	MECHANICAL GENERAL NOTES
1.	THE DRAWINGS INDICATE THE GENERAL SCOPE OF WORK ASSOCIATED WITH THE INSTALLATION OF HVAC EQUIPMENT AND SYSTEMS BUT ARE NOT NECESSARILY INCLUSIVE OF ACTUAL CONDITIONS. THE FULL EXTENT OF THE WORK SHALL BE DETERMINED IN THE FIELD BASED ON THE ACTUAL CONDITIONS ENCOUNTERED AND AS REQUIRED FOR THE SATISFACTORY EXECUTION OF THE NEW WORK.
2.	THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF THE EQUIPMENT AND SYSTEMS IN ACCORDANCE WITH THE PROJECT CONSTRUCTION SCHEDULE.
3.	THE CONTRACTOR SHALL COORDINATE THE INSTALLATION AND SCHEDULING OF THEIR WORK WITH ALL OTHER TRADES (PLUMBING, ELECTRICAL, GENERAL ETC.). ANY CONFLICTS DUE TO FAILURE OF THIS CONTRACTOR TO COORDINATE WORK WITH OTHER TRADES SHALL BE THEIR RESPONSIBILITY TO RESOLVE.
4.	ALL CUTTING AND PATCHING OF WALLS, FLOORS, ROOFS, AND CEILINGS, AS REQUIRED TO INSTALL DUCTWORK, PIPING, ROOF CURBS ETC. SHALL BE PERFORMED BY THIS CONTRACTOR UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS. PATCHING SHALL MATCH EXISTING METHODS, MATERIALS OF CONSTRUCTION, AND ADJACENT FINISHES.
5.	WHERE THE DRAWINGS SPECIFICALLY INDICATE, CUTTING AND PATCHING IS TO BE PERFORMED BY THE GENERAL CONTRACTOR. THE CONTRACTOR SHALL VERIFY THE DIMENSIONS AND EXACT LOCATIONS OF THE OPENINGS.
6.	THE CONTRACTOR SHALL PROVIDE ALL METHODS AND MATERIALS FOR SUPPORTING ALL EQUIPMENT, PIPING, AND DUCTWORK FURNISHED UNDER THIS CONTRACT. IN AREAS OF BAR JOIST CONSTRUCTION ALL PIPING, DUCTWORK, AND SUSPENDED EQUIPMENT WITH A CONCENTRATED LOAD (I.E. HANGERS) IN EXCESS OF 150 LBS. SHALL BE SUPPORTED FROM THE TOP CHORD OF THE BAR JOISTS. DO NOT HANG ANY PIPING OR DUCTWORK FROM THE ROOF DECK.
7.	VERIFY THE FINAL MOUNTING HEIGHTS AND LOCATIONS OF LOUVERS, BRICK VENTS, CABINET HEATERS, SIDEWALL GRILLES AND REGISTERS, AND ALL OTHER VISIBLE EQUIPMENT WITH THE ARCHITECTURAL INTERIOR AND EXTERIOR ELEVATIONS.
8.	COORDINATE FINAL CEILING GRILLE AND DIFFUSER LOCATIONS WITH ARCHITECTURAL REFLECTED CEILING PLANS, FIRE PROTECTION PLANS, AND ELECTRICAL/TECHNOLOGY PLANS.
9.	SEAL ALL DUCT AND PIPING PENETRATIONS OF FIRE AND SMOKE RATED PARTITIONS AND FLOORS WITH FIRE STOPPING MATERIALS AS SPECIFIED IN THE DIVISION 1 SPECIFICATIONS. WHERE FIRESTOPPING MATERIALS ARE NOT SPECIFIED IN DIVISION 1, ALL FIRESTOPPING MATERIALS SHALL BE U.L. LISTED FOR USE AND AS MANUFACTURED BY 3M OR EQUAL.
10.	PROVIDE ACOUSTICAL SEALS AROUND ALL DUCTWORK AND PIPING PENETRATIONS OF INTERIOR ACOUSTICALLY RATED PARTITIONS. REFER TO THE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF ACOUSTICAL PARTITIONS.
11.	ALL ADJUSTABLE THERMOSTATS, SENSORS AND SWITCHES INTENDED FOR NORMAL USE BY THE BUILDING'S OCCUPANTS SHALL BE MOUNTED 48" A.F.F. TO THE TOP OF THE DEVICE IN ACCORDANCE WITH ADA REQUIREMENTS.
12.	DO NOT UTILIZE AIR HANDLING EQUIPMENT AND DUCTED AIR SYSTEMS FURNISHED UNDER THIS CONTRACT AS A MEANS OF TEMPORARY HEAT DURING CONSTRUCTION. OBTAIN WRITTEN APPROVAL FROM THE ENGINEER PRIOR TO PLACING EQUIPMENT IN SUSTAINED OPERATION.
13.	BOTTOM OF DUCT AND BOTTOM OF PIPE ELEVATIONS ARE FOR REFERENCE ONLY, FINAL ELEVATIONS ARE SUBJECT TO ACTUAL FIELD CONDITIONS. FIELD VERIFY ALL CLEARANCES AND DIMENSIONS PRIOR TO FABRICATING AND INSTALLING DUCTWORK AND PIPING. COORDINATE DUCT AND PIPING INSTALLATIONS WITH ALL OTHER TRADES TO AVOID INTERFERENCE WITH LIGHT FIXTURES, SPRINKLERS, SPEAKERS, ETC.
14.	ALL DUCT DIMENSIONS ARE CLEAR INSIDE DIMENSIONS. FIELD VERIFY ACTUAL CLEARANCES AND CONDITIONS PRIOR TO FABRICATING DUCTWORK. DO NOT ORDER FIRE DAMPERS UNTIL VERIFYING ACTUAL CONDITIONS AND DIMENSIONS.
15.	SUBMIT SHEET METAL SHOP DRAWINGS TO SCALE 3/8" = 1'-0", DETAILING DUCTWORK, HVAC EQUIPMENT AND DIFFUSERS. SHOP DRAWINGS SHALL BE DIMENSIONED, SHALL INDICATE DUCT ELEVATIONS, AND SHALL DEPICT CEILING GRID, STRUCTURAL STEEL, LIGHT FIXTURES, SPRINKLER HEADS, AND PLUMBING AND HVAC PIPING MAINS.
16.	THE CONTRACTOR SHALL FURNISH ALL ACCESS DOORS IN WALLS AND PLASTER CEILINGS AS REQUIRED TO ACCESS VOLUME DAMPERS, FIRE DAMPERS, AND OTHER SERVICEABLE DEVICES. ACCESS DOORS SHALL BE UL LISTED WHEN INSTALLED IN RATED CONSTRUCTION. FIELD VERIFY ACCESS DOOR LOCATIONS AND SIZES WITH ARCHITECT.
17.	PROVIDE LOCATION/IDENTIFICATION MARKERS ON CEILING T-BAR GRIDS (OR ON CEILING ACCESS DOORS AS APPLICABLE) JUST BELOW CONCEALED SHUT-OFF VALVES, CONTROL VALVES, AND HVAC EQUIPMENT.
18.	ALL ROUND DUCTWORK SHALL BE ROUND SPIRAL DUCT EXCEPT WHERE NOTED AS FLEXIBLE. ROUND FLEXIBLE DUCTWORK IS LIMITED TO LOCATIONS ONLY AS SHOWN ON THE DRAWINGS. MAXIMUM LENGTH SHALL NOT EXCEED 6'-0".
19.	THE CONTRACTOR SHALL COORDINATE THE RIGGING, MOVING AND HOISTING OF EQUIPMENT FURNISHED UNDER THIS CONTRACT WITH EXISTING ARCHITECTURAL CONSTRAINTS.
20.	DUCT SMOKE DETECTORS SHALL BE FURNISHED BY E.C., INSTALLED BY H.C. WIRING TO SHUT DOWN UNIT/ CLOSE DAMPER SHALL BE BY H.C. AND WIRING TO FIRE ALARM PANEL SHALL BE BY E.C.
21.	ALL CONDENSATE AND CLEAN, CLEAR WATER FROM MECHANICAL EQUIPMENT MUST BE PIPED TO A DRAIN CONNECTED TO THE STORM SYSTEM AND NOT SANITARY.
22.	ALL REFRIGERANT PIPE SIZES SHALL BE VERIFIED BY THE CONDENSING UNIT MANUFACTURER.

	M	EC
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H.C. /	′ M.C.	ME
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P.	C.	F
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<u>NOTE</u> : N	OT ALL S	L YMB

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IBC	
IMC	
IEEC	
IFGC	
NFPA	
NEC	

CHANICAL SYMBO	LS & ABBR	EVIATIONS
GENERAL CONTRACTOR	C.D.	CONDENSATE DRAIN
MECHANICAL CONTRACTOR	F.D.	FLOOR DRAIN
ELECTRICAL CONTRACTOR	RS	REFRIGERANT SUCTION
PLUMBING CONTRACTOR	RL	REFRIGERANT LIQUID
SUPPLY AIR	—— HWS——	HOT WATER SUPPLY
RETURN AIR	HWR	HOT WATER RETURN
TRANSFER AIR	CWS	CHILLED WATER SUPPLY
EXHAUST AIR	CWR	CHILLED WATER RETURN
OUTSIDE AIR	CS	CONDENSER WATER SUPPLY
ABOVE FINISHED FLOOR	CR	CONDENSER WATER RETURN
ACOUSTCAL LINING	FOS	FUEL OIL SUPPLY
OPEN END DUCT	FOR	FUEL OIL RETURN
NORMALLY CLOSED	LPS	LOW PRESSURE STEAM SUPPLY
NORMALLY OPEN	LPR	LOW PRESSURE STEAM RETURN
DISCONNECT SWITCH		GATE/BUTTERFLY VALVE
REMOVE EXISTING		BALL VALVE
CONNECT TO EXISTING		BALANCING VALVE
SUPPLY AIR DIFFUSER/DROP/RISE		3-WAY ATC VALVE
RETURN AIR GRILLE/DROP/RISE	陸盟	2-WAY ATC VALVE
EXHAUST AIR GRILLE/DROP/RISE		AUTOMATIC FILL VALVE
DUCT MOUNTED SMOKE DETECTOR	─────	RELIEF VALVE
TEMPERATURE/HUMIDITY SENSOR	- ↓ 1 1	CHECK VALVE
CARBON DIOXIDE SENSOR		TRIPLE DUTY VALVE
SWITCH	-↓ B	STRAINER
PRESSURE SENSOR		PIPE ANCHOR
VOLUME DAMPER	— <b>A</b>	PIPE GUIDE
AUTOMATIC TEMPERATURE CONTROL DAMPER		FLEXIBLE CONNECTION
BACKDRAFT DAMPER		THERMOMETER
SMOKE DAMPER		PRESSURE GAUGE
ACCESS PANEL		OS&Y VALVE
FIRE DAMPER		PRESSURE REDUCING VALVE
DIFFERENTIAL PRESSURE SENSOR		UNION
IBOLS & ABBREVIATIONS SHC	WN ARE USED ON	N THIS PROJECT.

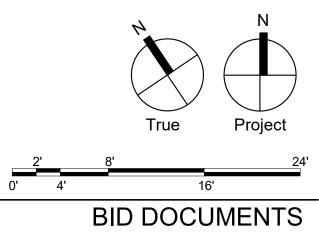
	MECHANICAL E	EQUIPMEN	T TAGS
(AAC)	AMBIENT AIR CLEANER	FCU	FAN COIL UNIT
#	# = MARK	#	# = MARK
ACC	AIR-COOLED CHILLER	FOP	FUEL OIL TRANSFER PUMP
#	# = MARK	#	# = MARK
AHU	AIR HANDLING UNIT	FPV	FAN POWERED VAV BOX
#	# = MARK	#	# = MARK
B	BOILER	GF	GAS FURNACE
#	# = MARK	#	# = MARK
BCU	BLOWER COIL UNIT	GRV	GRAVITY RELIEF VENT
#	# = MARK	#	# = MARK
C	CONVECTOR	GUH	GAS-FIRED UNIT HEATER
#	# = MARK	#	# = MARK
CH	CABINET HEATER	H	HUMIDIFIER
#	# = MARK	#	# = MARK
CHL	WATER-COOLED CHILLER	HEX	HEAT EXCHANGER
#	# = MARK	#	# = MARK
CP	CONDENSATE PUMP	(HP	HEAT PUMP
#	# = MARK	#	# = MARK
CRAC	COMPUTER ROOM AC UNIT	HRU	HEAT RECOVERY UNIT
#	# = MARK	#	# = MARK
CT	COOLING TOWER	HWC	HOT WATER COIL
#	# = MARK	#	# = MARK
CU	CONDENSING UNIT	L	LOUVER
#	# = MARK	#	# = MARK
CWC	CHILLED WATER COIL	MAU	MAKE-UP AIR UNIT
#	# = MARK	#	# = MARK
DC	DUST COLLECTOR	OAI	OUTSIDE AIR INTAKE
#	# = MARK	#	# = MARK
DHU	DEHUMIDIFICATION UNIT	(P	PUMP
#	# = MARK	#)	# = MARK
DS	DUCT SILENCER	(PTAC)	PACKAGED TERMINAL AC UNI
#	# = MARK	#	# = MARK
DSS	DUCTLESS SPLIT SYSTEM	R	RADIATION
#	# = MARK	#	# = MARK
ECH	ELECTRIC CABINET HEATER	(RF	RETURN FAN
#	# = MARK	#	# = MARK
EDC	ELECTRIC DUCT COIL	RTU	ROOFTOP AIR HANDLING UNI
#	# = MARK	#	# = MARK
EF	EXHAUST FAN	(SF	SUPPLY FAN
#	# = MARK	#	# = MARK
ER	ELECTRIC RADIATION	(SV	SMOKE VENT
#	# = MARK	#	# = MARK
ERU	ENERGY RECOVERY UNIT	UH	UNIT HEATER
#	# = MARK	#	# = MARK
EUH	ELECTRIC UNIT HEATER	UV	UNIT VENTILATOR
#	# = MARK	#	# = MARK
EWH	ELECTRIC WALL HEATER	(VAV	VAV BOX
#	# = MARK	#	# = MARK
EXP #	EXPANSION TANK # = MARK	(#) V CFM	GRILLE / DIFFUSER TAG V = VOLUME

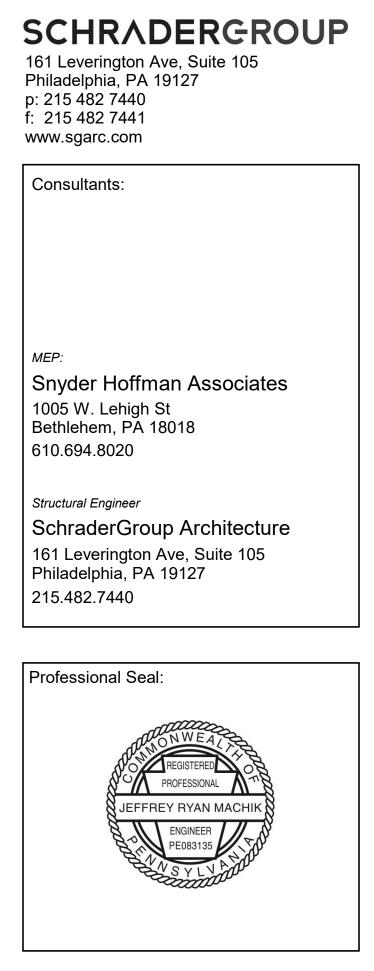
NOTE: NOT ALL TAGS SHOWN ARE USED ON THIS PROJECT.

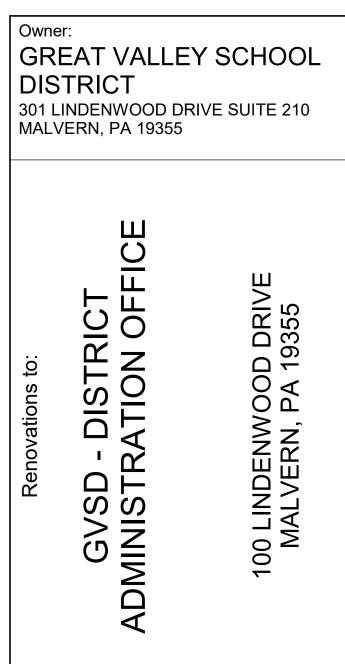
### DESIGN CODE COMPLIANCE

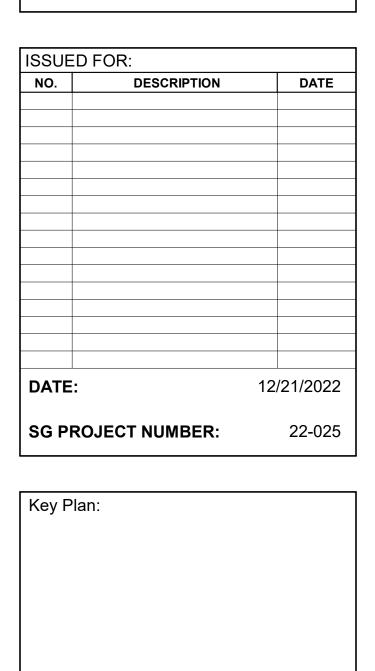
PENNSYLVANIA UNIFORM CONSTRUCTION CODE; 2018	
ICC - INTERNATIONAL BUILDING CODE; 2018	
ICC - INTERNATIONAL MECHANICAL CODE; 2018	
ICC - INTERNATIONAL ENERGY CONSERVATION CODE; 2018	
ICC - INTERNATIONAL FUEL GAS CODE; 2018	
NATIONAL FIRE PROTECTION ASSOCIATION	
NATIONAL ELECTRIC CODE; 2017	

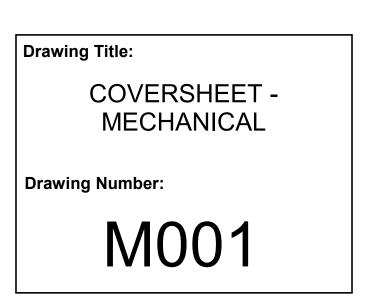


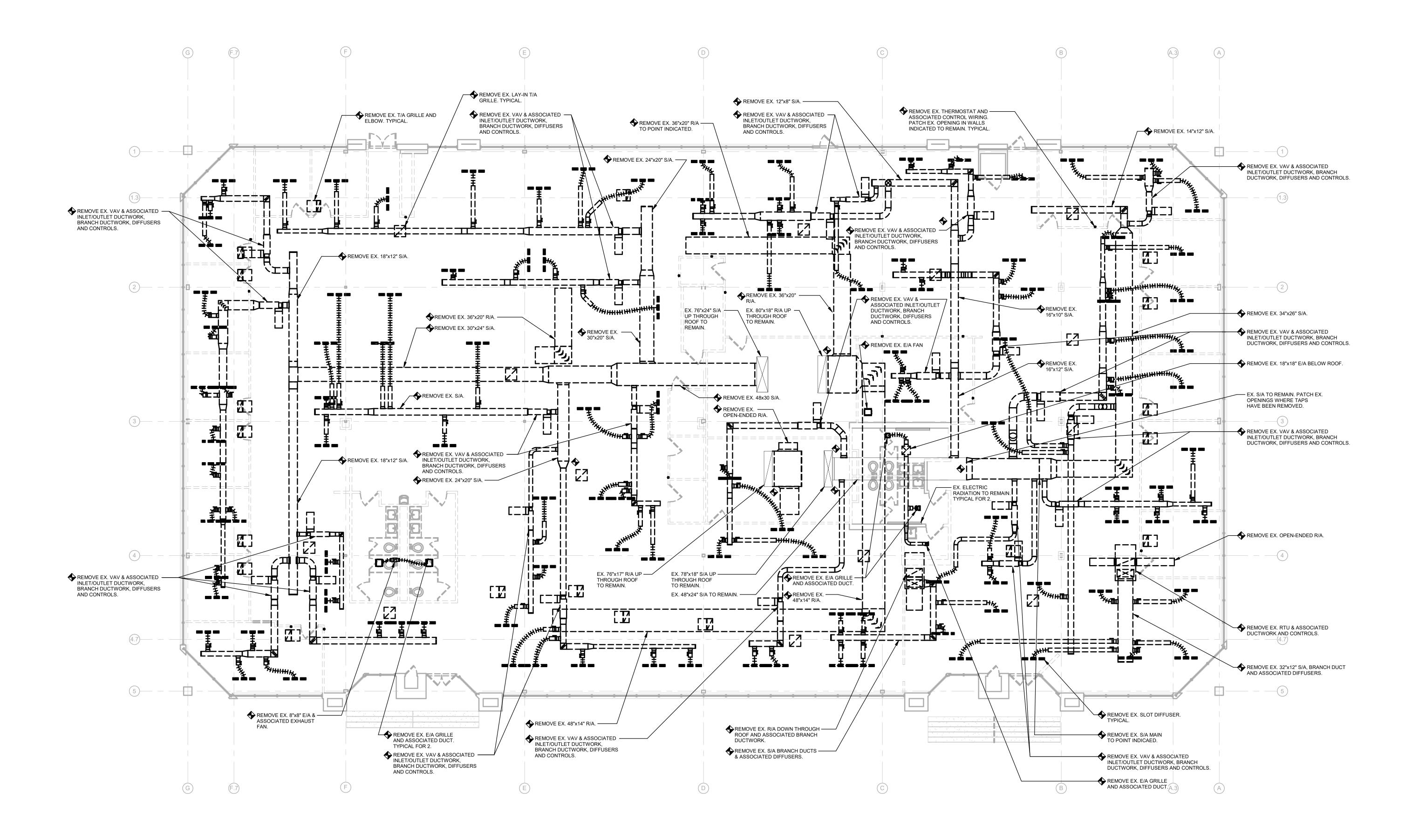




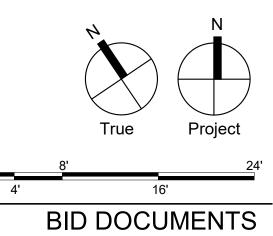






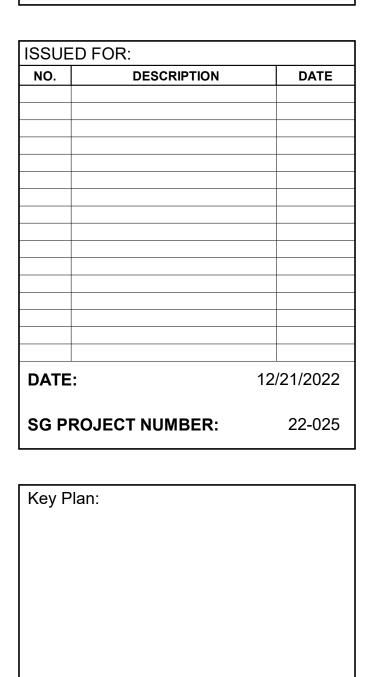


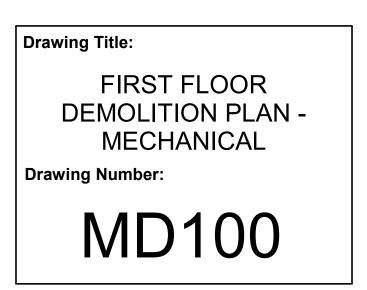
# 1 FIRST FLOOR DEMOLITION PLAN - MECHANICAL MD100 SCALE: 1/8" = 1'-0"

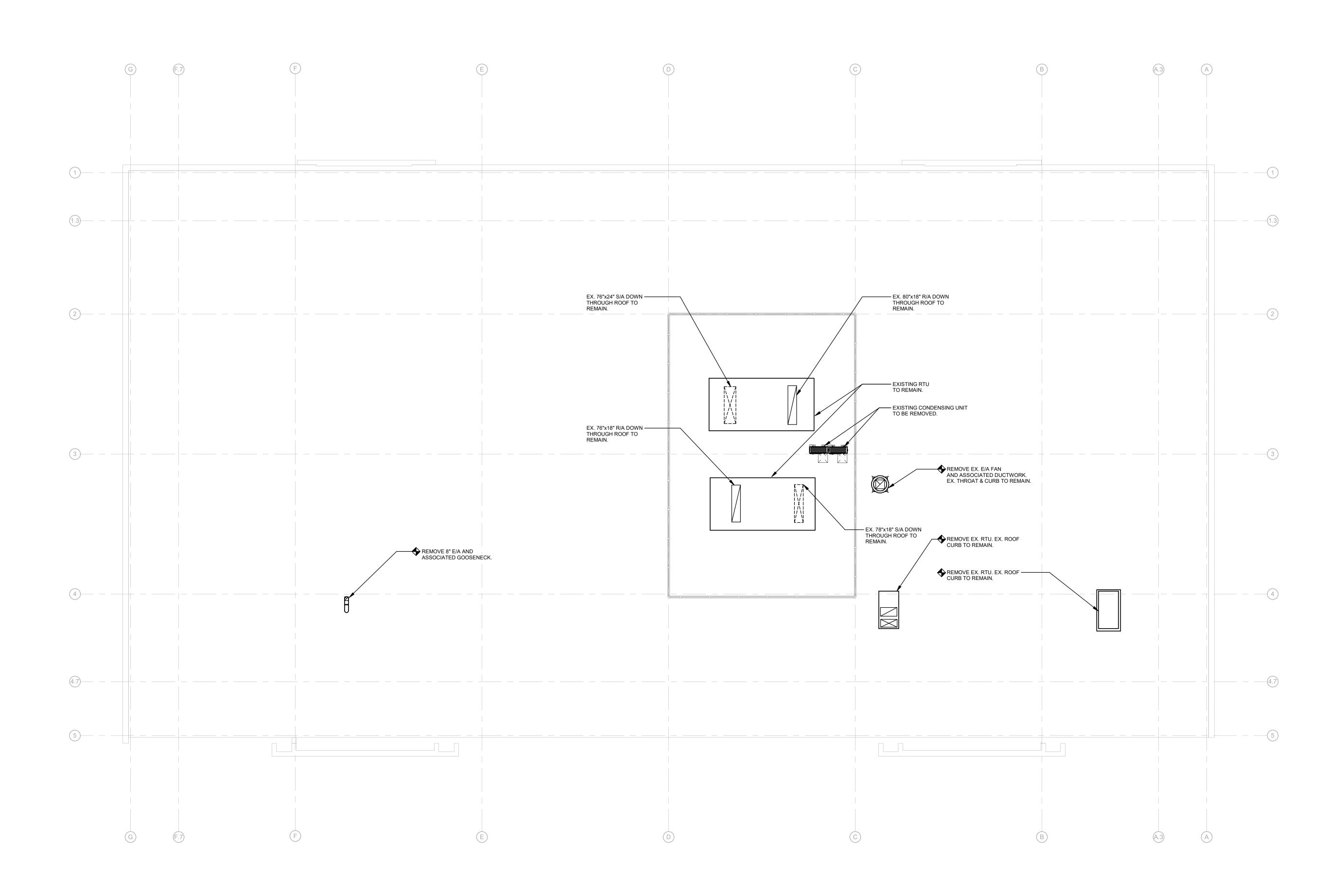




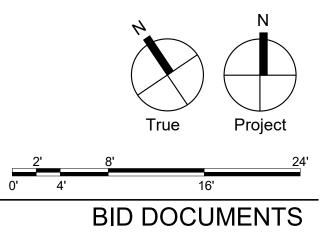




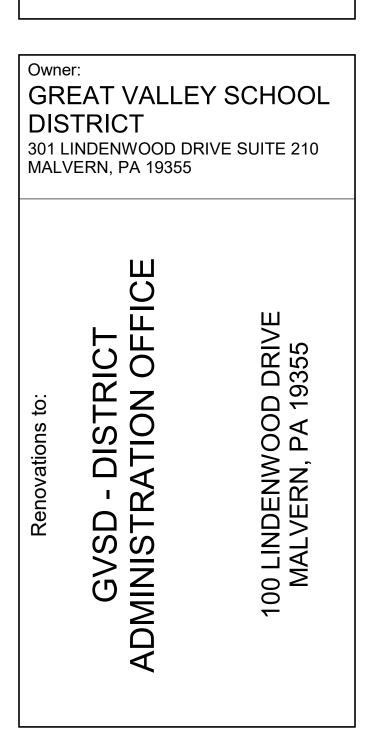


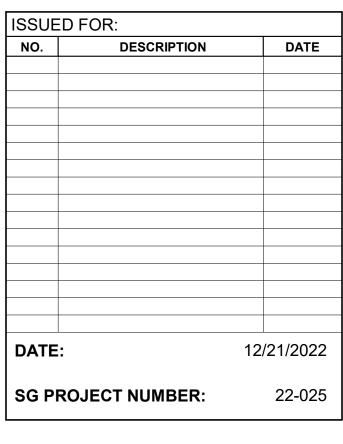


1 ROOF PLAN DEMOLITION - MECHANICAL MD101 SCALE: 1/8" = 1'-0"

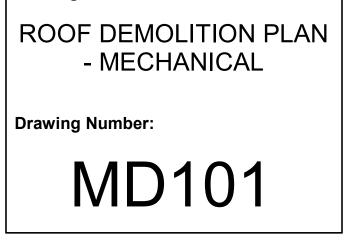


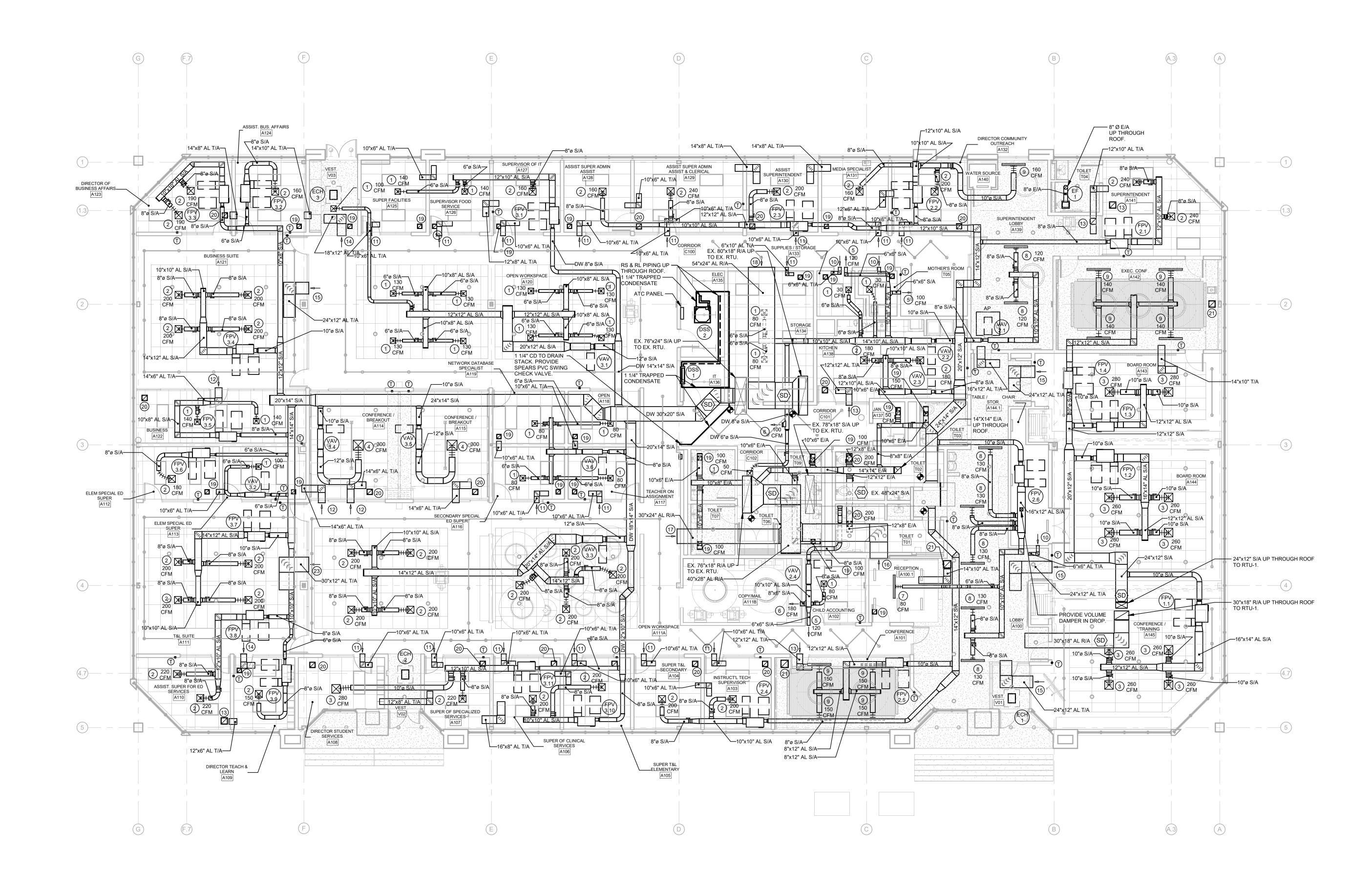




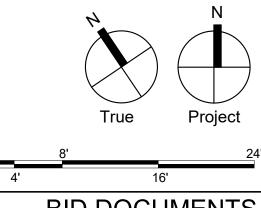


Key Plan: Drawing Title:



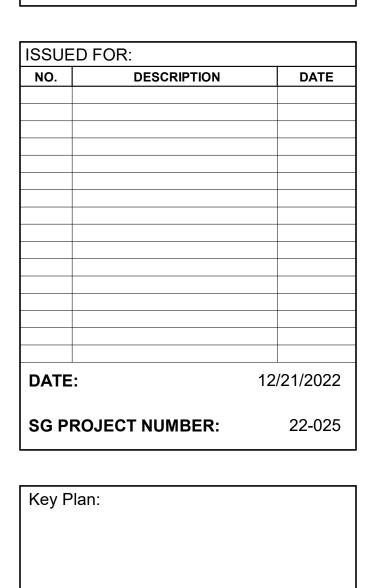


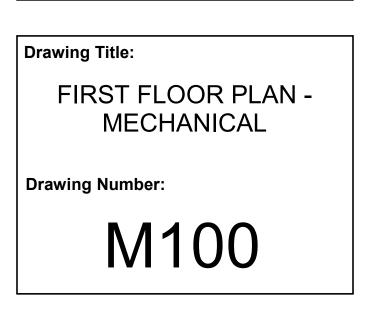
1FIRST FLOOR PLAN - MECHANICALM100SCALE: 1/8" = 1'-0"

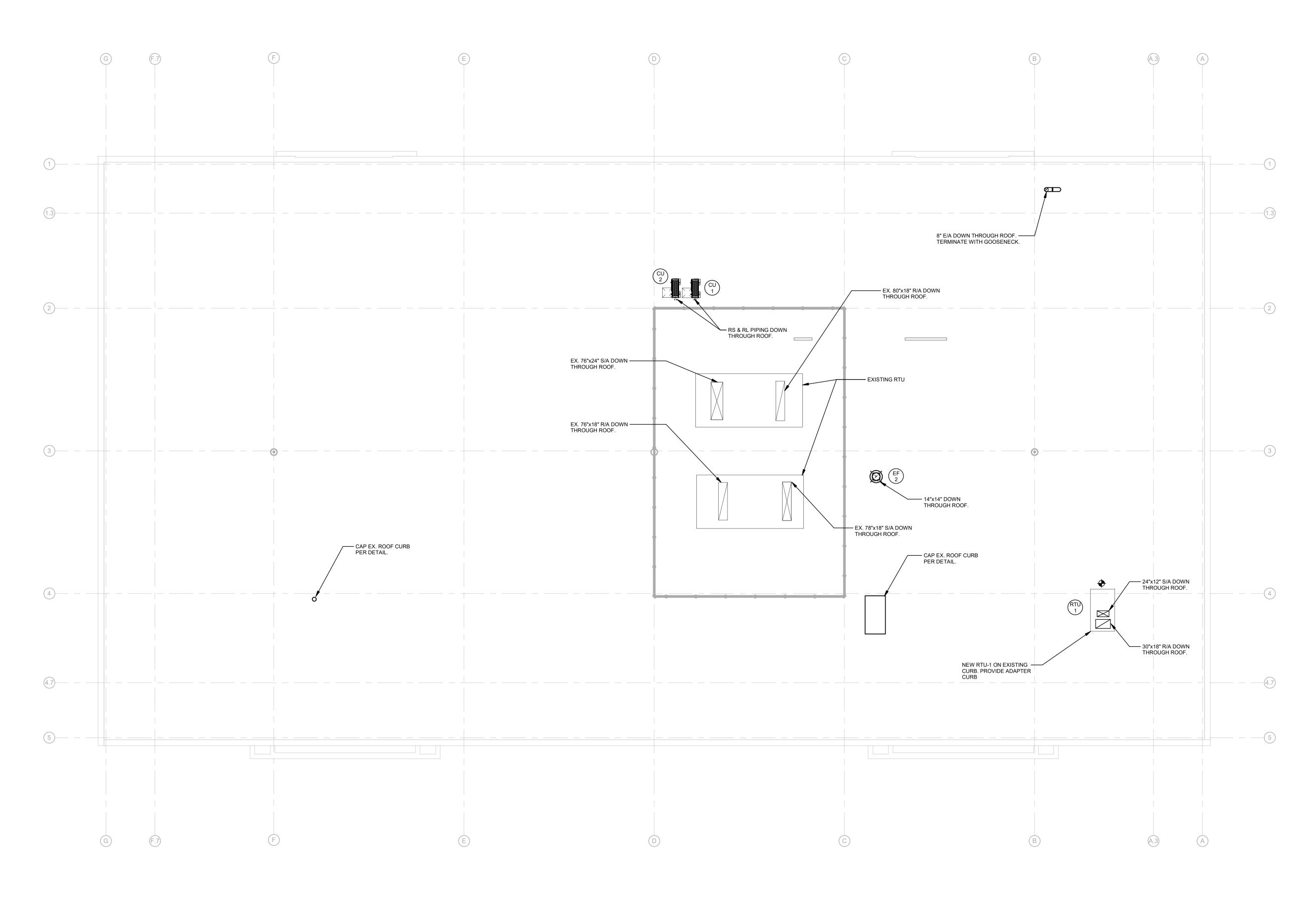




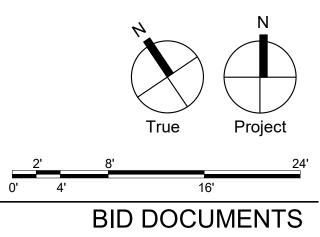




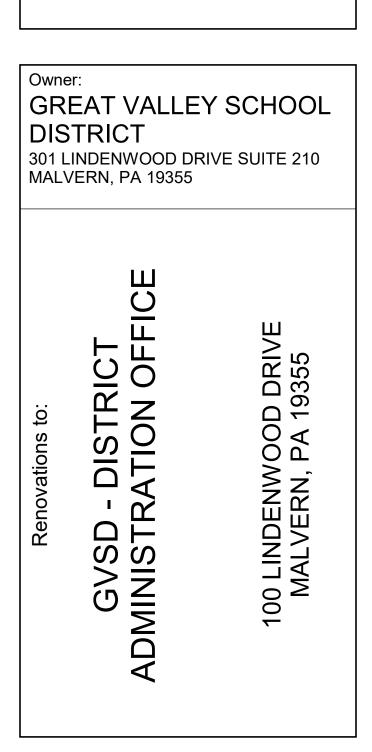


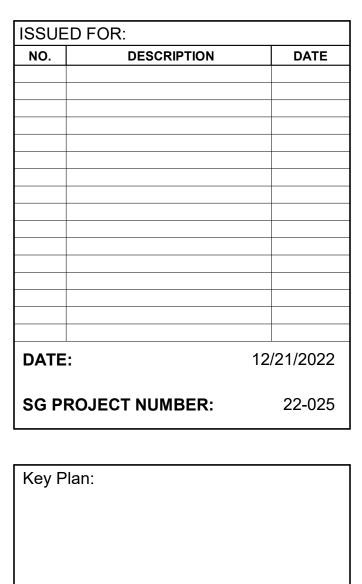


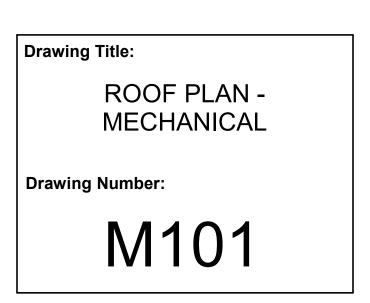
1ROOF PLAN - MECHANICALM101SCALE: 1/8" = 1'-0"

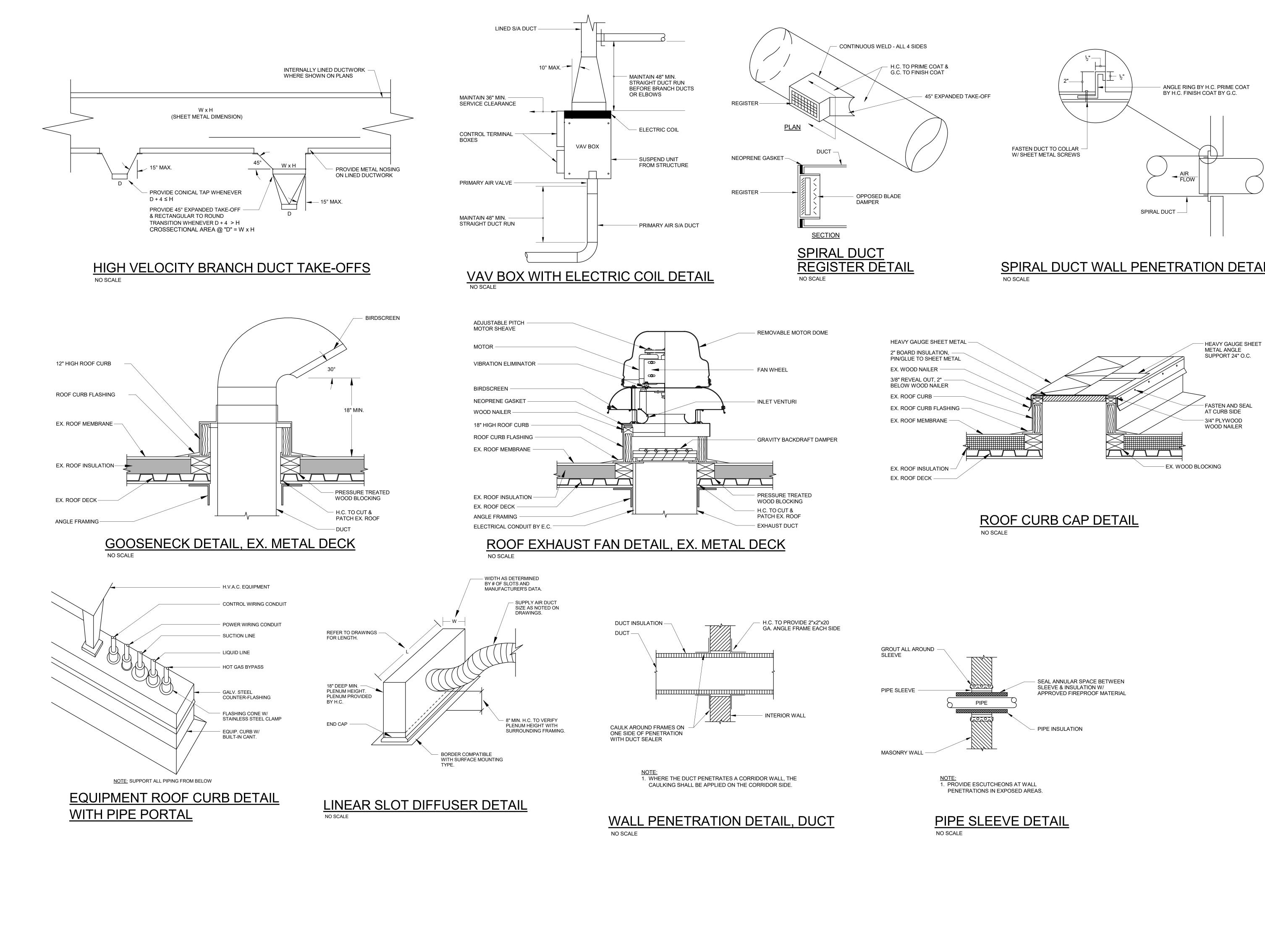




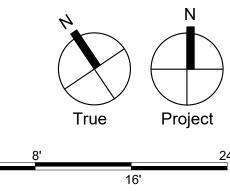




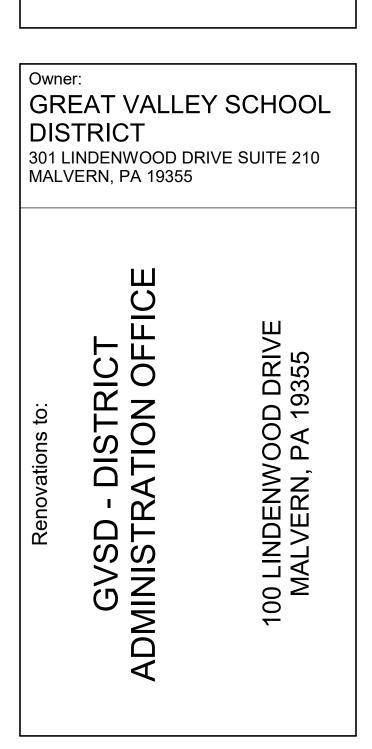


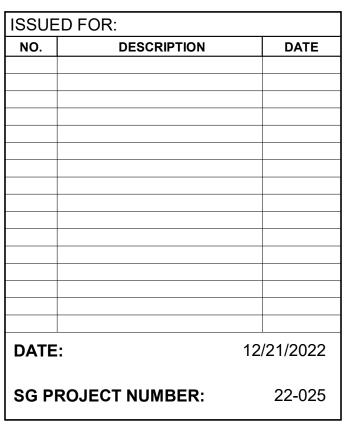


# SPIRAL DUCT WALL PENETRATION DETAIL

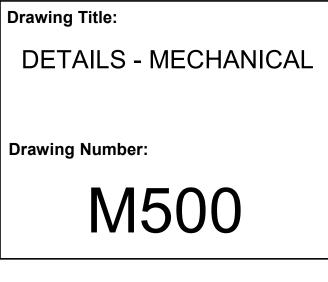


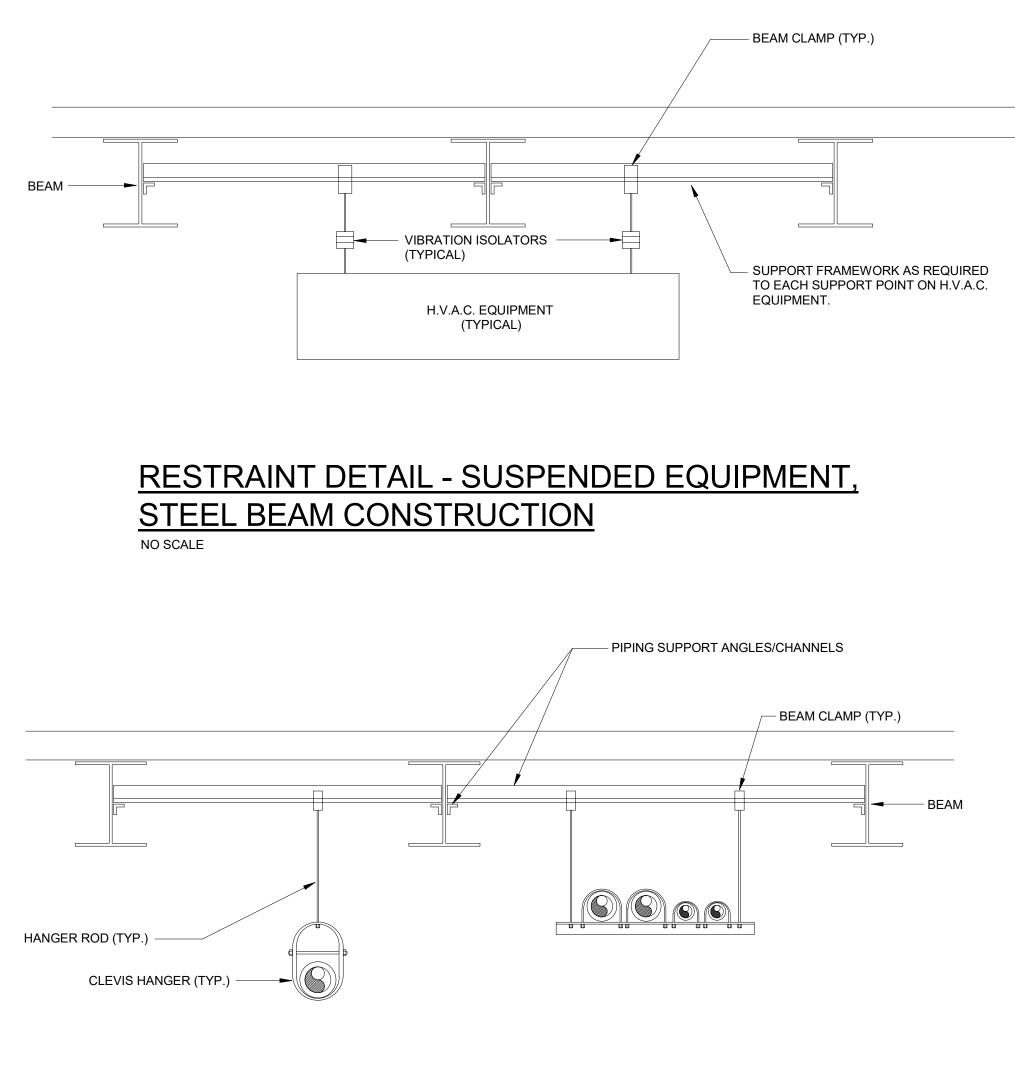




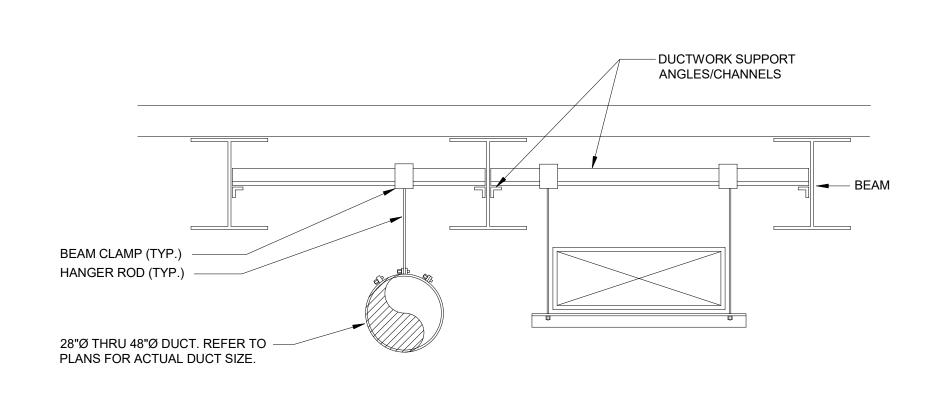


Key Plan: Drawing Title:

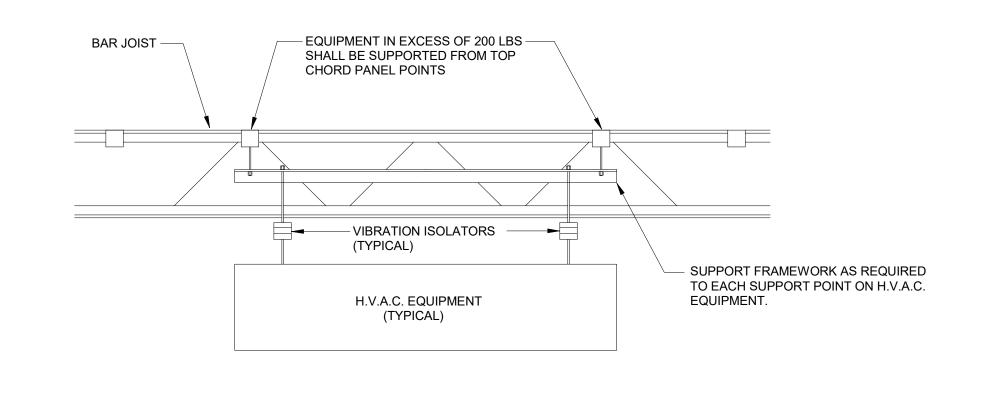




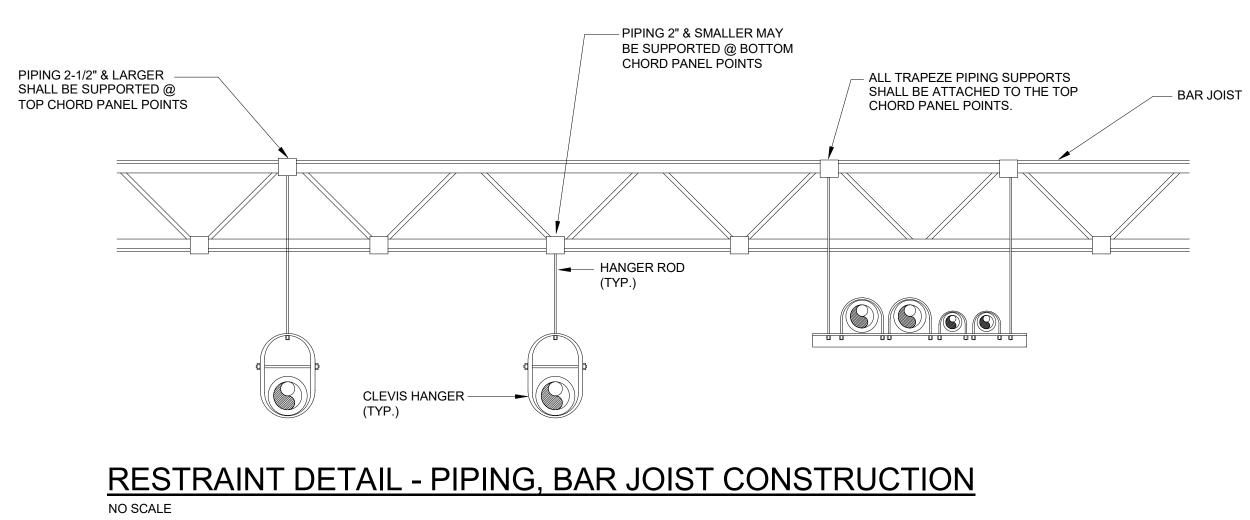
# RESTRAINT DETAIL - PIPING, STEEL BEAM CONSTRUCTION NO SCALE

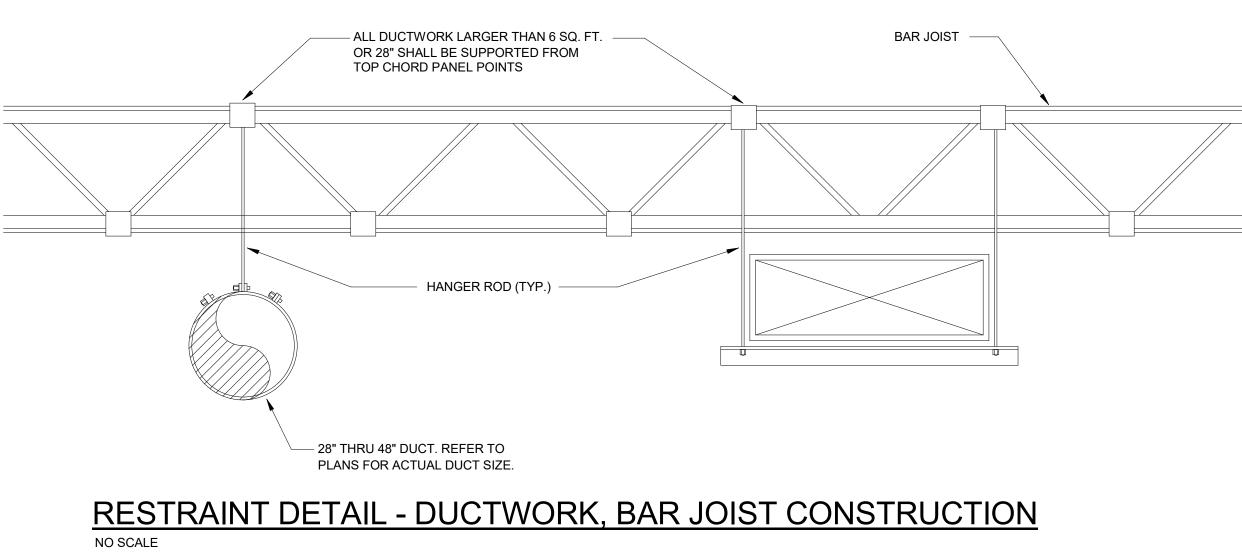


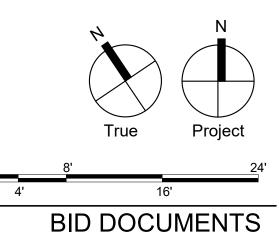




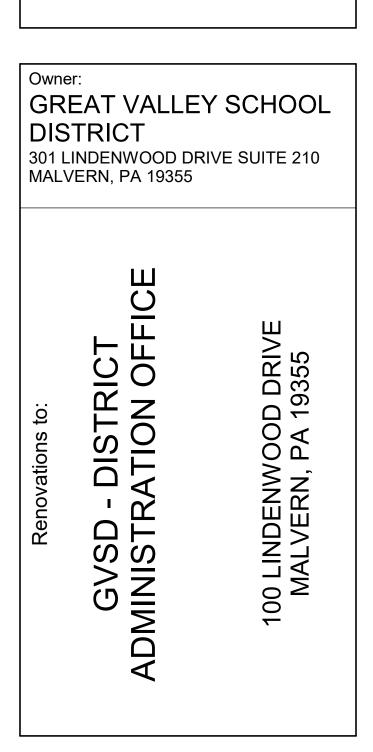
## RESTRAINT DETAIL - SUSPENDED EQUIPMENT, BAR JOIST CONSTRUCTION NO SCALE

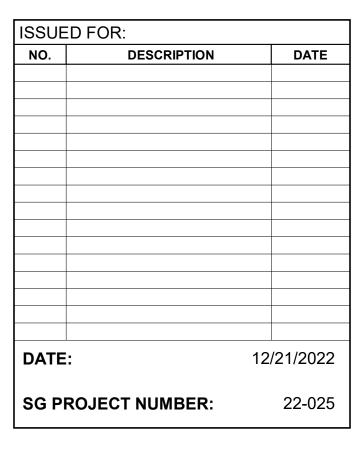












Key Plan: Drawing Title:



M501

RTU RT	ΓU = ROOFTOP UNIT = MARK								F	ROOFT	OP	' AIR	HA	ANDLING	UNIT S	CHE	DUL	E									
TAG No.	AREA SERVED	MFR.	MODEL No.	CFM	ESP"			FAN HP	O/A CFM	EAT DB°F W	3°F C	LAT		NG COIL (DX SENSIBLE MBH	() TOTAL MBH	ROWS					r í			rrical V/P/Hz	FILTERS	OPERATING WEIGHT LBS.	NOTES
RTU-1	CONFERENCE ROOMS	TRANE	H3D0A1	3,200	1.6	1.9	2.1	4.7	800	80.0 6	5.6	53.7 5	53.2	89.7	118.2	1	53.8	106.9	54	1	-	74	90	460/60/3	MERV-13	1162	1,2

NOTES:

UNIT SHALL CONSIST OF: MIXING BOX WITH FILTER, DX COOLING, ELECTRICAL RESISTANCE HEATING, AND SUPPLY FAN WITH VFD.
 PROVIDE SINGLE POINT POWER WITH UNIT MOUNTED DISCONNECT SWITCH.

	PV = FAN POWERED VAV BOX = MARK					SE	RIE	S FAN F	OWERE	D VA	V BC	X S	CHE	DULE	Ξ						
					SUF	PPLY I	-AN	PRIMA	RY CFM			HEA	TING	COIL (E	ELECTRIC)		ELECT	RICAL			
AG No.	AREA SERVED	MFR.	MODEL No.	SYSTEM	CFM	ESP"	HP	MININUM	MAXIMUM	INLET DIA."	INLET APD"	EAT DB°F	LAT DB°F	KW	STAGES	MCA	MOP	V/P/Hz	DISCHARGE	RADIATED NC LEVEL	NOTES
FPV-1.1	A145 CONFERENCE TRAINING	TRANE	VSEF	RTU-1	1040	0.25	1	315	1040	10	0.75	65.5	92.7	9.0	1	47.4	50	277/1/60	32	18	1 - 3
FPV-1.2	A144 BOARD ROOM	TRANE	VSEF	RTU-1	1040	0.25	1	375	1040	10	0.75	64.6	91.8	9.0	1	47.4	50	277/1/60	32	18	1 - 3
FPV-1.3	A143 BOARD ROOM	TRANE	VSEF	RTU-1	560	0.25	1	170	560	10	0.75	65.5	90.7	4.5	1	27.1	30	277/1/60	24	15	1 - 3
FPV-1.4	A142 EXEC. CONF	TRANE	VSEF	RTU-1	560	0.25	1	170	560	10	0.75	65.5	90.7	4.5	1	27.1	30	277/1/60	24	15	1 - 3
FPV-2.1	A141 SUPERINTENDENT	TRANE	VSEF	RTU-2	480	0.25	1	165	480	10	0.75	64.8	91.1	4.0	1	24.8	25	277/1/60	23	15	1 - 3
FPV 2.2	A132, A 131, A139	TRANE	VSEF	RTU-2	520	0.25	1	165	520	10	0.75	65.2	95.5	5.0	1	29.3	30	277/1/60	24	15	1 - 3
FPV-2.3	A128, A129, A130	TRANE	VSEF	RTU-2	600	0.25	1	180	600	10	0.75	65.5	94.4	5.5	1	31.6	35	277/1/60	24	15	1 - 3
FPV-2.4	A103 INS. TECH, A104 SUPER T&L SECONDARY	TRANE	VSEF	RTU-2	400	0.25	1	165	400	10	0.75	63.8	91.4	3.5	1	22.5	25	277/1/60	22	15	1 - 3
FPV-2.5	A101 CONFERENCE	TRANE	VSEF	RTU-2	600	0.25	1	180	600	10	0.75	65.5	91.7	5.0	1	29.3	30	277/1/60	24	15	1 - 3
FPV-2.6	A100 LOBBY, A100.1 RECEPTION, A144.1 STOR.	TRANE	VSEF	RTU-2	770	0.25	1	235	770	10	0.75	65.4	92.0	6.5	1	36.1	40	277/1/60	26	15	1 - 3
FPV-3.1	A125, A126, A127	TRANE	VSEF	RTU-3	440	0.25	1	165	440	10	0.75	64.4	96.6	4.5	1	27.1	30	277/1/60	23	15	1 - 3
FPV-3.2	A124 ASSIST. BUS. AFFAIRS	TRANE	VSEF	RTU-3	350	0.25	1	165	350	10	0.75	62.9	98.9	4.0	1	24.8	25	277/1/60	22	15	1 - 3
FPV-3.3	A123 DIRECTOR OF BUSINESS AFFAIRS	TRANE	VSEF	RTU-3	380	0.25	1	165	380	10	0.75	63.5	96.6	4.0	1	24.8	25	277/1/60	22	15	1 - 3
FPV-3.4	A121 BUSINESS SUITE	TRANE	VSEF	RTU-3	800	0.25	1	240	800	10	0.75	65.5	91.1	6.5	1	36.1	40	277/1/60	27	15	1 - 3
FPV-3.5	A122 BUSINESS SUITE	TRANE	VSEF	RTU-3	400	0.25	1	165	400	10	0.75	63.8	91.4	3.5	1	22.5	25	277/1/60	22	15	1 - 3
FPV-3.6	A112 ELEM SPECIAL ED	TRANE	VSEF	RTU-3	380	0.25	1	165	380	10	0.75	63.5	96.6	4.0	1	24.8	25	277/1/60	22	15	1 - 3
FPV-3.7	A111 T&L SUITE	TRANE	VSEF	RTU-3	800	0.25	1	240	800	10	0.75	65.5	91.1	6.5	1	36.1	40	277/1/60	27	15	1 - 3
-PV-3.8	A110 ASSIST SUPER FOR ED SERVICES	TRANE	VSEF	RTU-3	440	0.25	1	165	440	10	0.75	64.4	93.0	4.0	1	24.8	25	277/1/60	23	15	1 - 3
-PV-3.9	A109 DIRECTOR TEACH	TRANE	VSEF	RTU-3	380	0.25	1	165	380	10	0.75	63.5	96.6	4.0	1	24.8	25	277/1/60	22	15	1 - 3
PV-3.10	A105 SUPER ELEM., A106 SUPER CLINICAL SERV.	TRANE	VSEF	RTU-3	400	0.25	1	165	400	10	0.75	63.8	91.4	3.5	1	22.5	25	277/1/60	22	15	1 - 3
PV-3.11	A107 SUPER OF SPEC. SERV., A108 DIR. ST. SER.	TRANE	VSEF	RTU-3	500	0.25	1	165	500	10	0.75	65.1	90.2	4.0	1	24.8	25	277/1/60	23	15	1 - 3

1. TRANSITION DUCTWORK AS REQUIRED TO MATCH INLET AND OUTLET DIMENSIONS FOR EACH VAV. 2. INSTALL ALL UNITS FOLLOWING THE MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION AND CLEARANCES. 3. PROVIDE DISCONNECT SWITCH & STEP-DOWN TRANSFORMER FOR CONTROL CIRCUIT.

	AV = VAV BOX = MARK					S	SHUT	Γ-OFF	= VAV	BO	x sc	HED	ULE							
						CFM					HEATI	NG COI	L (ELECTRI	C)		ELECT	RICAL			
GAG No.	AREA SERVED	MFR.	MODEL No.	SYSTEM	MIN.	HTG.	MAX.	INLET DIA."	INLET APD"	EAT DB°F	LAT DB°F	KW	STAGES	APD"	MCA	MOP	V/P/Hz	DISCHARGE	RADIATED NC LEVEL	NOTES
VAV-2.1	A139 SUPERINTENDENT LOBBY	TRANE	VCEF	RTU-2	125	125	240	5	0.75	55.0	93.1	1.5	1	0.02	6.77	15	277/1/60	22	<15	1 - 3
VAV-2.2	C100, A133, A134, C101, T04,T08	TRANE	VCEF	RTU-2	240	240	610	8	0.75	55.0	94.3	3.0	1	0.05	13.54	15	277/1/60	22	19	1 - 3
VAV-2.3	A138 KITCHEN	TRANE	VCEF	RTU-2	130	130	360	6	0.75	55.0	91.3	1.5	1	0.11	6.77	15	277/1/60	20	<15	1 - 3
VAV-2.4	A102 CHILD ACCOUNTING, A111.1 COPY/MAIL	TRANE	VCEF	RTU-2	125	125	260	5	0.75	55.0	93.1	1.5	1	0.02	6.77	15	277/1/60	24	<15	1 - 3
VAV-3.1	A120 OPEN WORKSPACE, C100 CORRIDOR	TRANE	VCEF	RTU-3	315	315	1040	10	0.75	55.0	95.0	4.0	1	0.03	18.05	20	277/1/60	22	20	1 - 3
VAV-3.2	A113 ELEM SPECIAL ED	TRANE	VCEF	RTU-3	125	125	124	5	0.75	55.0	93.1	1.5	1	0.01	6.77	15	277/1/60	<15	<15	1 - 3
VAV-3.3	A111 OPEN WORKSPACE	TRANE	VCEF	RTU-3	525	525	1600	12	0.75	55.0	94.1	6.0	1	0.05	27.08	30	277/1/60	22	23	1 - 3
VAV-3.4	A114 CONFERENCE/BREAKOUT	TRANE	VCEF	RTU-3	125	125	300	6	0.75	55.0	93.1	1.5	1	0.08	6.77	15	277/1/60	18	<15	1 - 3
VAV-3.5	A115 CONFERENCE/BREAKOUT	TRANE	VCEF	RTU-3	125	125	300	6	0.75	55.0	93.1	1.5	1	0.08	6.77	15	277/1/60	18	<15	1 - 3
VAV-3.6	A116, A117, A118, A119	TRANE	VCEF	RTU-3	175	175	320	6	0.75	55.0	100.0	2.5	1	0.09	11.28	15	277/1/60	19	<15	1 - 3

NOTES:

NOTES: 1. TRANSITION DUCTWORK AS REQUIRED TO MATCH INLET AND OUTLET DIMENSIONS FOR EACH VAV.

INSTALL ALL UNITS FOLLOWING THE MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION AND CLEARANCES.
 PROVIDE DISCONNECT SWITCH & STEP-DOWN TRANSFORMER FOR CONTROL CIRCUIT.

	DSS = DUCTLESS SPLIT SYSTEM # = MARK	1				DUC	TLESS	SPLI	T SY	YSTEM A	AIR CON	DITIO	NING UNIT S	SCHEDU	LE							CU = CON	NDENSING UNIT # = MARK
						INDOOR L	JNIT									OUTI	DOOR UNIT						
TAG N	o. AREA SERVED	MFR.	MODEL No.	CFM ESP'		COOLING TOT. MBH		MCA	MOP	V/P/Hz	WEIGHT LBS.	TAG No.	MODEL No.	AMBIENT °F	SEER	HSPF	COOLING MBH	HEATING MBH	MCA	MOP	V/P/Hz	WEIGHT LBS.	NOTE
DSS-1	A136 IT	MITSUBISHI	PKA-A12LA	350 N/A	10.6	12.0	10.6	N/A	N/A	N/A	28	CU-1	PUZ-A12NKA7	95.0 / 5.0	21.0	13.3	12.0	10.6	11.0	28	208/1/60	93	1,2,3,4,5,6
DSS-2	A135 ELEC	MITSUBISHI	PLA-A24EA7	640 N/A	20.6	24.0	13.0	N/A	N/A	N/A	56	CU-2	PUZ-A24NHA7	95.0 / 5.0	24.2	11.2	24.0	13.0	19.0	26	208/1/60	153	1,2,3,4,5,6

NOTES:

INSTALL ALL AC & CU UNITS FOLLOWING MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION, CLEARANCES AND SERVICEABILITY. REFRIGERANT PIPING SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS FOR SIZING AND MAXIMUM PIPING LENGTH. PROVIDE PROPER REFRIGERANT CHARGE AS RECOMMENDED BY MANUFACTURER IF EQUIVALENT LENGTH EXCEEDES RATINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REFRIGERANT PIPING ACCESSORIES AND APPURTENANCES AS REQUIRED TO COMPLETE THE SYSTEM.

PROVIDE INTEGRAL DISCONNECT SWITCH FOR DSS AND CU.

PROVIDE LOW AMBIENT CONTROL. POWER CONNECTIONS SHALL BE MADE AT CONDENSING UNIT. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL INTERCONNECTING POWER AND CONTROL WIRING BETWEEN INDOOR AND OUTDOOR COMPONENTS.
 PROVIDE WALL MOUNTED THERMOSTAT. PROVIDE SEPARATE SPACE TEMPERATURE SENSOR (BY BAS MANUFACTURER) FOR BAS INTEGRATION.

# $\overrightarrow{\mathsf{EF}}$ $\overrightarrow{\mathsf{EF}}$ $\overrightarrow{\mathsf{EF}}$ $\overrightarrow{\mathsf{EF}}$ $\overrightarrow{\mathsf{EF}}$ $\overrightarrow{\mathsf{EF}}$ $\overrightarrow{\mathsf{FF}}$ $\overrightarrow{\mathsf{KF}}$ $\overrightarrow{\mathsf{KF}}$ $\overrightarrow{\mathsf{KF}}$ $\overrightarrow{\mathsf{KF}}$ $\overrightarrow{\mathsf{KF}}$ $\overrightarrow{\mathsf{KF}}$ $\overrightarrow{\mathsf{KF}}$

EF EF = EZ # #= MA		EN EXHAUST FAN					FAN	SCHED	ULE					
TAG	AREA(S) SERVED	MFR	MODEL	CFM	ESP"	RPM	DRIVE	SONES	MOTOR HP/W	V/P/Hz	CONTROL	DAMPER	WEIGHT LBS	NOTES
EF-1	T10 TOILET	GREENHECK	SP-A190	150	0.35	1,400	DIRECT	1.5	46	115/1/60	ATC	BDD	17	1
EF-2	A137, T03, T02, T01, T05, T06, T07,T08	GREENHECK	G-100-A	1,000	0.5	1725	DIRECT	10.5	216	208/1/60	ATC	BDD	50	1

NOTES:

1. PROVIDE DISCONNECT SWITCH.

(#) # = TA V V = V0 CFM	AG DLUME	GRILLE, F	REGIST	FER, & DIFFU	SER S	CHEDI	JLE		
TAG	MFR	MODEL	SIZE	PATTERN	TYPE	MOUNT	FINISH	MAX N.C.	NOTES
1	TITUS	TDV	6x6	6" DIA. NECK 4-WAY	S/A	SURFACE	BWE	25	-
2	TITUS	TDV	9x9	8" DIA. NECK 4-WAY	S/A	SURFACE	BWE	25	-
3	TITUS	TDV	12x12	10" DIA.NECK 4-WAY	S/A	SURFACE	BWE	25	-
4	TITUS	TDV	15x15	12" DIA.NECK 4-WAY	S/A	SURFACE	BWE	25	-
5	TITUS	300 RL	6X6	3/4" SPACING 2X DEFLECTION	S/A	SURFACE	BWE	25	-
6	TITUS	300 RL	8x6	3/4" SPACING 2X DEFLECTION	S/A	SURFACE	BWE	25	-
7	TITUS	ML 38	48x4	3/4" SPACING, 2-SLOT, 6" DIA. NECK	S/A	SURFACE	BWE	25	-
8	TITUS	ML 38	48x4	3/4" SPACING, 2-SLOT, 8" DIA. NECK	S/A	SURFACE	BWE	25	-
9	TITUS	ML 38	48x4	3/4" SPACING, 2-SLOT, 10" DIA. NECK	S/A	SURFACE	BWE	25	-
10	TITUS	350 RL	6x6	3/4" SPACING 35° DEFLECTION	R/A,T/A	SURFACE	BWE	25	-
11	TITUS	350 RL	10x6	3/4" SPACING 35° DEFLECTION	R/A,T/A	SURFACE	BWE	25	-
12	TITUS	350 RL	14x6	3/4" SPACING 35° DEFLECTION	R/A,T/A	SURFACE	BWE	25	-
13	TITUS	350 RL	12x12	3/4" SPACING 35° DEFLECTION	R/A,T/A	SURFACE	BWE	25	-
14	TITUS	350 RL	18x12	3/4" SPACING 35° DEFLECTION	R/A,T/A	SURFACE	BWE	25	-
15	TITUS	350 RL	24x12	3/4" SPACING 35° DEFLECTION	R/A,T/A	SURFACE	BWE	25	-
16	TITUS	350 RL	36x16	3/4" SPACING 35° DELFECTION	R/A,T/A	SURFACE	BWE	25	-
17	TITUS	350 RL	30x24	3/4" SPACING 35° DEFLECTION	R/A,T/A	SURFACE	BWE	25	-
18	TITUS	350 RL	54x24	3/4" SPACING 35° DEFLECTION	R/A,T/A	SURFACE	BWE	25	-
19	TITUS	350 RL	8x8	3/4" SPACING 35° DEFLECTION	R/A,T/A,EA	SURFACE	BWE	25	-
20	TITUS	350 RL	10x10	3/4" SPACING 35° DEFLECTION	R/A,T/A,E/A	SURFACE	BWE	25	-
21	TITUS	350 RL	14x14	3/4" SPACING 35° DEFLECTION	R/A,T/A	SURFACE	BWE	25	-
22	TITUS	350 RL	22x22	3/4" SPACING 35° DEFLECTION	R/A,T/A	SURFACE	BWE	25	-
23	TITUS	350 RL	30x12	3/4" SPACING 35° DEFLECTION	R/A,T/A	SURFACE	BWE	25	-

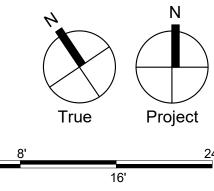
					FAN		HEATING COIL (ELECTRIC)			ELECTRICAL				
TAG No.	AREA SERVED	MFR.	MODEL No.	SPEED	CFM	HP		LAT DB°F	KW	STAGES	AMPS	V/P/Hz	MOUNTING	NOTES
ECH-1	V01 VEST.	BERKO	CUH 935	1,550	250	1/8	55.0	85.0	2	2	8	277/1/60	CEILING	1,2,3
ECH-2	V02 VEST.	BERKO	CUH 395	1,550	250	1/8	55.0	85.0	2	2	8	277/1/60	CEILING	1,2,3
ECH-3	V03 VEST.	BERKO	CUH395	1,550	250	1/8	55.0	85.0	2	2	8	277/1/60	CIELING	1,2,3

1	NO	TES:
2	2.	PROVIDE INTEGRAL DISCON PROVIDE 2-STAGE BUILT-IN T PROVIDE RECESS TRIM KIT A

NOTES:

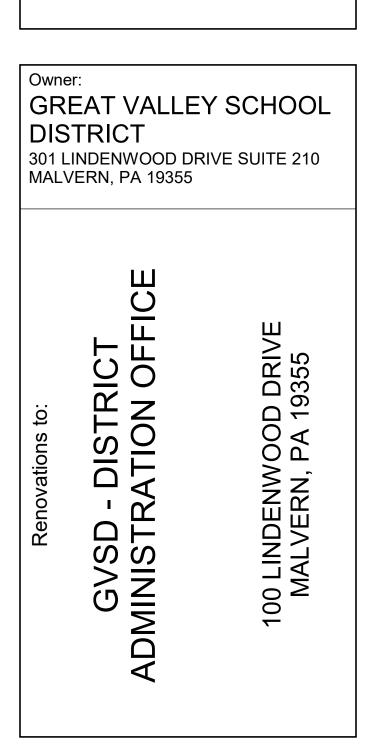
DNNECT SWITCH & SINGLE POINT POWER CONNECTION. N THERMOSTAT.PROVIDE FRONT INLET/DISCHARGE AIR CONFIGURATIONS AND ARCHITECTURAL EXTRUDED ALUMINUM GRILLE. AND ARCHITECTURAL EXTRUDED ALUMINUM GRILLES.

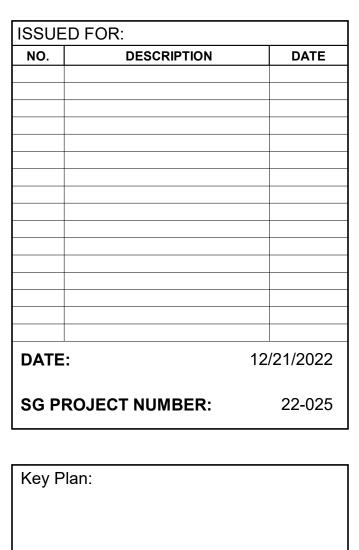
NIT CU ARK # DTES ,4,5,6,7 3,4,5,6,7

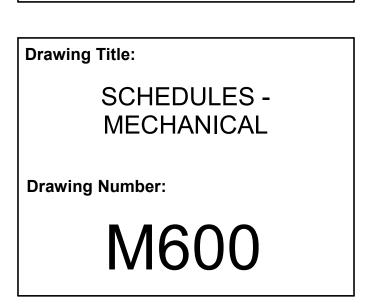


0' 4'









	ELECTRICAL LEGEND
<u>NOTE:</u> N	IOT ALL DEVICES SHOWN ON THE LEGEND ARE USED ON
<b></b> ?	LED LIGHT FIXTURE (UPPER CASE LETTER DENOTES TY CASE LETTER DENOTES SWITCHING GROUP)
_ © €	LIGHT FIXTURE WITH EMERGENCY LAMP SOCKET
? 	INCANDESCENT, LED, FLUORESCENT OR H.I.D. LIGHT FI
	NORMAL-EMERGENCY LIGHT FIXTURE
? <sup>0</sup> ?	
©?	EMERGENCY ONLY LIGHT FIXTURE
	WALL SCONCE
	EXIT SIGN
<u> </u>	EMERGENCY BATTERY UNIT
<b>9</b>	REMOTE HEAD
<u></u>	DOUBLE REMOTE HEAD
□-□> <sub>?</sub>	POLE-MOUNTED SITE LIGHT FIXTURE
s	SINGLE POLE SWITCH (LOWER CASE LETTER DENOTES
s <sub>D</sub>	DIMMER SWITCH
s <sub>LV</sub>	LOW VOLTAGE SWITCH
s <sub>T</sub>	CAPACITIVE TOUCH SCREEN LIGHTING CONTROL PANEL
s <sub>3</sub>	3-WAY SWITCH
s <sub>4</sub>	4-WAY SWITCH
S <sub>F</sub>	FAN SWITCH
s <sub>K</sub>	KEY SWITCH
s <sub>M</sub>	MOMENTARY-CONTACT SWITCH
S <sub>OR</sub>	OVERRIDE SWITCH
S <sub>P</sub>	SWITCH WITH PILOT LIGHT
	OCCUPANCY SENSOR (CEILING-MOUNTED)
	DUAL-TECH OCCUPANCY SENSOR (CORNER-MOUNTED)
	CORRIDOR OCCUPANCY SENSOR
	ULTRASONIC 360° OCCUPANCY SENSOR (CEILING-MOUN
	UL1008 EMERGENCY LIGHTING RELAY
СР	OCCUPANCY SENSOR CONTROL/ POWER PACK
DM	DIGITAL LIGHTING ROOM CONTROLLER
Ф <sub>ст</sub>	DUPLEX CONVENIENCE OUTLET (CT DENOTES COUNTER
● <sub>DC</sub>	DUPLEX OUTLET SUSPENDED FROM DROP CORD
<b>O</b>	DUPLEX ISOLATED GROUND OUTLET
•	DOUBLE DUPLEX (QUADRUPLEX) OUTLET
Ð	QUADRUPLEX ISOLATED GROUND OUTLET
	SPECIAL PURPOSE OUTLET
Φ <sub>R</sub>	RANGE OUTLET, 50AMP 3 WIRE
	TELEPHONE OUTLET (POTS LINE)
	TELEPHONE OUTLET (PROVIDE (1) DATA DROP)
$\nabla_{W}$	WALL-MOUNTED TELEPHONE OUTLET (PROVIDE (1) DAT
end table	COMPUTER OUTLET (NUMBER DENOTES NUMBER OF JA
¥	WHERE NO NUMBER IS SHOWN, PROVIDE TWO JACKS N WIRELESS ACCESS POINT. PROVIDE TWO DATA DROPS
	WALL FOR EACH LOCATION INDICATED. FIELD COORDIN, PLATE TYPE WITH OWNER PROVIDED DEVICE REQUIREM
4	A/V INPUT/OUTPUT JACK
₽	FIBER CONNECTION
+	FLATSCREEN INPUT/OUTPUT JACK
	TELEVISION CABLE OUTLET
н	BLANK PLATE
SB	SMARTBOARD
	PROJECTOR PLATE
	FLOOR OUTLET - DUPLEX RECEPTACLE, TELEPHONE AN
	MOTOR
	DISCONNECT SWITCH (FUSED OR NON-FUSED AS INDICA
	FRACTIONAL HORSEPOWER MANUAL MOTOR STARTER/
⊠∽	COMBINATION MOTOR STARTER/DISCONNECT SWITCH
⊠	MOTOR STARTER
	FRACTIONAL MOTOR STARTER
Ø <sub>PP</sub>	POWER POLE
Ū	JUNCTION BOX
•	PUSHBUTTON
00	START/STOP STATION
000	OVERHEAD DOOR OPERATOR (UP, DOWN AND STOP)
	WIRING CONCEALED ABOVE CEILING OR IN WALL. CROS
	OF #12 A.W.G. WIRES IN A 3/4" CONDUIT. GROUND WIRE CROSS LINES INDICATE (2)#12 A.W.G., (1)#12 A.W.G. GRO
	WIRING CONCEALED BELOW GRADE OR FLOOR
	CIRCUIT HOME RUN WITH CIRCUIT NUMBER INDICATED
	NORMAL-EMERGENCY OR EMERGENCY ONLY BRANCH (
	PLUGMOLD
T	TRANSFORMER
	1

	]
D ON THIS PROJECT	
S TYPE, LOWER	
IT FIXTURE	vo
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DTES GROUP TO BE SWITCHED)	
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	2
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IOUNTED)	
	-
INTERTOP HEIGHT)	-
) DATA DROP) DF JACKS.	
CKS MINIMUM.)	
RDINATE TERMINATION/ JIREMENTS.	
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IE AND COMPUTER JACK	
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NDICATED ON DRAWING)	
тсн	-
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P)	- [
CROSS LINES INDICATE NUMBER	- [
VIRES ARE NOT SHOWN. NO . GROUND IN A 3/4" CONDUIT.	
	┥ ┝──
TED	
NCH CIRCUIT WIRING	- [

F	FIRE ALARM PULL STATION
∇ F	FIRE ALARM AUDIOVISUAL HORN ALARM DEVICE. # INDICATES CANDELA RATING. WHERE NO NUMBER IS INDICATED, PROVIDE DEVICE WITH 15 CANDELA RATING.
vo ₽ #	FIRE ALARM VISUAL-ONLY ALARM DEVICE. # INDICATES CANDELA RATING. WHERE NO NUMBER IS INDICATED, PROVIDE DEVICE WITH 15 CANDELA RATING.
E E	FIRE ALARM BELL CEILING-MOUNTED AUDIOVISUAL FIRE ALARM DEVICE. # INDICATES
Ē#	CANDELA RATING. WHERE NO NUMBER IS INDICATED, PROVIDE DEVICE WITH 15 CANDELA RATING.
<u>(A)</u>	CEILING-MOUNTED AUDIO ONLY FIRE ALARM DEVICE.
 	HEAT DETECTOR
$\bigcirc$	DUCT SMOKE DETECTOR
CO	CARBON MONOXIDE DETECTOR
FS TS	SPRINKLER SYSTEM FLOW SWITCH (BY OTHERS) SPRINKLER SYSTEM TAMPER SWITCH (BY OTHERS)
PS	SPRINKLER SYSTEM PRESSURE SWITCH (BY OTHERS)
RAC	RESCUE ASSISTANCE REMOTE CALL STATION
	RESCUE ASSISTANCE MASTER STATION/ANNUNCIATOR PANEL
<u>୍</u> ରାଜ୍ମ ର	SPRINKLER SYSTEM ELECTRIC MOTOR GONG
	DOORBELL DOOR HOLDER - FIRE ALARM SYSTEM
	INDIVIDUAL ADDRESSABLE MODULE - FIRE ALARM SYSTEM
ZAM	ZONE ADDRESSABLE MODULE - FIRE ALARM SYSTEM
CZAM	CONTROL RELAY ZONE ADDRESSABLE MODULE - F/A SYSTEM
REX	REQUEST-TO-EXIT DETECTOR
	CLOCK, SPEAKER UNIT
<u> </u>	
<sup>2</sup> © (CR)	DOUBLE FACE CLOCK
	CORD REEL WITH 20A 120V OUTLET EXISTING DEVICES TO REMAIN
 M	MICROPHONE JACK - SOUND SYSTEM
S	PUBLIC ADDRESS/INTERCOM SPEAKER (FLUSH, CEILING-MOUNTED)
S	PUBLIC ADDRESS/INTERCOM SPEAKER (SURFACE, CEILING-MOUNTED)
<b>S</b>	PUBLIC ADDRESS/INTERCOM SPEAKER (SURFACE, WALL-MOUNTED)
<u>s</u>	
	PUBLIC ADDRESS/ INTERCOM VOLUME CONTROL
IM	INTERCOM MASTER STATION
¥	MOTION DETECTOR - SECURITY SYSTEM
Þ	CEILING MOUNTED, 360° MOTION DETECTOR
	DOOR MAGNET CONTACT - SECURITY SYSTEM
	SECURITY CAMERA
	ALARM HORN - SECURITY SYSTEM
	CARD READER
K	KEY PAD
®	RESET KEYSWITCH STATION
HP	PUSH PLATE
<u> </u>	EMERGENCY OFF PUSH-BUTTON
<u>بت</u>	EMERGENCY KILLSWITCH GAS SOLENOID VALVE
<u></u> 	NURSE CALL DOME LIGHT, 'C' INDICATES CEILING MOUNTED
A	NURSE CALL AUXILIARY STATION
В	NURSE CALL CODE BLUE STATION
С	CALL CANCEL BUTTON
DS	DUTY STATION
E	EMERGENCY CALL STATION
N <sub>A</sub>	NURSE CALL PATIENT STATION W/ CODE BLUE AND STAFF ASSISTANCE
N <sub>PB</sub>	NURSE CALL SINGLE PATIENT WALL-MOUNTED PUSH BUTTON STATION
N <sub>PS</sub>	NURSE CALL PATIENT STATION W/ STAFF ASSITANCE AND PILLOW SPEAKER
N <sub>s</sub>	NURSE CALL PATIENT STATION W/ STAFF ASSITANCE
N <sub>SA</sub>	NURSE CALL STAFF STATION W/ CODE BLUE
	NURSE CALL DECENTRALIZED MINI-MASTER TOUCH STATION
	NURSE CALL CONTROL STATION HEAD END
MC TM	
P 	
P <sub>s</sub>	SLAVE SHOWER BATH STATION WITH PULL CORD
5  [SA]	NURSE CALL STAFF STATION NURSE CALL STAFF ASSISTANCE STATION
<u></u>	

	ELECTRICAL ABBREVIATIONS
A/a	AMPERE
A.F.F.	ABOVE FINISHED FLOOR
AFI	ARC FAULT INTERRUPTER RECEPTACLE
ARCH.	ARCHITECT
ATS	AUTOMATIC TRANSFER SWITCH
AUX.	AUXILIARY
A/V	AUDIOVISUAL
AWG.	AMERICAN WIRE GAUGE
BEPs	BUILDING ENTRANCE PROTECTORS
BKR.	BREAKER
CKT.	CIRCUIT
CLG.	CEILING
COND.	CONDUIT
СТ	COUNTERTOP
DISC.	DISCONNECT
DN	DOWN
DWG.	DRAWING
E.C.	ELECTRICAL CONTRACTOR
EM.	EMERGENCY
EMT	
	ELECTRIC WATER COOLER (PROVIDE GROUND
EWC	FAULT PROTECTION)
EXIST./EX./E	EXISTING
F.A.	FIRE ALARM
G.C.	GENERAL CONTRACTOR
GEN.	GENERATOR
GFI	GROUND FAULT INTERRUPTER RECEPTACLE
GND.	GROUND
H.C.	HEATING CONTRACTOR
HD	HAND DRYER
HWH	HOT WATER HEATER
IDF	INTERMEDIATE DISTRIBUTION FRAME
MAX.	MAXIMUM
M.C.	
MDF	
MIN.	
MTD.	MOUNTED
N/E	NORMAL EMERGENCY
P	
P.C.	
PNL.	
POTS	
PTZ	PAN, TILT, ZOOM
S.F.	SQUARE FEET
SW.	SWITCH
TR	TAMPER RESISTANT
TYP.	TYPICAL
U/E	UNDERGROUND ELECTRIC
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLT
W/	WITH
W/O	WITHOUT
	WIRE GUARD
WG	
WP XFMR	WEATHERPROOF

NOTE: NO	EQUIPMENT TAG LEGEND DT ALL TAGS SHOWN ON THE LEGEND ARE USED ON THIS PROJECT
(ACC) X	AIR-COOLED CHILLER - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
	AIR-COOLED CONDENSOR - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
(AHU) X	AIR HANDLING UNIT - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
(ATC) X	AUTOMATIC TEMPERATURE CONTROL DAMPER - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
BX	BOILER - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
BFX	BOOSTER FAN - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
CHX	CABINET HEATER - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
CHP	CONSOLE HEAT PUMP - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
CP	CONDENSATE PUMP - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
CTX	COOLING TOWER - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
CUX	CONDENSING UNIT - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
(CV X	CONSTANT VOLUME BOX - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
	DEHUMIDIFICATION UNIT - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
	DUCTLESS SPLIT SYSTEM - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
(ECH) X	ELECTRIC CABINET HEATER - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
(EDC) X	ELECTRIC DUCT COIL - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
(EF X	EXHAUST FAN - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
(ER X)	ELECTRIC RADIATION - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
(FH X	FUME HOOD - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
(FPV) X	FAN-POWERED VAV BOX - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
(FTP) X	FUEL TRANSFER PUMP - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
GF	GAS FURNACE - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
GUH	GAS-FIRED UNIT HEATER - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
HX	HUMIDIFIER - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
$\begin{pmatrix} HP \\ X \end{pmatrix}$	HEAT PUMP - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
HRUX	HEAT RECOVERY UNIT - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
(IFR X	INFRARED HEATER - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
MAU	MAKEUP AIR UNIT - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
PX	PUMP - SUPPLIED AND INSTALLED BY OTHERS, FINAL CONNECTION BY E.C.
(PTAC)	PACKAGED THRU-WALL A/C UNIT - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
(RF) X	RETURN AIR FAN - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
RTUX	ROOFTOP UNIT - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
(SF X	SUPPLY FAN - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
(SS X	SPLIT SYSTEM - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
UHX	UNIT HEATER - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
UVX	UNIT VENTILATOR - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
(VAV) X	VARIABLE AIR VOLUME BOX - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
WH	WALL HEATER - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.
WHP	WATER SOURCE HEAT PUMP - SUPPLIED AND INSTALLED BY H.C., FINAL CONNECTION BY E.C.

	ELECTRICAL	GENERAL NOTES
1.	UNLESS OTHERWISE INDICATED, 40A #8, 50A #6, 70A #4, 100A #1.	WIRE SIZES SHALL BE AS FOLLOWS: 20A #12, 30A #10,
2.		TICAL. E.C. SHALL COORDINATE LIGHTS WITH LING PLANS AND OTHER TRADES AND ADJUST AS REQUIRED.
3.	"IN-USE" WEATHERPROOF COVER SHOWN ON THE DRAWINGS, THE WEATHERPROOF GFI RECEPTACL OWNER. EACH OF THE RECEPTA CONNECT TO THE NEAREST AVAI	ED, GROUND-FAULT RECEPTACLES SHALL HAVE LOCKABLE RS. IN ADDITION TO THE WEATHERPROOF GFI RECEPTACLES E.C. SHALL PROVIDE AND INSTALL (2) ADDITIONAL LES TO BE MOUNTED AS DIRECTED IN THE FIELD BY THE CLES SHALL HAVE 50' OF BRANCH CIRCUIT WIRING TO LABLE RECEPTACLE CIRCUIT. E.C. SHALL ASSUME NG THE INSTALLATION OF THESE RECEPTACLES.
4.		URAL INTERIOR AND EXTERIOR ELEVATIONS TO COORDINATE DNS. WHERE CONFLICTS OCCUR, CONTACT THE ARCHITECT DCATION PRIOR TO ROUGHING IN.
5.	TO INSURE THAT THE DOORS OPI LOCKS, MAGNETIC DOOR HOLDER PROVIDE ANY NECESSARY INTER POWER FEED WIRING AS REQUIR	E INSTALLATION OF THE DOOR HARDWARE WITH THE G.C. ERATE PROPERLY. THE E.C. SHALL INCLUDE THE MAGNETIC RS, SECURITY CONTACTS, FIRE DOOR OPERATORS, ETC. FACE DEVICES SUCH AS TRANSFORMERS OR RELAYS AND ED TO SUIT THE INSTALLATION OR SYSTEM. PROVIDE FOR ALL ELECTRIC DOOR STRIKES AS REQUIRED.
6.	INSTALL THE FOLLOWING ELECTF (2) OCCUPANCY SENSORS OF EAG SENSORS, (5) DUPLEX RECEPTAC DETECTORS, (2) DUCT DETECTOF STATIONS, (2) AUDIO/VISUAL DEV INSTALLATION WITH UP TO 100' O WILL BE AFTER FINISHES ARE CO EACH DEVICE TO ITS RESPECTIVE OPERATING SYSTEM TO ADD ANY	SHOWN ON THE DRAWING, THE E.C. SHALL PROVIDE AND RICAL EQUIPMENT WHERE DIRECTED IN THE FIELD: CH TYPE USED ON THE PROJECT AND POWER PACKS FOR SLES, (5) DATA OUTLETS, (2) EXIT SIGNS, (2) SMOKE RS EACH WITH REMOTE TEST STATION, (1) MANUAL PULL ICES, AND (2) VISUAL ONLY DEVICES. INCLUDE THE COST OF F SYSTEM WIRING PER DEVICE AND ASSUME INSTALLATION MPLETE AND CEILINGS HAVE BEEN INSTALLED. CONNECT E SYSTEM AND INCLUDE THE COST TO REPROGRAM THE OF THE ABOVE MENTIONED DEVICES. THE E.C. SHALL TURN SES THAT ARE NOT UTILIZED ON THE PROJECT AS SPARE
7.	EQUIPMENT PROVIDED UNDER TH SWITCHBOARDS, EMERGENCY GE	CONCRETE PAD UNDER ALL FLOOR-MOUNTED ELECTRICAL HE ELECTRICAL CONTRACT. THIS SHALL INCLUDE ENERATOR, AND OTHER ELECTRICAL FLOOR-MOUNTED UNTED ON THE PADS SHALL CONFORM TO
8.		CONDUITS WITHIN ANY OF THE ELEVATED FLOOR SLABS. N THE SLAB ON GRADE SHALL BE INSTALLED IN THE STONE CRETE.
9.	RECEPTACLES IN KITCHEN, SERV BASINS AS REQUIRED PER THE N RESISTANT, WEATHER-RESISTAN	RAWINGS ARE NOT ALL-INCLUSIVE. E.C. SHALL PROVIDE GFI ING AREAS, AND WHERE LOCATED WITHIN 6FT OF SINK EC. E.C. SHALL ALSO PROVIDE ALL ARC-FAULT, TAMPER T, AND GFI RECEPTACLES WHERE REQUIRED BY THE NEC ON SHOWN ON THE DRAWINGS AND AS REQUIRED FOR GROUP
10.	RECEPTACLE WITH P.C. BEFORE	N LOCATION FOR ELECTRIC WATER COOLER (EWC) DOING ANY WORK. PROVIDE OUTLET, CORD AND PLUG FOR VE CEILING. PROVIDE GFI-TYPE RECEPTACLES FOR ALL EWCs
11.	ADJUSTMENT OF THE OCCUPANC THIS SHALL INCLUDE ADJUSTMEN	ELECTRICAL BID FOR THE POST-CONSTRUCTION SY SENSORS AS DIRECTED BY THE ARCHITECT OR OWNER. IT OF THE TIME AND SENSITIVITY OF THE DEVICES. ALSO E (5) SENSORS UP TO 25' IN ORDER TO ELIMINATE FALSE
12.	DEVICE MOUNTING HEIGHTS AS FOR RECEPTACLES CT RECEPTACLES SWITCHES FIRE ALARM PULL STATIONS	OLLOWS: 18" ABOVE FINISHED FLOOR TO CENTER OF BOX 3" ABOVE COUNTERTOP OR 1" ABOVE BACKSPLASH 48" ABOVE FINISHED FLOOR TO TOP OF BOX THE OPERABLE PART (PULL HANDLE) OF EACH MANUAL FIRE ALARM BOX SHALL BE NOT LESS THAN 42" AND NOT MORE THAN 48" A.F.F. 54" TO CENTERLINE
	FIRE ALARM A/V UNITS	UNLESS OTHERWISE NOTED, ALL WALL-MOUNTED AUDIOVISUAL OR VISUAL-ONLY DEVICES SHALL BE MOUNTED SUCH THAT THE ENTIRE LENS IS NOT LESS THAN 80" AND NOT GREATER THAN 96" A.F.F.

	OCCUPANCY SENSOR SCHEDULE							
SYMBOL	MANUFACTURER	MODEL #	COVERAGE AREA SQ. FT.	SENSOR TYPE	ADDITIONAL REMARKS			
OS	WATTSTOPPER	WS-301	900	INFRARED	WALL MOUNTING			
<u>(</u> OS)	WATTSTOPPER	DT-200	2000	DUAL TECHNOLOGY	WALL OR CEILING MOUNTING			
<u>(</u> os	WATTSTOPPER	DT-300	1000	DUAL TECHNOLOGY	360° CEILING MOUNTING			
	WATTSTOPPER	WT-2255	90 LINEAL FEET	ULTRASONIC	CEILING MOUNTED CORRIDOR SENSOR			
US	WATTSTOPPER	UT-355-2	1000	ULTRASONIC	CEILING MOUNTED			

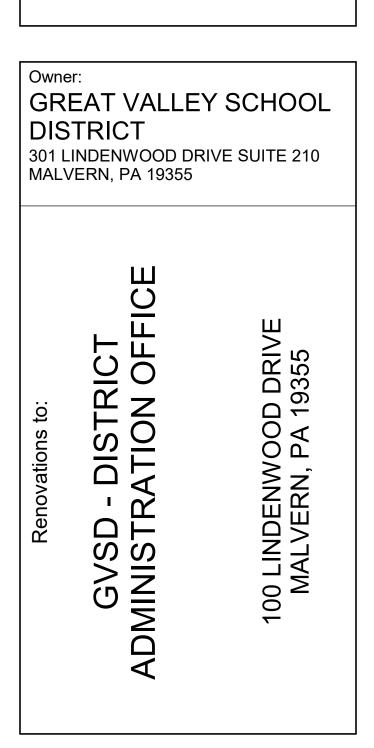
NOTES: DISABLE SMART SET TECHNOLOGY IN ALL SPACES.

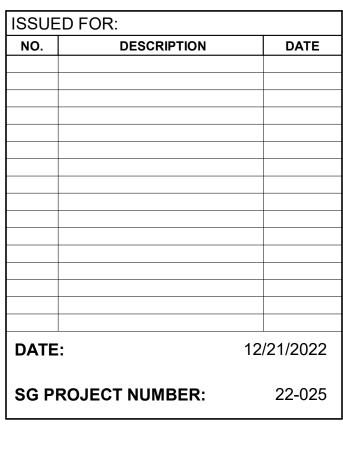
\*\*CONTRACTOR SHALL VERIFY LOCATIONS OF ALL OCCUPANCY SENSORS WITH MANUFACTURER PRIOR TO ROUGH-IN\*\*

	LOW-VOLTAGE SYSTEMS RESPONSIBILITY MATRIX							
DEVICE	FURNISHED BY	INSTALLED BY	CABLING BY	CONDUIT/BACKBOX BY				
WAP	OWNER	OWNER	E.C.	E.C.				
SPEAKERS	E.C.	E.C.	E.C.	E.C.				
CAMERAS	OWNER	E.C.	E.C.	E.C.				
DISPLAYS	OWNER	E.C.	E.C.	E.C.				
PROJECTORS	OWNER	E.C.	E.C.	E.C.				

NOTE: ANY ITEM NOT SPECIFICALLY LISTED BUT SHOWN IN THE CONTRACT DOCUMENTS ARE TO BE FURNISHED AND INSTALLED BY THE E.C.



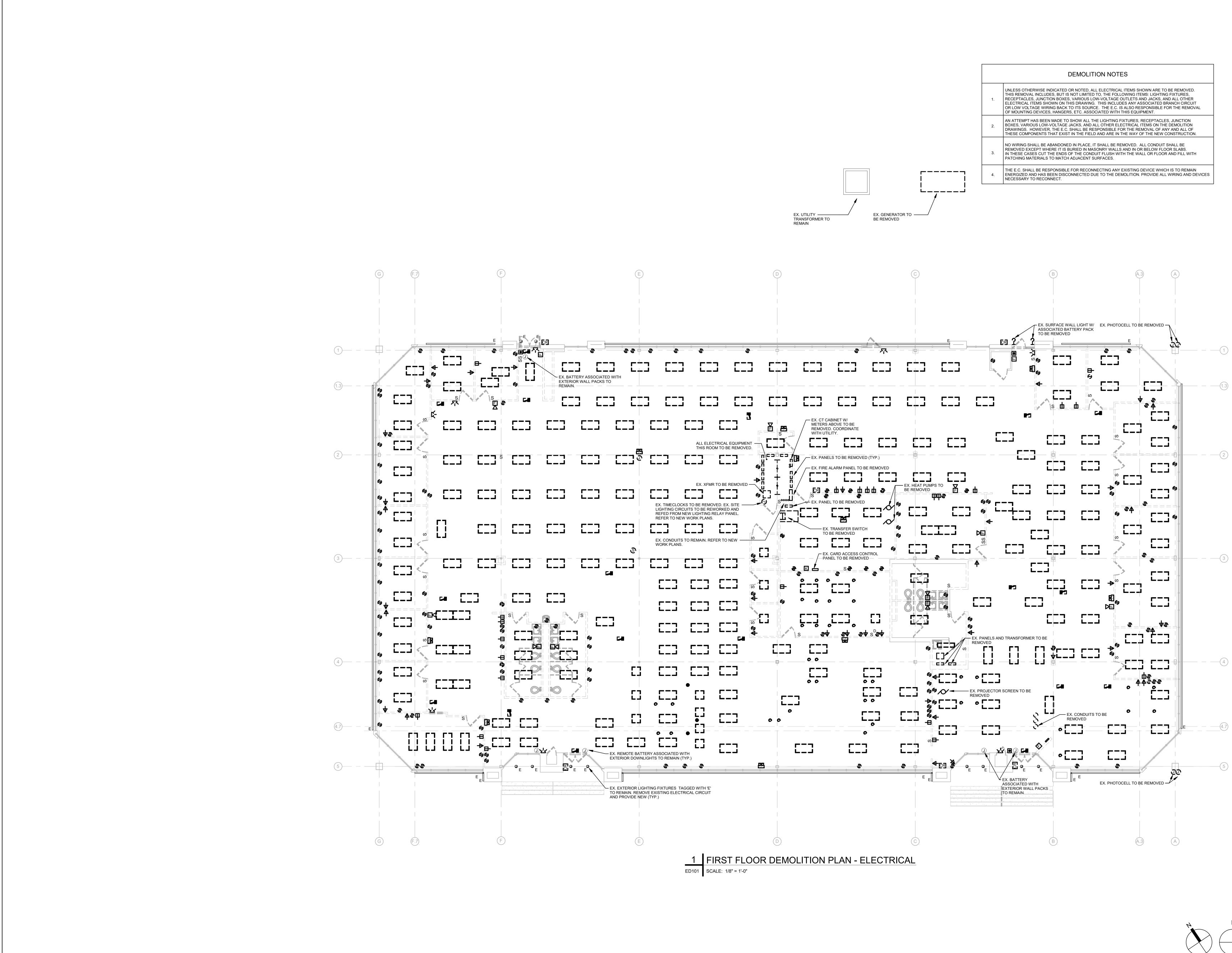


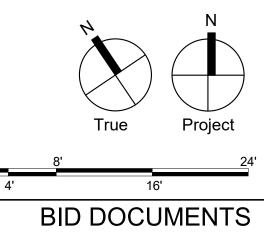


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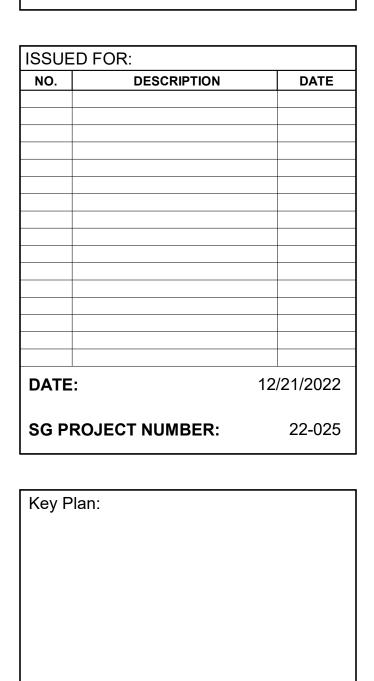
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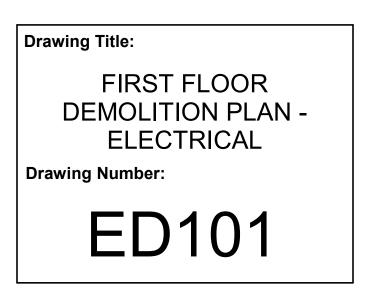


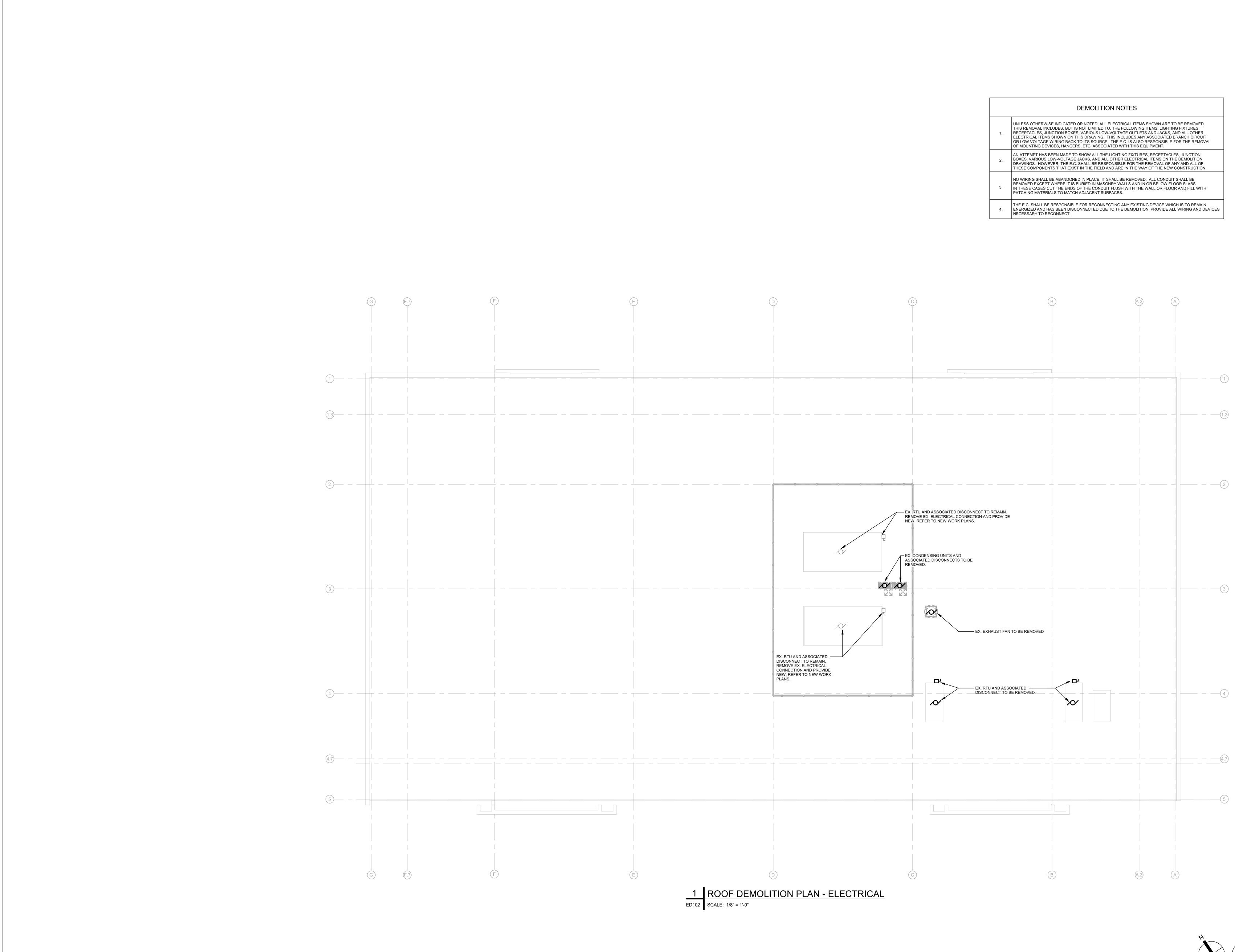




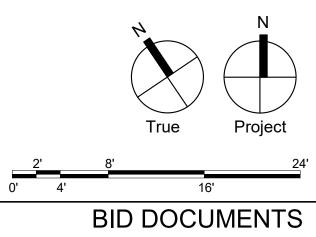


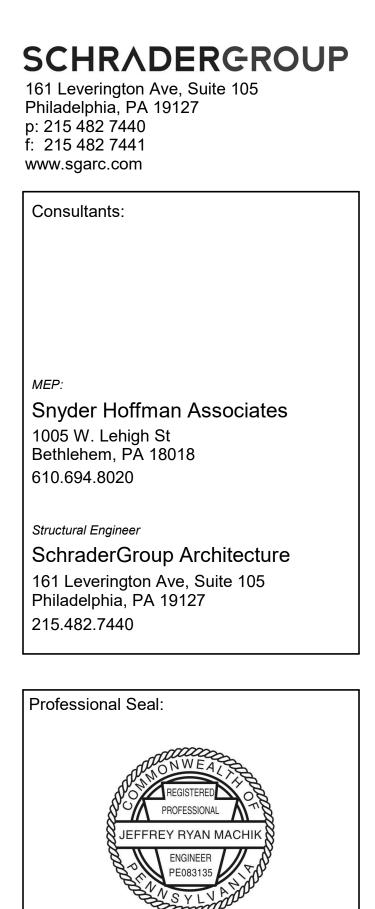


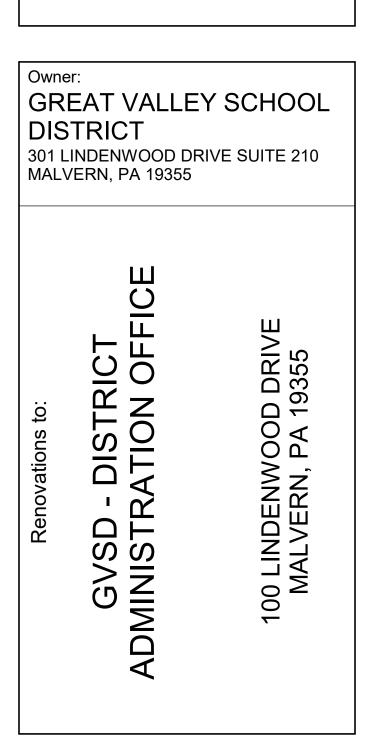


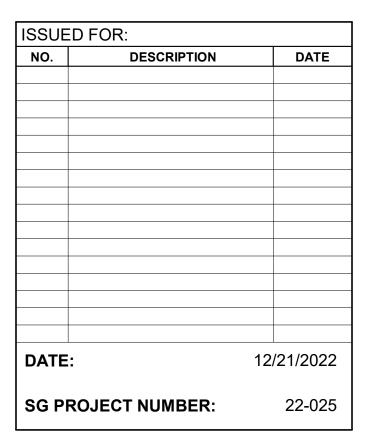


	DEMOLITION NOTES							
1.	UNLESS OTHERWISE INDICATED OR NOTED, ALL ELECTRICAL ITEMS SHOWN ARE TO BE REMOVED. THIS REMOVAL INCLUDES, BUT IS NOT LIMITED TO, THE FOLLOWING ITEMS: LIGHTING FIXTURES, RECEPTACLES, JUNCTION BOXES, VARIOUS LOW-VOLTAGE OUTLETS AND JACKS, AND ALL OTHER ELECTRICAL ITEMS SHOWN ON THIS DRAWING. THIS INCLUDES ANY ASSOCIATED BRANCH CIRCUIT OR LOW VOLTAGE WIRING BACK TO ITS SOURCE. THE E.C. IS ALSO RESPONSIBLE FOR THE REMOVAL OF MOUNTING DEVICES, HANGERS, ETC. ASSOCIATED WITH THIS EQUIPMENT.							
2.	AN ATTEMPT HAS BEEN MADE TO SHOW ALL THE LIGHTING FIXTURES, RECEPTACLES, JUNCTION BOXES, VARIOUS LOW-VOLTAGE JACKS, AND ALL OTHER ELECTRICAL ITEMS ON THE DEMOLITION DRAWINGS. HOWEVER, THE E.C. SHALL BE RESPONSIBLE FOR THE REMOVAL OF ANY AND ALL OF THESE COMPONENTS THAT EXIST IN THE FIELD AND ARE IN THE WAY OF THE NEW CONSTRUCTION.							
3.	NO WIRING SHALL BE ABANDONED IN PLACE, IT SHALL BE REMOVED. ALL CONDUIT SHALL BE REMOVED EXCEPT WHERE IT IS BURIED IN MASONRY WALLS AND IN OR BELOW FLOOR SLABS. IN THESE CASES CUT THE ENDS OF THE CONDUIT FLUSH WITH THE WALL OR FLOOR AND FILL WITH PATCHING MATERIALS TO MATCH ADJACENT SURFACES.							
4.	THE E.C. SHALL BE RESPONSIBLE FOR RECONNECTING ANY EXISTING DEVICE WHICH IS TO REMAIN ENERGIZED AND HAS BEEN DISCONNECTED DUE TO THE DEMOLITION. PROVIDE ALL WIRING AND DEVICE NECESSARY TO RECONNECT.							

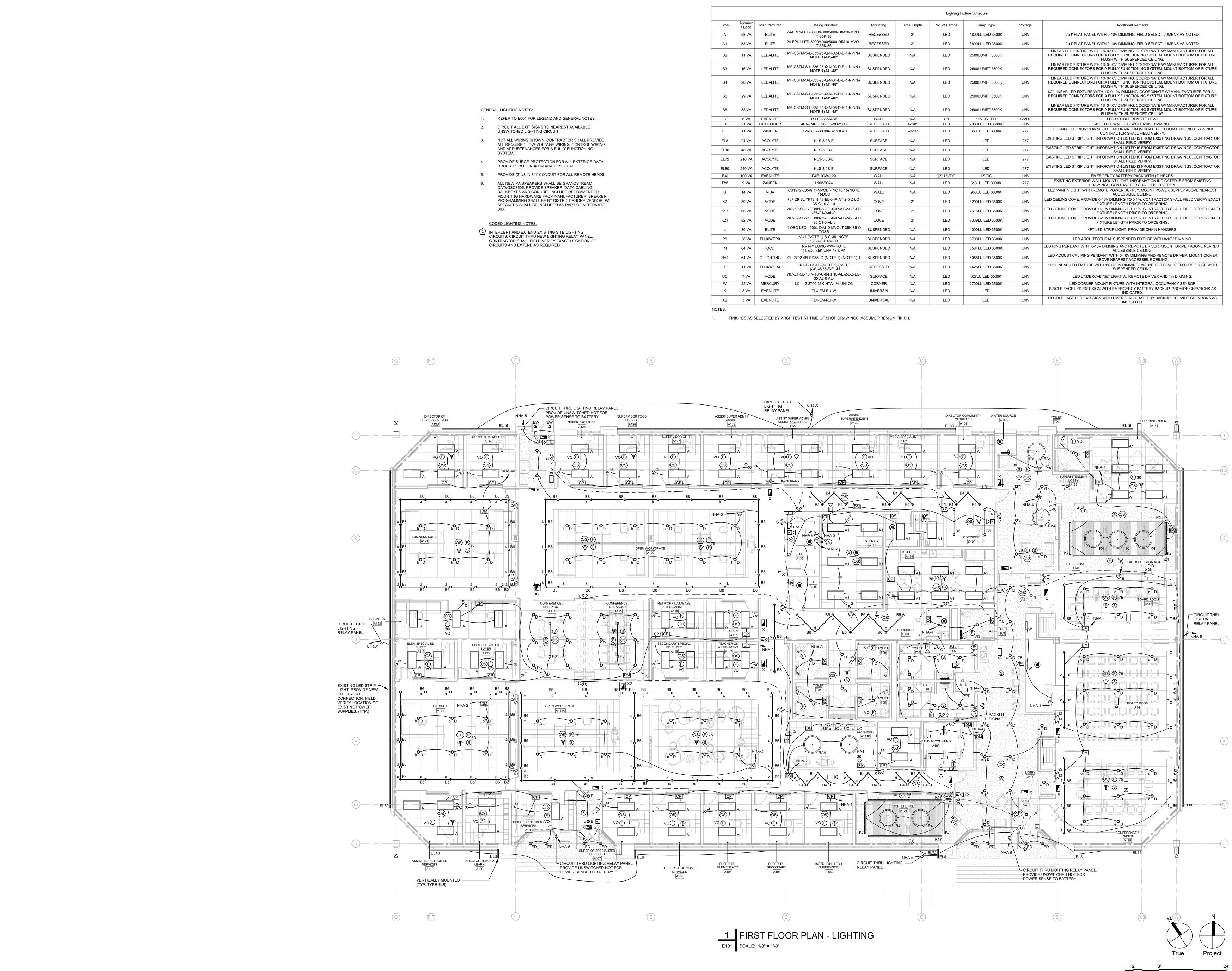








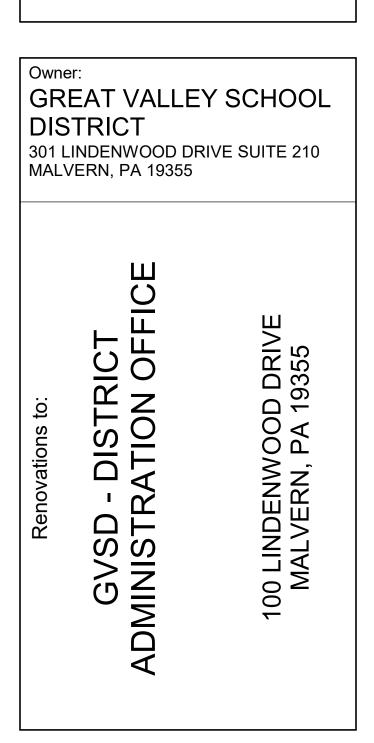
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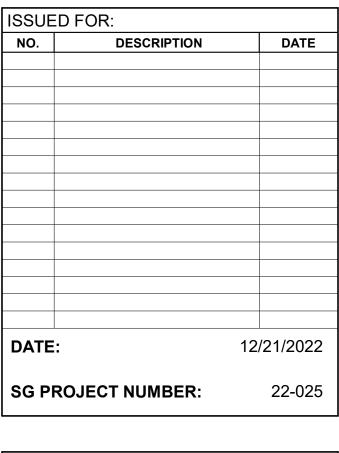


				xture Schedule		
Catalog Number	Mounting	Total Depth	No. of Lamps	Lamp Type	Voltage	Additional Remarks
D-3000/4000/5000-DIM10-MVOL T-35K-85	RECESSED	2"	LED	4800LU LED 3500K	UNV	2'x4' FLAT PANEL WITH 0-10V DIMMING. FIELD SELECT LUMENS AS NOTED.
D-3000/4000/5000-DIM10-MVOL T-35K-85	RECESSED	2"	LED	3800LU LED 3500K	UNV	2'x4' FLAT PANEL WITH 0-10V DIMMING. FIELD SELECT LUMENS AS NOTED.
6-L-835-25-Q-N-02-D-E-1-N-NN-( NOTE 1)-M1-48"	SUSPENDED	N/A	LED	2500LU/4FT 3500K		LINEAR LED FIXTURE WITH 1% 0-10V DIMMING. COORDINATE W/ MANUFACTURER FOR ALL REQUIRED CONNECTORS FOR A FULLY FUNCTIONING SYSTEM. MOUNT BOTTOM OF FIXTURE FLUSH WITH SUSPENDED CEILING.
S-L-835-25-Q-N-03-D-E-1-N-NN-( NOTE 1)-M1-48"	SUSPENDED	N/A	LED	2500LU/4FT 3500K	UNV	LINEAR LED FIXTURE WITH 1% 0-10V DIMMING. COORDINATE W/ MANUFACTURER FOR ALL REQUIRED CONNECTORS FOR A FULLY FUNCTIONING SYSTEM. MOUNT BOTTOM OF FIXTURE FLUSH WITH SUSPENDED CEILING.
S-L-835-25-Q-N-04-D-E-1-N-NN-( NOTE 1)-M1-48"	SUSPENDED	N/A	LED	2500LU/4FT 3500K	UNV	LINEAR LED FIXTURE WITH 1% 0-10V DIMMING. COORDINATE W/ MANUFACTURER FOR ALL REQUIRED CONNECTORS FOR A FULLY FUNCTIONING SYSTEM. MOUNT BOTTOM OF FIXTURE FLUSH WITH SUSPENDED CEILING.
S-L-835-25-Q-N-06-D-E-1-N-NN-( NOTE 1)-M1-48"	SUSPENDED	N/A	LED	2500LU/4FT 3500K	UNV	1/2" LINEAR LED FIXTURE WITH 1% 0-10V DIMMING. COORDINATE W/ MANUFACTURER FOR ALL REQUIRED CONNECTORS FOR A FULLY FUNCTIONING SYSTEM. MOUNT BOTTOM OF FIXTURE FLUSH WITH SUSPENDED CEILING.
6-L-835-25-Q-N-08-D-E-1-N-NN-( NOTE 1)-M1-48"	SUSPENDED	N/A	LED	2500LU/4FT 3500K	UNV	LINEAR LED FIXTURE WITH 1% 0-10V DIMMING. COORDINATE W/ MANUFACTURER FOR ALL REQUIRED CONNECTORS FOR A FULLY FUNCTIONING SYSTEM. MOUNT BOTTOM OF FIXTURE FLUSH WITH SUSPENDED CEILING.
TSLED-2-MV-W	WALL	N/A	(2)	12VDC LED	12VDC	LED DOUBLE REMOTE HEAD
N-P4RDL20835WHZ10U	RECESSED	4-3/8"	LED	2000LU LED 3500K	UNV	4" LED DOWNLIGHT WITH 0-10V DIMMING.
R0002-3000K-32POLAR	RECESSED	3-1/16"	LED	850LU LED 3000K	277	EXISTING EXTERIOR DOWNLIGHT. INFORMATION INDICATED IS FROM EXISTING DRAWINGS, CONTRACTOR SHALL FIELD VERIFY.
NLS-3.0B-E	SURFACE	N/A	LED	LED	277	EXISTING LED STRIP LIGHT. INFORMATION LISTED IS FROM EXISTING DRAWINGS, CONTRACTOR SHALL FIELD VERIFY.
NLS-3.0B-E	SURFACE	N/A	LED	LED	277	EXISTING LED STRIP LIGHT. INFORMATION LISTED IS FROM EXISTING DRAWINGS, CONTRACTOR SHALL FIELD VERIFY.
NLS-3.0B-E	SURFACE	N/A	LED	LED	277	EXISTING LED STRIP LIGHT. INFORMATION LISTED IS FROM EXISTING DRAWINGS, CONTRACTOR SHALL FIELD VERIFY.
NLS-3.0B-E	SURFACE	N/A	LED	LED	277	EXISTING LED STRIP LIGHT. INFORMATION LISTED IS FROM EXISTING DRAWINGS, CONTRACTOR SHALL FIELD VERIFY.
P4E100-W129	WALL	N/A	(2) 12VDC	12VDC	UNV	EMERGENCY BATTERY PACK WITH (2) HEADS.
L10W0074	WALL	N/A	LED	518LU LED 3000K	277	EXISTING EXTERIOR WALL MOUNT LIGHT. INFORMATION INDICATED IS FROM EXISTING DRAWINGS, CONTRACTOR SHALL FIELD VERIFY.
5K(H)-MVOLT-(NOTE 1)-(NOTE 1)-DCC	WALL	N/A	LED	950LU LED 3000K	UNV	LED VANITY LIGHT WITH REMOTE POWER SUPPLY. MOUNT POWER SUPPLY ABOVE NEAREST ACCESSIBLE CEILING.
7FT8IN-48-EL-0-IP-AT-2-0-Z-LO- 35-C1-0-AL-0	COVE	2"	LED	3200LU LED 3500K	UNV	LED CEILING COVE. PROVIDE 0-10V DIMMING TO 0.1%. CONTRACTOR SHALL FIELD VERIFY EXAC FIXTURE LENGTH PRIOR TO ORDERING.
17FT8IN-72-EL-0-IP-AT-2-0-Z-LO -35-C1-0-AL-0	COVE	2"	LED	7616LU LED 3500K	UNV	LED CEILING COVE. PROVIDE 0-10V DIMMING TO 0.1%. CONTRACTOR SHALL FIELD VERIFY EXAC FIXTURE LENGTH PRIOR TO ORDERING.
21FT8IN-72-EL-0-IP-AT-2-0-Z-LO -35-C1-0-AL-0	COVE	2"	LED	9339LU LED 3500K	UNV	LED CEILING COVE. PROVIDE 0-10V DIMMING TO 0.1%. CONTRACTOR SHALL FIELD VERIFY EXAC FIXTURE LENGTH PRIOR TO ORDERING.
-4000L-DIM10-MVOLT-35K-85-O CGSS	SUSPENDED	N/A	LED	4000LU LED 3500K	UNV	4FT LED STRIP LIGHT. PROVIDE CHAIN HANGERS.
-(NOTE 1)-B-C-35-(NOTE 1)-08-G-E1-M-03	SUSPENDED	N/A	LED	5700LU LED 3500K	UNV	LED ARCHITECTURAL SUSPENDED FIXTURE WITH 0-10V DIMMING.
/1-P1EU-36-MW-(NOTE _ED2-35K-UNV-48-DM1-	SUSPENDED	N/A	LED	3584LU LED 3500K	UNV	LED RING PENDANT WITH 0-10V DIMMING AND REMOTE DRIVER. MOUNT DRIVER ABOVE NEARES ACCESSIBLE CEILING.
BLED35LO-(NOTE 1)-(NOTE 1)-1	SUSPENDED	N/A	LED	6058LU LED 3500K	UNV	LED ACOUSTICAL RING PENDANT WITH 0-10V DIMMING AND REMOTE DRIVER. MOUNT DRIVER ABOVE NEAREST ACCESSIBLE CEILING.
P-1-S-03-(NOTE 1)-(NOTE 1)-W1-8-35-E-E1-M	RECESSED	N/A	LED	1425LU LED 3500K	UNV	1/2" LINEAR LED FIXTURE WITH 1% 0-10V DIMMING. MOUNT BOTTOM OF FIXTURE FLUSH WITH SUSPENDED CEILING.
18IN-18"-C-0-RP10-AE-2-0-Z-LO- 35-A2-0-AL-	SURFACE	N/A	LED	627LU LED 3500K	UNV	LED UNDERCABINET LIGHT W/ REMOTE DRIVER AND 1% DIMMING.
2-2700-35K-HTA-1%-UNI-O3	CORNER	N/A	LED	2700LU LED 3500K	UNV	LED CORNER MOUNT FIXTURE WITH INTEGRAL OCCUPANCY SENSOR
TLX-EM-RU-W	UNIVERSAL	N/A	LED	LED	UNV	SINGLE FACE LED EXIT SIGN WITH EMERGENCY BATTERY BACKUP. PROVIDE CHEVRONS AS INDICATED.
TLX-EM-RU-W	UNIVERSAL	N/A	LED	LED	UNV	DOUBLE FACE LED EXIT SIGN WITH EMERGENCY BATTERY BACKUP. PROVIDE CHEVRONS AS INDICATED.

BID DOCUMENTS

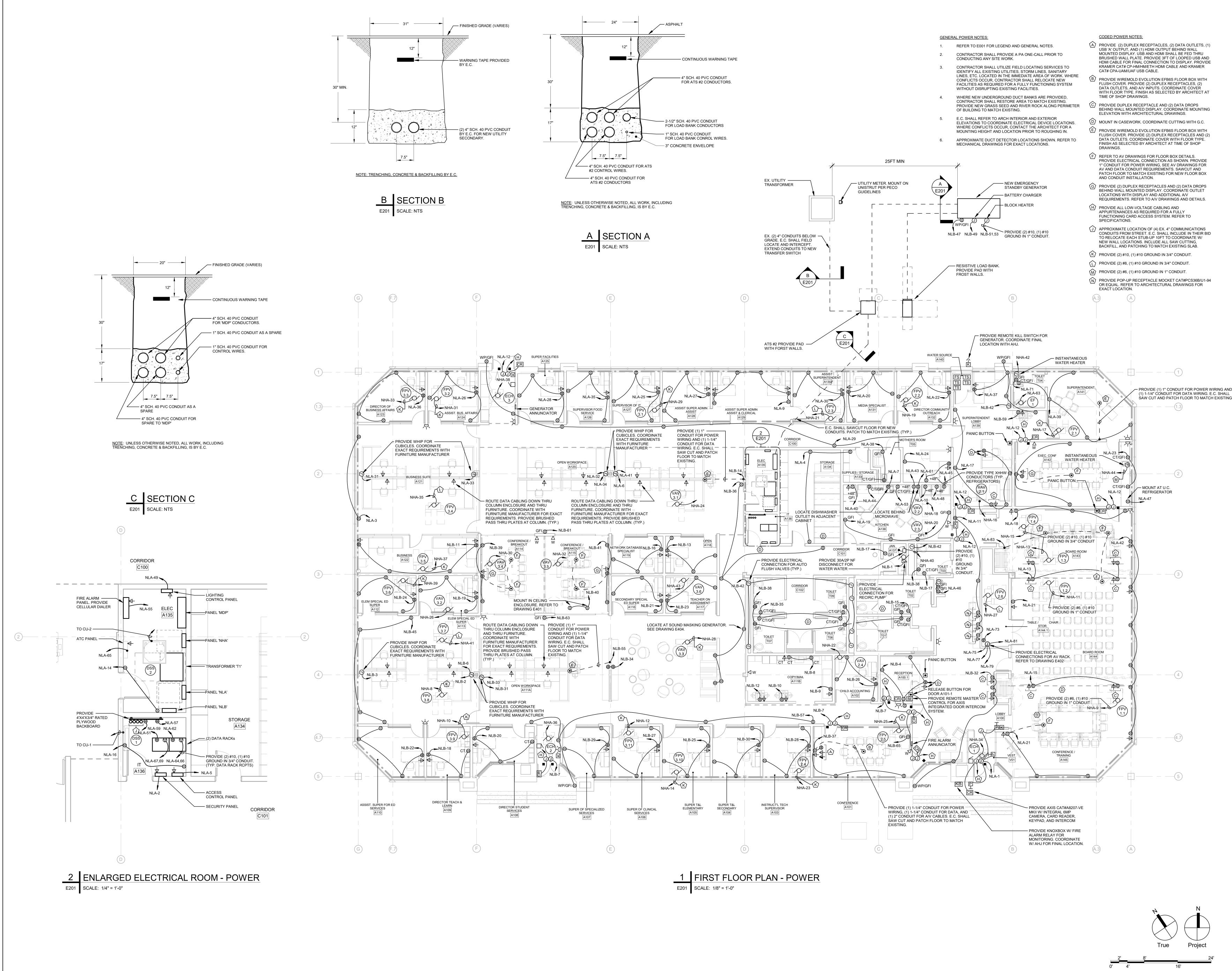




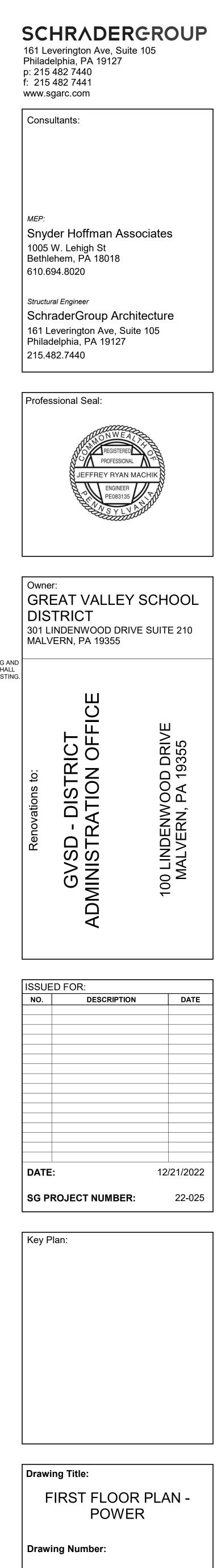


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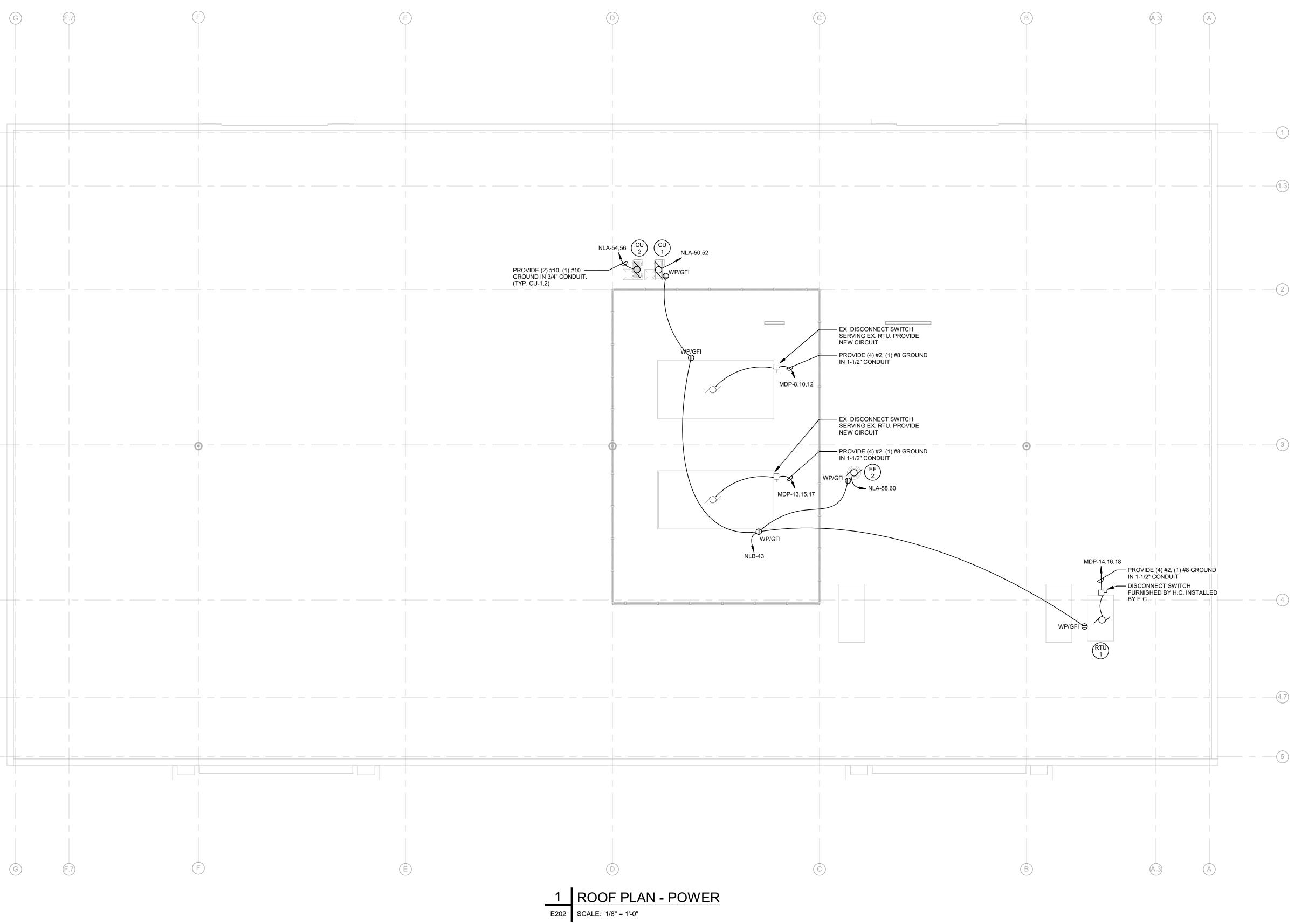


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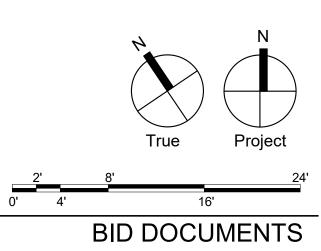
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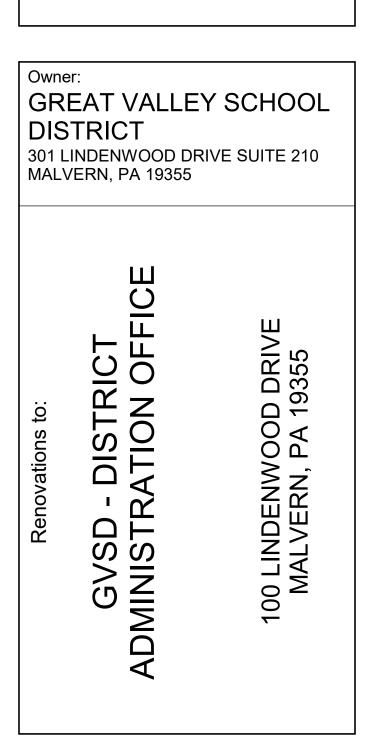


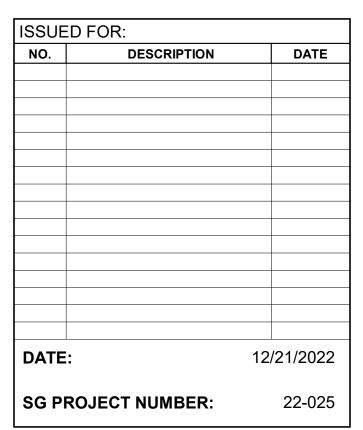
## GENERAL POWER NOTES:

- 1. REFER TO E001 FOR LEGEND AND GENERAL NOTES.
- CONTRACTOR SHALL PROVIDE A PA ONE-CALL PRIOR TO CONDUCTING ANY SITE WORK.
   CONTRACTOR SHALL UTILIZE FIELD LOCATING SERVICES TO IDENTIFY ALL EXISTING UTILITIES, STORM LINES, SANITARY LINES, ETC. LOCATED IN THE IMMEDIATE AREA OF WORK. WHERE CONFLICTS OCCUR, CONTRACTOR SHALL RELOCATE NEW
- 4. WHERE NEW UNDERGROUND DUCT BANKS ARE PROVIDED,
- CONTRACTOR SHALL RESTORE AREA TO MATCH EXISTING. PROVIDE NEW GRASS SEED AND RIVER ROCK ALONG PERIMETER OF BUILDING TO MATCH EXISTING. 5. E.C. SHALL REFER TO ARCH INTERIOR AND EXTERIOR
- E.C. SHALL REFER TO ARCH INTERIOR AND EXTERIOR ELEVATIONS TO COORDINATE ELECTRICAL DEVICE LOCATIONS. WHERE CONFLICTS OCCUR, CONTACT THE ARCHITECT FOR A MOUNTING HEIGHT AND LOCATION PRIOR TO ROUGHING IN.
- 6. APPROXIMATE DUCT DETECTOR LOCATIONS SHOWN. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATIONS.







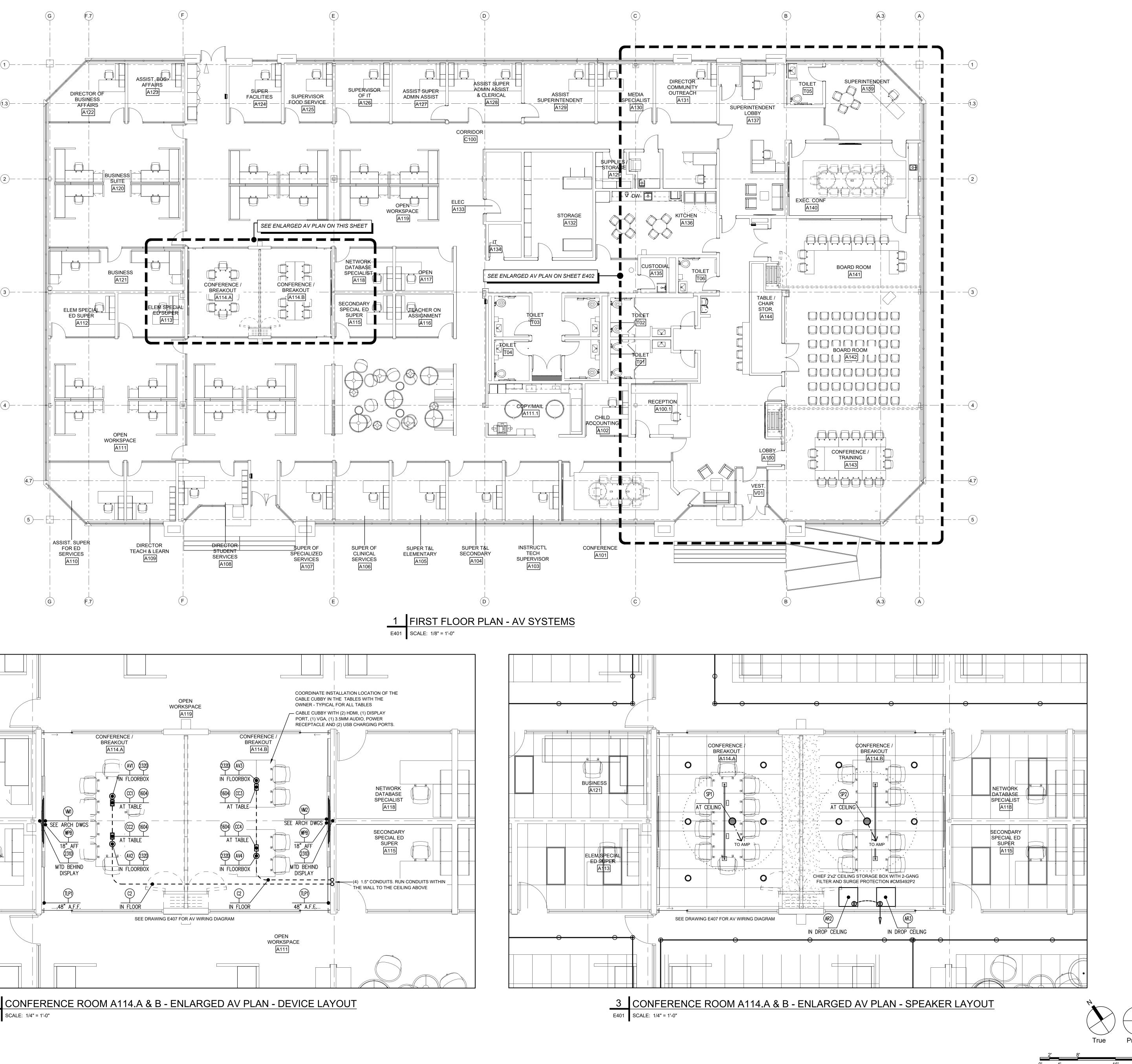


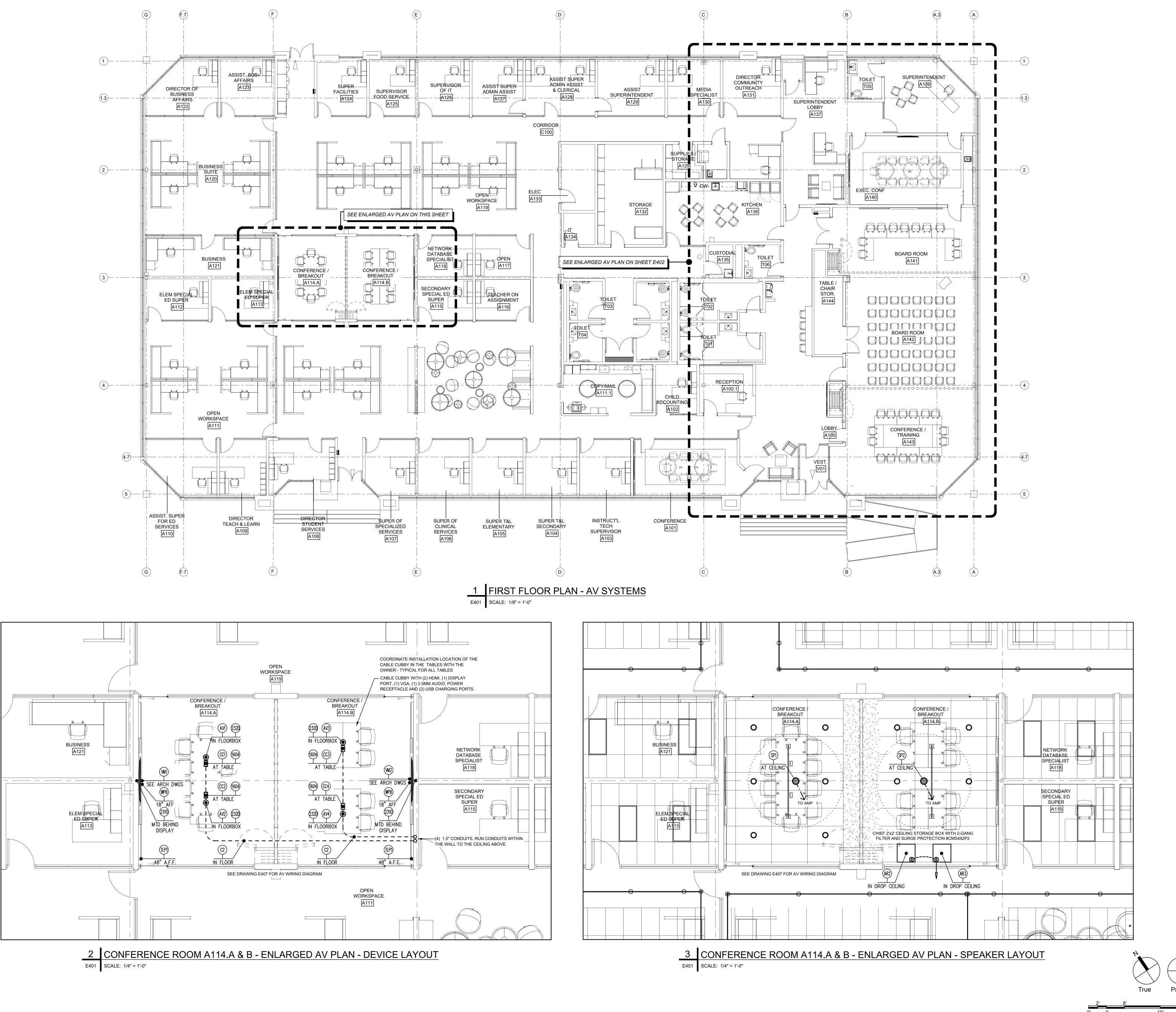
 Key Plan:

 Drawing Title:

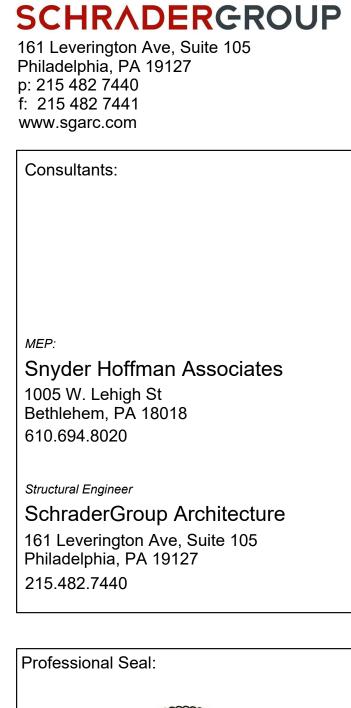
 ROOF PLAN - POWER







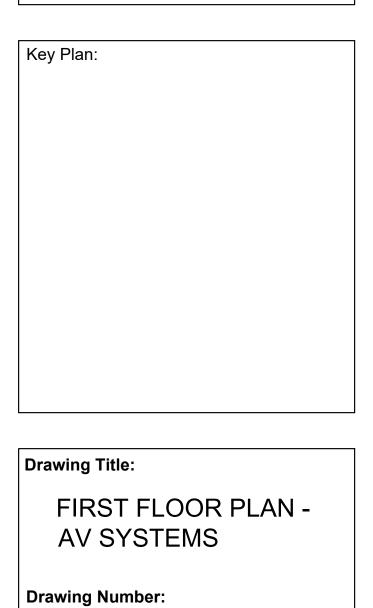
**BID DOCUMENTS** 



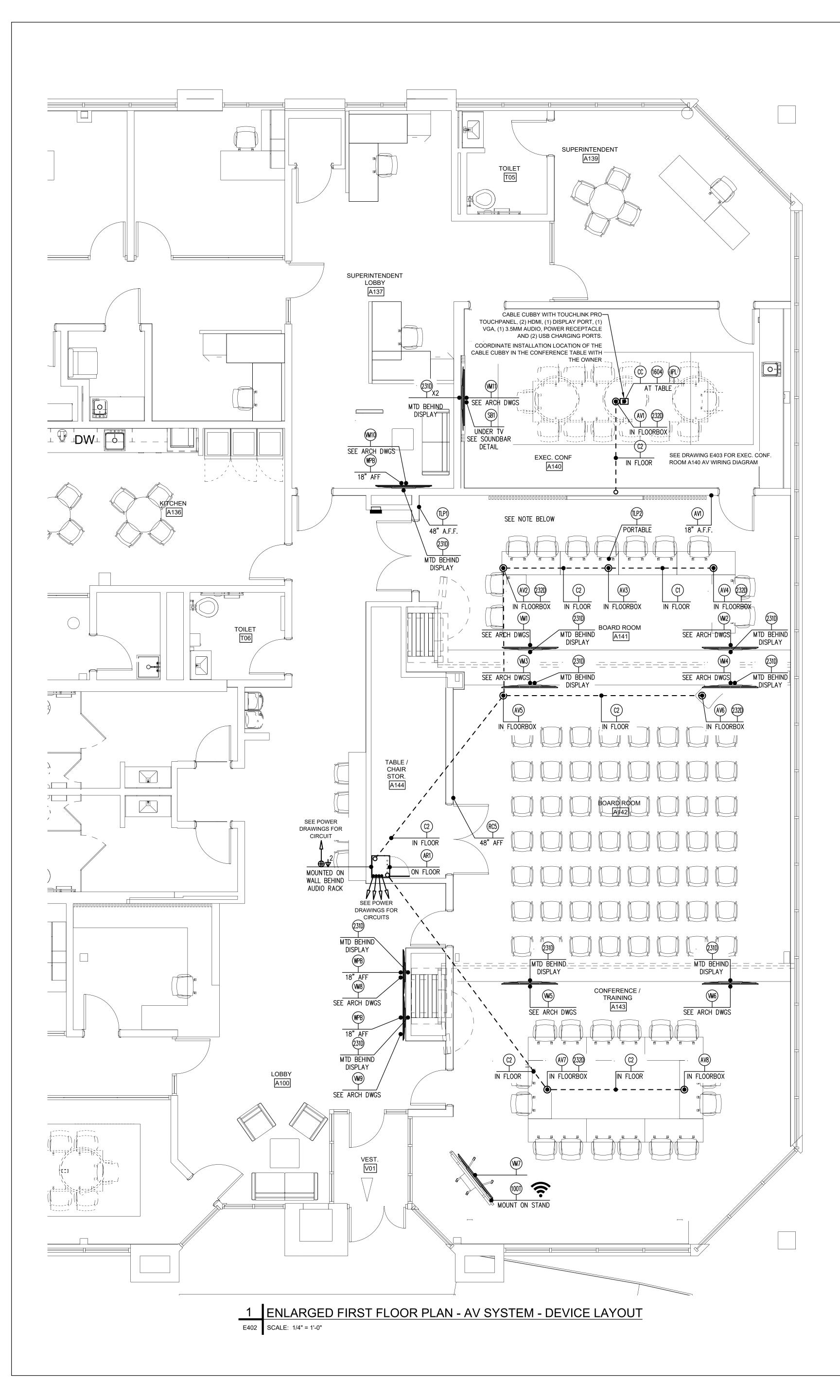


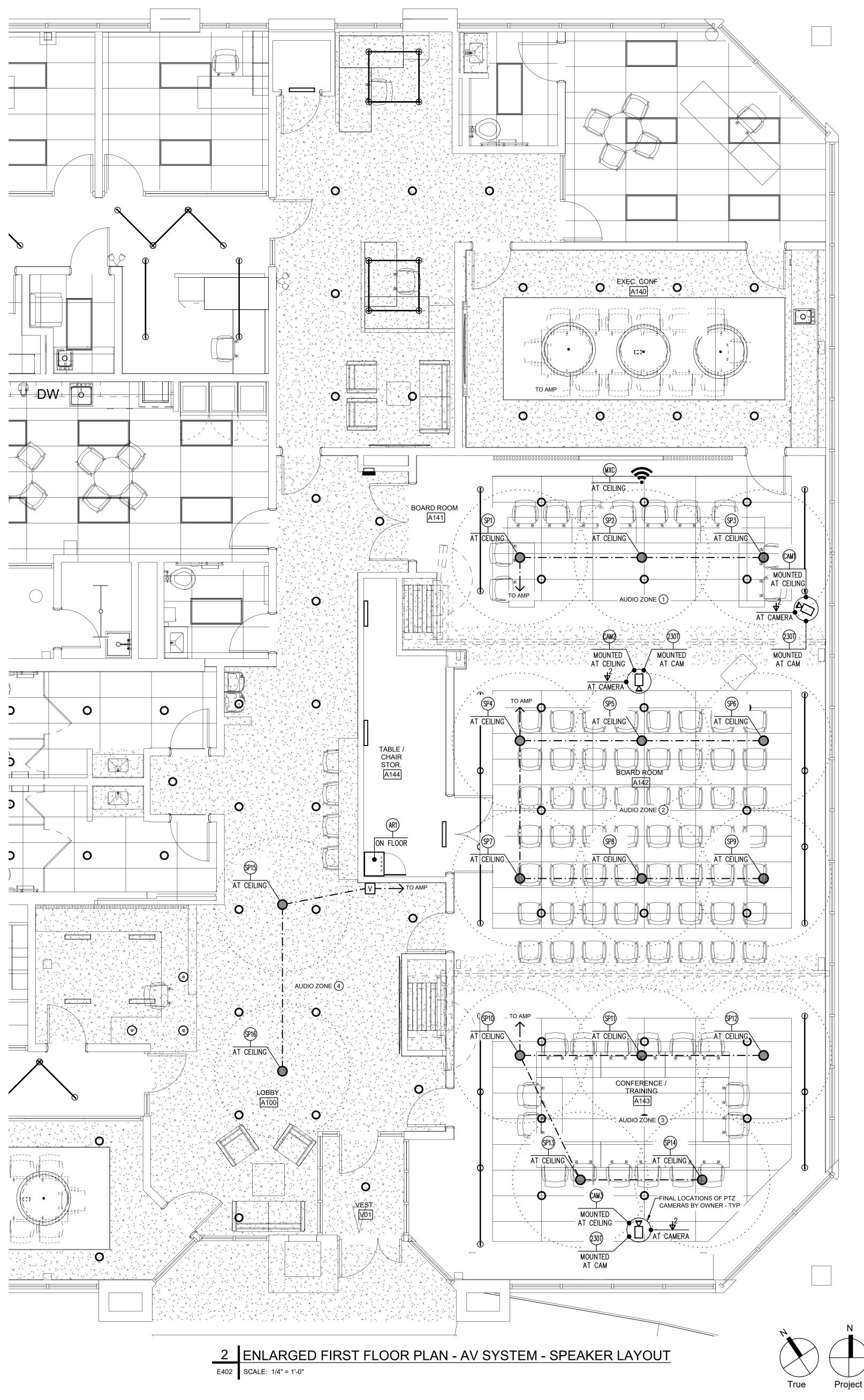


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NO.	DESCRIPTION		DATE		
<b>DATE:</b> 12/21/2022		21/2022			
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E401

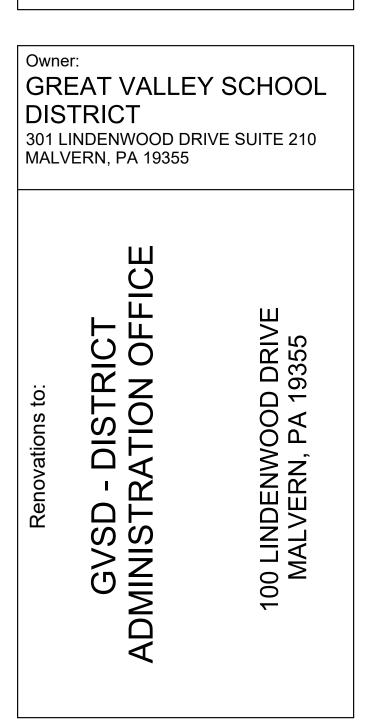




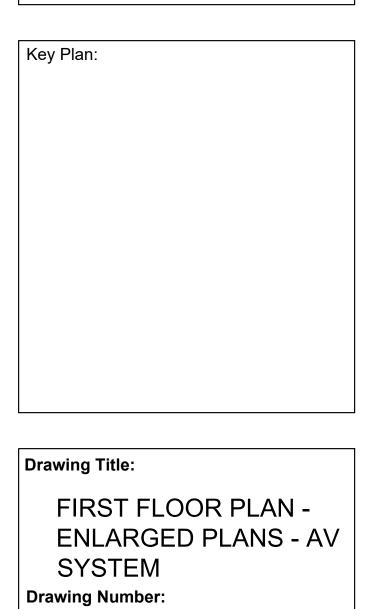
AV1 AT TABLE



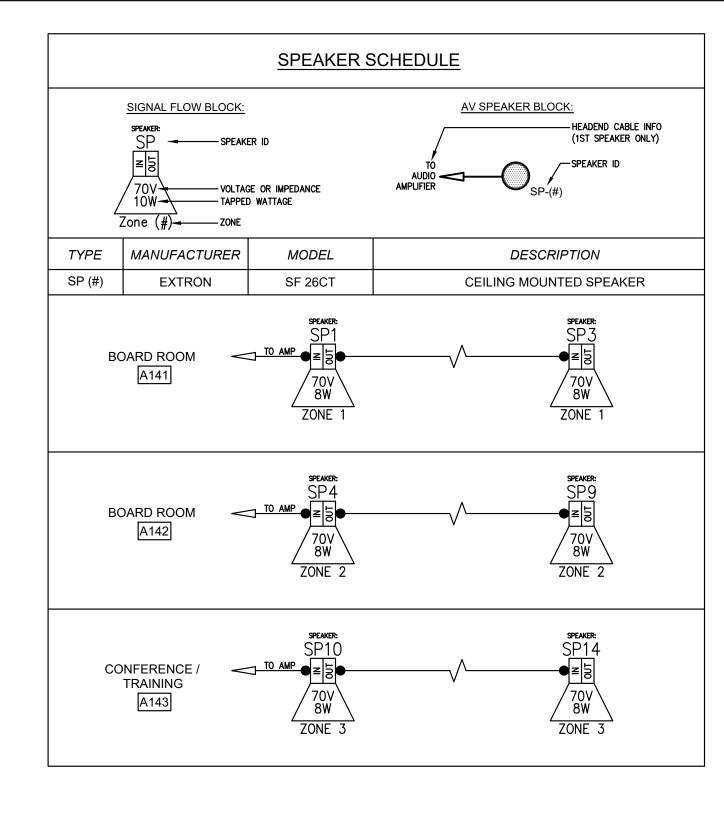


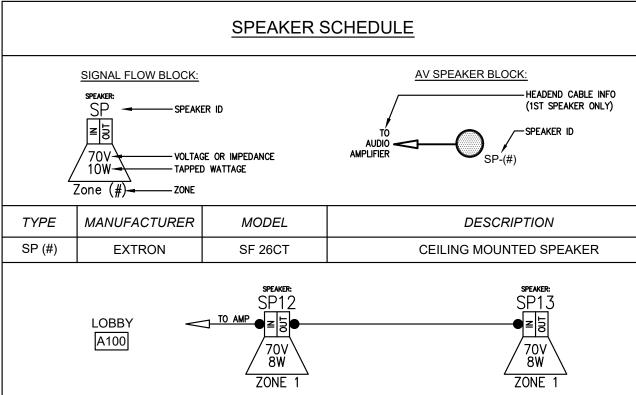


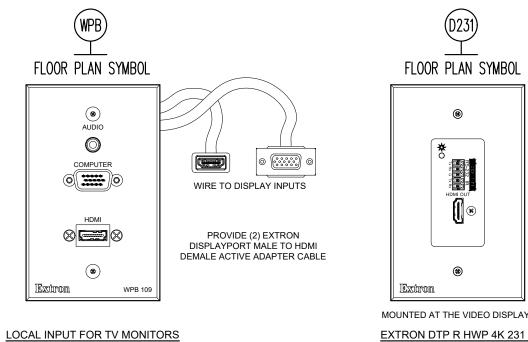
ISSUE	ISSUED FOR:			
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<b>DATE:</b> 12/21/2022		/21/2022		
SG PROJECT NUMBER: 22-025		22-025		



E402







			BY THE E.C. FINISH TO MA	
		MOUNTED AT THE VIDEO DISPLAY	S	
INPUT FOR TV MONITORS IN CAUCUS ROOM		EXTRON DTP R HWP 4K 231 I HDMI RECEIVER	2	
AVSYST	EM - DEVIC	E ELEVATIONS		
E403 SCALE: None				
				RETRACTOR
SPEAKERS		SPEAKERS		
JF LANLINJ	CAMERA	JELANLINS		RETRACTOR
	EXTRON ADJUSTABLE S			RETRACTOR
INSTALL THE SOUND BAR W WIRING CONNECTIONS TO		-		
BAR SHALL BE MOUNTED DI VESA BRACKET TO MOUNT				
EXTRON SOUND BAR NOTE	<u>S:</u>			G
PROVIDE EXTRON ADJUSTA SB-33-A-46-55, PART #60-173		FOR 46" TO 55", MODEL I OWNER ON WHAT DISPLAY		C
WILL BE PURCHASED AND N DISPLAY.				FLOOR P
	TABLE WIDTH SOUND BA	R FOR 46" TO 55" DISPLAYS		
		R FOR 55" TO 65" DISPLAYS R FOR 65" TO 70" DISPLAYS		
		R FOR 75" TO 80" DISPLAYS		
2 SOU	NDBAR DE	ΤΑΠ		
E403 SCALE: I	None			
		FSR SF8-CPT-JNC1-xxx FIRE RAT (xxx= COVER FINISH BY ARCHITE	ED POKE-THRU ECT: ALUMINUM / BLACK / BRASS)	
FLOOR BOXES AT DESKS & C	ONFERENCE ROOM			
FSR SF8-CPT-JNC1 FIRE RATED PO	OKE-THRU		FSR SF8-SPC2 MIDDLE 3-GANG AREA BRACKET WITH SPACE FOR 2 FSR IPS PLATES	
			FSR IPS-A611D XLR PLATE	
SR SF8-SPO 1 END AREA BRACKE VITH SPACE FOR 1 FSR IPS PLATE				
SR IPS-C612S TPS BLOCK 10 CONNECTOR PLATE			DUAL 20A PRE-WIRED AC OUTLET SUB-PLATE INCLUDED WITH FSR SF8-CPT-JNC1	
			STAND-OFF WITH (2) 43763 WASHERS PER STAND-OFF (4 STAND-OFF'S REQUIRED)	
SR SF8-SPC5 2-GANG DECORATO			FSR KIT 17519 INCLUDES: (4) 26659 STAND-OFF'S (8) 43763 WASHERS (KIT	
~			MUST BE ORDERED SEPARATELY)	
			EXTRON DTP T DWP 4K 232 D DIGITAL MEDIA	
			INTERFACE	
DISPLAY PORT CABLE		LLOWING CABLES FOR EACH FLOOR BOX	LOCATION:	
×	A.			
AUD	JO CABLE			
	(2) 10' - 1/8" MALE	TO 1/8" MALE AUDIO CABLE		
		OOR BOX DETA		
	E403 SCALE: No	ne		
	-			

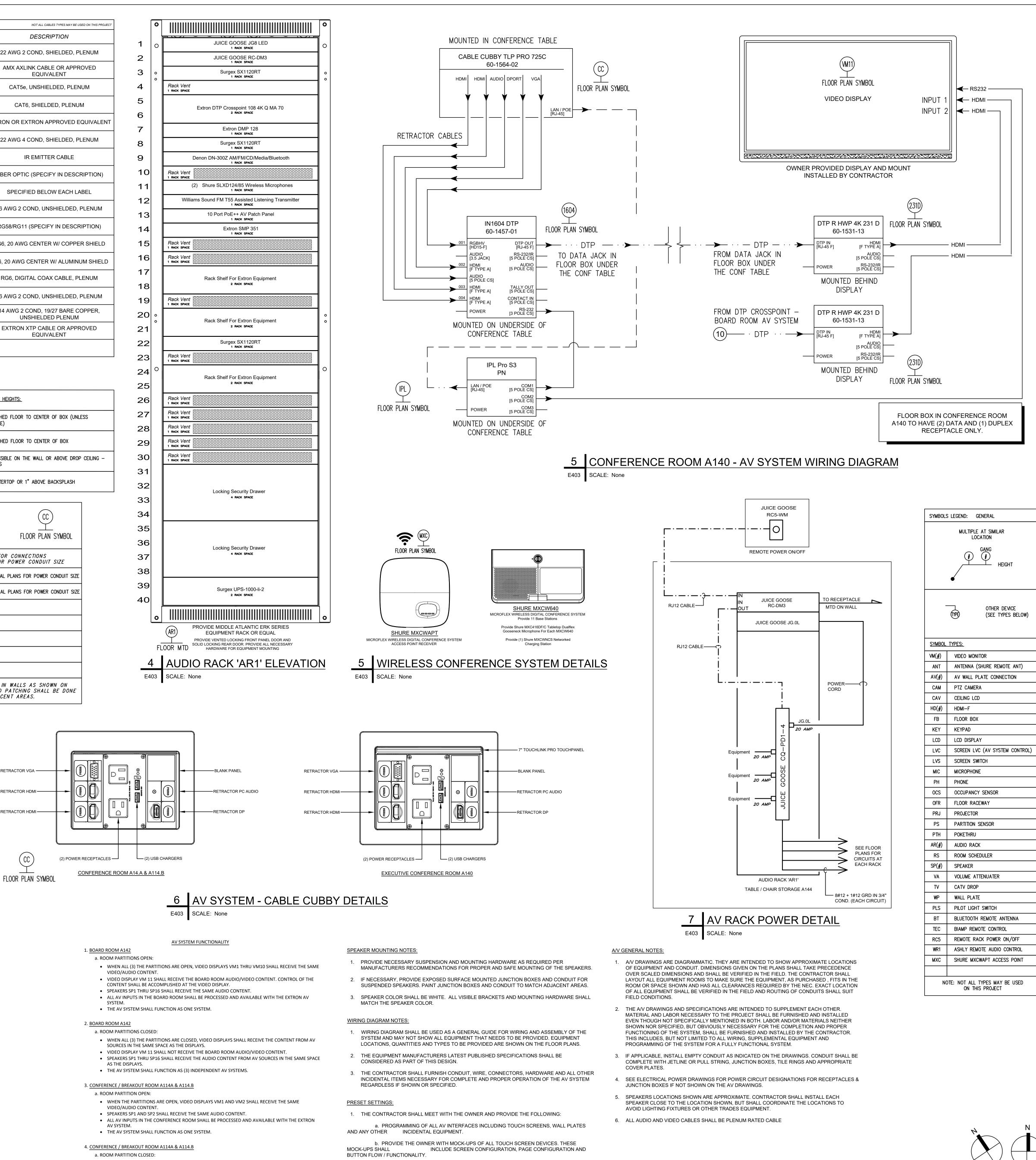
CABLE LEGEND	
TYPE	
AUDIO	22 AWG 2
AXLINK	AMX AXLI
CAT5E	CAT5e,
CAT6 SHIELDED	CATE
EXTRON	EXTRON OR EX
CONTROL	22 AWG 4
IR EMITTER	IF
FIBER OPTIC	FIBER OPTIC
PREMADE CABLE	SPECIFI
POWER (TYP. LOW VOLTAGE)	16 AWG 2 C
RF ANTENNA	RG58/RG11
RG6 VIDEO	RG6, 20 AWG
RG6 FOR CATV/MATV	RG6, 20 AWG (
SDI DIGITAL VIDEO	RG6, DIGI⁻
70V SPEAKER	16 AWG 2 C
LOW IMPEDANCE SPEAKER	14 AWG 2 0 UN
EXTRON XTP	EXTRON >

	Mounting Heights:
RECEPTACLES	18" ABOVE FINISHED FLOOR TO NOTED OTHERWISE)
SWITCHES	48" ABOVE FINISHED FLOOR T
REMOTE ANTENNA	AS HIGH AS POSSIBLE ON THE NOTED ON PLANS
CT RECEPTACLES	3" ABOVE COUNTERTOP OR 1"

CONDUIT SCHEDULE

	av connections FL(
	SEE AV WIRING DIAGRAM FOR CONNE SEE ELECTRICAL PLANS FOR POWER
C1	(1) 1.5" CONDUITS. SEE ELECTRICAL PLANS FO
C2	(2) 1.5" CONDUITS. SEE ELECTRICAL PLANS F
	CONDUIT UNDER FLOOR OR IN WALLS DR PLANS. ALL CUTTING AND PATCHIN

ENT AREAS.



- WHEN THE PARTITION IS CLOSED, VIDEO DISPLAYS SHALL RECEIVE THE CONTENT FROM AV SOURCES IN
- THE SAME SPACE AS THE DISPLAYS. • SPEAKERS SP1 AND SP2 SHALL RECEIVE THE AUDIO CONTENT FROM AV SOURCES IN THE SAME SPACE
- AS THE DISPLAYS. • THE SYSTEM SHALL FUNCTION AS (2) INDEPENDENT AV SYSTEMS.

THE OWNER AND PROGRAMMING OF ALL INTERFACES.

2. THE CONTRACTOR SHALL PROVIDE AS PART OF HIS BID, ANY TIME NECESSARY TO MEET WITH

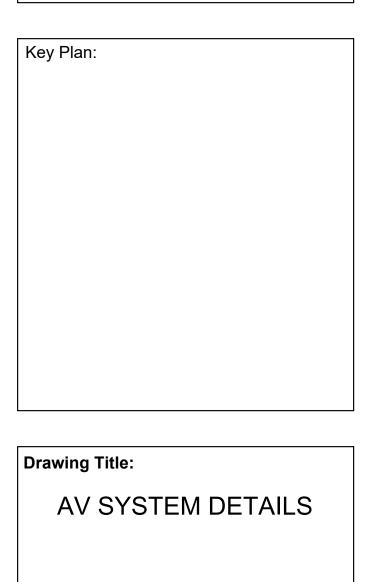
COMPLETED.



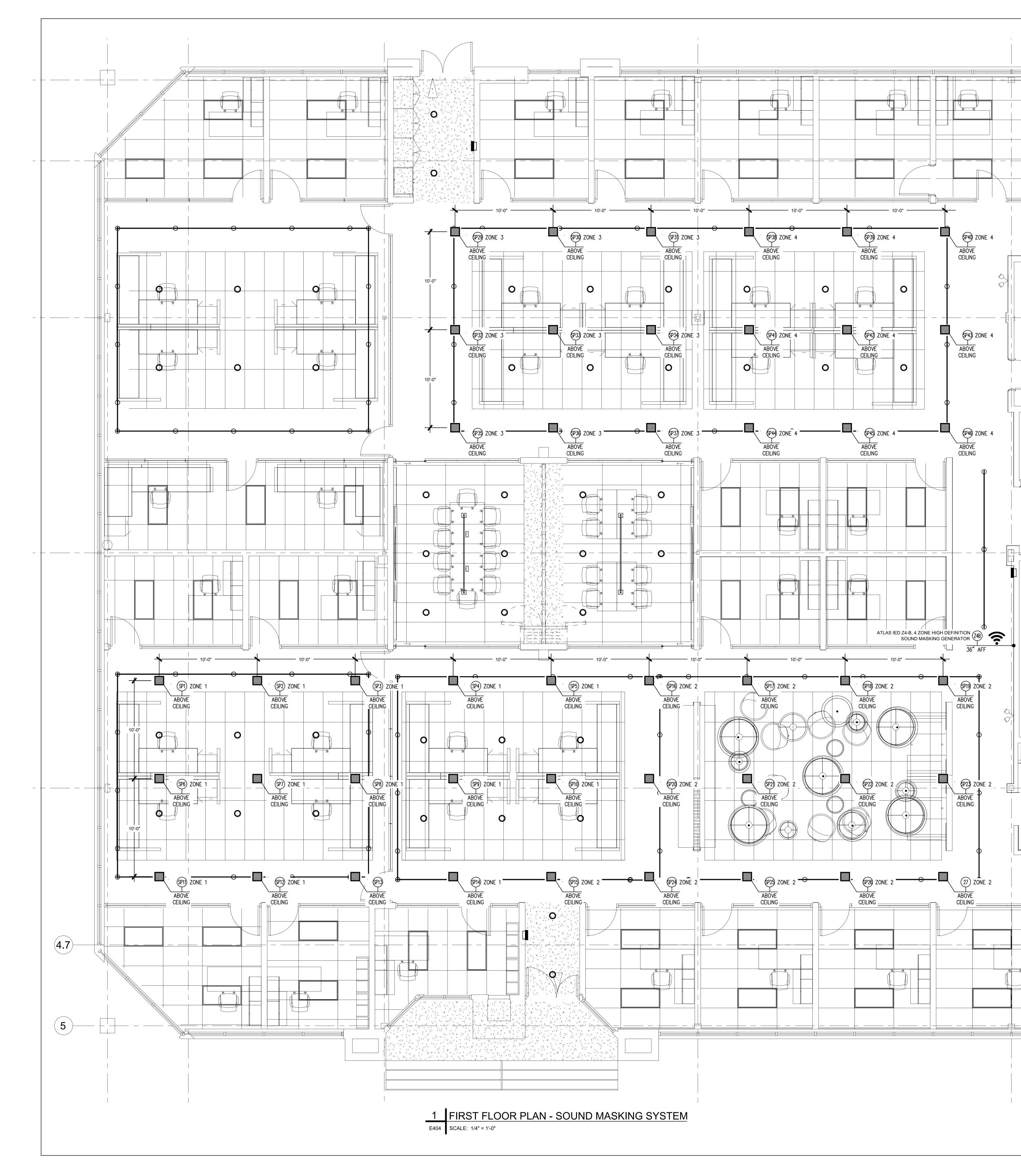


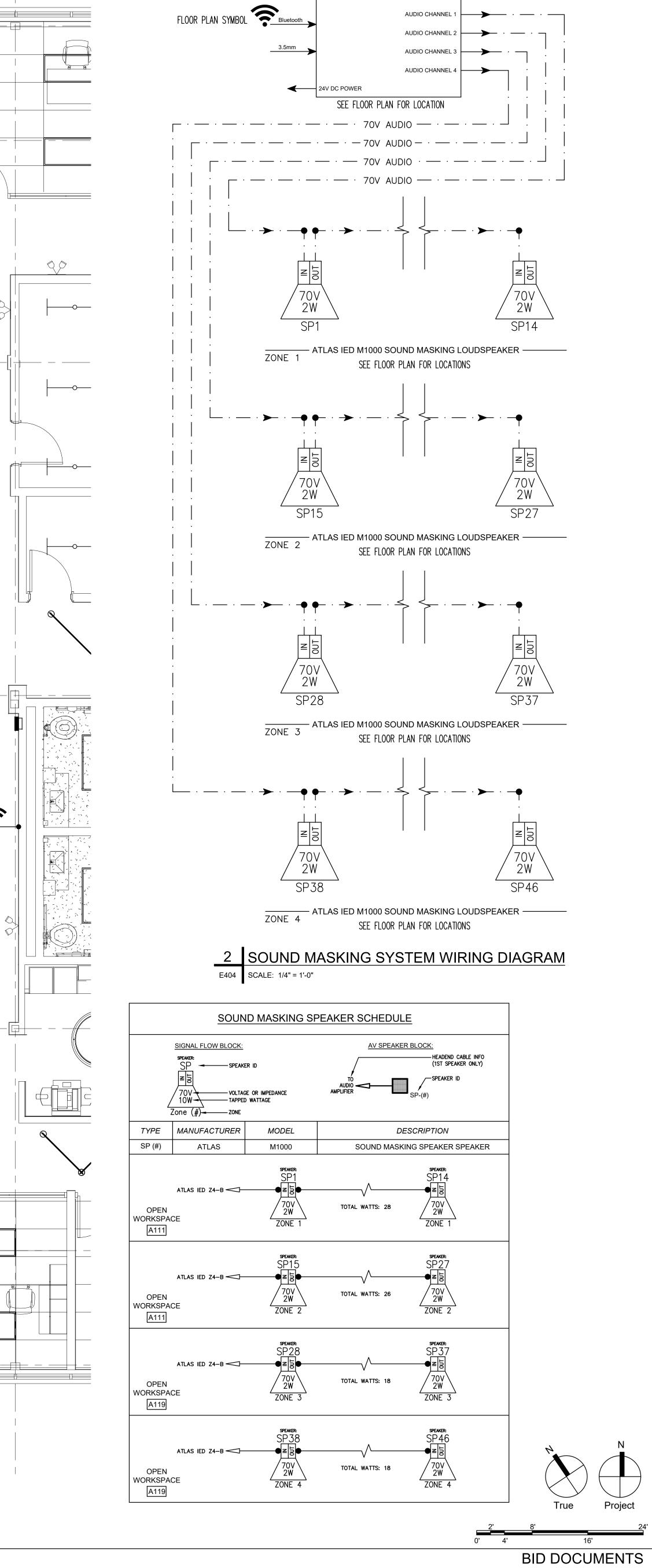


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DATE: 12/21/2022		/21/2022		
SG PROJECT NUMBER: 22-025		22-025		









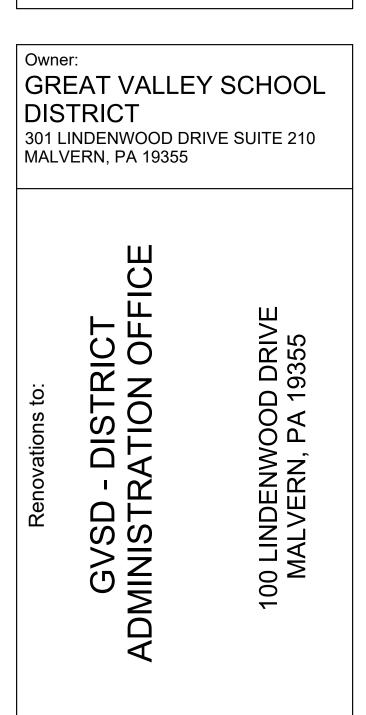


(Z4B)

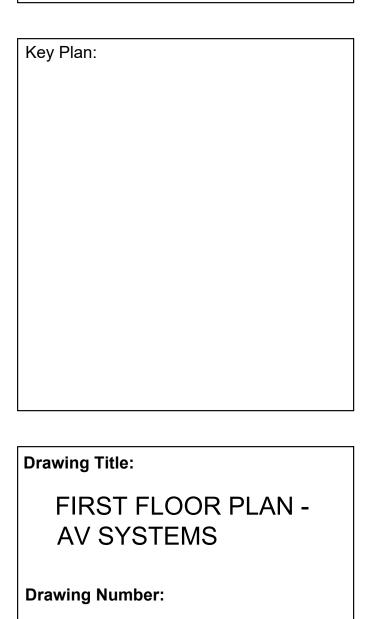
FLOOR PLAN SYMBOL

ATLAS IED Z4-B SOUND MASKING GENERATOR

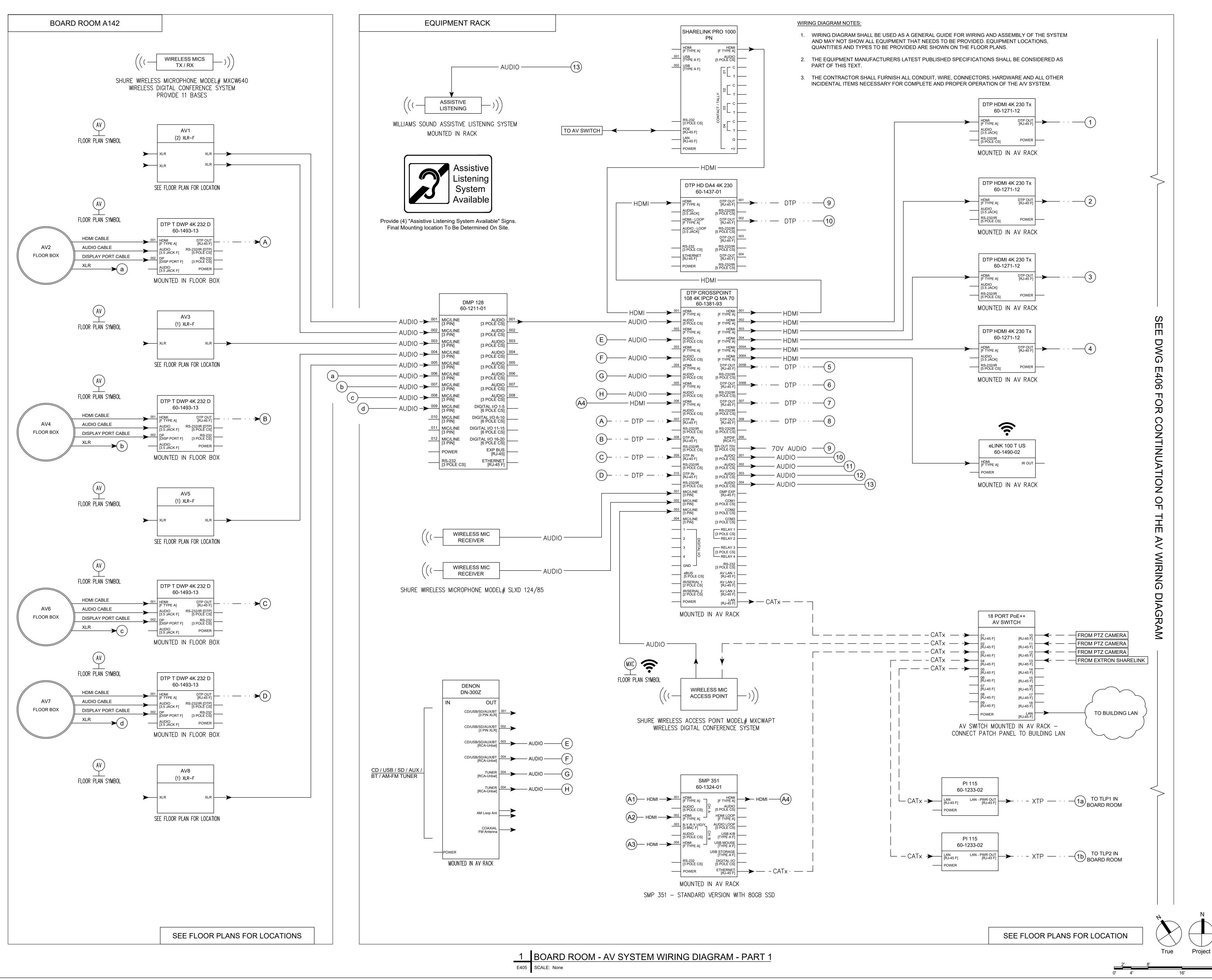




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SG PROJECT NUMBER: 22-025		22-025		



E404



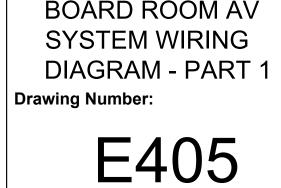




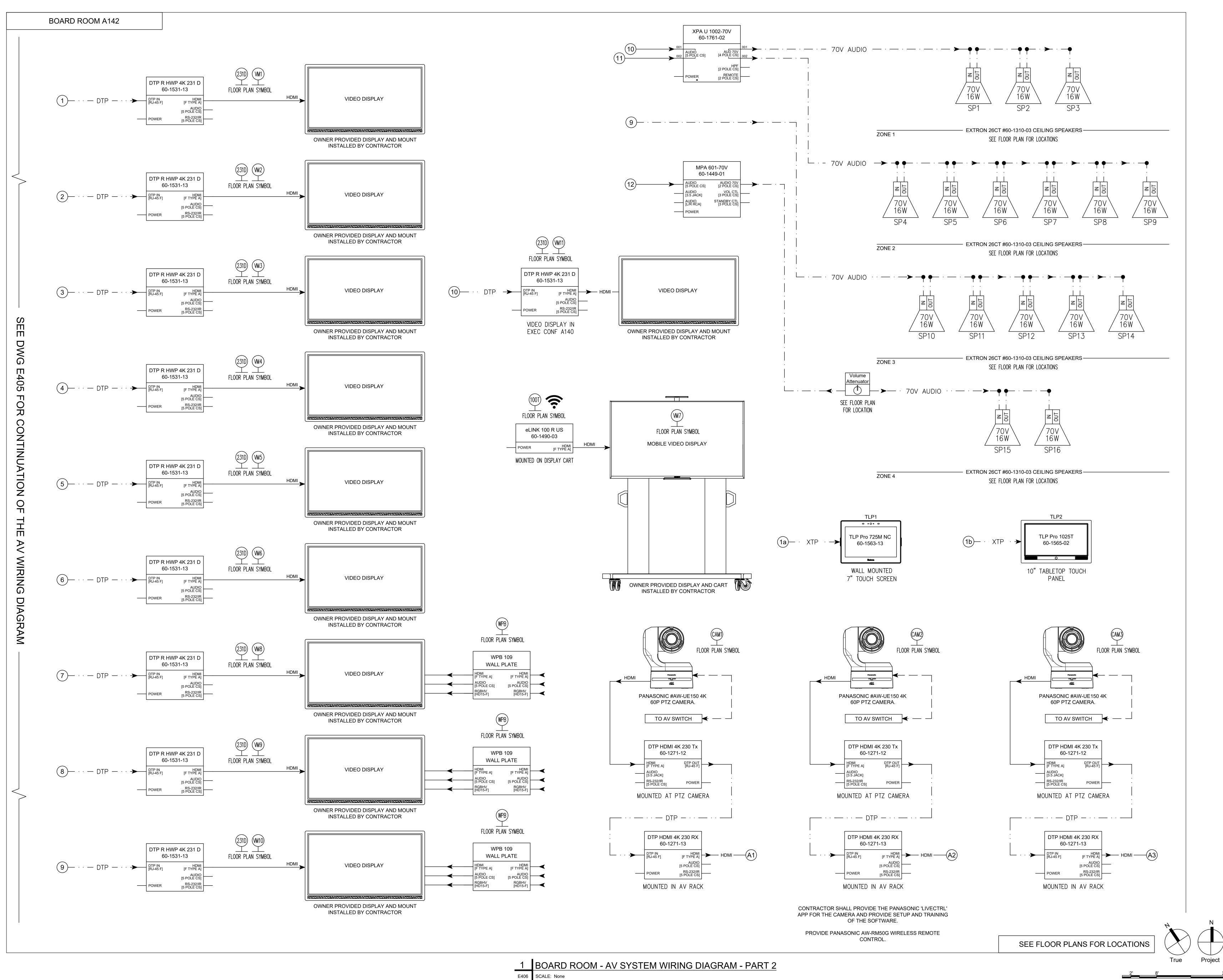


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DATE	<b>DATE:</b> 12/21/2022			
SG PI	SG PROJECT NUMBER: 22-025			

Key Plan: Drawing Title: **BOARD ROOM AV** 



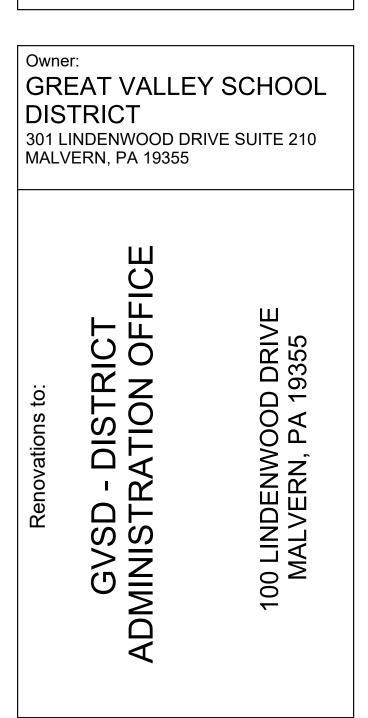
**BID DOCUMENTS** 



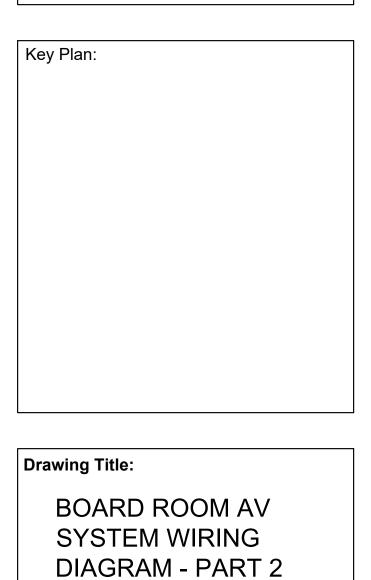
0' 4'





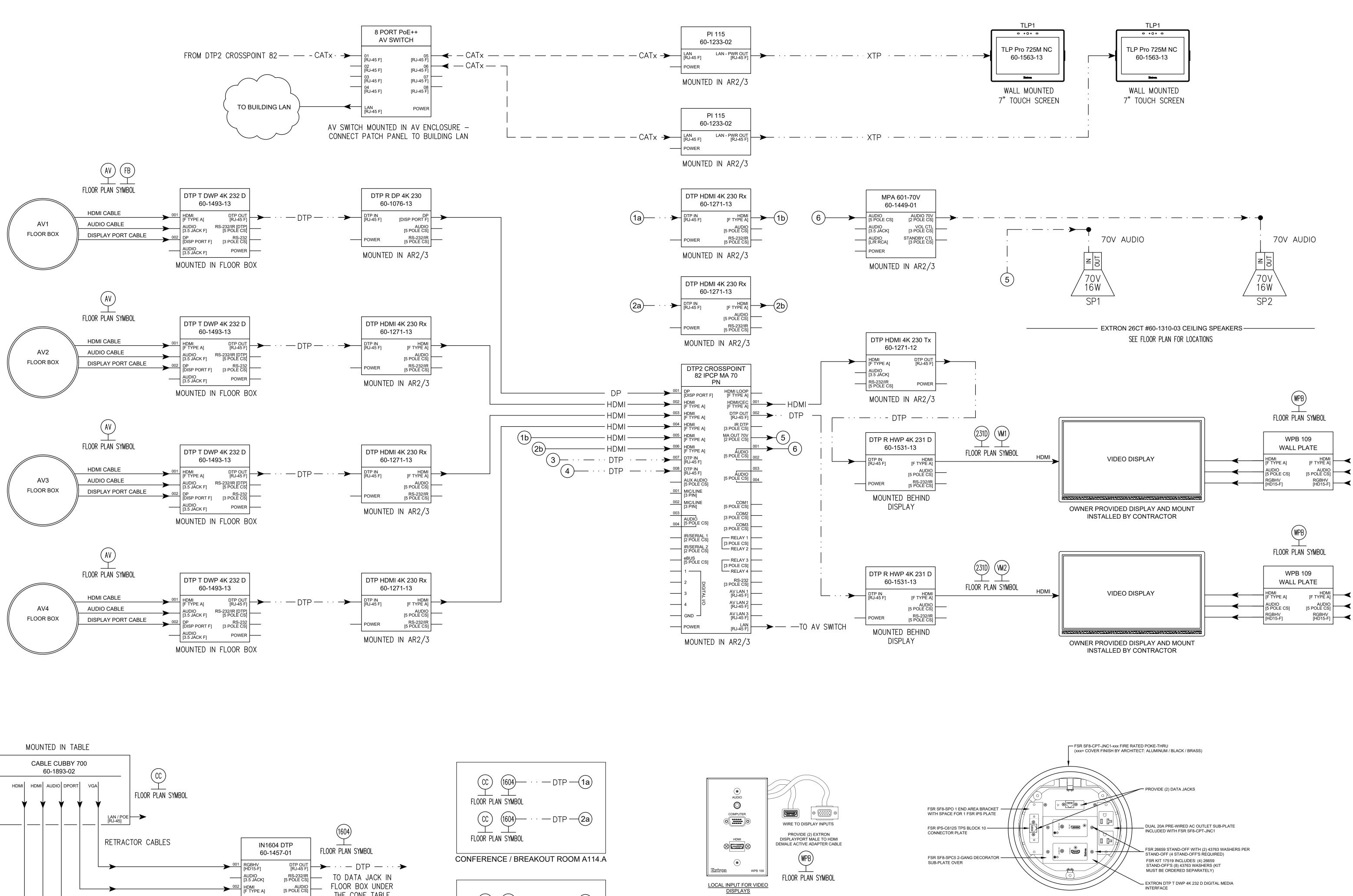


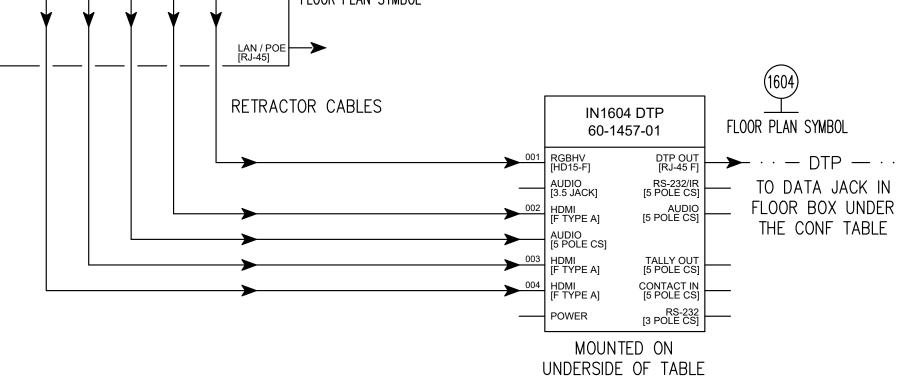
ISSUE	ISSUED FOR:			
NO.	DESCRIPTION		DATE	
<b>DATE:</b> 12/21/2022		1/2022		
SG PROJECT NUMBER: 22-025		22-025		



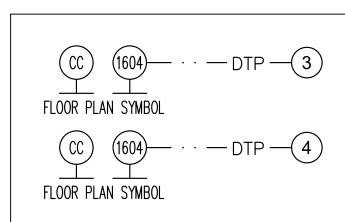
E406

**BID DOCUMENTS** 





AV1 THRU AV4 - CABLE CUBBY WIRING DETAIL IN CONFERENCE / BREAKOUT ROOMS A114.A & A114.B

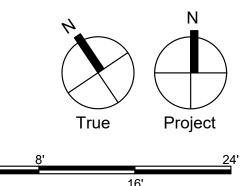


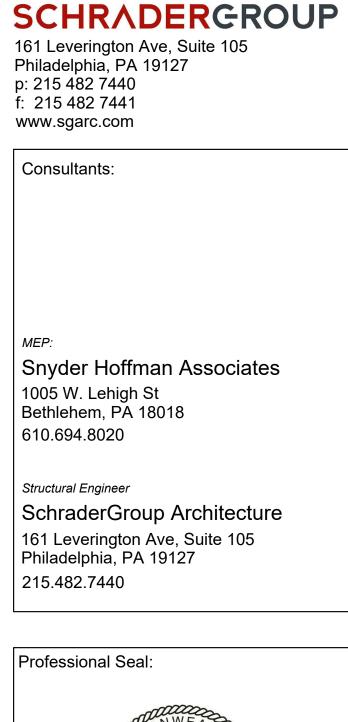


1 CONFERENCE ROOM A114.A & A114.B - AV SYSTEM WIRING DIAGRAM E407 SCALE: None

AV1 THRU AV4 - FLOOR BOX IN CONFERENCE / BREAKOUT ROOMS A114.A & A114.B FSR SF8-CPT-JNC1 FIRE RATED POKE-THRU

INTERFACE

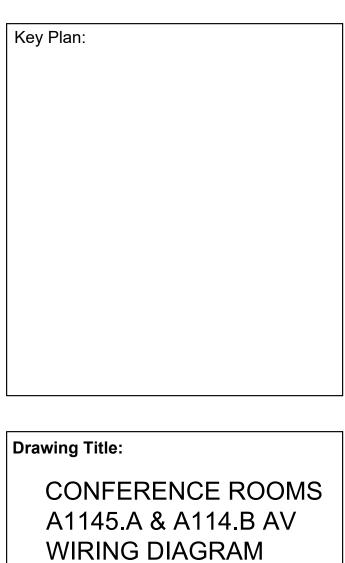




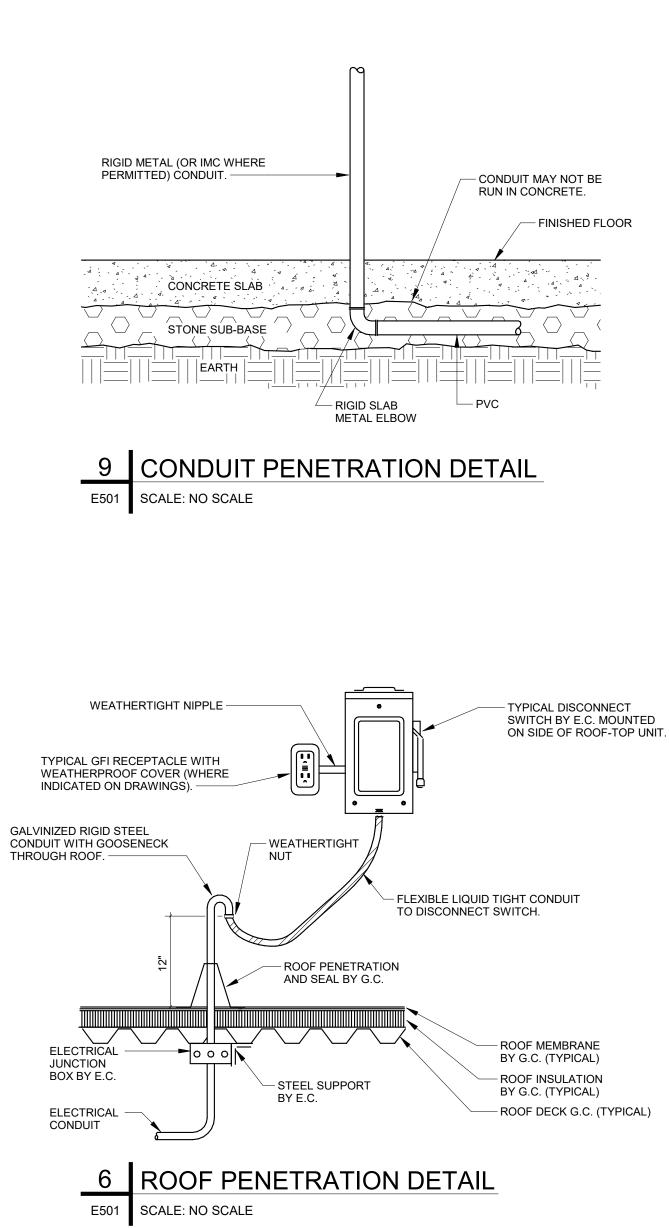
PROFESSIONA JEFFREY RYAN MACHIN ENGINEER E083135

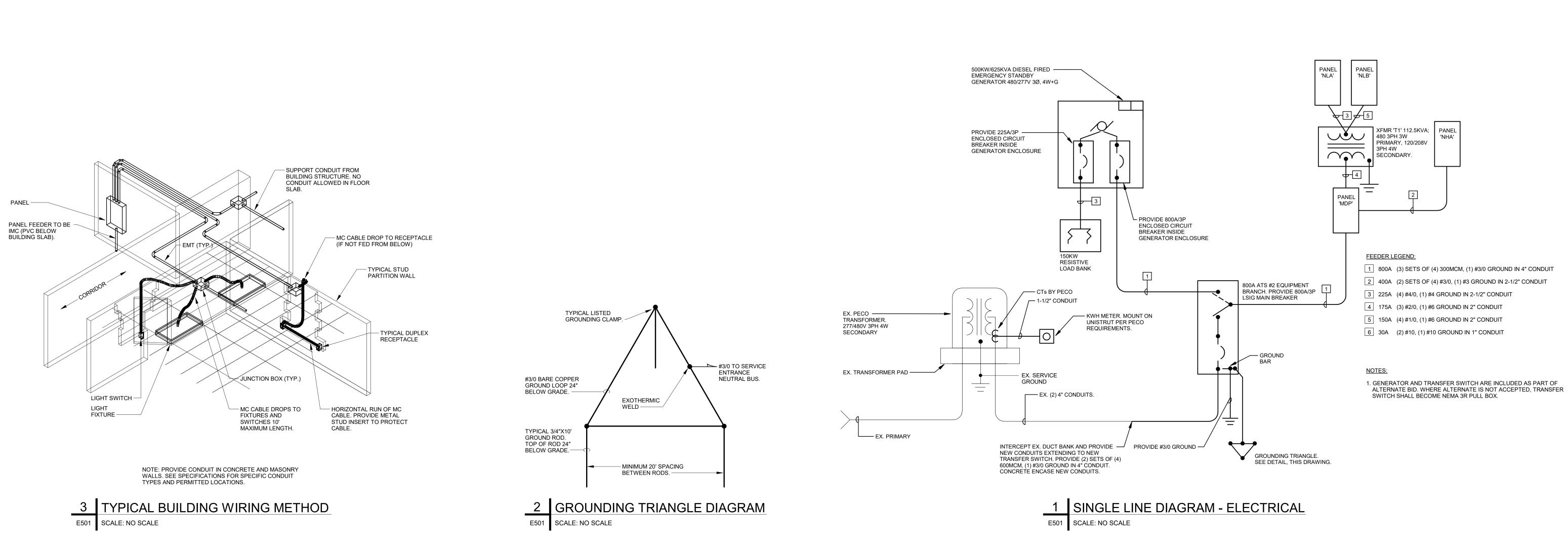


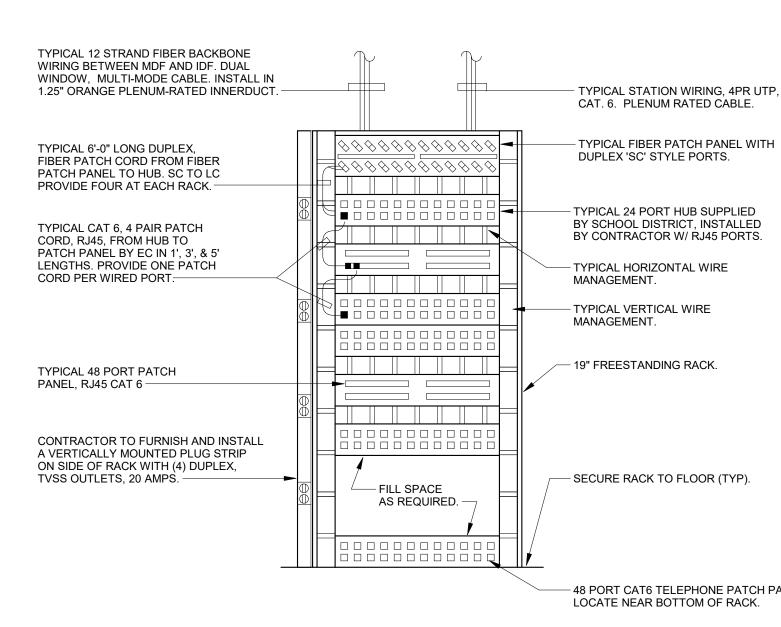
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SG PROJECT NUMBER: 22-025		22-025		



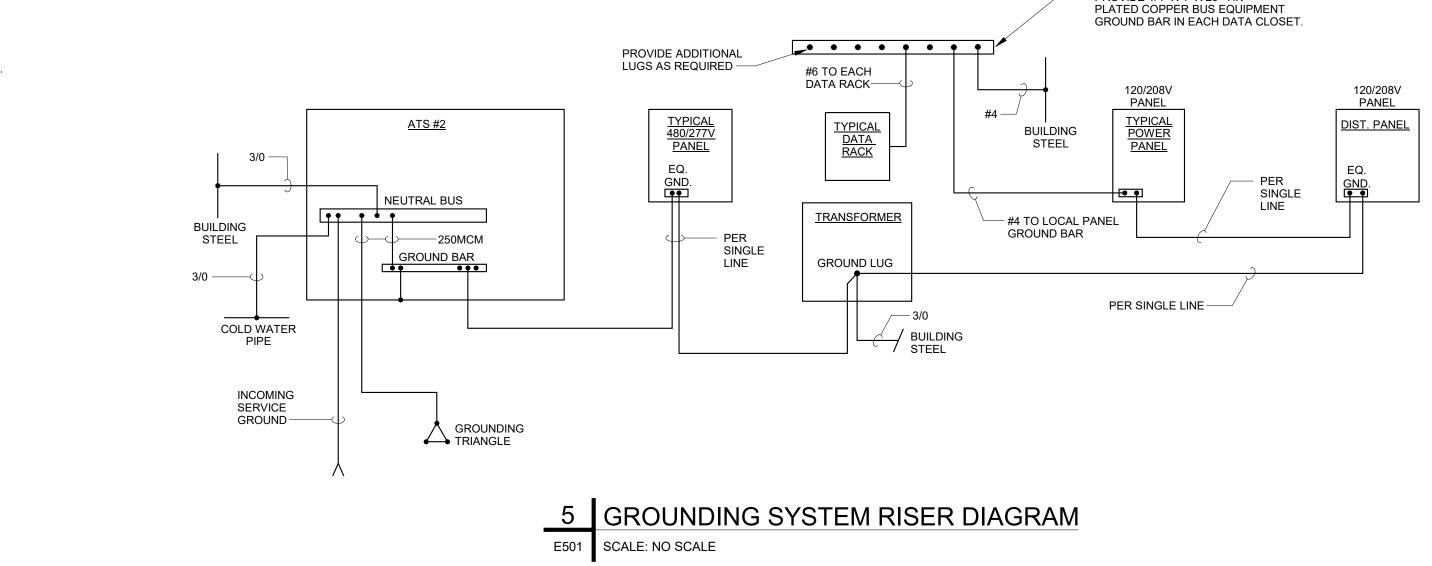












# - PROVIDE 1/4" X 4" X 20" TIN

### MUFFLER \_\_\_\_ WATER JACKET HEATER -- SOUND-ATTENUATING WEATHERPROOF HOUSING — 12" THICK REINFORCED VIBRATION -CONCRETE GENERATOR ISOLATORS └╼╢╟╒╴╛ (TYPICAL) PAD BY E.C. ┤║║┝ — — — — — — — 6" MIN. FINISHED GRADE 3' MIN. — #4'S, @ 12" ON CENTER BOTH WAYS (TYPICAL (4) SIDES) — #5'S, @ 12" ON CENTER BOTH WAYS (TYPICAL TOP) UNDERGROUND CONDUITS

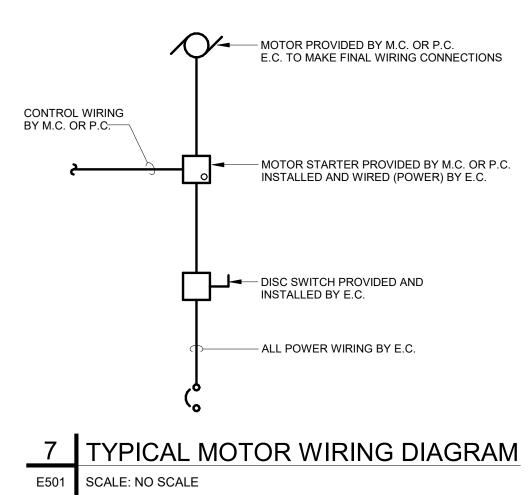
**EXTERIOR GENERATOR INSTALLATION DETAIL** 

-RAIN CA

- 48 PORT CAT6 TELEPHONE PATCH PANEL LOCATE NEAR BOTTOM OF RACK.

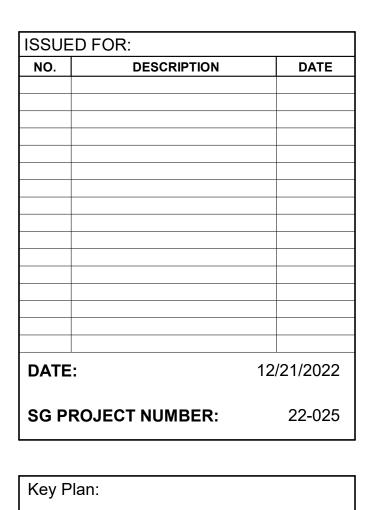
4

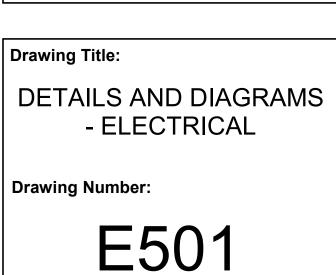
E501 SCALE: NO SCALE











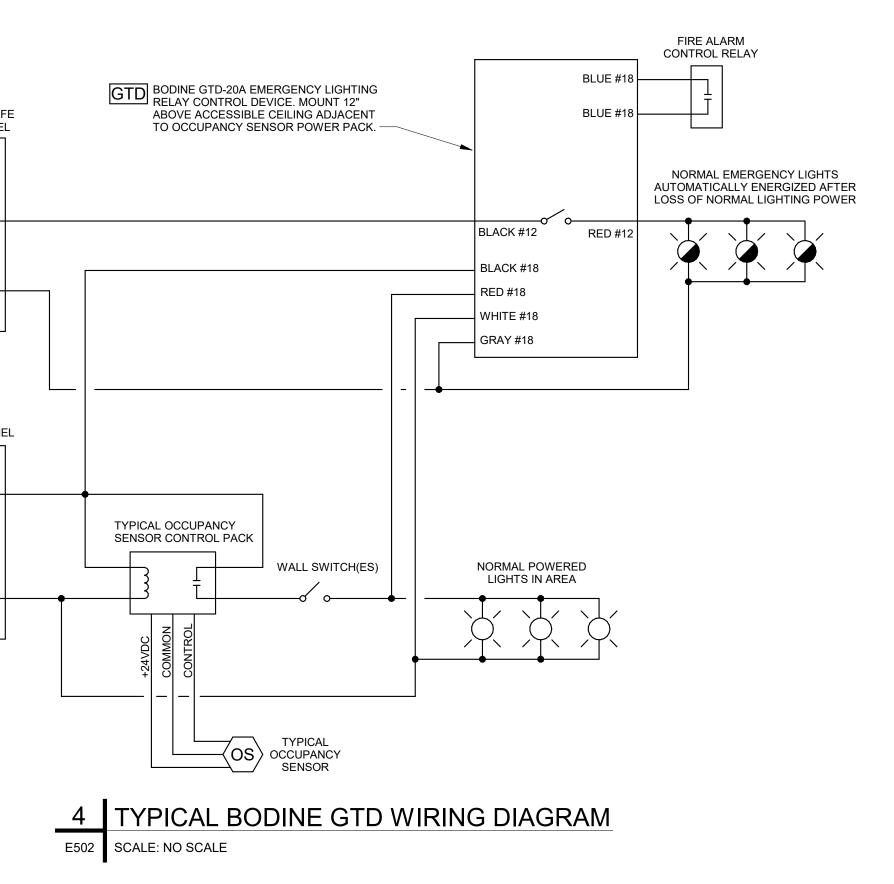
### NORMAL / EMERGENY LIFE SAFETY LIGHTING PANEL

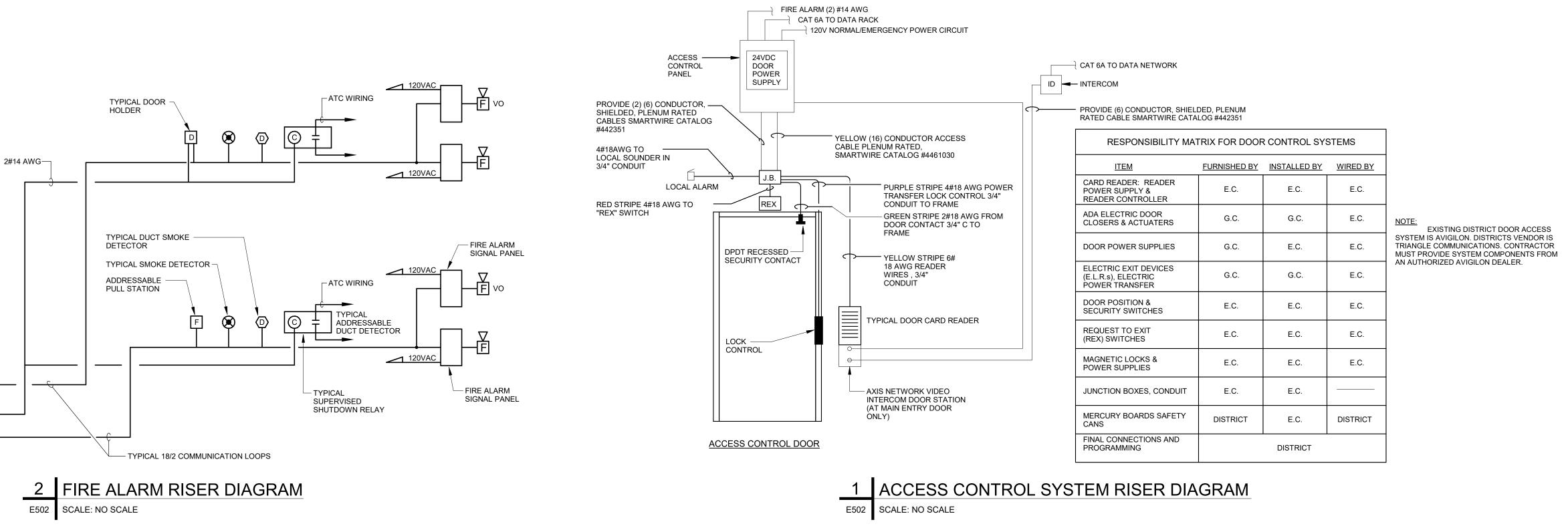
$\left( \begin{array}{c} \circ \\ \circ \end{array} \right)$	
	•
NEUTF	AL BUS

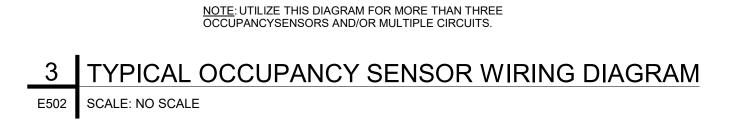
NORMAL LIGHTING PANEL

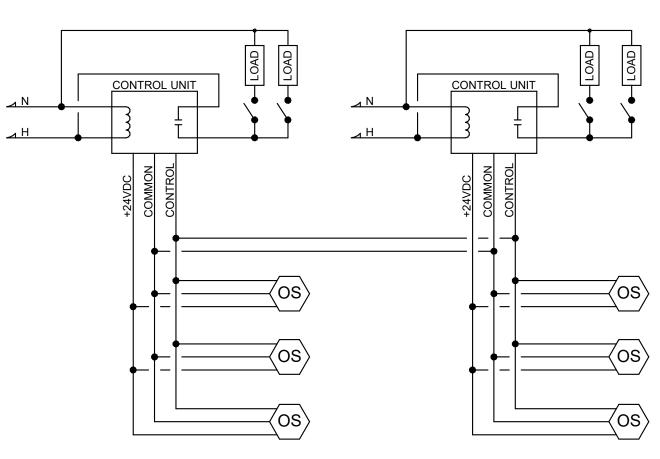
 $\frown$ • NEUTRAL BUS

FIRE ALARM ANNUNCIATOR MAIN FIRE ALARM CONTROL PANEL

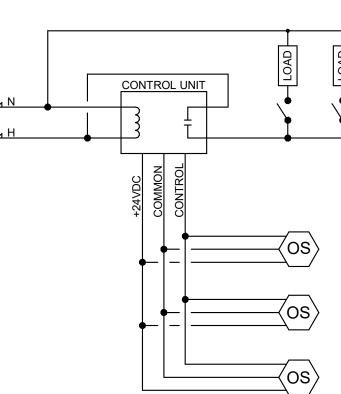




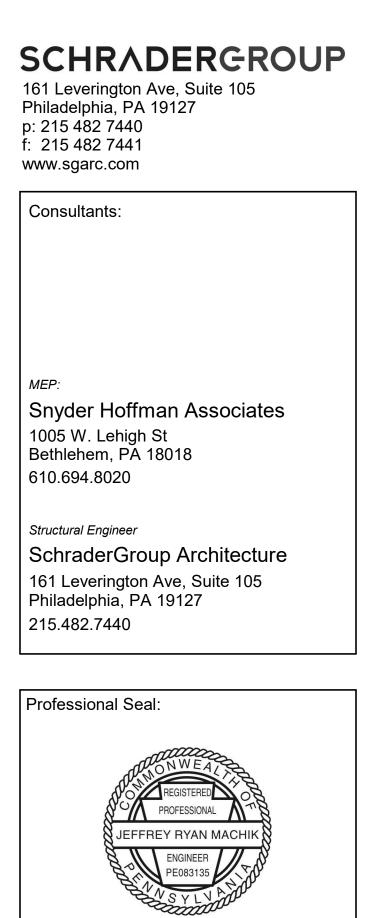




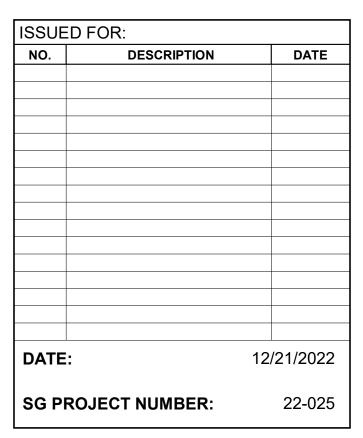
NOTE: UTILIZE THIS DIAGRAM FOR UP TO THREE OCCUPANCYSENSORS AND ONE CIRCUIT APPLICATIONS.



# $\neg N$

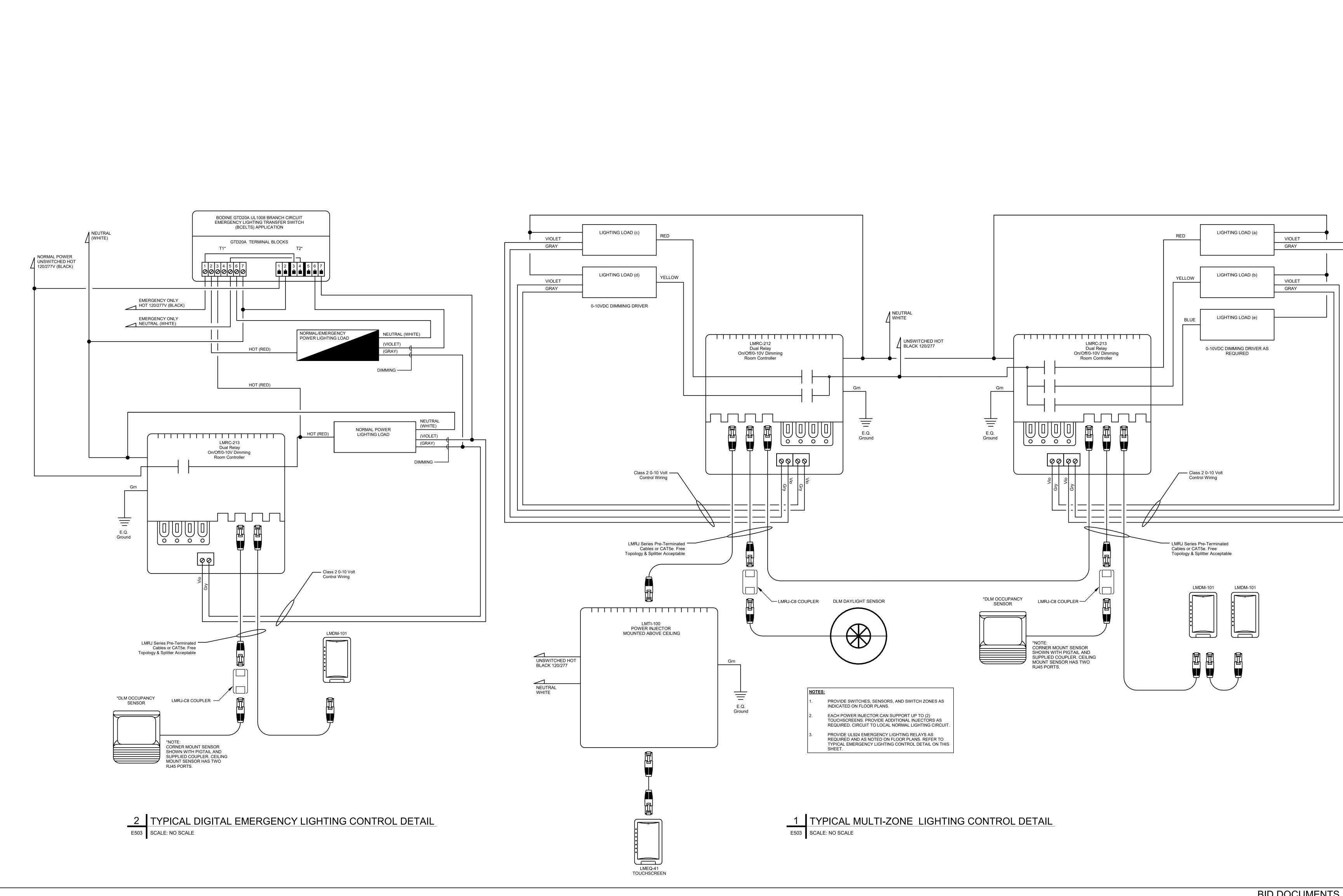






Key Plan: Drawing Title: DETAILS AND DIAGRAMS - ELECTRICAL







# Branch Panel: MDP

Location: ELEC A135 Supply From: Mounting: Surface Enclosure: 1				Ph	Volts: 480/2 nases: 3 Wires: 4	77 Wye	A.I.C. Rating: 4200 Mains Type: MCE Mains Rating: 800 MCB Rating: 800			
СКТ	Poles	-	Circuit Description	Phase A (VA)	Phase B (VA)	Phase C (VA)	Circuit Description	Trip	Poles	скт
1	3	400 A	NHA	78624 /			T1	175 A	3	2
3					84804 /					4
5						78519 /				6
7			Space	0 / 21000			EX. RTU	90 A	3	8
9			Space		0 / 21000					10
11			Space			0 / 21000				12
13	3	90 A	Ex. RTU	21000 /			RTU-1	90 A	3	14
15					21000 /					16
17						21000 /				18
19	3	225 A	Spare	0/0			Spare	100 A	3	20
21					0/0					22
23						0 / 0				24
25	3	100 A	Spare	0/0			SPD	30 A	3	26
27					0/0					28
29						0 / 0				30
				183835 VA	185705 VA	180574 VA				
				665 A	672 A	652 A				

Load Classification	I
HVAC	Ī
Lighting	I
Motor	Ī
Other	I
Power	Ī
Receptacle	I
Cooling Unit	I
Heating Unit	I

Integrated Equivelant SPD by Equipment Manufacturer

Notes:

## Branch Panel: NHA

Location: ELEC A135 Supply From: MDP Mounting: Surface Enclosure: Type 1

СКТ	Poles	Trip	Circuit Descri
1	1	20 A	Lighting
3	1	20 A	Lighting
5	1	20 A	Lighting - Exterior
7	1	20 A	Site Lighting
9	1	50 A	FPV-1.1
11	1	50 A	FPV-1.2
13	1	30 A	FPV-1.3
15	1	30 A	FPV-1.4
17	1	25 A	FPV-2.1
19	1	30 A	FPV-2.2
21	1	35 A	FPV-2.3
23	1	25 A	FPV-2.4
25	1	30 A	FPV-2.5
27	1	40 A	FPV-2.6
29	1	30 A	FPV-3.1
31	1	25 A	FPV-3.2
33	1	25 A	FPV-3.3
35	1	40 A	FPV-3.4
37	1	25 A	FPV-3.5
39	1	25 A	FPV-3.6
41	1	40 A	FPV-3.7
43	1	15 A	VAV-3.6
45	1	20 A	Spare
47	1	20 A	Spare
49	1	20 A	Spare
51	1	20 A	Spare
53	1	20 A	Spare

### Load Classification

Lighting	
Other	
Heating Unit	
	-

Integrated Equivelant SPD by Equipment Manufacturer

Connected Load	Demand Factor	Estimated	Panel	Totals
388434 VA	100.00%	388434 VA		
16090 VA	100.00%	16090 VA	Total Conn. Load:	548113 VA
262 VA	100.00%	262 VA	Total Est. Demand:	504468 VA
33438 VA	100.00%	33438 VA	Total Conn. Current:	659 A
360 VA	100.00%	360 VA	Total Est. Demand	607 A
97290 VA	55.14%	53645 VA		
6240 VA	100.00%	6240 VA		
6000 VA	100.00%	6000 VA		

Provide Bolt-on Breakers, Full Rated Copper Buses, Equipment Ground Bars and Isolated Ground Bar (where Required) Provide Leviton Cat # 5227-CM3 Surge Protection Device (SPD) with Flush Mounted Enclosure and Dedicated 30A/3p Breaker/Feed or Provide

Volts:	480/277 Wye
Phases:	3
Wires:	4

A.I.C. Rating: 42000 Mains Type: MLO Mains Rating: 400 A MCB Rating:

	_	_	_				
	Α	В	С		Trip	Poles	
otion				Circuit Description			СКТ
	1172 / 3546			Lighting	20 A	1	2
		2332 / 2926		Lighting	20 A	1	4
			1330 / 1500	Site Lighting	20 A	1	6
	1500 / 6869			FPV-3.8	25 A	1	8
		13129 /		FPV-3.9	25 A	1	10
			13129 /	FPV-3.11	25 A	1	12
	7506 / 6869			FPV-3.10	25 A	1	14
		7506 / 1875		VAV-2.1	15 A	1	16
			6648 / 3750	VAV-2.2	15 A	1	18
	8116 / 1875			VAV-2.3	15 A	1	20
		8753 / 1875		VAV-2.4	15 A	1	22
			6232 / 4999	VAV-3.1	20 A	1	24
	8116 / 1875			VAV-3.2	15 A	1	26
		9999 / 7501		VAV-3.3	30 A	1	28
			7506 / 1875	VAV-3.4	15 A	1	30
	6869 / 1875			VAV-3.5	15 A	1	32
		6869 / 2000		ECH-1	20 A	1	34
			9999 / 2000	ECH-2	20 A	1	36
	6232 / 2000			ECH-3	20 A	1	38
		6869 / 4500		Hot Water Heater - A137	25 A	1	40
			9999 / 3320	Inst. Water Heater - T10	20 A	1	42
	3124 /			Inst. Water Heater - A142	50 A	1	44
		0 / 1805		Lighting	20 A	1	46
			0/0	Spare	20 A	1	48
	0/0			SPD	30 A	3	50
		0/0					52
			0/0				54
	78624 VA	84804 VA	78519 VA				
	284 A	306 A	283 A				

Totals	Panel	Estimated	Demand Factor	connected Load
		200940 VA	100.00%	200940 VA
241947 VA	Total Conn. Load:	16090 VA	100.00%	16090 VA
241947 VA	Total Est. Demand:	18918 VA	100.00%	18918 VA
291 A	Total Conn. Current:	6000 VA	100.00%	6000 VA
291 A	Total Est. Demand			

Provide Bolt-on Breakers, Full Rated Copper Buses, Equipment Ground Bars and Isolated Ground Bar (where Required) Provide Leviton Cat # 32277-DY3 Surge Protection Device (SPD) with Flush Mounted Enclosure and Dedicated 30A/3p Breaker/Feed or Provide

## Branch Panel: NLA

Location: ELEC A135 Supply From: T1 Mounting: Surface Enclosure: Type 1

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

кт	Poles	Trip	<b>Circuit Description</b>	Α	В	С	Circuit Description	Trip Poles	СКТ	скт	Poles	Trip	Circuit Description	A	В	С	Circuit Description	Trip Poles	C
1	1	20 A	Control Doors - V01	400 / 500			Security Panel	20 A 1	2	1	1	20 A	Recirc Pump	120 / 720			Cubicles - A111	20 A 1	
3	1	20 A	Rcpts - A120		360 / 540		Rcpts - A132, A133	20 A 1	4	3	1	20 A	Cubicles - A111		720 / 1080		Rcpts - A100.1	20 A 1	
5	1	20 A	Access Control Panel			500 / 720	Cubicles - A119	20 A 1	6	5	1	20 A	Spare			0 / 720	Cubicles - A111	20 A 1	
7	1	20 A	Dishwasher - A137	1500 / 1260			Rcpts - A141	20 A 1	8	7	1	20 A	Access Doors	2000 / 360			Rcpts - A111.1	20 A 1	
)	1	20 A	Rcpts - A129		1440 / 1500		Rcpt - A137	20 A 1	10	9	1	20 A	Mail Sorter - A111.1		1500 / 1500		Copier - A111.1	20 A 1	
1	1	20 A	Rcpts - A100			900 / 2000	Access Doors	20 A 1	12	11	1	20 A	Rcpts - A121			1080 / 1500	Copier - A111B	20 A 1	
3	1	20 A	TV Monitors - A143	720 / 360			Rcpts - A133	20 A 1	14	13	1	20 A	Rcpts - A117	900 / 1500			Floorbox - A120	20 A 1	
5	1	20 A	TV Monitors - A143		360 / 360		Rcpts - A134	20 A 1	16	15	1	20 A	Rcpts - T01, T02		360 / 900		Rcpts - A118	20 A 1	
7	1	20 A	Rcpts - A138			1260 / 540	Rcpts - A142	20 A 1	18	17	1	20 A	Rcpts - T06. A135			360 / 720	Rcpts- A109	20 A 1	
9	1	20 A	Rcpts - A137	720 / 900			Rcpts - A130	20 A 1	20	19	1	20 A	Rcpts - A113	900 / 900			Rcpts - A108	20 A 1	
1	1	20 A	Rcpts - A144		1080 / 900		Rcpts - A131	20 A 1	22	21	1	20 A	Rcpts - A115		900 / 900		Rcpts - A110	20 A 1	
3	1	20 A	Rcpts - A141			360 / 720	Rcpts - C100	20 A 1	24	23	1	20 A	Rcpts - A116			900 / 900	Rcpts - A112	20 A 1	
5	1		Rcpts - A127	900 / 900			Rcpts - A124	20 A 1	26	25	1	20 A	Rcpts - A105	900 / 900			Rcpts - A102	20 A 1	
7	1	20 A	Rcpts - A128		900 / 900		Rcpts - A124	20 A 1	28	27	1	20 A	Rcpts - A106		900 / 900		Rcpts - A103	20 A 1	
9	1	20 A	Rcpts - C100			1080 / 900	Rcpts - A129	20 A 1	30	29	1	20 A	Rcpts - A107			900 / 900	Rcpts - A104	20 A 1	
1	1	20 A	Cubicles - A120	720 / 720			Cubicles - A119	20 A 1	32	31	1	20 A	Cubicles - A111	720 / 900			Rcpts - A100	20 A 1	
3	1	20 A	Cubicles - A120		720 / 720		Cubicles - A119	20 A 1	34	33	1	20 A	Cubicles - A120		720 / 720		Rcpts - A111	20 A 1	
5	1	20 A	Rcpts - A126			900 / 900	Rcpts - A123	20 A 1	36	35	1	20 A	Rcpt - T04, T05, T06, T07			720 / 1260	Rcpts - C101, A111, A119	20 A 1	
7	1	20 A	Rcpts - A138	1080 / 360			Rcpts - T08	20 A 1	38	37	1	20 A	Rcpts - A101	1260 / 1260			Rcpts - Auto Sinks	20 A 1	
)	1	20 A	Rcpts - A140		1080 / 1500		Vending - A137	20 A 1	40	39	1	20 A	Rcpts - A114.A		1440 / 360		Rcpts - Clg A115	20 A 1	1
	1	20 A	Cubicles - A119			720 / 1080	Rcpts - A142, A143, A144	20 A 1	42	41	1	20 A	Rcpts - A114.B			1440 / 0	Spare	20 A 1	1
3	1	20 A	Microwave - A138	1500 / 1500			Rcpt - A137	20 A 1	44	43	1	20 A	Receptacle	900 / 0			Spare	20 A 1	
5	1	20 A	Refrigerator - A137*		1500 / 600		EWC - A100	20 A 1	46	45	1	20 A	Rcpts - A111		720 / 0		Spare	20 A 1	
7	1	20 A	UC Refrigerator - A142			600 / 1500	Refrigerator - A137*	20 A 1	48	47	1	20 A	Rcpt - Gen			180 / 0	Spare	20 A 1	
9	1	20 A	Lighting Control Panel	500 / 1144			CU-1	25 A 2	50	49	1	20 A	Battery Charger	1500 / 0			Spare	20 A 1	
1	1	20 A	Rcpt - A134		360 / 1144				52	51	2	30 A	Block Heater		1000 / 0		Spare	20 A 1	
3	1	20 A	Rcpts - A137			1500 / 1976	CU-2	25 A 2	54	53						1000 / 0	Spare	20 A 1	
5	1	20 A	Fire Alarm Panel	500 / 1976					56	55	1	20 A	Copier - A111A	1500 / 0			Spare	20 A 1	
7	1	20 A	Rcpt - A134		360 / 108		EF-2	15 A 2	58	57	1	20 A	Rcpts - A111A		900 / 0		Spare	20 A 1	
9	1	20 A	Data Rack - A134			1500 / 108			60	59	1	20 A	Copier - A139			1500 / 0	Spare	20 A 1	
1	1	20 A	Microwave - A138	1500 / 1500			Data Rack - A134	20 A 1	62	61	1	20 A	Water Cooler - A120	1500 / 0			SPD	30 A 3	
3	1	15 A	EF-1		46 / 953		Data Rack - A134	30 A 2	64	63	1	20 A	Water Cooler - A11A		1500 / 0				
5	1	20 A	ATC Panel - A135			500 / 953			66	65	1	20 A	Water Cooler - A101			1500 / 0			
7	2	30 A	Data Rack - A134	953 / 0			Spare	20 A 1	68				1	18740 VA	17020 VA	15580 VA			4
9					953 / 0		Spare	20 A 1	70					158 A	144 A	130 A			
1	1	20 A	Rcpts - Auto Sinks			180 / 0	Spare	20 A 1	72					10077			I		
3	1	20 A	Rcpt - AV Rack - A144	360 / 0			Spare	20 A 1	74										
5			AV Rack - A144		1500 / 0		Spare	20 A 1	76							1			
7	1	20 A	AV Rack - A144			1500 / 0	Spare	20 A 1	78	Load Class	ificati	ion		d Load Dem		Estimate		el Totals	
)	1	20 A	AV Rack - A144	1500 / 0			SPD	30 A 3	80	Other			5620	<b>VA</b> 1	100.00%	5620 V	A		
			AV Rack		1500 / 0				82	Power			360 \	/A 1	100.00%	360 VA	Total Conn. Load	<b>1:</b> 51340 VA	
}	1		Floorbox - A143			1080 / 0			84	Receptacle			45360		61.02%	27680 V			
				23973 VA	21383 VA			1						-			Total Conn. Curren		
				203 A	178 A	203 A	1										Total Est. Demand.		

Notes:

Load Classification	Connected Load	Demand Factor	Estimated	Panel	Totals
Motor	262 VA	100.00%	262 VA		
Other	8900 VA	100.00%	8900 VA	Total Conn. Load:	67332 VA
Receptacle	51930 VA	59.63%	30965 VA	Total Est. Demand:	46367 VA
Cooling Unit	6240 VA	100.00%	6240 VA	Total Conn. Current:	187 A
				Total Est. Demand	129 A

Notes: Provide Bolt-on Breakers, Full Rated Copper Buses, Equipment Ground Bars and Isolated Ground Bar (where Required) Provide Leviton Cat # 32120-DY3 Surge Protection Device (SPD) with Flush Mounted Enclosure and Dedicated 30A/3p Breaker/Feed or Provide Integrated Equivelant SPD by Equipment Manufacturer \*Provide GFI Breaker

### A.I.C. Rating: 22000 Mains Type: MCB Mains Rating: 225 A MCB Rating: 225 A

## **Branch Panel: NLB**

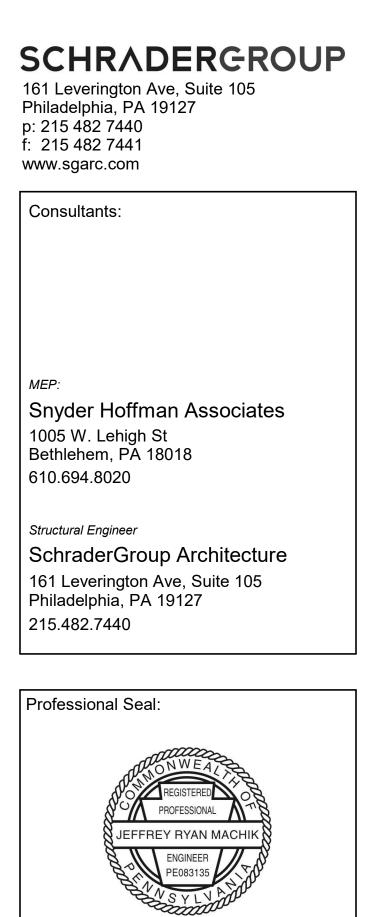
Location: ELEC A135 Supply From: ⊤1 Mounting: Surface Enclosure: Type 1

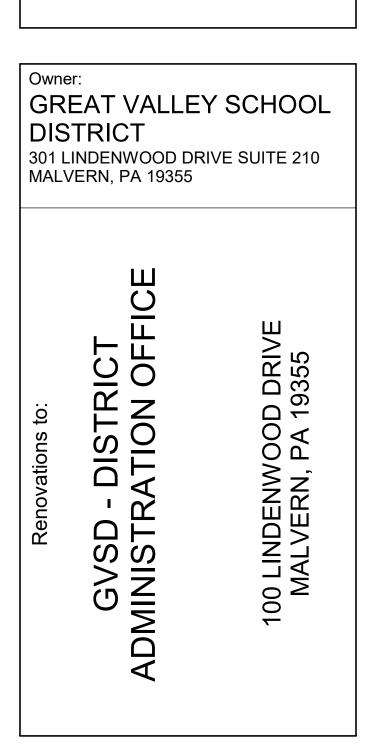
Volts: 120/208 Wye Phases: 3 Wires: 4

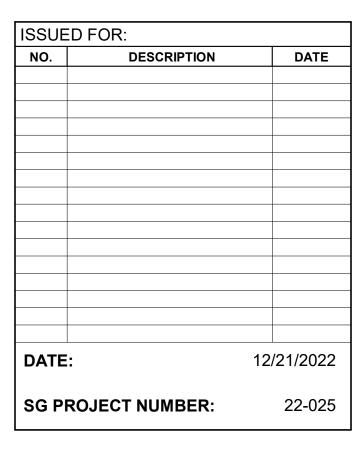
A.I.C. Rating: 22000 Mains Type: MCB Mains Rating: 225 A MCB Rating: 150 A

				•	В	с		Trip	Poles	
скт	Poles	Trip	Circuit Description	A	В	L.	<b>Circuit Description</b>	пр	Poles	СКТ
1	1	20 A	Recirc Pump	120 / 720			Cubicles - A111	20 A	1	2
3	1	20 A	Cubicles - A111		720 / 1080		Rcpts - A100.1	20 A	1	4
5	1	20 A	Spare			0 / 720	Cubicles - A111	20 A	1	6
7	1	20 A	Access Doors	2000 / 360			Rcpts - A111.1	20 A	1	8
9	1	20 A	Mail Sorter - A111.1		1500 / 1500		Copier - A111.1	20 A	1	10
11	1	20 A	Rcpts - A121			1080 / 1500	Copier - A111B	20 A	1	12
13	1	20 A	Rcpts - A117	900 / 1500			Floorbox - A120	20 A	1	14
15	1	20 A	Rcpts - T01, T02		360 / 900		Rcpts - A118	20 A	1	16
17	1	20 A	Rcpts - T06. A135			360 / 720	Rcpts- A109	20 A	1	18
19	1	20 A	Rcpts - A113	900 / 900			Rcpts - A108	20 A	1	20
21	1	20 A	Rcpts - A115		900 / 900		Rcpts - A110	20 A	1	22
23	1	20 A	Rcpts - A116			900 / 900	Rcpts - A112	20 A	1	24
25	1	20 A	Rcpts - A105	900 / 900			Rcpts - A102	20 A	1	26
27	1	20 A	Rcpts - A106		900 / 900		Rcpts - A103	20 A	1	28
29	1	20 A	Rcpts - A107			900 / 900	Rcpts - A104	20 A	1	30
31	1	20 A	Cubicles - A111	720 / 900			Rcpts - A100	20 A	1	32
33	1	20 A	Cubicles - A120		720 / 720		Rcpts - A111	20 A	1	34
35	1	20 A	Rcpt - T04, T05, T06, T07			720 / 1260	Rcpts - C101, A111, A119	20 A	1	36
37	1	20 A	Rcpts - A101	1260 / 1260			Rcpts - Auto Sinks	20 A	1	38
39	1	20 A	Rcpts - A114.A		1440 / 360		Rcpts - Clg A115	20 A	1	40
41	1	20 A	Rcpts - A114.B			1440 / 0	Spare	20 A	1	42
43	1	20 A	Receptacle	900 / 0			Spare	20 A	1	44
45	1	20 A	Rcpts - A111		720 / 0		Spare	20 A	1	46
47	1	20 A	Rcpt - Gen			180 / 0	Spare	20 A	1	48
49	1	20 A	Battery Charger	1500 / 0			Spare	20 A	1	50
51	2	30 A	Block Heater		1000 / 0		Spare	20 A	1	52
53						1000 / 0	Spare	20 A	1	54
55	1	20 A	Copier - A111A	1500 / 0			Spare	20 A	1	56
57	1	20 A	Rcpts - A111A		900 / 0		Spare	20 A	1	58
59	1	20 A	Copier - A139			1500 / 0	Spare	20 A	1	60
61	1	20 A	Water Cooler - A120	1500 / 0			SPD	30 A	3	62
63	1	20 A	Water Cooler - A11A		1500 / 0					64
65	1	20 A	Water Cooler - A101			1500 / 0				66
			·	18740 VA	17020 VA	15580 VA			·	
				158 A	144 A	130 A				

Provide Bolt-on Breakers, Full Rated Copper Buses, Equipment Ground Bars and Isolated Ground Bar (where Required) Provide Leviton Cat # 32(voltage)-DY3 Surge Protection Device (SPD) with Flush Mounted Enclosure and Dedicated 30A/3p Breaker/Feed or Provide Integrated Equivelant SPD by Equipment Manufacturer \*Provide GFI Breaker







Key Plan: Drawing Title:



E601

### PLUMBING MISCELLANEOUS LEGEND NOTE: NOT ALL ITEMS USED THIS PROJECT FLOW ARROWS E D PIPE CAP CLEANOUT ABOVE CEILING ⊩ 0 CLEANOUT TO GRADE (H) PIPE RISE · PIPE STACK · [9] ·· PIPE TEE DROP/RISE VALVE IN PIPE DROP Ô VENT THRU ROOF - TYPICAL $\bigcirc$ VENT THRU ROOF - ACID WCO WALL CLEANOUT - TYPICAL PLUMBING DRAIN LEGEND NOTE: NOT ALL ITEMS USED THIS PROJECT AIR GAP FITTING ► EMERGENCY RAIN WATER OUTLET 6 FLOOR CLEANOUT FLOOR DRAIN - FUNNEL FLOOR DRAIN - INDIRECT FLOOR DRAIN - ROUND FLOOR DRAIN - SQUARE FLOOR SINK - FULL GRATE FLOOR SINK - HALF GRATE FLOOR SINK - NO GRATE FLOOR SINK - <sup>3</sup>/<sub>4</sub> GRATE ROOF DRAIN - TYPICAL ROOF DRAIN - EMERGENCY PLUMBING VALVE LEGEND NOTE: NOT ALL ITEMS USED THIS PROJECT ANCHOR - PIPE BALL VALVE - TYPICAL BUTTERFLY VALVE CHECK VALVE CIRCUIT SETTER VALVE COMPRESSED AIR OUTLET $\triangleleft$ Ħ GAS COCK \_\_\_\_ GAS REGULATOR GATE VALVE GAUGE VALVE GLOBE VALVE GUIDE, PIPE >+ HOSE BIBB MANUAL BALANCING VALVE NON FREEZE WALL HYDRANT PRESSURE RE RECIRCULATING PUMP REDUCE PRESSURE BACKFLOW PREVENTER जिह्होन SHOCK ABSORBER SOLENOID VALVE CE STEMPERING VALVE UNION, PIPE PLUMBING TAG LEGEND NOTE: NOT ALL ITEMS USED THIS PROJECT ADA SYMBOL CONNECT TO EXISTING NOTE DRAWING TAG (????####### INVERT ELEVATION TAG (#) NOTE TAG - CIRCLE

 
 #
 NOTE TAG - DEMOLITION
 **(#**) NOTE TAG - HEXAGONAL # NOTE TAG - RENOVATION NOTE TAG - SQUARE NOTE TAG - TO BE REMOVED FIXT PLUMBING FIXTURE TAG TITLE REVISION TAG

### PIPING SYSTEMS LEGEND NOTE: NOT ALL ITEMS USED THIS PROJECT

	ITE: NOT ALL ITEMS USED THIS PROJECT Project Specifications for Material specifications)
V	ATER & GAS PIPING
140° H	Domestic Hot Water (140 Deg.F)
140° R	Domestic Hot Water Return (140 Deg.F)
C / CW	Domestic Cold Water
CA	Compressed Air
G	Gas
H / HW	Domestic Hot Water (110-120 deg.F)
R/HWR	Domestic Hot Water Return (110-120 deg.F)
Т	Tempered Water (85-110 deg.F)
D	RAIN & VENT PIPING
ASAN	Acid Sanitary (Below Slab/Grade)
AV	Acid Vent
AW	Acid Waste (Above Slab/Grade)
CD	Condensate Drain
ERW	Emergency Rainwater
FM	Forced Main/Pumped Drain
GW	Grease Waste
GSAN	Grease Sanitary (Below Slab/Grade)
SAN	Sanitary (Below Slab/Grade)
ST	Storm (Below Slab/Grade)
REP	Radon Evacuation Piping
RW	Rain Water (Above Slab/Grade)
V	Vent
W	Waste (Above Slab/Grade)

AAC	Above Accessible Ceiling	G	Gas
AFF	Above Finished Floor	G.C.	General Contractor
AFG	Above Finished Grade	G.I.	Grease Interceptor
AB	Above	GSAN	Grease Sanitary
AD	Area Drain	GV	Gas Valve
Arch	Architecturals	GW	Grease Waste
ASAN	Acid Sanitary	H / HW	Hot Water
AV	Acid Vent	H.C.	Heating Contractor
AW	Acid Waste Automatic Washer	HB	Hose Bibb
AWC	Connection	HR	Hose Reel
BF	Below Floor	HWH	Hot Water Heater
BFG	Below Finished Grade	HWR/R	Hot Water Return
BFP	Backflow Preventer	I.E. / Inv.	Invert Elevation
BV	Balancing Valve	IG	Interruptible Gas
C/CW	Cold Water	IWH	Instantaneous Water Hea
C.I.	Cast Iron	JAN	Janitor
C.O.	Clean Out	KD	Kitchen Drain
	Compressed Air		Kitchen Sanitary
CA		KS	
CD	Condensate Drain	KW	Kitchen Waste
CFH	Cubic Feet per Hour	LAV	Lavatory
CLG.	Ceiling	LPG	Liquid Petroleum Gas/Pro
Conn.	Connection	LT	Laundry Tub
Coord.	Coordinate	MAX	Maximum
CTE	Connect To Existing	MIN	Minimum
CTG	Clean Out To Grade	MR	Mop Receptor
CV	Circuit Vent Combination Waste &	MTD	Mounted
CWV	Vent	MU	Make-up Water
D	Drain	NFWH	Non-Freeze Wall Hydran
DBF	Down Below Floor	NG	Natural Gas
DF	Drinking Fountain	NT	Neutralizing Tank
DFU	Drainage Fixture Units	OS	Oil Sanitary
DN	Down	P.C.	Plumbing Contractor
DWG	Drawing	PIV	Post Indicating Valve
DWH	Domestic Water Heater	PRV	Pressure Reducing Valve
E.C.	Electrical Contractor	PSI	Pounds per Square Inch
E.T.R.	Existing To Remain	PT	Plaster Trap
			Return Piping (Hot Water
Ea.	Each Emerg. Eyewash	R	Re-circulating Pump
EEW		RCP	
ER / ERC	Emerg. Rainwater Conductor	RD	Roof Drain
ERD	Emerg. Roof Drain	RW	Rain Water
ESEW	Emerg. Shower / Eyewash	RWC	Rainwater Conductor
ES	Emerg. Station	RWS	Rain Water Stack
ETV	Emerg. Tempering Valve	S.F./Sq. Ft.	Square Foot
EIV	Electric Water Cooler	SA SA	Shock Absorber
_			Snock Absorber Sanitary
Ext.	Exterior	SAN	Sanitary Invert Elevation
F.F.	Finished Floor	SAN I.E.	
F.P.C.	Fire Protection Contractor	ST	Storm
FAI	Fresh Air Inlet	T	Tempered Water
FCO	Floor Cleanout	T&P	Temperature and Pressu
FD	Floor Drain	T.B.R.	To Be Removed
FH	Fire Hydrant	TV	Tempering Valve
FHC	Fire Hose Cabinet	TYP.	Typical
Fin. Flr.	Finished Floor	UR	Urinal
Flr.	Floor	V	Vent
FM	Forced Main	V.I.F.	Verify In Field
FP	Fire Protection	V.T.R.	Vent Through Roof
FPZ	Fire Protection Zone	VS	Vent Stack
FS	Floor Sink	W	Waste
FSC	Food Service Contractor	WF	Wash Fountains
FVC	Fire Valve Cabinet	WB	Wash Box (Toilet Rooms
		WC	Water Closet
		WCO	Wall Cleanout
		WSFU	Water Supply Fixture Uni

		PLUMBING DEMOLITION - GENERAL NOT	TES	
1.	required by to only the not shown	ping which is removed from service, shall be removed in its entiret y scope of work. Verify exact location of all branch piping in field. piping on the demolition plans. Verify all conditions and notify Arc on removals prior to any demolition. No demolition shown on this d new piping, equipment, and etc. or necessary temporary connect	emoved from service, shall be removed in its entirety, as indicated by plans or k. Verify exact location of all branch piping in field. removals shall not be limited demolition plans. Verify all conditions and notify Architect / Engineer of any piping prior to any demolition. No demolition shown on this plan shall be performed until equipment, and etc. or necessary temporary connections, are installed and	
2.	locations a	and piping locations, quantity and conditions are approximate. Field verify all conditions, nd quantities prior to bid. The demolition drawings are intended to convey the basics of the stem components. Not all conditions and components have been identified on these drawings.		
3.	removed, t mains. Pip and aband	where existing fixtures, equipment, pipe risers and drops etc. occ the existing fixture and related piping shall be removed and related bing within walls that are to remain, shall be capped or plugged wi loned. Sanitary piping shall be capped below the floor slab and at Patch any affected construction to match existing adjacent finish	d piping capped or plugged at thin the existing construction pandoned unless noted	
4.	as required functioning weekends normal wo which affe	systems shall remain functional for as long as required, until replated (see new work plans and phasing plans). Provide temporary correst properly as required. Some additional work may be required to be, or during vacation breaks. All demolition work shall in no way incredar schedule for this facility (coordinate with Architect/Owner). Acts the operation of this facility shall be replaced with new, repaired y temporary means for however long as required at no cost to the	nnections to keep systems be performed after hours, convenience or interrupt the Any demolition work done d to original conditions or	
5.	Coordinate all demolition and new work. Demolition work shall be coordinated so that no existing systems are demolished out-of-phase or ahead of the new piping system replacement schedule. Provide necessary temporary system connections as required to maintain all existing systems until which time the new		t schedule. Provide necessary intil which time the new stended and reconnected to ng systems or to replace	
6.		ework existing work, materials, etc. in the way of any new work, e n the demolition plans.	ven if not indicated to be	
7.		isting materials, equipment and finishes that are to remain. any da shall be repaired/replaced as necessary by this contractor.		
8.		Remove all items that are to remain but conflict with the installation of any new work. Re-install the same items (or new if damaged during this task) once new work is completed.		
9.	<ul> <li>P.C. is responsible for all plumbing demo work. In all areas where patching is required, the plumbing contractor shall patch the sub-surface where the new surface is to be finished by the General Contractor. This sub-surface must be provided so that it does not inhibit the installation of or affect the appearance of the new finish. If a new finish will not be provided by the General Contractor, The Plumbing Contractor is responsible to patch the surrounding finished surface to match existing. Patch existing openings from demolished piping in fire rated floors and walls as required to maintain fire rating. Refer to the specifications for additional information and coordinate all work in field.</li> </ul>			
10.	Existing materials scheduled to remain may be required to be temporarily removed, to allow installation of new materials, finishes, etc. These materials must be re-installed in their previous locations in equal or better condition.			
11.	At all locations where existing below slab drainage piping is indicated to be demolished, the piping shall b permanently capped and abandoned below floor slab. Any existing abandoned mains below floor which are encountered and conflict with new underground utilities shall be cut off with ample space on both side of new main and both ends of existing sealed permanently as noted above. All pipe caps/plugs of removed floor penetration piping shall be at elevation that allows patching and restoration of existing floor with new finish materials.(Coordinate with General Contractor in field)		ned mains below floor which vith ample space on both sides All pipe caps/plugs of	
12.	new piping once his w support rei	xisting ceiling tiles and grids as required to obtain access to ceiling above ceiling. Store the existing ceiling tiles and grids in a safe lo work is completed and inspected. Provide additional temporary han maining ceiling structure, light fixtures, ceiling devices, etc. during ary facilities once work is completed.	cation and re-install the same gers/cables required to	
13.	of all conn	tivation of existing systems following temporary shutdowns, P.C. s ected fixtures and equipment. All system outlets, stops, and equip o normal operating positions.		
		DESIGN CODE REFERENCES		
PA - U	JCC	PENNSYLVANIA UNIFORM CONSTRUCTION CODE; 2018		
IBC20	18	ICC - INTERNATIONAL BUILDING CODE; 2018		
IFGC2	2018	ICC - INTERNATIONAL FUEL GAS CODE; 2018 (LPG REQUIREMENTS SUPERCEDED BY THE REQUIREMENTS OF PENNSYLVANIA'S PROPANE AND LIQUEFIED PETROLEUM GAS ACT)		
IMC20	)18	ICC - INTERNATIONAL MECHANICAL CODE; 2018		
IPC20	-	ICC - INTERNATIONAL PLUMBING CODE; 2018		
IFC20	IÕ	ICC - INTERNATIONAL FIRE CODE; 2018 (AS REFERENCED IN INTERNATIONAL BUILDING CODE)		
IECC2		ICC - INTERNATIONAL ENERGY CONSERVATION CODE; 2018		
ECI20	18	THE FACILITY CLIIDELINES INSTITUTE - CLIIDELINES	1	

		PLUMBING DEMOLITION - GENERAL NO	TES
1.	Existing piping which is removed from service, shall be removed in its entirety, as indicated by plans or required by scope of work. Verify exact location of all branch piping in field. removals shall not be limited to only the piping on the demolition plans. Verify all conditions and notify Architect / Engineer of any pipin not shown on removals prior to any demolition. No demolition shown on this plan shall be performed unti all required new piping, equipment, and etc. or necessary temporary connections, are installed and operational.		removals shall not be limited hitect / Engineer of any piping plan shall be performed until
2.	locations a	t and piping locations, quantity and conditions are approximate. Fi and quantities prior to bid. The demolition drawings are intended t ystem components. Not all conditions and components have been	o convey the basics of the
3.	removed, mains. Pi and aband	where existing fixtures, equipment, pipe risers and drops etc. occ the existing fixture and related piping shall be removed and related ping within walls that are to remain, shall be capped or plugged wi doned. Sanitary piping shall be capped below the floor slab and al . Patch any affected construction to match existing adjacent finish	d piping capped or plugged at thin the existing construction bandoned unless noted
4.	as require functioning weekends normal wo which affe	g systems shall remain functional for as long as required, until replation of (see new work plans and phasing plans). Provide temporary corg properly as required. Some additional work may be required to be, or during vacation breaks. All demolition work shall in no way incorrectly schedule for this facility (coordinate with Architect/Owner). Architects the operation of this facility shall be replaced with new, repaired by temporary means for however long as required at no cost to the	nnections to keep systems be performed after hours, convenience or interrupt the Any demolition work done d to original conditions or
5.	are demol temporary systems a existing. V	e all demolition and new work. Demolition work shall be coordinate ished out-of-phase or ahead of the new piping system replacement system connections as required to maintain all existing systems up rea installed (during its proper phase) or until new mains can be exi- verify in field. All temporary connections required to maintain existing ponnection terminated out-of-phase shall be installed immediately a	t schedule. Provide necessary intil which time the new stended and reconnected to ng systems or to replace
6.		Rework existing work, materials, etc. in the way of any new work, e on the demolition plans.	ven if not indicated to be
7.		isting materials, equipment and finishes that are to remain. any day shall be repaired/replaced as necessary by this contractor.	amage caused by this
8.		Il items that are to remain but conflict with the installation of any ne new if damaged during this task) once new work is completed.	ew work. Re-install the same
9.	P.C. is responsible for all plumbing demo work. In all areas where patching is required, the plumbing contractor shall patch the sub-surface where the new surface is to be finished by the General Contractor. This sub-surface must be provided so that it does not inhibit the installation of or affect the appearance of the new finish. If a new finish will not be provided by the General Contractor, The Plumbing Contractor is responsible to patch the surrounding finished surface to match existing. Patch existing openings from demolished piping in fire rated floors and walls as required to maintain fire rating. Refer to the specifications for additional information and coordinate all work in field.		
10.	Existing materials scheduled to remain may be required to be temporarily removed, to allow installation of new materials, finishes, etc. These materials must be re-installed in their previous locations in equal or better condition.		
11.	removed floor penetration piping shall be at elevation that allows patching and restoration of existing floor with new finish materials.(Coordinate with General Contractor in field)		
12.	new piping once his v support re	existing ceiling tiles and grids as required to obtain access to ceiling g above ceiling. Store the existing ceiling tiles and grids in a safe lo vork is completed and inspected. Provide additional temporary han maining ceiling structure, light fixtures, ceiling devices, etc. during ary facilities once work is completed.	ocation and re-install the same gers/cables required to
13.	of all conn	ctivation of existing systems following temporary shutdowns, P.C. s nected fixtures and equipment. All system outlets, stops, and equip o normal operating positions.	
		DESIGN CODE REFERENCES	
PA - UCC PENNSYLVANIA UNIFORM CONSTRUCTION CODE; 2018			
IBC20	18	ICC - INTERNATIONAL BUILDING CODE; 2018	
IFGC2	2018	ICC - INTERNATIONAL FUEL GAS CODE; 2018 (LPG REQUIREMENTS SUPERCEDED BY THE REQUIREMENTS OF PENNSYLVANIA'S PROPANE AND LIQUEFIED PETROLEUM GAS ACT)	
IMC20	)18	ICC - INTERNATIONAL MECHANICAL CODE; 2018	
IPC20	18	ICC - INTERNATIONAL PLUMBING CODE; 2018	
IFC20	18	ICC - INTERNATIONAL FIRE CODE; 2018 (AS REFERENCED IN INTERNATIONAL BUILDING CODE)	
IECC2	2018	ICC - INTERNATIONAL ENERGY CONSERVATION CODE; 2018	
FGI20	18	THE FACILITY GUIDELINES INSTITUTE - GUIDELINES FOR DESIGN AND CONSTRUCTION OF HOSPITALS; 2018	

	REFERENCED DESIGN STANDARDS
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NFPA 13	NATIONAL FIRE PROTECTION ASSOCIATION - STANDARD FOR THE INSTALLATION OF SPRINKLEI SYSTEMS; 2013 EDITION OR MOST RECENT EDITIO ADOPTED BY AUTHORITY HAVING JURISDICTION, INCLUDING ALL APPLICABLE AMENDMENTS AND SUPPLEMENTS.
NFPA 99	NATIONAL FIRE PROTECTION ASSOCIATION - HEALTH CARE FACILITIES CODE; 2015 EDITION OR MOST RECENT EDITION ADOPTED BY AUTHORITY HAVING JURISDICTION, INCLUDING ALL APPLICABI AMENDMENTS AND SUPPLEMENTS.
NFPA 101	NATIONAL FIRE PROTECTION ASSOCIATION - COD FOR SAFETY TO LIFE FROM FIRE IN BUILDINGS AN STRUCTURES; 2015 EDITION OR MOST RECENT EDITION ADOPTED BY AUTHORITY HAVING JURISDICTION, INCLUDING ALL APPLICABLE AMENDMENTS AND SUPPLEMENTS.

SOCIATION -ON OF SPRINKLER RECENT EDITION JURISDICTION,

SOCIATION -2015 EDITION OR D BY AUTHORITY GALL APPLICABLE

OCIATION - CODE N BUILDINGS AND OST RECENT HAVING PPLICABLE

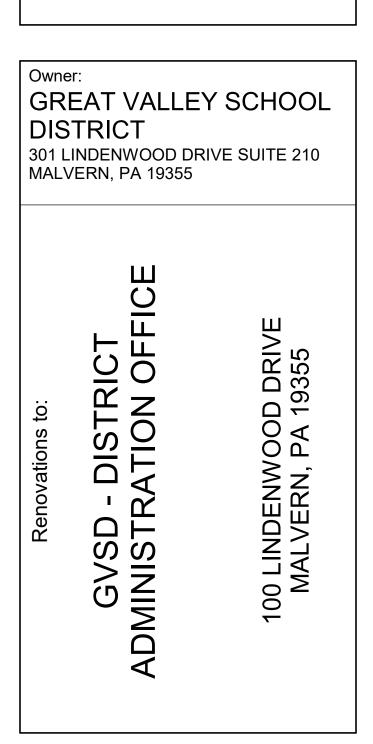
1.	Provide all labor, material, and equipment required for the completion and operation of all systems specified within the Division 22 specification sections and Plumbing drawings of work in accordance with all applicable codes including but not limited to PA Uniform Construction Code (PA-UCC), International Plumbing Code (IPC), ICC/ANSI A117.1 - Accessible and Usable Buildings and Facilities, International Building Code (IBC). Verify the latest adopted code editions and any additional adopted amendments with the Local Authority Having Jurisdiction(AHJ) Prior to beginning work.
2.	Provide a complete domestic water, gas and waste/vent systems to all fixtures and or equipment requiring such. verify all rough-in locations and coordinate piping locations with work under other divisions of the specifications to avoid conflicts.
3.	Provide all plumbing fixtures and appliances complete with all required supplies, stops, valves, faucets, drains, traps, tail pieces, escutcheons, etc. All fixture traps shall be semi-cast style, removable and/or provided with access for cleanout. All stops and shutoff valves shall be quarter turn style and installed in a readily accessible locations.
4.	All plumbing fixtures, equipment, and materials shall be new and shall fit the space available. Verify dimensions at site are adequate prior to order of any materials.
5.	All piping, apparatus, equipment, etc. shall be properly supported, braced vertically and horizontally in accordance with applicable codes and as required to prevent excessive movement during seismic conditions.
6.	Do not scale the plans. See architectural plans for exact location of doors, windows, fixtures, wall dimensions, equipment, devices, etc. Coordinate exact locations of fixtures, equipment, specialties, and piping in field prior to rough-in.
7.	All valves, cleanouts, plumbing specialties, etc., shall be so located and installed to permit access for service without damage to building or finished materials.
8.	In addition to cleanouts indicated on the plumbing drawings, provide cleanouts at base of all waste and rainwater stacks, at all changes in direction of piping in excess of 45 degrees and every 50 feet. Floor cleanouts shall be installed flush with finished floor. All cleanouts shall be so located and installed to permit access for service without damage to building or finished materials, wall cleanouts shall be minimum 18" A.F.F. Wall cleanouts covers shall be stainless steel or where directed by architect provide primer painted steel coverplates to receive final painted finish, same as wall finish. (final paint by G.C.)
9.	All exposed supply and waste piping in rest room areas shall be min. 17 ga. thick or semi-cast chrome plated brass, with matching stops and escutcheons.
10.	Drainage and vent piping systems, and water distribution piping systems shall be tested with air or water in accordance with IPC Section 312. Coordinate and schedule all required testing with local A.H.J. prior to testing.
11.	Sanitize domestic water piping in accordance with IPC requirements, Local Health Department, and American Water Works Association's (AWWA) specifications. Provide Final reports and test results to Owner.
12.	All domestic water piping shall be hung level without pitch unless noted otherwise on plans.
13.	Protect copper piping against contact with dissimilar metals. All hangers, supports, anchors, and clips shall be copper or copper plated. Where copper piping is carried on iron trapeze hangers with other piping, satisfactory and permanent electrolytic isolation material shall prevent contact with other metals.
14.	Protect copper piping against contact with all masonry. Where copper is sleeved through masonry, copper or red brass sleeves shall be used. Where copper must be concealed in or against masonry partitions, contact shall be prevented by coating the copper heavily with asphaltic enamel and #15 asphalt saturated felt between the pipe and the masonry partition.
15.	Install piping in areas not subject to freezing temperatures. Water piping in exterior walls shall be installed on conditioned side of the wall insulation.
16.	Provide shock absorbers, supplies and stops at each fixture as required by IPC and additionally as noted on the plans. Exposed stops shall be chrome plated.
17.	Provide drain valves at all low points of domestic water piping systems for complete drainage and indicate location of same on record drawings.
18.	Provide vacuum breakers and air vents as required by code.
19.	Vent all plumbing fixture drains in accordance with all applicable codes.
20.	Verify all fixture mounting heights with architectural interior elevations, schedules, etc. prior to fixture installation. Verify locations of Accessible fixtures and install in strict accordance with ICC/ANSI A117.1 requirements.
21.	Provide sleeves at all wall/floor penetrations. Coordinate sleeves with GC for installation in wall/floor construction. In exposed areas provide chrome plated escutcheons at pipe pentrations. Seal all fire rated floor and wall penetrations with fire stopping materials as specified in the Div. 7 specifications. Where firestopping materials are not specified in Div. 7, provide firestopping materials U.L. listed for use and as manufactured by 3m "or equal."
22.	Install ball style shutoff valves on the entire domestic water system. Ball valves shall be furnished with blowout proof stem, insulated extension handles, and chrome plated ball.
23.	Insulate all domestic water piping as noted in Div. 22 specifications and in accordance with minimum thickness specified in IECC Section C404 and Table C403.11.3. Insulate all vertical and horizontal above slab rainwater and emergency rainwater piping as noted in Div. 22 specifications.
24.	Seal all fixtures to walls, floor, counters, etc. using a sanitary-type one-part, mildew resistant, silicone sealant. match
25.	sealant color to fixture color.
26.	
20.	sealant color to fixture color.
27.	sealant color to fixture color.         Install all underground sanitary/storm piping at 2% slope unless noted otherwise).
	sealant color to fixture color.         Install all underground sanitary/storm piping at 2% slope unless noted otherwise).         Install all above ground vent piping at 1% slope (unless noted otherwise).         Install all above ceiling cleanouts in locations above accessible ceiling construction. Coordinate exact locations in field. No
27.	<ul> <li>sealant color to fixture color.</li> <li>Install all underground sanitary/storm piping at 2% slope unless noted otherwise).</li> <li>Install all above ground vent piping at 1% slope (unless noted otherwise).</li> <li>Install all above ceiling cleanouts in locations above accessible ceiling construction. Coordinate exact locations in field. No cleanouts shall be installed within plenum ceilings.</li> <li>Coordinate all equipment floor drain and floor sink locations with the work of all other trades and with associated equipment in field prior to rough in. Coordinate all general area floor drains with architectural plans and with G.C. in field prior to</li> </ul>
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27. 28. 29. 30. 31. 32. 33. 34.	<ul> <li>sealant color to fixture color.</li> <li>Install all underground sanitary/storm piping at 2% slope unless noted otherwise).</li> <li>Install all above ground vent piping at 1% slope (unless noted otherwise).</li> <li>Install all above ceiling cleanouts in locations above accessible ceiling construction. Coordinate exact locations in field. No cleanouts shall be installed within plenum ceilings.</li> <li>Coordinate all equipment floor drain and floor sink locations with the work of all other trades and with associated equipment in field prior to rough in. Coordinate all general area floor drains with architectural plans and with G.C. in field prior to rough-in to maintain floor slope to drain at low point of floor.</li> <li>Provide all floor drains with deep seal traps (unless noted otherwise) and trap seal protection.</li> <li>Verify all "Accessible" toilet locations on Architectural plans. Installation of flushing lever actuator shall comply with ANSI A117.1 and shall be mounted on the accessible (wide) side of toilet areas no more than 44 inches above the finished floor. Coordinate rough-ins of all supplies, flush valves, sensors, etc., to avoid conflict with grab bars or other toilet accessories.</li> <li>All piping located in return air plenums shall conform to the flame spread and smoke developed limits of ASTM E84 or must be wrapped with U.L. approved plenum rated material.</li> <li>In finished spaces with exposed structure, provide and install 1" thick "fiberglass insulation with all-service jacket" in lieu of insulation specified. Prep and paint pipe insulation in color selected by Architect.</li> <li>All fixture trim, including faucets, strainers, escutcheons, stops, waste traps, visible waste piping or visible hangers shall be made of brass and shall be polished chrome plated. Plastic, zinc or white metal will not be acceptable.</li> <li>Install all exposed horizontal and vertical piping in a neat arrangement in locations which are the most inconspicuous. Vertical drops shall be coordinated a</li></ul>

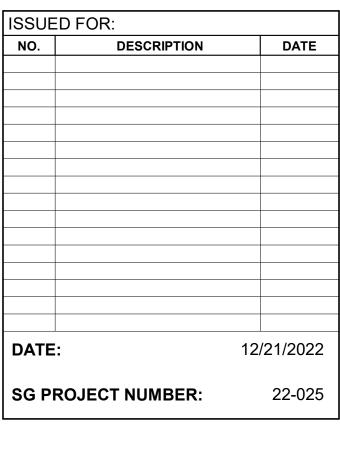
Provide thermal expansion control equipment/specialties on all segments of hot water and hot water return piping exceeding 50ft. and at intervals not to exceed 100ft. Thermal expansion control equipment shall include pipe anchors, pipe guides, and expansion loops. Expansion loops shall be provided as specified and verified by manufacturer's calculation to 37 be adequate to accommodate thermal expansion of the applicable piping system. All piping penetrations through exterior wall shall be sealed weathertight. Piping penetrations through foundation walls shall 38 be sleeved and provided with Link Seal Thunderline annular space seals. Provide cold water hose bibb connection with all associated supply piping at all MR-1 mop receptor locations. For additional information refer to "Mop Receptor and Accessories Detail" on plumbing details drawings. Coordinate exact 39. location of accessories in field with owner representative prior to rough in of accessories/fixtures.

40. All piping drops to fixtures, shall be concealed within wall or chase construction, unless noted otherwise.

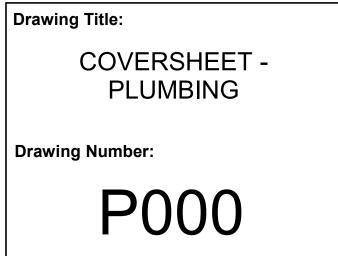
### PLUMBING GENERAL NOTES

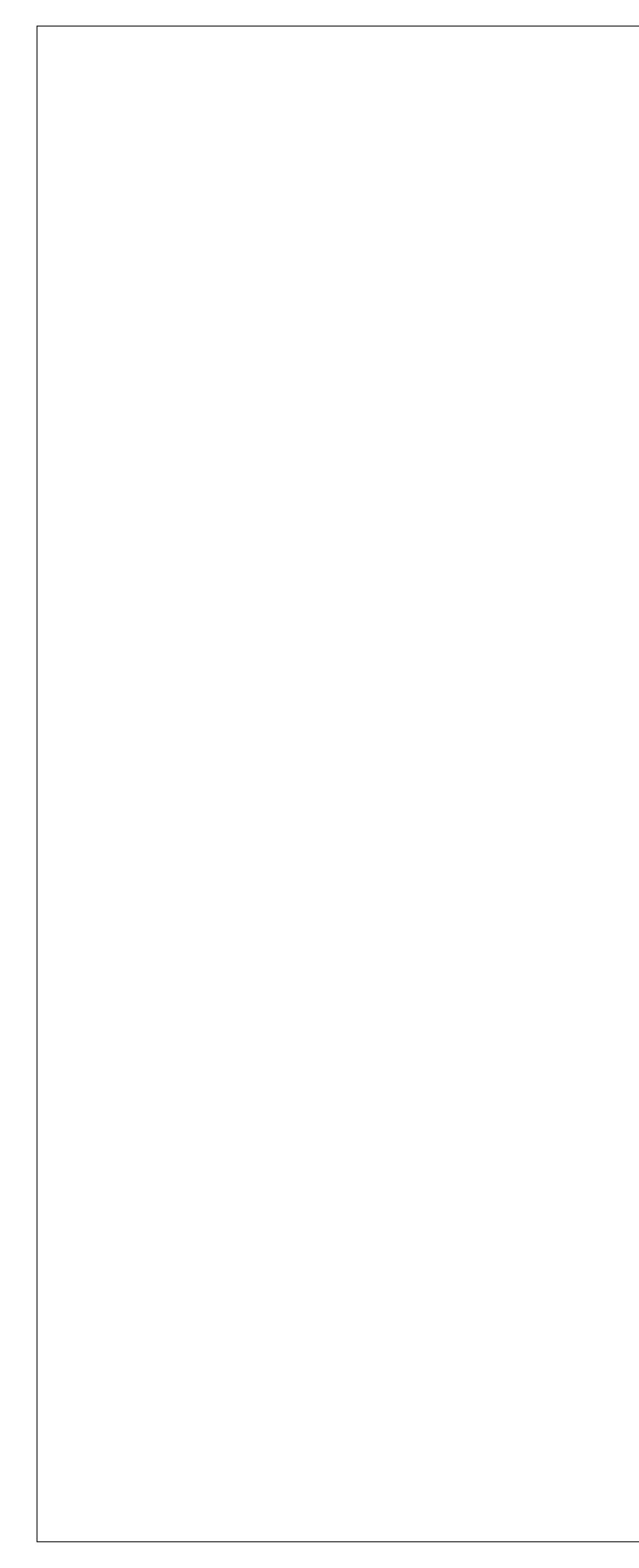






Key Plan:





FIXTURE	FIXTURE	FIXTURE	DRAIN ROUGH IN	WATER RO	
TAG	DESCRIPTION	SPECIFICATIONS	CONNECTION	НОТ	COLD
EWC-1	Electric Water Cooler with Bottle Filler Bi-Level Surface Mounted	<ul> <li>Electric Water Cooler with Bottle Filler, Bi-Level, Surface mounted,</li> <li>18ga 304 Stainless Steel body panels</li> <li>Elevated anti-squirt bubbler with flexible mouth guard</li> <li>Bottle filler mounted in ABS alcove above lower bowl w/sensor operation and Green Ticker</li> <li>Cane Touch Skirt (where required for compliance with ANSI A117.1)</li> <li>Basis of Design: Elkay Model VRCGRNTL8WSK- LKAPREZL - MLP200</li> </ul>	1-1/2"		1/2"
FCO-1	Floor Cleanout	<ul> <li>Floor Cleanout</li> <li>Cast iron body with flashing clamp</li> <li>Twist to Floor adjustable Nickel Bronze top</li> <li>Cover type coordinated with floor finish</li> <li>Basis of Design: J.R. Smith 4000-4100 series</li> </ul>	Refer to Plans		
FD-1	Floor Drain General Purpose	Floor Drain - Cast iron body with flashing clamp - 5" Nickel Bronze strainer - Deep Seal P-Trap w/ProSet Trap Guard seal protection. Basis of Design: J.R. Smith 2005 (5"NB Strainer)	Refer to Plans		
HB-1	Hose Bibb	Hose bibb/wall hydrant - Chrome plated, Half turn operation w/Interchangeable Wheel handle/Loose Key operation - Anti-Siphon Vacuum Breaker (ASSE 1011 compliant) Basis of Design: J.R. Smith 5672			1/2"
LAV-1/ LAV-2/ LAV-3	Lavatory System (Toilet Rooms)	<ul> <li>Basin:</li> <li>Countertop, Undermount, Vitreous China, ADA/ANSI A117.1 compliant</li> <li>White</li> <li>Basis of Design: Kohler Caxton K20000</li> <li>Faucet:</li> <li>Chrome Plated Cast Brass, Electronic Sensor Operated, Hardwired power, .5 gpm.</li> <li>Basis of Design: Kohler K-103C36-SANA</li> <li>Accessories:</li> <li>Below deck ASSE-1070 compliant mixing valve</li> <li>Truebro Lav Guard supply and drain insulating covers.</li> <li>Chrome plated, Lead Free, Commercial grade, quarter turn Loose Key Angle Stops</li> <li>Chrome plated copper supplies</li> </ul>	1-1/2"	1/2"	1/2"
MR-1	Mop Receptor with Utility Faucet	Base:         - 24"x24"x12"H, Neo-Corner Terazzo mop receptor basin         Basis of Design: Acorn TNC-24         Faucet:         - Chrome plated, wall mounted utility faucet w/Integral Vacuum Breaker, integral check         stops, 3/4 GHT outlet, Wrist blade handles, Wall brace, and pail hook.         Basis of Design: Chicago 897-CRCF         Accessories:         - Quick connect drain fitting, (3) bracket Mop Hanger, 30" hose and hose bracket         - Stainless Steel wall guards         - Refer to detail for additional information.	3"	1/2"	1/2"

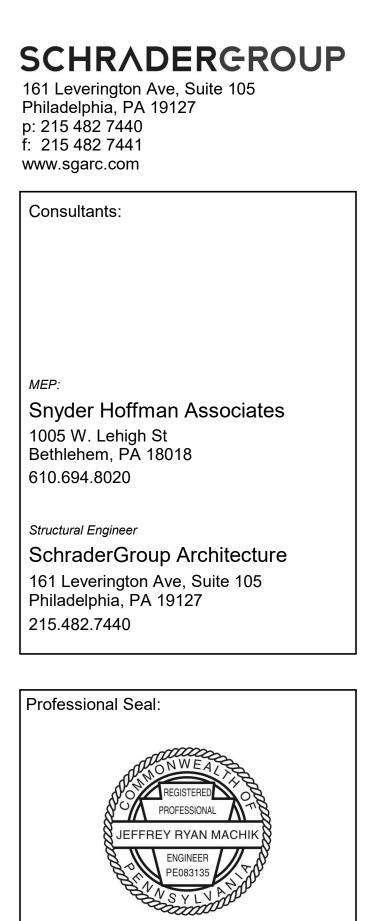
NOTES:
1. P.C. shall coordinate all "Accessible" fixture locations with Architectural plans prior to rough in.
2. Refer to Architectural drawings for all fixture mounting heights.
3. At all "Accessible" water closet compartments, installation of flush controls shall comply with ANSI 117.1. Flush controls shall be mounted on the wide/accessible side of toilet compartments, no more than 44 inches above the floor. Where sensor operated flush controls are provided, the rough in of the fluch control shall be appreciated to accessible side of the compartment to permit conversion to manual controls installed in accordance in of the flush control shall be opposite the wide/accessible side of the compartment to permit conversion to manual controls installed in accordance with the above requirements.

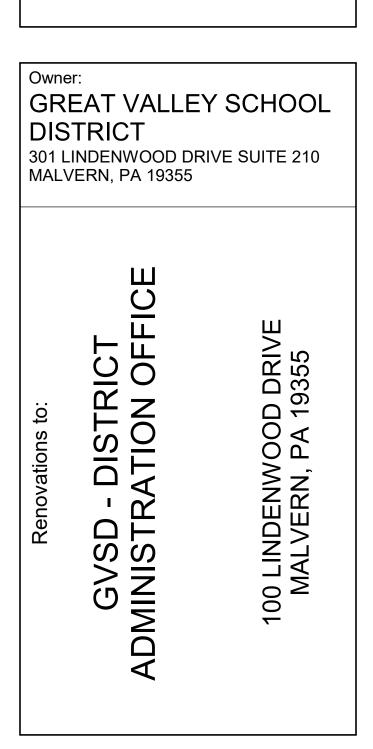
4. Provide deep seal trap and Proset Trapguard trap seal protection in all floor drains. Refer to plans for outlet size/trap size.

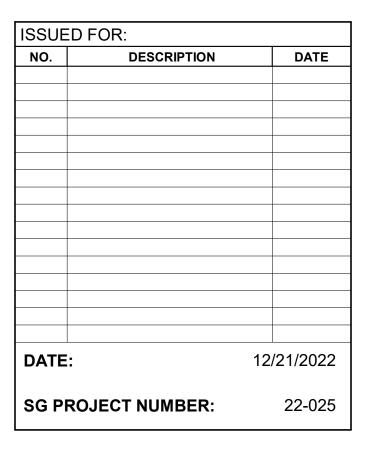
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IXTURE	FIXTURE	FIXTURE	DRAIN	WATER RO	
TAG	DESCRIPTION	SPECIFICATIONS	ROUGH IN CONNECTION	НОТ	COLD
SINK-1	Sink Kitchen	Basin: 18 gauge Stainless Steel - Undermount         - Bowl Dimension: 21" (left to right) x 15-3/4" (front to back) X 5" deep         - ADA/ANSI A117.1 compliant         - Basis of Design: Elkay ELUHAD2115-5.0         Faucet:         - Chrome Plated Brass High Arc Faucet w/ pull down spray, lever handle, ceramic cartridge, 1.5gpm Aerator         - Basis of Design: Chicago 434-ABCP         Accessories:         - 17 ga. Chrome Plated brass P-Trap w/ cleanout plug and escutcheon.         - Manufactured for Commercial Construction, Loose key/Screwdriver operated, 1/4 turn, chrome plated angle stops.         - Rigid Chrome plated copper supplies	2"	1/2"	1/2"
SINK-2	Sink Exec. Conference	<ul> <li>Basin: 18 gauge Stainless Steel - Undermount <ul> <li>Bowl Dimension: 16" (left to right) x 16" (front to back) x 5" deep</li> <li>ADA/ANSI A117.1 compliant</li> <li>Basis of Design: Elkay ELUHAD1616-5.0</li> </ul> </li> <li>Faucet: <ul> <li>Chrome Plated Brass High Arc Faucet w/ pull down spray, lever handle, ceramic cartridge, 1.5gpm Aerator</li> <li>Basis of Design: Chicago 434-ABCP</li> </ul> </li> <li>Accessories: <ul> <li>17 ga. Chrome Plated brass P-Trap w/ cleanout plug and escutcheon.</li> <li>Manufactured for Commercial Construction, Loose key/Screwdriver operated, 1/4 turn, chrome plated angle stops.</li> <li>Rigid Chrome plated copper supplies</li> </ul> </li> </ul>	2"	1/2"	1/2"
SINK-3	Sink Mothers Nursing	<ul> <li>Basin: 18 gauge Stainless Steel - Undermount <ul> <li>Bowl Dimension: 16" (left to right) x 16" (front to back) x 5" deep</li> <li>ADA/ANSI A117.1 compliant</li> <li>Basis of Design: Elkay ELUHAD1616-5.0</li> </ul> </li> <li>Faucet: <ul> <li>Chrome Plated Brass High Arc Faucet w/ pull down spray, lever handle, ceramic cartridge, 1.5gpm Aerator</li> <li>Basis of Design: Chicago 434-ABCP</li> </ul> </li> <li>Accessories: <ul> <li>17 ga. Chrome Plated brass P-Trap w/ cleanout plug and escutcheon.</li> <li>Manufactured for Commercial Construction, Loose key/Screwdriver operated, 1/4 turn, chrome plated angle stops.</li> <li>Rigid Chrome plated copper supplies</li> </ul> </li> </ul>	2"	1/2"	1/2"
WC-1/ WC-2/ WC-3	Water Closet (Toilet Rooms)	Bowl: - Elongated, Wall hung - ICC/ANSI A117.1 & ASME A112.19 compliant - Vitreous China, white w/ antimicrobial finish Basis of Design: Kohler : Kigston K-4325 Carrier: - Compatible closet carrier, minimum 500 lb. load rated. Seat: Plastic Open Front Seat, white, with self sustaining check hinge Basis of Design: Beamis 1955SSCT Flush Valve: - 1.6 gpf, Exposed chrome plated cast brass,w/integral angle stop - Sensor Operated, hardwired power supply w/True Mechanical Override Basis of Design: Sloan Optima Royal 111-1.28	4"		1"

 Refer to Architectural drawings for all fixture mounting heights.
 At all "Accessible" water closet compartments, installation of flush controls shall comply with ANSI 117.1. Flush controls shall be mounted on the wide/accessible side of toilet compartments, no more than 44 inches above the floor. Where sensor operated flush controls are provided, the rough in of the flush control shall be opposite the wide/accessible side of the compartment to permit conversion to manual controls installed in accordance with the above requirements. 4. Provide deep seal trap and Proset Trapguard trap seal protection in all floor drains. Refer to plans for outlet size/trap size.



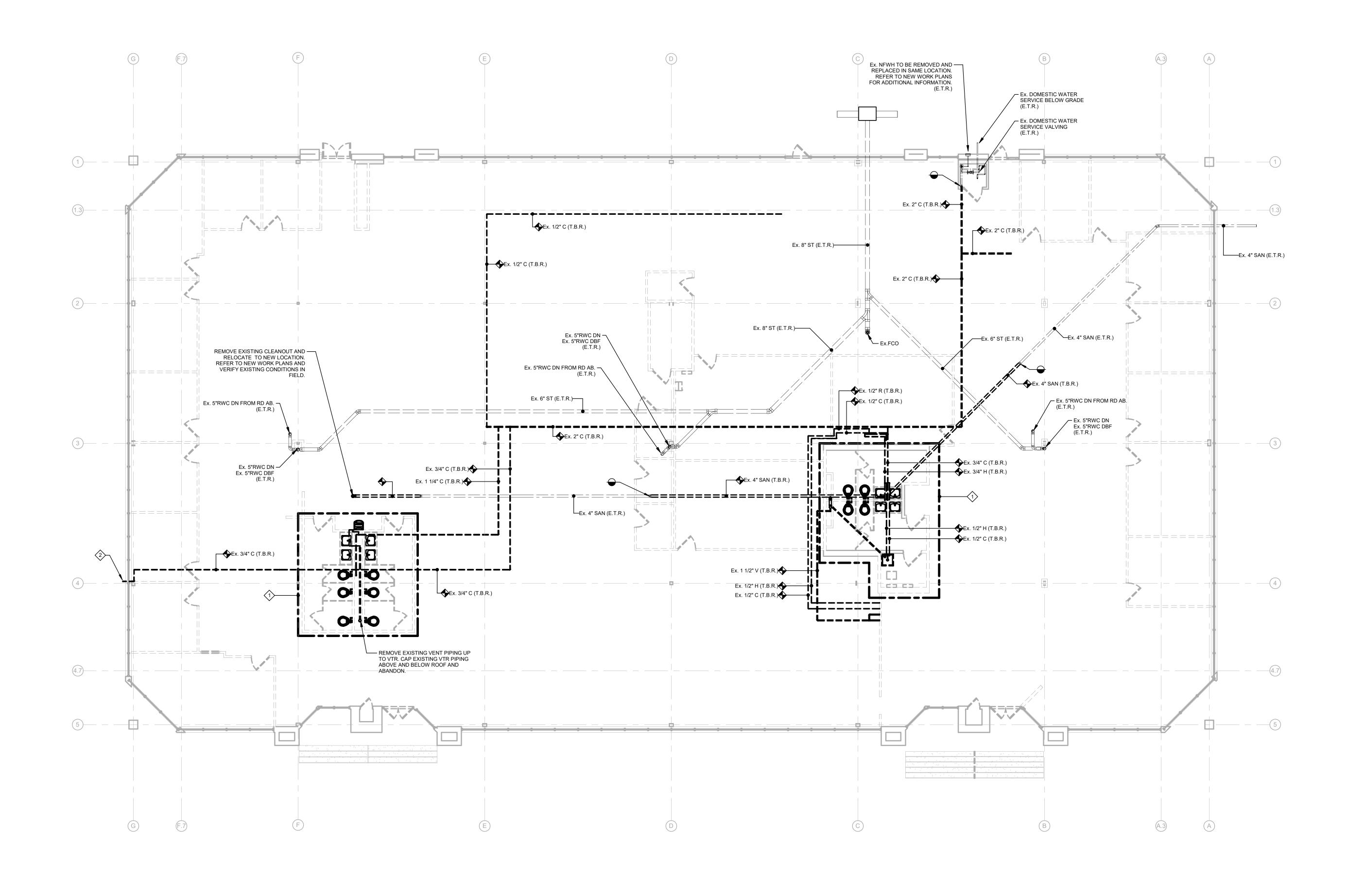




Key Plan: Drawing Title:



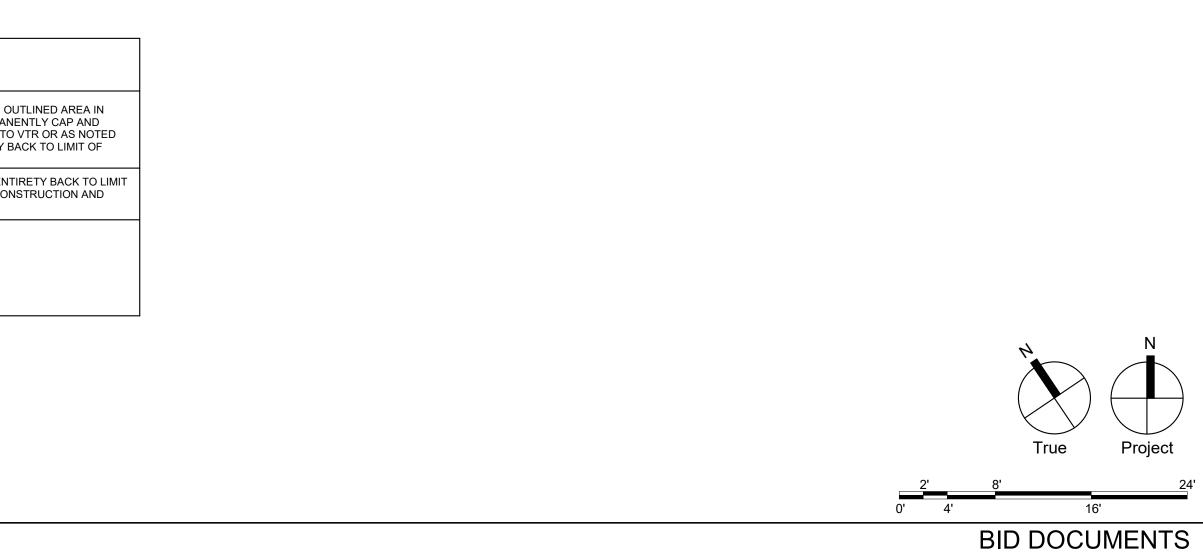
P001



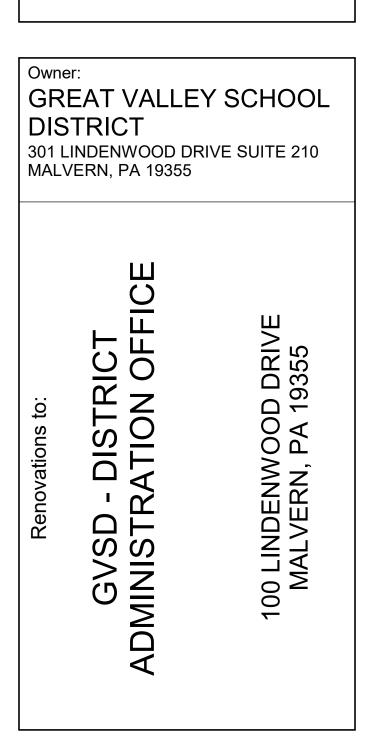
# 1 FIRST FLOOR DEMOLITION PLAN - PLUMBING

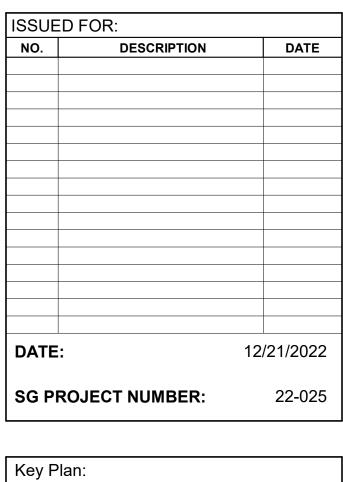
PD101 SCALE: 1/8" = 1'-0"

	PLUMBING DEMOLITION NOTE LEGEND
$\langle \rangle$	REMOVE ALL EXISTING PLUMBING FIXTURES AND ASSOCIATED PIPING WITHIN THE OUTHEIR ENTIRETY. REMOVE DRAINAGE PIPING DOWN TO BELOW FLOOR AND PERMAN ABANDON BELOW FLOOR SLAB. REMOVE ALL VENT PIPING IN ITS ENTIRETY BACK TO OTHERWISE ON PLANS. REMOVE ALL ASSOCIATED WATER PIPING IN ITS ENTIRETY B DEMOLITION NOTED ON PLANS.
2	REMOVE EXISTING NON-FREEZE WALL HYDRANT AND ASSOCIATED PIPING IN ITS ENT OF DEMOLITION NOTED ON PLANS. PATCH EXISTING WALL TO MATCH ADJACENT CON FINISHES.



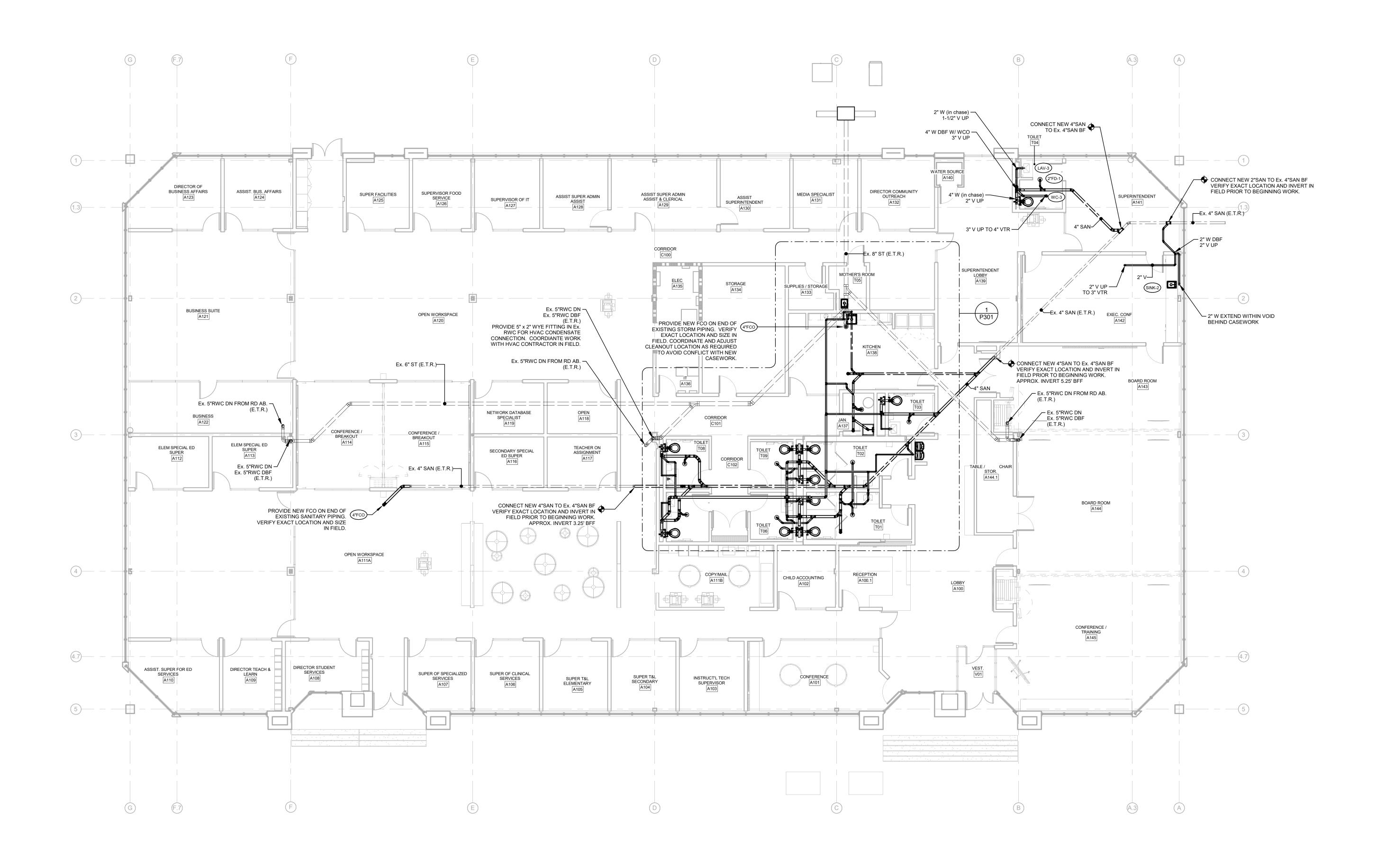




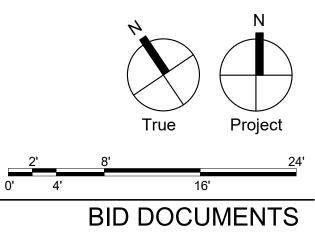


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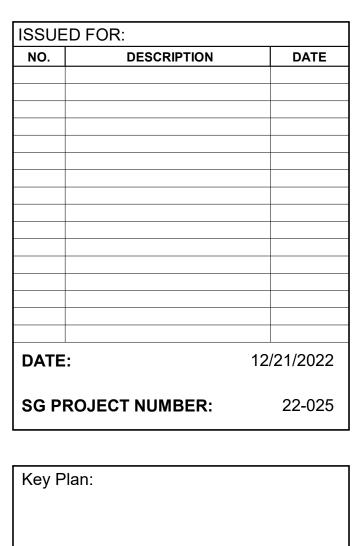


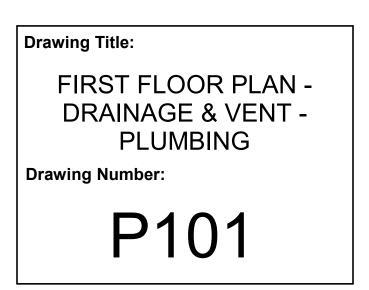


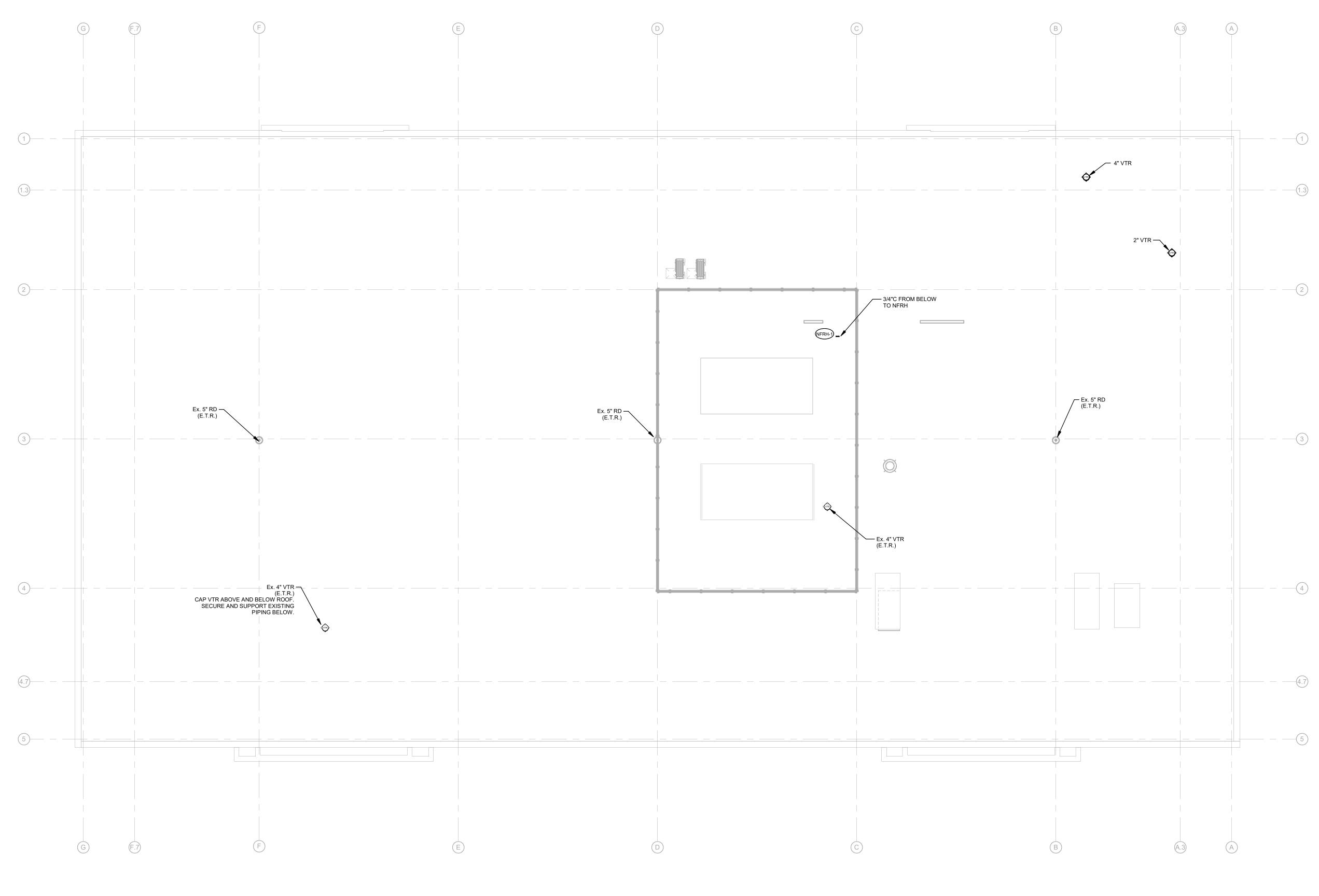






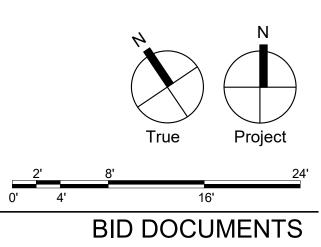






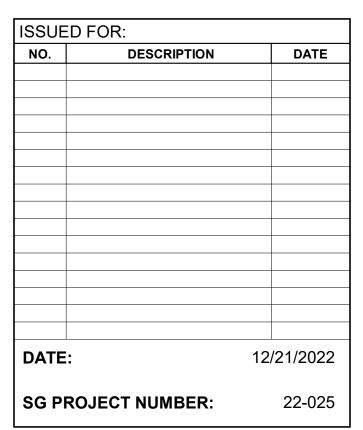
 1
 ROOF PLAN - PLUMBING

 P102
 SCALE: 1/8" = 1'-0"





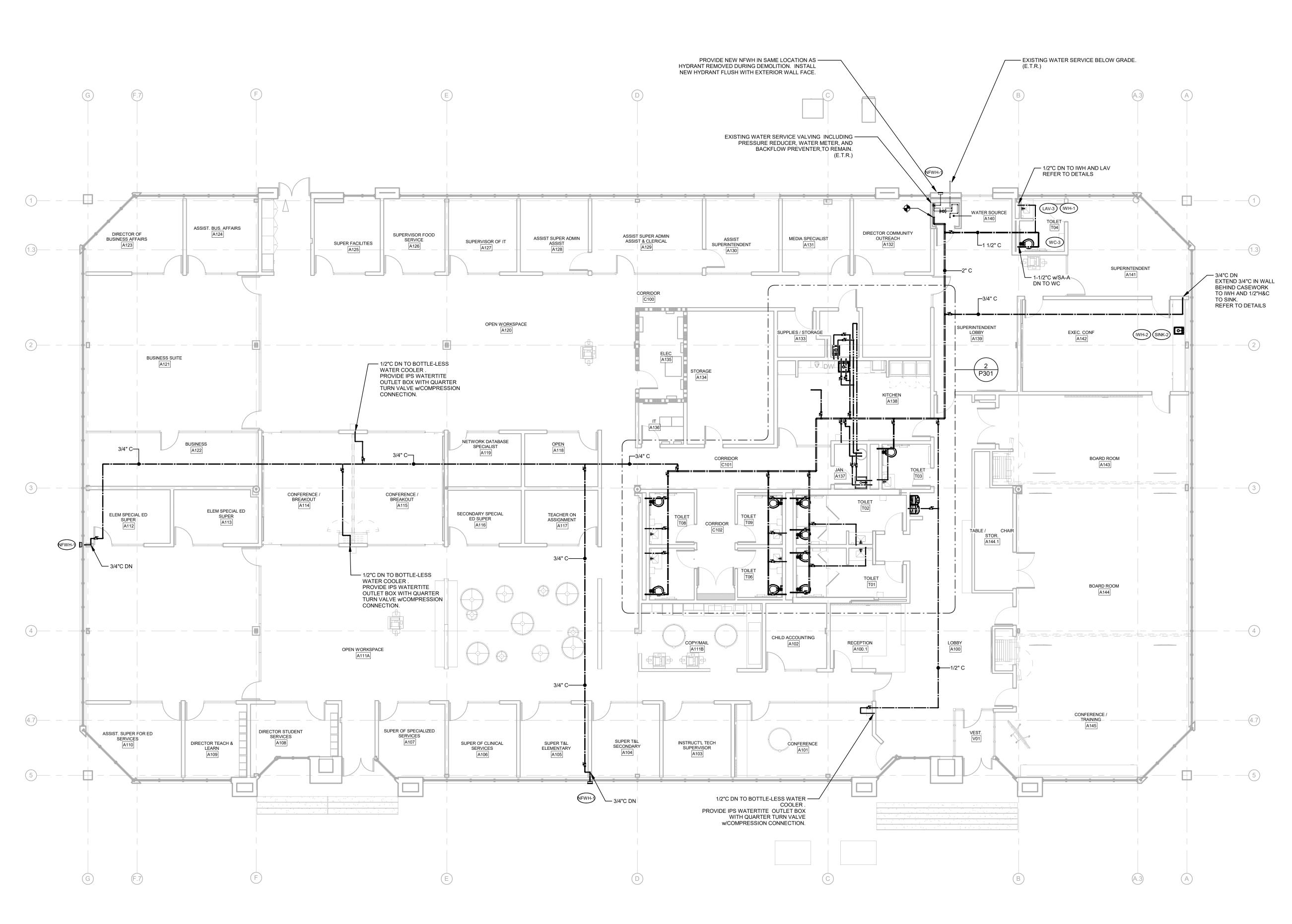




 Key Plan:

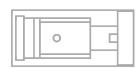
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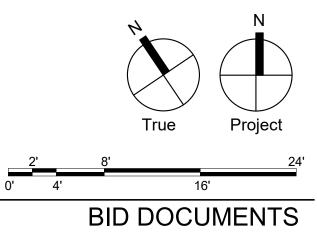
 ROOF PLAN - PLUMBING



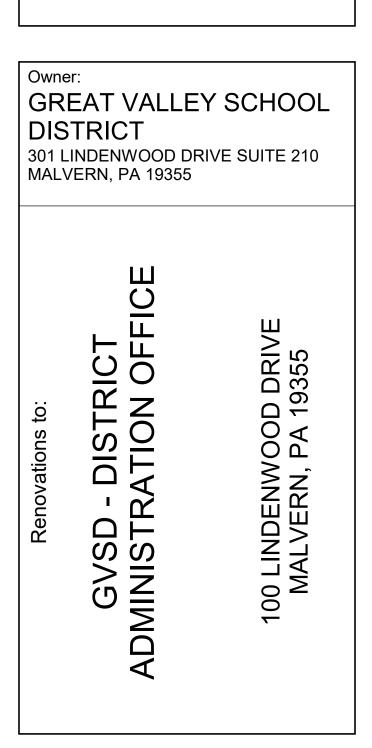
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 FIRST FLOOR PLAN - SUPPLY

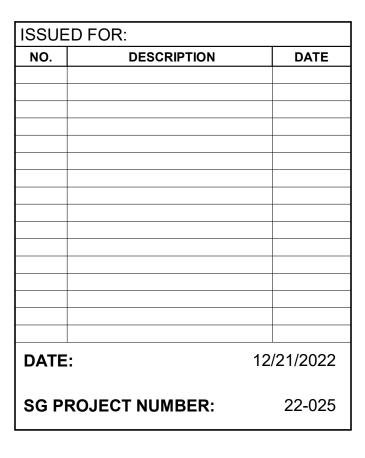
 P201
 SCALE: 1/8" = 1'-0"







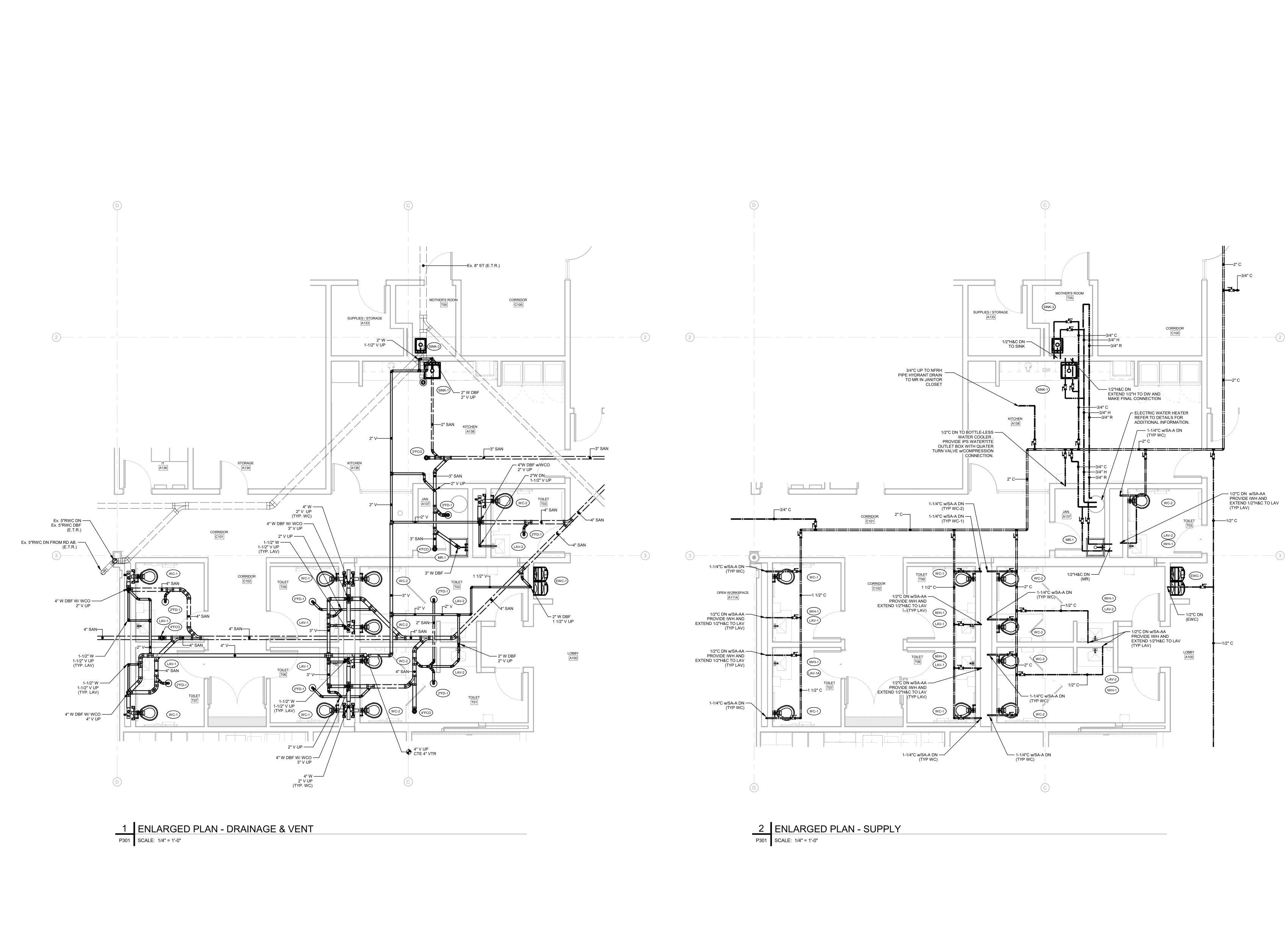


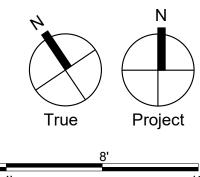


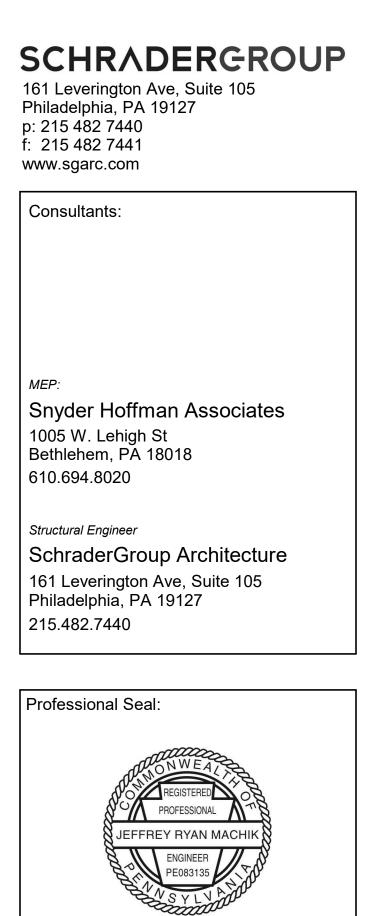
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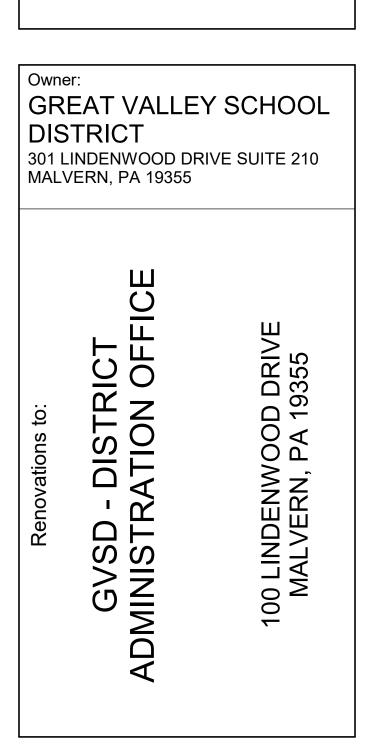


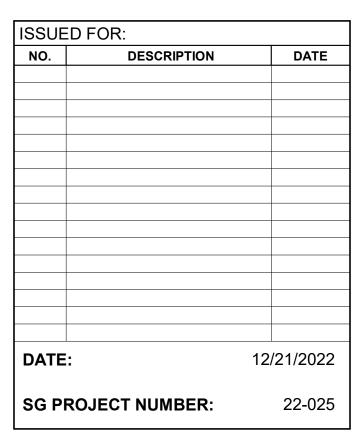
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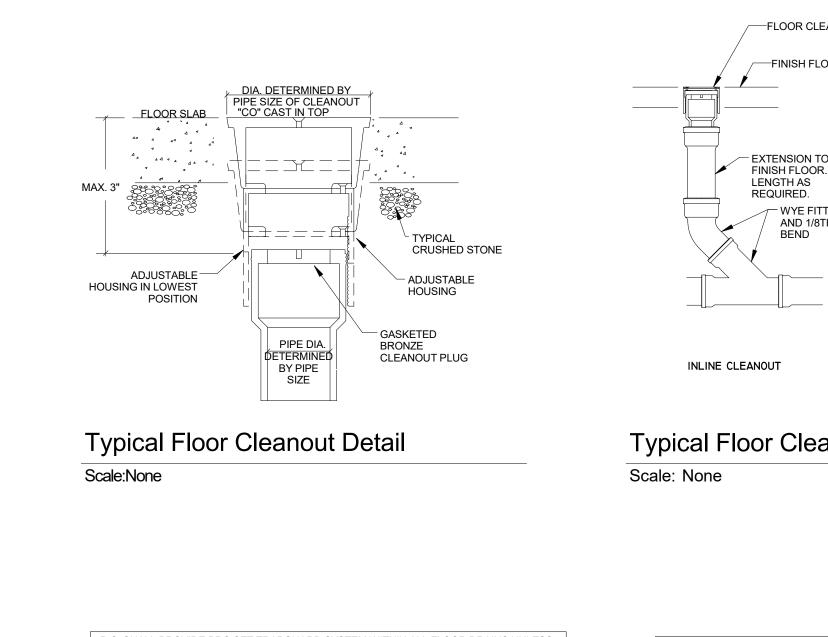


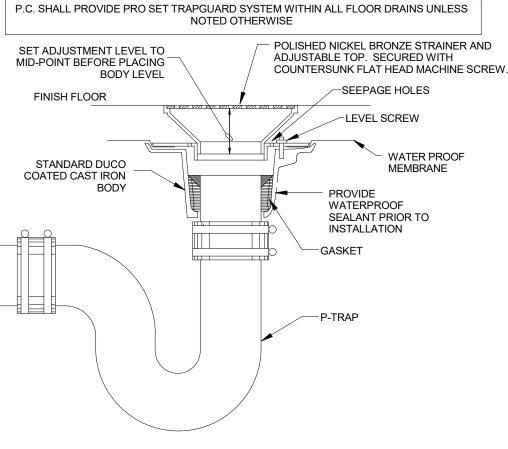




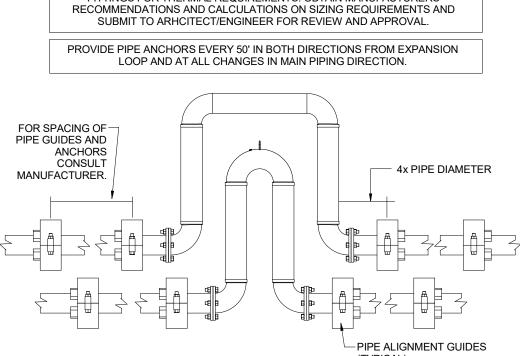
Key Plan: Drawing Title:











-FLOOR CLEANOUT

-FINISH FLOOR

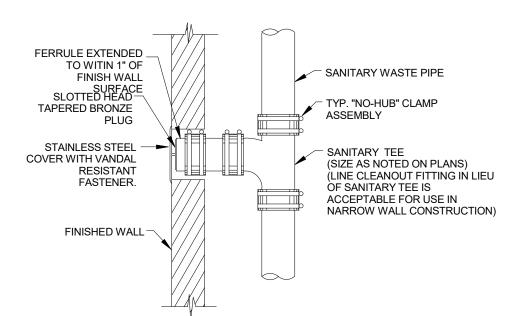
LENGTH AS

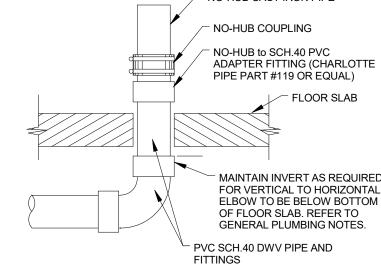
REQUIRED.

WYE FITTING

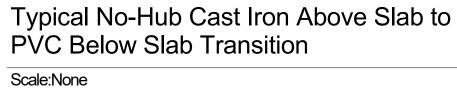
AND 1/8TH BEND

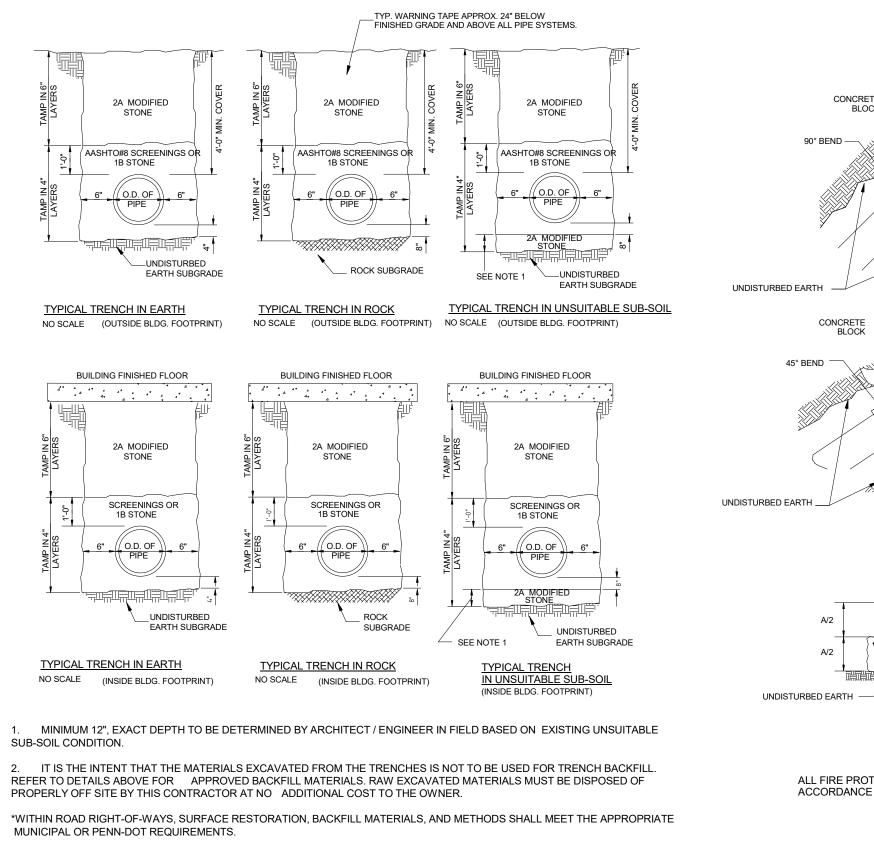
THERMAL EXPANSION LOOP NOTES: 1. PROVIDE THERMAL EXPANSION LOOPS ON ALL HOT WATER AND HOT WATER RECIRCULATION PIPING EXCEEDING 50' IN LENGTH. LOCATE EXPANSION LOOPS AT INTERVALS NOT EXCEEDING 100'. Typical Thermal Expansion Loop Detail Scale:None





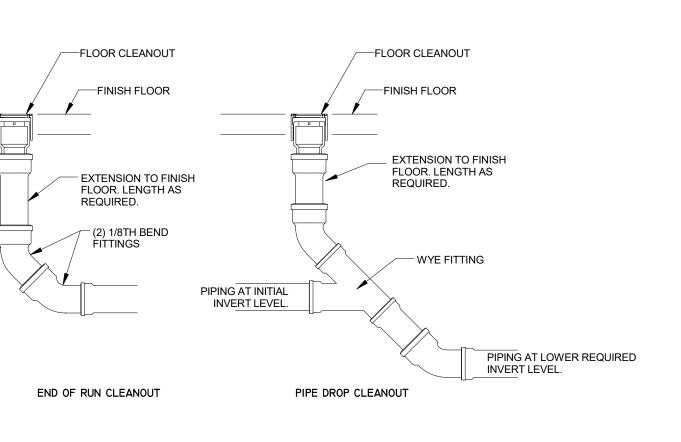




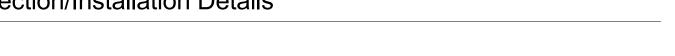


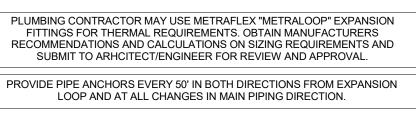
Typical Pipe Trench Details Scale: None

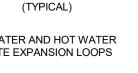
90° BEND —



# Typical Floor Cleanout Connection/Installation Details

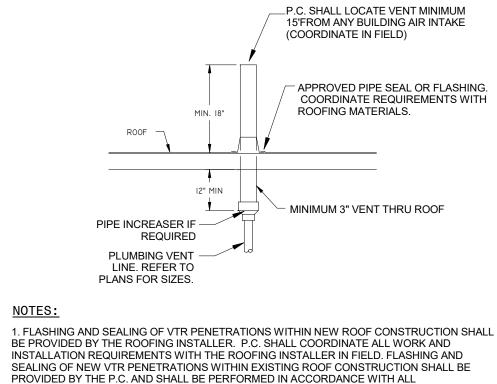






- NO-HUB CAST IRON PIPE <sup>-</sup> FLOOR SLAB

MAINTAIN INVERT AS REQUIRED FOR VERTICAL TO HORIZONTAL ELBOW TO BE BELOW BOTTOM GENERAL PLUMBING NOTES.



PIPE SLEEVE REQUIREMENTS OF THE EXISTING ROOF MANUFACTURER TO MAINTAIN ANY EXISTING ROOF WARRANTY. COORDINATE ALL REQUIREMENTS WITH OWNER AND EXISTING ROOF

- BAR JOIST OR BEAM

FINISH WALL

FIRE RATED

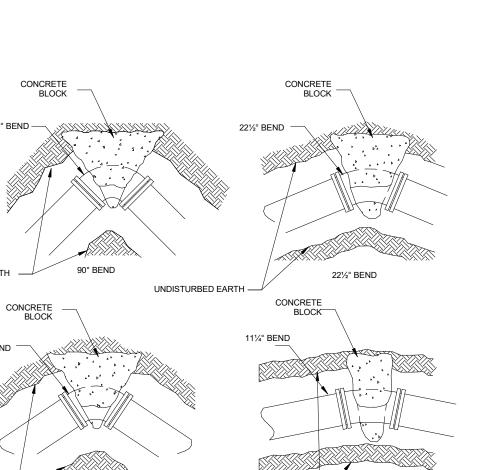
PIPE SEALANT

# Pipe Sleeve Through Wall Detail Scale: None

- FINISH WALL

- PIPE INSULATION

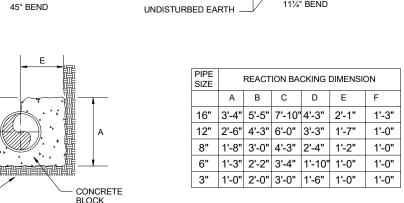
- PIPE ESCUTCHEON



MANUFACTURER IN FIELD.

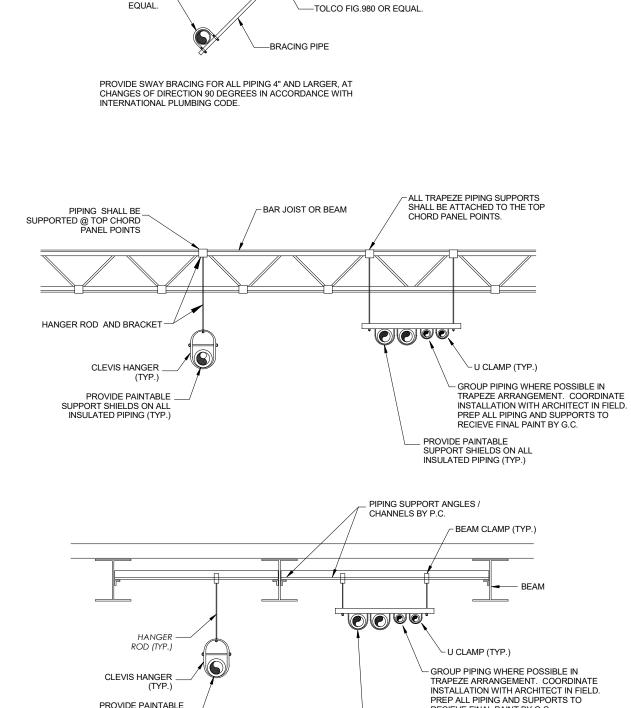
Scale: None

Vent Thru Roof Detail



ALL FIRE PROTECTION SERVICE PIPING SHALL BE INSTALLED AND RESTRAINED IN ACCORDANCE WITH NFPA-24 REQUIREMENTS.

# Typical Thrust Block Details



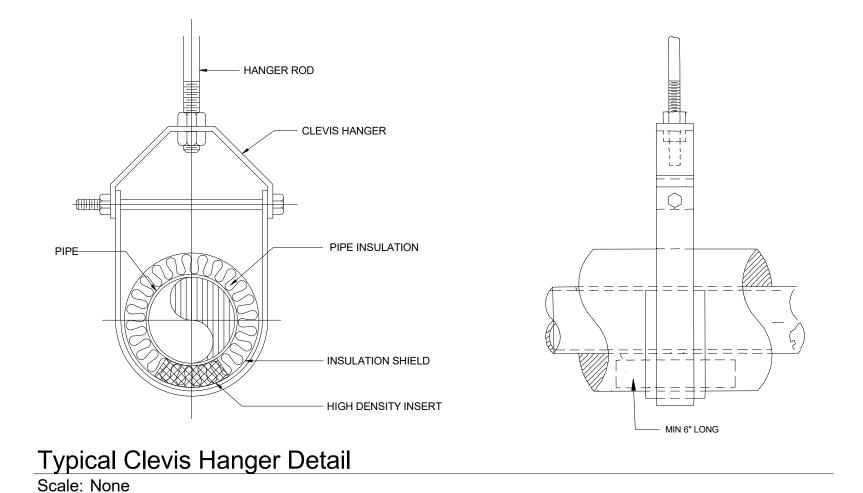
RECIEVE FINAL PAINT BY G.C.

PROVIDE PAINTABLE SUPPORT SHIELDS ON ALL INSULATED PIPING (TYP.)

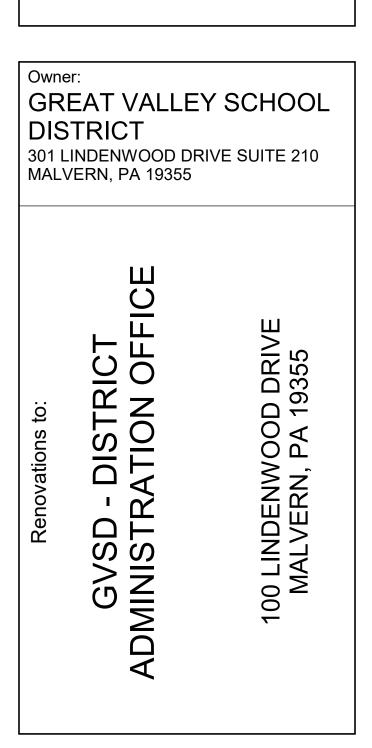
Typical Piping Support Details Scale: None

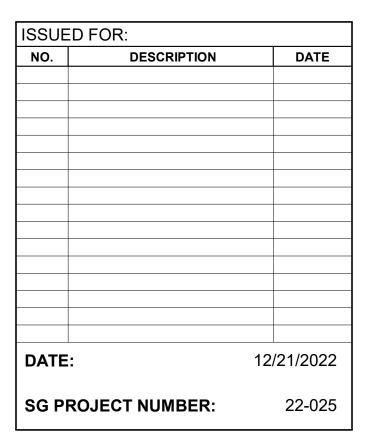
PROVIDE PAINTABLE \_ SUPPORT SHIELDS ON ALL INSULATED PIPING (TYP.)

TOLCO FIG.202 OR \_\_



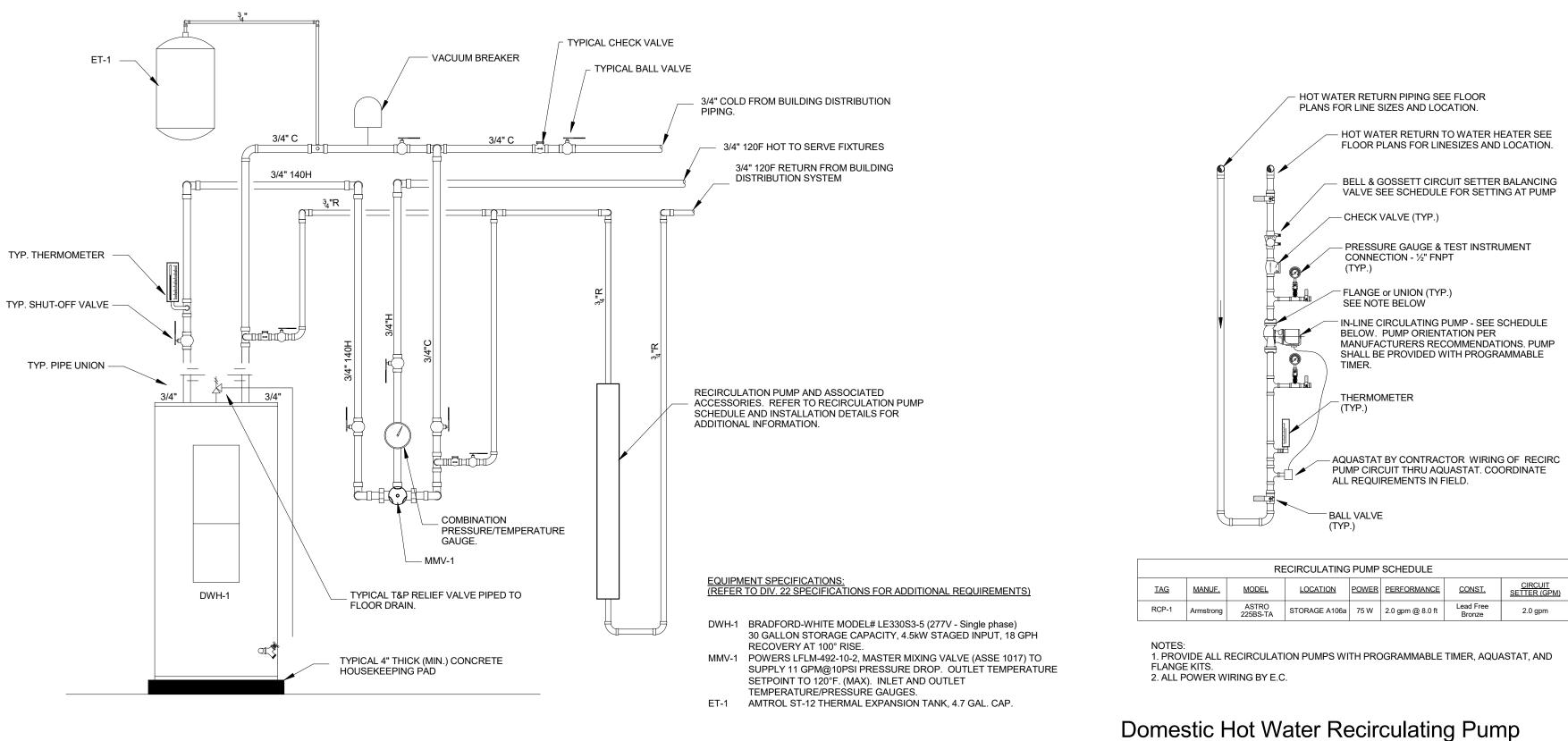




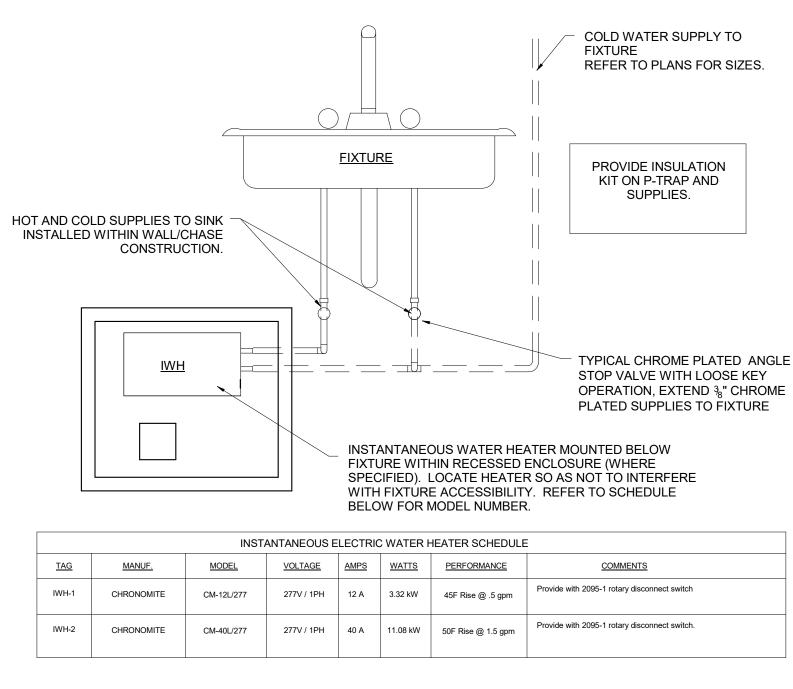


Key Plan: Drawing Title: DETAILS - PLUMBING

P401



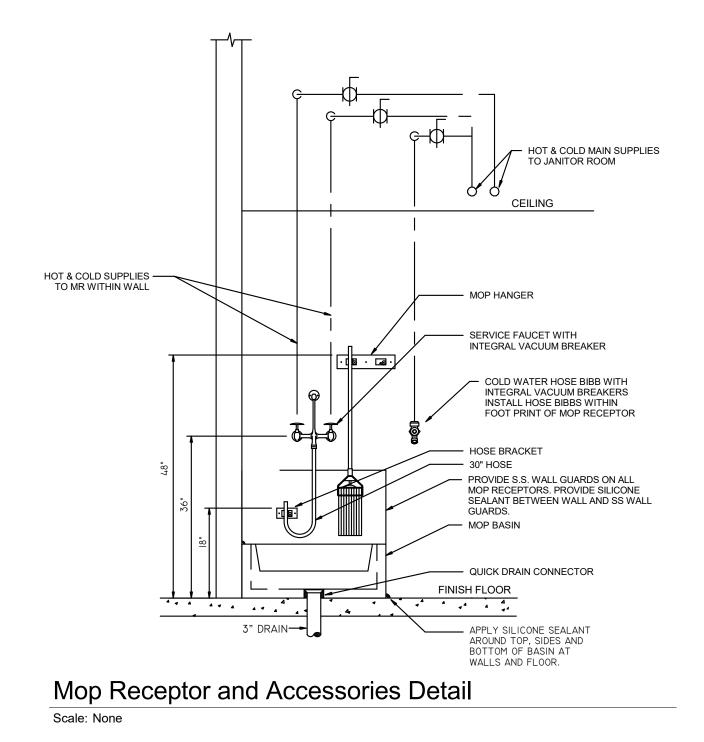


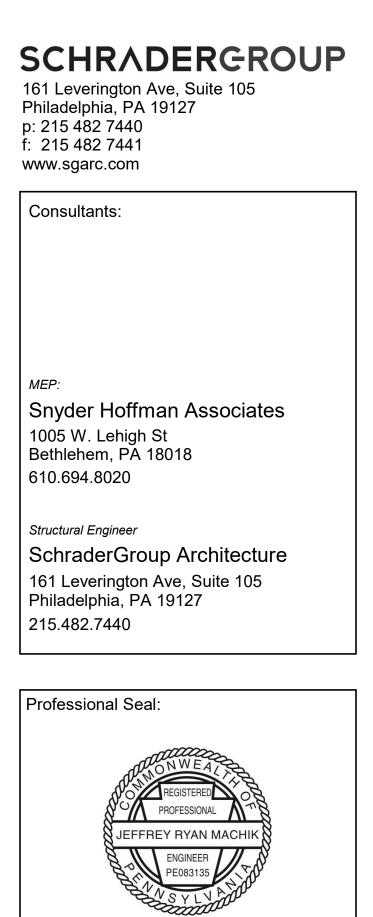


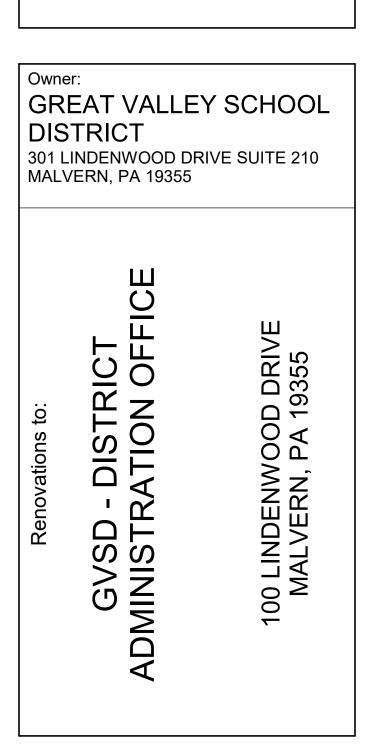
Instantaneous Water Heater Installation (Single Sink)

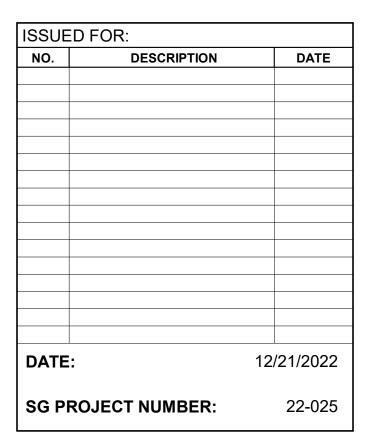
Scale: None

Installation Detail Scale: None





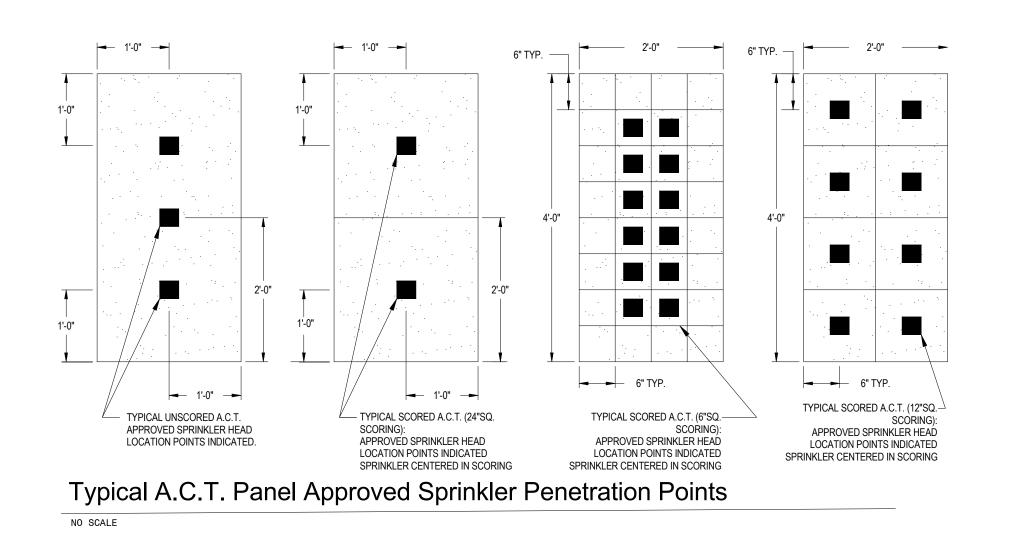


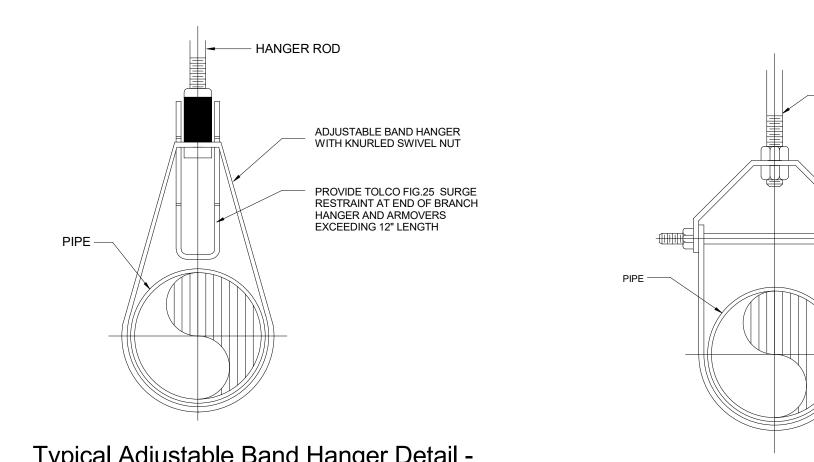


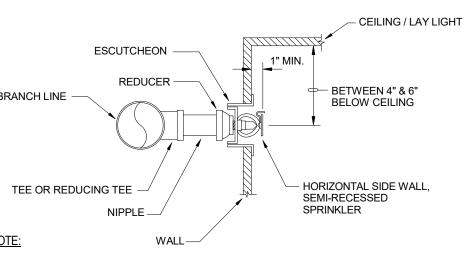
Key Plan: Drawing Title: **DETAILS - PLUMBING** 

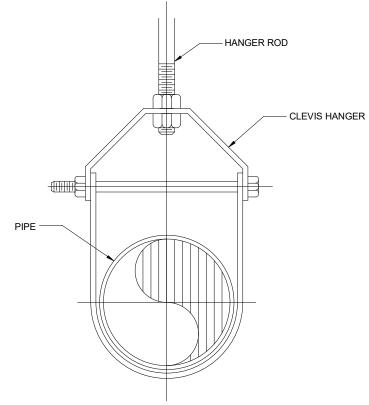
P402

HANGER ROD ADJUSTABLE BAND HANGER WITH KNURLED SWIVEL NUT HANGER AND ARMOVERS EXCEEDING 12" LENGTH PIPE — Typical Adjustable Band Hanger Detail -Fire Protection Piping Scale: None ESCUTCHEON -REDUCER -- BETWEEN 4" & 6" BRANCH LINE BELOW CEILING HORIZONTAL SIDE WALL, TEE OR REDUCING TEE — SEMI-RECESSED SPRINKLER NIPPLE \_\_\_/ NOTE: POSITION OF SPRINKLER HEADS WITH RESPECT TO COMBUSTIBLE AND NON-COMBUSTIBLE CONSTRUCTION, STRUCTURAL MEMBERS, ETC. SHALL BE IN ACCORDANCE WITH NFPA #13. Typical Recessed Sidewall Sprinkler Head Detail Scale: None

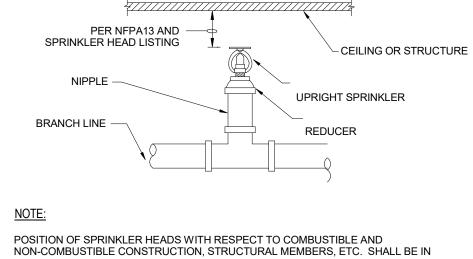








Typical Clevis Hanger Detail Scale: None

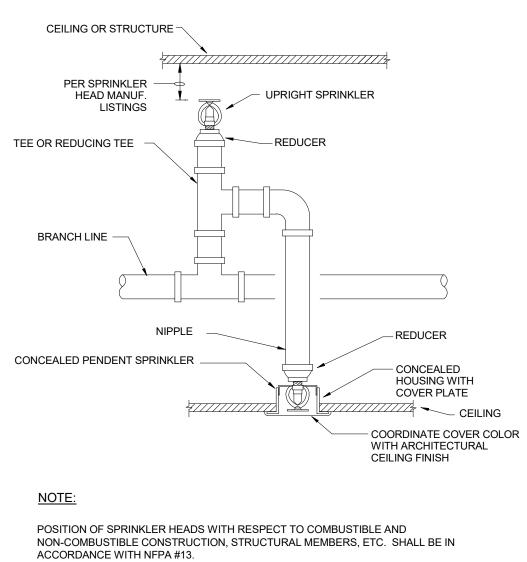


ACCORDANCE WITH NFPA 13. Typical Upright Sprinkler Head Detail

Scale: None

NOTE:

Scale: None



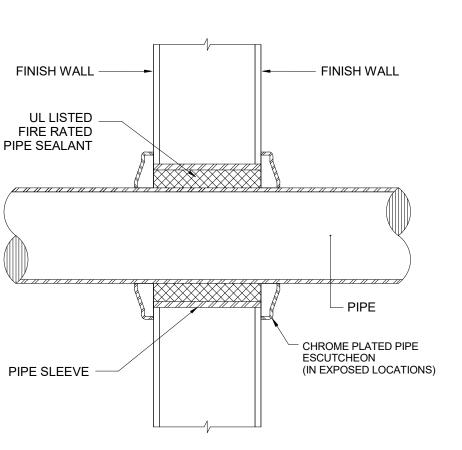
INSTALLATION IN ACCORDANCE WITH NFPA13 8.14.19.3.3

Upright Head Sprig Up w/Concealed Pendent Sprinkler Head in Low Ceiling Detail Scale: None

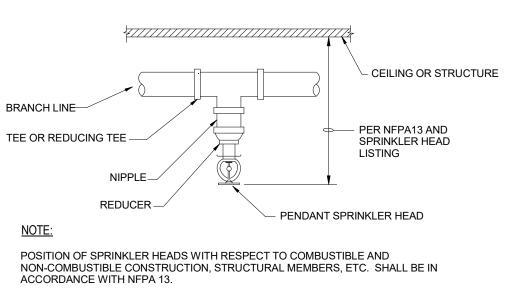
SPRINKLER BRANCH ----

NOTES:

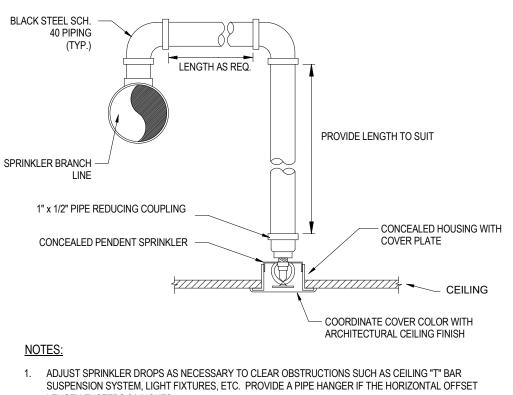
Scale: None



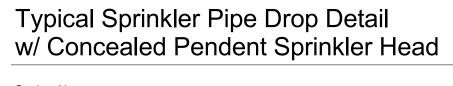
# Pipe Sleeve Through Wall Detail Scale: None



Typical Pendent Sprinkler Head Detail



LENGTH EXCEEDS 24 INCHES.



	FIRE PROTECTION - GENERAL NOTES
1.	The entire renovated building area shall be fully sprinklered. The sprinkler system shall be "Design Build" by the contractor in accordance with IBC2018 and NFPA 13 (2016), and inclusive of all additional requirements as indicated on the drawings and in the specifications. The system shall be hydraulically calculated to provide the prescribed density uniformly over the most remote area. Contractor shall prepare shop drawings and calculations and submit to the Architect/Engineer, and all reviewing agencies having jurisdiction including the owner's insurance carrier. The final approved submittal drawings prepared by the contractor shall bear a fire protection engineer's seal, whom is registered in the Commonwealth of Pennsylvania. No work shall begin until all approvals are granted. Note: Schematic representation of some main and branch piping has been included on the attached contract drawings for space allocation and design coordination. Not all piping is shown and the contractor shall be responsible for a complete "Design Build" system and to provide all
2.	required piping and appurtenances as noted above. The contractor whom installs the system shall have a minimum of five (5) years successful installation experience on projects with fire protection systems similar to that required by this project.
3.	All sprinkler heads shall be "Quick Response" rated.
4.	No extended coverage heads shall be permitted on this project unless specifically noted as extended coverage on drawings.
5.	Exposed piping to be limited to areas noted on drawings and as approved by architect/tenant representative in field. Exposed piping shall be installed in a neat arrangement in inconspicuous locations. Where possible piping shall be installed within chases, soffits, and walls and coordinated with all trades prior to installation.
6.	Coordinate all piping, heads, equipment, etc. with all other trades in field prior to installation. All exposed piping shall be field coordinated with architect prior to installation. Field coordination shall take precedence over routing and details shown on FP submittal drawings. Any change in piping from that shown on the submittal drawings, resulting from field coordination, shall be completed at no additional cost to the owner. Prefabrication of FP piping off site or third party design of FP system does not relieve the installing contractor of any field coordination requirements.
7.	All sprinkler heads shall be located as shown on "Typical ACT Panel Approved Sprinkler Penetration Points" detail, unless noted otherwise. All sprinkler heads must be installed symmetrically with all other devices, equipment, etc. The contractor shall use the approved architectural reflected ceiling plans as the basis for his sprinkler head layout, any deviation from the drawing layout must be approved in advance by the Architect/Engineer.
8.	Contractor shall paint all exposed piping in color selected by Architect. Where painting of exposed piping is specified under separate contract, this contract shall include all preparation including cleaning, removal of rust, oil, or other contaminants on exposed piping.
9.	The contractor shall verify all ceiling construction types prior to ordering or installing any sprinkler heads as shown. Refer to details/specifications for sprinkler head manufacturers, models, and type to be used in each ceiling type.
10.	Sprinkler system design density for Offices, Toilet Rooms, Break Rooms, etc. shall be based on "Light Hazard Occupancy" classification. Maximum sprinkler coverage shall be 225 square feet per head, unless noted otherwise.
11.	Sprinkler system design density for Mechanical Rooms, Janitor Closets, Storage Rooms, etc. shall be based on "Ordinary Hazard I Occupancy" classification. Maximum sprinkler coverage shall be 130 square feet per head, unless noted otherwise.
12.	Sprinkler head locations, installations, etc. for the entire project shall be installed in strict accordance with NFPA 13 (latest edition) Chapter 8 "Installation Requirements", International Building Code, International Fire Code (latest editions), and the Local Fire Marshal.
13.	Contractor shall provide additional heads and supply pipe required for proper sprinkler coverage both above and below HVAC duct work, suspended units, obstructions, etc. over 48" in width. Coordinate in field (NFPA 8-5.5.3.1).
14.	Contractor shall be responsible for providing sprinklers in all concealed spaces, as required by NFPA13 (latest edition) Chapter 8.
15.	This contractor shall provide vibration isolation and seismic restraint on fire piping as required by contract drawings, specifications, the requirements of NFPA13 (latest edition) Chapter 9 "Hanging, Bracing, and Restraint of System Piping", all local code requirements, the International Building Code and International Fire Code (latest editions).
16.	Provide Inspectors Test Connections and drains as required by NFPA 13 (latest edition) Chapter 8 "Installation Requirements". Fire Protection Contractor shall pipe Inspectors Test Connections piped to exterior of building or to an approved drain location (verify with local AHJ).
17.	Where sprinkler heads are installed in spaces with no ceilings or below ceilings exposed, provide sprinkler guards on these heads. Sprinkler guards shall have chrome finish.
18.	This Contractor is responsible for performing a Fire Flow Test on the Public Water Distribution System serving the building prior to beginning his design. The Contractor shall use these test results as a basis of design for his hydraulic calculations for the building system.
19.	This Contractor shall install all sprinkler piping as high as possible within the ceiling space provided throughout the building. Sprinkler mains shall be installed within bar joists, tight to bottom of joists or tight to bottom of beams. This Contractor shall coordinate piping locations and elevations with all other trades and note elevations on the sprinkler submittal drawings. All piping shall be installed to freely drain back to mains. Where trapped piping is unavoidable, this contractor shall provide auxiliary drains in accordance with NFPA13 at lowpoints of all trapped piping. All auxiliary drains shall be clearly labeled and all locations shall be noted on the record drawings.

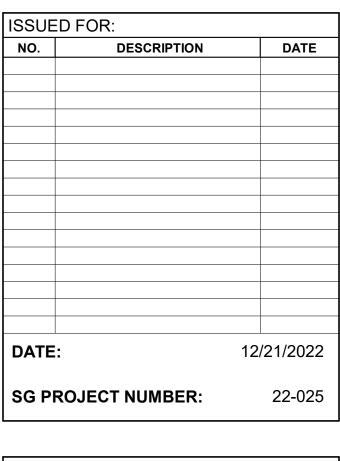
	SPRINKLER HEAD LEGEND
<b>•</b>	Concealed Pendant Type. See drawings for following option designations: Designations: DRY - Dry type with barrel length determined in field Cover colors: W - White Chrome CC - Custom Color (Color as determined by Architect)
<b>\$</b>	Standard Pendant (P) or Upright (U) Type. See drawings for following option designations: DRY - Dry type with barrel length determined in field. DSR - Dry type, Semi-recessed INST - Institutional, flush mount pendant type EC - Extended Coverage G - Guard Colors: Chrome Brass
< ??? ??? ???	Horizontal Sidewall Type. See drawings for following option designations: C - Concealed DRY - Dry type with barrel length determined in field. DSR - Dry type, Semi-recessed with barrel length determined in field. EC - Extended Coverage G - Guard Colors: Chrome Brass
*Coordinate	sprinkler head types with drawings, approved architectural reflected ceiling plans and

field conditions. Resolve any conflicts with Architect/Engineer prior to installation. ning piar \*Heads designated as exposed standard upright and pendant type can be either pendant or upright as to best fit in final piping layout. \*Refer to Division 21 - "Fire Suppression" Specifications for detailed sprinkler specifications.

	FIRE PROTECTION DESIGN LEGEND
1	Sprinkler system Design Density for rooms indicated shall be based on "Light Hazard" classification. Maximum sprinkler coverage shall be 225 square feet per head , unless noted otherwise.
2	Sprinkler system Design Density for rooms indicated shall be based on "Ordinary Hazard 1" classification. Maximum sprinkler coverage shall be 130 square feet per head , unless noted otherwise.
3	Sprinkler system Design Density for rooms indicated shall be based on "Ordinary Hazard 2" classification. Maximum sprinkler coverage shall be 130 square feet per head , unless noted otherwise.
4	This Contractor shall coordinate sprinkler head and piping with all other trades prior to installation. Contractor shall also provide additional heads and supply pipe required for proper sprinkler coverage both above and below HVAC duct work, suspended units, etc. over 48" in width. Coordinate in field (NFPA 5-5.5.3.1).

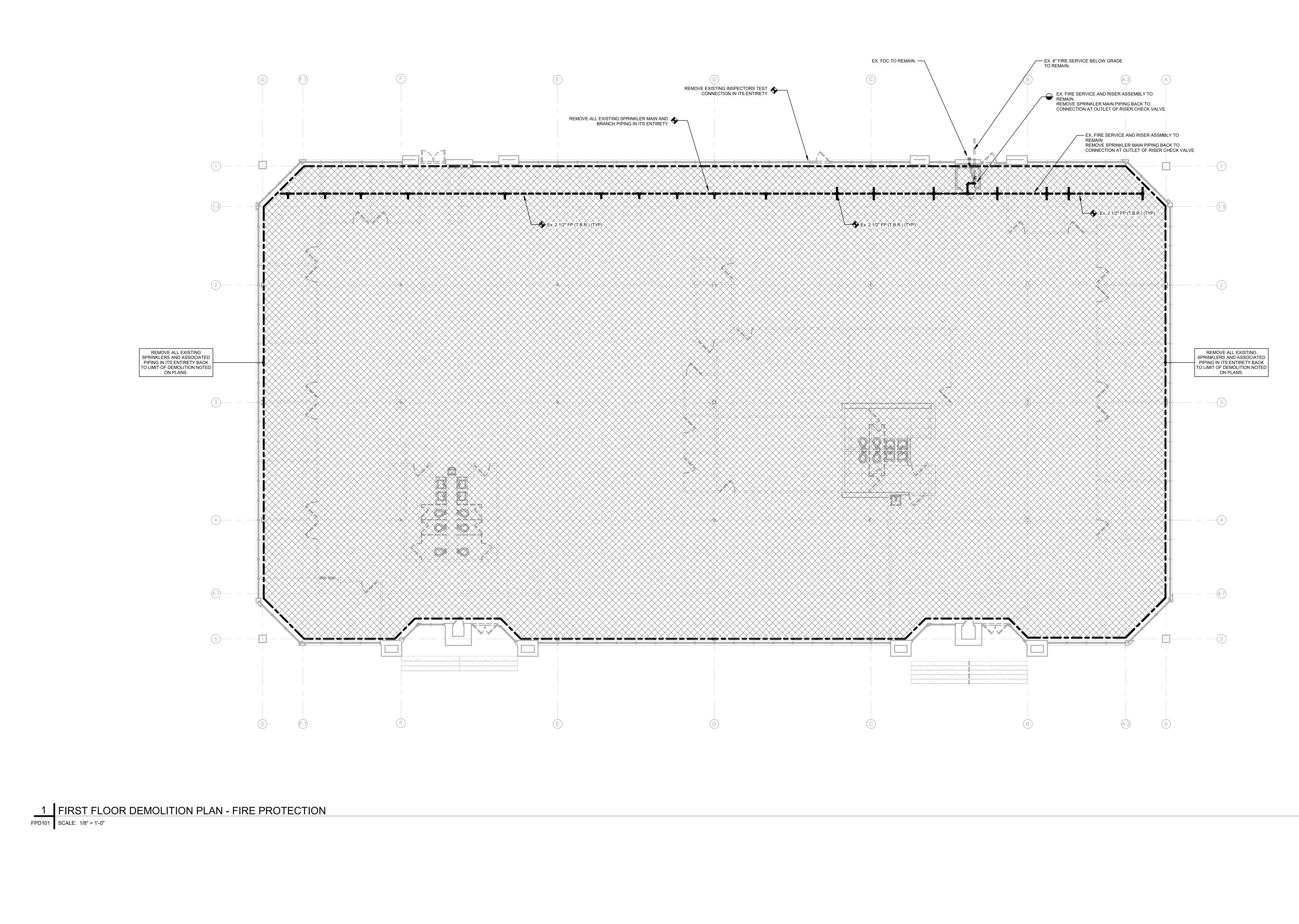


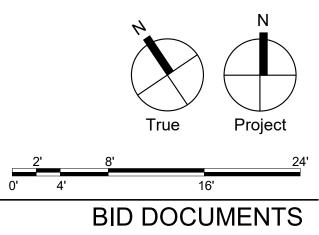


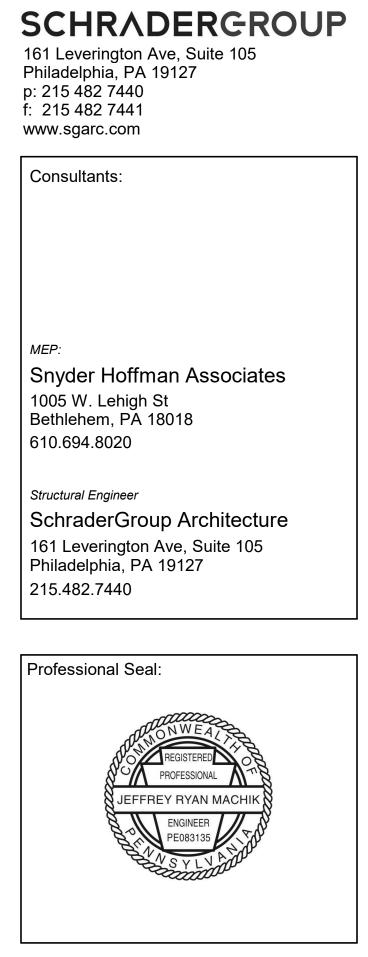


Key Plan: Drawing Title:

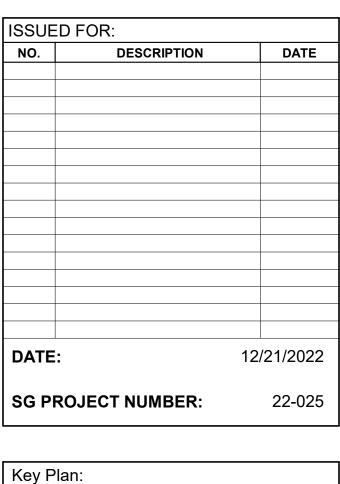


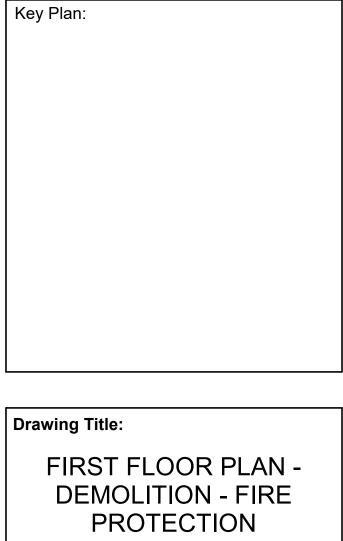




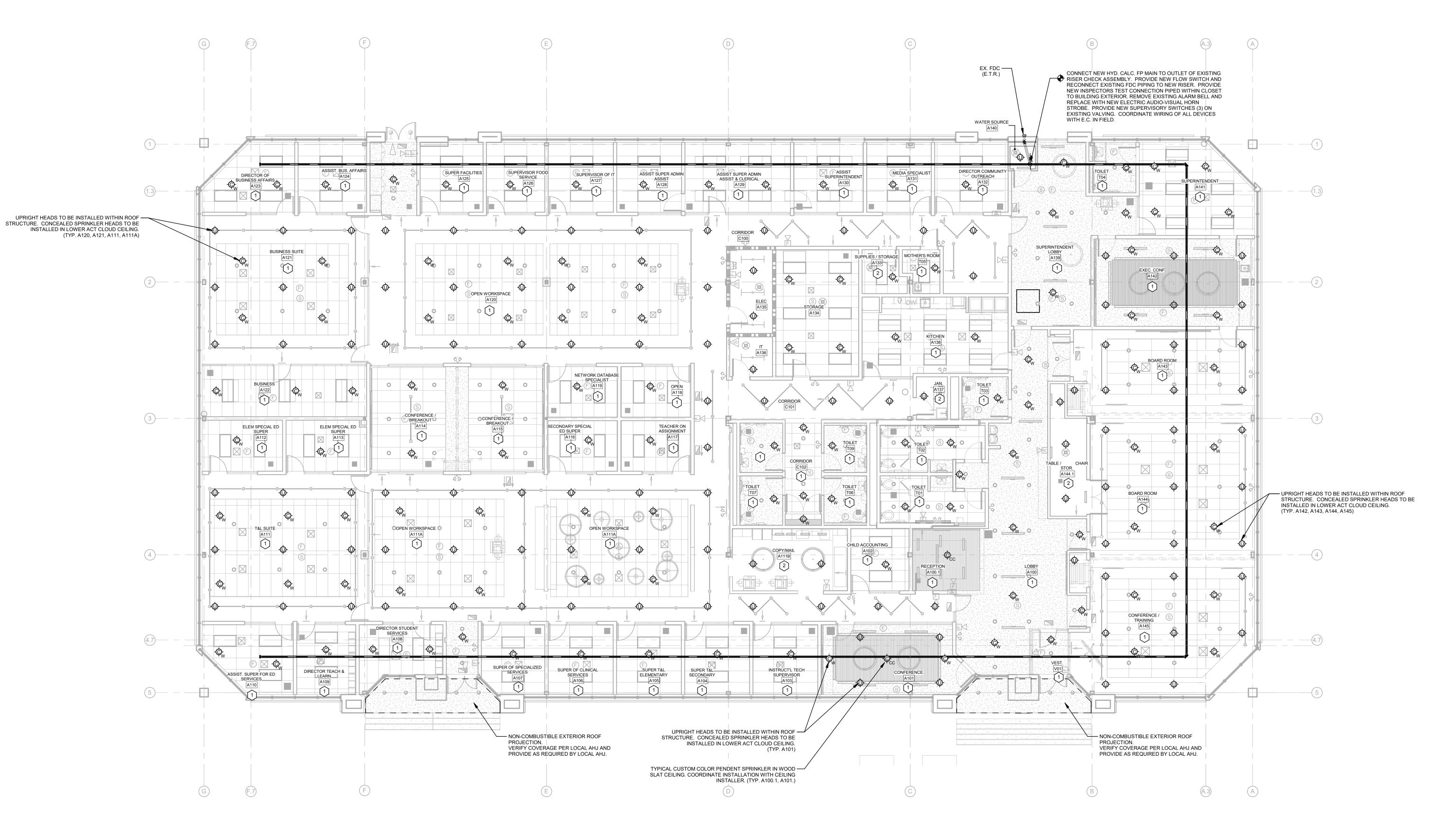




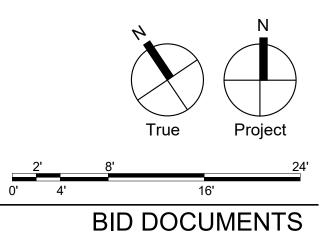




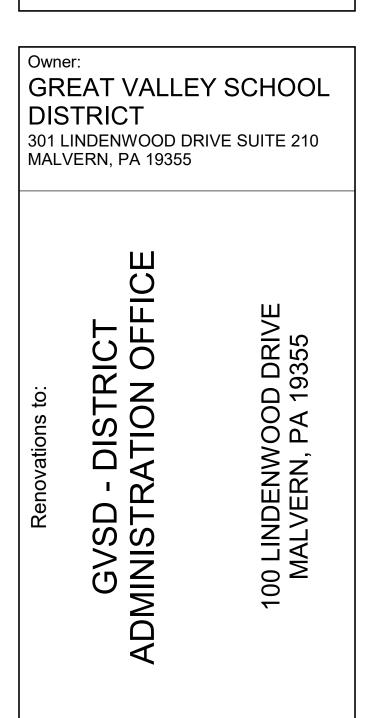
FPD101

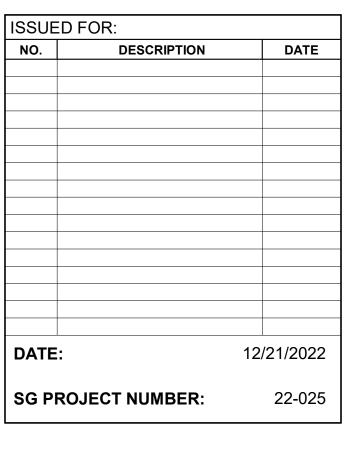


FIRST FLOOR PLAN - FIRE PROTECTION 1 FP101 SCALE: 1/8" = 1'-0"









Key Plan: Drawing Title:



FP101