

ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR	FPS	FEET PER SECOND	PG	PRESSURE GAUGE
AHU	AIR HANDLING UNIT	FS	FLOW SWITCH	PH	PHASE-ELECTRICAL
AMP	AMPERE	FT	FEET	PLBG	PLUMBING
APPROX	APPROXIMATE	GA	GAUGE	PRV	PRESSURE REDUCING VALVE
AVG	AVERAGE	GAL	GALLONS	PSI	POUNDS PER SQUARE INCH
B.O.P	BOTTOM OF PIPE	GALV	GALVANIZED	PVC	POLYVINYL CHLORIDE PIPE
BFP	BACKFLOW PREVENTION DEVICE	GPD	GALLONS PER DAY	QT	QUART
BFV	BUTTERFLY VALVE	GPH	GALLONS PER HOUR	RA	RETURN AIR
BHP	BRAKE HORSEPOWER	GPM	GALLONS PER MINUTE	RD	ROOF DRAIN
BTU	BRITISH THERMAL UNIT	GR	GRAINS OF MOISTURE	REQ	REQUIRED
CA	COMPRESSED AIR	GRD	GROUND	RG	RETURN AIR GRILLE
C TO C	CENTER TO CENTER	GWH	GAS WATER HEATER	RH	RELATIVE HUMIDITY
C/D	CONDENSATE DRAIN	H	ENTHALPY	RM	ROOM
CFH	CUBIC FEET PER HOUR	HC	HANDICAP	RPM	REVOLUTIONS PER MINUTE
CFM	CUBIC FEET PER MINUTE	HD	HEAD	RR	RETURN AIR REGISTER
CLG	CEILING	HP	HORSEPOWER	RWC	RAIN WATER CONDUCTOR
CO	CLEANOUT	HR	HOUR	RPZ	REDUCED PRESSURE ZONE BFP
CO ₂	CARBON DIOXIDE	HT	HEIGHT	SAN	SANITARY WASTE
COND	CONDENSATE	HTR	HEATER	SCH	SCHEDULE
CR	CONDENSER RETURN	HVAC	HEATING VENTILATION AIR CONDITIONING	SD	SUPPLY AIR DIFFUSER
CS	CONDENSER SUPPLY	HW	HOT WATER (DOMESTIC)	SF	SQUARE FEET
CONT	CONTINUED	HZ	FREQUENCY-ELECTRICAL	SPEC	SPECIFICATION
CPVC	CHLORINATED POLYVINYL CHLORIDE	ID	INSIDE DIAMETER	SPR	SPRINKLER
CW	COLD WATER (DOMESTIC)	ID	INDIRECT DRAIN	SQ	SQUARE
DB	DRY BULB	IE	INVERT ELEVATION	SR	SUPPLY AIR REGISTER
DEG	DEGREE	IW	INDIRECT WASTE	SS	STAINLESS STEEL
DIA	DIAMETER	KW	KILOWATT	STD	STANDARD
DN	DOWN	KWH	KILOWATT HOUR	STL	STEEL
DTV	DOUBLE THICK TURNING VANES	LAT	LEAVING AIR TEMPERATURE	STR	STRAINER
DWG	DRAWING	LBS	POUNDS	STRUC	STRUCTURAL
(E)	EXISTING	LF	LINEAR FEET	SUCT	SUCTION
EA	EXHAUST AIR	LL	LOW LEVEL	T&P	TEMPERATURE & PRESSURE RELIEF VALVE
EAT	ENTERING AIR TEMPERATURE	LWT	LEAVING WATER TEMPERATURE	TEMP	TEMPERATURE
(ED)	EXISTING TO BE DEMOLISHED	MAU	MAKE-UP AIR UNIT	THERM	THERMOMETER
(ER)	EXISTING TO BE RELOCATED	MAX	MAXIMUM	T.O.P	TOP OF PIPE
EL	ELEVATION	MECH	MECHANICAL	TP	TRAP PRIMER
ELEC	ELECTRICAL	MFR	MANUFACTURER	TP	TYPICAL
EQ	EQUAL	MIN	MINIMUM	UL	UNDERWRITER'S LABORATORY
EQUIP	EQUIPMENT	MISC	MISCELLANEOUS	UTIL	UTILITY
ESP	EXTERNAL STATIC PRESSURE	MOD	MOTOR OPERATED DAMPER	VAV	VARIABLE AIR VOLUME
EVAP	EVAPORATOR	MPCR	MEDIUM PRESSURE CONDENSATE RETURN	VD	VOLUME DAMPER
EWH	ELECTRIC WATER HEATER	(N)	NEW	VEL	VELOCITY
EWT	ENTERING WATER TEMPERATURE	NA	NOT APPLICABLE	VERT	VERTICAL
EXT	EXTERIOR	NC	NOISE CRITERIA	VFD	VARIABLE FREQUENCY DRIVE
"F	DEGREE FAHRENHEIT	N.C.	NORMALLY CLOSED	VOL	VOLUME
FD	FLOOR DRAIN	NIC	NOT IN CONTRACT	VTR	VENT THROUGH ROOF
FIN	FINISH	N.O.	NORMALLY OPEN	W/	WITH
FF	FINISHED FLOOR	NO	NUMBER	WB	WET BULB TEMPERATURE
FLR	FLOOR	NTS	NOT TO SCALE	WH	WALL HYDRANT
FO	FUEL OIL	OA	OUTSIDE AIR	WP	WEATHERPROOF
FPM	FEET PER MINUTE	OD	OUTSIDE DIAMETER	W/O	WITHOUT
		OED	OPEN END DUCT		

MECHANICAL GENERAL NOTES

- ALL WORK IS TO BE IN COMPLIANCE WITH THE 2018 INTERNATIONAL MECHANICAL CODE OR LOCAL CODE HAVING JURISDICTION. NOT ALL CODE REQUIREMENTS HAVE BEEN DESCRIBED IN THIS SPECIFICATION OR INDICATED ON THE DRAWINGS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BE FAMILIAR WITH THE CODES AND INSTALL THE WORK IN ACCORDANCE WITH CODES.
- OBTAIN AND PAY FOR BUILDING PERMITS, INSPECTIONS, CONNECTION CHARGES, AND FEES.
- THE CONTRACTOR IS TO SURVEY AND VERIFY ALL EXISTING CONDITIONS PRIOR TO BID SUBMISSION AND BECOME AWARE OF ALL CONDITIONS WHICH MAY IMPACT THE REQUIRED WORK. CONTRACTOR IS TO INCLUDE ALL ASSOCIATED COSTS (MATERIALS/LABOR) DETERMINED TO BE REQUIRED DURING SITE INSPECTIONS. CONTRACTOR'S BID SUBMISSION IS TO BE CONSIDERED PROOF THAT THIS REQUIREMENT HAS BEEN MET.
- DRAWINGS AND SPECIFICATIONS ARE INTENDED TO BE TAKEN AS A WHOLE. IF A CONFLICT OR CONTRADICTION EXISTS BETWEEN THE DRAWINGS AND SPECIFICATIONS, THE MORE STRINGENT WILL APPLY. THE ARCHITECT'S AND ENGINEER'S INTERPRETATION OF THE DOCUMENTS ARE TO BE BINDING UPON THE CONTRACTOR.
- ALL WORK IS TO BE COORDINATED WITH AND APPROVED BY THE OWNER PRIOR TO ANY SHUT-DOWNS. ALL REQUESTS ARE TO BE SUBMITTED, IN WRITING, TO THE OWNER 24 TO 48 HOURS PRIOR TO REQUESTED DELETIONS.
- COORDINATE ALL ELECTRICAL REQUIREMENTS WITH THE ELECTRICAL CONTRACTOR PRIOR TO PURCHASING EQUIPMENT. VERIFY ALL VOLTAGE AND AMPERE REQUIREMENTS FOR FEEDERS, AND MOCIP DEVICES.
- ALL EXTERIOR WALL/ROOF PENETRATIONS ARE TO BE SEALED, AIR, AND WATER-TIGHT. ALL PIPING PASSING THROUGH WALL, OR FLOOR PENETRATIONS IS TO HAVE SLEEVES. ALL WALL, OR FLOOR-RATED PENETRATIONS ARE TO BE SEALED WITH FIRE-RATED SEALANT FORMED IN PLACE (BY 3M OR HILTI).
- PROVIDE ALL ACCESS DOORS FOR ALL VALVES, DAMPERS, DEVICES, CONTROLLERS, ETC. WHICH MAY REQUIRE SERVICE. ALL ACCESS PANELS ARE BE 16 GAUGE STEEL FRAME, 20 GAUGE HINGED DOOR, LOCKABLE, AND FIRE-RATED (WHEN INSTALLED IN RATED WALLS, FLOORS, "B" LABEL, 1-1/2 HOURS), FINISH AS SELECTED BY THE ARCHITECT.
- SUBMIT SHOP DRAWINGS FOR ALL EQUIPMENT TO BE REVIEWED BY THE ENGINEER PRIOR TO ORDERING. COORDINATE ALL ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR, AND PHYSICAL DIMENSIONS PRIOR TO SHOP DRAWING SUBMISSION.
- SUBMIT SHOP DRAWINGS OF ALL SHEET METAL FOR REVIEW. DRAWINGS ARE TO BE NOT LESS THAN 1/4"x1'-0" SCALE AND ARE TO INDICATE ALL STEEL, PIPING, CONDUIT WIRING METHODS, LIGHTING FIXTURES, SPRINKLER, EQUIPMENT, AND ARCHITECTURAL FEATURES. DUCTWORK IS TO BE INDICATED DOUBLE-LINE. INDICATE DETAIL OF FIRE DAMPER. SHEET METAL SHOP DRAWINGS WILL BE UTILIZED FOR CONTRACTOR'S COORDINATION DRAWINGS AND IS TO BE SUBMITTED FOR REVIEW, AND APPROVAL PRIOR TO INSTALLATION. IF SHEET METAL SHOP DRAWINGS ARE NOT SUBMITTED, OR IF THE CONTRACTOR INSTALLS THE DUCTWORK WITHOUT PRIOR APPROVALS, THE CONTRACTOR IS TO ASSUME ALL RESPONSIBILITIES AND FIELD COORDINATION, AND PAY ALL ASSOCIATED COSTS ASSOCIATED WITH DUCTWORK INSTALLATION DEFICIENCIES, AND FIELD COORDINATION ISSUES.
- ALL DUCTWORK IS TO COMPLY WITH NFPA Pamphlet 90 A. ALL DUCTWORK SEAMS ARE TO BE SEALED WITH DUCT SEALANT. ALL NEW DUCTWORK SECTIONS AND FITTINGS TO BE INSTALLED ON THE PROJECT ARE TO BE COVERED, AND SEALED FROM DUST, DIRT, DEBRIS.
- PROVIDE THIRD-PARTY TEST, BALANCE, AND ADJUST REPORT (FOR ALL AIR AND HYDRONIC SYSTEMS) BOTH PRIOR TO DEMOLITION WORK, AND AT THE COMPLETION OF THE WORK. BALANCE AIR QUANTITIES AND FLOW RATES TO VALUES AS INDICATED ON THE DRAWINGS. SET DAMPER AND VALVE POSITIONS. ALLOW FOR ONE SHEAVE CHANGE PER EACH (50%) OF THE HVAC SYSTEMS. PROVIDE ONE SPEED TAP ADJUSTMENT FOR DIRECT DRIVE SYSTEMS PER EACH (100%) OF THE HVAC SYSTEMS. PROVIDE TOTAL AND STATIC PRESSURE READINGS, TRAVERSE AT FAN INLETS, AND OUTLETS. READ PUMP PRESSURE, AMPERAGE, GPMs, RPMs AND IDENTIFY OPERATING POINT ON THE IMPELLER CURVE. T.B.A. CONTRACTOR IS TO BE INDEPENDENT, AND AABC/NEBB CERTIFIED.
- ALL WORK IS TO BE CONCEALED, UNLESS OTHERWISE INDICATED.
- NO PVC PIPING IS PERMITTED IN RETURN AIR PLENUMS.
- ALL THREE PHASE STARTER EQUIPMENT IS TO BE PROVIDED BY THE MECHANICAL CONTRACTOR AND IS TO BE MAGNETIC, ACROSS-THE-LINE WITH AUXILIARY CONTACTS. ALL SINGLE PHASE STARTER EQUIPMENT IS TO BE PROVIDED BY ELECTRICAL CONTRACTOR.
- PROVIDE CONDENSATE DRAIN TO ACCEPTABLE CODE APPROVED DISCHARGE POINT, 1-1/2" PVC (COPPER). ALL CONDENSATE PIPING IS TO HAVE 1/2" FIBERGLASS INSULATION WITH VAPOR BARRIER. PROVIDE CONDENSATE PUMP(S) WITH DISCHARGE CHECK VALVE(S) IF GRAVITY FLOW IS NOT OBTAINABLE. SUBMIT SHOP DRAWING FOR REVIEW AND APPROVAL AND COORDINATE ELECTRICAL WORK WITH THE ELECTRICAL CONTRACTOR.
- PROVIDE FIRE DAMPERS IN ALL RATED WALL/FLOOR/SHAFT ASSEMBLIES WHERE INDICATED ON THE ARCHITECTURAL PLANS. FIRE DAMPERS ARE TO BE INSTALLED IN ACCORDANCE WITH THE UL LISTING FOR THE DAMPER AND AS DETAILED AS ON THE DRAWINGS, AND DETAILS. THE DAMPERS ARE TO BE SET IN A STEEL SLEEVE, AND ARE TO BE PROVIDED WITH BREAKAWAY CONNECTIONS. DAMPERS ARE TO BE 1-1/2 HOUR RATED. PROVIDE SMOKE DAMPERS IN ALL SMOKE-RATED WALLS/PARTITIONS PER THE ARCHITECTURAL PLANS. COORDINATE ALL LOCATIONS AND POWER REQUIREMENTS WITH ELECTRICAL, AND FIRE ALARM CONTRACTORS.
- PROVIDE INSULATED PREFABRICATED ROOF CURB FOR ROOF-MOUNTED EQUIPMENT, DUCTWORK, AND PIPING AS MANUFACTURED BY THE ROOF-MOUNTED EQUIPMENT MANUFACTURER. ALL DUCT/PIPING ROOF PENETRATIONS ARE TO HAVE ROOF CURBS. ALL ROOF CURBS ARE TO BE SECURED TO THE ROOF AND COORDINATED WITH THE OWNER'S ROOFING CONTRACTOR.
- KITCHEN EXHAUST DUCTS ARE TO BE 16 GAUGE, CONTINUOUS WELDED STEEL, INSTALLED IN ACCORDANCE WITH NFPA 96. PROVIDE ONE HOUR FIRE-RATING AROUND THE ENTIRETY OF DUCTWORK FROM THE KITCHEN HOOD TO THE EXHAUST FAN. ALL ELBOWS ARE TO BE LONG-SWEEP RADIUS ELBOWS. PROVIDE CLEAN-OUT ACCESS PANELS AT ALL CHANGES IN DIRECTION, SPACED IN ACCORDANCE WITH NFPA-96 REQUIREMENTS.
- ALL FINISHES RELATED TO MECHANICAL EQUIPMENT, TERMINAL EQUIPMENT, AIR DEVICES, PERIMETER HEATERS, LOUVERS, ACCESS PANELS, EXPOSED WIREMOLD/ RACEWAYS, ETC. ARE TO BE COORDINATED AND SELECTED BY THE ARCHITECT/OWNER/ENGINEER PRIOR TO SHOP DRAWING SUBMISSION, ORDERING, AND INSTALLATION.
- FINAL LOCATIONS OF ALL THERMOSTATS, ACCESS PANELS, SPACE SENSORS, DETECTION DEVICES, ETC. IN FINISHED SPACES ARE TO BE COORDINATED AND APPROVED BY THE ARCHITECT/OWNER PRIOR TO ROUGH-IN AND INSTALLATION.
- PROVIDE NEW MERV 11 FILTERS FOR ALL NEW AND EXISTING HVAC EQUIPMENT. CONTRACTOR IS TO PROVIDE ONE SPARE SET OF MERV 11 FILTERS FOR EACH HVAC SYSTEM, AND TURN OVER TO THE OWNER.
- RENOVATION PROJECTS: CONTRACTOR IS TO PROVIDE TEMPORARY FILTERS IN ALL EXISTING HVAC EQUIPMENT IMPACTED BY THE RENOVATION PROJECT'S SCOPE OF WORK. CONTRACTOR IS TO COVER ALL EXISTING SUPPLY, RETURN, EXHAUST, AND RELIEF AIR OPENINGS DURING CONSTRUCTION, AND/OR DEMOLITION TO PREVENT DUST, DIRT, AND DEBRIS FROM ENTERING THE EXISTING DUCTWORK.
- WATER SYSTEMS START-UP: FILL SYSTEM AND THOROUGHLY FLUSH ALL SEDIMENT, DIRT, PARTICLES, AND ANY OTHER MATERIAL FROM THE SYSTEM. REMOVE ALL AIR FROM THE SYSTEM. THIS WILL REQUIRE SEVERAL BLEEDING SEQUENCES. PROVIDE AIR VENTS AS REQUIRED. CLEAN ALL STRAINERS AFTER A THOROUGH FLUSHING. PROVIDE CHEMICAL TREATMENTS FOR THE FIRST YEAR OF OPERATION INCLUDING ALL NECESSARY TASKS, CHEMICALS, ADDITIVES, AND SERVICE VISITS.
- THE CONTRACTOR IS TO PROVIDE RADIANT CEILING DAMPERS IN ALL CEILING AIR DEVICES, (DIFFUSERS, GRILLES, REGISTERS, ETC.) AND RECESSED CEILING EXHAUST FANS LOCATED IN A FIRE-RATED CEILING ASSEMBLY. REFER TO ATTACHED DETAILS.
- THE CONTRACTOR IS TO BE RESPONSIBLE FOR PROVIDING AUXILIARY DEHUMIDIFICATION UNITS IN EACH DWELLING UNIT AND THROUGHOUT THE BUILDING AFTER THE BUILDING IS ENCLOSED, DRYWALL, AND PAINTING IS FINISHED. THE DEHUMIDIFICATION UNITS ARE TO REMAIN IN OPERATION UNTIL UNIT TURN-OVER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DISCHARGE ALL CONDENSATE AND PROVIDE MEANS FOR POWER.
- THE CONTRACTOR IS TO PROVIDE MANUFACTURER'S START-UP OF ALL EQUIPMENT, AND SYSTEMS.
- PROPERLY INSTRUCT OWNER'S PERSONNEL IN THE OPERATION AND MAINTENANCE OF ALL SYSTEMS AND EQUIPMENT. PROVIDE THREE INSTRUCTION AND MAINTENANCE MANUALS. SUBMIT MANUALS FOR REVIEW PRIOR TO OPERATING INSTRUCTION.
- COORDINATE LOCATIONS AND ROUGH-IN REQUIREMENTS WITH ALL TRADES PRIOR TO INSTALLATION.
- IF THE CONTRACTOR ELECTS TO SUBMIT ALTERNATE EQUIPMENT, MANUFACTURERS, SYSTEMS, METHODS, OR MATERIALS NOT SPECIALLY IDENTIFIED IN THE DRAWINGS AND SPECIFICATIONS, IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE THE WORK WITH OTHER TRADES AND PAY FOR ANY ADDITIONAL COSTS ASSOCIATED WITH THE SUBSTITUTION OR CHANGE.
- PROVIDE ONE SET OF ELECTRONIC AS-BUILT DRAWINGS AT COMPLETION OF WORK. SUBMIT TO OWNER AND ENGINEER FOR REVIEW AND APPROVAL.

PROJECT DEDUCT/ADD ALTERNATES

REFER TO FLOOR PLANS

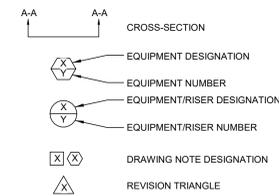
CONTRACTOR NOTES

CONTRACTOR IS TO COORDINATE FINAL LOCATIONS FOR ALL KITCHEN EQUIPMENT, FLOOR DRAINS, FLOOR SINKS, ETC. WITH THE ARCHITECT/ OWNER KITCHEN CONSULTANT PRIOR TO ROUGH-IN WORK. CONTRACTOR IS TO COORDINATE WITH KITCHEN VENDOR AND KITCHEN CONSULTANT FOR ALL KITCHEN EQUIPMENT CONNECTION POINT LOCATIONS PRIOR TO ROUGH-IN. IT IS THE INTENT FOR ALL WORK TO BE CONCEALED UNLESS DIRECTED OTHERWISE. CONTRACTORS ARE TO MAKE ALL FINAL CONNECTIONS TO KITCHEN EQUIPMENT (CONTRACTOR IS TO FURNISH AND INSTALL NEW VALVED CONNECTIONS, DAMPERS, FITTINGS, ETC. FOR EACH PIECE OF EQUIPMENT (NEW AND EXISTING). CONTRACTOR IS TO PROVIDE FLEXIBLE PIPE CONNECTIONS FOR ALL MOVABLE PIECES OF EQUIPMENT. CONTRACTOR IS TO PROVIDE WASHABLE, PVC-INSULATED FITTED COVERS, AND JACKET (MAHVILLE PERMEWELL SYSTEM, USA AND FDA APPROVED, WHITE) ON ALL EXPOSED PIPING (NEW AND EXISTING). CONTRACTOR IS TO PERFORM A SITE VISIT PRIOR TO BID SUBMISSION AND INCLUDE ALL ASSOCIATED COSTS FOR ALL NEW AND EXISTING CONDITIONS. CONTRACTOR'S BID SUBMISSION IS TO BE CONSIDERED PROOF THAT ALL SURVEY AND VERIFICATION REQUIREMENTS HAVE BEEN MET.

DRAWING LIST

Drawing List- Mechanical					
NUMBER	NAME	Current Issue	Current Revision	Current Revision Date	Current Revision Description
M-001	COVER SHEET- MECHANICAL	ISSUED	0		Issued
M-101	FIRST FLOOR PLAN- MECHANICAL DUCTWORK	ISSUED	0	03/29/24	Issued
M-102	SECOND FLOOR PLAN- MECHANICAL DUCTWORK	ISSUED	0	03/29/24	Issued
M-103	FIRST FLOOR PLAN- MECHANICAL PIPING	ISSUED	0	03/29/24	Issued
M-104	SECOND FLOOR PLAN- MECHANICAL PIPING	ISSUED	0	03/29/24	Issued
M-105	ROOF PLAN- MECHANICAL	ISSUED	0	03/29/24	Issued
M-201	DETAILS- MECHANICAL	ISSUED	0	03/29/24	Issued
M-202	DETAILS- MECHANICAL	ISSUED	0	03/29/24	Issued
M-301	SCHEDULES- MECHANICAL	ISSUED	0	03/29/24	Issued
M-302	SCHEDULES- MECHANICAL	ISSUED	0	03/29/24	Issued
M-303	SCHEDULES- MECHANICAL	ISSUED	0	03/29/24	Issued

DRAWING SYMBOLS LIST

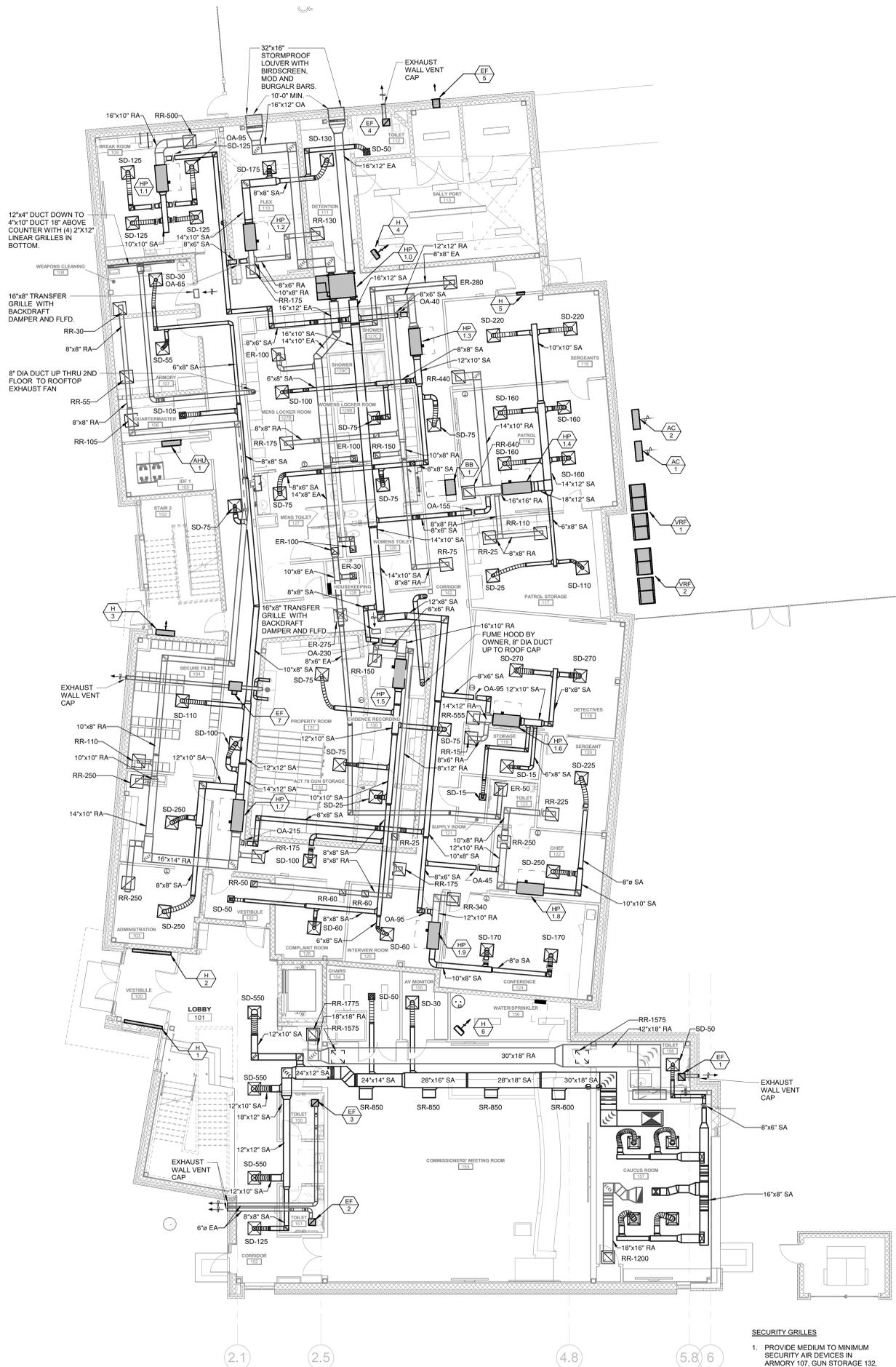


DESIGN NOTES

- DESIGN CONDITIONS
SIZING, DESIGN AND PERFORMANCE OF THE HEATING AND COOLING SYSTEMS ARE BASED ON THE FOLLOWING DESIGN CHARACTERISTICS. MODIFICATION OF ANY OF THESE CHARACTERISTICS MAY ADVERSELY AFFECT THE HEATING AND COOLING PERFORMANCE AND LEVEL OF COMFORT TO THE BUILDING OCCUPANTS.
WEATHER STATION LOCATIONS - PHILADELPHIA, PA
HEATING DEGREE DAYS = 4589
OUTDOOR:
WINTER DRY BULB 14°F
SUMMER DRY BULB 90°F
SUMMER WET BULB 74°F
INDOOR:
WINTER DRY BULB 70°F
SUMMER DRY BULB 75°F

NOTICE
THE SCHEDULES AND DRAWINGS REPRESENT ONLY CERTAIN REQUIREMENTS OF THE PROJECT. THERE ARE ADDITIONAL REQUIREMENTS IN THE SPECIFICATIONS BROCKET WHICH THE CONTRACTOR IS BOUND TO PROVIDE. A SUPPLIER OR CONTRACTOR'S PRICING, WHICH IS BASED ONLY ON DRAWINGS OR SCHEDULES, MAY LEAVE IMPORTANT COSTS UNACCOUNTED FOR WHICH WILL ULTIMATELY BE THE CONTRACTOR OR SUPPLIER'S RESPONSIBILITY TO PROVIDE.

THE DELIVERY OF THIS DRAWING SHOULD NOT BE CONSTRUED TO PROVIDE AN EXPRESS WARRANTY OR GUARANTEE TO ANYONE THAT ALL THE DIMENSIONS AND DETAILS ARE EXACT OR TO INDICATE THAT THE USE OF THIS DRAWING WITHOUT THE REVIEW AND APPROVAL BY THE DESIGN PROFESSIONAL OF ANY FUTURE USE. ANY USE OF THIS INFORMATION WITHOUT THE WRITTEN APPROVAL OF THE DESIGN PROFESSIONAL IS AT THE SOLE RISK AND LIABILITY OF THE USER. THE DESIGN PROFESSIONAL RECEIVES THE RIGHT TO REMOVE OUR PROFESSIONAL SEAL AND/OR TITLE BLOCK.



REFRIGERANT PIPING GENERAL NOTES:

1. ALL SPLIT SYSTEM COOLING UNITS AND HEAT PUMPS WILL REQUIRE STRICT ADHERENCE TO MANUFACTURER'S DATA SHEETS FOR LONG LINES ET INSTALLATION.
2. CONTRACTOR MUST SUBMIT CALCULATED LINESET LENGTH, ELEVATION, SIZE, AND REFRIGERANT CHARGE VOLUME FOR EACH SYSTEM OR ENGINEER APPROVAL WILL NOT BE GRANTED. PROVIDE DOCUMENTATION THAT EACH SYSTEM WILL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S GUIDELINES. SYSTEM DE-RATING, DROP IN PERFORMANCE/CAPACITY, OR LOSS OF EFFICIENCY SHALL NOT BE ACCEPTABLE. PROVIDE WARRANTY FROM MANUFACTURER AS WELL AS ON INSTALLATION.
3. ALL LINESETS MUST BE EXTENDED AS STRAIGHT AND DIRECT AS POSSIBLE WITH THE MINIMAL AMOUNT OF ELBOWS POSSIBLE.
4. INSTALL OVERSIZED PIPING, ADDITIONAL INSULATION, CRANKCASE HEATERS, HARD START KITS, OIL TRAPS, SUCTION RISERS, THERMAL EXPANSION VALVES, LIQUID LINE SOLENOIDS, AND ADDITIONAL CHARGE WHEREVER REQUIRED.
5. CONTRACTOR MUST PROVIDE FACTORY START-UP AND VERIFICATION FOR EVERY SYSTEM INSTALLED.
6. EXPOSED REFRIGERANT PIPING, POWER AND CONTROL WIRING EXTENDING FROM THE BUILDING TO THE REMOTE CONDENSING UNITS SHALL BE PROTECTED AND INSULATED WITH SPLIT TYPE INSULATION WITH PVC JACKET AND CEMENTED JOINTS FOR PIPING LARGER THAN 7/8" TUBE WITH 1" INSULATION. ALL PIPING SMALLER SHALL HAVE A JACKETING SYSTEMS BASED ON AIREX E-FLEX GUARD.
7. WALL/DROUHOUSE PIPING PENETRATION TO BE SEALED TIGHT AND INSTALLED WITH AIREX PENETRATION KIT. REFER TO DETAIL FOR ADDITIONAL INFORMATION.

MECHANICAL DUCTWORK NOTE:

DUCTWORK DRAWINGS/LAYOUT IS DIAGRAMMATIC. ALL DUCTWORK INSTALLATIONS AND SHEETMETAL SHOP DRAWINGS SHALL BE IN ACCORDANCE WITH MCHUGH ENGINEERING ASSOCIATES DUCTWORK DETAILS AND PER SMACNA STANDARDS.

SECURITY GRILLES

1. PROVIDE MEDIUM TO MINIMUM SECURITY AIR DEVICES IN ARMORY 107, GUN STORAGE 132, DETENTION 211.
2. PROVIDE MINIMUM SECURITY AIR DEVICES IN EVIDENCE RECORDING 130 AND PROPERTY ROOM 131.

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

Consultant:
McHUGH ENGINEERING ASSOCIATES, INC.
136 Poplar Street
Ambler, PA 19002
215-641-1158
2023-141

Project:
ASTON TOWNSHIP MUNICIPAL COMPLEX
3264 Concord Road
Aston, PA 19014

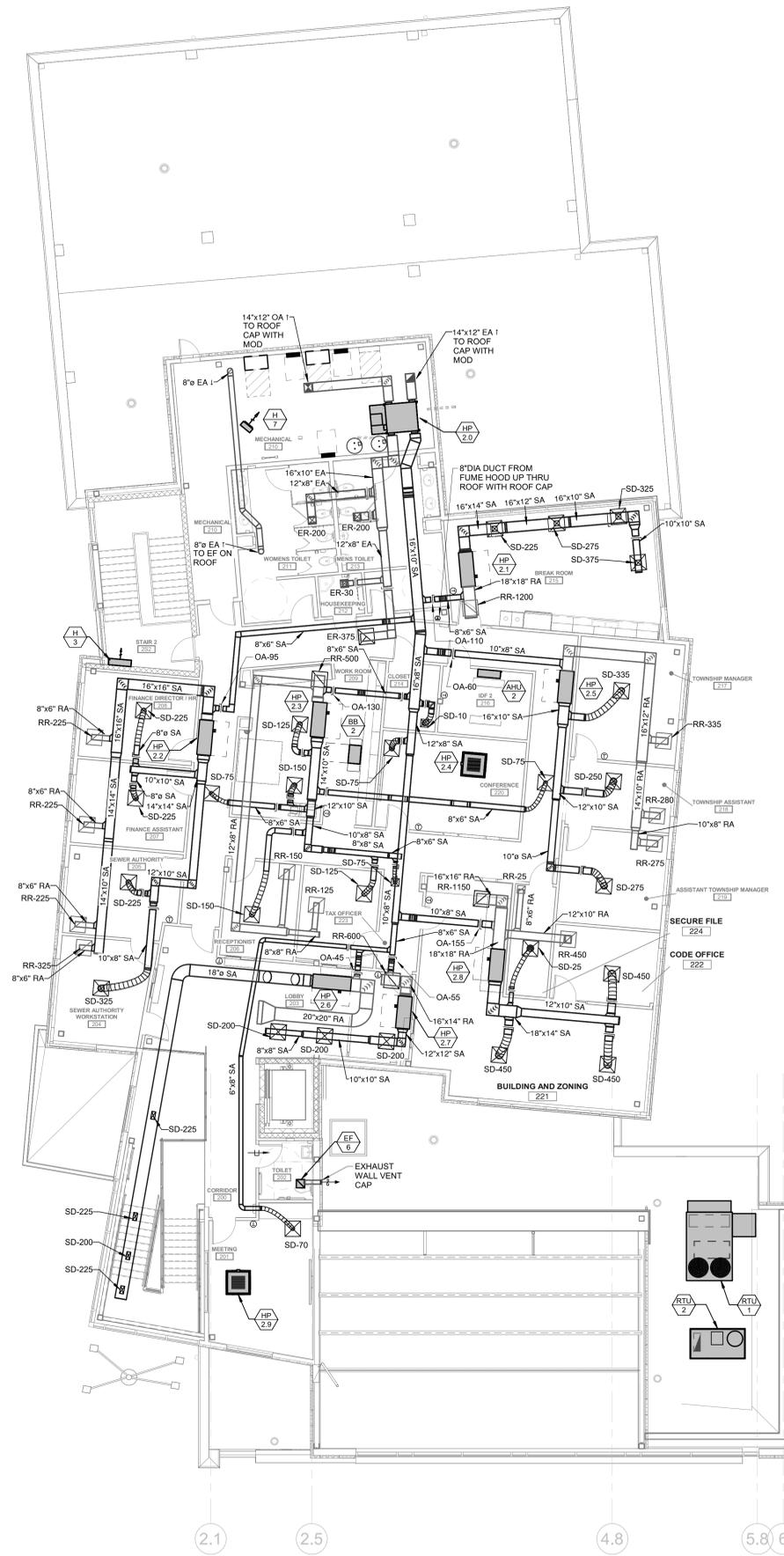
Owner:
ASTON TOWNSHIP
2 New Road
Suite 123
Aston, PA 19014

Revision/Issue:
0 03/29/24 Issued

Drawn: JK
Reviewed: PAS
Contact: Paul Andrew Sgroi
Project Number: 2301.00-22

Sheet Title:
SECOND FLOOR PLAN- MECHANICAL DUCTWORK
Sheet Number:

M-102



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1 SECOND FLOOR PLAN - MECHANICAL
1/8" = 1'-0"

Consultant:
McHUGH ENGINEERING ASSOCIATES, INC.
 136 Poplar Street
 Ambler, PA 19002
 215-641-1158
 2023-141

Project:
ASTON TOWNSHIP MUNICIPAL COMPLEX
 3264 Concord Road
 Aston, PA 19014

Owner:
ASTON TOWNSHIP
 2 New Road
 Suite 123
 Aston, PA 19014

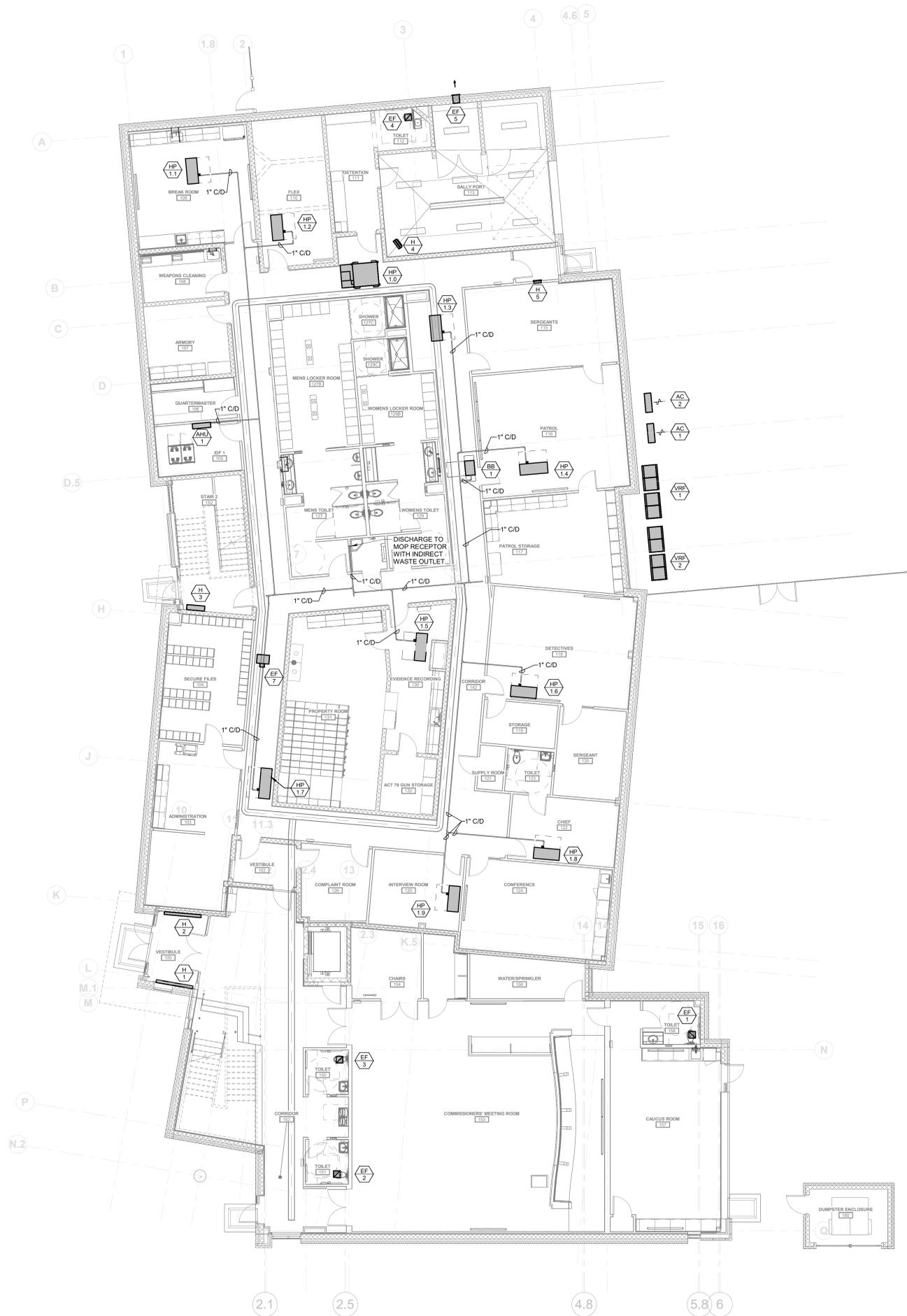
Revision/Issue:
 0 03/29/24 Issued

Drawn: JK
 Reviewed: PAS
 Contact: Paul Andrew Sgroi
 Project Number: 2301.00-22

Sheet Title:
FIRST FLOOR PLAN - MECHANICAL PIPING

Sheet Number:
M-103

MECHANICAL KEY NOTES NOTED THUS



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

NOTICE
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 136 Poplar Street
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 2023-141

Project:
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 Aston, PA 19014

Owner:
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 Suite 123
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Revision/Issue:
 0 03/29/24 Issued

Drawn: JK
Reviewed: PAS
Contact: Paul Andrew Sgroi
Project Number: 2301.00-22

Sheet Title:
SECOND FLOOR PLAN- MECHANICAL PIPING
Sheet Number:

M-104



1 SECOND FLOOR PLAN -MECHANICAL PIPING
 1/8" = 1'-0"

NOTICE
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 136 Poplar Street
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 215-641-1158
 2023-141

Project:
ASTON TOWNSHIP MUNICIPAL COMPLEX
 3264 Concord Road
 Aston, PA 19014

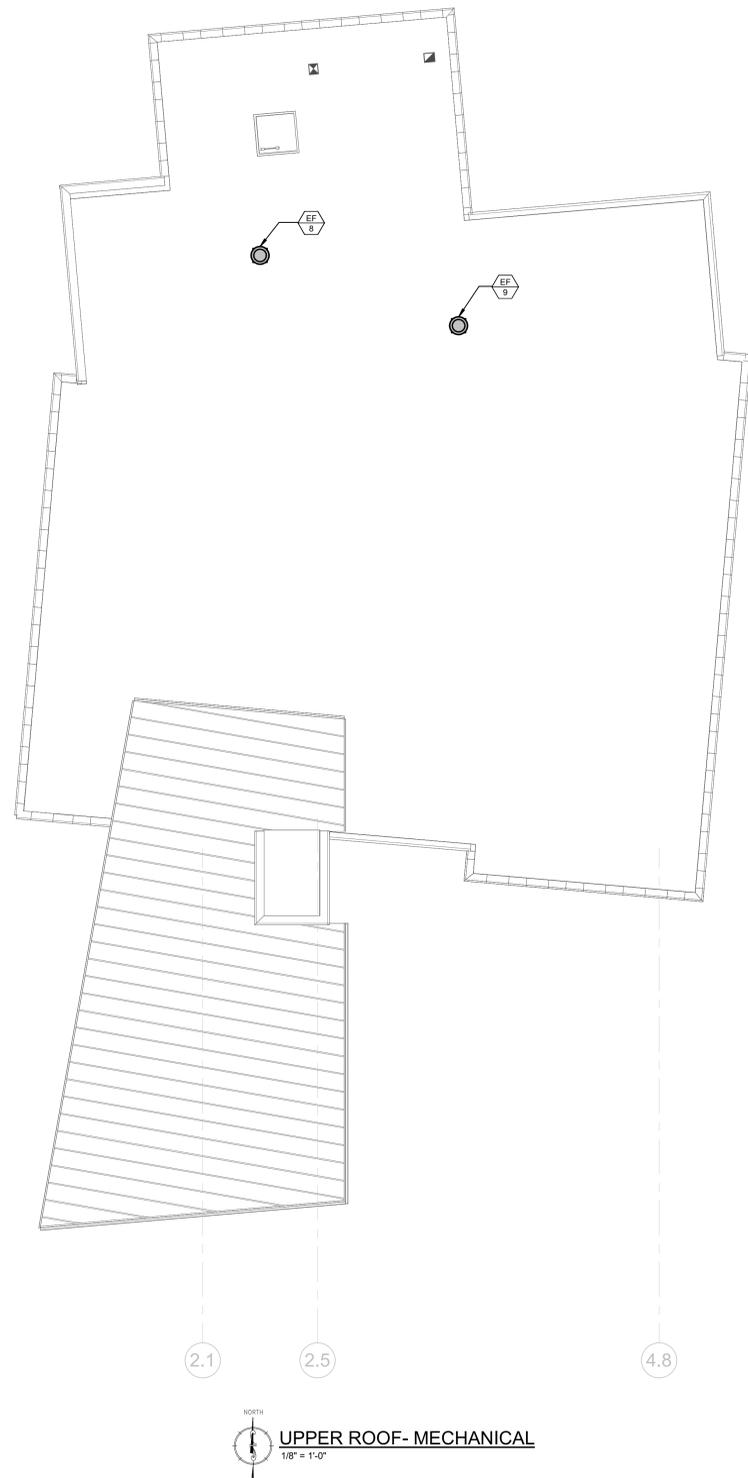
Owner:
ASTON TOWNSHIP
 2 New Road
 Suite 123
 Aston, PA 19014

Revision/Issue:
 0 03/29/24 Issued

Drawn: JK
 Reviewed: PAS
 Contact: Paul Andrew Sgroi
 Project Number: 2301.00-22

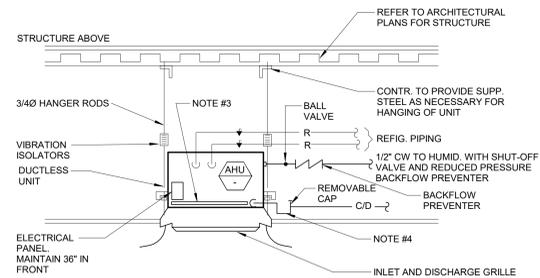
Sheet Title:
ROOF PLAN- MECHANICAL

Sheet Number:
M-105



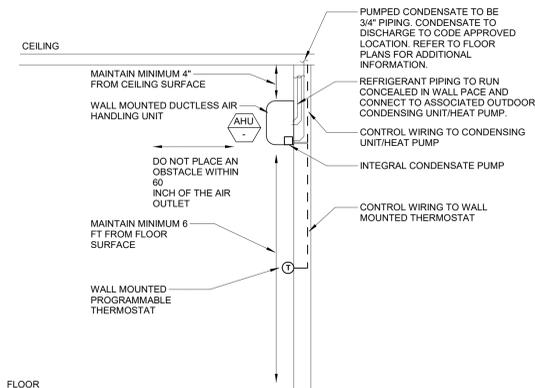
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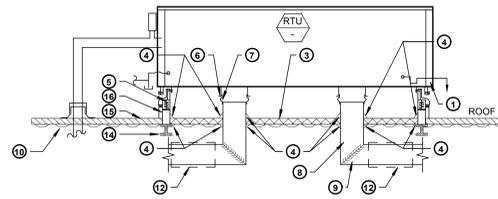
CEILING CASSETTE AIR HANDLING UNIT DETAIL
SCALE: NONE

- NOTES:
1. VERIFY IF EQUIPMENT IS PROVIDED WITH INTEGRAL CONDENSATE PUMP.
 2. 24"x24" CASSETTE UNITS REQUIRE A CEILING ACCESS PANEL ADJACENT TO THE CONTROL SIDE, WHERE INSTALLED ON NON ACCESSIBLE CEILINGS
 3. FILTER RACK, ALLOW CLEARANCE FOR ACCESS
 4. 1 1/2" Ø MIN. CONDENSATE LINE TO ACCEPTABLE DISCHARGE POINT. REFER TO SEPARATE CONDENSATE TRAP DETAIL.



WALL MOUNTED DUCTLESS AHU W/ INTEGRAL CONDENSATE PUMP DETAIL
SCALE: NONE

- NOTE:
1. INSTALL PER MANUFACTURER REQUIREMENTS.



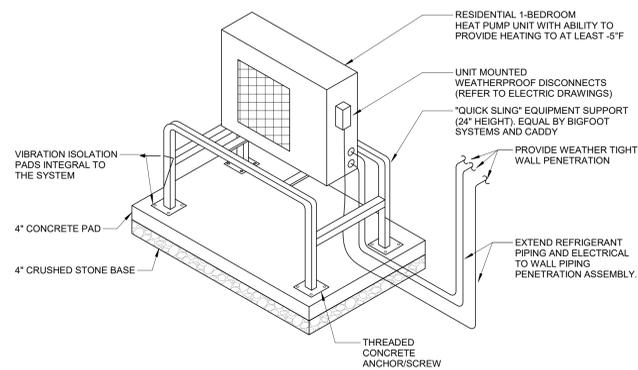
RTU NOISE CONTROL DETAIL
SCALE: NONE

- | BY RTU UNIT MANUFACTURER | BY ACOUSTICAL MANUFACTURER | BY MECH. CONTRACTOR | BY GENERAL CONTRACTOR |
|--------------------------|---|--|--|
| 1. RTU BASE | 3. HUSH CORE DECK SYSTEM-IN-CURB ACOUSTICAL TREATMENT TO PROVIDE A MINIMUM STC LEVEL OF 50. | 5. RTU CURB W/ SPRING ISOLATORS. | 14. BUILDING STEEL |
| 2. SAIRA UNIT OPENINGS | 4. HUSH SEALANT ACOUSTICAL CAULK AT ALL DUCT DROPS, ANY PENETRATIONS WITHIN ELBOW TRAP CAN BE USED WHERE CONDITIONS ALLOW | 6. DUCT DROP | 15. BUILT-UP ROOF OR CONCRETE |
| | | 7. FLEX CONNECTORS FOR ALL PIPING AND CONDUITS. | 16. INSULATION AND CANT STRIP |
| | | 8. DUCT WORK | 17. CURB SLOPE REQUIREMENTS WHERE APPLICABLE |
| | | 9. TURNING VANE | |
| | | 10. ROOF DECK FLASHED TO WITHIN 1/4" OF ALL DUCT DROPS & PENETRATIONS, BUT NOT IN CONTACT WITH DUCT WALL | |
| | | 11. SUBMIT LETTER OF CERTIFICATION FROM ACOUSTICAL SUPPLIER FOLLOWING INSPECTION | |
| | | 12. SOUND TRAP. CONFIRM LOCATION WITH FLOOR PLANS. | |
| | | 13. 16 GAUGE DUCTWORK FROM UNIT TO SOUND TRAP WITH 1" ACOUSTICAL DUCT LINER. | |

DESIGNER'S NOTE: NOTES 1,3,5,11,12,13 NEED TO BE EDITED PER PROJECT

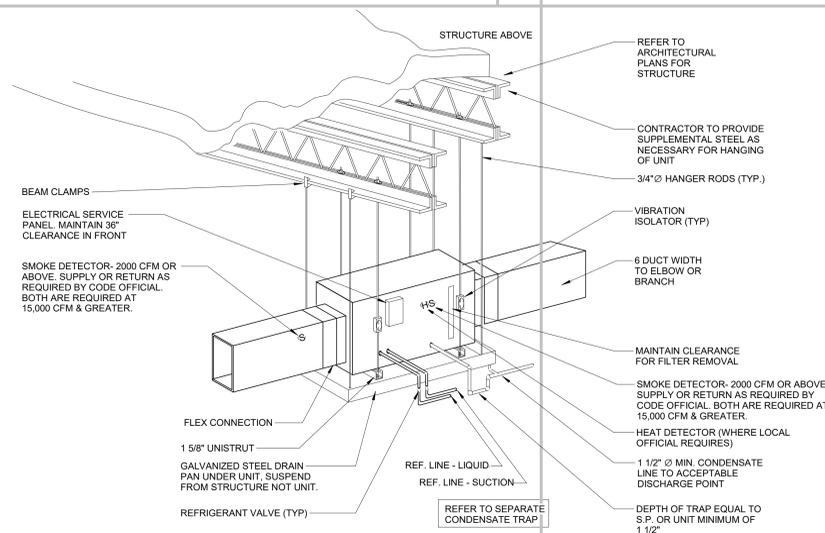
RTU NOISE REDUCTION SYSTEM

THE HUSH CORE SYSTEM SHALL BE A MULTI-LAYERED ACOUSTICAL COMPOSITE FOR PLACEMENT INSIDE THE ROOFTOP EQUIPMENT CURB. OVERALL INSTALLED THICKNESS OF THE COMPOSITE PANELS SHALL BE A MAXIMUM OF 14" THICK.



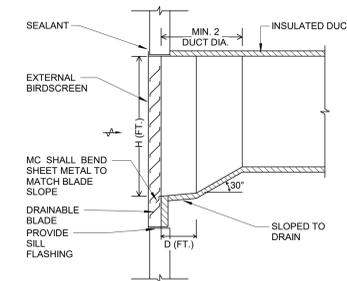
GRADE MOUNTED ELEVATED HEAT PUMP DETAIL
SCALE: NONE

- NOTES:
1. SUPPORT HEIGHT SHALL BE DETERMINED BY MANUFACTURER REQUIREMENTS AND THE LOCATION ANTICIPATED SNOWFALL.
 2. COORDINATE WITH ARCHITECT FOR MULTIPLE HEAT PUMP ARRAY DIRECTION.



DETAIL OF HORIZONTAL AIR HANDLING UNIT
SCALE: NONE

- NOTES:
1. SMOKE DETECTOR- 2000 CFM OR ABOVE. SUPPLY OR RETURN AS REQUIRED BY CODE OFFICIAL. BOTH ARE REQUIRED AT 15,000 CFM & GREATER.
 2. CONTRACTOR TO FURNISH AND INSTALL A CONDENSATE PUMP IF GRAVITY CONDENSATE DRAINAGE PIPING SYSTEM IS NOT POSSIBLE.
 3. UL LISTED CONDENSATE DETECTION DEVICE ON DRAIN PAN WITH SENOR INTERLOCKED W/AIR HANDLER. SHUT UNIT DOWN IF WATER IS DETECTED



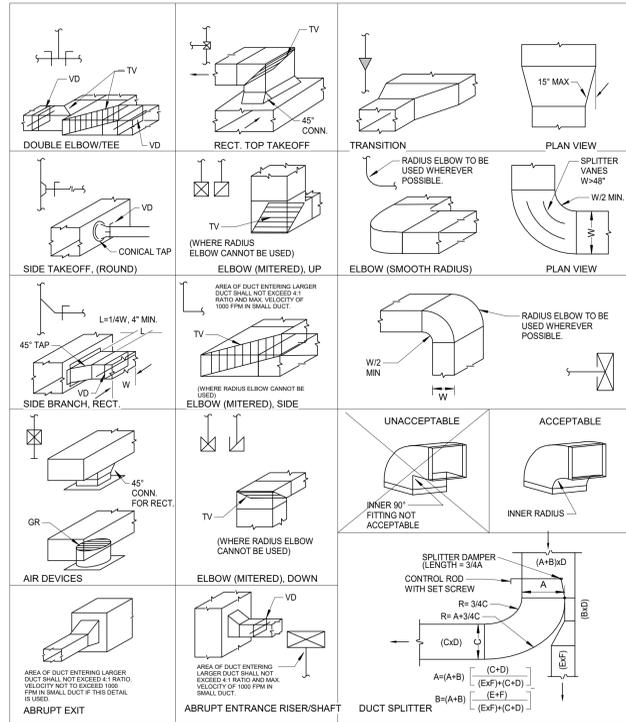
DRAINABLE LOUVER DETAIL
SCALE: NONE

- NOTES:
1. INSTALL PER MANUFACTURER'S REQUIREMENTS. REFER TO SCHEDULE FOR SIZES.

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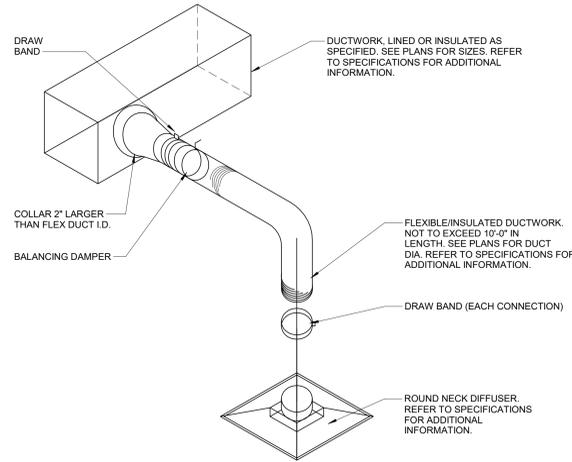
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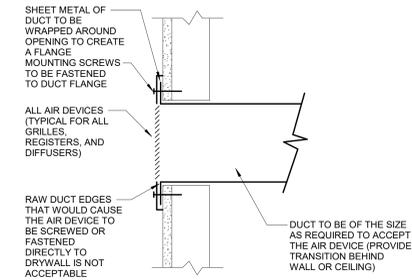
DUCTWORK DETAIL
SCALE: NONE

ABBREVIATIONS:

- GR EQUALIZING GRID
- TV TURNING VANES
- VD VOLUME DAMPER
- AT AIR TURN OR EXTRACTOR

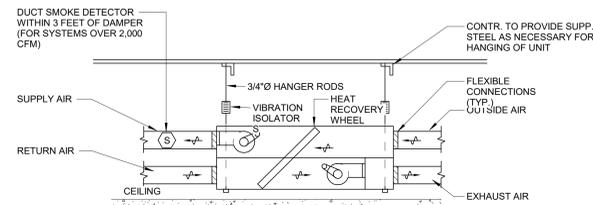


SUPPLY DIFFUSER DETAIL
SCALE: NONE

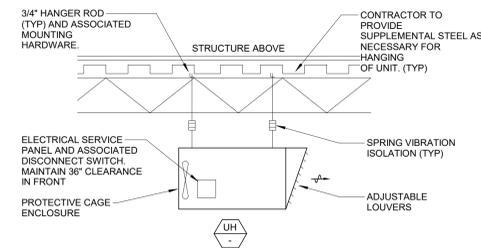


AIR DEVICE MOUNTING DETAIL
SCALE: NONE

- NOTE:**
1. APPLIES TO ALL AIR DEVICES MOUNTED TO WALLS OR CEILINGS.



HEAT RECOVERY UNIT DETAIL
SCALE: NONE



SUSPENDED ELECTRIC UNIT HEATER DETAIL
SCALE: NONE

- NOTES:**
1. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS FOR BUILDING STRUCTURE DETAILS.

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VRF HEAT RECOVERY BRANCH BOX SCHEDULE (BB)													
TAG	AREA	NUMBER OF PORTS	MAX PORT CAPACITY (MBH)	MAX UNIT CAPACITY (MBH)	ELECTRICAL				WEIGHT (LB)	H x L x W (IN)	BASIS OF DESIGN	MODEL	COMMENTS
					VOLT	PHASE	AMPS	MOCP					
1	1st FLR.	12	54	336	208	1	1.2	20	133	9'x44x21"	TRANE	TCMBM1012	1, 2, 3, 4, 5
2	2nd FLR.	12	54	336	208	1	1.2	20	133	9'x44x21"	TRANE	TCMBM1012	1, 2, 3, 4, 5

COMMENTS:
 1. ELECTRICAL DISCONNECT SWITCH BY E.C.
 2. MANUFACTURER'S START-UP AND 1 YEAR MANUFACTURER WARRANTY.
 3. VIBRATION ISOLATION HANGERS.
 4. SHUT-OFF VALVES ON ALL PORTS.
 5. PROVIDE ACCESS PANEL FOR UNITS INSTALLED ABOVE UNACCESSIBLE CEILINGS.

ELECTRIC UNIT HEATER SCHEDULE (EH)												
TAG	AREA SERVED	CONFIGURATION	BTUH	KW	CFM	LNPTH X WDTX X HGH (IN)	ELECTRICAL		CONTROL	BASIS OF DESIGN	MODEL	COMMENTS
							VOLTS	PHASE				
1	VESTIBULE 100	PEDESTAL	5121	1.5	NA	72"x3"x6"	208	1	WALL MNT'D THERMOSTAT	BERKO	CPLAM6	1, 3, 5, 6, 7, 9, 10
2	VESTIBULE 100	PEDESTAL	5121	1.5	NA	72"x3"x6"	208	1	SEE # 1 ABOVE	BERKO	CPLAM6	1, 3, 5, 6, 7, 9, 10
3	STAIR 01	CABINET UNIT HEATER	13656	4.0	250	24"x36"x10"	208	3	INTEGRAL THERMOSTAT	INDEECO	CU922U04	1, 3, 5, 6, 9
4	SALLYPORT 113	UNIT HEATER	25605	7.5	270	4"x14"x18"	208	3	WALL MNT'D THERMOSTAT	BERKO	HUHT24SA	1, 2, 3, 4, 5, 6, 7, 8, 9
5	VESTIBULE ADJ SERGEANTS	WALL MOUNTED, FAN FORCED	13656	4.0	100	4"x14"x18"	208	1	INTEGRAL THERMOSTAT	BERKO	SSHO4008	1, 2, 3, 4, 5, 6, 8
6	UTILITY 136	UNIT HEATER	10659	3.1	270	4"x14"x18"	208	1	WALL MNT'D THERMOSTAT	BERKO	HUHS24TA	1, 2, 3, 4, 5, 6, 7, 8, 9
7	MECHANICAL 210	UNIT HEATER	17070	5.0	270	4"x14"x18"	208	3	WALL MNT'D THERMOSTAT	BERKO	HUHS20SA	1, 2, 3, 4, 5, 6, 7, 8, 9

COMMENTS:
 1. EQUIVALENT MANUFACTURERS: MARKEL, QMARK OR PRIOR APPROVED EQUAL.
 2. SUMMER / WINTER SWITCH.
 3. THERMOSTAT SHALL BE TAMPERPROOF.
 4. MOUNTING BRACKETS AND HARDWARE.
 5. INTEGRAL DISCONNECT. AND THERMAL CUTOUT
 6. FINISH AND COLOR TO BE SELECTED BY ARCHITECT AND OWNER.
 7. EXTRUDED ALUMINUM HOUSING AND GRILLES
 8. FULLY RECESSED IN WALL
 9. LINE VOLTAGE THERMOSTAT SHALL BE ALLOWED BUT ALL WIRING SHALL STILL BE INSTALLED (OR SUBBED) BY THE M.C.
 10. EXTRUDED ALUMINUM HOUSING AND GRILLES

MITSUBISHI ELECTRIC TRANE HVAC US: CITY MULTI VRF INDOOR UNIT SCHEDULE																
Tag Reference	Room Name	Peak Fan Airflow (cfm)	M-NET Address	Type	Capacity			Estimated Cooling Coil LAT (°F)	Estimated Heating Coil LAT (°F)	Max Fan ESP Setting 208V/230V (IN WG)	Sound Pressure Per Fan Speed (dBA)	Electrical			Model	Notes / Options
					Cooling Total Capacity (BTU/h)	Cooling Sensible Capacity (BTU/h)	Heating Capacity (BTU/h)					Voltage / Phase	MCA	MOCP		
1.1	Break	585	9	Multi-Position Air Handler	18,345	13,660	20,442	58.1	98.0	0.8	28-32-36	208V/1Ph	3.00	15	PVIFY-P18NAMU-E1	1,2,3,4,5,6,7,8,9,10,11,12
1.2	Detention	400	8	Multi-Position Air Handler	12,128	9,556	13,680	57.5	99.1	0.8	27-31-35	208V/1Ph	3.00	15	PVIFY-P12NAMU-E1	1,2,3,4,5,6,7,8,9,10,11,12
1.3	Central_Toilet	585	4	Multi-Position Air Handler	18,268	13,646	20,333	58.1	98.9	0.8	28-32-36	208V/1Ph	3.00	15	PVIFY-P18NAMU-E1	1,2,3,4,5,6,7,8,9,10,11,12
1.4	SE Patrol Sergeant	1095	2	Multi-Position Air Handler	36,229	25,964	40,294	57.6	102.6	0.8	35-39-43	208V/1Ph	4.13	15	PVIFY-P36NAMU-E1	1,2,3,4,5,6,7,8,9,10,11,12
1.5	corridor_Prep.	585	7	Multi-Position Air Handler	18,114	13,676	20,191	57.9	100.1	0.8	28-32-36	208V/1Ph	3.00	15	PVIFY-P18NAMU-E1	1,2,3,4,5,6,7,8,9,10,11,12
1.6	SE Det	585	3	Multi-Position Air Handler	18,268	13,646	20,300	58.1	99.2	0.8	28-32-36	208V/1Ph	3.00	15	PVIFY-P18NAMU-E1	1,2,3,4,5,6,7,8,9,10,11,12
1.7	NW_Admin	1400	1	Multi-Position Air Handler	48,100	33,919	54,219	57.1	105.0	0.8	35-39-43	208V/1Ph	5.63	15	PVIFY-P48NAMU-E1	1,2,3,4,5,6,7,8,9,10,11,12
1.8	Serg Chief	585	6	Multi-Position Air Handler	18,114	13,676	20,169	57.9	100.3	0.8	28-32-36	208V/1Ph	3.00	15	PVIFY-P18NAMU-E1	1,2,3,4,5,6,7,8,9,10,11,12
1.9	Conf	390	5	Multi-Position Air Handler	12,128	9,556	13,680	57.5	99.1	0.8	27-31-35	208V/1Ph	3.00	15	PVIFY-P12NAMU-E1	1,2,3,4,5,6,7,8,9,10,11,12
2.1	Break	1095	1	Multi-Position Air Handler	36,383	25,891	36,301	57.7	98.7	0.8	35-39-43	208V/1Ph	4.13	15	PVIFY-P36NAMU-E1	1,2,3,4,5,6,7,8,9,10,11,12
2.2	NW Sewer	875	4	Multi-Position Air Handler	30,191	21,801	30,756	56.5	101.2	0.8	32-36-40	208V/1Ph	4.13	15	PVIFY-P30NAMU-E1	1,2,3,4,5,6,7,8,9,10,11,12
2.3	Int Corr_Work	1095	8	Multi-Position Air Handler	36,075	26,036	36,085	57.5	99.7	0.8	35-39-43	208V/1Ph	4.13	15	PVIFY-P36NAMU-E1	1,2,3,4,5,6,7,8,9,10,11,12
2.4	Conf	328	2	Ceiling Cassette (One-Way)	12,128	7,882	12,278	57.3	102.2	-	32-34-36-37	208V/1Ph	0.26	15	PMFY-P12NBMU...	1,2,4,5,6,7,8,9,10,11,12,13
2.5	SE Off_Manage	875	6	Multi-Position Air Handler	30,191	21,801	30,722	56.5	101.4	0.8	32-36-40	208V/1Ph	4.13	15	PVIFY-P30NAMU-E1	1,2,3,4,5,6,7,8,9,10,11,12
2.6	Stair	875	9	Multi-Position Air Handler	30,063	21,864	30,528	56.4	102.3	0.8	32-36-40	208V/1Ph	4.13	15	PVIFY-P30NAMU-E1	1,2,3,4,5,6,7,8,9,10,11,12
2.7	Lobby	585	5	Multi-Position Air Handler	18,191	13,632	18,219	58.0	96.1	0.8	28-32-36	208V/1Ph	3.00	15	PVIFY-P18NAMU-E1	1,2,3,4,5,6,7,8,9,10,11,12
2.8	Build Zone	1400	7	Multi-Position Air Handler	48,100	33,919	48,662	57.1	101.6	0.8	35-39-43	208V/1Ph	5.63	15	PVIFY-P48NAMU-E1	1,2,3,4,5,6,7,8,9,10,11,12
2.9	Mtg	460	3	Ceiling-Cassette (Four-Way)	18,191	11,872	18,151	55.6	104.5	-	33-39-43	208V/1Ph	0.50	15	PLFY-P18NFMU-E1	1,2,4,5,6,7,8,9,10,11,12,13

Notes & Options:
 1 Manufactured by Mitsubishi, Equivalent by Daikin, LG or prior approved equal
 2 Full design package must be submitted for approval
 3 Merv 11 filter rack for ducted units
 4 Nominal cooling capacities are based on indoor coil EAT of 80/67°F (DB/WB), outdoor of 95°F (DB)
 5 5 year compressor warranty
 6 Disconnect switch by Electrical Contractor
 7 Nominal heating capacities are based on indoor coil EAT of 70°F (DB), outdoor of 43°F (WB)
 8 Manufacturers start-up and 1 year manufacturer warranty
 9 Insulated refrigerant lines. Manufacturer to confirm all sizes.
 10 See outdoor unit schedule for outdoor data, and other factors associated with corrected capacities
 11 Direct drive fan motor
 12 Vibration isolation hangers
 13 Integral condensate lift pump - powered from associated indoor unit (refer to plans)

MITSUBISHI ELECTRIC TRANE HVAC US: CITY MULTI VRF OUTDOOR UNIT SCHEDULE																	
System Tag	Tag Reference	Modules	Nominal Cooling Capacity (BTU/h)	Nominal Heating Capacity (BTU/h)	Cooling Efficiency (I)EER (SEER)	Heating COP @ 47°F [HSPF]	Design Cooling Outdoor Temp (°F)	Design Heating Outdoor Temp (°F)	Max Pipe Length from BC or 1st Joint (feet)	Corrected Cooling Total Capacity (BTU/h)	Corrected Heating Capacity (BTU/h)	Electrical			Model Number	Notes / Options	
												Voltage / Phase	MCA	RFS			MOCP
1.0	1st floor	HP120, HP120	240,000	270,000	19.6 / 9.85	3.460	93.0	9.0	119.2	237,017.1	261,185.7	208V / 3	66 (2)	70 (2)	110 (2)	PURY-HP240TSNU-A1	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11
2.0	2nd floor	HP120, HP120	240,000	270,000	19.6 / 9.85	3.460	93.0	9.0	101.5	226,116.8	261,702.2	208V / 3	66 (2)	70 (2)	110 (2)	PURY-HP240TSNU-A1	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11

Notes & Options:
 1 Manufactured by Mitsubishi, Equivalent by Daikin, LG or prior approved equal.
 2 For systems with multiple modules, refrigerant pipe dimensions indicate total system combined piping downstream of module twinning.
 3 Nominal cooling capacities are based on indoor coil EAT of 80/67°F (DB/WB), outdoor of 95°F (DB)
 4 Added field charge listed is in addition to factory charge, this must be updated based upon final as-built piping layout.
 5 Nominal heating capacities are based on indoor coil EAT of 70°F (DB), outdoor of 43°F (WB)
 6 Full design package must be submitted for approval
 7 Efficiency values for EER, IEER, COP are based on AHRI 1230 test method for mixture of ducted & non-ducted indoor units.
 8 5 year compressor warranty
 9 Disconnect switch by Electrical Contractor
 10 Manufacturers start-up and 1 year manufacturer warranty
 11 Unit must provide full capacity heating down to 5 deg. F

EXHAUST FAN SCHEDULE (EF)															
TAG	AREA SERVED	TYPE	DRIVE	AIRFLOW (CFM)	EXT. STATIC PRESSURE (IN. W.C.)	SOUND RATING (SONES)	RPM	TIP Spd. FPM	Watts (W)/HP	Volts	Phase	Max. Height	BASIS OF DESIGN	MODEL	COMMENTS
EF-1	TOILET RM. 158	CEILING	DIRECT	98	0.125	<.03	870	NA	17 W	120	1	12"	GREENHECK	SP-A90	1, 2, 3, 4, 5, 6
EF-2	TOILET RM. 150	CEILING	DIRECT	98	0.125	<.03	870	NA	17 W	120	1	12"	GREENHECK	SP-A90	1, 2, 3, 4, 5, 6
EF-3	TOILET RM. 151	CEILING	DIRECT	98	0.125	<.03	870	NA	17 W	120	1	12"	GREENHECK	SP-A90	1, 2, 3, 4, 5, 6
EF-4	TOILET RM. 112	CEILING	DIRECT	155	0.125	2.5	1050	NA	128 W	120	1	12"	GREENHECK	SP-B150	1, 2, 3, 4, 6, 14
EF-5	SALLYPORT	WALL	DIRECT	350	0.25	7.5	1350		120 W	120	1	18"	GREENHECK	S1-12-436-G	7, 8, 9, 10, 16
EF-6	TOILET RM. 202	CEILING	DIRECT	98	0.125	<.03	870	NA	17 W	120	1	12"	GREENHECK	SP-A90	1, 2, 3, 4, 5, 6
EF-7	PROPERTY 131, CABINETS	INLINE	DIRECT	100 (11)	0.25	1.0	980	NA	23 W	120	1	12"	GREENHECK	CSP-A125	1, 2, 3, 4, 6, 11, 14
EF-8	GUN CLEAN RM. 108	ROOFTOP	DIRECT	350	0.625	6.9	1315	3852	1/4 HP	120	1	24"	GREENHECK	G098	8, 10, 13, 14, 15, 17
EF-9	FUME HOOD, 130	ROOFTOP	DIRECT	654 (12)	0.625	6.9	1670	4891	1/4 HP	120	1	24"	GREENHECK	G098	8, 10, 12, 13, 15, 17

Comments
 1. Equivalent manufacturer by Carnes, Cook, Acme, Penn Ventilation
 2. Backdraft damper
 3. Flexible connection
 4. Wall cap with birdscreen
 5. Control with light switch with time delay off.
 6. Vibration isolating hanger
 7. Wall sleeve with fan guard, bird screen and burgular bars
 8. Motor operated backdraft damper
 9. Motor side guard, 45 deg. Weatherhood
 10. Birdscreen
 11. Coordinate air volume with cabinet manufacturer, owner
 12. Constant air volume, coord with fume hood
 13. 8" High roof curb
 14. Continuous operation.
 15. Manual motor starter
 16. Thermostat controlled with occupancy sensor and manual override
 17. Vari-green variable speed

Motor Starters:
 Mechanical Contractor shall provide for polyphase and single phase above 1/2 hp.
 Electrical contractor shall provide for fractional horsepower up to 1/2 hp.
 Electrical contractor shall install all starters except for those integral to the equipment.

NOTICE
 THE SCHEDULES AND DRAWINGS REPRESENT ONLY CERTAIN REQUIREMENTS OF THE PROJECT. THERE ARE ADDITIONAL REQUIREMENTS IN THE SPECIFICATIONS BIDDLET WHICH THE CONTRACTOR IS BOUND TO PROVIDE. A SUPPLIER OR CONTRACTOR'S PRICING, WHICH IS BASED ONLY ON DRAWINGS OR SCHEDULES, MAY LEAVE IMPORTANT COSTS UNACCOUNTED FOR WHICH WILL ULTIMATELY BE THE CONTRACTOR OR SUPPLIER'S RESPONSIBILITY TO PROVIDE.

THE DELIVERY OF THIS DRAWING SHOULD NOT BE CONSTRUED TO PROVIDE AN EXPRESS WARRANTY OR GUARANTEE TO ANYONE THAT ALL THE DIMENSIONS AND DETAILS ARE EXACT OR TO INDICATE THAT THE USE OF THIS DRAWING MERITS THE REVIEW AND APPROVAL BY THE DESIGN PROFESSIONAL OF ANY FUTURE USE. ANY USE OF THIS INFORMATION WITHOUT THE WRITTEN APPROVAL BY THE DESIGN PROFESSIONAL IS AT THE SOLE RISK AND LIABILITY OF THE USER. THE DESIGN PROFESSIONAL RECEIVES THE RIGHT TO REMOVE OUR PROFESSIONAL SEAL AND/OR TITLE BLOCK.

Consultant:

McHUGH ENGINEERING ASSOCIATES, INC.
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Ambler, PA 19002
215-641-1158

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Project:

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Revision/Issue:

0 03/29/24 Issued

Drawn: JK
Reviewed: PAS
Contact: Paul Andrew Sgroi
Project Number: 2301.00-22

Sheet Title:

SCHEDULES-MECHANICAL

Sheet Number:

M-303

International Mechanical Code 2018 Section 403 Calculations															
VRF IDU	Room #	Room Name	Occupancy Lookup	International Mechanical Code Occupancy Category	Area (S.F.)	Breathing Zone OA Flow - "Vbz"...	Zone Air Effectiveness - "Ez"...	Zone Outdoor Air Flow - "Voz"...	System Ventilation Efficiency - "Ev"...	OA Air Intake Flow - "Vot"...	OA Air Intake Flow - "Vot"...	Based on IMC 2018		Used in "Ventilation ERU" tab.	
												Min. Exhaust Required (CFM/S...)	Min. Exhaust Required (CFM)		Design Exhaust Air (CFM)
1.8	122	Chief Room	42	Office Space	206	17	0.8	22	1.0	22	25	0.0	0	0	25
	120	Sergeant	42	Office Space	176	16	0.8	19	1.0	19	20	0.0	0	0	20
	Total Area = 412					384	73	0.8	91	1.0	91	95	0.0	0	95
1.9	124	Conference	35	Conference / Meeting	384	73	0.8	91	1.0	91	95	0.0	0	95	
1.7	143	Corridor	49	Corridors	146	9	0.8	11	1.0	11	15	0.0	0	15	
	106	Quartermaster	42	Office Space	105	11	0.8	14	1.0	14	15	0.0	0	15	
	107	Armory	69	Storage Rooms	182	22	0.8	27	1.0	27	30	0.0	0	30	
	108	Weapons cleaning	42	Office Space	125	8	0.8	9	1.0	9	10	0.0	0	10	
	103	Admin	42	Office Space	382	38	0.8	47	1.0	47	50	0.0	0	50	
	104	Secure Files	69	Storage Rooms	274	33	0.8	41	1.0	41	45	0.0	0	45	
	140	Corridor	49	Corridors	407	24	0.8	31	1.0	31	35	0.0	0	150	
	144.1	Corridor	49	Corridors	188	11	0.8	14	1.0	14	15	0.0	0	15	
Total Area = 1809					215	215	0.8	215	1.0	215	230	0.0	0	230	
1.6	121	Supply	69	Storage Rooms	30	4	0.8	4	1.0	15	15	0.0	0	15	
	119	Storage	69	Storage Rooms	33	4	0.8	5	1.0	5	5	0.0	0	5	
	118	Detectives	42	Office Space	456	57	0.8	72	1.0	72	75	0.0	0	75	
Total Area = 489					489	72	0.8	72	1.0	72	95	0.0	0	80	
1.5	102	Vestibule	49	Corridors	67	4	0.8	5	1.0	5	10	0.0	0	10	
	126	Compliant Room	42	Office Space	133	23	0.8	29	1.0	29	30	0.0	0	30	
	125	Interview Room	42	Office Space	177	21	0.8	26	1.0	26	30	0.0	0	30	
	144	Corridor	49	Corridors	439	26	0.8	33	1.0	33	35	0.0	0	35	
	131	Property Room	69	Storage Rooms	499	60	0.8	75	1.0	75	75	0.0	0	75	
	132	ACT 79 GUN Storage	69	Storage Rooms	81	10	0.8	12	1.0	12	15	0.0	0	15	
	130	Evidence Recording	69	Storage Rooms	221	27	0.8	33	1.0	33	35	0.0	0	35	
	Total Area = 1617					230	230	0.8	230	1.0	230	230	0.0	0	230
1.4	115	Sergeants	42	Office Space	348	41	0.8	51	1.0	51	55	0.0	0	55	
	117	Patrol Storage	69	Storage Rooms	154	18	0.8	23	1.0	23	25	0.0	0	25	
	116	Patrol	42	Office Space	523	56	0.8	70	1.0	70	75	0.0	0	75	
Total Area = 1025					155	155	0.8	155	1.0	155	155	0.0	0	155	
1.1	109	Breakroom	4	Day Room	414	75	0.8	94	1.0	94	95	0.0	0	95	
Total Area = 414					94	94	0.8	94	1.0	94	95	0.0	0	95	
1.2	110	Flex	42	Office Space	304	33	0.8	42	1.0	42	45	0.0	0	45	
	111	Detention	42	Office Space	164	15	0.8	19	1.0	19	20	0.0	0	20	
	112	Toilet	59	Toilet rooms - public	83	0	0.8	0	1.0	0	0	50 / 70	0	50	
Total Area = 551					65	65	0.8	65	1.0	65	65	0.0	0	65	
1.3	142	Corridors	49	Corridors	491	29	0.8	37	1.0	37	40	0.0	0	40	
	127	Toilet Room(M)	59	Toilet rooms - public	593	0	0.8	0	1.0	0	0	50 / 70	200	200	
	129	Toilet Room(W)	59	Toilet rooms - public	405	0	0.8	0	1.0	0	0	50 / 70	200	200	
Total Area = 1489					40	40	0.8	40	1.0	40	40	0.0	0	40	
RTU-1	153	Commission Room	35	Conference / Meeting	1540	512	0.8	641	1.0	641	645	0.0	0	645	
	152	Corridor	49	Corridors	289	17	0.8	22	1.0	22	25	0.0	0	25	
	101	Lobby/ Stairs	41	Main Entry Lobby	653	39	0.8	49	1.0	49	50	0.0	0	50	
	111	Chairs	69	Storage Rooms	126	15	0.8	19	1.0	19	20	0.0	0	20	
	155	AV Monitor	69	Storage Rooms	67	8	0.8	10	1.0	10	15	0.0	0	15	
Total Area = 2675					755	755	0.8	755	1.0	755	755	0.0	0	755	
2.9	201	Meeting Room	35	Conference / Meeting	242	55	0.8	68	1.0	68	70	0.0	0	70	
Total Area = 242					70	70	0.8	70	1.0	70	70	0.0	0	70	
2.6	200	Corr/ stairs Upper	49	Corridors	543	33	0.8	41	1.0	41	45	0.0	0	45	
	Total Area = 785					45	45	0.8	45	1.0	45	45	0.0	0	45
2.7	203	Lobby	41	Main Entry Lobby	440	41	0.8	52	1.0	52	55	0.0	0	55	
Total Area = 983					55	55	0.8	55	1.0	55	55	0.0	0	100	
RTU-2	157	Caucus Room	35	Conference / Meeting	570	144	0.8	180	1.0	180	185	0.0	0	185	
	Total Area = 570					185	185	0.8	185	1.0	185	185	0.0	0	185
2.2	205	Sewer authority	42	Office Space	190	16	0.8	21	1.0	21	25	0.0	0	25	
	204	Sewer workstation	42	Office Space	161	20	0.8	25	1.0	25	25	0.0	0	25	
	207	Finance Assistant	42	Office Space	173	15	0.8	19	1.0	19	20	0.0	0	20	
	208	Finance Director/ HR	42	Office Space	185	16	0.8	20	1.0	20	25	0.0	0	25	
Total Area = 709					95	95	0.8	95	1.0	95	95	0.0	0	95	
2.5	217	Township Manager	42	Office Space	210	18	0.8	22	1.0	22	25	0.0	0	25	
	218	Township Assistant	42	Office Space	112	12	0.8	15	1.0	15	15	0.0	0	15	
	215	Assistant Township...	42	Office Space	164	15	0.8	19	1.0	19	20	0.0	0	20	
Total Area = 486					60	60	0.8	60	1.0	60	60	0.0	0	60	
2.8	224	Secure Files	69	Storage Rooms	66	8	0.8	10	1.0	10	10	0.0	0	10	
	222	Code Office	42	Office Space	129	43	0.8	53	1.0	53	55	0.0	0	55	
	216	Building and Zone	42	Office Space	551	68	0.8	85	1.0	85	90	0.0	0	90	
Total Area = 680					155	155	0.8	155	1.0	155	155	0.0	0	145	
2.4	222	Conference	35	Conference / Meeting	282	57	0.8	71	1.0	71	75	0.0	0	75	
Total Area = 282					75	75	0.8	75	1.0	75	75	0.0	0	75	
2.1	212	Breakroom	4	Day Room	416	85	0.8	106	1.0	106	110	0.0	0	110	
Total Area = 416					110	110	0.8	110	1.0	110	110	0.0	0	110	
2.3	223	Tax Office	42	Office Space	123	12	0.8	15	1.0	15	20	0.0	0	20	
	206	Building Receptionist	42	Office Space	118	12	0.8	15	1.0	15	20	0.0	0	20	
	209	Work Room/ Corridor	42	Office Space	360	32	0.8	40	1.0	40	40	0.0	0	40	
Total Area = 628					47	47	0.8	47	1.0	47	50	0.0	0	50	
x	113	Sally Port	45	Garages, common for...	618	0	0.8	0	1.0	0	0	0.8	0.30cfm...	125	
x	210	Elec/Mech	61	Mechanical / Electrical Rm.	581	0	0.8	0	1.0	0	0	0.0	0	0	
x	145	Mech/ Water/ Sprinkler	61	Mechanical / Electrical Rm.	122	0	0.8	0	1.0	0	0	0.0	0	2	
Total Area = 1321					0	0	0.8	0	1.0	0	0	0.0	0	127	
x	212	Housekeeping	59	Toilet rooms - public	30	0	0.8	0	1.0	0	0	50 / 70	1cfm/sf	30	
x	213	Men's Toilet	59	Toilet rooms - public	253	0	0.8	0	1.0	0	0	50 / 70	200	200	
x	211	Women's Toilet	59	Toilet rooms - public	265	0	0.8	0	1.0	0	0	50 / 70	200	200	
x	202	Toilet Room	59	Toilet rooms - public	53	0	0.8	0	1.0	0	0	50 / 70	50	50	
Total Area = 601					0	0	0.8	0	1.0	0	0	50 / 70	50	480	
x	128	Housekeeping	59	Toilet rooms - public	30	0	0.8	0	1.0	0	0	50 / 70	1cfm/sf	30	
x	123	Toilet Room	59	Toilet rooms - public	51	0	0.8	0	1.0	0	0	50 / 70	50	50	
x	158	Toilet	59	Toilet rooms - public	64	0	0.8	0	1.0	0	0	50 / 70	50	50	
x	150	Toilet	59	Toilet rooms - public	50	0	0.8	0	1.0	0	0	50 / 70	50	50	
x	151	Toilet	59	Toilet rooms - public	50	0	0.8	0	1.0	0	0	50 / 70	50	50	
Total Area = 245					0	0	0.8	0	1.0	0	0	50 / 70	50	230	

NOTICE

ABBREVIATIONS				PLUMBING GENERAL NOTES				DRAWING LIST																																																																																															
AD	AREA DRAIN	FDC	FIRE DEPARTMENT CONNECTION	OD	OUTSIDE DIAMETER	<table border="1"> <thead> <tr> <th colspan="6">Drawing List- Plumbing</th> </tr> <tr> <th>NUMBER</th> <th>NAME</th> <th>Current Issue</th> <th>Current Revision</th> <th>Current Revision Date</th> <th>Current Revision Description</th> </tr> </thead> <tbody> <tr> <td>P-001</td> <td>COVER SHEET- PLUMBING</td> <td>ISSUED</td> <td>0</td> <td>03/29/24</td> <td>Issued</td> </tr> <tr> <td>P-101</td> <td>FIRST FLOOR PLAN- SANITARY</td> <td>ISSUED</td> <td>0</td> <td>03/29/24</td> <td>Issued</td> </tr> <tr> <td>P-102</td> <td>FIRST FLOOR PLAN- DOMESTIC WATER</td> <td>ISSUED</td> <td>0</td> <td>03/29/24</td> <td>Issued</td> </tr> <tr> <td>P-103</td> <td>SECOND FLOOR PLAN- PLUMBING</td> <td>ISSUED</td> <td>0</td> <td>03/29/24</td> <td>Issued</td> </tr> <tr> <td>P-104</td> <td>ROOF PLAN- PLUMBING</td> <td>ISSUED</td> <td>0</td> <td>03/29/24</td> <td>Issued</td> </tr> <tr> <td>P-201</td> <td>DETAILS- PLUMBING</td> <td>ISSUED</td> <td>0</td> <td>03/29/24</td> <td>Issued</td> </tr> <tr> <td>P-202</td> <td>DETAILS- PLUMBING</td> <td>ISSUED</td> <td>0</td> <td>03/29/24</td> <td>Issued</td> </tr> <tr> <td>P-203</td> <td>DETAILS- PLUMBING</td> <td>ISSUED</td> <td>0</td> <td>03/29/24</td> <td>Issued</td> </tr> <tr> <td>P-204</td> <td>DETAILS- PLUMBING</td> <td>ISSUED</td> <td>0</td> <td>03/29/24</td> <td>Issued</td> </tr> <tr> <td>P-301</td> <td>SCHEDULES- PLUMBING</td> <td>ISSUED</td> <td>0</td> <td>03/29/24</td> <td>Issued</td> </tr> <tr> <td>P-401</td> <td>RISER DIAGRAMS- SANITARY</td> <td>ISSUED</td> <td>0</td> <td>03/29/24</td> <td>Issued</td> </tr> <tr> <td>P-402</td> <td>RISER DIAGRAMS- DOMESTIC WATER</td> <td>ISSUED</td> <td>0</td> <td>03/29/24</td> <td>Issued</td> </tr> <tr> <td>P-403</td> <td>RISER DIAGRAMS- STORM WATER</td> <td>ISSUED</td> <td>0</td> <td>03/29/24</td> <td>Issued</td> </tr> </tbody> </table>								Drawing List- Plumbing						NUMBER	NAME	Current Issue	Current Revision	Current Revision Date	Current Revision Description	P-001	COVER SHEET- PLUMBING	ISSUED	0	03/29/24	Issued	P-101	FIRST FLOOR PLAN- SANITARY	ISSUED	0	03/29/24	Issued	P-102	FIRST FLOOR PLAN- DOMESTIC WATER	ISSUED	0	03/29/24	Issued	P-103	SECOND FLOOR PLAN- PLUMBING	ISSUED	0	03/29/24	Issued	P-104	ROOF PLAN- PLUMBING	ISSUED	0	03/29/24	Issued	P-201	DETAILS- PLUMBING	ISSUED	0	03/29/24	Issued	P-202	DETAILS- PLUMBING	ISSUED	0	03/29/24	Issued	P-203	DETAILS- PLUMBING	ISSUED	0	03/29/24	Issued	P-204	DETAILS- PLUMBING	ISSUED	0	03/29/24	Issued	P-301	SCHEDULES- PLUMBING	ISSUED	0	03/29/24	Issued	P-401	RISER DIAGRAMS- SANITARY	ISSUED	0	03/29/24	Issued	P-402	RISER DIAGRAMS- DOMESTIC WATER	ISSUED	0	03/29/24	Issued	P-403	RISER DIAGRAMS- STORM WATER	ISSUED	0	03/29/24	Issued
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P-403	RISER DIAGRAMS- STORM WATER	ISSUED	0	03/29/24	Issued																																																																																																		
AFF	ABOVE FINISHED FLOOR	FHC	FIRE HOSE CABINET	OED	OPEN END DUCT	<p>1. ALL WORK TO BE IN CONFORMANCE WITH THE 2018 INTERNATIONAL PLUMBING CODE OR LOCAL CODE HAVING JURISDICTION. NOT ALL CODE REQUIREMENTS HAVE BEEN DESCRIBED IN THIS SPECIFICATION OR INDICATED ON THE DRAWINGS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BE FAMILIAR WITH THE CODES AND INSTALL THE WORK IN ACCORDANCE WITH CODES.</p> <p>2. OBTAIN AND PAY FOR BUILDING PERMITS, INSPECTIONS, CONNECTION CHARGES, AND FEES.</p> <p>3. THE CONTRACTOR IS TO SURVEY AND VERIFY ALL EXISTING CONDITIONS PRIOR TO BID SUBMISSION AND BECOME AWARE OF ALL CONDITIONS WHICH MAY IMPACT THE REQUIRED WORK. CONTRACTOR IS TO INCLUDE ALL ASSOCIATED COSTS (MATERIALS/LABOR) DETERMINED TO BE REQUIRED DURING SITE INSPECTIONS. CONTRACTOR'S BID SUBMISSION IS TO BE CONSIDERED PROOF THAT THIS REQUIREMENT HAS BEEN MET.</p> <p>4. DRAWINGS AND SPECIFICATIONS ARE INTENDED TO BE TAKEN AS A WHOLE. IF A CONFLICT OR CONTRADICTION EXISTS BETWEEN THE DRAWINGS AND SPECIFICATIONS, THE MORE STRINGENT WILL APPLY. THE ARCHITECT'S AND ENGINEER'S INTERPRETATION OF THE DOCUMENTS ARE TO BE BINDING UPON THE CONTRACTOR.</p> <p>5. ALL WORK IS TO BE COORDINATED WITH, AND APPROVED BY THE OWNER PRIOR TO ANY SHUT-DOWNS. ALL REQUESTS ARE TO BE SUBMITTED, IN WRITING, TO THE OWNER 24 TO 48 HOURS PRIOR TO REQUESTED DELETIONS.</p> <p>6. COORDINATE LOCATIONS AND ROUGH-IN REQUIREMENTS WITH ALL TRADES PRIOR TO INSTALLATION.</p> <p>7. COORDINATE ALL ELECTRICAL REQUIREMENTS WITH THE ELECTRICAL CONTRACTOR PRIOR TO PURCHASING EQUIPMENT. VERIFY ALL VOLTAGE AND AMPERE REQUIREMENTS FOR FEEDERS, AND MOCIP DEVICES.</p> <p>8. ALL EXTERIOR WALL/ ROOF PENETRATIONS ARE TO BE SEALED, AIR, AND WATER-TIGHT. ALL PIPING PASSING THROUGH WALL, OR FLOOR PENETRATIONS IS TO HAVE SLEEVES. ALL WALL, OR FLOOR-RATED PENETRATIONS ARE TO BE SEALED WITH FIRE-RATED SEALANT FORMED IN PLACE (BY 3M OR HILTI).</p> <p>9. VENTS THROUGH ROOF SHALL BE FLASHED WITH 'SURE SEAL' PRE-MOLDED OR SIMILAR TYPE BOOT AS RECOMMENDED BY THE ROOFING CONTRACTOR.</p> <p>10. PROVIDE ALL ACCESS DOORS FOR ALL VALVES, DAMPERS, DEVICES, CONTROLLERS, ETC. WHICH MAY REQUIRE SERVICE. ALL ACCESS PANELS ARE TO BE 18 GAUGE STEEL FRAME, 20 GAUGE HINGED DOOR, LOCKABLE, AND FIRE-RATED (WHEN INSTALLED IN RATED WALLS, FLOORS, "B" LABEL, 1-1/2 HOURS). FINISH AS SELECTED BY THE ARCHITECT.</p> <p>11. SUBMIT SHOP DRAWINGS FOR ALL EQUIPMENT TO BE REVIEWED BY THE ENGINEER PRIOR TO ORDERING. COORDINATE ALL ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR, AND PHYSICAL DIMENSIONS PRIOR TO SHOP DRAWING SUBMISSION.</p> <p>12. ALL WORK TO BE CONCEALED UNLESS OTHERWISE INDICATED.</p> <p>13. THE PLUMBING CONTRACTOR SHALL PROVIDE ALL REQUIRED INPUT OF THE PLUMBING SYSTEM TO THE MECHANICAL CONTRACTOR FOR THE COORDINATION DRAWINGS.</p> <p>14. PROVIDE RECORD AS-BUILT DRAWINGS AT COMPLETION OF WORK. SUBMIT TO OWNER AND ENGINEER FOR REVIEW AND APPROVAL.</p> <p>15. ALL FINISHES RELATED TO PLUMBING EQUIPMENT, TERMINAL EQUIPMENT, AIR DEVICES, PERIMETER HEATERS, LOUVERS, ACCESS PANELS, EXPOSED WIREMOLD/RACEWAYS, ETC. SHALL BE COORDINATED AND SELECTED BY THE ARCHITECT/OWNER/ENGINEER PRIOR TO SHOP DRAWING SUBMISSION, ORDERING, AND INSTALLATION.</p> <p>16. FINAL LOCATIONS OF ALL ACCESS PANELS, ETC. IN FINISHED SPACES SHALL BE COORDINATED AND APPROVED BY THE ARCHITECT/OWNER PRIOR TO ROUGH-IN AND INSTALLATION.</p> <p>17. NO PVC PIPING IS PERMITTED IN RETURN AIR PLENUMS.</p> <p>18. ALL THREE PHASE STARTER EQUIPMENT IS TO BE PROVIDED BY THE MECHANICAL CONTRACTOR AND IS TO BE MAGNETIC, ACROSS-THE-LINE WITH AUXILIARY CONTACTS. ALL SINGLE PHASE STARTER EQUIPMENT IS TO BE PROVIDED BY ELECTRICAL CONTRACTOR.</p> <p>19. ALL TRIM, TRAPS, ESCUTCHEON PLATES, SEAT HINGES AND ANY MISCELLANEOUS PARTS OF FIXTURES SHALL BE CHROME PLATED BRASS.</p> <p>20. THE CONTRACTOR IS TO COORDINATE HIS WORK, AND THE WORK OF HIS SUB-CONTRACTORS TO ENSURE THAT ALL OF THE WORK IS COMPLETE AND OPERATIONAL. THE CONTRACTOR IS TO PROVIDE COMPLETE COORDINATION DRAWINGS, INCLUDING ALL TRADES (MECHANICAL, ELECTRICAL, AND FIRE PROTECTION), THE CONTRACTOR IS TO COORDINATE ALL CONNECTIONS TO SITE CIVIL WORK PRIOR TO STARTING WORK.</p> <p>21. THE CONTRACTOR IS TO PROVIDE BALANCING VALVES ON ALL BRANCHES OF THE DOMESTIC HOT WATER RETURN SYSTEM, BALANCE THE SYSTEM, AND PROVIDE BALANCING REPORT TO THE OWNER/ ENGINEER FOR RECORD.</p> <p>22. THE CONTRACTOR IS TO PROVIDE MANUFACTURER'S START-UP OF ALL EQUIPMENT, AND SYSTEMS.</p> <p>23. PROPERLY INSTRUCT OWNER'S PERSONNEL IN THE OPERATION AND MAINTENANCE OF ALL SYSTEMS AND EQUIPMENT. PROVIDE THREE INSTRUCTION AND MAINTENANCE MANUALS. SUBMIT MANUALS FOR REVIEW PRIOR TO OPERATING INSTRUCTION.</p> <p>24. COORDINATE LOCATIONS AND ROUGH-IN REQUIREMENTS WITH ALL TRADES PRIOR TO INSTALLATION.</p> <p>25. IF THE CONTRACTOR ELECTS TO SUBMIT ALTERNATE EQUIPMENT, MANUFACTURERS, SYSTEMS, METHODS, OR MATERIALS NOT SPECIALLY IDENTIFIED IN THE DRAWINGS AND SPECIFICATIONS, IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE THE WORK WITH OTHER TRADES AND PAY FOR ANY ADDITIONAL COSTS ASSOCIATED WITH THE SUBSTITUTION OR CHANGE.</p> <p>26. PROVIDE ONE SET OF ELECTRONIC AS-BUILT DRAWINGS AT COMPLETION OF WORK. SUBMIT TO OWNER AND ENGINEER FOR REVIEW AND APPROVAL.</p>																																																																																																	
AGF	AIR GAP FITTING	FHV	FIRE HOSE VALVE	PCR	PUMPED CONDENSATE RETURN									<p>PROJECT DEDUCT/ADD ALTERNATES</p>																																																																																									
AHU	AIR HANDLING UNIT	FIN	FINISH	PD	PUMPED DRAIN	<p>DRAWING SYMBOLS</p>																																																																																																	
AMP	AMPERE	FF	FINISHED FLOOR	PG	PRESSURE GAUGE									<p>SPRINKLER NOTE:</p> <p>1. SPRINKLER CONTRACTOR SHALL DESIGN, FURNISH, AND INSTALL A SPRINKLER SYSTEM THROUGHOUT THE BUILDING IN ACCORDANCE WITH NFPA-13.</p> <p>2. SPRINKLER SYSTEM SHALL BE DESIGNED PER NFPA-13 LIGHT HAZARD OCCUPANCY EXCEPT WHERE DICTATED BY NFPA-13 TO BE ORDINARY HAZARD.</p> <p>3. PROVIDE FM200 AND DOUBLE INTERLOCK PREACTION SYSTEMS FOR EVIDENCE AREA.</p> <p>4. PROVIDE DRY SPRINKLER HEADS IN AREAS SUBJECT TO FREEZING.</p> <p>5. ALL WET SPRINKLER PIPING SHALL BE LOCATED WITHIN BUILDING ENVELOPE.</p> <p>6. SPRINKLER SHOP DRAWINGS AND HYDRAULIC CALCULATIONS SHALL BE SUBMITTED FOR APPROVAL TO THE LOCAL FIRE MARSHALL (AUTHORITY HAVING JURISDICTION).</p> <p>7. SPRINKLER HEADS IN AREAS WITH UNFINISHED CEILINGS SHALL BE STANDARD BRASS UPRIGHT TYPE.</p> <p>8. SPRINKLER HEADS IN FINISHED PUBLIC AREAS SHALL BE CONCEALED.</p> <p>9. SPRINKLER HEADS IN AREAS WITHOUT A CEILING SHALL BE PENDANT TYPE.</p> <p>FLOW TEST INFO: ____ PSI STATIC, ____ PSI RESIDUAL, ____ GPM.</p>																																																																																									
APPROX	APPROXIMATE	FLR	FLOOR	PH	PHASE-ELECTRICAL	<p>NOTICE</p> <p>THE SCHEDULES AND DRAWINGS REPRESENT ONLY CERTAIN REQUIREMENTS OF THE PROJECT. THERE ARE ADDITIONAL REQUIREMENTS IN THE SPECIFICATIONS BOOKLET WHICH THE CONTRACTOR IS BINDING TO PROVIDE. A SUPPLIER OR CONTRACTOR'S PRICING, WHICH IS BASED ONLY ON DRAWINGS OR SCHEDULES, MAY LEAVE IMPORTANT COSTS UNACCOUNTED FOR WHICH WILL ULTIMATELY BE THE CONTRACTOR OR SUPPLIER'S RESPONSIBILITY TO PROVIDE.</p> <p>THE DELIVERY OF THIS DRAWING SHOULD NOT BE CONSTRUED TO PROVIDE AN EXPRESS WARRANTY OR GUARANTEE TO ANYONE THAT ALL THE DIMENSIONS AND DETAILS ARE EXACT OR TO INDICATE THAT THE USE OF THIS DRAWING MERITS THE REVIEW AND APPROVAL BY THE DESIGN PROFESSIONAL OF ANY FUTURE USE. ANY USER OF THIS INFORMATION WITHOUT THE WRITTEN APPROVAL OF THE DESIGN PROFESSIONAL IS AT THE SOLE RISK AND LIABILITY OF THE USER. THE DESIGN PROFESSIONAL RECEIVES THE RIGHT TO REMOVE OUR PROFESSIONAL SEAL AND/OR TITLE BLOCK.</p>																																																																																																	
AV	ACID VENT	FPM	FEET PER MINUTE	PIV	POST INDICATOR VALVE									<p>OWNER:</p> <p>ASTON TOWNSHIP 2 New Road Suite 123 Aston, PA 19014</p>																																																																																									
AVG	AVERAGE	FPS	FEET PER SECOND	PLBG	PLUMBING	<p>Revision/Issue:</p> <p>0 03/29/24 Issued</p>																																																																																																	
B.O.P.	BOTTOM OF PIPE	FS	FLOW SWITCH	PRV	PRESSURE REDUCING VALVE									<p>Drawn: PR Reviewed: PAS Contact: Paul Andrew Sgroi Project Number: 2301.00-22</p>																																																																																									
B.F.F.	BELOW FINISHED FLOOR	FT	FEET	PSF	POUNDS PER SQUARE FOOT	<p>Sheet Title:</p> <p>COVER SHEET- PLUMBING</p>																																																																																																	
BFV	BUTTERFLY VALVE	FU	FIXTURE UNIT	PSI	POUNDS PER SQUARE INCH									<p>Sheet Number:</p> <p>P-001</p>																																																																																									
BHP	BRAKE HORSEPOWER	FV	FLUSH VALVE	PVC	POLYVINYL CHLORIDE PIPE	<p>NOTICE</p> <p>THE SCHEDULES AND DRAWINGS REPRESENT ONLY CERTAIN REQUIREMENTS OF THE PROJECT. THERE ARE ADDITIONAL REQUIREMENTS IN THE SPECIFICATIONS BOOKLET WHICH THE CONTRACTOR IS BINDING TO PROVIDE. A SUPPLIER OR CONTRACTOR'S PRICING, WHICH IS BASED ONLY ON DRAWINGS OR SCHEDULES, MAY LEAVE IMPORTANT COSTS UNACCOUNTED FOR WHICH WILL ULTIMATELY BE THE CONTRACTOR OR SUPPLIER'S RESPONSIBILITY TO PROVIDE.</p> <p>THE DELIVERY OF THIS DRAWING SHOULD NOT BE CONSTRUED TO PROVIDE AN EXPRESS WARRANTY OR GUARANTEE TO ANYONE THAT ALL THE DIMENSIONS AND DETAILS ARE EXACT OR TO INDICATE THAT THE USE OF THIS DRAWING MERITS THE REVIEW AND APPROVAL BY THE DESIGN PROFESSIONAL OF ANY FUTURE USE. ANY USER OF THIS INFORMATION WITHOUT THE WRITTEN APPROVAL OF THE DESIGN PROFESSIONAL IS AT THE SOLE RISK AND LIABILITY OF THE USER. THE DESIGN PROFESSIONAL RECEIVES THE RIGHT TO REMOVE OUR PROFESSIONAL SEAL AND/OR TITLE BLOCK.</p>																																																																																																	
BLV	BALANCING VALVE	G	NATURAL GAS	PEX	CROSS LINKED POLYETHYLENE									<p>OWNER:</p> <p>ASTON TOWNSHIP 2 New Road Suite 123 Aston, PA 19014</p>																																																																																									
BTU	BRITISH THERMAL UNIT	GA	GAUGE	PEX	CROSS LINKED POLYETHYLENE	<p>Revision/Issue:</p> <p>0 03/29/24 Issued</p>																																																																																																	
BV	BALL VALVE	GAL	GALLONS	Q	QUART									<p>Drawn: PR Reviewed: PAS Contact: Paul Andrew Sgroi Project Number: 2301.00-22</p>																																																																																									
BWV	BACKWATER VALVE	GALV	GALVANIZED	QT	QUART	<p>Sheet Title:</p> <p>COVER SHEET- PLUMBING</p>																																																																																																	
CA	COMPRESSED AIR	GPD	GALLONS PER DAY	RE	RELOCATE EXISTING									<p>Sheet Number:</p> <p>P-001</p>																																																																																									
C TO C	CENTER TO CENTER	GPH	GALLONS PER HOUR	REQ	REQUIRED	<p>NOTICE</p> <p>THE SCHEDULES AND DRAWINGS REPRESENT ONLY CERTAIN REQUIREMENTS OF THE PROJECT. THERE ARE ADDITIONAL REQUIREMENTS IN THE SPECIFICATIONS BOOKLET WHICH THE CONTRACTOR IS BINDING TO PROVIDE. A SUPPLIER OR CONTRACTOR'S PRICING, WHICH IS BASED ONLY ON DRAWINGS OR SCHEDULES, MAY LEAVE IMPORTANT COSTS UNACCOUNTED FOR WHICH WILL ULTIMATELY BE THE CONTRACTOR OR SUPPLIER'S RESPONSIBILITY TO PROVIDE.</p> <p>THE DELIVERY OF THIS DRAWING SHOULD NOT BE CONSTRUED TO PROVIDE AN EXPRESS WARRANTY OR GUARANTEE TO ANYONE THAT ALL THE DIMENSIONS AND DETAILS ARE EXACT OR TO INDICATE THAT THE USE OF THIS DRAWING MERITS THE REVIEW AND APPROVAL BY THE DESIGN PROFESSIONAL OF ANY FUTURE USE. ANY USER OF THIS INFORMATION WITHOUT THE WRITTEN APPROVAL OF THE DESIGN PROFESSIONAL IS AT THE SOLE RISK AND LIABILITY OF THE USER. THE DESIGN PROFESSIONAL RECEIVES THE RIGHT TO REMOVE OUR PROFESSIONAL SEAL AND/OR TITLE BLOCK.</p>																																																																																																	
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CFH	CUBIC FEET PER HOUR	GRD	GROUND	RPM	REVOLUTIONS PER MINUTE	<p>Revision/Issue:</p> <p>0 03/29/24 Issued</p>																																																																																																	
CI	CAST IRON	GRW	GAS WATER HEATER	RR	RETURN AIR REGISTER									<p>Drawn: PR Reviewed: PAS Contact: Paul Andrew Sgroi Project Number: 2301.00-22</p>																																																																																									
CISP	CAST IRON SOIL PIPE	HB	HOSE BIBB	RWC	RAINWATER CONDUCTOR	<p>Sheet Title:</p> <p>COVER SHEET- PLUMBING</p>																																																																																																	
CLG	CEILING	HC	HANDICAP	RPZ	REDUCED PRESSURE ZONE BFP									<p>Sheet Number:</p> <p>P-001</p>																																																																																									
CO	CLEANOUT	HD	HEAD	SA	SHOCK ABSORBER	<p>NOTICE</p> <p>THE SCHEDULES AND DRAWINGS REPRESENT ONLY CERTAIN REQUIREMENTS OF THE PROJECT. THERE ARE ADDITIONAL REQUIREMENTS IN THE SPECIFICATIONS BOOKLET WHICH THE CONTRACTOR IS BINDING TO PROVIDE. A SUPPLIER OR CONTRACTOR'S PRICING, WHICH IS BASED ONLY ON DRAWINGS OR SCHEDULES, MAY LEAVE IMPORTANT COSTS UNACCOUNTED FOR WHICH WILL ULTIMATELY BE THE CONTRACTOR OR SUPPLIER'S RESPONSIBILITY TO PROVIDE.</p> <p>THE DELIVERY OF THIS DRAWING SHOULD NOT BE CONSTRUED TO PROVIDE AN EXPRESS WARRANTY OR GUARANTEE TO ANYONE THAT ALL THE DIMENSIONS AND DETAILS ARE EXACT OR TO INDICATE THAT THE USE OF THIS DRAWING MERITS THE REVIEW AND APPROVAL BY THE DESIGN PROFESSIONAL OF ANY FUTURE USE. ANY USER OF THIS INFORMATION WITHOUT THE WRITTEN APPROVAL OF THE DESIGN PROFESSIONAL IS AT THE SOLE RISK AND LIABILITY OF THE USER. THE DESIGN PROFESSIONAL RECEIVES THE RIGHT TO REMOVE OUR PROFESSIONAL SEAL AND/OR TITLE BLOCK.</p>																																																																																																	
COL	COLUMN	HP	HORSEPOWER	SAN	SANITARY WASTE									<p>OWNER:</p> <p>ASTON TOWNSHIP 2 New Road Suite 123 Aston, PA 19014</p>																																																																																									
COND	CONDENSATE	HPC	HIGH PRESSURE CONDENSATE RETURN	SCH	SCHEDULE	<p>Revision/Issue:</p> <p>0 03/29/24 Issued</p>																																																																																																	
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CONT	CONTINUED	HPSS	HIGH PRESSURE STEAM SUPPLY	SH	SHOWER	<p>Sheet Title:</p> <p>COVER SHEET- PLUMBING</p>																																																																																																	
CONTR	CONTRACTOR	HPW	HEAT PUMP WATER HEATER	SP	STANDPIPE									<p>Sheet Number:</p> <p>P-001</p>																																																																																									
CU FT	CUBIC FEET	HR	HOUR	SPR	SPRINKLER	<p>NOTICE</p> <p>THE SCHEDULES AND DRAWINGS REPRESENT ONLY CERTAIN REQUIREMENTS OF THE PROJECT. THERE ARE ADDITIONAL REQUIREMENTS IN THE SPECIFICATIONS BOOKLET WHICH THE CONTRACTOR IS BINDING TO PROVIDE. A SUPPLIER OR CONTRACTOR'S PRICING, WHICH IS BASED ONLY ON DRAWINGS OR SCHEDULES, MAY LEAVE IMPORTANT COSTS UNACCOUNTED FOR WHICH WILL ULTIMATELY BE THE CONTRACTOR OR SUPPLIER'S RESPONSIBILITY TO PROVIDE.</p> <p>THE DELIVERY OF THIS DRAWING SHOULD NOT BE CONSTRUED TO PROVIDE AN EXPRESS WARRANTY OR GUARANTEE TO ANYONE THAT ALL THE DIMENSIONS AND DETAILS ARE EXACT OR TO INDICATE THAT THE USE OF THIS DRAWING MERITS THE REVIEW AND APPROVAL BY THE DESIGN PROFESSIONAL OF ANY FUTURE USE. ANY USER OF THIS INFORMATION WITHOUT THE WRITTEN APPROVAL OF THE DESIGN PROFESSIONAL IS AT THE SOLE RISK AND LIABILITY OF THE USER. THE DESIGN PROFESSIONAL RECEIVES THE RIGHT TO REMOVE OUR PROFESSIONAL SEAL AND/OR TITLE BLOCK.</p>																																																																																																	
CU IN	CUBIC INCH	HS	HOSE STATION	SQ	SQUARE									<p>OWNER:</p> <p>ASTON TOWNSHIP 2 New Road Suite 123 Aston, PA 19014</p>																																																																																									
CV	CHECK VALVE	HT	HEIGHT	SS	STAINLESS STEEL	<p>Revision/Issue:</p> <p>0 03/29/24 Issued</p>																																																																																																	
CW	COLD WATER (DOMESTIC)	HTR	HEATER	STD	STANDARD									<p>Drawn: PR Reviewed: PAS Contact: Paul Andrew Sgroi Project Number: 2301.00-22</p>																																																																																									
DB	DECIBEL	HVAC	HEATING VENTILATION AIR CONDITIONING	STL	STEEL	<p>Sheet Title:</p> <p>COVER SHEET- PLUMBING</p>																																																																																																	
DCBP	DOUBLE CHECK BACKFLOW PREVENTER	HZ	FREQUENCY-ELECTRICAL	STR	STRAINER									<p>Sheet Number:</p> <p>P-001</p>																																																																																									
DD	DECK DRAIN	ID	INDIRECT DRAIN	SUCT	SUCTION	<p>NOTICE</p> <p>THE SCHEDULES AND DRAWINGS REPRESENT ONLY CERTAIN REQUIREMENTS OF THE PROJECT. THERE ARE ADDITIONAL REQUIREMENTS IN THE SPECIFICATIONS BOOKLET WHICH THE CONTRACTOR IS BINDING TO PROVIDE. A SUPPLIER OR CONTRACTOR'S PRICING, WHICH IS BASED ONLY ON DRAWINGS OR SCHEDULES, MAY LEAVE IMPORTANT COSTS UNACCOUNTED FOR WHICH WILL ULTIMATELY BE THE CONTRACTOR OR SUPPLIER'S RESPONSIBILITY TO PROVIDE.</p> <p>THE DELIVERY OF THIS DRAWING SHOULD NOT BE CONSTRUED TO PROVIDE AN EXPRESS WARRANTY OR GUARANTEE TO ANYONE THAT ALL THE DIMENSIONS AND DETAILS ARE EXACT OR TO INDICATE THAT THE USE OF THIS DRAWING MERITS THE REVIEW AND APPROVAL BY THE DESIGN PROFESSIONAL OF ANY FUTURE USE. ANY USER OF THIS INFORMATION WITHOUT THE WRITTEN APPROVAL OF THE DESIGN PROFESSIONAL IS AT THE SOLE RISK AND LIABILITY OF THE USER. THE DESIGN PROFESSIONAL RECEIVES THE RIGHT TO REMOVE OUR PROFESSIONAL SEAL AND/OR TITLE BLOCK.</p>																																																																																																	
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DFU	DRAINAGE FIXTURE UNIT	IW	INDIRECT WASTE	SWV	SANITARY WASTE VENT	<p>Revision/Issue:</p> <p>0 03/29/24 Issued</p>																																																																																																	
DI	DEIONIZED WATER	KW	KILOWATT	T&P	TEMPERATURE & PRESSURE RELIEF VALVE									<p>Drawn: PR Reviewed: PAS Contact: Paul Andrew Sgroi Project Number: 2301.00-22</p>																																																																																									
DIA	DIAMETER	KWH	KILOWATT HOUR	TEMP	TEMPERATURE	<p>Sheet Title:</p> <p>COVER SHEET- PLUMBING</p>																																																																																																	
DIS	DISTILLED WATER	LAV	LAVATORY	THERM	THERM THERMOMETER									<p>Sheet Number:</p> <p>P-001</p>																																																																																									
DISCH	DISCHARGE	LBS	POUNDS	T.O.P	TOP OF PIPE	<p>NOTICE</p> <p>THE SCHEDULES AND DRAWINGS REPRESENT ONLY CERTAIN REQUIREMENTS OF THE PROJECT. THERE ARE ADDITIONAL REQUIREMENTS IN THE SPECIFICATIONS BOOKLET WHICH THE CONTRACTOR IS BINDING TO PROVIDE. A SUPPLIER OR CONTRACTOR'S PRICING, WHICH IS BASED ONLY ON DRAWINGS OR SCHEDULES, MAY LEAVE IMPORTANT COSTS UNACCOUNTED FOR WHICH WILL ULTIMATELY BE THE CONTRACTOR OR SUPPLIER'S RESPONSIBILITY TO PROVIDE.</p> <p>THE DELIVERY OF THIS DRAWING SHOULD NOT BE CONSTRUED TO PROVIDE AN EXPRESS WARRANTY OR GUARANTEE TO ANYONE THAT ALL THE DIMENSIONS AND DETAILS ARE EXACT OR TO INDICATE THAT THE USE OF THIS DRAWING MERITS THE REVIEW AND APPROVAL BY THE DESIGN PROFESSIONAL OF ANY FUTURE USE. ANY USER OF THIS INFORMATION WITHOUT THE WRITTEN APPROVAL OF THE DESIGN PROFESSIONAL IS AT THE SOLE RISK AND LIABILITY OF THE USER. THE DESIGN PROFESSIONAL RECEIVES THE RIGHT TO REMOVE OUR PROFESSIONAL SEAL AND/OR TITLE BLOCK.</p>																																																																																																	
DN	DOWN	LL	LOW LEVEL	TP	TRAP PRIMER									<p>OWNER:</p> <p>ASTON TOWNSHIP 2 New Road Suite 123 Aston, PA 19014</p>																																																																																									
DP	DEEP	LP	LIQUID PROPANE	TYP	TYPICAL	<p>Revision/Issue:</p> <p>0 03/29/24 Issued</p>																																																																																																	
DS	DOWNSPOUT	LPCR	LOW PRESSURE CONDENSATE RETURN	UL	UNDERWRITER'S LABORATORY									<p>Drawn: PR Reviewed: PAS Contact: Paul Andrew Sgroi Project Number: 2301.00-22</p>																																																																																									
DSP	DRY STANDPIPE	LPCS	LOW PRESSURE CONDENSATE SUPPLY	UTIL	UTILITY	<p>Sheet Title:</p> <p>COVER SHEET- PLUMBING</p>																																																																																																	
DVC	DRY VACUUM CLEANING	LWT	LEAVING WATER TEMPERATURE	VAC	VACUUM									<p>Sheet Number:</p> <p>P-001</p>																																																																																									
DWG	DRAWING	MAU	MAKE-UP AIR UNIT	VB	VACUUM BREAKER	<p>NOTICE</p> <p>THE SCHEDULES AND DRAWINGS REPRESENT ONLY CERTAIN REQUIREMENTS OF THE PROJECT. THERE ARE ADDITIONAL REQUIREMENTS IN THE SPECIFICATIONS BOOKLET WHICH THE CONTRACTOR IS BINDING TO PROVIDE. A SUPPLIER OR CONTRACTOR'S PRICING, WHICH IS BASED ONLY ON DRAWINGS OR SCHEDULES, MAY LEAVE IMPORTANT COSTS UNACCOUNTED FOR WHICH WILL ULTIMATELY BE THE CONTRACTOR OR SUPPLIER'S RESPONSIBILITY TO PROVIDE.</p> <p>THE DELIVERY OF THIS DRAWING SHOULD NOT BE CONSTRUED TO PROVIDE AN EXPRESS WARRANTY OR GUARANTEE TO ANYONE THAT ALL THE DIMENSIONS AND DETAILS ARE EXACT OR TO INDICATE THAT THE USE OF THIS DRAWING MERITS THE REVIEW AND APPROVAL BY THE DESIGN PROFESSIONAL OF ANY FUTURE USE. ANY USER OF THIS INFORMATION WITHOUT THE WRITTEN APPROVAL OF THE DESIGN PROFESSIONAL IS AT THE SOLE RISK AND LIABILITY OF THE USER. THE DESIGN PROFESSIONAL RECEIVES THE RIGHT TO REMOVE OUR PROFESSIONAL SEAL AND/OR TITLE BLOCK.</p>																																																																																																	
DWR	DOMESTIC WATER RISER	MAX	MAXIMUM	VEL	VELOCITY									<p>OWNER:</p> <p>ASTON TOWNSHIP 2 New Road Suite 123 Aston, PA 19014</p>																																																																																									
(E)	EXISTING	MBH	1000 BTU	VERT	VERTICAL	<p>Revision/Issue:</p> <p>0 03/29/24 Issued</p>																																																																																																	
(ED)	EXISTING TO BE DEMOLISHED	MECH	MECHANICAL	VFD	VARIABLE FREQUENCY DRIVE									<p>Drawn: PR Reviewed: PAS Contact: Paul Andrew Sgroi Project Number: 2301.00-22</p>																																																																																									
(ER)	EXISTING TO BE RELOCATED	MFR	MANUFACTURER	VIF	VERIFY IN FIELD	<p>Sheet Title:</p> <p>COVER SHEET- PLUMBING</p>																																																																																																	
EFF	EFFICIENCY	MH	MANHOLE	VOL	VOLUME									<p>Sheet Number:</p> <p>P-001</p>																																																																																									
EFL	EFFLUENT	MIN	MINIMUM	VPC	VIA PHOTOCCELL	<p>NOTICE</p> <p>THE SCHEDULES AND DRAWINGS REPRESENT ONLY CERTAIN REQUIREMENTS OF THE PROJECT. THERE ARE ADDITIONAL REQUIREMENTS IN THE SPECIFICATIONS BOOKLET WHICH THE CONTRACTOR IS BINDING TO PROVIDE. A SUPPLIER OR CONTRACTOR'S PRICING, WHICH IS BASED ONLY ON DRAWINGS OR SCHEDULES, MAY LEAVE IMPORTANT COSTS UNACCOUNTED FOR WHICH WILL ULTIMATELY BE THE CONTRACTOR OR SUPPLIER'S RESPONSIBILITY TO PROVIDE.</p> <p>THE DELIVERY OF THIS DRAWING SHOULD NOT BE CONSTRUED TO PROVIDE AN EXPRESS WARRANTY OR GUARANTEE TO ANYONE THAT ALL THE DIMENSIONS AND DETAILS ARE EXACT OR TO INDICATE THAT THE USE OF THIS DRAWING MERITS THE REVIEW AND APPROVAL BY THE DESIGN PROFESSIONAL OF ANY FUTURE USE. ANY USER OF THIS INFORMATION WITHOUT THE WRITTEN APPROVAL OF THE DESIGN PROFESSIONAL IS AT THE SOLE RISK AND LIABILITY OF THE USER. THE DESIGN PROFESSIONAL RECEIVES THE RIGHT TO REMOVE OUR PROFESSIONAL SEAL AND/OR TITLE BLOCK.</p>																																																																																																	
EL	ELEVATION	MISC	MISCELLANEOUS	VTC	VIA TIME CLOCK									<p>OWNER:</p> <p>ASTON TOWNSHIP 2 New Road Suite 123 Aston, PA 19014</p>																																																																																									
ELEC	ELECTRICAL	MPCR	MEDIUM PRESSURE CONDENSATE RETURN	VTR	VENT THROUGH ROOF	<p>Revision/Issue:</p> <p>0 03/29/24 Issued</p>																																																																																																	
EQ	EQUAL	MPS	MEDIUM PRESSURE STEAM SUPPLY	W	WITH									<p>Drawn: PR Reviewed: PAS Contact: Paul Andrew Sgroi Project Number: 2301.00-22</p>																																																																																									
EQUIP	EQUIPMENT	N	NEW	WCO	WALL CLEANOUT	<p>Sheet Title:</p> <p>COVER SHEET- PLUMBING</p>																																																																																																	
ES	EMERGENCY SHOWER	NA	NOT APPLICABLE	WH	WALL HYDRANT									<p>Sheet Number:</p> <p>P-001</p>																																																																																									
EW	EMERGENCY EYEWASH	NC	NORMALLY CLOSED	WP	WEATHERPROOF	<p>NOTICE</p> <p>THE SCHEDULES AND DRAWINGS REPRESENT ONLY CERTAIN REQUIREMENTS OF THE PROJECT. THERE ARE ADDITIONAL REQUIREMENTS IN THE SPECIFICATIONS BOOKLET WHICH THE CONTRACTOR IS BINDING TO PROVIDE. A SUPPLIER OR CONTRACTOR'S PRICING, WHICH IS BASED ONLY ON DRAWINGS OR SCHEDULES, MAY LEAVE IMPORTANT COSTS UNACCOUNTED FOR WHICH WILL ULTIMATELY BE THE CONTRACTOR OR SUPPLIER'S RESPONSIBILITY TO PROVIDE.</p> <p>THE DELIVERY OF THIS DRAWING SHOULD NOT BE CONSTRUED TO PROVIDE AN EXPRESS WARRANTY OR GUARANTEE TO ANYONE THAT ALL THE DIMENSIONS AND DETAILS ARE EXACT OR TO INDICATE THAT THE USE OF THIS DRAWING MERITS THE REVIEW AND APPROVAL BY THE DESIGN PROFESSIONAL OF ANY FUTURE USE. ANY USER OF THIS INFORMATION WITHOUT THE WRITTEN APPROVAL OF THE DESIGN PROFESSIONAL IS AT THE SOLE RISK AND LIABILITY OF THE USER. THE DESIGN PROFESSIONAL RECEIVES THE RIGHT TO REMOVE OUR PROFESSIONAL SEAL AND/OR TITLE BLOCK.</p>																																																																																																	
EWC	ELECTRIC WATER COOLER	N.C.	NORMALLY CLOSED	WIO	WITHOUT									<p>OWNER:</p> <p>ASTON TOWNSHIP 2 New Road Suite 123 Aston, PA 19014</p>																																																																																									
EWH	ELECTRIC WATER HEATER	N.O.	NORMALLY OPEN	WSFU	WATER SUPPLY FIXTURE UNITS	<p>Revision/Issue:</p> <p>0 03/29/24 Issued</p>																																																																																																	
EWT	ENTERING WATER TEMPERATURE	N.O.	NORMALLY OPEN											<p>Drawn: PR Reviewed: PAS Contact: Paul Andrew Sgroi Project Number: 2301.00-22</p>																																																																																									
EXT	EXTERIOR	NTS	NOT TO SCALE			<p>Sheet Title:</p> <p>COVER SHEET- PLUMBING</p>																																																																																																	
*F	DEGREE FAHREN																																																																																																						

Consultant:

McHUGH ENGINEERING ASSOCIATES, INC.
136 Poplar Street
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2023-141

Project:

ASTON TOWNSHIP MUNICIPAL COMPLEX
3264 Concord Road
Aston, PA 19014

Owner:

ASTON TOWNSHIP
2 New Road
Suite 123
Aston, PA 19014

Revision/Issue:

0 03/29/24 Issued

Drawn: PR
Reviewed: PAS
Contact: Paul Andrew Sgroi
Project Number: 2301.00-22

Sheet Title:

FIRST FLOOR PLAN - SANITARY

Sheet Number:

P-101

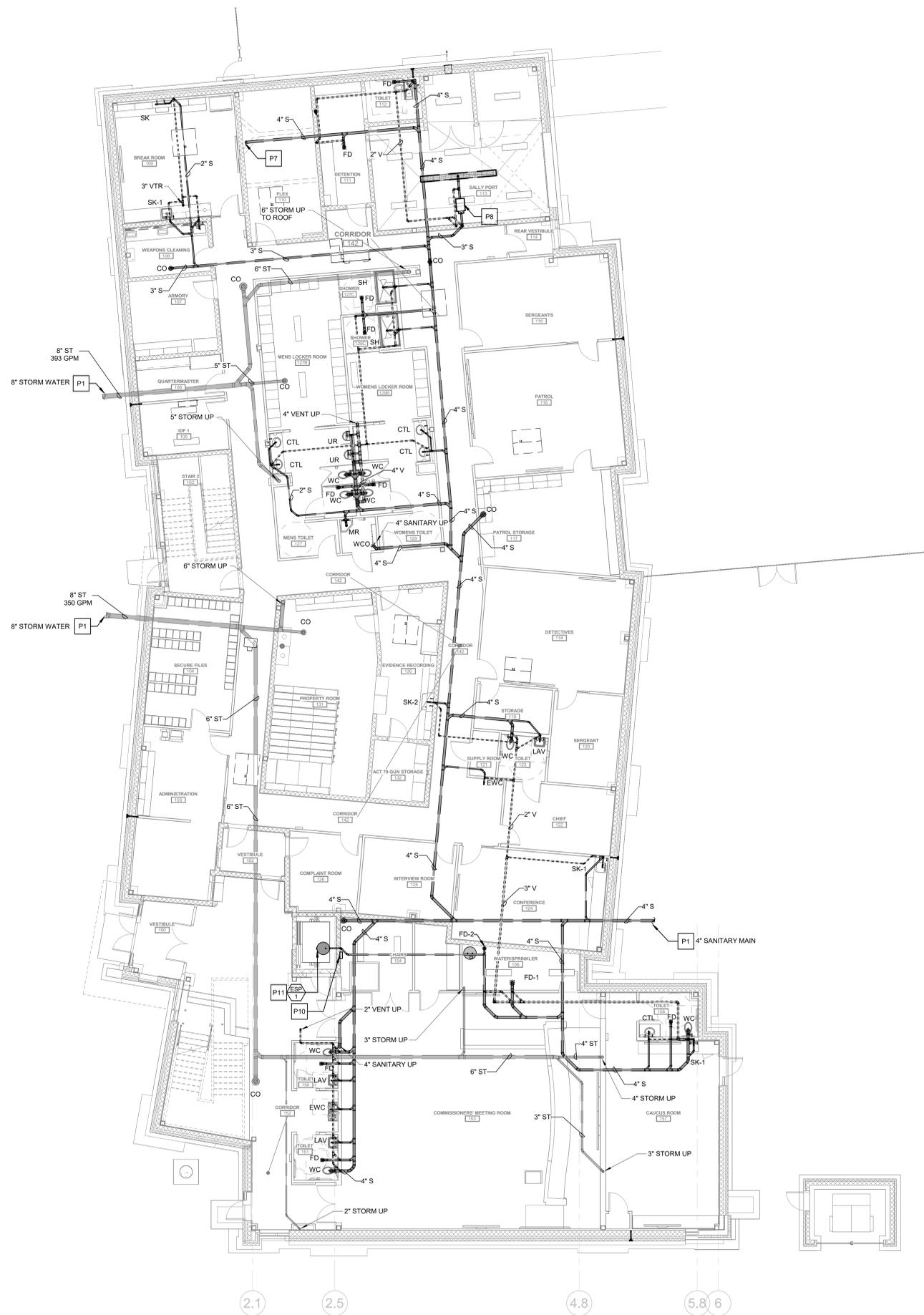
GENERAL PLUMBING NOTES:

- COORDINATE ALL BELOW GRADE PLUMBING PIPING WITH FOUNDATION ELEVATIONS AND SITE UTILITY INVERTS. VERIFY EXISTING ELEVATIONS AND INVERTS PRIOR TO CONSTRUCTION.
- PROVIDE WATER HAMMER ARRESTORS IN CONFORMANCE WITH PDI AND LOCAL ORDINANCES AT FLUSH VALVES, LAUNDRY WASHING MACHINES/COMMERCIAL AND RESIDENTIAL, SOLENOIDS, FAST CLOSING VALVES, ETC.
- DO NOT ROUTE PLUMBING PIPING THROUGH ELECTRICAL ROOMS, ELECTRICAL CLOSETS, OR DATA COMMUNICATION CENTERS.
- DO NOT ROUTE PLUMBING PIPING THROUGH ELEVATOR SHAFT UNLESS PIPING IS DEDICATED TO SHAFT. DO NOT ROUTE PLUMBING PIPING THROUGH UTILITY CHASES UNLESS CHASE IS DEDICATED FOR PLUMBING SERVICES.
- PROVIDE SHUT OFF VALVES CLOSE TO MAINS ON EACH BRANCH AND RISER SERVING PLUMBING FIXTURES, CASEWORK OR EQUIPMENT. PROVIDE SHUT OFF VALVES ON EACH WATER SUPPLY TO PLUMBING FIXTURES THAT DO NOT HAVE SUPPLY STOPS. PROVIDE ACCESS PANELS FOR ALL VALVES.
- COORDINATE LOCATIONS OF FLOOR DRAINS WITH ARCHITECTURAL PLANS.
- PROVIDE CLEANOUTS AT THE BASE OF ALL RAINWATER CONDUCTORS AND SANITARY WASTE STACKS, AT EVERY CHANGE IN DIRECTION AND 50'-0" ON CENTER FOR STRAIGHT LENGTHS.
- PROVIDE VENT LIMITERS ON ALL NATURAL GAS PRESSURE REGULATORS.
- THE CONTRACTOR SHALL PROVIDE BALANCING VALVES ON ALL BRANCHES OF THE DOMESTIC HOT WATER RETURN SYSTEM, BALANCE THE SYSTEM, AND PROVIDE BALANCING REPORT TO THE OWNER/ENGINEER FOR RECORD. ALL HOT WATER BALANCING VALVES SHALL BE SET TO 1 GPM UNLESS OTHERWISE NOTED.
- PROVIDE LOW POINT DRAIN VALVES WITH HOSE CONNECTIONS ON EACH FLOOR. LOCATE WHERE SERVICE MAINS CONNECT TO RISERS IN VALVE CLOSETS OR JANITORS CLOSETS. PROVIDE BLUE AND RED CEILING MARKERS ON DROP CEILINGS.
- REFER TO DOMESTIC WATER AND SANITARY RISER DIAGRAMS FOR ADDITIONAL PIPE SIZE INFORMATION.
- REFER TO STORM WATER RISER DIAGRAMS FOR ADDITIONAL PIPE SIZE INFORMATION.
- REFER TO NATURAL GAS RISER DIAGRAMS FOR ADDITIONAL PIPE SIZE INFORMATION.

PLUMBING KEYNOTES

NOTED THUS

- P1 REFER TO CIVIL PLANS FOR CONTINUATION.
- P7 PROVIDE CAP ON 4" SANITARY FOR FUTURE CONNECTION.
- P8 SAND AND OIL INTERCEPTOR. REFER TO DETAIL.
- P10 ELEVATOR SUMP PUMP CONTROL MODULE.
- P11 ELEVATOR SUMP PUMP. REFER TO DETAIL FOR ADDITIONAL INFORMATION.



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

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2023-141

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Revision/Issue:
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Drawn: PR
Reviewed: PAS
Contact: Paul Andrew Sgroi
Project Number: 2301.00-22

Sheet Title:
FIRST FLOOR PLAN - DOMESTIC WATER

Sheet Number:
P-102

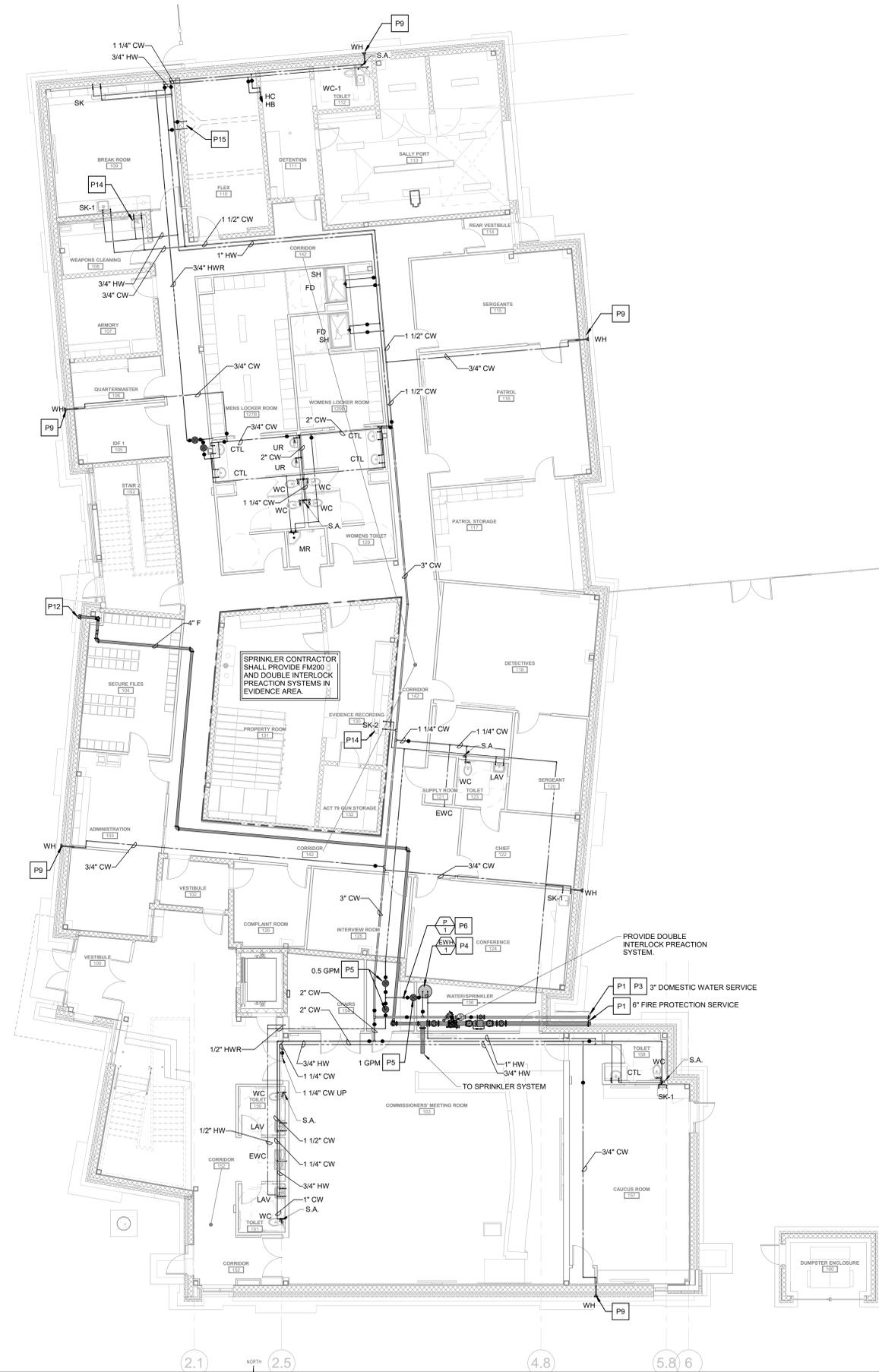
GENERAL PLUMBING NOTES:

- COORDINATE ALL BELOW GRADE PLUMBING PIPING WITH FOUNDATION ELEVATIONS AND SITE UTILITY INVERTS. VERIFY EXISTING ELEVATIONS AND INVERTS PRIOR TO CONSTRUCTION.
- PROVIDE WATER HAMMER ARRESTORS IN CONFORMANCE WITH PDI AND LOCAL ORDINANCES AT FLUSH VALVES, LAUNDRY WASHING MACHINES/COMMERCIAL AND RESIDENTIAL), SOLENOIDS, FAST CLOSING VALVES, ETC.
- DO NOT ROUTE PLUMBING PIPING THROUGH ELECTRICAL ROOMS, ELECTRICAL CLOSETS, OR DATA COMMUNICATION CENTERS.
- DO NOT ROUTE PLUMBING PIPING THROUGH ELEVATOR SHAFT UNLESS PIPING IS DEDICATED TO SHAFT. DO NOT ROUTE PLUMBING PIPING THROUGH UTILITY CHASES UNLESS CHASE IS DEDICATED FOR PLUMBING SERVICES.
- PROVIDE SHUT OFF VALVES CLOSE TO MAINS ON EACH BRANCH AND RISER SERVING PLUMBING FIXTURES, CASEWORK OR EQUIPMENT. PROVIDE SHUT OFF VALVES ON EACH WATER SUPPLY TO PLUMBING FIXTURES THAT DO NOT HAVE SUPPLY STOPS. PROVIDE ACCESS PANELS FOR ALL VALVES.
- COORDINATE LOCATIONS OF FLOOR DRAINS WITH ARCHITECTURAL PLANS.
- PROVIDE CLEANOUTS AT THE BASE OF ALL RAINWATER CONDUCTORS AND SANITARY WASTE STACKS, AT EVERY CHANGE IN DIRECTION AND 50'-0" ON CENTER FOR STRAIGHT LENGTHS.
- PROVIDE VENT LIMITERS ON ALL NATURAL GAS PRESSURE REGULATORS.
- THE CONTRACTOR SHALL PROVIDE BALANCING VALVES ON ALL BRANCHES OF THE DOMESTIC HOT WATER RETURN SYSTEM, BALANCE THE SYSTEM, AND PROVIDE BALANCING REPORT TO THE OWNER/ENGINEER FOR RECORD. ALL HOT WATER BALANCING VALVES SHALL BE SET TO 1 GPM UNLESS OTHERWISE NOTED.
- PROVIDE LOW POINT DRAIN VALVES WITH HOSE CONNECTIONS ON EACH FLOOR. LOCATE WHERE SERVICE MAINS CONNECT TO RISERS IN VALVE CLOSETS OR JANITORS CLOSETS. PROVIDE BLUE AND RED CEILING MARKERS ON DROP CEILINGS.
- REFER TO DOMESTIC WATER AND SANITARY RISER DIAGRAMS FOR ADDITIONAL PIPE SIZE INFORMATION.
- REFER TO STORM WATER RISER DIAGRAMS FOR ADDITIONAL PIPE SIZE INFORMATION.
- REFER TO NATURAL GAS RISER DIAGRAMS FOR ADDITIONAL PIPE SIZE INFORMATION.

PLUMBING KEYNOTES

NOTED THUS

- P1 REFER TO CIVIL PLANS FOR CONTINUATION.
- P3 THE SPRINKLER SERVICE LINE SHALL NOT BE INSTALLED UNTIL ALL FLOW/PRESSURE CALCULATIONS FOR THE SPRINKLER SYSTEM ARE HYDRAULICALLY VERIFIED BY THE SPRINKLER CONTRACTOR. THE LINE SIZE MAY INCREASE (OR DECREASE) AS A RESULT OF SUCH CALCULATIONS.
- P4 ELECTRICAL WATER HEATER. REFER TO DETAIL.
- P5 PROVIDE HOT WATER BALANCING VALVE AND SHUTOFF VALVE.
- P6 HOT WATER RECIRCULATION PUMP. REFER TO DETAIL.
- P9 PROVIDE ACCESS PANEL FOR WALL HYDRANT SHUT OFF VALVE.
- P12 FIRE DEPARTMENT CONNECTION. SPRINKLER CONTRACTOR TO COORDINATE FINAL LOCATION WITH FIRE MARSHALL PRIOR TO INSTALLATION.
- P14 PROVIDE GUARDIAN G1848 ANSI-COMPLIANT WALL MOUNTED EYEWASH AT SINK. COORDINATE SPECIFIC MODEL AND MOUNTING OPTION WITH ARCHITECT PRIOR TO ORDERING. PROVIDE 68620 THERMOSTATIC MIXING VALVE FOR EYEWASH.
- P15 PROVIDE CAP ON 1" COLD WATER AND 1/2" HOT WATER FOR FUTURE CONNECTION.



NOTICE
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FIRST FLOOR PLAN - DOMESTIC WATER AND GAS
1/8" = 1'-0"

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Revision/Issue:
0 03/29/24 Issued

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Reviewed: PAS
Contact: Paul Andrew Sgroi
Project Number: 2301.00-22

Sheet Title:
SECOND FLOOR- PLUMBING

Sheet Number:
P-103

GENERAL PLUMBING NOTES:

- COORDINATE ALL BELOW GRADE PLUMBING PIPING WITH FOUNDATION ELEVATIONS AND SITE UTILITY INVERTS. VERIFY EXISTING ELEVATIONS AND INVERTS PRIOR TO CONSTRUCTION.
- PROVIDE WATER HAMMER ARRESTORS IN CONFORMANCE WITH PDI AND LOCAL ORDINANCES AT FLUSH VALVES, LAUNDRY WASHING MACHINES/COMMERCIAL AND RESIDENTIAL), SOLENOIDS, FAST CLOSING VALVES, ETC.
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- COORDINATE LOCATIONS OF FLOOR DRAINS WITH ARCHITECTURAL PLANS.
- PROVIDE CLEANOUTS AT THE BASE OF ALL RAINWATER CONDUCTORS AND SANITARY WASTE STACKS, AT EVERY CHANGE IN DIRECTION AND 50'-0" ON CENTER FOR STRAIGHT LENGTHS.
- PROVIDE VENT LIMITERS ON ALL NATURAL GAS PRESSURE REGULATORS.
- THE CONTRACTOR SHALL PROVIDE BALANCING VALVES ON ALL BRANCHES OF THE DOMESTIC HOT WATER RETURN SYSTEM, BALANCE THE SYSTEM, AND PROVIDE BALANCING REPORT TO THE OWNER/ENGINEER FOR RECORD. ALL HOT WATER BALANCING VALVES SHALL BE SET TO 1 GPM UNLESS OTHERWISE NOTED.
- PROVIDE LOW POINT DRAIN VALVES WITH HOSE CONNECTIONS ON EACH FLOOR. LOCATE WHERE SERVICE MAINS CONNECT TO RISERS IN VALVE CLOSETS OR JANITORS CLOSETS. PROVIDE BLUE AND RED CEILING MARKERS ON DROP CEILINGS.
- REFER TO DOMESTIC WATER AND SANITARY RISER DIAGRAMS FOR ADDITIONAL PIPE SIZE INFORMATION.
- REFER TO STORM WATER RISER DIAGRAMS FOR ADDITIONAL PIPE SIZE INFORMATION.
- REFER TO NATURAL GAS RISER DIAGRAMS FOR ADDITIONAL PIPE SIZE INFORMATION.

PLUMBING KEYNOTES

- NOTED THUS
- P13 OVERFLOW DISCHARGE NOZZLE. COORDINATE DISCHARGE ELEVATION WITH ARCHITECTURAL PLANS. REFER TO DETAIL.



SECOND FLOOR- PLUMBING
1/8" = 1'-0"

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Revision/Issue:

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Drawn: PR
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Contact: Paul Andrew Sgroi
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Sheet Title:

ROOF PLAN- PLUMBING

Sheet Number:

P-104

GENERAL PLUMBING NOTES:

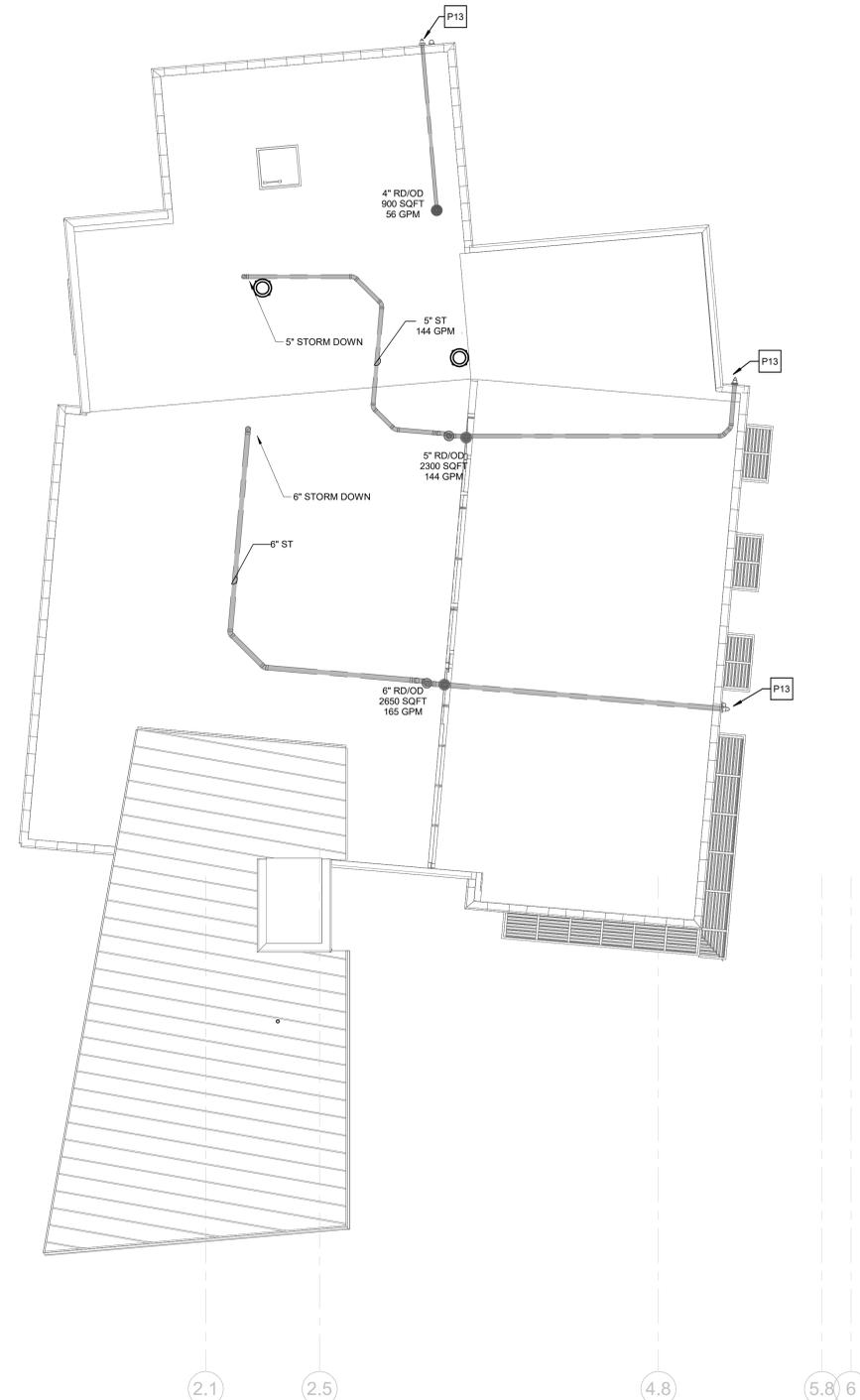
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- COORDINATE LOCATIONS OF FLOOR DRAINS WITH ARCHITECTURAL PLANS.
- PROVIDE CLEANOUTS AT THE BASE OF ALL RAINWATER CONDUCTORS AND SANITARY WASTE STACKS. AT EVERY CHANGE IN DIRECTION AND 50'-0" ON CENTER FOR STRAIGHT LENGTHS.
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- REFER TO DOMESTIC WATER AND SANITARY RISER DIAGRAMS FOR ADDITIONAL PIPE SIZE INFORMATION.
- REFER TO STORM WATER RISER DIAGRAMS FOR ADDITIONAL PIPE SIZE INFORMATION.
- REFER TO NATURAL GAS RISER DIAGRAMS FOR ADDITIONAL PIPE SIZE INFORMATION.

PLUMBING ROOF NOTES

- COORDINATE LOCATIONS OF ROOF DRAINS WITH ARCHITECTURAL PLANS.
- ALL VENTS THROUGH THE ROOF SHALL BE A MINIMUM OF 10' FROM OUTSIDE AIR INTAKES.
- ALL VENTS THROUGH THE ROOF SHALL BE A MINIMUM OF 6' FROM PARAPET OR ADJOINING BUILDING.
- THE ROOF VENTS SHALL BE TERMINATED NOT LESS THAN 2' ABOVE THE ROOF. WHERE A ROOF IS TO BE USED FOR ASSEMBLY OR AS A PROMENADE, OBSERVATION DECK, SUNBATHING DECK, OR SIMILAR PURPOSES, OPEN VENT PIPES SHALL TERMINATE NOT LESS THAN 7' ABOVE THE ROOF.

PLUMBING KEYNOTES

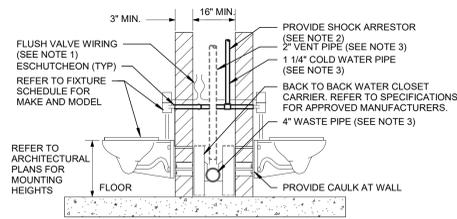
- NOTED THIS
- P13 OVERFLOW DISCHARGE NOZZLE. COORDINATE DISCHARGE ELEVATION WITH ARCHITECTURAL PLANS. REFER TO DETAIL.



1 ROOF PLAN - PLUMBING
1/8" = 1'-0"

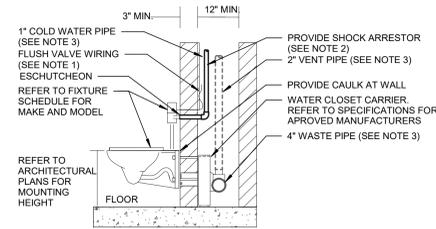
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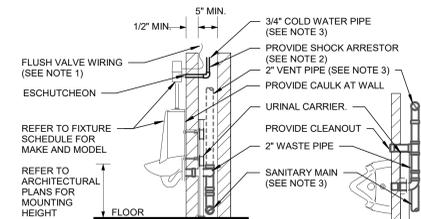
BACK TO BACK WATER CLOSET DETAIL

- SCALE: NONE
- NOTES:
- COORDINATE ELECTRICAL CONNECTIONS WITH ELECTRICAL CONTRACTOR FOR HARDWIRED FLUSH VALVES.
 - REFER TO DOMESTIC WATER RISER DIAGRAM FOR SHOCK ARRESTOR LOCATIONS.
 - REFER TO FLOOR PLANS FOR CONTINUATION OF PIPING.
 - WALL MATERIAL AND CARRIER CAN AFFECT MINIMUM CHASE SIZE. COORDINATE FINAL CHASE SIZE WITH ARCHITECT.
 - MOUNTING HEIGHT FOR ADA WATER CLOSET SHALL BE 17"-19" TO THE TOP OF THE SEAT.



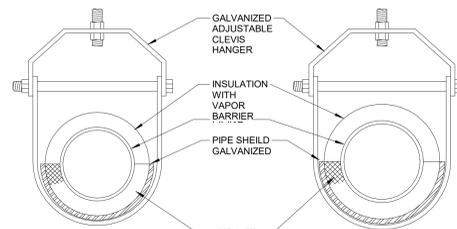
WALL HUNG WATER CLOSET DETAIL

- SCALE: NONE
- NOTES:
- COORDINATE ELECTRICAL CONNECTIONS WITH ELECTRICAL CONTRACTOR FOR HARDWIRED FLUSH VALVES.
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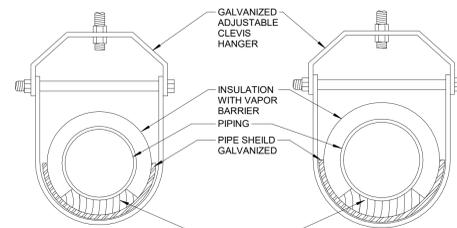


WALL HUNG URINAL DETAIL

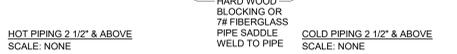
- SCALE: NONE
- NOTES:
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 - REFER TO DOMESTIC WATER RISER DIAGRAM FOR SHOCK ARRESTOR LOCATIONS.
 - REFER TO FLOOR PLANS FOR CONTINUATION OF PIPING.
 - PROVIDE CLEANOUT FOR URINAL.
 - COORDINATE FINAL CHASE SIZE WITH ARCHITECT.
 - MOUNTING HEIGHT FOR ADA URINALS SHALL BE A MAXIMUM OF 17".
 - REFER TO SPECIFICATIONS FOR APPROVED MANUFACTURERS FOR URINAL CARRIERS.



HOT PIPING 2" & BELOW
SCALE: NONE

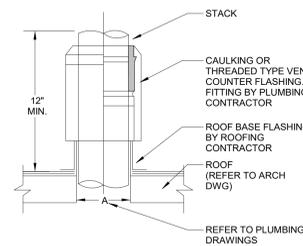


COLD PIPING 2" & BELOW
SCALE: NONE



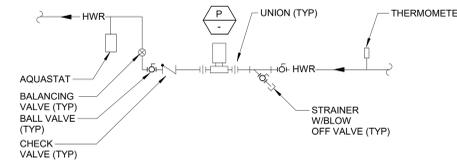
HOT PIPING 2 1/2" & ABOVE
SCALE: NONE

PIPE HANGER DETAILS
SCALE: NONE



ROOF VENT DETAIL
SCALE: NONE

- NOTES:
- FITTING IS OF THE COUPLING TYPE THAT PERMITS STACK EXTENSION TO THE DESIRED HEIGHT. COUNTER FLASHING FITTING, J.R. SMITH FIG. 1740C OR 1750T.



DOMESTIC HOT WATER RETURN PUMP DETAIL
SCALE: NONE

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1

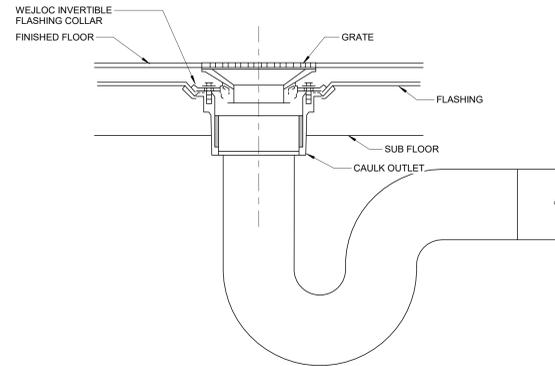
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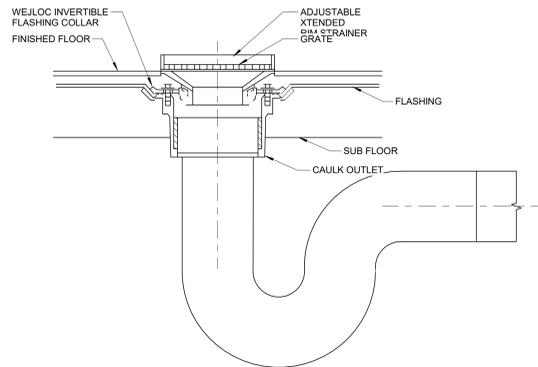
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FLOOR DRAIN DETAIL
SCALE: NONE

- NOTE:**
1. CONTRACTOR TO PROVIDE TRAP PRIMER. REFER TO TRAP PRIMER DETAIL FOR MORE INFORMATION.

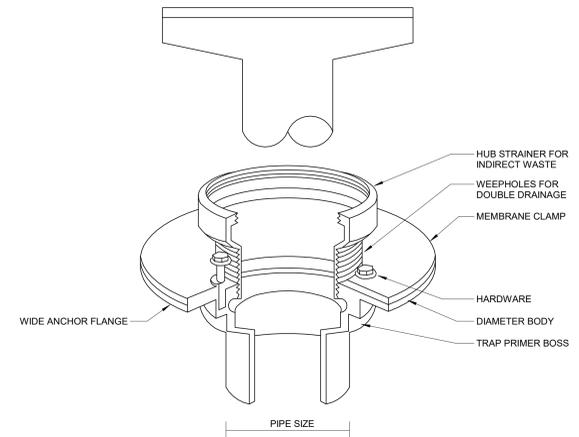
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MECHANICAL ROOM FLOOR DRAIN DETAIL
SCALE: NONE

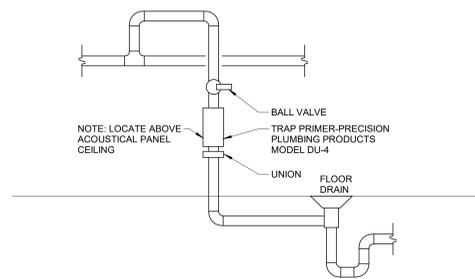
- NOTE:**
1. CONTRACTOR TO PROVIDE TRAP PRIMER. REFER TO TRAP PRIMER DETAIL FOR MORE INFORMATION.

2



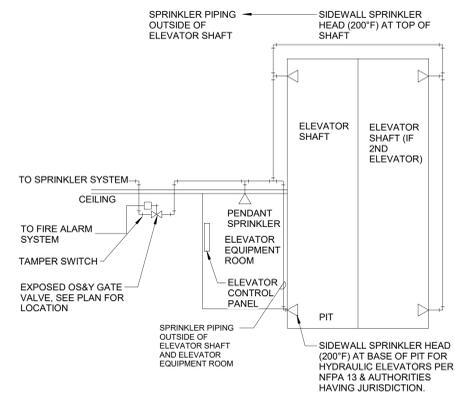
HUB DRAIN DETAIL
SCALE: NONE

3



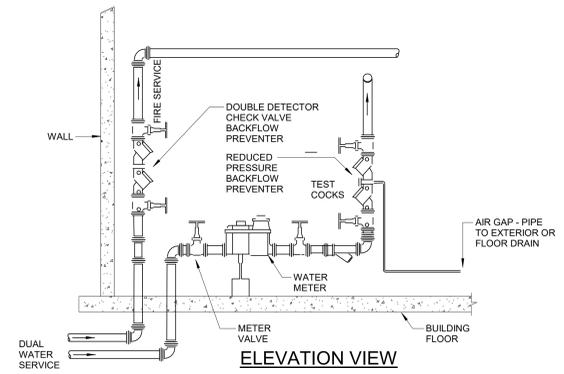
TRAP PRIMER DETAIL (TP-1)
SCALE: NONE

4



ELEVATOR SPRINKLER PIPING DIAGRAM
NO SCALE

5



WATER SERVICE DETAIL
SCALE: NONE

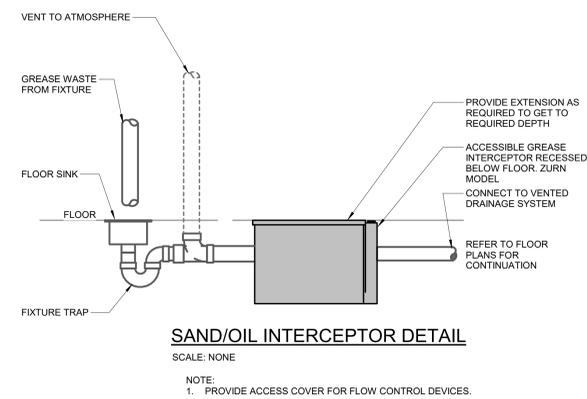
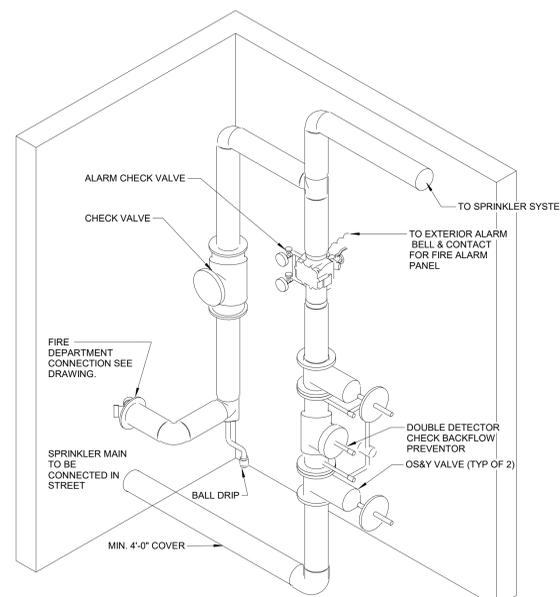
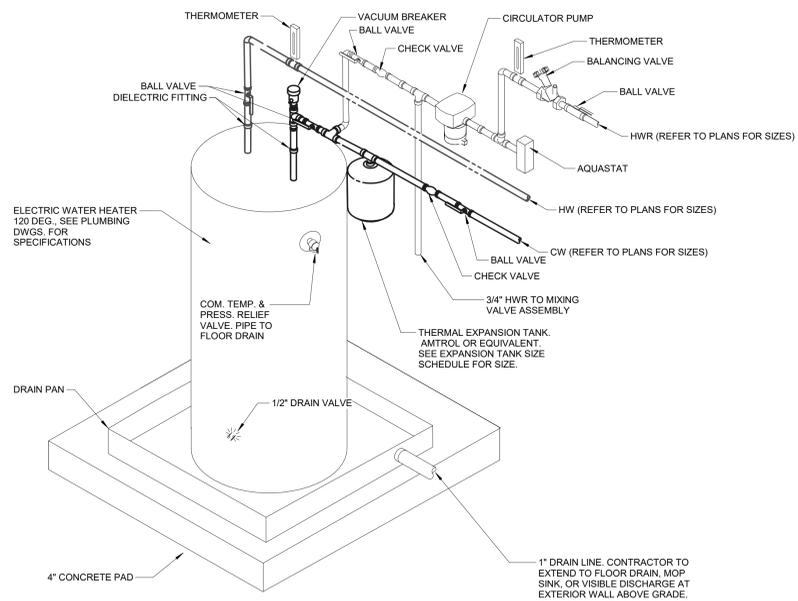
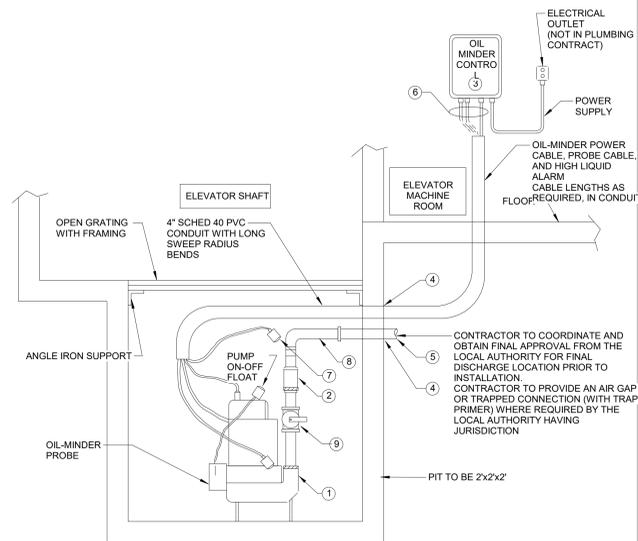
- NOTES:**
1. BACKFLOW PREVENTERS TO BE SET A MINIMUM OF 12" FROM FLOOR TO THE LOWEST PART OF DEVICE, AND A MAXIMUM OF 5'-0" FROM THE FLOOR TO THE TOP OF DEVICE, AND 12" FROM ANY WALL.
 2. CONTRACTOR TO PROVIDE PRESSURE REDUCING VALVE IF PRESSURE EXCEEDS 80 PSI.
 3. CONTRACTOR TO COORDINATE INSTALLATION REQUIREMENTS WITH LOCAL UTILITY COMPANY.

DIMENSION	PIPE SIZE			
	3"	4"	6"	8"
E	2'-1 1/2"	2'-5 1/2"	3'-1"	4'-5 1/2"
G	1'-6"	2'-6"	2'-6"	3'-6"
H	1'-0"	1'-0"	1'-6"	2'-0"

6

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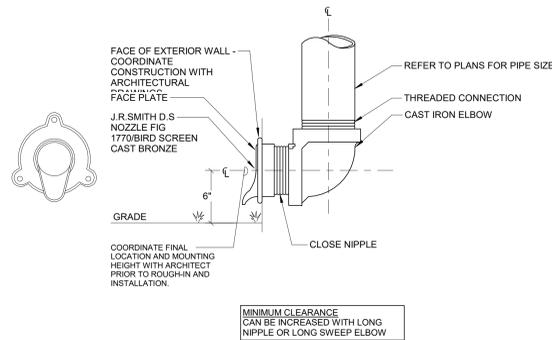
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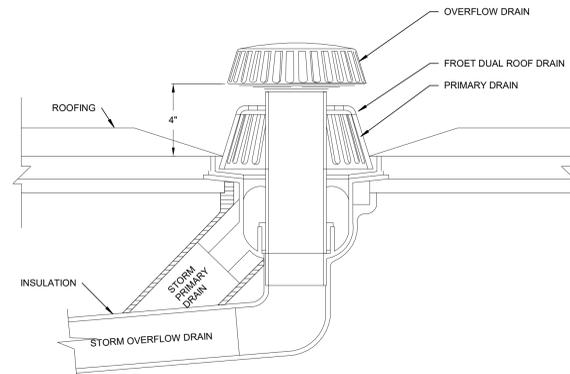
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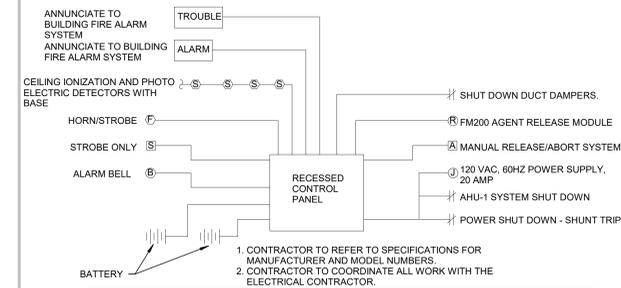


OVERFLOW DISCHARGE NOZZLE DETAIL
 SCALE: NONE

- NOTE:
 1. CONTRACTOR TO REFER TO DRAWINGS AND SPECIFICATIONS FOR PIPING.
 2. CONTRACTOR TO COORDINATE FINISH WITH ARCHITECT.



ROOF DRAIN DETAIL
 NOT TO SCALE

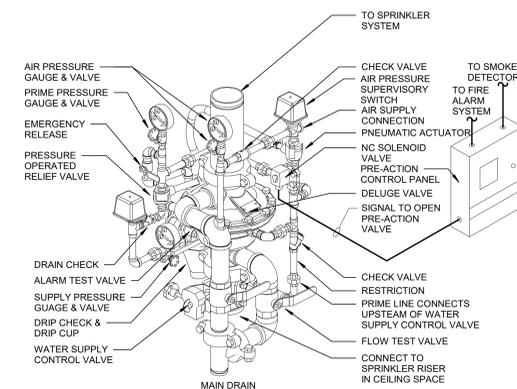


1. CONTRACTOR TO REFER TO SPECIFICATIONS FOR MANUFACTURER AND MODEL NUMBERS.
 2. CONTRACTOR TO COORDINATE ALL WORK WITH THE ELECTRICAL CONTRACTOR.

FM200 SEQUENCE OF OPERATION

- 1ST ALARM:** ACTIVATION OF ANY SYSTEM DETECTOR WILL CAUSE THE "ALARM" LED ON THE PANEL TO FLASH, CAUSE THE PIEZO ON THE PANEL TO "CHIRP" ACTIVATE THE ALARM BELL AND CAUSE THE FOLLOWING:
 1) ANNUNCIATE TO BLDG. FIRE ALARM
- 2ND ALARM:** ACTIVATION OF A SECOND SMOKE DETECTOR WILL CAUSE THE PRE-DISCHARGE LED ON THE PANEL TO FLASH, CAUSE THE PIEZO TO CONTINUE TO "CHIRP", THE HORN/STROBE UNIT TO ACTIVATE, INITIATE A 30 SECOND TIME DELAY AND THE FOLLOWING WILL OCCUR:
 1) SHUTDOWN AIR DIST. SYSTEM
- DISCHARGE:** UPON EXPIRATION OF THE 30 SECOND TIME DELAY, THE RELEASE LED ON THE PANEL WILL FLASH, THE PIEZO WILL CONTINUE TO "CHIRP", THE DISCHARGE STROBE WILL ACTIVATE, THE FM200 WILL BE DISCHARGED, AND THE FOLLOWING WILL OCCUR:
 1) SHUTDOWN POWER
- MAN. REL:** ACTIVATION OF A MANUAL RELEASE STATION WILL ACTIVATE THE AUDIO/VISUAL DEVICES STATION AND INITIATE ALL SYSTEM FUNCTIONS, INCLUDING IMMEDIATE FM200 DISCHARGE.
- TROUBLE CONDITION:** A TROUBLE CONDITION WILL ILLUMINATE THE YELLOW "TROUBLE" LAMP ON THE PANEL, AND ANNUNCIATE TO BLDG. FIRE ALARM.

FM200 RISER DIAGRAM
 NOT TO SCALE



- NOTES:
 1. DOUBLE INTERLOCK PRE-ACTION SYSTEMS SHALL MAINTAIN A MINIMUM SUPERVISING AIR OR NITROGEN PRESSURE OF 7 PSI.
 2. AIR OR NITROGEN SUPERVISING PRESSURE FOR PRE-ACTION SYSTEMS SHALL BE INSTALLED IN CONFORMANCE WITH THE DRY PIPE SYSTEM AIR PRESSURE AND SUPPLY RULES.
 3. ALL DEVICES ARE TO BE UL LISTED & FIRE MARSHALL APPROVED.
 4. BASED ON VIKING MODEL G-4000P DOUBLE INTERLOCK PREACTION W/ELECTRIC/PNEUMATIC RELEASE.
 5. CONTRACTOR TO COORDINATE ELECTRICAL CONNECTIONS WITH ELECTRICAL CONTRACTOR.
 6. FIRE PROTECTION CONTRACTOR IS RESPONSIBLE FOR WIRING AND PROGRAMMING CONTROLLER.

DOUBLE INTERLOCK PRE-ACTION SYSTEM DETAIL
 NOT TO SCALE

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PLUMBING FIXTURE SCHEDULE

1. ALL FIXTURES AND TRIM TO BE LEAD FREE
2. ALL HANDICAP FIXTURES TO BE INSTALLED ADA COMPLIANT WITH OFFSET WASTE WHERE REQUIRED AND INCLUDING UNDERFIXTURE PROTECTIVE KIT.
3. REFER TO SPECIFICATION FOR ADDITIONAL FIXTURE REQUIREMENTS AND ALTERNATE MFR.'S.
4. ALL TRIM TO BE CHROME PLATED CAST BRASS.
5. LAVATORIES IN PUBLIC TOILETS TO BE FURNISHED WITH GRID STRAINERS. FIXTURES IN PRIVATE TOILETS AND LOCKER ROOMS SHALL BE FURNISHED WITH POP-UP DRAINS.
6. TRAPS FOR LAV./SINKS SHALL BE SEMI-CAST BRASS/17 GAUGE WASTE 1 1/4"x1 1/2" OR 1 1/2" DEPENDING ON FIXTURE OUTLET.
7. ALL FIXTURES TO BE FURNISHED WITH INDIVIDUAL FIXTURE STOP VALVES. IN PUBLIC AREAS VALVES SHALL BE LOOSE KEY TYPE.
8. ALL WALL HUNG FIXTURES TO BE PROVIDED WITH SUITABLE FLOOR MOUNTED SUPPORTS.
9. WALL HUNG WATER CLOSETS SHALL BE PROVIDED WITH COMBINATION CARRIER WITH HORIZONTAL OR VERTICAL FITTING TO SUIT PIPING ARRANGEMENT.
10. VENTS NOTED ARE FOR INDIVIDUAL FIXTURE VENTS ONLY.
11. WATER CLOSETS LOCATED IN PUBLIC AREAS SHALL BE PROVIDED WITH OPEN FRONT SEATS.
12. COORDINATE WITH ARCHITECT FOR BLOCKING REQUIREMENTS.

BASIS OF DESIGN (APPROVED MFR.'S ARE LISTED IN SPECIFICATIONS)															ROUGH IN		FIXTURE UNITS		MEA NOTES:
TAG	DESCRIPTION	MANUFACTURER	MODEL NO.	FAUCET OR FLUSH VALVE	CARRIER OR SUPPORT	SENSOR OPERATED	COLOR/FINISH	FLOW (GPF)	MAP	CW	HW	SAN	SWV	CW	HW	DFU			
CTL	COUNTER-TOP LAVATORY	KOHLER	CAXTON K-2210	DELTA 500-DST	COUNTER-TOP	-	WHITE	0.5 GPM	-	1/2"	1/2"	1 1/4"	1 1/4"	.5	1		WATERSENSE LABELED.		
EWC	ELECTRIC WATER COOLER	ELKAY	EZSTL8W/SLK	-	WALL MOUNTED	-	LIGHT GRAY	8 GPH	-	1/2"	-	1 1/4"	1 1/4"	-	-	-	B1-LEVEL WATER COOLER, ELKAY EZH20 BOTTLE FILLING STATION, FLEXIGUARD SAFETY BUBBLER, 115 V, 60 HZ, 6A, ADA COMPLIANT.		
FD	FLOOR DRAIN	J.R. SMITH	2010	-	-	-	-	-	-	-	-	3"	2"	-	-	-	PROVIDE TRAP PRIMER, REFER TO SPEC SECTION 22 13 00 FOR MORE INFORMATION		
FD-1	FLOOR DRAIN	J.R. SMITH	2530	-	-	-	-	-	-	-	-	4"	2"	-	-	-	BALL FLOAT BACKWATER VALVE, PROVIDE TRAP PRIMER, REFER TO SPEC SECTION 22 13 00 FOR MORE INFORMATION		
FD-2	FUNNEL DRAIN	-	-	-	-	-	-	-	-	-	-	4"	2"	-	-	-	PROVIDE TRAP PRIMER		
HC HB	HOT AND COLD HOSE BIBB	ACORN ENGINEERING	8145	-	WALL MOUNTED	-	STAINLESS STEEL	-	-	3/4"	3/4"	-	-	-	-	-	LOCKABLE HOT AND COLD HOSE BIBB, VACUUM BREAKER.		
LAV	LAVATORY HANDICAPPED	AMERICAN STANDARD	LUCERNE 0355.912	MOEN COMMERCIAL M-BITION 8432	WALL MOUNTED	-	WHITE	0.5 GPM	-	1/2"	1/2"	1 1/4"	1 1/4"	1.5	1.5	1	VITREOUS CHINA, ADA COMPLIANT, WATERSENSE LABELED.		
MR	MOP RECEPTOR	FIAT	TSB-1610	FIAT 830-AA	FLOOR MOUNTED	-	TERRAZZO	1.5 GPM	-	1/2"	1/2"	3"	2"	-	-	-	CORNER MOP RECEPTOR, 24"x24"x12", 832-AA HOSE AND BRACKETS, 833-AA SILICONE SEALANT, & BUMPER GUARD		
RD/OD	ROOF DRAIN OVERFLOW DRAIN	FROET	100	-	-	-	-	-	-	-	-	2", 3", 4", 5", 6", 8"	-	-	-	-	DUAL DRAIN DESIGN, 5" HIGH PRIMARY STRAINER, 6" HIGH OVERFLOW INLET, CAST IRON BODY.		
SH	SHOWER HANDICAPPED	FREEDOM	APF6238FF875	MOEN 834ZEP15	FLOOR MOUNTED	-	WHITE	1.5 GPM	-	1/2"	1/2"	2"	2"	-	-	-	62"x32.75"x78.625" ONE-PIECE SHOWER, TEXTURED FLOOR, ADA COMPLIANT, WATERSENSE LABELED.		
SK	KITCHEN SINK HANDICAPPED	ELKAY	LUSTERONE LRAD332255	DELTA 100-DST	DROP-IN	-	STAINLESS STEEL	1.5 GPM	-	1/2"	1/2"	1 1/2"	1 1/2"	-	-	-	33"x22"x5-1/2", 18 GAUGE 304 STAINLESS STEEL, EQUAL DOUBLE BOWL, REAR CENTER DRAIN, SINGLE LEVER FAUCET, ADA COMPLIANT.		
SK-1	KITCHEN SINK HANDICAPPED	ELKAY	LUSTERONE LRAD252240	DELTA 100-DST	DROP-IN	-	STAINLESS STEEL	1.5 GPM	-	1/2"	1/2"	1 1/2"	1 1/2"	-	-	-	25"x22"x4", 18 GAUGE 304 STAINLESS STEEL, SINGLE BOWL, REAR CENTER DRAIN, ADA COMPLIANT.		
SK-2	KITCHEN SINK	ELKAY	CROSSTOWN ECTSR33229TBG	DELTA LKEC2031	DROP-IN/ UNDERMOUNT	-	STAINLESS STEEL	1.5 GPM	-	1/2"	1/2"	1 1/2"	1 1/2"	-	-	-	33"x22"x9", 18 GAUGE 304 STAINLESS STEEL, DOUBLE BOWL, REAR CENTER DRAIN, PROVIDE ELKAY PART #64090022 FOR DROP-IN INSTALLATION.		
UR	URINAL HANDICAPPED	AMERICAN STANDARD	TRIMBROOK 6561.017	SLOAN ROYAL 180 ESS	WALL MOUNTED	-	WHITE	1.0 GPF	-	3/4"	-	2"	2"	-	-	-	VITREOUS CHINA, ADA COMPLIANT (REFER TO ARCHITECTURAL PLANS FOR MOUNTING HEIGHT).		
WC	WATER CLOSET HANDICAPPED	AMERICAN STANDARD	MADERA FLOWWISE 3461.001	SLOAN ROYAL 111 ESS	FLOOR MOUNTED	-	WHITE	1.28 GPF	-	1"	-	4"	2"	10	-	4	VITREOUS CHINA, 16-1/2" HEIGHT FLOOR MOUNTED FLUSH VALVE, ELONGATED BOWL, EVERCLEAN SURFACE, ADA COMPLIANT, PROVIDE TOILET SEAT.		
WC-1	COMBINATION FIXTURE	ACORN	1432AL	ACORN	FLOOR MOUNTED	-	STAINLESS STEEL	1.28 GPF	-	1"	1/2"	3"	2"	11.5	1.5	5	LOW CONSUMPTION, FLUSHING RIM, INTEGRAL STRAINER, WASHOUT FLUSH ACTION.		
WH	WALL HYDRANT	J.R. SMITH	5509QT	-	-	-	-	-	-	3/4"	-	-	-	-	-	-	1/4 TURN NON-FREEZE WALL HYDRANT, INTEGRAL VACUUM BREAKER, 20 GAUGE STAINLESS STEEL BOX, OPERATING KEY LOCK.		

WATER HEATER SCHEDULE

TAG	LOCATION	TYPE	MANUFACTURER	MODEL NO.	GALLON STORAGE	ENERGY FACTOR	THERMAL EFFICIENCY	RECOVERY 90°F RISE	BTU INPUT	ELECTRICAL			NOTES:
										WATTS	VOLTS	PHASE	
EW-H-1	WATER ROOM	ELECTRIC	BRADFORD WHITE	LE230S3-3	30	-	-	21 GAL	-	4500	-	-	18" JACKET DIAMETER, COORDINATE CONNECTION WITH ELECTRICAL CONTRACTOR.
EW-H-2	MECHANICAL(210)	ELECTRIC	BRADFORD WHITE	LE255T3-3	55	-	-	25 GAL	-	5500	-	-	23" JACKET DIAMETER, COORDINATE CONNECTION WITH ELECTRICAL CONTRACTOR.
EW-H-3	MECHANICAL(210)	ELECTRIC	BRADFORD WHITE	LE255T3-3	55	-	-	25 GAL	-	5500	-	-	23" JACKET DIAMETER, COORDINATE CONNECTION WITH ELECTRICAL CONTRACTOR.

PLUMBING PUMP SCHEDULE

SYMBOL	TYPE	MANUFACTURER	MODEL	CONFIGURATION	GPM	HEAD	HP	HEADER SIZE	WATTS	ELECTRICAL			NOTES:
										VOLTS	PHASE		
P-1	HOT WATER RECIRCULATION PUMP	TACO	0015E3	INLINE	4	12 FT	-	-	44	115	1	1	HIGH EFFICIENCY CIRCULATOR, SET TO LOWEST MODE REQUIRED TO BALANCE SYSTEM. REFER TO DETAIL.
P-2	HOT WATER RECIRCULATION PUMP	TACO	0015E3	INLINE	4	12 FT	-	-	44	115	1	1	HIGH EFFICIENCY CIRCULATOR, SET TO LOWEST MODE REQUIRED TO BALANCE SYSTEM. REFER TO DETAIL.
ESP-1	SUMP PUMP	STANCOR	SE-50	-	50	22	0.5	-	-	-	-	1	

EXPANSION TANK SIZE SCHEDULE

WATER HEATER GALLONS	EXTROL SIZE GALLONS		DIAMETER	HEIGHT	CONN. SIZE
	TOTAL	ACCEPTANCE			
1 TO 50	2	0.9	8"	12 1/2"	3/4"
51 TO 100	4.4	2.4	11"	15"	3/4"
100 TO 199	8.6	8.6	11"	24 3/4"	3/4"
200 AND OVER	11.3	14	15 3/8"	23 7/8"	1"

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Project:
ASTON TOWNSHIP MUNICIPAL COMPLEX
 3264 Concord Road
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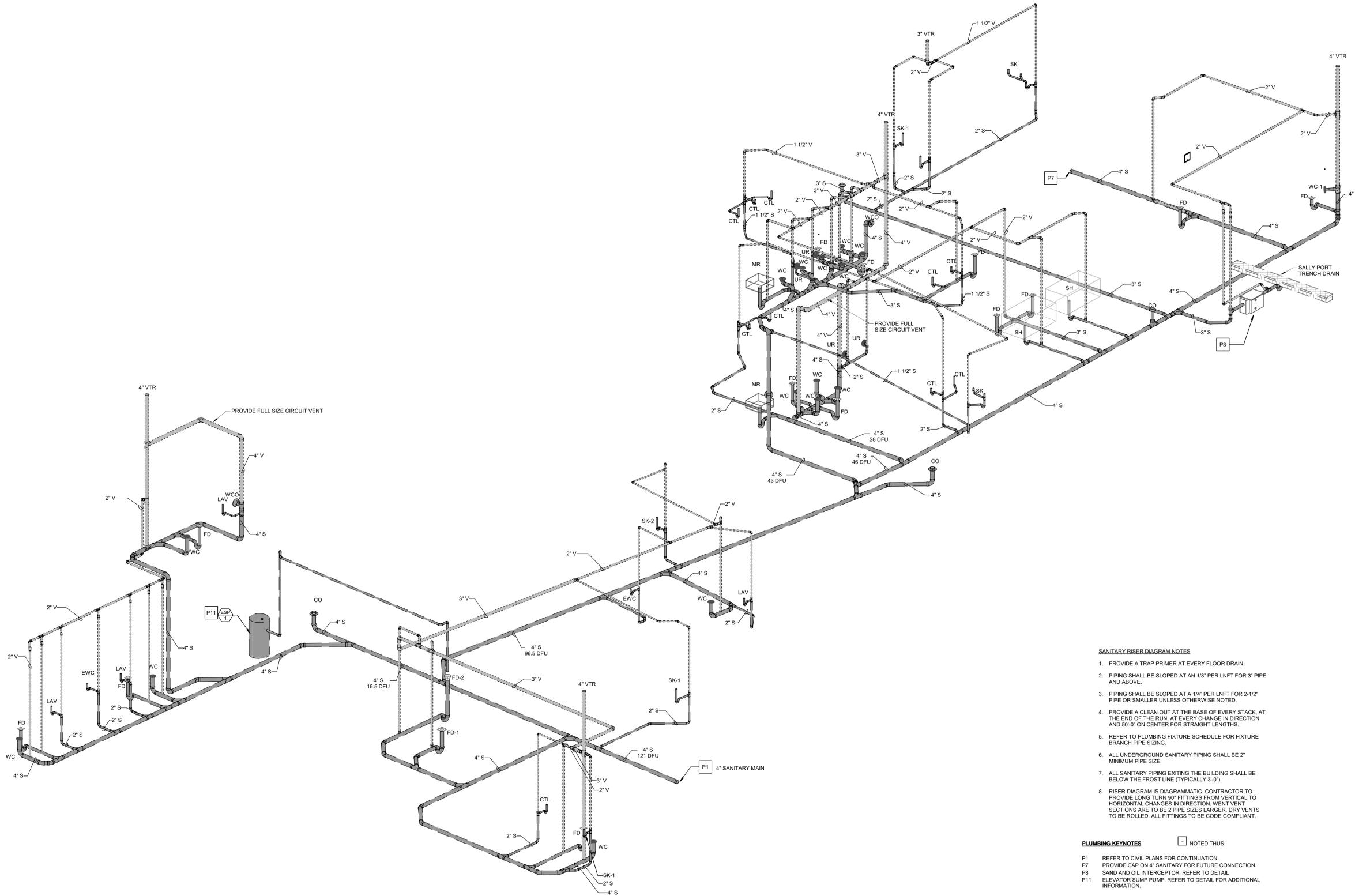
Owner:
ASTON TOWNSHIP
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Revision/Issue:
 0 03/29/24 Issued

Drawn: PR
 Reviewed: PAS
 Contact: Paul Andrew Sgroi
 Project Number: 2301.00-22

Sheet Title:
**RISER DIAGRAMS-
 SANITARY**

Sheet Number:
P-401



SANITARY RISER DIAGRAM
 NOT TO SCALE

- SANITARY RISER DIAGRAM NOTES**
1. PROVIDE A TRAP PRIMER AT EVERY FLOOR DRAIN.
 2. PIPING SHALL BE SLOPED AT AN 1/8" PER LNFT FOR 3" PIPE AND ABOVE.
 3. PIPING SHALL BE SLOPED AT A 1/4" PER LNFT FOR 2-1/2" PIPE OR SMALLER UNLESS OTHERWISE NOTED.
 4. PROVIDE A CLEAN OUT AT THE BASE OF EVERY STACK, AT THE END OF THE RUN, AT EVERY CHANGE IN DIRECTION AND 50'-0" ON CENTER FOR STRAIGHT LENGTHS.
 5. REFER TO PLUMBING FIXTURE SCHEDULE FOR FIXTURE BRANCH PIPE SIZING.
 6. ALL UNDERGROUND SANITARY PIPING SHALL BE 2" MINIMUM PIPE SIZE.
 7. ALL SANITARY PIPING EXITING THE BUILDING SHALL BE BELOW THE FROST LINE (TYPICALLY 3'-0").
 8. RISER DIAGRAM IS DIAGRAMMATIC. CONTRACTOR TO PROVIDE LONG TURN 90° FITTINGS FROM VERTICAL TO HORIZONTAL CHANGES IN DIRECTION. WENT VENT SECTIONS ARE TO BE 2 PIPE SIZES LARGER. DRY VENTS TO BE ROLLED. ALL FITTINGS TO BE CODE COMPLIANT.

- PLUMBING KEYNOTES**
- P1 REFER TO CIVIL PLANS FOR CONTINUATION.
 - P7 PROVIDE CAP ON 4" SANITARY FOR FUTURE CONNECTION.
 - P8 SAND AND OIL INTERCEPTOR. REFER TO DETAIL.
 - P11 ELEVATOR SUMP PUMP. REFER TO DETAIL FOR ADDITIONAL INFORMATION.

NOTICE
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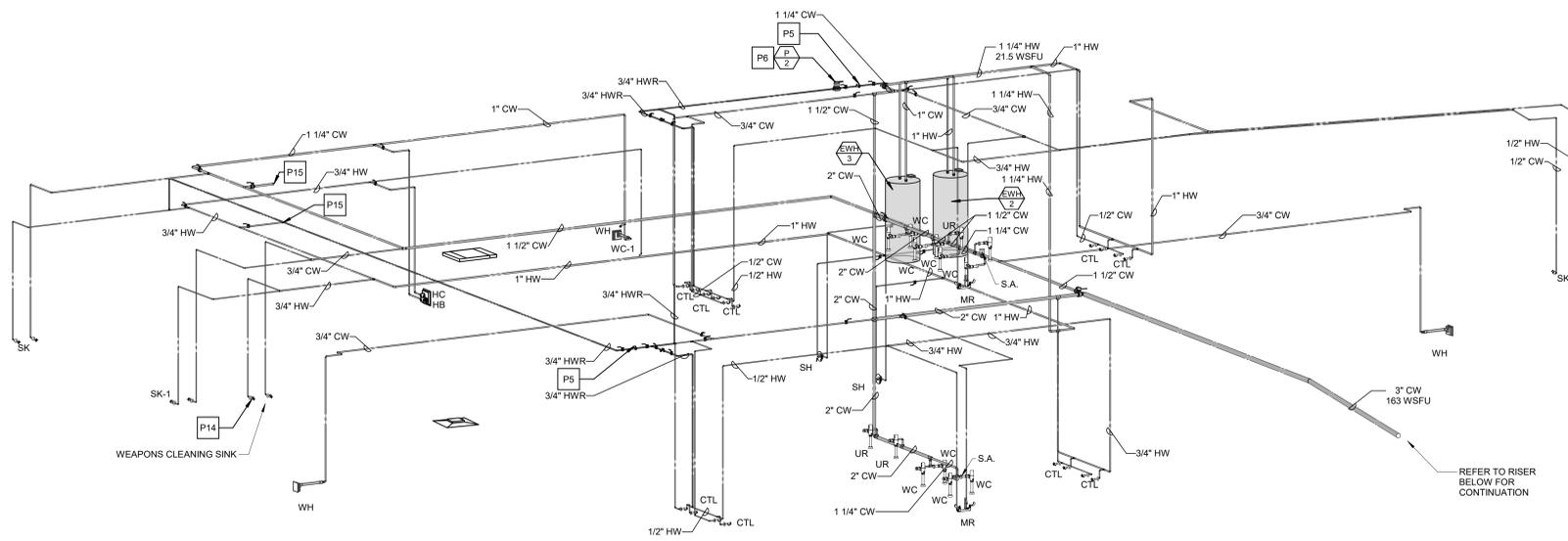
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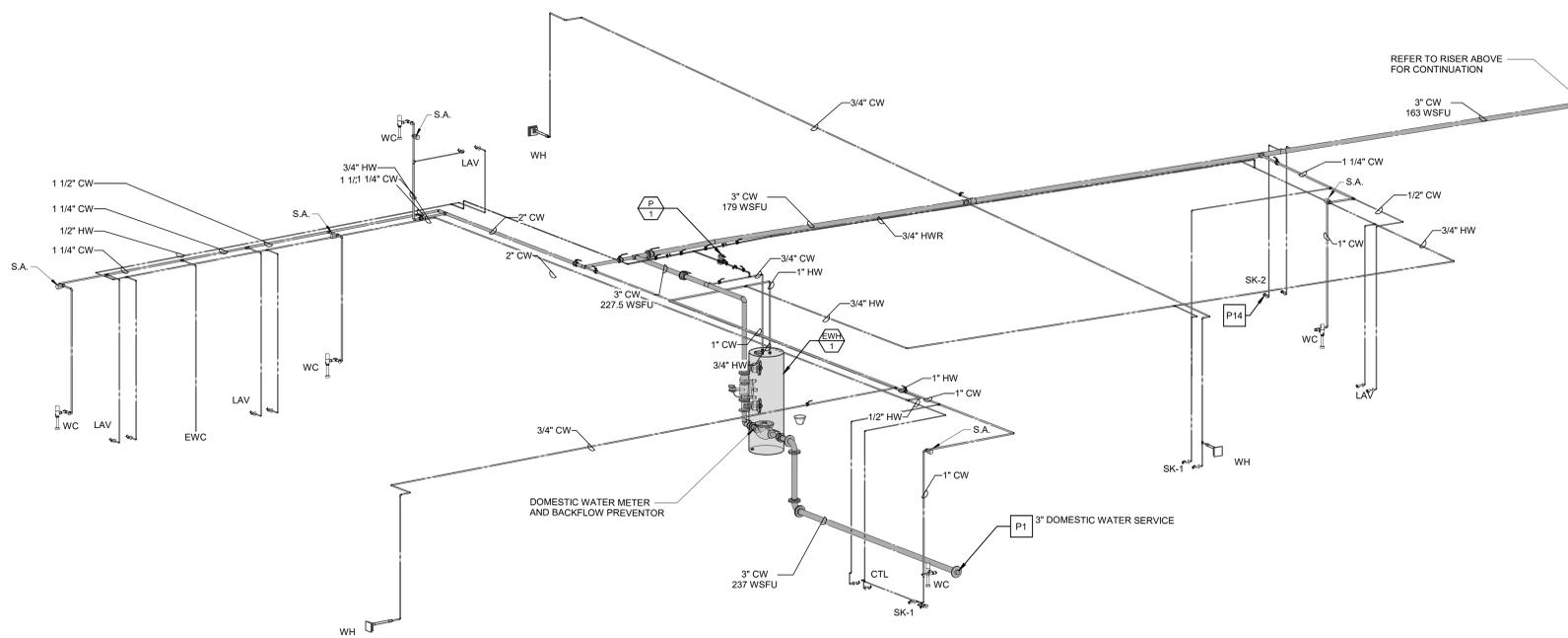
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 Contact: Paul Andrew Sgroi
 Project Number: 2301.00-22

Sheet Title:
RISER DIAGRAMS- DOMESTIC WATER

Sheet Number:
P-402



DOMESTIC WATER RISER DIAGRAM
 NOT TO SCALE



DOMESTIC WATER RISER DIAGRAM
 NOT TO SCALE

DOMESTIC WATER RISER DIAGRAM NOTES

1. PROVIDE A TRAP PRIMER AT EVERY FLOOR DRAIN.
2. PROVIDE A SHUT OFF VALVE AT EACH PIECE OF EQUIPMENT.
3. PROVIDE A CHECK VALVE AND BALANCING VALVE AT EVERY DOMESTIC HOT WATER RETURN BRANCH / LOOP. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE A CERTIFIED BALANCING REPORT ON EACH HOT WATER RETURN SYSTEM.
4. REFER TO PLUMBING FIXTURE SCHEDULE FOR FIXTURE BRANCH PIPE SIZING.

PLUMBING KEYNOTES

- P1 REFER TO CIVIL PLANS FOR CONTINUATION.
- P5 PROVIDE HOT WATER BALANCING VALVE AND SHUTOFF VALVE.
- P6 HOT WATER RECIRCULATION PUMP. REFER TO DETAIL.
- P14 PROVIDE GUARDIAN G18AS ANSI-COMPLIANT WALL MOUNTED EYEWASH AT SINK. COORDINATE SPECIFIC MODEL AND MOUNTING OPTION WITH ARCHITECT PRIOR TO ORDERING. PROVIDE GIBBO THERMOSTATIC MIXING VALVE FOR EYEWASH.
- P15 PROVIDE CAP ON 1\"/>

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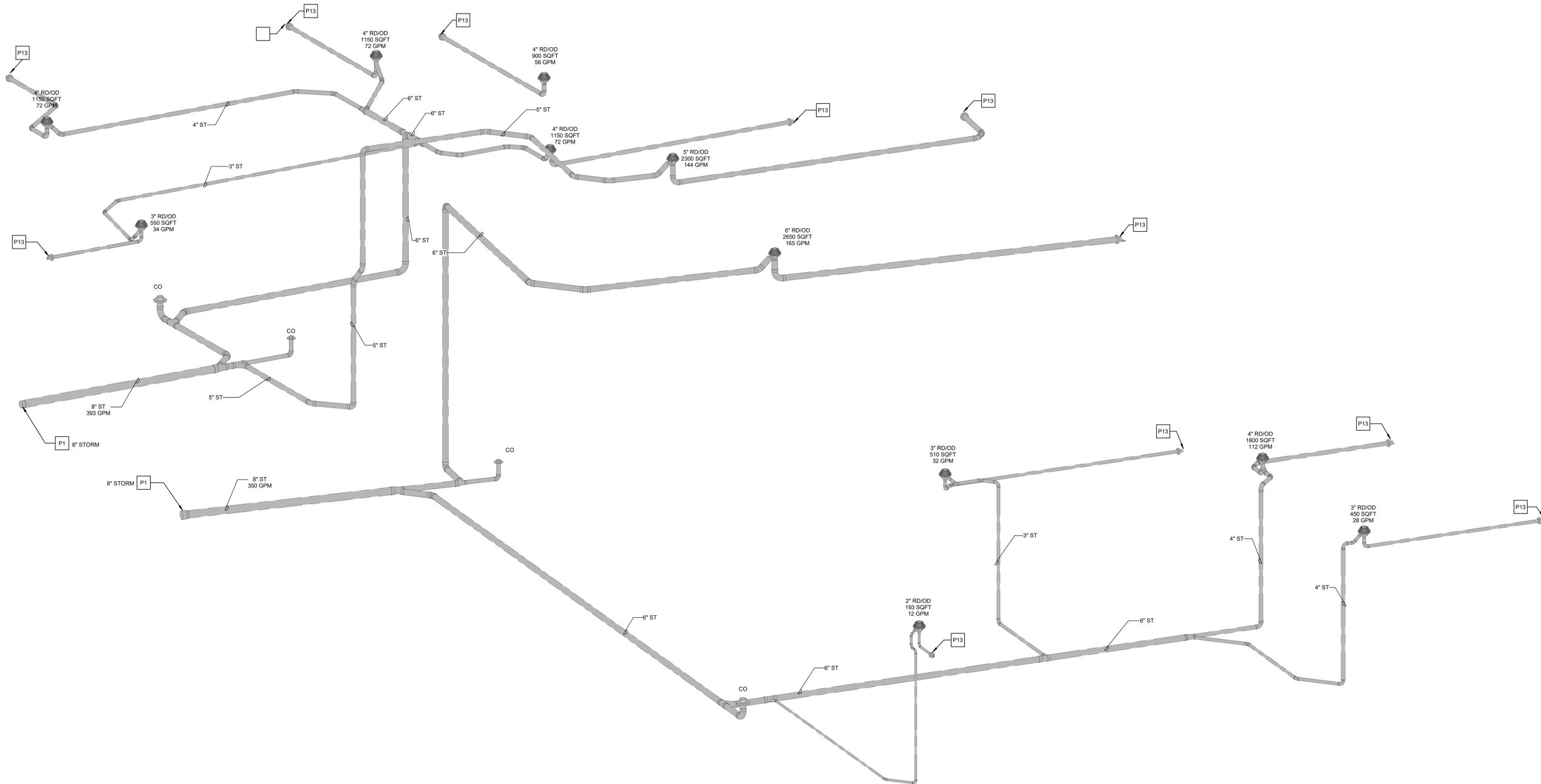
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Sheet Title:
**RISER DIAGRAMS-
STORM WATER**

Sheet Number:
P-403



STORM WATER RISER DIAGRAM

NOT TO SCALE

PLUMBING KEYNOTES

□ NOTED THUS

P1 REFER TO CIVIL PLANS FOR CONTINUATION.
P13 OVERFLOW DISCHARGE NOZZLE. COORDINATE DISCHARGE ELEVATION WITH ARCHITECTURAL PLANS. REFER TO DETAIL.

RAIN WATER RISER DIAGRAM NOTES

1. PIPING SHALL BE SLOPED AT AN 1/8" PER LNFT FOR 3" PIPE DIAMETER AND GREATER AND 1/4" PER LNFT FOR 2" OR SMALLER UNLESS OTHERWISE NOTED.
2. PROVIDE A CLEAN OUT AT THE BASE OF EVERY STACK, AT THE END OF THE RUN, AT EVERY CHANGE IN DIRECTION AND 50'-0" ON CENTER FOR STRAIGHT LENGTHS.
3. ALL STORM WATER PIPING EXTING THE BUILDING SHALL BE BELOW THE FROST LINE (TYPICALLY 3'-0").

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COVER SHEET- ELECTRICAL

Sheet Number:

E-001

ABBREVIATIONS

ABS	ABSOLUTE	MECH	MECHANICAL
AC	ALTERNATING CURRENT	MCC	MOTOR CONTROL CENTER
AFF	ABOVE FINISHED FLOOR	MCM	THOUSAND CIRCULAR MILLS
AHU	AIR HANDLING UNIT	MFR	MANUFACTURER
AMP, A	AMPERE	MH	MANHOLE, MOUNTING HEIGHT
APP	APPROVED	MIN	MINIMUM
APPROX	APPROXIMATE	MISC	MISCELLANEOUS
ATS	AUTOMATIC TRANSFER SWITCH	MLO	MAIN LUG ONLY
AVG	AVERAGE	MOD	MOTOR OPERATED DAMPER
BLDG	BUILDING	MTD	MOUNTED
C	CONDUIT	(N)	NEW
CB	CIRCUIT BREAKER	NA	NOT APPLICABLE
COL	COLUMN	N.C.	NORMALLY CLOSED
CONN	CONNECTION	NEUT.	NEUTRAL
CONT	CONTINUED	NIC	NOT IN CONTRACT
CONTR	CONTRACTOR	NL	NIGHT LIGHT
DB	DECIBEL	N.O.	NORMALLY OPEN
DEG	DEGREE	NO.	NUMBER
DIA	DIAMETER	NTS	NOT TO SCALE
DN	DOWN	OD	OUTSIDE DIAMETER
DT	DOUBLE THROW	OH	OVERHEAD
DWG	DRAWING	OHD	OVERHEAD DOOR
(E)	EXISTING	%	PERCENT
E.C.	ELECTRICAL CONTRACTOR	PB	PUSH BUTTON
EF	EXHAUST FAN	PH	PHASE-ELECTRICAL
EL	ELEVATION	PNL	PANEL
ELEC	ELECTRICAL	PVC	POLYVINYL CHLORIDE PIPE
EQ	EQUAL	(R)	REMOVE EXISTING
EQUIP	EQUIPMENT	(RE)	RELOCATE EXISTING
EWC	ELECTRIC WATER COOLER	R&D	RESEARCH & DEVELOPMENT
EWH	ELECTRIC WATER HEATER	REQ	REQUIRED
EXT	EXTERIOR	RM	ROOM
°F	DEGREE FAHRENHEIT	SCH	SCHEDULE
FACP	FIRE ALARM CONTROL PANEL	SF	SQUARE FEET
FBO	FURNISHED BY OTHERS	SPD	SURGE PROTECTION DEVICE
FD	FLOOR DRAIN	SPEC	SPECIFICATION
FDC	FIRE DEPARTMENT CONNECTION	SQ	SQUARE
FHC	FIRE HOSE CABINET	SS	SAFETY SWITCH
FIN	FINISH	ST	SINGLE THROW
FF	FINISHED FLOOR	STD	STANDARD
FLR	FLOOR	STL	STEEL
FT	FEET	STRUC	STRUCTURAL
FU,F	FUSED	SW	SWITCH
GALV	GALVANIZED	SWBD	SWITCHBOARD
GFCI	GROUND-FAULT CURRENT- INTERRUPTER	SWGR	SWITCHGEAR
GRD, GND	GROUND	TEMP	TEMPERATURE
GW	GAS WATER HEATER	TEL	TELEPHONE
HC	HANDICAP	THERM	THERMOMETER
HP	HORSEPOWER	TYP	TYPICAL
HR	HOUR	UG	UNDERGROUND
HT	HEIGHT	UH	UNIT HEATER
HTR	HEATER	UL	UNDERWRITER'S LABORATORY
HV	HIGH VOLTAGE	U.O.N.	UNLESS OTHERWISE NOTED
HVAC	HEATING VENTILATION AIR CONDITIONING	UTIL	UTILITY
HZ	FREQUENCY-ELECTRICAL	V	VOLTS
ID	INSIDE DIAMETER	VB	VACUUM BREAKER
ID	INDIRECT DRAIN	VERT	VERTICAL
JB	JUNCTION BOX	VFD	VARIABLE FREQUENCY DRIVE
KV	KILOVOLTS	VIF	VERIFY IN FIELD
KVA	KILOVOLT AMPERE	VPC	VIA PHOTOCCELL
KW	KILOWATT	VTC	VIA TIME CLOCK
KWH	KILOWATT HOUR	W	WIRE
LF	LINEAR FEET	W/	WITH
LV	LOW VOLTAGE	WP	WEATHERPROOF
MAU	MAKE-UP AIR UNIT	W/O	WITHOUT
MAX	MAXIMUM	XFMR	TRANSFORMER
MCB	MAIN CIRCUIT BREAKER	YR	YEAR

GENERAL NOTES

- ALL WORK IS TO CONFORM WITH THE 2017 NATIONAL ELECTRICAL CODE AND ALL APPLICABLE CODES. REGULATIONS AND STANDARDS, NOT ALL CODE REQUIREMENTS HAVE BEEN DESCRIBED IN THIS SPECIFICATION OR INDICATED ON THE DRAWINGS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BE FAMILIAR WITH THE CODES AND INSTALL THE WORK IN ACCORDANCE WITH CODES.
- OBTAIN AND PAY FOR ALL BUILDING PERMITS, INSPECTIONS, CONNECTION CHARGES, AND FEES.
- PROVIDE ALL LABOR, MATERIALS, EQUIPMENT AND SUPERVISION NECESSARY TO INSTALL COMPLETE OPERATING ELECTRICAL SYSTEMS AS INDICATED ON THE DRAWINGS AND SPECIFIED HEREIN, INCLUDING ALL SITE WORK ON THE SITE AND WITHIN THE PROPOSED CONSTRUCTION AREAS TO ACCOMPLISH THE REQUIRED WORK.
- THE CONTRACTOR IS TO BE RESPONSIBLE FOR COORDINATION OF ALL WORK ASSOCIATED WITH THE ELECTRIC UTILITY COMPANY. MAKE ALL ARRANGEMENTS IN A TIMELY FASHION FOR CONNECTION OF THE ELECTRICAL SERVICE.
- DRAWINGS AND SPECIFICATIONS ARE INTENDED TO BE TAKEN AS A WHOLE. IF A CONFLICT OR CONTRADICTION EXISTS BETWEEN THE DRAWINGS AND SPECIFICATIONS, THE MORE STRINGENT WILL APPLY. THE ARCHITECTS AND ENGINEERS' INTERPRETATION OF THE DOCUMENTS ARE TO BE BINDING UPON THE CONTRACTOR.
- PROVIDE SHOP DRAWINGS OF ALL EQUIPMENT FOR REVIEW PRIOR TO ORDERING. COORDINATE ALL PHYSICAL DIMENSIONS PRIOR TO SHOP DRAWING SUBMISSION.
- IF THE CONTRACTOR ELECTS TO SUBMIT ALTERNATE EQUIPMENT, MANUFACTURERS, SYSTEMS, METHODS, OR MATERIALS NOT SPECIALLY IDENTIFIED IN THE DRAWINGS AND SPECIFICATIONS, IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE THE WORK WITH OTHER TRADES AND PAY FOR ANY ADDITIONAL COSTS ASSOCIATED WITH THE SUBSTITUTION OR CHANGE.
- THE CONTRACTOR IS TO SURVEY AND VERIFY ALL EXISTING CONDITIONS PRIOR TO BID SUBMISSION AND BECOME AWARE OF ALL CONDITIONS WHICH MAY IMPACT THE REQUIRED WORK. CONTRACTOR IS TO INCLUDE ALL ASSOCIATED COSTS (MATERIALS/ LABOR) DETERMINED TO BE REQUIRED DURING SITE INSPECTIONS. CONTRACTOR'S BID SUBMISSION IS TO BE CONSIDERED PROOF THAT THIS REQUIREMENT HAS BEEN MET.
- FINAL LOCATIONS OF ALL DEVICES IN FINISHED SPACES ARE TO BE COORDINATED, AND APPROVED BY THE ARCHITECT/ OWNER PRIOR TO ROUGH-IN AND INSTALLATION.
- COORDINATE LOCATIONS AND ROUGH-IN REQUIREMENTS WITH ALL TRADES PRIOR TO INSTALLATION.
- PROVIDE 3/8" = 1'-0" SCALE DRAWINGS OF THE MAIN ELECTRICAL ROOM INDICATING ALL ELECTRICAL, MECHANICAL, PLUMBING, TELEPHONE, SECURITY, FIRE ALARM, AND LIFE SAFETY EQUIPMENT TO BE INSTALLED WITHIN THIS ROOM. ALL EXACT DIMENSIONS OF EQUIPMENT, PADS, ETC., ARE TO BE INDICATED. PROVIDE TWO CROSS-SECTIONS AT IMPORTANT POINTS. OBTAIN INFORMATION FROM OTHER SUB-CONTRACTORS AS NEEDED, AND APPROPRIATE. SUBMIT THE ABOVE FOR REVIEW, AND APPROVAL ALONG WITH ELECTRICAL EQUIPMENT SUBMITTALS. EQUIPMENT WILL NOT BE APPROVED PRIOR TO REVIEW OF THIS DRAWING.
- PROVIDE ADDRESSABLE FIRE ALARM SYSTEM WITH BATTERY BACKUP, HORN/ STROBES, MANUAL PULL STATIONS, DETECTORS, STROBES, DUCT DETECTORS, REMOTE ANNUNCIATOR, ELEVATOR CONTROLS (FOR RECALL AND DE-ENERGIZING), TELEPHONE AUTO DIALER, FIRE-FIGHTER PHONES, AND ALL ASSOCIATED CONTROLS, AND APPURTENANCES.
- PROVIDE POWER TO HVAC AND PLUMBING EQUIPMENT AS REQUIRED FOR COMPLETE, OPERATIONAL SYSTEMS.
- PROVIDE LIGHTING THROUGH-OUT, WITH EXTERIOR LIGHTING AT ALL EGRESS DOORS.
- THE CONTRACTOR IS TO BE RESPONSIBLE FOR SELECTING PARTICULAR MOUNTING ARRANGEMENTS OF FIXTURES TO SUIT THE CONSTRUCTION, OR CEILING TYPE. THE CONTRACTOR OR HIS AGENT IS TO REVIEW ALL ARCHITECTURAL PLANS, ELEVATIONS AND DETAILS TO VERIFY ALL CEILING TYPES PRIOR TO PREPARING SHOP DRAWINGS FOR SUBMISSION. IT IS NOT TO BE UNDERSTOOD THAT THE LIGHTING FIXTURE SCHEDULE ACCOUNTS FOR THE MOUNTING TYPES. CEILING TYPES ARE FREQUENTLY CHANGED AFTER THE SCHEDULE HAS BEEN COMPLETED.
- FIXTURES AND DEVICES RECESSED IN A FIRE-RATED CEILING ARE TO BE PROVIDED WITH A FIRE-RATED ENCLOSURE THAT MAINTAINS THE FIRE-RATING OF THE CEILING SYSTEM. THE INSTALLATION OF THE ENCLOSURE IS TO MEET THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION, WHERE APPLICABLE. FIXTURES AND DEVICES ARE TO BE RATED FOR INSULATION CONTACT (IC) FOR HIGH-TEMPERATURE OPERATION.
- ALL ROOMS ARE TO BE PROVIDED WITH LIGHTING CONTROLS. PROVIDE MANUAL SWITCH(ES) AND APPROPRIATE, CODE-REQUIRED LIGHTING CONTROL DEVICES, WIRING METHODS, AND COMPONENTS.
- PROVIDE EGRESS AND EMERGENCY LIGHTING AS REQUIRED BY CODE IN ALL SPACES TO MEET REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION. ALLOW FOR TEN ADDITIONAL FIXTURES TO BE INSTALLED WHERE DIRECTED BY THE AUTHORITY HAVING JURISDICTION.
- PROVIDE GROUNDING SYSTEM FOR FACILITY IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.
- PROVIDE ROOF PENETRATIONS FOR ALL ASSOCIATED ELECTRICAL WORK.
- ALL DEVICES ARE TO BE INSTALLED SQUARE, LEVEL, PLUMB, AND TRUE.
- SWITCH PLATES AND OUTLET BACKBOXES ARE NOT TO BE INSTALLED BACK-TO-BACK IN ADJACENT ROOMS. BACKBOX LOCATIONS ARE TO BE OFFSET A MINIMUM OF 0'-3" TO REDUCE NOISE TRANSFER. THIS APPLIES TO RECEPTACLES, LIGHTING FIXTURES, TV OUTLETS, TELEPHONE OUTLETS, AND DATA OUTLETS.
- ALL DEVICES LOCATED ON OPPOSING SIDES OF A FIRE-RATED WALL ASSEMBLY ARE TO BE SEPARATED BY A HORIZONTAL DISTANCE OF NOT LESS THAN 2'-0".
- GROUND FAULT CIRCUIT INTERRUPTERS ARE TO BE PROVIDED FOR ALL OUTDOOR RECEPTACLE CIRCUITS. RECEPTACLE CIRCUITS WITHIN TOILET AND BATHROOMS, AREAS IN CLOSE PROXIMITY TO WATER, AND WHEREVER ELSE INDICATED ON THE DRAWINGS OR AS REQUIRED BY CODE. WHILE-IN-USE TYPE COVERS ARE TO BE USED FOR ALL EXTERIOR LOCATIONS.
- PROVIDE CODE REQUIRED SIGNAGE (I.E., NEC 110.34, NEC 700.8, AND 695.4 B3).
- PROVIDE THIRD-PARTY CERTIFICATION OF ALL PACKAGED SYSTEMS BY A NATIONALLY RECOGNIZED TESTING LABORATORY (NRTL) IN ACCORDANCE WITH OSHA FEDERAL REGULATIONS 29CFR1910.303 AND .399 AS WELL AS PAMPHLET #70 AND NATIONAL ELECTRICAL CODE ARTICLE 90-7.
- ALL EQUIPMENT PANELS, CONTROLS, SAFETY SWITCHES, AND DEVICES ARE TO BE PROVIDED WITH PERMANENT BLACK LAMINATED MICARTA WHITE CORE LABELS WITH 3/8" LETTERS. THIS ALSO APPLIES TO ALL CONTROLLERS, REMOTE START/ STOP PUSHBUTTONS, EQUIPMENT CABINETS, AND WHERE DIRECTED BY THE ARCHITECT AND ENGINEER. THIS REQUIREMENT DOES NOT APPLY TO INDIVIDUAL ROOM THERMOSTATS, AND LOCAL LIGHTING CONTROL DEVICES.
- ALL THREE PHASE STARTER EQUIPMENT IS TO BE PROVIDED BY THE MECHANICAL CONTRACTOR AND IS TO BE PROVIDED BY ELECTRICAL CONTRACTOR.
- ALL WORK IS TO BE CONCEALED, UNLESS OTHERWISE INDICATED.
- ALL EXPOSED INTERIOR WIRING, PANEL FEEDERS, HOME RUNS, AND EQUIPMENT FEEDERS ARE TO BE INSTALLED IN EMT (ELECTRICAL METALLIC TUBING). ALL EMT IS TO BE SECURELY FASTENED AT INTERVALS NOT EXCEEDING 10'-0" AND WITHIN 3'-0" OF ALL BOXES. NOTE: "EXPOSED" INDICATES ALL WIRING METHODS NOT INSTALLED WITHIN WALLS, ABOVE SUSPENDED CEILINGS, OR WITHIN A PRE-MANUFACTURED RACEWAY. ANY EXPOSED RACEWAY IN A FINISHED SPACE IS TO BE COORDINATED WITH THE ARCHITECT/ ENGINEER PRIOR TO INSTALLATION.
- PROPERLY INSTRUCT OWNER'S PERSONNEL IN THE OPERATION AND MAINTENANCE OF ALL SYSTEMS AND EQUIPMENT. PROVIDE THREE INSTRUCTION AND MAINTENANCE MANUALS. SUBMIT MANUALS FOR REVIEW PRIOR TO OPERATING INSTRUCTION.
- PROVIDE ONE SET OF ELECTRONIC AS-BUILT DRAWINGS AT COMPLETION OF WORK. SUBMIT TO OWNER AND ENGINEER FOR REVIEW AND APPROVAL.

PROJECT DEDUCT/ ADD ALTERNATES

- ADD ALTERNATE:**
- PROVIDE A LIGHTNING PROTECTION SYSTEM PER SPECIFICATION SECTION 26.41.13.
- DEDUCT ALTERNATES:**
- ALL PANELBOARD FEEDERS AND BRANCH CIRCUIT WIRING METHODS, 100 AMPS AND LARGER AS WELL AS PRIMARY CABLE, TRANSFORMER COILS, BUSWAYS AND SWITCHBOARDS ARE TO BE ALUMINUM IN LIEU OF COPPER PER SPECIFICATION SECTION 26.00.00.
 - ALL FIRE ALARM WIRING IS TO BE FPLP PLENUM RATED FIRE ALARM CABLE IN LIEU OF FIRE ALARM MC CABLE PER SPECIFICATION SECTION 26.30.00.
 - CONTRACTOR TO ELIMINATE SHUNT TRIP BREAKER FOR ELEVATOR AS WELL AS HEAT DETECTORS IN THE ELEVATOR MACHINE ROOM AND SHAFT. COORDINATE WITH SPRINKLER CONTRACTOR FOR ELEVATOR SHAFT SPRINKLER REQUIREMENTS.

DRAWING LIST

NUMBER	NAME	Current Issue	Current Revision	Current Revision Date	Current Revision Description
E-001	COVER SHEET- ELECTRICAL	ISSUED	0	03/29/24	Issued
E-101	FIRST FLOOR PLAN- LIGHTING	ISSUED	0	03/29/24	Issued
E-102	SECOND FLOOR PLAN- LIGHTING	ISSUED	0	03/29/24	Issued
E-103	FIRST FLOOR PLAN- POWER	ISSUED	0	03/29/24	Issued
E-104	SECOND FLOOR PLAN- POWER	ISSUED	0	03/29/24	Issued
E-105	ROOF PLAN- ELECTRICAL	ISSUED	0	03/29/24	Issued
E-201	DETAILS- ELECTRICAL	ISSUED	0	03/29/24	Issued
E-202	DETAILS- ELECTRICAL	ISSUED	0	03/29/24	Issued
E-203	DETAILS- ELECTRICAL	ISSUED	0	03/29/24	Issued
E-301	SCHEDULES- ELECTRICAL	ISSUED	0	03/29/24	Issued

ELECTRICAL SYMBOLS AND ABBREVIATIONS

S	SINGLE-POLE WALLBOX SWITCH	TV	TELEVISION OUTLET:	□	SURFACE MOUNTED DISTRIBUTION PANEL SERVED VIA NORMAL POWER FEEDER
S ₃	3-WAY WALLBOX SWITCH	□	COMMON AREAS: PROVIDE BACK BOX WITH 3/4" BUSHED CONDUIT WITH PULL-STRING TO ACCESSIBLE CEILING SPACE. DEVICES, WIRING METHODS, AND TERMINATIONS BY OTHERS. MOUNT 60" ABOVE FINISHED FLOOR TO CENTER OF DEVICE OR AS DIRECTED BY THE OWNER.	□	SURFACE MOUNTED LIGHTING, OR POWER BRANCH CIRCUIT PANEL SERVED VIA NORMAL POWER FEEDER
S ₄	4-WAY WALLBOX SWITCH	□	DWELLING UNITS: PROVIDE BACK BOX WITH 3/4" BUSHED CONDUIT WITH PULL-STRING TO ACCESSIBLE CEILING SPACE ABOVE STRUCTURED MEDIA ENCLOSURE. DEVICES, WIRING METHODS, AND TERMINATIONS BY OTHERS.	□	RECESSED MOUNTED LIGHTING, OR POWER BRANCH CIRCUIT PANEL SERVED VIA NORMAL POWER FEEDER
S _D	LUMINAIRE CONTROL SYSTEM DIMMER	□	TELEPHONE OUTLET: INDICATES WALL PHONE MOUNTED 54" A.F.F.	□	MOTOR
2224	INDICATES AREA OR ZONE OF CONTROL	□	COMMON AREAS: PROVIDE BACK BOX WITH 3/4" BUSHED CONDUIT WITH PULL-STRING TO ACCESSIBLE CEILING SPACE. DEVICES, WIRING METHODS, AND TERMINATIONS BY OTHERS.	SM	MOTOR RATED SWITCH (PROVIDE MANUAL MOTOR STARTER FOR OVERLOAD PROTECTION, AS REQUIRED)
SE	EMERGENCY SHUT-DOWN SWITCH	□	DWELLING UNITS: PROVIDE BACK BOX WITH 3/4" BUSHED CONDUIT WITH PULL-STRING TO ACCESSIBLE CEILING SPACE ABOVE STRUCTURED MEDIA ENCLOSURE. DEVICES, WIRING METHODS, AND TERMINATIONS BY OTHERS.	□	UN-FUSED DISCONNECTING MEANS
St	SINGLE-POLE WALLBOX SWITCH WITH INTEGRAL TIMER FUNCTION.	□	DATA OUTLET: PROVIDE BACK BOX WITH 3/4" BUSHED CONDUIT WITH PULL-STRING TO ACCESSIBLE CEILING SPACE. DEVICES, WIRING METHODS, AND TERMINATIONS BY OTHERS.	□	FUSIBLE DISCONNECTING MEANS XXAF = FRAME CAPACITY XXAT = TRIP RATING
Sp	SINGLE-POLE WALLBOX SWITCH WITH PILOT LIGHT	□	TELEPHONE OUTLET: INDICATES WALL PHONE MOUNTED 54" A.F.F.	□	ENCLOSED CIRCUIT BREAKER XXAF = FRAME CAPACITY XXAT = TRIP RATING
□	DUAL TECHNOLOGY, WALL BOX OCCUPANCY SENSOR WITH OFF/ AUTO OVERRIDE SWITCH	□	COMMON AREAS: PROVIDE BACK BOX WITH 3/4" BUSHED CONDUIT WITH PULL-STRING TO ACCESSIBLE CEILING SPACE. DEVICES, WIRING METHODS, AND TERMINATIONS BY OTHERS.	□	MOTOR STARTER
□	DUAL TECHNOLOGY, CEILING MOUNTED OCCUPANCY SENSOR	□	DWELLING UNITS: PROVIDE BACK BOX WITH 3/4" BUSHED CONDUIT WITH PULL-STRING TO ACCESSIBLE CEILING SPACE ABOVE STRUCTURED MEDIA ENCLOSURE. DEVICES, WIRING METHODS, AND TERMINATIONS BY OTHERS.	□	COMBINATION MOTOR STARTER/ DISCONNECTING MEANS
□	DUAL TECHNOLOGY, WALL BOX VACANCY SENSOR WITH OFF/ AUTO OVERRIDE SWITCH	□	TELEPHONE OUTLET: INDICATES WALL PHONE MOUNTED 54" A.F.F.	□	INDICATES HEIGHT ABOVE FINISHED FLOOR TO CENTER OF DEVICE(S)
□	DUAL TECHNOLOGY, CEILING MOUNTED VACANCY SENSOR	□	COMMON AREAS: PROVIDE BACK BOX WITH 3/4" BUSHED CONDUIT WITH PULL-STRING TO ACCESSIBLE CEILING SPACE. DEVICES, WIRING METHODS, AND TERMINATIONS BY OTHERS.	□	WIRING METHOD DESIGNATION (CONDUCTOR QUANTITY AND SIZE)
□	ROOM CONTROLLER WITH 0-10V DIMMING FOR LUMINAIRES, COORDINATE ALL POWER REQUIREMENTS WITH FINAL EQUIPMENT SELECTIONS	□	DWELLING UNITS: PROVIDE BACK BOX WITH 3/4" BUSHED CONDUIT WITH PULL-STRING TO ACCESSIBLE CEILING SPACE ABOVE STRUCTURED MEDIA ENCLOSURE. DEVICES, WIRING METHODS, AND TERMINATIONS BY OTHERS.	□	PANEL AND POLE SPACE DESIGNATION (CONCEALED WIRING METHOD)
□	TAG (NONE = SINGLE ZONE); 2 = TWO ZONE 3 = THREE ZONE EM = PROVIDED WITH UL924 DEVICE	□	COMBINATION TELEPHONE/ DATA OUTLET: COMMON AREAS: PROVIDE BACK BOX WITH 1"Ø BUSHED CONDUIT WITH PULL-STRING TO ACCESSIBLE CEILING SPACE. DEVICES, WIRING METHODS, AND TERMINATIONS BY OTHERS.	□	CONCEALED BRANCH CIRCUIT WIRING METHOD
□	TAG (NONE = SINGLE ZONE); 2 = TWO ZONE 3 = THREE ZONE EM = PROVIDED WITH UL924 DEVICE	□	DWELLING UNITS: PROVIDE BACK BOX WITH 1"Ø BUSHED CONDUIT WITH PULL-STRING TO ACCESSIBLE CEILING SPACE ABOVE STRUCTURED MEDIA ENCLOSURE. DEVICES, WIRING METHODS, AND TERMINATIONS BY OTHERS.	□	JUNCTION BOX
□	RECESSED, OR SURFACE MOUNTED LED LUMINAIRE CONNECTED TO NORMAL POWER. REFER TO THE LUMINAIRE SCHEDULE FOR ADDITIONAL INFORMATION.	□	COMMON AREAS: PROVIDE BACK BOX WITH 1"Ø BUSHED CONDUIT WITH PULL-STRING TO ACCESSIBLE CEILING SPACE. DEVICES, WIRING METHODS, AND TERMINATIONS BY OTHERS.	□	DUPLICATE RECEPTACLE DEVICE
□	RECESSED, OR SURFACE MOUNTED LED LUMINAIRE CONNECTED TO EMERGENCY POWER, OR PROVIDED WITH INTEGRAL BATTERY BACK-UP. REFER TO THE LUMINAIRE SCHEDULE FOR ADDITIONAL INFORMATION.	□	WIRELESS ACCESS POINT (CEILING MOUNTED): POWER-OVER-ETHERNET (NO AC POWER REQUIRED). PROVIDE (2) CAT-6 HOME-RUN TO THE MAIN DATA FRAME. PROVIDE 1/2" PIGTAIL AT EACH LOCATION.	□	TAG: C = DEVICE MOUNTED 0'-8" ABOVE COUNTER TOP D = DEDICATED OVERCURRENT PROTECTION DEVICE T = TAMPER RESISTANT DEVICE U = INTEGRAL USB OUTLETS
□	4'-0", LENSED LED INDUSTRIAL STRIP LUMINAIRE. LENGTHS AS INDICATED ON PLANS.	□	SECURITY/ ACCESS CONTROL DEVICE: INDICATES BRANCH CIRCUIT DESIGNATION. ACCESS CONTROL HEAD-END EQUIPMENT. COORDINATE ALL POWER REQUIREMENTS WITH THE SECURITY/ ACCESS CONTROL VENDOR.	□	GFCI (GROUND-FAULT CIRCUIT-INTERRUPTER) DUPLICATE RECEPTACLE DEVICE FOR PERSONAL PROTECTION
□	INDICATES LUMINAIRE TYPE	□	"XX" INDICATES DEVICE TYPE: AI = AI PHONE EQUIPMENT CR = CARD READER DC = DOOR CONTACT ES = ELECTRIC DOOR STRIKE EX = REQUEST TO EXIT KP = KEY PAD MD = MOTION DETECTOR ML = MAGNETIC LOCK RE = RFID EXCITER	□	SWITCHED (BOTTOM OUTLET) DUPLICATE RECEPTACLE DEVICE
□	INDICATES BRANCH CIRCUIT DESIGNATION	□	EXIT SIGN LUMINAIRE: GENERATOR OR BATTERY POWERED WALL MOUNTED EXIT SIGN LUMINAIRE: GENERATOR OR BATTERY POWERED	□	INDICATES CORRESPONDING CONTROL DEVICE
□	INDICATES CONTROL ZONE	□	CCTV CAMERA (POE) INDICATES WEATHERPROOF, EXTERIOR CAMERA	□	SINGLE RECEPTACLE DEVICE FOR EQUIPMENT
□	BATTERY PACK EMERGENCY LIGHTING UNIT WITH SOLID STATE CHARGER. CONNECT AHEAD OF ANY SWITCHING. REMOTE CAPABLE WHERE REQUIRED.	□	FLUSH MOUNTED, ADJUSTABLE FLOOR BOX WITH POWER, IS POWER, AND VOICE/ DATA OUTLETS W = WALL SOURCE F = FLOOR SOURCE X = 2, 3, OR 4 GANG BOX	□	DOUBLE DUPLICATE RECEPTACLE DEVICE
□	REMOTE EMERGENCY LIGHTING UNIT CONNECTED TO EMERGENCY POWER, OR PROVIDED WITH INTEGRAL BATTERY BACK-UP. REFER TO THE LIGHTING FIXTURE SCHEDULE FOR ADDITIONAL INFORMATION.	□	PUSH-BUTTON DEVICE ON/ OFF PUSH-BUTTON DEVICE THREE FUNCTION PUSH-BUTTON DEVICE (UP/ DOWN/ STOP)	□	SPECIAL RECEPTACLE DEVICE (COORDINATE NEMA CONFIGURATION WITH FINAL EQUIPMENT SELECTIONS)
□	EXIT SIGN LUMINAIRE: GENERATOR OR BATTERY POWERED WALL MOUNTED EXIT SIGN LUMINAIRE: GENERATOR OR BATTERY POWERED	□	VOLUME CONTROL DEVICE: PROVIDE BACK BOX WITH 3/4" BUSHED CONDUIT WITH PULL-STRING TO ACCESSIBLE CEILING SPACE. DEVICES, WIRING METHODS, AND TERMINATIONS BY OTHERS. MOUNT 48" ABOVE FINISHED FLOOR TO CENTER OF DEVICE OR AS DIRECTED BY THE OWNER.	□	POWER, CCTV, OR CATV W = WALL SOURCE F = FLOOR SOURCE X = 2, 3, OR 4 GANG BOX
□	INDICATES WEATHERPROOF, EXTERIOR CAMERA	□	MICROPHONE OUTLET	□	

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2023-141

Project:
ASTON TOWNSHIP MUNICIPAL COMPLEX
3264 Concord Road
Aston, PA 19014

Owner:
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2 New Road
Suite 123
Aston, PA 19014

Revision/Issue:
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Drawn: IM
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Contact: Paul Andrew Sgroi
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Sheet Title:
FIRST FLOOR PLAN - LIGHTING

Sheet Number:
E-101



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

2 VEHICLE SHLTER - LIGHTING
1/8" = 1'-0"

ELECTRICAL KEY NOTES NOTED THUS

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Sheet Title:
SECOND FLOOR PLAN- LIGHTING

Sheet Number:
E-102



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

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Sheet Title:
FIRST FLOOR PLAN- POWER

Sheet Number:
E-103



2 VEHICLE SHELTER- POWER
1/8" = 1'-0"

ELECTRICAL KEY NOTES

- ⊙ NOTED THUS
- E1 COORDINATE WIREMOLD REQUIREMENTS WITH OWNER
- E2 COORDINATE LOCKER POWER REQUIREMENTS WITH FINAL SELECTION

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

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Sheet Title:
SECOND FLOOR PLAN- POWER

Sheet Number:
E-104



GENERAL POWER AND LOW VOLTAGE NOTES:

- COORDINATE LOCATIONS AND MOUNTING HEIGHTS OF ALL WIRING DEVICES WITH OWNER/ TENANT/ ARCHITECT PRIOR TO ROUGH-IN. REFER TO DETAILS AND SPECIFICATIONS FOR TYPICAL MOUNTING HEIGHTS.
- UNLESS OTHERWISE NOTED, BRANCH CIRCUIT NUMBERS ARE VIA PANEL "AT-2".
- CONTRACTOR IS TO CONCEAL WIRING WHENEVER POSSIBLE. ALL EXPOSED WIRING IS TO BE INSTALLED IN EMT. CONTRACTOR IS TO PAINT AS DIRECTED BY THE ARCHITECT. CONDUIT PATH IS TO BE AS INCONSPICUOUS AS POSSIBLE. COORDINATE CONDUIT ROUTE WITH ARCHITECT/ OWNER PRIOR TO ROUGH-IN AND INSTALLATION.
- ALL NETWORK, POE, AND IT INFRASTRUCTURE IS TO BE PROVIDED BY THE GENERAL CONTRACTOR.
- ALL POWER REQUIREMENTS FOR DOORS AND ASSOCIATED LOCKING MECHANISMS INDICATED IN DIVISION 8 "HARDWARE SCHEDULE FIRE ALARM INTERFACE" ARE TO BE PROVIDED BY THE GENERAL CONTRACTOR.
- ALL CABLE TERMINATIONS, AND CERTIFICATIONS FOR PATCH PANELS ARE TO BE PROVIDED BY THE GENERAL CONTRACTOR.
- POWER, AND DATA/ COAX FOR SECURITY TV, NVR, KEYPER SYSTEM, AND IT EQUIPMENT CLOSET WITH RACKS, AND TERMINATIONS ARE TO BE BY THE GENERAL CONTRACTOR.

1 SECOND FLOOR PLAN - POWER
 1/8" = 1'-0"

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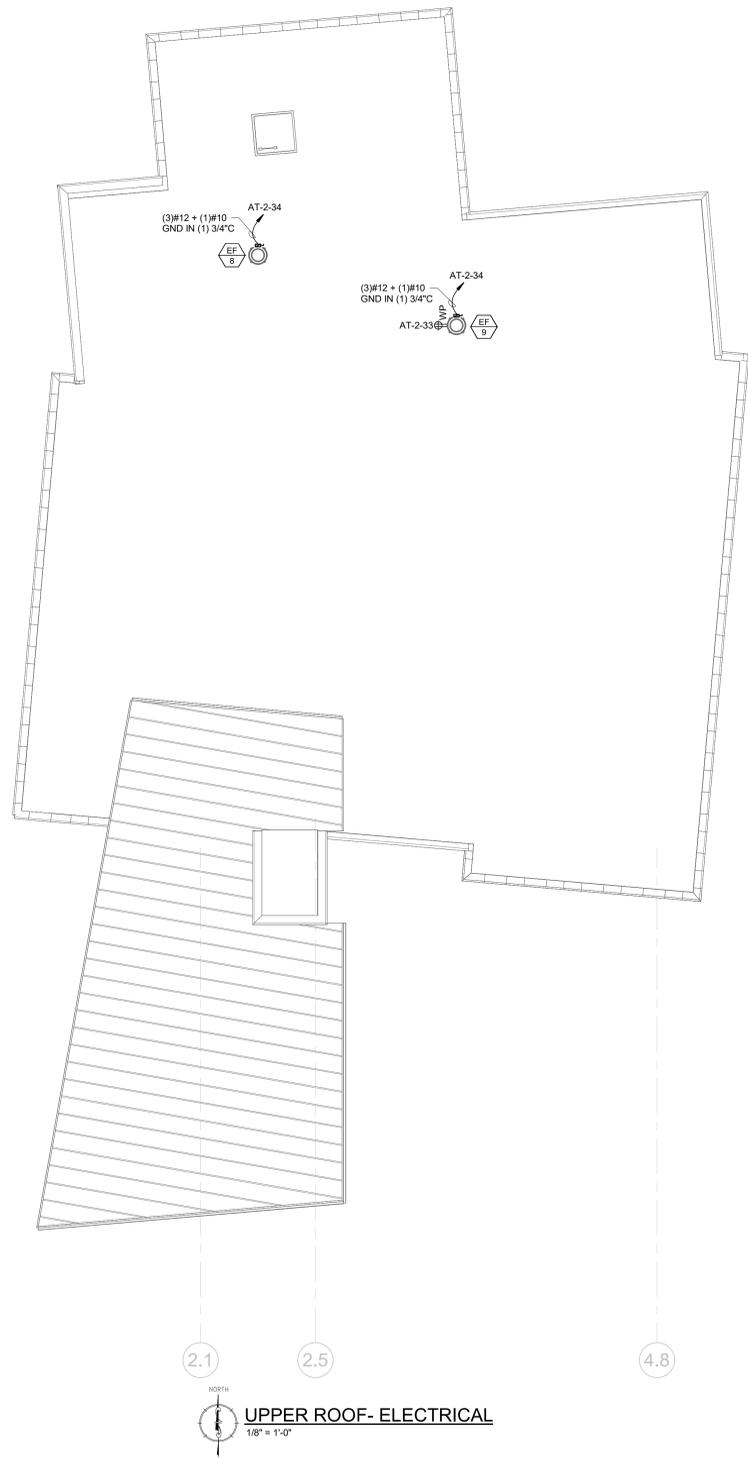
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Sheet Title:
ROOF PLAN- ELECTRICAL

Sheet Number:
E-105



NOTICE
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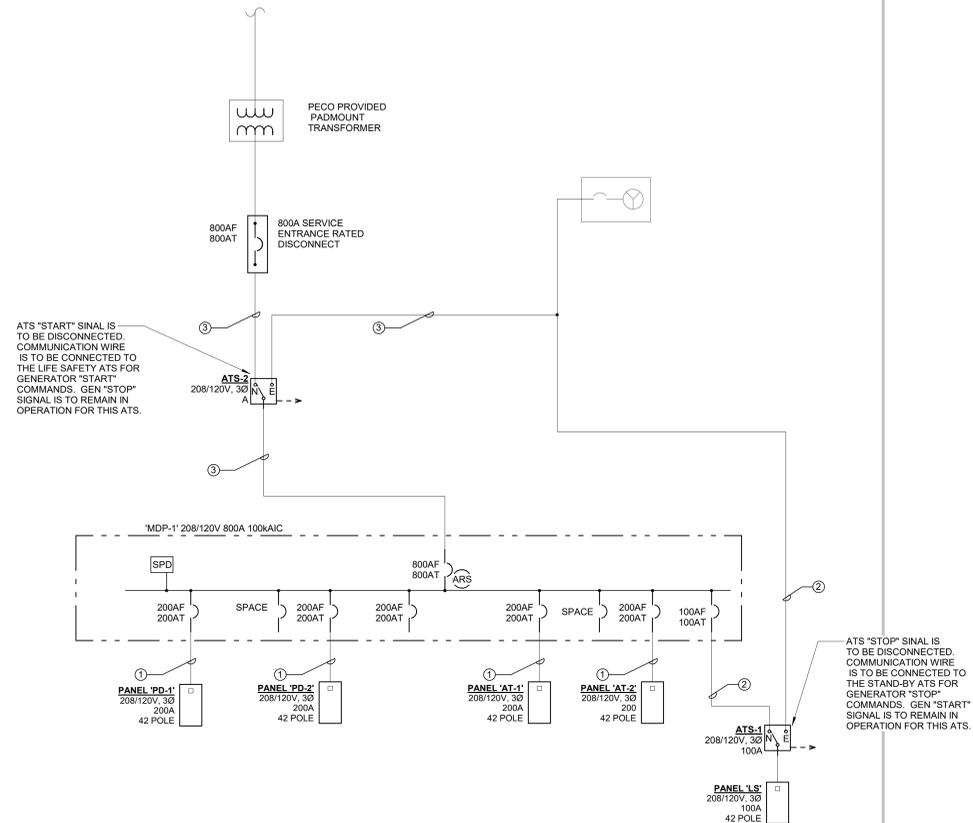
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Sheet Title:
**DETAILS-
 ELECTRICAL**

Sheet Number:
E-201

FEEDER SCHEDULE									(3 PHASE, 4 WIRE, COPPER, 75°C)
FEEDER TYPE	PHASE CABLE		NEUTRAL CABLE		EQUIPMENT GROUND CABLE		RACEWAY		REMARKS
	NO.	SIZE	NO.	SIZE	NO.	SIZE	NO.	SIZE	
②	100	3 #2	1 #2	1 #6	1 #6	1 1 1/4"			- (#8 GND FOR 30kVA XFMR SECONDARY) - GND NOT REQUIRED FOR SERVICE ENTRANCE - 1 1/2" PVC CONDUIT
①	200	3 #3/0	1 #3/0	1 #6	1 #6	1 2"			- 3" PVC CONDUIT (SCHEDULE 40) - GND NOT REQUIRED FOR SERVICE ENTRANCE
③	800	6 600KCMIL	2 600KCMIL	2 #2/0	2 #2/0	4"			- (#1/0 GND FOR 225kVA XFMR SECONDARY) - GND NOT REQUIRED FOR SERVICE ENTRANCE - 3" EMT

GRS CONDUIT, SCHEDULE 40 PVC, EMT OR IMC UNLESS NOTED OTHERWISE. REFER TO SPECIFICATIONS FOR APPLICATION REQUIREMENTS.

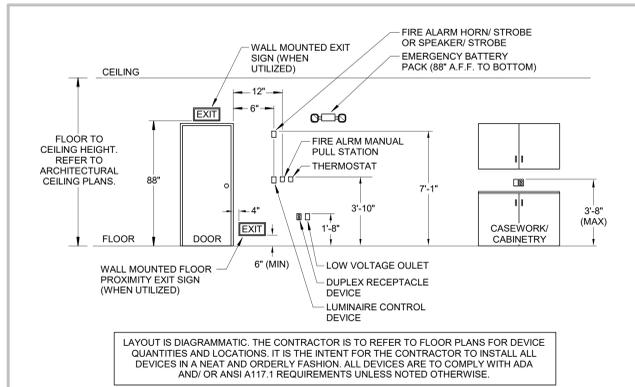


ATS "START" SIGNAL IS TO BE DISCONNECTED. COMMUNICATION WIRE IS TO BE CONNECTED TO THE LIFE SAFETY ATS FOR GENERATOR "START" COMMANDS. GEN "STOP" SIGNAL IS TO REMAIN IN OPERATION FOR THIS ATS.

ATS "STOP" SIGNAL IS TO BE DISCONNECTED. COMMUNICATION WIRE IS TO BE CONNECTED TO THE STAND-BY ATS FOR GENERATOR "STOP" COMMANDS. GEN "START" SIGNAL IS TO REMAIN IN OPERATION FOR THIS ATS.

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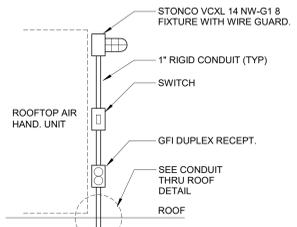
TYPICAL DEVICE ELEVATION DETAIL

SCALE: NONE

NOTES:

1. ALL GENERAL PURPOSE RECEPTACLES TELE/DATA/COAX OUTLETS ARE TO BE MOUNTED AT A MINIMUM OF 15" ABOVE FINISH FLOOR PER ADA TO THE BOTTOM OF THE DEVICE. 20" ABOVE FINISHED FLOOR IS TO BE STANDARD INSTALLATION HEIGHT TO THE TOP OF THE DEVICE BOX.
2. ALL GENERAL PURPOSE RECEPTACLES, LIGHTING SWITCHES AND LOW VOLTAGE OUTLETS ABOVE COUNTERTOPS ARE TO BE MOUNTED A MAXIMUM OF 44" ABOVE FINISHED FLOOR TO THE TOP OF THE DEVICE BOX. 8" ABOVE COUNTERTOP IS STANDARD.
3. LIGHTING CONTROLS AND FIRE ALARM PULL STATIONS ARE TO BE MOUNTED AT MAXIMUM OF 46" ABOVE FINISHED FLOOR. DEVIATIONS FROM THE STANDARD MOUNTING HEIGHTS ABOVE MAY BE INCORPORATED FOR EASE OF INSTALLATION DUE TO ARCHITECTURAL ITEMS SUCH AS TILES, HAND RAILS, ETC. DEVICES TO BE A MAXIMUM OF 48" ABOVE FINISHED FLOOR TO THE OPERATING HANDLE.
4. THERMOSTATS ARE INDICATED FOR SIDE REACH APPLICATIONS. WHEN LOCKABLE COVERS ARE PROVIDED, THERMOSTATS ARE TO BE MOUNTED AT 4'-0".

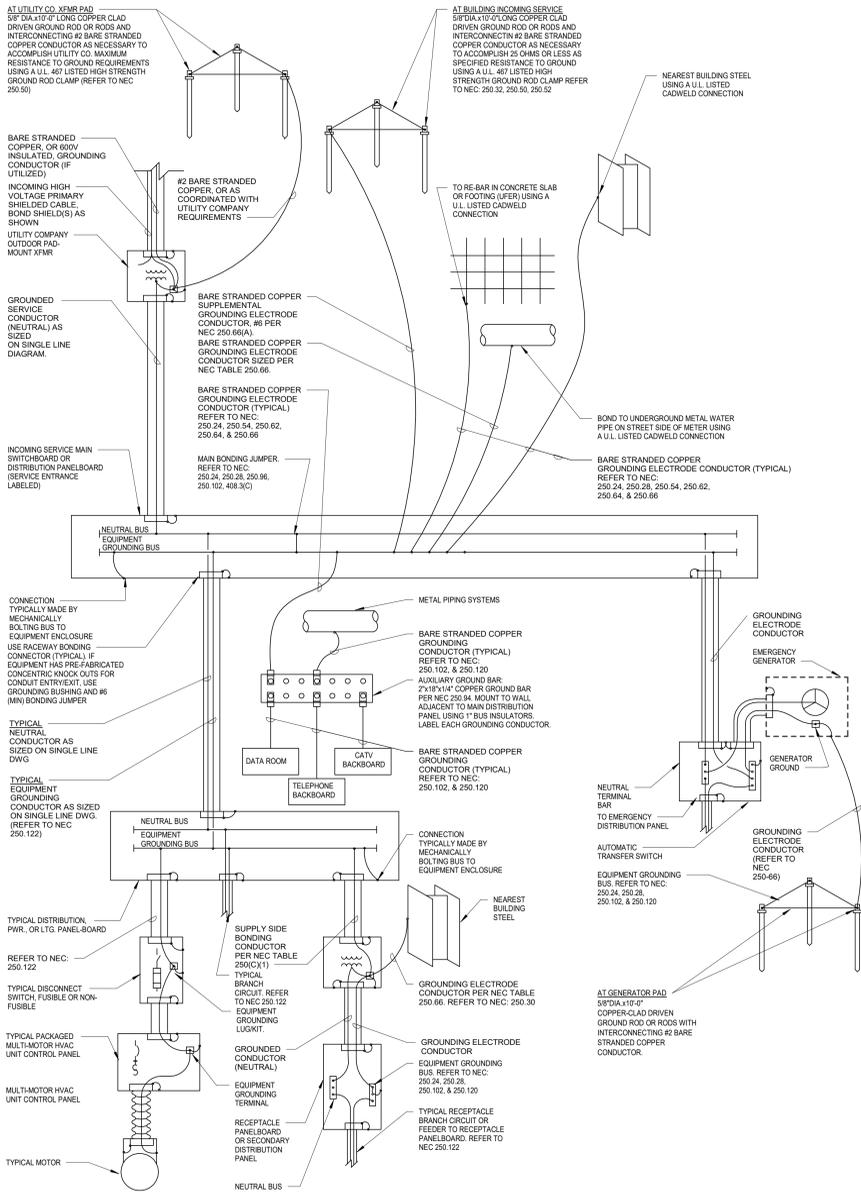
1



ROOFTOP LIGHTING AND POWER DETAIL

SCALE: NONE

4



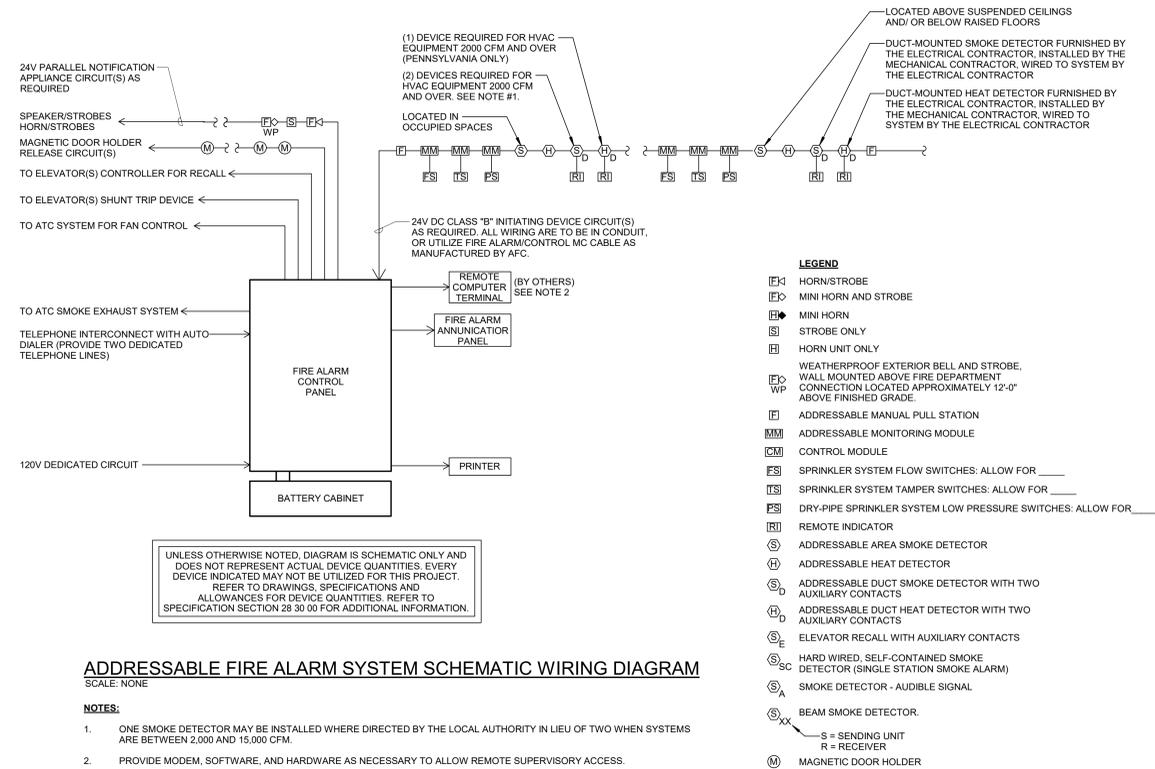
SYSTEM GROUNDING AND BONDING DIAGRAM

SCALE: NONE

6

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ADDRESSABLE FIRE ALARM SYSTEM SCHEMATIC WIRING DIAGRAM
 SCALE: NONE

Switchboard: MDP

Location: MECHANICAL 210
Supply From:
Mounting:
Enclosure:

Volts: 208/120 Wye
Phases: 3
Wires: 4

A.I.C. Rating:
Mains Rating:
MCB Rating: 1 A

Notes:

CKT	ATS-1	Circuit Description	# of Poles	Frame Size	Trip Rating	Load	Remarks
1							
2	ATS-2		3	400 A	20 A	0 VA	
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

Total Conn. Load: 0 VA
Total Amps: 0 A

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
LIGHTING	0 VA	0.00%	0 VA	Total Conn. Load: 0 VA Total Est. Demand: 0 VA Total Conn. Current: 0 A Total Est. Demand Current: 0 A

Notes:

PANEL SCHEDULE AT-1

CKT	TRIP	POLE	LOAD TYPE	DESCRIPTION/LOCATION	WATT	A	B	C	WATT	DESCRIPTION/LOCATION	LOAD TYPE	POLE	TRIP	CKT
1	20 A	1	LIGHTING	CORRIDOR LIGHTING	0	0	0	0	0	CONFERENCE LIGHTING	LIGHTING	1	20 A	2
3	20 A	1	LIGHTING	MANAGER OFFICES LIGHTING	0	0	0	0	0	LOBBY MEETING LIGHTING	LIGHTING	1	20 A	4
5	20 A	1	LIGHTING	SEWER/FINANCE LIGHTING	180	360	360	360	360	CORR 200 RECPT	RECEPTACLE	1	20 A	6
7	20 A	1	RECEPTACLE	TOILET 202 RECPT	540	540	540	540	540	MEETING 201	RECEPTACLE	1	20 A	8
9	20 A	1	RECEPTACLE	RECEPTIONIST 206 RECPT	540	540	540	540	540	TAX OFFICER RECPT	RECEPTACLE	1	20 A	10
11	20 A	1	RECEPTACLE	BUILDING AND ZONING RECPT	1440	1440	1440	1440	1080	ASSIST TOWN MANAGER RECPT	RECEPTACLE	1	20 A	12
13	20 A	1	RECEPTACLE	TOWN MANAGER RECPT	1260	1260	1260	1260	104	Other MEETING	RECEPTACLE	2	20 A	14
15	20 A	2	Other	Other BUILDING AND ZONING 221	1171	1171	1171	1171	860	HP-2.9	Other	2	20 A	16
17	20 A	2	Other	Other LOBBY 203	635	635	635	635	860	HP-2.6	Other	2	20 A	18
19	20 A	2	Other	Other LOBBY 203	635	635	635	635	860	HP-2.6	Other	2	20 A	20
21	20 A	2	Other	Other LOBBY 203	635	635	635	635	860	HP-2.6	Other	2	20 A	22
23	20 A	2	Other	Other LOBBY 203	635	635	635	635	860	HP-2.6	Other	2	20 A	24
25	20 A	2	Other	Other LOBBY 203	635	635	635	635	860	HP-2.6	Other	2	20 A	26
27	20 A	2	Other	Other LOBBY 203	635	635	635	635	860	HP-2.6	Other	2	20 A	28
29	20 A	2	Other	Other LOBBY 203	635	635	635	635	860	HP-2.6	Other	2	20 A	30
31	20 A	2	Other	Other LOBBY 203	635	635	635	635	860	HP-2.6	Other	2	20 A	32
33	20 A	2	Other	Other LOBBY 203	635	635	635	635	860	HP-2.6	Other	2	20 A	34
35	20 A	2	Other	Other LOBBY 203	635	635	635	635	860	HP-2.6	Other	2	20 A	36
37	20 A	2	Other	Other LOBBY 203	635	635	635	635	860	HP-2.6	Other	2	20 A	38
39	20 A	2	Other	Other LOBBY 203	635	635	635	635	860	HP-2.6	Other	2	20 A	40
41	20 A	2	Other	Other LOBBY 203	635	635	635	635	860	HP-2.6	Other	2	20 A	42
43	20 A	2	Other	Other LOBBY 203	635	635	635	635	860	HP-2.6	Other	2	20 A	44
45	20 A	2	Other	Other LOBBY 203	635	635	635	635	860	HP-2.6	Other	2	20 A	46
47	20 A	2	Other	Other LOBBY 203	635	635	635	635	860	HP-2.6	Other	2	20 A	48
49	20 A	2	Other	Other LOBBY 203	635	635	635	635	860	HP-2.6	Other	2	20 A	50
51	20 A	2	Other	Other LOBBY 203	635	635	635	635	860	HP-2.6	Other	2	20 A	52
53	20 A	2	Other	Other LOBBY 203	635	635	635	635	860	HP-2.6	Other	2	20 A	54
55	20 A	2	Other	Other LOBBY 203	635	635	635	635	860	HP-2.6	Other	2	20 A	56
57	20 A	2	Other	Other LOBBY 203	635	635	635	635	860	HP-2.6	Other	2	20 A	58
59	20 A	2	Other	Other LOBBY 203	635	635	635	635	860	HP-2.6	Other	2	20 A	60
61	20 A	2	Other	Other LOBBY 203	635	635	635	635	860	HP-2.6	Other	2	20 A	62
63	20 A	2	Other	Other LOBBY 203	635	635	635	635	860	HP-2.6	Other	2	20 A	64
65	20 A	2	Other	Other LOBBY 203	635	635	635	635	860	HP-2.6	Other	2	20 A	66
67	20 A	2	Other	Other LOBBY 203	635	635	635	635	860	HP-2.6	Other	2	20 A	68
69	20 A	2	Other	Other LOBBY 203	635	635	635	635	860	HP-2.6	Other	2	20 A	70
71	20 A	2	Other	Other LOBBY 203	635	635	635	635	860	HP-2.6	Other	2	20 A	72
TOTAL WATTS					8520 VA	TOTAL AMPS					21 A			

PANEL SCHEDULE LS

CKT	TRIP	POLE	LOAD TYPE	DESCRIPTION/LOCATION	WATT	A	B	C	WATT	DESCRIPTION/LOCATION	LOAD TYPE	POLE	TRIP	CKT
1	20 A	1	LIGHTING	AT-1A LIGHTING	0	0	0	0	0	AT-1A LIGHTING	LIGHTING	1	20 A	2
3	20 A	1	LIGHTING	STAIR 02 LIGHTING	0	0	0	0	0	PD-1A LIGHTING	LIGHTING	1	20 A	4
5	20 A	1	LIGHTING	STAIR 02 LIGHTING	0	0	0	0	0	PD-1A LIGHTING	LIGHTING	1	20 A	6
7	20 A	1	LIGHTING	STAIR 02 LIGHTING	0	0	0	0	0	PD-1A LIGHTING	LIGHTING	1	20 A	8
9	20 A	1	LIGHTING	STAIR 02 LIGHTING	0	0	0	0	0	PD-1A LIGHTING	LIGHTING	1	20 A	10
11	20 A	1	LIGHTING	STAIR 02 LIGHTING	0	0	0	0	0	PD-1A LIGHTING	LIGHTING	1	20 A	12
13	20 A	1	LIGHTING	STAIR 02 LIGHTING	0	0	0	0	0	PD-1A LIGHTING	LIGHTING	1	20 A	14
15	20 A	1	LIGHTING	STAIR 02 LIGHTING	0	0	0	0	0	PD-1A LIGHTING	LIGHTING	1	20 A	16
17	20 A	1	LIGHTING	STAIR 02 LIGHTING	0	0	0	0	0	PD-1A LIGHTING	LIGHTING	1	20 A	18
19	20 A	1	LIGHTING	STAIR 02 LIGHTING	0	0	0	0	0	PD-1A LIGHTING	LIGHTING	1	20 A	20
21	20 A	1	LIGHTING	STAIR 02 LIGHTING	0	0	0	0	0	PD-1A LIGHTING	LIGHTING	1	20 A	22
23	20 A	1	LIGHTING	STAIR 02 LIGHTING	0	0	0	0	0	PD-1A LIGHTING	LIGHTING	1	20 A	24
25	20 A	1	LIGHTING	STAIR 02 LIGHTING	0	0	0	0	0	PD-1A LIGHTING	LIGHTING	1	20 A	26
27	20 A	1	LIGHTING	STAIR 02 LIGHTING	0	0	0	0	0	PD-1A LIGHTING	LIGHTING	1	20 A	28
29	20 A	1	LIGHTING	STAIR 02 LIGHTING	0	0	0	0	0	PD-1A LIGHTING	LIGHTING	1	20 A	30
31	20 A	1	LIGHTING	STAIR 02 LIGHTING	0	0	0	0	0	PD-1A LIGHTING	LIGHTING	1	20 A	32
33	20 A	1	LIGHTING	STAIR 02 LIGHTING	0	0	0	0	0	PD-1A LIGHTING	LIGHTING	1	20 A	34
35	20 A	1	LIGHTING	STAIR 02 LIGHTING	0	0	0	0	0	PD-1A LIGHTING	LIGHTING	1	20 A	36
37	20 A	1	LIGHTING	STAIR 02 LIGHTING	0	0	0	0	0	PD-1A LIGHTING	LIGHTING	1	20 A	38
39	20 A	1	LIGHTING	STAIR 02 LIGHTING	0	0	0	0	0	PD-1A LIGHTING	LIGHTING	1	20 A	40
41	20 A	1	LIGHTING	STAIR 02 LIGHTING	0	0	0	0	0	PD-1A LIGHTING	LIGHTING	1	20 A	42
TOTAL WATTS					0 VA	TOTAL AMPS					0 A			

PANEL SCHEDULE AT-2

CKT	TRIP	POLE	LOAD TYPE	DESCRIPTION/LOCATION	WATT	A	B	C	WATT	DESCRIPTION/LOCATION	LOAD TYPE	POLE	TRIP	CKT
1	20 A	1	RECEPTACLE	CORRIDOR RECPT	1080	1080	1080	1080	1080	HR FINANCE RECPT	RECEPTACLE	1	20 A	2
3	20 A	1	RECEPTACLE	SEWER AUTH. RECPT	1620	1620	1620	1620	1620	CONF 220 RECPT	POWER	1	20 A	4
5	20 A	1	RECEPTACLE	WORKROOM 209 PRINTER	180	180	180	180	180	BREAKROOM 215 COUNTER 1	RECEPTACLE	1	20 A	6
7	20 A	1	RECEPTACLE	MECH/ELEC RECPT	540	540	540	540	540	BREAKROOM 215 COUNTER 2	RECEPTACLE	1	20 A	8
9	20 A	1	REFRIGERATOR	BREAK 215 FRIDGE	900	900	900	900	900	TOILET 211 213 RECPT	RECEPTACLE	1	20 A	10
11	20 A	1	RECEPTACLE	HOUSEKEEPING RECPT	180	180	180	180	180	BREAKROOM 215 RECPT	RECEPTACLE	1	20 A	12
13	20 A	2	Other	HP-2.2	860	860	860	860	860	Other WORK ROOM 209	Other	2	20 A	14
15	20 A	2	Other	HP-2.2	860	860	860	860	860	Other WORK ROOM 209	Other	2	20 A	16
17	20 A	2	Other	HP-2.4	54	54	54	54	54	HP-2.5	Other	2	20 A	18
19	20 A	2	Other	CONFERENCE	HP-2.4	54	54	54	54	HP-2.5	Other	2	20 A	20
21	20 A	2	Other	Other BREAK ROOM 215	HP-2.1	860	860	860	860	Other MECHANICAL 210	Other	2	20 A	22
23	20 A	2	Other	Other BREAK ROOM 215	HP-2.1	860	860	860	860	Other MECHANICAL 210	Other	2	20 A	24
25	20 A	2	Other	Other BREAK ROOM 215	HP-2.1	860	860	860	860	Other MECHANICAL 210	Other	2	20 A	26
27	20 A	2	Other	Other BREAK ROOM 215	HP-2.1	860	860	860	860	Other MECHANICAL 210	Other	2	20 A	28
29	20 A	2	Other	Other BREAK ROOM 215	HP-2.1	860	860	860	860	Other MECHANICAL 210	Other	2	20 A	30
31	20 A	2	Other	Other BREAK ROOM 215	HP-2.1	860	860	860	860	Other MECHANICAL 210	Other	2	20 A	32
33	20 A	1	RECEPTACLE	RECEPTS - ROOFTOP	180	180	180	180	180	EF-8 & EF-9	EQUIPMENT	1	20 A	34
35	20 A	1	RECEPTACLE	RECEPTS - ROOFTOP	180	180	180	180	180	EF-8 & EF-9	EQUIPMENT	1	20 A	36
37	90 A	3	EQUIPMENT	RTU-1	30000	30000	30000	30000	30000	RTU-2	EQUIPMENT	3	30 A	38
39	20 A	1	EQUIPMENT	RTU-1	30000	30000	30000	30000	30000	RTU-2	EQUIPMENT	3	30 A	40
41	20 A	1	EQUIPMENT	RTU-1	30000	30000	30000	30000	30000	RTU-2	EQUIPMENT	3	30 A	42
43	20 A	1	EQUIPMENT	RTU-1	30000	30000	30000	30000	30000	RTU-2	EQUIPMENT	3	30 A	44
45	20 A	1	EQUIPMENT	RTU-1	30000	30000	30000	30000	30000	RTU-2	EQUIPMENT	3	30 A	46
47	20 A	1	EQUIPMENT	RTU-1	30000	30000	30000	30000	30000	RTU-2	EQUIPMENT	3	30 A	48
49	20 A	1	EQUIPMENT	RTU-1	30000	30000	30000	30000	30000	RTU-2	EQUIPMENT	3	30 A	50
51	20 A	1	EQUIPMENT	RTU-1	30000	30000	30000	30000	30000	RTU-2	EQUIPMENT	3	30 A	52
53	20 A	1	EQUIPMENT	RTU-1	30000	30000</								

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Sheet Title:
LOW VOLTAGE SYSTEMS TITLESHEET

Sheet Number:

TA-001

LOW VOLTAGE SYSTEMS SYMBOL LEGEND

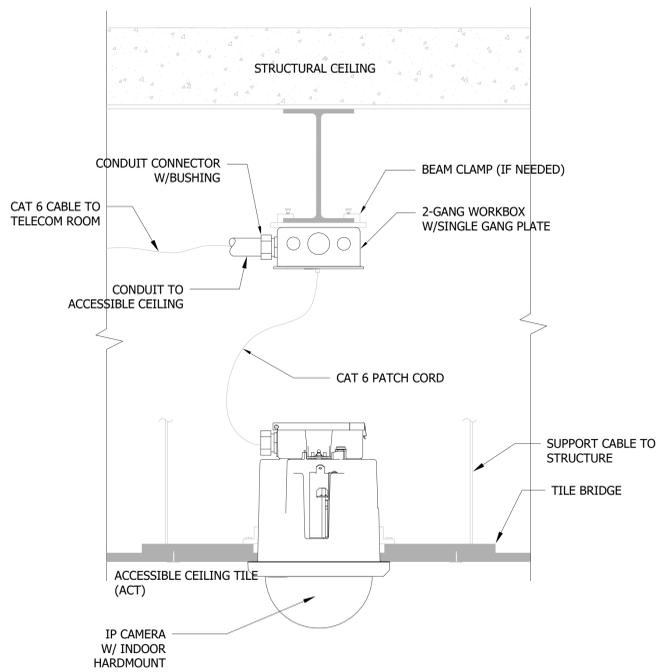
SYMBOL:	DESCRIPTION:	BACKBOX:	CONDUITS:	MOUNTING HEIGHT:	ELECTRONICS:	TELECOM CABLE:	POWER REQUIREMENTS:	SPECIFICATION SECTION
	CEILING RECESSED LOUDSPEAKER	CUSTOM BACK BOX	N/A	CEILING RECESSED	LOUDSPEAKER	N/A	N/A	27 41 00
	WALL MOUNTED LOUDSPEAKER	1-GANG TRIM RING	N/A	80" AFF	LOUDSPEAKER	N/A	N/A	27 41 00
	DIGITAL SIGNAGE DISPLAY	FSR PWB-100	TWO (2) 1-1/4" EC	60" AFF	FLAT PANEL DISPLAY	TWO (2) CATEGORY CABLE	120VAC DUPLEX RECEPTACLE	27 41 00
	FLAT PANEL DISPLAY	FSR PWB-100	TWO (2) 1-1/4" EC	60" AFF	FLAT PANEL DISPLAY	TWO (2) CATEGORY CABLE	120VAC DUPLEX RECEPTACLE	27 41 00
	FLAT PANEL DISPLAY	FSR PWB-100	TWO (2) 1-1/4" EC	60" AFF	FLAT PANEL DISPLAY	TWO (2) CATEGORY CABLE	120VAC DUPLEX RECEPTACLE	27 41 00
	WALL MOUNTED VIDEO CAMERA	VADDIO 999-2225-118	N/A	60" AFF	VIDEO CAMERA	N/A	REMOTE LOW VOLTAGE POWER	27 41 00
	AUDIO INTERCOM	CUSTOM BACK BOX	ONE (1) 1" EC	48" AFF	AUDIO INTERCOM STATION	ONE (1) CATEGORY CABLE	REMOTE LOW VOLTAGE POWER	28 13 00
	2-GANG MULTI-MEDIA WALLBOX	2-GANG BOX	ONE(1) 1-1/4" EC	VARIES	N/A	N/A	N/A	N/A
	5-GANG MULTI-MEDIA WALLBOX	5-GANG BOX	THREE (3) 1-1/4" EC	OUTLET HEIGHT	N/A	N/A	N/A	N/A
	REMOTE CONTROL TOUCH PANEL	3-GANG BOX	ONE (1) 1" EC	SWITCH HEIGHT	REMOTE CONTROL TOUCH PANEL	ONE (1) CATEGORY CABLE	REMOTE LOW VOLTAGE POWER	27 41 00
	AUDIOVISUAL EQUIPMENT RACK	N/A	N/A	ON FLOOR	SEE AV SIGNAL FLOW	N/A	(2) DEDICATED 20-AMP, 120V CIRCUITS W/ DUPLEX RECEPTACLE	27 41 00
	STANDARD TELECOMMUNICATION OUTLET	2-GANG BOX WITH SINGLE GANG TRIM RING	ONE (1) 1-1/4" EC	OUTLET HEIGHT	N/A	"X" CATEGORY CABLES (TO TELECOM CLOSET)	N/A	27 41 00
	WALL PHONE TELECOMMUNICATIONS OUTLET	2-GANG BOX WITH SINGLE GANG TRIM RING	ONE (1) 1" EC	SWITCH HEIGHT	N/A	ONE (1) CATEGORY CABLE	N/A	27 41 00
	FLOORBOX	WIREMOLD EFB8S	THREE (3) 1-1/4" EC	IN FLOOR	N/A	FOUR (4) CATEGORY CABLES	120V DUPLEX RECEPTACLE	27 41 13
	WIRELESS ACCESS POINT	SURFACE MOUNTED BISCUIT BOX	N/A	CEILING MOUNTED	OFOI WIRELESS ACCESS POINT	TWO (2) CATEGORY CABLE	REMOTE LOW VOLTAGE POWER	27 10 00
	ELECTRONIC ACCESS CONTROL DOOR	REFER TO ACCESS CONTROL DOOR DETAILS	REFER TO ACCESS CONTROL DOOR DETAILS	REFER TO ACCESS CONTROL DOOR DETAILS	REFER TO ACCESS CONTROL DOOR DETAILS	N/A	REMOTE LOW VOLTAGE POWER	28 13 00
	CARD READER	2-GANG BOX WITH SINGLE GANG TRIM RING	ONE (1) 1" EC	REFER TO ACCESS CONTROL DOOR DETAILS	CARD READER	N/A	REMOTE LOW VOLTAGE POWER	28 13 00
	VIDEO INTERCOM STATION	CUSTOM BACK BOX	ONE (1) 1" EC	48" AFF	VIDEO INTERCOM STATION	ONE (1) CATEGORY CABLE	REMOTE LOW VOLTAGE POWER	28 13 00
	FIXED SURVEILLANCE VIDEO CAMERA	SURFACE MOUNTED BISCUIT BOX	N/A	CEILING MOUNTED	FIXED VIDEO CAMERA	ONE (1) CATEGORY CABLE	REMOTE LOW VOLTAGE POWER	28 23 00
	EXTERIOR SURVEILLANCE VIDEO CAMERA	2-GANG BOX INTERIOR TO BUILDING	N/A	VARIES	EXTERIOR VIDEO CAMERA	ONE (1) CATEGORY CABLE	REMOTE LOW VOLTAGE POWER	28 23 00

LOW VOLTAGE SYSTEM SHEET LIST

Sheet Number	Sheet Name
TA-001	LOW VOLTAGE SYSTEMS TITLESHEET
TA-002	LOW VOLTAGE SYSTEMS INFRASTRUCTURE DETAILS
TA-003	LOW VOLTAGE SYSTEMS INFRASTRUCTURE DETAILS
TA-005	OVERALL SITE PLAN
TA-010	TELECOM RISER DIAGRAM
TA-101	FIRST FLOOR PLAN
TA-102	SECOND FLOOR PLAN
TA-121	FIRST FLOOR REFLECTED CEILING PLAN
TA-122	SECOND FLOOR REFLECTED CEILING PLAN
TA-300	TELECOM ROOM DETAILS - FIRST FLOOR
TA-301	TELECOM ROOM DETAILS - SECOND FLOOR
TA-302	TELECOM ROOM RACK ELEVATIONS - FIRST FLOOR
TA-303	TELECOM ROOM RACK ELEVATIONS - SECOND FLOOR
TA-304	TYPICAL FACEPLATE DETAILS
TA-400	AV ELEVATIONS 1
TA-401	AV ELEVATIONS 2
TA-500	ACCESS CONTROL DETAILS
TA-501	ACCESS CONTROL DOOR SCHEDULE
TA-502	AV SIGNAL FLOW COMMISSIONERS MEETING ROOM
TA-503	AV SIGNAL FLOW TYPICAL CONFERENCE ROOMS
TA-504	AV SIGNAL FLOW MISC SPACES

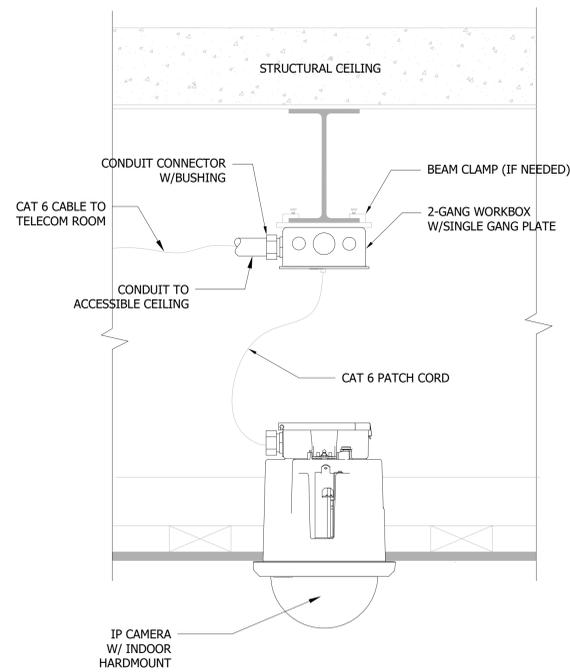
TA SERIES SHEET NOTES

- ALL CONDUIT, BACK BOXES, AND AC POWER REQUIREMENTS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.
- ANY CONDUIT TERMINATIONS AT CONSOLE OR EQUIPMENT RACK LOCATIONS SHOULD BE ACCESSIBLE.
- EACH LOW VOLTAGE OUTLET SHALL INCLUDE A 200lb TEST PULL WIRE TO ACCESSIBLE AFC OR CABLE TRAY UNLESS OTHERWISE NOTED.
- AC POWER CIRCUITS OUTLINED FOR USE WITH THE LOW VOLTAGE ELEMENTS SHALL BE TIED TO A SINGLE PHASE OF THE ELECTRICAL POWER SUPPLY.
- REFERENCE ELECTRICAL DIVISION 26 00 00 SPECIFICATION FOR CONDUIT SPECIFICATIONS.
- COORDINATE CEILING MOUNTED ELEMENTS WITH ARCHITECTURAL CEILING PLANS.
- REFERENCE ARCHITECTURAL DRAWINGS FOR ALL BOX LOCATIONS AND DIMENSIONS.
- ALL TELECOM CONDUITS ARE TO RUN FROM BACK BOX TO ACCESSIBLE AFC UNLESS DETAILED OTHERWISE.
- NOTES ON INDIVIDUAL DRAWING SHEETS SUPERSEDE THE ABOVE REQUIREMENTS.



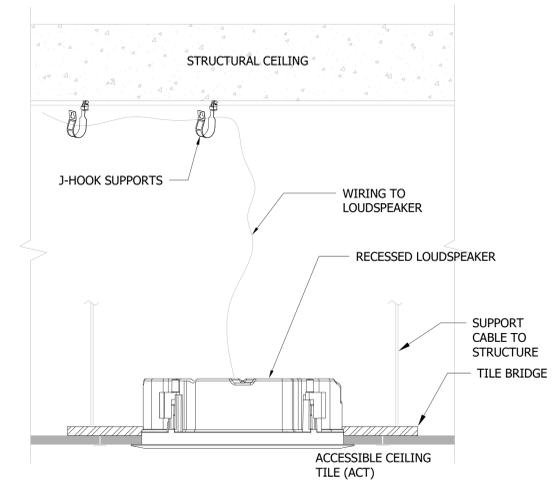
1 **CAMERA IN ACT CEILING DETAIL**

3" = 1'-0"



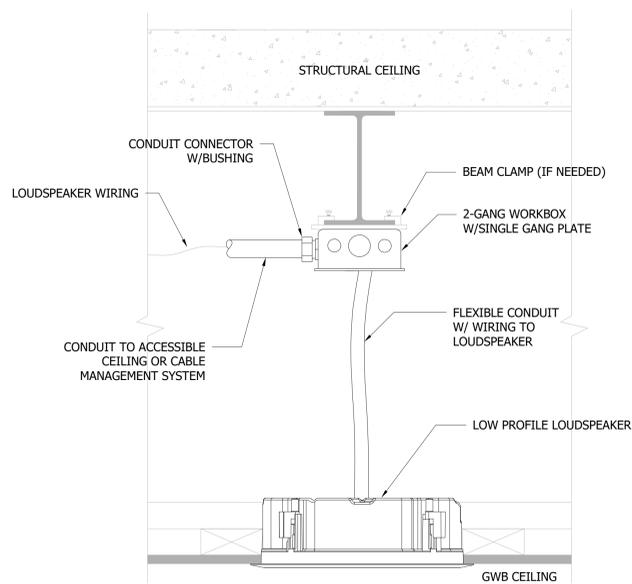
2 **CAMERA IN GWB CEILING DETAIL**

3" = 1'-0"



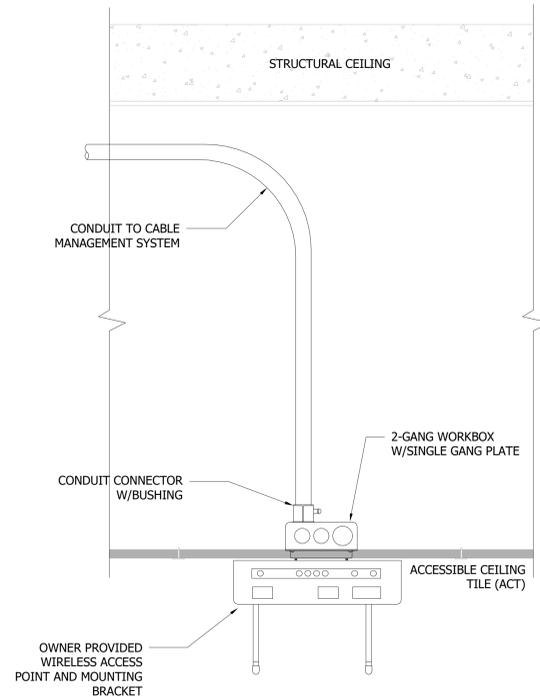
3 **LOUDSPEAKER IN ACT CEILING DETAIL**

3" = 1'-0"



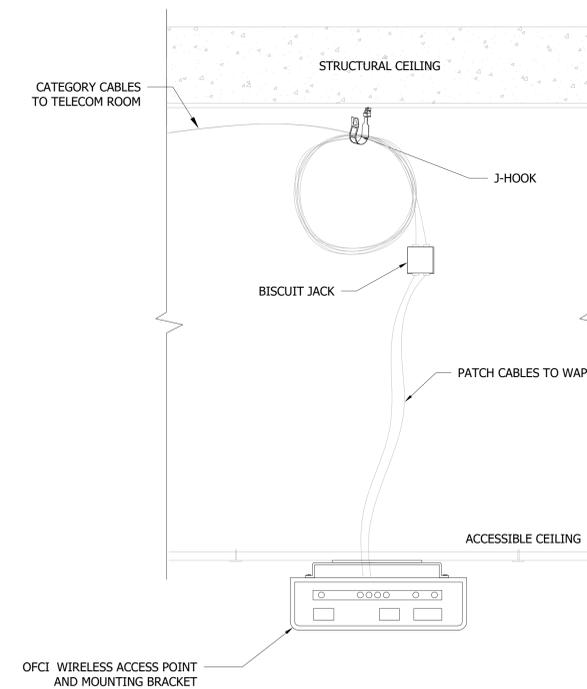
4 **LOUDSPEAKER IN GWB CEILING DETAIL**

3" = 1'-0"



5 **WAP IN ACT CEILING DETAIL**

3" = 1'-0"



6 **WAP IN GWB CEILING DETAIL**

3" = 1'-0"

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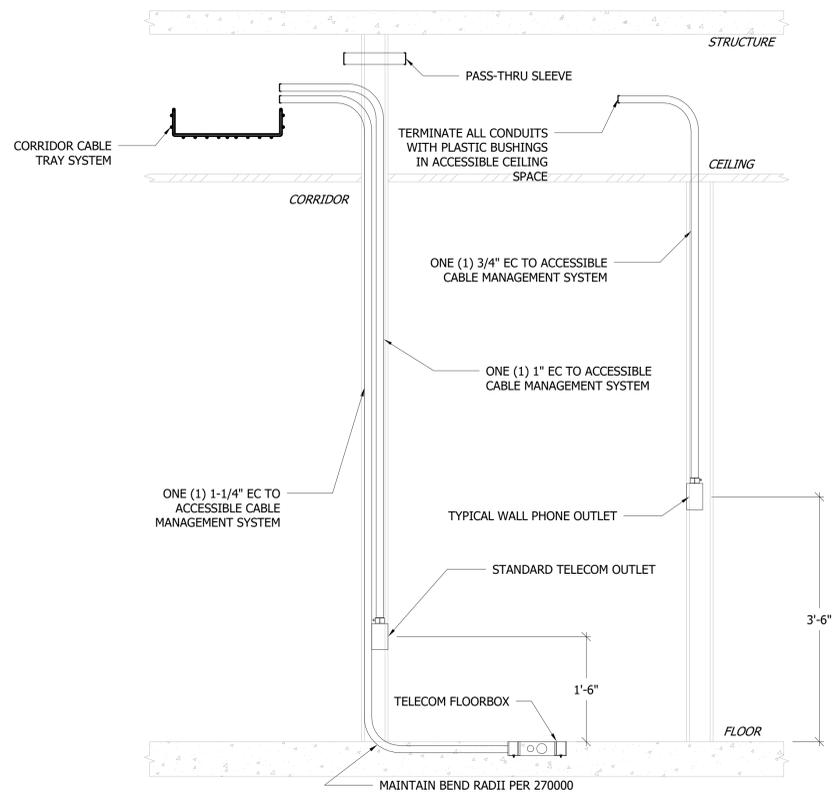
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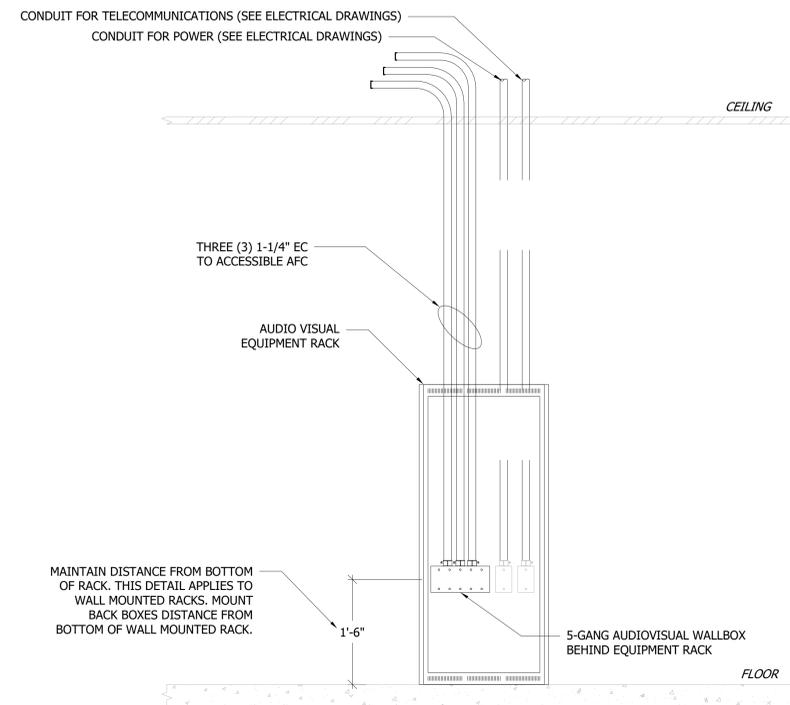
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 Contact: Paul Andrew Sgroi
 Project Number: 2301.00-22

Sheet Title:
LOW VOLTAGE SYSTEMS INFRASTRUCTURE DETAILS
 Sheet Number:

TA-003



1 TYPICAL TELECOM DETAIL
 1" = 1'-0"



2 TYPICAL AV RACK DETAIL
 1" = 1'-0"

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Sheet Title:
**OVERALL SITE
PLAN**

Sheet Number:
TA-005



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Sheet Title:
TELECOM RISER DIAGRAM

Sheet Number:

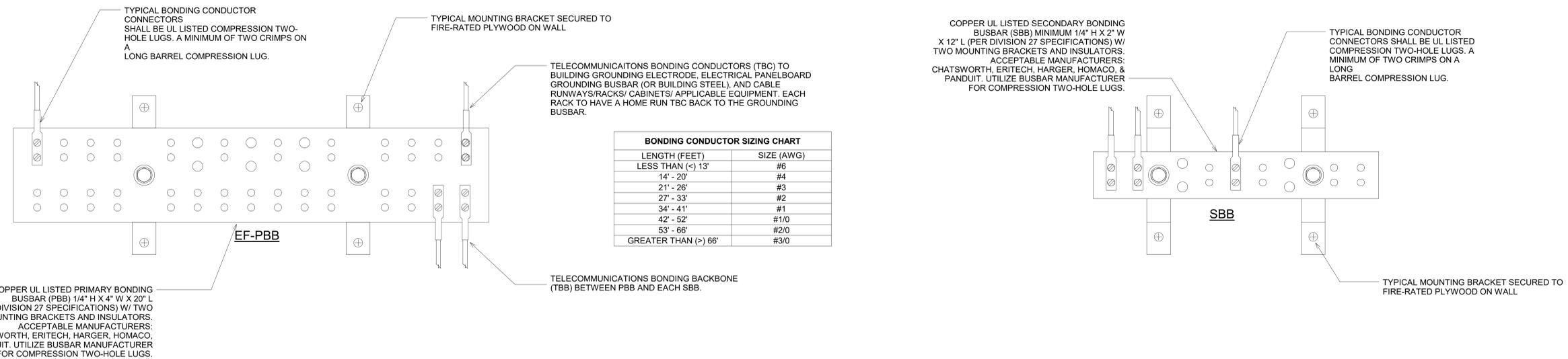
TA-010

RISER NOTES

1. PROVIDE 24 STRAND SINGLE MODE AND 24 STRAND MULTIMODE FIBER FROM IDF ROOM 105 TO IDF ROOM 216
2. PROVIDE FOUR (4) 4" CONDUITS BETWEEN IDF ROOM 105 AND IDF ROOM 216
3. PROVIDE ONE(1) 4" SCH40 CONDUIT FROM IDF ROOM 216 TO ELECTRIC POLE 657.
4. PROVIDE ONE(1) 4" SCH40 CONDUIT FROM IDF ROOM 105 TO ELECTRIC POLE 1146.



1 TELECOM RISER DIAGRAM
1" = 1'-0"



2 TELECOMMUNICATIONS GROUNDING DETAILS
6" = 1'-0"

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 Project Number: 2301.00-22

Sheet Title:
FIRST FLOOR PLAN

Sheet Number:

TA-101



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

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Sheet Title:
**SECOND FLOOR
 PLAN**

Sheet Number:

TA-102



1 SECOND FLOOR PLAN
 1/8" = 1'-0"

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Sheet Title:
**FIRST FLOOR
REFLECTED
CEILING PLAN**

Sheet Number:

TA-121



1 FIRST FLOOR RCP
1/8" = 1'-0"

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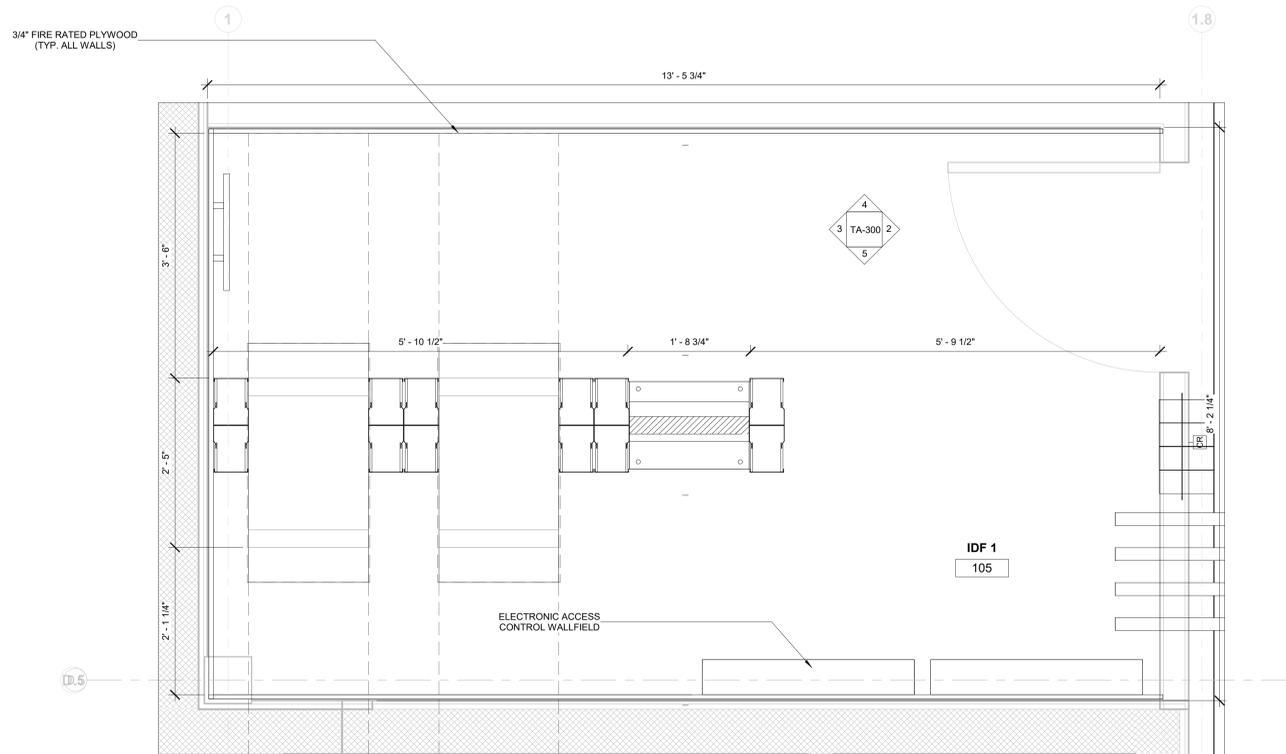
Sheet Title:
SECOND FLOOR REFLECTED CEILING PLAN

Sheet Number:

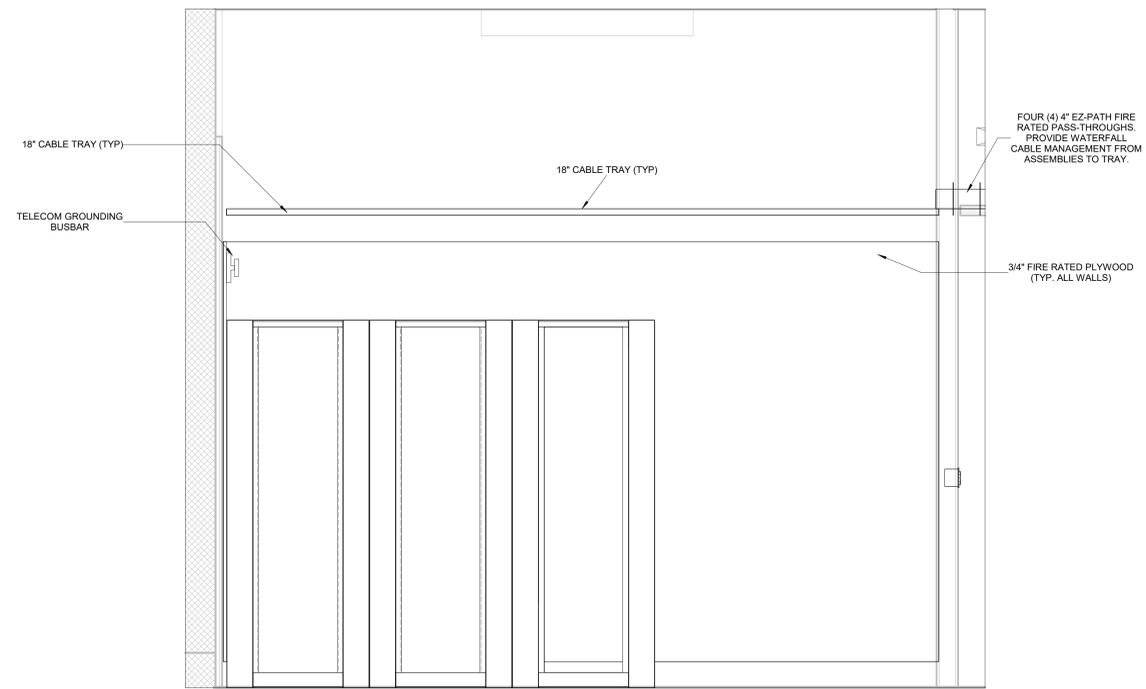
TA-122



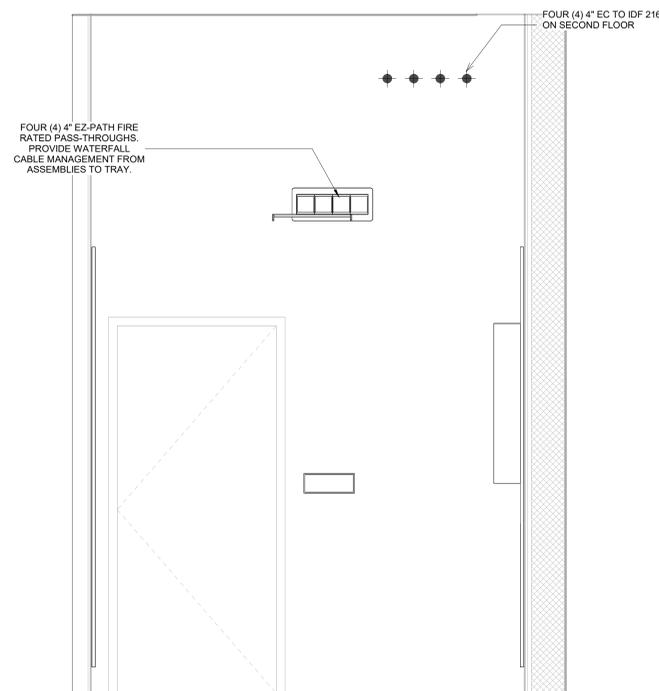
1 SECOND FLOOR RCP
 1/8" = 1'-0"



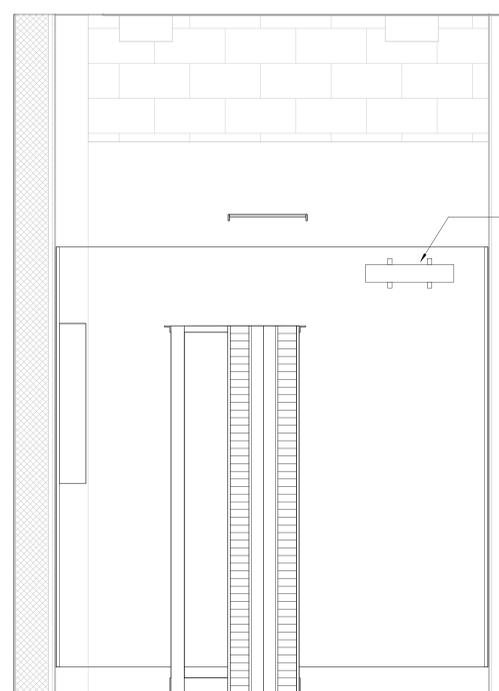
1 FIRST FLOOR IDF
 1" = 1'-0"



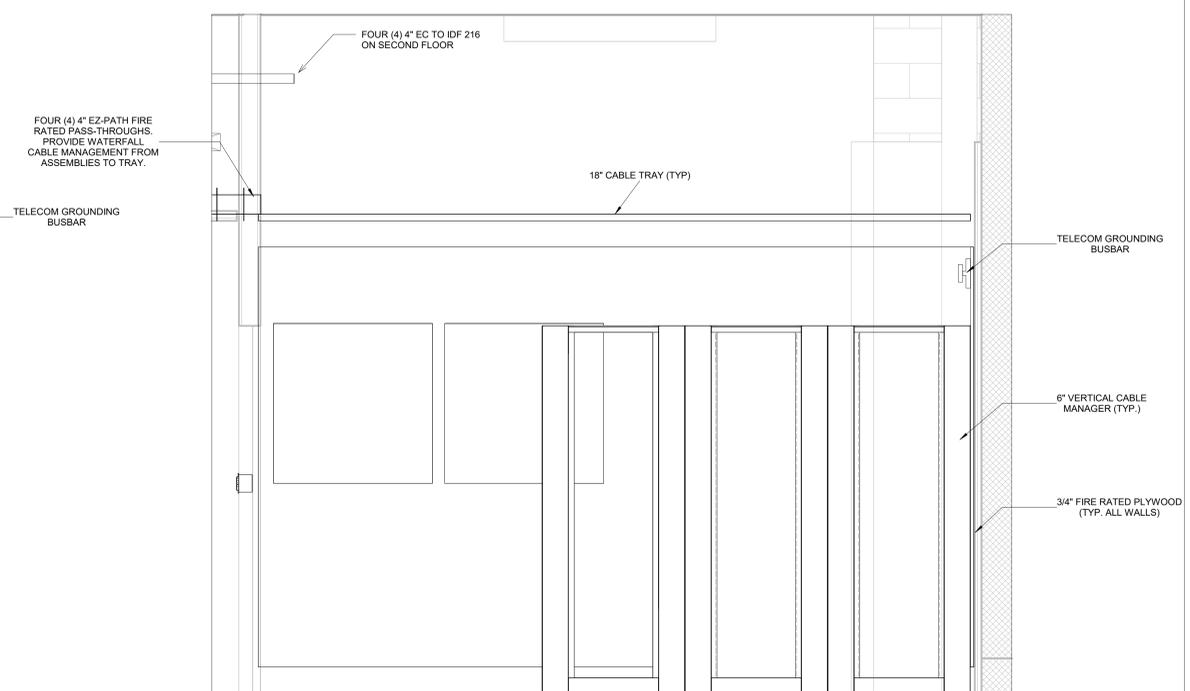
4 FIRST FLOOR IDF - NORTH
 3/4" = 1'-0"



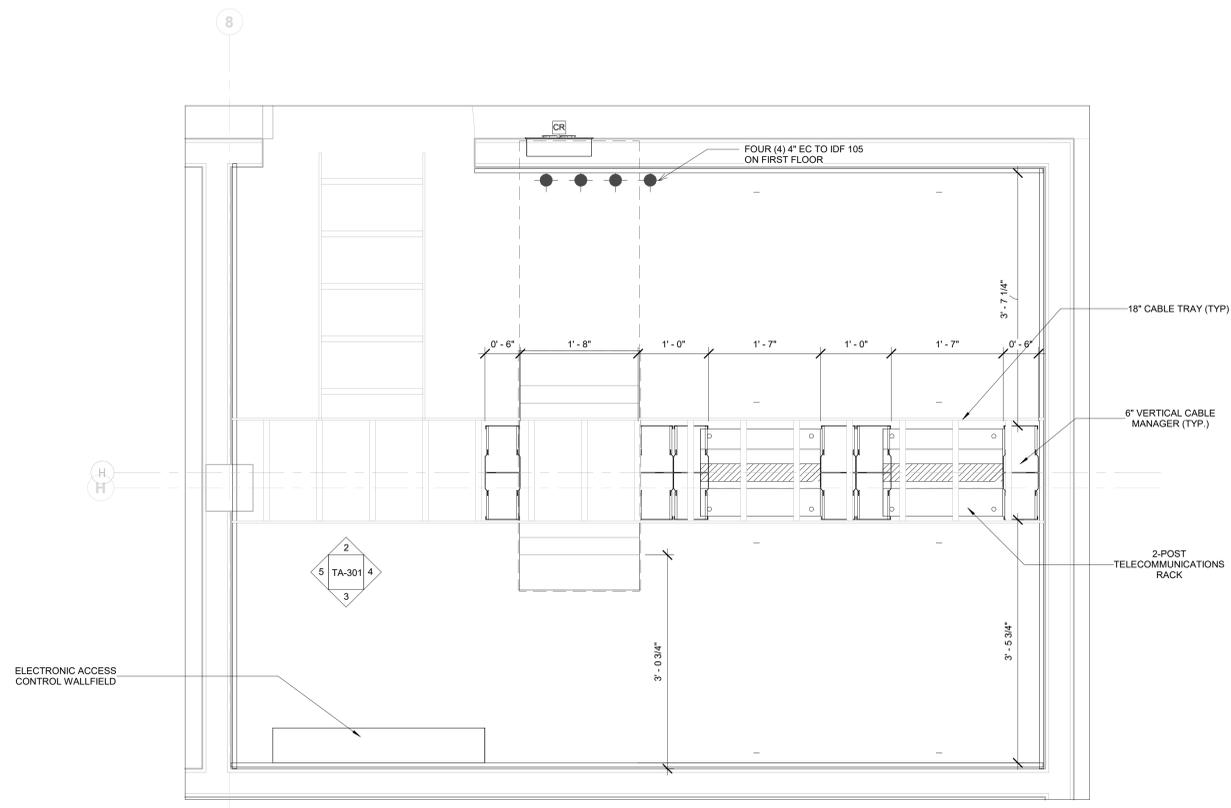
2 FIRST FLOOR IDF - EAST
 3/4" = 1'-0"



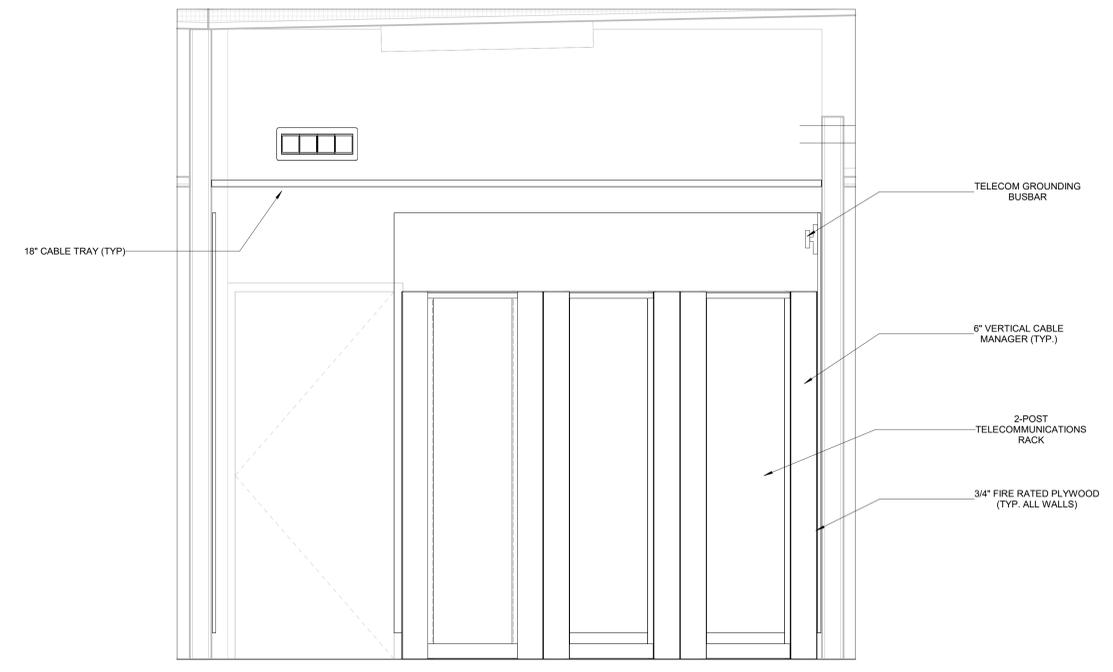
3 FIRST FLOOR IDF - WEST
 3/4" = 1'-0"



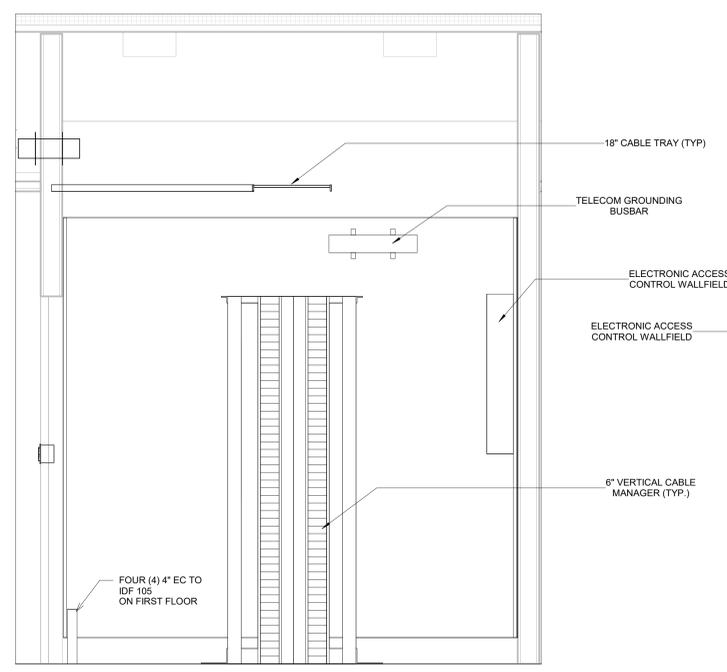
5 FIRST FLOOR IDF - SOUTH
 3/4" = 1'-0"



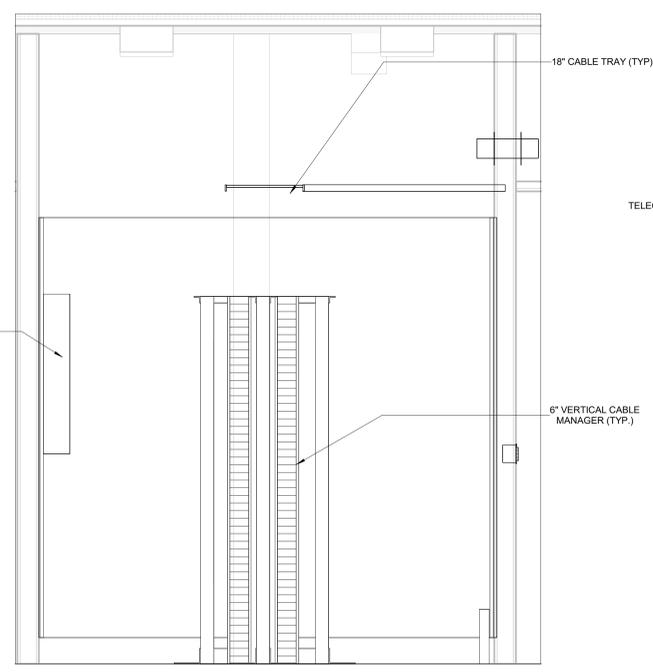
1 SECOND FLOOR IDF
 1" = 1'-0"



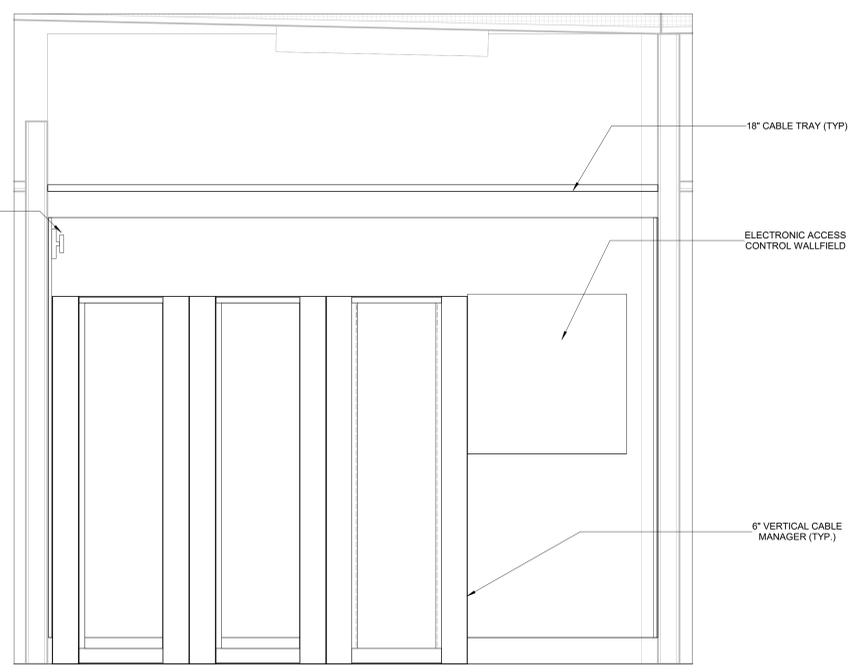
2 SECOND FLOOR IDF - NORTH
 3/4" = 1'-0"



4 SECOND FLOOR IDF - EAST
 3/4" = 1'-0"



5 SECOND FLOOR IDF - WEST
 3/4" = 1'-0"



3 SECOND FLOOR IDF - SOUTH
 3/4" = 1'-0"

C:\Users\jnyk\p\Documents\2301_0022_Aston_Township_Municipal_Complex_Low_Voltage_apn\BIM\61.rvt 3/28/2024 1:25:06 PM

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 646-475-5116

Project:
ASTON TOWNSHIP MUNICIPAL COMPLEX
 3270 Concord Road
 Aston, PA 19014

Owner:
ASTON TOWNSHIP
 2 New Road
 Suite 123
 Aston, PA 19014

Revision/Issue:
 0 03/29/24 Issued

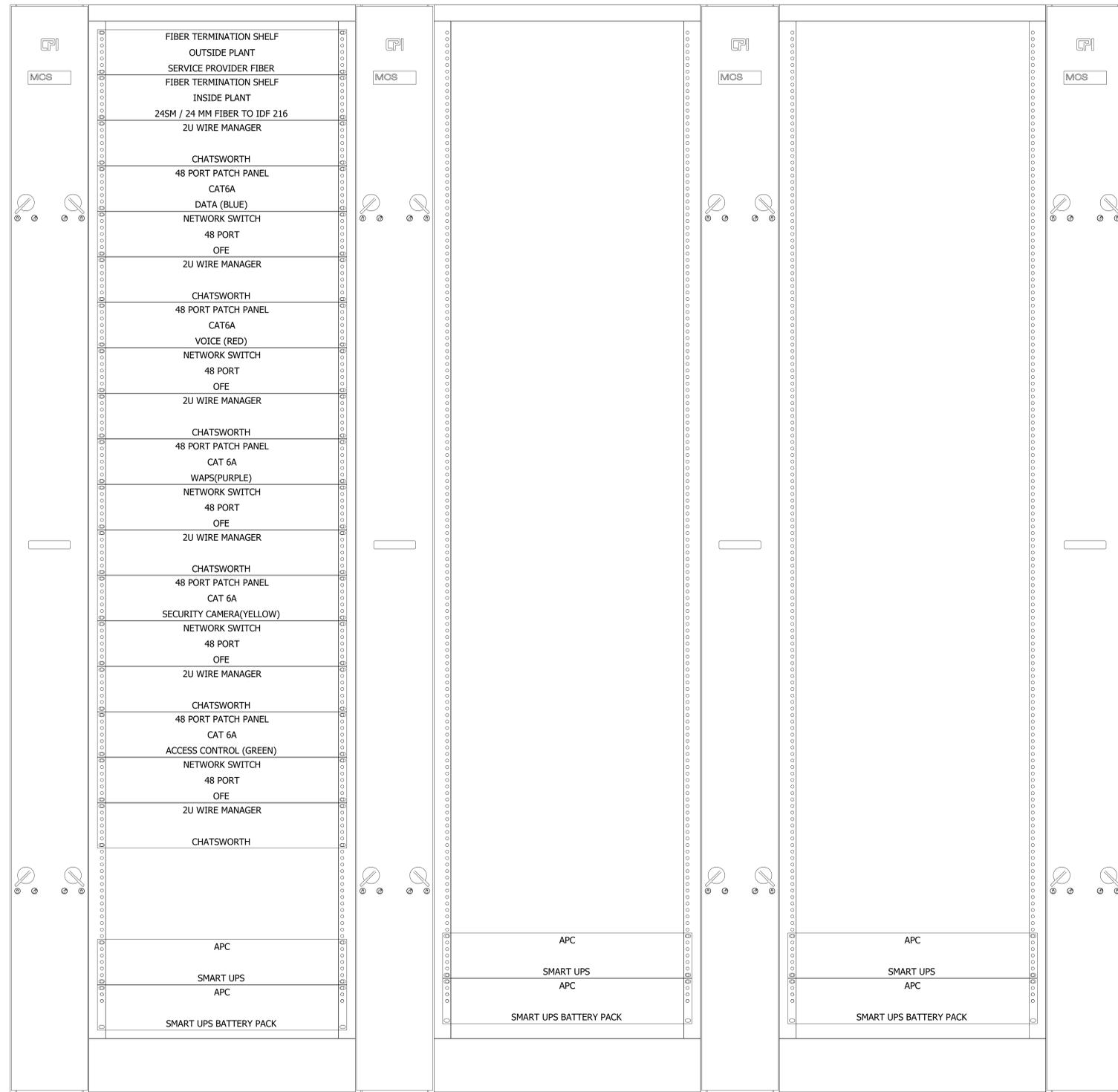
Drawn: AP
 Reviewed: PAS
 Contact: Paul Andrew Sgroi
 Project Number: 2301.00-22

Sheet Title:
TELECOM ROOM RACK ELEVATIONS - FIRST FLOOR

Sheet Number:

TA-302

RACK UNITS	HEIGHT INCHES
44	77.00
43	75.25
42	73.50
41	71.75
40	70.00
39	68.25
38	66.50
37	64.75
36	63.00
35	61.25
34	59.50
33	57.75
32	56.00
31	54.25
30	52.50
29	50.75
28	49.00
27	47.25
26	45.50
25	43.75
24	42.00
23	40.25
22	38.50
21	36.75
20	35.00
19	33.25
18	31.50
17	29.75
16	28.00
15	26.25
14	24.50
13	22.75
12	21.00
11	19.25
10	17.50
9	15.75
8	14.00
7	12.25
6	10.50
5	8.75
4	7.00
3	5.25
2	3.50
1	1.75
0	0.00



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Revision/Issue:
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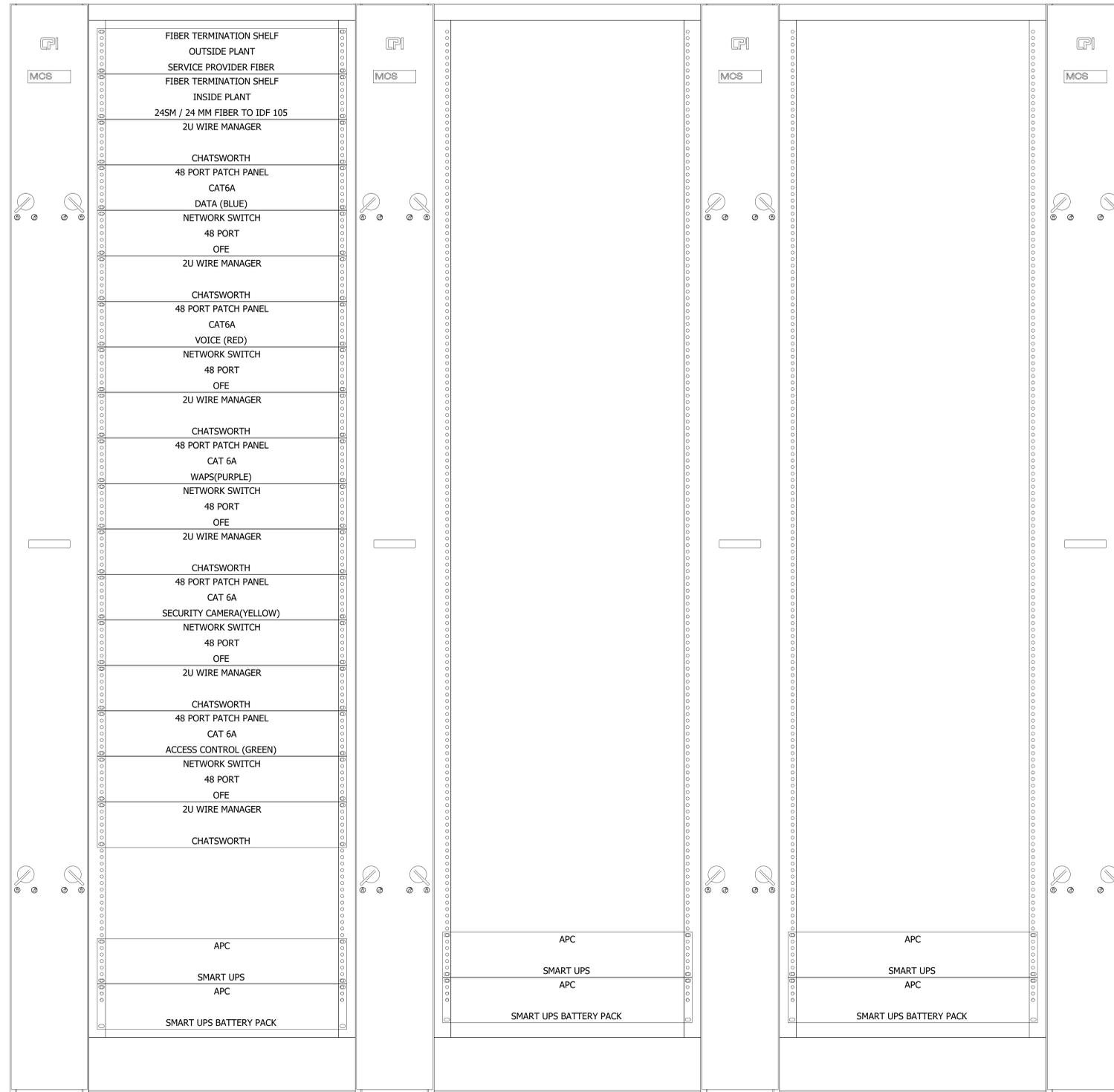
Drawn: AP
 Reviewed: PAS
 Contact: Paul Andrew Sgroi
 Project Number: 2301.00-22

Sheet Title:
TELECOM ROOM RACK ELEVATIONS - SECOND FLOOR

Sheet Number:

TA-303

RACK UNITS	HEIGHT INCHES
44	77.00
43	75.25
42	73.50
41	71.75
40	70.00
39	68.25
38	66.50
37	64.75
36	63.00
35	61.25
34	59.50
33	57.75
32	56.00
31	54.25
30	52.50
29	50.75
28	49.00
27	47.25
26	45.50
25	43.75
24	42.00
23	40.25
22	38.50
21	36.75
20	35.00
19	33.25
18	31.50
17	29.75
16	28.00
15	26.25
14	24.50
13	22.75
12	21.00
11	19.25
10	17.50
9	15.75
8	14.00
7	12.25
6	10.50
5	8.75
4	7.00
3	5.25
2	3.50
1	1.75
0	0.00



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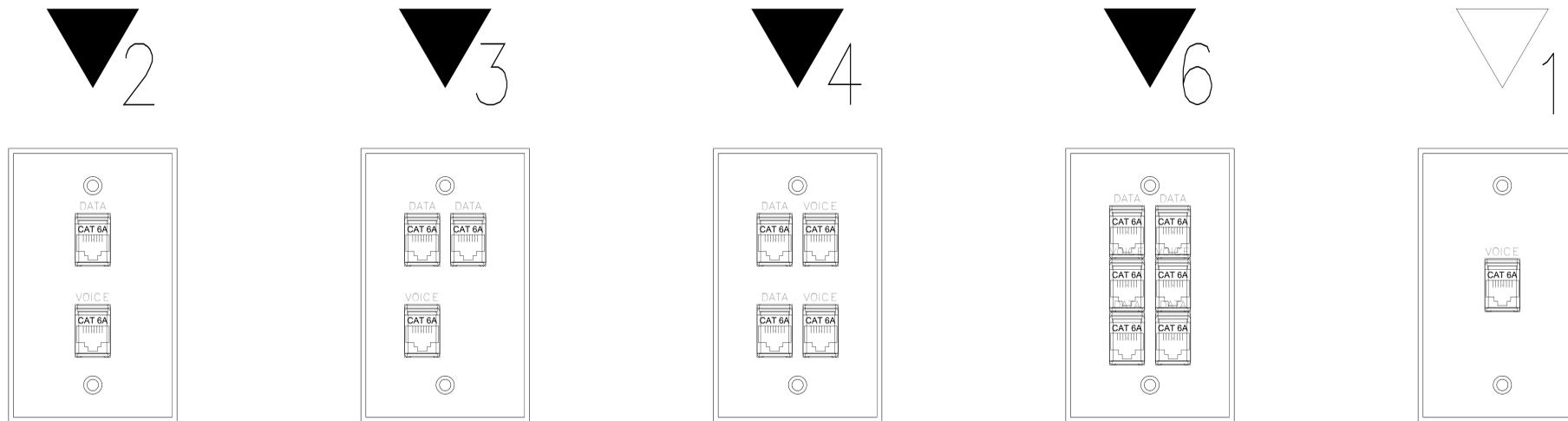
Revision/Issue:
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Drawn: AP
 Reviewed: PAS
 Contact: Paul Andrew Sgroi
 Project Number: 2301.00-22

Sheet Title:
**TYPICAL
 FACEPLATE
 DETAILS**

Sheet Number:

TA-304



1 TYPICAL FACEPLATE DETAILS
 12" x 11"

Consultant:
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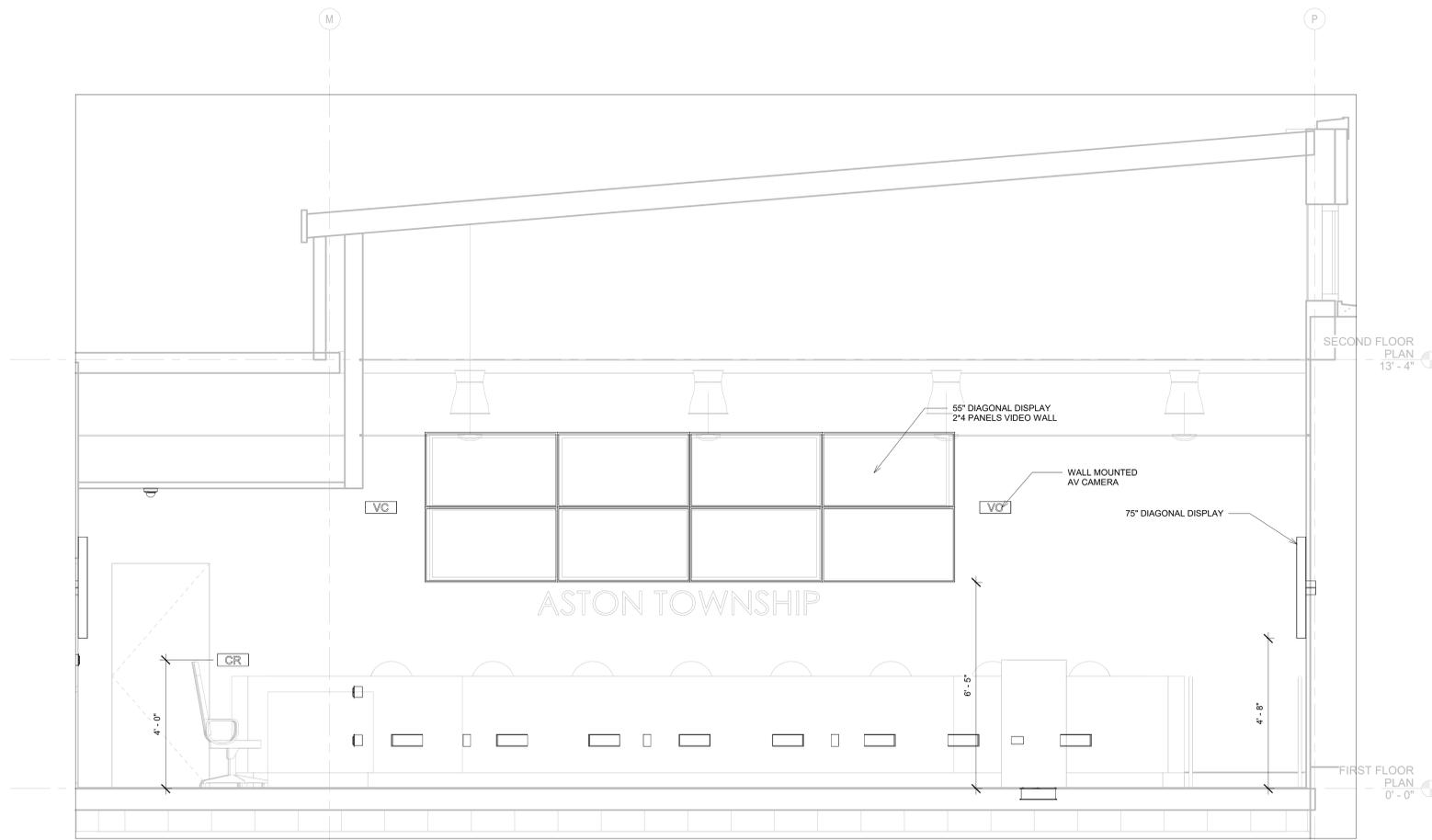
Owner:
ASTON TOWNSHIP
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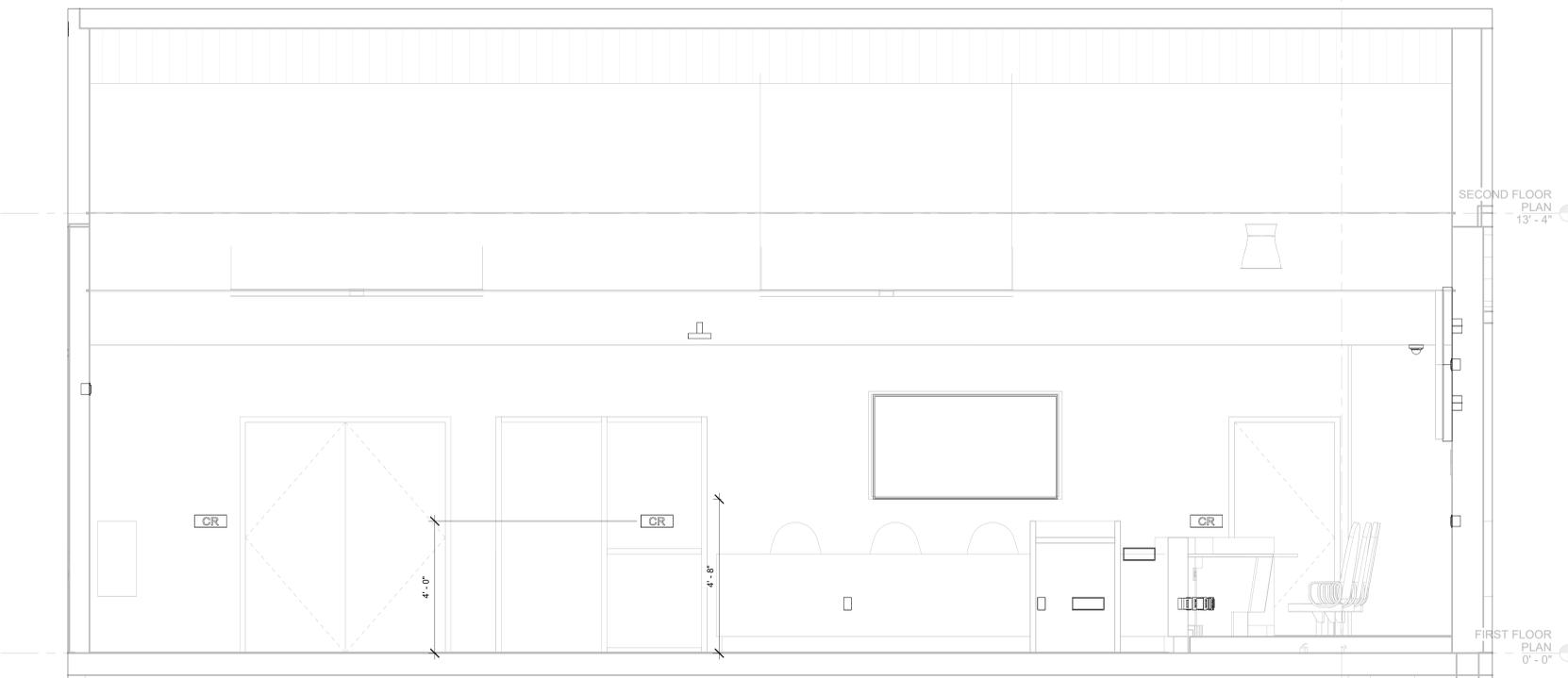
Drawn: AP
 Reviewed: PAS
 Contact: Paul Andrew Sgroi
 Project Number: 2301.00-22

Sheet Title:
AV ELEVATIONS 1

Sheet Number:
TA-400



1 COMMISSIONERS MEETING ROOM FRONT ELEVATION
 1/2" = 1'-0"



2 COMMISSIONERS MEETING ROOM SIDE ELEVATION
 1/2" = 1'-0"

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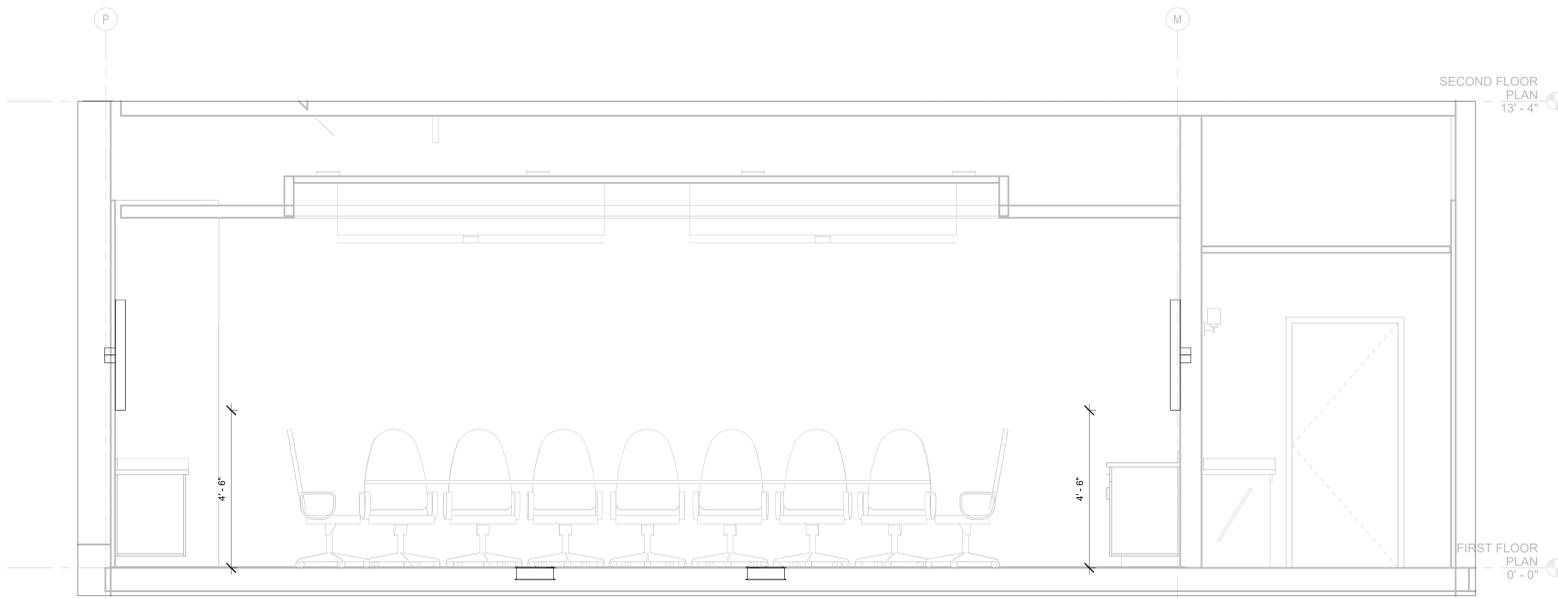
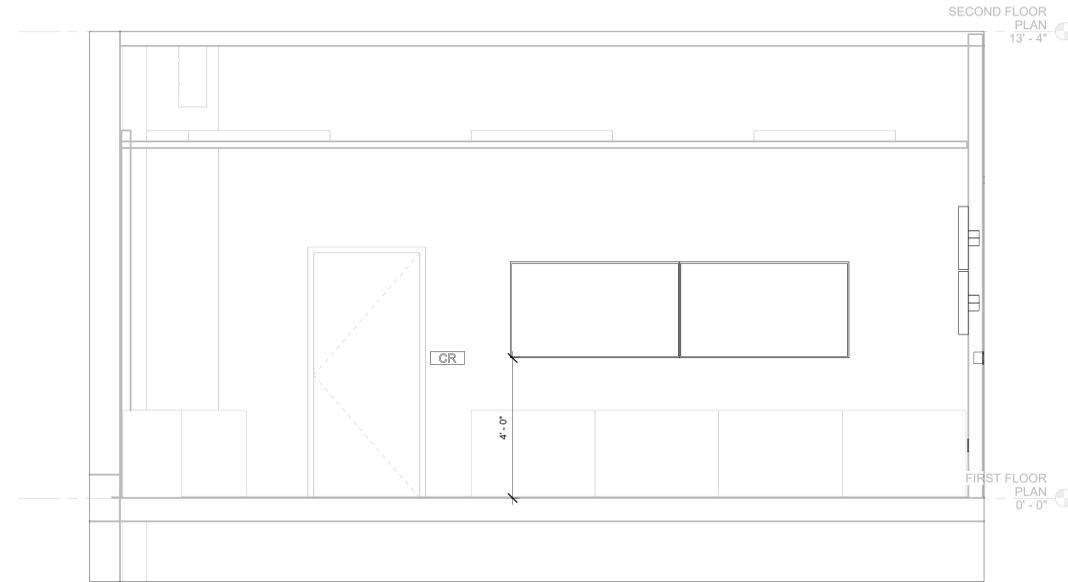
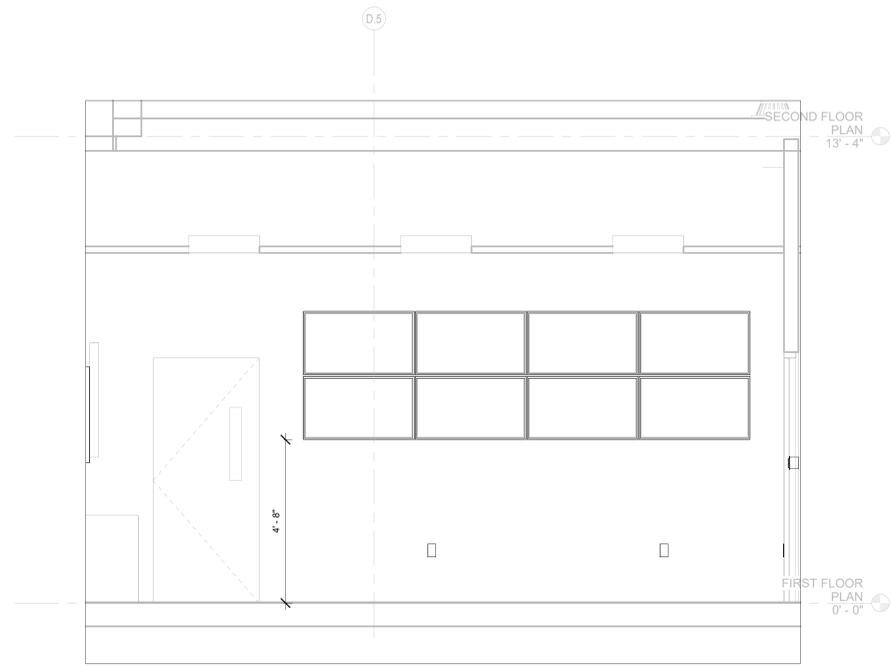
Owner:
ASTON TOWNSHIP
 2 New Road
 Suite 123
 Aston, PA 19014

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Sheet Title:
AV ELEVATIONS 2

Sheet Number:
TA-401



2 CAUCUS ROOM ELEVATION
 1/2" = 1'-0"

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Baltimore, MD
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Project:
ASTON TOWNSHIP MUNICIPAL COMPLEX
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Aston, PA 19014

Revision/Issue:
0 03/29/24 Issued

Drawn: AP
Reviewed: PAS
Contact: Paul Andrew Sgroi
Project Number: 2301.00-22

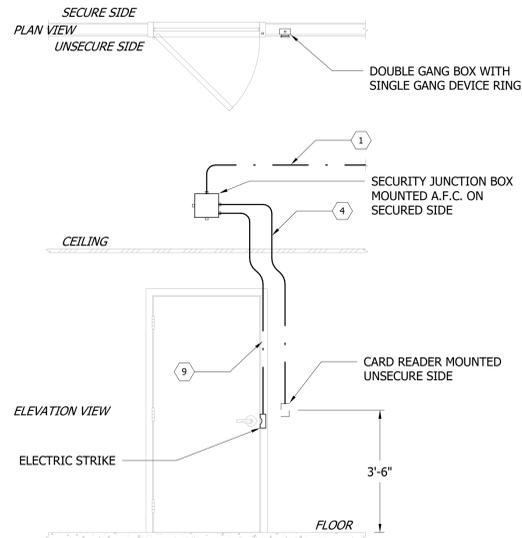
Sheet Title:
ACCESS CONTROL DETAILS

Sheet Number:

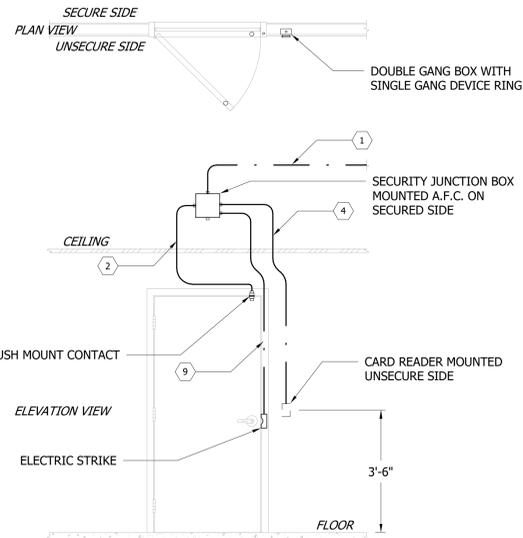
TA-500

KEY LEGEND

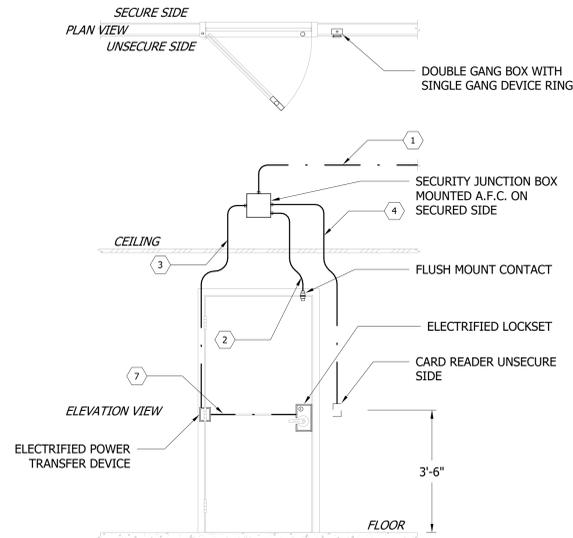
- ① = ONE (1) 1" EC FROM SECURITY JUNCTION BOX TO ACCESS CONTROL PANEL.
- ② = ONE (1) 3/4" EC FROM SECURITY JUNCTION BOX TO DOOR CONTACT MOUNT LOCATION.
- ③ = ONE (1) 3/4" EC FROM SECURITY JUNCTION BOX STUBBED BEHIND DOOR FRAME TO ELECTRIFIED POWER TRANSFER DEVICE.
- ④ = DOUBLE GANG BOX WITH SINGLE GANG DEVICE RING MOUNTED 42" A.F.F. WITH ONE (1) 3/4" TO SECURITY JUNCTION BOX.
- ⑤ = DOUBLE GANG BOX WITH SINGLE GANG DEVICE RING MOUNTED 42" A.F.F. WITH ONE (1) 3/4" TO ADJACENT DOUBLE GANG BOX.
- ⑥ = DOUBLE GANG BOX WITH HORIZONTALLY ARRAYED SINGLE GANG DEVICE RING MOUNTED ABOVE DOOR WITH ONE (1) 3/4" EC TO SECURITY JUNCTION BOX.
- ⑦ = ONE (1) 3/8" CORE DRILL THROUGH DOOR TO LOCKSET .
- ⑧ = ONE (1) 3/4" EC FROM SECURITY JUNCTION BOX TO MAGNETIC LOCK.
- ⑨ = ONE (1) 3/4" EC FROM SECURITY JUNCTION BOX STUBBED BEHIND DOOR FRAME TO ELECTRIC STRIKE.
- ⑩ = AUTOMATIC DOOR OPERATOR. COORDINATE WITH DOOR MANUFACTURER.



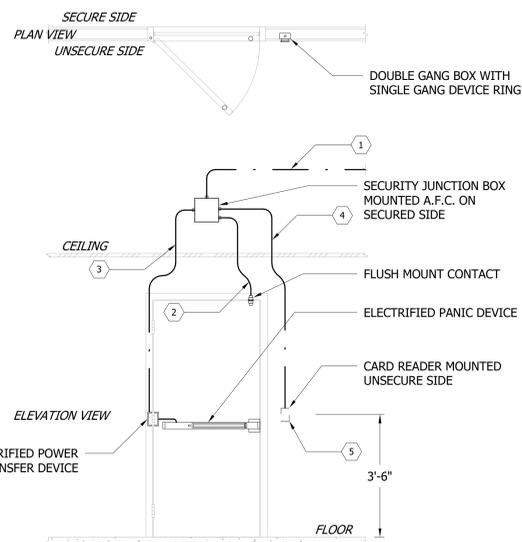
D10 SINGLE DOOR WITH CARD READER UNSECURE SIDE, AND ELECTRIC STRIKE
Scale: NTS



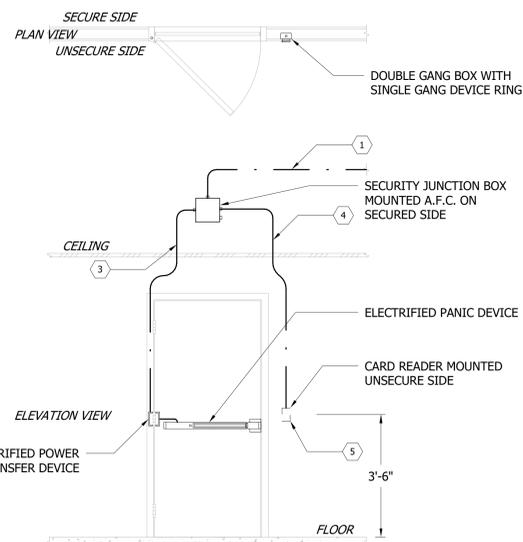
D11 SINGLE DOOR WITH DOOR CONTACT, CARD READER UNSECURE SIDE, AND ELECTRIC STRIKE
Scale: NTS



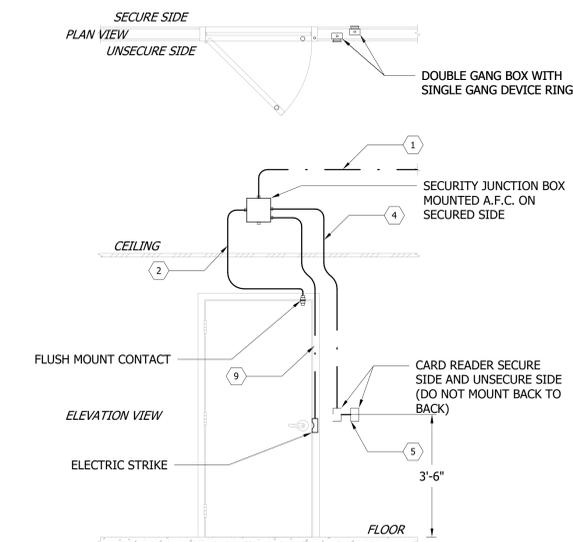
D12 SINGLE DOOR WITH DOOR CONTACT, CARD READER UNSECURE SIDE, POWER TRANSFER DEVICE AND ELECTRIFIED LOCKSET
Scale: NTS



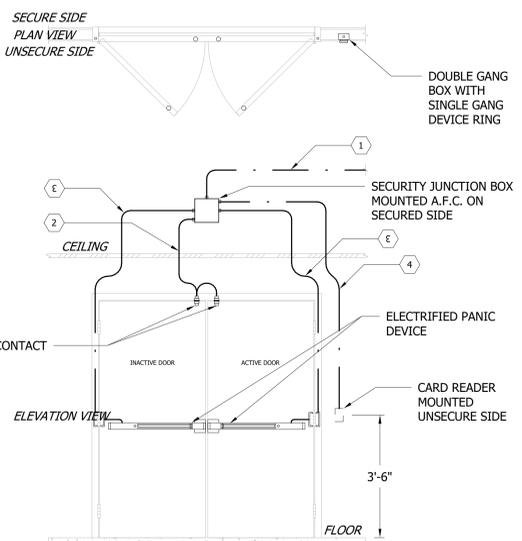
D13 SINGLE DOOR WITH DOOR CONTACT, CARD READER UNSECURE SIDE, POWER TRANSFER DEVICE, AND ELECTRIFIED PANIC DEVICE
Scale: NTS



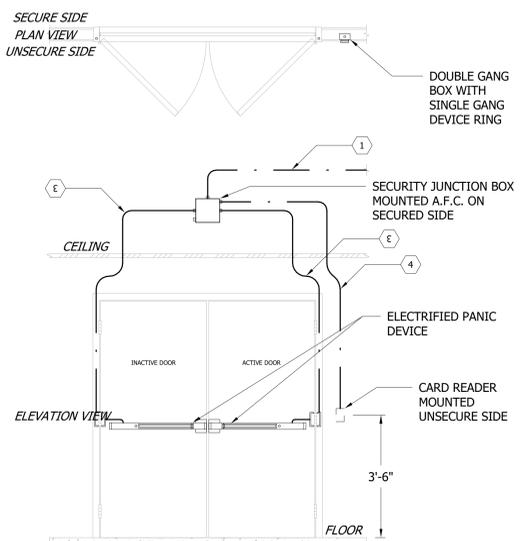
D14 SINGLE DOOR WITH CARD READER UNSECURE SIDE, POWER TRANSFER DEVICE, AND ELECTRIFIED PANIC DEVICE
Scale: NTS



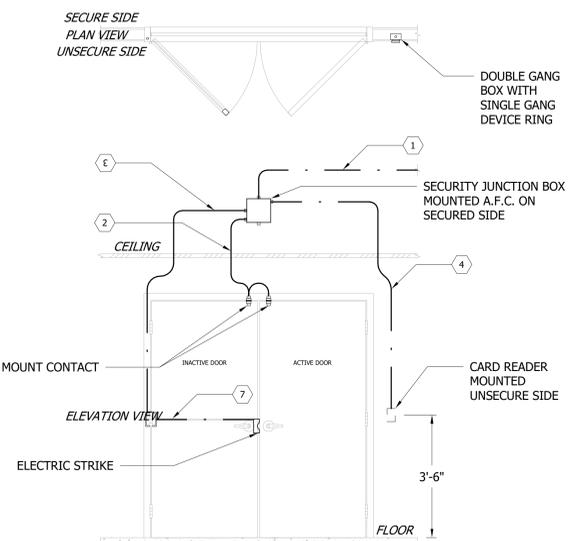
D15 SINGLE DOOR WITH DOOR CONTACT, CARD READER BOTH SECURE AND UNSECURE SIDE, AND ELECTRIC STRIKE
Scale: NTS



D20 DOUBLE DOOR WITH DOOR CONTACT, CARD READER UNSECURE SIDE, POWER TRANSFER DEVICE, AND ELECTRIFIED PANIC DEVICE
Scale: NTS



D21 DOUBLE DOOR WITH CARD READER UNSECURE SIDE, POWER TRANSFER DEVICE, AND ELECTRIFIED PANIC DEVICE
Scale: NTS



D22 DOUBLE DOOR WITH CARD READER UNSECURE SIDE, POWER TRANSFER DEVICE, AND ELECTRIC STRIKE
Scale: NTS

Consultant:

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Revision/Issue:
 0 03/29/24 Issued

Drawn: AP
 Reviewed: PAS
 Contact: Paul Andrew Sgroi
 Project Number: 2301.00-22

Sheet Title:
**ACCESS CONTROL
 DOOR SCHEDULE**

Sheet Number:

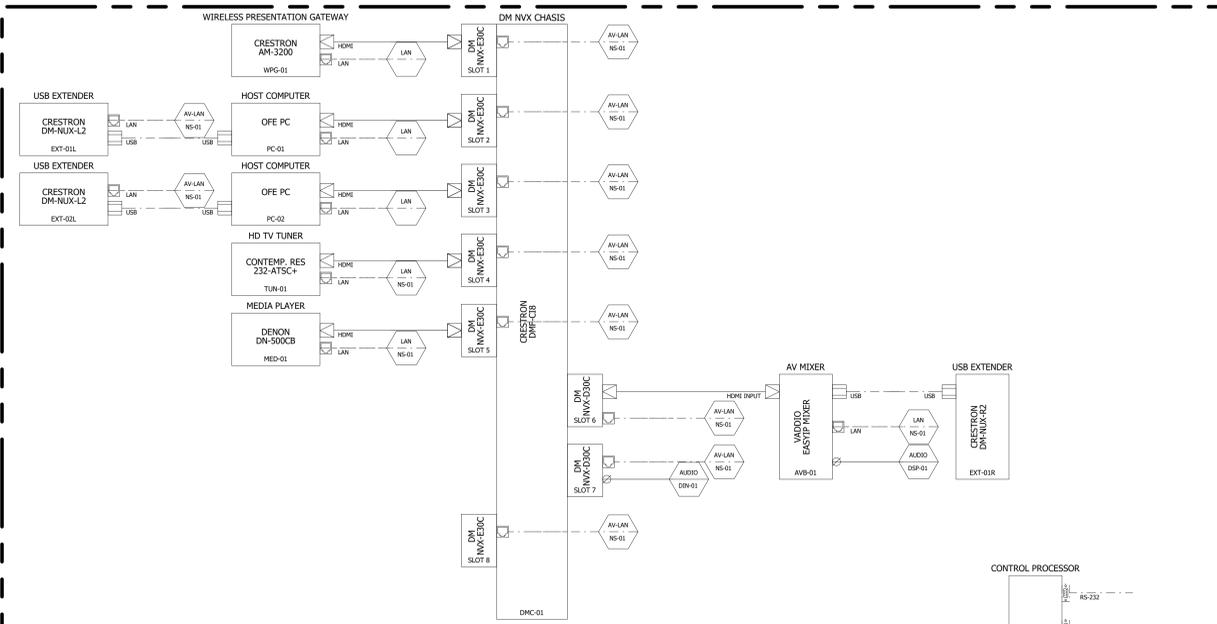
TA-501

ELECTRONIC ACCESS CONTROL DOOR SCHEDULE

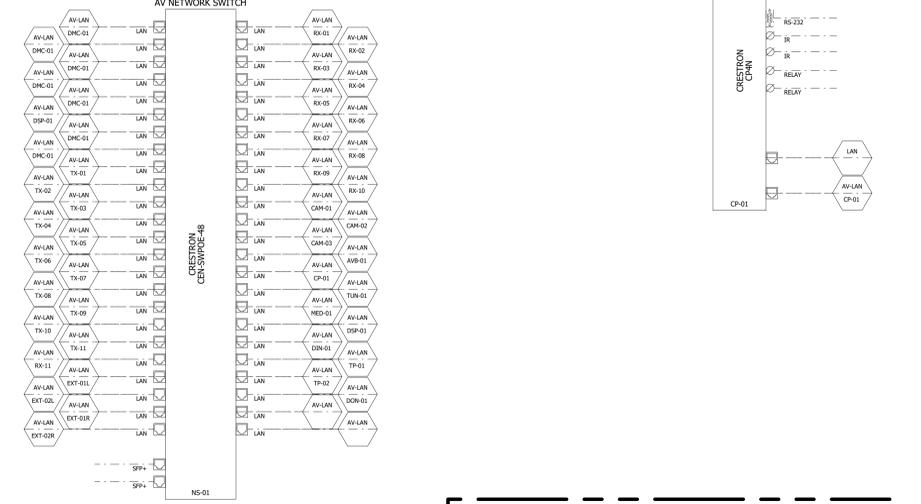
Level	Door Number	Door Type	Single/Double	Telecom Room	Door Contact	Electronic Locking Mechanism	Card Reader (Unsecure Side)	Electronic Locking Mechanism (2nd Lead)	Comments
FIRST FLOOR PLAN	1S2A	D13	SINGLE	IDF 105	Yes	EED / EPT	Yes		
FIRST FLOOR PLAN	1S2B	D14	SINGLE	IDF 105	No	EED / EPT	Yes		Integrate with Fire Alarm System
FIRST FLOOR PLAN	100	D20	DOUBLE	IDF 105	Yes	EED / EPT	Yes	EED / EPT	
FIRST FLOOR PLAN	102A	D10	SINGLE	IDF 105	No	ES	Yes		
FIRST FLOOR PLAN	102B	D10	SINGLE	IDF 105	No	ES	Yes		
FIRST FLOOR PLAN	103	D11	SINGLE	IDF 105	Yes	ES	Yes		
FIRST FLOOR PLAN	104	D10	SINGLE	IDF 105	No	ES	Yes		
FIRST FLOOR PLAN	105	D11	SINGLE	IDF 105	Yes	ES	Yes		
FIRST FLOOR PLAN	106	D11	SINGLE	IDF 105	Yes	ES	Yes		
FIRST FLOOR PLAN	107	D11	SINGLE	IDF 105	Yes	ES	Yes		
FIRST FLOOR PLAN	108	D10	SINGLE	IDF 105	No	ES	Yes		
FIRST FLOOR PLAN	110	D10	SINGLE	IDF 105	No	ES	Yes		
FIRST FLOOR PLAN	111	D15	SINGLE	IDF 105	Yes	ES	Yes		
FIRST FLOOR PLAN	113A	D15	SINGLE	IDF 105	Yes	ES	Yes		
FIRST FLOOR PLAN	114A	D13	SINGLE	IDF 105	Yes	EED / EPT	Yes		
FIRST FLOOR PLAN	115A	D10	SINGLE	IDF 105	No	ES	Yes		
FIRST FLOOR PLAN	115B	D10	SINGLE	IDF 105	No	ES	Yes		
FIRST FLOOR PLAN	116	D10	SINGLE	IDF 105	No	ES	Yes		
FIRST FLOOR PLAN	117	D10	SINGLE	IDF 105	No	ES	Yes		
FIRST FLOOR PLAN	118	D10	SINGLE	IDF 105	No	ES	Yes		
FIRST FLOOR PLAN	119	D10	SINGLE	IDF 105	No	ES	Yes		
FIRST FLOOR PLAN	120	D10	SINGLE	IDF 105	No	ES	Yes		
FIRST FLOOR PLAN	121	D10	SINGLE	IDF 105	No	ES	Yes		
FIRST FLOOR PLAN	122	D10	SINGLE	IDF 105	No	ES	Yes		
FIRST FLOOR PLAN	124	D10	SINGLE	IDF 105	No	ES	Yes		
FIRST FLOOR PLAN	125	D10	SINGLE	IDF 105	No	ES	Yes		
FIRST FLOOR PLAN	126A	D10	SINGLE	IDF 105	No	ES	Yes		
FIRST FLOOR PLAN	126B	D11	SINGLE	IDF 105	Yes	ES	Yes		
FIRST FLOOR PLAN	130	D10	SINGLE	IDF 105	No	ES	Yes		
FIRST FLOOR PLAN	131	D10	SINGLE	IDF 105	No	ES	Yes		
FIRST FLOOR PLAN	132	D10	SINGLE	IDF 105	No	ES	Yes		
FIRST FLOOR PLAN	152	D13	SINGLE	IDF 105	Yes	EED / EPT	Yes		
FIRST FLOOR PLAN	153A	D21	DOUBLE	IDF 105	No	EED / EPT	Yes	EED / EPT	Integrate with Fire Alarm System
FIRST FLOOR PLAN	153B	D21	DOUBLE	IDF 105	No	EED / EPT	Yes	EED / EPT	Integrate with Fire Alarm System
FIRST FLOOR PLAN	154	D22	DOUBLE	IDF 105	No	ES / EPT	Yes		
FIRST FLOOR PLAN	155	D11	SINGLE	IDF 105	Yes	ES	Yes		
FIRST FLOOR PLAN	156	D10	SINGLE	IDF 105	No	ES	Yes		
FIRST FLOOR PLAN	157A	D10	SINGLE	IDF 105	No	ES	Yes		
FIRST FLOOR PLAN	157B	D13	SINGLE	IDF 105	Yes	EED / EPT	Yes		
FIRST FLOOR PLAN	E01	D10	SINGLE	IDF 105	No	ES	Yes		
SECOND FLOOR PLAN	2S2	D14	SINGLE	IDF 216	No	EED / EPT	Yes		Integrate with Fire Alarm System
SECOND FLOOR PLAN	201	D11	SINGLE	IDF 216	Yes	ES	Yes		
SECOND FLOOR PLAN	203	D10	SINGLE	IDF 216	No	ES	Yes		
SECOND FLOOR PLAN	204A	D10	SINGLE	IDF 216	No	ES	Yes		
SECOND FLOOR PLAN	204B	D10	SINGLE	IDF 216	No	ES	Yes		
SECOND FLOOR PLAN	205	D10	SINGLE	IDF 216	No	ES	Yes		
SECOND FLOOR PLAN	206	D10	SINGLE	IDF 216	No	ES	Yes		
SECOND FLOOR PLAN	207	D10	SINGLE	IDF 216	No	ES	Yes		
SECOND FLOOR PLAN	208	D10	SINGLE	IDF 216	No	ES	Yes		
SECOND FLOOR PLAN	210A	D10	SINGLE	IDF 216	No	ES	Yes		
SECOND FLOOR PLAN	210B	D12	SINGLE	IDF 216	Yes	EL / EPT	Yes		
SECOND FLOOR PLAN	214	D10	SINGLE	IDF 216	No	ES	Yes		
SECOND FLOOR PLAN	216	D10	SINGLE	IDF 216	No	ES	Yes		
SECOND FLOOR PLAN	217	D10	SINGLE	IDF 216	No	ES	Yes		
SECOND FLOOR PLAN	219	D10	SINGLE	IDF 216	No	ES	Yes		
SECOND FLOOR PLAN	220	D10	SINGLE	IDF 216	No	ES	Yes		
SECOND FLOOR PLAN	221	D10	SINGLE	IDF 216	No	ES	Yes		
SECOND FLOOR PLAN	223A	D10	SINGLE	IDF 216	No	ES	Yes		
SECOND FLOOR PLAN	224	D10	SINGLE	IDF 216	No	ES	Yes		
SECOND FLOOR PLAN	233	D10	SINGLE	IDF 216	No	ES	Yes		

Grand total: 60

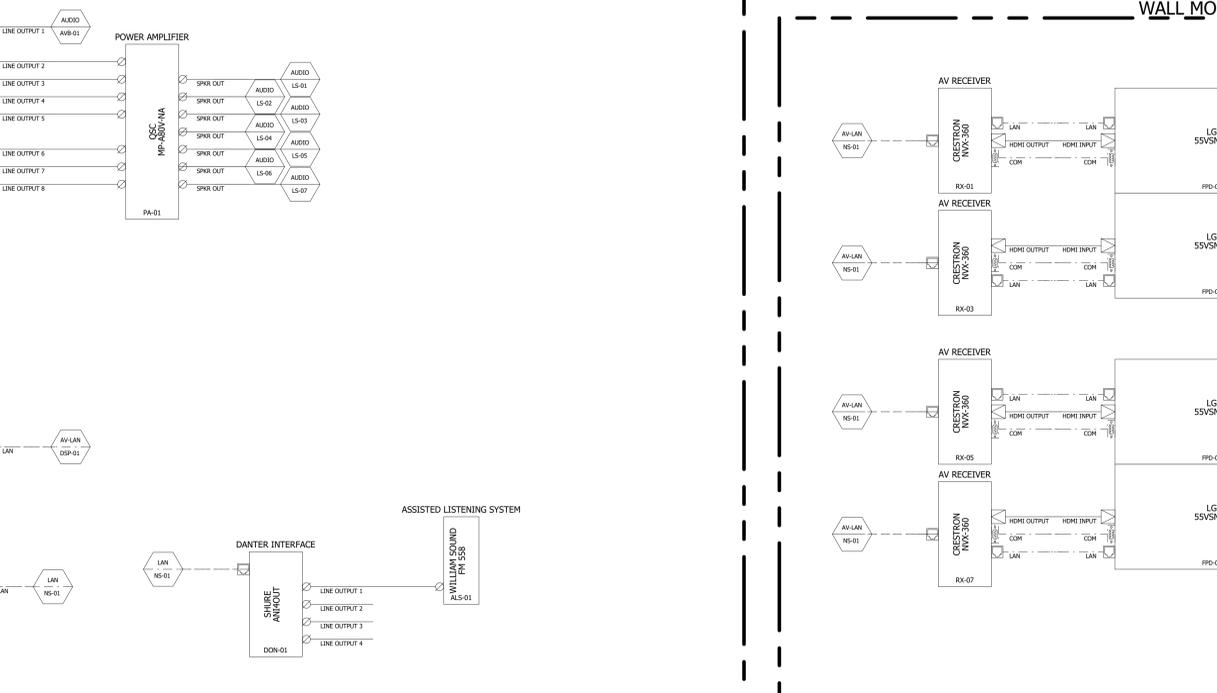
RACK MOUNTED EQUIPMENT



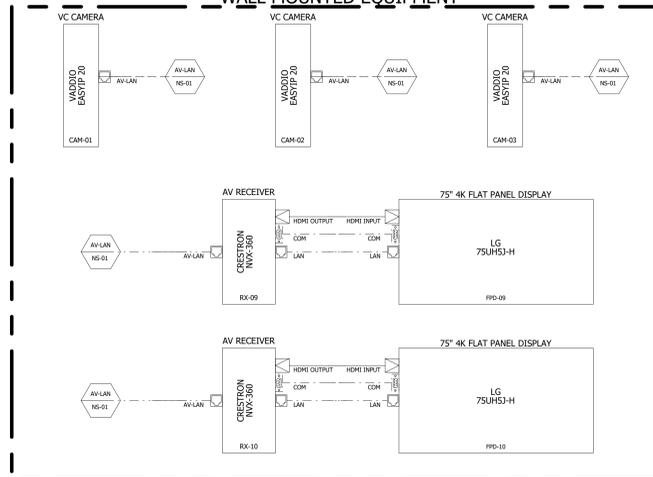
AV NETWORK SWITCH



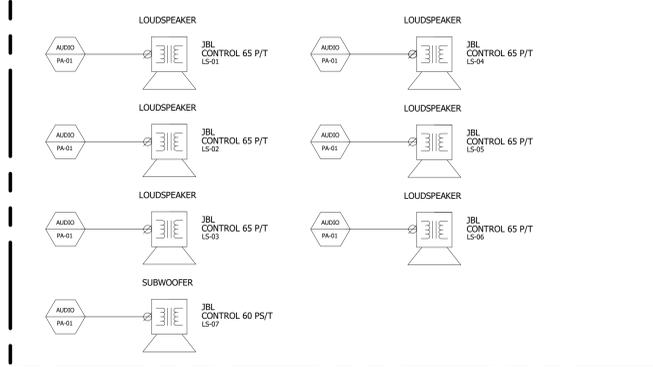
ASSISTED LISTENING SYSTEM



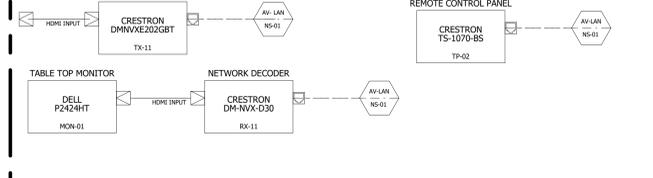
WALL MOUNTED EQUIPMENT



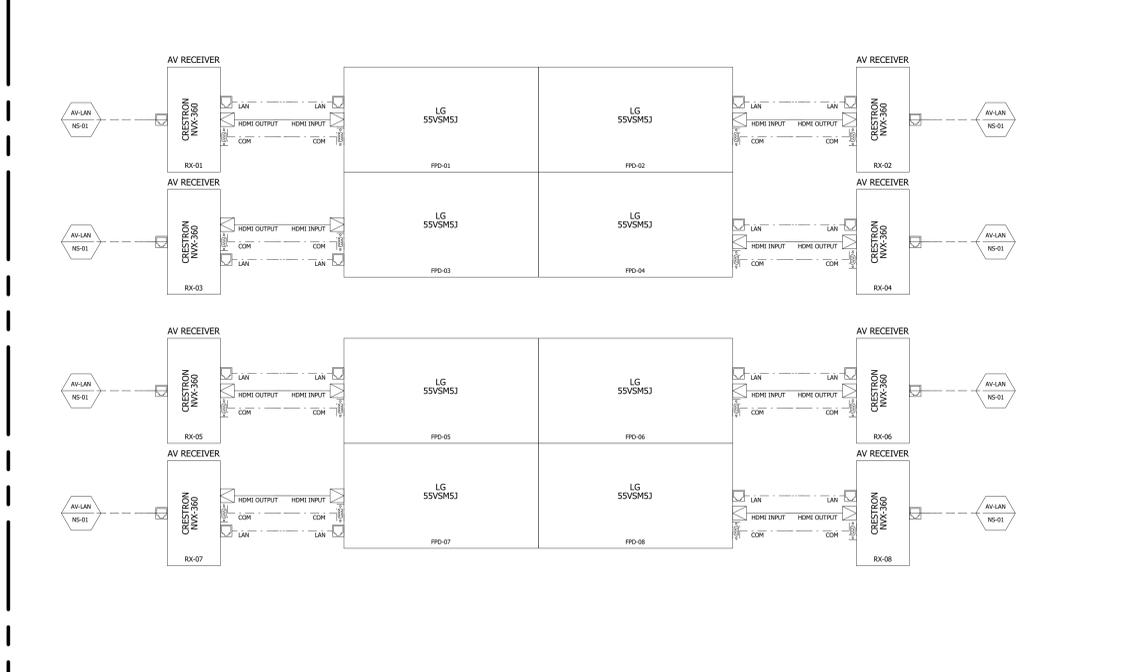
CEILING MOUNTED ELEMENTS



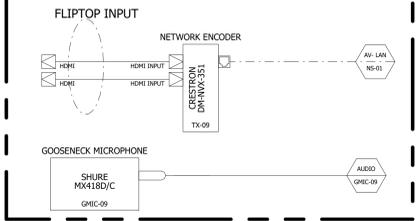
EQUIPMENT IN AV MONITOR ROOM 155



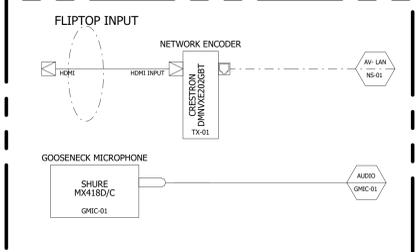
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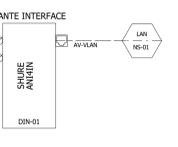
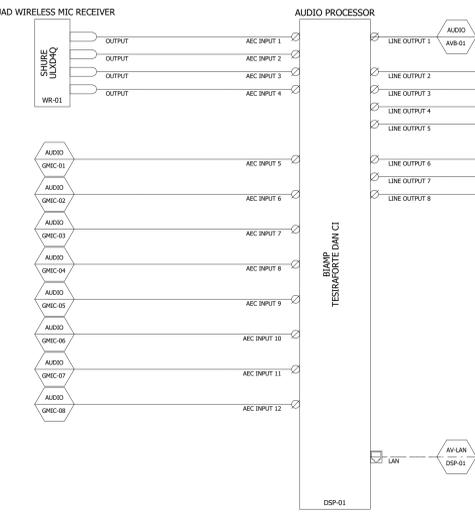
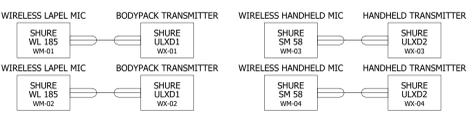
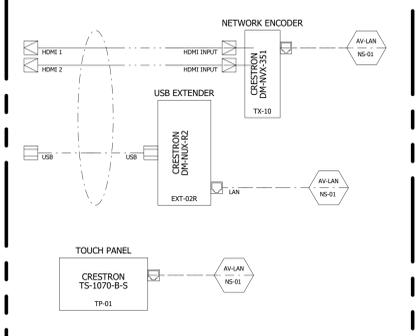
PODIUM MOUNTED EQUIPMENT (PROVIDE PODIUM AS PER SPEC)



DAIS MOUNTED EQUIPMENT (TYPICAL OF 8)



OPERATORS DESK LOCATED EQUIPMENT



Consultant:
CONVERGENT TECHNOLOGIES DESIGN GROUP
 6501 York Road
 Baltimore, MD
 21212
 646-475-5116

Project:
ASTON TOWNSHIP MUNICIPAL COMPLEX
 3270 Concord Road
 Aston, PA 19014

Owner:
ASTON TOWNSHIP
 2 New Road
 Suite 123
 Aston, PA 19014

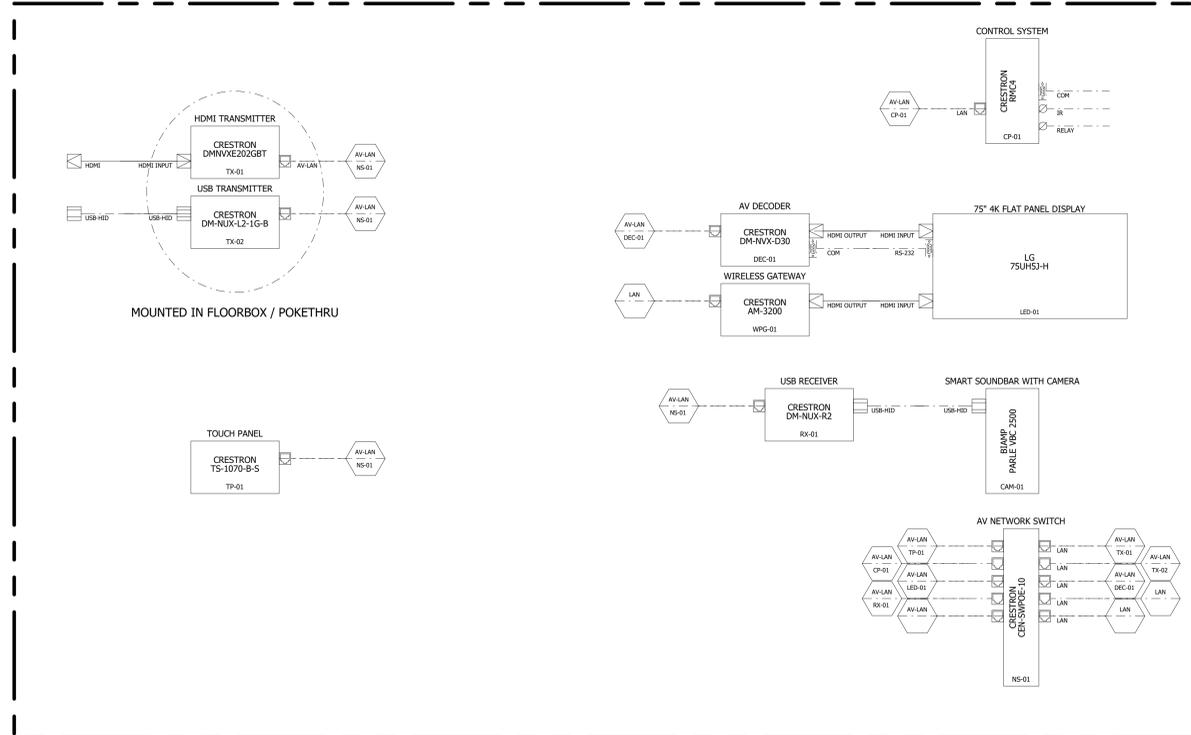
Revision/Issue:
 0 03/29/24 Issued

Drawn: AP
 Reviewed: PAS
 Contact: Paul Andrew Sgroi
 Project Number: 2301.00-22

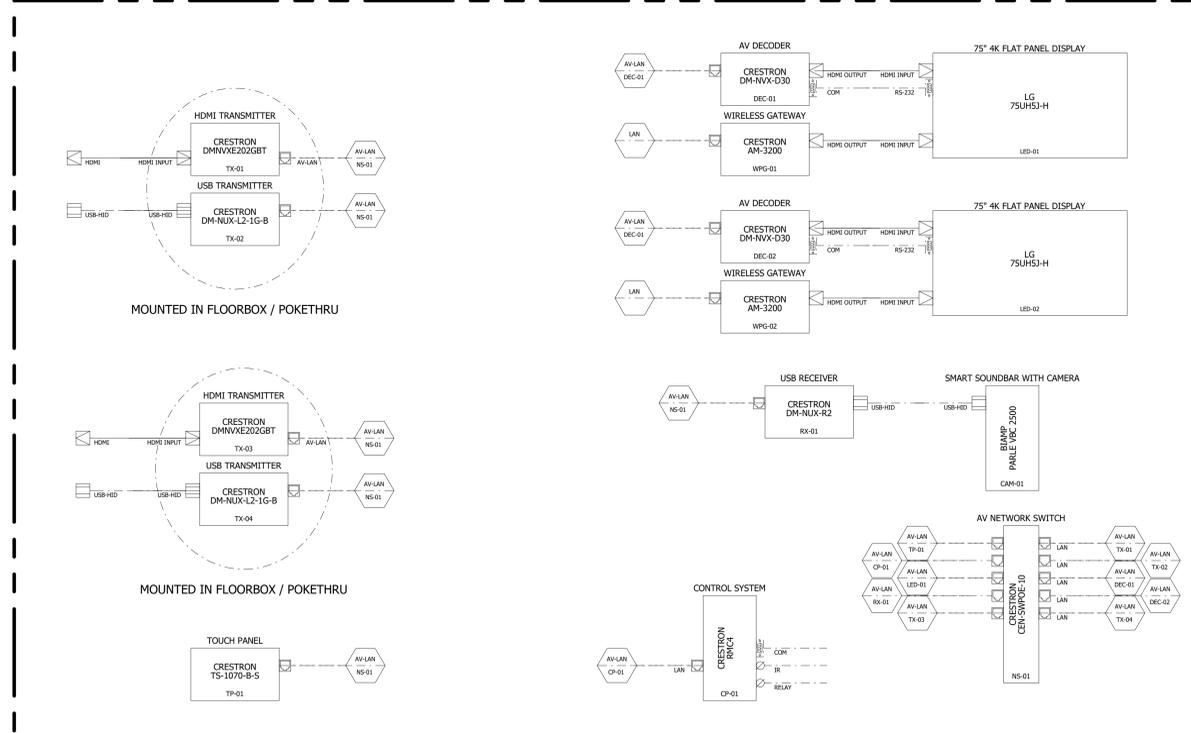
Sheet Title:
AV SIGNAL FLOW TYPICAL CONFERENCE ROOMS
 Sheet Number:

TA-503

CONFERENCE ROOM 124 AND 220 / MEETING ROOM 201 / DETECTIVE ROOM 118 SIGNAL FLOW



CAUCUS ROOM 157 SIGNAL FLOW



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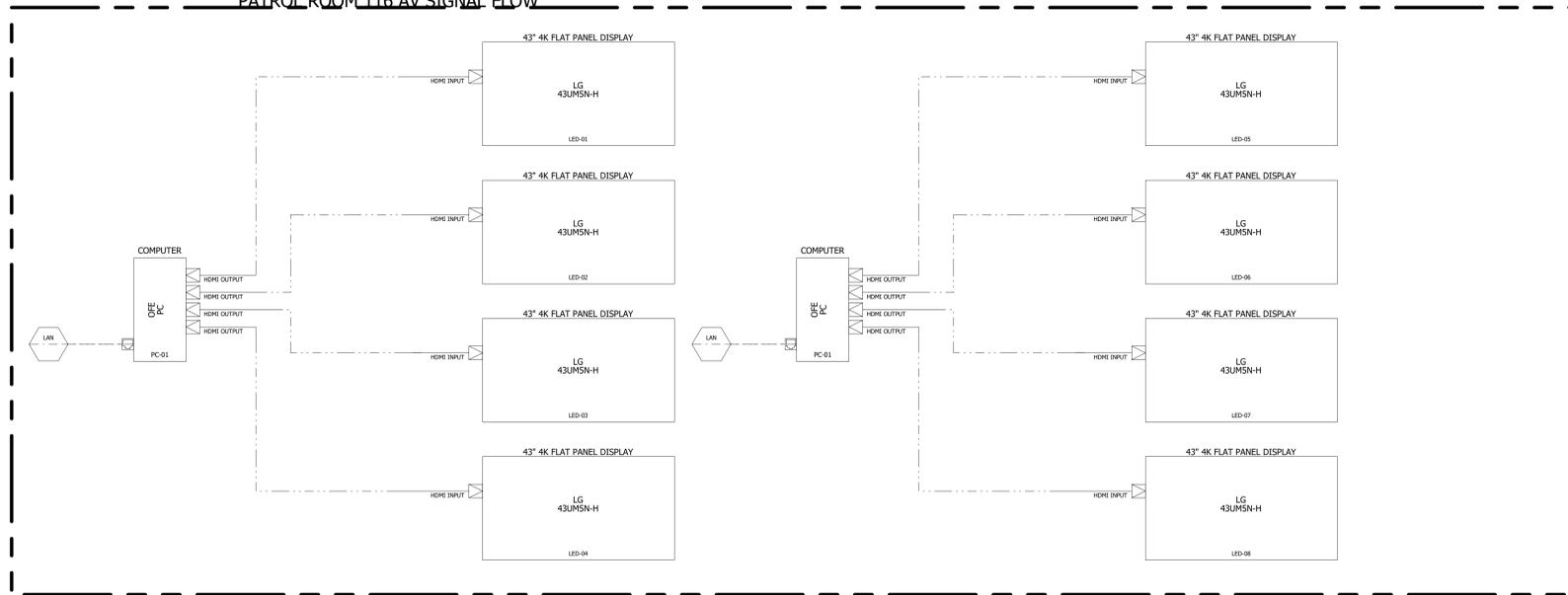
Revision/Issue:
 0 03/29/24 Issued

Drawn: AP
 Reviewed: PAS
 Contact: Paul Andrew Sgroi
 Project Number: 2301.00-22

Sheet Title:
AV SIGNAL FLOW
MISC SPACES

Sheet Number:
TA-504

PATROL ROOM 116 AV SIGNAL FLOW



DIGITAL SIGNAGE / TV DISPLAYS

