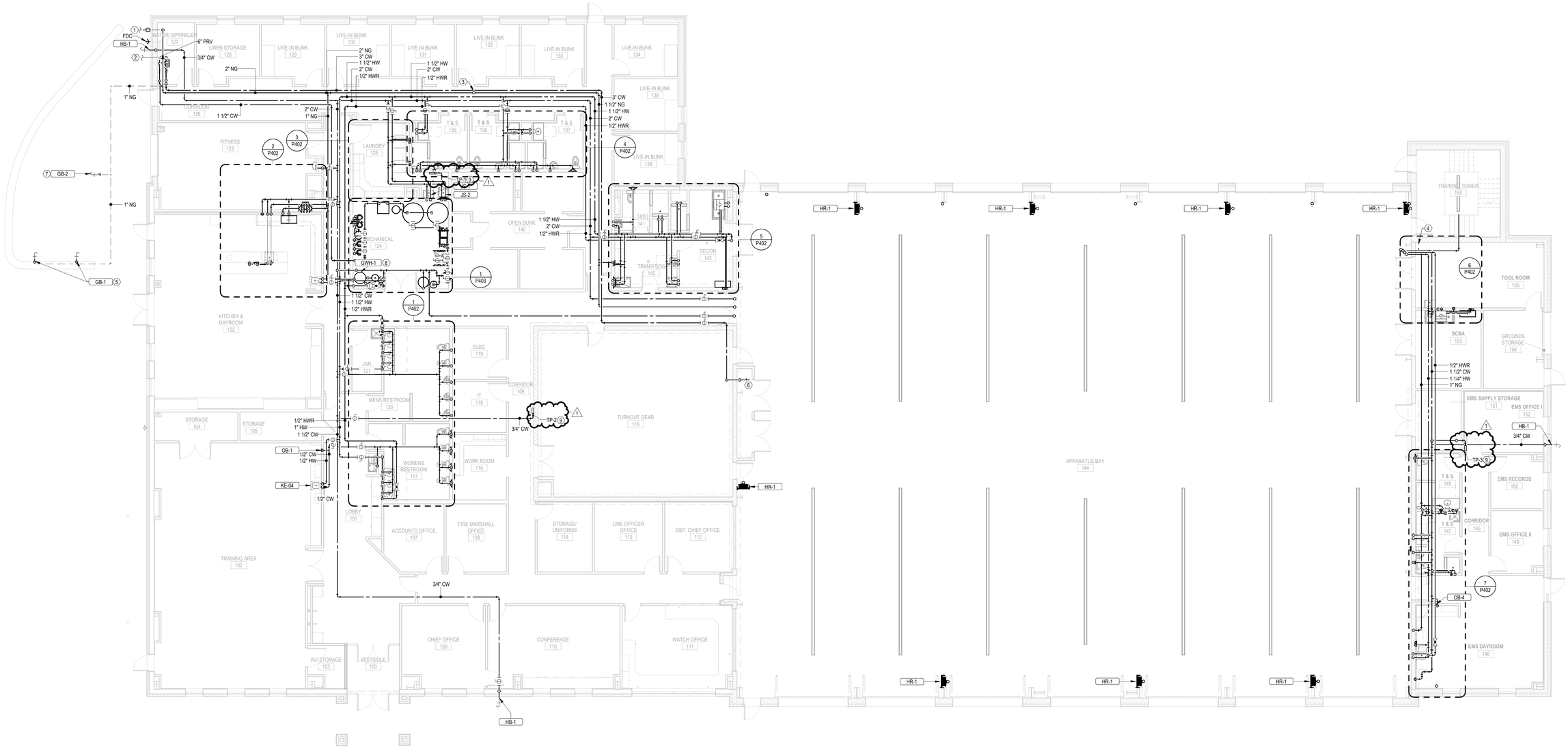
SHEET NUMBER:

P101

10/15/2026 1:02:18 PM

KEYNOTES

1. 2" NATURAL GAS INCOMING FROM UTILITY EXTENSION. SIZED PER IFC 402.4(2) WITH 596MBH AND APPROX. 300FT LENGTH. SEE CIVIL SITE PLAN FOR CONTINUATION.
2. 6" COMBINED FW/CW MAIN. SEE CIVIL SITE PLAN FOR CONTINUATION.
3. 2" NATURAL GAS UP THRU ROOF TO DOAS-1. COORDINATE WITH MECHANICAL PLANS FOR EXACT LOCATIONS.
4. 1" NATURAL GAS THRU WALL TO VRFO-2 ON ROOF. COORDINATE WITH MECHANICAL PLANS FOR EXACT LOCATION.
5. GAS BOX STUB TO BE RECESSED AND SHALL BE COORDINATED WITH OWNER PRIOR TO INSTALL. NG TO GB-1 IS INTO THE BOTTOM OF THE SURFACE MOUNTED GB-1.
6. CONTRACTOR TO INSTALL 3" BALL VALVE WITH DROP. TRANSITION TO 2 1/2" THREADED.
7. VERIFY FINAL LOCATION WITH ARCHITECT. INSTALL A 1 1/4" DRAIN PIPE TO THE ADJACENT PAVED AREA.
8. PC TO INSTALL VENT/COMBUSTION AIR PIPES ABV CEILING & THRU WALL ABOVE
9. PC TO FIELD ROUTE TRAP PRIMER PIPING TO FLOOR DRAINS
10. GAS SHUT-OFF VALVE WITH COMBUSTION AIR SWITCH AND SOLENOID VALVE A REMOTE ACTUATED VALVE TO BE COORDINATED WITH FIRE STATION ALERTING SYSTEM



1 P201 SERVICE PIPING PLAN - FIRST FLOOR
1/8" = 1'-0"

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FIRST FLOOR - SERVICE PIPING PLAN

SHEET NUMBER:

P201

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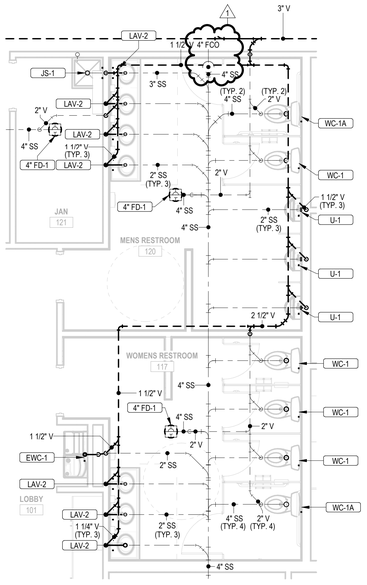
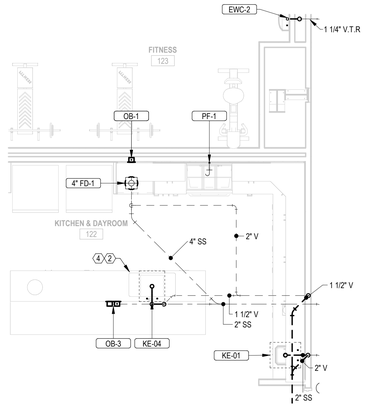
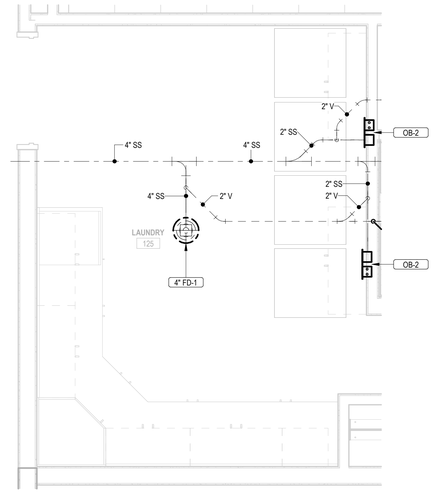


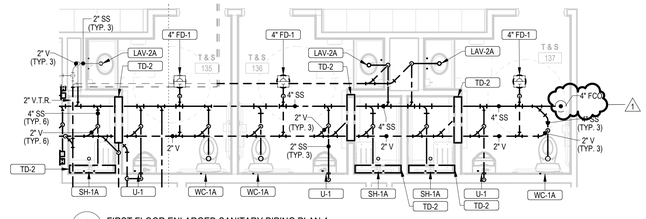
1 P401 FIRST FLOOR ENLARGED SANITARY PIPING PLAN 1
1/4" = 1'-0"



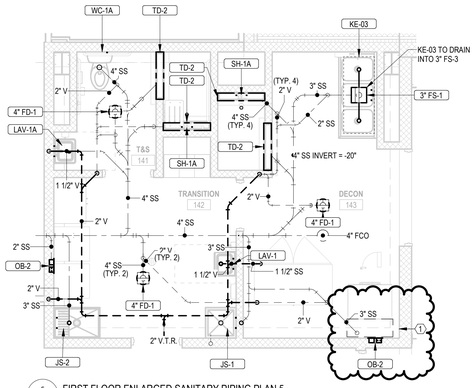
2 P401 FIRST FLOOR ENLARGED SANITARY PIPING PLAN 2
1/4" = 1'-0"



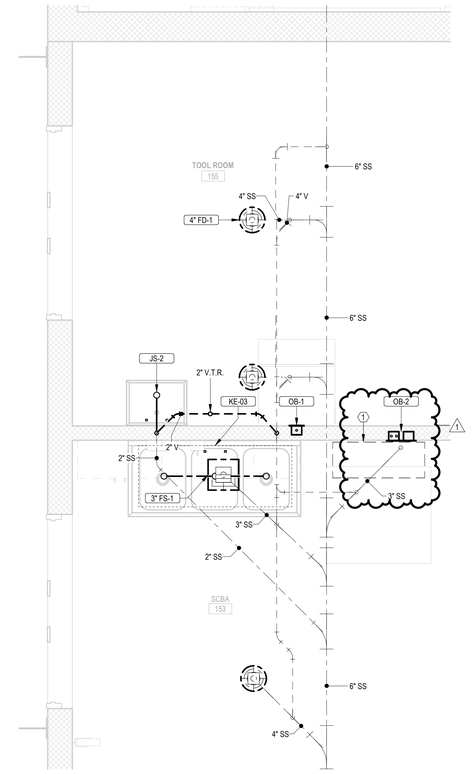
3 P401 FIRST FLOOR ENLARGED SANITARY PIPING PLAN 3
1/2" = 1'-0"



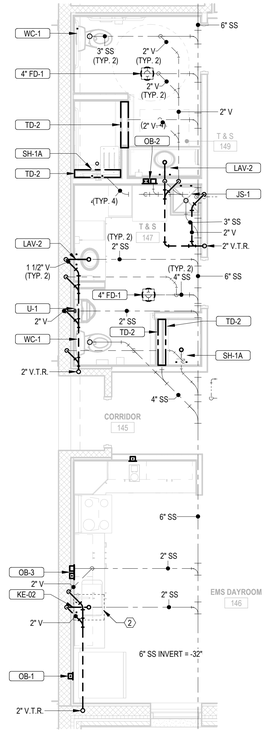
4 P401 FIRST FLOOR ENLARGED SANITARY PIPING PLAN 4
1/4" = 1'-0"



5 P401 FIRST FLOOR ENLARGED SANITARY PIPING PLAN 5
1/4" = 1'-0"



6 P401 FIRST FLOOR ENLARGED SANITARY PIPING PLAN 6
1/2" = 1'-0"



7 P401 FIRST FLOOR ENLARGED SANITARY PIPING PLAN 7
1/4" = 1'-0"

KEYNOTES

1. 14"x10"x3'-0" LONG WASHING MACHINE DRAIN TROUGH WITH LINT TRAP H-M COMPANY OR EQUAL. RECESSED INTO FLOOR WITH SIDE DRAIN CONNECTION. OB-2 DRAIN CONNECTION NOT USED.
2. CONTRACTOR TO COORDINATE FINISHED CEILING HEIGHT WITH ALL MECHANICAL LINES. PLUMBING CONTRACTOR TO INSTALL GARBAGE DISPOSAL IN KITCHEN SINK. GARBAGE DISPOSAL TO BE MOEN DISPOSAL CHEF SERIES MODEL EXL100C. CONTRACTOR IS TO CONNECT FIXTURES TO BOTH SANITARY AND DOMESTIC LINES.
4. PLUMBING CONTRACTOR IS TO REFERENCE 8/P602 WHEN INSTALLING ISLAND SANITARY. TYPICAL FOR ALL ISLAND SINKS.

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EXETER TOWNSHIP
EMERGENCY SERVICES FACILITY
70 GIBRALTAR ROAD
READING PA 19606

PROJECT NUMBER: 25-049

SUBMISSION:
BID SET

ORIGINAL ISSUE DATE:
10/01/2026

SHEET REVISION SCHEDULE:

No.	DATE
1	10/15/26

LAST PROJECT REVISION: No 1 | 10/15/26

FIRST FLOOR - ENLARGED SANITARY PIPING PLANS

SHEET NUMBER:

P401

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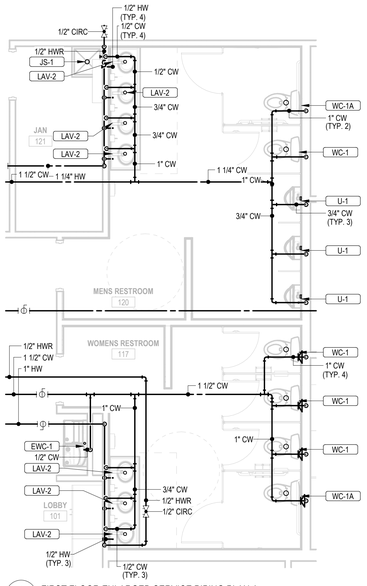
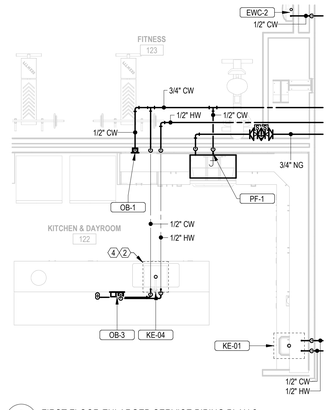
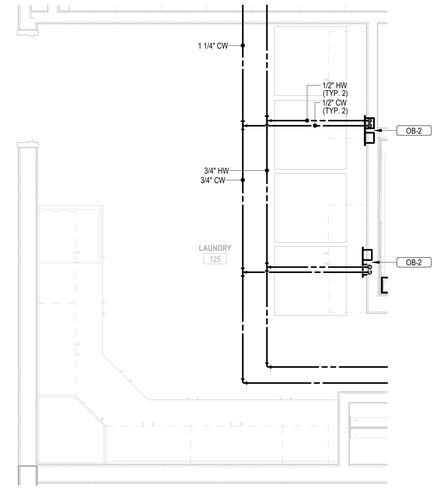


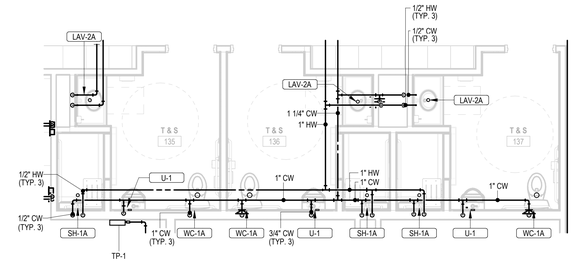
1 P402 FIRST FLOOR ENLARGED SERVICE PIPING PLAN 1
1/4" = 1'-0"



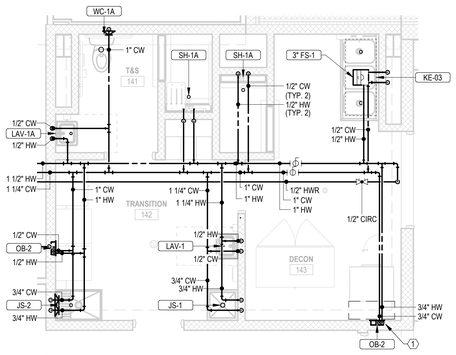
2 P402 FIRST FLOOR ENLARGED SERVICE PIPING PLAN 2
1/4" = 1'-0"



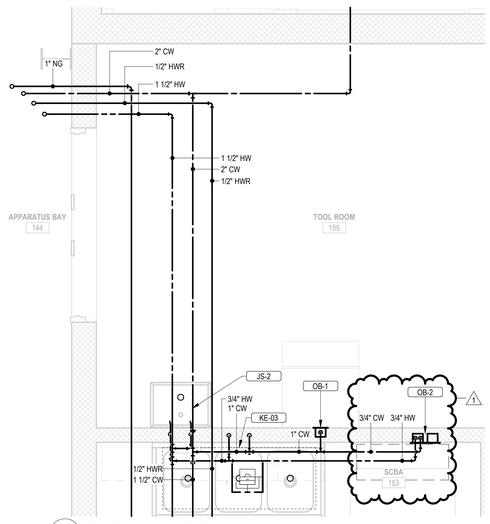
3 P402 FIRST FLOOR ENLARGED SERVICE PIPING PLAN 3
1/2" = 1'-0"



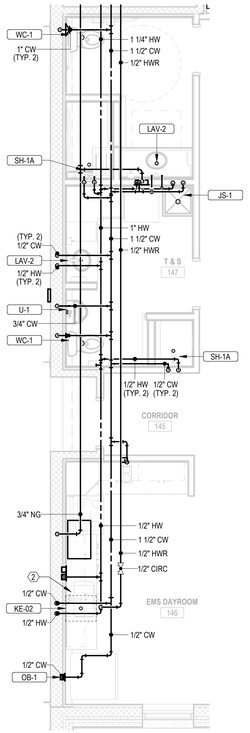
4 P402 FIRST FLOOR ENLARGED SERVICE PIPING PLAN 4
1/4" = 1'-0"



5 P402 FIRST FLOOR ENLARGED SERVICE PIPING PLAN 5
1/4" = 1'-0"



6 P402 FIRST FLOOR ENLARGED SERVICE PIPING PLAN 6
1/2" = 1'-0"



7 P402 FIRST FLOOR ENLARGED SERVICE PIPING PLAN 7
1/4" = 1'-0"

KEYNOTES

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FIRST FLOOR - ENLARGED SERVICE PIPING PLANS

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P402

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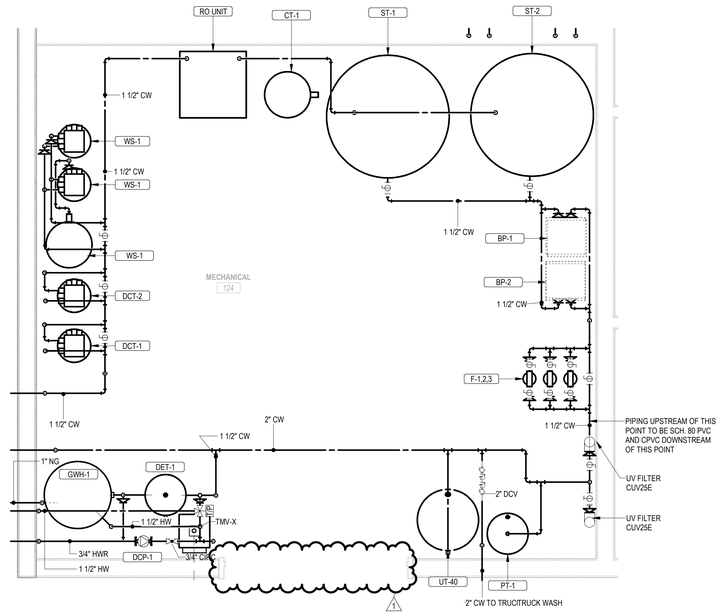
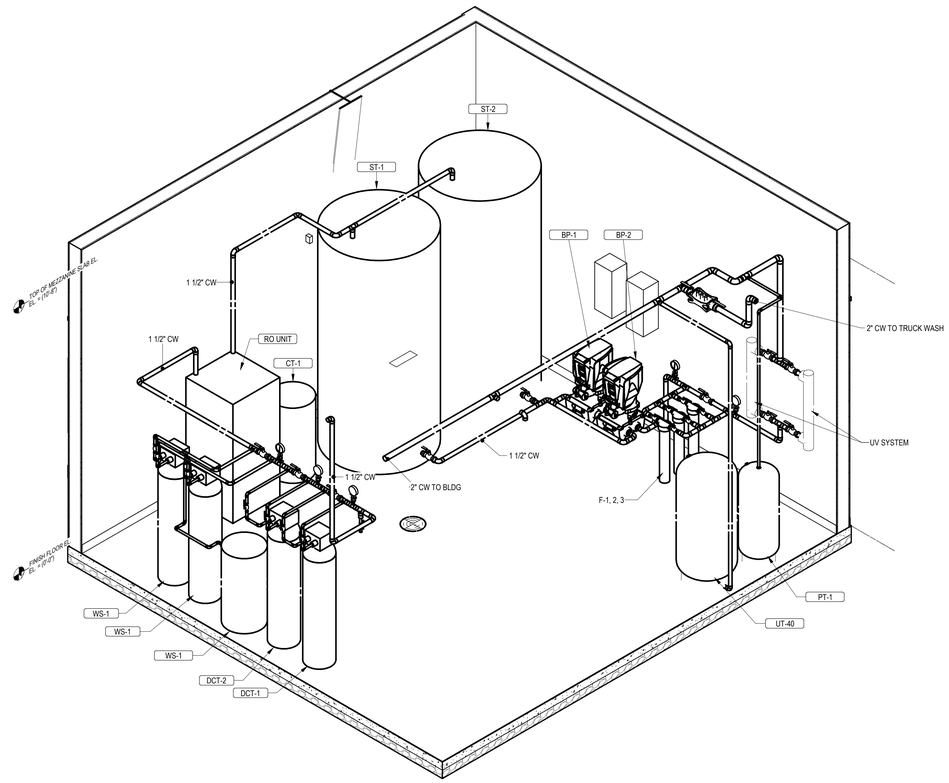


1 P403 FIRST FLOOR ENLARGED SERVICE PIPING PLAN 8
1/2" = 1'-0"

NOTES: CONTRACTOR TO REFER TO P603 FOR ENHANCED DETAIL OF MECHANICAL ROOM WATER PURIFICATION SYSTEM



2 P403 WATER FILTRATION ROOM SW ISOMETRIC

NOTE: WATER HEATER / ASSOCIATED PIPING NOT SHOW IN THIS VIEW

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FIRST FLOOR - ENLARGED SERVICE PIPING PLANS

SHEET NUMBER:

P403

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Plumbing Fixture Schedule

Identity	Description	Manufacturer	Model	Qty	Product Type	Installation Type	ADA	Material Description	Finish	Faucet / Valve		Domestic Connections			Product Specification	Notes
										Manufacturer M/N	Type	Cold Water	Hot Water	Piping Size(s)		
EWC-1	Water Cooler	Elkay	EMABFTL8WSLK	1	Electric Water Cooler - Dual Height	Wall Hung	Yes	Galvanized Steel	Light Gray Granite			Yes	No	1/2"	ezH2O® Bottle Filling Station with Mechanically Activated Bi-Level ADA Cooler Non-Filtered Refrigerated Light Gray.	
EWC-2	Bottle Filler	Elkay	LZWSSM	1	Bottle Filling Station	Wall Hung	No	Galvanized Steel	Stainless Steel			Yes	No	1/2"	Stainless. Features shall include Antimicrobial*, Filtered, Green Ticker™, Hands Free, Laminar Flow, Real Drain, Visual Filter Monitor. Electronic Bottle Filler Sensor activation. Product shall be Wall Mount (On Wall), for Indoor applications, serving 1 station(s). Unit shall be certified to UL 399 and CAN/CSA C22.2 No. 120.	
FD-1	Floor Drain	Watts	FD-100-A	24	Round Strainer			Cast Iron							Epoxy Coated Cast Iron Floor Drain With Anchor Flange, Reversible Clamping Collar With Primary & Secondary Weepholes, Adjustable Round Heel Proof Nickel Bronze Strainer, And No Hub Outlet.	
FS-1	Floor Sink	Watts	FS-730	2	12" Square X 6" Deep			Cast Iron							12" Square X 6" Deep Sanitary Floor Sink With White Porcelain Enamel Coated Interior, Loose Set Porcelain Enamel Coated Cast Iron Grate, Polypropylene Dome Bottom Strainer, And No Hub Outlet.	
GB-1	Gas Connection	Burnaby Manufacturing LTD	G0-102-DBL-SS	2	Gas Connection	Wall Mount	No					Yes	No	1/2"	Recessed Stainless Steel Gas Plug with (2) 1/2" Hose Connections. 125,000 BTU NG Each Side. 1/2" Inlet Connection.	
GB-2	Gas Connection	Burnaby Manufacturing LTD	VGP-GO-102-CDN	1	Gas Connection	Set in Concrete	No					Yes	No	1/2"	Recessed Stainless Steel Gas Plug with (1) 1/2" Hose Connections. 125,000 BTU NG. 1/2" Inlet Connection.	
HB-1	Hose Bibb	Zurn	Z1320XL-EZ	3	Wall Hydrant	Wall Mount	No					Yes	No	3/4"	Encased, EcolotroITM, lead-free, non-freeze automatic draining wall hydrant for flush installation.Hydrant features integral backflow preventer with anti-siphon technology,copper casing, all-bronze interior components with 1/2 turn long-life ceramic disc cartridge,combination 3/4" [19] female solder and 3/4" [19] male pipe thread inlet connection, and 3/4" [19] male hose connection. Hydrant furnished with type 304 stainless steel housing with locking hinged cover stamped "WATER" and includes operating key. Hydrant housing fits within one standard modular masonry course.Recommended wall opening: 3-3/16" [81] X 8-1/2" [216].	
HR-1	Hose Reel	Reelcraft	D830-75 OLP	8	Dual Pedestal Hose Reels	Wall Mount									Base Mounted Dual Pedestal with heat treated aluminum casting, two sealed ball bearings for smooth rotation of the main shaft, guide arm with 4 different adjustable positions, with Low-Pressure 3/4 in. x 75 ft PVC hose included. 3/4" Connection.	
JS-1	Sink	Fiat	MSB-2424	4	Janitor	Floor Set	No	Molded Stone		Chicago Faucets / 897-Cp	Manual	Yes	Yes	3/4"	Service Basin With Cap On Two Sides, With Chrome Plated 3" Drain And Cast Iron Trap. Faucet Shall Include Pail Hook And Atmospheric Vacuum Breaker Spout. Furnish 5'-0" Length Of 5-Ply Garden Hose And Fittings.	
JS-2	Sink	ADVANCE TABCO	FS-FM-2721-F	3	Laundry Tub	Floor Set	No	Stainless Steel	Stainless Steel	Included		Yes	Yes	1/2"	Advance Tabco Heavy Duty Floor Mounted Stainless Steel Service Sink FS-FM-2721-F w/ K-159 Gooseneck Faucet, 8" centerset, 3-1/2" gooseneck spout, 24" x 18" x 12" deep bowl, 8-1/2" backsplash, stainless steel tubular legs with flanged feet, and 3-1/2" rear basket drain.	
KE-01	Commercial Sink	Elkay	ELUHAD121255PD	1	1-Compartment	Undermount	Yes	Stainless Steel	Luminous Satin	Kohler K-28358		Yes	Yes	1/2"	Single-Compartment Kitchen Style Sink and Pulldown Faucet	
KE-02	Commercial Sink	Elkay	ELUHAD281655PD	1	1-Compartment	Undermount	Yes	Stainless Steel	Lustrous Satin	Kohler K-28358		Yes	Yes	1/2"	Single-Compartment Kitchen Style Sink and Pulldown Faucet	
KE-03	Commercial Sink	Elkay	RNSF83544	2	3-Compartment	Undermount	No	Stainless Steel	Stainless Steel	Elkay LK940GN05T4H		Yes	Yes	1/2"	3-Compartment Stainless Steel Sink with Wall-Mounted Faucet	
KE-04	Commercial Sink	Elkay	ECTRU35179TC	2	1-Compartment	Undermount	Yes	Stainless Steel	Polished Satin	Kohler K-28358		Yes	Yes	1/2"	Single-Compartment Kitchen Style Sink and Pulldown Faucet	
LAV-1	Lavatory	Elkay	WCLWO1923OSDC	1	Wall Hung	Wall Hung	No	Stainless Steel	Lustrous Satin	Chicago Faucets / 3511-E2805AB	Manual	Yes	Yes	1/2"	Lavatory With Backsplash, Faucet Holes On 4" Centers. Deck-Mounted Faucet With Manual Operation, Vandal Resistant Spray, External Asse 1070 Compliant Thermostatic Mixing Valve, Grid Drain, Loose Key Angle Stops And Supplies. Insulate Water And Waste With Insulation Kit.	
LAV-1A	Lavatory	Elkay	WCLWO1923OSDC	1	Wall Hung ADA	Wall Hung	Yes	Stainless Steel	Lustrous Satin	Chicago Faucets / 3511-E2805AB	Manual	Yes	Yes	1/2"	Lavatory With Backsplash, Faucet Holes On 4" Centers. Deck-Mounted Faucet With Manual Operation, Vandal Resistant Spray, External Asse 1070 Compliant Thermostatic Mixing Valve, Grid Drain, Loose Key Angle Stops And Supplies. Insulate Water And Waste With Insulation Kit.	
LAV-2	Lavatory	Kohler	K-37626	9	Counter Mount	Undermount	No	White Vitreous China	White	Chicago Faucets / 3511-E2805AB	Manual	Yes	Yes	1/2"	Undermount Vitreous China Lavatory With Overflow. Single-Hole Deck-Mounted Faucet With Manual Operation, Vandal-Resistant 0.5 GPM Spray, Integral Temperature Control Mixer, And Flexible Hot And Cold Water Supplies.	
LAV-2A	Lavatory	Kohler	K-37626	3	Counter Mount ADA	Undermount	Yes	White Vitreous China	White	Chicago Faucets / 3511-E2805AB	Manual	Yes	Yes	1/2"	Undermount Vitreous China Lavatory With Overflow. Single-Hole Deck-Mounted Faucet With Manual Operation, Vandal-Resistant 0.5 GPM Spray, Integral Temperature Control Mixer, And Flexible Hot And Cold Water Supplies.	
OB-1	Outlet Box	IPS Corporation	MIB1HAAB	4	Ice Maker	Recessed		Steel	White			Yes	No	1/2"	Recessed, White Powder-Coated Ice Maker Outlet Box With A Brass Quarter Turn Hammer Arrester Valve. Unit Shall Be Guy Gray™ Product Code Checked Below As Manufactured By IPS Corporation. The Brass Quarter Turn Valves Shall Comply With NSF61, NSF/ANSI 372, And ASME A112.18.1/CSA B125.1 And Shall Feature White Handle And Check-Mark Logo For Easy Lead-Free Identification.Hammer Arrester Shall Comply With ASSE 1010.	
OB-2	Outlet Box	IPS Corporation	MWB13	6	Washing Machine	Recessed		Steel	White			Yes	Yes	1/2"	Center Drain White Powder Coated Metal Washing Machine Outlet Box. Unit Shall Be Guy Gray Product Code As Manufactured By IPS Corporation. Qtr. Turn Valve With 1/2" Sweat/MIP, PEX, Wirsbo, Or CPVC Connection. 2" Slipnut Drain Kit Included. Valves Comply With ASME A112.18.1.	
OB-3	Outlet Box	IPS Corporation	DW1200HA	2	Dishwasher	Recessed		Hi-Impact Resin	White			No	Yes	1/2"	Recessed, White Powder-Coated Dishwasher Outlet Box, w/ Lead Free Qtr. Turn Arrester Valve with 3/8" Compression Outlet Available For Sweat.	
OB-4	Outlet Box	IPS Corporation	MIB1HAAB	1	Coffee Maker	Recessed		ABS Plastic	White			No	Yes	1/2"	Recessed, White Powder-Coated Coffee Maker Outlet Box With A Brass Quarter Turn Hammer Arrester Valve. Unit Shall Be Guy Gray™ Product Code Checked Below As Manufactured By IPS Corporation.	
PF-1	Pot Filler	Kohler	K-35745-CP	1	Single-Hole-Wall-Mounted Pot and Kettle Filler	Wall Mount	No					Yes	No	1/2"	Kohler Wall-Mounted Pot Filler K-35745-CP with articulating 360° rotating spout, single lever handle with main shutoff, ceramic disc valves, 7" spout reach, 5.2 GPM maximum flow rate, and polished chrome finish.	
SH-1A	Shower Stall - ADA	By Others	By Others	7	Shower Fixtures	Floor Set	Yes			Symmons / C-96-500-B30-V		Yes	Yes	1/2"	The Individual Shower Stall Is Specified In Another Division. See this schedule for Shower Drains. Shower System With Asse 1016 Compliant Type "T/P" Thermostatic/Pressure Balancing Combination Valve With Adjustable Stop Screw To Limit Handle Turn. Concealed 3-Port Diverter Valve With Lever Handle With Arm And Flange, Integral Stops, And In-Line Vacuum Breaker. Hand Shower System With Standard Hand Shower, 60" Flexible Metal Hose, And 48" Slide Bar For Hand Shower Mounting. Provide Manufacturer'S Flow Rate Restrictor On Showerhead.	
TD-1	Trench Drain	Watts	Dead Level D	57	Wide Reveal Trench Drain System	Set in Concrete		Polypropylene							6"(152) wide x 48"(1219) long (standard) UV stabilized glass-filled polypropylene frame, UV stabilized talc-filled polypropylene channels with integral 4"(102) No Hub bottom outlet(s). System shall be frame-anchored, with DI grating to suit DIN Class E load rating with Frame Guards. Installed length (number of sections) varies per architectural plans	
TD-2	Shower Linear Drain	Oatey	PLD36-N	13	QuickDrain ProLine Drain	Set in Concrete		Stainless Steel							18 Gauge 316L Stainless Steel Linear Shower Drain with "Lines" grate. Fully sloped trough to prevent standing water and solids from being deposited in the trough. 2" I.D. Schedule 10 stainless steel downspout waste outlet. Drain cover sold separately.	
U-1	Urinal	American Standard	Washbrook	7	Wall Hung	Wall Hung	No	White Vitreous China	White	Sloan / REGAL 186-0.5	Manual	Yes	No	3/4"	Wall Hung Urinal With Washout Action, Top Spud, Size 18" With Integral Extended Shields Supported By Through Going Bolts And C.P. Nuts. Manual Flushometer 0.5GPF	
WC-1	Water Closet	Kohler	K3505	6	Pressure Assist Water Closet	Floor Set	No	White Vitreous China	White	Sloan / Flushmate III	Manual	Yes	No	1/2"	Elongated Floor Mounted Pressure Assist Tank Type Water Closet, With Kohler Stronghold K-4731-GC Commercial elongated toilet seat with integrated handle and Quiet-Close™ check hinge. Provide A 1/4" Brass Ball Valve At Wall Connection.	
WC-1A	Water Closet	Kohler	K3493	6	Pressure Assist Water Closet	Floor Set	Yes	White Vitreous China	White	Sloan / Flushmate III	Manual	Yes	No	1/2"	ADA Height Elongated Floor Mounted Pressure Assist Tank Type Water Closet, With Kohler Stronghold K-4731-GC Commercial elongated toilet seat with integrated handle and Quiet-Close™ check hinge. Provide A 1/4" Brass Ball Valve At Wall Connection.	

Thermal Expansion Tank Schedule

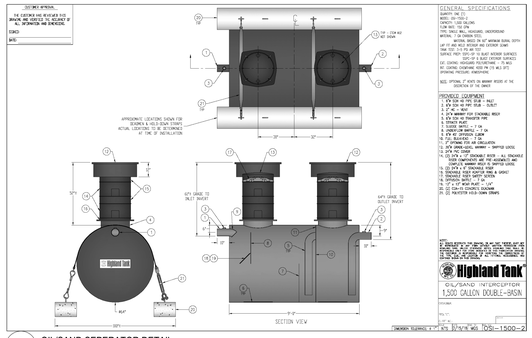
Identity	Location Name	Location No.	Manufacturer	Model	Product Type	System Fluid	Water Supply Temp.	ASME	Tank Fill Pressure	Tank Fill Temp.	Tank Acceptance Factor	Tank Acceptance Volume	Tank Capacity	Product Weight	Operating Weight	Notes
DET-1	MECHANICAL	124	Bell & Gossett	PT-12	Diaphram	Dom. Water	40 °F	Yes	38 psi	40 °F	73%	3.2 gal	4.4 gal	9 lb	128 lb	
DET-2	COMPRESSOR	201	Bell & Gossett	PT-12	Diaphram	Dom. Water	40 °F	Yes	38 psi	40 °F	73%	3.2 gal	4.4 gal	9 lb	128 lb	
PT-1	MECHANICAL	124	Amtrol	ST-70VC	Fixed Diaphram	Dom. Water	40 °F	Yes	0 psi	40 °F	32%	10.9 gal	34.0 gal	99 lb	190 lb	
UT-40	MECHANICAL	124	Amtrol	ST-210VC	Fixed Diaphram	Dom. Water	40 °F	Yes	0 psi	40 °F	39%	35.1 gal	90.0 gal	319 lb	612 lb	

Air Compressor Schedule

Identity	Location Name	Location No.	Manufacturer	Model	HP	Capacity (CFM @ 90 psi)	Max Pressure	Tank Capacity	Electrical	Weight (lbs)	Notes
AC-1	COMPRESSOR	201	Ingersoll Rand	2340L5	5	14.3	175	60 gal	460-3-60	433	

Domestic Circulator Pump Schedule

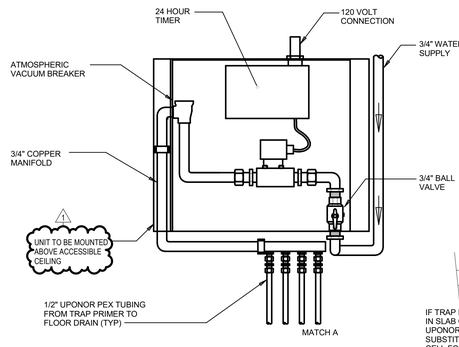
Identity	Location Name	Location No.	Manufacturer	Model	Product Type	Connections Suction	Connections Discharge	Motor Power	Motor RPM	Electrical FLA	Electrical Voltage	Electrical Phase	Notes
DCP-1	MECHANICAL	124	Taco	008IQSF6-IFC	Inline	3/4"	3/4"	19 W	3250	0.84 A	120 V	1	
DCP-2	COMPRESSOR	201	Taco	008IQSF6-IFC	Inline	3/4"	3/4"	19 W	3250	0.7 A	120 V	1	



6 / P601 OIL/SAND SEPERATOR DETAIL
NOT TO SCALE

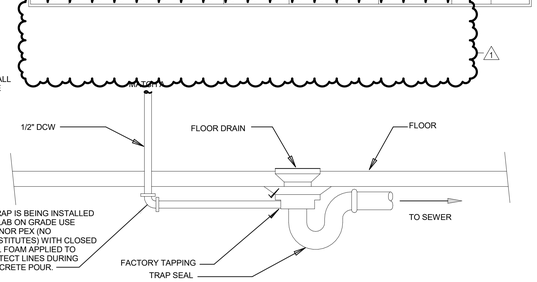
Gas-Fired Water Heater Schedule

Identity	Location Name	Location No.	Manufacturer	Model	Product Type	Temp. Rise	Recovery Capacity	Storage Capacity	MAWP	ASME	Gas Burner Type	Gas Burner Input Rating	Gas Burner Output Rating	Gas Burner Efficiency	Electrical Voltage	Electrical Phase	Breaker Size	Product Weight	Operating Weight	Notes
GWH-1	MECHANICAL	124	Rheem	GHE100SS-250(A)	Gas Tank	100F	291gph	100gal	160 PSI	Y	NG	250MBH	240MBH	96%	110	1	7.5A	775lbs	-	
GWH-2	COMPRESSOR	201	Rheem	GHE80SS-130 (A)	Gas Tank	100F	153gph	80gal	160 PSI	Y	NG	130MBH	120MBH	96%	110	1	7.5A	775lbs	-	

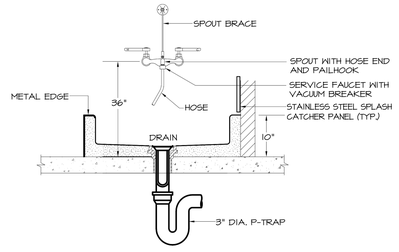


TRAP PRIMING MANIFOLD SCHEDULE

TAG	SYSTEM	LOCATION	VOLTAGE	PHASE	MANUFACTURER	MODEL	REMARKS
TP-1	ELECTRONIC TRAP PRIMING MANIFOLD	LAUNDRY 125	120 V	1	PPP INC.	PTS-10	
TP-2	ELECTRONIC TRAP PRIMING MANIFOLD	CORRIDOR 106	120 V	1	PPP INC.	PTS-10	
TP-3	ELECTRONIC TRAP PRIMING MANIFOLD	EMS OFFICE 116A	120 V	1	PPP INC.	PTS-6	



10 / P601 DETAIL - ELECTRONIC TRAP PRIMER
NOT TO SCALE



9 / P601 DETAIL - JANITOR SINK
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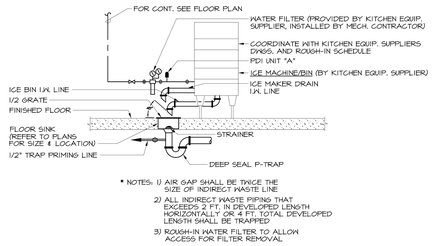
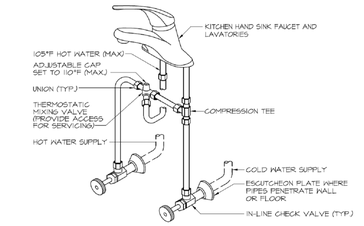


8 / P601 DETAIL - ICE MACHINE
NOT TO SCALE



3 / P601 DETAIL - FAUCET
NOT TO SCALE

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EXETER TOWNSHIP
EMERGENCY SERVICES FACILITY
70 GIBRALTAR ROAD
READING PA 19606

PROJECT NUMBER: 25-049

SUBMISSION:
BID SET

ORIGINAL ISSUE DATE:
10/01/2026

SHEET REVISION SCHEDULE:

No.	DATE
1	10/15/26

LAST PROJECT REVISION: No 1 | 10/15/26

PLUMBING SCHEDULES & DETAILS

SHEET NUMBER:
P601

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ELECTRICAL SYMBOL LEGEND

ELECTRICAL DEVICES & EQUIPMENT

SYMBOL	DESCRIPTION
	20A, 120V AC, NEMA 5-20R, DUPLEX RECEPTACLE, SINGLE GANG BOX, TILE RING (DEPTH AS REQUIRED), AND COVERPLATE.
	20A, 120V AC, NEMA 5-20R, DOUBLE DUPLEX RECEPTACLE, DOUBLE GANG BOX, TILE RING (DEPTH AS REQUIRED), AND COVERPLATE.
XX-XXR	SPECIAL PURPOSE ELECTRICAL RECEPTACLE. XX-XXR = NEMA CONFIGURATION. MH = 18" A.F.F. AS MEASURED TO CENTER OF DEVICE BOX U.O.N. (COORDINATE WITH MILLWORK).
S	RECESSED JUNCTION BOX. CONDUIT STUBBED UP TO EASILY ACCESSIBLE SPACE ABOVE CEILING.
CLNG	FLOOR/CEILING RECESSED JUNCTION BOX
PB	PULL BOX
XX-XXR WP	ELECTRIC CORD REEL, FED FROM GFCI BRANCH CIRCUIT BREMER, 20A, 250V AC RATED, NEMA 5-20R, YELLOW INDUSTRIAL REEL, UL TYPE 1, 39FT #12/3 SJO CORD, 90° YELLOW FEMALE WATERPROOF SINGLE RECEPTACLE. CORD REEL SHALL BE MODEL #HBL5261I22Y WITH RECEPTACLE END #HBL5324 AS MANUFACTURED BY HUBBELL. PROVIDE BALL STOP #HBL1053 AND PIVOT BASE #HUL5340PB AS MANUFACTURED BY HUBBELL. XX-XXR = SPECIAL RECEPTACLE NEMA CONFIGURATION. WP = WEATHERPROOF REEL, UL TYPE 4, WITH IN-USE WEATHERPROOF COVER.
WM	4" WIDE STAINLESS STEEL RACEWAY, 20A-120V DUPLEX RECEPTACLE @ EVERY 24" O.C. RACEWAY SHALL BE #S4000 AS MANUFACTURED BY WIREMOLD LEGRAND. PROVIDE RACEWAY WIRE DIVIDER FOR COMMUNICATIONS INSTALLATIONS WHERE SHOWN ON DRAWINGS.
MM	MULTIMEDIA STATION WITH (4) GANGS FOR (1) 5-20R QUAD RECEPTACLE, ONE GANG FOR (1) CAT6A "I". (1) HDMI AND ONE GANG FOR (2) RJ-45 ETHERNET CONNECTIONS, AND ONE SPARE BOX MOUNTING HEIGHT TO BOTTOM OF OUTLETS SHALL BE AS COORDINATED WITH ARCHITECTURAL DRAWINGS.
FB1	CAST-IRON ON-GRADE STYLE FLOORBOX WITH 10 GANGS, PROVIDE (2) HDMI OUTLETS, (4) RJ-45 ETHERNET OUTLETS, AND (3) 5-20R DUPLEX RECEPTACLES. FLIPNISH MODEL #EFR05-OG AS MANUFACTURED BY WIREMOLD LEGRANDE. S = (1) DUPLEX RECEPTACLE SHALL BE SWITCHED.
FRPT1	FIRE-RATED POKE-THRU W/ (2) 20A, 120V AC DUPLEX RECEPTACLES. (1) 4-PORT DATA OUTLET & SURFACE COVER. FIRE RATED POKE-THRU SHALL BE MODEL # 847C28K AS MANUFACTURED BY WIREMOLD LEGRAND.
M	SINGLE-POLE OR TWO-POLE (AS REQUIRED), 250V AC, 1 HP RATED, TOGGLE TYPE MANUAL MOTOR STARTER UNIT WITH MELTING ALLOY TYPE THERMAL OVERLOAD RELAY, APPROPRIATELY SIZED THERMAL UNITS. NEMA TYPE 1 OR 4 (AS REQUIRED) ENCLOSURE, AND HANDLE GUARD LOCK-OFF. SQUARE D CLASS 2510 FG OR FW TYPES (AS REQUIRED) OR APPROVED EQUAL.
M3Ø	THREE-POLE, 250V AC, 1 OR 2 HP, RATED (AS REQUIRED), TOGGLE TYPE MANUAL MOTOR STARTER UNIT WITH MELTING ALLOY TYPE THERMAL OVERLOAD RELAY, APPROPRIATELY SIZED THERMAL UNITS. NEMA TYPE 1 ENCLOSURE AND HANDLE GUARD LOCK-OFF. SQUARE D CLASS 2510 K TYPE OR APPROVED EQUAL.
6A 8AF NEMA1	FUSIBLE SWITCH TYPE COMBINATION STARTER UNIT WITH DOOR MOUNTED H-O-A SWITCH AND RED "MOTOR RUNNING" LED TYPE PILOT LIGHT. PROVIDE AUXILIARY CONTACT.
6A NEMA4	NON-FUSIBLE DISCONNECT SWITCH
6A 8AF NEMA4	FUSIBLE DISCONNECT SWITCH
	POWER OR DISTRIBUTION PANEL. HIDDEN LINE REPRESENTS ELECTRICAL CLEARANCE SPACE.
	TRANSFORMER (SIZE AS DENOTED). HIDDEN LINE REPRESENTS ELECTRICAL CLEARANCE SPACE.
XX-1	MOTOR
	BUS DUCT WITH PLUG IN DISCONNECT (FUSED)

DATA, SECURITY, & FIRE ALARM

SYMBOL	DESCRIPTION
	TELEPHONE OUTLET, 4 PORT COVERPLATE, PORTS CABLE
	COMBINATION VOICE/DATA OUTLET, 4 PORT COVERPLATE, CAT-6A CABLE (# = NUMBER OF PORTS AND RUNS)
	WIRELESS ACCESS POINT WITH CAT-6A CABLE
	TELEVISION OUTLET WITH RG-6 COAX CABLE INSTALLED BACK TO IT ROOM WITH 10' SLACK.
ES	ELECTRIC STRIKE. (AS PROVIDED BY ELECTRICAL CONTRACTOR) JUNCTION BOX AT DOOR STRIKE LOCATION.
EH	ELECTRONIC DOOR HOLDER. (AS PROVIDED BY ELECTRICAL CONTRACTOR) JUNCTION BOX AT DOOR HOLDER LOCATION.
HDR	CARD ACCESS READER, CONSISTING OF 4" SQUARE JUNCTION BOX AT 48" A.F.F., 120VOAV LOW VOLTAGE TRANSFORMER
	SINGLE BUTTON 'DOOR RELEASE' DEVICE. E.C. SHALL FURNISH AND INSTALL J-BOX AND 3/4" CONDUIT STUBBED UP ABOVE CEILING AND WIRE INSTALLED FROM DEVICE BOX TO DOOR RELEASE CONTACT.
	SINGLE BUTTON 'PANIC' DEVICE. E.C. SHALL FURNISH AND INSTALL J-BOX AND 3/4" CONDUIT STUBBED UP ABOVE CEILING AND WIRE INSTALLED FROM DEVICE BOX TO SECURITY SYSTEM HEAD-END EQUIPMENT LOCATION. SECURITY VENDOR TO FURNISH AND INSTALL DEVICES, DEVICE PLATES, TERMINATIONS AND PROGRAMMING.
	SECURITY KEYPAD. E.C. SHALL FURNISH AND INSTALL J-BOX AND 3/4" CONDUIT STUBBED UP ABOVE CEILING AND WIRE INSTALLED FROM DEVICE BOX TO I.T. ROOM WITH 10' SLACK COILED UP IN ROOM.
INT	INTERIOR CAMERA LOCATION. CAT6 CABLE
EXT	EXTERIOR WEATHERPROOF RATED CAMERA LOCATION. CAT6 CABLE
EPO	EMERGENCY POWER OFF BUTTON
SCP	SECURITY CONTROL PANEL
FACP	FIRE ALARM CONTROL PANEL
FAA	FIRE ALARM REMOTE ANNUNCIATOR
S	PHOTOVOLTAIC SYSTEM SMOKE DETECTOR. R = ELEVATOR RECALL
H	RATE OF RISE SYSTEM HEAT DETECTOR
S	PHOTOELECTRIC SYSTEM DUCT SMOKE DETECTOR WITH REMOTE TEST STATION.
S	FIRE ALARM SYSTEM CARBON MONOXIDE DETECTOR.
S	FIRE ALARM SYSTEM COMBINATION SMOKE/CO DETECTOR.
	FIRE ALARM WALL MOUNTED STROBE LIGHT.
	FIRE ALARM HORN STROBE.
	FIRE SPEAKER STROBE.
F	FIRE ALARM BELL
F	FIRE ALARM PULLSTATION.
	SPRINKLER FLOW SWITCH
	SPRINKLER VALVE TAMPER SWITCH
FR	FIRE ALARM SHUT-DOWN RELAY
	FIRE ALARM EMERGENCY PHONE

LIGHTING DEVICES & CONTROLS

SYMBOL	DESCRIPTION
$_{S}$#	20A, 120-277V AC, SINGLE POLE TOGGLE SWITCH. '3' = THREE WAY TOGGLE SWITCH, '4' = FOUR WAY TOGGLE SWITCH
$_{D}$	24V DC, DIGITAL, TOGGLE, SINGLE BUTTON WALL SWITCH. SWITCH SHALL BE MODEL #LORKON-C1x AS MANUFACTURED BY LEVITON OR EQUAL.
$_{DD}$	24V DC, DIGITAL, DIMMING, DOUBLE BUTTON WALL SWITCH. SWITCH SHALL BE MODEL #LORKON-C2x AS MANUFACTURED BY LEVITON OR EQUAL.
$_{A}$	28V DC, ANALOG, TOGGLE, LOW VOLTAGE, SINGLE BUTTON WALL SWITCH. SWITCH SHALL BE MODEL #PLVSW-1x AS MANUFACTURED BY LEVITON OR EQUAL.
$_{AD}$	28V DC, ANALOG, DIMMING, LOW VOLTAGE, FOUR BUTTON WALL SWITCH. SWITCH SHALL BE MODEL #PLVSW-4x AS MANUFACTURED BY LEVITON OR EQUAL.
$_{OC1}$	20A, 120-277V AC, SINGLE BUTTON, 0-10V DIMMING WALL MOUNT, PASSIVE INFRARED, SINGLE RELAY OCCUPANCY SENSOR AS MANUFACTURED BY LEVITON MODEL #OSH10-0ID OR EQUAL.
$_{OC2}$	20A, 120-277V AC, TWO BUTTON WALL MOUNT, DUAL TECHNOLOGY (PASSIVE INFRARED AND ULTRASONIC), DUAL RELAY OCCUPANCY SENSOR AS MANUFACTURED BY LEVITON MODEL #OSDD-IDx OR EQUAL.
$_{OC3}$	20A, 120-277V AC, SINGLE BUTTON, 0-10V DIMMING WALL MOUNT, PASSIVE INFRARED, SINGLE RELAY OCCUPANCY SENSOR AS MANUFACTURED BY LEVITON MODEL #OD0-10ID-0ID OR EQUAL.
$_{D10}$	20A, 120-277VAC, ELECTRO-MECHANICAL, 0-10V DIMMING SWITCH AS MANUFACTURED BY LEVITON MODEL #IP710-0OZ.
$_{CC}$	20A, 120-277VAC, RGBW LED LIGHTING CONTROLLER SWITCH. COLORDIAL PRO AS MANUFACTURED BY COLOR KINETICS OR EQUAL. E.C. SHALL FURNISH AND INSTALL ALL WIRING TO CONTROLLER SWITCH FROM CONTROLLER IN WATCH OFFICE.
OC	2000 SQ. FT. COVERAGE SMART CEILING MOUNTED OCCUPANCY SENSOR, 120-277V AC, DUAL TECHNOLOGY (ULTRASONIC AND PASSIVE INFRARED). SENSOR SHALL BE MODEL #ACSD-DMV AS MANUFACTURED BY LEVITON OR EQUAL.
OC1	1500 SQ. FT. COVERAGE CEILING MOUNTED OCCUPANCY SENSOR AND PHOTOCELL, 24V DC, DUAL TECHNOLOGY (MICROWAVE AND PASSIVE INFRARED). SENSOR SHALL BE MODEL #OSP15-MOW AS MANUFACTURED BY LEVITON OR EQUAL. OCCUPANCY SENSOR SHALL BE FED FROM DIGITAL ROOM CONTROLLER.
OC2	2000 SQ. FT. COVERAGE CEILING MOUNTED OCCUPANCY SENSOR, 24V DC, DUAL TECHNOLOGY (ULTRASONIC AND PASSIVE INFRARED). SENSOR SHALL BE MODEL #OSC2D-MAN AS MANUFACTURED BY LEVITON OR EQUAL. OCCUPANCY SENSOR SHALL BE FED FROM DIGITAL ROOM CONTROLLER. OCCUPANCY SENSOR SHALL BE PROVIDED WITH A 2-PORT ANALOG INTERFACE, MODEL #ORDD-C82 AS MANUFACTURED BY LEVITON.
	1200 SQ. FT. COVERAGE WALL MOUNTED OCCUPANCY SENSOR, 24V DC, DUAL TECHNOLOGY (ULTRASONIC AND PASSIVE INFRARED). SENSOR SHALL BE MODEL #DSHV-MAW AS MANUFACTURED BY LEVITON OR EQUAL. OCCUPANCY SENSOR SHALL BE FED FROM DIGITAL ROOM CONTROLLER. OCCUPANCY SENSOR SHALL BE PROVIDED WITH A 2-PORT ANALOG INTERFACE, MODEL NUMBER #DRDD-C82 AS MANUFACTURED BY LEVITON.
RCD1	20A, 120V-277V AC, 60HZ, ON/OFF/0-10V DIMMING DIGITAL ROOM CONTROLLER. SINGLE RELAY, UL LISTED, AS MANUFACTURED BY LEVITON MODEL #DRCD1-E00 OR EQUAL.
RCSP	20A, 120V-277V AC, 60HZ, ON/OFF/0-10V DIGITAL ROOM CONTROLLER SMART PACK, SINGLE RELAY, UL LISTED, MODEL #DRCD1-E0D AS MANUFACTURED BY LEVITON OR EQUAL.

COMMUNICATION DEVICES

SYMBOL	DESCRIPTION
AS	ALERTING SYSTEM CEILING MOUNTED SPEAKER, 70V 2.5KW
BS	ALERTING SYSTEM CEILING MOUNTED BATHROOM SPEAKER, 1 W
WS	ALERTING SYSTEM WALL MOUNTED SPEAKER, 2W
SS	ALERTING SYSTEM CEILING MOUNTED OMNIDIRECTIONAL SPEAKER, 7.5W
HS	ALERTING SYSTEM WALL MOUNTED EXTERIOR SPEAKER, 7.5W
LED	ALERTING SYSTEM CEILING MOUNTED LED LIGHT/SPEAKER, 2.5W
S	ALERTING SYSTEM CEILING MOUNTED RED LED CLUSTER LIGHT
RB	ALERTING SYSTEM CEILING MOUNTED COLORED LED STROBE LIGHT
MCL	ALERTING SYSTEM CEILING MULTI-COLOR LIGHT
RB	ALERTING SYSTEM ABOVE CEILING RB RELAY
APS	ALERTING SYSTEM ALERTING CONTROLLER
I	ALERTING SYSTEM CEILING MOUNTED TROUBLE STROBE
I	ALERTING SYSTEM WALL MOUNTED EMERGENCY ALERT
AD	ALERTING SYSTEM WALL MOUNTED COMMERCIAL ALERTING DISPLAY
$_{WVS}$	WALL MOUNTED VOLUME CONTROL, 10W, 4/8" MH
$_{WVS}$	WALL MOUNTED VOLUME CONTROL, 35W, 48" MH
$_{WSS}$	WALL MOUNTED 4 BUTTON ALERT SELECTOR, 48" MH
$_{WSS}$	WALL MOUNTED 3 BUTTON ALERT SELECTOR, 48" MH
$_{WS}$	WALL MOUNTED 2 BUTTON MANUAL ALERT, 48" MH
$_{WS}$	WALL MOUNTED MEDICAL EMERGENCY BUTTON, 48" MH
$_{WR}$	WALL MOUNTED RESET BUTTON, 48" MH
$_{WSR}$	WALL MOUNTED STOVE RESET BUTTON, 48" MH
$_{WSD}$	WALL MOUNTED SPEAKER/AUDIO DISCONNECT
$_{WSD}$	WALL MOUNTED STOVE DISCONNECT
DS	FLUSH OR SURFACE MOUNTED APS DOORBELL
	STAINLESS STEEL WEATHER RESISTANT DOOR STATION LOCATION WITH VIDEO CAMERA.
MS	WALL MOUNTED VIDEO DOORBELL MASTER STATION LOCATION.
	WALL MOUNTED SPEAKER

GENERAL

SYMBOL	DESCRIPTION
#	KEYED NOTE (SEE KEYNOTE ON PLAN)
XX-1	MECHANICAL EQUIPMENT TAG
ROOM NAME XX	ROOM TAG
X.4	TYPICAL BRANCH CIRCUITING HOME RUN SYMBOL. GENERALLY: 15A AND 20A BRANCH CIRCUITS CONSISTS OF (2) #12 AWG CU. AND (1) #12 AWG CU. GND. IN 3/4" CONDUIT, UNLESS OTHERWISE NOTED. "X" IDENTIFIES PANELBOARD DESIGNATION, "#" IDENTIFIES PANELBOARD CIRCUIT NUMBER.
	LIGHT AND SOLID SYMBOL INDICATES EXISTING TO REMAIN
	DARK AND SOLID SYMBOL INDICATES NEW WORK
	DARK AND DASHED SYMBOL INDICATES DEMOLISHED.

* NOTE *
ALL OF GENERAL NOTES ON THIS SHEET ARE TO BE APPLIED TO ALL OTHER DRAWINGS IN THIS SET.THE
SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE USED IN THIS SET OF DRAWINGS.

SYMBOL LEGEND NOTES

POWER DEVICES

WALL MOUNTED WIRING DEVICE NOTES:
- MH = 18" A.F.F. AS MEASURED TO CENTER OF DEVICE BOX U.O.N. (COORDINATE WITH MILLWORK).
- GFI = GFCI TYPE
- U = USB-A & USB-C CHARGING PORT TYPE
- WP = IN USE WEATHERPROOF COVER

ELECTRICAL EQUIPMENT NOTES:
- "NEMA 9" IDENTIFIES NEMA ENCLOSURE TYPE. "#A" IDENTIFIES DISCONNECT SWITCH AMPACITY RATING. "#AF". IF PRESENT, IDENTIFIES APPROXIMATE FUSE RATING.
- UNLESS OTHERWISE NOTED, ALL FUSIBLE DISCONNECT SWITCHES SHALL BE COMPLETE WITH APPROPRIATELY SIZED DE. TD, CL, CLASS RK5 FUSES.
- ALL COMBINATION MOTOR STARTERS SHOWN ON OVERHEAD DOOR MOTORS SHALL BE REVERSING TYPE.
- ALL "MM" DEVICES SHOWN INSTALLED IN DRYWALL SHALL BE INSTALLED IN A 4 GANG WALLBOX. PROVIDE 11"x7-1/2" DEEP WALL BOX, TILE RING (DEPTH AS REQUIRED). STUB-UP (1) 1-1/4" CONDUIT FROM WALL BOX UP TO DATA OUTLET MOUNTED ABOVE BOX AT 72" A.F.F. MOUNTING HEIGHT TO BOTTOM OF BOX SHALL BE AS COORDINATED WITH ARCHITECTURAL DRAWINGS. WALLBOX MODEL SHALL BE #EFS84 AS MANUFACTURED BY WIREMOLD LEGRANCE.

TELE/DATA DEVICES

WALL MOUNTED DEVICE NOTES:
- S = SURFACE MOUNTED WITH RACEWAY.
- MH = 18" A.F.F. AS MEASURED TO CENTER OF DEVICE BOX U.O.N. (COORDINATE WITH MILLWORK).

TELE/DATA DEVICE NOTES:
- CABLING AS LISTED. TERMINATED ON DEVICE AND INSTALLED BACK TO IT ROOM.
- ALL DATA DEVICES SHALL CONSIST OF 4" SQUARE BOX, TILE RING (DEPTH AS REQUIRED), 1-1/4" CONDUIT STUBBED UP INTO THE NEAREST EASILY ACCESSIBLE CEILING SPACE.
- UNLESS OTHERWISE NOTED, ALL ETHERNET CABLING SHALL BE CAT-6A.
- E.C. SHALL FURNISH AND INSTALL ALL PATHWAYS, BACK BOXES, CONDUIT, CABLE TRAY, AND PULLSTRINGS.
- LOW-VOLTAGE VENDOR SHALL FURNISH AND INSTALL ALL LOW-VOLTAGE CABLING, JACKS, PATCH PANELS, AND WALLPLATES.
- OWNER SHALL FURNISH SWITCHES AND PATCH CABLES TO E.C. FOR INSTALLATION.

SECURITY DEVICES

SECURITY DEVICE NOTES:
- CABLING AS LISTED, TERMINATED ON DEVICE AND INSTALLED BACK TO SECURITY HEAD END EQUIPMENT.
- E.C. SHALL FURNISH AND INSTALL 3-1/4" CONDUIT STUBBED UP INTO EASILY ACCESSIBLE CEILING SPACE FROM JUNCTION BOX, TRANSFORMERS, TILE RINGS, JUNCTION BOXES, CONDUIT, AND LINE VOLTAGE WIRE.
- SECURITY VENDOR TO FURNISH AND INSTALL DEVICES, DEVICE PLATES, TERMINATIONS, PERFORM ALL PROGRAMMING, AND LOW VOLTAGE CABLING.

MAGSTIK DOOR NOTES:
- CABLING AS LISTED, TERMINATED ON DEVICE AND INSTALLED BACK TO IT ROOM.
- E.C. SHALL PROVIDE 4" SQUARE DEVICE BOX, TILE RING (DEPTH AS REQUIRED), AND 1" CONDUIT STUBBED UP TO EASILY ACCESSIBLE CEILING SPACE WHEN WALL MOUNTED.
- ALL HEAD-END EQUIPMENT, DEVICES, DEVICE PLATES, TERMINATIONS AND PROGRAMING TO BE FURNISHED AND INSTALLED BY SECURITY VENDOR.
- ALL MOUNTING SHALL BE COORDINATED WITH SECURITY VENDOR AND ARCHITECTURAL DRAWINGS.

FIRE ALARM DEVICES

FIRE ALARM DEVICE NOTES:
- E.C. SHALL PROVIDE 4" SQUARE DEVICE BOX, TILE RING (DEPTH AS REQUIRED).
- E.C. SHALL FURNISH AND INSTALL ALL WIRING, CONDUITS, RELAYS, AND FIRE ALARM PROGRAMMING FOR SMOKE DETECTOR INSTALLATION.
- LF = LOW FREQUENCY

LIGHTING DEVICES

LIGHTING CONTROL DEVICE NOTES:
- WALL-MOUNTED LIGHTING SWITCHES, MH = 48" A.F.F. AS MEASURED TO BOTTOM OF DEVICE BOX U.O.N.
- CABLING BETWEEN DIGITAL ROOM CONTROLLER AND DIGITAL WALL SWITCHES SHALL BE CAT-6A CABLE WITH RJ45 CONNECTORS.
- CABLING BETWEEN OCCUPANCY SENSOR/CONTROLLER AND ANALOG WALL SWITCHES SHALL BE LOW VOLTAGE CLASS 2 WIRING.
- E.C. TO INSTALL PER MANUFACTURERS WRITTEN INSTRUCTIONS.
- ALL COLORS AS SELECTED BY ARCHITECT.
- E.C. SHALL MOUNT DIGITAL ROOM CONTROLLER SECURELY ABOVE DROP CEILING IN ACCESSIBLE SPACE.
- ROOM CONTROLLER'S CONTROLLING LIGHTING FED FROM EMERGENCY CIRCUITS SHALL BE PROVIDED WITH AN EMERGENCY BYPASS CONTROLLER AS MANUFACTURED BY LEVITON MODEL #DPD0T-ED0.
- GREENMAX DIGITAL CONFIGURATION APP SHALL BE USED TO PROGRAM THE DIGITAL ROOM CONTROLLERS.

RADIO SYSTEM NOTES

RADIO SYSTEM NOTES:
- E.C. SHALL FURNISH AND INSTALL ALL CONDUIT/CABLE TRAY/PATHWAYS FROM DEVICES TO THE IT ROOM, INCLUDING ALL EXTERIOR WALL MOUNTED CABLE TRAY/CONDUIT PATHWAYS, CABLE ENTRY PORT PANELS, AND ALL SYSTEM GROUNDING.
- LOW-VOLTAGE VENDOR SHALL FURNISH AND INSTALL ALL ASSOCIATED LOW VOLTAGE WIRING.
- RADIO SYSTEM VENDOR SHALL FURNISH AND INSTALL ALL ASSOCIATED DEVICES AND ANTENNA WIRING AND CABLING.

COMMUNICATION DEVICES

WALL MOUNTED BUTTON NOTES:
- S = SURFACE MOUNTED WITH RACEWAY.
- MH = 48" A.F.F. AS MEASURED TO CENTER OF DEVICE BOX U.O.N. (COORDINATE WITH MILLWORK).

ALERTING SYSTEM DEVICE NOTES:
- E.C. SHALL FURNISH AND INSTALL J-BOXES AND 3/4" CONDUIT INSTALLED BACK TO IT ROOM WITH PULLSTRINGS.
- E.C. SHALL INSTALL ALL DEVICES, DEVICE PLATES, CONDUITS, PATHWAYS, PULLSTRINGS AND ALL UNLESS OTHERWISE NOTED.
- APS VENDOR SHALL FURNISH ALL DEVICES, INCLUDING MONITORS, AND COMPLETE ALL HEAD-END SYSTEM TIE-INS AND SYSTEM TESTING.
- LOW VOLTAGE VENDOR SHALL FURNISH AND INSTALL ALL ASSOCIATED LOW VOLTAGE WIRING.
- REFER TO ARCHITECTURAL DRAWINGS SET FOR SYSTEM SPECIFICATIONS.

INTERCOM SYSTEM NOTES:
- E.C. SHALL FURNISH AND INSTALL ALL HEAD-END EQUIPMENT, DEVICE, PROGRAMMING AND TERMINATIONS UNLESS OTHERWISE NOTED.
- E.C. SHALL FURNISH AND INSTALL RECESSED 4" SQ. JUNCTION BOX, 3/4" CONDUIT STUBBED UP TO ACCESSIBLE SPACE ABOVE CEILING, AND CABLING RUN TO HEAD-END EQUIPMENT.

GENERAL DEVICE NOTES

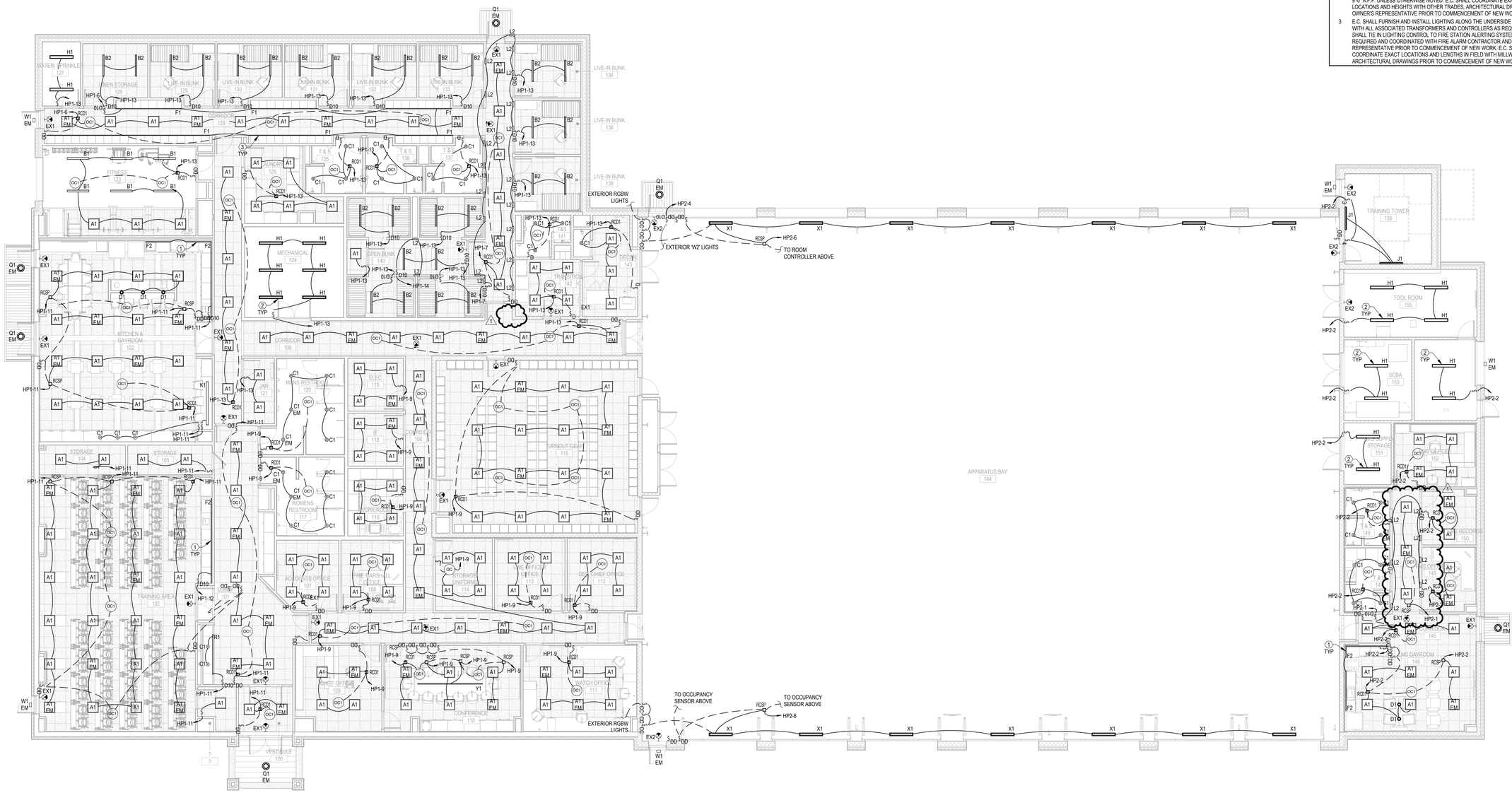
DEVICE KEY:
- XX" = MOUNTING HEIGHT A.F.F.
- S = SURFACE MOUNTED WITH WIREMOLD RACEWAY
- T = TAMPER PROOF
- WP = WEATHERPROOF
- ISO = GASKETED STAINLESS STEEL COVERPLATE

ELECTRICAL ABBREVIATIONS LIST

1P	1 POLE (2P, 3P, 4P, ETC.)	DCP	DOMESTIC WATER CIRCULATING PUMP	HT	HEIGHT	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
A	AMPERE	DEPT	DEPARTMENT	HTG	HEATING	NFDS	NON-FUSED SAFETY DISCONNECT SWITCH
AC	ABOVE COUNTER OR AIR CONDITIONER	DET	DETAIL	HTR	HEATER	NIC	NOT IN CONTRACT
ACLG	ABOVE CEILING	DIA	DIAMETER	HV	HIGH VOLTAGE	NL	NIGHT LIGHT
ADO	AUTOMATIC DOOR OPENER	DISC	DISCONNECT	HVAC	HEATING, VENTILATING AND AIR CONDITIONING	NO	NORMALLY OPEN
AF	AMP FRAME	DIST	DISTRIBUTION	HWP	HYDRONIC WATER PUMP	NPF	NORMAL POWER FACTOR
AFF	ABOVE FINISHED FLOOR	DN	DOWN	IC	INTERRUPTING CAPACITY	NTS	NOT TO SCALE
AFG	ABOVE FINISHED GRADE	DPR	DAMPER	IG	ISOLATED GROUND	OH	OVERHEAD
AFI	ARC FAULT CIRCUIT INTERRUPTER	DS	SAFETY DISCONNECT SWITCH	IMC	INTERMEDIATE METAL CONDUIT	OL	OVERLOADS
AHU	AIR HANDLING UNIT	DT	DOUBLE THROW	INCAND	INCANDESCENT	OPD	PUBLIC ADDRESS
AL	ALUMINUM	DWG	DRAWING	IR	INFRARED	PA	PULL BOX OR PUSHBUTTON
ALT	ALTERNATE	EC	ELECTRICAL CONTRACTOR	IW	INTERLOCK WITH	PB	PNEUMATIC ELECTRIC
AMP	AMPERE	ELEC	ELECTRIC, ELECTRICAL	J-BOX	JUNCTION BOX	PE	PEDESTAL
AMPL	AMPLIFIER	ELEV	ELEVATOR	KV	KILOVOLT	PED	POTENTIAL TRANSFORMER
ANNUN	ANNUNCIATOR	EM	EMERGENCY	KVA	KILOVOLT-AMPERE	PT	POLYVINYL CHLORIDE (CONDUIT)
APPROX	APPROXIMATELY	EMS	ENERGY MANAGEMENT SYSTEM	KW	KILOWATT	PVC	POWER FACTOR
AQ-STAT	AQUASTAT	EMT	ELECTRICAL METALLIC TUBING	KWH	KILOWATT HOUR	PF	PHASE
ARCH	ARCHITECT, ARCHITECTURAL	EP	ELECTRIC PNEUMATIC	LOC	LOCATE OR LOCATION	PH	POST INDICATING VALVE
AS	AMP SWITCH	E.C.P.	ELECTRICAL PRIME CONTRACTOR	LT	LIGHT	PIV	PANEL
AT	AMP TRIP	EQUIP	EQUIPMENT	LTG	LIGHTING	PNL	POWER POLE
ATS	AUTOMATIC TRANSFER SWITCH	EWC	ELECTRIC WATER COOLER	LTNG	LIGHTNING	PP	PAIR
AUTO	AUTOMATIC	EXIST	EXISTING	LV	LOW VOLTAGE	PR	PRIMARY
AUX	AUXILIARY	EXH	EXHAUST	MAX	MAXIMUM	PRI	PROJECTION
AV	AUDIO VISUAL	EXP	EXPLOSION PROOF	MAGS	MAGNETIC STARTER	PROJ	POWER ROOF VENTILATOR
AWG	AMERICAN WIRE GAUGE	FA	FIRE ALARM	MBP	MAIN BREAKER POWER	PRV	POTENTIAL TRANSFORMER
BATT	BATTERY	FABP	FIRE ALARM BOOSTER POWER SUPPLY PANEL	MC	MOMENTARY CONTACT	PT	POLYVINYL CHLORIDE (CONDUIT)
BD	BOARD	FACP	FIRE ALARM CONTROL PANEL	MC	MECHANICAL CONTRACTOR	PVC	POWER
BLDG	BUILDING	FCU	FAN COIL UNIT	MCB	MAIN CIRCUIT BREAKER	QUAN	QUANTITY
BMS	BUILDING MANAGEMENT SYSTEM	FIXT	FIXTURE	MCC	MOTOR CONTROL CENTER	QUANT	QUANTITY
C	CONDUIT	FLR	FLOOR	MDC	MAIN DISTRIBUTION CENTER	RCPT	RECEPTACLE
CAB	CABINET	FLUOR	FLUORESCENT	MDP	MAIN DISTRIBUTION PANEL	REQD	REQUIRED
CAT	CATALOG	FU	FUSE	MFR	MANUFACTURER	RM	ROOM
CATV	CABLE TELEVISION	FUDS	FUSED SAFETY DISCONNECT SWITCH	MFRS	MANUFACTURERS	RGC	RIGID STEEL CONDUIT
CB	CIRCUIT BREAKER	GA	GAUGE	MH	MANHOLE	RTU	ROOF TOP UNIT
CCTV	CLOSED CIRCUIT TELEVISION	GAL	GALLON	MIC	MICROPHONE	SC	SURFACE CONDUIT
CKT	CIRCUIT	GALV	GALVANIZED	MIN	MINIMUM	SEC	SECONDARY
CLG	CEILING	GC	GENERAL CONTRACTOR	MISC	MISCELLANEOUS	SHT	SHEET
COMB	COMBINATION	GEN	GENERATOR	MLO	MAIN LUGS ONLY	SIM	SIMILAR
COMPR	COMPRESSOR	GFI	GROUND FAULT CIRCUIT INTERRUPTER	MMS	MANUAL MOTOR STARTER	SIN	SOLID NEUTRAL
CONN	CONNECTION	GFP	GROUND FAULT PROTECTOR	MOA	MULTIOUTLET ASSEMBLY	SPEC	SPECIFICATION
CONST	CONSTRUCTION	GND	GROUND	MSP	MOTOR STARTER PANELBOARD	SPKR	SPEAKER
CONT	CONTINUATION OR CONTINUOUS	GRS	GALVANIZED RIGID STEEL (CONDUIT)	MSBD	MAIN SWITCHBOARD	SP	SPARE
CONTR	CONTRACTOR	HP	HORSEPOWER	MT	MOUNT	SR	SURFACE RACEWAY
CONV	CONVECTOR	HOA	HANDS-OFF-AUTOMATIC SWITCH	MTC	EMPTY CONDUIT	SS	STAINLESS STEEL
CP	CIRCULATING PUMP	HORIZ	HORIZONTAL	MTS	MANUAL TRANSFER SWITCH	SSW	SELECTOR SWITCH
CRT	CATHODE-RAY TUBE	HPF	HIGH POWER FACTOR	MTR	MOTOR, MOTORIZED	STA	STATION
CT	CURRENT TRANSFORMER			N.C.	NORMALLY CLOSED	STD	STANDARD
CTR	CENTER			NEC	NATIONAL ELECTRICAL CODE	SURF	SURFACE MOUNTED
CU	COPPER					SW	SWITCH
						SWBD	SWITCHBOARD
						SYM	SYMMETRICAL
						SYS	SYSTEM
						TEL	TELEPHONE
						TERM	TERMINAL
						TL	TWIST LOCK
						TR	TAMPER RESISTANT
						T-STAT	THERMOSTAT
						TTC	TELEPHONE TERMINAL CABINET
						TV	TELEVISION
						TVTC	TELEVISION TERMINAL CABINET
						TYP	TYPICAL
						UC	UNDER COUNTER
						UE	UNDERGROUND ELECTRICAL
						UG	UNDERGROUND
						UH	UNIT HEATER
						UT	UNDERGROUND TELEPHONE
						UTIL	UTILITY
						UV	UNIT VENTILATOR OR ULTRAVIOLET
						V	VOLT
						VA	VOLT-AMPERES
						VDT	VIDEO DISPLAY TERMINAL
						VERT	VERTICAL
						VFD	VARIABLE FREQUENCY DRIVE
						VOL	VOLUME
						W	WATT
						W	WITH
						WG	WIRE GUARD
						WH	WATER HEATER
						W/O	WITHOUT
						WP	WEATHERPROOF
						XFMR	TRANSFORMER
						XFR	TRANSFER
						@	AT
						'	FEET
						"	INCHES
						#	NUMBER
						Ø	PHASE
						C	CENTER LINE
						P	PLATE

GENERAL ELECTRICAL NOTES

1. IF THERE IS A DISCREPANCY BETWEEN THE DRAWINGS, SCHEDULES, AND/OR SPECIFICATIONS, THE CONTRACTOR IS REQUIRED TO PROVIDE THE MORE STRINGENT OR HIGHER-COST OPTION UNLESS THEY SEEK CLARIFICATION VIA AN RFI BEFORE PROCEEDING.
2. ALL CONDUCTORS OPERATING AT 50 VOLTS OR GREATER SHALL BE IN RACEWAY. ALL RACEWAY WITHIN THE STRUCTURE ABOVE THE FLOOR SLAB SHALL BE METAL. RACEWAY BELOW THE FLOOR SLAB AND UNDERGROUND RACEWAY OUTSIDE THE STRUCTURE SHALL BE PVC.
3. ALL LOW VOLTAGE CABLES OR CONDUCTORS OPERATING AT LESS THAN 50 VOLTS SHALL BE IN METAL RACEWAY WHERE INSTALLED WITHIN WALLS OR INACCESSIBLE SPACES. LOW VOLTAGE CABLES MAY BE RUN IN CABLE TRAY, WHERE NOTED. LOW VOLTAGE CABLES MAY BE RUN IN CABLE SUPPORT.
4. HOOKS ABOVE ACCES



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

GENERAL LIGHTING NOTES

A ALL LIGHTING FIXTURES SHALL BE FED FROM A JUNCTION BOX WITH 6' WHIPS.

B E.C. SHALL COORDINATE MOUNTING HEIGHTS OF ALL LIGHTS AND EXIT SIGNS IN FIELD WITH CEILING TYPES AND ARCHITECTURAL DRAWINGS.

C ALL ROOM CONTROLLERS AND OCCUPANCY SENSORS SHALL BE SET FOR 20 MIN. MAX VACANCY TIME.

D ALL EXIT SIGNS SHALL BE FED UNSWITCHED FROM THE NEAREST LOCAL LIGHTING CIRCUIT IN AREA IN WHICH FIXTURE IS SERVING.

E ALL WIRING SHOWN DASHED FROM ROOM CONTROLLERS REPRESENT LOW VOLTAGE CAT-6 WIRING. ALL DARK SOLID LINES SHOWN FROM ROOM CONTROLLERS REPRESENTS LINE VOLTAGE SWITCH LEGS. IF MULTIPLE SWITCH LEGS ARE SHOWN FROM ROOM CONTROLLER EACH IS FED FROM A SEPARATE RELAY INTEGRAL TO THE CONTROLLER, AS SUCH, EACH RELAY SHALL BE CONTROLLED BY IT'S OWN MANUAL CONTROL DEVICE, IF PRESENT IN THE AREA, AND SHALL BE PROGRAMMED TO BE OVERALL CONTROLLED BY THE OCCUPANCY SENSOR AS SHOWN IN LIGHTING CONTROL SCHEDULE.

F E.C. SHALL REFER TO LIGHTING CONTROL WIRING DIAGRAMS ON DRAWING E000 FOR ADDITIONAL LIGHTING CONTROL INFORMATION.

G ALL LIGHTING INSTALLED IN PATHS OF EGRESS THAT ARE CONTROLLED BY OCCUPANCY SENSORS SHALL HAVE A FIRE ALARM CONTROL MODULE FURNISHED, INSTALLED, AND WIRED INTO THE LIGHTING CONTROLLER TO AUTOMATICALLY PUSH LIGHTING TO 100% ON IN EVENT OF FIRE ALARM SYSTEM ACTIVATION. E.C. SHALL FURNISH AND INSTALL AN ADDITIONAL RCSP DEVICE TO INTERFACE BETWEEN THE LIGHTING CONTROL SYSTEM AND FIRE ALARM SYSTEM INPUT. E.C. SHALL INSTALL ALL WIRING AND DEVICES PER MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS.

H ROOM CONTROLLERS ARE SHOWN IN THEIR LOCATIONS FOR CIRCUITING CLARITY. E.C. SHALL FURNISH AND INSTALL ALL ROOM CONTROLLERS IN EASILY ACCESSIBLE LOCATION ABOVE CEILING.

J ALL LOCATIONS SHOWN WITH MULTIPLE SWITCHES SHALL BE INSTALLED IN A MULTI-GANG BOX FOR QUANTITY OF DEVICES AS SHOWN ON PLANS. E.C. SHALL COORDINATE ALL LOCATIONS AND QUANTITIES WITH ELECTRICAL AND ARCHITECTURAL DRAWINGS.

KEYNOTES

1 E.C. SHALL FURNISH AND INSTALL UNDER CABINET LIGHTING WITH ALL ASSOCIATED TRANSFORMERS AND CONTROLLERS AS REQUIRED. E.C. SHALL COORDINATE EXACT LOCATIONS AND LENGTHS IN FIELD WITH MILLWORK AND ARCHITECTURAL DRAWINGS PRIOR TO COMMENCEMENT OF NEW WORK.

2 E.C. SHALL FURNISH AND INSTALL LIGHT FIXTURES IN EXPOSED CEILING AREAS AT 9'-0" A.F.F. UNLESS OTHERWISE NOTED. E.C. SHALL COORDINATE EXACT LOCATIONS AND HEIGHTS WITH OTHER TRADES, ARCHITECTURAL DRAWINGS, AND OWNER'S REPRESENTATIVE PRIOR TO COMMENCEMENT OF NEW WORK.

3 E.C. SHALL FURNISH AND INSTALL LIGHTING ALONG THE UNDERSIDE OF TOE KICK WITH ALL ASSOCIATED TRANSFORMERS AND CONTROLLERS AS REQUIRED. E.C. SHALL TIE IN LIGHTING CONTROL TO FIRE STATION ALERTING SYSTEM AS REQUIRED AND COORDINATED WITH FIRE ALARM CONTRACTOR AND OWNER'S REPRESENTATIVE PRIOR TO COMMENCEMENT OF NEW WORK. E.C. SHALL COORDINATE EXACT LOCATIONS AND LENGTHS IN FIELD WITH MILLWORK AND ARCHITECTURAL DRAWINGS PRIOR TO COMMENCEMENT OF NEW WORK.

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EXETER TOWNSHIP
EMERGENCY SERVICES FACILITY
70 GIBRALTAR ROAD
READING PA 19606

PROJECT NUMBER: 25-049

SUBMISSION:
BID SET

ORIGINAL ISSUE DATE:
10/01/2026

SHEET REVISION SCHEDULE:

No.	DATE
1	10/15/26

LAST PROJECT REVISION: No 1 | 10/15/26

FIRST FLOOR LIGHTING PLAN

SHEET NUMBER:

E301

10/15/2026 11:50:09 AM

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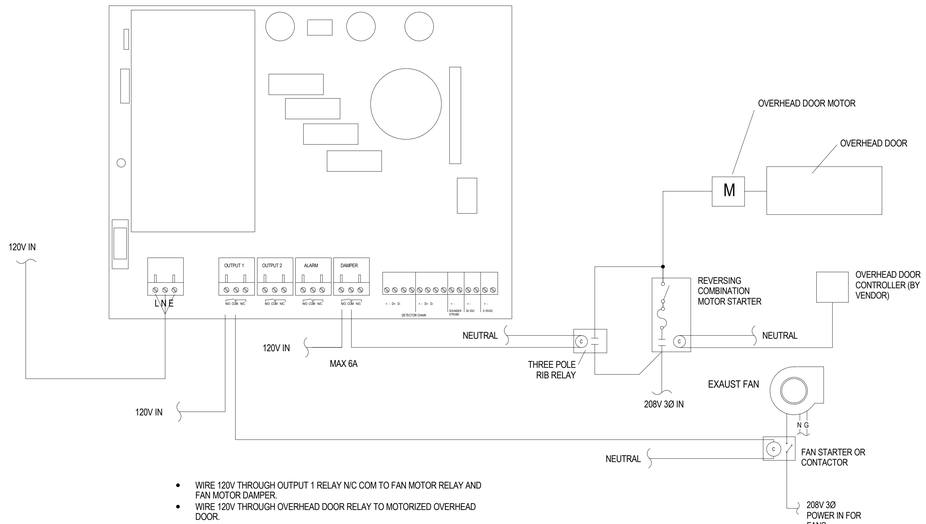
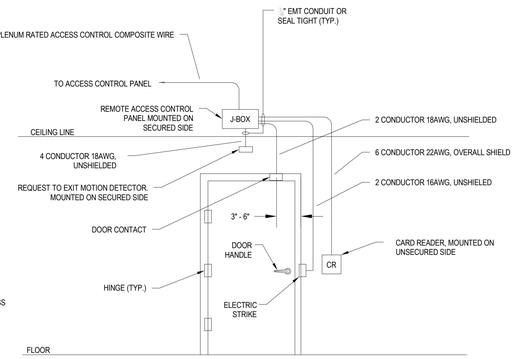
LIGHTING FIXTURE SCHEDULE (PROJECT)

TYPE	WATTS	VOLTS	LAMP TYPE	KELVIN TEMP	MANUFACTURER/MODEL (OR APPROVED EQUAL)	DESCRIPTION	REMARKS
A1	35W	277V	LED	3500 K	ELITE / 22-OAT1-LED-2000L/3000L/4000L-DIM10-120-MVOLT-30K/35K/40K-85	2'x2' ARCHITECTURAL ARCHITECTURAL VOLUMETRIC SHALLOW RECESSED LED TROFFER FIXTURE, ROLLED STEEL BODY, WHITE FINISH, 0-10V ELECTRONIC DIMMING DRIVER	
A1 EM	35W	277V	LED	3500 K	ELITE / 22-OAT1-LED-2000L/3000L/4000L-DIM10-120-MVOLT-30K/35K/40K-85-0-EMG-LED-10W	2'x2' ARCHITECTURAL ARCHITECTURAL VOLUMETRIC SHALLOW RECESSED LED TROFFER FIXTURE, ROLLED STEEL BODY, WHITE FINISH, 0-10V ELECTRONIC DIMMING DRIVER	ALL FIXTURES MARKED 'EM' SHALL BE PROVIDED WITH 90 MINUTE MINIMUM INTEGRATED EMERGENCY BATTERY BACKUP.
B1	40W	277V	LED	3500 K	ELITE / OLS-DI-LED-2-S-4'-D750L-US00L-BW-1C-DIM10-MVOLT-35K-90-WH	4' ARCHITECTURAL SUSPENDED LINEAR FIXTURE, ALUMINUM HOUSING, ACRYLIC LENS, 0-10V ELECTRONIC DIMMING DRIVER	
B2	26W	277V	LED	3500 K	ELITE / OLS-R-LED-4-TB-3G-S-4'-750L-DIM10-MVOLT-3500K-90-WH	4' LINEAR LAY-IN LUMINAIRE, WHITE FINISH, 0-10V ELECTRONIC DIMMING DRIVER, 4" FLUSH LENS	
C1	18W	277V	LED	3500 K	ELITE / HH4-1500L-DIM10-MVOLT-MWD-35K-90-HH4-4501-XX-XX-XX	4' ROUND DOWNLIGHT, ALUMINUM DIE-CAST BODY AND TRIM, 0-10V ELECTRONIC DIMMING DRIVER	
C1 EM	18W	277V	LED	3500 K	ELITE / HH4-1500L-DIM10-MVOLT-MWD-35K-90-EMG-LED-10W-HH4-4501-XX-XX-XX	4" ROUND DOWNLIGHT, ALUMINUM DIE-CAST BODY AND TRIM, 0-10V ELECTRONIC DIMMING DRIVER	ALL FIXTURES MARKED 'EM' SHALL BE PROVIDED WITH 90 MINUTE MINIMUM INTEGRATED EMERGENCY BATTERY BACKUP.
D1	15W	277V	LED	3500 K	ELITE / SCH6-LED-PM-1500L-DIM10-MVOLT-MD-35K-90+-BK--HH6-6501	6' ROUND CYLINDER PENDANT, SUSPENDED MOUNT, MEDIUM DISTRIBUTION, ALUMINUM HOUSING, SOFT FOCUS CANOPY	
EX1	3W	277V	LED		EVENLITE / SOVII-EM-G-1M-BA-SU-XX-IR	SINGLE FACE UNIVERSAL MOUNT EXIT SIGN, ALUMINUM HOUSING,BRUSHED ALUMINUM FINISH, ACRYLIC BODY WITH MIRROR FINISH, GREEN LETTERS, CHEVERONS AS NECESSARY, 90 MINUTE MINIMUM EMERGENCY BACKUP BATTERY	EXIT SIGNS SHALL BE MOUNTED CENTERED OVER EGRESS DOORS.
EX2	3W	277V	LED		EVENLITE / TWL-EM-G-1U-W-SD-TP	SINGLE FACE WET LOCATION EXIT SIGN, THERMOPLASTIC HOUSING, GREEN LETTERS, CHEVERONS AS NECESSARY, 90 MINUTE MINIMUM EMERGENCY BACKUP BATTERY	EXIT SIGNS SHALL BE MOUNTED CENTERED OVER EGRESS DOORS.
F1	4.4W/FT	24VDC	LED	2700 K	TARGETTI / DL-ED-44-I-27-HC024-A-DL-ALUM-U-8-DELI901241CPWM	36 LED/FT TAPELIGHT, FACTORY PREPPED ENDS, REMOTE POWER SUPPLY, ALUMINUM MOUNTING CHANNEL, FIELD CUTTABLE	E.C. SHALL TAKE-OFF ALL LENGTHS OF TAPELIGHT FROM DRAWINGS AND SHALL CONFIRM LENGTHS IN FIELD WITH ACTUAL LIGHT FIXTURE LOCATION DIMENSIONS. E.C. TO PROVIDE ADEQUATE NUMBER OF DRIVERS FOR TAPELIGHT OPERATION. E.C. SHALL MOUNT TAPELIGHT ON TOE KICK OF LOCKERS. E.C. SHALL COORDINATE INTERCONNECTION OF WIRING WITH FIRE ALARM ALERTING SYSTEM.
F2	4.4W/FT	24VDC	LED	3500 K	TARGETTI / DL-ED-44-I-27-HC024-A-DL-ALUM-U-8-DELI901241CPWM	36 LED/FT TAPELIGHT, FACTORY PREPPED ENDS, REMOTE POWER SUPPLY, ALUMINUM MOUNTING CHANNEL, FIELD CUTTABLE	E.C. SHALL TAKE-OFF ALL LENGTHS OF TAPELIGHT FROM DRAWINGS AND SHALL CONFIRM LENGTHS IN FIELD WITH ACTUAL LIGHT FIXTURE LOCATION DIMENSIONS. E.C. TO PROVIDE ADEQUATE NUMBER OF DRIVERS FOR TAPELIGHT OPERATION. E.C. SHALL MOUNT TAPELIGHT BELOW CABINETS AS REQUIRED. E.C. SHALL COORDINATE EXACT MOUNTING LOCATION WITH MILLWORK AND ARCHITECTURAL DRAWINGS.
G1	176W	277V	LED	3500 K	ILP / EDV4-24L-U-35-FRL-UP/2L-AC10Y	1.5'x4' HIGHBAY LED FIXTURE, CAST ALUMINUM HOUSING, IMPACT RESISTANT FROSTED ACRYLIC LENS, WHITE FINISH, SUSPENDED CABLE MOUNT, 0-10V ELECTRONIC DIMMING DRIVER	FIXTURE SHALL BE MOUNTED AT 19'-0" A.F.F. AS MEASURED TO BOTTOM OF FIXTURE. E.C. SHALL COORDINATE ALL HEIGHTS IN FIELD WITH OWNER/OWNER'S ONSITE REPRESENTATIVE.
G1 EM	82W	277V	LED	3500 K	ILP / EDV4-24L-U-35-FRL-UP/2L-AC10YL-EM20	1.5'x4' HIGHBAY LED FIXTURE, CAST ALUMINUM HOUSING, IMPACT RESISTANT FROSTED ACRYLIC LENS, WHITE FINISH, SUSPENDED CABLE MOUNT, 0-10V ELECTRONIC DIMMING DRIVER	FIXTURE SHALL BE MOUNTED AT 19'-0" A.F.F. AS MEASURED TO BOTTOM OF FIXTURE. E.C. SHALL COORDINATE ALL HEIGHTS IN FIELD WITH OWNER/OWNER'S ONSITE REPRESENTATIVE.
H1	38W	277V	LED	3500 K	ILP / WTZ4-SL-U-40-RAFL-SS-ACxL/SS	4' LINEAR FULLY ENCLOSED AND GASKETED FIXTURE, FIBERGLASS HOUSING, ELECTRONIC DRIVER, SHALLOW POLYCARBONATE CLEAR LENS, WET LOCATION LISTED, -40ºF COLD START DRIVER, STAINLESS STEEL LATCHE	
H1 EM	38W	277V	LED	4000 K	ILP / WTZ4-SL-U-40-RAFL-SS-ACxL/SS-EM12	4' LINEAR FULLY ENCLOSED AND GASKETED FIXTURE, WHITE FINISH, ELECTRONIC DRIVER, RIBBED FROSTED ACRYLIC LENS, WET LOCATION LISTED, EMERGENCY BATTERY BACKUP	ALL FIXTURES MARKED 'EM' SHALL BE PROVIDED WITH 90 MINUTE MINIMUM INTEGRATED EMERGENCY BATTERY BACKUP.
J1	54W	277V	LED	3500 K	HIGHSLED / HLLX-4-V-T-8-W-T-7-CB-AE	4' LINEAR WALL MOUNTED FIXTURE, WHITE FINISH, OPAL LENS, 0-10V ELECTRONIC DIMMING DRIVER, IP67 RATED	
K1	40W	277V	LED	3500 K	FIXTURE TO BE SELECTED BY ARCHITECT	LINEAR PENDANT MOUNTED FIXTURE	
L1	12W	277V	LED	3000 K	ABOVE ALL LIGHTING / SMWL-12-SW-1-RM-BZ-M-D	EXTERIOR SLIM RECESSED STEP AND WALL LIGHT, ALUMINUM HOUSING, TEMPERED GLASS LENS, 0-10V ELECTRONIC DIMMING DRIVER	
L2	4W	277V	LED	3000 K	WAC / WL-LED200F-30-65-BK	SLIM RECESSED STEP AND WALL LIGHT, ALUMINUM HOUSING, LOW PROFILE, IP67 RATED, 0-10V ELECTRONIC DIMMING DRIVER	
M1	27W	277V	LED	3000 K	LIGMAN / ULH-10665-27W-W30-01-120/277V-GFCI-DIM	42" TALL ROUND BOLLARD LIGHT, BLACK FINISH, MARINE GRADE ALUMINUM HOUSING, POWDER COAT PAINT FINISH, IP66 RATED, WET LOCATION LISTED ELECTRONIC DRIVER	
N1	10W	277V	LED	3000 K	VISTA PRO / 1182-SS-SS-NS-30-C-DV-CX-ND-834-T010	IN GROUND LED SPOT LIGHT, STAINLESS STEEL HOUSING, DRIVE OVER GRADE, NARROW SPOT, CLEAR POLYMER LENS, IP68 RATED, 10 DEGREE TILT OPTIC.	E.C. SHALL PROVIDE (3) AIMINGS PER FIXTURE.
P1	171W	277V	LED	3000 K	NLS LIGHTING / NV-2-13-80L-7-30K8-UNV-ASA-BRZ-BS-MGF-HSS-GL	SINGLE LUMINARE ROADWAY POLE LIGHT FIXTURE, DIE CAST ALUMINUM, MARINE GRADE BRONZE FINISH, TEMPERED GLASS LENS, HOUSE SIDE SHIELD. 0-10V ELECTRONIC DIMMING DRIVER	FIXTURE SHALL BE MOUNTED ONTO 4" ROUND STEEL POLE MODEL #SSSP-22-4R-7G-12BC-SGL-BRZ-136-MGF-UL-PROV AS MANUFACTURED BY NLS LIGHTING WITH A MOUNTING CONFIGURATION OF 'SGL'.
P2	171W	277V	LED	3000 K	NLS LIGHTING / NV-2-T4FTW-80L-7-30K8-UNV-ASA-BRZ-BS-MGF-HSS-GL	SINGLE LUMINARE ROADWAY POLE LIGHT FIXTURE, DIE CAST ALUMINUM, MARINE GRADE BRONZE FINISH, TEMPERED GLASS LENS, HOUSE SIDE SHIELD. 0-10V ELECTRONIC DIMMING DRIVER	FIXTURE SHALL BE MOUNTED ONTO 4" ROUND STEEL POLE MODEL #SSSP-22-4R-7G-12BC-SGL-BRZ-136-MGF-UL-PROV AS MANUFACTURED BY NLS LIGHTING WITH A MOUNTING CONFIGURATION OF 'SGL'.
Q1 EM	21W	277V	LED	3000 K	NLS LIGHTING / VSR-S-T2-16L-40-30K8-UNV-CM-BRZ-MGF	CEILING MOUNTED CANOPY LIGHT FIXTURE, LOW PROFILE. SPUN ALUMINUM, MARINE GRADE BRONZE FINISH	ALL FIXTURES MARKED 'EM' SHALL BE PROVIDED WITH 90 MINUTE MINIMUM INTEGRATED EMERGENCY BATTERY BACKUP.
R1	5W	277V	LED	3500 K	ELITE / FG-L2A-3-35-90 ELITE / FG-RTL2-4 48V GROOVE TRACK	ELITE 48V GROOVE TRACK SYSTEM WITH DIFFUSED 3" ADJUSTABLE TRACK LIGHT	TRACK LIGHTS SHALL BE SPACED 12" ON CENTER FROM EACH OTHER ON GROOVE TRACK. E.C. SHALL COORDINATE EXACT LOCATIONS AND AIMINGS WITH OWNER'S REPRESENTATIVE AND ARCHITECTURAL DRAWINGS PRIOR TO COMMENCEMENT OF NEW WORK.
S1	60W	277V	LED	3000 K	METEOR / LA6-60-309-RGB-UNV-DMX-40-40-BLK-OUT-WW	RGB IP65 RATED WALL CYLINDER DIRECT/INDIRECT LIGHT FIXTURE	
T1	6W/FT	24VDC	LED	3000 K	TARGETTI / DL-PX-60-O-RGBW-24-A-DL-ALUM-U-8-DELI901241CPWM	RGBW EXTERIOR 1ft LED/FT TAPELIGHT, FACTORY PREPPED ENDS, REMOTE POWER SUPPLY, ALUMINUM MOUNTING CHANNEL, FIELD CUTTABLE, IP65 WEATHERPROOF	E.C. SHALL TAKE-OFF ALL LENGTHS OF TAPELIGHT FROM DRAWINGS AND SHALL CONFIRM LENGTHS IN FIELD WITH ACTUAL LIGHT FIXTURE LOCATION DIMENSIONS. E.C. TO PROVIDE ADEQUATE NUMBER OF DRIVERS FOR TAPELIGHT OPERATION. E.C. SHALL MOUNT TAPELIGHT BELOW SOFFIT. E.C. SHALL COORDINATE EXACT MOUNTING TYPE AND LOCATION WITH OWNER'S REPRESENTATIVE PRIOR TO COMMENCEMENT OF NEW WORK.
V1	26W	277V	LED	3000 K	TARGETTI / SOL-CC-FE-L2-ZM-30	ADJUSTABLE FLOODLIGHT PROJECTOR, ANODIZED DIE-CAST ALUMINUM, IP68	E.C. SHALL PROVIDE (3) AIMINGS PER FIXTURE.
W1 EM	37W	277V	LED	3000 K	NLS LIGHTING / NV-2-12-16L-7-30K8-UNV-WM-BRZ-MGF-GL-EM8	SINGLE LUMINARE FULL CUTOFF WALL PACK, DIE-CAST ALUMINUM HOUSING, BRONZE FINISH, OUTDOOR RATED, ONE-PIECE GASKET, IMPACT RESISTANT GLASS LENS, 90 MINUTE MINIMUM EMERGENCY BACKUP BATTERY.	ALL FIXTURES MARKED 'EM' SHALL BE PROVIDED WITH 90 MINUTE MINIMUM INTEGRATED EMERGENCY BATTERY BACKUP.
W2	136	277V	LED	3000 K	NLS LIGHTING / NV-2-T4FTW-64L-7-30K8-UNV-WM-BRZ-MGF-GL	SINGLE LUMINARE FULL CUTOFF WALL PACK, DIE-CAST ALUMINUM HOUSING, BRONZE FINISH, OUTDOOR RATED, ONE-PIECE GASKET, IMPACT RESISTANT GLASS LENS, 90 MINUTE MINIMUM EMERGENCY BACKUP BATTERY.	ALL FIXTURES MARKED 'EM' SHALL BE PROVIDED WITH 90 MINUTE MINIMUM INTEGRATED EMERGENCY BATTERY BACKUP.
X1	33.6W	277V	LED	3500 K	COLOR KINETICS / 423-000035-30	EXTERIOR RATED COMPACT RGBW 4' LINEAR LUMINAIRE, ANODIZED ALUMINUM	
Y1	116W	277V	LED	3500 K	FLUXWERX / VU1-R-A-C-35-S-XX-S-E1-M-03	12'-0" DECORATIVE LINEAR LED PENDANT FIXTURE, BLACK FINISH, CLEAR ACRYLIC LENS, I-BEAM DESIGN, REMOTE 0-10V ELECTRONIC DIMMING DRIVER, AIRCRAFT CABLE HUNG	E.C. SHALL MOUNT FIXTURE AT 6'-0" A.F.F. AS MEASURED TO BOTTOM OF FIXTURE. E.C. SHALL COORDINATE EXACT MOUNTING HEIGHT IN FIELD WITH CONFERENCE ROOM TABLE AND ARCHITECTURAL DRAWINGS PRIOR TO INSTALLATION OF FIXTURE.



- WIRE 120V THROUGH OUTPUT 1 RELAY N/C COM TO FAN MOTOR RELAY AND FAN MOTOR DAMPER.
- WIRE 120V THROUGH OVERHEAD DOOR RELAY TO MOTORIZED OVERHEAD DOOR.
- RELAYS MAX 6A
- SET "DAMPER" OUTPUT TO CHANGE STATE AT SAME TIME AS OUTPUT 1
- COORDINATE ALL CONNECTIONS AND EQUIPMENT REQUIREMENTS WITH OVERHEAD DOOR VENDOR PRIOR TO INSTALLATION.

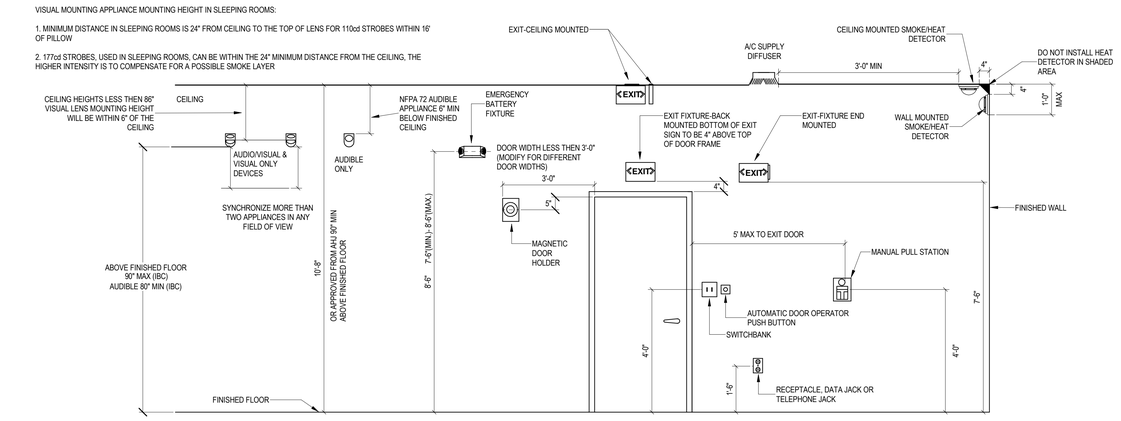
4 PARKSAFE SYSTEM WIRING DIAGRAM
NOT TO SCALE



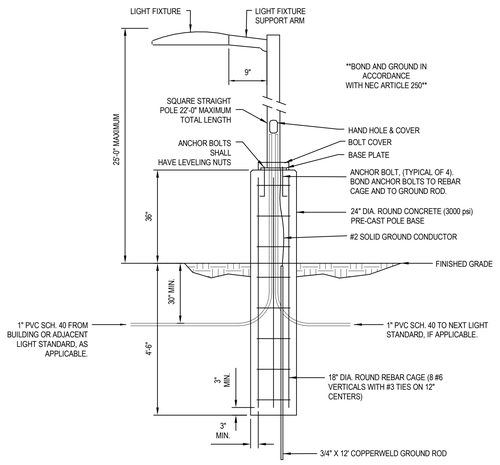
NOTE:

1. ACCESS CONTROL WIRING TO BE GRAY IN COLOR.
2. ALL DEVICES/EQUIPMENT TO MATCH NCC STANDARD.
3. PROVIDE FREE EGRESS ON DOORS TO RECEIVE NEW ACCESS CONTROL.

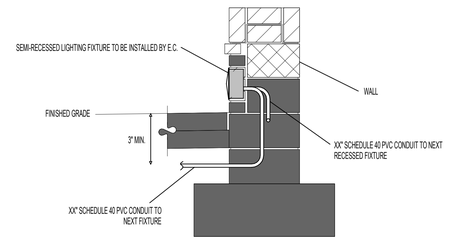
5 DOOR ACCESS CONTROL DIAGRAM
NOT TO SCALE



1 TYPICAL MOUNTING HEIGHTS
NOT TO SCALE



2 POLE LIGHT DETAIL (TYP)
NOT TO SCALE



3 STEP/WALL LIGHT MOUNTING DETAIL (TYPICAL)
NOT TO SCALE

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REGISTERED PROFESSIONAL
SCOTT W. FRENCH
ENGINEER
PE084137

EXETER TOWNSHIP
EMERGENCY SERVICES FACILITY
70 GIBRALTAR ROAD
READING PA 19606

PROJECT NUMBER: 25-049

SUBMISSION:
BID SET

ORIGINAL ISSUE DATE:
10/01/2026

SHEET REVISION SCHEDULE:

No.	DATE
1	10/15/26

LAST PROJECT REVISION: No 1 | 10/15/26

LIGHTING FIXTURE SCHEDULE AND DETAILS

SHEET NUMBER:

E602

10/15/2026 11:50:09 AM

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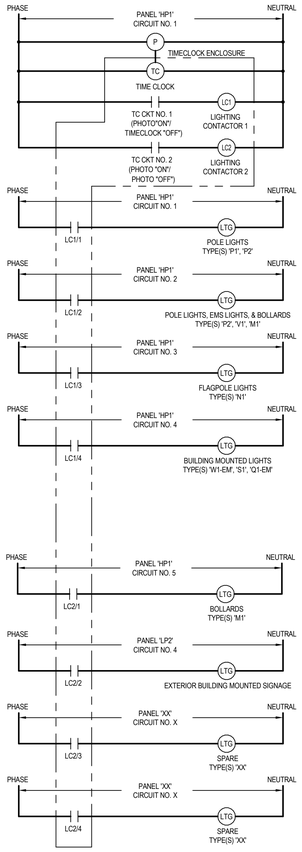
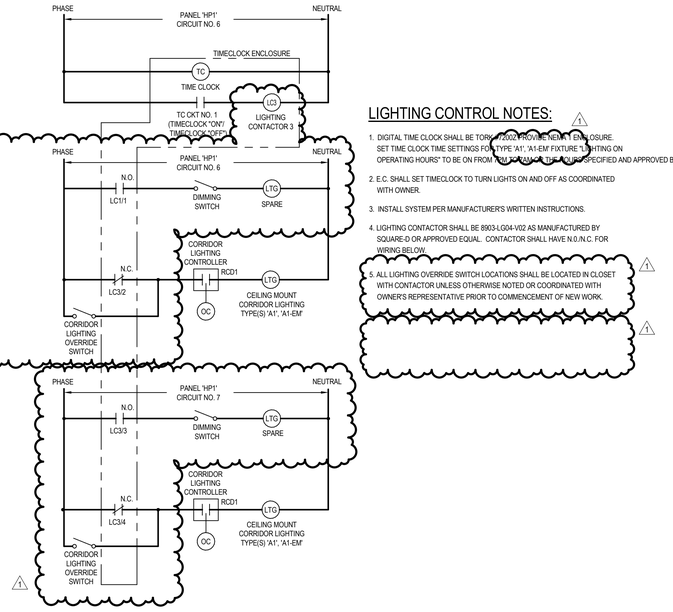
LIGHTING CONTROL NOTES:

1. DIGITAL TIME CLOCK SHALL BE TORK #DGLC200A-NC WITH PHOTOCELL #EPC-A INCLUDED.
2. PROVIDE NEMA 1 ENCLOSURE. E.C. SHALL FURNISH AND INSTALL PHOTOCELL DEVICE WITH DIGITAL TIMECLOCK ON NORTHEAST CORNER OF BUILDING'S ROOF. E.C. SHALL INSTALL PHOTOCELL SO OPERATION IS NOT INHIBITED DUE TO ADJACENT LIGHTING SOURCES IN THE AREA.
3. INSTALL SYSTEM PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
4. LIGHTING CONTACTOR #1 SHALL BE 8903-LG04-V02 AND LIGHTING CONTACTOR #2 SHALL BE 8903-LG04-V02 AS MANUFACTURED BY SQUARE-D OR APPROVED EQUAL
5. ALL EXTERIOR LIGHTING FIXTURES SHALL BE INSTALLED ON A LIGHTING CIRCUIT CONTROLLED BY DIGITAL TIMECLOCK WITH PHOTOCELL FOR AUTOMATIC DUSK TO DAWN OPERATION, LIGHTING CIRCUIT SHALL ALSO BE PROVIDED WITH CONTROLS TO DIM ALL FIXTURES TO 50% OPERATION FOR THE HOURS BETWEEN 10PM AND 7AM OR THE HOURS SPECIFIED AND APPROVED BY THE OWNER.



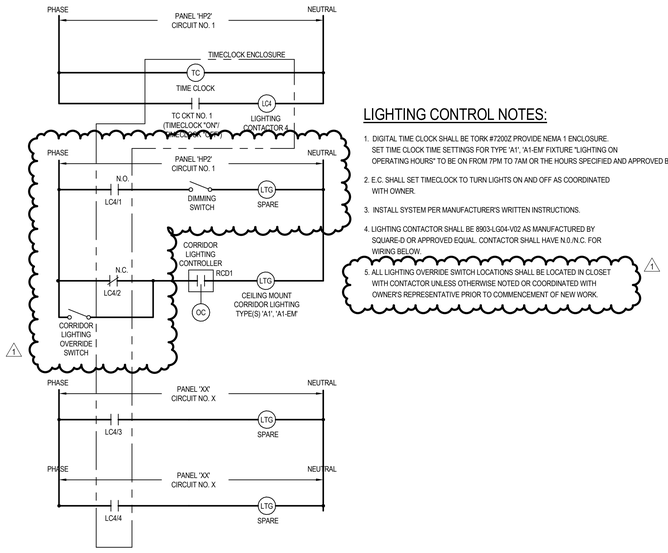
1 EXTERIOR LIGHTING CONTROL WIRING DIAGRAM
NOT TO SCALE



LIGHTING CONTROL NOTES:

1. DIGITAL TIME CLOCK SHALL BE TORK #7200Z PROVIDE NEMA 1 ENCLOSURE. SET TIME CLOCK TIME SETTINGS FOR TYPE 'A1', 'A1-EM' FIXTURE "LIGHTING ON OPERATING HOURS" TO BE ON FROM 7PM TO 7AM OR THE HOURS SPECIFIED AND APPROVED BY THE OWNER.
2. E.C. SHALL SET TIMECLOCK TO TURN LIGHTS ON AND OFF AS COORDINATED WITH OWNER.
3. INSTALL SYSTEM PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
4. LIGHTING CONTACTOR SHALL BE 8903-LG04-V02 AS MANUFACTURED BY SQUARE-D OR APPROVED EQUAL. CONTACTOR SHALL HAVE N.O./N.C. FOR WIRING BELOW.
5. ALL LIGHTING OVERRIDE SWITCH LOCATIONS SHALL BE LOCATED IN CLOSET WITH CONTACTOR UNLESS OTHERWISE NOTED OR COORDINATED WITH OWNER'S REPRESENTATIVE PRIOR TO COMMENCEMENT OF NEW WORK.

2 INTERIOR BUNK CORRIDOR LOW-LEVEL LIGHTING CONTROL WIRING DIAGRAM
NOT TO SCALE



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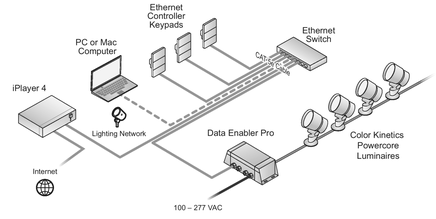
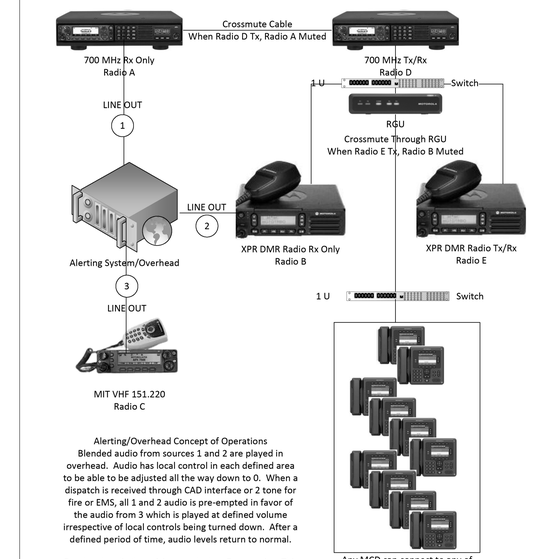
5. ALL LIGHTING OVERRIDE SWITCH LOCATIONS SHALL BE LOCATED IN CLOSET WITH CONTACTOR UNLESS OTHERWISE NOTED OR COORDINATED WITH OWNER'S REPRESENTATIVE PRIOR TO COMMENCEMENT OF NEW WORK.

3 INTERIOR EMS CORRIDOR LOW-LEVEL LIGHTING CONTROL WIRING DIAGRAM
NOT TO SCALE



4 RGB CONTROLLER WIRING DIAGRAM
NOT TO SCALE



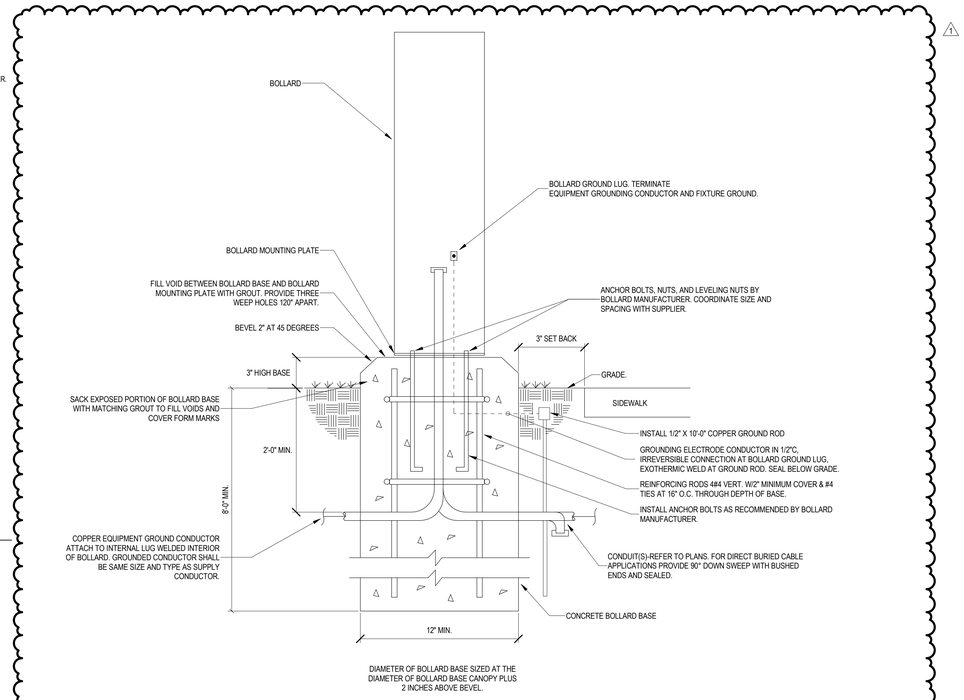
Alerting/Overhead Concept of Operations
Blended audio from sources 1 and 2 are played in overhead. Audio has local control in each defined area to be able to be adjusted all the way down to 0. When a dispatch is received through CAD interface or 2 tone for fire or EMS, all 1 and 2 audio is pre-empted in favor of the audio from 3 which is played at defined volume irrespective of local controls being turned down. After a defined period of time, audio levels return to normal.

Overhead audio from A is muted when D transmits. This is accomplished by consolette interconnection. Likewise overhead audio from B is muted when E transmits. This is accomplished through the RGU as these radios are dumb and have no crossmuting.

Version 2026-04-13

Any MCD can connect to any of Radios D or E
Units could connect to B but will not be programmed for this.
RGU interface of B to the RGU is just to accomplish crossmuting

5 FIRE RADIO BLOCK DIAGRAM
NOT TO SCALE



6 LIT BOLLARD BASE DETAIL (TYPICAL)
NOT TO SCALE

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EXETER TOWNSHIP
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ORIGINAL ISSUE DATE:
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SHEET REVISION SCHEDULE:

No.	DATE
1	10/15/26

LAST PROJECT REVISION: No 1 | 10/15/26

ELECTRICAL DETAILS

SHEET NUMBER:

E604

10/15/2026 11:50:09 AM

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Attachment: Schedule of Alternates

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END OF SECTION 00 0010

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SECTION 00 0103 - PROJECT DIRECTORY

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Identification of project team members and their contact information.

B. Architect and Architect's Consultants:
1. Structural Engineering Consultant.
2. Mechanical, Plumbing, Electrical Engineering Consultant.

C. Owner's Other Consultants:
1. Construction Manager.
2. Civil Engineering Consultant.

1.2 OWNER:

A. Name: Exeter Township
1. Address: 4975 DeMoss Road .
2. City: Reading.
3. State: Pennsylvania.
4. Zip Code: 19606.
5. Telephone: 610-779-5660.

B. Primary Contact: All correspondence from Contractor to the Architect will be direct, with copies to this party, unless alternate arrangements are mutually agreed upon at preconstruction meeting.
1. Title: Township Manager.
2. Name: ~~William Heim.~~Larry Piersol.
3. Phone: ~~610-779-5660~~ 610-779-5661.

1.3 ARCHITECT AND ARCHITECT'S CONSULTANTS:

A. Correspondence: All correspondence from the Contractor regarding construction documents authored by the Architect or the Architect's consultants will be through this party, unless alternate arrangements are mutually agreed upon at the preconstruction meeting and recorded within the meeting minutes.

B. Architect: Design Professional of Record.
1. Company Name: MW Studios.
   a. Address: 8098 Sandpiper Circle, Suite H.
   b. City: Nottingham.
   c. State: Maryland.
   d. Zip Code: 21236.
   e. Telephone: 410-344-1460.
   f. Fax: 443-403-2460.
2. Primary Contact - Construction Administrator/Technician:

a. Name: Jessica Spencer.
b. Phone Number: 410-777-5090.
c. Email: jspencer@mwsarch.com.

3. Primary Contact - Project Manager:
   a. Name: Mike Gerding.
   b. Phone Number: 410-967-1090.
   c. Email: mgerding@mwsarch.com.
4. Primary Contact - Architect/Designer:
   a. Name: Nate McNeill.
   b. Phone Number: 443-988-8045.
   c. Email: nmcneill@mwsarch.com.

C. Structural Engineering Consultant:
1. Company Name: Providence Engineering.
   a. Address: 10 Eisenhower Boulevard, Lancaster, Pennsylvania 17603.
   b. Telephone: 717-509-7000.
   c. Primary Contact:
      1) Name: Michelle Benoit, Senior Project Manager.
      2) Email: michelleb@proveng.com.

D. Mechanical, Plumbing, Electrical Engineering Consultant
1. Company Name: DEDC, LLC.
   a. Address: 315 S Chapel Street, Newark, Delaware 19711.
   b. Telephone: 302-738-7172.
   c. Primary Contact:
      1) Name: Scott Frenck.
      2) Email: sfrenck@dedc-eng.com.

1.4 OWNER'S OTHER CONSULTANTS

A. Construction Manager:
1. Company Name: Boyle Construction, Inc.
   a. Address: 3850 Sierra Circle, Suite 400, Center Valley, Pennsylvania 18304.
   b. Telephone: 484-223-0726.
   c. Primary Contact: Robert Lenosky, Project Manager.
      1) Name: 484-357-0716.
      2) Email: rlenosky@boyleconstruction.com.

B. Civil Engineering Consultant:
1. Company Name: Herbert, Rowland & Grubic, Inc.
   a. Address: 1275 Glenlivet Drive, Suite 145, Allentown, Pennsylvania 18106.
   b. Telephone: 610-351-0311.
   c. Primary Contact:
      1) Name: Dennis Reichel.
      2) Email: dreichel@hrg-inc.ocm.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION 00 0103

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SECTION 00 11 00 – INSTRUCTIONS TO BIDDERS

1. GENERAL

1.1 The drawings and specifications are complimentary via the Building Connected Program. Any labor and/or material not shown on the drawings but called for in the specifications or any labor and/or material not called for in the specifications but shown on the drawings, shall be furnished by the contractor as shown and called for in both.

1.2 DEFINED TERMS

1.2.1 Terms used in these Instructions to Bidders, which are defined in the General Conditions of the Contract for Construction (the "General Conditions"), have the meanings assigned to them in the General Conditions. The term "Bidder" means one who submits a Bid directly to Owner, as distinct from a sub-Bidder, who submits a bid to a Bidder. The term "Successful Bidder" means the lowest, qualified, responsible, and responsive Bidder to whom Owner (on the basis of Owner's evaluation as hereinafter provided) makes an award. The term "Bidding Documents" includes the Advertisement for Bids, Instructions to Bidders, the Bid Form, and the Contract Documents (including all Addenda issued prior to receipt of Bids). The numbering system refers to Articles.

2. COPIES OF BIDDING DOCUMENTS

2.1 In order to Bid the Project, complete sets of PDF documents must be obtained.

2.2 Complete sets of Bidding Documents must be used in preparing Bids; neither Owner, Architect, or Construction Manager assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents. Bidding Documents consist of Contract Documents (and all reference standards), specifications, addenda, and drawings. Bidder is responsible to make sure that the set of Bidding Documents is complete and that any printed contract document is legible and represents properly all the information as represented in the PDF file.

2.3 Owner, Architect, and Construction Manager, in making copies of the Bidding Documents available on the above terms, do so only for the purpose of obtaining Bids for the Work and do not confer a license or grant for any other use.

3. QUALIFICATIONS OF BIDDERS

3.1 **The following information must be completed and submitted when requested by the Construction Manager.**

3.1.1 The Contractors Qualification Statement A305-2020 found in Section 00 1940. Use additional pages to complete any of the sections if more space is needed. Bidder's failure to fully and accurately disclose all information requested in the Request for Qualifications questionnaire

shall constitute grounds for Bidder's disqualification from being considered the lowest responsive, responsible Bidder.

3.2 To demonstrate qualifications to perform the Work, each Bidder must be prepared to submit with their bid proposal, written evidence such as financial data, insurance certificates, previous experience of the Bidder and its assigned personnel, present commitments, and any other information that may be requested by the Owner. Each Bid must contain evidence of Bidder's qualification to do business in the Commonwealth of Pennsylvania, or covenant to obtain such qualification prior to award of the Contract. Owner reserves the right to reject Bidder if he cannot satisfy all of the Qualification Requirements, including those listed in the Technical Specifications.

3.3 In determining the lowest responsible Bidder, the Owner will consider the integrity, efficiency, experience of the Bidder and its assigned personnel, promptness, current workload, financial capability, performance on recent projects, references from owners, architects, and engineers, list of potential sub-contractors, schedule of values, and ability to successfully and timely complete the Project**.** The apparent low Bidder must demonstrate competency and provide any or all of the above information requested within three (3) calendar days of request. Owner reserves the right to reject the Bidder as non-responsive if all the information is not received on time and/or does not reasonably satisfy the Owner's evaluation process.

3.4 In addition to all the requirements specified in Articles 3.1, 3.2 and 3.3 regarding qualifications of Bidders, the Owner will evaluate Bidders using the following additional criteria:

3.4.1 The Bidder and its assigned personnel must have successfully performed a minimum of 3 previous Pennsylvania public municipal projects within the last 5 years of similar type or a contract value of at least seventy-five percent (75%) of the amount of the Bidder's Base Bid. Provide references including telephone number and contact person.

3.4.2 The Bidder shall perform not less than ten percent (10%) of the actual construction Work with staff employed directly by the Bidder. Project Management and Office Staff shall NOT be included in this percentage.

3.4.3 The Bidder, or its assigned personnel, must have successfully performed at least 3 Pennsylvania public municipal projects within the last 5 years where they have managed multiple trades and coordinated and scheduled all the activities for projects as per Article 3.4.1. Provide references including telephone number and contact person.

3.4.4 An Agreement of Surety certifying that the Surety Company is committed to provide the Bidder with a Performance Bond and Payment Bond each in the amount of one hundred percent (100%) of the contract amount. The Surety Company must have an AM Best rating of A- or higher and a financial rating of Class X or higher.

3.4.5 The Bidder's performance on previous projects including claims, litigation, coordination of work, staffing, and timely completion. If it is determined that the Bidder has not fully performed previous projects in a coordinated, timely, and good and workmanlike manner, the Owner reserves the right to reject the Bid.

3.4.6 The Bidder shall also refer to Article 11.

3.5 Owner shall be entitled to recover attorneys' fees and costs incurred in defending any unsuccessful challenge brought by a Bidder in its own name or as proxy for a Municipality resident to Owner's award of a contract to another Bidder, from the Bidder who brought the unsuccessful challenge as more fully set forth in Section 13.8.1 of the General Conditions of Contract.

3.6 All Bidders should be aware that the Owner encourages and promotes MBE (Minority Business Enterprise) and WBE (Women's Business Enterprise) participation for this Project. Bidders are encouraged to do their own research on the qualifications, and other factors, in preparing a comprehensive and responsible bid.

4. EXAMINATION OF CONTRACT DOCUMENTS AND SITE

4.1 It is the responsibility of each Bidder, before submitting a Bid, to:

1. Examine the Contract Documents thoroughly.
2. Visit the site to become familiar with local conditions that may affect the cost, progress, performance, or furnishing the Work.
3. Consider federal, state, and local laws and regulations that may affect cost, progress, performance, or furnishing of the Work.
4. Study and carefully correlate Bidder's observations with the Contract Documents.
5. Notify Architect and Construction Manager of any conflicts, errors, or discrepancies discovered in the Contract Documents.

4.1.1 REVIEW OF DRAWINGS AND SPECIFICATIONS

A. Bidders shall thoroughly examine and be familiar with the Specifications and Drawings. The failure or omission of any Bidder to receive or examine any form, instrument, document, or visit the site and acquaint himself with conditions there existing, shall in no way relieve any Bidder from obligation with respect to his or her Bid. By submitting a Bid, the Bidder agrees and warrants that he/she has examined the site and the Specifications and Drawings and, where Specifications and/or Drawings require in any part of the Work a given result to be produced, that the Specifications and Drawings are adequate, and the required result can be produced under the Specifications and Drawings. No claim for any additional costs will be allowed because of alleged impossibilities in the production of the results specified or because of inadequate or improper plans and specifications and whenever a result is required, the successful Bidder shall furnish any and all extras and make any changes needed to produce the required result for the sum stated in the form of proposal.

B. Should any Bidder find discrepancies, duplications, or omissions in the documents or have doubt as to the meaning expressed by the Contract Documents, he/she shall make inquiry at once in writing to the Architect and Construction Manager. Where changes, corrections, or clarifications to Contract Documents are deemed necessary by the Architect and/or Construction Manager, he will issue written Addenda accordingly. Addenda shall be a part of the Contract Documents. No oral, telephone, email, or letter instructions will be considered as having effect upon the Contract Documents; Addenda only shall constitute change to them. Bidders and sub-Bidders

are urged to make early examination of Contract Documents and make inquiries about them, if necessary, even though prices may not be determined until late in the bidding period.

4.2 The site may be made available for visits at the pre-bid conference and at the other specific designated dates and times determined at the pre-bid conference.

4.3 Information and data reflected in the Contract Documents with respect to underground facilities at or contiguous to the site is based upon information and data furnished to Owner and Architect and/or Construction Manager by owners of such underground facilities or others, and Owner and Architect and/or Construction Manager do not assume responsibility for the accuracy or completeness thereof. Successful Bidder shall verify the location of all underground utilities prior to any excavation.

4.4 Successful Bidder for the Site Contract is responsible, on behalf of the Owner, for providing the physical markings of all existing utilities including those on site as indicated on the drawings or that may be identified in the field. The locations shown on the drawings are approximate. The Bidder must include in his proposal the cost for hand-dug test holes, or other means, to ascertain the precise position of such underground facilities on the site owned by the Owner. This verification should be performed for any utilities to be relocated, removed, modified, or that may otherwise interfere with planned work. The utilities in the public right of way will be identified and marked by the appropriate facility owner as per the requirements of the PA One Call Act as amended. Physical layout is to be performed in full compliance with the PA One Call PA Act 287 of 1974 as amended by Act 18 of 1996 and Act 50 of 2017.

4.5 The Owner, Architect, and Construction Manager will not be responsible for the adequacy of data furnished to prospective Bidders on subsurface conditions, underground facilities, and other physical conditions. This information is provided based on information available. Bidder assumes responsibility for verifications, adjustments, and modifications that may be required since this is generally recognized as inherent to the work of the Contract Documents.

4.6 Before submitting a Bid, each Bidder will, at Bidder's expense, make or obtain any additional examinations, investigations, explorations, tests and studies, and obtain any additional information and data which pertain to the physical conditions (surface, subsurface, and underground facilities) at or contiguous to the site or otherwise which may affect cost, progress, performance, or furnishing the Work and which Bidder deems necessary to determine its Bid for performing and furnishing the Work in accordance with the time, price, and other terms and conditions of the Contract Documents.

4.7 On request in advance, Owner will provide each Bidder access to the site to conduct such explorations and tests, as each Bidder deems necessary for submission of a Bid. Bidder shall fill all holes, clean up, and restore the site to its former condition upon completion of such explorations.

4.8 The lands upon which the Work is to be performed, rights-of-way, and easements for access thereto and other lands designated for use by the Bidder in performing the Work are identified in the Contract Documents. All additional lands and access thereto required for temporary construction facilities or storage of materials and equipment are to be provided by Bidder. Easements for permanent structures or permanent changes in existing structures are to be obtained and paid for by Owner unless otherwise provided in the Contract Documents.

4.9 The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has

complied with every requirement of the Bidding Documents and, that without exception, the Bid is premised upon performing and furnishing the Work required by the Contract Documents and such means, methods, techniques, sequences, or procedures of construction as may be indicated in or required by the Contract Documents, and that the Contract Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

5. SCOPE

5.1 Contracts will be awarded in (6) prime contracts: Separate bids shall be submitted for: (BP-01) Site Construction, (BP-02) General Construction, (BP-03) Fire Protection Construction, (BP-04) Plumbing Construction, (BP-05) Mechanical Construction and (BP-06) Electrical Construction.

5.2 Each prime contractor shall furnish all labor, equipment, and materials necessary to complete the work called for and implied by the plans and specifications.

6. TIME

6.1 The Contract Documents include potential assessment of Liquidated Damages. Refer to AIA Document A132 – 2019, Standard Form of Agreement Between Owner and Contractor, Construction Manager as Adviser Edition.

7. INTERPRETATIONS OF CONTRACT DOCUMENTS PRIOR TO BIDDING

7.1 If any person submitting a bid for construction of the Work is in doubt as to the true meaning or intent of any part of the proposed Contract Documents, or find discrepancies or omissions, they shall submit a request for information to the Architect and Construction Manager no later than the date indicated in the Bid Schedule.

7.2 Interpretation or correction of proposed Contract Documents will be made only by Addendum and will be released to all prime contract bidders of record. The Owner, Architect, and Construction Manager will not be responsible for any other explanations or interpretations of the proposed Contract Documents.

7.3 During the bidding period, Bidders may be furnished these Bid Addenda modifying the Bid Documents. Any such Addenda shall be taken into account in submitting a Bid and shall form a part of the Contract Documents. Receipt of Bid Addenda must be identified on Bid Form.

7.4 When mistakes or omissions occur in the drawings and/or specifications, they shall be brought to the Construction Manager's attention before proceeding with the work.

7.5 All construction shall be in accordance with all federal, state, and local building codes and ordinances, which shall take precedence over these drawings and specifications.

7.6 Manufacturer's directions – All manufacturer's articles, materials and equipment shall be supplied, installed, connected, cleaned or conditioned in strict accordance with the manufacturer's printed directions.

7.7 If there is a discrepancy between the contract documents and the information on Building Connected the contract document requirements shall prevail in all cases.

8. REQUESTS FOR INFORMATION

8.1 If additional information is required concerning the meaning or intent of the Bid Documents, all questions and requests for information must be submitted electronically via Building Connected.

9. SUBMISSION OF PROPOSALS

9.1 Bids shall be submitted at the time and place indicated in the Advertisement for Bids and shall be enclosed in an opaque, sealed envelope, marked with the Project title, Contract No., and, if applicable, the designated portion of the Project for which the Bid is submitted. Envelopes shall contain the name and address of the Bidder and accompanied by the documents listed below. If the Bid is sent through the mail or other delivery system, the sealed envelope shall be enclosed in another envelope with the notation "BID ENCLOSED" on the face if it. One (1) hard copy of all documents listed below along with one (1) electronic USB are required to be submitted at the time of the Bid. Receipt of Bid is acknowledged when delivered to the Owner and not when mailed.

9.2 **Each Bidder shall submit two (2) hard copies of the complete bid submission.**

The following shall be included in the bid submission:

1. Form of Proposal, fully executed and notarized
2. Bid Bond or Certified Check or Cashier's check in the amount of 10% of the Bid total and shall include Consent of Surety and Power of Attorney
3. Non-Collusion Affidavit, Signed and Sealed
4. Non-Discrimination Clause, Signed and Sealed
5. PA Public Works Employment Verification Form (E-Verify)

Note that the following will be required to be submitted by ALL Bidders at the request of the Construction Manager within 48 hours of bid submission:

1. Bidder's Qualifications, AIA A305, completed
2. Schedule of Values
3. List of Subcontractors
4. Safety Questionnaire

Note that the successful bidder will be required to submit the following documents and any other documents deemed necessary by the Construction Manager upon issuance of Letter of Intent to Award:

1. Certificate of Insurance
2. Performance Bond in the amount of 100%
3. Payment Bond in the amount of 100%
4. No Lien Agreement

5. Maintenance Bond

10. BIDDERS RESPONSIBILITIES

10.1 Bidders will be given permission to withdraw any proposal after it has been received by the Owner, provided the Bidder or his agent duly authorized to act for him, personally appears at the Owner's Business Office with a written request signed by the Bidder prior to the time set forth for the opening of the Bids. At the time set for the opening of Bids, the withdrawn proposal will be returned to the Bidder. Such withdrawn proposals will not be opened or read at the Bid opening. Bids may not be modified after submittal.

10.2 Bids shall be irrevocable for ninety (90) days after the actual day of opening thereof unless the Owner is delayed in awarding the Contract due to the failure to receive a required approval/permit from one or more reviewing bodies/governmental agencies having jurisdiction over the Project, the sale of bonds or the award of a grant, in which case, Bids shall be irrevocable for (120) calendar days after Bid opening. Absent an exception for extending time for the award of the Contract, the Owner and the lowest responsible and responsive Bidder may mutually agree in writing to extend the time for the Owner to award the Contract.

10.3 Neither the designation of the apparent lowest responsible Bidder, nor the issuance of a Notice of Intent to Award to the Bidder so designated shall operate to release any other Bidder from its Bid. Each such other Bidder, unless earlier released from its Bid by specific action of the Owner, shall remain bound by its Bid until the earlier of (1) the date of actual execution by Owner of the Agreement Between Owner and Contractor with the Bidder whom the Award of Contract has been made, or (2) the expiration of the firm Bid period stipulated above.

10.4 Negligence by the Bidder in preparing his Bid confers no right of withdrawal or modification of his proposal after such proposal has been opened. No claims on account of mistakes or omissions of any proposal will be considered. Notwithstanding the above, a Bidder may withdraw his Bid within two (2) business days after the Bid opening time in accordance with the Public Contracts – Withdrawal of Bids Law, Act of January 23, 1974, P.L. 9, No. 4, 73 P.S. §1601 et seq., as amended. A Bid which has been opened may be withdrawn only in accordance with the causes set forth in said Act and for no other reasons. Strict compliance with said Act is required to withdraw a Bid after opening.

10.5 By submitting a bid, the bidder covenants and agrees that he has carefully examined the site, the existing building and details, the documents and the Contract and that, from his own investigations, he has satisfied himself as to the nature and location of the work, the general and local conditions and all matters which may in any way affect the work or its performance and that as a result of such examination, he fully understands the intent and purpose thereof and his obligations thereunder, and that he will not make any claim for, or have any right to, damages because of any lack of information.

10.6 Each bidder is highly encouraged to visit the site to familiarize themselves with the existing conditions thereon pertaining to the work. The bidder shall examine all the documents relating to the Contract on which he is bidding before submitting a Bid. Each Contractor shall obtain the full knowledge by personal and careful inspection of all existing conditions at the site and of all requirements of the Bid Documents that affect the work. The Contractor accepts all such conditions and requirements and hereby assumes all responsibilities and costs resulting from their failure to obtain full knowledge of them.

10.7 The Bids are to include all work as shown or specified, including but not limited to Unit Prices, Alternates and Allowances as may be requested or noted. These prices are important and should be carefully considered when Bids are submitted, and in the form, as quoted, on the Bid forms, attached to these specifications. It is requested upon any bidder, to include all Alternate Bids or Unit Prices. Should any bidder fail to submit requested Alternate Bids or Unit Prices the bidder will be responsible for his omission and shall have no claim against the Owner, should the Owner award the Contract to a bidder who has submitted a more satisfactory and complete bid.

10.8 Any Unit Prices furnished by the Bidder as part of his Proposal Form shall be made a part of the Agreement and shall be the basis of compensation for any Unit Price work required on the Project.

10.9 The Bidder shall identify and list Prior to Award of Contract each Major Subcontractor or material supplier, with their respective prices, to be used on this Project in accordance with the General Conditions of the Contract.

10.10 Bidders shall also secure and submit Major Subcontractors Qualification Statements accordingly as noted below.

10.11 Bidder warrants to execute the Contract, furnish required Bonds in form as incorporated in the contract documents and furnish required insurance certificates and other items, in amounts specified or required, by the owner. Bidder shall also warrant beginning work in accordance with the Project Contract agreement.

10.12 All permits and inspections shall be obtained by each prime contractor and paid for by the owner. The contractors will be required to pay all license and/ or registration fees by the local community.

10.13 A Waiver of Liens shall be signed by The Contractor as requested by the CM or prior to the beginning of the ordering of material and before any work is performed on the property. The Waiver of Lien to be filed and indexed in the Berks County Prothonotary's Office is found as an attachment at the end of these specifications. The Contractor shall provide a Release of Liens for themselves and all suppliers prior to application of final payment.

10.14 All work to be in accordance with applicable codes and ordinances adopted and/or as amended by the local Municipality, and the Commonwealth of Pennsylvania, Pennsylvania Uniform Construction Code, Act 45, The International Code Council, International Building Code – 2021 and Chapter 11 of the IBC 2018.

10.15 This Project falls under the Commonwealth of Pennsylvania Public Works Employment Verification Act, Act 127 of 2012, 43 P.S. § 167.1, which requires all public work contractors and subcontractors to utilize the Federal Government's E-Verify system to ensure that all employees performing work on public work projects are authorized to work in the United States. All Bidders are required to submit a Public Works Employment Verification Form as a precondition for the Contract Award.

10.16 The "Bid Bond," A.I.A. Document No. A310, of the American Institute of Architects, 2010 Edition, is hereby made a part of the Specifications as bound herein. The Bond is subject to all modifications as set forth hereinafter.

10.16.1 A bank cashier's, bank treasurer's certified check or bid bond in favor of Berks County in the amount of 10% of all base bids plus the amount of all add alternates, is required from each bidder and must be submitted electronically with the bid. It is understood the Bid Deposit will be forfeited to and retained by the owner as liquidated damages if the Proposal, or any part thereof, is accepted by the Owner and the Bidder fails to execute the contract and furnish Bonds within ten (10) days from the date of "Notice of Award". Should the owner fail to make any awards through no fault or failures on the part of the bidders, the Owner shall return said Bid Deposits.

10.16.2 Agreement of Surety: The "Agreement of Surety" form is to be provided to the Owner along with the bid proposal should the bid deposit submitted be other than a "Bid Bond". Attached is a 1-page sample letter to be signed and sealed from a corporate surety agreeing to provide a Performance Bond and Payment Bond in favor of the Owner as required for faithful performance and proper fulfillment of the contract. The Agreement is subject to all modifications as set forth hereinafter.

10.16.3 Non-Collusion Affidavit: The "Non-Collusion Affidavit" form is to be provided to the Owner along with the bid proposal by all prospective bidders. Attached is a document to be signed by all prospective bidders and sealed by notary, assuring the owner that the proposal for work is being submitted in good faith and without collusion with any other contractors or sub-contractors. The Affidavit is subject to all modifications as set forth hereinafter.

10.17 Non-Discrimination Clause: The "Non-Discrimination Clause" form is to be provided to the Owner along with the bid proposal by all prospective bidders. Attached is a document to be signed by all prospective bidders, assuring the owner that the proposal for work is being submitted in good faith and without collusion with any other contractors or subcontractors. The Clause is subject to all modifications as set forth hereinafter.

10.18 Performance and Payment Bonds: The "Performance Bond" and the "Payment Bond," A.I.A. Documents No. A312-2010, of the American Institute of Architects, are hereby made a part of the Specifications as bound herein. The Bonds are subject to all modifications as set forth hereinafter.

10.19 Maintenance Bond – the execution of a maintenance bond is required, per Section 00 4316.

10.20 CONTRACTOR'S QUALIFICATION STATEMENT

10.20.1 Each Bidder is required to submit a Contractor's Qualification Statement (AIA A305-2020) with a sworn statement of his financial responsibility, technical qualifications and evidence that he has completed at least Five similar construction contracts within the last five (5) years, each with a minimum value of 75% of the total amount of the proposal submitted. In addition, the designated Project Manager and Superintendent must have at least ten (10) years' experience in similar projects with similar values and phased construction. The Owner /CM has the right to reject a Project Manager or Superintendent if they do not specifically meet the qualifications.

10.21 REJECTION OR WITHDRAWAL OF PROPOSALS

10.21.1 A bidder on any Prime Contract may withdraw his bid from consideration within forty-eight (48) hours of the bid opening without forfeiture of the certified check, bank cashier's check, surety bid bond or other security filed with the bid if the price bid was submitted in good faith, and the bidder submits credible evidence that the reason for the price bid being substantially lower was a clerical mistake as opposed to a judgment mistake, and was actually due to an unintentional and substantial arithmetical error or an unintentional omission of a substantial quantity of work, labor, material or services made directly in compilation of the bid; provided, 1.) the mistake or error must be proven and submitted to the Owner / CM for review and approval: 2.) notice of a claim of the right to withdraw such bid is made in writing with the contracting body within two business days after the opening of bids; and 3.) the withdrawal of the bid would not result in the awarding of the contract on another bid of the same bidder, his partner, or to a corporation or business venture owned by or in which he has a substantial interest.. No bidder who is permitted to withdraw a bid shall supply any material or labor or perform any subcontract or other work on the project without written approval of the contracting body. No accepted bid may be withdrawn for ninety (90) calendar days after the Bid Opening. Initial determination as to whether there was a clerical mistake or arithmetical error or unintentional omission of substantial quantity of work, labor, material, or services will be within the discretion of the Architect, a representative of the Owner, with the assistance of the Construction Manager, and such decision shall be considered final and determinative.

10.21.2 The Township reserves the right to reject any bid received if the bidder's responses to the Contractor's Qualification Statement (AIA Document A305) fail to satisfy the Township that such bidder is qualified to carry out the obligations of the Contract and to complete work, as specified. By way of specific example, a default in a contract in the last five years will, absent extraordinary justification, disqualify a bidder, as will litigation on a construction contract which, in the past five years, resulted in an award against the interest of the bidder.

10.22 PA PREVAILING WAGE

10.22.1 The Schedule of Minimum Wages as determined by the Department of Labor and Industry, Commonwealth of Pennsylvania, is hereby made a part of this Specification. A copy of these rates is attached in Section 007343 Prevailing Wage Requirements.

10.22.2 Copies of these forms may be obtained from the Prevailing Wage Division. The Project is subject to the Pennsylvania Prevailing Wage Act (Act of 1961, P.L. 987 No. 442) as amended. The pages titled, "Duties of Awarding Agencies Under Pennsylvania Prevailing Wage Act" may be obtained from the Prevailing Wage Division. These duties include requirements of both the awarding agency (Owner), the Contractor(s) and Subcontractors. It is understood that the Owner will comply with its required duties. The Contractor(s) and Subcontractors shall comply with all duties and instructions required of them. All items mentioned as "contract requirements" in the documents are hereby made a part of the contract to the same extent as if included in the Owner-Contractor Agreement.

10.22.3 "Payroll Certification for Public Works Projects". All Contractors and Subcontractors shall complete this form for each week worked on this project. Each Weekly Payroll Certification

form shall be Notarized and forwarded to the Construction Manager for inclusion in the Owner's records. Payroll Certification Forms covering work periods included in an application for payment shall be submitted before or with the respective Application For Payment. If the certifications Forms are not submitted with the Application for Payments, the Owner will withhold payment until received.

10.22.4 US Steel Act 132. The Steel Products Procurement Act, 73 P.S. §§1881-1887, and the Trade Practices Act, 71 P.S. §773.101 et seq.

10.22.4.1 If any steel products are to be used or supplied in the performance of the Contract, only steel products produced in the United States shall be used or supplied in the performance of the Contract or any subcontract thereunder. This provision shall not apply in any case where the head of the public agency, in writing, determines that the type of steel products necessary to the performance of the Contract are not produced in the United States in sufficient quantities to meet the requirement of the Contract.

10.22.4.2 Contractors must ensure compliance with all provisions of the above which place restrictions upon the source of certain steel, cast iron and aluminum products allowed to be used in the performance of public agency contracts. The provisions of the above sited statutes are incorporated herein as if the same were set out at length herein.

10.22.4.3 Bidding will be public and utilize Pennsylvania State Prevailing Wage Rates established by the Commonwealth of PA Department of Labor and Industry.

11. INDEMNITY

11.1 The undersigned shall indemnify and hold harmless Exeter Township, Boyle Construction, Inc., Manns Woodward Studios and Herbert, Rowland & Grubic, Inc., all consultants and each officer and employees, with respect to any claims, losses, expenses, costs and reasonable attorney's fees incurred by Exeter Township, Boyle Construction, Inc., Manns Woodward Studios and Herbert, Rowland & Grubic, Inc., all consultants and each officer and employees, with regard to the undersigned's failure to comply with these Bid Documents and procedures.

11.2. Additional Insureds: All shall be named as "Additional Insureds" under all policies of insurances. Coverage shall be primary and non-contributory.
1. Exeter Township - its members, officers, employees and consultants.
2. Boyle Construction, Inc., Manns Woodward Studios, and Herbert, Rowland & Grubic, Inc. - and their members, officers, employees and consultants.
3. The Commonwealth of Pennsylvania.

12. Extra Work – No extra work will be considered unless the Exeter Township authorizes such work, in advance, in writing.

13. Safety and Health Regulations – The Bidder further agrees that should he enter into a Contract with

the Exeter Township to perform all or any portion of the work included herein, he will comply with all the provisions of the Department of Labor, Occupational Safety and Health Administration, Safety and Health Regulations for Construction, contained in the Federal Register Volume 37, Number 243, Part II, dated Saturday, December 16, 1972.

14. SPECIFICATION AND PRODUCT DESCRIPTION

14.1 Substitute Material and Equipment – Proposal shall include furnishing and installing material in strict accordance with Contract Documents. No substitutions or deviations will be considered except as provided for in Contract Documents

14.2 Any product substitution requests must be made in writing including all product literature and specification at least ten (10) calendar days prior to the bid due date.

15. This project is financed by Exeter Township.

16. OPENING OF PROPOSALS

16.1 The Owner will, as soon as practical, award the Contracts to the Bidders, and shall have the right to reject any or all Bids, to waive technical defects, and to accept or reject any part of any Bid if in the judgment of the Owner its best interest shall be served by such action; and the Bidder, in submitting a Bid accepts these conditions. No rights shall accrue to any person submitting a Bid or Proposal until such Bid has been accepted, and a contract awarded, and such contract completely executed in writing by both parties.

17. AWARD OF CONTRACT

17.1 The Owner's intent is to enter into Contracts with the lowest responsible and qualified Bidders.

17.2 The Owner reserves the right to reject any and all bids. The Owner reserves the right to waive non-material defects, informalities or technicalities in any Bid in accordance with law. The Owner reserves the right to disregard all nonconforming, non-responsive, unbalanced, or conditional bids. Also, Owner reserves the right to reject the Bid of any Bidder if Owner believes that it would not be in the best interest of the Project to make an award to that Bidder, whether because the Bid is not responsive, or the Bidder is unqualified or of doubtful financial ability or fails to meet any other pertinent standard or criteria established by the Bidding Documents.

17.3 In evaluating Bids, Owner will consider the qualifications of such Bidders (see Article 3), whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices and other data, as may be requested in the Bid Form or prior to the Notice of Award.

17.4 Owner may consider the qualifications and experience of Subcontractors, suppliers, and other persons or organizations proposed for any portions of the Work requested by

Owner. Owner also may consider the operating costs, maintenance requirements, performance data, and guarantees of major items of materials and equipment proposed for incorporation in the Work when such data is required to be submitted prior to the Notice of Award.

17.5 Owner may conduct such investigations as Owner deems necessary to assist in the evaluation of any Bid and to establish the responsibility, qualification, and financial ability of Bidders, subcontractors, suppliers, and other persons or organizations to perform and furnish the Work in accordance with the Contract Documents to Owner's satisfaction within the prescribed time.

17.6 If the Contract is to be awarded, Owner will give the Successful Bidder a Notice of Intent to Award within sixty (60) days after the day of Bid opening unless extended as set forth in these Instructions to Bidders.

17.7 The Owner reserves the right to waive non-material defects, informalities, or technicalities in any Bid in accordance with the law.

18. CONTRACT SECURITY & INSURANCE

18.1 The General Conditions set forth the Owner's requirements as to Performance Bonds, Payment Bonds, and insurance requirements.

18.2 The apparent low Bidder must provide Payment and Performance Bonds in the forms included in the Contract Documents and all Certificates of Insurance or other insurance information as required pursuant to the General Conditions of the Contract within ten (10) days of the issuance of Notice of Intent to Award. **Other bond forms will not be accepted**. Failure of the apparent low Bidder to provide original executed Payment and Performance Bonds in the required form within the required time will result in forfeiture of the Bid Security.

19. SIGNING OF AGREEMENT

When Owner/Construction Manager issues a Notice of Intent to Award to the Successful Bidder, the Successful Bidder shall within ten (10) days thereafter, deliver to the Owner/Construction Manager, One (1) original copy of the required bonds, insurance certificates, and any other documents that may be requested with the Notice of Intent to Award. Within ten (10) days thereafter, the Construction Manager will send contract agreements via DocuSign to Successful Bidder. The Successful Bidder shall sign the agreements and DocuSign will automatically send the agreements to the Owner for signature. Once signed by the Owner DocuSign will automatically return an executed agreement to all parties.

20. RETAINAGE

Retainage will be in accordance with the Contract Documents. Reference Article 9 of the General

Conditions.

21. PREVAILING WAGES

Pennsylvania Prevailing wage rates will apply to this project. The Contractor and its subcontractors shall comply with the provisions, duties, obligations, remedies, and penalties of the Pennsylvania Prevailing Wage Act, 43 P.S. § 165-1 et seq. which is incorporated herein by reference as if fully set forth herein. The general prevailing minimum wage rates, as determined by the Secretary of Labor and Industry shall be paid for each craft or classification of all workmen needed to perform work on the Project during the term hereof for the locality in which the work is to be performed.

22. COMPETENT WORKMEN

No person shall be employed to perform any work under the Contract if they are not legally eligible to be employed under applicable state and federal law or if they are not a trained, competent workman, or mechanic, as applicable. For purposes of this Section, no workman or mechanic, as applicable, shall be regarded as competent unless he shall be duly skilled in the applicable branch of labor, and paid the applicable prevailing wage.

22.1 The Commonwealth of Pennsylvania enacted Act 127 of 2012, known as the Public Works Employment Verification Act ('the Act') which requires all public work contractors and subcontractors to utilize the Federal Government's E-Verify system to ensure that all employees performing work on public work projects are authorized to work in the United States. The Contractor and its Subcontractor (as such term is defined in the Act) are required to comply with the Act and the Statement of Policy as published in the Pennsylvania Bulletin, December 29, 2012, and effective January 1, 2013.

23. EROSION CONTROL

The Successful Bidders shall comply with all rules and regulations of Chapter 102, Title 25 of Pennsylvania Code, relating to Soil Erosion and Sedimentation Control.

24. PUBLIC WORKS CONSTRUCTION CONTRACTS

In consideration of the funds awarded and activities funded under the Contract which involves construction, reconstruction, alteration, repair, improvement, or maintenance of a building, structure, or improvement ("The Work"), the Successful Bidder agrees to perform in accordance with the following:

24.1 Steel Products Procurement Act.

24.2 Trade Practices Act.

24.3 Public Works Contractor's Bond Law of 1967. Prior to the award of any Contract for any Work on the Project, the contractor to whom the contract is to be awarded must furnish the following bonds which shall become binding upon the award of such Contract:

24.3.1 A performance bond at 100 percent of the Contract Sum, conditioned upon the faithful performance of the Contract in accordance with the plans, specifications, and conditions of the Contract. Such bond shall solely for the protection of the Owner which awarded said contract.

24.3.2 A payment bond at 100 percent of the Contract Sum. Such bond shall be solely for the protection of claimants supplying labor or materials to the Successful Bidder, its contractor(s) or to any of its Subcontractors, in the prosecution of the work provided for in such Contract and shall be conditioned for the prompt payment of all such material furnished or labor supplied or performed in the prosecution of the Work. "Labor or materials" shall include public utility services and reasonable rentals of equipment, but only for periods when the equipment rented is actually used at the site.

24.3.3 Reference Article 11.1.2 of the General Conditions for additional requirements.

25. SEVERABILITY

25.1 Should any section or any part of any section of the Contract be rendered void, invalid, or unenforceable by any court of law, for any reason, such a determination shall not render void, invalid, or unenforceable any other section or part of any section of the Contract.

26. AMERICANS WITH DISABILITIES ACT

During the term of this Contract, the Successful Bidder agrees as follows:

26.1 Pursuant to federal regulations promulgated under the authority of The Americans with Disabilities Act, 28 C.F.R. § 35.101 et. Seq., the Successful Bidder understands and agrees that no individual with a disability shall, on the basis of the disability, be excluded from participation in this Contract or from activities provided for under this Contract. As a condition of accepting and executing the Contract, the Successful Bidder agrees to comply with the General Prohibitions Against Discrimination, 28 C.F.R. § 35.130, and all other regulations promulgated under Title II of The Americans with Disabilities Act which are applicable to all benefits, services, programs, and activities provided by the Commonwealth of Pennsylvania through contracts.

27. HEALTH AND SAFETY

27.1 Reference Article 10 of the General Conditions.

28. BONDS & INSURANCE

28.1 The Bidder will be required to furnish a Bid Bond, Performance Bond, and Labor and Material Payment Bonds in the amount of one hundred percent (100%) of the Contract Price in the form provided in the Contract Documents. Said Sureties shall be listed on the current Federal Register and have an AM Best rating of 'A-' or better and a financial rating of Class X or higher.

28.2 Insurance companies must be rated 'A-' or better in A.M. Best.

28.3 Bidder shall include the cost of the Bonds & Insurance in their Bid.

28.4 Bidder shall provide the insurance required in the General Conditions.

29. PRE-BID CONFERENCE

29.1 The Mandatory Pre-bid Conference will be held on the date and time listed in the Advertisement for Bids. Representatives of Owner, Construction Manager (CM), Architect and Civil Engineer will be present to discuss the Project. CM will transmit to all prospective Bidders of record such Addenda, as CM considers necessary in response to questions arising at the Conference. **Non-attendees will <u>no</u>t be permitted to bid.**

30. PROJECT FINANCING

The Work to be done under the Contract is public work and may be financed in whole or part by the Owner (a public body) by issuance of bonds, which are subject to various qualifications and restrictions. The Owner, in such case and in good faith, intends to consummate such financing, but its ability to do so is subject to many factors beyond its control. It is therefore expressly understood and agreed to by each Bidder that, notwithstanding any other provision of the Contract Documents, the Owner may at any time cancel any award made by it, or cancel any contract entered into with any Bidder, without liability to the Bidder, at any time before the Bidder has been given written notice to proceed and has actually begun Work under the Contract if financing satisfactory to the Owner cannot reasonably be consummated as contemplated, or if any court of competent jurisdiction shall enjoin or otherwise prohibit the Owner from proceeding with the Work.

30.1 The Work to be done under the Contract is funded in part by a Redevelopment Assistance Capital Program (RACP) Grant from the Commonwealth of Pennsylvania, Office of the Budget. Bidders are notified that Projects funded by state funds are subject to various qualifications, restrictions, and special requirements.

31. FAILURE TO EXECUTE CONTRACT

Failure of the Successful Bidder to whom Notice of Intent to Award has been given to deliver appropriate Payment and Performance Bonds, Certificates of Insurance, or execute the Contract within the time specified, shall constitute a default by such Bidder and the Owner may, at its sole

discretion, award the contract to the next lowest responsive and responsible Bidder or re-advertise for Bids, and the defaulting Bidder shall pay to the Owner the difference between the amounts of his Bid and any higher amount for which the Owner may contract for the required work, plus any advertising, consulting, legal or other expenses incurred by reason of the default. The Bid Security of such defaulting Bidder shall be applied on account of said damages, and if the amount of said damages exceeds the amount of the Bid Security, the defaulting Bidder shall pay to the Owner the full amount of the excess.

END OF SECTION 00 1100

SECTION 00 1930 – MAINTENANCE BOND

Exeter Township Emergency Services Facility

18 MONTH MAINTENANCE BOND

(Please type or print clearly)

BOND # _____

(Renew each term with Maintenance Contract)

Know all men by these presents, that we, the undersigned_____as principal and as sureties, are hereby held and firmly bound unto the Exeter Township, as Obligee, in the penal sum of_____dollars, (15% of Contract Amount) for the payment of which well and truly to be made, we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns.

Signed this_____day of_____, 20___.

The condition of the above obligation is such that whereas, the above named principal did on the day of___, 20___, enter into a contract with, which said contract is made a part of this the bond the same as though set forth herein:

Now, if said_____shall well and faithfully do and perform the things agreed by_____to be done and performed according to the terms of said contract, and shall pay all lawful claims for subcontractors, materialmen, laborers, persons, firms or corporations for labor performed or materials, provisions, provender or other supplies or teams, fuels, oils, implements or machinery furnished, used or consumed in the carrying forward, performing or completing said contract, we agreeing and assenting that this undertaking shall be for the benefit of any subcontractor, materialmen, laborer, person, firm or corporation having a just claim, as well as for the Obligee herein; and shall continue said obligation for **eighteen** months from the date of completion and acceptance of the work to be performed under the said contract to guarantee against defects in the work, which, in the judgment of the Obligee or its successors or assigns having jurisdiction in the premises, are caused by defective or inferior materials and/or workmanship, then this obligation shall be void; otherwise the same shall remain in liability of the surety for any and all claims hereunder shall in no event exceed the penal amount of this obligation as herein stated.

The said surety hereby stipulates and agrees that no modifications, omissions or additions in or to the terms of the said contract or in or to the plans or specifications therefore shall in anywise affect the obligation of said surety on its bond.

The Principal and the Surety agree that in case of default in and/or any action arising out of this Bond, the Obligee or any person, association, partnership and/or corporation who shall be entitled to institute and maintain an action upon this Bond, as above provided, may use, for the purpose of the establishment of the claim, a copy of this Bond, duly certified by the Obligee to be true and correct, and the Principal and the Surety agree that any action instituted upon any part of this Bond shall not be a bar to any subsequent action upon the same part or any other part of

this Bond.

Each reference in this Bond to the Obligee shall also include the officers, employees and representatives of said Obligee.

It is the intention of the parties hereto to be legally bound by this instrument.

IN WITNESS WHEREOF, THE said Principal and Surety have duly executed this Bond in triplicate under seal and day and year first above written.

SIGNED, SEALED AND DATED THIS_____DAY OF_____, 20_ .

_____
PRINCIPAL

Attest: BY_____(L.S.)

_____
Title of Officer

_____
SECRETARY (SEAL)

_____
Surety

Attest: BY_____(L.S.)

_____
Title of Officer

_____
SECRETARY (SEAL)

SECTION 23 0923 - DIRECT DIGITAL CONTROL SYSTEM FOR HVAC

PART 1 GENERAL

1.1 SUMMARY

A. Section includes a complete, fully functional, BACnet-based direct digital control (DDC) system for HVAC and related building systems, including controllers, operator interface, sensors, control devices, wiring, programming, graphics, integration, checkout, training, and warranty.

B. The points lists, sequences of operation, control diagrams, and riser diagrams on the Drawings are part of this Section.

1.2 RELATED REQUIREMENTS

A. Division 01: Submittal procedures, closeout, demonstration and training, and general commissioning requirements.

B. Division 23: HVAC equipment, packaged unit controls, ductwork accessories, vehicle exhaust system, and testing, adjusting, and balancing.

C. Division 26: Electrical power and branch circuits.

D. Division 28: Fire alarm system and, where indicated, carbon monoxide and nitrogen dioxide detection.

1.3 SCOPE OF WORK

A. Provide all labor, materials, devices, wiring, conduit, software, licenses, programming, and services required to accomplish every point, sequence, interlock, alarm, and function shown on the Drawings or specified herein, whether or not each component is individually listed.

B. Points lists indicate minimum requirements. Provide any additional physical or virtual points, sensors, relays, or devices required to execute the sequences of operation as written, at no additional cost.

C. Where the Drawings and Specifications conflict, or where requirements are ambiguous, the more stringent or more costly requirement is included in the Contract Sum, subject to the Engineer's interpretation.

D. Integrate the factory controls of packaged equipment listed on the points list over BACnet. Where a unit's factory controller is not BACnet, provide the manufacturer's BACnet communication card or a listed BACnet gateway at no additional cost.

E. Provide all control wiring, including line-voltage wiring for control devices, interlocks, and control power, except branch circuits shown on the Electrical Drawings.

1.4 DIVISION OF WORK

A. For work shared with other trades, provide the following under this Section. All other controls work is furnished, installed, and wired under this Section.

1. 120V control power to control panels and devices, except branch circuits shown on the Electrical Drawings.
2. Control valves, wells, and flow and pressure taps: Furnish and wire. Valves, wells, and taps will be installed by the piping installer.
3. Control dampers not factory-furnished with equipment: Furnish and wire. Dampers will be installed by the ductwork installer.
4. Duct smoke detectors: Fan shutdown interlock wiring.
5. Fire alarm relay modules for HVAC shutdown: Wiring from the relay module to HVAC equipment.
6. Packaged equipment factory controllers: Network and field I/O wiring.
7. Motor starters and VFDs: Control and network wiring.
8. CO/NO2 detection system: Interface wiring to the DDC system.
9. Vehicle exhaust system controls: Interlock and status wiring to the DDC system.
10. Network cabling from the Building Controller to the Owner's network connection point.

1.5 DEFINITIONS

A. BACnet: ASHRAE 135, current edition.

B. BTL: BACnet Testing Laboratories listing at the device profile indicated.

C. Building Controller: The single network controller serving as the building's supervisory device and web server.

D. Owner Access Level: Full administrative rights, including ability to change programming, sequences, setpoints, schedules, alarms, trends, graphics, and user accounts.

1.6 REFERENCE STANDARDS

A. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

1.7 OPEN SYSTEM REQUIREMENTS

A. All controllers, from the Building Controller to the terminal unit level, shall communicate natively using BACnet/IP or BACnet MS/TP. Proprietary field buses are not acceptable.

B. Each controller shall be BTL-listed at the profile appropriate to its function (B-BC for the Building Controller; B-AAC or B-ASC for application and unitary controllers).

C. At Substantial Completion, transfer to the Owner, at no additional cost:
1. All licenses required to operate and modify the system, registered to the Owner, perpetual, with no annual fees.
2. Current, editable programming files, databases, and graphics for every controller.
3. All usernames and passwords at Owner Access Level.
4. One licensed copy of every software tool required to modify the system, installed on an Owner-furnished computer.

D. The system shall not be locked, keyed, or configured so that service or modification is restricted to the installing contractor or branch. Any factory-authorized dealer or branch of the same manufacturer shall be able to service and modify the system.

E. Where the system uses the Niagara Framework, all Niagara licenses shall be open, with unrestricted compatibility, so that any Niagara-certified integrator can access and modify the system. Brand-restricted or compatibility-locked licenses are not acceptable.

F. No cloud service, remote-access gateway, or subscription is required for full operation. Any remote access shall be provided only at the Owner's written direction.

1.8 SUBMITTALS

A. Product Data: Cut sheets for every controller, sensor, device, and software item, with BTL listings and BACnet Protocol Implementation Conformance Statements (PICS).

B. Shop Drawings:
1. System riser showing every controller, its network address, and the network path to the Building Controller.
2. Control diagram for each system, matching the Drawings, with every device tagged.
3. Points list for each controller showing point name, type, address, range, alarm limits, and trend interval.
4. Wiring diagrams for every panel and every interface to other trades.
5. Sequences of operation, either confirming the Drawings verbatim or with each deviation highlighted. Unhighlighted deviations are not approved by a stamped submittal.
6. Graphic screen layouts for each system and the floor plan.

C. Checkout Documentation: Completed point-to-point checkout reports as specified in "Point-to-Point Checkout" Article.

D. Closeout Submittals: As-built shop drawings, final points lists, programming files and databases (electronic), operation and maintenance manuals, warranty, license certificates, and credential list.

E. Commissioning Documentation: Completed construction checklists, functional test procedures, functional test results, issues log responses, and the energy code functional testing report, as specified in "Commissioning" Article.

F. Partial or incomplete submittals will be returned without review.

G. The Engineer will review each submittal a maximum of two times. The Contractor shall reimburse the Owner for the Engineer's review of the third and subsequent submissions of any submittal at the Engineer's standard hourly rates.

1.9 QUALITY ASSURANCE

A. Installer Qualifications: Factory-authorized branch or dealer of the manufacturer, with a service office within 75 miles of the project, employing factory-trained technicians, and with at least 5 years installing the proposed product line.

B. The installer shall program, commission, and warrant the system with its own forces. Subcontracting of programming is not permitted.

C. Provide a list of three similar projects completed in the last five years, with Owner contact information, with the first submittal.

1.10 PRE-BID REVIEW AND CLARIFICATIONS

A. Bidders shall review the Drawings, points lists, and sequences, and submit questions before the deadline for bidder questions. Submission of a bid confirms that the bidder has found the documents sufficient to provide a complete system.

B. Claims for additional cost based on information available in the Contract Documents at the time of bid will not be considered.

1.11 WARRANTY

A. Warrant all materials, labor, and programming for two years from Substantial Completion. Respond on site within 24 hours of notice for loss of heating or cooling and within 72 hours otherwise.

B. The warranty period begins at Substantial Completion, regardless of any earlier use of the system for temporary heating, cooling, or ventilation.

C. Provide all manufacturer firmware and software updates, including security patches, released during the warranty period, installed at no additional cost.

D. Provide one opposite-season visit during the warranty period to verify sequences and retune loops, with a written report. This visit may be combined with seasonal commissioning testing.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Subject to compliance with requirements, provide products by one of the following, installed by a factory-authorized branch or dealer:
1. Johnson Controls, Inc.: Facility Explorer (FX) product line.
2. Honeywell International Inc.: Optimizer product line.
3. Trane Technologies: Tracer product line.
4. Alerton (a Honeywell company): Ascent product line.
5. Distech Controls, Inc.: ECLYPSE product line.
6. Automated Logic Corporation: WebCTRL product line.
7. Siemens Industry, Inc.: Desigo product line.

B. No substitutions. Manufacturers not listed will not be considered.

C. All controllers, the Building Controller, and the operator interface shall be from a single manufacturer. Factory controllers furnished with packaged equipment are excepted and shall be integrated as specified in "Scope of Work" Article.

2.2 BUILDING CONTROLLER

A. BTL-listed B-BC, BACnet/IP, with integral BACnet MS/TP port(s) as required.

B. Embedded web server providing the complete operator interface specified in "Operator Interface and Graphics" Article through any current standard web browser, with no client software, plug-ins, or per-user licenses.

C. Real-time clock with battery backup and network time synchronization. Retain programming, setpoints, schedules, and trend data through power loss without batteries.

D. Onboard storage for all trends specified in "Trending" Article for a minimum of 90 days, and for a minimum of 500 alarm records.

E. Email notification of alarms to a minimum of 5 recipients, configurable by alarm priority.

F. Minimum of 5 concurrent web users.

G. Automatic restart after power loss, with equipment start sequenced as specified in "Programming" Article.

2.3 FIELD CONTROLLERS

A. Programmable application controllers (BTL B-AAC) for air handling units, energy recovery units, and any equipment with a custom sequence.

B. Application-specific controllers (BTL B-ASC) are acceptable only for terminal units and simple unitary equipment where the factory application executes the sequence on the Drawings without modification.

C. Each controller shall execute its sequence independently of the network and the Building Controller. Loss of communication shall not stop equipment; equipment shall revert to the fail-safe or last-known mode indicated on the Drawings.

D. Provide a minimum of 15 percent spare inputs and outputs of each type across the system, distributed among controllers.

E. Controllers shall operate at 32 to 122 degrees Fahrenheit and 10 to 90 percent RH non-condensing. Controllers in apparatus bays or unconditioned spaces shall be in enclosures rated as specified in "Enclosures" Article.

2.4 OPERATOR INTERFACE AND GRAPHICS

A. Accessible from any computer or tablet on the Owner's network through a standard web browser over HTTPS.

B. Graphics:
1. Building floor plan with each zone color-coded by temperature relative to setpoint, with links to each system.
2. One graphic per major equipment item showing a schematic of the equipment with live values for every point on its points list, setpoints, and operating mode.
3. Alarm summary, schedule, and trend pages.

C. Functions available from the interface: view and command points, adjust setpoints, edit schedules and holidays, acknowledge alarms, view and export trends to CSV, and manage user accounts.

D. A minimum of three user levels: view only, operator (setpoints, schedules, alarm acknowledgment), and administrator.

2.5 CYBERSECURITY

A. Change all default passwords. Provide unique credentials for each user account.

B. Disable unused services and ports. Use HTTPS for all web access.

C. Install the manufacturer's current firmware and software release at Substantial Completion.

D. Coordinate IP addressing, VLAN, and firewall requirements with the Owner's IT representative. Provide the Owner a written network summary listing every IP device, its address, and its function.

2.6 SENSORS

A. Space Temperature Sensors:
1. Thermistor or RTD, accuracy plus or minus 0.5 degree F over 55 to 85 degrees Fahrenheit.
2. Offices, dayrooms, and bunk rooms: setpoint adjustment limited to plus or minus 3 degrees Fahrenheit and occupancy override button.
3. Apparatus bays, mechanical rooms, and public areas: sensor only, no adjustment, with stainless steel wall plate or locking wire guard.

B. Space Humidity Sensors: Plus or minus 3 percent RH over 20 to 80 percent RH.

C. Duct Temperature Sensors: Plus or minus 0.5 degree F. Averaging type for mixed air and coil discharge, minimum 1 linear foot of element per square foot of duct area.

D. Outdoor Air Temperature and Humidity Sensor: With sun shield, mounted on the north face of the building away from exhaust.

E. CO2 Sensors: NDIR, plus or minus 50 ppm or 3 percent of reading, self-calibrating.

F. Current Switches for Status: Split-core, adjustable trip point, with LED indication. Status proven by current alone is not acceptable for belt-driven fans; provide differential pressure switches.

G. Differential Pressure Switches and Transmitters: Range and accuracy as required by the sequence.

2.7 CONTROL DEVICES

A. Control Valves: Pressure-independent characterized control valves, sized for the flow and pressure drop shown, with close-off rating exceeding pump shutoff head.

B. Control Dampers: AMCA-licensed, Class 1A leakage, with blade and jamb seals. Dampers furnished with equipment shall meet the same leakage class.

C. Actuators: Electronic, modulating or two-position as required by the sequence, with spring return where a fail position is shown on the Drawings. Provide position feedback where shown on the points list.

D. Control Relays: Plug-in, with LED status indication and manual override.

2.8 ENCLOSURES

A. Indoor Conditioned Spaces: NEMA 1, hinged locking door, common key.

B. Apparatus Bays, Wash Bays, Mechanical Rooms with Water Piping, and Unconditioned Spaces: NEMA 4X.

C. Exterior: NEMA 4X, UV-resistant.

D. Provide a laminated as-built control diagram and points list inside each panel door.

2.9 WIRING AND RACEWAYS

A. Comply with NFPA 70 and Division 26.

B. Finished Spaces: Conceal all wiring and raceway. In masonry walls, install conduit in the cores during wall construction; coordinate with the masonry trade. Surface metal raceway is acceptable only where concealment is not possible and only where approved in writing by the Architect.

C. Mechanical Rooms, Apparatus Bays, and Unfinished Spaces: Install all wiring in conduit. Exposed conduit is acceptable.

D. Above Accessible Ceilings: Plenum-rated cable without conduit is acceptable, supported independently of other systems with J-hooks or bridle rings. Install in conduit where cable passes through inaccessible spaces or walls.

E. Minimum conduit size: 3/4 inch.

F. BACnet MS/TP: Shielded twisted pair as recommended by the controller manufacturer, with a distinct jacket color.

G. BACnet/IP: Category 6.

H. Label every conductor at both ends and every device with its points list tag.

PART 3 EXECUTION

3.1 EXAMINATION AND COORDINATION

A. Before rough-in, verify the controls interface of every packaged equipment item against the approved equipment submittals. Report any conflict with the points list or sequences in writing before ordering controls products. Conflicts not reported before rough-in shall be corrected at no additional cost.

B. Coordinate device locations with the architectural, structural, and electrical work. Relocate devices installed without coordination at no additional cost.

3.2 INSTALLATION

A. Install products per manufacturer's instructions, the approved shop drawings, and NFPA 70.

B. Mount panels with the top no higher than 6 feet above finished floor, with 36 inches of clear working space in front.

C. Install control panels, devices, and wiring in apparatus bays above the highest door swing and vehicle clearance line, or where protected by bollards or wall guards, and away from vehicle exhaust drops and wash-down spray.

D. Seal all conduit penetrations into NEMA 4X enclosures and between conditioned and unconditioned spaces.

E. Cutting, Patching, and Firestopping: Perform all cutting, patching, and firestopping for penetrations required by the Work of this Section, in accordance with Division 01 and the Division 07 firestopping section. Restore finishes to match adjacent surfaces.

F. Owner Network: If the Owner's network connection is not available at the time of checkout, provide a local network switch and all connections required to complete checkout, demonstration, and training with the system operating standalone. Connect the system to the Owner's network when it becomes available, at no additional cost.

3.3 SENSOR LOCATIONS

A. Mount space sensors at 48 inches above finished floor to the top of the device, on interior walls, away from supply diffusers, exterior doors, windows, and heat sources. Final locations as approved on shop drawings.

B. Apparatus Bay Space Sensors: On interior walls or columns away from overhead doors and radiant or unit heater discharge, at 8 feet above floor, with wire guards.

C. Outdoor Air Sensors: As specified in "Sensors" Article, minimum 10 feet from any exhaust or relief opening.

3.4 EXISTING CONTROLS

A. Remove existing controls devices, panels, and wiring made obsolete by the Work. Cut abandoned wiring back to its source and terminate.

B. Existing control devices, wiring, and controllers shall not be reused unless specifically indicated on the Drawings.

C. Removed controllers, sensors, and devices shall become the property of the Contractor and shall be legally disposed of off site.

D. Maintain operation of existing systems serving occupied areas until new controls are operational. Schedule any interruption with the Owner a minimum of 72 hours in advance.

3.5 TEMPORARY OPERATION DURING CONSTRUCTION

A. Where HVAC equipment is operated for temporary heating, cooling, or ventilation before Substantial Completion, provide the controls programming and safeties required for safe operation, including freeze protection and high and low limit safeties.

B. Before Substantial Completion, re-verify all programming, recalibrate all sensors, and replace any controls devices damaged or contaminated during temporary operation, at no additional cost to the Owner.

3.6 PROGRAMMING

A. Program every sequence of operation on the Drawings exactly as written. Do not modify setpoints, deadbands, or logic without written approval from the Engineer.

B. Point Naming: Use a consistent naming convention of building, system, and point, submitted for approval with the points lists.

C. Adjustable Parameters: Every setpoint, deadband, time delay, and limit referenced in the sequences shall be adjustable from the operator interface at administrator level without reprogramming.

D. Restart After Power Loss: Stagger equipment starts at a minimum of 30 seconds between major equipment items.

E. Alarms: In addition to alarms shown on the points list, provide:
1. Equipment failure: command and status disagree for more than 60 seconds.
2. Space temperature more than 5 degrees F from active setpoint for more than 30 minutes.
3. Apparatus bay temperature below 40 degrees F.
4. Loss of communication with any controller.
5. CO/NO2 detection system alarm.
6. Generator running and generator trouble.

F. Schedules: Program occupancy schedules as directed by the Owner during training. Fire station living areas default to continuous occupancy unless directed otherwise.

3.7 COORDINATION WITH TESTING, ADJUSTING, AND BALANCING

A. Provide a controls technician on site during testing, adjusting, and balancing, with the interface and software required to command dampers, valves, and variable frequency drives.

B. Set minimum outdoor air damper positions, airflow setpoints, and drive speeds as determined by the balancer, and enter final values into the programming.

C. Provide all assistance required by the balancer at no additional cost.

3.8 TRENDING

A. Trend every physical input and output and every setpoint at an interval of 15 minutes, and every status point on change of value. Retain as specified in "Building Controller" Article.

B. Trends shall be active before the sequence demonstration.

3.9 POINT-TO-POINT CHECKOUT

A. Before the sequence demonstration, check every point and document results on a checkout form listing each point with date, technician, and result:
1. Inputs: Compare the reading to a calibrated reference instrument. Record both values.
2. Outputs: Command through the full range and verify the device responds correctly.
3. Interlocks and Safeties: Verify each by actual trip, not by simulation.
4. Network Points from Packaged Equipment: Verify each value against the equipment's local display.

B. Submit completed checkout forms a minimum of 7 days before the sequence demonstration. The demonstration will not be scheduled until checkout forms are accepted.

3.10 COMMISSIONING

A. The DDC system shall be commissioned by the Owner's Commissioning Authority (CxA). Where the Contractor engages the CxA, the CxA shall be independent of the Contractor and the installer, and shall be approved by the Owner.

B. Commissioning shall satisfy the adopted energy code, including IECC Section C408 or ASHRAE 90.1 as applicable, and the Division 01 general commissioning requirements.

C. Contractor Responsibilities:
1. Attend commissioning meetings scheduled by the CxA, with the project manager and the lead programming technician.
2. Complete and submit construction checklists provided by the CxA for each controller, panel, and system before functional testing.
3. Complete point-to-point checkout as specified in "Point-to-Point Checkout" Article before functional testing begins.
4. Provide trend logs requested by the CxA, in electronic format, for a minimum of 7 consecutive days of normal operation before functional testing.
5. Provide technicians, tools, instruments, software, and access to the operator interface to execute each functional test, including overriding points and simulating conditions as directed by the CxA.
6. Respond in writing to each item on the CxA issues log within 5 working days, and correct deficiencies at no additional cost.
7. Prepare and submit the energy code functional testing report, documenting results, deficiencies, and corrections, in the form required by the code official.
8. Provide controls content for the systems manual and verify training as required by the CxA.

D. Retesting: Where a functional test fails, correct the deficiency and retest. The Contractor shall reimburse the Owner for the CxA's and the Engineer's time for each retest after the first retest of the same item, at their standard hourly rates.

E. Seasonal Testing: Perform deferred functional tests of heating or cooling sequences that cannot be tested under the conditions present at Substantial Completion during the first opposite season, as scheduled by the CxA, at no additional cost.

3.11 SEQUENCE DEMONSTRATION

A. The sequence demonstration may be performed concurrently with commissioning functional testing when approved by the Engineer and the CxA.

B. Demonstrate each sequence of operation to the Engineer and the Owner, including each mode, alarm, safety, and fail-safe response, using the operator interface and actual equipment operation.

C. Provide two technicians and all tools and instruments required.

D. Correct deficiencies and repeat the demonstration of affected sequences. The Contractor shall reimburse the Owner for the Engineer's time for any demonstration after the second attempt, at the Engineer's standard hourly rates.

3.12 TRAINING

A. Provide 4 hours of on-site training in two sessions, by a technician who programmed the system, covering: system overview, navigating the interface, setpoints and schedules, alarm response, trends, user accounts, and basic troubleshooting.

B. Provide 2 hours of follow-up training within 6 months of Substantial Completion, at a time selected by the Owner.

C. Provide a printed quick-reference guide with the web address, login procedure, and common tasks, mounted at the Building Controller.

3.13 CLOSEOUT AND TURNOVER

A. Submit all closeout submittals and transfer all items listed in "Open System Requirements" Article before Substantial Completion.

B. Provide all programming files, databases, graphics, and as-built documents electronically on a USB drive and by electronic transfer.

C. Final payment for this Section will not be released until the Owner confirms in writing that administrator access, licenses, and programming files have been received and verified.

END OF SECTION 23 0923