VOLUME 2

CJMW ARCHITECTURE
525 Vine Street, Suite 350
Winston-Salem, NC 27101
p. 336-724-1503
www.cjmw.com

DATE: 10-24-2023 COMMISON NO. 22-0410

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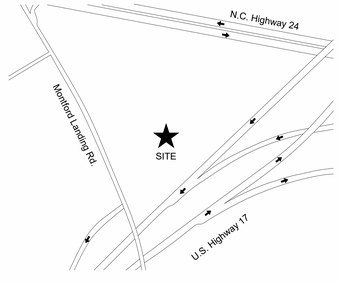
HICAPS

RAA

SAMET

LOCATION MAP



CAROLINA MUSEUM OF THE MARINE

111 Montford Point Dr,
Jacksonville, NC 28540

ARCHITECT & INTERIOR DESIGN
CJMW ARCHITECTURE P.A.
525 Vine Street, Suite 350
WINSTON SALEM, NC 27101
336-724-1503

CIVIL ENGINEERS
CAPE FEAR ENGINEERING
151 POOLE ROAD, SUITE 100
LELAND, NC 28451
910-383-1044

LANDSCAPE DESIGNER
SURFACE 678, PA
THE IMPERIAL BUILDING
215 MORRIS STREET, SUITE 150
DURHAM, NC 27701
919-419-1199

STRUCTURAL ENGINEERS
ADAMS ENGINEERING, PLLC
P.O. BOX 255
BETHANIA, NC 27010
336-749-8604

PLUMBING, MECHANICAL, ELECTRICAL & FIRE PROTECTION ENGINEERS
ALTIERI SEBOR WIEBER, LLC
31 KNIGHT STREET
NORWALK, CT 06851
203-866-5538

ACOUSTICAL CONSULTANT
JAFFE HOLDEN
114-A WASHINGTON STREET
NORWALK, CT 06854
203-838-4167

FOOD SERVICE CONSULTANT
FOODESIGN ASSOCIATES
220 N. AMES STREET, SUITE 101
MATTHEWS, NC 28105
704-545-6151

LOW VOLTAGE, SECURITY & AV CONSULTANTS
J&A ENGINEERING CONSULTANTS
4994 LOWER ROSSWELL RD., SUITE 1
MARIETTA, GA 30068
770-817-4220

CONSTRUCTION DOCUMENTS

DATE: 10-24-2023
REVISION:

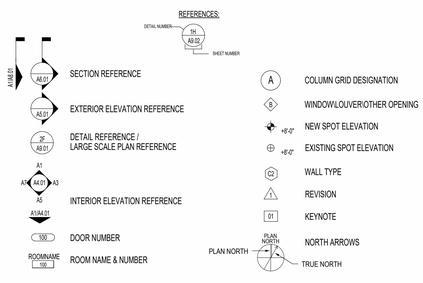
DOCUMENT PHASE: CONSTRUCTION DOCUMENTS

COMMISSION NO. 22-0410
PROJECT NAME: MUSEUM OF THE MARINE
SHEET: COVER SHEET VOLUME 2

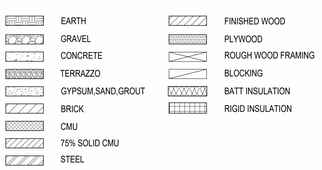
ABBREVIATIONS

&	and	C.H.	ceiling height	E.C.	electric contractor	H.B.	hose bibb	MAX.	maximum	Q.T.	quarry tile			SUSP.	suspended
∠	angle	C.I.	cast iron	E.J.	expansion joint	H.C.	hollow core	MBR.	member					SW.	switch
@	at		control joint or construction joint	E.W.C.	electric water cooler	H.M.	hollow metal	MECH.	mechanic (al)	R.	riser, radius			SYM.	symmetry (ical)
℄	centerline	C.M.T.	ceramic mosaic tile	EA.	each	H.P.	horsepower	MED.	medium	R.A.	return air				
[	channel	C.M.U.	concrete masonry unit	ELEC.	electric (al)	HDW.	hardware	MEMB.	membrane	R.C.P.	reinforced concrete pipe			T&B.	top and bottom
∅	diameter or round	C.T.	ceramic tile	ELEC. CAB.	electric cabinet	HDWD.	hardwood	MET.	metal	R.D.	roof drain			T&G.	tongue and groove
⊥	perpendicular	C. to C.	center to center	ELEV.	elevator, elevation	HORIZ.	horizontal	MEZZ.	mezzanine	R.H.	right hand			T.	tread
lb	plate	CAB.	cabinet	EMER.	emergency	HT.	height	MFGR.	manufacture (er)	R.O.	rough opening			T.C.	top of curb
#	pound or number	CER.	ceramic	ENCL.	enclose (ure)	HVAC.	heating/ventilating air conditioning	MIN.	minimum	R.O.W.	right of way			T.P.	top of pavement
		CLG.	ceiling	ENTR.	entrance	HWY.	highway	MISC.	miscellaneous	REINF.	reinforcing bar			T.P.D.	toilet paper dispenser
		CLO.	closet	EQ.	equal			MOD.	modified	REC.	recessed			T.W.	top of wall
		CLR.	clear	EQUIP.	equipment	I.P.S.	iron pipe size	MTD.	mounted	RECT.	rectangular			TEL.	telephone
		CNTR.	counter	ESTAB.	establish	ID.	inside diameter	MUL.	mullion	REF.	reference			TEMP.	tempered or temperature
		COL.	column	EXIST.G.	existing	IN.	inches			REFRIG.	refrigerator			TERRZ.	terrazzo
		COMP.	composition	EXP.	expansion	INCL.	include (ed) (sion)	N.	north	REG.	register			THK.	thick (ness)
		CONC.	concrete	EXT.	exterior	INSUL.	insulation (ed)	N.I.C.	not in contract	REINF.	reinforced			THRES.	threshold
		CONF.	conference			INTR.	interior	N.T.S.	not to scale	REQ.	required			T.T.	toilet
		CONN.	connection			INV.	invert	NO. or #	number	RESIL.	resilient			TV.	television
		CONSTR.	construction	F.B.O.	furnished by others			NOM.	nominal	RET.	return			TYP.	typical
		CONT.	continuous	F.D.	floor drain	O. to O.	out to out			REV.	revision(s), revised				
		CONTR.	contractor	F.E.	fire extinguisher	O.C.	on center (s)			RFG.	roofing			U.O.N.	unless otherwise noted
		CPT.	carpet	F.E.C.	fire extinguisher cab.	O.D.	outside diameter			RM.	room			UNFIN.	unfinished
		CSWK.	casework	F.H.C.	fire hose cabinet	OFF.	office							UTIL.	utility
		CT.	ceramic tile	F.O.C.	face of concrete	O.H.	opposite hand			S-P.	single-ply				
		CTR.	center	F.O.F.	face of finish	OPNG.	opening			S.	south			V.B.	vinyl base
		CTSK.	countersunk (sunk)	F.O.S.	face of studs	OPP.	opposite			S.C.	solid core			V.C.T.	vinyl composition tile
		CUBT.	cubicle	F.S.	full size	OUT.	outlet			S.C.J.	structural control joint			V.I.F.	verify in field
		CUH.	cabinet unit heater	FDN.	foundation	OZ.	ounce			S.D.	soap dispenser or storm drain			V.F.	vinyl fabric
		D	diameter	FIN.	finish (ed)			P.C.	plumbing contractor	S.N.D.	sanitary napkin dispenser			V.T.	vinyl tile
		DEPT.	department	FL.	floor (ing)	L.	left, length	P.C.F.	pounds per cubic foot	S.N.R.	sanitary napkin receptacle			V.W.F.	vinyl wall fabric
		DET.	detail	FLASHG.	flashing	L.H.	left hand	P.L.F.	pounds per lineal foot	S.S.	stainless steel			VENT.	ventilating
		DF.	drinking fountain	FLUOR.	fluorescent	L.L.	live load	P.LAM.	plastic laminate	S.T.C.	sound transmission classification			VERT.	vertical
		D.H.	double hung	FRPR.	fireproof (ing)	L.P.	low point	P.S.F.	pounds per square foot					VEST.	vestibule
		DL.	dead load	FRPT.	fireproof wall hydrant	L.R.	living room	P.S.I.	pounds per square inch					VOL.	volume
		DN.	down	F.P.W.H.	freeze proof wall hydrant	LAB.	laboratory	P.T.D.	paper towel dispenser	SAN.	sanitary			W.	west, women
		DOUB.	double	FT.	foot or feet	LAM.	laminate (d)	P.T.R.	paper towel receptacle	SCHED.	schedule			W.C.	water closet
		DRY.	dryer	FTG.	footing	LAV.	lavatory	P.T.	pressure treat (ed)	SECT.	section			W.F.	wide flange
		DS.	downspout	FURN.	furnish	LT.	light	PLAS.	plaster	SFTWD.	softwood			W.I.	wrought iron
		DTL.	detail	FURR.	furring	LTG.	lighting	PLYWD.	plywood	SHT.	sheet			W.W.F.	welded wire fabric
		DWG.	drawing	FUT.	future	LVR.	louver	PNL.	panel	SIM.	similar			W/	with
		DR.	door	F.V.	field verify			PNT(d).	paint (ed)	SPEC.	specification			W/O	without
		EA.	each	G.B.	grab bar	M.C.	medicine cabinet or mechanical contractor	PR.	pair	SQ.	square			WD.	wood
		E.J.	expansion joint	G.C.	general contractor	M.H.	manhole	PT.	point	SQ. FT.	square foot			WDW.	window
		EL.	elevation	GA.	gage, gauge	M.O.	masonry opening	PTDR.	combination paper towel dispenser & receptacle	STD.	standard			WP.	waterproofing
		ELEC.	electric (al)	GALV.	galvanized	MACH.	machine			STL.	steel			WSCT.	wainscot
		ELEV.	elevator	GL.	glass, glazing	MAINT.	maintenance	PTN.	partition	STOR.	storage			WT.	weight
		EMER.	emergency	GR.	grade	MAS.	masonry	PVC.	polyvinyl chloride	STRUC.	structure (al)				
		ENCL.	enclose (ure)	GYP.	gypsum	MATL.	material (s)	PVMT.	pavement	SURF.	surface			YD.	yard
		ENTR.	entrance												
		EQ.	equal												
		EQUIP.	equipment												
		ESTB.	establish												
		EXP.	expansion												
		EXISTG.	existing												
		EXT.	exterior												
A.B.	anchor bolt			F.B.O.	furnished by others										
A.F.F.	above finish floor			F.D.	floor drain										
A.P.	access panel			F.E.	fire extinguisher										
A.T.C.	acoustical tile ceiling			F.E.C.	fire extinguisher cab.										
A/C.	air conditioning			F.H.C.	fire hose cabinet										
ABV.	above			F.O.C.	face of concrete										
ACOUS.	acoustical			F.O.F.	face of finish										
ADD.	addendum			F.O.S.	face of studs										
ADJ.	adjacent or adjustable			F.S.	full size										
AGG.	aggregate			FDN.	foundation										
AL.	aluminum			FIN.	finish (ed)										
ALT.	alternate			F.T.F.	face to face										
ANOD.	anodize			FDN.	foundation										
APPROX.	approximate			FIN.	finish (ed)										
APT.	apartment			FL.	floor (ing)										
ARCHT.	architect (ural)			FLASHG.	flashing										
AUTO.	automatic			FLUOR.	fluorescent										
AVG.	average			FRPR.	fireproof (ing)										
B.U.R.	built-up roofing			F.P.W.H.	freeze proof wall hydrant										
BD.	board			FT.	foot or feet										
BEV.	beveled			FTG.	footing										
BITUM.	bituminous			FURN.	furnish										
BLDG.	building			FURR.	furring										
BLK.	block			FUT.	future										
BLKG.	blocking			F.V.	field verify										
BM.	beam or bench mark			G.B.	grab bar										
BR.	bedroom			G.C.	general contractor										
BRCG.	bracing			GA.	gage, gauge										
BRG.	bearing			GALV.	galvanized										
BSMT.	basement			GL.	glass, glazing										
BTW.	between			GR.	grade										
C.B.	catch basin			GYP.	gypsum										

SYMBOLS



MATERIAL DESIGNATIONS



Autodesk Docs://Museum of the Marine/22-0410_Museum of the Marine_R22.rvt

VOLUME	SHEET	SHEET NAME	CD 10/24/2023
GENERAL			
2	G0.20	COVER SHEET VOLUME 2	●
2	G0.21	SHEET INDEX VOLUME 2	●
PLUMBING			
2	P0.00	NOTES, SYMBOLS & DETAILS	●
2	P2.00	PLUMBING UNDERSLAB PIPING PLAN	●
2	P2.01	PLUMBING 1ST FLOOR PLAN	●
2	P2.02	PLUMBING 2ND FLOOR AND LOW ROOF PLAN	●
2	P2.03	PLUMBING HIGH ROOF PLAN	●
2	P2.12	PLUMBING GAS & STORM RISER DIAGRAM	●
2	P2.13	PLUMBING WATER RISER DIAGRAM	●
2	P2.14	SANITARY RISER DIAGRAM	●
MECHANICAL			
2	M0.01	FLOW AND CONTROL SHEET NO. 1	●
2	M0.02	FLOW AND CONTROL SHEET NO. 2	●
2	M2.01	MECHANICAL 1ST FLOOR PLAN	●
2	M2.02	MECHANICAL 2ND FLOOR PLAN	●
2	M3.01	MECHANICAL DETAIL SHEET NO. 1	●
2	M3.02	MECHANICAL DETAIL SHEET NO. 2	●
2	M3.03	MECHANICAL DETAIL SHEET NO. 3	●
2	M4.01	MECHANICAL ROOM PART PLANS	●
2	M4.02	MECHANICAL ROOM N-S SECTIONS	●
2	M4.03	MECHANICAL ROOM E-W SECTIONS	●
2	M5.01	MECHANICAL SCHEDULES	●
ELECTRICAL			
2	E0.01	ELECTRICAL SYMBOLS & NOTES	●
2	E0.02	ELECTRICAL SINGLE LINE DIAGRAM	●
2	E0.03	ELECTRICAL FIRE ALARM RISER DIAGRAM	●
2	E2.01	ELECTRICAL 1ST FLOOR POWER PLAN	●
2	E2.02	ELECTRICAL 2ND FLOOR, HIGH BAY & LOW ROOF POWER PLAN	●
2	E3.01	ELECTRICAL 1ST FLOOR LIGHTING PLAN	●
2	E3.02	ELECTRICAL 2ND FLOOR, HIGH BAY AND LOW ROOF LIGHTING PLAN	●
2	E4.01	ELECTRICAL PART PLANS	●
2	E5.01	ELECTRICAL DETAILS	●
2	E5.02	ELECTRICAL DETAILS	●
2	E5.03	ELECTRICAL LIGHTING CONTROL DETAILS	●
2	E5.04	ELECTRICAL LIGHTING CONTROL DETAILS	●
2	E6.01	ELECTRICAL PANEL SCHEDULES	●
2	E6.02	ELECTRICAL PANEL SCHEDULES	●
2	E6.03	ELECTRICAL PANEL SCHEDULES	●
2	SE1.00	ELECTRICAL SITE PLAN	●
FIRE PROTECTION			
2	F0.01	FIRE PROTECTION NOTES & DETAILS	●
2	F0.02	FIRE PROTECTION DETAILS, SITE PLAN & RISER DIAGRAM	●
2	F2.01	FIRE PROTECTION 1ST FLOOR PLAN	●
2	F2.02	FIRE PROTECTION 2ND FLOOR & LOW ROOF PLAN	●
2	F3.00	FIRE PROTECTION FIRE PUMP ROOM	●
2	F3.01	FIRE PROTECTION SECTIONS	●
FOOD SERVICE			
2	FS101	FOOD SERVICE EQUIPMENT PLAN	●
2	FS102	FOOD SERVICE EQUIPMENT SCHEDULE	●
2	FS103	FOOD SERVICE ROUGH-IN PLANS	●
LOW VOLTAGE			
2	LV-000	COVER PAGE	●
2	LV-101	SITE PLAN	●
2	LV-201	LEVEL 1 - FLOOR PLAN	●
2	LV-301	LARGE SCALES	●
2	LV-401	ONE-LINE DIAGRAMS	●
2	LV-501	DETAILS	●
2	LV-502	DETAILS	●
2	LV-503	DETAILS	●
2	LV-504	DETAILS	●
2	LV-505	DETAILS	●
2	LV-506	DETAILS	●
2	LV-507	DETAILS	●
2	LV-601	SECURITY CAMERA SCHEDULE	●
AV			
2	AV-000	COVER PAGE	●
2	AV-201	LEVEL 1 - FLOOR PLAN	●
2	AV-201.1	LEVEL 1 - FLOOR PLAN - RCP	●
2	AV-301	LARGE SCALES - GREAT HALL	●
2	AV-302	LARGE SCALES - LASSROOM 114, 115	●
2	AV-401	ONE-LINE DIAGRAMS	●
2	AV-402	ONE-LINE DIAGRAMS	●
2	AV-403	ONE-LINE DIAGRAMS	●
2	AV-404	ONE-LINE DIAGRAMS	●
2	AV-501	DETAILS	●
2	AV-601	DISPLAY SCHEDULE	●

CJMW ARCHITECTURE
525 Vine Street, Suite 350
Winston-Salem, NC 27101
p. 336.724.1503
www.cjmw.com

HICAPS

RAA

SAMET

CONSTRUCTION DOCUMENTS

CJMW ARCHITECTURE PLLC CERT. NO. 58856 WINSTON-SALEM, NC

JOHN LESLIE [illegible] 10/24/2023 GREENSBORO, NC

#	Description	Date

CAROLINA MUSEUM OF THE MARINE

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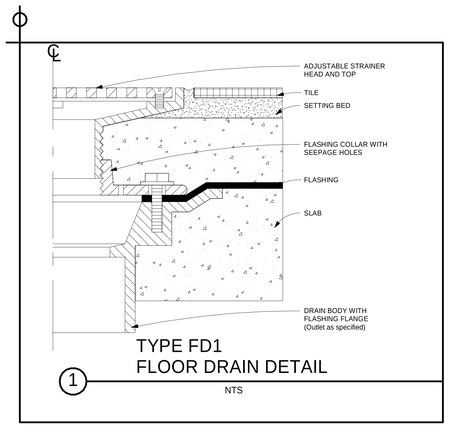
SHEET INDEX VOLUME 2

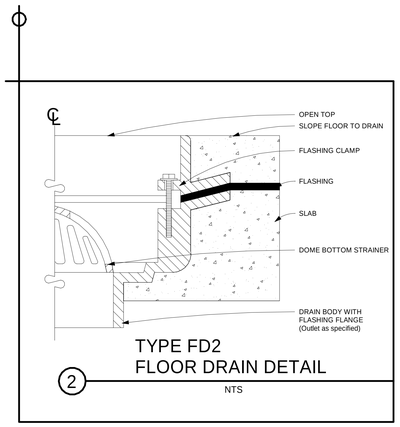
G0.21

ISSUE DATE: 10-24-2023
PROJECT NUMBER: 22-0410
DRAWN BY: Author
CHECKED BY: Checker



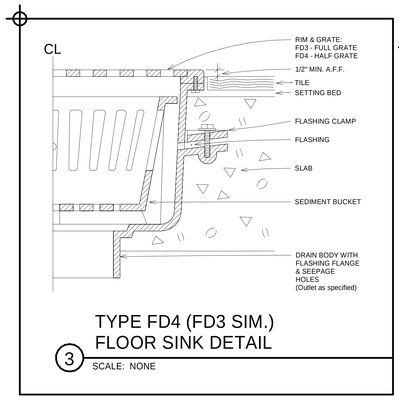
TYPE FD1
FLOOR DRAIN DETAIL

1 NTS



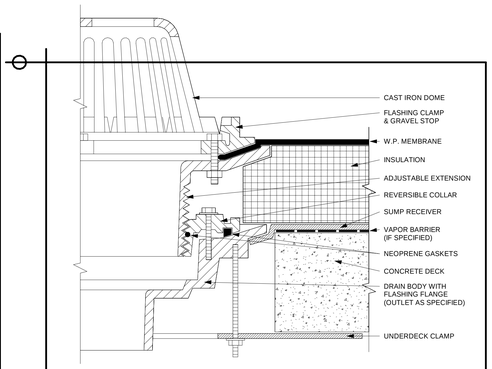
TYPE FD2
FLOOR DRAIN DETAIL

2 NTS



TYPE FD4 (FD3 SIM.)
FLOOR SINK DETAIL

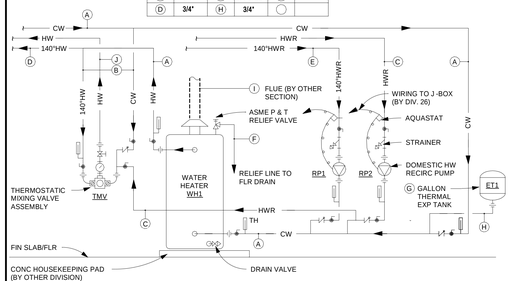
3 SCALE: NONE



TYPE RD
ROOF DRAIN DETAIL

4 NTS

SIZES					
A	1 1/2"	E	3/4"	I	3"
B	1 1/4"	F	3/4"	J	1"
C	3/4"	G	6.4 GALS		
D	3/4"	H	3/4"		



WATER HEATER PIPING DIAGRAM

5 SCALE: NONE

SYMBOL LIST		SYMBOL LIST		SYMBOL LIST		SYMBOL LIST	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	GATE VALVES		BUTTERFLY VALVE	DF	DRINKING FOUNTAIN	TOS	TOP OF SLAB
	CHECK VALVES		DRAIN VALVE	DFU	DRAINAGE FIXTURE UNITS	TPA	TRAP PRIMER ASSEMBLY
	STRAINERS		GAS SERVICE STOP VALVE	DIA, Ø	DIAMETER	TR	TO REMAIN
	BALL VALVES		SERVICE STOP VALVE	DIV	DIVISION	TRP	TRAP
	BALANCING VALVES		GLOBE VALVE	DRP	DROP	TYP	TYPICAL
	UNIONS		OS&Y GATE VALVE	DS	DOWNSPOUT	UI#	URINAL, TYPE
HWR	HOT WATER RETURN		PRESSURE & TEMPERATURE RELIEF VALVE	DTS	DOWN THRU SLAB	UG	UNDERGROUND
CW	COLD WATER SUPPLY		SOLENOID VALVE	ES	EMERGENCY SHOWER	VA	VALVE
HW	HOT WATER SUPPLY		STRAINER W/ DRAIN VALVE	ET#	THERMAL EXPANSION TANK, DESIGNATION	VB	VACUUM BREAKER
S	SANITARY DRAIN PIPE		UNION	EX	EXISTING	VIF	VERIFY IN FIELD
ST	STORM DRAIN PIPE	AD	AREA DRAIN	F#	DRINKING FOUNTAIN/WATER COOLER, TYPE	W#	WATERCLOSET, TYPE
PD	PUMP DISCHARGE PIPING	AFF	ABOVE FINISHED FLOOR	FLR	FLOOR	WSFU	WATER SUPPLY FIXTURE UNITS
	VENT PIPING	BFP	BACKFLOW PREVENTER	FRS	FLUSHING RIM SINK	YD	YARD DRAIN
W	WASTE PIPING	BI	BIDET	FTG	FOOTING		
IW	INDIRECT WASTE PIPING	BLDG	BUILDING	FTTP	FLUSH TANK TRAP PRIMER ASSEMBLY		
OST	OVERFLOW STORM PIPING	BI	BIDET	FVTP	FLUSH VALVE TRAP PRIMER ASSEMBLY		
	ELBOW DOWN - ELBOW UP	CO	CLEANOUT	GA	GAUGE		
	EXISTING PIPE TO REMAIN	CONN	CONNECT	GD	GUTTER DRAIN		
	EXISTING PIPE TO BE REMOVED	CONT	CONTINUATION	H/C, HC, H	HANDICAP ACCESSIBLE FIXTURE		
	CONNECT NEW TO EXISTING	DI#	DRAIN, TYPE	HB#	HOSE BIBB, TYPE		
AV	ACID VENT PIPING	DN	DOWN	HT	HOUSE TRAP		
AW	ACID WASTE PIPING	DW	DISHWASHER	KEC	KITCHEN EQUIPMENT CONTRACTOR		
CA	COMPRESSED AIR PIPING	DWG	DRAWING	L#	LAVATORY, TYPE		
CD	CONDENSATE DRAIN PIPING	DPCO	DECKPLATE CLEANOUT	LDR	LEADER		
CHS,R	COOLER CHILLED WATER SUPPLY/RETURN PIPING	EL	ELEVATION	LS	LAUNDRY SINK		
CS	COMBINED SEWER, ABOVE FINISHED FLOOR	EW	EMERGENCY EYEWASH	MECH	MECHANICAL		
CS	COMBINED SEWER, BELOW FINISHED FLOOR	EWC	ELECTRIC WATER COOLER	MER	MECHANICAL EQUIPMENT ROOM		
DI	DEIONIZED WATER PIPING	EWSH	EMERGENCY EYEWASH/ SHOWER COMBINATION	MH	MANHOLE		
DR	DRAIN PIPING	FAI	FRESH AIR INTAKE	MTD	MOUNTED		
DW	DISTILLED WATER PIPING	FD	FLOOR DRAIN	NC	NORMALLY CLOSED		
FM	FORCED MAIN PIPING	FFD	FUNNEL FLOOR DRAIN	NIC	NOT IN CONTRACT		
FTG	FOOTING DRAIN PIPING	FP	FIRE PROTECTION	NTS	NOT TO SCALE		
G	GAS PIPING	FPHB	FREEZE PROOF HOSE BIBB	OC	ON CENTER		
GW	GREASE WASTE PIPING	FS	FLOOR SINK	OD	OUTSIDE DIAMETER		
IRR	IRRIGATION PIPING	GPM	GALLONS PER MINUTE	ORD	OVERFLOW ROOF DRAIN		
LA	LAB COMPRESSED AIR PIPING	HB	HOSE BIBB	P#	PUMP, DESIGNATION		
LV	LAB VACUUM PIPING	IE, INV	INVERT ELEVATION	PLBG	PLUMBING		
MU	MAKE -UP WATER PIPING	KS	KITCHEN SINK	PLD	PLANTER DRAIN		
S	SANITARY DRAIN PIPE (BELOW FINISHED FLOOR)	LAV	LAVATORY	PMP	PUMP		
SA	SHOP COMPRESSED AIR PIPING	MR	MOP RECEPTOR	POC	POINT OF CONNECTION		
ST	STORM DRAIN PIPE (BELOW FINISHED FLOOR)	RD	ROOF DRAIN	PSI	POUNDS PER SQUARE INCH		
TP	TRAP PRIMER PIPING	RPZ	REDUCED PRESSURE ZONE	RAC	RUN ABOVE CEILING		
UD	UNDER DRAIN PIPING	SH	SHOWER	R@C	RUN AT CEILING		
W	WASTE DRAIN PIPING (BELOW FINISHED FLOOR)	SK	SINK	RBF	RUN BELOW FLOOR		
WPD	WELL PUMP DISCHARGE PIPING	SS	SERVICE SINK	RBG	RUN BELOW GRADE		
WW	WELL WATER PIPING	UR	URINAL	RBS	RUN BELOW SLAB		
	COLD WATER SUPPLY	VTR	VENT THRU ROOF	RP#	RECIRC. PUMP, DESIGNATION		
	HOT WATER SUPPLY	WC	WATER CLOSET	RPZBFP	REDUCED PRESSURE ZONE BACKFLOW PREVENTER		
	HOT WATER RETURN	WCO	WALLPLATE CLEANOUT	RSE	RISE		
	EXISTING PIPING AND/OR EQUIPMENT TO BE REMOVED	A/C	AIR CONDITIONING	RSR	RISER		
	EXISTING PIPING AND/OR EQUIPMENT TO REMAIN	AP	ACCESS PANEL TO SERVICE VALVES	RT	RUNNING TRAP		
	PIPING TO BE ELECTRICALLY HEAT TRACED	ASSY	ASSEMBLY	S#	SINK, TYPE		
	CONCENTRIC REDUCER	AVTR	ACID VENT THRU ROOF	SD	SCUPPER DRAIN		
	ECCENTRIC REDUCER	BE	BOTTOM ELEVATION	SE#	SEWAGE EJECTOR PUMP, DESIGNATION		
	ANGLE VALVE	BS	BAR SINK	SF, FT ²	SQUARE FEET		
	CHECK/BACKWATER VALVE	BT	BATHTUB	SH#	SHOWER,TYPE		
	BALANCING VALVE	BT/SH	BATHTUB & SHOWER	SHD	SHOWER DRAIN		
	BALL VALVE	BTUH	BRITISH THERMAL UNITS PER HOUR	SMH	SANITARY MANHOLE		
		BT/WP	BATHTUB & WHIRLPOOL	SOG	SLAB -ON -GRADE		
		C#	CLEANOUT, TYPE	SOV	SHUT -OFF VALVE		
		CFH	CUBIC FEET PER HOUR	SP#	STORM SUMP PUMP, DESIGNATION		
		CFM	CUBIC FEET PER MINUTE	ST/STL	STAINLESS STEEL		
		CFS	CUBIC FEET PER SECOND	SVC	SERVICE		
		CLD	CLOTHES DRYER	TBR	TO BE REMOVED		
		℄ EL	CENTER LINE ELEVATION	TD	TERRACE DRAIN		
		CLG	CEILING	TE	TOP ELEVATION		
		CLW	CLOTHES WASHER	TLT	TOILET		
		CS	CUP SINK	TMV#	THERMOSTATIC MIXING VALVE, DESIGNATION		
		DD	DECK DRAIN	TOF	TOP OF FOOTING		

PLUMBING GENERAL NOTES

1. THE PLUMBING CONTRACTOR SHALL COORDINATE ALL EQUIPMENT AND PIPING LOCATIONS WITH OTHER TRADES AND STRUCTURES.

2. THESE DRAWINGS ARE TO BE CONSIDERED DIAGRAMMATIC ONLY, THE LOCATION AND ELEVATIONS OF EXISTING EQUIPMENT AND PIPING INDICATED ON THE DRAWINGS HAS BEEN TAKEN FROM AVAILABLE DRAWINGS AND/OR FIELD SURVEYS, BUT MAY VARY SLIGHTLY FROM ACTUAL CONDITIONS. THE PLUMBING CONTRACTOR SHALL VERIFY ALL TRUE SIZES, LOCATIONS AND ELEVATIONS OF EQUIPMENT AND PIPING (INCLUDING PIPING RUN BELOW SLAB) IN THE FIELD PRIOR TO CONSTRUCTION.

3. NO EXISTING SERVICE MAY BE CUT OR DAMAGED WHEN ENCOUNTERED ALONG THE ROUTE DESIGNED FOR NEW SERVICES WITHOUT CONSENT OF THE ARCHITECT. ANY EXISTING SERVICE SEVERED OR DAMAGED SHALL BE REPLACED (WITH NEW OR TO ITS ORIGINAL WORKING CONDITION) AT NO ADDITIONAL COST TO THE OWNER.

4. THE PLUMBING CONTRACTOR SHALL VISIT THE SITE AT THE TIME OF BID TO EXAMINE CONDITIONS AND FAMILIARIZE HIMSELF WITH THE JOB NOTING DEGREE OF DIFFICULTY IN GETTING EQUIPMENT IN AND OUT OF THE CONSTRUCTION AREA.

5. THE PLUMBING CONTRACTOR SHALL VERIFY ALL PIPING IN THE FIELD EITHER BY DYE OR FLOW TESTING BEFORE MAKING NEW CONNECTIONS TO EXISTING PIPING. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT OR ENGINEER BEFORE ANY CONNECTIONS ARE MADE.

6. THE PLUMBING CONTRACTOR SHALL VERIFY THE SIZES AND LOCATIONS OF ALL EXISTING PIPING IN THE FIELD BEFORE MAKING NEW CONNECTIONS TO EXISTING PIPING. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT OR ENGINEER BEFORE ANY CONNECTIONS ARE MADE.

7. THE PLUMBING CONTRACTOR SHALL SEAL AROUND ALL NEW PIPE PENETRATIONS THROUGH NEW AND EXISTING STRUCTURES WITH SEALANT OF FIRE RETARDANT TYPE EQUAL IN FIRE RATING TO STRUCTURE PENETRATED. SEALANT SHALL EXTEND FULL THICKNESS OF STRUCTURE. CONTRACTOR SHALL VERIFY FIRE RATED WALLS. IF WALLS ARE NOT FIRE RATED THEN FIRE SEALANT SHALL NOT BE REQUIRED.

8. THE CONTRACTOR SHALL VERIFY CONDITION OF EXISTING PIPING PRIOR TO MAKING NEW CONNECTIONS. ALL PIPING FOUND TO BE DETERIORATED AND/OR UNSUITABLE FOR USE SHALL BE REPORTED TO THE ENGINEER FOR EVALUATION.

9. ALL CUTTING, ROUGH PATCHING AND PRIME PAINTING REQUIRED FOR WORK OF THIS SECTION SHALL BE THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR. ALL FINISHED PATCHING AND PAINTING SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.

10. ALL EXCAVATION AND BACKFILLING REQUIRED FOR WORK OF THIS SECTION SHALL BE THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR.

11. ALL FEES FOR PERMITS AND INSPECTIONS SHALL BE THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR.

12. ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE REQUIREMENTS OF LOCAL AUTHORITIES HAVING JURISDICTION AND WITH THE PROVISIONS OF ALL STATE AND FEDERAL CODES AND LAWS.

13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING A COMPLETE AND APPROVED POTABLE WATER SERVICE (AND FIRE SERVICE) FROM STREET MAIN TO THE BUILDING. HE SHALL PROVIDE ALL NECESSARY COMPONENTS, SUCH AS STREET TAP(S), PIPING, WATER METER(S), DETECTOR CHECK(S), ROUGHING -IN AND CURB STOP(S). HE SHALL CONSULT WITH LOCAL AUTHORITIES HAVING JURISDICTION AT THE TIME OF BID MAKING ALL NECESSARY ARRANGEMENTS, BEARING ALL COSTS AND FEES SOLELY FOR THE COMPLETE INSTALLATION OF THE WATER SERVICE(S) AT NO ADDITIONAL COST TO THE OWNER.

14. THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING A COMPLETE AND APPROVED GAS SERVICE FROM THE STREET MAIN TO THE BUILDING. HE SHALL BE RESPONSIBLE FOR ARRANGING WITH THE GAS COMPANY THE INSTALLATION OF A COMPLETE SERVICE INCLUDING ALL NECESSARY COMPONENTS SUCH AS STREET TAP(S), PIPING AND METER, ROUGHING -IN, AND CURB STOP(S). HE SHALL CONSULT WITH LOCAL AUTHORITIES HAVING JURISDICTION AT THE TIME OF BID MAKING ALL NECESSARY ARRANGEMENTS, BEARING ALL COSTS AND FEES SOLELY FOR THE COMPLETE INSTALLATION OF THE GAS SERVICE, AT NO ADDITIONAL COST TO THE OWNER.

15. THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING A COMPLETE AND APPROVED SEWER SYSTEM FROM BUILDING TO STREET MAIN. HE SHALL CONSULT WITH LOCAL AUTHORITIES HAVING JURISDICTION AT THE TIME OF BID MAKING ALL NECESSARY ARRANGEMENTS, BEARING ALL COSTS AND FEES SOLELY FOR THE COMPLETE INSTALLATION OF THE SEWER SERVICE AT NO ADDITIONAL COST TO THE OWNER.

FIXTURE BRANCH SIZES

FIXTURE	COLD	HOT	WASTE	VENT
WATER CLOSET (flush valve)	1"	—	4"	2"
WATER CLOSET (flush tank)	1/2"	—	3"	2"
URINAL (flush valve)	3/4"	—	2"	2"
LAVATORIES	1/2"	1/2"	1 1/2"	1 1/2"
SINKS	1/2"	1/2"	2"	2"
DRINKING FOUNTAINS/WATER COOLERS	1/2"	—	1 1/2"	1 1/2"
HOSE BIBBS (interior)	1/2"	—	---	---
HOSE BIBBS (exterior)	3/4"	—	---	---
SERVICE SINKS	1/2"	1/2"	3"	2"
MOP RECEPTORS	1/2"	1/2"	3"	2"
SHOWERS	1/2"	1/2"	2"	2"
BATHTUBS	1/2"	1/2"	2"	2"
CLOTHES WASHERS	1/2"	1/2"	2"	2"

DRAWING INDEX

Sheet Number	Sheet Name
P0.00	NOTES, SYMBOLS & DETAILS
P2.00	PLUMBING UNDERSLAB PIPING PLAN
P2.01	PLUMBING 1ST FLOOR PLAN
P2.02	PLUMBING 2ND FLOOR AND LOW ROOF PLAN
P2.03	PLUMBING HIGH ROOF PLAN
P2.12	PLUMBING STORM RISER DIAGRAM
P2.13	PLUMBING WATER RISER DIAGRAM
P2.14	SANITARY RISER DIAGRAM

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NOTES, SYMBOLS & DETAILS

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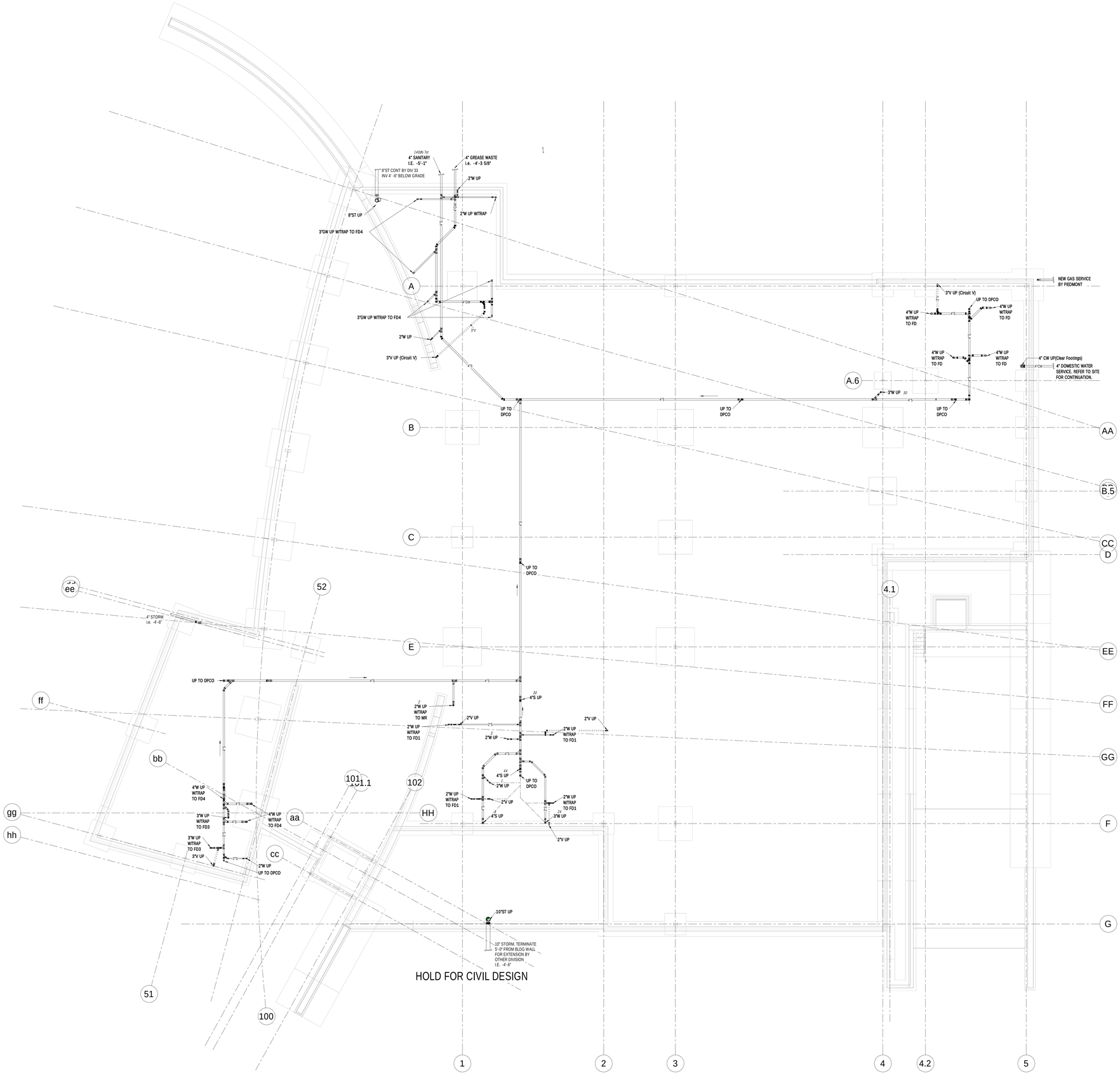

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PLUMBING UNDERSLAB PIPING PLAN

P2.00

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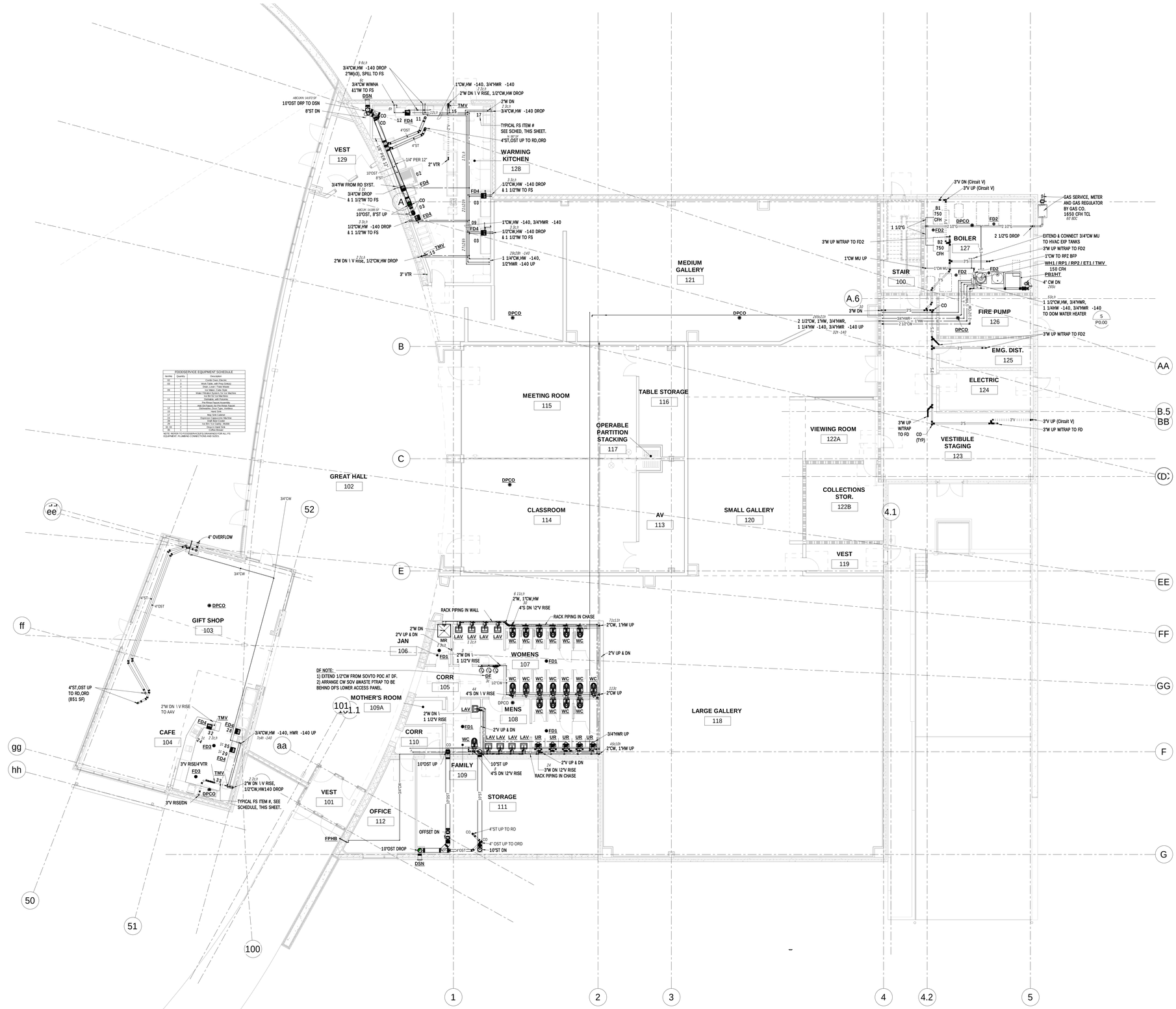
CHECKED BY: Checker

PLAN NORTH



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PLUMBING 1ST FLOOR PLAN

P2.01

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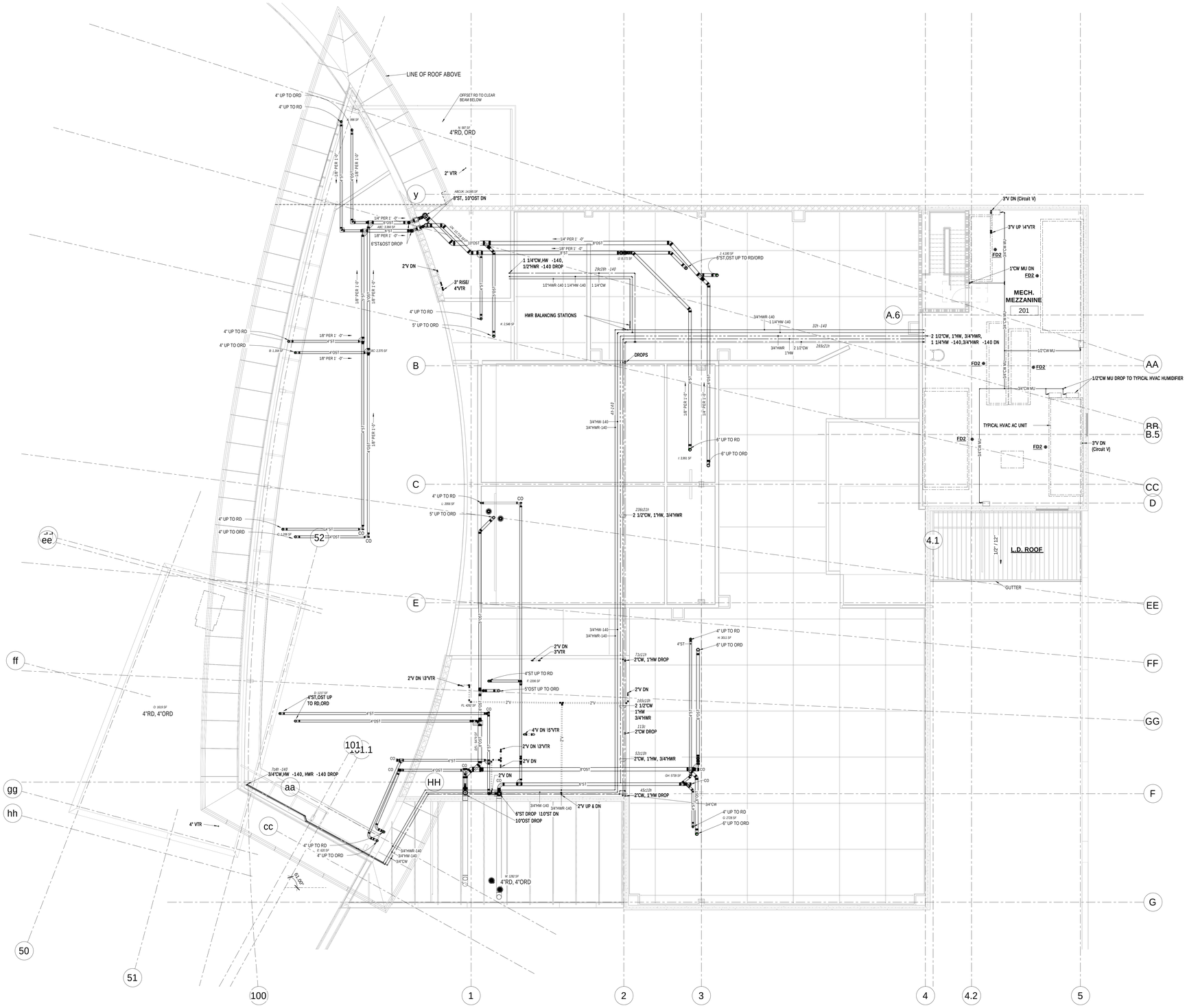

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PLUMBING 2ND FLOOR AND LOW ROOF PLAN

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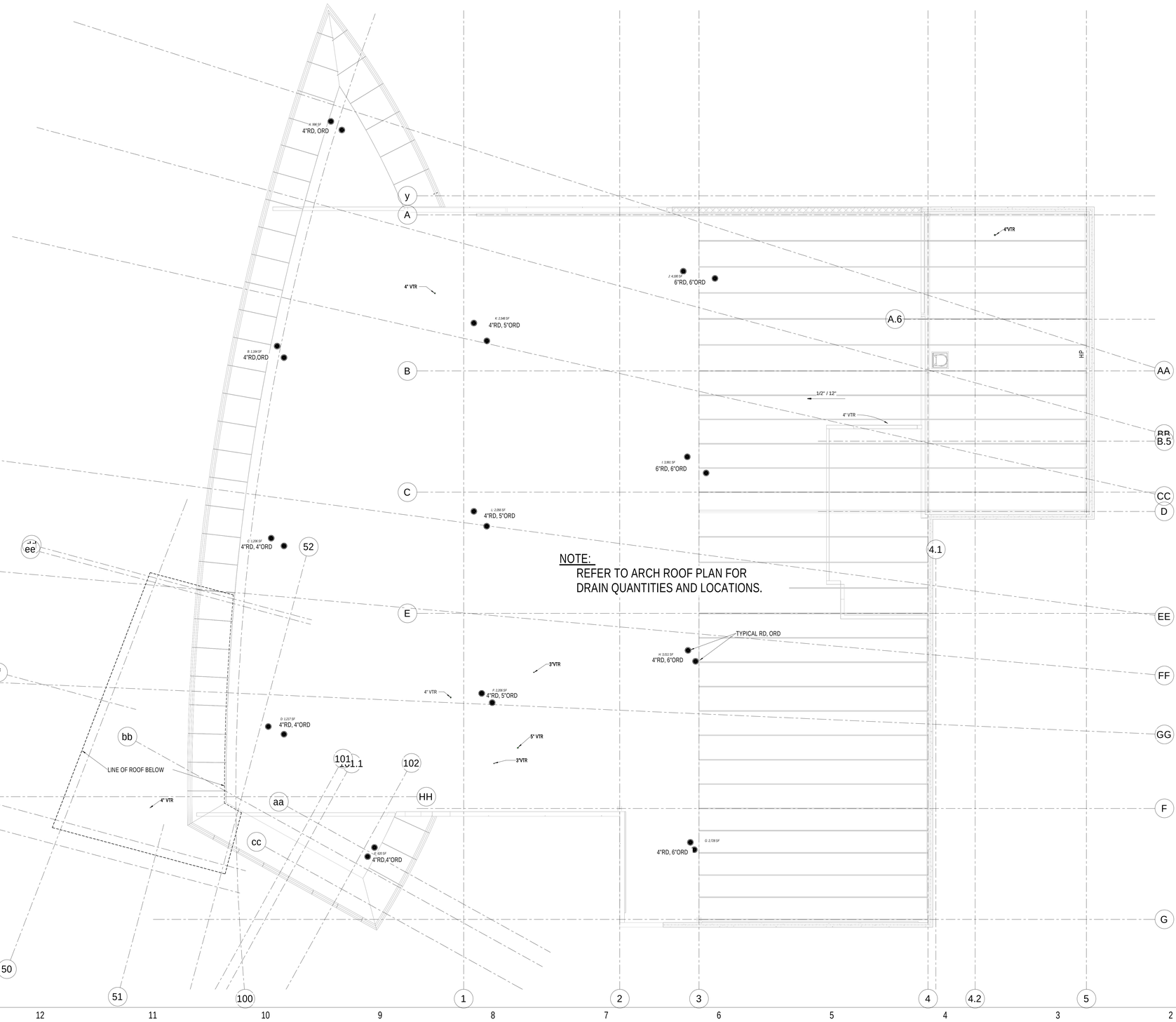

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PLUMBING HIGH ROOF PLAN

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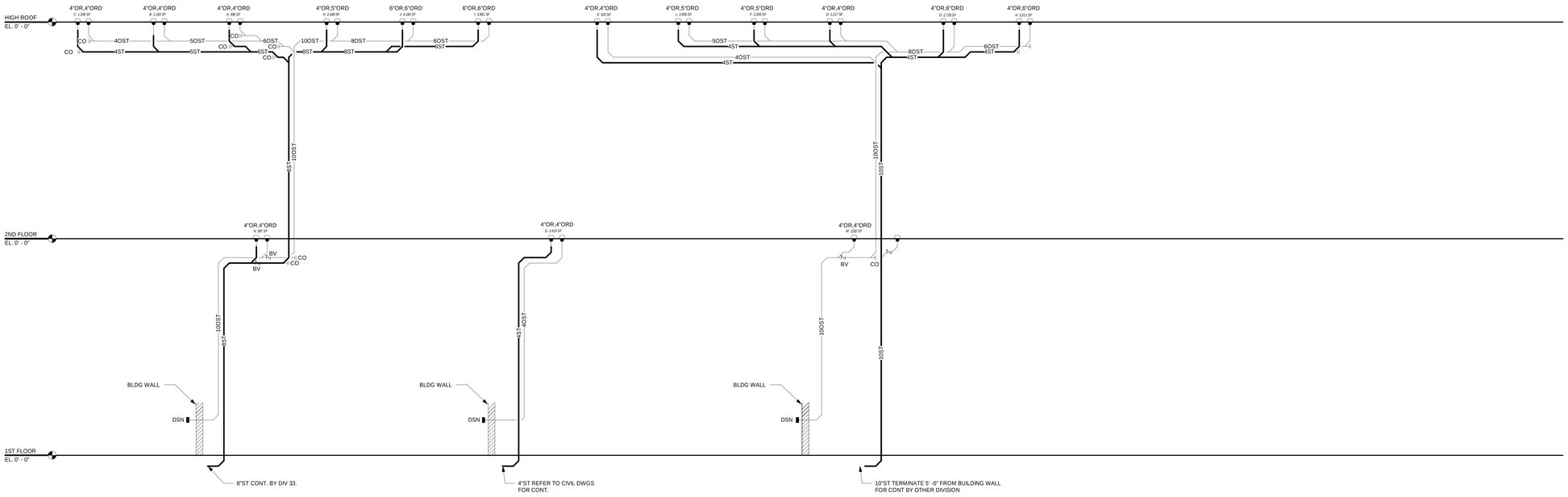

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PLUMBING GAS & STORM RISER DIAGRAM

P2.12

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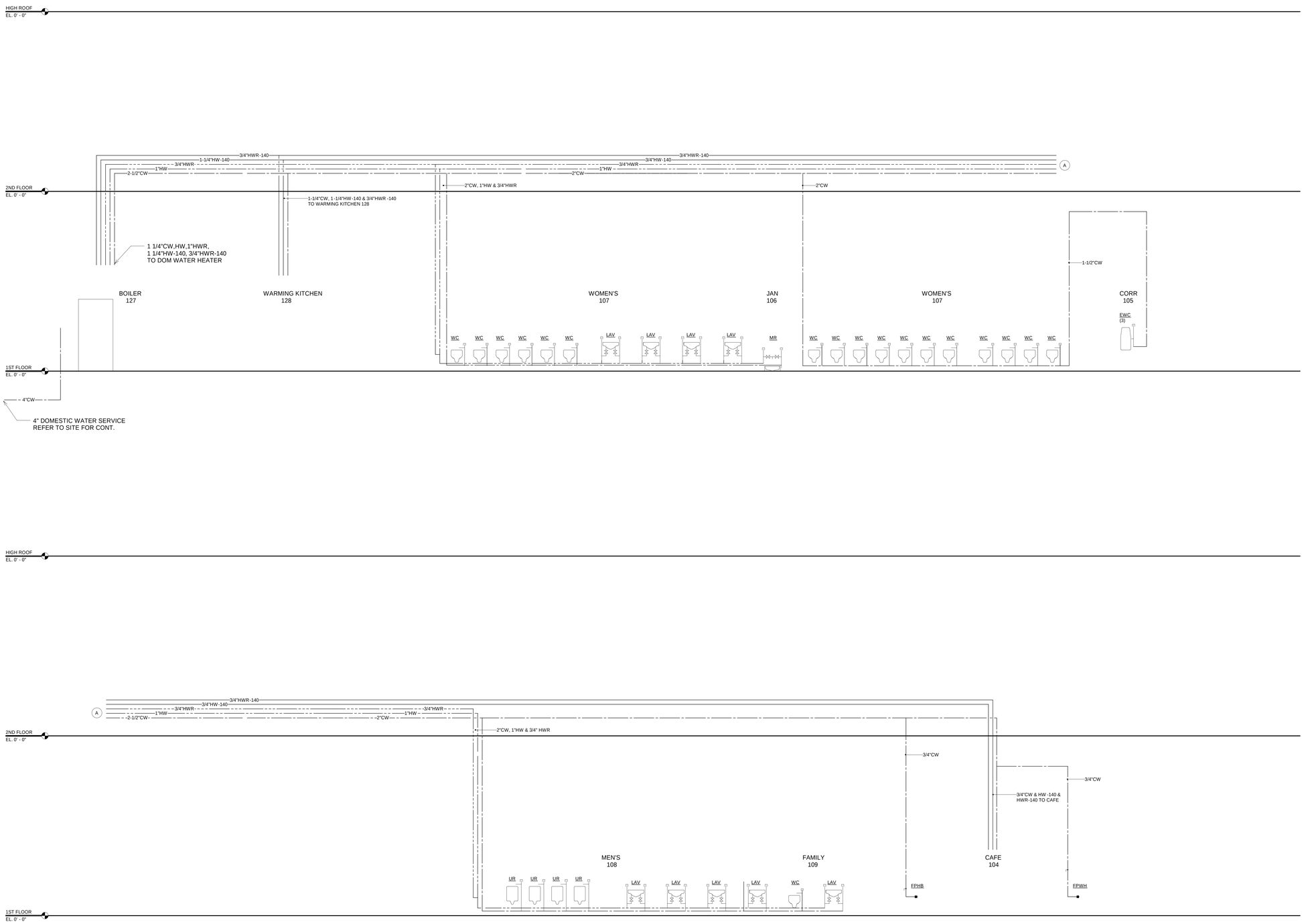

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PLUMBING WATER RISER DIAGRAM

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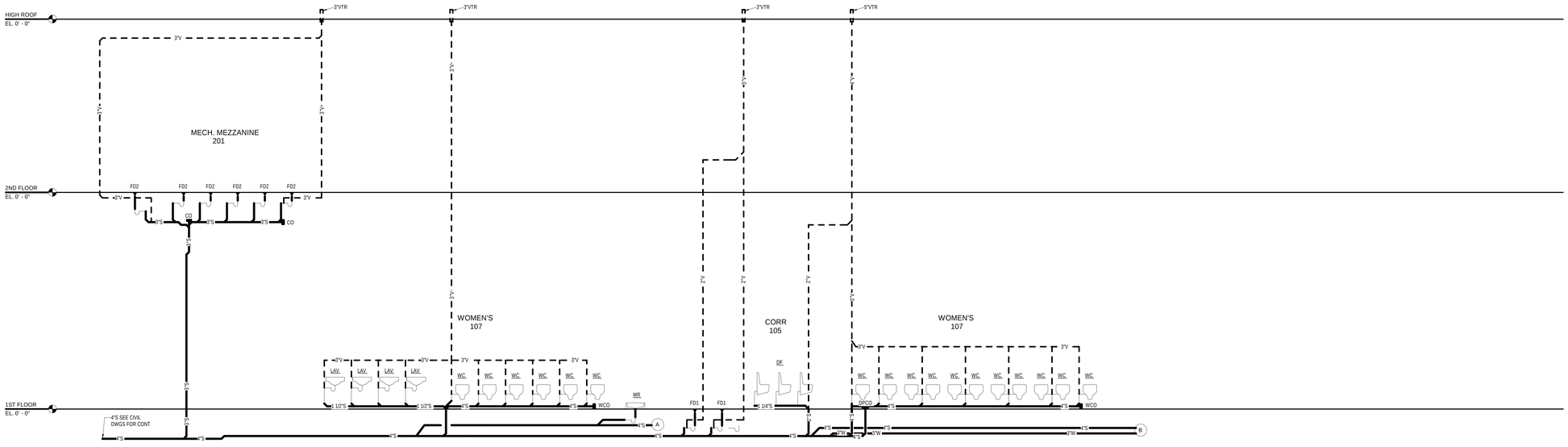

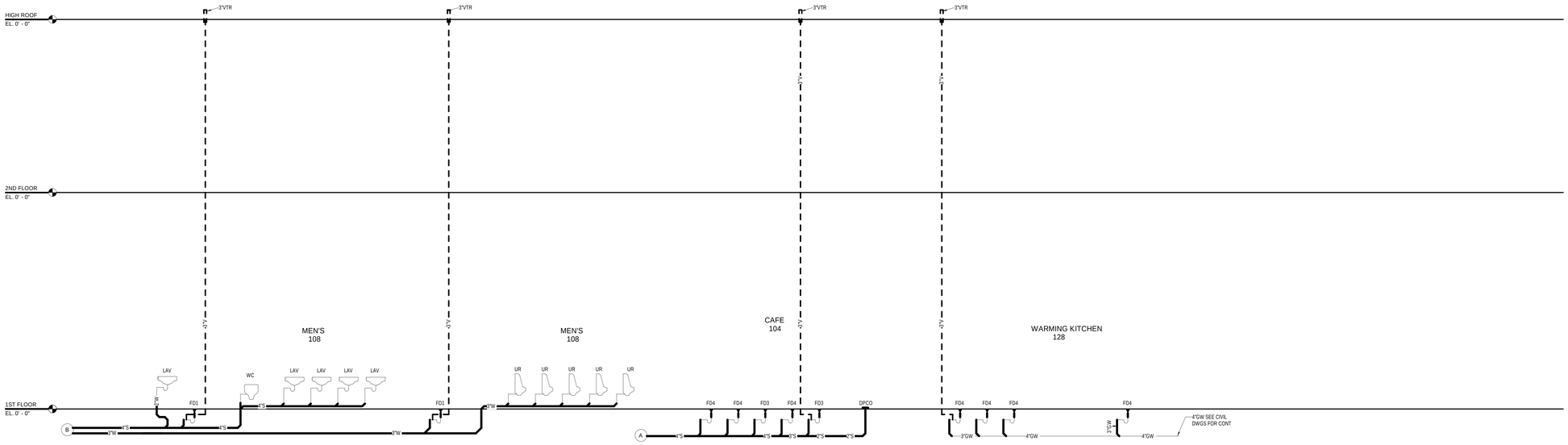

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SANITARY RISER DIAGRAM

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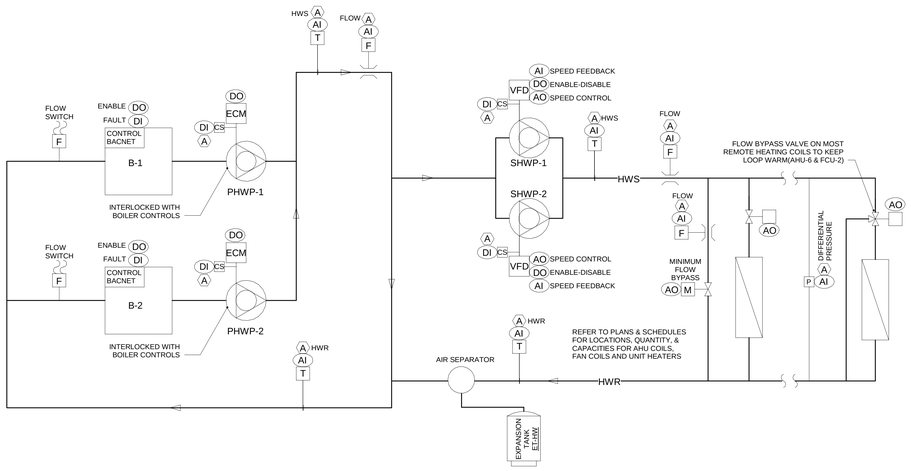

1 HOT WATER SYSTEM
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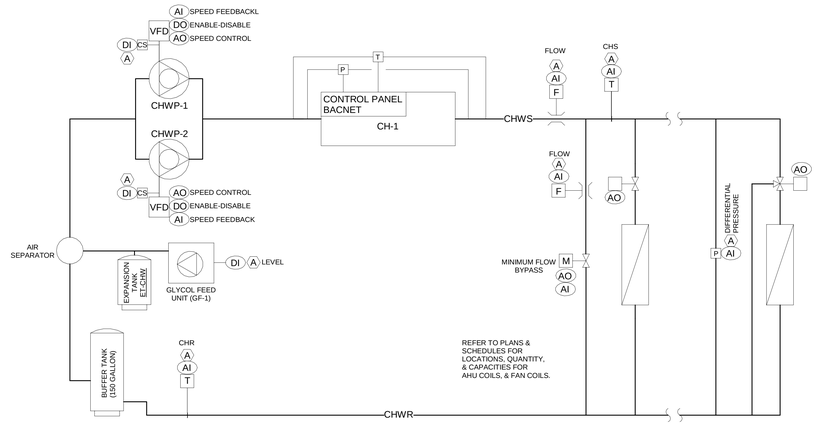

2 CHILLED WATER SYSTEM
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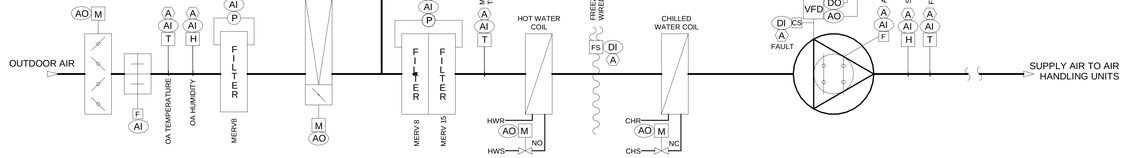

3 DEDICATED OUTSIDE AIR UNIT (OAU-1)
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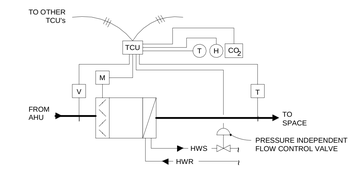

4 CV/RH & VAV BOX
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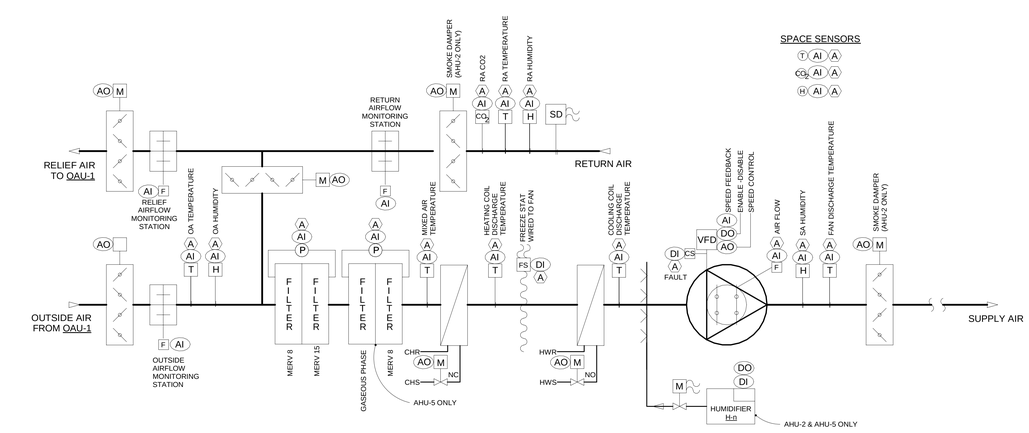

5 CONSTANT VOLUME SINGLE ZONE w/ REHEAT (AHU-2, AHU-5 & AHU-6)
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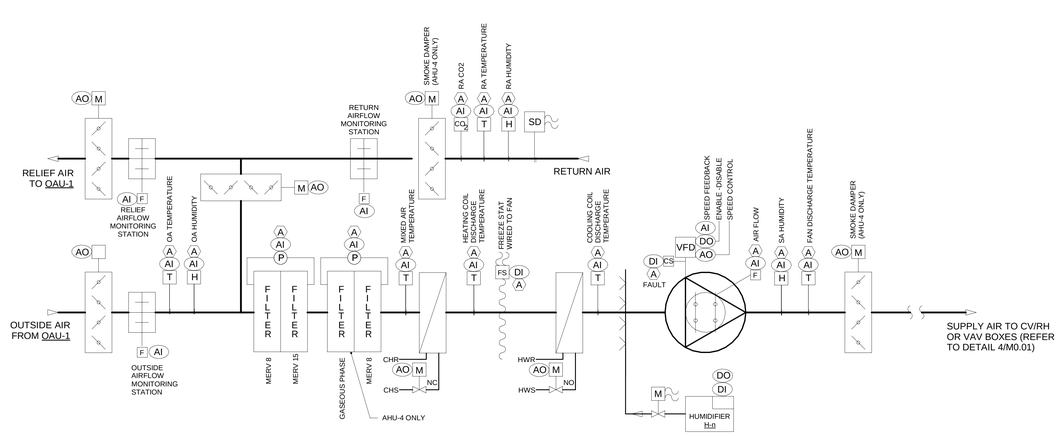

6 CV/RH & VAV (AHU-1, AHU-3 & AHU-4)
N.T.S.

SYMBOL LIST

SYMBOL	DESCRIPTION
	HUMIDIFIER
	HEATING (OR COOLING) COIL
	OPPOSED BLADE DAMPER
	FAN (OR PUMP)
M	AUTOMATIC 2-WAY VALVE
M	AUTOMATIC 3-WAY VALVE
M	AUTOMATIC BUTTERFLY VALVE
	MANUAL 2-WAY VALVE
	MANUAL BUTTERFLY VALVE
	CHECK VALVE
	STRAINER
T	SPACE TEMPERATURE SENSOR
H	SPACE HUMIDITY SENSOR
T	TEMPERATURE TRANSMITTER
H	HUMIDITY TRANSMITTER
CO_2	CARBON DIOXIDE TRANSMITTER
P	DIFFERENTIAL PRESSURE
F	FLOW SENSOR
M	ELECTRIC MOTOR
	ROTARY SWITCH
ES	END SWITCH
CS	CURRENT SENSOR
	ALARM (OR INDICATION LAMP
	ALARM BUZZER
NO	NORMALLY OPEN
NC	NORMALLY CLOSED
HOA	HAND OFF AUTOMATIC
HTR	HEATER (ELECTRIC SUMP)
MS	MOTOR STARTER
VFD	VARIABLE FREQUENCY DRIVE UNIT
ECM	ELECTRONICALLY COMMUTATED MOTOR
SD	SMOKE DETECTOR
DI	DDC DIGITAL INPUT POINT
DO	DDC DIGITAL OUTPUT POINT
AI	DDC ANALOG INPUT POINT
AO	DDC ANALOG OUTPUT POINT
A	DDC ALARM POINT
BN	BACNET INTERFACE
RS485	RS485 INTERFACE

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Flow & Control Sheet No.1

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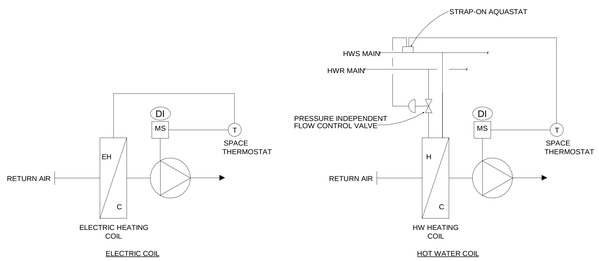
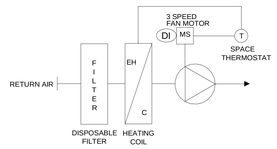


1 UNIT HEATER CONTROL
N.T.S



2 CABINET UNIT HEATER CONTROL
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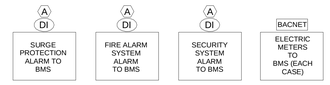

3 MISC. ELECTRICAL BMS CONTACTS
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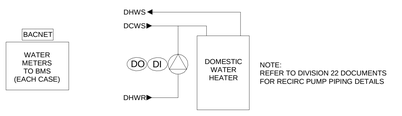

4 MISC. PLUMBING BMS CONTACTS
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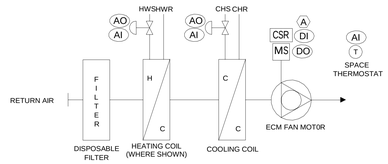

5 FAN COIL UNIT CONTROL
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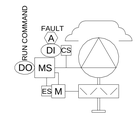

6 TOILET EXHAUST FAN
N.T.S

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CONSTRUCTION
DOCUMENTS

#	Description	Date

CAROLINA
MUSEUM OF THE MARINE

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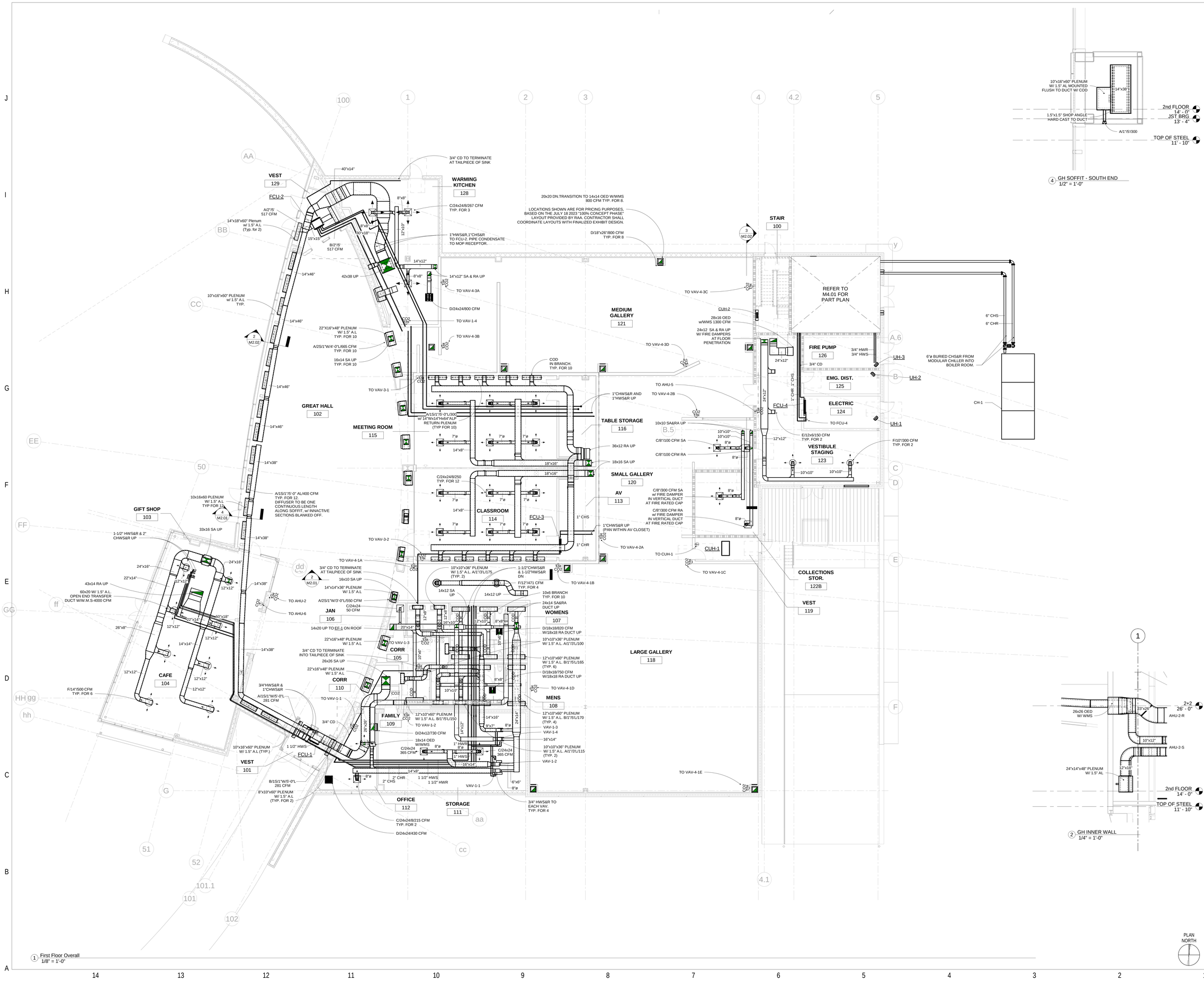
Flow & Control Sheet No. 2

M0.02

ISSUE DATE: 10 -24-2023
PROJECT NUMBER: 22 -0410
DRAWN BY: AA
CHECKED BY: Altieri



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ARCHITECTURE
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Winston-Salem, NC 27101
p. 336.724.1503
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HICAPS

RAA

SAMET

NORTH CAROLINA PROFESSIONAL SEAL 040487 ENGINEER JOHN M. CHRISTIANSEN
OCT. 2, 2023

CONSTRUCTION
DOCUMENTS

#	Description	Date

CAROLINA MUSEUM OF THE MARINE

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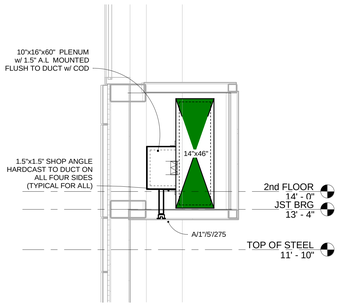
Mechanical 1st Floor Plan

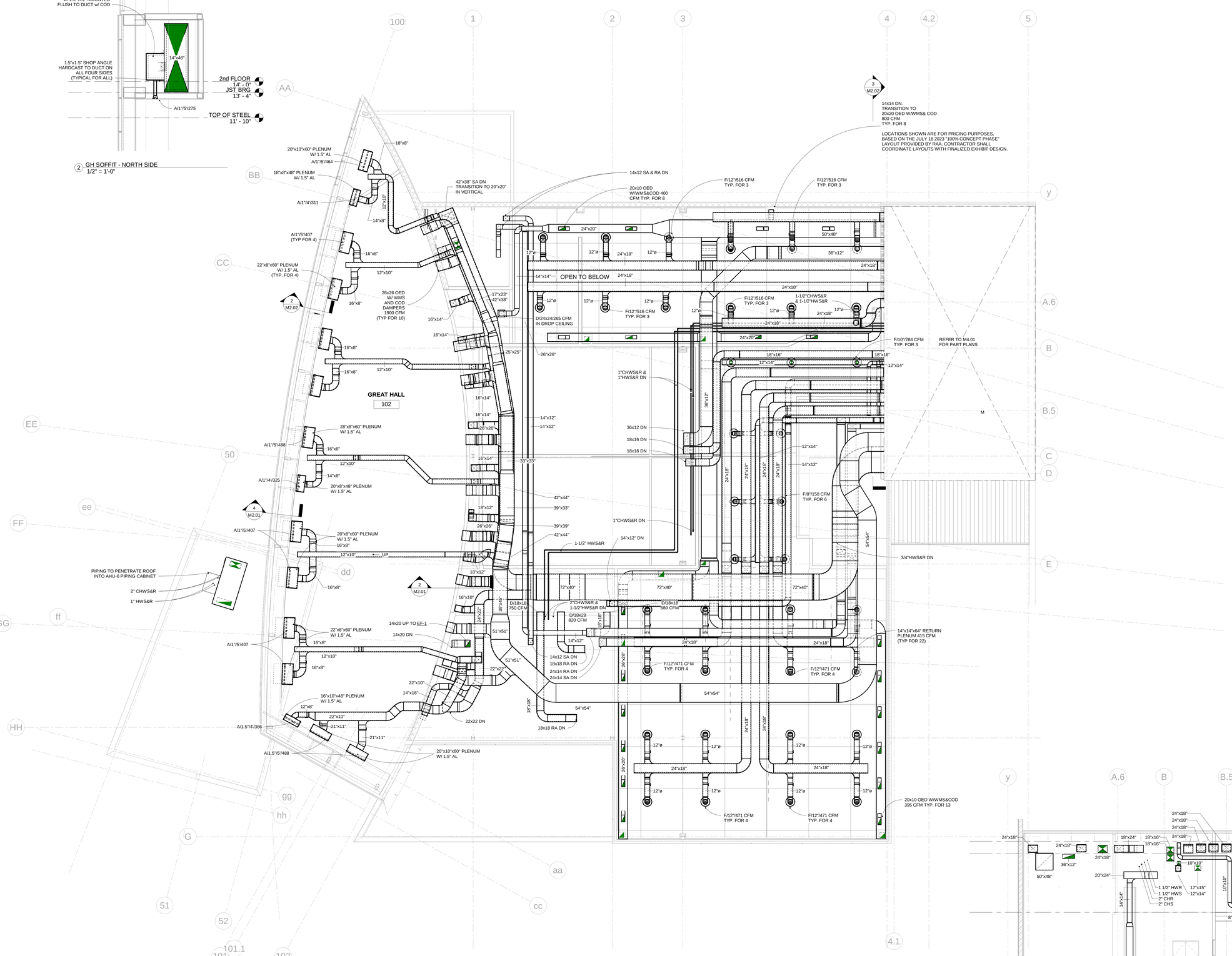
M2.01

ISSUE DATE: 10 -24-2023
PROJECT NUMBER: 22 -0410
DRAWN BY: NC
CHECKED BY: Allen

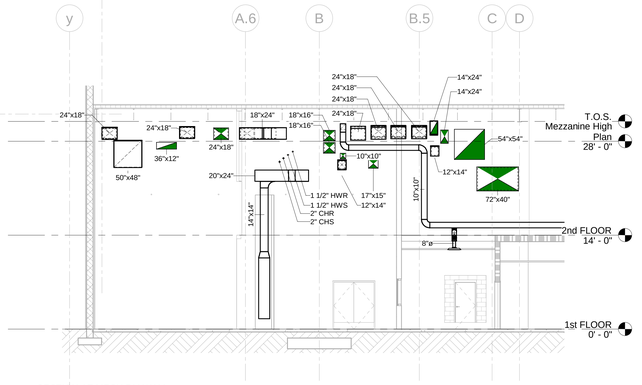
PLAN
NORTH



2 GH SOFFIT - NORTH SIDE
1/2" = 1'-0"



1 Second Floor Overall
1/8" = 1'-0"



3 SECTION AT MECH RM WALL
1/8" = 1'-0"

PLAN NORTH

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NORTH CAROLINA PROFESSIONAL SEAL 31487 ENGINEER
OCT 24 2023

CONSTRUCTION DOCUMENTS

#	Description	Date

CAROLINA MUSEUM OF THE MARINE

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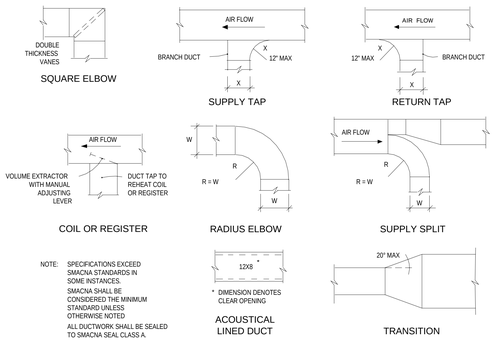
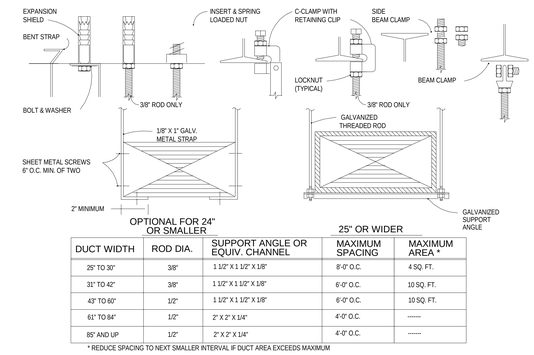
Mechanical 2nd Floor Plan

M2.02

ISSUE DATE: 10 -24-2023
PROJECT NUMBER: 22 -0410
DRAWN BY: NC
CHECKED BY: Alberi



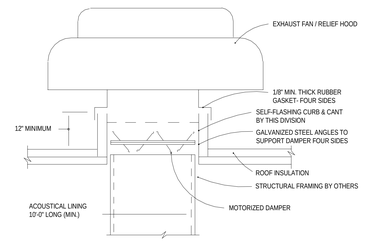
1 DUCT CONSTRUCTION DETAIL
N.T.S



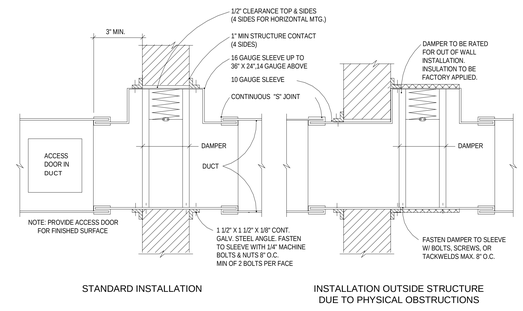
DUCT WIDTH	ROD DIA.	SUPPORT ANGLE OR EQUIV. CHANNEL	MAXIMUM SPACING	MAXIMUM AREA *
25" TO 30"	3/8"	1 1/2" X 1 1/2" X 1/8"	8'-0" O.C.	4 SQ. FT.
31" TO 42"	3/8"	1 1/2" X 1 1/2" X 1/8"	6'-0" O.C.	10 SQ. FT.
43" TO 60"	1/2"	1 1/2" X 1 1/2" X 1/8"	6'-0" O.C.	10 SQ. FT.
61" TO 84"	1/2"	2" X 2" X 1/4"	4'-0" O.C.	------
85" AND UP	1/2"	2" X 2" X 1/4"	4'-0" O.C.	------

* REDUCE SPACING TO NEXT SMALLER INTERVAL IF DUCT AREA EXCEEDS MAXIMUM

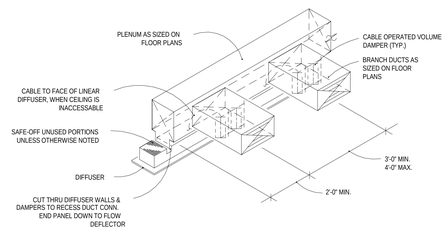
2 DUCT SUPPORT DETAIL
N.T.S



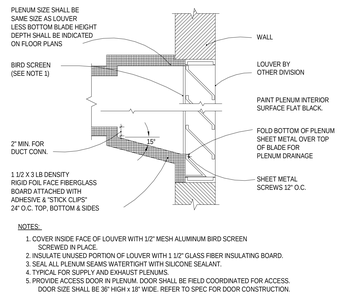
3 EXHAUST FAN/RELIEF HOOD DETAIL
N.T.S



4 FIRE DAMPER MOUNTING DETAIL
N.T.S

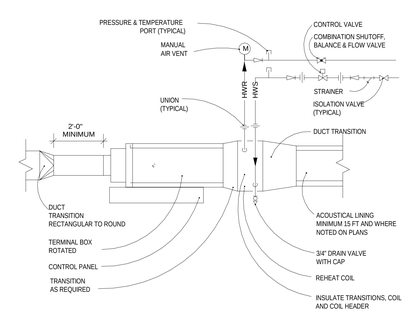


6 LINEAR DIFFUSER DETAIL
N.T.S

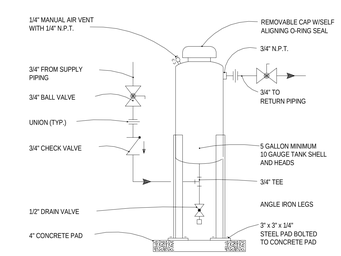


NOTES:
1. COVER INSIDE FACE OF LOUVER WITH 1/2" MESH ALUMINUM BIRD SCREEN SCREWED IN PLACE.
2. INSULATE UNUSED PORTION OF LOUVER WITH 1 1/2" GLASS FIBER INSULATING BOARD.
3. SEAL ALL PLENUM SEAMS WATERTIGHT WITH SILICONE SEALANT.
4. TYPICAL FOR SUPPLY AND EXHAUST PLENUMS.
5. PROVIDE ACCESS DOOR IN PLENUM. DOOR SHALL BE FIELD COORDINATED FOR ACCESS. DOOR SIZE SHALL BE 36" HIGH x 18" WIDE. REFER TO SPEC FOR DOOR CONSTRUCTION.

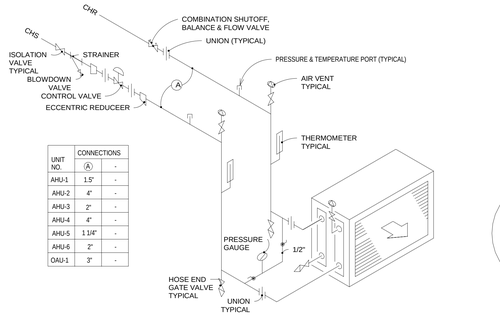
7 LOUVER PLENUM DETAIL
N.T.S



8 CV/RH & VAV BOX INSTALLATION DETAIL
N.T.S

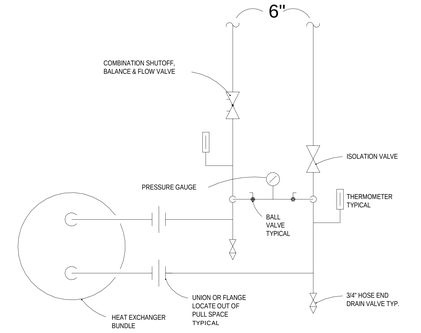


9 CHEMICAL SHOT FEEDER DETAIL
N.T.S

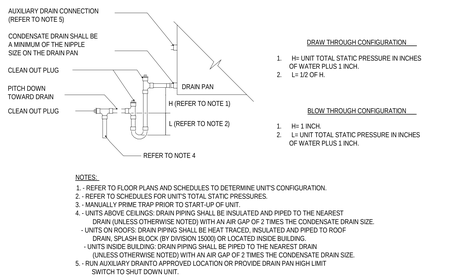


UNIT NO.	CONNECTIONS	
	(A)	-
AHU-1	1.5"	-
AHU-2	4"	-
AHU-3	2"	-
AHU-4	4"	-
AHU-5	1 1/4"	-
AHU-6	2"	-
OAU-1	3"	-

10 CHILLED WATER COOLING COIL
N.T.S.

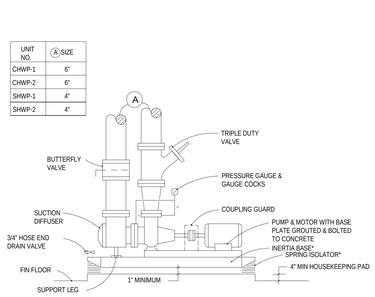


11 CHILLER CONNECTIONS DETAIL
N.T.S



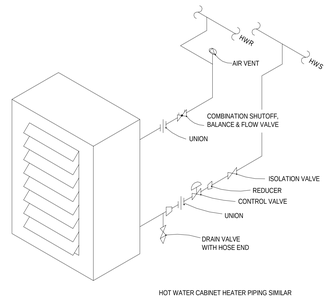
NOTES:
1. - REFER TO FLOOR PLANS AND SCHEDULES TO DETERMINE UNIT'S CONFIGURATION.
2. - REFER TO SCHEDULES FOR UNIT'S TOTAL STATIC PRESSURES.
3. - MANUALLY PRIME TRAP PRIOR TO START-UP OF UNIT.
4. - UNITS ABOVE CEILINGS: DRAIN PIPING SHALL BE INSULATED AND PIPED TO THE NEAREST DRAIN (UNLESS OTHERWISE NOTED) WITH AN AIR GAP OF 2 TIMES THE CONDENSATE DRAIN SIZE.
   - UNITS ON ROOFS: DRAIN PIPING SHALL BE HEAT TRACED, INSULATED AND PIPED TO ROOF DRAIN, SPLASH BLOCK (BY DIVISION 150000 OR LOCATED INSIDE BUILDING.
   - UNITS INSIDE BUILDING: DRAIN PIPING SHALL BE PIPED TO THE NEAREST DRAIN (UNLESS OTHERWISE NOTED) WITH AN AIR GAP OF 2 TIMES THE CONDENSATE DRAIN SIZE.
5. - RUN AUXILIARY DRAIN TO APPROVED LOCATION OR PROVIDE DRAIN PAN HIGH LIMIT SWITCH TO SHUT DOWN UNIT.

12 COOLING COIL DRAIN TRAP DETAIL
N.T.S



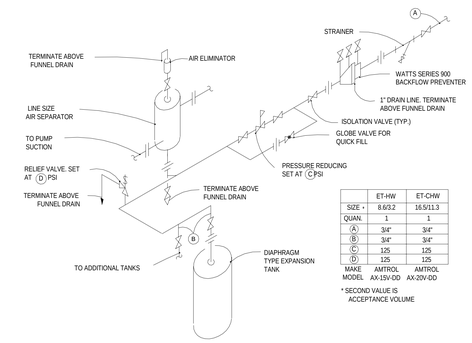
UNIT NO.	(A) SIZE
CHWP-1	6"
CHWP-2	6"
SHWP-1	4"
SHWP-2	4"

13 END SUCTION PUMP DETAIL
N.T.S



HOT WATER CABINET HEATER PIPING SIMILAR

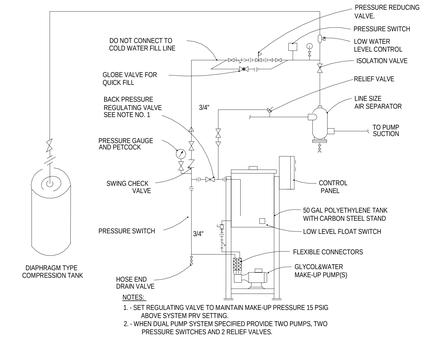
14 HOT WATER UNIT HEATER DETAIL
N.T.S



	ET-HW	ET-CHW
SIZE *	8.6/3.2	16.5/11.3
QUAN.	1	1
(A)	3/4"	3/4"
(B)	3/4"	3/4"
(C)	125	125
(D)	125	125
MAKE MODEL	AMTROL AX-15V-DD	AMTROL AX-20V-DD

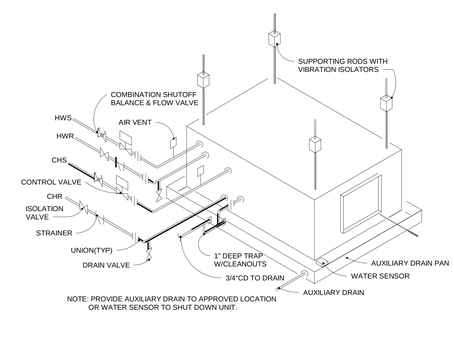
* SECOND VALUE IS ACCEPTANCE VOLUME

15 EXPANSION TANK DETAIL
N.T.S



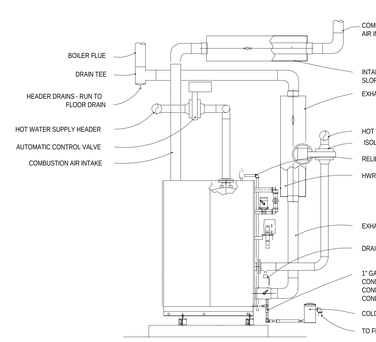
NOTES:
1. - SET REGULATING VALVE TO MAINTAIN MAKE-UP PRESSURE 15 PSIG ABOVE SYSTEM PRV SETTING.
2. - WHEN DUAL PUMP SYSTEM SPECIFIED PROVIDE TWO PUMPS, TWO PRESSURE SWITCHES AND 2 RELIEF VALVES.

16 GLYCOL FEED SYSTEM DETAIL
N.T.S

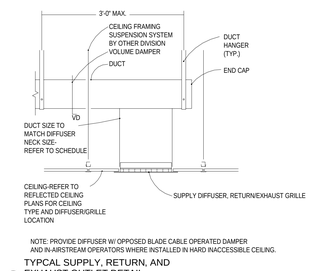


NOTE: PROVIDE AUXILIARY DRAIN TO APPROVED LOCATION OR WATER SENSOR TO SHUT DOWN UNIT.

17 HORIZONTAL FAN COIL UNIT DETAIL
N.T.S



18 HOT WATER BIOLER DETAIL
N.T.S



NOTE: PROVIDE DIFFUSER W/ OPPOSED BLADE CABLE OPERATED DAMPER AND IN AIRSTREAM OPERATORS WHERE INSTALLED IN HARD INACCESSIBLE CEILING.

19 TYPCAL SUPPLY, RETURN, AND EXHAUST OUTLET DETAIL
N.T.S

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HICAPS
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NORTH CAROLINA PROFESSIONAL SEAL 030487 ENGINEER JEFFREY ALTIERI
OCT 24 2023

CONSTRUCTION DOCUMENTS

#	Description	Date

CAROLINA MUSEUM OF THE MARINE

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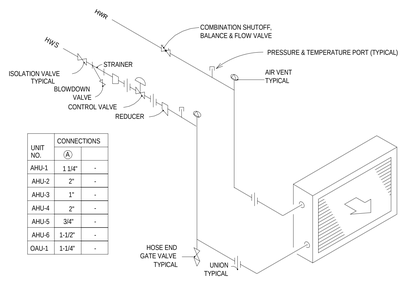
Mechanical Detail Sheet No. 1

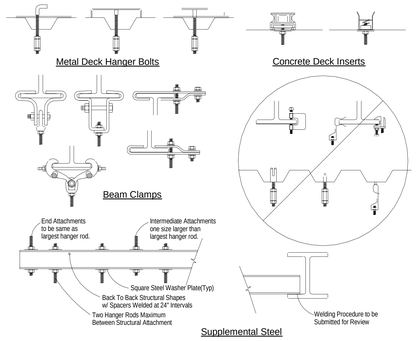
M3.01

ISSUE DATE: 10 -24-2023
PROJECT NUMBER: 22 -0410
DRAWN BY: NC
CHECKED BY: Altieri

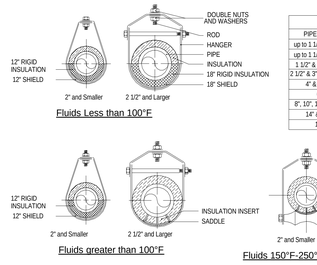


UNIT NO.	CONNECTIONS Ⓐ	
AHU-1	1 1/4"	-
AHU-2	2"	-
AHU-3	1"	-
AHU-4	2"	-
AHU-5	3/4"	-
AHU-6	1-1/2"	-
OAU-1	1-1/4"	-

1 HOT WATER HEAT COIL DETAIL
N.T.S



2 PIPE HANGER ATTACHEMENT DETAIL
N.T.S



HANGER SCHEDULE		
PIPE SIZE	ROD SIZE	MAX. SPACING
up to 1 1/4"	3/8" DIA.	8' Steel
up to 1 1/4"	3/8" DIA.	6' Copper & Brass
1 1/2" & 2"	3/8" DIA.	10'
2 1/2" & 3"	1/2" DIA.	10'
4" & 5"	5/8" DIA.	10'
6"	3/4" DIA.	10'
8", 10", 12"	7/8" DIA.	10'
14" & 16"	1" DIA.	10'
18"	1 1/8" DIA.	10'

3 PIPE HANGER DETAIL
N.T.S

4 STEAM HUMIDIFIER DETAIL
N.T.S

NOTES:
1. PROVIDE ACCESS DOOR FOR FINISHED SURFACE, WHERE NO OTHER ACCESS IS AVAILABLE.
2. EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND LISTING.
3. DUCT SMOKE DETECTOR IS FURNISHED AND WIRED BY DIVISION 26 FIRE ALARM CONTRACTOR AND INSTALLED BY DIVISION 23 CONTRACTOR.

5 SMOKE DAMPER DETAIL
N.T.S.

6 INLINE PUMP DETAIL
N.T.S

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HICAPS

RAA

SAMET

NORTH CAROLINA PROFESSIONAL SEAL 31487 ENGINEER
OCT 24 2023

CONSTRUCTION DOCUMENTS

#	Description	Date

CAROLINA MUSEUM OF THE MARINE

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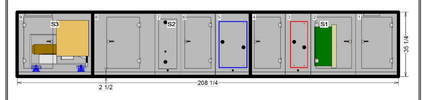
Mechanical Detail Sheet No. 2

M3.02

ISSUE DATE: 10 -24-2023
PROJECT NUMBER: 22 -0410
DRAWN BY: NC
CHECKED BY: Alteri

TRANE — Job Name: Museum of the Marine — CSAA Quantity: 1 Tags: "AHU-1

Shipping splits are indicated by thick black lines



For maneuvering purposes, include 1.125 inches to each ship split length for overlapping panel flange. Flange will not add to overall installed unit length sh

Pos #	Module	Length	Weight
1	Air mixing section	23 3/8	140.00
2	Filter section	24 1/2	130.00
3	Coil section	14	192.71
4	Access section	19 1/8	84.00
5	Coil section	19 1/8	328.73
6	Access section	19	84.00
7	Humidification section	14	165.00
8	Access section	24 1/8	179.00
9	Fan section	41 1/8	574.00

Installed Unit Weight 1897.44 lbs

Basic Overall Plan View: Top - Measurements in inches

OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

Unit size: 6	Job Name: Museum of the Marine	Unit Casing: 2in Double Wall Foam
Product group: Indoor unit	2700 cfm	Proposal Number:
Integral base frame: 2.5in. integral base frame	Sales Office:	Tags: "AHU-1
Paint:		1802.3 lb / 1897.4 lb

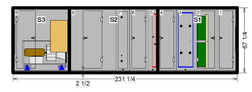
TRANE — Performance Climate Changer Air Handlers

2023/10/20 17:11:04 Product Version: 1 — Page 6 of 28

AHU-1

TRANE — Job Name: Museum of the Marine — CSAA Quantity: 1 Tags: AHU-2

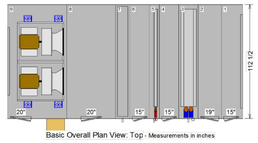
Shipping splits are indicated by thick black lines



For maneuvering purposes, include 1.125 inches to each ship split length for overlapping panel flange. Flange will not add to overall installed unit length sh

Pos #	Module	Length	Weight
1	Air mixing section	20 3/4	560.00
2	Filter section	23	418.00
3	Coil section	19	1681.63
4	Access section	19 1/8	301.00
5	Coil section	10 1/8	357.09
6	Access section	19	301.00
7	Humidification section	14	599.00
8	Access section	48 1/8	557.00
9	Fan section	58 1/4	2240.66

Installed Unit Weight 7013.38 lbs



Basic Overall Plan View: Top - Measurements in inches

OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

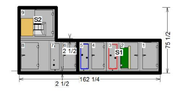
Unit size: 40	Job Name: Museum of the Marine	Unit Casing: 2in Double Wall Foam
Product group: Indoor unit	19000 cfm	Proposal Number:
Integral base frame: 2.5in. integral base frame	Sales Office:	Tags: AHU-2
Paint:		6577.5 lb / 7013.4 lb

TRANE — Performance Climate Changer Air Handlers

2023/10/20 17:11:03 Product Version: 1 — Page 6 of 28

AHU-2

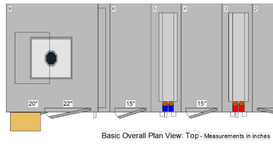
TRANE — Job Name: Museum of the Marine — CSAA Quantity: 1 Tags: "AHU-3



For maneuvering purposes, include 1.125 inches to each ship split length for overlapping panel flange. Flange will not add to overall installed unit length sh

Pos #	Module	Length	Weight
1	Air mixing section	23 3/8	158.00
2	Filter section	24 1/2	145.00
3	Coil section	14	241.81
4	Access section	19	103.00
5	Coil section	14 1/8	262.16
6	Access section	19 1/8	103.00
7	Humidification section	14	184.00
8	Access section	34 1/8	199.12
9	Fan section	42 5/8	391.12

Installed Unit Weight 1787.22 lbs



Basic Overall Plan View: Top - Measurements in inches

OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

Unit size: 8	Job Name: Museum of the Marine	Unit Casing: 2in Double Wall Foam
Product group: Indoor unit	3200 cfm	Proposal Number:
Integral base frame: 2.5in. integral base frame	Sales Office:	Tags: "AHU-3
Paint:		1694.3 lb / 1787.2 lb

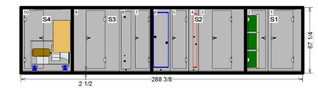
TRANE — Performance Climate Changer Air Handlers

2023/10/20 17:11:04 Product Version: 1 — Page 7 of 25

AHU-3

TRANE — Job Name: Museum of the Marine — CSAA Quantity: 1 Tags: "AHU-4

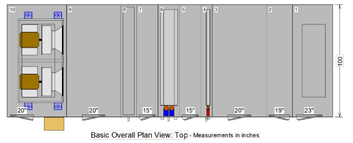
Shipping splits are indicated by thick black lines



For maneuvering purposes, include 1.125 inches to each ship split length for overlapping panel flange. Flange will not add to overall installed unit length sh

Pos #	Module	Length	Weight
1	Air mixing section	35 1/2	539.00
2	Filter section	23 1/8	406.00
3	Access section	48 1/8	514.00
4	Coil section	10	432.26
5	Access section	19	280.00
6	Coil section	19 1/8	3464.92
7	Access section	19 1/8	280.00
8	Humidification section	14	544.00
9	Access section	48 1/8	514.00
10	Fan section	52 1/2	1902.45

Installed Unit Weight 7876.64 lbs



Basic Overall Plan View: Top - Measurements in inches

OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

Unit size: 35	Job Name: Museum of the Marine	Unit Casing: 2in Double Wall Foam
Product group: Indoor unit	15000 cfm	Proposal Number:
Integral base frame: 2.5in. integral base frame	Sales Office:	Tags: "AHU-4
Paint:		7495.1 lb / 7876.6 lb

TRANE — Performance Climate Changer Air Handlers

2023/10/20 17:11:03 Product Version: 1 — Page 6 of 28

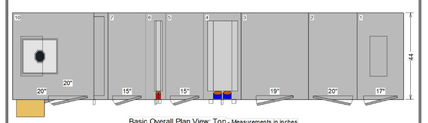
AHU-4

TRANE — Job Name: Museum of the Marine — CSAA Quantity: 1 Tags: "AHU-5

For maneuvering purposes, include 1.125 inches to each ship split length for overlapping panel flange. Flange will not add to overall installed unit length sh

Pos #	Module	Length	Weight
1	Air mixing section	23 3/8	128.00
2	Filter section	24 5/8	121.00
3	Access section	34 1/8	165.00
4	Coil section	19	367.62
5	Access section	19 1/8	88.00
6	Coil section	10 1/8	94.12
7	Access section	19	88.00
8	Humidification section	14	146.00
9	Access section	34 1/4	163.36
10	Fan section	41 1/8	291.37

Installed Unit Weight 1652.47 lbs



Basic Overall Plan View: Top - Measurements in inches

OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

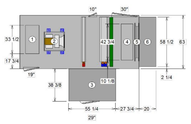
Unit size: 4	Job Name: Museum of the Marine	Unit Casing: 2in Double Wall Foam
Product group: Indoor unit	1500 cfm	Proposal Number:
Integral base frame: 2.5in. integral base frame	Sales Office:	Tags: "AHU-5
Paint:		1598.0 lb / 1652.5 lb

TRANE — Performance Climate Changer Air Handlers

2023/10/20 17:11:06 Product Version: 1 — Page 7 of 25

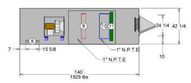
AHU-5

TRANE — Job Name: Museum of the Marine — Unit Tag: RTU-1 — Quantity: 1



1 Discharge Bottom 33.5 x 15.625
2 Plenum fan
3 Pipe cabinet Right 42.75 x 13.97
4 Damper back 16.97 x 40.75
5 Hood back 16.97 x 40.75
6 Opening bottom 33.5 x 15.625
9 Heating Coil
10 Cooling coil
11 Flat filters - 2" MERV 8

Doors
18 width x 34 height
29 width x 34 height
29 width x 34 height
30 width x 34 height



OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

Unit size: 10	Job Name: Museum of the Marine	Unit Casing: 2in Double Wall Foam
Unit type: Outdoor unit	Design airflow: 4000	Proposal Number:
Optional indoor basera:	Sales Office:	Unit Tag: AHU-6
Pipe cab / curb / paint: Factory curb, pipe cabinet, std paint		Rigging weight: 1928.9 / Installed weight: 2174.4

TRANE — Performance Climate Changer Air Handlers

2023/10/17 10:26:29 — Page 4 of 18

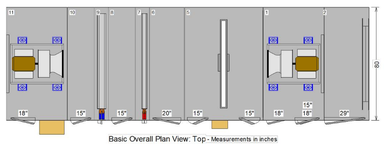
AHU-6

TRANE — Job Name: Museum of the Marine — CSAA Quantity: 1 Tags: OAU-1 75F LAT

For maneuvering purposes, include 1.125 inches to each ship split length for overlapping panel flange. Flange will not add to overall installed unit length sh

Pos #	Module	Length	Weight
1	Fan section	43	1107.12
2	Air mixing section	34	416.40
3	Access section	19	148.00
4	Controls section	21 7/8	291.90
5	Wheel	55 1/2	1381.20
6	Filter section	24 1/2	331.60
7	Coil section	10	191.18
8	Access section	19	148.00
9	Coil section	10	225.79
10	Access section	19 1/8	148.00
11	Fan section	43	1107.12

Installed Unit Weight 5498.30 lbs



Basic Overall Plan View: Top - Measurements in inches

OPENING AND DIMENSIONS MAY VARY FROM CONTRACT DOCUMENTS / RETURN OF APPROVED DRAWINGS CONSTITUTES ACCEPTANCE OF THESE VARIANCES / NOT TO SCALE

Unit size: 21	Job Name: Museum of the Marine	Unit Casing: 2in Double Wall Foam
Product group: Indoor unit	Actual airflow: 8550	Proposal Number:
Integral base frame: 2.5in. integral base frame	Sales Office:	Tags: OAU-1
Paint:		Rigging weight: 5424.2 / Installed weight: 5498.3

TRANE — Performance Climate Changer Air Handlers

2023/07/28 15:35:15 Product Version: 1 — Page 9 of 32

OAU-1

1 AHU DETAILS
NOT TO SCALE

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CONSTRUCTION DOCUMENTS

#	Description	Date

CAROLINA MUSEUM OF THE MARINE

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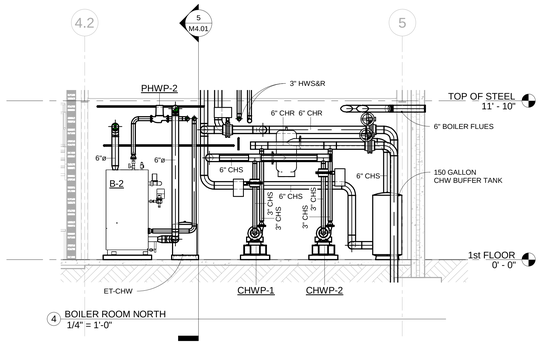
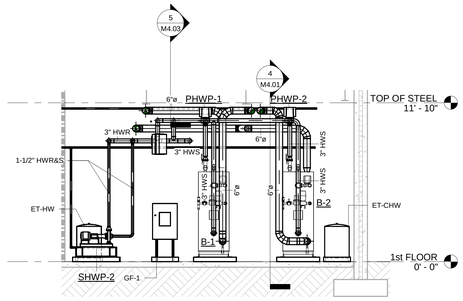
Mechanical Detail Sheet No. 3

M3.03

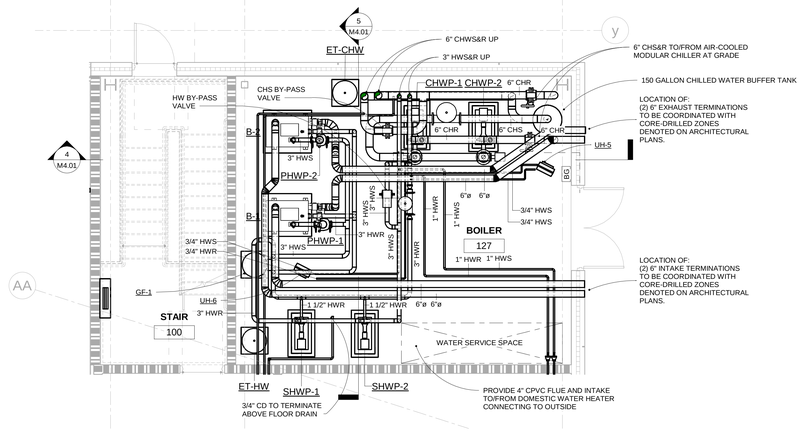
ISSUE DATE: 10 -24-2023
PROJECT NUMBER: 22 -0410
DRAWN BY: NC
CHECKED BY: Altieri

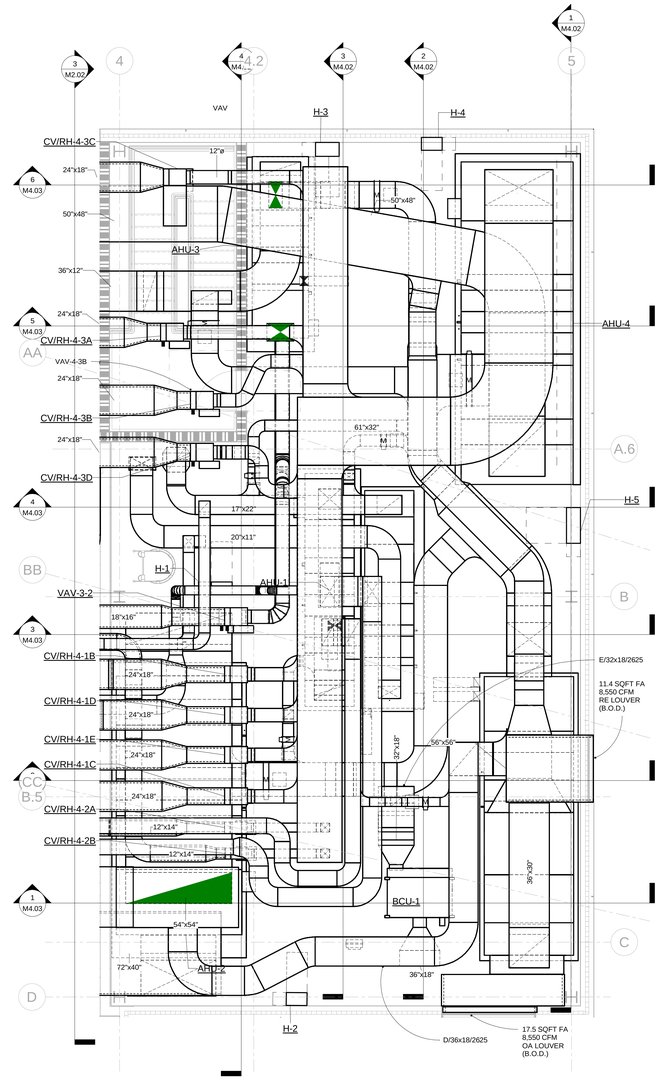


4 BOILER ROOM NORTH
1/4" = 1'-0"



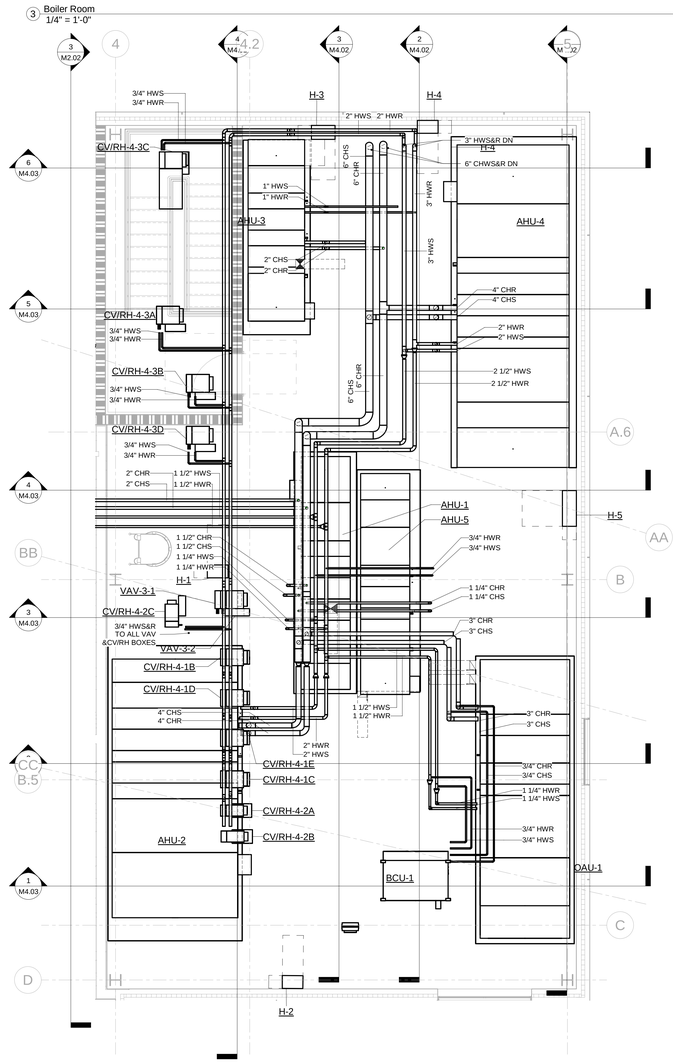
5 BOILER ROOM WEST
1/4" = 1'-0"





1 Mechanical Mezzanine - Ductwork
1/4" = 1'-0"

3 Boiler Room
1/4" = 1'-0"



2 Mechanical Mezzanine - Piping
1/4" = 1'-0"

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OCT 24 2023

CONSTRUCTION
DOCUMENTS

#	Description	Date

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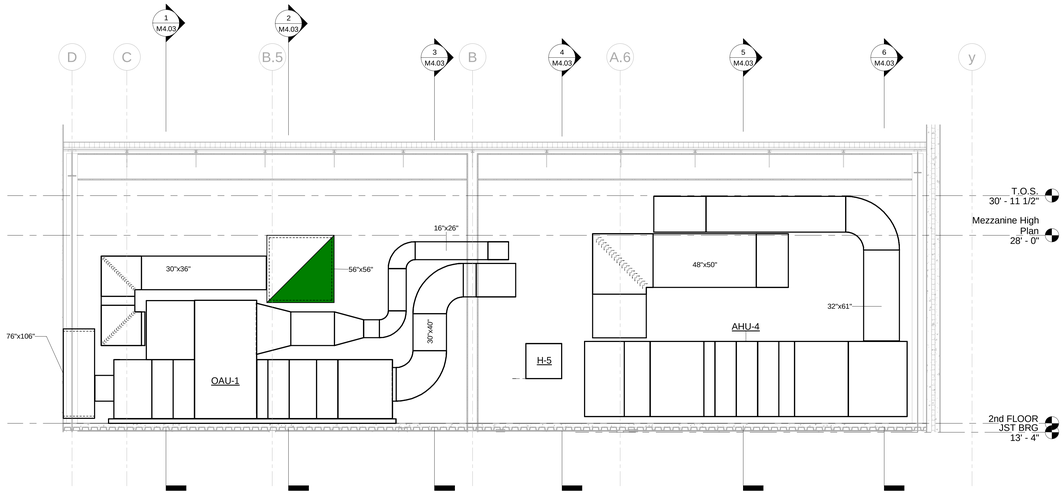
Mechanical Room Part Plans

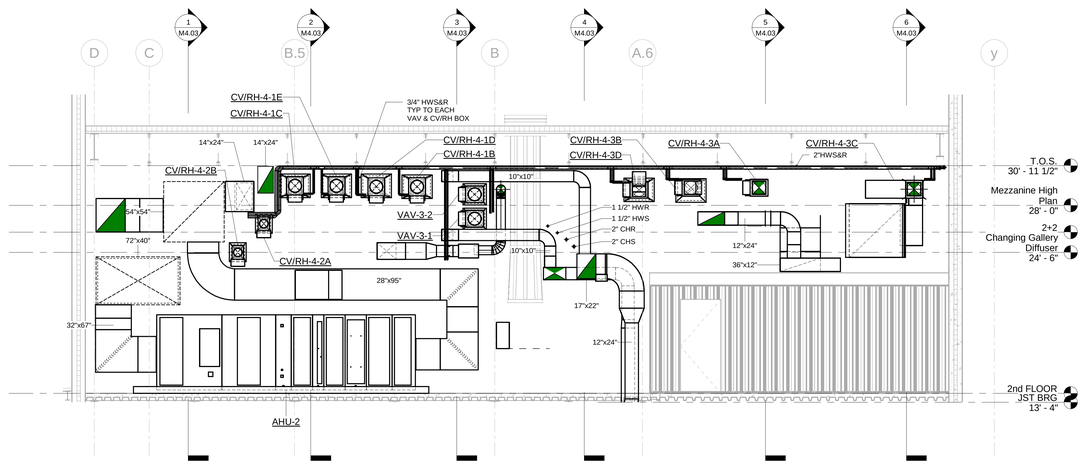
M4.01

PLAN
NORTH

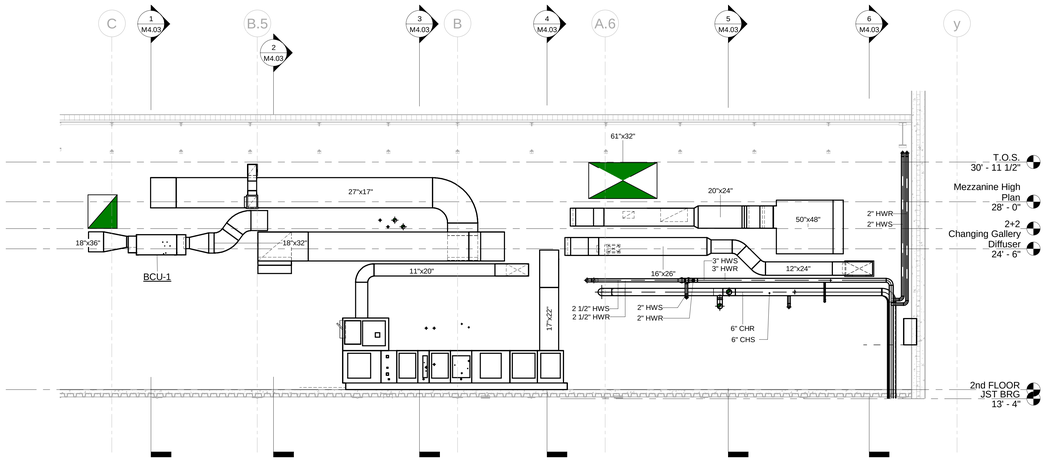
ISSUE DATE: 10 -24-2023
PROJECT NUMBER: 22 -0410
DRAWN BY: NC
CHECKED BY: Albiri



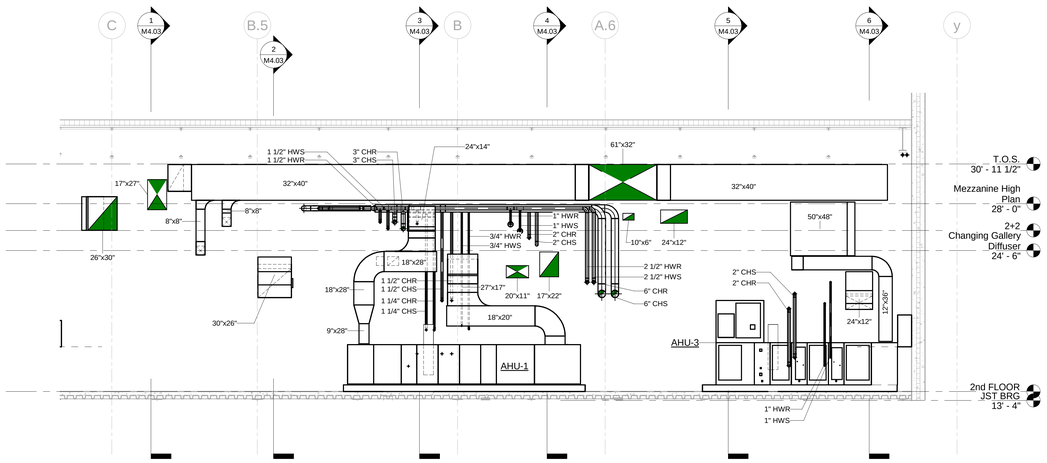
1 Section Through AHU-4 and OAU-1
1/4" = 1'-0"



4 Section Through AHU-2
1/4" = 1'-0"



2 Section Through AHU-5
1/4" = 1'-0"



3 Section Through AHU-1 & AHU-3
1/4" = 1'-0"

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OCT 24 2023

CONSTRUCTION DOCUMENTS

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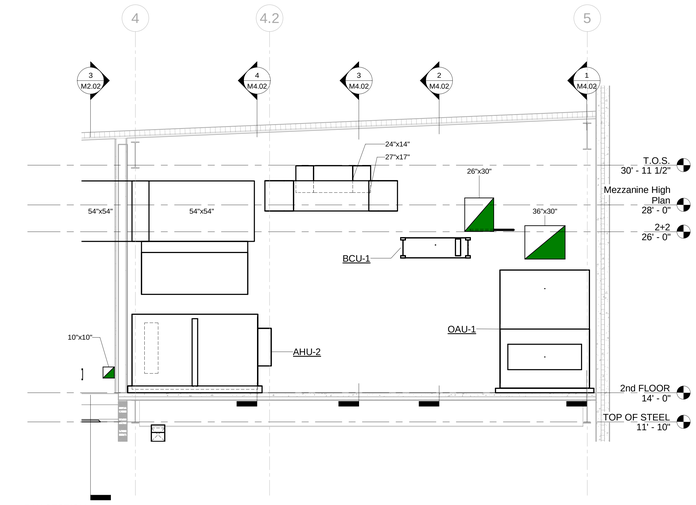
Mechanical Equipment Room N -S Sections

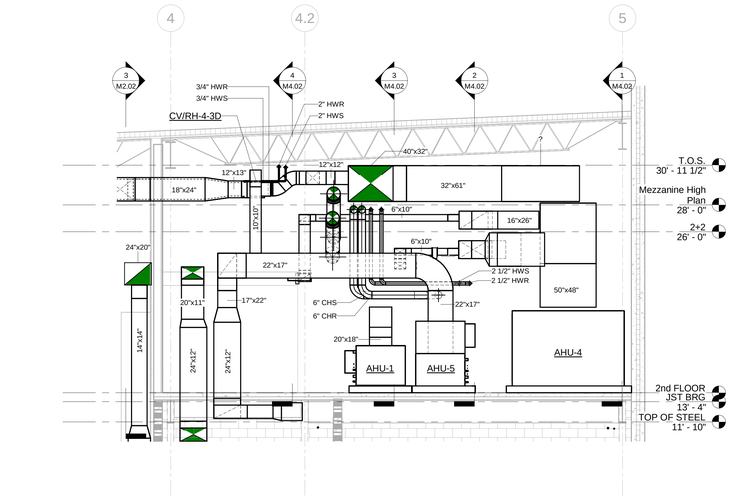
M4.02

PLAN NORTH

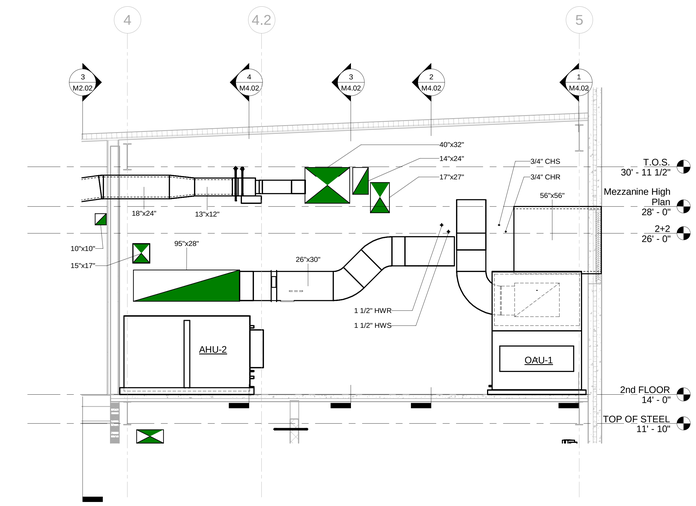
ISSUE DATE: 10 -24-2023
PROJECT NUMBER 22 -0410
DRAWN BY: NC
CHECKED BY: Allen



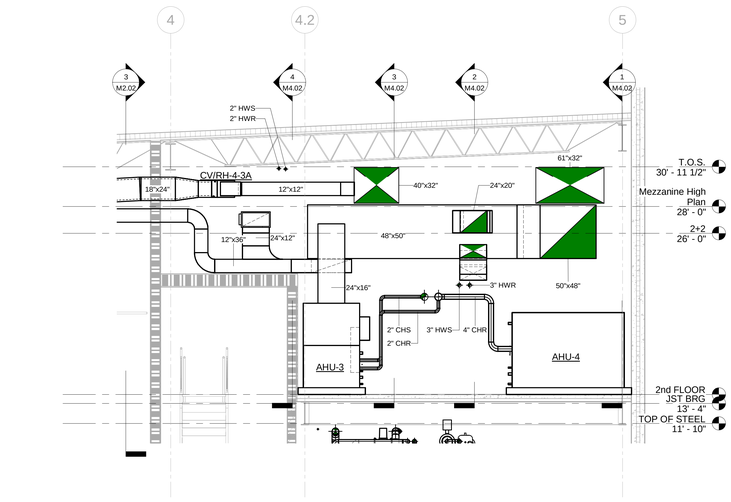
1 E-W SECTION 1
1/4" = 1'-0"



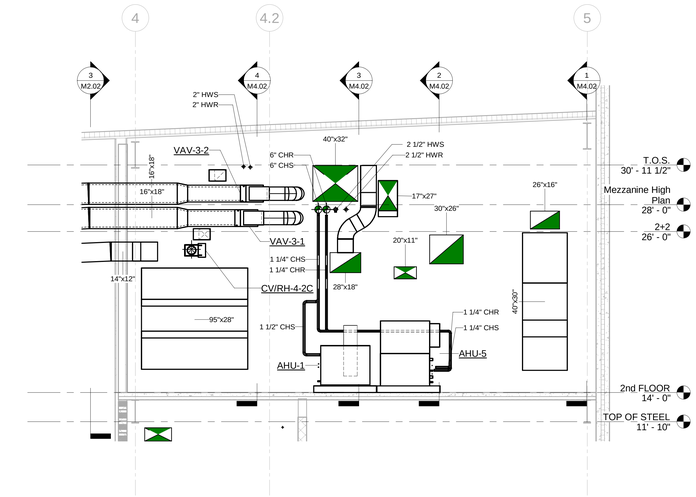
4 E-W SECTION 4
1/4" = 1'-0"



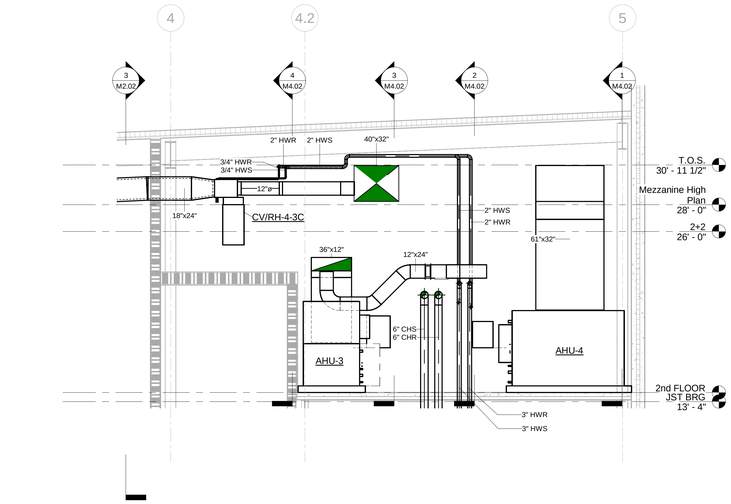
2 E-W SECTION 2
1/4" = 1'-0"



5 E-W SECTION 5
1/4" = 1'-0"



3 E-W SECTION 3
1/4" = 1'-0"



6 E-W SECTION 6
1/4" = 1'-0"

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OCT. 2 4 2023

CONSTRUCTION DOCUMENTS

#	Description	Date

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Mechanical Equipment Room E -W Sections

M4.03

ISSUE DATE: 10 -24-2023
PROJECT NUMBER: 22 -0410
DRAWN BY: NC
CHECKED BY: Allen

PLAN NORTH

AIR HANDLING UNITS

UNIT NO	LOCATION	SERVES	VENT AIR	CFM	FAN SECTION TOTAL SP	WHEEL TYPE	QUANTITY	MAX BHP	ELECTRICAL HP	ELECTRICAL VOLTS	ELECTRICAL PH	ELECTRICAL RPM	CHILLED WATER COIL CAP MBH	CHILLED WATER COIL AIR DATA EAT	CHILLED WATER COIL AIR DATA LAT	CHILLED WATER COIL WATER DATA EWT	CHILLED WATER COIL WATER DATA LWT	CHILLED WATER COIL WATER DATA GPM	CHILLED WATER COIL VEL FPM	CHILLED WATER COIL AIR PD	CHILLED WATER COIL WATER PD	CHILLED WATER COIL ROWS FINS	HOT WATER COIL CAP MBH	HOT WATER COIL AIR DATA EAT	HOT WATER COIL AIR DATA LAT	HOT WATER COIL WATER DATA EWT	HOT WATER COIL WATER DATA LWT	HOT WATER COIL WATER DATA GPM	HOT WATER COIL VEL FPM	HOT WATER COIL AIR PD	HOT WATER COIL WATER PD	HOT WATER COIL ROWS FINS	MAKE/MODEL	REMARKS
AHU-1	MEZZANINE MECH. ROOM	CATERING / GENERAL	287	2700	5.53" TSP 2.75" ESP	PLENUM	1	4.02	5	460	3	1800	94.7 TOT 70.4 SEN	76.7°F DB 64.7°F WB	53.01°F DB 52.8°F WB	42°F	54°F	17.08	506	0.889"	1.68'	8 ROWS 112 FPF	131.8	50.0°F	95°F	140°F	100°F	6.6	506	0.272"	0.5'	4 ROWS 91 FPF	TRANE / CSAA 006	30% P.G. CHILLED WATER
AHU-2	MEZZANINE MECH. ROOM	GREAT HALL	5639	19000	5.12" TSP 2.28" ESP	PLENUM	2	23.6	(2) 15	460	3	1800	991.7 TOT 573 SEN	79.3°F DB 68.8°F WB	52°F DB 51.9°F WB	42°F	54°F	178.8	493	0.889"	10.7'	8 ROWS 105 FPF	412.1	55°F	75°F	140°F	100°F	20.7	507	0.118"	0.93'	1 ROWS 129 FPF	TRANE / CSAA 040	30% P.G. CHILLED WATER
AHU-3	MEZZANINE MECH. ROOM	MEETING/ CLASSROOM	1277	3200	4.54" TSP 2.12" ESP	AIRFOIL	1	8.05	8.05	460	3	2873	180.7 TOT 97.87 SEN	81.6°F DB 71.3°F WB	54°F DB 53.9°F WB	42°F	54°F	32.58	401	0.572"	7.39'	6 ROWS 122 FPF	125	55°F	91°F	140°F	100°F	6.26	438	.251"	0.06'	4 ROWS 118 FPF	TRANE / CSAA 008	30% P.G. CHILLED WATER
AHU-4	MEZZANINE MECH. ROOM	GALLERIES	2881	15000	5.26" TSP 2.0" ESP	PLENUM	2	18.06	(2) 10	460	3	1800	728.9 TOT 461.8 SEN	78°F DB 66.8°F WB	50°F DB 49.98°F WB	42°F	54°F	131.5	447	1.29"	18.84'	8 ROWS 155 FPF	455.5	55°F	83°F	140°F	100°F	22.83	460	.115"	2.26'	1 ROWS 158 FPF	TRANE / CSAA 035	30% P.G. CHILLED WATER
AHU-5	MEZZANINE MECH. ROOM	COLLECTIONS	178	1500	3.99" TSP 1.5" ESP	AIRFOIL	1	4.02	4.02	460	3	2901	59.99 TOT 44.28 SEN	76.9°F DB 64°F WB	50°F DB 49.95°F WB	42°F	54°F	10.82	375	0.75"	1.53'	8 ROWS 134 FPF	32.53	60°F	80	140°F	100°F	1.63	375	0.072"	0.38'	1 ROWS 140 FPF	TRANE /CSAA 004	30% P.G. CHILLED WATER
AHU-6	LOW WEST ROOF	RETAIL SHOP	662	3721	2.64" TSP .75" ESP	PLENUM	1	1.80 kW	1.80 kW	208	3	1693	147.59 TOT 99.0 SEN	77.4°F DB 66.1F WB	53.26°F DB 52.96°F WB	42°F	51.93°F	35	375	0.825"	8.58'	8 ROWS 14 FPI	173	55°F	98	140°F	118°F	15.7	375	0.138"	0.91'	2 ROWS 12 FPI	TRANE / UCCA-010	30% P.G. CHILLED WATER

DEDICATED OUTDOOR AIR UNITS

UNIT NO	LOCATION	SERVES	VENT AIR	SUPPLY FAN SECTION CFM	SUPPLY FAN SECTION TOTAL SP	SUPPLY FAN SECTION WHEEL TYPE	SUPPLY FAN SECTION QUANTITY	SUPPLY FAN SECTION MAX BHP	SUPPLY FAN SECTION ELECTRICAL HP	SUPPLY FAN SECTION ELECTRICAL VOLTS	SUPPLY FAN SECTION ELECTRICAL PH	SUPPLY FAN SECTION ELECTRICAL RPM	EXHAUST FAN SECTION CFM	EXHAUST FAN SECTION TOTAL SP	EXHAUST FAN SECTION WHEEL TYPE	EXHAUST FAN SECTION QUANTITY	EXHAUST FAN SECTION MAX BHP	EXHAUST FAN SECTION ELECTRICAL HP	EXHAUST FAN SECTION ELECTRICAL VOLTS	EXHAUST FAN SECTION ELECTRICAL PH	EXHAUST FAN SECTION ELECTRICAL RPM	CHILLED WATER COIL CAP MBH	CHILLED WATER COIL AIR DATA EAT	CHILLED WATER COIL AIR DATA LAT	CHILLED WATER COIL WATER DATA EWT	CHILLED WATER COIL WATER DATA LWT	CHILLED WATER COIL WATER DATA GPM	CHILLED WATER COIL VEL FPM	CHILLED WATER COIL AIR PD	CHILLED WATER COIL WATER PD	CHILLED WATER COIL ROWS FINS	HOT WATER COIL CAP MBH	HOT WATER COIL AIR DATA EAT	HOT WATER COIL AIR DATA LAT	HOT WATER COIL WATER DATA EWT	HOT WATER COIL WATER DATA LWT	HOT WATER COIL WATER DATA GPM	HOT WATER COIL VEL FPM	HOT WATER COIL AIR PD	HOT WATER COIL WATER PD	HOT WATER COIL ROWS FINS
OAU-1	MEZZANINE MECH. ROOM	AHU-1,2,3,4,5	8550	8550	4.17" TSP 1.5" ESP	AIRFOIL	1	9.75	10	460	3	1800	8550	4.17TSP 1.5" ESP	AIRFOIL	1	8.162	10	460	3	1800	71.82 TOT 71.83 SEN	79°F DB 66.47°F WB	71.7°F DB 64.6°F WB	42°F	52°F	15.6	435	0.12"	0.73'	2 ROWS 84 FPF	162.9	53.1°F	70°F	140°F	110°F	10.88	448	0.067"	0.3'	1 ROWS 93 FPF

ENERGY WHEEL									
OUTSIDE AIR			RELIEF/EXHAUST AIR						
SUMMER			WINTER			SUMMER		WINTER		REMARKS
EAT (DB/WB)	LAT (DB/WB)	MBH	EAT (DB/WB)	LAT (DB/WB)	MBH	EAT (DB/WB)	LAT (DB/WB)	EAT (DB/WB)	LAT (DB/WB)	
95F / 77F	79F / 66.5F	339.5 TOT 149 SEN	26F / 22F	53.1F / 42.5F	252	70F / 58.5F	85F / 70.2F	70F / 53F	43.1F / 36F	30% P.G. CHILLED WATER

AIR COOLED CHILLER

UNIT NO	LOCATION	TYPE	CAP TONS	EVAPORATOR GPM	EVAPORATOR EWT	EVAPORATOR LWT	EVAPORATOR PD	COMPRESSORS TYPE	COMPRESSORS NO	COMPRESSORS STEP	COMPRESSORS SDT	ELECTRICAL KW	ELECTRICAL VOLTS	ELECTRICAL PH	ELECTRICAL MCA	MAKE/MODEL	REMARKS
CH-1	NEAR LOADING DOCK	AIR COOLED	156	327.4	54°F	42°F	11.1'	SCROLL	6	-	-	204	460	3	397	TRANE TPACVMV0600	*

* PROVIDE VARIABLE SPEED COMPRESSORS, INTERGRAL FREE COOLING AND EPOXY COATING SALT SPRAY RESISTANCE ON CONDENSER COILS

FANS

UNIT NO	LOCATION	SYSTEM SERVED	TYPE	CFM	SP	MAX BHP	FAN RPM	TIP SPEED	SOUND	ELECTRICAL HP	ELECTRICAL VOLTS	ELECTRICAL PH	ELECTRICAL RPM	MAKE/MODEL	REMARKS
EF-1	HIGH ROOF	TOILET EXHAUST	UPBLAST	1,650	.75"	.19	1501	-	8.7 SONES	1/4	120	1	1750	GREENHECK / CUE-120-VG	

BOILERS

UNIT NO	LOCATION	TYPE	INPUT MBH	MAX OUTPUT MBH	EFFICIENCY	FUEL	FIRING RATE	OPER PRESS	ELECTRICAL HP	ELECTRICAL VOLTS	ELECTRICAL PH	ELECTRICAL RPM	MAKE/MODEL	REMARKS
B-1	BOILER ROOM	CONDENSING	750	720	95.6%	NAT. GAS	-	7" W.C.	4.2AMPS	120	1	-	AERCO / BMK750	
B-2	BOILER ROOM	CONDENSING	750	720	95.6%	NAT. GAS	-	7" W.C.	4.2AMPS	120	1	-	AERCO / BMK750	

PUMPS

UNIT NO	LOCATION	SYSTEM SERVED	FLUID	GPM	MAX TEMP	HEAD FT	MAX BHP	ELECTRICAL HP	ELECTRICAL VOLTS	ELECTRICAL PH	ELECTRICAL RPM	TYPE	MAKE/MODEL	REMARKS
CHWP-1	BOILER ROOM	CHILLED WATER	30% P.G.	350	52°	65'	8.35	10	460	3	1800	END SUCTION	BELL&GOSSETT / 1510-2.5BB	70.9% PUMP EFF.
CHWP-2	BOILER ROOM	CHILLED WATER	30% P.G.	350	52°	65'	8.35	10	460	3	1800	END SUCTION	BELL&GOSSETT / 1510-2.5BB	70.9% PUMP EFF.
PHWP-1	BOILER ROOM	HEATING HOT WATER	WATER	40	140°	15'	0.728	2	460	3	2740	INLINE	BELL&GOSSETT / 27-320 3PH	-
PHWP-2	BOILER ROOM	HEATING HOT WATER	WATER	40	140°	15'	0.728	2	460	3	2740	INLINE	BELL&GOSSETT / 27-320 3PH	-
SHWP-1	BOILER ROOM	HEATING HOT WATER	WATER	60	140°	30'	0.777	1	460	3	1800	END SUCTION	BELL&GOSSETT / 1510-1.25AD	57.4% PUMP EFF.
SHWP-2	BOILER ROOM	HEATING HOT WATER	WATER	60	140°	30'	0.777	1	460	3	1800	END SUCTION	BELL&GOSSETT / 1510-1.25AD	57.4% PUMP EFF.

FAN COIL UNITS

UNIT NO	CFM	EXT SP	COOLING COIL MBH	COOLING COIL EAT	COOLING COIL LAT	HEATING COIL EWT	HEATING COIL LWT	HEATING COIL GPM	HEATING COIL PD	ELECTRICAL MBH	ELECTRICAL EAT	ELECTRICAL LAT	ELECTRICAL EWT	ELECTRICAL LWT	ELECTRICAL GPM	ELECTRICAL PD	ELECTRICAL HP	ELECTRICAL VLT	ELECTRICAL PH	ELECTRICAL RPM	MAKE/MODEL	REMARKS
FCU-1	281	.5"	9.5 (T) 5.6 (S)	75°F DB 67°F WB	56.66°F DB 56.15°F WB	42°F	48.5°F	3.19	15.78	7.0	70°F	92.9°F	140°F	125.3°F	0.95	2.07	0.13	115	1	1750	TRANE / UNI 30	S. VESTIBULE 101
FCU-2	517	.5"	12 (T) 7.78 (S)	75°F DB 67°F WB	61.3°F DB 59.8°F WB	42°F	50°F	3.31	16.78	9.5	70°F	87°F	140°F	100°F	0.48	1.43	0.22	115	1	1750	TRANE / UNI 60	N. VESTIBULE 129
FCU-3	1623	.5"	37.5 (T) 25.1 (S)	80°F DB 67°F WB	55°F DB 56°F WB	42°F	52°F	8	17.9								1/12	208	1	1750	MHQWW-36-H-1	A/V 114
FCU-4	600	0"	26.5 (T) 17.7 (S)	80°F DB 67°F WB	55°F DB 56°F WB	42°F	52°F	6	14.4								1/20	208	1	1750	MHQWW-24-H-1	ELECTRICAL 123
BCU-1	2625	1"	62.59	75°F DB 60.9°F WB	62.2°F DB 60.2°F WB	42°F	52°F	1.3	2.56	4.2	-°F	104°F	140°F	100°F	1.23	4.6	55 W	120	1	1750	TRANE / BCHE072	MECH MEZZ

CABINET & UNIT HEATERS

UNIT NO	LOCATION	CFM	MBH	AIR DATA EAT	AIR DATA LAT	WATER DATA GPM	WATER DATA EWT	WATER DATA LWT	WATER DATA PD	ELECTRICAL HP	ELECTRICAL VOLTS	ELECTRICAL PH	ELECTRICAL RPM	MAKE/MODEL	REMARKS
UH-1	ELECTRIC 124	-	2.4	65°F	-					750W	208	1	-	Q-MARK / CBD758	PROVIDE WALL BRACKET
UH-2	EMG. DIST. 125	-	2.4	65°F	-					750W	208	1	-	Q-MARK / CBD758	PROVIDE WALL BRACKET
UH-3	FIRE PUMP ROOM 126	185	5.82	65°F	-	.2	140°F	100°F	.02	1/15	120	1	-	STERLING / RC02	
UH-4	MECHANICAL ROOM	1400	35.5	60°F	106	3.35	140°F	118.9°F	0.29	1/12	120	1	-	TRANE / UHSA096	
UH-5	BOILER ROOM	450	9.9	60°F	96	1.24	140°F	124°F	0.014	16W	115	1	-	TRANE / UHSA024	
UH-6	BOILER ROOM	450	9.9	60°F	96	1.24	140°F	124°F	0.014	16W	115	1	-	TRANE / UHSA024	
CUH-1	E. VESTIBULE 119	350	10.2	70°F	-					3000W	208	1	-	Q-MARK / FFCH-548	
CUH-2	STAIR 100	250	10.2	70°F	-					3000W	208	1	-	Q-MARK / CU935	

REGISTERS, GRILLES & DIFFUSERS

PLAN DESIGNATION
Symbol
Face Size, Width, Number of Slots
Neck Size, Length
CFM
(A) ####

PLAN DESIGNATION LEGEND
#S - Number of Slots
#W - Width in Inches
C - Continuous Length
ALP- Acoustical Lined Plenum

SYM	SERVICE	TYPE	MAKE	MODEL	MATERIAL FINISH	REMARKS	SYM	SERVICE	TYPE	MAKE	MODEL	MATERIAL FINISH	REMARKS
(A)	SUPPLY	FLOW BAR	TITUS	FL	ARCHITECT TO CONFIRM ARCHITECT TO CONFIRM	JET THROW	(B)	RETURN	FLOW BAR	TITUS	FL	ARCHITECT TO CONFIRM ARCHITECT TO CONFIRM	JET THROW
(C)	SUPPLY	T-BAR	TITUS	OMNI	ARCHITECT TO CONFIRM ARCHITECT TO CONFIRM		(D)	RETURN OR EXHAUST	GRILLE	TITUS	350FL	ARCHITECT TO CONFIRM ARCHITECT TO CONFIRM	
(E)	SUPPLY	GRILLE	TITUS	300FL	ARCHITECT TO CONFIRM ARCHITECT TO CONFIRM		(F)	SUPPLY	CEILING DIFFUSER	TITUS	TMRA	ARCHITECT TO CONFIRM ARCHITECT TO CONFIRM	

VOLUME BOXES

UNIT NO	LOCATION	SERVES	CFM DES	CFM MIN	SP	DUCT CONN INLET	DUCT CONN OUTLET	REHEAT COIL MBH	REHEAT COIL EAT	REHEAT COIL LAT	REHEAT COIL PD	REHEAT COIL EWT	REHEAT COIL LWT	REHEAT COIL GPM	REHEAT COIL PD	MAKE/MODEL	REMARKS
VAV-1-1	STORAGE 111	OFFICE 112	430	129	-	6"Ø	12x8	13.9	50°F	80°F	-	140°F	101°F	0.7	-	TITUS / DESV08	
VAV-1-2	STORAGE 111	STORAGE 111	730	219	-	8" Ø	12x10	23.6	50°F	80°F	-	140°F	101°F	1.2	-	TITUS / DESV08	
VAV-1-3	STORAGE 111	MENS 108 WOMENS 107	680	204	-	8" Ø	12x10	22.1	50°F	80°F	-	140°F	101°F	1.1	-	TITUS / DESV08	
VAV-1-4	STORAGE 111	WARMING KITCHEN 128	801	241	-	8" Ø	12x10	26	50°F	80°F	-	140°F	101°F	1.3	-	TITUS / DESV08	
VAV-3-1	MECH RM	MEETING RM 115	1500	450	-	12" Ø	16x15	48.6	50°F	80°F	-	140°F	101°F	2.5	-	TITUS / DESV12	
VAV-3-2	MECH RM	CLASSROOM 114	1500	450	-	12" Ø	16x15	48.6	50°F	80°F	-	140°F	101°F	2.5	-	TITUS / DESV12	
CV/RH-4-1A	MECH RM	LARGE GALLERY 121	820	820	-	10" Ø	14x12	26.6	50°F	80°F	-	140°F	101°F	1.4	-	TITUS / DESV10	
CV/RH-4-1B	MECH RM	LARGE GALLERY 121	1,845	1,845	-	12" Ø	16x15	59.8	50°F	80°F	-	140°F	101°F	3.1	-	TITUS / DESV12	
CV/RH-4-1C	MECH RM	LARGE GALLERY 121	1,845	1,845	-	12" Ø	16x15	59.8	50°F	80°F	-	140°F	101°F	3.1	-	TITUS / DESV12	
CV/RH-4-1D	MECH RM	LARGE GALLERY 121	1,845	1,845	-	12" Ø	16x15	59.8	50°F	80°F	-	140°F	101°F	3.1	-	TITUS / DESV12	
CV/RH-4-1E	MECH RM	LARGE GALLERY 121	1,845	1,845	-	12" Ø	16x15	59.8	50°F	80°F	-	140°F	101°F	3.1	-	TITUS / DESV12	
CV/RH-4-2A	MECH RM	SMALL GALLERY 121	850	850	-	10" Ø	14x12	27.6	50°F	80°F	-	140°F	101°F	1.4	-	TITUS / DESV10	
CV/RH-4-2B	MECH RM	SMALL GALLERY 121	850	850	-	10" Ø	14x12	27.6	50°F	80°F	-	140°F	101°F	1.4	-	TITUS / DESV10	
CV/RH-4-3A	MECH RM	MEDIUM GALLERY 121	1,550	1,550	-	12" Ø	16x15	50.2	50°F	80°F	-	140°F	101°F	2.6	-	TITUS / DESV12	
CV/RH-4-3B	MECH RM	MEDIUM GALLERY 121	1,550	1,550	-	12" Ø	16x15	50.2	50°F	80°F	-	140°F	101°F	2.6	-	TITUS / DESV12	
CV/RH-4-3C	MECH RM	MEDIUM GALLERY 121	1,550	1,550	-	12" Ø	16x15	50.2	50°F	80°F	-	140°F	101°F	2.6	-	TITUS / DESV12	
CV/RH-4-3D	MECH RM	MEDIUM GALLERY 121	1,550	1,550	-	12" Ø	16x15	50.2	50°F	80°F	-	140°F	101°F	2.6	-	TITUS / DESV12	

HUMIDIFIERS

UNIT NO	LOCATION	SERVES	CFM	CAP LBS/HR	EAT °F/%RH	LAT °F/%RH	W x H	MAX LEN ABSORB.	STEAM PRESS	ELECTRICAL KW	ELECTRICAL VOLT	ELECTRICAL PH	ELECTRICAL MCA	MAKE/MODEL	REMARKS
H-1	MEZZANINE MECH. ROOM	AHU-1	2700	8.6	85/28	85/30	MATCH AHU SIZE	12"	ATM.	8.6	460	3	4.6	CONDAIR/RS-010 &SAM-E	MODULATING CONTROL
H-2	MEZZANINE MECH. ROOM	AHU-2	19500	169	85/23	85/30	MATCH AHU SIZE	12"	ATM.	64.3	460	3	77.4	CONDAIR/RS-180 &SAM-E	MODULATING CONTROL
H-3	MEZZANINE MECH. ROOM	AHU-3	3200	38	85/20	85/30	MATCH AHU SIZE	12"	ATM.	15.4	460	3	18.5	CONDAIR/RS-045 &SAM-E	MODULATING CONTROL
H-4	MEZZANINE MECH. ROOM	AHU-4	15500	86	85/26	85/30	MATCH AHU SIZE	12"	ATM.	32.1	460	3	38.7	CONDAIR/RS-090 &SAM-E	MODULATING CONTROL
H-5	MEZZANINE MECH. ROOM	AHU-5	1500	5	85/27	85/30	MATCH AHU SIZE	12"	ATM.	3.8	460	3	4.6	CONDAIR/RS-010 &SAM-E	MODULATING CONTROL

SYMBOL LIST

SYMBOL	DESCRIPTION
	BUTTERFLY VALVES
	GATE VALVES
	GLOBE VALVES
	CHECK VALVES
	STRAINERS
	BALL VALVES
	BALANCING VALVES
	CONTROL VALVES (2-WAY)
	CONTROL VALVES (3-WAY)
	FLEXIBLE CONNECTORS
	UNIONS
HWS HWR	HOT WATER SUPPLY, RETURN
CHS CHR	CHILLED WATER SUPPLY, RETURN
L S HG	LIGUID, HOT GAS, SUCTION (REFRIGERANT)
CD	CONDENSATE
PD	PUMP DISCHARGE
	ELBOW DOWN - ELBOW UP
	EXISTING PIPE TO REMAIN
	EXISTING PIPE TO REMAIN
	EXISTING PIPE TO BE REMOVED
	EXISTING PIPE TO BE REMOVED
	ANCHOR POINT
	PIPE GUIDE
ECC	ECCENTRIC REDUCER / INCREASER
W x H	DUCT (WIDTH X HEIGHT)
W x H	ACOUSTICAL LINED DUCT (CLEAR INSIDE DIM.)
	EXISTING DUCT TO REMAIN
	EXISTING DUCT TO REMAIN
	EXISTING DUCT TO BE REMOVED
	EXISTING DUCT TO BE REMOVED
	FIRE DAMPER
	COMBINATION FIRE & SMOKE DAMPER
M	MOTORIZED CONTROL DAMPER
COD	CABLE OPERATED DAMPER
AFMS	AIRFLOW MEASURING STATION
	VOLUME DAMPER (VD)
	FLEXIBLE CONNECTOR (FC)
ALP	ACOUSTICALLY LINED PLENUM
AL	ACOUSTICAL LINING
LD, CD	LINEAR DIFFUSER, CEILING DIFFUSER
LG, CG, TG, BG	LINEAR , CEILING, TOP, BOTTOM GRILLE
LR, CR, TR, BR	LINEAR , CEILING, TOP, BOTTOM REGISTER
	SUPPLY AIR
RA	RETURN AIR
	RETURN OR EXHAUST AIR
	POINT OF CONNECTION
	TO BE REMOVED
OAI	OUTSIDE AIR INTAKE
N, NK	NECK
ID	INSIDE DIMENSION
FT	FLAT ON TOP
FB	FLAT ON BOTTOM
WMS	WIRE MESH SCREEN
OED	OPEN END DUCT
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
FRE	FIRE RATED ENCLOSURE
BOD	BY OTHER DIVISION
T	TEMPERATURE SENSOR
H	HUMIDITY SENSOR
CO2	CARBON DIOXIDE SENSOR
CO	CARBON MONOXIDE SENSOR
BG	BREAK GLASS SWITCH
A X/Y/Z COMM . . X . A Y . Z COMM.	REGISTERS, GRILLES, & DIFFUSERS TAG A -SYMBOL - REFER TO SCHEDULE X - FACE SIZE, WIDTH, NUMBER OF SLOTS Y - NECK SIZE, LENGTH Z - CUBIC FEET PER MINUTE COMM. - COMMENT (OPTIONAL)
WxHxL ALP/TWxTH TAP COMM. WxHxL ALP TWxTH TAP COMM.	ACOUSTICAL LINED PLENUM (ALP) TAG W - INTERIOR WIDTH, H - INTERIOR HEIGHT L - INTERIOR LENGTH TW - TAP INTERIOR WIDTH DIMENSION TH - TAP INTERIOR HEIGHT DIMENSION COMM. - COMMENT (OPTIONAL)

CJMW ARCHITECTURE
525 Vine Street, Suite 350
Winston-Salem, NC 27101
p. 336.724.1503
www.cjmw.com

HICAPS

RAA

SAMET

NORTH CAROLINA PROFESSIONAL SEAL 047107 ENGINEER
OCT 24 2023

CONSTRUCTION DOCUMENTS

#	Description	Date

CAROLINA MUSEUM OF THE MARINE

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Mechanical Schedule Sheet

M5.01

ISSUE DATE: 10 -24- 2023
PROJECT NUMBER: 22 -0410
DRAWN BY: NC
CHECKED BY: Albert

ELECTRICAL SYMBOLS

A	RECESSED FLUORESCENT LIGHTING FIXTURE (LETTER INDICATES TYPE)		POWER OR LIGHTING PANEL
	RECESSED FLUORESCENT LIGHTING FIXTURE ON EMERGENCY CIRCUIT		TELEPHONE TERMINAL BACKBOARD
	SURFACE MOUNTED FLUORESCENT LIGHTING FIXTURE	30/20	DISCONNECT SWITCH (SWITCH SIZE/FUSE SIZE; NF = NON-FUSED)
	SURFACE MOUNTED FLUORESCENT FIXTURE ON EMERGENCY CIRCUIT		MOTOR LOCATION
	WALL MOUNTED FLUORESCENT LIGHTING FIXTURE		COMBINATION MOTOR STARTER / MOTOR CIRCUIT PROTECTOR LOCATION
	WALL MOUNTED FLUORESCENT FIXTURE ON EMERGENCY CIRCUIT		VARIABLE FREQUENCY DRIVE / VARIABLE SPEED CONTROLLER
	RECESSED WALL WASH LIGHTING FIXTURE		MISCELLANEOUS CONTROL PANEL
	RECESSED WALL WASH LIGHTING FIXTURE ON EMERGENCY CIRCUIT	R	RELAY OR CONTACTOR FOR LIGHTING CONTROL
	CEILING MOUNTED LIGHTING OUTLET (SEE SCHEDULE)	F	FIRE ALARM STROBE LIGHT - 80"AFF U.O.N.
	CEILING MOUNTED LIGHTING OUTLET ON EMERGENCY CIRCUIT	FS	RECESSED CLG-MTD FIRE ALARM VOICE COMM. SPEAKER
	WALL MOUNTED LIGHTING OUTLET (SEE SCHEDULE)	FS	RECESSED WALL-MTD FIRE ALARM VOICE COMM. SPEAKER / STROBE
	WALL MOUNTED LIGHTING OUTLET ON EMERGENCY CIRCUIT	FS	SURFACE CLG-MTD FIRE ALARM VOICE COMM. SPEAKER
	WALL MOUNTED STEP LIGHT	FS	SURFACE WALL-MTD FIRE ALARM VOICE COMM. SPEAKER
	SURFACE/PENDANT MOUNTED LIGHTING OUTLET	FS	SURFACE WALL-MTD FIRE ALARM VOICE COMM. SPEAKER / STROBE
	LIGHTING TRACK WITH JUNCTION BOX	F	FIRE ALARM MANUAL PULL STATION - 48"AFF U.O.N.
	EXIT LIGHT CEILING MOUNTED, (ARROWS AS INDICATED)		SMOKE DETECTOR (PHOTOELECTRIC U.O.N.)
	EXIT LIGHT WALL MTD. (SHADING INDICATES LIGHTED FACE)		135F HEAT DETECTOR UNLESS OTHERWISE NOTED
	EXIT LIGHT END MTD. (SHADING INDICATES LIGHTED FACE(S))		DUCT MOUNTED SMOKE DETECTOR (S=SUPPLY; R=RETURN)
	DUPLEX CONVENIENCE RECEPTACLE - 16"AFF U.O.N.	CO	CARBON MONOXIDE DETECTOR - 60"AFF U.O.N.
	DOUBLE DUPLEX CONVENIENCE RECEPTACLE - 16"AFF U.O.N.		SMOKE DETECTOR REMOTE INDICATOR LIGHT AND TEST SWITCH
	SINGLE CONVENIENCE RECEPTACLE - 16"AFF U.O.N.	FSR	FAN SHUTDOWN RELAY
	GROUND FAULT INTERRUPTING RECEPTACLE - 16"AFF U.O.N.	FCR	FAN CONTROL RELAY - ADDRESSABLE RELAY MODULE
	SPECIAL OUTLET CONFIGURATION - SEE NEMA #	FAI	FIRE ALARM INTERFACE - ADDRESSABLE RELAY MODULE
	FLOOR BOX WITH DUPLEX RECEPTACLE (1) = TYPE-SEE 16100	FSI	FIRE / SECURITY SYSTEM INTERFACE
	FLOOR BOX WITH DOUBLE DUPLEX RECEPTACLE (1) = TYPE-SEE 16100	FS	FLOW SWITCH
	FLOOR BOX WITH COMBINATION TELE/DATA OUTLET	TS	TAMPER SWITCH
XF	POWER TRANSFORMER	PS	PRESSURE SWITCH
J	WALL MOUNTED JUNCTION BOX		MAGNETIC DOOR HOLDER
J	CEILING MOUNTED JUNCTION BOX		BELL
	TELEPHONE OUTLET - 16"AFF U.O.N.		BUZZER
	COMMUNICATIONS OUTLET - 16"AFF U.O.N.	TC	TIME CLOCK
	COMBINATION TELE/DATA OUTLET - 16"AFF U.O.N.	PC	PHOTO CELL
S	SINGLE POLE SWITCH - 48"AFF U.O.N.		EQUIPMENT / OUTLET CONTROL GROUP WIRING
S_3	3 - WAY SWITCH - 48"AFF U.O.N.		EMERGENCY EQUIPMENT / OUTLET CONTROL GROUP WIRING
S_4	4 - WAY SWITCH - 48"AFF U.O.N.		UNSWITCHED BRANCH CIRCUIT WIRING
S_a	SINGLE POLE SWITCH, LETTER INDICATES CONTROL - 48"AFF U.O.N.		UNSWITCHED EMERGENCY BRANCH CIRCUIT WIRING
S_D	DIMMER (SWITCH) OR CONTROL - 48"AFF U.O.N.	LP##	HOMERUN TO PANEL (LP = PANEL NAME; # = CIRCUIT #)
S_{D3}	3-WAY DIMMER (SWITCH) OR CONTROL - 48"AFF U.O.N.	LP/#RN	HOMERUN TO PANEL VIA RELAY OR CONTACTOR (RN = RELAY NUMBER)
S_K	KEY SWITCH - 48"AFF U.O.N.		BRANCH CIRCUIT ARROW
S_P	SWITCH WITH PILOT LIGHT - 48"AFF U.O.N.		MISCELLANEOUS SYSTEM ARROW (AS DEFINED)
$S_{R/L}$	MOMENTARY CONTACT RAISE / LOWER SWITCH - 48"AFF U.O.N.		TELECOMM. OR MISCELLANEOUS SIGNAL CONDUIT
	BREAK GLASS EMERGENCY SWITCH - 48"AFF U.O.N.	WP	WEATHERPROOF
S_M	MOTOR DISCONNECT SWITCH - SNAP TYPE (SEE SPECS.)	B.O.	BY OTHERS
HC	PUSH BUTTON (HC=HANDICAP)	PB	PULL BOX
S_O	OCCUPANCY SENSOR SWITCH - WALL MOUNTED - 48"AFF U.O.N.	JB	JUNCTION BOX
OC	360° CEILING-MOUNTED OCCUPANCY SENSOR SWITCH	CB	CIRCUIT BREAKER
CKT	CIRCUIT	E	EMERGENCY
PNL	PANEL	C	CONDUIT
AFF	ABOVE FINISHED FLOOR	CH	DEVICE MOUNTED ABOVE/AT COUNTER HEIGHT
U.O.N.	UNLESS OTHERWISE NOTED	EWH	ELECTRIC WATER HEATER
J	WALL MOUNTED JUNCTION BOX (A - AV, D - DATA, L - LIGHTING) 4 11/16" BOX WITH PLASTER RING	H	DEVICE HORIZONTALLY MOUNTED
J	CEILING MOUNTED JUNCTION BOX (A - AV, D - DATA, L - LIGHTING) 4 11/16" BOX WITH PLASTER RING	HD	HAND DRYER
		VESDA	VERY EARLY SMOKE DETECTION APPERATUS

GENERAL NOTES

1. REFER TO SPECIFICATIONS FOR GENERAL REQUIREMENTS OF ALL ELECTRICAL EQUIPMENT, RACEWAYS, AND GROUNDING SYSTEMS.
2. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS AND ELEVATION DETAILS FOR EXACT LOCATIONS, MOUNTING, AND ORIENTATION OF ALL LIGHTING FIXTURES, EQUIPMENT, DEVICES, AND OUTLETS.
3. REFER TO ARCHTECTURAL DRAWINGS AND ELEVATION DETAILS FOR EXACT LOCATION AND MOUNTING OF ALL RECEPTACLES, SWITCHES, TELEPHONE AND DATA OUTLETS. CONFIRM WITH ARCHITECT EXACT LOCATION AND MOUNTING HEIGHTS OF ALL DEVICES PRIOR TO INSTALLATION OF ANY WORK.
4. PROVIDE A SUITABLE JUNCTION BOX AT EACH RECESSED FIXTURE, WHETHER SPECIFICALLY INDICATED OR NOT.
5. ALL CONDUITS SHALL BE RUN CONCEALED IN WALLS AND ABOVE HUNG CEILINGS. STUB-OUT OF WALLS AND FLOORS AS REQUIRED FOR CONNECTIONS TO EQUIPMENT AND/OR DEVICES.
6. ALL FEEDERS AND BRANCH CIRCUITS SHALL INCLUDE A SEPARATE, INSULATED GREEN GROUND CONDUCTOR, SIZED AS INDICATED AND PER NEC REQUIREMENTS.
7. COORDINATE WITH MECHANICAL, PLUMBING, FIRE PROTECTION, ARCHITECTURAL, IRRIGATION, AND LANDSCAPE DRAWINGS FOR EXACT LOCATIONS, MOUNTING HEIGHTS, AND MOUNTING DETAILS FOR ALL EQUIPMENT INSTALLED ON THIS PROJECT. WORK UNDER THIS DIVISION (26) SHALL INCLUDE ALL ELECTRICAL WORK DETAILED, SPECIFIED, OR OTHERWISE REQUIRED FOR THE SUPPORT OF OTHER TRADES, UNLESS OTHERWISE SPECIFICALLY INDICATED.
8. COORDINATE WITH MECHANICAL CONTRACTOR AND THE REQUIREMENTS OF DIVISION 23 FOR LOCATIONS OF ALL TEMPERATURE CONTROL PANELS, DUCT-MOUNTED SMOKE DETECTORS, MOTOR STARTERS, AND OTHER EQUIPMENT. POWER FOR THE SAME SHALL BE PROVIDED AND INSTALLED BY DIVISION 26.
9. A MAINTENANCE LABEL SHALL BE AFFIXED TO ALL EQUIPMENT REQUIRING PREVENTIVE MAINTENANCE AND 3 COPIES OF ALL MAINTENANCE INSTRUCTIONS SHALL BE PROVIDED FOR THE OWNER'S USE.
10. COORDINATE CONSTRUCTION AND DESIGN OF TRIM AND SUPPORTS FOR ALL LIGHTING UNITS FOR CONFORMITY WITH THE CEILINGS IN WHICH THE UNITS ARE TO BE INSTALLED. ANY SPECIAL WORK OR COMPONENTS THAT MAY BE REQUIRED TO OVERCOME UNUSUAL DIFFICULTIES IN FITTING DESIGNS TO PARTICULAR LOCATIONS, OR TO CLEAR UNFORSEEN OBSTACLES, ETC., SHALL BE PROVIDED WITHOUT EXTRA COST TO THE OWNER.
11. ALL LIGHTING FIXTURES LOCATED AT THE EXTERIOR OF THE BUILDING SHALL BE LISTED AND LABELED FOR WET LOCATIONS, AND SHALL BE FULLY GASKETED AND TAMPER-RESISTANT. PROVIDE WITH TAMPER-RESISTANT HARDWARE AND 3 SETS OF ASSOCIATED TOOLS TO OWNER.
12. COORDINATE LOCATIONS OF DEVICES AND OUTLETS IN ALL STORAGE AREAS WITH ARCHITECT AND FURNITURE/SHELVING BEING PROVIDED IN THESE AREAS.
13. DIVISION 23 TEMPERATURE CONTROL / MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL POWER AND CONTROL WIRING TO VAV BOXES AND TERMINAL CONTROL UNITS AS NOTED ON THE MECHANICAL DRAWINGS AND IN SECTION 23900. POWER SHALL BE FROM NORMAL SOURCES AS SCHEDULED ON THE ELECTRICAL DRAWINGS U.O.N.
14. ELECTRICAL CONTRACTOR SHALL PROVIDE POWER WIRING TO, BETWEEN, AND FROM ALL DISCONNECT SWITCHES AND MOTOR STARTERS, WHETHER IN THE SAME ENCLOSURE OR MOUNTED AS SEPARATE UNITS. ALL VARIABLE FREQUENCY DRIVES (VFD'S), COMBINATION STARTERS, AND MANUAL MOTOR STARTERS SHALL BE FURNISHED BY DIVISION 23 AND SHALL BE INSTALLED BY DIVISION 26. REFER TO SECTION 23053.
15. ALL SAFETY DISCONNECT SWITCHES SHALL BE SUPPLIED AND INSTALLED BY DIVISION 26. REFER TO SECTION 260500. REFER TO MECHANICAL AND ELECTRICAL PLANS FOR UNIT AND DEVICE LOCATIONS. SAFETY DISCONNECTS ON THE LOAD SIDE OF VFD'S SHALL BE EQUIPPED WITH AUXULLARY CONTACTS AND WIRING BACK TO "RUN-ALLOW" TERMINALS ON THE VFD TO PREVENT THE VFD FROM STARTING WITH THE DISCONNECT SWITCH IN THE OPEN POSITION.
16. WIRING BETWEEN MOTOR CONTROLLERS AND 2-SPEED MOTORS AND WYE/DELTA TYPE MOTORS SHALL INCLUDE 6 WIRES. WIRE SIZES SHALL MATCH FEEDER TO CONTROLLER UNLESS OTHERWISE NOTED.
17. ELECTRICAL CONTRACTOR SHALL PROVIDE 120 VOLT POWER WIRING TO ALL TEMPERATURE CONTROL PANELS, IRRIGATION CONTROL PANELS, AND OTHER CONTROLLERS SUPPLIED BY OTHER DIVISIONS.
18. DO NOT SCALE THE DRAWINGS FOR DIMENSIONS NOT INDICATED. CONSULT WITH ARCHITECT FOR RESOLTION OF ANY DIMENSIONS NOT INDICATED.
19. LIGHT SWITCHES, RECEPTACLES, TELEPHONES, AND DATA OUTLETS, AS WELL AS FIRE ALARM PULL STATIONS, HORN/STROBES, AND OTHER DEVICES, SHALL BE MOUNTED AT HEIGHTS TO COMPLY WITH THE LATEST EDITION OF THE AMERICANS WITH DISABILITIES ACT (ADA), THE APPLICABLE STATE AND LOCAL BUILDING CODES, AND PER ALL AUTHORITIES HAVING JURISDICTION. REFER TO ARCHITECTURAL DETAILS FOR ADDITIONAL MOUNTING LOCATION INFORMATION.

AUDIO/VISUAL SYSTEM NOTES

1. THE ELECTRICAL CONTRACTOR SHALL PROVIDE A COMPLETE EMPTY RACEWAY, TRAY, AND BACKBOX SYSTEM FOR THE ABOVE SYSTEM IN ACCORDANCE WITH SPECIFICATIONS SECTIONS 260500, 274000 AND THE "AV-SERIES" DRAWINGS.
2. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL POWER CONNECTIONS FOR THE ABOVE SYSTEM AS OUTLINED IN SPECIFICATION SECTION 274000 AND AS INDICATED ON THE ELECTRICAL DRAWINGS.
3. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL GROUNDING COMPONENTS AND CONNECTIONS FOR THE ABOVE SYSTEM AS OUTLINED IN SPECIFICATION SECTION 260500 AND 274000 WHEREAS THE MORE STRINGENT APPLIES.
4. THE AV CONTRACTOR SHALL BE RESPONSIBLE FOR ALL AUDIO/VISUAL SYSTEM EQUIPMENT, DEVICES, WIRING, AND CONNECTIONS AS SPECIFIED IN SECTION 274000 AND AS INDICATED ON THE "AV-SERIES" DRAWINGS. PATHWAYS SHALL BE BY THE ELECTRICAL CONTRACTOR.
5. REFER TO THE RESPONSIBILITY MATRIX ON THE "AV-SERIES" DRAWINGS. ALL REFERENCES MADE TO THE GENERAL CONTRACTOR SHALL APPLY TO THE ELECTRICAL CONTRACTOR'S SCOPE. COORDINATE ACCORDINGLY.

SECURITY SYSTEM NOTES

1. THE ELECTRICAL CONTRACTOR SHALL PROVIDE A COMPLETE EMPTY RACEWAY AND BACKBOX SYSTEM FOR THE ABOVE SYSTEM IN ACCORDANCE WITH SPECIFICATIONS SECTIONS 260500, 282000, 281300 AND THE "LV-SERIES" DRAWINGS.
2. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL POWER CONNECTIONS FOR THE ABOVE SYSTEM AS OUTLINED AND AS INDICATED ON THE ELECTRICAL DRAWINGS.
3. THE SECURITY CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SECURITY EQUIPMENT, DEVICES, WIRING, AND CONNECTIONS AS INDICATED ON THE "LV-SERIES" DRAWINGS.
4. REFER TO THE RESPONSIBILITY MATRIX ON THE "LV-SERIES" DRAWINGS. ALL REFERENCES MADE TO THE GENERAL CONTRACTOR SHALL APPLY TO THE ELECTRICAL CONTRACTOR'S SCOPE. COORDINATE ACCORDINGLY.

INFORMATION TECHNOLOGY SYSTEM NOTES

1. THE ELECTRICAL CONTRACTOR SHALL PROVIDE A COMPLETE EMPTY RACEWAY AND BACKBOX SYSTEM FOR THE ABOVE SYSTEM IN ACCORDANCE WITH SPECIFICATIONS SECTIONS 260500AND THE "LV-SERIES" DRAWINGS.
2. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL POWER CONNECTIONS FOR THE ABOVE SYSTEM AS INDICATED ON THE ELECTRICAL DRAWINGS.
3. THE "IT" CONTRACTOR SHALL BE RESPONSIBLE FOR ALL "IT" EQUIPMENT, DEVICES, WIRING, AND CONNECTIONS AS INDICATED ON THE "LV-SERIES" DRAWINGS.
4. REFER TO THE RESPONSIBILITY MATRIX ON THE "LV-SERIES" DRAWINGS. ALL REFERENCES MADE TO THE GENERAL CONTRACTOR SHALL APPLY TO THE ELECTRICAL CONTRACTOR'S SCOPE. COORDINATE ACCORDINGLY.

CJMW ARCHITECTURE
525 Vine Street, Suite 350
Winston-Salem, NC 27101
p. 336.724.1503
www.cjmw.com

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NORTH CAROLINA PROFESSIONAL SEAL 030487 ENGINEER LUKE FRANKLIN
OCT 2 4 2023

CONSTRUCTION DOCUMENTS

#	Description	Date

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ELECTRICAL SYMBOLS AND NOTES

E0.01

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PROJECT NUMBER: 22 -0410
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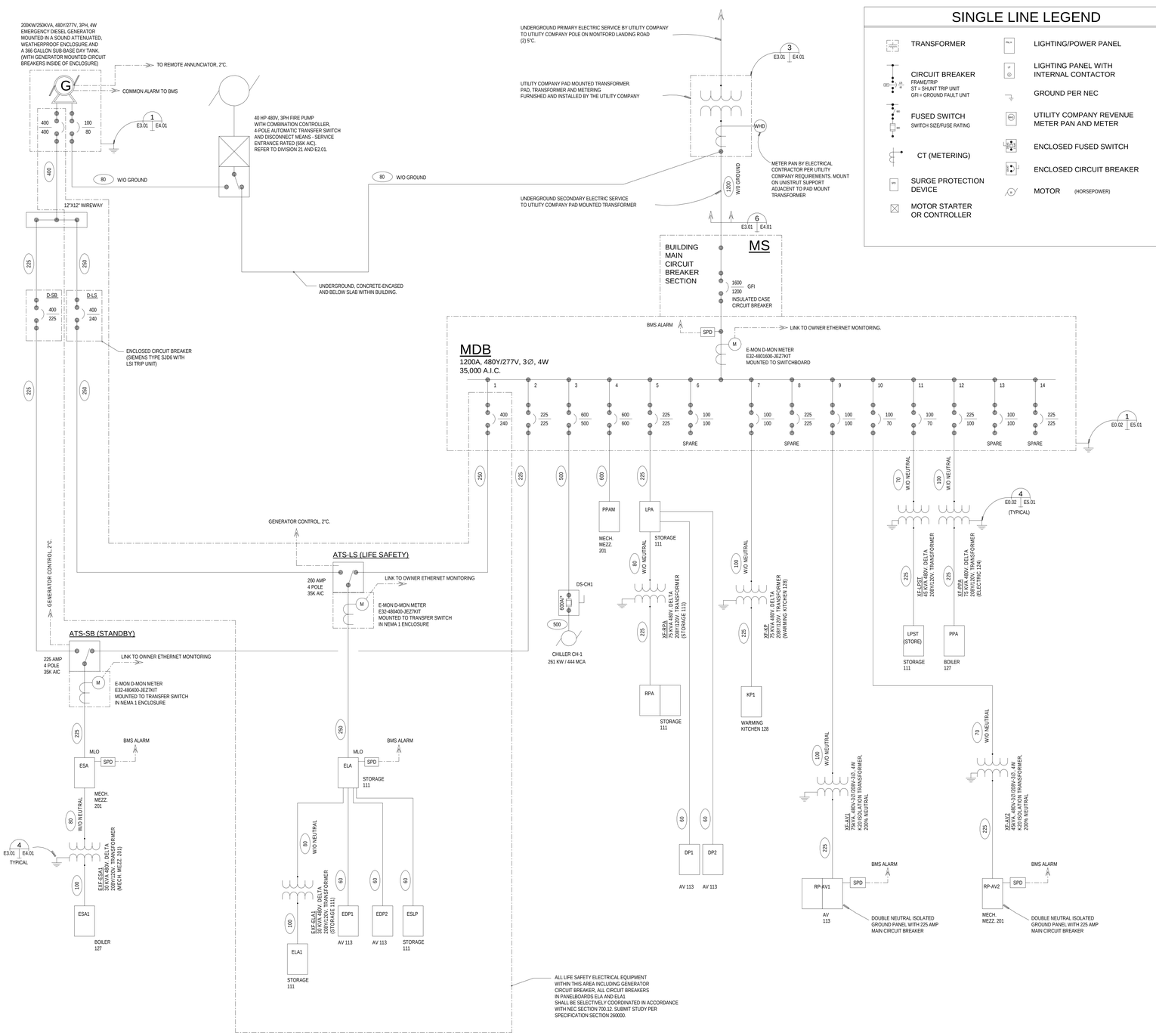

SINGLE LINE LEGEND

- TRANSFORMER
- CIRCUIT BREAKER — FRAME/TRIP; ST = SHUNT TRIP UNIT; GFI = GROUND FAULT UNIT
- FUSED SWITCH — SWITCH SIZE/FUSE RATING
- CT (METERING)
- SURGE PROTECTION DEVICE
- MOTOR STARTER OR CONTROLLER
- LIGHTING/POWER PANEL
- LIGHTING PANEL WITH INTERNAL CONTACTOR
- GROUND PER NEC
- UTILITY COMPANY REVENUE METER PAN AND METER
- ENCLOSED FUSED SWITCH
- ENCLOSED CIRCUIT BREAKER
- MOTOR (HORSEPOWER)

CONDUCTOR & CONDUIT SCHEDULE

FEEDER SYMBOL	CONDUCTORS (3PH,4W) WITH GROUND	CONDUIT SIZE
RS	REFER TO PANEL SCHEDULE	
20	4#12 + 1#12 G	(1) 3/4"
30	4#10 + 1#10 G	(1) 3/4"
40	4#8 + 1#10 G	(1) 3/4"
50	4#6 + 1#10 G	(1) 1"
60	4#6 + 1#10 G	(1) 1"
70	4#4 + 1#8 G	(1) 1 1/4"
80	4#4 + 1#8 G	(1) 1 1/4"
100	4#2 + 1#8 G	(1) 1 1/4"
125	4#1 + 1#6 G	(1) 1 1/2"
150	4#1/0 + 1#6 G	(1) 2"
175	4#2/0 + 1#6 G	(1) 2"
200	4#3/0 + 1#6 G	(1) 2"
225	4#4/0 + 1#4 G	(1) 2 1/2"
250	4#250KCM + 1#4 G	(1) 2 1/2"
300	4#350KCM + 1#4 G	(1) 3"
350	4#500KCM + 1#2 G	(1) 3 1/2"
400	4#500KCM + 1#2 G	(1) 3 1/2"
420	4#600KCM + 1#2 G	(1) 4"
450	8#4/0 + 2#2 G	(2) 2 1/2"
500	8#250KCM + 2#2 G	(2) 2 1/2"
600	8#350KCM + 2#1 G	(2) 3"
700	8#500KCM + 2#1/0 G	(2) 3 1/2"
800	8#500KCM + 2#1/0 G	(2) 3 1/2"
840	8#600KCM + 2#2/0 G	(2) 4"
900	12X350KCM + 3#2/0 G	(3) 3"
1000	12X500KCM + 3#2/0 G	(3) 3 1/2"
1200	12X600KCM + 3#3/0 G	(3) 4"
1600	16X600KCM + 4#4/0 G	(4) 4"
2000	20X600KCM + 5X250KCM G	(5) 4"
2500	24X600KCM + 6X350KCM G	(6) 4"
3000	32X600KCM + 8X400KCM G	(8) 4"

NOTES:

1. PROVIDE 4-WIRE CIRCUIT, UNLESS DEVICE SERVED DOES NOT HAVE PROVISIONS FOR A NEUTRAL CONNECTION.
2. ALL CONDUCTOR SIZES ARE FOR COPPER CONDUCTORS, WITH 90 DEGREE INSULATION RATING.
3. FOR AN OVERCURRENT PROTECTION DEVICE OF INTERMEDIATE RATING OF THOSE LISTED, PROVIDE WIRING INDICATED FOR THE NEXT HIGHER RATED DEVICE.
4. VD=FEEDER UPSIZED DUE TO VOLTAGE DROP 3W=3WIRE FEEDER (NO NEUTRAL) REQUIRED 5W=5WIRE FEEDER (2X NEUTRAL) REQUIRED
5. FEEDERS ON TRANSFORMER SECONDARY SIDE SHALL CONTAIN SYSTEM BONDING JUMPER SIZED PER NEC 250-30(A)(1), & NEC TABLE 250-66.

1 ELECTRICAL SINGLE LINE DIAGRAM

E3.01 | E3.01 SCALE: NONE

BASIS OF DESIGN OF EQUIPMENT AND CIRCUIT BREAKERS IS BY SIEMENS INDUSTRY, INC.

CJMW ARCHITECTURE
525 Vine Street, Suite 350
Winston-Salem, NC 27101
p. 336.724.1503
www.cjmw.com

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NORTH CAROLINA PROFESSIONAL SEAL 040487 ENGINEER JOHN M. FRANKLIN
OCT 2 4 2023

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ELECTRICAL SINGLE LINE DIAGRAM

E0.02

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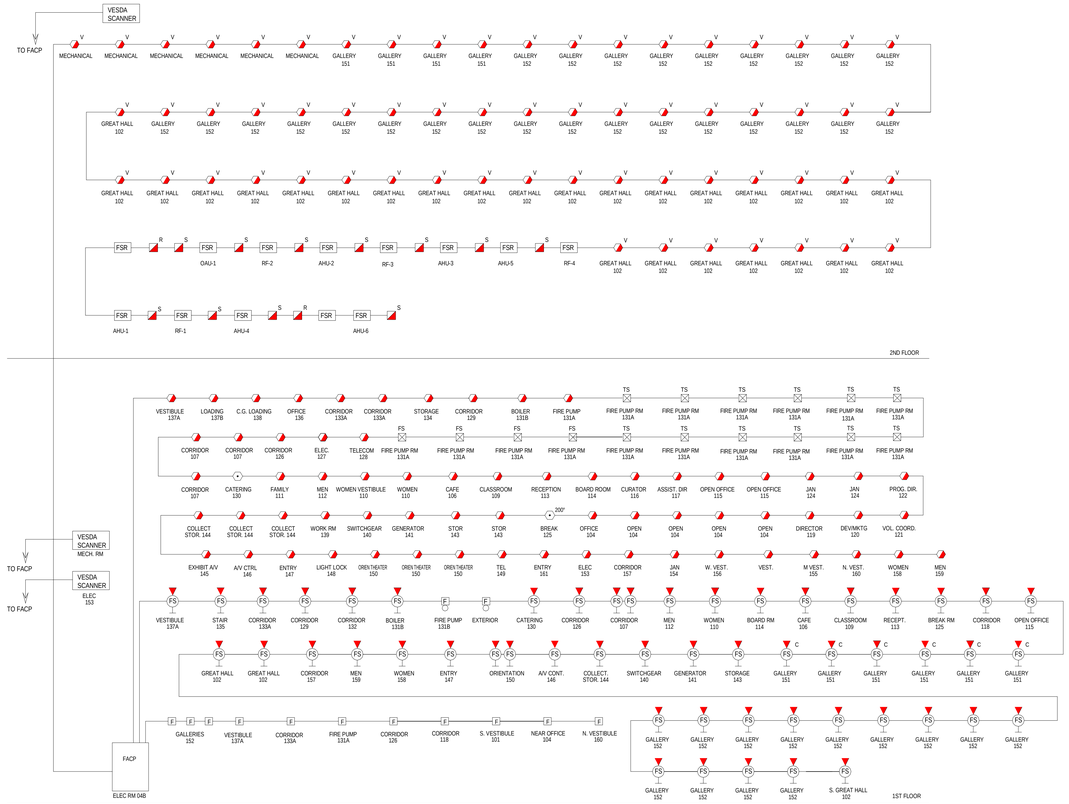
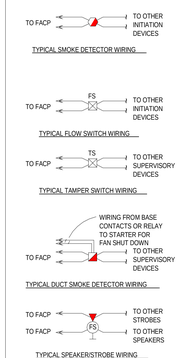


3 FIRE ALARM RISER DIAGRAM

E3.02 | E3.02 SCALE: NONE

FIRE ALARM DEVICE WIRING KEY



REFER TO SECTION 283100 OF SPECIFICATIONS FOR WIRING SIZES AND QUANTITIES SERVING EACH TYPE OF DEVICE ABOVE

FIRE ALARM NOTES:

1. FIRE SPEAKERS AND STROBES SHALL BE WIRED VIA VOICE EVACUATION LOOPS AS SCHEDULED ON THIS DRAWING.
2. SPEAKER TAP SETTINGS SHALL BE PER SCHEDULE ON THIS DRAWING. ALLOW SUFFICIENT AMPLIFIER WATTAGE SO THAT SEVERAL SPEAKER TAPS CAN BE INCREASED IN THE FIELD IF REQUIRED TO MEET SOUND OUTPUT REQUIREMENTS.
3. VOICE COMMUNICATIONS SPEAKERS SHALL BE WIRED ALTERNATELY, WITH EVERY OTHER SPEAKER ON THE SAME CIRCUIT, SO THAT THE FAILURE OF ONE CIRCUIT WILL NOT LEAVE AN ENTIRE AREA WITHOUT COMMUNICATIONS.
4. REFER TO PLANS FOR EXACT QUANTITIES AND LOCATIONS OF ALL DEVICES. IF A DISCREPANCY BETWEEN THE PLANS AND THE RISER IS FOUND, PROVIDE THE GREATER/MORE STRINGENT QUANTITY OF DEVICES.
5. ALL FIRE ALARM DEVICES SHALL BE WIRED VIA ADDRESSABLE LOOPS FROM THE FIRE ALARM DCP'S PER MANUFACTURER'S RECOMMENDATIONS. LEAVE SPACE FOR THE ADDITION OF 10 FUTURE DEVICES PER LOOP MINIMUM.
6. PROVIDE A SEPARATE RACEWAY SYSTEM FOR FIRE ALARM WIRING. POWER SHALL NOT BE INSTALLED IN RACEWAYS WITH LOW VOLTAGE WIRING. RACEWAY SHALL BE ELECTRICAL METALLIC TUBING (EMT), MINIMUM 3/4-INCH SIZE, MAXIMUM 40% FILL AND AS INDICATED ON DRAWINGS. REFER TO SECTION 260500 FOR RACEWAY AND INSTALLATION REQUIREMENTS.
7. SMOKE DETECTORS NOTED WITH "TOS" + TOP OF SHAFT/STAIR. SUCH DETECTORS SHALL BE WIRED AND PROGRAMMED TO OPEN SHAFT HATCH UPON DETECTION OF SMOKE. DETECTORS SHALL RECEIVE THEIR CONTROL POWER FROM THE FACP AND SHALL REPORT ALL ALARMS TO THE FACP.
8. ALL DOORS ON MAGNETIC HOLD-OPENS SHALL BE RELEASED AUTOMATICALLY UPON ANY FIRE ALARM CONDITION.
9. ALL AC UNITS, AHU'S, AND RF'S RATED GREATER THAN 2000 CFM SHALL AUTOMATICALLY SHUTDOWN UPON ANY FIRE ALARM CONDITION.
10. ALL EF'S WITH FAN SHUTDOWN RELAYS (FSR) SHALL BE AUTOMATICALLY SHUTDOWN UPON ANY FIRE ALARM CONDITIONS.
11. ALL FIRE ALARM SYSTEM POWER SUPPLIES SHALL BE POWERED VIA CIRCUIT BREAKERS IN PANEL AS INDICATED IN PANEL SCHEDULES. PROVIDE ALL SUCH CIRCUIT BREAKERS WITH HANDLE LOCKING DEVICES.
12. GENERATOR COMMON ALARM AND TROUBLE SIGNALS SHALL REPORT AS SUPERVISORIES TO FACP FROM GENERATOR REMOTE ANNUNCIATOR PANEL.
13. THE FIRE ALARM PANEL SHALL SEND A SIGNAL TO THE BMS SYSTEM INDICATING THAT A FIRE ALARM CONDITION HAS OCCURRED.
14. SMOKE DETECTORS SHALL NOT BE LOCATED IN A DIRECT AIR FLOW NOR CLOSER THAN THREE (3) FEET FROM AN AIR SUPPLY DIFFUSER OR RETURN AIR OPENING. INCREASE SEPARATION AS REQUIRED BY NFPA 72.
15. THE CONTRACTOR SHALL PERFORM TESTING TO DETERMINE RADIO COVERAGE AND IF DEEMED REQUIRED, PROVIDE A TWO-WAY RADIO COMMUNICATIONS ENHANCEMENT SYSTEM PER NFPA REQUIREMENTS. BUILDINGS AND STRUCTURES THAT CANNOT SUPPORT THE REQUIRED LEVEL OF RADIO COVERAGE SHALL BE EQUIPPED WITH A RADIATING CABLE SYSTEM OR A DISTRIBUTED ANTENNA SYSTEM (DAS), COMPLETE WITH FCC-CERTIFIED SIGNAL BOOSTERS, OR BOTH, OR WITH A SYSTEM THAT IS OTHERWISE APPROVED, IN ORDER TO ACHIEVE THE REQUIRED, ADEQUATE RADIO COVERAGE.

SPEAKER TAP SETTINGS

TAP (W)	AREA SERVED
1/8	-
1/4	-
1/2	TOILET ROOMS, STAIRWAYS
1	OPEN OFFICE AREAS, GALLERIES
2	MECHANICAL ROOMS
4	LOADING DOCK & CATERING KITCHEN
8	NONE

STROBE UNIT CANDELA RATINGS

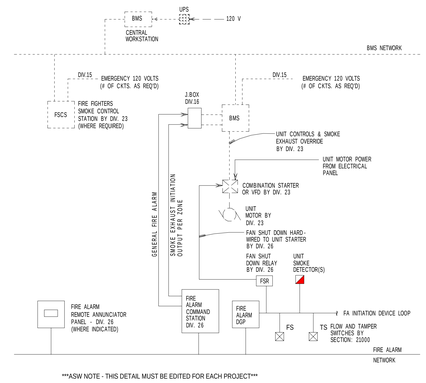
CANDELA	MOUNTING	AREA SERVED
15	WALL	CORRIDORS, & AREAS THAT ARE 20'X20' AND SMALLER
30	WALL	LARGE TOILET ROOMS AND AREAS 28'X28' MAXIMUM
75	WALL	MECHANICAL ROOMS
110	WALL	GALLERIES & ORIENTATION THEATER

VOICE EVACUATION ZONE SCHEDULE

ZONE	AREA SERVED
A	1ST FLOOR
B	2ND FLOOR
C	ALL FIRE STAIRS
D	SPARE
E	SPARE
F	SPARE

FIRE ALARM SYSTEM SEQUENCE OF OPERATION

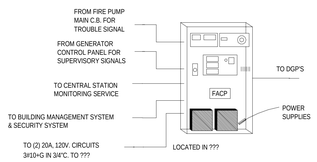
		OUTPUTS																							
		DISPLAY & SOUND FIGHT AT FA CONTROL PANEL	SEND SMOKE/HEAT ALARM SIGNAL TO CENTRAL STATION	ACTIVATE ANNUNCIATION DEVICES (SPEAKER/STROBES) THROUGHOUT	SEND SIGNAL TO BUILDING MANAGEMENT SYSTEM	SENDS SHUTDOWN SIGNAL TO AIR HANDLING SYSTEMS	RELEASES DOOR HOLD-OPEN DEVICES	SEND PULL STATION ALARM SIGNAL TO CENTRAL STATION	SEND WATERFLOW ALARM TO CENTRAL STATION	SEND VALVE SUPERVISORY SIGNAL TO CENTRAL STATION	SEND FIRE PUMP SUPERVISORY SIGNAL TO CENTRAL STATION	SEND SYSTEM TROUBLE TO CENTRAL STATION	SEND SUPERVISORY SIGNAL TO FA CONTROL PANEL	SEND SIGNAL TO RECALL ELEVATORS TO DESIGNATED LEVEL	SEND SIGNAL TO SHUT OFF POWER TO ELEVATOR EQUIPMENT	SEND SIGNAL TO SHUT DOWN THEATER SOUND & PROJECTION SYSTEMS	SEND SIGNAL TO RAISE THEATER HOUSE LIGHTING SYSTEMS TO FULL "ON"
INPUTS	AREA SMOKE DETECTOR	X	X	X	X	X	X										X	X							
	DUCT SMOKE DETECTOR	X	X	X	X	X	X										X	X							
	AREA HEAT DETECTOR	X	X	X	X	X	X										X	X							
	MANUAL PULL STATION	X		X	X	X	X	X									X	X							
	SPRINKLER WATER FLOW SWITCH	X		X	X	X	X		X						X		X	X							
	SPRINKLER VALVE TAMPER SWITCH									X															
	FIRE PUMP SUPERVISORY										X														
	SYSTEM TROUBLE CONDITION													X											
	LOSS OF PRIMARY AC POWER													X											
	EMERGENCY GENERATOR ALARM OR TROUBLE														X										
	CARBON MONOXIDE DETECTOR														X										



ASW NOTE - THIS DETAIL MUST BE EDITED FOR EACH PROJECT

2 MECH. EQUIP. / FIRE ALARM INTERFACE

E3.02 | E3.02 SCALE: NONE



1 FIRE COMMAND STATION

E3.02 | E3.02 SCALE: NONE

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Winston-Salem, NC 27101
p. 336.724.1503
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OCT 2 4 2023

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ELECTRICAL FIRE ALARM RISER DIAGRAM

E0.03

ISSUE DATE: 10 -24-2023
PROJECT NUMBER: 22 -0410
DRAWN BY: LF
CHECKED BY: LF

VEST
129

WARMING KITCHEN
128

HANDICAP DOOR OPERATOR (TYP. FOR 4)

REMOTE F.A. DGP

FCU-2

RPA /15

RPA /7

KP1 /9,11,13

KP1 /4

KP1 /5

KP1 /3

KP1 /8,10,12

KP1 /2

KP1 /6

KP1 /1

KP1 /7

KP1

XF-KP

HUNG FROM SUPPLEMENTAL CEILING FRAMING (12'-2" AFF.)

FOR PROJECTOR

RP-AV1 /47

RPA /6

RPA /19

FOR MOTORIZED SUNSHADE

RP-AV1 /16

CONCEAL ALL WIRING IN DUCT ENCLOSURE. (TYPICAL- STEEL CURTAIN WALL)

RP-AV1 /17

RPA /39

MEETING ROOM
115

FOR PROJECTOR

RP-AV1 /48

RPA /5

FOR PROJECTOR

RPA /8

FOR PROJECTOR

RP-AV1 /49

FOR MOTORIZED SUNSHADE

CONCEAL ALL WIRING IN DUCT ENCLOSURE. (TYPICAL- STEEL CURTAIN WALL)

RPA /12

MOTORIZED SCREEN

CLASSROOM
114

RPA /11

FOR PROJECTOR

RP-AV1 /45

3 E4.01

COMBINATION POWER-DATA FLOORBOX, TYPICAL

RPA /13

RPA /9

FOR MOTORIZED SUNSHADE

GREAT HALL
102

DISPLAY SCREEN

RPA /27

LPST /19

LPST /22

RPA /21

LPST /20

OVERHEAD DOOR

LPST /21,23,25

RP-AV1 /36

COORDINATE LAYOUT OF RECEPTION DESK

COORDINATE HEIGHT OF ALL OUTLETS WITH FOOD SERVICE DWGS. & PURCHASED EQUIP.

LPST /17

LPST /18

LPST /1

LPST /2

KITCHEN
104A

CAFE
104

LPST /13

LPST /3

LPST /4

LPST /14,16

LPST /24,26

LPST /5

LPST /6

LPST /15

LPST /11

LPST /10,12

LPST /8

LPST /7,9

RP-AV1 /15

FOR MOTORIZED SUNSHADE

FIRE ALARM ANNUNCIATOR PNL.

FCU-1

RPA /16

RPA /14

OFFICE
112

RPA /22

VEST
101

HANDICAP DOOR OPERATOR (TYP. FOR 4)

WP

RPA /40

JAN
106

MOTHER'S ROOM
109A

CORR
110

CORR
105

FAMILY
109

WOMENS
107

MENS
108

RPA /1

RPA /2

RPA /23

RPA /26

RPA /24

RPA /42

RPA /30

RPA /25

RPA /41

SUNDIALER REPEATER

MECHOSHADE SUNDIALER CONTROLLER

ESLP

XF-LPST

EXF-ELA1

XF-RPA

LPST ELA1 ELA RPA LPA

ALL TRANSFORMERS IN THIS ROOM ARE HUNG FROM STRUCTURE

RPA /10

STORAGE
111

RP-AV1 /46

RP-AV1 /35

RP-AV1 /43

RP-AV1 /31

RP-AV1 /32

RP-AV1 /30

RP-AV1 /34

RP-AV1 /33

RP-AV1 /41

1" EC IN SLAB TO NEAREST WALL AND INTO ACCESSIBLE CEILING SPACE. (TYPICAL FOR ALL FLOOR BOXES LV WIRING)

RP-AV1 /29

MEDIUM GALLERY
121

TABLE STORAGE
116

RP-AV1 /28

OPERABLE PARTITION STACKING
117

SMALL GALLERY
120

RP-AV1 /27

RP-AV1 /26

RP-AV1 /51

AV
113

XF-AV1

ELA1 /1

DP2

EDP2

EDP1

RP-AV1 /50

RP-AV1 /52

RP-AV1 /53

RP-AV1 /54

RP-AV1 /55

RP-AV1 /56

RP-AV1 /57

RP-AV1 /58

RP-AV1 /59

RP-AV1 /60

RP-AV1 /61

RP-AV1 /62

RP-AV1 /63

RP-AV1 /64

RP-AV1 /65

RP-AV1 /66

RP-AV1 /67

RP-AV1 /68

RP-AV1 /69

RP-AV1 /70

RP-AV1 /71

FCU-3

1" EC TO LIGHTING RACK - TYPICAL FOR ALL

RP-AV1 /20

RP-AV1 /19

RP-AV1 /38

RPA /4

RPA /41

FOR AUTOMATIC FLUSH VALVE (TYP.)

1" EC TO AV RACK - TYPICAL FOR ALL

RP-AV1 /18

RP-AV1 /21

RP-AV1 /22

RP-AV1 /23

RPA /40

STAIR
100

BOILER
127

CHWR & CHWS

PPA

B-1

B-2

SWBD

SWBD-2

UH-3

ESA1

ATS-SB

ATS-LS

D-SB

D-LS

UH-2

UH-1

XF-PPA

MDB

FIRE PUMP
126

12"x12"x12" WIREWAY

EMG. DIST.
125

ELECTRIC
124

VESTIBULE STAGING
123

CONCRETE-ENCASED GROUNDING ELECTRODE, REFER TO DETAIL #1, ON DRAWING E5.01.

SERVICE GROUND BOX (REFER TO DETAIL #1+2, E5.01)

SERVICE GROUND LOOP. REFER TO DETAIL #3 ON DRAWING E5.01.

4#4 w/o GROUND IN 1 1/4"C.

4 #350KCM+1#4G IN (1) 3"C. & (3) 2"C. FOR BATTERY CHARGER, COOLANT & BLOCK HEATER & CONTROLS.

GENERATOR

TO REMOTE ANNUNCIATOR

BATTERY CHARGER

ESA1 /12

ESA1 /10

BLOCK HEATER

COMMON OUTPUTS TO BMS

FOR GENERATOR CONTROLS

ESA1 /6

FOR ELECTRIC HEAT TRACE

MDB /3

WP

PPA /17

CH-1

VIEWING ROOM
122A

RP-AV1 /39

RP-AV1 /44

COLLECTIONS STOR.
122B

RPA /35

PPA /2,4

PPA /1,3,5

DOCK LEVELER

VEST
119

FACP

ELA1 /6

CUH-1

12 #600KCM IN (3) 4"C. + (3) 2" C. FOR CONTROLS AND AUXILIARY POWER INDICATED.

HOLD FOR FINAL CIVIL DESIGN - TYPICAL FOR ALL SERVICES

UTILITY TRANSFORMER

(FRONT)

PPA /13

PPA /18

PPA /20

POWER FOR HOT BOXES COORDINATE WITH CIVIL DRAWINGS.

REFER TO DETAIL #3 ON DRAWING E5.01

UNDERGROUND PRIMARY ELECTRIC SERVICE BY UTILITY COMPANY TO UTILITY CO. POLE ON MONTFORD LANDING ROAD.

LARGE GALLERY
118

1 ELECTRICAL 1ST FLOOR POWER PLAN
1/8" = 1'-0"

PLAN NORTH

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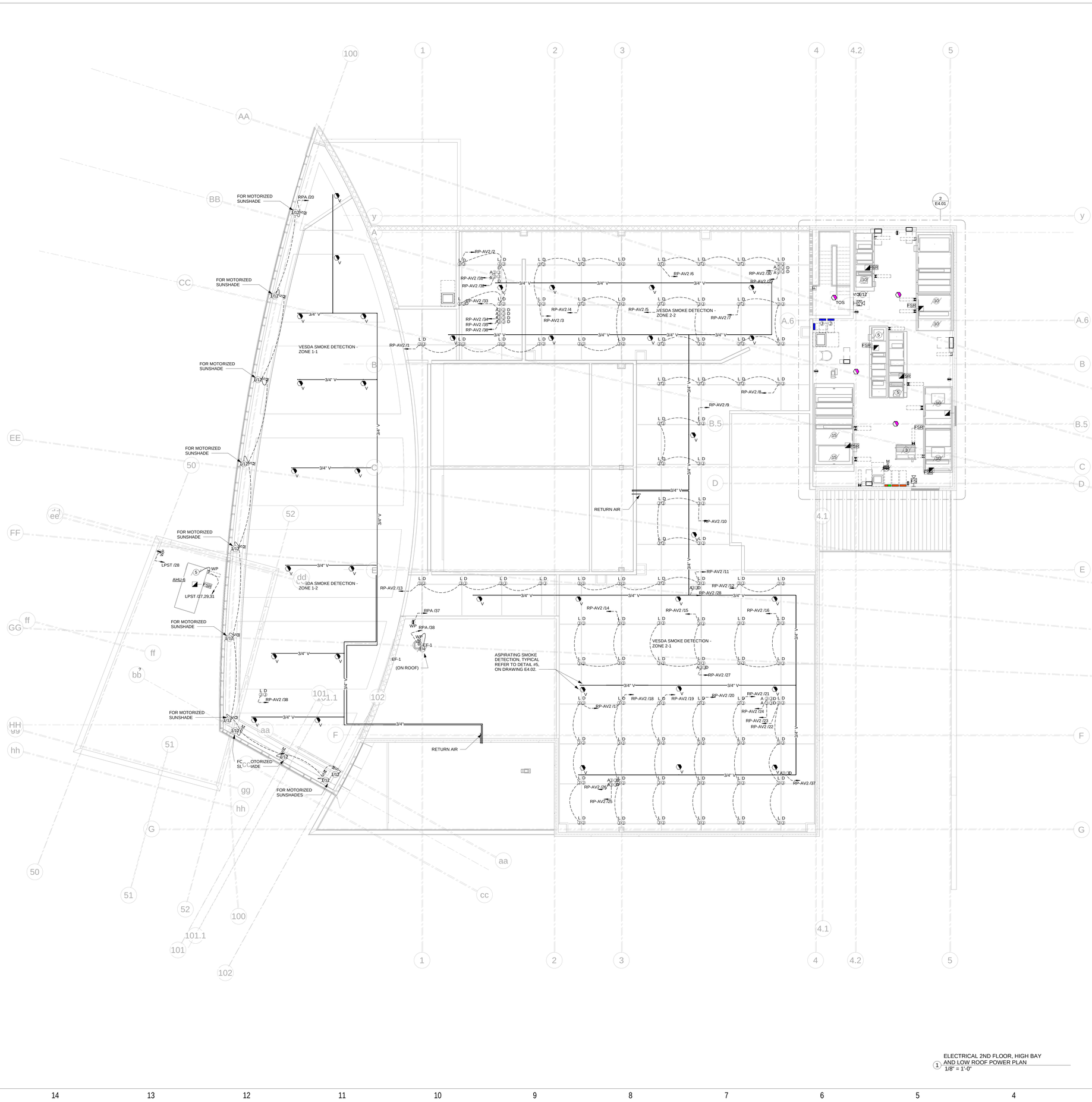
ELECTRICAL 1ST FLOOR POWER PLAN

E2.01

ISSUE DATE: 10 -24-2023
PROJECT NUMBER: 22 -0410
DRAWN BY: LF
CHECKED BY: LF



ELECTRICAL 2ND FLOOR, HIGH BAY AND LOW ROOF POWER PLAN
1/8" = 1'-0"

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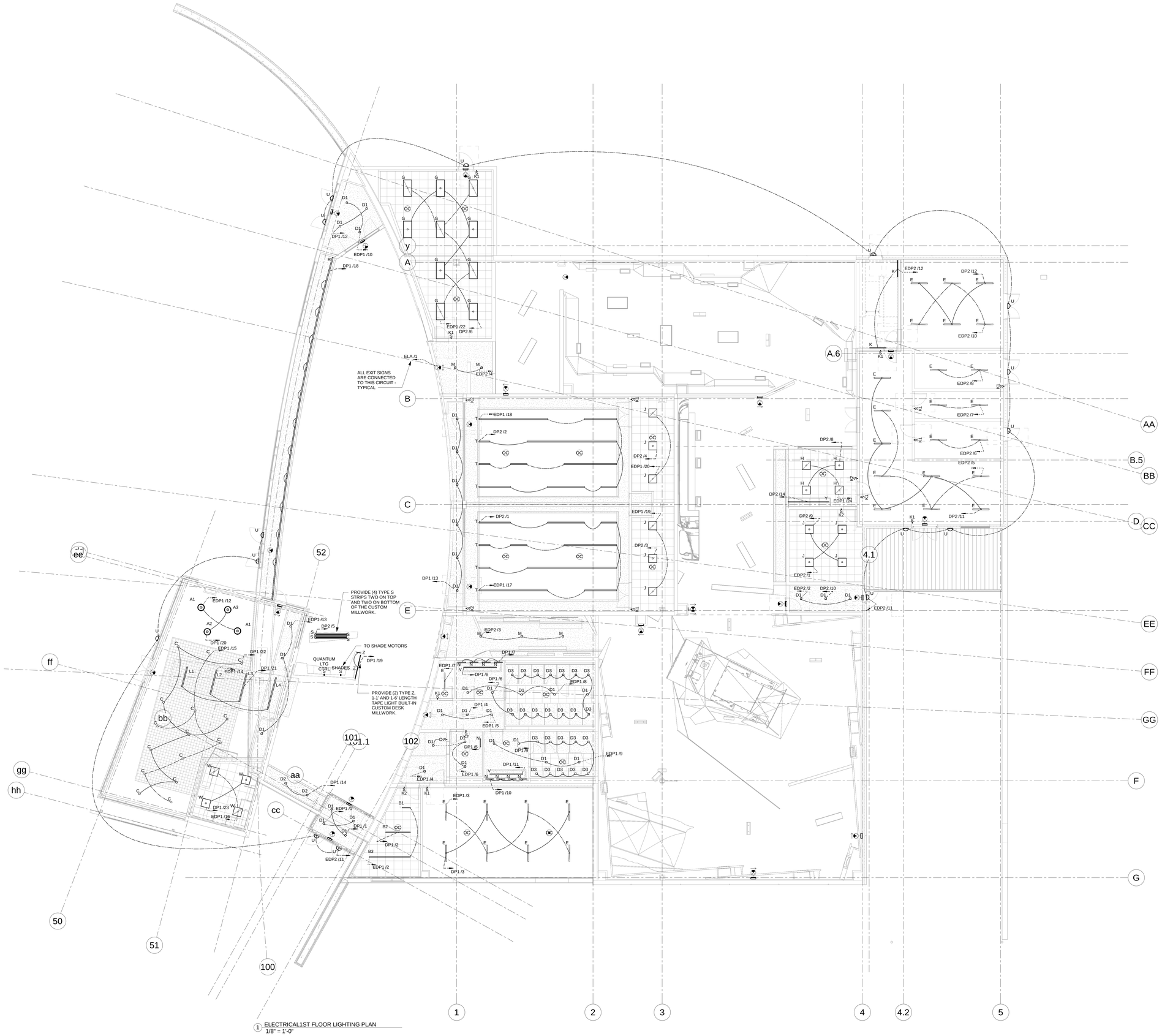
ELECTRICAL 2ND FLOOR, HIGH BAY AND LOW ROOF POWER PLAN

E2.02

ISSUE DATE: 10 -24-2023
PROJECT NUMBER: 22 -0410
DRAWN BY: AL
CHECKED BY: LF



1 ELECTRICAL1ST FLOOR LIGHTING PLAN
1/8" = 1'-0"

NOTES:
1. REFER TO GENERAL NOTES ON DRAWING E0.01.
2. REFER TO SPECIFICATIONS SECTION 265000 FOR LIGHTING FIXTURE SCHEDULES AND DESCRIPTIONS.
3. TYPICAL FOR ALL EXIT SIGNS: PROVIDE CEILING OR WALL MOUNTED, RECESSED OR SURFACE, SELF-POWERED, EDGE-LIT EXIT SIGN WITH 6" HIGH RED LETTERS ON CLEAR OR MIRRORED BACKGROUND. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR CEILING AND/OR WALL TYPES AND MOUNTING CONDITIONS. COOPER ATLITE MARATHON SERIES #TA-C/W-1/2-6-RC/RM-SA-HS HOUSING WITH ARROWS AS REQUIRED.

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ELECTRICAL 1ST FLOOR LIGHTING PLAN

E3.01

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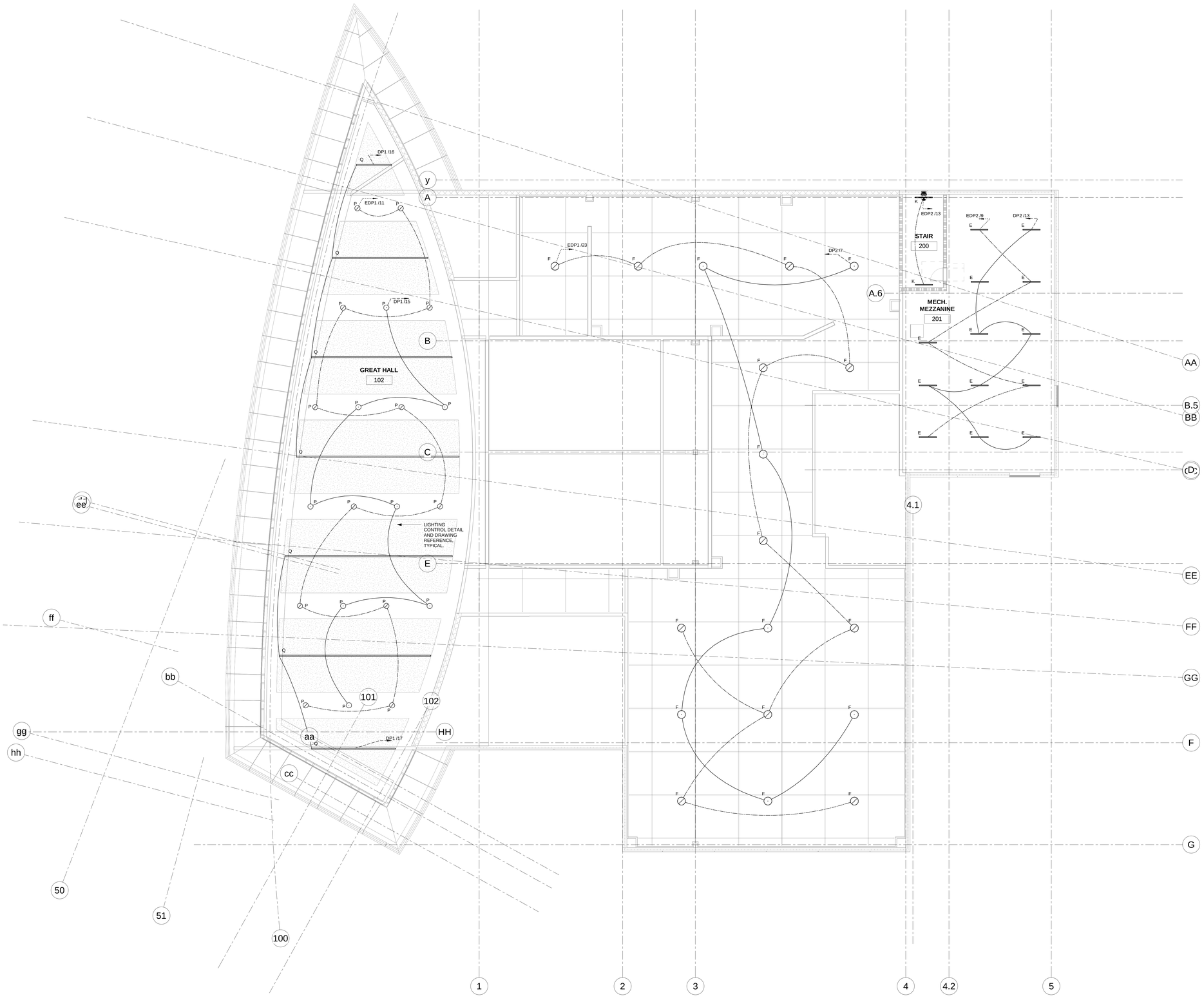
DRAWN BY: AL
CHECKED BY: LF



ELECTRICAL 2ND FLOOR HIGH BAY AND LOW ROOF LIGHTING PLAN
1/8" = 1'-0"

PLAN NORTH

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ELECTRICAL 2ND FLOOR, HIGH BAY AND LOW ROOF LIGHTING PLAN

E3.02

ISSUE DATE: 10 -24-2023
PROJECT NUMBER: 22 -0410
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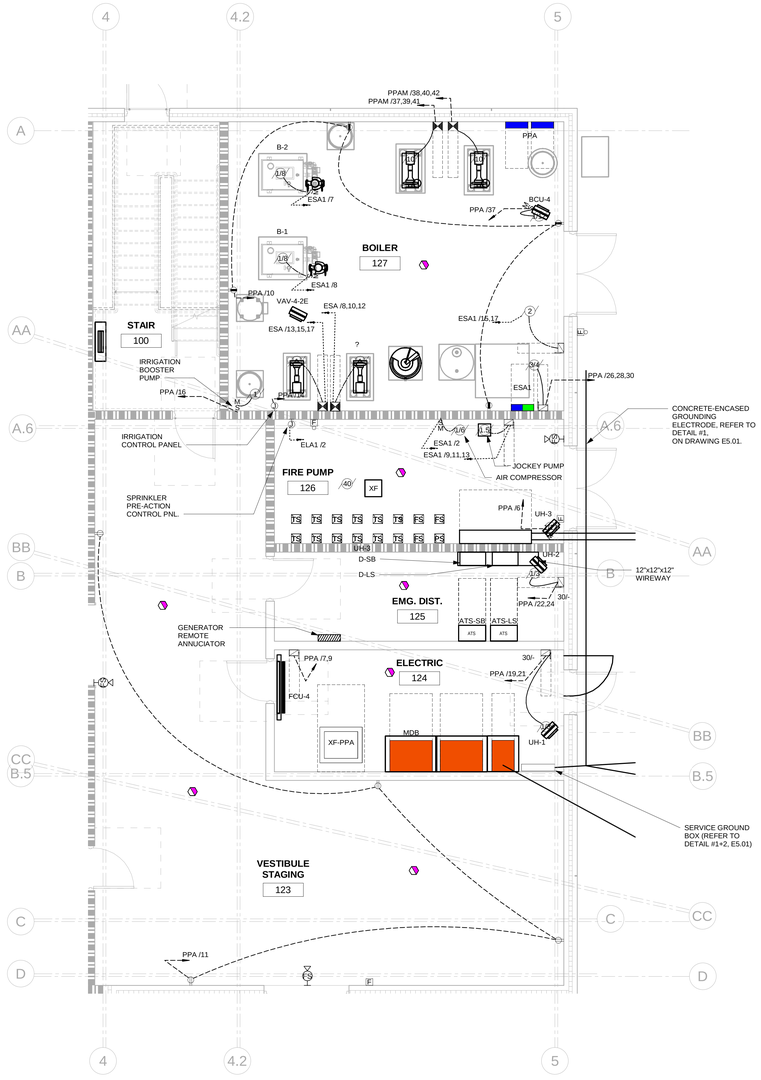
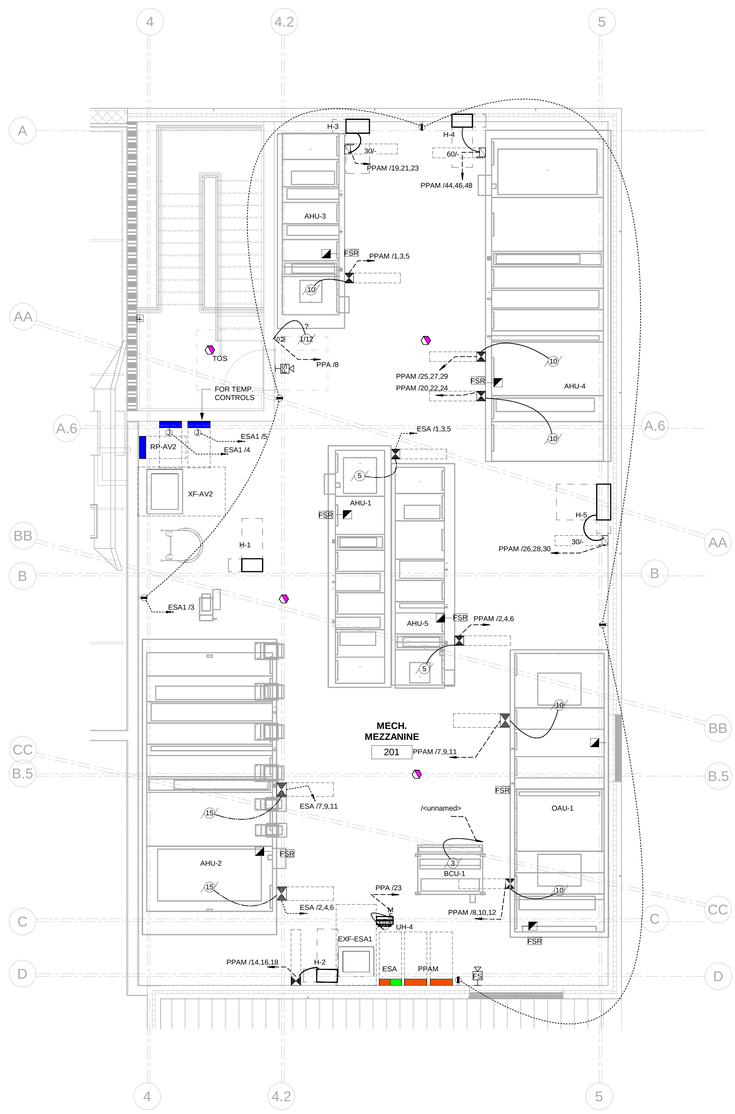
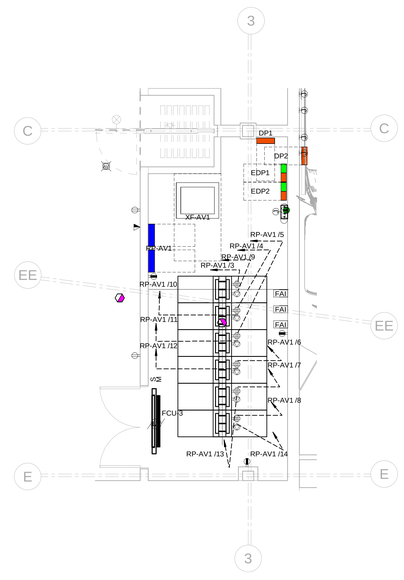


1 ELECTRICAL 1ST FLOOR POWER PART PLAN
1/4" = 1'-0"



2 ELECTRICAL 2ND FLOOR POWER PART PLAN - MECH. MEZZANINE 201
1/4" = 1'-0"



3 ELECTRICAL PART PLAN - AV 113
1/4" = 1'-0"

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ELECTRICAL PART PLANS

E4.01

ISSUE DATE: 10 -24-2023
PROJECT NUMBER: 22 -0410
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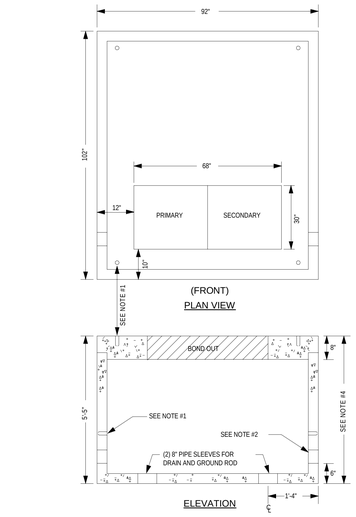
PLAN NORTH

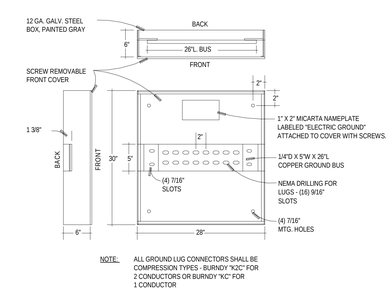


NOTES:

1. 3/4" ANCHORS FOR 3/4" EYE BOLTS. (A) 4 AT 90° ANGLES FOR CABLE PULLING (B) 4 FOR LIFTING COVER
2. PROVIDE CABLE OPENINGS AT BASE OF WALL AS NEEDED.
3. "FRONT" DENOTES THE SIDE ON WHICH THE ACCESS DOORS SHALL BE LOCATED. FRONT SHALL BE READILY ACCESSIBLE.
4. OVERALL HEIGHT MAY BE DECREASED PER UTILITY CO. ENGINEERING APPROVAL.
5. CONCRETE SHALL BE 4000 P.S.I. FOR 28 DAY TEST WITH MAX. 3/4" BROKEN STONE.
6. REINFORCEMENT SHALL BE 6"X6", #10 WELDED WIRE MESH WITH #4 VERTICAL WIRE.
7. WALL THICKNESS SHALL BE 4"; BASE THICKNESS SHALL BE 5".
8. COORDINATE ALL DIMENSIONS AND REQUIREMENTS WITH UTILITY COMPANY STANDARDS.

3 PRECAST EXTERIOR TRANSFORMER PAD & VAULT DETAIL

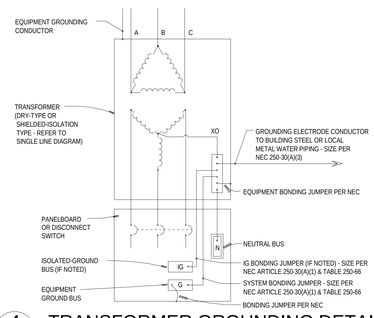
E4.01 | E4.01 SCALE: NONE



NOTE: ALL GROUND LUG CONNECTORS SHALL BE COMPRESSION TYPES - BURNDY "KZC" FOR 2 CONDUCTORS OR BURNDY "KC" FOR 1 CONDUCTOR

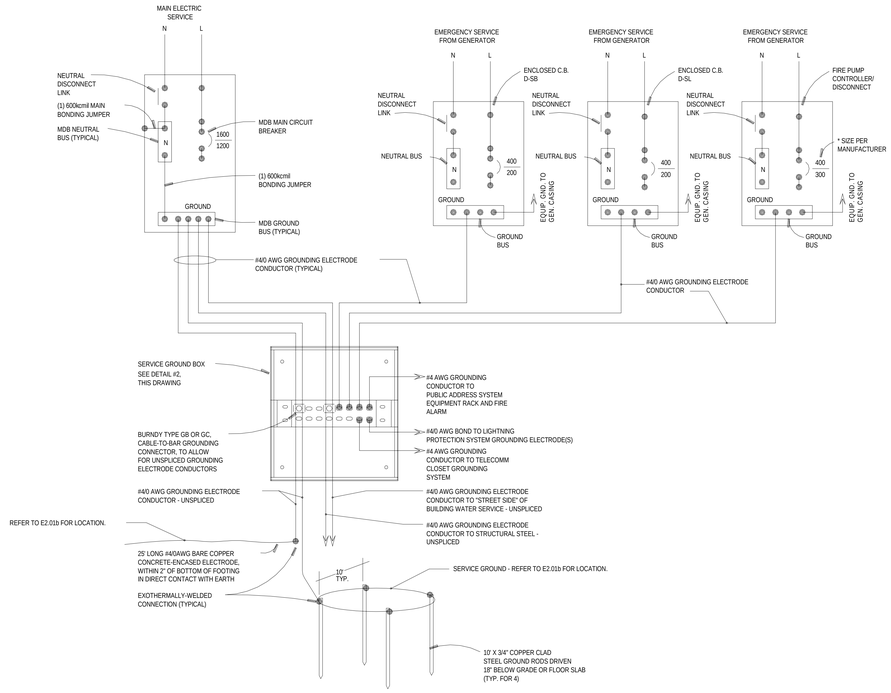
2 SERVICE GROUND BOX DETAIL

E4.01 | E4.01 SCALE: NONE



4 TRANSFORMER GROUNDING DETAIL

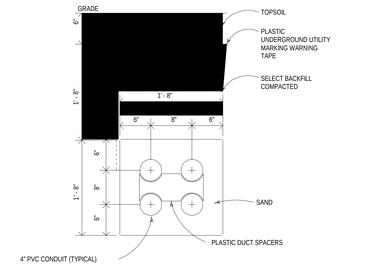
E4.01 | E4.01 SCALE: NONE



1 SERVICE GROUNDING & INTERCONNECTION DETAIL

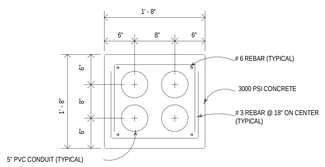
E4.01 | E4.01 SCALE: NONE

NOTE: PROVIDE GROUNDING BUSHINGS WITH BONDING JUMPERS AT ALL ENCLOSURES WHERE GROUNDING ELECTRODE CONDUCTOR IS ENCLOSED WITHIN METALLIC CONDUIT.
PROVIDE CONDUIT SLEEVE(S) WHERE GROUNDING ELECTRODE CONDUCTOR(S) PENETRATES FLOOR SLAB AND/OR FOOTING. PROVIDE BONDING JUMPERS AS DESCRIBED ABOVE.



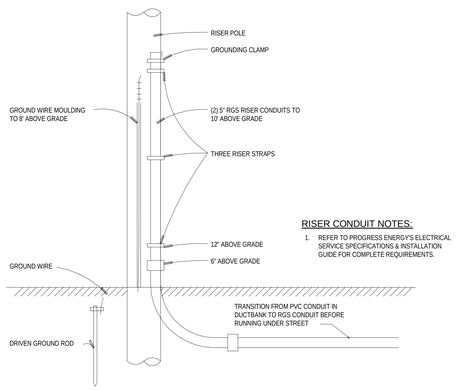
5 TRENCH DETAIL

E4.01 | E4.01 SCALE: NONE



6 DUCTBANK DETAIL

E3.01 | E4.01 SCALE: NONE

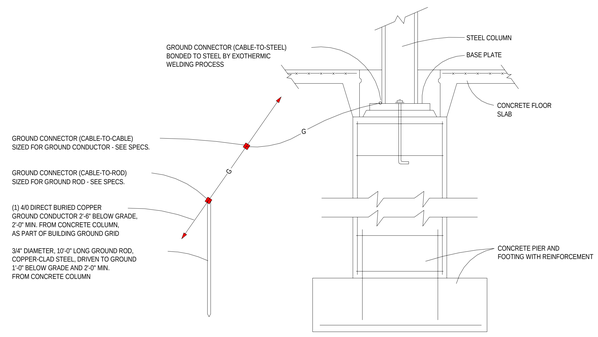


RISER CONDUIT NOTES:

1. REFER TO PROGRESS ENERGY'S ELECTRICAL SERVICE SPECIFICATIONS & INSTALLATION GUIDE FOR COMPLETE REQUIREMENTS.

7 RISER CONDUIT DETAIL

E4.01 | E4.01 SCALE: NONE



8 STRUCTURAL COLUMN GROUNDING DETAIL

E4.01 | E4.01 SCALE: NONE

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ELECTRICAL DETAILS

E5.01

ISSUE DATE: 10 -24-2023
PROJECT NUMBER: 22 -0410
DRAWN BY: LF
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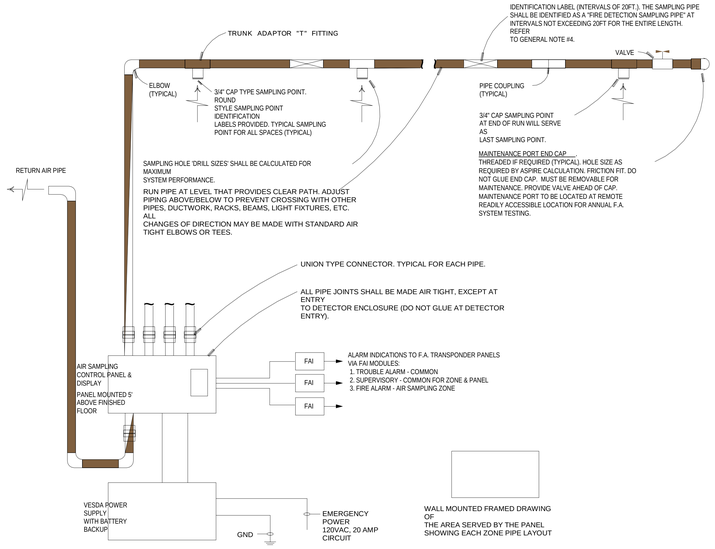
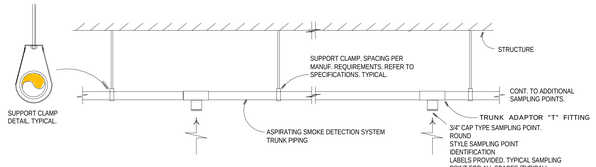


4 TYPICAL AIR SAMPLING SYSTEM LAYOUT

E4.02 | E4.02 SCALE: NTS

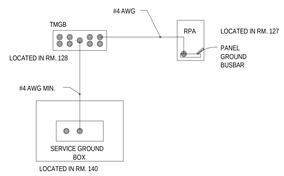
NOTE: PROVIDE WALL MOUNTED FRAMED DRAWING OF THE AREA SERVED BY THE PANEL SHOWING EACH ZONE PIPE LAYOUT



5 TYPICAL ASPIRATING SMOKE DETECTION SYSTEM SAMPLING POINT/PIPING DETAIL.

E4.02 | E4.02 SCALE: NONE

NOTE: REFER TO FIRE ALARM SPECIFICATIONS AND ABOVE DETAIL FOR ADDITIONAL INFORMATION.
PROVIDE DETAILED COORDINATION DRAWINGS OF THE EXACT ROUTING, MOUNTING DETAILS & SYSTEM LAYOUT PRIOR TO ANY INSTALLATION FOR APPROVAL.



6 TELECOMM. GROUNDING RISER

E4.02 | E4.02 SCALE: NONE

TMGB = TELECOMM. MAIN GROUNDING BUSBAR (4"H. X 1/4"D. X 24"L. PER TIA/EIA-607)

ALL GROUNDING CONDUCTORS SHALL BE PROVIDED WITH GREEN INSULATION AND SHALL BE RUN IN METALLIC CONDUIT WITH BONDING JUMPERS.

AIR SAMPLING SYSTEM GENERAL NOTES:

1. ALL SAMPLING PIPE SHALL BE 3/4" DIAMETER PIPE AND FITTINGS. SEE FLOOR PLANS FOR LENGTHS IN EACH BRANCH.
2. IF REQUIRED, PIPE JOINTS SHALL BE PERMANENTLY SEALED BY APPROVED SEAL TYPE EPOXY, EXCEPT AT ENTRY TO THE DETECTOR ENCLOSURE.
3. ALL ELBOWS SHALL HAVE LONG RADIUS BENDS (SWEEP ELBOWS) TO ENHANCE AIR SAMPLING SYSTEM PERFORMANCE.
4. THE PIPE SHALL BE IDENTIFIED AS A 'FIRE DETECTION SAMPLING PIPE' AT INTERVALS NOT EXCEEDING 20 FEET FOR THE ENTIRE LENGTH. PLACE IDENTIFICATION LABELS INDISCREETLY WHERE NOT VISIBLE FROM BELOW.
5. TO MINIMIZE FLEXING FOR THE PIPING IT SHALL BE SUPPORTED AT NOT LESS THAN 4 FEET ON CENTER.
6. PIPE LENGTH SHOW IS APPROXIMATE. ADJUST LENGTH TO SUIT FIELD CONDITIONS. NOTE: ADJUST PIPE RUNS AT PROPER LEVEL TO AVOID CROSSING OF PIPES. RUN VESDA PIPE TIGHT TO SLAB AS POSSIBLE.
7. FIELD VERIFY EXACT LENGTH WITH EQUIPMENT LINEUP AND PROJECT SUPERVISOR.
8. SAMPLING NOTE 'DRILL SIZES' SHALL BE CALCULATED FOR MAXIMUM SYSTEM PERFORMANCE. PROVIDE WINDOWS ASPIRE CALCULATIONS FOR THESE VALUES. REFER TO SPECIFICATIONS.

VESDA AIR SAMPLING SYSTEM SEQUENCE OF OPERATIONS:

GENERAL OPERATION: VESDA - VERY EARLY SMOKE DETECTION APPARATUS

1. THE VESDA UNIT CONSTANTLY SAMPLES AIR VIA A HIGH EFFICIENCY ASPIRATOR. WHEN THE UNIT REACHES AN ADAPTIVE THRESHOLD IT SHALL REPORT THE STATUS AT THE DETECTOR.
2. INFORMATION IS DISPLAYED VISUALLY ON A BAR GRAPH THAT INDICATES THE OVERALL SMOKE LEVEL, ALARM THRESHOLDS (ALERT, PRE-ALARM OR FIRE). SERVICE OR FAULT EVENTS THAT EXIST. VIA ADDRESSABLE MONITOR POINTS, VESDA ALARM THRESHOLDS AND FAULT EVENTS ARE TRANSMITTED TO THE FIRE ALARM CONTROL PANEL AND WILL RESPECTIVELY ACTIVATE PROGRAMMED FUNCTIONS.

ACTIVATION OF A VESDA 'FIRE ALARM TROUBLE (FAULT) SIGNAL' SHALL:

1. ILLUMINATE THE COMMON TROUBLE LED AND SOUND THE LOCAL ALARM AT THE FIRE COMMAND STATION.
2. DISPLAY LOCATION OF ACTIVATED DEVICE AT THE FIRE COMMAND STATION AND AT THE REMOTE ANNUCIATOR(S).
3. REFER TO FIRE ALARM SEQUENCE OF OPERATION MATRIX ON E3.02 FOR ADDITIONAL REQUIREMENTS.

ACTIVATION OF A VESDA FIRST THRESHOLD LEVEL 'ALERT' SHALL:

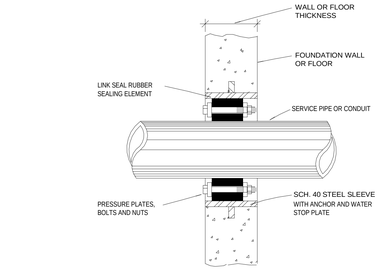
1. ILLUMINATE THE COMMON SUPERVISORY LED AND SOUND THE LOCAL ALARM AT THE FIRE COMMAND STATION.
2. DISPLAY LOCATION OF ACTIVATED DEVICE AT THE FIRE COMMAND STATION AND AT THE REMOTE ANNUNCIATOR(S).
3. REFER TO FIRE ALARM SEQUENCE OF OPERATION MATRIX ON E3.02 FOR ADDITIONAL REQUIREMENTS.

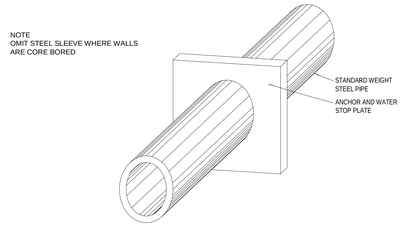
ACTIVATION OF VESDA SECOND THRESHOLD LEVEL 'PRE-ALARM' SHALL:

1. ILLUMINATE THE COMMON SUPERVISORY LED AND SOUND THE LOCAL ALARM AT THE FIRE COMMAND STATION.
2. DISPLAY LOCATION OF ACTIVATED DEVICE AT THE FIRE COMMAND STATION AT THE REMOTE ANNUNCIATOR(S).
3. REFER TO FIRE ALARM SEQUENCE OF OPERATION MATRIX ON E3.02 FOR ADDITIONAL REQUIREMENTS.

ACTIVATION OF A VESDA THIRD THRESHOLD LEVEL 'FIRE ALARM' SIGNAL SHALL:

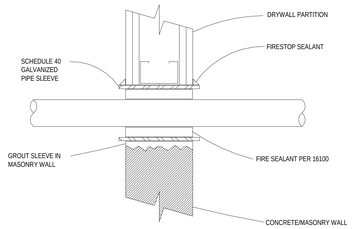
1. ILLUMINATE THE COMMON ALARM LED AND SOUND THE LOCAL ALARM AT THE FIRE COMMAND STATION.
2. DISPLAY LOCATION OF THE ACTIVATED DEVICE AT THE FIRE COMMAND STATION AND AT THE REMOTE ANNUNCIATOR(S).
3. REFER TO FIRE ALARM SEQUENCE OF OPERATION MATRIX ON E3.02 FOR ADDITIONAL REQUIREMENTS.





1 WATER TIGHT WALL/FLOOR SLEEVE DETAIL

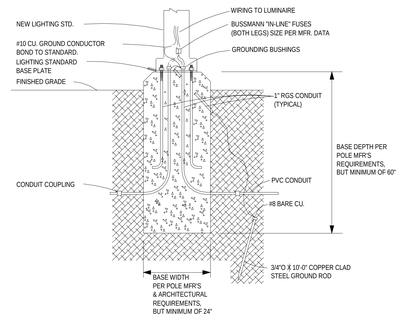
E4.02 | E4.02 SCALE: NONE



NOTE: FIRE STOPPING SHALL HAVE A RATING EQUAL TO OR GREATER THAN THE WALL BEING PENETRATED - SEE 16100. REFER TO ARCHITECTURAL DRAWINGS FOR WALL RATINGS AND LOCATIONS.

2 FIRE-RATED WALL PENETRATION

E4.02 | E4.02 SCALE: NONE



3 LIGHTING STANDARD (FOUNDATION) DETAIL

E4.02 | E4.02 SCALE: NONE

NOTE: FOR ELECTRICAL REQUIREMENTS ONLY REFER TO L SERIES DRAWINGS FOR LIGHTING STANDARD (FOUNDATION) REQUIREMENTS.

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ELECTRICAL DETAILS

E5.02

ISSUE DATE: 10 -24-2023
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CHECKED BY: LF

NOTES ON WIRING

QS CONTROL LINK

THE QS CONTROL LINK HAS A FREE WIRING TOPOLOGY (DAISY CHAIN, T-TAP, ETC). THE SYSTEM WIRING ILLUSTRATED BY THIS DRAWING HAS BEEN LAID OUT TO ENSURE APPROPRIATE POWER TO EACH DEVICE. IF FOR ANY REASON THE SYSTEM IS TO BE WIRED DIFFERENTLY THAN WHAT IS SHOWN, PLEASE CONFIRM ALL DEVICE POWER REQUIREMENTS ARE MET (PLEASE REFER TO "QS LINK POWER REQUIREMENTS" FOR INDIVIDUAL DEVICE POWER REQUIREMENTS).
FOR QS CONTROL WIRE LENGTHS TOTALING LESS THAN 500 FT (153 M), USE LUTRON CABLE GRX-CBL-346S (4 CONDUCTOR NON-PLENUM), OR GRX-PCBL-346S (4 CONDUCTOR PLENUM). OTHERWISE USE 2 #18 AWG (1.0 SQ MM) + 2 #22 AWG (0.5 SQ MM) TWISTED AND SHIELDED OR EQUIVALENT (BELDEN #9461). FOR QS CONTROL WIRE LENGTHS TOTALING UP TO 2,000 FT, USE GRX-CBL-46L (5 CONDUCTOR NON-PLENUM) OR GRX-PCBL-46L (5 CONDUCTOR PLENUM). TOTAL QS CONTROL WIRE LENGTH MUST NOT EXCEED 2,000 FT (600 M).

PANEL LINK RULES

PANELS ARE DAISY CHAINED ON ONE OF THE CONFIGURABLE LINKS PER LUTRON'S DRAWING, HOWEVER THEY DO NOT HAVE TO BE IN THE ORDER SHOWN. DO NOT HOME-RUN OR T-TAP THIS WIRING LINK. ALL CIRCUITS NEED TO BE LANDED IN THESE PANELS PER LUTRON'S PANEL SCHEDULES. THE MAXIMUM WIRE LENGTH OF A PANEL LINK IS 2,000FT (600M). IF A PANEL IS MOVED TO ANOTHER LINK, OR THE LOADS ARE NOT WIRED AS SHOWN IN LUTRON'S PANEL SCHEDULES, LUTRON MUST BE NOTIFIED AS THIS INFORMATION IS IMPORTANT FOR PROGRAMMING THE SYSTEM. LT-1 LINK TERMINATORS ARE NEEDED ON EACH END OF THE LINK.
USE LUTRON CABLE GRX-CBL-46L (5 CONDUCTOR NON-PLENUM) OR GRX-PCBL-46L (5 CONDUCTOR PLENUM RATED). OTHERWISE, USE 2 #12 AWG (4 SQ MM)+ 2 #22 AWG (0.5 SQ MM) TWISTED AND SHIELDED AND BETWEEN THE PANELS ADD 1 #18 AWG (1.0 SQ MM) FOR EMERGENCY SENSING CABLE BY OTHERS.

QS LINK POWER REQUIREMENTS	
DEVICE	PDUS
QS DEVICES THAT SUPPLY PDU	
DIN RAIL POWER SUPPLY	+75
MYROOM DIN RAIL POWER SUPPLY	+30
QS PLUG-IN POWER SUPPLY, QS J-BOX POWER SUPPLY	+8
ENERGI SAVR NODE WITH ECOSYSTEM, ENERGI SAVR NODE WITH DALI, ENERGI SAVR NODE WITH T-SERIES TUNABLE-WHITE	+30
ENERGI SAVR NODE FOR 0–10 V, ENERGI SAVR NODE WITH SOFTSWITCH, ENERGI SAVR NODE FOR 0–10 V (DIN RAIL), ENERGI SAVR NODE WITH SOFTSWITCH (DIN RAIL)	+14
1 A MYROOM DIN RAIL POWER MODULE SWITCHING, 1 A MYROOM DIN RAIL POWER MODULE PHASE ADAPTIVE	+4
ENERGI SAVR NODE WITH DALI (DIN RAIL), ENERGI SAVR NODE WITH ECOSYSTEM (DIN RAIL)	+3
ENERGI SAVR NODE PHASE ADAPTIVE (DIN RAIL), QS MOTOR GROUP CONTROLLER (DIN RAIL), HOMEWORKS QS DIN RAIL POWER MODULES	0
GRAFIK EYE QS (ALL MODELS EXCEPT GRAFIK EYE QS DALI WITH KNX), QS TIMECLOCK	+3
QP2 QUANTUM LIGHTING HUB	LINK A : 0 LINKS B,C,D : +33 EACH
QP3 QUANTUM LIGHTING HUB	LINKS A,B : +33 EACH
TWO PROCESSOR LIGHTING HUB (QP5)	LINKS A,B,C,D : +33 EACH
SINGLE PROCESSOR LIGHTING HUB (QP5), 2-LINK PROCESSOR (QP-2L)	LINKS A,B : +33 EACH
1-LINK PROCESSOR LIGHTING HUB (QP6), 1-LINK PROCESSOR LIGHTING HUB (QP5), 1-LINK PROCESSOR (QP-1L)	LINKS A : +33 EACH
QS DEVICES THAT CONSUME PDU	
QS WALLSTATION (SEETOUCH, ARCHITRAVE, SIGNATURE SERIES, QS PICO, KEYSWITCH, SINGLE COLUMN PALLADIOM), QS SLIDER, GRAFIK T SLIDER, QS INFRARED (IR) EYE, WALLBOX INPUT CLOSURE INTERFACE	-1
QS NETWORK INTERFACE, QS DMX INTERFACE, ENERGI SAVR NODE PROGRAMMING INTERFACE, QS WALLSTATION (DOUBLE COLUMN PALLADIOM)	-2
QS SENSOR MODULE (QSM), NOT INCLUDING ATTACHED WIRED SENSORS (SEE SECTION BELOW FOR MORE INFORMATION), QS CONTACT CLOSURE INTERFACE, PALLADIOM ROOM THERMOSTAT	-3
GUESTROOM CONTROL UNIT	-8
SENSORS & DEVICES THAT CONSUME PDUS WHEN WIRED TO A QSM	
LUTRON DAYLIGHT SENSOR, LUTRON INFRARED (IR) RECEIVER, PICO WIRED CONTROLLER	-0.5
ECOSYSTEM WALLSTATION	-1
LOS C SERIES OCCUPANCY SENSOR, HIGH BAY OCCUPANCY SENSOR	-2

LUTRON SERVICES		
QTY	SERVICE TITLE (MODEL NUMBER)	SERVICE DESCRIPTION
		THE QUANTITY OF SERVICES BELOW ARE TO BE INCLUDED AS PART OF THIS PROJECT'S SCOPE OF WORK AND SPECIFIED INTO THE WRITTEN SPEC DOCUMENTS
	PRE-STARTUP ELECTIVE SERVICES	
	REMOTE PRE-WIRE SESSION (LSC-PREWIRE-RMTE)	A REMOTE SESSION WHERE THE LUTRON FIELD SERVICE ENGINEER REVIEWS THE LUTRON SUBMITTAL PACKAGE (PARTICULARLY THE ONE LINE AND DEVICE SPECIFICATIONS) WITH THE ELECTRICAL CONTRACTOR, ANSWERS QUESTIONS, AND REVIEWS THE CONSTRUCTION TIMELINE ALONG WITH BEST PRACTICES FOR INSTALLATION. THIS SESSION
	ONSITE PRE-WIRE VISIT (LSC-PREWIRE-ONST)	AN ONSITE VISIT WHERE THE LUTRON FIELD SERVICE ENGINEER REVIEWS THE LUTRON SUBMITTAL PACKAGE (PARTICULARLY THE ONE LINE AND DEVICE SPECIFICATIONS) WITH THE ELECTRICAL CONTRACTOR, ANSWERS QUESTIONS, AND REVIEWS THE CONSTRUCTION TIMELINE ALONG WITH BEST PRACTICES FOR INSTALLATION.
	POST-WIRE TERMINATION VISIT (LSC-POSTWIRE-VST)	AN ON-SITE WALK THROUGH BY A LUTRON FIELD SERVICE ENGINEER WITH THE ELECTRICAL CONTRACTOR TO CONFIRM THE PROCESSORS ARE ONLINE, THE DEVICES ARE INSTALLED AND WIRED PROPERLY, AND THE SYSTEM IS COMMUNICATING EFFICIENTLY PRIOR TO LUTRON RETURNING TO SITE FOR THE PHYSICAL STARTUP OF THE SYSTEM. THIS VISIT IS INTENDED AS A HIGH LEVEL VERIFICATION/CONFIRMATION THAT THE LUTRON EQUIPMENT IS WIRED AND POWERED; IT DOES NOT INCLUDE WIRING TROUBLESHOOTING, OR VALIDATION THAT THE ENTIRE SYSTEM WAS INSTALLED PER THE APPROVED SUBMITTAL. LUTRON WILL WORK TO CONFIRM OVERALL WIRING READINESS AND BASIC SYSTEM FUNCTIONALITY PRIOR TO START-UP AND WILL NOTE ANY DEFICIENCIES FOR THE ELECTRICAL CONTRACTOR. THE LUTRON SYSTEM MUST BE
	SENSOR LAYOUT & TUNING (LSC-SENS-LT)	LUTRON WILL TAKE RESPONSIBILITY FOR LUTRON-PROVIDED SENSOR PLACEMENT AND PERFORMANCE BY CREATING SENSOR LAYOUTS AND COORDINATING SENSOR AND POWERED PRIOR TO THIS SITE VISIT. PLACEMENT BEFORE AND AFTER INSTALLATION ONCE THE BUILDING IS OCCUPIED. LUTRON WILL RETURN UP TO TWO TIMES TO PERFORM SENSOR FINE-TUNING.
	SYSTEM & NETWORK INTEGRATION CONSULTATION (LSC-INT-VISIT)	A CONSULTATIVE VISIT WITH THIRD PARTY INTEGRATORS TO CONFIRM THE SPECIFIED SEQUENCE OF OPERATION AND DISCUSS INTEGRATION PROCEDURES NEEDED IN ORDER TO INTEGRATE WITH THE LUTRON EQUIPMENT. THIS MAY INCLUDE ANY OF THE FOLLOWING THIRD PARTY SYSTEMS: BMS, BAS, IT, NON-LUTRON SHADES, BACNET, AV, OR ENERGY DASHBOARDS.
	STARTUP ELECTIVE SERVICES (THESE SERVICES ARE ADDITIONAL TO YOUR SPECIFIED STARTUP BASED ON YOUR REQUIREMENTS)	
	ONSITE SCENE & LEVEL TUNING (LSC-AF-VISIT)	AN ONSITE VISIT WITH THE SPECIFIER OR CUSTOMER REPRESENTATIVE TO REVIEW THE DESIGN INTENT, FINE-TUNE THE SCENE LEVEL PROGRAMMING, AND MAKE ADJUSTMENTS TO TIMECLOCKS.
	DYNAMIC WHITE PROGRAMMING PACKAGE (LSC-DWP-PKG)	A SPECIFIER DRIVEN PACKAGE WHICH INCLUDES ONE (1) POST WIRE TERMINATION VISIT (FOR WIRE VERIFICATION), TWO (2) VISITS TO PERFORM FINE TUNING OF FIXTURES AND PROGRAMMING ADJUSTMENTS PER THE DIRECTION OF A LIGHTING DESIGNER AND/OR A PRE-DETERMINED SEQUENCE OF OPERATIONS PROVIDED BY THE SPECIFIER. THE FIRST FINE-TUNING VISIT IS DURING NORMAL BUSINESS HOURS AND THE SECOND VISIT IS AN AFTER HOUR SITE VISIT. ALSO INCLUDED IN THIS PACKAGE IS A TWO-HOUR REMOTE SESSION FOR ANY ADDITIONAL TIMECLOCK ADJUSTMENTS. ENERGI SAVR NODES AND/OR QS INTERFACES TIED TO THE REMOTE TWO HOUR SESSION AND THE SYSTEM MUST BE ABLE TO CONNECT TO THE INTERNET.
	ONSITE PERFORMANCE-VERIFICATION WALKTHROUGH (LSC-WALK)	AN ONSITE WALK THROUGH WITH THE LUTRON COMMISSIONING AGENTS TO DEMONSTRATE THAT SYSTEM FUNCTIONALITY MEETS THE INTENT. THIS MAY INCLUDE ANY OF THE FOLLOWING ONSITE ACTIVITIES – CONSULTATION/TRAINING DEMOS, FUNCTIONAL TESTING ASSISTANCE, OR INVENTORY OF LUTRON EQUIPMENT.
	SYSTEM PERFORMANCE-VERIFICATION DOCUMENTATION (LSC-SPV-DOC)	COMPLETION OF DOCUMENTATION WHICH PROVIDES PERFORMANCE VERIFICATION CERTIFYING THE LUTRON EQUIPMENT HAS BEEN THOROUGHLY TESTED. IT SUPPORTS THE DOCUMENTATION REQUIREMENTS OF MANY BUILDING STANDARDS.
	SYSTEM PERFORMANCE-VERIFICATION DOCUMENTATION TITLE 24 (LSC-SPV-DOC-T24)	DOCUMENTS THE TITLE 24 ACCEPTANCE TESTS REQUIRED FOR THE LIGHTING CONTROL SYSTEM AND THE TEST'S RESULTS. DOCUMENTATION IS TO BE FILLED OUT AS A SEPARATE VISIT AFTER ONSITE STARTUP BY LUTRON'S CALIFORNIA CERTIFIED CALCTP TECHNICIAN. UPON COMPLETION, A LUTRON SERVICES REPRESENTATIVE WILL SUPPLY THE JOB-SPECIFIC TITLE 24 DOCUMENTATION THAT SHOWS THE RESULTS OF THE LIGHTING CONTROL SYSTEM TESTING.
	AFTER HOURS STARTUP (LSC-AH-SU)	STARTUP PROVIDED BETWEEN THE HOURS OF 5:00PM – 7:00AM, MONDAY - FRIDAY. THIS SCOPE OF WORK DOES NOT INCLUDE HOLIDAY OR WEEKEND WORK. ADDITIONAL FEES MAY APPLY FOR WORK TO BE COMPLETED ON WEEKENDS (FRIDAY 5:00PM – MONDAY 7:00AM).
	POST-STARTUP ELECTIVE SERVICES	
	CUSTOMER SYSTEM ORIENTATION VISIT (LSC-CSO-VST)	AN ON-SITE VISIT WHERE THE LUTRON FIELD SERVICE ENGINEER COMES OUT 30-90 DAYS POST-OCCUPANCY TO GO OVER THE LUTRON SYSTEM COMPONENTS WITH THE SYSTEM USER AND PERFORMS A THOROUGH TRAINING. THE FIELD SERVICE ENGINEER WILL ENSURE THE SYSTEM USER KNOWS HOW TO NAVIGATE WITHIN THEIR SYSTEM AND MAKE APPROPRIATE ADJUSTMENTS. THEY WILL ALSO PROVIDE A LEAVE BEHIND SYSTEM OPTIMIZATION RECOMMENDATION REPORT.
	TRAINING VISIT (LSC-TRAINING-SP)	CUSTOMER SITE SOLUTION TRAINING – THIS TRAINING VISIT IS PROVIDED BY A LUTRON SERVICES REPRESENTATIVE TO TEACH SYSTEM USERS HOW TO OPERATE AND MAINTAIN THE LIGHTING CONTROL SYSTEM. QUANTITY DICTATES THE NUMBER OF VISITS PURCHASED.
	SYSTEM OPTIMIZATION (LSC-SYSOPT-SP)	AN ONSITE CONSULTATIVE VISIT TO IDENTIFY AND IMPLEMENT LIGHTING CONTROL ADJUSTMENTS TO SAVE ADDITIONAL ENERGY AND CREATE A MORE PRODUCTIVE WORK ENVIRONMENT.
	PREVENTATIVE MAINTENANCE VISIT (LSC-SCHD-MAINT)	VISIT TO PERFORM PREVENTATIVE MAINTENANCE, MINOR REPROGRAMMING, AND CONDUCT SYSTEM TRAINING. THE LUTRON SERVICE REPRESENTATIVE WILL REVIEW SERVICE OPTIONS WITH THE END-USER PRIOR TO BEGINNING ANY WORK. THE END-USER WILL RECEIVE DOCUMENTATION THAT DESCRIBES THE WORK PERFORMED AND ANY RECOMMENDATIONS FOR FUTURE SERVICE. QUANTITY DICTATES THE NUMBER OF DAYS PURCHASED.
	ADDITIONAL DAY OF SERVICE (LSC-DAY-ADDL-CS)	ONSITE DAY OF SERVICE BY A LUTRON SERVICE REPRESENTATIVE.
	REMOTE SUPPLEMENTAL TRAINING (LSC-TRAIN-RMTE)	A SUPPLEMENTAL REMOTE TRAINING FOR SITE PERSONNEL. THIS SERVICE IS AVAILABLE FOR LUTRON QUANTUM AND ATHENA SYSTEMS. THIS TRAINING IS NOT TO EXCEED 4 HOURS. REMOTE NETWORK ACCESS IS REQUIRED FOR THIS VISIT AND THE SYSTEM MUST BE ABLE TO CONNECT TO THE INTERNET.
	REMOTE PROGRAMMING ASSISTANCE (LSC-PRG-AST-RMTE)	ONE 4-HOUR REMOTE PROGRAMMING ASSISTANCE SESSION TO MAKE PROGRAMMING ADJUSTMENTS PER THE DIRECTION OF A FACILITY MANAGER OR SPECIFIER. THIS SERVICE IS AVAILABLE FOR LUTRON QUANTUM AND ATHENA SYSTEMS. REMOTE NETWORK ACCESS IS REQUIRED FOR THIS VISIT AND THE SYSTEM MUST BE ABLE TO CONNECT TO THE INTERNET.
	MAINTENANCE & SUPPORT SERVICES	
	SOFTWARE MAINTENANCE AGREEMENT (LSC-SMA-SW)	PROVIDES COMPATIBILITY TESTING RESULTS OF QUANTUM WITH OPERATING SYSTEM PATCHES AND WEB BROWSER UPDATES. INCLUDES AN ELECTIVE FREE SOFTWARE UPGRADE LICENSE.
	COMMERCIAL SYSTEMS 2-YEAR LIMITED WARRANTY (LSC-8D)	A 2-YEAR SYSTEM WARRANTY PROVIDING 100% REPLACEMENT PARTS AND 100% LUTRON DIAGNOSTIC LABOR COVERAGE WITH A FIRST-AVAILABLE RESPONSE TIME.
1	ENHANCED SILVER (LSC-E8S)	YEARS 1-2 - 100% REPLACEMENT PARTS AND 100% LUTRON DIAGNOSTIC LABOR COVERAGE WITH A FIRST-AVAILABLE RESPONSE TIME; YEARS 3-5 - 50% PARTS ONLY COVERAGE; YEARS 6-8 - 25% PARTS ONLY COVERAGE.
	ENHANCED GOLD (LSC-E8G)	YEARS 1-2 - 100% REPLACEMENT PARTS AND 100% LUTRON DIAGNOSTIC LABOR COVERAGE WITH A 72-HOUR RESPONSE TIME AND AN ANNUAL (1-DAY) SCHEDULED PREVENTIVE MAINTENANCE VISIT; YEARS 3-5 - 50% PARTS ONLY COVERAGE; YEARS 6-8 - 25% PARTS ONLY COVERAGE.
	ENHANCED PLATINUM (LSC-E8P)	YEARS 1-2 - 100% REPLACEMENT PARTS AND 100% LUTRON DIAGNOSTIC LABOR COVERAGE WITH A 24-HOUR RESPONSE TIME AND AN ANNUAL (1-DAY) SCHEDULED PREVENTIVE MAINTENANCE VISIT; YEARS 3-5 - 50% PARTS ONLY COVERAGE; YEARS 6-8 - 25% PARTS ONLY COVERAGE.
	SILVER TECHNOLOGY SUPPORT PLAN (LSC-SILV-IW)	AN ANNUAL SERVICE PLAN THAT COVERS 100% REPLACEMENT PARTS AND 100% LUTRON DIAGNOSTIC LABOR WITH A FIRST-AVAILABLE ONSITE OR REMOTE RESPONSE TIME.
	GOLD TECHNOLOGY SUPPORT PLAN (LSC-GOLD-IW)	AN ANNUAL SERVICE PLAN THAT COVERS 100% REPLACEMENT PARTS AND 100% LUTRON LABOR WITH A 72-HOUR ONSITE OR REMOTE RESPONSE TIME. ALSO INCLUDES AN ANNUAL (1-DAY) SCHEDULED PREVENTIVE MAINTENANCE VISIT EACH YEAR.
	PLATINUM TECHNOLOGY SUPPORT PLAN (LSC-PLAT-IW)	AN ANNUAL SERVICE PLAN THAT COVERS 100% REPLACEMENT PARTS AND 100% LUTRON DIAGNOSTIC LABOR WITH A 24-HOUR ONSITE OR REMOTE RESPONSE TIME. ALSO INCLUDES AN ANNUAL (1-DAY) SCHEDULED PREVENTIVE MAINTENANCE VISIT EACH YEAR.
	PREVENTIVE MAINTENANCE VISIT(S) (LSC-SCH-MAINT)	SCHEDULED MAINTENANCE VISIT TO PERFORM PREVENTIVE MAINTENANCE, MINOR PROGRAMMING, AND CONDUCT SYSTEM TRAININGS. QUANTITY IS IN ADDITION TO ANY YEARLY VISITS SPECIFIED WITH AN ENHANCED WARRANTY OR TECHNOLOGY SUPPORT PLAN.
	PLEASE GO TO WWW.LUTRON.COM/SERVICES FOR FURTHER INFORMATION.	

CJMW ARCHITECTURE
525 Vine Street, Suite 350
Winston-Salem, NC 27101
p. 336.724.1503
www.cjmw.com

HICAPS

RAA

SAMET

NORTH CAROLINA PROFESSIONAL SEAL 34487 ENGINEER LUKE FRANKLIN
OCT 2 4 2023

CONSTRUCTION DOCUMENTS

#	Description	Date

CAROLINA MUSEUM OF THE MARINE

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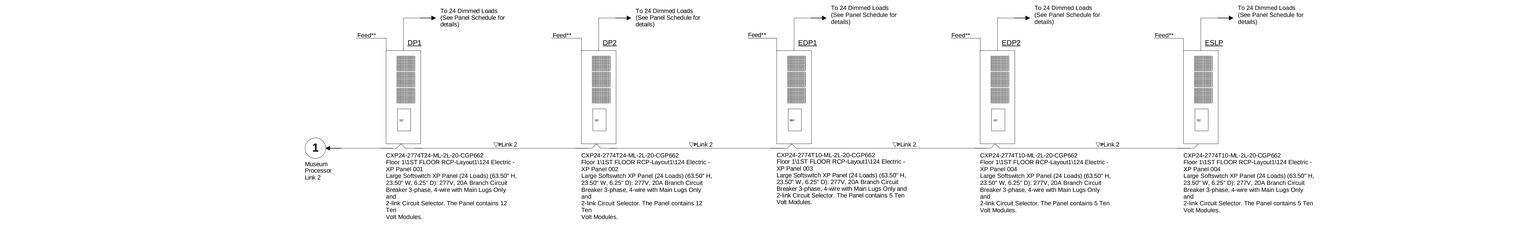
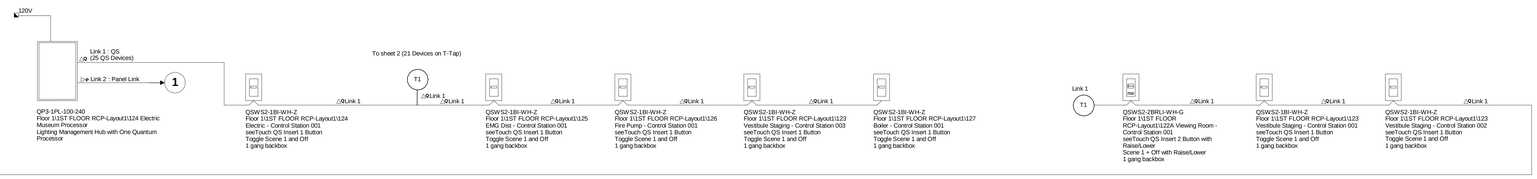
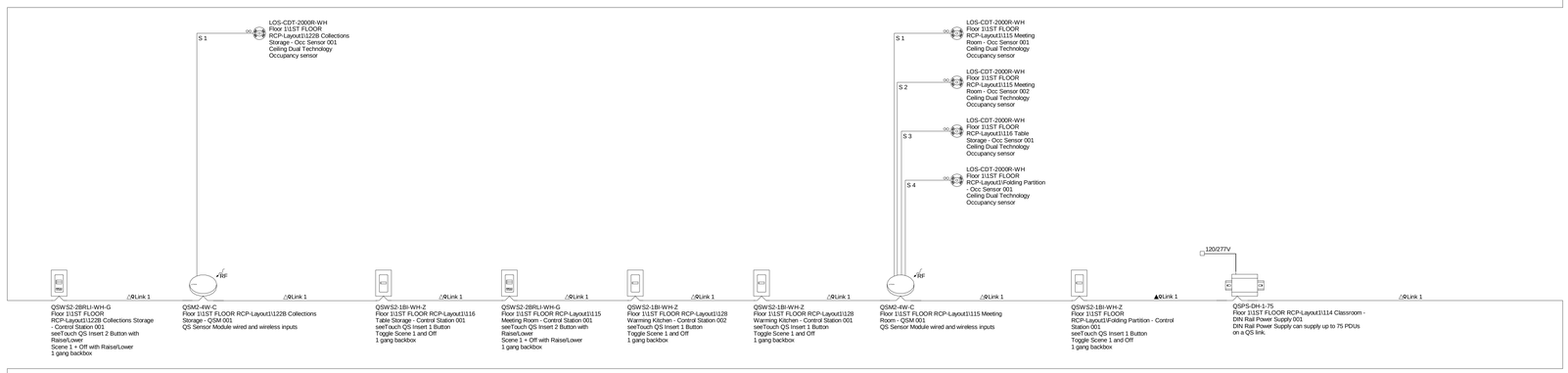
ELECTRICAL LIGHTING CONTROL DETAILS

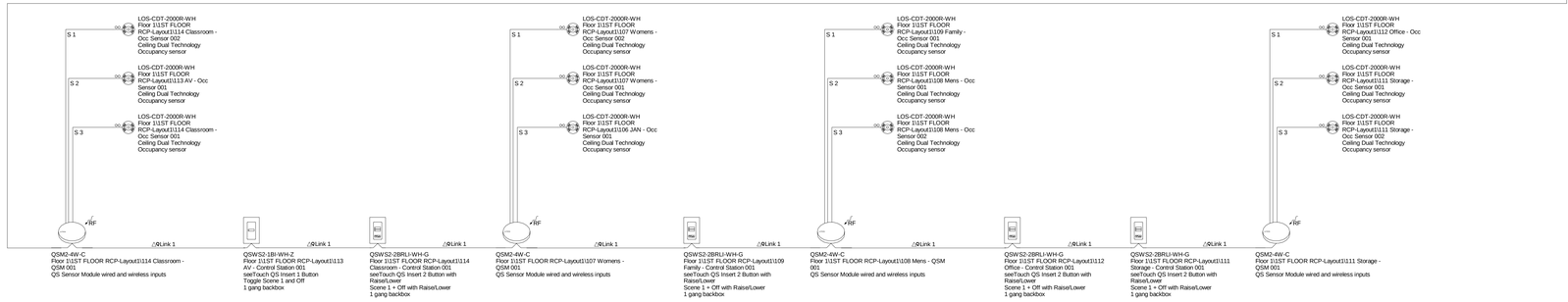
E5.03

ISSUE DATE: 10 -24-2023
PROJECT NUMBER: 22 -0410
DRAWN BY: LF
CHECKED BY: LF









1 LIGHTING CONTROL DETAILS 2
12" = 1'-0"

CJMW ARCHITECTURE
525 Vine Street, Suite 350
Winston-Salem, NC 27101
p. 336.724.1503
www.cjmw.com

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NORTH CAROLINA PROFESSIONAL SEAL 031487 ENGINEER JOHN M. WEAVER
OCT 2 4 2023

CONSTRUCTION DOCUMENTS

#	Description	Date

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ELECTRICAL LIGHTING CONTROL DETAILS

E5.04

ISSUE DATE: 10 -24-2023
PROJECT NUMBER: 22 -0410
DRAWN BY: Author
CHECKED BY: Checker

Switchboard: MDB

Location: ELECTRIC 124 | **Volts:** 480/277 Wye | **A.I.C. Rating:** 35000
Supply From: | **Phases:** 3 | **Mains Type:**
Mounting: Surface | **Wires:** 4 | **Mains Rating:** 1600 A
Enclosure: | **MCB Rating:** 1200 A

Notes:

CKT	Circuit Description	# of Poles	Frame Size	Trip Rating	Load	Remarks
1	ELA VIA ATS	3	400 A	240 A	13046 VA	
2	ESA VIA ATS	3	225 A	225 A	55990 VA	
3	Chiller CH-1	3	600 A	500 A	261000 VA	
4	PPAM	3	600 A	600 A	175744 VA	
5	LPA	3	225 A	225 A	29980 VA	
6	Spare	3	100 A	100 A	0 VA	Refer to Single Line Drawing E0.02
7	XF-KP	3	100 A	100 A	46789 VA	3#2+#8G-1 1/4"C
8	Spare	3	225 A	225 A	0 VA	Refer to Single Line Drawing E0.02
9	XF-AV1	3	100 A	100 A	37650 VA	
10	XF-AV2	3	100 A	70 A	39750 VA	
11	XF-LPST	3	100 A	70 A	38450 VA	
12	XF-PPA	3	225 A	100 A	12729 VA	
13	Spare	3	100 A	100 A	0 VA	Refer to Single Line Drawing E0.02
14	Spare	3	225 A	225 A	0 VA	Refer to Single Line Drawing E0.02
15						
16						
17						
18						
19						
20						
				Total Conn. Load:	700505 VA	
				Total Amps:	843 A	

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Lighting	8191 VA	100.00%	8191 VA		
Other	65132 VA	100.00%	65132 VA	**Total Conn. Load:**	700505 VA
Power	629878 VA	100.00%	629878 VA	**Total Est. Demand:**	700505 VA
				Total Conn. Current:	843 A
				Total Est. Demand Current:	843 A

Notes:

Panel: ESA

Location: MECH. MEZZANINE 201 | **Volts:** 480/277 Wye | **A.I.C. Rating:** 25,000
Supply From: MDB | **Phases:** 3 | **Mains Type:**
Mounting: Surface | **Wires:** 4 | **Mains Rating:** 225 A
Enclosure: Type 1 | **MCB Rating:** MLO

CKT	Circuit Description	Wire Size (AWG)	Trip	#P	A	B	C	#P	Trip	Wire Size (AWG)	Circuit Description	CKT
1					2220	6135						2
3	AHU-1	3#12+G-3/4"C	15	3		2220	6135	3	60	3#6+G-1"C	AHU-2	4
5							2220	6135				6
7					6135	613						8
9	AHU-2	3#6+G-1"C	60	3		6135	613	3	20	3#12+G-3/4"C	P-3	10
11							6135	613				12
13					613	2452						14
15	P-4	3#12+G-3/4"C	20	3		613	3559	3	80	3#4 + #8G - 1 1/4"C	EXF-ESA1	16
17							613	2878				18
19	Spare		20	1	0	0		1	20		Spare	20
21	Spare		20	1		0	0	1	20		Spare	22
23	Spare		20	1			0	0	1	20	Spare	24
25	Spare		20	1	0	0			1	20	Spare	26
27	Spare		20	1		0	0		1	20	Spare	28
29	Spare		20	1			0	0	1	20	Spare	30
31	Spare		20	1	0	0			1	20	Spare	32
33	Spare		20	1		0	0		1	20	Spare	34
35	Spare		20	1			0	0	1	20	Spare	36
37	Spare		0	1	0	0			1	0	Spare	38
39	Spare		0	1		0	0		1	0	Spare	40
41	Spare		0	1			0	0	1	0	Spare	42
	Total VA				18167	19240	18585					

Total Connected Load (VA): 55990 VA
Total Connected Current (Amps): 67 A

Panel: ESA1

Location: Space 299 | **Volts:** 120/208 Wye | **A.I.C. Rating:** 22,000
Supply From: EXF-ESA1 | **Phases:** 3 | **Mains Type:**
Mounting: Surface | **Wires:** 4 | **Mains Rating:** 100 A
Enclosure: Type 1 | **MCB Rating:** MLO

CKT	Circuit Description	Wire Size (AWG)	Trip	#P	A	B	C	#P	Trip	Wire Size (AWG)	Circuit Description	CKT
1	Spare		20	1	0	557		1	20	2#12...	Air Compressor	2
3	Mech Rm Recep	2#12...	20	1		900	180	1	20	2#12...	TCP	4
5	TCP	2#12...	20	1			180	180	1	20	2#12...	GENERATOR CTRL.	6
7	B-1	2#12...	20	1	430	430			1	20	2#12...	B-2	8
9	Jockey Pump	2#12 +1#12G - 3/4"C	20	3			872	180	1	20	2#12...	Block Heater	10
11								872	180	1	20	2#12...	Battery Charger	12
13					872	180				1	20	2#12...	TCP	14
15	CUH-2	2#12 +1#12G - 3/4"C	20	2			1510	0			1	20		Spare	16
17								1510	0	1	20		Spare	18
19	Spare		20	1	0	0					1	20		Spare	20
21	Space		--	1			--	--			1	--		Space	22
23	Space		--	1				--	--		1	--		Space	24
25	Space		--	1	--	--					1	--		Space	26
27	Space		--	1			--	--			1	--		Space	28
29	Space		--	1				--	--		1	--		Space	30
31	Space		--	1	--	--					1	--		Space	32
33	Space		--	1			--	--			1	--		Space	34
35	Space		--	1				--	--		1	--		Space	36
37	Space		--	1	--	--					1	--		Space	38
39	Space		--	1			--	--			1	--		Space	40
41	Space		--	1				--	--		1	--		Space	42
	Total VA				2452	3559	2878					

Total Connected Load (VA): 8877 VA
Total Connected Current (Amps): 25 A

Panel: PPAM

Location: MECH. MEZZANINE 201 | **Volts:** 480/277 Wye | **A.I.C. Rating:** 25,000
Supply From: MDB | **Phases:** 3 | **Mains Type:**
Mounting: Surface | **Wires:** 4 | **Mains Rating:** 600 A
Enclosure: Type 1 | **MCB Rating:**

CKT	Circuit Description	Wire Size (AWG)	Trip	#P	A	B	C	#P	Trip	Wire Size (AWG)	Circuit Description	CKT
1					4090...	2220...						2
3	AHU-3	3#12+G-3/4"C	15	3		4090...	2220...	3	15	3#12+G-3/4"C	AHU-5	4
5							4090...	2220...				6
7					4090...	4090...						8
9	OAU-1	3#8+G-3/4"C	50	3		4090...	4090...	3	20	3#12+G-3/4"C	OAU-R	10
11							4090...	4090...				12
13					1402...	2143...						14
15	BCU-1	3#12+G-3/4"C	15	3		1402...	2143...	3	60	3#6+G-1"C	H-2	16
17							1402...	2143...				18
19					5133...	4090...						20
21	H-3	3#12+G-3/4"C	20	3		5133...	4090...	3	40	3#8+G-3/4"C	AHU-4	22
23							5133...	4090...				24
25					4090...	1266...						26
27	AHU-4	3#8+G-3/4"C	40	3		4090...	1266...	3	15	3#12+G-3/4"C	H-5	28
29							4090...	1266...				30
31	Spare		20	1	0 VA	0 VA		1	20		Spare	32
33	Spare		20	1		0 VA	0 VA	1	20		Spare	34
35	Spare		20	1			0 VA	0 VA	1	20	Spare	36
37					4090...	4090...						38
39	P-1	3#8+G-3/4"C	40	3		4090...	4090...	3	40	3#8+G-3/4"C	P-2	40
41							4090...	4090...				42
43					0 VA	11 VA						44
45	Spare		20	3		0 VA	11 VA	3	60	3#6+G-1"C	H-4	46
47							0 VA	11 VA				48
49	Spare		20	1	0 VA	0 VA		1	20		Spare	50
51	Spare		20	1		0 VA	0 VA	1	20		Spare	52
53	Spare		20	1			0 VA	0 VA	1	20	Spare	54
55	Spare		0	1	0 VA	0 VA		1	0		Spare	56
57	Spare		0	1		0 VA	0 VA	1	0		Spare	58
59	Spare		0	1			0 VA	0 VA	1	0	Spare	60
61	Spare		0	1	0 VA	0 VA		1	0		Spare	62
63	Spare		0	1		0 VA	0 VA	1	0		Spare	64
65	Spare		0	1			0 VA	0 VA	1	0	Spare	66
67	Spare		0	1	0 VA	0 VA		1	0		Spare	68
69	Spare		0	1		0 VA	0 VA	1	0		Spare	70
71	Spare		0	1			0 VA	0 VA	1	0	Spare	72
73	Spare		0	1	0 VA	0 VA		1	0		Spare	74
75	Spare		0	1		0 VA	0 VA	1	0		Spare	76
77	Spare		0	1			0 VA	0 VA	1	0	Spare	78
79	Spare		0	1	0 VA	0 VA		1	0		Spare	80
81	Spare		0	1		0 VA	0 VA	1	0		Spare	82
83	Spare		0	1			0 VA	0 VA	1	0	Spare	84
	Total VA				58581	58581	58581					

Total Connected Load (VA): 175744 VA
Total Connected Current (Amps): 211 A

Panel: ELA

Location: Space 281 | **Volts:** 480/277 Wye | **A.I.C. Rating:** 25,000
Supply From: MDB | **Phases:** 3 | **Mains Type:**
Mounting: Surface | **Wires:** 4 | **Mains Rating:** 250 A
Enclosure: Type 1 | **MCB Rating:** MLO

CKT	Circuit Description	Wire Size (AWG)	Trip	#P	A	B	C	#P	Trip	Wire Size (AWG)	Circuit Description	CKT
1	EXIT SIGNS	2#10 + 1#10G - 3/4"C	20	1	375	2013						2
3							360	2591				4
5	EXF-ELA1	3#4 + #8G - 1 1/4"C	80	3					180	704		6
7					360	591						8
9							458	3271				10
11	EDP2	3#6 + #10 - 1"C	60	3					818	960		12
13					465	0						14
15	Spare		20	1			0	0				16
17	Spare		20	1					0	0		18
19	Spare		20	1	0	0						20
21	Spare		20	1			0	0				22
23	Spare		20	1					0	--		24
25	Space		--	1	--	--						26
27	Space		--	1			--	--				28
29	Space		--	1					--	--		30
31	Space		--	1	--	--						32
33	Space		--	1			--	--				34
35	Space		--	1					--	--		36
37	Space		--	1	--	--						38
39	Space		--	1			--	--				40
41	Space		--	1					--	--		42
	Total VA				3765	6669	2637					

Total Connected Load (VA): 13046 VA
Total Connected Current (Amps): 16 A

Panel ELB Feed Thru. Circuit #38,40,42 indicated for load purposes only. Refer to Drawing E3.01.

Panel: ELA1

Location: Space 281 | **Volts:** 120/208 Wye | **A.I.C. Rating:** 22,000
Supply From: EXF-ELA1 | **Phases:** 3 | **Mains Type:**
Mounting: Surface | **Wires:** 4 | **Mains Rating:** 100 A
Enclosure: Type 1 | **MCB Rating:** MLO

CKT	Circuit Description	Wire Size (AWG)	Trip	#P	A	B	C	#P	Trip	Wire Size (AWG)	Circuit Description	CKT
1	VESDA Scanner	2#12...	20	1	180	180			1	20	2#12...	TCP	2
3	Vesda Scanner	2#12...	20	1			180	0	1	20	2#12...	Transformer - 120 -Low...	4
5	Security Gate	2#12...	20	1					180	180	1	20	2#12...	FACP	6
7	Spare		20	1	0	0					1	20		Spare	8
9	Spare		20	1			0	0			1	20		Spare	10
11	Spare		20	1					0	0	1	20		Spare	12
13	Spare		20	1	0	0					1	20		Spare	14
15	Spare		20	1			0	0			1	20		Spare	16
17	Space		--	1					--	--	1	--		Space	18
19	Space		--	1	--	--					1	--		Space	20
21	Space		--	1			--	--			1	--		Space	22
23	Space		--	1					--	--	1	--		Space	24
25	Space		--	1	--	--					1	--		Space	26
27	Space		--	1			--	--			1	--		Space	28
29	Space		--	1					--	--	1	--		Space	30
31	Space		--	1	--	--					1	--		Space	32
33	Space		--	1			--	--			1	--		Space	34
35	Space		--	1					--	--	1	--		Space	36
37	Space		--	1	--	--					1	--		Space	38
39	Space		--	1			--	--			1	--		Space	40
41	Space		--	1					--	--	1	--		Space	42
	Total VA				360	180	360								

Total Connected Load (VA): 900 VA
Total Connected Current (Amps): 2 A

DIMMER PANEL: EDP1

LOCATION: | **VOLTS:** 480/277 Wye | **MANUFACTURER:**
SUPPLY FROM: ELA | **PHASE:** 3 | **MODEL # :**
A.I.C. RATING: 22,000 | **WIRE:** 4 | **MAIN TYPE:**
| **MAIN RATING:**

CKT	LOAD SERVED (ROOM)	CONTROLS	ZONES	DESCRIPTION	# Of LAMPS	Load	DIMMER TYPE	WIRE & CONDUIT	REMARKS/COMMENTS
1	VEST 101	D1	1	MODULE 1	2	50 VA	0-10V	4#12+G-3/4"C	
2	OFFICE 112	B1,B3	2	MODULE 1	2	108 VA	0-10V	4#12+G-3/4"C	
3	STORAGE 111	E	3	MODULE 1	4	152 VA	0-10V	4#12+G-3/4"C	
4	CORR 110	D1	4	MODULE 1	1	25 VA	0-10V	4#12+G-3/4"C	
5	CORR 105	D1	5	MODULE 2	2	50 VA	0-10V	4#12+G-3/4"C	
6	FAMILY 109	D1	6	MODULE 2	3	75 VA	0-10V	4#12+G-3/4"C	
7	JAN 106	E	7	MODULE 2	1	38 VA	0-10V	4#12+G-3/4"C	
8	WOMENS 107	D1	8	MODULE 2	3	75 VA	0-10V	4#12+G-3/4"C	
9	MENS 108	D1	11	MODULE 3	3	75 VA	0-10V	4#12+G-3/4"C	
10	VEST 129	D1	14	MODULE 3	2	50 VA	0-10V	4#12+G-3/4"C	
11	GREAT HALL 102	P	17	MODULE 3	12	1140 VA	0-10V	4#12+G-3/4"C	
12	GIFT SHOP 103	A1	21	MODULE 3	2	90 VA	0-10V	4#12+G-3/4"C	
13	CAFÉ 104	D1	22	MODULE 4	3	75 VA	0-10V	4#12+G-3/4"C	
14	CAFÉ 104	L1,L3	23	MODULE 4	2	126 VA	0-10V	4#12+G-3/4"C	
15	CAFE 104	C	24	MODULE 4	8	217 VA	0-10V	4#12+G-3/4"C	
16	KITCHEN 104A	W	25	MODULE 4	2	60 VA	0-10V	4#12+G-3/4"C	
17	CLASSROOM 114	T	26	MODULE 5	5	308 VA	0-10V	4#12+G-3/4"C	
18	MEETING ROOM 115	T	27	MODULE 5	5	308 VA	0-10V	4#12+G-3/4"C	
19	AV 113	J	28	MODULE 5	2	94 VA	0-10V	4#12+G-3/4"C	
20	TABLE STORAGE 116	J	29	MODULE 5	2	94 VA	0-10V	4#12+G-3/4"C	
21	Spare	--	--	--	--	0 VA	--	--	
22	WARMING KITCHEN 128	G	31	MODULE 6	5	200 VA	0-10V	4#12+G-3/4"C	
23	GALLERIES 118, 120, 121	F	32	MODULE 6	11	1386 VA	0-10V	4#12+G-3/4"C	
24	VIEWING ROOM 122A	H	33	MODULE 6	2	56 VA	0-10V	4#12+G-3/4"C	
				Total Load:		4783 VA			
				Total Amps:		6 A			

Notes:

DIMMER PANEL: EDP2

LOCATION: | **VOLTS:** 480/277 Wye | **MANUFACTURER:**
SUPPLY FROM: ELA | **PHASE:** 3 | **MODEL # :**
A.I.C. RATING: 22,000 | **WIRE:** 4 | **MAIN TYPE:**
| **MAIN RATING:**

CKT	LOAD SERVED (ROOM)	CONTROLS	ZONES	DESCRIPTION	# Of LAMPS	Load	DIMMER TYPE	WIRE & CONDUIT	REMARKS/COMMENTS
1	COLL. STOR. 122B	J	34	MODULE 1	2	94 VA	0-10V	4#12+G-3/4"C	
2	VEST 119	D1	35	MODULE 1	2	50 VA	0-10V	4#12+G-3/4"C	
3	GALLERY ENTRIES	M	36	MODULE 1	3	75 VA	0-10V	4#12+G-3/4"C	
4	GALLERY ENTRIES	M	36	MODULE 1	2	50 VA	0-10V	4#12+G-3/4"C	
5	VEST STAGING 123	E	37	MODULE 2	4	152 VA	0-10V	4#12+G-3/4"C	
6	ELECTRIC 124	E	38	MODULE 2	2	76 VA	0-10V	4#12+G-3/4"C	
7	EMG DIST 125	E	39	MODULE 2	2	76 VA	0-10V	4#12+G-3/4"C	
8	FIRE PUMP 126	E	40	MODULE 2	2	76 VA	0-10V	4#12+G-3/4"C	
9	MECH. MEZZANINE 201	E	41	MODULE 3	5	190 VA	0-10V	4#12+G-3/4"C	
10	BOILER 127	E	41	MODULE 3	3	114 VA	0-10V	4#12+G-3/4"C	
11	EXTERIOR ENTRANCES	U	42	MODULE 3	15	540 VA	0-10V	4#12+G-3/4"C	
12	STAIR 100	K	43	MODULE 3	2	130 VA	0-10V	4#12+G-3/4"C	
13	STAIR 100	K	43	MODULE 4	2	130 VA	0-10V	4#12+G-3/4"C	
14	Spare	--	--	--	--	0 VA	--	--	
15	Spare	--	--	--	--	0 VA	--	--	
16	Spare	--	--	--	--	0 VA	--	--	
17	Spare	--	--	--	--	0 VA	--	--	
18	Spare	--	--	--	--	0 VA	--	--	
19	Spare	--	--	--	--	0 VA	--	--	
20	Spare	--	--	--	--	0 VA	--	--	
21	Spare	--	--	--	--	0 VA	--	--	
22	Spare	--	--	--	--	0 VA	--	--	
23	Spare	--	--	--	--	0 VA	--	--	
24	Spare	--	--	--	--	0 VA	--	--	
				Total Load:		1739 VA			
				Total Amps:		2 A			

Notes:

PANEL SCHEDULE NOTES:

ALL BRANCH CIRCUIT WIRE SIZES SHALL BE 2#12+G IN 3/4"C. UNLESS OTHERWISE NOTED. TYPICAL FOR ALL BRANCH PANELBOARDS.

CJMW ARCHITECTURE
525 Vine Street, Suite 350
Winston-Salem, NC 27101
p. 336.724.1503
www.cjmw.com

HICAPS

RAA

SAMET

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 040487 SCOTT M. FOSTER
OCT 24 2023

CONSTRUCTION DOCUMENTS

#	Description	Date

CAROLINA MUSEUM OF THE MARINE

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ELECTRICAL PANEL SCHEDULES

E6.01

ISSUE DATE: 10 -24-2023
PROJECT NUMBER: 22 -0410
DRAWN BY: LF
CHECKED BY: LF

Panel: LPA

Location: Space 281
Supply From: MDB
Mounting: Surface
Enclosure: Type 1

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

A.I.C. Rating: 25,000
Mains Type:
Mains Rating: 225 A
MCB Rating: MLO

CKT	Circuit Description	Wire Size (AWG)	Trip	#P	A		B		C		#P	Trip	Wire Size (AWG)	Circuit Description	CKT
1					10609	1475									2
3	XF-RPA	3#2 + #8G - 1 1/4"C	110	3			6528	1123			3	60	3#6 + #10 - 1"C	DP1	4
5									5786	1823					6
7					1558	0					1	20		Spare	8
9	DP2	3#6 + #10 - 1"C	60	3			693	0			1	20		Spare	10
11									455	0	1	20		Spare	12
13	Spare		20	1	0	0					1	20		Spare	14
15	Spare		20	1			0	0			1	20		Spare	16
17	Space		--	1					--	--	1	--		Space	18
19	Space		--	1	--	--					1	--		Space	20
21	Space		--	1			--	--			1	--		Space	22
23	Space		--	1					--	--	1	--		Space	24
25	Space		--	1	--	--					1	--		Space	26
27	Space		--	1			--	--			1	--		Space	28
29	Space		--	1					--	--	1	--		Space	30
31	Space		--	1	--	--					1	--		Space	32
33	Space		--	1			--	--			1	--		Space	34
35	Space		--	1					--	--	1	--		Space	36
37	Space		--	1	--	--					1	--		Space	38
39	Space		--	1			--	--			1	--		Space	40
41	Space		--	1					--	--	1	--		Space	42
	Total VA				13627		8341		8045						

Total Connected Load (VA):	29980 VA
Total Connected Current (Amps):	36 A

DIMMER PANEL: DP1

LOCATION:
SUPPLY FROM: LPA
A.I.C. RATING: 22,000

VOLTS: 480/277 Wye
PHASE: 3
WIRE: 4

MANUFACTURER:
MODEL # :
MAIN TYPE:
MAIN RATING:

CKT	LOAD SERVED (ROOM)	CONTROLS	ZONES	DESCRIPTION	# Of LAMPS	Load	DIMMMER TYPE	WIRE & CONDUIT	REMARKS/COMMENTS
1	VEST 101	D1	1	MODULE 1	2	50 VA	0-10V	4#12+G-3/4"C	
2	OFFICE 112	B2	2	MODULE 1	1	54 VA	0-10V	4#12+G-3/4"C	
3	STORAGE 111	E	3	MODULE 1	4	152 VA	0-10V	4#12+G-3/4"C	
4	CORR 105	D1	5	MODULE 1	1	25 VA	0-10V	4#12+G-3/4"C	
5	FAMILY 109	N	6	MODULE 2	1	7 VA	0-10V	4#12+G-3/4"C	
6	WOMENS 107	D1,D3	8	MODULE 2	16	218 VA	0-10V	4#12+G-3/4"C	
7	WOMENS 107	N	9	MODULE 2	4	28 VA	0-10V	4#12+G-3/4"C	
8	WOMENS 107	V	10	MODULE 2	1	15 VA	0-10V	4#12+G-3/4"C	
9	MENS 108	D1,D3	11	MODULE 3	11	145 VA	0-10V	4#12+G-3/4"C	
10	MENS 108	N	12	MODULE 3	4	28 VA	0-10V	4#12+G-3/4"C	
11	MENS 108	V	13	MODULE 3	1	15 VA	0-10V	4#12+G-3/4"C	
12	VEST 129	D1	14	MODULE 3	2	50 VA	0-10V	4#12+G-3/4"C	
13	GREAT HALL 102	D1	15	MODULE 4	6	150 VA	0-10V	4#12+G-3/4"C	
14	GREAT HALL 102	D2	16	MODULE 4	2	50 VA	0-10V	4#12+G-3/4"C	
15	GREAT HALL 102	P	17	MODULE 4	8	760 VA	0-10V	4#12+G-3/4"C	
16	GREAT HALL 102	Q	18	MODULE 4	4	908 VA	0-10V	4#12+G-3/4"C	
17	GREAT HALL 102	Q	18	MODULE 5	3	843 VA	0-10V	4#12+G-3/4"C	
18	GREAT HALL 102	R	19	MODULE 5	1	423 VA	0-10V	4#12+G-3/4"C	
19	GREAT HALL 102	Z	20	MODULE5	2	63 VA	0-10V	4#12+G-3/4"C	
20	GIFT SHOP 103	A2,A3	21	MODULE 5	2	90 VA	0-10V	4#12+G-3/4"C	
21	CAFÉ 104	L2,L4	23	MODULE 6	2	110 VA	0-10V	4#12+G-3/4"C	
22	CAFÉ 104	C	24	MODULE 6	8	248 VA	0-10V	4#12+G-3/4"C	
23	KITCHEN 104A	W	25	MODULE 6	2	60 VA	0-10V	4#12+G-3/4"C	
24	Spare	--	--	--	--	0 VA	--	--	
				Total Load:		4419 VA			
				Total Amps:		5 A			

Notes:

DIMMER PANEL: DP2

LOCATION:
SUPPLY FROM: LPA
A.I.C. RATING: 22,000

VOLTS: 480/277 Wye
PHASE: 3
WIRE: 4

MANUFACTURER:
MODEL # :
MAIN TYPE:
MAIN RATING:

CKT	LOAD SERVED (ROOM)	CONTROLS	ZONES	DESCRIPTION	# Of LAMPS	Load	DIMMMER TYPE	WIRE & CONDUIT	REMARKS/COMMENTS
1	CLASSROOM 114	T	26	MODULE 1	5	315 VA	0-10V	4#12+G-3/4"C	
2	MEETING ROOM 115	T	27	MODULE 1	5	315 VA	0-10V	4#12+G-3/4"C	
3	AV 113	E	28	MODULE 1	1	47 VA	0-10V	4#12+G-3/4"C	
4	TABLE STORAGE 116	E	29	MODULE 1	1	47 VA	0-10V	4#12+G-3/4"C	
5	GREAT HALL 102	S	30	MODULE 2	4	90 VA	0-10V	4#12+G-3/4"C	
6	WARMING KITCHEN 128	G	31	MODULE 2	5	200 VA	0-10V	4#12+G-3/4"C	
7	GALLERIES 118,120,121	F	32	MODULE 2	7	882 VA	0-10V	4#12+G-3/4"C	
8	VIEWING ROOM 122A	H	33	MODULE 2	2	56 VA	0-10V	4#12+G-3/4"C	
9	COLL. STOR. 122B	J	34	MODULE 3	2	94 VA	0-10V	4#12+G-3/4"C	
10	VEST 119	D1	35	MODULE 3	1	25 VA	0-10V	4#12+G-3/4"C	
11	VEST STAGING 123	E	37	MODULE 3	5	190 VA	0-10V	4#12+G-3/4"C	
12	BOILER 127	E	41	MODULE 3	3	114 VA	0-10V	4#12+G-3/4"C	
13	MECH. MEZZANINE 201	E	41	MODULE 4	8	304 VA	0-10V	4#12+G-3/4"C	
14	VIEWING ROOM 122A	Y	44	MODULE 4	1	50 VA	0-10V	4#12+G-3/4"C	
15	Spare	--	--	--	--	0 VA	--	--	
16	Spare	--	--	--	--	0 VA	--	--	
17	Spare	--	--	--	--	0 VA	--	--	
18	Spare	--	--	--	--	0 VA	--	--	
19	Spare	--	--	--	--	0 VA	--	--	
20	Spare	--	--	--	--	0 VA	--	--	
21	Spare	--	--	--	--	0 VA	--	--	
22	Spare	--	--	--	--	0 VA	--	--	
23	Spare	--	--	--	--	0 VA	--	--	
24	Spare	--	--	--	--	0 VA	--	--	
				Total Load:		2695 VA			
				Total Amps:		3 A			

Notes:

Panel: RPA

Location: Space 281
Supply From: XF-RPA
Mounting: Surface
Enclosure: Type 1

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

A.I.C. Rating: 22,000
Mains Type:
Mains Rating: 225 A
MCB Rating: MLO

CKT	Circuit Description	Wire Size (AWG)	Trip	#P	A		B		C		#P	Trip	Wire Size (AWG)	Circuit Description	CKT
1	Electric Flush Valves	2#12 + #10...	20	1	1800...	1260...					1	20	2#12 + #10...	Transformer - 120 ...	2
3	GALLERY REC.	2#12 + #10...	20	1			360 VA	720 VA			1	20	2#12 + #10...	GALLERY REC.	4
5	Great Hall Floorbox	2#12 + #10...	20	1					360 VA	360 VA	1	20	2#12 + #10...	Great Hall Floorbox	6
7	FCU-2	2#12 + #10...	20	1	300 VA	180 VA					1	20	2#12 + #10...	Projector	8
9	CLASSROOM REC.	2#12 + #10...	20	1			360 VA	360 VA			1	20	2#12 + #10...	111 STORAGE...	10
11	CLASSROOM REC.	2#12 + #10...	20	1					360 VA	557 VA	1	20	2#12 + #10...	CLASSROOM REC.	12
13	CLASSROOM REC.	2#12 + #10...	20	1	360 VA	1720...					1	20	2#12 + #10...	Handicap Doors	14
15	Motorized Door	2#12 + #10...	20	1			1720...	300 VA			1	20	2#12 + #10...	FCU-1 & FPB-1	16
17	Sundialer Repeater	2#10+#10...	20	1					180 VA	180 VA	1	20	2#12 + #10...	Sundialer Controller	18
19	Motorized Sunshade	2#10+#10...	20	1	750 VA	1650...					1	20	2#10+#10...	Motorized Sunshade	20
21	Floor Box	2#12 + #10...	20	1			360 VA	540 VA			1	20	2#12 + #10...	112 OFFICE REC.	22
23	CORR REC.	2#12 + #10...	20	1					540 VA	180 VA	1	20	2#12 + #10...	Mother's RM...	24
25	Electric Flush Valves	2#12 + #10...	20	1	1620...	180 VA					1	20	2#12 + #10...	Mother's RM...	26
27	TV REC.		20	1			180 VA	0 VA			1	20		Spare	28
29	Spare		20	1					0 VA	1080...	1	20	2#12 + #10...	Electric Flush Valves	30
31	Event Power	2#8+#8G-1" C.	50	2	90 VA	60 VA					3	40	4#8 + #10G - 3/4"C	Water Feature	32
33							90 VA	60 VA							34
35	COLLECTIONS &...	2#12 + #10...	20	1					1080...	60 VA					36
37	Roof Receptacle	2#12 + #10...	20	1	180 VA	734 VA					1	20	2#12 + #10...	EF-1	38
39	MEETING ROOM...	2#12 + #10...	20	1			900 VA	720 VA			1	20	2#12 + #10...	Exterior Recep	40
41	WOMENS ROOM...	- 3/4"C	20	1					360 VA	540 VA	1	20	- 3/4"C	MENS ROOM REC	42
43	Spare		20	1	0 VA	0 VA					1	20		Spare	44
45	Spare		20	1			0 VA	0 VA			1	20		Spare	46
47	Spare		20	1					0 VA	0 VA	1	20		Spare	48
49	Spare		20	1	0 VA	0 VA					1	20		Spare	50
51	Spare		20	1			0 VA	0 VA			1	20		Spare	52
53	Spare		20	1					0 VA	0 VA	1	20		Spare	54
55	Spare		20	1	0 VA	0 VA					1	20		Spare	56
57	Spare		20	1			0 VA	0 VA			1	20		Spare	58
59	Spare		20	1					0 VA	0 VA	1	20		Spare	60
61	Spare		20	1	0 VA	0 VA					1	20		Spare	62
63	Spare		20	1			0 VA	0 VA			1	20		Spare	64
65	Spare		20	1					0 VA	0 VA	1	20		Spare	66
67	Spare		20	1	0 VA	0 VA					1	20		Spare	68
69	Spare		20	1			0 VA	0 VA			1	20		Spare	70
71	Spare		20	1					0 VA	0 VA	1	20		Spare	72
73	Spare		20	1	0 VA	0 VA					1	20		Spare	74
75	Spare		20	1			0 VA	0 VA			1	20		Spare	76
77	Spare		20	1					0 VA	0 VA	1	20		Spare	78
79	Spare		20	1	0 VA	0 VA					1	20		Spare	80
81	Spare		20	1			0 VA	0 VA			1	20		Spare	82
83	Spare		20	1					0 VA	0 VA	1	20		Spare	84
	Total VA				10609		6528		5786						

Total Connected Load (VA):	22868 VA
Total Connected Current (Amps):	63 A

Panel: RP-AV1

Location: Space 292
Supply From: XF-AV1
Mounting: Surface
Enclosure: Type 1

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

A.I.C. Rating: 22,000
Mains Type:
Mains Rating: 225 A
MCB Rating:

CKT	Circuit Description	Wire Size (AWG)	Trip	#P	A		B		C		#P	Trip	Wire Size (AWG)	Circuit Description	CKT
1	113 AV REC.	2#12 + 1#10G - 3/4"C	20	1	540 VA	1240...					1	20	2#12 + 1#10G - 3/4"C	FCU-3	2
3	POWER SPACE...	2#8 + 1#10G - 3/4"C	20	1			360 VA	360 VA			1	20	2#8 + 1#10G - 3/4"C	POWER SPACE...	4
5	POWER SPACE...	2#8 + 1#10G - 3/4"C	20	1					360 VA	360 VA	1	20	2#8 + 1#10G - 3/4"C	POWER SPACE...	6
7	POWER SPACE...	2#8 + 1#10G - 3/4"C	20	1	360 VA	360 VA					1	20	2#8 + 1#10G - 3/4"C	POWER SPACE...	8
9	POWER SPACE...	2#8 + 1#10G - 3/4"C	30	1			180 VA	180 VA			1	30	2#8 + 1#10G - 3/4"C	POWER SPACE...	10
11	POWER SPACE...	2#8 + 1#10G - 3/4"C	30	1					180 VA	180 VA	1	30	2#8 + 1#10G - 3/4"C	POWER SPACE...	12
13	POWER SPACE...	2#8 + 1#10G - 3/4"C	30	1	180 VA	180 VA					1	30	2#8 + 1#10G - 3/4"C	POWER SPACE...	14
15	GREAT HALL...	2#12 + 1#10G - 3/4"C	20	1			800 VA	800 VA			1	20	2#12 + 1#10G - 3/4"C	GREAT HALL...	16
17	GREAT HALL...	2#12 + 1#10G - 3/4"C	20	1					250 VA	1600...	1	20	2#12 + 1#10G - 3/4"C	EXHIBIT AV	18
19	EXHIBIT AV	2#12 + 1#10G - 3/4"C	20	1	1600...	1600...					1	20	2#12 + 1#10G - 3/4"C	EXHIBIT AV	20
21	EXHIBIT AV	2#12 + 1#10G - 3/4"C	20	1			980 VA	980 VA			1	20	2#12 + 1#10G - 3/4"C	EXHIBIT AV	22
23	EXHIBIT AV	2#12 + 1#10G - 3/4"C	20	1					980 VA	1600...	1	20	2#12 + 1#10G - 3/4"C	EXHIBIT AV	24
25	EXHIBIT AV	2#12 + 1#10G - 3/4"C	20	1	1600...	1600...					1	20	2#12 + 1#10G - 3/4"C	EXHIBIT AV	26
27	EXHIBIT AV	2#12 + 1#10G - 3/4"C	20	1			1600...	1340...			1	20	2#12 + 1#10G - 3/4"C	EXHIBIT AV	28
29	EXHIBIT AV	2#12 + 1#10G - 3/4"C	20	1					1600...	980 VA	1	20	2#12 + 1#10G - 3/4"C	EXHIBIT AV	30
31	EXHIBIT AV	2#12 + 1#10G - 3/4"C	20	1	540 VA	1600...					1	20	2#12 + 1#10G - 3/4"C	EXHIBIT AV	32
33	EXHIBIT AV	2#12 + 1#10G - 3/4"C	20	1			360 VA	360 VA			1	20	2#12 + 1#10G - 3/4"C	EXHIBIT AV	34
35	EXHIBIT AV	2#12 + 1#10G - 3/4"C	20	1					800 VA	800 VA	1	20	2#12 + 1#10G - 3/4"C	KITCHEN AV	36
37	Spare		20	1	0 VA	1000...					1	20	2#12 + 1#10G - 3/4"C	EXHIBIT LTG	38
39	EXHIBIT LTG	2#12 + 1#10G - 3/4"C	20	1			500 VA	1000...			1	20	2#12 + 1#10G - 3/4"C	EXHIBIT LTG	40
41	EXHIBIT LTG	2#12 + 1#10G - 3/4"C	20	1					1000...	750 VA	1	20	2#12 + 1#10G - 3/4"C	EXHIBIT LTG	42
43	EXHIBIT LTG	2#12 + 1#10G - 3/4"C	20	1	1000...	1000...					1	20	2#12 + 1#10G - 3/4"C	EXHIBIT LTG	44
45	PROJECTOR	2#12 + #10G - 3/4"C	20	1			180 VA	250 VA			1	20	2#12 + 1#10G - 3/4"C	EXHIBIT LTG	46
47	PROJECTOR	2#12 + #10G - 3/4"C	20	1					180 VA	180 VA	1	20	2#12 + #10G - 3/4"C	PROJECTOR	48
49	PROJECTOR	2#12 + #10G - 3/4"C	20	1	180 VA	800 VA					1	20	2#12 + #10G - 3/4"C	PODIUM AV	50
51	PODIUMS		20	1			360 VA	0 VA			1	20		Spare	52
53	Spare		20	1					0 VA	0 VA	1	20		Spare	54
55	Spare		20	1	0 VA	0 VA					1	20		Spare	56
57	Spare		20	1			0 VA	0 VA			1	20		Spare	58
59	Spare		20	1					0 VA	0 VA	1	20		Spare	60
61	Spare		20	1	0 VA	0 VA					1	20		Spare	62
63	Spare		20	1			0 VA	0 VA			1	20		Spare	64
65	Spare		20	1					0 VA	0 VA	1	20		Spare	66
67	Spare		20	1	0 VA	0 VA					1	20		Spare	68
69	Spare		20	1			0 VA	0 VA			1	20		Spare	70
71	Spare		20	1					0 VA	0 VA	1	20		Spare	72
73	Spare		20	1	0 VA	0 VA					1	20		Spare	74
75	Spare		20	1			0 VA	0 VA			1	20		Spare	76
77	Spare		20	1					0 VA	0 VA	1	20		Spare	78
79	Spare		20	1	0 VA	0 VA					1	20		Spare	80
81	Spare		20	1			0 VA	0 VA			1	20		Spare	82
83	Spare		20	1					0 VA	0 VA	1	20		Spare	84
	Total VA				15266		10590		11800						

Total Connected Load (VA):	37650 VA
Total Connected Current (Amps):	105 A

Panel: KP1

Location: Space 255
Supply From: KF-KP
Mounting: Surface
Enclosure: Type 1

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

A.I.C. Rating: 22,000
Mains Type:
Mains Rating: 225 A
MCB Rating:

CKT	Circuit Description	Wire Size (AWG)	Trip	#P	A		B		C		#P	Trip	Wire Size (AWG)	Circuit Description	CKT
1	ROLL-IN REF.	2#12 + 1#12G - 3/4"C	20	1	943	2000					1	20	2#12 + 1#12G - 3/4"C	HEATED CABINET	2
3	HEATED CABINET	2#12 + 1#12G - 3/4"C	20	1			2000	368			1	20	2#12 + 1#12G - 3/4"C	REACH-IN FREEZE	4
5	REACH-IN REF.	2#12 + 1#12G - 3/4"C	20	1					495	1403	1	20	2#12 + 1#12G - 3/4"C	ICE MAKER	6
7	128 KITCHEN REC.	2#12 + 1#12G - 3/4"C	20	1	720	7433									8
9							5520	7433			3	80	3#4 + #8G - 1 1/4"C	COMBI OVEN, ELECTRIC	10
11	DISHWASHER	3#6 + #10G - 1"C	60	3					5520	7433					12
13					5520	0					1	20		Spare	14
15	Spare		20	1			0	0			1	20		Spare	16
17	Spare		20	1					0	0	1	20		Spare	18
19	Spare		20	1	0	0					1	20		Spare	20
21	Spare		20	1			0	0			1	20		Spare	22
23	Spare		20	1					0	0	1	20		Spare	24
25	Spare		20	1	0	0					1	20		Spare	26
27	Spare		20	1			0	0			1	20		Spare	28
29	Spare		20	1					0	0	1	20		Spare	30
31	Spare		20	1	0	0					1	20		Spare	32
33	Spare		20	1			0	0			1	20		Spare	34
35	Spare		20	1					0	0	1	20		Spare	36
37	Spare		20	1	0	0					1	20		Spare	38
39	Spare		20	1			0	0			1	20		Spare	40
41	Spare		20	1					0	0	1	20		Spare	42
	Total VA				16616		15321		14851						

Total Connected Load (VA):	46789 VA
Total Connected Current (Amps):	130 A

Panel: RP-AV2

Location: MECH. MEZZANINE 201
Supply From: XF-AV2
Mounting: Surface
Enclosure: Type 1

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

A.I.C. Rating:
Mains Type:
Mains Rating: 175 A
MCB Rating:

CKT	Circuit Description	Wire Size (AWG)	Trip	#P	A		B		C		#P	Trip	Wire Size (AWG)	Circuit Description	CKT
1	LTG GRID	2#12 + 1#10G - 3/4"C	20	1	1000	1000					1	20	2#12 + 1#10G - 3/4"C	LTG GRID	2
3	LTG GRID	2#12 + 1#10G - 3/4"C	20	1			1000	1000			1	20	2#12 + 1#10G - 3/4"C	LTG GRID	4
5	LTG GRID	2#12 + 1#10G - 3/4"C	20	1					1000	1000	1	20	2#12 + 1#10G - 3/4"C	LTG GRID	6
7	LTG GRID	2#12 + 1#10G - 3/4"C	20	1	1000	1000					1	20	2#12 + 1#10G - 3/4"C	LTG GRID	8
9	LTG GRID	2#12 + 1#10G - 3/4"C	20	1			1000	1000			1	20	2#12 + 1#10G - 3/4"C	LTG GRID	10
11	LTG GRID	2#12 + 1#10G - 3/4"C	20	1					1000	500	1	20	2#12 + 1#10G - 3/4"C	LTG GRID	12
13	LTG GRID	2#12 + 1#10G - 3/4"C	20	1	1000	1000					1	20	2#12 + 1#10G - 3/4"C	LTG GRID	14
15	LTG GRID	2#12 + 1#10G - 3/4"C	20	1			1000	1000			1	20	2#12 + 1#10G - 3/4"C	LTG GRID	16
17	LTG GRID	2#12 + 1#10G - 3/4"C	20	1					1000	1000	1	20	2#12 + 1#10G - 3/4"C	LTG GRID	18
19	LTG GRID	2#12 + 1#10G - 3/4"C	20	1	1000	1000					1	20	2#12 + 1#10G - 3/4"C	LTG GRID	20
21	LTG GRID	2#12 + 1#10G - 3/4"C	20	1			1000	1000			1	20	2#12 + 1#10G - 3/4"C	LTG GRID	22
23	CEIL. PROJECTOR	2#12 + 1#10G - 3/4"C	20	1					1200	1200	1	20	2#12 + 1#10G - 3/4"C	CEIL. PROJECTOR	24
25	CEIL. PROJECTOR	2#12 + 1#10G - 3/4"C	20	1	1200	1200					1	20	2#12 + 1#10G - 3/4"C	CEIL. PROJECTOR	26
27	CEIL. PROJECTOR	2#12 + 1#10G - 3/4"C	20	1			1200	1200			1	20	2#12 + 1#10G - 3/4"C	CEIL. PROJECTOR	28
29	CEIL. PROJECTOR	2#12 + 1#10G - 3/4"C	20	1					1200	1200	1	20	2#12 + 1#10G - 3/4"C	CEIL. PROJECTOR	30
31	CEIL. PROJECTOR	2#12 + 1#10G - 3/4"C	20	1	1200	1200					1	20	2#12 + 1#10G - 3/4"C	CEIL. PROJECTOR	32
33	CEIL. PROJECTOR	2#12 + 1#10G - 3/4"C	20	1			1200	1200			1	20	2#12 + 1#10G - 3/4"C	CEIL. PROJECTOR	34
35	CEIL. PROJECTOR	2#12 + 1#10G - 3/4"C	20	1					1200	1200	1	20	2#12 + 1#10G - 3/4"C	CEIL. PROJECTOR	36
37	CEIL. PROJECTOR	2#12 + 1#10G - 3/4"C	20	1	1200	250					1	20	2#12 + 1#10G - 3/4"C	GREAT HALL CEIL....	38
39	Spare		20	1			0	0			1	20		Spare	40
41	Spare		20	1					0	0	1	20		Spare	42
	Total VA				14250		12800		12700						

Total Connected Load (VA):	39750 VA
Total Connected Current (Amps):	110 A

PANEL SCHEDULE NOTES:

ALL BRANCH CIRCUIT WIRE SIZES SHALL BE 2#12+G IN 3/4"C. UNLESS OTHERWISE NOTED. TYPICAL FOR ALL BRANCH PANELBOARDS.

CJMW ARCHITECTURE
525 Vine Street, Suite 350
Winston-Salem, NC 27101
p. 336.724.1503
www.cjmw.com

HICAPS

RAA

SAMET

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 29437 JOHN F. FOLEY
OCT 2 4 2023

CONSTRUCTION DOCUMENTS

#	Description	Date

CAROLINA MUSEUM OF THE MARINE

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ELECTRICAL PANEL SCHEDULES

E6.02

ISSUE DATE: 10 -24-2023
PROJECT NUMBER: 22 -0410
DRAWN BY: LF
CHECKED BY: LF

Panel: LPST

Location: Space 261
Supply From: XF-LPST
Mounting: Recessed
Enclosure: Type 1

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

A.I.C. Rating: 22,000
Mains Type:
Mains Rating: 225 A
MCB Rating: MLO

CKT	Circuit Description	Wire Size (AWG)	Trip	#P	A		B		C		#P	Trip	Wire Size (AWG)	Circuit Description	CKT
1	REACH-IN REF.	2#12...	20	1	644	644					1	20	2#12...	REACH-IN REF.	2
3	REACH-IN HEATED...	2#12...	20	1			850	161			1	20	2#12...	DRAFT BEER COOLER	4
5	REACH-IN UC REF.	2#12...	20	1					230	230	1	20	2#12 +1#12G - 3/4"C	UC REFRIGERATOR	6
7	RAPID COOK OVEN	3#8 + 1#10G - 3/4"C	40	2	3100	518					1	20	2#12 +1#12G - 3/4"C	PREP REFRIGERATOR	8
9							3100	3100			2	40	3#8 + 1#10G - 3/4"C	RAPID COOK OVEN	10
11	DISPLAY CASE REF.	2#12...	20	1					1150	3100					12
13	UC REFRIGERATOR	2#12...	20	1	230	2300					2	30	3#10+1#10G -3/4"C	ESPRESSO MACHINE	14
15	Power Space 277	2#12 +1#12G - 3/4"C	20	1			540	2300							16
17	Floor Box	2#12 +1#12G - 3/4"C	20	1					360	360	1	20	2#12...	Floor Box	18
19	Store Recep	2#12...	20	1	360	360					1	20	2#12...	Floor Box	20
21		3#12 +1#12G - 3/4"C	20	3			317	1080			1	20		RECEPTION REC.	22
23	Overhead Door								317	3300	2	40	3#8 + 1#10G - 3/4"C	COFFEE BREWER	24
25					317	3300									26
27		3#10+1#10G - 3/4"C	30	3			2206	180			1	20	2#12...	Roof Recep	28
29	AHU-6								2206	0	1	20		Spare	30
31					2206	0					1	20		Spare	32
33	Spare		20	1			0	0			1	20		Spare	34
35	Spare		20	1					0	0	1	20		Spare	36
37	Spare		20	1	0	0					1	20		Spare	38
39	Spare		20	1			0	0			1	20		Spare	40
41	Spare		20	1					0	0	1	20		Spare	42
	Total VA				13770		13626		11056						

Total Connected Load (VA):	38450 VA
Total Connected Current (Amps):	107 A

Panel: PPA

Location: Space 299
Supply From: XF-PPA
Mounting: Surface
Enclosure: Type 1

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

A.I.C. Rating: 22,000
Mains Type:
Mains Rating: 225 A
MCB Rating:

CKT	Circuit Description	Wire Size (AWG)	Trip	#P	A		B		C		#P	Trip	Wire Size (AWG)	Circuit Description	CKT
1					317 VA	1510...					2	20	2#12 + 1#10G - 3/4"C	CUH-1	2
3	Dock Leveler	3#12 + 1#10G - 3/4"C	20	3			317 VA	1510...							4
5									317 VA	300 VA	1	20	2#12 + 1#10G - 3/4"C	UH-6	6
7	FCU-4	2#12 + 1#10G - 3/4"C	20	2	0 VA	300 VA					1	20	2#12 + 1#10G - 3/4"C	UH-4	8
9							0 VA	720 VA			1	20	2#12 + 1#10G - 3/4"C	Corridor Recep	10
11	VESTIBULE 123...	2#12 + 1#10G - 3/4"C	20	1					720 VA	0 VA	1	20		Spare	12
13	Hot Boxes	2#12 + 1#10G - 3/4"C	20	1	180 VA	180 VA					1	20	2#12 + 1#10G - 3/4"C	Irrigation Control	14
15	VAV Controls	2#12 + 1#10G - 3/4"C	20	1			180 VA	2024...			1	20	2#12 + 1#10G - 3/4"C	Irrigation Booster...	16
17	Heat Trace	2#12 + 1#10G - 3/4"C	20	1					180 VA	180 VA	1	20	2#12 + 1#10G - 3/4"C	Hot Boxes	18
19	UH-1	2#12 + 1#10G - 3/4"C	20	2	458 VA	180 VA					1	20	2#12 + 1#10G - 3/4"C	Hot Boxes	20
21							458 VA	458 VA			2	20	2#12 + 1#10G - 3/4"C	UH-2	22
23	EF-8	2#12 + 1#10G - 3/4"C	20	1					300 VA	458 VA					24
25					0 VA	462 VA									26
27	Spare		20	3			0 VA	462 VA			3	20	3#12+G-3/4"C	Glycol Fill System	28
29									0 VA	462 VA					30
31					0 VA	0 VA									32
33	Spare		20	3			0 VA	0 VA			3	20		Spare	34
35									0 VA	0 VA					36
37	BCU-4		20	1	300 VA	0 VA									38
39	Spare		20	1			0 VA	0 VA			3	20		Spare	40
41	Spare		20	1					0 VA	0 VA					42
43	Spare		20	1	0 VA	0 VA					1	20		Spare	44
45	Spare		20	1			0 VA	0 VA			1	20		Spare	46
47	Spare		20	1					0 VA	0 VA	1	20		Spare	48
49	Spare		20	1	0 VA	0 VA					1	20		Spare	50
51	Spare		20	1			0 VA	0 VA			1	20		Spare	52
53	Spare		20	1					0 VA	0 VA	1	20		Spare	54
55	Spare		20	1	0 VA	0 VA					1	0		Spare	56
57	Spare		0	1			0 VA	0 VA			1	0		Spare	58
59	Spare		0	1					0 VA	0 VA	1	0		Spare	60
61	Spare		0	1	0 VA	0 VA					1	0		Spare	62
63	Spare		0	1			0 VA	0 VA			1	0		Spare	64
65	Spare		0	1					0 VA	0 VA	1	0		Spare	66
67	Space		--	1	--	--					1	--		Space	68
69	Space		--	1			--	--			1	--		Space	70
71	Space		--	1					--	--	1	--		Space	72
73	Space		--	1	--	--					1	--		Space	74
75	Space		--	1			--	--			1	--		Space	76
77	Space		--	1					--	--	1	--		Space	78
79	Space		--	1	--	--					1	--		Space	80
81	Space		--	1			--	--			1	--		Space	82
83	Space		--	1					--	--	1	--		Space	84
	Total VA				3840		6052		2848						

Total Connected Load (VA):	12729 VA
Total Connected Current (Amps):	35 A

DIMMER PANEL: ESLP

LOCATION:
SUPPLY FROM: ELA
A.I.C. RATING: 22,000

VOLTS: 480/277 Wye
PHASE: 3
WIRE: 4

MANUFACTURER:
MODEL # :
MAIN TYPE:
MAIN RATING:

CKT	LOAD SERVED (ROOM)	CONTROLS	ZONES	DESCRIPTION	# Of LAMPS	Load	DIMMER TYPE	WIRE & CONDUIT	REMARKS/COMMENTS
1	Existing Site Lighting	EX	EX	MODULE 1		1440 VA	ELV	2#8+G-3/4"C	
2	Existing Site Lighting	EX	EX	MODULE 1		1296 VA	ELV	2#8+G-3/4"C	
3	Existing Site Lighting	EX	EX	MODULE 1		348 VA	ELV	2#8+G-3/4"C	
4	Existing Site Lighting	EX	EX	MODULE 1		302 VA	ELV	2#8+G-3/4"C	
5	Existing Site Lighting	EX	EX	MODULE 2		1105 VA	ELV	2#8+G-3/4"C	
6	Site Lighting	S4	46	MODULE 2	7	56 VA	ELV	2#8+G-3/4"C	
7	Spare	--	--	--	--	0 VA	--	--	
8	Spare	--	--	--	--	0 VA	--	--	
9	Site Lighting	SP	48	MODULE 3	6	300 VA	Non-Dim	2#8+G-3/4"C	
10	Site Lighting	SP	48	MODULE 3	5	250 VA	Non-Dim	2#8+G-3/4"C	
11	Site Lighting	S3	45	MODULE 3	10	190 VA	Non-Dim	2#8+G-3/4"C	
12	Spare	--	--	--	--	0 VA	--	--	
13	Site Lighting	S9	47	MODULE 4	3	21 VA	0-10V	2#8+G-3/4"C	
14	Spare	--	--	--	--	0 VA	--	--	
15	Spare	--	--	--	--	0 VA	--	--	
16	Spare	--	--	--	--	0 VA	--	--	
17	Spare	--	--	--	--	0 VA	--	--	
18	Spare	--	--	--	--	0 VA	--	--	
19	Spare	--	--	--	--	0 VA	--	--	
20	Spare	--	--	--	--	0 VA	--	--	
21	Spare	--	--	--	--	0 VA	--	--	
22	Spare	--	--	--	--	0 VA	--	--	
23	Spare	--	--	--	--	0 VA	--	--	
24	Spare	--	--	--	--	0 VA	--	--	
				Total Load:		5308 VA			
				Total Amps:		6 A			

Notes:

PANEL SCHEDULE NOTES:

ALL BRANCH CIRCUIT WIRE SIZES SHALL BE 2#12+G IN 3/4"C. UNLESS OTHERWISE NOTED. TYPICAL FOR ALL BRANCH PANELBOARDS.

CJMW ARCHITECTURE
525 Vine Street, Suite 350
Winston-Salem, NC 27101
p. 336.724.1503
www.cjmw.com

HICAPS

RAA

SAMET

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 19457 CHRISTOPHER M. FOLEY
OCT 2, 4 2023

CONSTRUCTION DOCUMENTS

#	Description	Date

CAROLINA MUSEUM OF THE MARINE

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ELECTRICAL PANEL SCHEDULES

E6.03

ISSUE DATE: 10 -24-2023
PROJECT NUMBER: 22 -0410
DRAWN BY: LF
CHECKED BY: LF

NOTES:
1. REMOVE LIGHTING ONLY IN AREA AFFECTED PER CIVIL DRAWING CD100. ALL OTHER EXISTING LIGHTING SHALL REMAIN. CONTRACTOR TO RE-WIRE EXISTING LIGHTING CIRCUIT TO MAINTAIN CONTINUITY AS REQUIRED.
2. CONTRACTOR TO SURVEY AND IDENTIFY EXISTING, FAULTY FIXTURES THAT REMAIN ON SITE, AND REPLACE FIXTURES IN KIND TO MATCH EXISTING.
3. TYPE 'SP' ARE ROADWAY/AREA LIGHT POLES, MATCH EXISTING.
4. COORDINATE WITH CIVIL DRAWINGS AND DRAWING CS100 FOR NEW LIGHT FIXTURE LOCATIONS.

LINETYPE DENOTES EXISTING TO REMAIN. (LIGHT FIXTURES & CIRCUITING)

POTENTIAL FUTURE PHASE 2 FOOTPRINT

DISCONNECT (10) FLAGPOLE FIXTURES, PROVIDE NEW TYPE S3 AND CIRCUIT AS INDICATED AT NEW FLAGPOLE LOCATIONS.

ESLP/6

ESLP/11

ESLP/13

(11) FIXTURES AND CIRCUITING TO BE DISCONNECTED AND REMOVED.

M.O.T.M BUILDING (PHASE 1)

(16) FIXTURES AND CIRCUITING TO BE DISCONNECTED AND REMOVED.

REFER TO CIVIL DRAWINGS FOR STREAM CROSSING DETAIL

APPROXIMATE LOCATION OF NEW PANEL ESLP IN STORAGE 111. REFER TO DWG. E2.01.

200KW GENERATOR IN SOUND ATTENUATED, WEATHERPROOF ENCLOSURE AND SUB-BASE FUEL TANK. REFER TO DWG. E2.01.

FOR IRRIGATION CONTROLS

IRRIGATION BOOSTER PUMP

FIRE WARNING SERVICE AT BACKFLOW PREVENTER COORDINATES WITH CIVIL DRAWINGS

FOR HOT BOX POWER. REFER TO E2.01.

ESLP/9

ESLP/10

BUS PARKING

NEW UTILITY CO. PAD MOUNTED TRANSFORMER WITH REVENUE METER PER UTILITY REQUIREMENTS. REFER TO DRAWING E2.01.

EXISTING TRANSFORMER, SITE PANEL(S), CONTACTORS, TIMECLOCK, ETC. SERVING EXISTING SITE LIGHTING CIRCUITS TO BE DISCONNECTED AND REMOVED. PROVIDE NEW IN-GROUND SPLICE BOX TO PICK-UP ALL REMAINING SITE LIGHTING CIRCUITS AND FOR RE-CONNECTION TO NEW PANEL ESLP. COORDINATE WITH EXISTING SITE. (REFER TO PANEL SCHEDULE).

NEW UNDERGROUND PRIMARY ELECTRIC SERVICE TO UTILITY CO. POLE ON MONTFORD LANDING ROAD. COORDINATE WITH UTILITY CO. REQUIREMENTS. (REFER TO DWG. E0.02).

1 SITE PLAN
1" = 20'-0"

PLAN NORTH

CJMW ARCHITECTURE
525 Vine Street, Suite 350
Winston-Salem, NC 27101
p. 336.724.1503
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NORTH CAROLINA PROFESSIONAL SEAL 031487 ENGINEER

OCT 24 2023

CONSTRUCTION DOCUMENTS

#	Description	Date

CAROLINA MUSEUM OF THE MARINE

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CJMW Architecture, P.A.

Electrical Site Plan

SE1.00

ISSUE DATE: 10 -24-2023
PROJECT NUMBER: 22 -0410
DRAWN BY: Author
CHECKED BY: Checker

FIRE PROTECTION NOTES

SCOPE OF WORK

NEW WORK:

1. THE NEW BUILDING SHALL BE PROTECTED THROUGHOUT BY NEW AUTOMATIC WET SPRINKLER PROTECTION. SINCE THE FLOOR LEVEL OF THE HIGHEST STORY IN THE BUILDING IS LESS THAN 30' IN HEIGHT, FIRE STANDPIPE IS NOT REQUIRED PER NORTH CAROLINA BUILDING CODE.
2. INCLUDE NEW 6" FIRE PROTECTION UG PIPING (BY CIVIL DIVISION) AND 6" BACKFLOW PREVENTER (BY CIVIL DIVISION). ALSO INCLUDE NEW 6" RISER CHECK VALVE ASSEMBLY.
3. PROVIDE A NEW 500 GPM ±40 HP HORIZONTAL SPLIT CASE FIRE PUMP ASSEMBLY WITH ASSOCIATED CONTROLLERS, JOCKEY PUMP, AND FIRE PUUMP TEST HEADER IN N PUMP ROOM 126.
4. PROVIDE A NEW 3" PREACTION-PAC CABINET WITH INTEGRATED NITROGEN FOR COLLECTIONS STORAGE 122B.
5. PROVIDE NEW 2-WAY FLUSH MOUNT FIRE DEPARTMENT CONNECTION (FDC). FINAL LOCATION AND STYLE TO BE CONFIRMED BY LOCAL FIRE MARSHAL.

GENERAL REQUIREMENTS

1. THE DESIGN, INSTALLATION, COMPONENTS AND ACCEPTANCE TESTING OF THE AUTOMATIC SPRINKLER SYSTEM SHALL COMPLY WITH THE MOST RECENT NORTH CAROLINA BUILDING CODE AND UFC 3-600-01, AS AMENDED, AND WITH ALL APPLICABLE BUILDING CODE ARTICLES AND REFERENCE STANDARDS CITED THEREIN INCLUDING NFPA 13, 20 AND THE IBC. DESIGN SHALL ALSO COMPLY TO THE LOCAL FIRE MARSHAL REQUIREMENTS AND ANY OWNER'S INSURANCE COMPANY REQUIREMENTS
2. WORK STARTS AT THE CONNECTION TO THE NEW 6" FIRE PROTECTION SUPPLY MAIN IN THE LOWER LEVEL.
3. USE ONLY UL/FM APPROVED SPRINKLERS AND COMPONENTS.
4. CONTRACTOR SHALL REVIEW ALL CONTRACT DOCUMENTS AND SITE CONDITIONS AS PART OF PREPARATION FOR SUBMITTING BID. ANY NOTABLE DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER (IN WRITING) PRIOR TO SUBMITTING BID. AFTER AWARD OF CONTRACT, RESOLUTION OF SUCH DISCREPANCIES INCLUDING MATERIAL, LABOR, AND ENGINEERING COSTS, IS THE RESPONSIBILITY OF THE CONTRACTOR.
5. CONTRACTOR SHALL REVIEW ALL EXISTING AND EXPECTED SITE AND BUILDING CONDITIONS AS PART OF PREPARATION FOR SUBMITTING BID, AND BECOME FAMILIAR WITH THE OVERALL PROJECT SCOPE, NOTING DEGREE OF DIFFICULTY, INCLUDING GETTING EQUIPMENT IN AND OUT OF THE BUILDING, AND POTENTIAL USE OF LIFTS AND/OR SCAFFOLDING.
6. CONTRACTOR SHALL COORDINATE ALL SPRINKLER LOCATIONS AND PIPING WITH ALL OTHER TRADES AND STRUCTURAL FEATURES.
7. CONTRACTOR SHALL SEAL AROUND ALL NEW PIPE PENETRATIONS THROUGHOUT THE BUILDING WITH FIRE SEAL DESIGN WITH A FIRE RESISTANCE EQUAL IN FIRE RATING TO THE STRUCTURE BEING PENETRATED. ALL FIRE STOPPING ASSEMBLIES SHALL BE UL LISTED.
8. ARRANGE PIPING TO FACILITATE FLUSHING. PROVIDE READILY ACCESSIBLE DRAIN AND FLUSHING CONNECTIONS AS REQUIRED BY NFPA 13. PROVIDE AND INSTALL AUXILIARY DRAINS WITH PROVISIONS FOR COMPLETE DRAINAGE. ALL SPRINKLER CONTROL ASSEMBLIES SHALL BE CONNECTED TO TEST AND DRAIN PIPING. PIPE ALL DRAINS TO THE BUILDING EXTERIOR OR OTHER ENGINEER APPROVED LOCATION. WHERE APPROVED BY ENGINEER, AUXILIARY DRAINS MAY CONSIST OF A DRAIN VALVE WITH HOSE CONNECTION AND CAP.
9. PROVIDE MAKES AND MODELS OF ALL SPRINKLERS AND COMPONENTS ON ALL SHOP DRAWINGS. ALL SYSTEM COMPONENTS SHALL BE CAPABLE OF WITHSTANDING A MINIMUM WORKING PRESSURE OF 175 PSI.
10. INSPECTOR'S TEST CONNECTIONS, DRAIN VALVES, AND CONTROL VALVES SHALL BE READILY ACCESSIBLE AND INSTALLED NO GREATER THAN ±7'-0" ABOVE THE FINISHED FLOOR. PROVIDE IDENTIFICATION SIGNS AND TAGS FOR ALL VALVES. PROVIDE ELECTRONIC SUPERVISION FOR ALL CONTROL VALVES.
11. SPRINKLER LOCATIONS AND FP PIPING SHOWN ON F DRAWINGS IS DIAGRAMMATIC, AND INDICATES A GENERAL ARRANGEMENT OF WORK. REFER TO ARCHITECTURAL DRAWINGS FOR PREFERRED SPRINKLER LOCATIONS. DO NOT SCALE FIRE PROTECTION DRAWINGS FOR DIMENSIONS NOT INDICATED, BUT RATHER REFER TO ARCHITECT FOR RESOLUTION FOR ANY DIMENSIONS NOT INDICATED. DISCREPANCIES BETWEEN ARCHITECTURAL AND F DRAWINGS, SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER (IN WRITING) BEFORE PROCEEDING WITH WORK. PROVIDE ANY ADDITIONAL SPRINKLERS, PIPING, MATERIALS, LABOR, AND ENGINEERING REQUIRED FOR A COMPLETE, CODE COMPLIANT FIRE PROTECTION SYSTEM.
12. ALL NEW PIPING (INCLUDING MAINS) SHALL BE SCHEDULE 40 PIPE, ASTM A53, TYPE F, GRADE A (UNLESS NOTED OTHERWISE).
13. INSTALL A PRESSURE GAUGE WITH A MAINTENANCE VALVE AT THE TOP OF ALL RISERS.
14. CONTRACTOR SHALL SECURE AND PAY COSTS OF ALL PERMITS, CERTIFICATES, LICENSES, INSPECTIONS, AND APPROVALS ASSOCIATED WITH THEIR WORK.
15. PROVIDE SPRINKLER PROTECTION BELOW ALL DUCTS AND OBSTRUCTIONS ACCORDANCE WITH THE OBSTRUCTION REQUIREMENTS OF NFPA 13.
16. FINISHED CEILING AREAS SHALL BE PROVIDED WITH CONCEALED PIPING AND SPRINKLERS, AND SHALL BE INSTALLED SYMMETRICAL AND LINEUP WITH ADJACENT CEILING FIXTURES AND LIGHTS. CUSTOM SPRINKLER FINISHES AND COVER PLATE AND ESCUTCHEON COLORS SHALL BE SELECTED BY ARCHITECT. SPRINKLERS SHALL BE CENTERED IN CEILING TILES WHERE APPLICABLE.
17. ALL EXPOSED PIPING IN PUBLIC SPACES SHALL BE CLEAN AND READY FOR PAINTING.
18. PROVIDE A COMPLETE VALVE TAG CHART. INCLUDE ALL CONTROL, TEST AND DRAIN VALVES. ON THE CHART, INCLUDE FUNCTION AND LOCATION OF EACH VALVE.
19. PROVIDE COMPLETE TEST AND DRAINAGE PIPING IN ACCORDANCE WITH NFPA 13. ALL DRAIN PIPE AND FITTINGS SHALL BE GALVANIZED .
20. INSTALL HEAD GUARDS ON ALL SPRINKLER HEADS IN MECHANICAL ROOMS AND ALL OTHER AREAS WHERE SUBJECT TO MECHANICAL DAMAGE.
21. **IN ADDITION TO THOSE SPRINKLERS REQUIRED TO PROVIDE COMPLETE SPRINKLER PROTECTION THROUGHOUT THE BUILDING, INCLUDE AN ADDITIONAL 20 SPRINKLERS INCLUDING ANY NECESSARY PIPING, FITTINGS AND HANGERS REQUIRED TO INSTALL THE SPRINKLERS. THE PURPOSE OF THE ADDITIONAL SPRINKLERS IS TO PROVIDE ENHANCED SPRINKLER PROTECTION IN ANY EXPOSED OR FINISHED AREA AS MAY BE DEEMED NECESSARY BY THE ARCHITECT OR ENGINEER BASED ON FIELD CONDITIONS. SPRINKLERS REQUIRED BELOW DUCTS AND OBSTRUCTIONS ARE NOT INCLUDED IN THE ADDITIONAL 20 SPRINKLERS AS THEY ARE INCLUDED IN THOSE SPRINKLERS REQUIRED TO PROVIDE COMPLETE SPRINKLER PROTECTION THROUGHOUT THE BUILDING.**

FIRE PROTECTION SYMBOLS

SYMBOL	DESCRIPTION
●	NEW CONCEALED PENDENT SPRINKLER HEAD
○	NEW EXPOSED UPRIGHT SPRINKLER HEAD
○A	NEW EXPOSED UPRIGHT SPRINKLER HEAD ABOVE GRATE CEILING
○B	NEW EXPOSED UPRIGHT SPRINKLER HEAD BELOW DUCT
⊛	NEW EXPOSED PENDENT SPRINKLER HEAD IN GRATE CEILING
◣	NEW DRY RECESSED SIDEWALL SPRINKLER HEAD
●DP	NEW DRY CONCEALED PENDENT SPRINKLER HEAD
○BS	NEW EXPOSED UPRIGHT SPRINKLER HEAD BELOW STAIRS
———	NEW SPRINKLER PIPING
- - - -	NEW GALVANIZED DRAIN PIPING
— — —	UNDERGROUND FP SUPPLY PIPING
▬ ● ▬	SPRINKLER ZONE BOUNDARY LINE
— — —	UNDERGROUND MUNICIPAL WATER MAIN PIPING
——►	DIRECTIONAL FLOW ARROW
—○—	ELBOW UP OR DOWN
—○—	BOTTOM TAP
—◇—	TOP TAP
—⋈—	CONTROL VALVE (W/ TAMPER SWITCH)
—◁—	CHECK VALVE
◧	CONNECT TO EXISTING
AB	ABOVE AND BELOW
ABD	AUTOMATIC BALL DRIP
AFF	ABOVE FINISHED FLOOR
AUX	AUXILIARY
CSS	COMBINATION SPRINKLER STANDPIPE
DN	DOWN
ELEV	ELEVATOR
EX	EXISTING
FDC	FIRE DEPARTMENT CONNECTION
FDV	FIRE DEPARTMENT VALVE
FS	FLOW SWITCH
FP	FIRE PROTECTION
N/C	NORMALLY CLOSED
NIC	NOT IN CONTRACT
SCA	SPRINKLER CONTROL ASSEMBLY
SPK	SPRINKLER
STP	FIRE STANDPIPE
ETR	EXISTING TO REMAIN
TS	TAMPER SWITCH
UG	UNDERGROUND

SEISMIC DESIGN REQUIREMENTS:

THE SEISMIC DESIGN CATEGORY (SDC) FOR THIS PROJECT IS "B" (REFER TO STRUCTURAL DRAWING S1.01). THEREFORE SEISMIC BRACING IS NOT REQUIRED FOR THE FIRE PROTECTION PIPING. (BASED ON THE CRITERIA OF REFERENCE STANDARD ASCE 7-2016, SECTION 13.1.4, SEISMIC RESTRAINT IS NOT REQUIRED FOR MECHANICAL [INCLUDING FP PIPING] AND ELECTRICAL COMPONENTS IN SDC B)

DESIGN CRITERIA

WATER SUPPLY INFORMATION:

DATE:	05-09-2022
STATIC:	44 PSI
RESIDUAL:	32 PSI @ 839 GPM
GAUGED HYDRANT:	HYDRANT #1418 IN CEMETERY ON SOUTH SIDE OF MONTIFORD POINT ROAD (NEAR INTERSECTION WITH ROUTE 24) (REFER TO SITE PLAN)
FLOWING HYDRANT:	HYDRANT #1419
SOURCE:	JACKSONVILLE WATER CO.

CONTRACTOR SHALL OBTAIN NEW WATERFLOW DATA PRIOR TO SHOP DRAWING SUBMITTAL, AND SUBMIT RESULTS WITH INITIAL SHOP DRAWING SUBMITTAL

1. CALCULATIONS SHALL INCLUDE A MINIMUM 10 PSI DESIGN MARGIN BETWEEN THE REQUIRED PRESSURE AND THE AVAILABLE WATER SUPPLY PRESSURE AT THE REQUIRED FLOW. CALCULATED FRICTION LOSSES (PF) SHALL NOT EXCEED .30 PSI/FOOT PER CONTRACT DOCUMENTS.
2. AREA OF SPRINKLER OPERATION SELECTED FOR HYDRAULIC CALCULATION SHALL BE THE MOST DEMANDING, A MINIMUM OF 1500 FT² AND CAN NOT INCLUDE ANY UNSPRINKLERED AREAS. ALL SPRINKLERS IN REMOTE AREA MUST OPERATE INCLUDING "SMALL ROOMS AND CLOSETS".
3. REDUCTIONS TO THE MINIMUM SQUARE FOOTAGE IN NOT PERMITTED. REDUCTION OF REMOTE AREA (AS NOTED IN QUICK RESPONSE SPRINKLERS EXCEPTION IN NFPA 13) IS NOT PERMITTED.
4. FOR EACH CALCULATION, THE TOTAL SPRINKLER DEMAND SHALL BE BROUGHT BACK THROUGH THE FIRE PUMP, TO THE MUNICIPAL WATER MAIN CONNECTION.
5. RESULTS OF EACH CALCULATION SHALL BE PLOTTED ON N°1.85 GRAPH, ALONG WITH WATER FLOW TEST INFORMATION. HYDRAULIC SUMMARY DATA SHALL BE INCLUDED ON SHOP DRAWINGS, INCLUDING REQUIRED PRESSURE AND FLOW, AND AVAILABLE PRESSURE AT REQUIRED FLOW.
6. USE OF LINE SPACING OFF WALL IN EXCESS OF 7'-6", AS PERMITTED BY THE EXCEPTIONS IN NFPA 13 IS NOT PERMITTED.
7. ALL SPRINKLERS SHALL BE QUICK RESPONSE UNLESS NOTED OTHERWISE.

SPRINKLER SYSTEMS SHALL BE HYDRAULICALLY CALCULATED BASED ON THE FOLLOWING CRITERIA:

HAZARD CLASS	DESCRIPTION	HYDRAULIC DESIGN DENSITY**	MAX. SPACING PER SPRINKLER	HOSE ALLOWANCE	
LIGHT	GALLERIES, CORRIDORS, GREAT HALL, OFFICES, BATHROOMS, VESTIBULES, ETC.	0.10 GPM/FT² OVER THE MOST REMOTE *1500 FT²	225 FT²	250 GPM	WET
ORDINARY GROUP I	MECHANICAL ROOMS, ELECTRICAL ROOMS, GIFT SHOP, WARMING KITCHEN, ETC.	0.20 GPM/FT² OVER THE MOST REMOTE *2500 FT²	130 FT²	250 GPM	WET
ORDINARY GROUP II	STORAGE, ETC.	0.20 GPM/FT² OVER THE MOST REMOTE *2500 FT²	130 FT²	250 GPM	WET
ORDINARY GROUP II	COLLECTIONS STORAGE	0.20 GPM/FT² OVER THE MOST REMOTE *3500 FT²	100 FT²	250 GPM	PREACTION

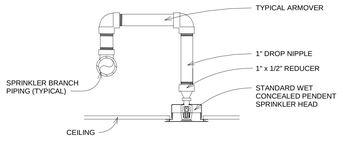
* NOTE: INCREASE REMOTE AREAS BY 30% FOR AREAS PROTECTED BY PREACTION SYSTEMS AND ANY AREAS WITH SLOPED CEILINGS.
** PER UFC-3-600-01 TABLE 9-3.

SEQUENCE OF OPERATION:

1. ACTIVATION OF A TAMPER OR LOW AIR SWITCH SHALL RESULT AS A "TROUBLE" INDICATION AT THE FIRE ALARM CONTROL PANEL AND THE FIRE ALARM ANNUNCIATOR PANEL. ACTIVATION OF A VANE OR PRESSURE TYPE FLOW SWITCH SHALL RESULT AS AN "ALARM" INDICATION AT THE FIRE ALARM CONTROL PANEL AND THE FIRE ALARM ANNUNCIATOR PANEL.
2. INTERIOR AND EXTERIOR ALARM BELLS SHALL SOUND UPON AN "ALARM" INDICATION AT THE FIRE ALARM CONTROL PANEL AND THE FIRE ALARM ANNUNCIATOR PANEL.

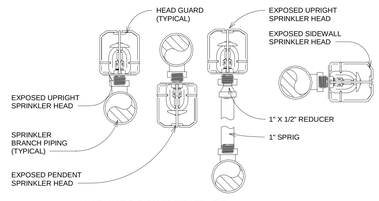
SHOP DRAWINGS:

1. PROVIDE DIMENSIONAL INSTALLATION PIPING LAYOUT(S) COORDINATED WITH ALL TRADES. INCLUDE ALL SPRINKLERS, PIPING, PIPE SIZES, PIPE ELEVATIONS, FITTINGS, DRAINS AND AUXILIARY DRAINS, HANGER TYPES AND LOCATIONS, VALVES WITH IDENTIFICATION NUMBERS, ALARM EQUIPMENT, AND ALL OTHER NECESSARY INFORMATION REQUIRED FOR A COMPLETE SHOP DRAWING. EACH DRAWING SHALL ACCURATELY LIST THE SIZE, TYPE AND SCHEDULE OF ALL PIPE AND FITTINGS USED ON THE PROJECT. INCLUDE ANY NOTED OR REQUESTED DETAILS AND SECTIONS THAT ARE REQUIRED TO CLARIFY PIPING LAYOUT AND INSTALLATION INTENT.
2. SUBMITTED SHOP DRAWINGS SHALL BE CLEAR AND LEGIBLE. MINIMUM SCALE SHALL BE 3/16"=1'-0". MINIMUM TEXT SIZE SHALL BE 1/8". ALL SPRINKLER INFORMATION MUST STANDOUT ON THE SHOP DRAWINGS (I.E., BOLD PIPING, ETC. ON LIGHTER BACKGROUND). REVERSE READING DRAWINGS ARE NOT ACCEPTABLE. DO NOT DRAW PIPING INTERSECTING WITH OTHER PIPING THAT DOES NOT ACTUALLY CONNECT. POOR QUALITY PRINTINGS, REVERSE READING DRAWINGS AND DRAWINGS WITH EXCESSIVE UNNECESSARY INFORMATION (I.E., FIELD FABRICATION NOTES, ETC.) WILL NOT BE REVIEWED AND WILL BE RETURNED FOR RESUBMISSION.
3. WITH INITIAL SHOP DRAWING SUBMITTAL, INCLUDE A COMPLETE, SCHEMATIC TYPE, RISER DIAGRAM INDICATING ALL SYSTEM COMPONENTS, HYDRAULIC REFERENCE POINTS, AND ELEVATIONS AT EACH FLOOR. DIAGRAM SHALL INCLUDE ALL INFORMATION FROM THE MUNICIPAL WATER MAIN CONNECTION UP TO AND INCLUDING THE MECHANICAL PENTHOUSE LEVEL.

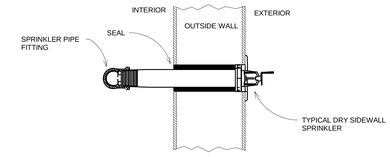


NOTES:
1. SUPPOST ARMOVER IN ACCORDANCE WITH NFPA 13 WITH DUE CONSIDERATION OF ARMOVER PIPE SIZE AND MAXIMUM EXPECTED PRESSURE.
2. MAINTAIN 18" CLEARANCE BETWEEN THE DEFLECTOR AND THE TOP OF STORAGE.

1 TYPICAL CONCEALED PENDENT SPRINKLER HEAD
F0.01 NOT TO SCALE

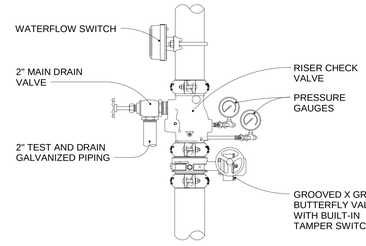


2 EXPOSED SPRINKLERS WTH HEAD GUARDS
F0.01 NOT TO SCALE



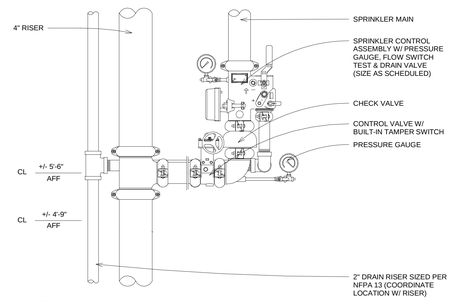
NOTES:
- LOCATE SPRINKLER 4"-6" BELOW CEILING OR AS OTHERWISE PERMITTED BY THE SPRINKLERS LISTING OR APPROVAL.
- PROPERLY SEAL SPRINKLER PENETRATION AGAINST AIR INFILTRATION AS REQUIRED BY NFPA 13 TO ENSURE ADEQUATE MEASURES ARE TAKEN AGAINST FREEZING.
- SPRINKLER LENGTH SHALL MEET MANUFACTURER'S RECOMMENDED LENGTH FOR THE APPLICATION.

3 TYPICAL DRY RECESSED HORIZONTAL SIDEWALL SPRINKLER
F0.01 NOT TO SCALE



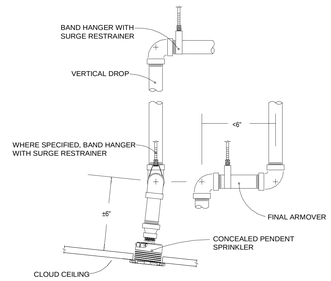
NOTES:
1. WHEN ASSEMBLY IS INSTALLED IN HORIZONTAL POSITION, ORIENT VALVE SUCH THAT THE 2" MAIN DRAIN VALVE IS LOCATED ON TOP, AND PIPE GAUGES, EACH WITH A MAINTENANCE VALVE, ARE AT READILY ACCESSIBLE LOCATION ABOVE 2" MAIN DRAIN VALVE FOR EASY READING.

4 TYPICAL 6" RISER CHECK VALVE ASSEMBLY
F0.01 NOT TO SCALE



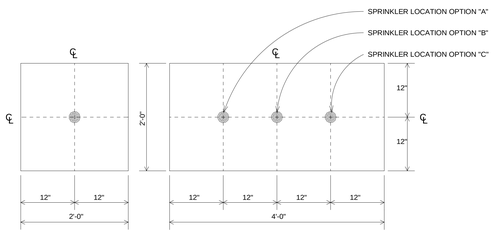
NOTES:
- COORDINATE ALL PIPING PENETRATIONS W/ STRUCTURAL WORK.
- CABINETS IN RATED WALLS SHALL BE FIRE RATED.

5 VERTICAL SPRINKLER CONTROL ASSEMBLY (SCA)
F0.01 NOT TO SCALE

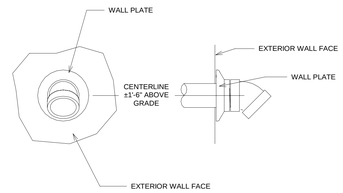


NOTES:
- VERTICAL DROP SHALL BE LOCATED SUCH THAT DROP IS WITHIN A 6" RADIUS OF FINAL LOCATION. FINAL ARMOVER SHALL BE LOCATED APPROXIMATELY 6" ABOVE CLOUD STRUCTURE.
- PROVIDE BAND HANGER WITH SURGE RESTRAINER AT DROP ELBOW. HANGER AND SURGE RESTRAINER SHALL BE SIMILAR TO TOLCO FIGS. 2NPA AND 25. FOR VERTICAL DROPS GREATER THAN 4' PROVIDE ADDITIONAL BAND HANGER WITH SURGE RESTRAINER ON FINAL ARMOVER.
- VERTICAL DROPS GREATER THAN 4' SHALL BE STIFFENED WITH 3/32" DIAMETER STAINLESS STEEL AIRCRAFT CABLE (19 STRAND).

6 TYPICAL CONCEALED PENDENT SPRINKLER WITH ARMOVER AT GREAT HALL
F0.01 NOT TO SCALE

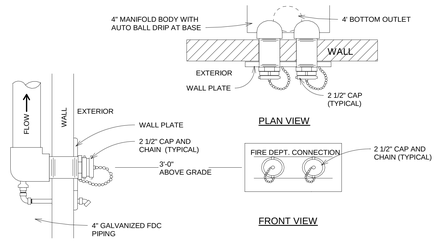


7 TYPICAL CEILING TILE/ SPRINKLER HEAD LOCATIONS
F0.01 NOT TO SCALE

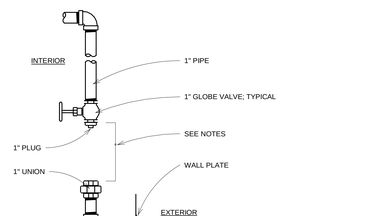


NOTES:
- PIPING, 45° ELBOW FITTING AND WALL PLATE EXPOSED AT EXTERIOR OF WALL SHALL BE CHROME PLATED.

8 2" MAIN TEST/DRAIN OUTLET AT EXTERIOR FACE
F0.01 NOT TO SCALE

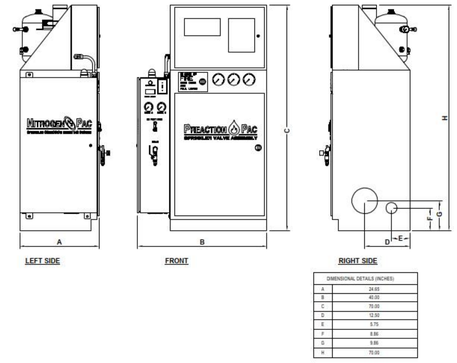


10 2-WAY FLUSH MOUNT FIRE DEPARTMENT CONNECTION
F0.01 NOT TO SCALE



NOTES:
- PROVIDE PIPE FOR TEMPORARY CONNECTION BETWEEN GLOBE VALVE AND UNION FOR USE DURING PERIODIC DRY VALVE TRIP TEST. PIPE SHALL BE LABELED AND STORED IN SPARE SPRINKLER CABINET.
- PIPING, 45 DEGREE ELBOW FITTING AND WALL PLATE EXPOSED AT EXTERIOR OF BUILING SHALL BE CHROME PLATED.
- SMOOTH BORE CORROSION-RESISTANT OUTLET MAY BE FABRICATED FROM AN UPRIGHT/PENDENT SPRINKLER THAT EMPLOYS AN ORIICE SIZE EQUAL TO THE SMALLEST ORIFICE SPRINKLER USED IN THE SYSTEM. WHEN CUTTING SPRINKLER FRAME, GRIND DOWN SHARP EDGES.
- COORDINATE LOCATION OF TEST CONNECTION OUTLET AND VAVLE WITH ARCHITECT AND LOCATION OF ACCESS PANEL.

11 TYPICAL PREACTION SPRINKLER SYSTEM TEST CONNECTION
F0.01 NOT TO SCALE



DIMENSIONAL DETAILS (INCHES)	
A	24.65
B	40.00
C	75.00
D	12.50
E	5.75
F	8.95
G	9.88
H	75.00

NOTE: INCLUDE SHUT-OFF VALVE & SIGHT GLASS ASSEMBLY (FOR TESTING), ANTI-COLUMN DEVICE, ACCELERATOR, 1/2 HP DIRECT AIR COMPRESSOR AND AUTOPURGE SYSTEM.

INSTALL AUTOPURGE ASSEMBLY ON A REMOTE SECTION OF THE [PREACTION] SPRINKLER PIPING.

[PREACTION] PIPE SYSTEM SETTINGS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS, BASED ON THE MAXIMUM WATER SUPPLY PRESSURE.

1- 1/2 HP AIR COMPRESSOR
1- 20 AMP N2 COMPRESSOR
1- PS (ALARM)
1- TS
1-LAPS(SUPERVISORY-PREACTION)
1-LAPS(SUPERVISORY-N2)
1- HAPS (SUPERVISORY)
1- 24VDC ELECTRIC BELL

9 3" PREACTION-PAC CABINET WITH INTEGRATED NITROGEN
F0.01 NOT TO SCALE

FIRE PROTECTION DRAWING INDEX		
SHEET NUMBER	SHEET NAME	NEW SPKS
F0.01	FIRE PROTECTION NOTES & DETAILS	±MISC 20
F0.02	FIRE PROTECTION DETAILS, SITE PLAN & RISER DIAGRAM	
F2.01	FIRE PROTECTION 1ST FLOOR PLAN	±203
F2.02	FIRE PROTECTION 2ND FLOOR & LOW ROOF PLAN	±210
F3.00	FIRE PROTECTION FIRE PUMP ROOM	
F3.01	FIRE PROTECTION SECTIONS	
	TOTAL	±433

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OCT. 24 2023

CONSTRUCTION DOCUMENTS

#	Description	Date

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FIRE PROTECTION NOTES & DETAILS

F0.01

ISSUE DATE: 10 -24-2023
PROJECT NUMBER: 22 -0410
DRAWN BY: JS
CHECKED BY: Checker

PLAN NORTH

SPRINKLER SCHEDULE

LEGEND	TYPE/FINISH	AREA	TEMP. RATING	APPROVAL	MANUF./ MODEL	K FACTOR
●	CONCEALED PENDENT SPRINKLER	HUNG CEILING AREAS	155°F**	UL/FM	VIKING CORP. SIN VK462	5.6
○	EXPOSED UPRIGHT SPRINKLER	EXPOSED AREAS	155°F**	UL/FM	VIKING CORP. SIN VK300	5.6/8.0
◢	DRY SIDEWALL SPRINKLER	EXTERIOR OVERHANG	155°F**	UL/FM	VIKING CORP. SIN VK481	5.6
●DP	DRY CONCEALED PENDENT SPRINKLER	COLLECTION STORAGE	155°F**	UL/FM	GLOBE GL5634	8.0

NOTES:
** OR AS OTHERWISE REQUIRED BY NFPA 13 AND THE TEMPERATURE RATINGS CHART

FIRE PROTECTION RISER SCHEDULE

RISER #	VALVE #	TYPE	SIZE	LOCATION
1	13	SPK	4"	BOILER ROOM 127

FIRE PROTECTION ZONE SCHEDULE

ZONE #	VALVE #	RISER #	TYPE	MAIN SIZE	AREA PROTECTED
1	13	-	WET	4"	GALLERIES, RESTROOMS, VESTIBULES, ETC
2	14	-	PREACTION	3"	COLLECTION STORAGE

FIRE PROTECTION ALARM BELL SCHEDULE

ZONE #	LOCATION	OPERATION
1	EXTERIOR	UPON ANY FLOW ALARM
2	PUMP ROOM	UPON ANY FLOW ALARM
3	PUMP ROOM	UPON FLOW OF PREACTION VALVE

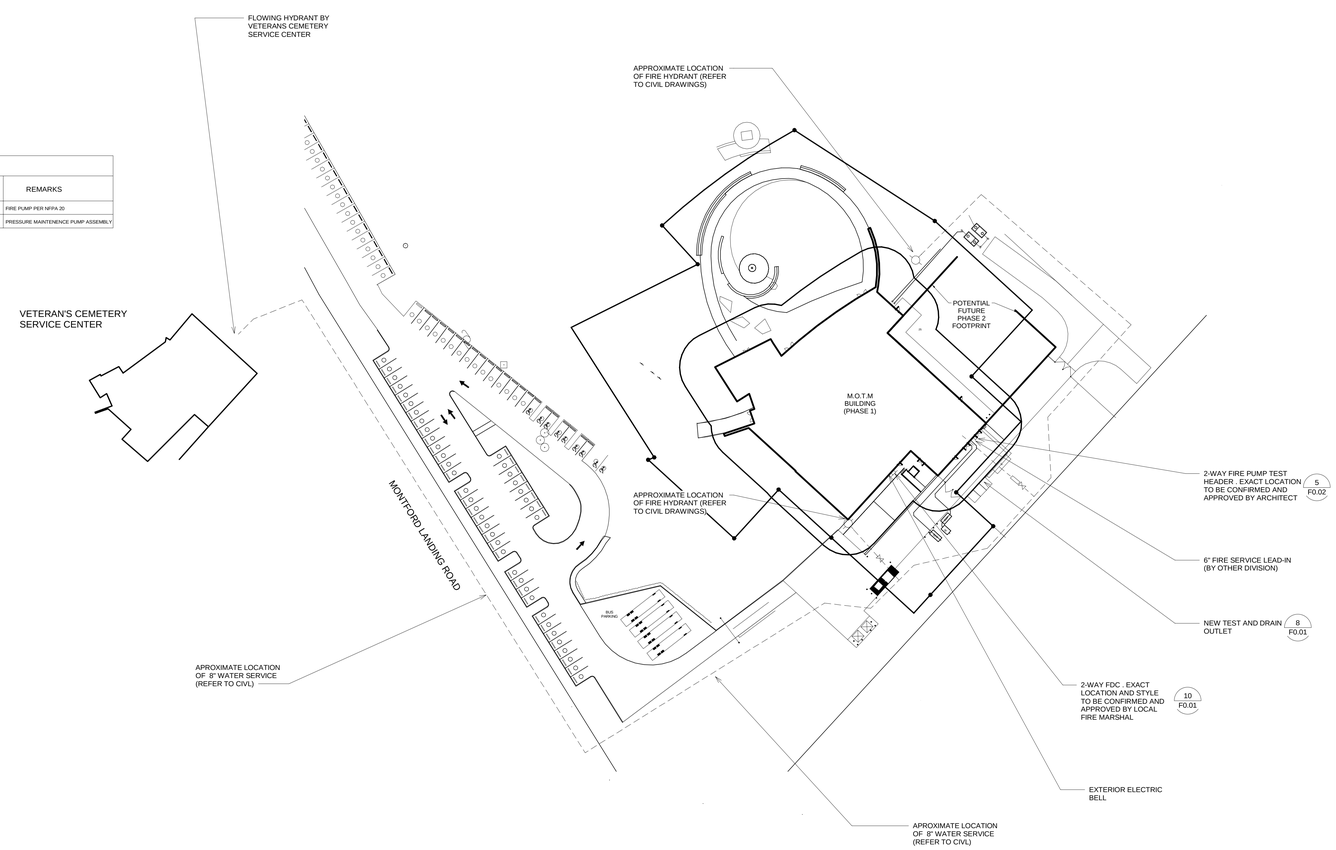
FIRE PUMP SCHEDULE

UNIT #	LOCATION	SYSTEM SERVED	FLUID	GPM	PSI	ELECTRICAL				TYPE	MAKE/MODEL	REMARKS
						HP	VOLTS	PH	RPM			
FP1	FIRE PUMP 126	FIRE PROTECTION	WATER	500	85	40	480	3	3526	HORIZONTAL SPLIT-CASE	PEERLESS AAEF10G	FIRE PUMP PER NFPA 20
FP2	FIRE PUMP 126	FIRE PROTECTION	WATER	10	85	1.5	208	3	3500	VERTICAL IN-LINE	GRUNDFOS CR3-7	PRESSURE MAINTENENCE PUMP ASSEMBLY

FIRE PROTECTION VALVE SCHEDULE

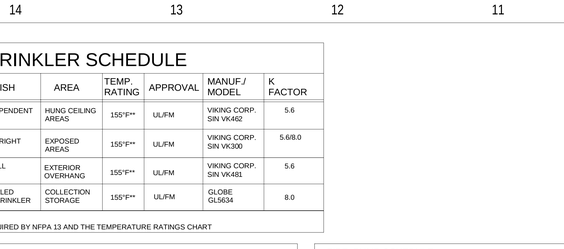
VALVE #	SIZE	FUNCTION	LOCATION	ALARM
1	6"	WATER SUPPLY CONTROL	INCOMING MECHANICAL SERVICES	
2	6"	BACKFLOW PREVENTER INLET	YARD	TS
3	6"	BACKFLOW PREVENTER OUTLET	YARD	TS
4	6"	WATER SUPPLY CONTROL	FIRE PUMP ROOM	TS
5	6"	FIRE PUMP INLET GATE VALVE	FIRE PUMP ROOM	TS
6	6"	FIRE PUMP OUTLET BUTTERFLY VALVE	FIRE PUMP ROOM	TS
7	1 1/2"	PRESSURE MAINTENANCE PUMP INLET	FIRE PUMP ROOM	TS
8	1 1/2"	PRESSURE MAINTENANCE PUMP OUTLET	FIRE PUMP ROOM	TS
9	6"	FIRE PUMP BY-PASS INLET	FIRE PUMP ROOM	TS
10	6"	FIRE PUMP BY-PASS OUTLET	FIRE PUMP ROOM	TS
11	6"	RISER CHECK VALVE CONTROL	FIRE PUMP ROOM	FS, TS
12	6"	FIRE PUMP TEST HEADER CONTROL	FIRE PUMP ROOM	TS
13	4"	ZONE 1 SPRINKLER CONTROL	FIRE PUMP ROOM	FS, TS
14	3"	PRE-ACTION VALVE CONTROL	FIRE PUMP ROOM	FS, TS, HAPS, LAPS
15	6"	FIRE PUMP OUTLET CHECK VALVE	FIRE PUMP ROOM	
16	6"	FDC CHECK VALVE	FIRE PUMP ROOM	

NOTES:
1. CONTRACTOR SHALL COMPLETE RISER, SPRINKLER ZONE AND VALVE SCHEDULES, AND INCLUDE WITH A COMPLETE RISER DIAGRAM ON SHOP DRAWINGS.

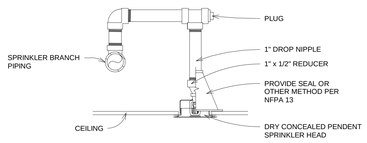


1 SITE PLAN (HOLD FOR CIVIL)
F0.02
1" = 100' - 0"

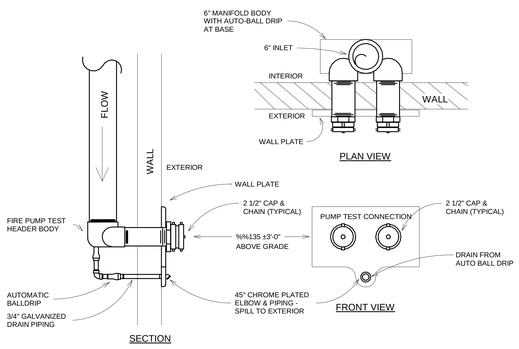
NOTE:
SITE PLAN FOR REFERENCE ONLY. PLAN DEPICTS GENERAL ARRANGEMENT OF NEW WATER SERVICE AND FIRE SERVICE LEAD-IN. REFER TO CIVIL DRAWINGS FOR SPECIFIC LOCATION OF MUNICIPAL WATER MAIN, AND ROUTING OF NEW WATER SERVICE AND FIRE SERVICE LEAD-IN INCLUDING THE HYDRANT LOCATIONS.



2 FIRE PUMP SCHEMATIC
F0.02
NOT TO SCALE

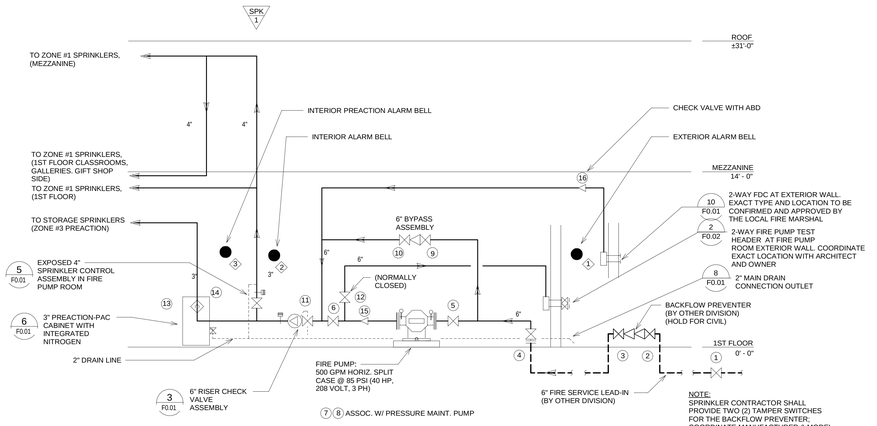


3 TYPICAL DRY CONCEALED PENDENT SPRINKLER HEAD
F0.02
NTS



NOTE; STORE TWO (2) 2 1/2" FIRE HOSE TEST VALVES IN CABINET IN FIRE PUMP ROOM

5 2-WAY FIRE PUMP TEST HEADER ASSEMBLY
F0.02
NOT TO SCALE



4 RISER DIAGRAM
F0.02
NOT TO SCALE

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OCT. 2, 2023

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FIRE PROTECTION DETAILS, SITE PLAN & RISER DIAGRAM

F0.02

PLAN NORTH

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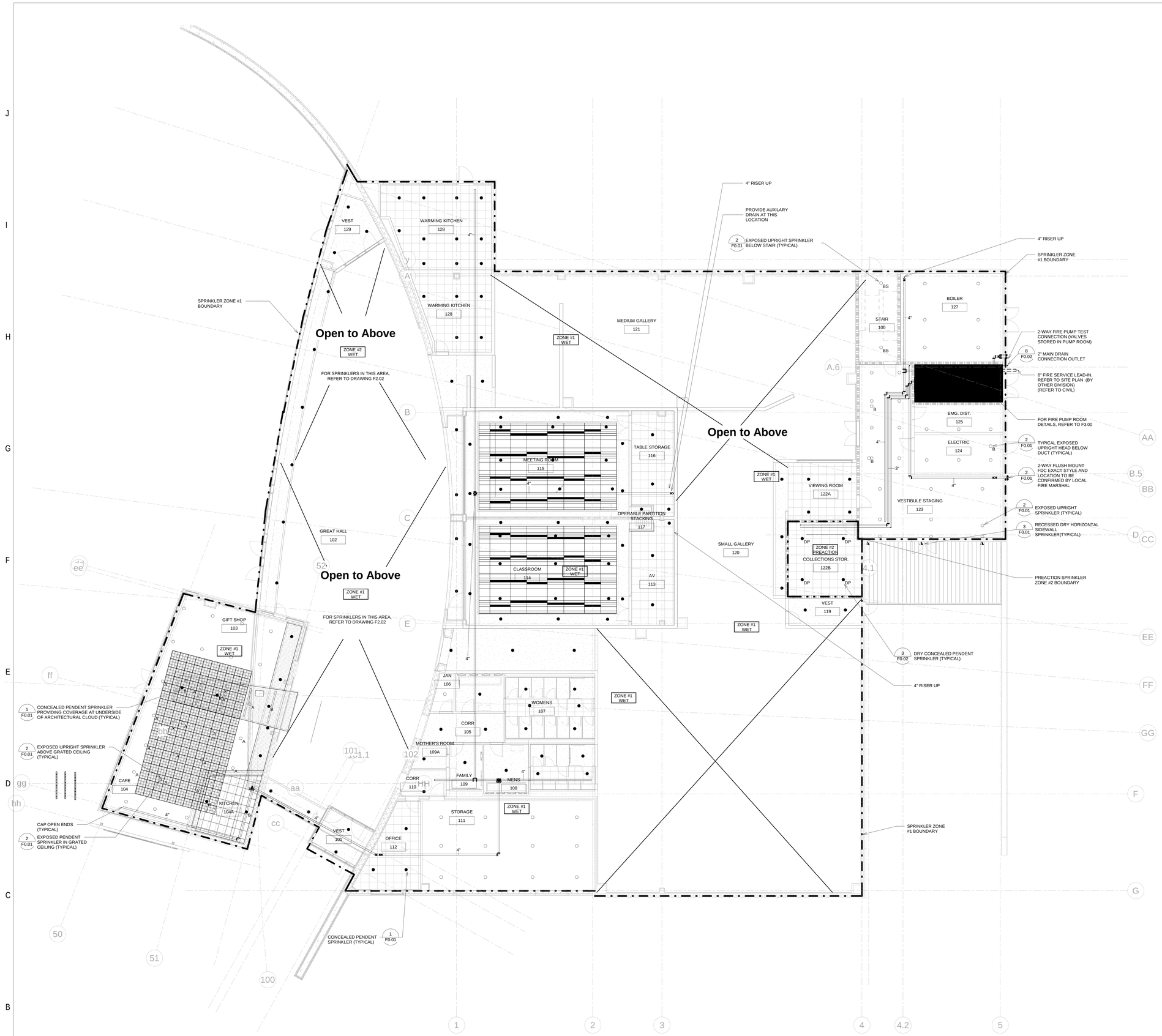
PROJECT NUMBER: 22 -0410
DRAWN BY: JS
CHECKED BY: Checker



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FIRE PROTECTION 1ST FLOOR PLAN

F2.01

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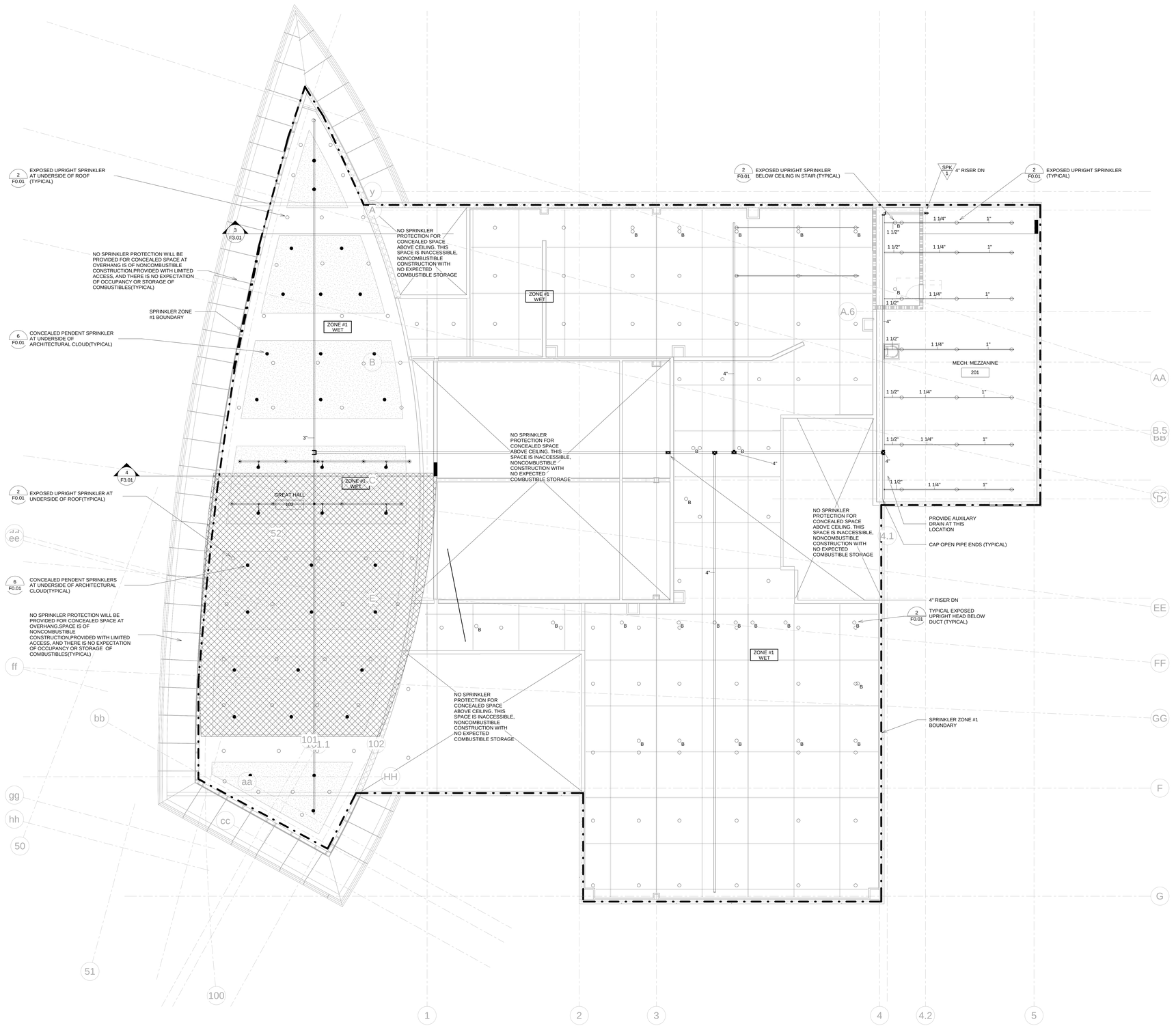
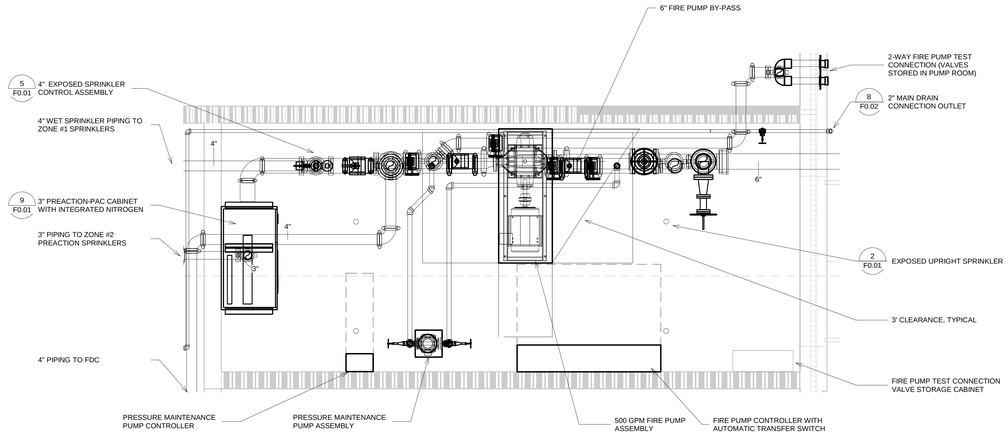
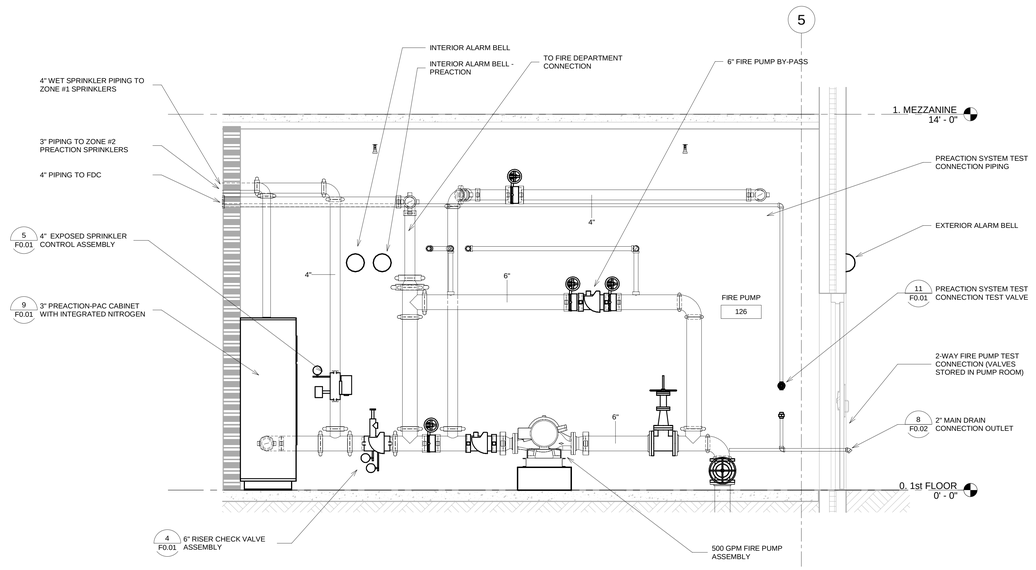

2 F0.01 EXPOSED UPRIGHT SPRINKLER AT UNDERSIDE OF ROOF (TYPICAL)
3 F3.01
NO SPRINKLER PROTECTION WILL BE PROVIDED FOR CONCEALED SPACE AT OVERHANG IS OF NONCOMBUSTIBLE CONSTRUCTION,PROVIDED WITH LIMITED ACCESS, AND THERE IS NO EXPECTATION OF OCCUPANCY OR STORAGE OF COMBUSTIBLES(TYPICAL)
SPRINKLER ZONE #1 BOUNDARY
6 F0.01 CONCEALED PENDENT SPRINKLER AT UNDERSIDE OF ARCHITECTURAL CLOUD(TYPICAL)
ZONE #1 WET
4 F3.01
2 F0.01 EXPOSED UPRIGHT SPRINKLER AT UNDERSIDE OF ROOF(TYPICAL)
GREAT HALL
102
6 F0.01 CONCEALED PENDENT SPRINKLERS AT UNDERSIDE OF ARCHITECTURAL CLOUD(TYPICAL)
NO SPRINKLER PROTECTION WILL BE PROVIDED FOR CONCEALED SPACE AT OVERHANG.SPACE IS OF NONCOMBUSTIBLE CONSTRUCTION,PROVIDED WITH LIMITED ACCESS, AND THERE IS NO EXPECTATION OF OCCUPANCY OR STORAGE OF COMBUSTIBLES(TYPICAL)
NO SPRINKLER PROTECTION FOR CONCEALED SPACE ABOVE CEILING. THIS SPACE IS INACCESSIBLE, NONCOMBUSTIBLE CONSTRUCTION WITH NO EXPECTED COMBUSTIBLE STORAGE
ZONE #1 WET
NO SPRINKLER PROTECTION FOR CONCEALED SPACE ABOVE CEILING. THIS SPACE IS INACCESSIBLE, NONCOMBUSTIBLE CONSTRUCTION WITH NO EXPECTED COMBUSTIBLE STORAGE



1 Fire Pump Room
1/2" = 1'-0"



2 Fire Pump Room Looking North
1/2" = 1'-0"

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FIRE PROTECTION FIRE PUMP ROOM

F3.00

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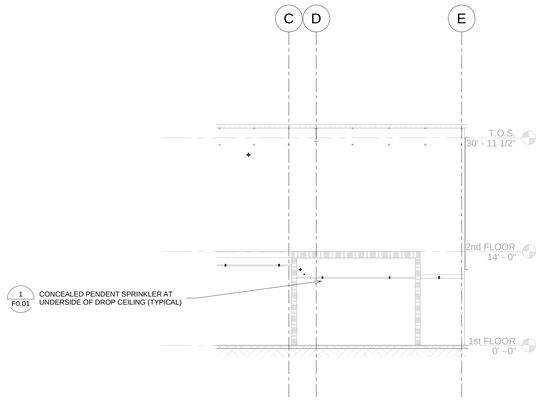
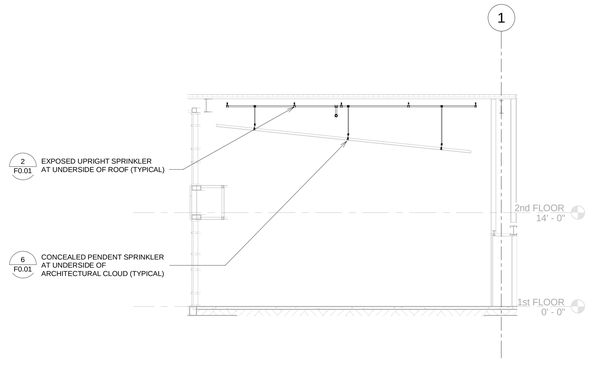
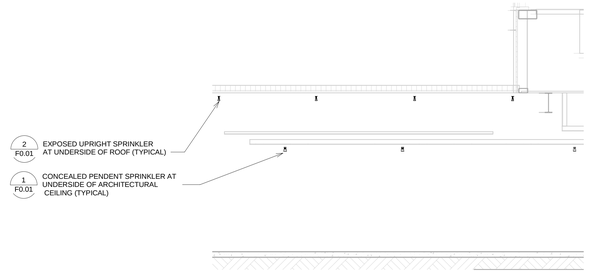


1 Collection Storage Looking East
1/8" = 1'-0"

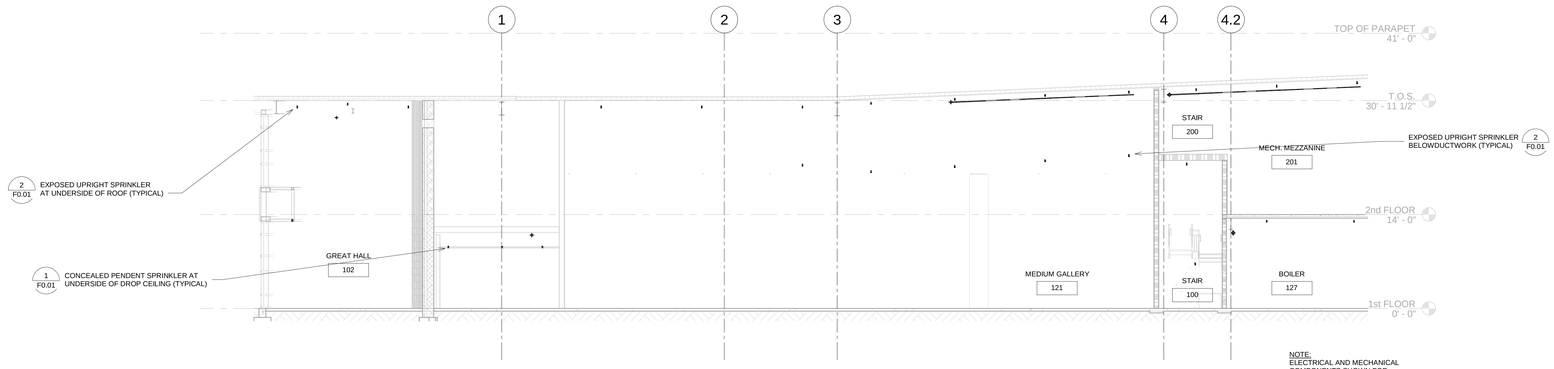


4 Great Hall looking Northeast
1/8" = 1'-0"



NOTE:
ELECTRICAL AND MECHANICAL
COMPONENTS SHOWN FOR REFERENCE
INFORMATION ONLY; FOR DESIGN
INFORMATION SEE ELECTRICAL AND
MECHANICAL DRAWINGS

5 Store looking Northeast
1/4" = 1'-0"



NOTE:
ELECTRICAL AND MECHANICAL
COMPONENTS SHOWN FOR
REFERENCE INFORMATION ONLY;
FOR DESIGN INFORMATION SEE
ELECTRICAL AND MECHANICAL
DRAWINGS

3 Galleries looking Northeast
1/8" = 1'-0"

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FIRE PROTECTION SECTIONS

F3.01

PLAN
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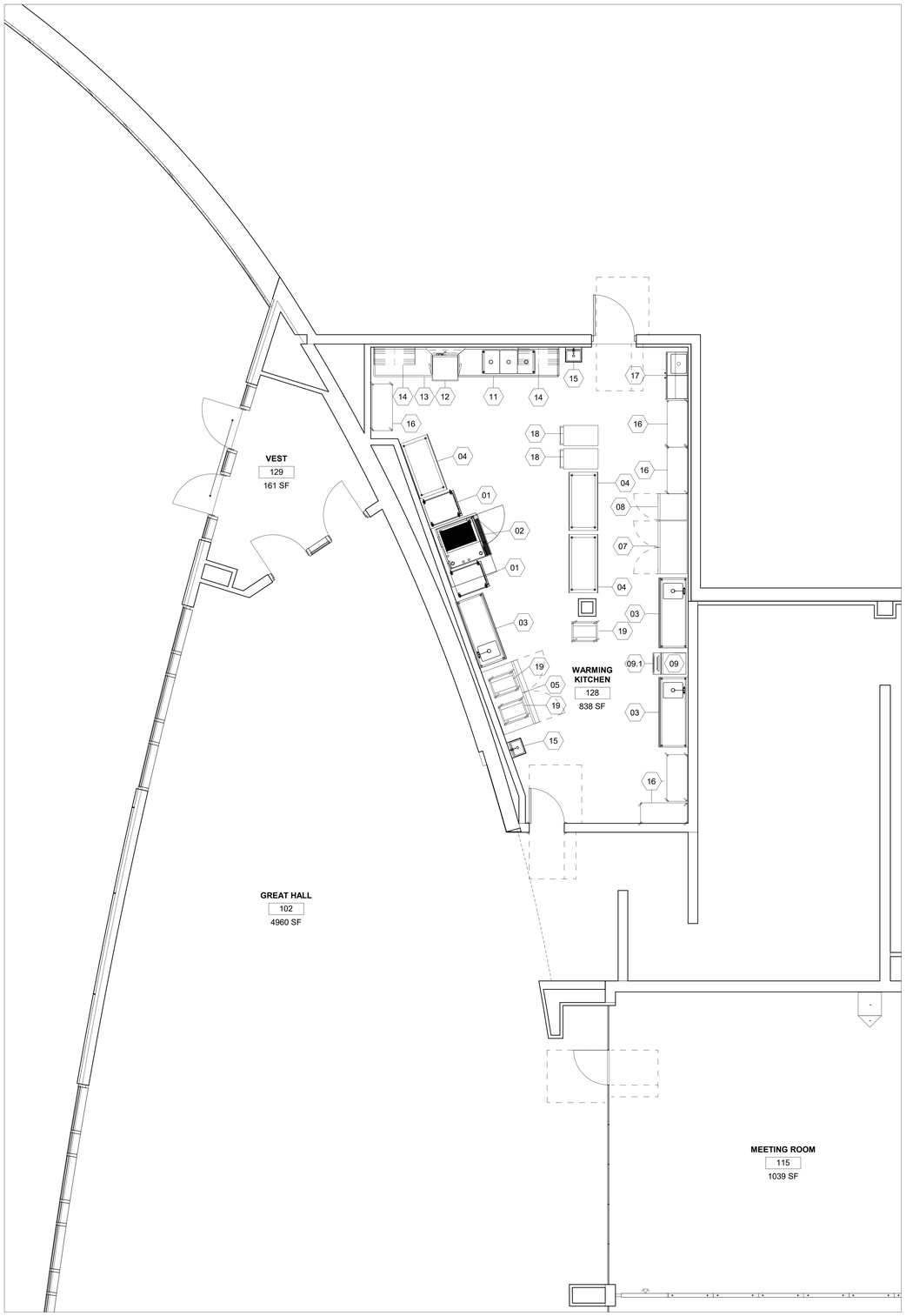
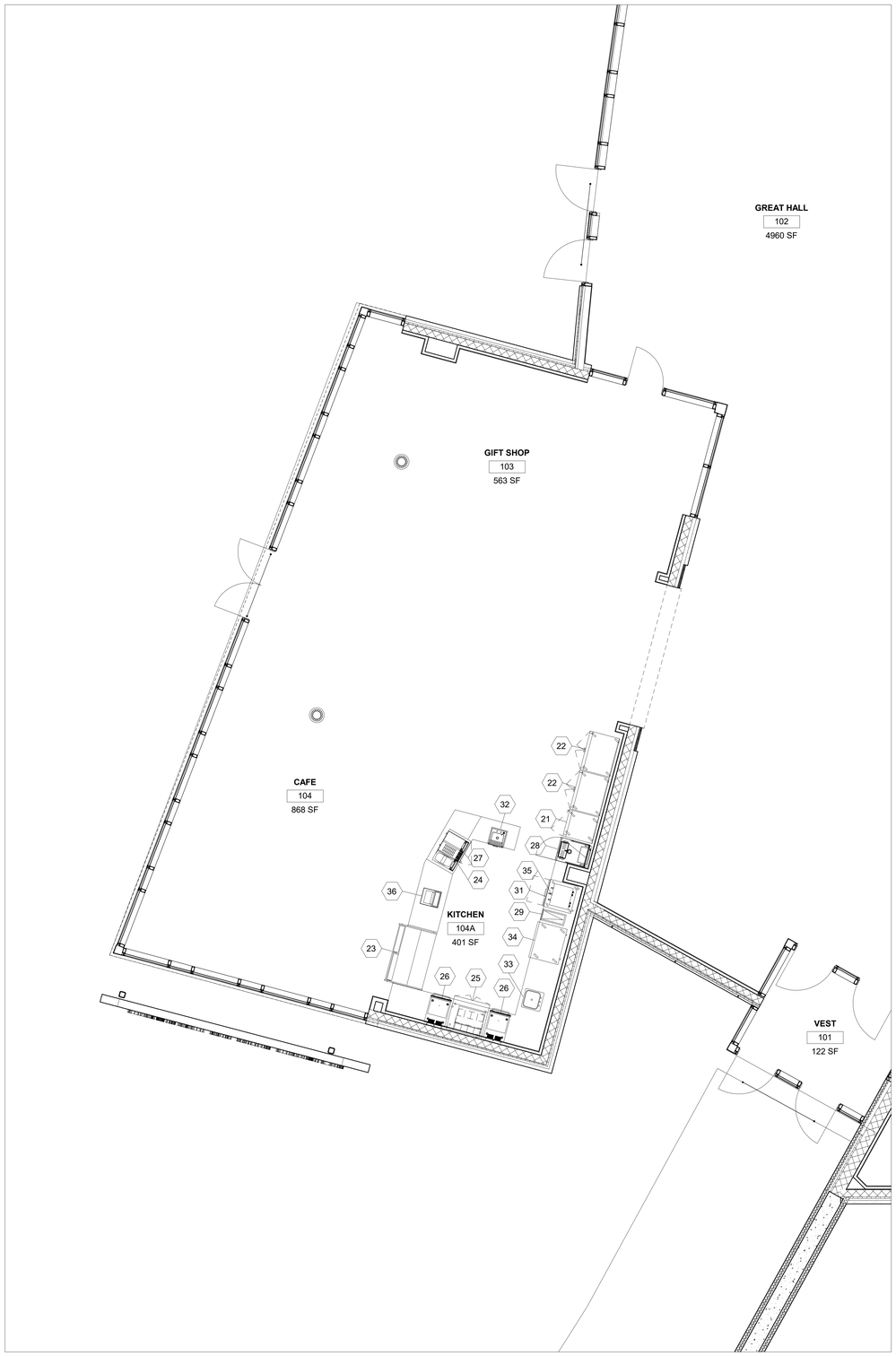


1 FS101 WARMING KITCHEN EQUIPMENT PLAN

1/4" = 1'-0"



2 FS101 CAFE EQUIPMENT PLAN

1/4" = 1'-0"

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FOOD SERVICE EQUIPMENT PLAN

FS101

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DRAWN BY: JB
CHECKED BY: Checker

PLAN NORTH

FOOD SERVICE EQUIPMENT SCHEDULE

QTY	ITEM	DESCRIPTION	MANUFACTURER	MODEL	ITEM	ELECTRICAL							PLUMBING					REMARKS
						ELECTRICAL A.F.F.	KW	HP	AMPS	VOLTS	PHASE	NEMA	HW SIZE	HW/A.F.F.	CW SIZE	CW/A.F.F.	DRAIN TYPE	
2	01	MOBILE HEATING CABINET	METRO	C539-HDC-4	01	24"			16.7	120	1	5-20P						CASTERS
1	02	COMBI OVEN, ELECTRIC	ALTO-SHAAM	7-20E PRO	02	50"	B: .40		45.7	208	3	DIRECT			3/4"	14"	F.S.	B: VENTECH TYPE 1 HOOD WITH CONDENSATION, EQUIPMENT STAND, WATER FILTER
3	03	WORK TABLE W/ PREP SINK	JOHN BOOS	EPT6R5-3072SSK-L	03								1/2"	14"	1/2"	14"	F.S.	LEVER WASTE, FAUCET, WELD-IN SINK
3	04	WORK TABLE	JOHN BOOS	ST6-3060SSK	04													CASTERS
1	05	ROLL-IN REFRIGERATOR	HOSHIZAKI	RN2A-FS	05	24"			8.2	120	1	5-15P						
1	06	NOT USED	-	-	06													
1	07	REFRIGERATOR, REACH-IN	HOSHIZAKI	ER2A-FS	07	50"			4.3	120	1	5-15P						CASTERS
1	08	FREEZER, REACH-IN	HOSHIZAKI	EF1A-FS	08	50"			3.2	120	1	5-15P						CASTERS
1	09	ICE MAKER, CUBE-STYLE	MANITOWOC ICE	IYT0620A	09	68"			14.4	120	1	DIRECT			3/8"	64"	F.S.	WATER FILTER, BACKFLOW PREVENTION DEVICE
1	09.1	ICE BIN	MANITOWOC ICE	D-420	09.1												F.S.	
1	10	NOT USED	-	-	10													
1	11	DISHTABLE, W/ POTSINKS	JOHN BOOS	DT3B18244-2D24R	11								1/2"	14"	1/2"	14"	F.S.	PRE-RINSE W/ADD ON FAUCET, LEVER WASTE
1	12	DOOR TYPE DISHWASHER, VENTLESS	CHAMPION	DH-6000T-VHR	12	24"			46.0	208	3	DIRECT	3/4"	14"	3/4"	14"	F.S.	SINGLE POINT CONN., DRAIN WATER TEMP KIT
1	13	CLEAN STRAIGHT DISHTABLE	JOHN BOOS	CDT6-S60SBK-L	13													
2	14	DISHTABLE SORTING SHELF	JOHN BOOS	BHS1842-TS	14													MOUNT 5'-4" A.F.F.
2	15	HAND SINK, WALL MOUNT	JOHN BOOS	PBHS-W-1410-EE	15								1/2"	14"	1/2"	14"	1 1/2"	SIDE SPLASH WHERE REQUIRED, FAUCET
5	16	WIRE SHELVING UNIT	QUANTUM	WR74-2148P	16													CASTERS, BUMPERS
1	17	MOP SINK CABINET	JOHN BOOS	PBJC-224884-L	17								1/2"	14"	1/2"	14"	3 1/2"	HOSE BIB
2	18	BUSSING UTILITY TRANSPORT CART, METAL	CHANNEL MANUFACTURING	US2135-3	18													CASTERS
3	19	UNIVERSAL PAN RACK	CHANNEL MANUFACTURING	UTR-18	19													CASTERS
1	20	NOT USED	-	-	20													
1	21	REACH-IN HEATED CABINET	TRUE	TH-23G~FGD01	21	50"			7.8	120	1	5-15P						CASTERS
2	22	REACH-IN REFRIGERATOR	TRUE	T-35G-HC~FGD01	22	50"		1/3	5.6	120	1	5-15P						CASTERS
1	23	DISPLAY CASE, REFRIGERATED/NON-REFRIGERATED	TRUE	TGM-DZ-59-SC/SC-B-W	23	CTR		1/4	10.0	120	1	5-15P						
1	24	ESPRESSO MACHINE	EVERSYS	ENIGMA E'4M X-WIDE	24	CTR			30.0	208	2	L60-30P	3/8"	14"	3/8"	14"	F.S.	WATER FILTER, BACKFLOW PREVENTION DEVICE
1	25	MEGA-TOP SANDWICH/SALAD PREP REFRIGERANT	TRUE	TSSU-36-12M-B-HC	25	24"		1/4	4.5	120	1	5-15P						CASTERS
2	26	RAPID COOK OVEN	PRATICA	ROCKET EXPRESS	26	50"			30.0	208	1	6-30P						
1	27	UNDERCOUNTER REFRIGERATOR	TRUE	TUC-24-HC	27	CTR		1/6	2.0	120	1	5-15P						CASTERS
1	28	DRAFT BEER COOLER	TRUE	TDD-1-S-HC	28	24"			3.9	120	1	5-15P						CASTERS, DRAFT TOWER
1	29	ICE BIN, MOBILE	BK RESOURCES	BK-MIB-2411	29												F.S.	CASTERS, SLIDING LID
1	30	NOT USED	-	-	30													
1	31	REACH-IN UNDERCOUNTER FREEZER	SILVER KING	SKF27A-EDUS1	31	24"		1/4	2.5	120	1	5-15P						CASTERS
1	32	DROP-IN SINK	JOHN BOOS	PB-DISINK091106-STD	32								1/2"	14"	1/2"	14"	F.S.	FAUCET, LEVER WASTE, SIDE SPLASH
1	33	DROP-IN SINK	ADVANCE TABCO	SS-1-1919-12	33								1/2"	14"	1/2"	14"	F.S.	FAUCET, LEVER WASTE
1	34	UNDERCOUNTER REFRIGERATOR	TRUE	TUC-36-HC	34	24"		1/6	2.0	120	1	5-15P						CASTERS
1	35	COFFEE BREWER	BUNN	34600.0001	35	50"			27.5	120	1	C&P			3/8"	14"	F.S.	WATER FILTER, BACKFLOW PREVENTION DEVICE, (4) THERMO SERVER
1	36	P.O.S.	BY OWNER	TOUCH SCREEN REGISTER	36	CTR			15.0	120	1	C&P						F.S.E.C. TO VERIFY UTILITIES WITH OWNER
1	37-40	NOT USED	-	-	37-40													

ABBREVIATIONS

ABV.	ABOVE
A.F.F.	ABOVE FINISHED FLOOR
CTR.	COUNTER MOUNTED
C.W.	COLD WATER
E.C.	ELECTRICAL CONTRACTOR
F.D.	FLOOR DRAIN
F.S.	FLOOR SINK
F.S.E.C.	FOOD SERVICE EQUIPMENT CONTRACTOR
G.C.	GENERAL CONTRACTOR
H.W.	HOT WATER
I.W.	INDIRECT WASTE
M.C.	MECHANICAL CONTRACTOR
N.I.K.C.	NOT IN KITCHEN CONTRACT
S/S	STAINLESS STEEL
ST.	STUB
U.C.	UTILITY CHASE
W.	WASTE

140° F. HOT WATER REQUIREMENTS		GPH
POT SINKS	3 @ 30	90
PREP SINKS	3 @ 20	60
CAN WASH	-	10
CLEANING	-	10
	TOTAL	170

ELECTRICAL LOADS ARE BASED ON MANUFACTURER'S INFORMATION. MINIMUM CIRCUIT AMPACITY AND OVERCURRENT PROTECTION TO BE DETERMINED BY CODE REQUIREMENTS AND/OR MANUFACTURER'S DIRECTIONS.

110° F. HOT WATER REQUIREMENTS		GPH
MOP SINK	-	5
HAND SINK	3 @ 5	15
	TOTAL	20

PLUMBING CONTRACTOR TO PROVIDE BACKFLOW PREVENTION DEVICE FOR ALL BEVERAGE EQUIPMENT, COOKING EQUIPMENT, DISHMACHINES, AND ICE MACHINES AS REQUIRED BY CODE

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525 Vine Street, Suite 350
Winston-Salem, NC 27101
p. 336.724.1503
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CONSTRUCTION DOCUMENTS

#	Description	Date

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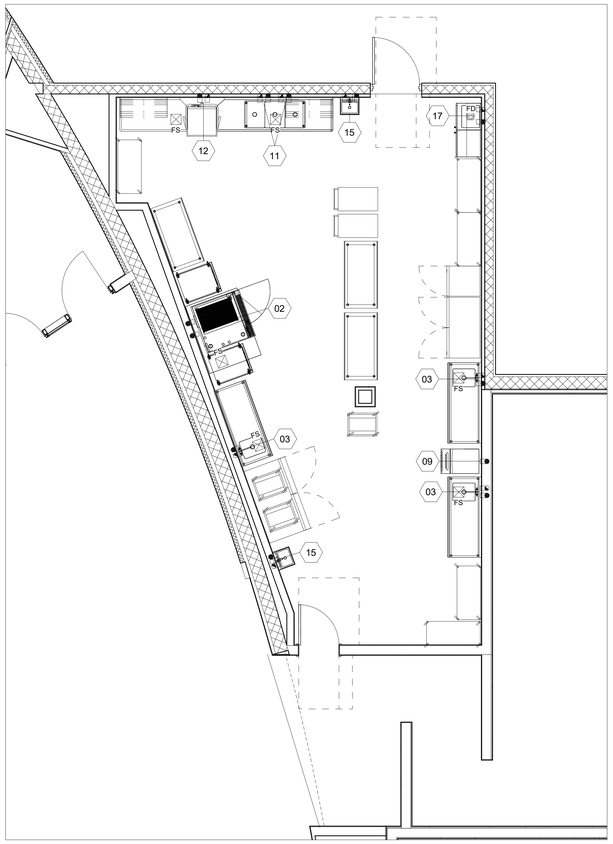
FOOD SERVICE EQUIPMENT SCHEDULE

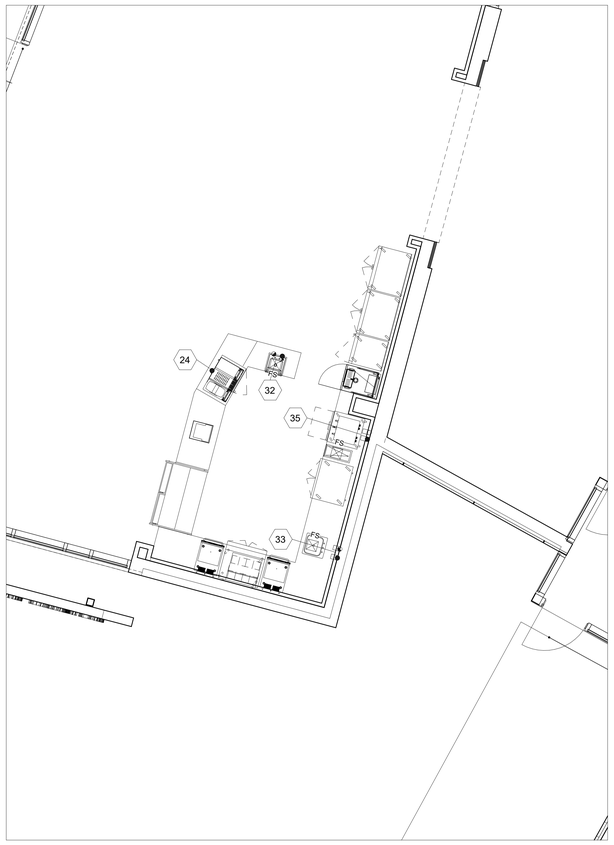
FS102

ISSUE DATE: 10/24/2023
PROJECT NUMBER: 22-0410
DRAWN BY: JB
CHECKED BY: Checker



1 FS103 WARMING KITCHEN PLUMBING PLAN

1/4" = 1'-0"



2 FS103 CAFE PLUMBING PLAN

1/4" = 1'-0"

MECHANICAL SYMBOLS	
	HOT WATER (HW)
	COLD WATER (CW)
	WASTE (W)
FD	FLOOR DRAIN
FS	FLOOR SINK - OPEN
FS	FLOOR SINK W/HALF GRATE

PLUMBING ROUGHING IN NOTES

THIS PLAN IS INTENDED TO SHOW UTILITY REQUIREMENTS AND APPROXIMATE ROUGHING-IN LOCATIONS ONLY. DO NOT USE FOR ACTUAL ROUGHING-IN. FOR FINAL ROUGH-IN LOCATIONS SEE DIMENSIONED PLANS PROVIDED BY FOOD SERVICE EQUIPMENT CONTRACTOR.

WHERE EXPOSED PIPES AND CONDUITS ARE NECESSARY, THEY SHOULD BE MOUNTED 1 TO 2 INCHES OFF THE WALL AND 6 INCHES OFF THE FLOOR TO ALLOW FOR CLEANING.

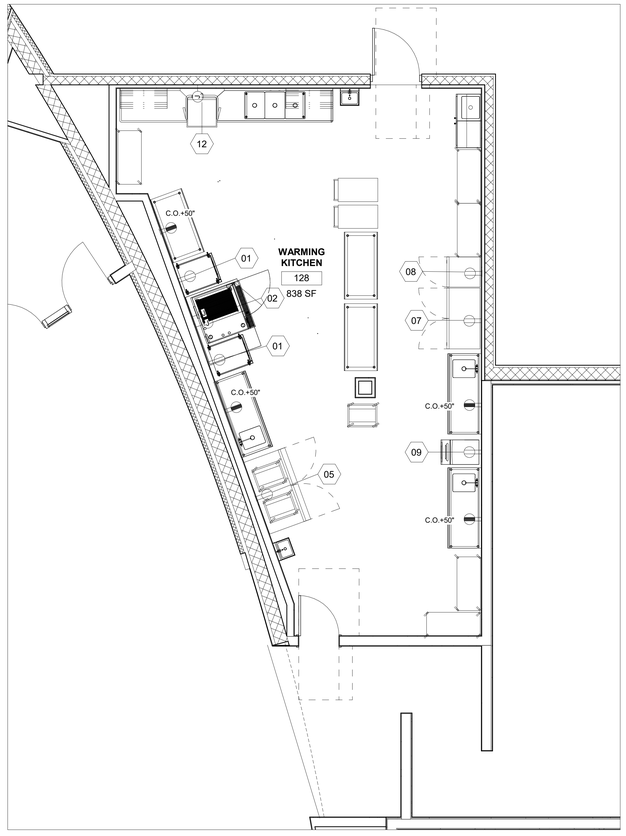
PLUMBING NOTES

PLUMBING TRIM SUCH AS FAUCETS AND SINK WASTES SHALL BE FURNISHED WITH EQUIPMENT BY FOOD SERVICE EQUIPMENT CONTRACTOR. PLUMBER TO PROVIDE SERVICE, STOP VALVES, P-TRAPS, ETC., AND MAKE FINAL CONNECTIONS.

PLUMBING CONTRACTOR TO PROVIDE BACKFLOW PREVENTION DEVICE FOR ALL BEVERAGE EQUIPMENT, COOKING EQUIPMENT, DISHMACHINES, AND ICE MACHINES AS REQUIRED BY CODE

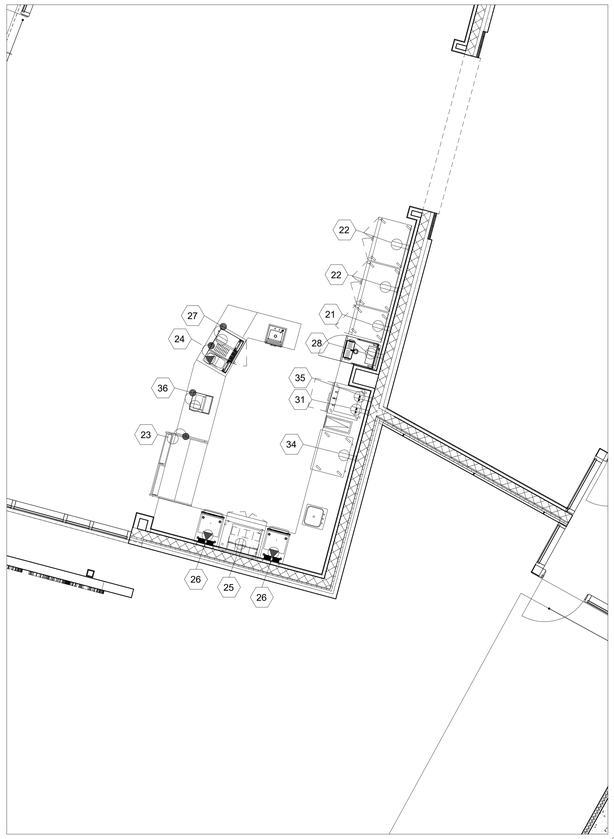
MECHANICAL NOTES

DISHMACHINE SHALL BE FURNISHED BY FOOD SERVICE EQUIPMENT CONTRACTOR WITH VENT COWLS AND STAINLESS STEEL DUCTS TO CEILING, READY FOR FINAL CONNECTIONS BY H.V.A.C. CONTRACTOR.



3 FS103 WARMING KITCHEN ELECTRICAL PLAN

1/4" = 1'-0"



4 FS103 CAFE ELECTRICAL PLAN

1/4" = 1'-0"

ELECTRICAL SYMBOLS	
J	J-BOX, FLUSH IN WALL
J	J-BOX FROM ABOVE
	WATERPROOF CONDUIT STUB
	DUPLEX OUTLET
	CONVENIENCE OUTLET, UNASSIGNED
F	FLOOR MOUNTED OUTLET BY E.C.
	SPECIAL OUTLET TO MATCH EQUIPMENT
	COUNTER DUPLEX OUTLET
	COUNTER SPECIAL OUTLET
C	COUNTER MOUNTED OUTLET BY E.C.

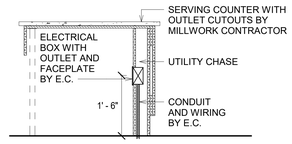
ELECTRICAL ROUGHING IN NOTES

THIS PLAN IS INTENDED TO SHOW UTILITY REQUIREMENTS AND APPROXIMATE ROUGHING-IN LOCATIONS ONLY. DO NOT USE FOR ACTUAL ROUGHING IN. FOR FINAL ROUGH-IN LOCATIONS SEE DIMENSIONED PLANS PROVIDED BY FOOD SERVICE EQUIPMENT CONTRACTOR.

WHERE EXPOSED PIPES AND CONDUITS ARE NECESSARY, THEY SHOULD BE MOUNTED 1 TO 2 INCHES OFF THE WALL AND 6 INCHES OFF THE FLOOR TO ALLOW FOR CLEANING.

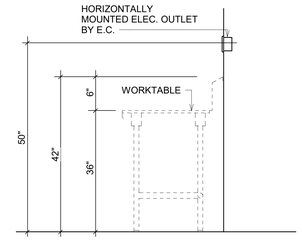
ELECTRICAL NOTES

DISHMACHINE SHALL BE FURNISHED BY FOOD SERVICE EQUIPMENT CONTRACTOR, PRE-WIRED TO INTEGRAL CONTROL PANEL READY FOR FINAL CONNECTION BY ELECTRICAL CONTRACTOR.



5 FS103 COUNTER-MOUNTED RECEPTACLE

NO SCALE



6 FS103 TYP. UNASSIGNED WALL OUTLET DETAIL

NO SCALE

PLAN NORTH

CJMW ARCHITECTURE
525 Vine Street, Suite 350
Winston-Salem, NC 27101
p. 336.724.1503
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CONSTRUCTION DOCUMENTS

#	Description	Date

CAROLINA MUSEUM OF THE MARINE

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FOOD SERVICE ROUGH-IN PLANS

FS103

ISSUE DATE: 10/24/2023
PROJECT NUMBER: 22-0410
DRAWN BY: JB
CHECKED BY: Checker

LOW VOLTAGE SYSTEMS

CAROLINA MUSEUM OF THE MARINE

COMMUNITY CORPS CAROLINAS

111 MONTFORD POINT DRIVE, JACKSONVILLE, NC 28540

SUBMITTED ON: OCTOBER 24, 2023

DEVICE LEGEND:

- DATA OUTLET, MOUNT AT 18" AFF. COORDINATE WITH POWER RECEPTACLE AND ARCHITECTURAL ELEVATIONS FOR EXACT MOUNTING HEIGHT. PROVIDE TWO(2) CATEGORY 6/23 AWG/UTP CABLES FROM STATION OUTLET TO CLOSEST TELECOM ROOM AND TERMINATE ON CATEGORY 6 PATCH PANEL. SUPPORT CABLES IN CEILING SPACE WITH J-HOOKS ON 4'-0" TO 5'-0" CENTERS. CABLES TO BE DESIGNATED FOR DATA.
  *NOTE: WHEN OUTLET IS PROVIDED WITH "C" SUBSCRIPT, OUTLET IS TO BE INSTALLED ABOVE COUNTER
  *NOTE: WHEN OUTLET IS PROVIDED WITH NUMERICAL SUBSCRIPT, OUTLET IS TO BE INSTALLED WITH NOTED QUANTITY OF CABLES.
- TV — DATA/TV OUTLET. COORDINATE MOUNTING HEIGHT WITH AUDIO VISUAL DRAWINGS AND ARCHITECTURAL ELEVATIONS. PROVIDE TWO(2) CATEGORY 6/23 AWG/UTP CABLES FROM STATION OUTLET TO CLOSEST TELECOM ROOM AND TERMINATE ON CATEGORY 6 PATCH PANEL. SUPPORT CABLES IN CEILING SPACE WITH J-HOOKS ON 4'-0" TO 5'-0" CENTERS. CABLES TO BE DESIGNATED FOR DATA.
- W — WALL PHONE SINGLE DATA WITH WALL PHONE PLATE MOUNTED AT 48" AFF TO CENTERLINE. TELECOM CONTRACTOR TO PROVIDE ONE(1) CATEGORY 6/23 AWG/UTP CABLES FROM WALL OUTLET TO LOCAL TELECOM ROOM AND TERMINATE ON CATEGORY 6 PATCH PANEL. CABLES TO BE DESIGNATED FOR VOICE USE.
- CEILING MOUNT DATA OUTLET FOR WIRELESS ACCESS POINT. TELECOM CONTRACTOR TO PROVIDE TWO(2) CATEGORY 6A/23 AWG/UTP CABLES FROM CEILING OUTLET TO CLOSEST TELECOM ROOM AND TERMINATE ON CATEGORY 6A PATCH PANEL. MOUNT OUTLET IN DUAL PORT SURFACE MOUNT BOX ATTACHED TO STRUCTURAL CEILING. CABLES TO BE DESIGNATED FOR DATA. PROVIDE 20' SERVICE LOOP IN CEILING SUPPORTED BY J-HOOKS. IN NON-ACCESSIBLE/OPEN CEILING SPACE TERMINATE IN BACKBOX.
- WALL MOUNT WIRELESS ACCESS POINT DATA OUTLET MOUNTED AT 12'-0" AFF. TELECOM CONTRACTOR TO PROVIDE TWO(2) CATEGORY 6A/23 AWG/UTP FROM STATION OUTLET TO CLOSEST TELECOM ROOM AND TERMINATE ON CATEGORY 6A PATCH PANEL. SUPPORT CABLES IN CEILING SPACE WITH J-HOOKS ON 4'-0" TO 5'-0" CENTERS. PROVIDE 20' SERVICE LOOP IN CEILING SUPPORTED BY J-HOOKS.
- P — CEILING MOUNT DATA OUTLET FOR PROJECTOR. TELECOM CONTRACTOR TO PROVIDE ONE(1) CATEGORY 6/23 AWG/UTP CABLES FROM PROJECTOR LOCATION TO CLOSEST TELECOM ROOM AND TERMINATE ON CATEGORY 6 PATCH PANEL. MOUNT OUTLET IN SINGLE PORT SURFACE MOUNT BOX ATTACHED TO STRUCTURAL CEILING. CABLES TO BE DESIGNATED FOR AUDIO VISUAL USE. PROVIDE 20' SERVICE LOOP IN CEILING SUPPORTED BY J-HOOKS. IN NON-ACCESSIBLE/OPEN CEILING SPACE TERMINATE IN BACKBOX.
- E — CEILING MOUNT DATA OUTLET FOR EXHIBITS. TELECOM CONTRACTOR TO PROVIDE TWO(2) CATEGORY 6/23 AWG/UTP CABLES FROM DATA/TV LOCATION TO CLOSEST TELECOM ROOM AND TERMINATE ON CATEGORY 6 PATCH PANEL. TERMINATE CABLE WITH FIELD TERMINABLE MALE RJ45 PLUG. CABLES TO BE DESIGNATED FOR AUDIO VISUAL USE. PROVIDE 20' SERVICE LOOP IN CEILING SUPPORTED BY J-HOOKS. IN NON-ACCESSIBLE/OPEN CEILING SPACE TERMINATE IN BACKBOX.
- CEILING MOUNT DATA OUTLET FOR WIRELESS GATEWAY FOR LOCKING CONTROLS. PROVIDE ONE(1) CATEGORY 6/23 AWG/UTP CABLES FROM CEILING OUTLET TO LOCAL TELECOM ROOM AND TERMINATE ON CATEGORY 6 PATCH PANEL.
- DATA OUTLET MOUNTED IN SHARED ELECTRICAL FLOOR BOX / POKE-THRU, COORDINATE LOCATION WITH ELECTRICAL DRAWINGS. PROVIDE TWO(2) CATEGORY 6/23 AWG/UTP CABLE FROM STATION OUTLET TO CLOSEST TELECOM ROOM AND TERMINATE ON CATEGORY 6 PATCH PANEL. CABLES TO BE DESIGNATED FOR DATA.
  *NOTE: ALL CABLES ROUTED IN SLAB ON GRADE OR BELOW GRADE TO BE WET LOCATION RATED.
  *NOTE: WHEN OUTLET IS PROVIDED WITH NUMERICAL SUBSCRIPT, OUTLET IS TO BE INSTALLED WITH NOTED QUANTITY OF CABLES.
- CR — MULTI-TECHNOLOGY CARD READER MOUNTED AT 42" AFF PROVIDED AND INSTALLED BY SECURITY CONTRACTOR. SEE PLAN DETAILS FOR REQUIREMENTS.
- E — ELECTRIC DOOR HARDWARE. POWER SUPPLY & DOOR POSITION SWITCH PROVIDED & INSTALLED BY THE SECURITY CONTRACTOR. ALL DEVICES WIRED & INTEGRATED BY THE SECURITY CONTRACTOR. ELECTRIC DOOR HARDWARE PROVIDED AND INSTALLED BY DOOR HARDWARE CONTRACTOR
- P — DOOR POSITION SWITCH. PROVIDED, INSTALLED, WIRED AND INTEGRATED BY SECURITY CONTRACTOR. SEE PLAN DETAILS FOR REQUIREMENTS.
- C — CONTACT CLOSURE FOR EXHIBITION CASES. PROVIDED, INSTALLED, WIRED AND INTEGRATED BY SECURITY CONTRACTOR. SEE PLAN DETAILS FOR REQUIREMENTS.
- S — WALL MOUNTED DOOR SOUNDER AT 6" BELOW CEILING. PROVIDE WALL MOUNTED SINGLE GANG BACKBOX. PROVIDE ONE (1) -3/4" EMT CONDUIT FROM BOX TO NEAREST ACCESSIBLE CEILING.
- DOOR OPERATOR PUSH BUTTON. PROVIDED BY DOOR HARDWARE CONTRACTOR. WIRED AND INTEGRATED BY SECURITY CONTRACTOR.
- SPLIT INGRESS/EGRESS ADA DOOR OPERATOR PUSH-BUTTON, PROVIDED BY DOOR HARDWARE SUPPLIER AND WIRED AND INTEGRATED BY THE SECURITY CONTRACTOR.
- SINGLE-SENSOR VIDEO SURVEILLANCE CAMERA. SEE CAMERA SCHEDULE FOR REQUIREMENTS. TELECOM CONTRACTOR TO PROVIDE ONE(1) CATEGORY 6 CABLE TO LOCATION OF EACH INTERIOR AND EXTERIOR CAMERA. MOUNT OUTLET IN SINGLE PORT SURFACE MOUNT BOX ATTACHED TO STRUCTURAL CEILING. SEE DETAILS FOR TERMINATION REQUIREMENT.
- MULTI-SENSOR VIDEO SURVEILLANCE CAMERA. SEE CAMERA SCHEDULE FOR REQUIREMENTS. TELECOM CONTRACTOR TO PROVIDE ONE(1) CATEGORY 6 CABLE TO LOCATION OF EACH INTERIOR AND EXTERIOR CAMERA. MOUNT OUTLET IN SINGLE PORT SURFACE MOUNT BOX ATTACHED TO STRUCTURAL CEILING. SEE DETAILS FOR TERMINATION REQUIREMENT.
- FISH-EYE VIDEO SURVEILLANCE CAMERA. SEE CAMERA SCHEDULE FOR REQUIREMENTS. TELECOM CONTRACTOR TO PROVIDE ONE(1) CATEGORY 6 CABLE TO LOCATION OF EACH INTERIOR AND EXTERIOR CAMERA. MOUNT OUTLET IN SINGLE PORT SURFACE MOUNT BOX ATTACHED TO STRUCTURAL CEILING. SEE DETAILS FOR TERMINATION REQUIREMENT.

ELECTRICAL ROUGH-IN LEGEND:

- DATA OUTLET. REFERENCE ARCHITECTURAL ELEVATIONS FOR MOUNTING HEIGHTS. PROVIDE WALL MOUNT 4" SQUARE BACKBOX WITH SINGLE GANG TILE RING. PROVIDE ONE (1) - 1" EMT CONDUIT FROM BOX TO NEAREST ACCESSIBLE CEILING SPACE.
- TV — DATA/TV OUTLET. REFERENCE ARCHITECTURAL ELEVATIONS AND AUDIO-VISUAL DRAWINGS FOR MOUNTING HEIGHTS. PROVIDE WALL MOUNT 4" SQUARE BACKBOX WITH SINGLE GANG TILE RING. PROVIDE ONE(1) -1" EMT CONDUIT FROM BOX TO NEAREST ACCESSIBLE CEILING SPACE.
- W — WALL PHONE OUTLET. PROVIDE WALL MOUNT 4" SQUARE BACKBOX WITH SINGLE GANG TILE RING AT 48" AFF. PROVIDE (1) - 3/4" EMT CONDUIT FROM BOX TO NEAREST ACCESSIBLE CEILING SPACE.

  DATA/FIBER OUTLET. REFERENCE ARCHITECTURAL ELEVATIONS FOR MOUNTING HEIGHTS. PROVIDE WALL MOUNT 4" SQUARE BACKBOX WITH SINGLE GANG TILE RING. PROVIDE ONE (1) - 1" EMT CONDUIT FROM BOX TO NEAREST ACCESSIBLE CEILING.
- E P — CEILING MOUNT DATA OUTLET. PROVIDE 4-11/16" BACKBOX WITH SINGLE GANG TILE RING SUPPORTED FROM STRUCTURE ABOVE. PROVIDE TWO J-HOOKS SUPPORTED FROM STRUCTURE SPACED 12" APART TO SUPPORT 20' SERVICE LOOP ABOVE FINISHED CEILING. COORDINATE EXACT LOCATION OF SERVICE LOOP WITH ACCESSIBLE CEILING SPACES. FOR DEVICES LOCATED IN OPEN CEILINGS, CABLING TO BE INSTALLED IN 1" EMT CONDUIT.
- DATA OUTLET MOUNTED IN SHARED ELECTRICAL FLOOR BOX / POKE-THRU. SEE ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR FLOOR BOX REQUIREMENTS. PROVIDE ONE(1) -1" CONDUIT FROM BOX TO NEAREST ACCESSIBLE CEILING SPACE. SIZE CONDUIT PER NEC 40% FILL REQUIREMENTS. UPSIZE TO 1-1/4" CONDUITS WHEN MORE THAN 4 CABLES ARE REQUIRED.
- CR — MULTI-TECHNOLOGY CARD READER. PROVIDE WALL MOUNT 4" SQUARE BACKBOX WITH SINGLE GANG TILE RING AT 42" AFF. PROVIDE ONE(1) - 1" EMT CONDUIT ROUTED FROM DOOR FRAME TO SECURITY JUNCTION BOX IN NEAREST ACCESSIBLE CEILING SPACE. SEE INSTALLATION DETAILS FOR FURTHER REQUIREMENTS.
- E — ELECTRIC DOOR HARDWARE. PROVIDE ONE(1) - 3/4" EMT CONDUIT ROUTED FROM DOOR FRAME TO SECURITY JUNCTION BOX IN NEAREST ACCESSIBLE CEILING SPACE. SEE INSTALLATION DETAILS FOR FURTHER REQUIREMENTS.
- P — DOOR POSITION SWITCH . PROVIDE ONE(1) - 3/4" EMT CONDUIT ROUTED FROM DOOR FRAME TO SECURITY JUNCTION BOX IN NEAREST ACCESSIBLE CEILING SPACE. SEE INSTALLATION DETAILS FOR FURTHER REQUIREMENTS.
- S — WALL MOUNTED DOOR SOUNDER. PROVIDE WALL MOUNTED SINGLE GANG BACKBOX MOUNTED ON WALL AT 6" BELOW CEILING. PROVIDE ONE (1) -3/4" EMT CONDUIT ROUTED FROM BOX TO NEAREST ACCESSIBLE CEILING SPACE.
- DOOR OPERATOR PUSH BUTTON. PROVIDE WALL MOUNT 4" SQUARE BACKBOX WITH ONE (1) - 3/4" EMT CONDUIT ROUTED FROM BOX TO NEAREST ACCESSIBLE CEILING SPACE.
- VIDEO SURVEILLANCE CAMERAS. IN ACCESSIBLE CEILING SPACE -PROVIDE TWO J-HOOKS SUPPORTED FROM CEILING STRUCTURE SPACED 12" APART TO SUPPORT 20' SERVICE LOOP AND ROUTE ON J-HOOK SYSTEM TO LOCAL TELECOM ROOM. IN EXPOSED TO STRUCTURE OR INACCESSIBLE CEILING SPACE -PROVIDE ONE(1) -1" EMT CONDUIT FROM CAMERA LOCATION TO ACCESSIBLE CEILING/CABLING PATHWAY. SEE CAMERA SCHEDULE FOR REFERENCE TO MOUNTING DETAIL.

SHEET LIST:

LV-000	COVER PAGE
LV-101	SITE PLAN
LV-201	LEVEL 1 - FLOOR PLAN
LV-301	LARGE SCALES
LV-401	ONE-LINE DIAGRAMS
LV-501	DETAILS
LV-502	DETAILS
LV-503	DETAILS
LV-504	DETAILS
LV-505	DETAILS
LV-506	DETAILS
LV-507	DETAILS
LV-601	SECURITY CAMERA SCHEDULE

LOW VOLTAGE RESPONSIBILITY MATRIX

SPECS SECTIONS	SYSTEM	INFRASTRUCTURE INSTALLATION	PROCUREMENT	SYSTEM INSTALLATION
27 40 00	PROJECTION SCREEN	GC	GC	GC
DIVISION 27	STRUCTURED CABLING SYSTEM	GC (CONDUIT, WIREWAYS, BACK BOXES)	OWNER/VENDOR	VENDOR
27 40 00	AUDIO-VISUAL SYSTEM (NON-EXHIBIT)	GC (CONDUIT, WIREWAYS, BACK BOXES)	OWNER/VENDOR	VENDOR
28 13 00	ACCESS CONTROL SECURITY SYSTEM	GC (CONDUIT, WIREWAYS, BACK BOXES)	OWNER/VENDOR	VENDOR
08 71 00	ELECTRIC DOOR HARDWARE	GC	GC	GC
28 20 00	VIDEO SURVEILLANCE SECURITY SYSTEM	GC (CONDUIT, WIREWAYS, BACK BOXES)	OWNER/VENDOR	VENDOR
N/A	NETWORK PERIPHERALS (PHONES, COMPUTERS, PRINTERS, ETC)	N/A	OWNER/VENDOR	VENDOR
N/A	NETWORK ELECTRONICS (SWITCHES, WAPS, CONTROLLERS, ETC)	N/A	OWNER/VENDOR	VENDOR
N/A	DISTRIBUTED ANTENNA SYSTEMS (PUBLIC SAFETY AND CELLULAR)	N/A	OWNER/VENDOR	VENDOR
N/A	EXHIBIT AUDIO-VISUAL (DISPLAYS, PROJECTORS, SPEAKERS, ETC.)	GC (CONDUIT, WIREWAYS, BACK BOXES	EXHIBIT FABRICATOR	EXHIBIT FABRICATOR
N/A	EXHIBIT LIGHTING (TRACKS, FIXTURES, CONTROL EQUIPMENT)	GC (CONDUIT, WIREWAYS, BACK BOXES	EXHIBIT FABRICATOR	GC

CJMW ARCHITECTURE
525 Vine Street, Suite 350
Winston-Salem, NC 27101
p. 336.724.1503
www.cjmw.com

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J&A ENGINEERING CONSULTANTS
4994 LOWER ROSWELL ROAD, SUITE ONE
MARIETTA, GEORGIA 30068
PHONE: (770) 817-4220
FAX: (678) 234-6878

CONSTRUCTION DOCUMENTS

NC ENGINEERING CERT. No. P-0776 — NORTH CAROLINA PROFESSIONAL SEAL 23025 ENGINEER GEORGE E. GOSNELL — 10.24.23

#	Description	Date

CAROLINA MUSEUM OF THE MARINE

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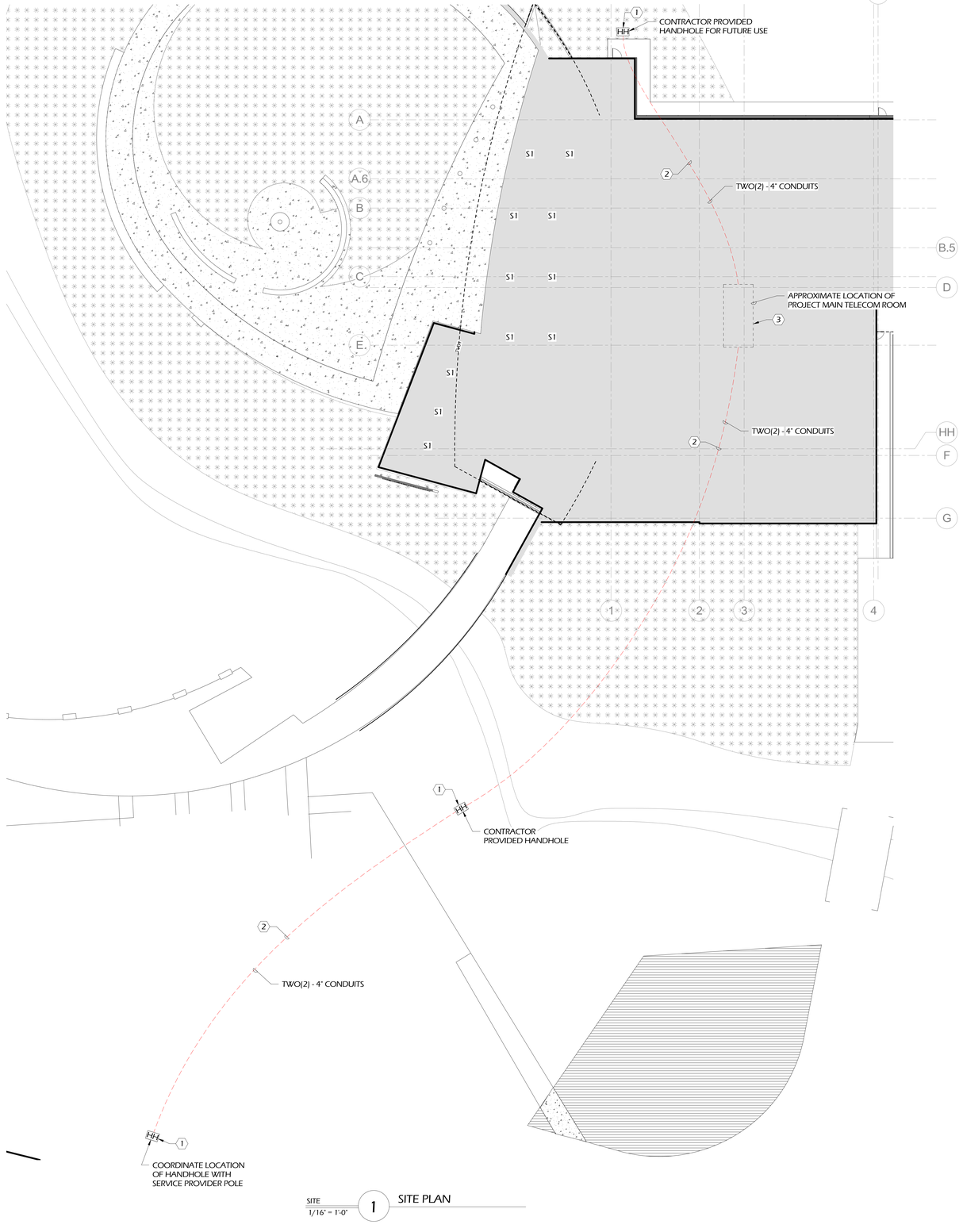
COVER PAGE

LV-000

ISSUE DATE: 10-24-2023
PROJECT NUMBER: 22-0410
DRAWN BY: AJ
CHECKED BY: JG



SITE 1/16" = 1'-0"

1 SITE PLAN

GENERAL NOTES:

A. NO CONDUIT RUN TO CONTAIN MORE THAN TWO (2) 90 DEGREE BENDS BETWEEN PULLING POINTS. PROVIDE JUNCTION BOXES WHERE REQUIRED TO MAINTAIN (2) 90 DEGREE BEND RULE.

B. ALL CONDUITS ROUTED BELOW GRADE TO BE SEALED TO PREVENT WATER INFILTRATION INTO EQUIPMENT ROOMS.

C. ALL DAMAGED LANDSCAPING, ASPHALT, AND CONCRETE SHALL BE RETURNED BACK TO THE ORIGINAL CONDITION.

D. REFERENCE ELECTRICAL SPECIFICATIONS FOR DUCT BANK INSTALLATION REQUIREMENTS.

E. ALL OUTSIDE PLANT CABLES TO BE OUTSIDE PLANT (WET LOCATION) RATED.

F. ALL NEW EXTERIOR DUCTBANKS TO BE PROVIDED WITH METALLIC TRACER WIRE TO ALLOW FUTURE LOCATION.

G. ALL LOW VOLTAGE CABLING SHALL BE ROUTED DIRECTLY TO LOW VOLTAGE EQUIPMENT CABINETS WITHOUT SPLICES. JUNCTIONS OR SPLICES IN CABLES ARE NOT ACCEPTABLE.

H. AS REQUIRED BY NATIONAL ELECTRIC CODE, NEC 300.5 (A), PROVIDE MINIMUM OF 24" OF COVER WHERE CONDUITS ARE CROSSING UNDER STREETS, ROADS, ALLEYS, DRIVEWAYS, AND PARKING AREAS.

I. CONTRACTOR SHALL UTILIZE RIGID CONDUIT ELBOWS FOR ALL 90° CONDUIT TURN-UPS FROM UNDERGROUND DUCT BANKS TO INTERIOR LOCATIONS.

KEY NOTES:

(1) PROVIDE AND INSTALL 24" x 36" x 24" QUAZITE HAND HOLE (SITE JUNCTION BOX) WITH TRAFFIC RATED COVER, TIER 22 RATED, FOR NEW DUCT BANK SYSTEM. COORDINATE LOCATION WITH OTHER TRADES. SEE INSTALLATION DETAIL FOR COMPLETE REQUIREMENTS. TRAFFIC RATED COVER TO BE BOLT ON TYPE.

(2) PROVIDE, BELOW GRADE, NOTED QUANTITY OF SCHEDULE 40 PVC CONDUITS BETWEEN HAND HOLES AND BUILDINGS. INSTALL CONDUIT PER NEC CODE REQUIREMENTS. ALL CONDUIT OPENINGS ARE TO BE SEALED. REFER TO ONE-LINE DIAGRAM FOR CABLING REQUIREMENTS.

(3) PROVIDE, BELOW GRADE, NOTED QUANTITY OF SCHEDULE 40 PVC CONDUITS FROM MAIN TELECOM ROOM ON GRADE LEVEL TO 5'-0" FROM BUILDING FOOTING FOR FUTURE USE. INSTALL CONDUIT PER NEC CODE REQUIREMENTS.

(4) USE LONG RADIUS 90 DEGREE ELBOWS TO TURN CONDUIT UP INTO MAIN TELECOM ROOM. CONDUITS TO TURN-UP ~3" ABOVE GRADE SLAB. ALL CONDUIT OPENINGS ARE TO BE SEALED. REFER TO LARGE SCALE DRAWING FOR PLACEMENT OF CONDUITS IN MAIN TELECOM ROOM.

CJMW ARCHITECTURE
525 Vine Street, Suite 350
Winston-Salem, NC 27101
p. 336.724.1503
www.cjmw.com

HICAPS

RAA

SAMET

J&A ENGINEERING CONSULTANTS
4994 LOWER ROSWELL ROAD, SUITE ONE
MARIETTA, GEORGIA 30068
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FAX: (678) 234-6878

CONSTRUCTION DOCUMENTS

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SITE PLAN

LV-101

ISSUE DATE: 10-24-2023
PROJECT NUMBER: 22-0410
DRAWN BY: AJ
CHECKED BY: JG

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

GENERAL NOTES:

A. NO CONDUIT RUN ROUTED ABOVE GRADE TO CONTAIN MORE THAN 180° OF BENDS BETWEEN PULLING POINTS. PROVIDE JUNCTION BOXES WHERE REQUIRED TO MAINTAIN 180° DEGREE BEND RULE.

B. ROUTE ALL CABLING IN MOST DIRECT MANNER WHEN REQUIRED TO MEET 90 METER RULE. LOW VOLTAGE CONTRACTOR SHALL PROVIDE AND INSTALL ALL REQUIRED SLEEVES FOR ROUTING OF LOW VOLTAGE CABLING. LOW VOLTAGE CONTRACTOR TO FIRE STOP ALL PENETRATIONS TO MAINTAIN RATING OF WALL. SEE DETAILS FOR EXACT REQUIREMENTS.

C. ALL SIGNAL AND LOW VOLTAGE POWER CABLES TO BE ROUTED DIRECT TO EQUIPMENT ROOMS WITHOUT SPLICES. NO JUNCTION OR SPLICES IN CABLES ARE ACCEPTABLE.

D. ALL SIGNAL AND LOW VOLTAGE POWER CABLES TO BE PLENUM RATED. FOR ALL LOW VOLTAGE SYSTEMS PROVIDE EMT RACEWAY FROM TELECOM BACKBOX TO ACCESSIBLE CEILING SPACE AND PROVIDE J-HOOK SUPPORT TO TELECOM ROOM. J-HOOKS TO BE INSTALLED ON 4'-0" CENTERS. CABLES ARE NOT PERMITTED TO LAY UNSUPPORTED ACROSS CEILINGS.

E. IN NON-ACCESSIBLE CEILING SPACE, ALL SIGNAL AND LOW VOLTAGE POWER CABLE TO BE ROUTED IN EMT CONDUIT. MINIMUM SIZE SHALL BE 3/4". SIZE PER NEC 40% FILL REQUIREMENT.

F. COORDINATE EXACT LOCATION OF ALL VIDEO SURVEILLANCE CAMERAS TO ENSURE CLEAR FIELD-OF-VIEW

KEY NOTES:

1. CONTRACTOR TO INTEGRATE REQUEST-TO-EXIT SIGNAL AVAILABLE IN ELECTRIC DOOR HARDWARE INTO SECURITY AND ACCESS CONTROL SYSTEM.
2. ACCESS CONTROL DEVICES TO BE INTEGRATED WITH AUTOMATIC DOOR OPERATORS BY SECURITY CONTRACTOR. WHEN BUILDING IS SECURED, EXTERIOR PUSH-BUTTON TO BE DISABLED UNTIL VALID CARD READ. INTERIOR ADA PUSH-BUTTONS TO BE ENABLED AT ALL TIMES AND INTERFACED WITH ELECTRIC DOOR HARDWARE AND OPERATORS.
3. COORDINATE LOCATION OF SHARED FLOOR BOX WITH ELECTRICAL CONTRACTOR AND EXHIBIT/FURNITURE LOCATION. ALL CABLES ROUTED IN SLAB ON GRADE OR BELOW GRADE TO BE OSP 'WET LOCATION' RATED. PROVIDE CONDUIT SYSTEM FROM FLOOR BOX TO NEAREST WALL AND INTO ACCESSIBLE CEILING SPACE. TRANSITION FROM OSP TO PLENUM RATED CABLE IN JUNCTION BOX.
4. CONTRACTOR TO COORDINATE EXACT LOCATION OF DATA/TV OUTLET WITH AUDIO-VISUAL DRAWINGS AND ARCHITECTURAL ELEVATIONS. MOUNT DATA OUTLET IN SHARED ELECTRICAL BACKBOX.
5. WALL MOUNT ALARM SOUNDER TO BE INTEGRATED WITH ADJACENT DOOR POSITION SWITCH. DOOR TO ALARM UPON FORCED OR PROPPED DOOR CONDITIONS.
6. CONTRACTOR TO COORDINATE EXACT LOCATION OF DATA OUTLET FOR CEILING MOUNT PROJECTOR WITH AUDIO-VISUAL DRAWINGS.
7. CONTRACTOR TO COORDINATE EXACT LOCATION OF CEILING MOUNT DATA OUTLET FOR EXHIBITS WITH ARCHITECTURAL ELEVATIONS AND OWNER PRIOR TO ROUGH-IN. TERMINATE CABLES WITH MALE RJ-45 CONNECTOR AND COIL 25' SERVICE LOOP SUPPORTED ON J-HOOK SYSTEM.
8. ALARM STROBE/SOUNDER TO BE ROUTED TO SECURITY CONTROL PANEL TO ALLOW SCHEDULING OF DEVICE. ALL ASSOCIATED CAMERAS & EXHIBIT SHOWCASE CONTACTS IN ZONED AREAS TO BE CONFIGURED TO TRIGGER ALARM.
9. ACCESS CONTROL DEVICES TO BE INTEGRATED WITH AUTOMATIC DOOR OPERATORS BY SECURITY CONTRACTOR. WHEN BUILDING IS SECURED, EXTERIOR PUSH-BUTTON TO BE DISABLED. INTERIOR ADA PUSH-BUTTONS TO BE ENABLED AT ALL TIMES AND INTERFACED WITH ELECTRIC DOOR HARDWARE AND OPERATORS. WIRE TO SECURITY AND ACCESS CONTROL SYSTEM TO ALLOW CONTROL FROM SECURITY SCHEDULES

CJMW ARCHITECTURE
525 Vine Street, Suite 350
Winston-Salem, NC 27101
p. 336.724.1503
www.cjmw.com

HICAPS
RAA
SAMET
J&A
ENGINEERING CONSULTANTS
4994 LOWER ROSWELL ROAD, SUITE ONE
MARIETTA, GEORGIA 30068
PHONE: (770) 817-4220
FAX: (678) 234-6878

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LEVEL 1 - FLOOR PLAN

LV-201

ISSUE DATE: 10-24-2023
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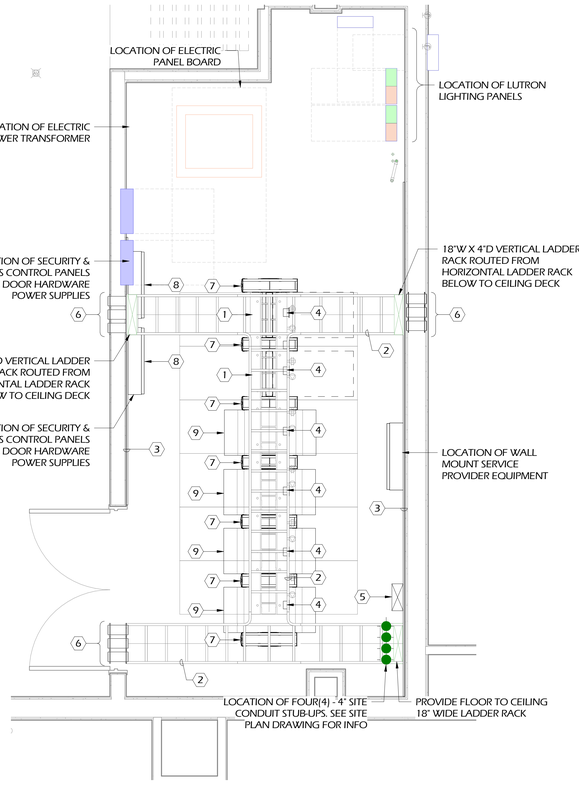
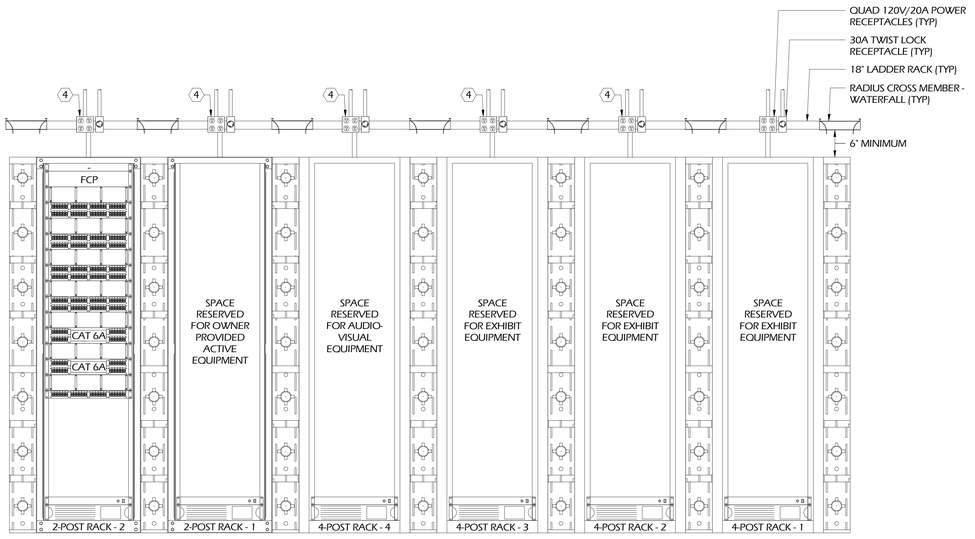
PLAN NORTH



LARGE SCALE
1/2" = 1'-0"

1 AV 113 (MDF)



ELEVATION
N.T.S.

2 AV 113 (MDF) - RACK ELEVATION

KEY NOTES:

1. CONTRACTOR TO PROVIDE TIA/EIA STANDARD 2-POST 84"X 19" OPEN FRAME RELAY RACK. RACK TO BE PROVIDED WITH TWO-SIDED VERTICAL WIRE MANAGERS ON BOTH ENDS OF RACK. SEE DETAIL FOR TYPICAL RACK ELEVATION.
2. TELECOM CONTRACTOR TO PROVIDE AND INSTALL 18" HORIZONTAL LADDER RACK INSTALLED AT 90" AFF. LADDER RACK TO BE PROVIDED WITH TURN-DOWN VANES ABOVE VERTICAL WIRE MANAGERS.
3. GENERAL CONTRACTOR TO PROVIDE AND INSTALL 8' HIGH X 3/4" THICK CDX PLYWOOD BACKBOARDS INSTALLED AT 18" AFF ON NOTED THREE WALLS. BOTH SIDES AND ALL EDGES SHALL BE TREATED WITH TWO (2) COATS OF FIRE-RETARDANT GREY PAINT. UTILIZE RECESSED FASTENERS.
4. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL ONE(1) L6-30R 208V POWER RECEPTACLE AND ONE(1) 5-20R 120V DEDICATED QUAD POWER RECEPTACLE ROUTED IN METAL CONDUIT, INSTALLED ON OUTSIDE EDGE OF LADDER RACK.
5. ELECTRICAL CONTRACTOR FURNISHED AND INSTALLED GROUNDING BUSBAR INSTALLED AT 84" AFF. REFER TO GROUNDING ONE-LINE DIAGRAM FOR ADDITIONAL INFORMATION.
6. PROVIDE THREE (3) -4" CONDUIT SLEEVES. FIRESTOP PENETRATIONS TO MATCH WALL RATING.
7. TELECOM CONTRACTOR TO PROVIDE AND INSTALL VERTICAL CABLE MANAGER, DOUBLE-SIDED, 84" HIGH X 6" WIDE X 24.5" DEEP.
8. DEDICATED 120VAC/20A POWER RECEPTACLE INSTALLED BY ELECTRICAL CONTRACTOR. COORDINATE EXACT LOCATION WITH SECURITY CONTRACTOR.
9. CONTRACTOR TO PROVIDE TIA/EIA STANDARD 4-POST 84"X 19" OPEN FRAME RELAY RACK. RACK TO BE PROVIDED WITH TWO-SIDED VERTICAL WIRE MANAGERS ON BOTH ENDS OF RACK. SEE DETAIL FOR TYPICAL RACK ELEVATION.

DEVICE LEGEND:

–	BLANK COVERPLATE (1RU)
FCP	FIBER CONNECTOR PANEL (2RU)
	48-PORT CATEGORY 6 PATCH PANEL (2RU)
CAT 6A	48-PORT CATEGORY 6A PATCH PANEL (2RU)
	24-PORT VOICE PATCH PANEL
	HORIZONTAL WIRE MANAGER (2RU)

CJMW ARCHITECTURE
525 Vine Street, Suite 350
Winston-Salem, NC 27101
p. 336.724.1503
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J&A ENGINEERING CONSULTANTS
4994 LOWER ROSWELL ROAD, SUITE ONE
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LARGE SCALES

LV-301

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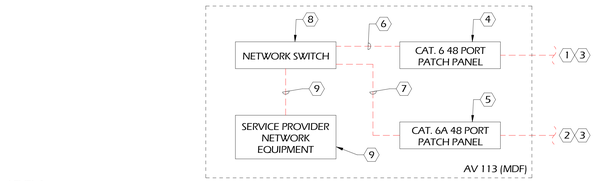
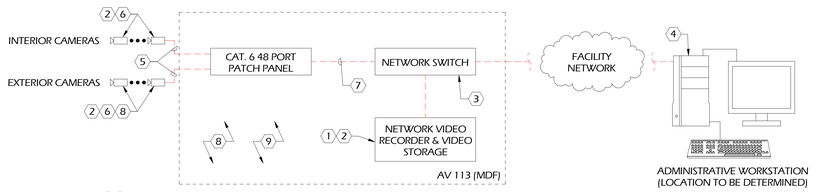


LEVEL 1

ONE-LINE N.T.S. 1 DATA INFRASTRUCTURE

DATA INFRASTRUCTURE KEY NOTES:

1. PROVIDE PLENUM-TYPE 23 AWG/CATEGORY 6 COMPLIANT 4 PR. CABLE FROM CATEGORY 6 PATCH PANEL IN TELECOM ROOMS TO STATION OUTLET LOCATIONS & IP CAMERAS. SEE LEGEND AND FLOOR PLANS FOR REQUIREMENTS.
2. PROVIDE PLENUM-TYPE 23 AWG/CATEGORY 6A COMPLIANT 4 PR. CABLES FROM CATEGORY 6A PATCH PANELS IN TELECOM ROOMS TO ALL WIRELESS ACCESS POINT LOCATIONS.
3. REFERENCE OUTLET DETAILS FOR TERMINATIONS REQUIREMENTS.
4. ALL CATEGORY 6 COPPER PATCH PANELS TO BE SIZED AS REQUIRED TO PROVIDE CAT. 6 LINK TO ALL STATIONS. PROVIDE SPARE CAPACITY AS REQUIRED IN SPECIFICATIONS. PATCH PANELS TO BE CATEGORY 6 48 PORT TYPE. SEE RACK ELEVATIONS FOR REQUIREMENTS.
5. ALL CATEGORY 6A COPPER PATCH PANELS TO BE SIZED AS REQUIRED TO PROVIDE CAT. 6A LINK TO ALL STATIONS. PROVIDE SPARE CAPACITY AS REQUIRED IN SPECIFICATIONS. PATCH PANELS TO BE CATEGORY 6A 48 PORT TYPE. SEE RACK ELEVATIONS FOR REQUIREMENTS.
6. PROVIDE ONE(1) - 2 METER CATEGORY 6 PATCH CABLE FOR EACH TERMINATED CATEGORY 6 HORIZONTAL CIRCUITS. COORDINATE EXACT COLOR AND LENGTHS WITH OWNER PRIOR TO ORDERING.
7. PROVIDE ONE(1) - 2 METER CATEGORY 6A PATCH CABLE FOR EACH TERMINATED CATEGORY 6A HORIZONTAL CIRCUIT. COORDINATE EXACT COLOR AND LENGTHS WITH OWNER PRIOR TO ORDERING.
8. POE IP NETWORK SWITCH TO BE PROVIDED BY OWNER.
9. NETWORK SERVICE EQUIPMENT AND PATCH CORDS TO BE PROVIDED BY SERVICE PROVIDER.

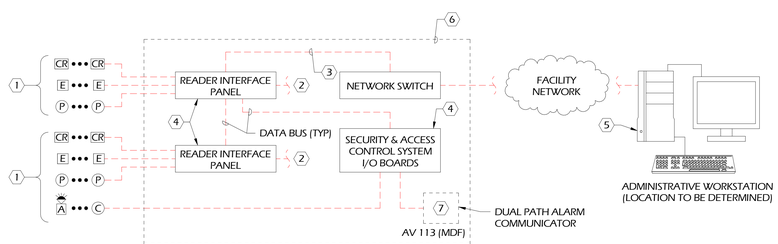


LEVEL 1

ONE-LINE N.T.S. 2 VIDEO SURVEILLANCE SYSTEM

VIDEO SURVEILLANCE KEY NOTES:

1. SECURITY CONTRACTOR SHALL PROVIDE ALL REQUIRED NVR'S FOR SURVEILLANCE VIDEO STORAGE. SECURITY CONTRACTOR SHALL PROVIDE ALL REQUIRED LICENSING FOR FULLY OPERATIONAL SYSTEM. NVR STORAGE TO BE SIZED FOR 30 DAYS.
2. SECURITY CONTRACTOR TO CONFIGURE VMS SYSTEM FOR "ACTIVITY DETECTION RECORDING". SEE SPECIFICATIONS FOR REQUIREMENTS. ALL VIDEO TO BE CONFIGURED TO BE MAINTAINED FOR A MINIMUM OF 30 DAYS.
3. OWNER TO PROVIDE CORE SWITCH AND POWER-OVER-ETHERNET SWITCH MOUNTED IN TELECOM RACK.
4. SECURITY CONTRACTOR TO LOAD AND CONFIGURE OWNER PROVIDED VIDEO SURVEILLANCE SOFTWARE ON OWNER PROVIDED WORKSTATIONS. ALL CAMERA SETTINGS TO BE PROGRAMMED BY CONTRACTOR TO OWNER'S SATISFACTION.
5. TELECOM CONTRACTOR TO PROVIDE AND INSTALL ONE(1) CATEGORY 6 CABLE FOR EACH IP DEVICE.
6. SECURITY CONTRACTOR TO PROVIDE AND INSTALL ALL VIDEO SURVEILLANCE CAMERAS, MOUNTS AND WIRING. CONTRACTOR TO ENSURE CLEAR FIELD-OF VIEW FOR ALL CAMERAS. SEE FLOOR PLANS FOR LOCATIONS. SEE CAMERA SCHEDULE FOR MOUNTING REQUIREMENTS.
7. TELECOM CONTRACTOR TO PROVIDE AND INSTALL ALL CATEGORY 6 PATCH CABLES.
8. SECURITY CONTRACTOR TO PROVIDE AND INSTALL POE SURGE PROTECTOR AT DEVICE AND RACK MOUNTED POE SURGE PROTECTOR IN TELECOM ROOM. BASIS OF DESIGN IS DITEK MODEL #DTK-RM12POE (RACK) AND #DTK-MRJPOES (DEVICE). EACH PROTECTOR PANEL SHALL HAVE A #6 CONDUCTOR BACK TO TELECOM ROOM GROUNDING BUSBAR.
9. SECURITY CONTRACTOR TO PROGRAM UP TO FIVE(5) OWNER PROVIDED SMART WIRELESS DEVICES. CONTRACTOR TO PROVIDE ALL REQUIRED LICENSING.



LEVEL 1

ONE-LINE N.T.S. 3 ACCESS CONTROL SYSTEM

ACCESS CONTROL KEY NOTES:

1. VERIFY AND PROVIDE EXACT QUANTITY OF CARD READERS, DOOR POSITION SWITCH INPUTS, AND MISCELLANEOUS SIGNAL INPUTS AS SHOWN ON CONTRACT DRAWINGS.
2. CONTRACTOR TO INTERFACE WITH ELECTRIC LOCKS PER THE CONTRACT SPECIFICATIONS. CONTRACTOR TO INTEGRATE ALL CONTROLLED OUTPUTS INTO ACCESS CONTROL SYSTEM. VERIFY QUANTITY OF ALL CONTROLLED OUTPUTS WITH CONTRACT DRAWINGS.
3. SECURITY CONTRACTOR TO INTERFACE WITH BUILDING NETWORK BY PROVIDING CATEGORY 6 DATA CABLES BETWEEN ACCESS CONTROL PANELS AND OWNER PROVIDED NETWORK SWITCH.
4. SECURITY PANELS WITH BATTERY BACKUP TO BE PROVIDED BY THE SECURITY CONTRACTOR. ALL WIRING & TESTINGTO BE PERFORMED BY THE SECURITY CONTRACTOR.
5. SECURITY CONTRACTOR TO LOAD AND CONFIGURE SECURITY & ACCESS CONTROL SOFTWARE ON UP TO THREE(3) OWNER PROVIDED WORKSTATIONS. ALL SECURITY SETTINGS TO BE PROGRAMMED BY THE SECURITY CONTRACTOR TO THE UNIVERSITY'S REQUIREMENTS.
6. SECURITY CONTRACTOR TO PROGRAM UP TO FIVE(5) OWNER PROVIDED SMART WIRELESS DEVICES. CONTRACTOR TO PROVIDE ALL REQUIRED LICENSING.
7. SECURITY CONTRACTOR TO PROVIDE AND PROGRAM DUAL PATH CELLULAR ALARM AND INTERNET ALARM COMMUNICATOR FOR INTERFACE WITH OWNER SELECTED MONITORING SERVICE PROVIDER.

CJMW ARCHITECTURE
525 Vine Street, Suite 350
Winston-Salem, NC 27101
p. 336.724.1503
www.cjmw.com

HICAPS

RAA

SAMET

J&A ENGINEERING CONSULTANTS
4994 LOWER ROSWELL ROAD, SUITE ONE
MARIETTA, GEORGIA 30068
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FAX: (678) 234-6878

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ONE-LINE DIAGRAMS

LV-401

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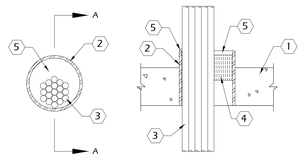


SECTION A-A

F RATINGS -2, 3 AND 4 HR (SEE ITEM 5)
T RATINGS - 0, 1/2 AND 2-3/4 HR (SEE ITEM 5)

KEY NOTES: (APPLY TO THIS DETAIL ONLY)

1. FLOOR OR WALL ASSEMBLY - MIN 2-1/2 IN. (64 MM) OR 4-1/2 IN. (114 MM) THICK REINFORCED LIGHTWEIGHT OR NORMAL WEIGHT (100-150 PCF OR 1600-2400 KG/M3) CONCRETE. WALL MAY ALSO BE CONSTRUCTED OF ANY UL CLASSIFIED CONCRETE BLOCKS*. FLOOR MAY ALSO BE CONSTRUCTED OF ANY UL CLASSIFIED HOLLOW-CORE PRECAST CONCRETE UNITS*. MAX DIAM OF OPENING IS 6 IN. (152 MM). SEE CONCRETE BLOCKS (CAZT) AND PRECAST CONCRETE UNITS (CFTV) CATEGORIES IN THE FIRE RESISTANCE DIRECTORY FOR NAMES OF MANUFACTURERS.

2. SLEEVE - (OPTIONAL) - NOM 6 IN. (152 MM) DIAM (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE SLEEVE, NOM 6 IN. (152 MM) DIAM (OR SMALLER) NO. 26 GA (0.022 IN. OR 0.56 MM THICK) SHEET STEEL SLEEVE WITH SQUARE ANCHOR FLANGE SPOT WELDED TO SLEEVE AT APPROX MID-HEIGHT OR NOM 6 IN. (152 MM) DIAM (OR SMALLER) SCHEDULE 40 POLYVINYL CHLORIDE (PVC) PIPE SLEEVE CAST OR GROUTED INTO FLOOR OR WALL FLUSH WITH FLOOR OR WALL SURFACES. STEEL PIPE SLEEVE MAY BE INSTALLED TO PROJECT A MAX OF 2 IN. (51 MM) BEYOND THE FLOOR OR WALL SURFACES.

3. CABLES - AGGREGATE CROSS-SECTIONAL AREA OF CABLES IN SLEEVE TO BE MAX 45 PERCENT OF THE CROSS-SECTIONAL AREA OF THE SLEEVE. SEE ITEM 5 FOR SPECIFIC CABLE FILL REQUIREMENTS. TIGHT BUNDLE OF CABLES TO BE INSTALLED IN THE STEEL SLEEVE. THE ANNULAR SPACE WITHIN THE FIRESTOP SYSTEM SHALL BE A MIN OF 0 IN. (POINT CONTACT) TO A MAX OF 2 IN. IN 4 HR FIRE RATED ASSEMBLIES, THE ANNULAR SPACE WITHIN THE FIRESTOP SYSTEM SHALL BE A MIN OF 1/4 IN. (6 MM) TO A MAX OF 1 IN. (25 MM). CABLES TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF THE FLOOR OR WALL ASSEMBLY. ANY COMBINATION OF THE FOLLOWING TYPES AND SIZES OF CABLES MAY BE USED:
   - A. MAX 400 PAIR NO. 24 AWG (OR SMALLER) COPPER CONDUCTOR CABLE WITH POLYVINYL CHLORIDE (PVC) JACKETING AND INSULATION.
   - B. MAX 3/C NO. 2/0 AWG (OR SMALLER) ALUMINUM OR COPPER CONDUCTOR SERVICE ENTRANCE CABLE WITH PVC INSULATION AND JACKET.
   - C. MAX 3/C NO. 2/0 AWG (OR SMALLER) COPPER CONDUCTOR PVC JACKETED ALUMINUM CLAD OR STEEL CLAD TECK 90 CABLE.
   - D. MAX 3/C NO. 8 AWG (OR SMALLER) NONMETALLIC SHEATHED (ROMEX) CABLE WITH COPPER CONDUCTORS, PVC INSULATION AND JACKET.
   - E. MAX 1/C 1000 KCMIL (OR SMALLER) COPPER CONDUCTOR POWER CABLE WITH XLPE OR PVC INSULATION AND XLPE OR PVC JACKET.
   - F. MAX RG59/U (OR SMALLER) COAXIAL CABLE WITH FLUORINATED ETHYLENE INSULATION AND JACKETING.
   - G. MAX 62.5/48 FIBER OPTIC CABLE WITH PVC INSULATION AND JACKETING.
   - H. MAX 4 PAIR NO. 24 AWG (OR SMALLER) COPPER CONDUCTOR DATA CABLE WITH PVC INSULATION AND JACKET.

3A. THROUGH PENETRATING PRODUCT* - (NOT SHOWN) - MAX 4/C NO. 2/0 AWG (OR SMALLER) STEEL OR ALUMINUM ARMORED CABLE+ OR METAL CLAD CABLE+ WITH COPPER OR ALUMINUM CONDUCTORS. DIAM OF CABLE BUNDLE (ITEM 3) INCLUDING ARMORED CABLE NOT TO EXCEED 4 IN. THROUGH PENETRATING PRODUCT TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF A FLOOR OR WALL ASSEMBLY.

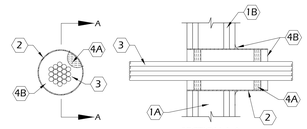
4. AFC CABLE SYSTEMS INC
   PACKING MATERIAL - MIN 2, 3 OR 4 IN. (51, 76 OR 102 MM) THICKNESS OF MIN 4 PCF (64 KG/M3) DENSITY MINERAL-WOOL BATT INSULATION TIGHTLY PACKED INTO OPENING AS A PERMANENT FORM FOR 2, 3 OR 4 HR FIRE RATED ASSEMBLIES, RESPECTIVELY . PACKING MATERIAL TO BE RECESSED FROM TOP EDGE OF SLEEVE OR FROM TOP SURFACE OF CONCRETE IN CAST CONCRETE FLOOR ASSEMBLIES TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL. PACKING MATERIAL TO BE RECESSED FROM BOTH EDGES OF SLEEVE OR FROM BOTH SURFACES OF ASSEMBLY IN WALLS AND IN FLOOR CONSTRUCTED WITH HOLLOW-CORE PRECAST CONCRETE UNITS TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL.

5. FILL, VOID OR CAVITY MATERIAL* - SEALANT OR PUTTY - MIN 1/2 IN. (13 MM) THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS FOR 2 AND 3 HR F RATINGS. MIN 3/4 IN. (19 MM) THICKNESS OF FILL MATERIAL APPLIED WITH THE ANNULUS FOR 4 HR F RATING. IN FLOORS, FILL MATERIAL TO BE INSTALLED FLUSH WITH TOP EDGE OF SLEEVE OR TOP SURFACE OF FLOOR. IN WALLS AND IN FLOOR CONSTRUCTED OF HOLLOW-CORE PRECAST CONCRETE UNITS, FILL MATERIAL TO BE INSTALLED FLUSH WITH BOTH ENDS OF SLEEVE OR BOTH SURFACES OF ASSEMBLY. F AND T RATINGS OF FIRESTOP SYSTEM ARE DEPENDENT UPON THE THROUGH OPENING SIZE, THICKNESS OF CONCRETE, SLEEVE TYPE AND PERCENT CABLE FILL, AS SHOWN IN THE FOLLOWING TABLE:

MAX OPENING DIAM	MIN CONCRETE THICKNESS	OPTIONAL SLEEVE TYPE	CABLE TYPE	PERCENT CABLE FILL	F RATING	T RATING
6 IN. (152 MM)	2-1/2 IN. (64 MM)	PVC	A TO H, 3A	37	2 HR	0 HR
6 IN. (152 MM)	2-1/2 IN. (64 MM)	PVC	H	45	2 HR	0 HR
6 IN. (152 MM)	2-1/2 IN. (64 MM)	STEEL	A TO H, 3A	37	2 HR	0 HR
6 IN. (152 MM)	2-1/2 IN. (64 MM)	STEEL	H	45	2 HR	0 HR
6 IN. (152 MM)	4-1/2 IN. (114 MM)	STEEL	A TO H, 3A	34	3 HR	1/2 HR
6 IN. (152 MM)	4-1/2 IN. (114 MM)	STEEL	H	45	3 HR	1/2 HR
2 IN. (52 MM)	4-1/2 IN. (114 MM)	STEEL	H	40	3 HR	2-3/4 HR
2 IN. (52 MM)	4-1/2 IN. (114 MM)	STEEL	H	40	4 HR	2-3/4 HR

SPECIFIED TECHNOLOGIES INC - SPECSEAL SERIES SSS SEALANT OR SPECSEAL LCI SEALANT. WHEN MIN FLOOR OR WALL THICKNESS IS 4-1/2 IN. (114 MM) , SPECSEAL PUTTY MAY BE USED.
*BEARING THE UL CLASSIFICATION MARK

DETAIL 1 NOT TO SCALE — FIRESTOP SYSTEM - C-AJ-3154



SECTION A-A

F RATINGS -1 AND 2 HR (SEE ITEM 1)
T RATING - 3/4 HR

KEY NOTES: (APPLY TO THIS DETAIL ONLY)

1. WALL ASSEMBLY - THE 1 OR 2 HR FIRE RATED GYPSUM BOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL U300, U400 OR V400 SERIES WALL AND PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:
   - A. STUDS - WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM. 2 X 4 IN. (51 X 102MM) LUMBER SPACED 16 IN. (406MM) OC. STEEL STUDS TO BE MIN 3-1/2 IN. (76MM) WIDE AND SPACED MAX 14 IN. (610MM) OC.
   - B. GYPSUM BOARD - THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL U300, U400 OR V400 SERIES DESIGN IN THE UL FIRE RESISTANCE DIRECTORY. MAX DIAM. OF OPENING IS 4-1/2 IN. (114MM).
   - C. THE HOURLY F RATING OF THE FIRESTOP SYSTEM IS EQUAL TO THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED.

2. STEEL SLEEVE - NOM. 4 IN. (102MM) DIAM. (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING (EMT), STEEL CONDUIT OR SCHEDULE 5 (OR HEAVIER) STEEL PIPE SLEEVE FRICTION-FITTED INTO WALL ASSEMBLY. SLEEVE MAY BE INSTALLED FLUSH WITH OR EXTEND UP TO 18 IN. (46 CM) BEYOND ONE OR BOTH WALL SURFACES.

3. CABLES - AGGREGATE CROSS-SECTIONAL AREA OF CABLES IN STEEL SLEEVE TO BE MAX. 48 PERCENT OF THE AGGREGATE CROSS-SECTIONAL AREA OF THE SLEEVE. CABLES TO BE BUNDLED AND RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY. THE ANNULAR SPACE BETWEEN THE CABLES AND THE SLEEVE SHALL BE MIN. 0 IN. (POINT CONTACT) TO MAX. 1-1/2 IN. (38MM). ANY COMBINATION OF THE FOLLOWING TYPES AND SIZES OF COPPER CONDUCTOR CABLE MAY BE USED:
   - A. MAX 200 PAIR NO. AWG (OR SMALLER) COPPER CONDUCTOR CABLE WITH POLYVINYL CHLORIDE (PVC) JACKETING AND INSULATION.
   - B. MAX 3/C NO. 2/0 AWG (OR SMALLER) ALUMINUM OR COPPER CONDUCTOR SERVICE ENTRANCE CABLE WITH PVC INSULATION AND JACKET.
   - C. MAX 3/C NO. 8 AWG (OR SMALLER) NONMETALLIC SHEATHED (ROMEX) CABLE WITH COPPER CONDUCTORS, PVC INSULATION AND JACKET.
   - D. MAX 7/C NO. 2/0 AWG (OR SMALLER) MULTICONDUCTOR POWER AND CONTROL CABLES WITH XLPE OR PVC INSULATION AND XLPE OR PVC JACKET.
   - E. MAX. RG/U (OR SMALLER) COAXIAL CABLE WITH FLOURINATED ETHYLENE INSULATION AND JACKETING.
   - F. MAX. 62.5/48 FIBER OPTIC CABLE WITH PVC INSULATION AND JACKETING.
   - G. MAX 4 PAIR NO. 24 AWG (OR SMALLER) COPPER CONDUCTOR DATA CABLE WITH PVC INSULATION AND JACKET.
   - H. MAX. 4/C NO 2/0 ALUMINUM OR COPPER CONDUCTOR ALUMINUM OR STEEL METAL-CLAD# OR ARMORED-CLAD# CABLE.

FIRESTOP SYSTEM - THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING:

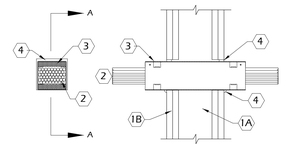
4. A. PACKING MATERIAL - WHEN REQUIRED (SEE TABLE IN ITEM 3B), MIN. 1 IN. (25MM) THICKNESS OF MIN. 4.0 PCF (64 KG/M3) MINERAL WOOL BATT INSULATION FIRMLY PACKED INTO EACH END OF SLEEVE AS A PERMANENT FORM. PACKING MATERIAL TO BE RECESSED FROM EACH END OF SLEEVE AS REQUIRED TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL.

   B. FILL, VOID OR CAVITY MATERIAL* - SEALANT OR PUTTY - FILL MATERIAL APPLIED TO APPROPRIATE THICKNESS WITHIN STEEL SLEEVE, FLUSH WITH EDGES OF STEEL SLEEVE ON BOTH SURFACES OF WALL. MIN. 1/2 IN. (13MM) DIAM. BEAD OF SEALANT OR "ROPE" OF PUTTY SHALL BE APPLIED AROUND THE PERIMETER OF THE SLEEVE ON EACH SIDE OF THE WALL WHEN SLEEVE EXTENDS BEYOND SURFACE OF WALL. SEE TABLE BELOW FOR FILL MATERIAL THICKNESS REQUIREMENTS.

SEALANT OR PUTTY TYPE	THICKNESS	PACKING MATERIAL REQUIRED
SPECSEAL SERIES SSS SEALANT OR LCI SEALANT	1/2 IN. (13 MM)	YES
SPECSEAL SERIES SSS SEALANT OR LCI SEALANT	1 IN. (25 MM)	NO
SPECSEAL PUTTY	1 IN. (25 MM)	NO

SPECIFIED TECHNOLOGIES INC - SPECSEAL SERIES SSS SEALANT OR SPECSEAL LCI SEALANT. WHEN MIN FLOOR OR WALL THICKNESS IS 4-1/2 IN. (114 MM) , SPECSEAL PUTTY MAY BE USED.
*BEARING THE UL CLASSIFICATION MARK

DETAIL 2 NOT TO SCALE — FIRESTOP SYSTEM - W-L-3210



SECTION A-A

F RATINGS -1 AND 2 HR (SEE ITEM 1)
T RATING - 3/4 HR (SEE ITEM 2)
L RATING AT AMBIENT - LESS THAN 1, 1.3, 4 OR 7 CFM (SEE ITEM 3)
L RATING AT 400 F - LESS THAN 1, 2 OR 3 CFM (SEE ITEM 3)

KEY NOTES: (APPLY TO THIS DETAIL ONLY)

1. WALL ASSEMBLY - THE 1 OR 2 HR FIRE RATED GYPSUM BOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL U300, U400 OR V400 SERIES WALL AND PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:
   - A. STUDS - WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM. 2 X 4 IN. (51 X 102MM) LUMBER SPACED 16 IN. (406MM) OC. STEEL STUDS TO BE MIN 3-1/2 IN. (76MM) WIDE AND SPACED MAX 14 IN. (610MM) OC.
   - B. GYPSUM BOARD - THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL U300, U400 OR V400 SERIES DESIGN IN THE UL FIRE RESISTANCE DIRECTORY. MAX DIAM. OF OPENING IS 4-1/2 IN. (114MM).
   - C. THE HOURLY F RATING OF THE FIRESTOP SYSTEM IS EQUAL TO THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED.

2. CABLES - WITHIN THE LOADING AREA FOR EACH FIRESTOP DEVICE MODULE, THE CABLES MAY REPRESENT A 0 TO 100 PERCENT VISUAL FILL. CABLE FILL TO BE DISTRIBUTED AT A UNIFORM HEIGHT ACROSS THE WIDTH OF THE FIRESTOP DEVICE MODULE. CABLES TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF THE WALL ASSEMBLY. ANY COMBINATION OF THE FOLLOWING TYPES OF CABLES MAY BE USED:
   - A. MAX. 100 PAIR NO. 24 AWG (OR SMALLER) COPPER CONDUTOR TELECOMMUNICATION CABLE WITH POLYVINYL CHLORIDE (PVC) JACKETING AND INSULATION.
   - B. MAX. 350 KCMIL SINGLE COPPER CONDUCTOR POWER CABLE WITH XLP E JACKET AND INSULATION.
   - C. MAX 7/C NO. 12 AWG COPPER CONDUCTOR CONTROL CABLE WITH PVC OR XLP E JACKET AND INSULATION.
   - D. MAX. 3/C NO. 10 AWG METAL CLAD OR ARMORED CABLE WITH STEEL OR ALUMINUM JACKET.
   - E. MAX. 3/C NO. 8 AWG NM CABLE (ROMEX) WITH PVC INSULATION AND JACKET.
   - F. MAX FOUR PAIR NO. 22 AWG (OR SMALLER) COPPER CONDUCTOR DATA CABLE WITH PVC OR PLENUM RATED JACKETING AND INSULATION.
   - G. MAX RG/U COAXIAL CABLE WITH FLOURINATED ETHYLENE INSULATION AND JACKETING.
   - H. FIBER OPTIC CABLE WITH PVC OR POLYETHYLENE (PE) JACKET AND INSULATION HAVING A MAX. DIAM. OF 5/8 IN.
   - I. [12MM] AL FIBER RACEWAY - MAX 1-1/2 IN. (38MM) DIAM. (OR SMALLER) OPTICAL FIBER RACEWAY ("INNERDUCT") FORMED OF EITHER PVC OR POLYVINYLIDENED FLOURIDE (PVDF) WITH OPTICAL FIBER CABLE FILL. RACEWAYS INSTALLED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NFPA 70).

   WHEN THE HOURLY RATING OF THE WALL ASSEMBLY IS 1 HR, THE T RATING IS 3/4 HR. WHEN THE HOURLY RATING OF THE WALL ASSEMBLY IS 2 HR, THE T RATING IS 3/4 HR. WHEN ITEM 2A, 2B,2C,2D OR 2E IS USED. OTHERWISE THE T RATING IS 1 HR.

3. THE L RATING FOR THE EMPTY FIRESTOP DEVICE IS LESS THAN 1CFM AT AMBIENT AND AT 400F.WHEN ITEM 3A IS USED, THE L RATING FOR THE FIRESTOP DEVICE WITH 100 PERCENT VISUAL FILL IS 4 CFM AT AMBIENT AND 3 CFM AT 400F. WHEN ITEM 3F IS USED, THE L RATING FOR THE FIRESTOP DEVICE WITH 100 PERCENT VISUAL FILL IS 1.3 CFM AT AMBIENT AND LESS THAN 1 CFM AT 400F. WHEN ITEM 3G OR 3H IS USED, THE L RATING FOR THE FIRESTOP DEVICE WITH 100 PERCENT VISUAL FILL IS 7 CFM AT AMBIENT AND 2 CFM AT 400F.

   FIRESTOP DEVICE - FIRESTOP DEVICE CONSISTS OF A 3 X 3 X 10-1/2 IN. (76 X 76 X 267MM) LONG GALV. STEEL TUBE WITH AN INTUMESCENT MATERIAL LINING. FIRESTOP DEVICE TO BE INSTALLED IN ACCORDANCE WITH THE ACCOMPANYING INSTALLATION INSTRUCTIONS. PRIOR TO INSTALLATION WITHIN WALL, ATTACHMENT SCREWS AND LID REMOVED FROM DEVICE TO CAPTURE GROUPED CABLES. AFTER INSTALLATION OF CABLES, LID REPLACED AND REATTACHED WITH SAME SCREWS. DEVICE SLID ALONG CABLES INTO WALL SUCH TAT LID IS ON TOP AND ENDS PROJECT AN EQUAL DISTANCE FROM THE APPROX. CENTERLINE OF THE WALL ASSEMBLY. THE SPACE BETWEEN THE DEVICE AND THE PERIPHERY OF THE OPENING SHALL BE MIN. 0 IN. (0MM) TO MAX. 1/2 IN. (13MM).
   SPECIFIED TECHNOLOGIES INC - EZ PATH SERIES 33 FIRE RATED PATHWAY

4. FILL, VOID OR CAVITY MATERIAL - SEALANT - MIN. 5/8 IN. (6MM) THICKNESS OF SEALANT TO BE APPLIED IN ANNULAR SPACE BETWEEN FIRESTOP DEVICE AND PERIPHERY OF OPENING ON EACH SIDE OF WALL ASSEMBLY. NOM. 3/8 IN. (10MM) DIAM. BEAD OF FILL MATERIAL APPLIED AT THE FIRESTOP DEVICE/GYPSUM BOARD INTERFACE ON BOTH SIDES OF THE WALL ASSEMBLY.

   SPECIFIED TECHNOLOGIES INC. - SPECSEAL 100,101,102,105,120 OR 129 SEALANT, SPECSEAL LCI SEALANT, SPECSEAL LC150 SEALANT, PENSIL 300 SEALANT OR SPECSEAL SERIES SIL300 SEALANT.

DETAIL 3 NOT TO SCALE — FIRESTOP SYSTEM - W-L-3219

CJMW ARCHITECTURE
525 Vine Street, Suite 350
Winston-Salem, NC 27101
p. 336.724.1503
www.cjmw.com

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J&A ENGINEERING CONSULTANTS
4994 LOWER ROSWELL ROAD, SUITE ONE
MARIETTA, GEORGIA 30068
PHONE: (770) 817-4220
FAX: (678) 234-6878

CONSTRUCTION DOCUMENTS

CERT. No P-0776 — SEAL 23025 — REGISTERED ENGINEER — 10.24.23

#	Description	Date

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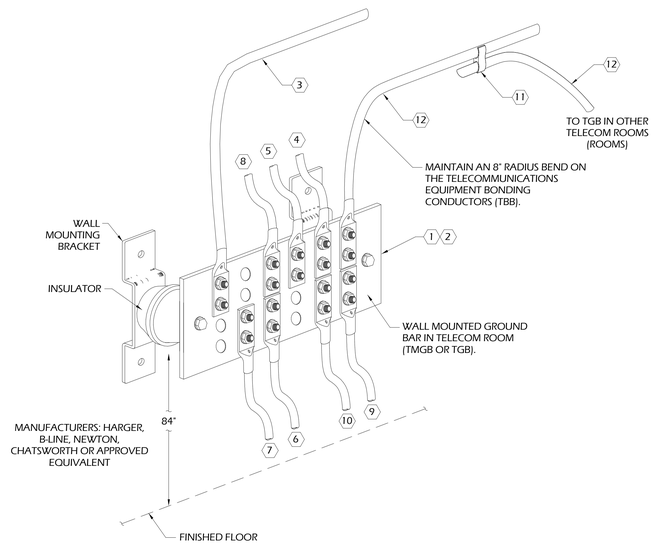
DETAILS

LV-501

ISSUE DATE: 10-24-2023
PROJECT NUMBER: 22-0410
DRAWN BY: AJ
CHECKED BY: JG



GENERAL NOTES:

A. TELECOMMUNICATIONS BONDING BACKBONE (TBB) SHALL BE A CONTINUOUS CONDUCTOR AND SHALL BE SPLICED TO TELECOMMUNICATIONS GROUND BUSBARS WITH A SHORT BONDING CONDUCTOR. USE CONDUCTOR TABLE TO CALCULATE TBB SIZE. CONTRACTOR TO COMPLY WITH ALL REQUIREMENTS OF NASI/TIA-607B.

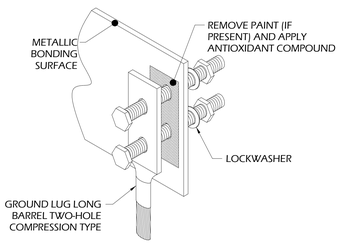
B. GROUNDING EQUALIZER (GE) SHALL BE A CONTINUOUS CONDUCTOR AND SHALL BE SPLICED TO TELECOMMUNICATIONS GROUND BUSBARS WITH A SHORT BONDING CONDUCTOR. USE CONDUCTOR TABLE TO CALCULATE GE SIZE. CONTRACTOR TO COMPLY WITH ALL REQUIREMENTS OF ANSI/TIA-607C.

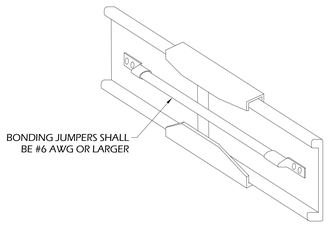
C. ALL GROUNDING LUGS SHALL BE TWO HOLE, NO EXCEPTIONS.

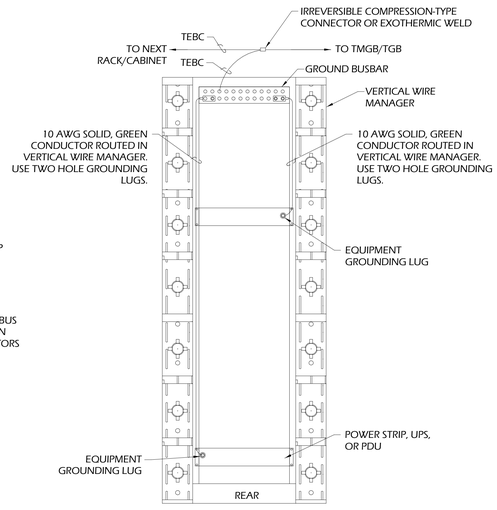
CONDUCTOR TABLE	
LINEAR LENGTH (FT.)	SIZE (AWG)
LESS THAN 13	6
14 - 20	4
21 - 26	3
27 - 33	2
34 - 41	1
42 - 52	1/0
53 - 66	2/0
GREATER THAN 67	3/0

KEY NOTES:

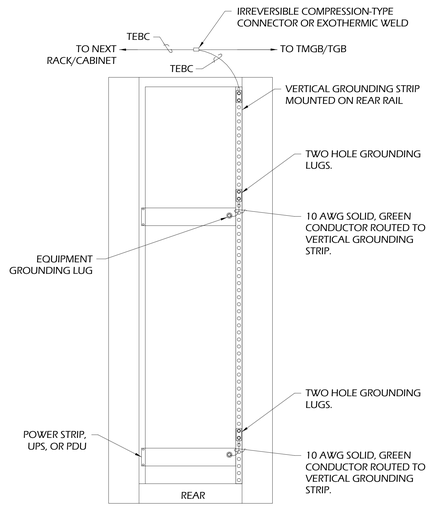
1. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL TELECOMMUNICATIONS MAIN GROUNDING BUSBAR (TMGB). TMGB SHALL BE PRE-DRILLED COPPER BUSBAR WITH STANDARD NEMA BOLT HOLE SIZING AND SPACING. MINIMUM SIZING SHALL BE ¼" THICK X 4" WIDE X 24" LENGTH.
2. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL TELECOMMUNICATIONS GROUNDING BUSBAR (TGB). TGB SHALL BE PRE-DRILLED COPPER BUSBAR WITH STANDARD NEMA BOLT HOLE SIZING AND SPACING. MINIMUM SIZING SHALL BE ¼" THICK X 4" WIDE X 18" LENGTH.
3. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL BONDING CONDUCTOR FOR TELECOMMUNICATIONS (BCT) TO BUILDING MAIN ELECTRICAL GROUNDING SYSTEM AND BUILDING STEEL. USE CONDUCTOR TABLE TO CALCULATE BCT SIZE. NOTE: THE BCT AND THE TBB SHALL BE THE SAME SIZE BASED UPON THE LARGER CONDUCTOR.
4. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL BONDING CONDUCTOR FOR TELECOMMUNICATIONS (BCT) TO ELECTRICAL PANELS WITHIN THE MDF AND IDF ROOMS. USE CONDUCTOR TABLE TO CALCULATE BCT SIZE.
5. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL BONDING CONDUCTOR TO THE BUILDING STEEL. USE CONDUCTOR TABLE TO CALCULATE CONDUCTOR SIZE.
6. TELECOMMUNICATIONS CONTRACTOR TO PROVIDE AND INSTALL TELECOMMUNICATIONS EQUIPMENT BONDING CONDUCTOR (TEBC) ROUTED ON LADDER RACK TO BOND EACH TELECOMMUNICATIONS RACK OR CABINET TO THE TMGB OR TGB. USE CONDUCTOR TABLE TO CALCULATE CONDUCTOR SIZE. EACH TEBC SHALL BE A CONTINUOUS CONDUCTOR. SPLICE A #6AWG CONDUCTOR USING AN IRREVERSIBLE COMPRESSION OR EXOTHERMAL WELD FROM THE TEBC TO EACH RACK OR CABINET MOUNTED GROUNDING BUSBAR. DAISY CHANNELING FROM ONE RACK OR CABINET TO ANOTHER IS NOT ACCEPTABLE.
7. TELECOMMUNICATIONS CONTRACTOR TO PROVIDE AND INSTALL TELECOMMUNICATIONS EQUIPMENT BONDING CONDUCTOR FROM TMGB OR TGB TO EACH LEVEL OF THE LADDER RACK SYSTEM WITH A #6AWG CONDUCTOR. EACH SECTION OF THE LADDER RACK SYSTEM SHALL BE BONDED TOGETHER WITH CABLE RUNWAY STRAPS.
8. TELECOMMUNICATIONS CONTRACTOR TO PROVIDE AND INSTALL TELECOMMUNICATIONS EQUIPMENT BONDING CONDUCTOR FROM TMGB OR TGB TO EACH EMT CONDUIT USED FOR BACKBONE CABLING WITH A #6 AWG CONDUCTOR. CONDUIT SHALL BE BONDED ON BOTH ENDS.
9. TELECOMMUNICATIONS CONTRACTOR TO PROVIDE AND INSTALL TELECOMMUNICATIONS EQUIPMENT BONDING CONDUCTOR FROM TMGB OR TGB TO EACH METAL JACKET OF THE ARMORED FIBER OPTIC CABLE WITH A #6 AWG CONDUCTOR. METAL JACKET SHALL BE BONDED ON BOTH ENDS.
10. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL TELECOMMUNICATIONS EQUIPMENT BONDING CONDUCTOR FROM TMGB OR TGB TO EACH EMT CONDUIT AND CABLE BASKET TRAY SYSTEM USED FOR DISTRIBUTING HORIZONTAL CABLING. USE CONDUCTOR TABLE TO CALCULATE CONDUCTOR SIZE.
11. IRREVERSIBLE COMPRESSION TYPE CONNECTOR OR EXOTHERMIC WELD.
12. TELECOMMUNICATIONS CONTRACTOR TO PROVIDE AND INSTALL TELECOMMUNICATIONS BONDING CONDUCTOR(TBB) ROUTED IN CONDUIT TO BOND EACH TELECOMMUNICATIONS ROOM TO THE TMGB. USE CONDUCTOR TABLE TO CALCULATE CONDUCTOR SIZE. THE TBB SHALL BE A CONTINUOUS CONDUCTOR.



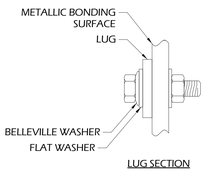




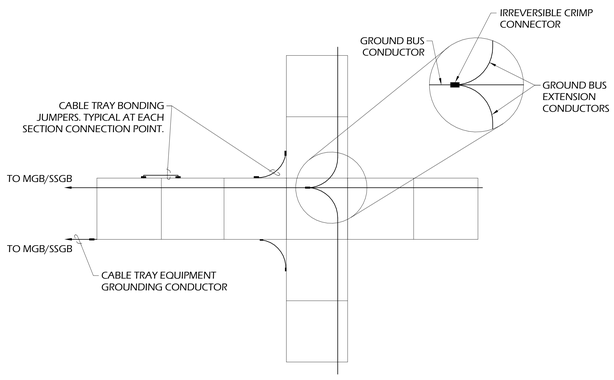
FREE STANDING RACK



FREE-STANDING EQUIPMENT CABINET



LUG SECTION



DETAIL N.T.S. 1 GROUNDING

CJMW ARCHITECTURE
525 Vine Street, Suite 350
Winston-Salem, NC 27101
p. 336.724.1503
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ENGINEERING CONSULTANTS
4994 LOWER ROSWELL ROAD, SUITE ONE
MARIETTA, GEORGIA 30068
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CONSTRUCTION DOCUMENTS

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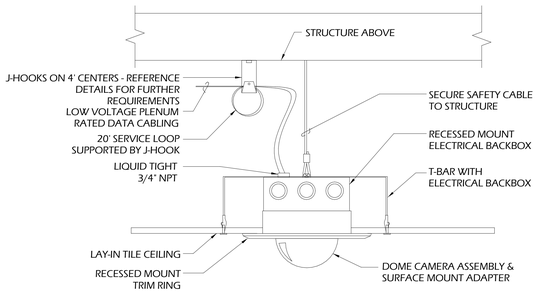
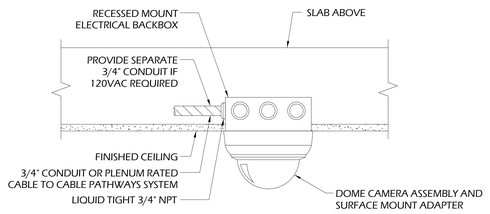
DETAILS

LV-502

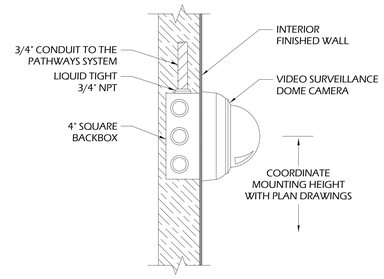
ISSUE DATE: 10-24-2023
PROJECT NUMBER: 22-0410
DRAWN BY: AJ
CHECKED BY: JG



DETAIL NOT TO SCALE 1 INTERIOR LAY-IN TILE CEILING



DETAIL NOT TO SCALE 2 INTERIOR GYP BOARD CEILING



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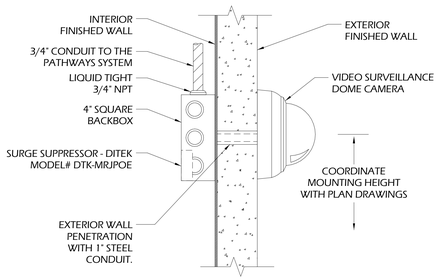

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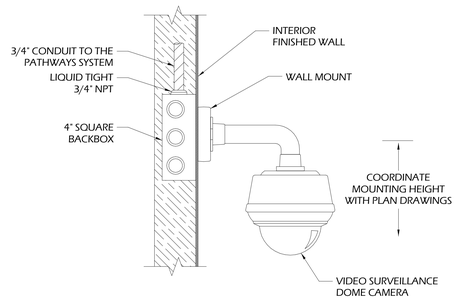
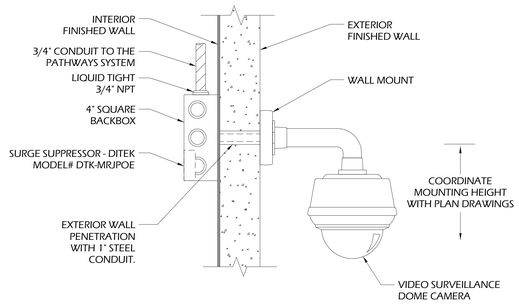
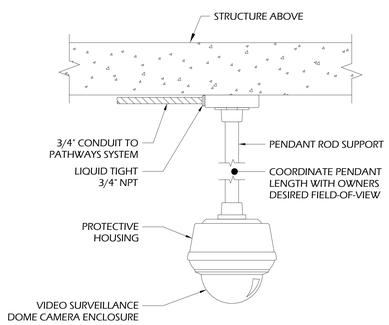


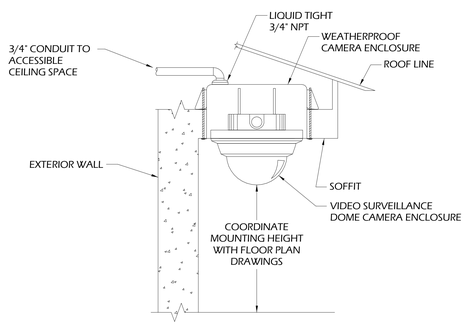
DETAIL NOT TO SCALE 5 INTERIOR/EXTERIOR PENDANT ARM



DETAIL NOT TO SCALE 6 EXTERIOR PENDANT ARM



DETAIL NOT TO SCALE 7 PENDANT ROD CEILING MOUNT



DETAIL NOT TO SCALE 8 EXTERIOR FIXED SOFFIT MOUNTED DOME CAMERA ENCLOSURE

CJMW ARCHITECTURE
525 Vine Street, Suite 350
Winston-Salem, NC 27101
p. 336.724.1503
www.cjmw.com

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DETAILS

LV-503

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DRAWN BY: AJ
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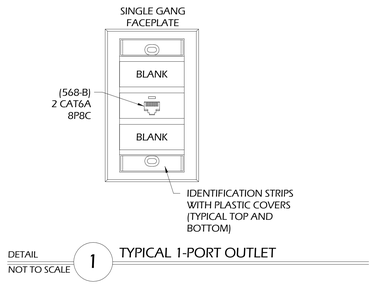
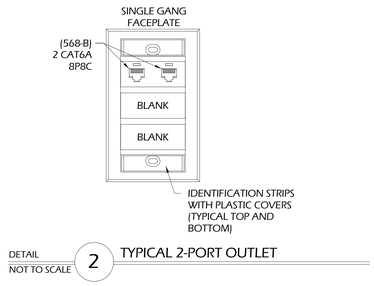


DETAIL NOT TO SCALE 1 TYPICAL 1-PORT OUTLET



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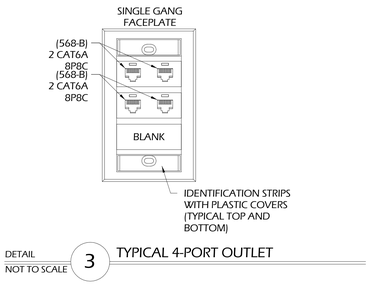
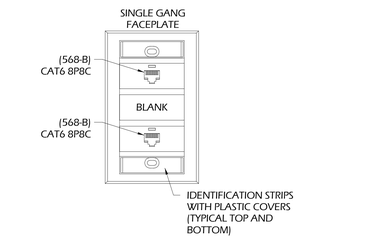
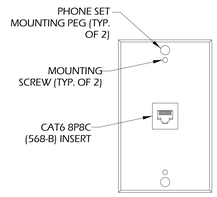


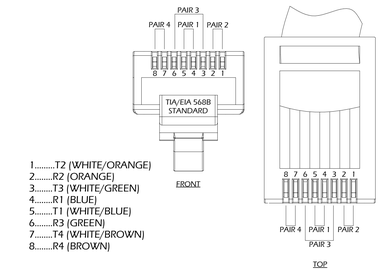
DETAIL NOT TO SCALE 3 TYPICAL 4-PORT OUTLET



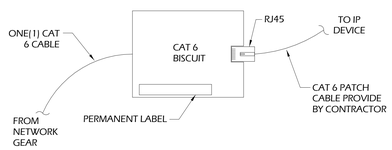
DETAIL NOT TO SCALE 4 TYPICAL DISPLAY OUTLET



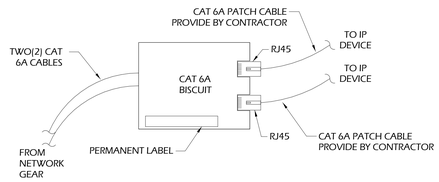
DETAIL NOT TO SCALE 5 WALL PHONE WITH MOUNTING PEGS



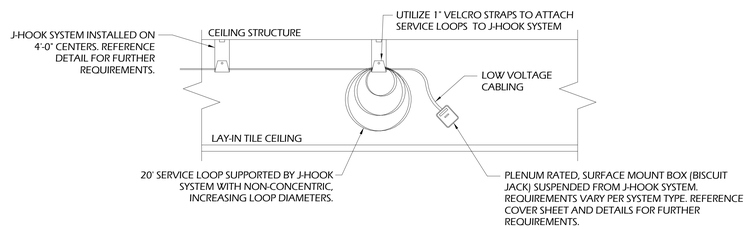
DETAIL NOT TO SCALE 6 RJ45 JACK TERMINATION



DETAIL NOT TO SCALE 7 VIDEO SURVEILLANCE CAMERA TYPICAL ETHERNET BISCUIT



DETAIL NOT TO SCALE 8 WIRELESS ACCESS POINT TYPICAL ETHERNET BISCUIT



GENERAL NOTES:

A. BISCUIT JACK SHALL BE PLENUM RATED, DUAL PORT, CATEGORY 6A TYPE FOR ALL WIRELESS ACCESS POINT LOCATIONS.

B. BISCUIT JACK SHALL BE PLENUM RATED, SINGLE PORT, CATEGORY 6A TYPE FOR ALL VIDEO SURVEILLANCE CAMERA LOCATIONS.

DETAIL NOT TO SCALE 9 SUSPENDED BISCUIT JACK

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MARIETTA, GEORGIA 30068
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CONSTRUCTION DOCUMENTS

#	Description	Date

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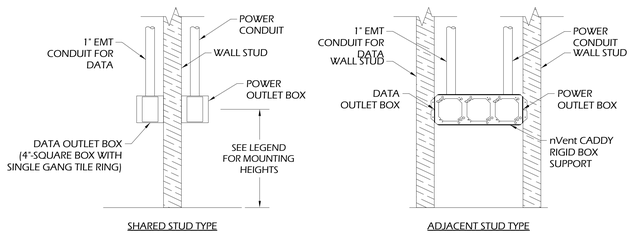
DETAILS

LV-504

ISSUE DATE: 10-24-2023
PROJECT NUMBER: 22-0410
DRAWN BY: AJ
CHECKED BY: JG



GENERAL NOTES:

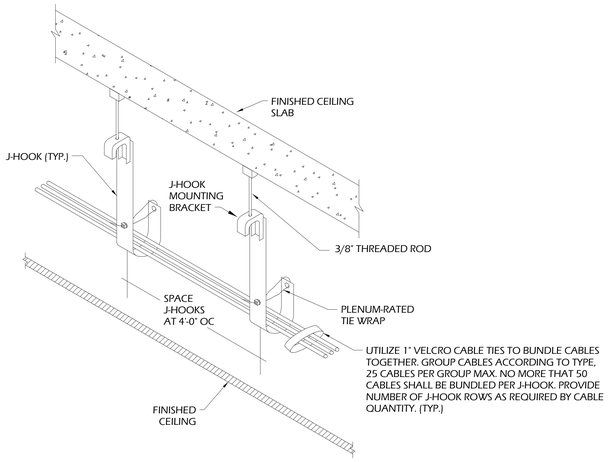
A. ALL DATA OUTLETS TO BE COORDINATED WITH ELECTRICAL POWER LOCATIONS. DATA OUTLETS SHALL BE MOUNTED ADJACENT TO POWER RECEPTACLES AT SAME HEIGHT.

B. DATA OUTLET SHALL EITHER BE MOUNTED ON OPPOSITE SIDE OF SHARED STUD AS POWER OR DATA SHALL BE MOUNTED ON ADJACENT STUD TO POWER IN SAME WALL CAVITY.

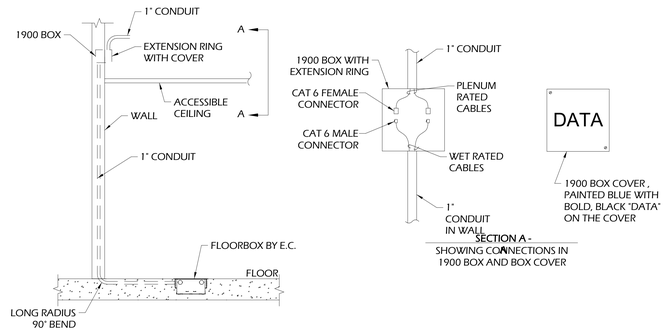
C. TYPICAL DATA OUTLET HEIGHT SHALL BE 18", UNLESS OTHERWISE NOTED.COORDINATE EXACT MOUNTING HEIGHTS AND ORIENTATION WITH ELECTRICAL AND ARCHITECTURAL PLAN.

D. CONTRACTOR TO VERIFY ALL DATA OUTLETS TO BE PROVIDED WITH ADJACENT POWER RECEPTACLE. SUBMIT RFI IF CONDITION DOES NOT EXIST.

DETAILS N.T.S. **1** TYPICAL DATA OUTLET INSTALLATION REQUIREMENTS

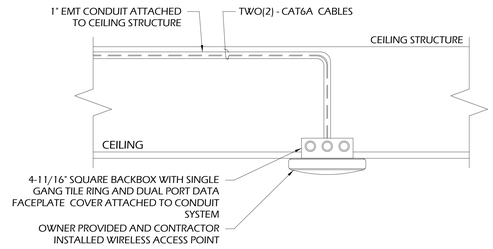


DETAIL N.T.S. **2** ACCESSIBLE CEILING J-HOOKS



SECTION A - SHOWING CONNECTIONS IN 1900 BOX AND BOX COVER

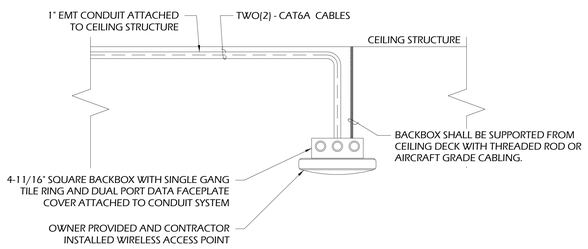
DETAIL N.T.S. **3** FLOOR BOX CABLE TRANSITION



GENERAL NOTES:

A. INSTALL SERVICE LOOP ON J-HOOK SYSTEM IN NEAREST ACCESSIBLE CEILING.

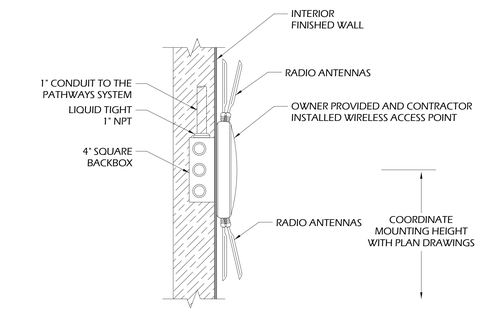
DETAIL NOT TO SCALE **4** SURFACE MOUNT (HARD CEILING) WIRELESS ACCESS POINT



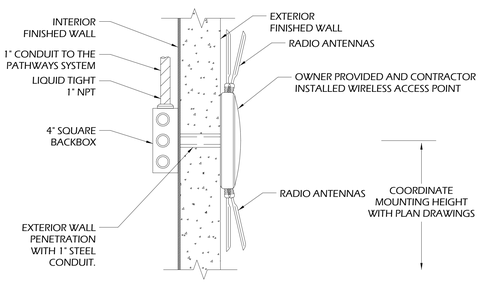
GENERAL NOTES:

A. INSTALL SERVICE LOOP ON J-HOOK SYSTEM IN NEAREST ACCESSIBLE CEILING.

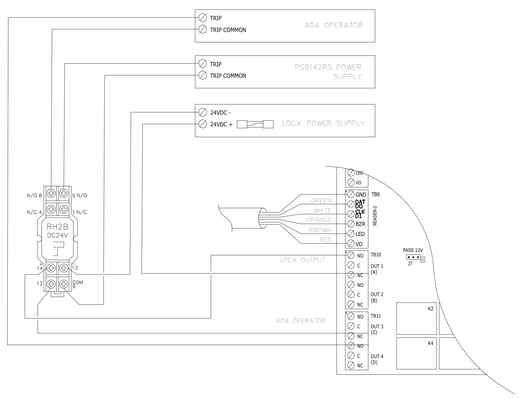
DETAIL NOT TO SCALE **5** OPEN CEILING WIRELESS ACCESS POINT



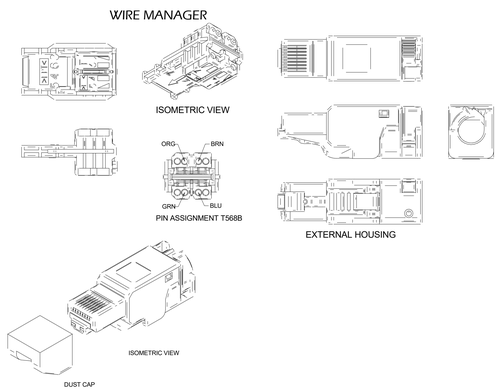
DETAIL NOT TO SCALE **6** INTERIOR WALL MOUNT WIRELESS ACCESS POINT



DETAIL NOT TO SCALE **7** EXTERIOR WALL MOUNT WIRELESS ACCESS POINT



ONE-LINE N.T.S. **8** ADA DOOR INTERFACE



ONE-LINE N.T.S. **9** FIELD TERMINABLE PLUG

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CONSTRUCTION DOCUMENTS

#	Description	Date

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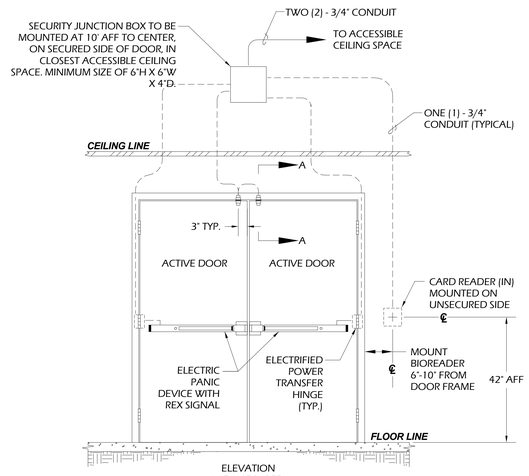
DETAILS

LV-505

ISSUE DATE: 10-24-2023
PROJECT NUMBER: 22-0410
DRAWN BY: AJ
CHECKED BY: JG

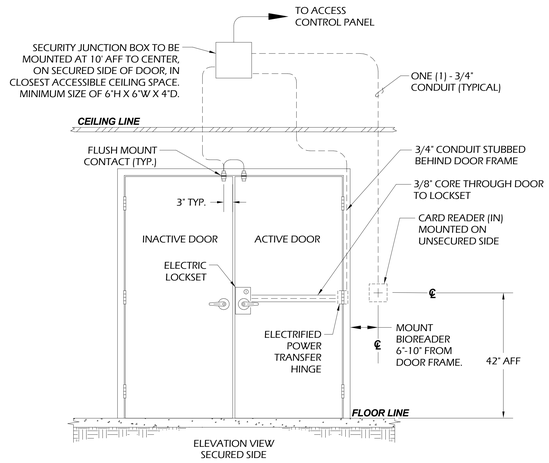


ELEVATION
VIEW SECURED
SIDE

DOUBLE DOOR WITH
BIOMETRIC READER, DOOR CONTACTS, ELECTRIC PANIC DEVICES,
REX SIGNAL, POWER TRANSFER HINGES

NOTE: FOR FACIAL RECOGNITION READER MOUNT AT 48" AFF

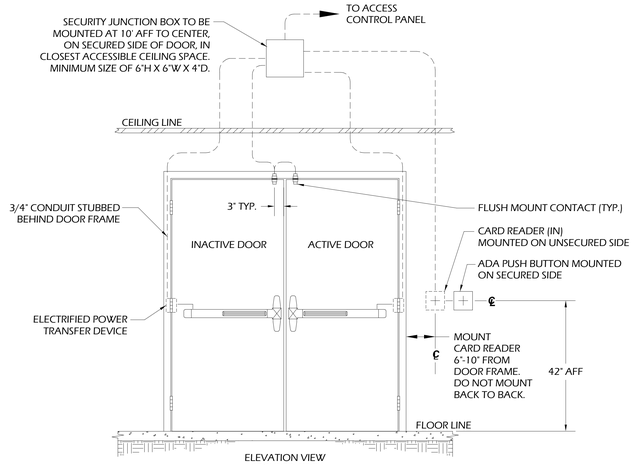
DETAIL 1 — NOT TO SCALE — DOUBLE DOOR DETAIL



ELEVATION VIEW
SECURED SIDE

DOUBLE DOOR WITH
CARD READER (IN), CARD READER (OUT),
DOOR CONTACTS, MORTISE LOCKSET, POWER TRANSFER HINGE

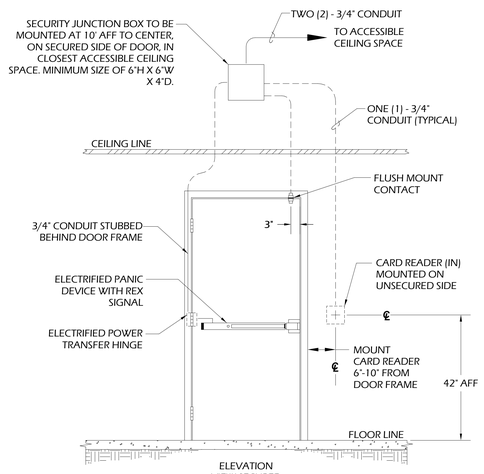
DETAIL 2 — NOT TO SCALE — DOUBLE DOOR DETAIL



ELEVATION VIEW
SECURED SIDE

DOUBLE DOOR WITH
CARD READER (IN), ADA DOOR OPERATOR PUSH-BUTTON,
DOOR CONTACTS, POWER TRANSFER DEVICE

DETAIL 3 — NOT TO SCALE — DOUBLE DOOR DETAIL

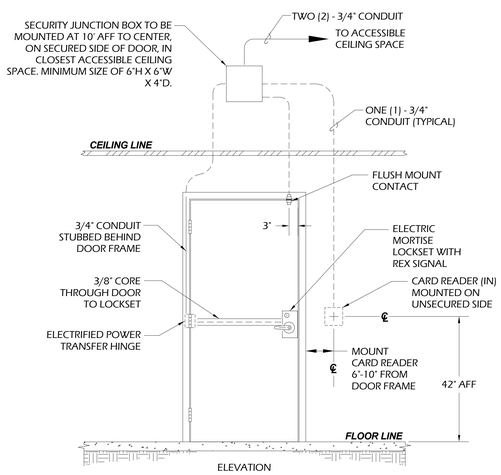


ELEVATION
VIEW SECURED
SIDE

SINGLE DOOR WITH
BIOMETRIC READER, DOOR CONTACT, ELECTRIFIED PANIC DEVICE,
POWER TRANSFER DEVICE

NOTE: FOR FACIAL RECOGNITION READER MOUNT AT 48" AFF

DETAIL 4 — NOT TO SCALE — SINGLE DOOR DETAIL

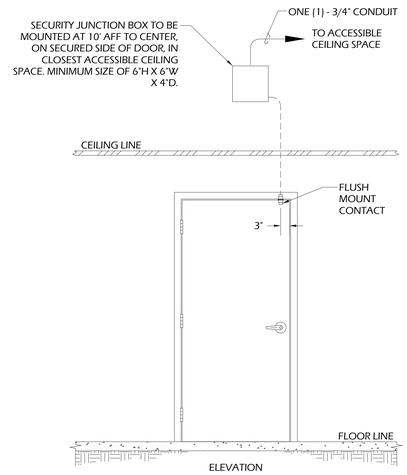


ELEVATION
VIEW SECURED
SIDE

SINGLE DOOR WITH
BIOMETRIC READER, DOOR CONTACT, MORTISE LOCKSET,
REX SIGNAL, POWER TRANSFER HINGE

NOTE: FOR FACIAL RECOGNITION READER MOUNT AT 48" AFF

DETAIL 5 — NOT TO SCALE — SINGLE DOOR DETAIL

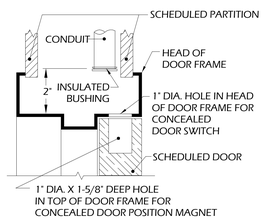


ELEVATION
VIEW SECURED
SIDE

SINGLE DOOR WITH
DOOR CONTACT

NOTE: FOR FACIAL RECOGNITION READER MOUNT AT 48" AFF

DETAIL 6 — NOT TO SCALE — SINGLE DOOR DETAIL



SECTION A-A

SHOWING FLUSH MOUNT MAGNETIC
DOOR CONTACT INSTALLATION
(TYPICAL FOR ALL DOOR POSITION SWITCHES)

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CONSTRUCTION DOCUMENTS

J.A. ENGINEERING CONSULTANTS, INC. CERT. No P-0776 GEORGIA

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 036205 GEORGE E GOSNELL

10.24.23

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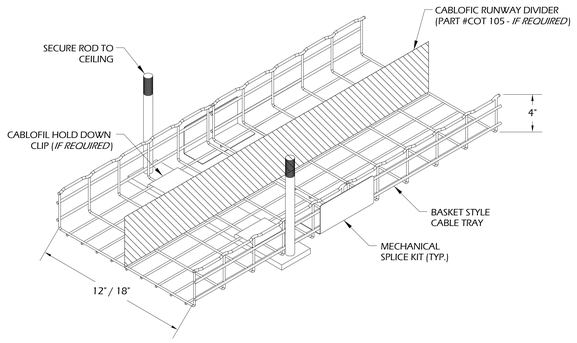
DETAILS

LV-506

ISSUE DATE: 10-24-2023
PROJECT NUMBER: 22-0410
DRAWN BY: AJ
CHECKED BY: JG



GENERAL NOTES:

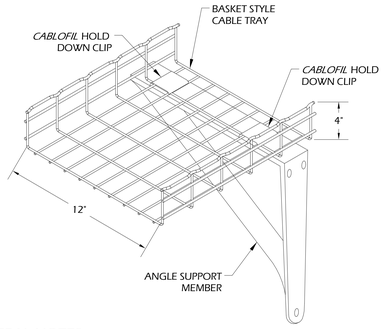
A. CONTRACTOR TO UTILIZE REQUIRED MANUFACTURER RADIUS DROPS FOR TRANSITIONING HORIZONTAL ROUTING TO VERTICAL ROUTING OF CABLES.

B. CONTRACTOR RESPONSIBLE FOR INSTALLING ALL PARTS AND PIECES NECESSARY FOR CABLE PATHWAY SHOWN ON FLOOR PLAN DRAWINGS.

C. CONTRACTOR TO UTILIZE ALL NECESSARY SUPPORT BRACKETS TO INSURE ADEQUATE SUPPORT. PROVIDE SUPPORT WITHIN 2'-0" OF ALL JUNCTIONS AND ENDS.

D. CONTRACTOR REQUIRED TO PROVIDE ALL SPLICES AND CONNECTORS FOR COMPLETE PATHWAY INSTALLATION.

DETAIL / NOT TO SCALE 1 — CEILING MOUNT TRAPEZE BASKET CABLE TRAY INSTALLATION



GENERAL NOTES:

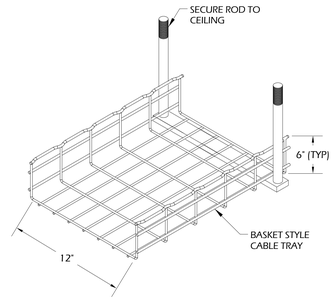
A. CONTRACTOR TO UTILIZE REQUIRED MANUFACTURER RADIUS DROPS FOR TRANSITIONING HORIZONTAL ROUTING TO VERTICAL ROUTING OF CABLES.

B. CONTRACTOR RESPONSIBLE FOR INSTALLING ALL PARTS AND PIECES NECESSARY FOR CABLE PATHWAY SHOWN ON FLOOR PLAN DRAWINGS.

C. CONTRACTOR TO UTILIZE ALL NECESSARY SUPPORT BRACKETS TO INSURE ADEQUATE SUPPORT. PROVIDE SUPPORT WITHIN 2'-0" OF ALL JUNCTIONS AND ENDS.

D. CONTRACTOR REQUIRED TO PROVIDE ALL SPLICES AND CONNECTORS FOR COMPLETE PATHWAY INSTALLATION.

DETAIL / NOT TO SCALE 2 — WALL MOUNT BASKET CABLE TRAY INSTALLATION



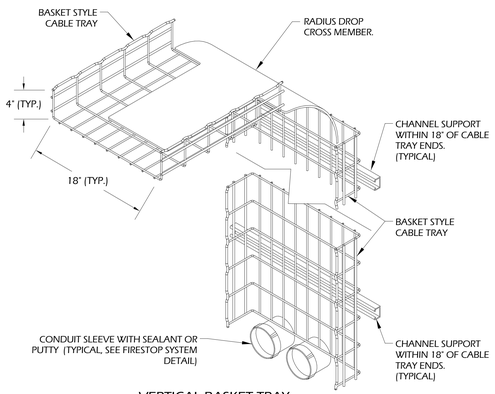
GENERAL NOTES:

A. CONTRACTOR TO UTILIZE REQUIRED MANUFACTURE RADIUS DROPS FOR TRANSITIONING HORIZONTAL ROUTING TO VERTICAL ROUTING OF CABLES.

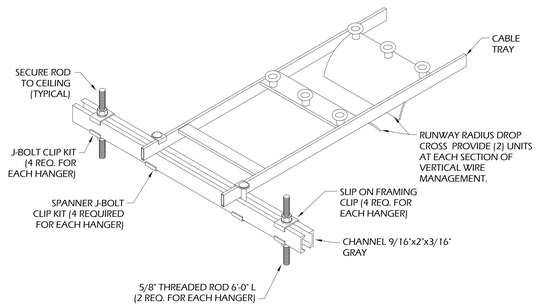
B. CONTRACTOR RESPONSIBLE FOR INSTALLING ALL PARTS AND PIECES NECESSARY FOR CABLE PATHWAY SHOWN ON FLOOR PLAN DRAWINGS.

C. CONTRACTOR TO UTILIZE ALL NECESSARY SUPPORT BRACKETS ON 5'-0" SPACING TO INSURE ADEQUATE SUPPORT

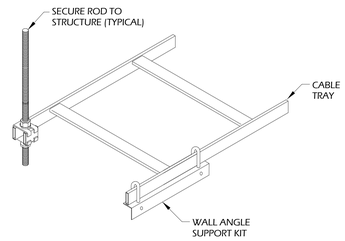
DETAIL / NOT TO SCALE 3 — CEILING MOUNT BASKET CABLE TRAY INSTALLATION



DETAIL / NOT TO SCALE 4 — VERTICAL BASKET TRAY TYPICAL INSTALLATION



DETAIL / NOT TO SCALE 5 — CEILING MOUNT CABLE TRAY INSTALLATION



DETAIL / NOT TO SCALE 6 — WALL MOUNT CABLE TRAY INSTALLATION

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PHONE: (770) 817-4220
FAX: (678) 234-6878

CONSTRUCTION DOCUMENTS

NC ENGINEERING CORPORATION CERT. No P-0778 GREG CARSON

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT SEAL 23025 GEORGE E. GOSNELL JR. 10.24.23

#	Description	Date

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DETAILS

LV-507

ISSUE DATE: 10-24-2023
PROJECT NUMBER: 22-0410
DRAWN BY: AJ
CHECKED BY: JG

CAMERA SCHEDULE

CAMERA #	CAMERA MODEL	LENS TYPE	MOUNTING REQUIREMENTS	FIELD OF VIEW	REFERENCE SHEET	REFERENCE DETAIL
C-1.1	AXIS P3265-LV	2MP - 3.4-8.9MM	CEILING MOUNT	VESTIBULE 129	LV-201	1/LV-503
C-1.2	AXIS P3719-PLE	15MP - 3-6MM	PENDANT ARM	GREAT HALL 102	LV-201	5/LV-503
C-1.3	AXIS P3267-LV	5MP - 3-8MM	CEILING MOUNT	GIFT SHOP 103	LV-201	1/LV-503
C-1.4	AXIS P3719-PLE	15MP - 3-6MM	PENDANT ARM	GREAT HALL 102	LV-201	5/LV-503
C-1.5	AXIS M4308-PLE	12MP - 1.3MM	CEILING MOUNT	CAFE 104	LV-201	2/LV-503
C-1.6	AXIS P3265-LV	2MP - 3.4-8.9MM	CEILING MOUNT	VESTIBULE 101	LV-201	1/LV-503
C-1.7	AXIS M4308-PLE	12MP - 1.3MM	CEILING MOUNT	LARGE GALLERY 118 - CORRIDOR	LV-201	2/LV-503
C-1.8	AXIS M4308-PLE	12MP - 1.3MM	CEILING PENDANT MOUNT	LARGE GALLERY 118	LV-201	7/LV-503
C-1.9	AXIS M4308-PLE	12MP - 1.3MM	CEILING PENDANT MOUNT	LARGE GALLERY 118	LV-201	7/LV-503
C-1.10	AXIS M4308-PLE	12MP - 1.3MM	CEILING MOUNT	VESTIBULE 119	LV-201	2/LV-503
C-1.11	AXIS M4308-PLE	12MP - 1.3MM	CEILING PENDANT MOUNT	SAMLL GALLERY 120	LV-201	7/LV-503
C-1.12	AXIS M4308-PLE	12MP - 1.3MM	CEILING PENDANT MOUNT	MEDIUM GALLERY 121	LV-201	7/LV-503
C-1.13	AXIS M4308-PLE	12MP - 1.3MM	CEILING PENDANT MOUNT	MEDIUM GALLERY 121	LV-201	7/LV-503
C-1.14	AXIS P3265-LV	2MP - 3.4-8.9MM	WALL MOUNT	STAIR 100	LV-201	3/LV-503
C-1.15	AXIS P3267-LV	5MP - 3-8MM	WALL MOUNT	VESTIBULE STAGING 123	LV-201	3/LV-503
C-1.16	AXIS P3267-LV	5MP - 3-8MM	CEILING MOUNT	WARMING KITCHEN 128	LV-201	1/LV-503
C-S.1	AXIS P3267-LVE	5MP - 3-8MM	EXTERIOR PENDANT ARM	BUILDING EXTERIOR	LV-201	6/LV-503
C-S.2	AXIS P3267-LVE	5MP - 3-8MM	EXTERIOR PENDANT ARM	BUILDING EXTERIOR	LV-201	6/LV-503
C-S.3	AXIS P3267-LVE	5MP - 3-8MM	EXTERIOR PENDANT ARM	BUILDING EXTERIOR	LV-201	6/LV-503
C-S.4	AXIS P3267-LVE	5MP - 3-8MM	EXTERIOR PENDANT ARM	BUILDING EXTERIOR	LV-201	6/LV-503
C-S.5	AXIS P3267-LVE	5MP - 3-8MM	EXTERIOR PENDANT ARM	BUILDING EXTERIOR	LV-201	6/LV-503
C-S.6	AXIS P3267-LVE	5MP - 3-8MM	EXTERIOR PENDANT ARM	BUILDING EXTERIOR	LV-201	6/LV-503
C-S.7	AXIS P3267-LVE	5MP - 3-8MM	EXTERIOR PENDANT ARM	BUILDING EXTERIOR	LV-201	6/LV-503

SCHEDULE 1 SECURITY CAMERA SCHEDULE
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SAMET

J&A ENGINEERING CONSULTANTS
4994 LOWER ROSWELL ROAD, SUITE ONE
MARIETTA, GEORGIA 30068
PHONE: (770) 817-4220
FAX: (678) 234-6878

CONSTRUCTION DOCUMENTS

#	Description	Date

CAROLINA MUSEUM OF THE MARINE

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SECURITY CAMERA SCHEDULE

LV-601

ISSUE DATE: 10-24-2023
PROJECT NUMBER: 22-0410
DRAWN BY: AJ
CHECKED BY: JG

AUDIO VISUAL SYSTEMS

CAROLINA MUSEUM OF THE MARINE

COMMUNITY CORPS CAROLINAS

111 MONTFORD POINT DRIVE, JACKSONVILLE, NC 28540

SUBMITTED ON: OCTOBER 24, 2023

GENERAL NOTES:

A. ELECTRICAL CONTRACTOR TO INSTALL PULL STRINGS IN ALL CONDUIT.
B. ELECTRICAL CONTRACTOR TO TERMINATE ALL CONDUIT STUB-OUT AND SLEEVES WITH PLASTIC BUSHINGS.
C. NO MORE THAN THREE(3) QUARTER BENDS OR 200 DEGREES OF CONDUIT SHALL BE INSTALLED BETWEEN PULL BOXES.
D. GENERAL CONTRACTOR TO PROVIDE WALL BLOCKING AT ALL FLAT PANEL LOCATIONS.

ABBREVIATION LEGEND:

A. LAN - LOCAL AREA NETWORK
B. NET - FACILITY COMPUTER NETWORK
C. RJ45 - EIGHT POSITION MODULAR PLUG AND JACK UTILIZED FOR TWISTED-PAIR CABLE CONNECTIONS
D. SC - FIBER OPTIC CABLE CONNECTOR FORM FACTOR
E. VOIP - VOICE OVER INTERNET PROTOCOL (IP) TELEPHONE SYSTEM
F. POE - POWER OVER ETHERNET
G. HDMI - HIGH-DEFINITION MULTIMEDIA INTERFACE DIGITAL VIDEO STANDARD
H. AEC - ACOUSTIC ECHO CANCELING MICROPHONE INPUT
I. PGM - PROGRAM AUDIO OR VIDEO
J. RS232 - UNBALANCED SERIAL CONTROL INTERFACE STANDARD
K. CNTR - CONTROL INPUT OR OUTPUT
L. OFE - OWNER FURNISHED EQUIPMENT
M. DS - DIGITAL SIGNAGE DISPLAY

DEVICE LEGEND:

PJ — CEILING MOUNTED VIDEO PROJECTOR SEE FLOOR PLANS FOR ANY REQUIREMENTS FOR A CEILING ENCLOSURE. - COORDINATE LOCATION WITH ARCHITECTURAL CEILING. COORDINATE THE REQUIREMENTS FOR ONE (1) DEDICATED 120VAC @ 20 AMP POWER CIRCUIT ADJACENT TO PROJECTOR LOCATION.
- COORDINATE WITH TELECOM CONTRACTOR FOR DATA & CATV TERMINATIONS.

FLAT PANEL DISPLAY MOUNTING SYSTEM WITH INTEGRAL SPEAKERS (IF REQUIRED, SEE FLOOR PLANS). SEE MOUNTED HEIGHTS AT XX"AFF TO CENTER OF SCREEN - SIZE DISPLAY AS INDICATED ON FLOOR PLANS. COORDINATE EXACT LOCATION AS INDICATED ON FLOOR PLANS. COORDINATE MOUNTING WITH ARCHITECTURAL AND FURNITURE LOCATIONS. SEE FLOOR PLANS FOR POWER, WALL BLOCKING, AND INTERFACE REQUIREMENTS.

S# — AUDIO VISUAL CEILING SPEAKER PROVIDED AND INSTALLED BY AUDIO/VISUAL CONTRACTOR. SPEAKER TO BE WHITE IN COLOR, CONFIRM WITH ARCHITECT.
- #SUBSCRIPT INDICATES MODEL TYPE. REFERENCE FLOOR PLAN & DETAILS FOR MODEL TYPE.

AV FB# — AUDIO VISUAL INTERFACE CONNECTION FLOOR BOX. REFERENCE FLOOR PLANS FOR LOCATION.
- #SUBSCRIPT INDICATES MODEL TYPE. REFERENCE FLOOR PLAN & DETAILS FOR MODEL TYPE

CUB# — AV CABLE ENCLOSURE. REFERENCE FLOOR PLANS FOR LOCATION.
- #SUBSCRIPT INDICATES MODEL TYPE. REFERENCE FLOOR PLAN & DETAILS FOR MODEL TYPE.
- DATA CONTRACTOR TO PROVIDE TWO DATA CIRCUITS TO ENCLOSURE LOCATION.

CTL# — WALL OR TABLE MOUNTED CONTROL PANEL. REFERENCE FLOOR PLANS FOR LOCATION.
- #SUBSCRIPT INDICATES MODEL TYPE. REFERENCE FLOOR PLAN & DETAILS FOR MODEL TYPE.

ANT# — WIRELESS MICROPHONE ANTENNA. REFERENCE FLOOR PLAN & CEILING PLANS FOR REQUIREMENTS. INSTALL BELOW CEILING TILE USING TILE BRIDGE IN GRID OR SIMILAR MOUNTING DEVICE.

CAM# — PAN/TILT/ZOOM VIDEO CAMERA. REFERENCE FLOOR PLANS FOR LOCATION.

ELECTRICAL CONDUIT ROUGH-IN LEGEND:

PJ — CEILING MOUNTED VIDEO PROJECTOR. SEE FLOOR PLANS FOR ANY REQUIREMENTS FOR A CEILING ENCLOSURE. PROVIDE ONE (1) DEDICATED 120VAC @ 15 AMP POWER CIRCUIT TO VIDEO PROJECTOR LOCATION IN CEILING. PROVIDE CONDUIT AS SHOWN ON PLANS.

FLAT PANEL DISPLAY MOUNTING SYSTEM WITH SPEAKERS (IF REQUIRED) SEE FLOOR PLANS FOR POWER AND INTERFACE REQUIREMENTS. PROVIDE A POWER RECEPTACLE AT EACH DISPLAY LOCATION.

S# — AUDIO VISUAL CEILING SPEAKER. AUDIO VISUAL CONTRACTOR TO PROVIDE MANUFACTURER'S BACK BOX AND MOUNTING ACCESSORIES FOR ALL LOCATIONS AS SHOWN ON PLANS. COORDINATE MOUNTING LOCATION WITH MECHANICAL AND LIGHTING. INSTALLS IN CEILING GRID.
- ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL 3/4" CONDUIT BETWEEN SPEAKER BOXES IN HARD CEILING SPACES AND/OR LOCATIONS THAT ARE INACCESSIBLE. ROUTE CONDUIT TO ACCESSIBLE CEILING SPACES VIA PASS-THRU SLEEVES.

AV FB1 — AUDIO VISUAL INTERFACE CONNECTION RAISED ACCESS FLOOR BOX PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR. FLOOR BOX TO BE FSR, INC. FL-500P-6-B WITH FL-500P-B-BLK COVER AND TO BE MOUNTED UNDER CONFERENCE ROOM TABLE./LECTERN AS SHOWN ON PLANS. AV CONDUITS TO TERMINATE INTO LOW VOLTAGE SIDE OF FLOOR BOX.
- DATA CONTRACTOR TO PROVIDE TWO DATA CIRCUITS TO FLOOR BOX LOCATION.
- AUDIO VISUAL CONTRACTOR TO PROVIDE INTERCONNECT PLATE FOR AUDIO VISUAL AND NETWORK CONNECTIONS.
- PROVIDE WITH COVER. COORDINATE COVER SELECTION WITH ARCHITECT/OWNER. PROVIDE WITH POUR PAN ACCESSORY.

120 VOLT DUPLEX RECEPTACLE NEMA 5-20R. PROVIDED BY ELECTRICAL CONTRACTOR. SEE PLANS AND DETAILS FOR LOCATIONS. ELEVATION IS AS NOTED ON PLANS.

D# — DATA OUTLET. BACK BOX PROVIDED BY ELECTRICAL CONTRACTOR. SEE PLANS AND DETAILS FOR LOCATIONS AND QUANTITIES. ELEVATION IS NOTED ON PLANS. REFERENCE TELECOM DRAWINGS FOR ROUGH-IN REQUIREMENTS.
- #SUBSCRIPT DETAILS NUMBER OF DATA DROPS PER LOCATION.

DS — DIGITAL SIGNAGE OUTLET. ELECTRICAL CONTRACTOR SEE PLANS AND DETAILS FOR LOCATIONS AND QUANTITIES. REFERENCE TELECOM DRAWINGS FOR ROUGH-IN REQUIREMENTS.

CTL# — WALL OR LECTERN MOUNTED CONTROL PANEL. REFERENCE FLOOR PLANS FOR LOCATION.
- CTL 3: ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL ONE 2-GANG BACK BOX MOUNTED AT 46" AFF TO CENTER WITH CONDUITS AS SHOWN ON PLANS.

CAM1 — WALL MOUNTED PAN/TILT/ZOOM VIDEO CAMERA. REFERENCE FLOOR PLANS FOR LOCATION.
- ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL ONE TWO-GANG BACK BOX. SEE FLOOR PLANS FOR MOUNTING HEIGHT LOCATION. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL CONDUITS AS SHOWN ON PLANS.

CAM2 — CEILING MOUNTED PAN/TILT/ZOOM CAMERA. REFERENCE FLOOR PLANS FOR LOCATION.

ANT — CEILING MOUNTED WIRELESS MICROPHONE ANTENNA

SHEET LIST:

AV-000	COVER PAGE
AV-201	LEVEL 1 - FLOOR PLAN
AV-201.1	LEVEL 1 - FLOOR PLAN - RCP
AV-301	LARGE SCALES - GREAT HALL
AV-302	LARGE SCALES - CLASSROOM 114, 115
AV-401	ONE-LINE DIAGRAMS
AV-402	ONE-LINE DIAGRAMS
AV-403	ONE-LINE DIAGRAMS
AV-404	ONE-LINE DIAGRAMS
AV-501	DETAILS
AV-601	DISPLAY SCHEDULE

LOW VOLTAGE RESPONSIBILITY MATRIX

SPECS SECTIONS	SYSTEM	INFRASTRUCTURE INSTALLATION	PROCUREMENT	SYSTEM INSTALLATION
27 40 00	PROJECTION SCREEN	GC	GC	GC
DIVISION 27	STRUCTURED CABLING SYSTEM	GC (CONDUIT, WIREWAYS, BACK BOXES)	OWNER/VENDOR	VENDOR
27 40 00	AUDIO-VISUAL SYSTEM (NON-EXHIBIT)	GC (CONDUIT, WIREWAYS, BACK BOXES)	OWNER/VENDOR	VENDOR
28 13 00	ACCESS CONTROL SECURITY SYSTEM	GC (CONDUIT, WIREWAYS, BACK BOXES)	OWNER/VENDOR	VENDOR
08 71 00	ELECTRIC DOOR HARDWARE	GC	GC	GC
28 20 00	VIDEO SURVEILLANCE SECURITY SYSTEM	GC (CONDUIT, WIREWAYS, BACK BOXES)	OWNER/VENDOR	VENDOR
N/A	NETWORK PERIPHERALS (PHONES, COMPUTERS, PRINTERS, ETC)	N/A	OWNER/VENDOR	VENDOR
N/A	NETWORK ELECTRONICS (SWITCHES, WAPS, CONTROLLERS, ETC)	N/A	OWNER/VENDOR	VENDOR
N/A	DISTRIBUTED ANTENNA SYSTEMS (PUBLIC SAFETY AND CELLULAR)	N/A	OWNER/VENDOR	VENDOR
N/A	EXHIBIT AUDIO-VISUAL (DISPLAYS, PROJECTORS, SPEAKERS, ETC.)	GC (CONDUIT, WIREWAYS, BACK BOXES	EXHIBIT FABRICATOR	EXHIBIT FABRICATOR
N/A	EXHIBIT LIGHTING (TRACKS, FIXTURES, CONTROL EQUIPMENT)	GC (CONDUIT, WIREWAYS, BACK BOXES	EXHIBIT FABRICATOR	GC

CJMW ARCHITECTURE
525 Vine Street, Suite 350
Winston-Salem, NC 27101
p. 336.724.1503
www.cjmw.com

HICAPS

RAA

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COVER PAGE

AV-000

ISSUE DATE: 10-24-2023
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CHECKED BY: JG

KEY NOTES:

1. FLAT PANEL DISPLAY LOCATION. AUDIO VISUAL CONTRACTOR TO PROVIDE AND INSTALL FLAT PANEL DISPLAY. PROVIDE WITH MOUNTING ACCESSORIES FOR ALL LOCATIONS AS SHOWN ON PLANS. GENERAL CONTRACTOR TO PROVIDE BLOCKING FOR DISPLAY.
2. AUDIO VISUAL SHARED IN-WALL BACK BOX. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL BACK BOX FSR 320XL, FLUSH MOUNTED AT LOCATION SHOWN ON PLANS. PROVIDE (1) 1-1/4" CONDUIT TO AV RACK ROOM 113.
3. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL ONE 120V/20A POWER TO FSR 320XL IN-WALL BACK BOX FROM A 20A CIRCUIT IN HOUSE PANEL. SEE ELECTRICAL DRAWINGS FOR CIRCUITING. TELECOM CONTRACTOR TO PROVIDE AND INSTALL TWO(2) DATA OUTLETS IN ONE GANG INSERT OF FSR IN-WALL BACK BOX

VEST 129
WARMING KITCHEN 128
MEDIUM GALLERY 121
STAIR 127
BOILER 127
FIRE PUMP 126
EMG. DIST. 125
ELECTRIC 124
TABLE STORAGE 116
MEETING ROOM 115
OPERABLE PARTITION STACKING
VIEWING ROOM 122A
VESTIBULE STAGING 123
GREAT HALL 102
CLASSROOM 114
AV 113
SMALL GALLERY 120
COLLECTIONS STOR. 122B
VEST 119
GIFT SHOP 103
JAN 106
WOMENS 107
CORR 105
CAFE 104
MENS 108
FAMILY 109
CORR 110
KITCHEN 104A
LARGE GALLERY 118
VEST 101
STORAGE 111
OFFICE 112

1 AV-301
1 AV-302
3 AV-302
2
1
3
75'-0"
DS

FLOOR PLAN 1 LEVEL 1 - AV
1/8" = 1'-0"

PLAN NORTH

CJMW ARCHITECTURE
525 Vine Street, Suite 350
Winston-Salem, NC 27101
p. 336.724.1503
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MARIETTA, GEORGIA 30068
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LEVEL 1 - FLOOR PLAN

AV-201

ISSUE DATE: 10-24-2023
PROJECT NUMBER: 22-0410
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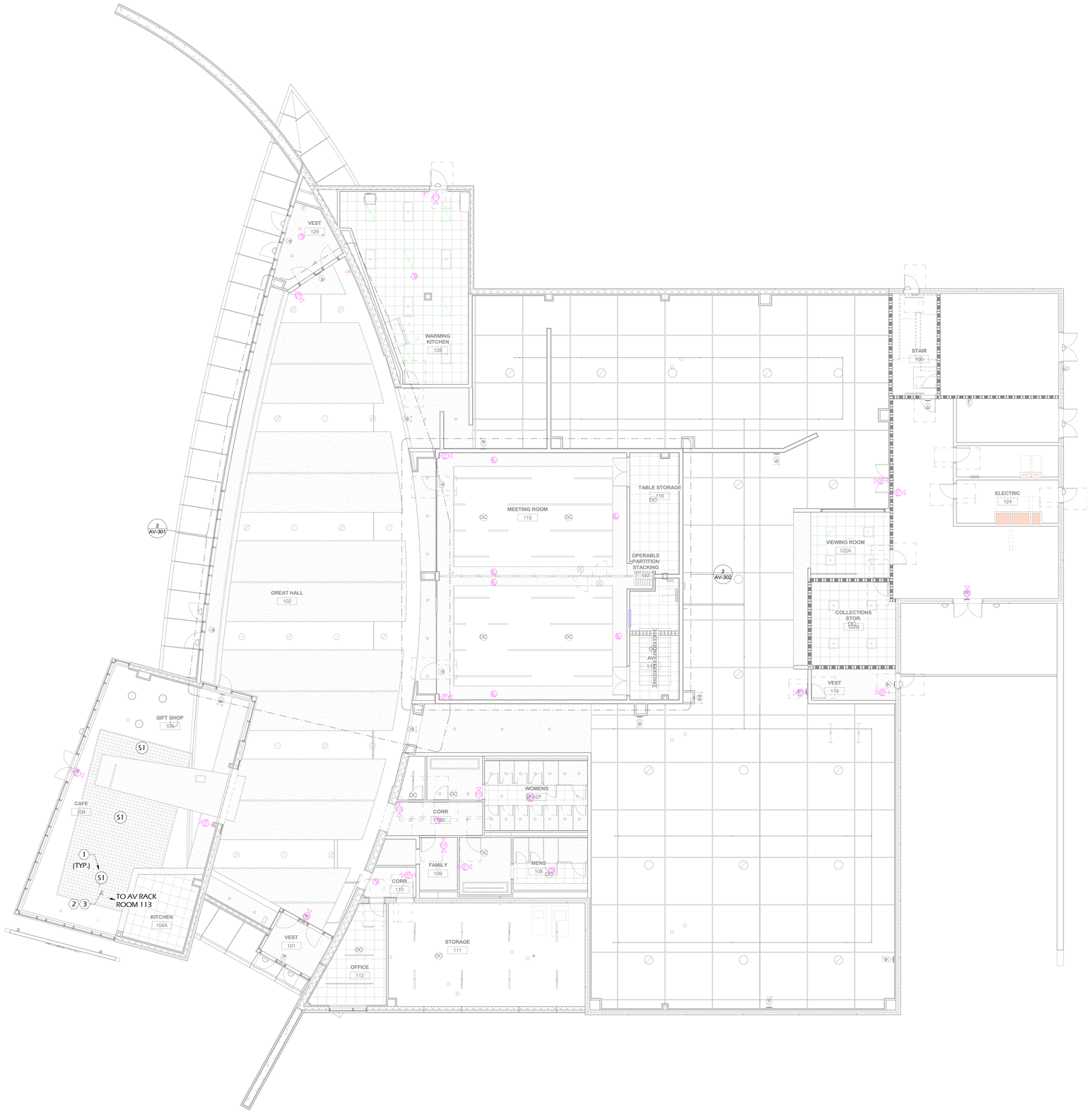

FLOOR PLAN 1 — LEVEL 1 -FLOOR PLAN - RCP
1/8" = 1'-0"

KEY NOTES:

1. CEILING MOUNTED SPEAKER. AUDIO VISUAL CONTRACTOR SHALL PROVIDE AND INSTALL IN-CEILING MOUNTED SPEAKER AT LOCATION SHOWN.
2. CABLE PROVIDED AND INSTALLED IN J-HOOKS ON 4' CENTERS BY AUDIO VISUAL CONTRACTOR. CABLE TO BE INSTALLED FREE OF SPLICES BETWEEN DEVICES AND SHALL BE PLENUM RATED. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL 3/4" CONDUIT WITHIN ALL OPEN CEILING, NON-ACCESSIBLE CEILING, OR HARD CEILING AREAS. COORDINATE WITH ARCHITECTURAL DOCUMENTS TO VERIFY EXACT LOCATIONS.
3. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL ONE (1) 1-1/4" CONDUIT ROUTED TO AV RACK ROOM 113 FOR SPEAKER CABLING.

CJMW ARCHITECTURE
525 Vine Street, Suite 350
Winston-Salem, NC 27101
p. 336.724.1503
www.cjmw.com

HICAPS

RAA

SAMET

J&A ENGINEERING CONSULTANTS
4994 LOWER ROSWELL ROAD, SUITE ONE
MARIETTA, GEORGIA 30068
PHONE: (770) 817-4220
FAX: (678) 234-6878

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LEVEL 1 - FLOOR PLAN - RCP

AV-201.1

ISSUE DATE: 10-24-2023
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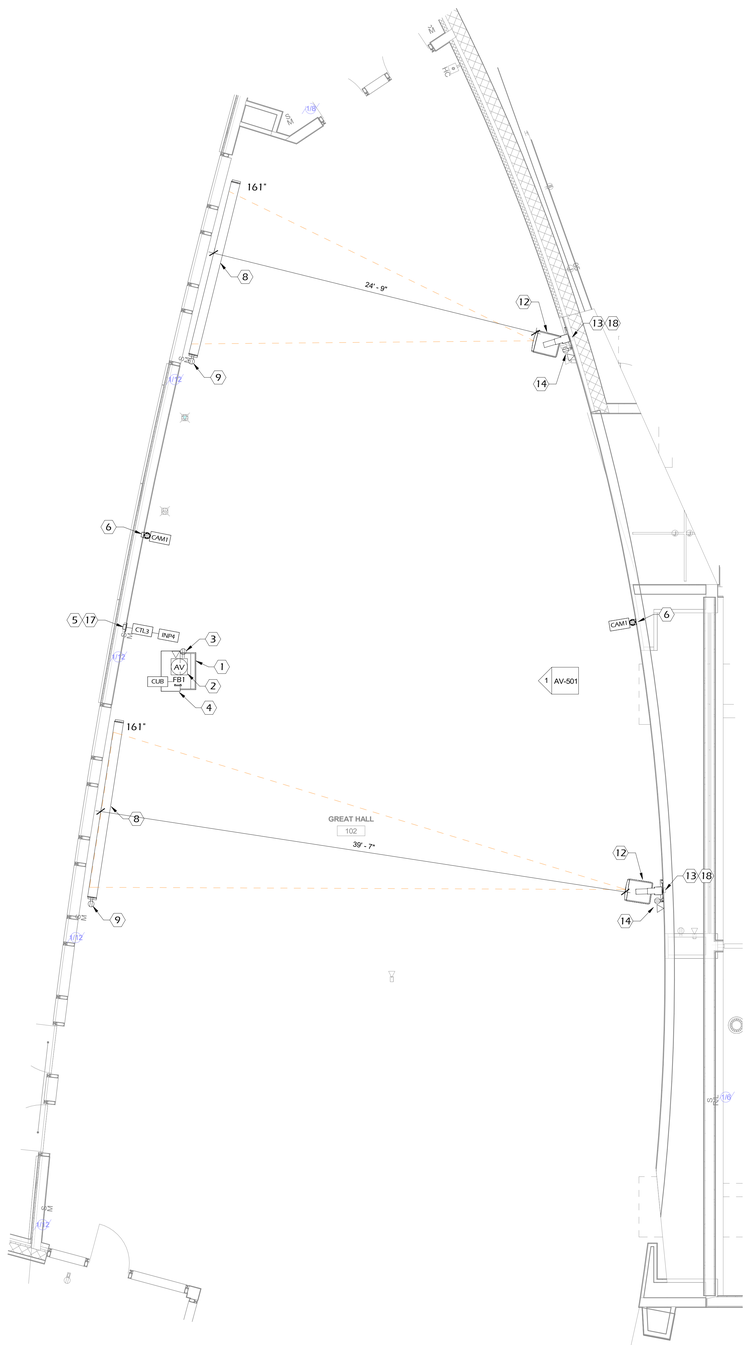
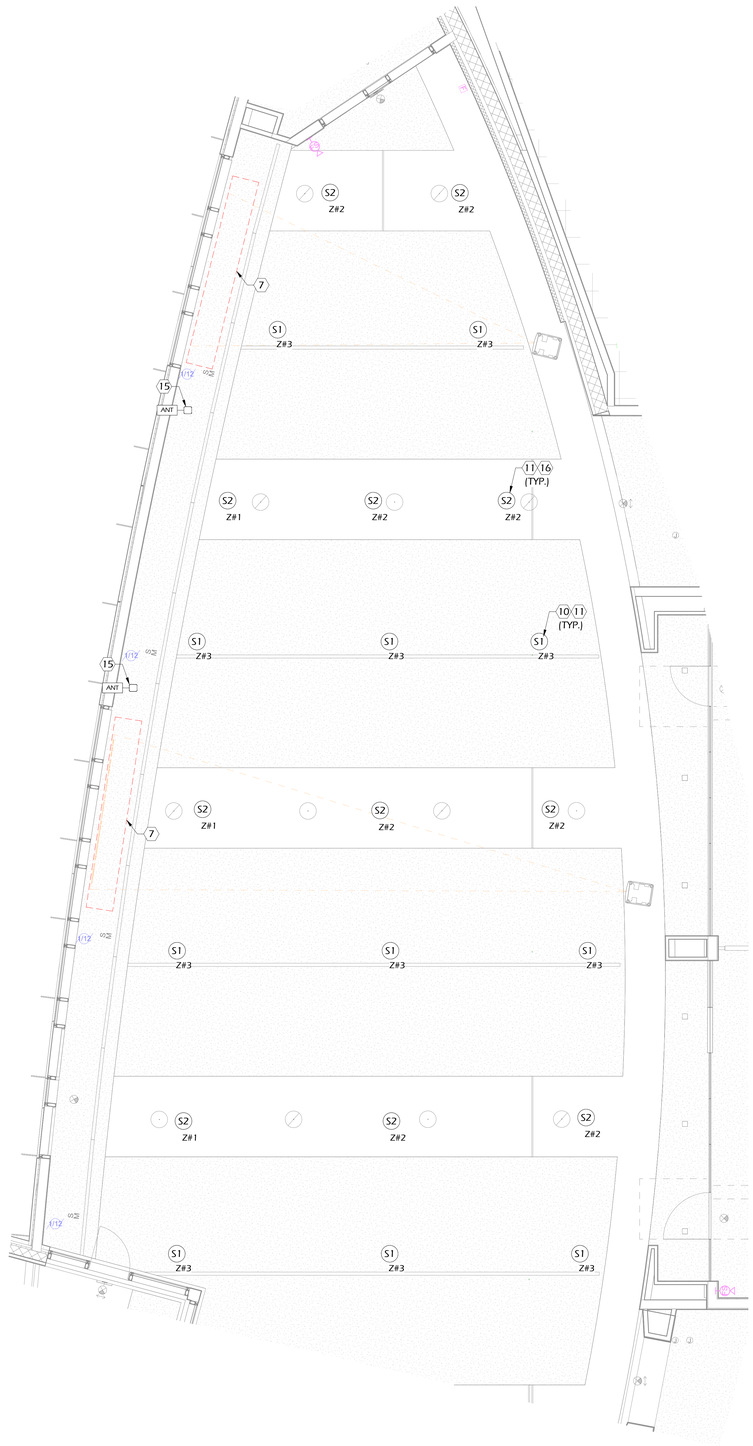
PLAN NORTH



LARGE SCALE 1/4" = 1'-0" 1 GREAT HALL 102



LARGE SCALE 1/4" = 1'-0" 2 GREAT HALL 102

KEY NOTES:

1. LECTERN PROVIDED AND INSTALLED BY AUDIO VISUAL CONTRACTOR. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION. COORDINATE LECTERN COLOR AND FINISH WITH ARCHITECT PRIOR TO ORDERING.
2. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL RECESSED FLOOR BOX AS SHOWN ON PLANS. REFERENCE AUDIO VISUAL LEGEND FOR ADDITIONAL INFORMATION ON FLOOR BOX. ROUTE (2) 1-1/4" CONDUIT FROM RECESSED FLOOR BOX TO AV RACK IN AV RACK ROOM 113.
3. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL 120V/20A DUPLEX RECEPTACLE FROM A DEDICATED 20A CIRCUIT IN HOUSE POWER PANEL. REFER TO ELECTRICAL DRAWINGS FOR CIRCUITING. TELECOM CONTRACTOR TO PROVIDE AND INSTALL TWO (2) DATA OUTLETS ADJACENT TO POWER DUPLEX IN RECESSED BOX.
4. AUDIO VISUAL CONTRACTOR TO PROVIDE AND INSTALL AV CABLE ENCLOSURE WITH FLIP LID AND TO COORDINATE WITH FURNITURE CONTRACTOR/ARCHITECT FOR INSTALLATION IN TABLETOP / LECTERN. COORDINATE WITH ARCHITECT PRIOR TO ROUGH-IN. AUDIO VISUAL CONTRACTOR TO PROVIDE AND INSTALL CABLE MANAGEMENT SYSTEM CONNECTING TABLE/LECTERN TO FLOOR BOX. AV TABLE/LECTERN TO CONNECT TO FLOOR BOX WITH PLUGGABLE UMBILICAL ENCASED IN BLACK EXPANDABLE SLEEVING.
5. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL ONE (1) 2-GANG BACK BOX, FLUSH MOUNTED IN WALL AT 46" AFF FOR AUDIO VIDEO SYSTEM CONTROL. PROVIDE AND INSTALL ONE (1) 1" CONDUIT FROM BACK BOX TO CABLE PATHWAY SYSTEM TO AV RACK ROOM 113.
6. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL ONE (1) 2-GANG BACK BOX, FLUSH MOUNTED IN WALL AT 102" AFF FOR AUDIO VIDEO CAMERA (CAM-1). PROVIDE AND INSTALL ONE (1) 1" CONDUIT FROM BACK BOX TO CABLE PATHWAY SYSTEM TO AV RACK ROOM 113.
7. GENERAL CONTRACTOR TO PROVIDE AND INSTALL CEILING BLOCKING TO ADEQUATELY SUPPORT THE CEILING MOUNTED PROJECTION SCREEN.
8. CEILING MOUNTED MOTORIZED FRONT PROJECTION SCREEN. GENERAL CONTRACTOR SHALL INSTALL CEILING MOUNTED MOTORIZED FRONT PROJECTION SCREEN.REFERENCE ELEVATIONS FOR DETAILS. GENERAL CONTRACTOR TO FIELD VERIFY MEASUREMENTS PRIOR TO ORDERING PROJECTION SCREEN TO ENSURE PROPER PROJECTOR-SCREEN GEOMETRY. FIELD VERIFY APPROPRIATE EXTRA ROLL OUT/DROP ABOVE ACTIVE VIEWING AREA OF SCREEN.
9. ELECTRICAL CONTRACTOR TO PROVIDE A 120V HARD-WIRED CONNECTION TO JUNCTION BOX IN END OF VIDEO SCREEN CASE. SEE ELECTRICAL DRAWINGS FOR CIRCUITING. SCREEN MOTOR DRAWS 2.4 AMPS MAX.
10. CEILING MOUNTED SPEAKER. AUDIO VISUAL CONTRACTOR SHALL PROVIDE AND INSTALL IN-CEILING MOUNTED SPEAKER AT LOCATION SHOWN.
11. CABLE PROVIDED AND INSTALLED IN J-HOOKS ON 4' CENTERS BY AUDIO VISUAL CONTRACTOR. CABLE TO BE INSTALLED FREE OF SPLICES BETWEEN DEVICES AND SHALL BE PLENUM RATED. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL 3/4" CONDUIT WITHIN ALL OPEN CEILING, NON-ACCESSIBLE CEILING, OR HARD CEILING AREAS. COORDINATE WITH ARCHITECTURAL DOCUMENTS TO VERIFY EXACT LOCATIONS.
12. WALL MOUNTED VIDEO PROJECTOR SHALL BE PROVIDED AND INSTALLED BY AUDIO VISUAL CONTRACTOR.
13. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL ONE (1) 2-GANG BACK BOX, FLUSH MOUNTED IN WALL AT 13'-0" AFF FOR VIDEO PROJECTOR. PROVIDE AND INSTALL ONE (1) 1-1/4" CONDUIT FROM BACK BOX TO CABLE PATHWAY SYSTEM TO AV RACK ROOM 113.
14. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL A (20A)120V CONNECTION TO INCLUDED RECEPTACLE IN PLENUM BOX. TELECOM CONTRACTOR TO PROVIDE AND INSTALL ONE (1) DATA OUTLET FOR PROJECTOR ADJACENT TO POWER OUTLET.
15. AUDIO VISUAL CONTRACTOR TO PROVIDE AND INSTALL WIRELESS MICROPHONE ANTENNA AT 12'-6" AFF AT LOCATION SHOWN.
16. PENDANT MOUNTED SPEAKER. AUDIO VISUAL CONTRACTOR SHALL PROVIDE AND INSTALL PENDANT MOUNTED SPEAKER AT LOCATION SHOWN.
17. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL ONE(1) 4-GANG BACK BOX FLUSH MOUNTED IN-WALL AT 18" AFF FOR AUDIO VISUAL INTERFACE, ROUTE 1 INCH CONDUIT TO AV RACK ROOM 113.
18. GENERAL CONTRACTOR TO PROVIDE AND INSTALL WALL BLOCKING FOR PROJECTOR MOUNT.

CJMW ARCHITECTURE
525 Vine Street, Suite 350
Winston-Salem, NC 27101
p. 336.724.1503
www.cjmw.com

HICAPS
RAA
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ENGINEERING CONSULTANTS
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PHONE: (770) 817-4220
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LARGE SCALES - GREAT HALL

AV-301

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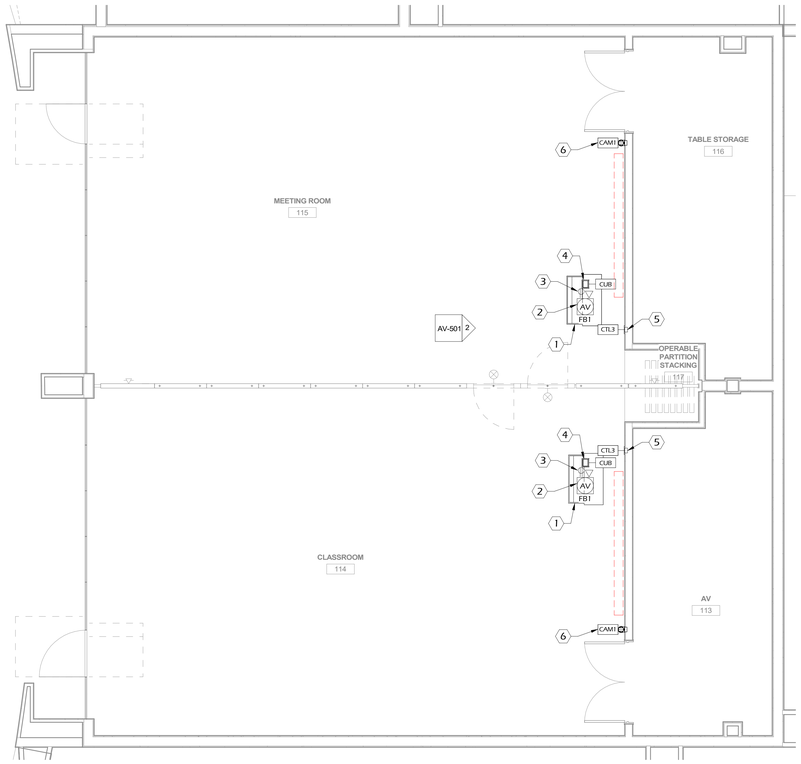
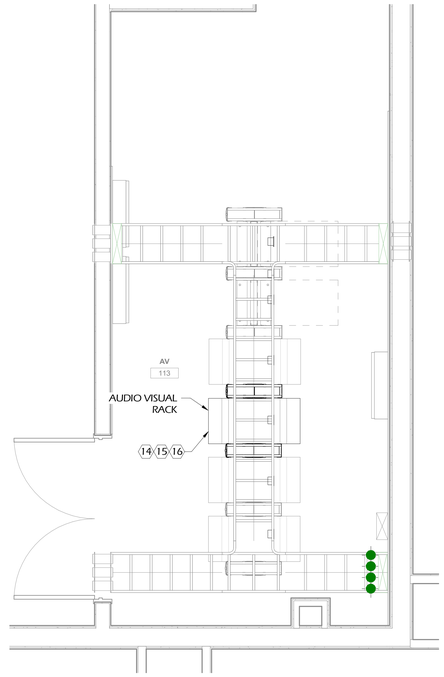
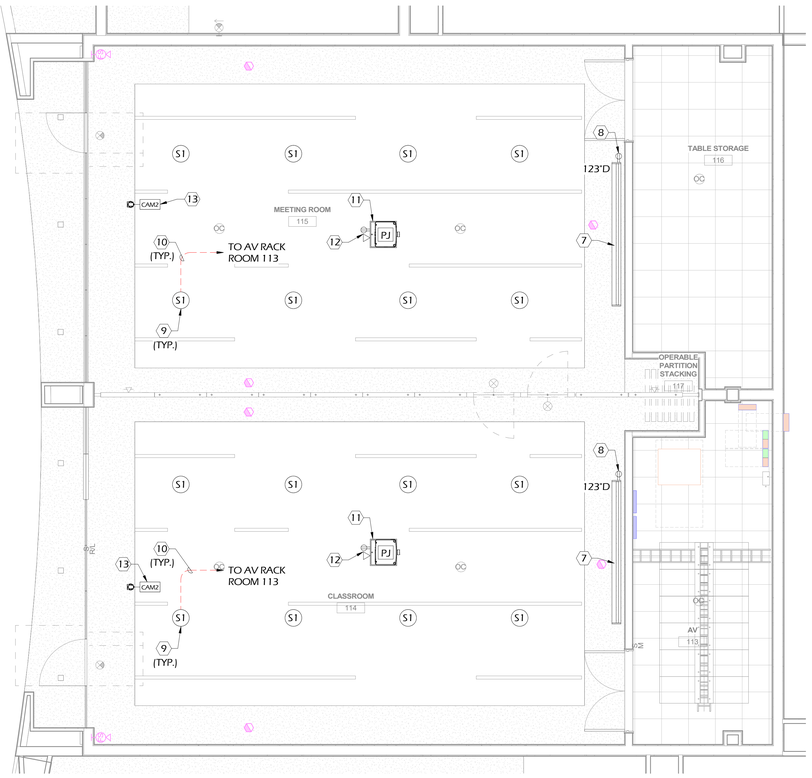
CHECKED BY: JG



LARGE SCALE 1/4" = 1'-0" — 1 — CLASSROOM 114 & MEETING ROOM 115



LARGE SCALE 1/2" = 1'-0" — 3 — AV ROOM 113



LARGE SCALE 1/4" = 1'-0" — 2 — CLASSROOM 114 & MEETING ROOM 115

KEY NOTES:

1. LECTERN PROVIDED AND INSTALLED BY AUDIO VISUAL CONTRACTOR. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION. COORDINATE LECTERN COLOR AND FINISH WITH ARCHITECT PRIOR TO ORDERING.
2. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL RECESSED FLOOR BOX AS SHOWN ON PLANS. REFERENCE AUDIO VISUAL LEGEND FOR ADDITIONAL INFORMATION ON FLOOR BOX. ROUTE (2) 1-1/4" CONDUIT FROM RECESSED FLOOR BOX TO AV RACK IN AV RACK ROOM 113.
3. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL 120V/20A DUPLEX RECEPTACLE FROM A DEDICATED 20A CIRCUIT IN HOUSE POWER PANEL. REFER TO ELECTRICAL DRAWINGS FOR CIRCUITING. TELECOM CONTRACTOR TO PROVIDE AND INSTALL TWO (2) DATA OUTLETS ADJACENT TO POWER DUPLEX IN RECESSED BOX.
4. AUDIO VISUAL CONTRACTOR TO PROVIDE AND INSTALL AV CABLE ENCLOSURE WITH FLIP LID AND TO COORDINATE WITH FURNITURE CONTRACTOR/ARCHITECT FOR INSTALLATION IN TABLETOP / LECTERN. COORDINATE WITH ARCHITECT PRIOR TO ROUGH-IN. AUDIO VISUAL CONTRACTOR TO PROVIDE AND INSTALL CABLE MANAGEMENT SYSTEM CONNECTING TABLE/LECTERN TO FLOOR BOX. AV TABLE/LECTERN TO CONNECT TO FLOOR BOX WITH PLUGGABLE UMBILICAL ENCASED IN BLACK EXPANDABLE SLEEVING.
5. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL ONE (1) 2-GANG BACK BOX, FLUSH MOUNTED IN WALL AT 46" AFF FOR AUDIO VIDEO SYSTEM CONTROL. PROVIDE AND INSTALL ONE (1) 1" CONDUIT FROM BACK BOX TO CABLE PATHWAY SYSTEM TO AV RACK ROOM 113.
6. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL ONE (1) 2-GANG BACK BOX, FLUSH MOUNTED IN WALL AT 102" AFF FOR AUDIO VIDEO CAMERA (CAM-1). PROVIDE AND INSTALL ONE (1) 1" CONDUIT FROM BACK BOX TO CABLE PATHWAY SYSTEM TO AV RACK ROOM 113.
7. CEILING RECESSED MOTORIZED FRONT PROJECTION SCREEN. GENERAL CONTRACTOR SHALL INSTALL CEILING RECESSED MOTORIZED FRONT PROJECTION SCREEN. REFERENCE ELEVATIONS FOR DETAILS. GENERAL CONTRACTOR TO FIELD VERIFY MEASUREMENTS PRIOR TO ORDERING PROJECTION SCREEN TO ENSURE PROPER PROJECTOR-SCREEN GEOMETRY. FIELD VERIFY APPROPRIATE EXTRA ROLL OUT/DROP ABOVE ACTIVE VIEWING AREA OF SCREEN.
8. ELECTRICAL CONTRACTOR TO PROVIDE A 120V HARD-WIRED CONNECTION TO JUNCTION BOX IN END OF VIDEO SCREEN CASE. SEE ELECTRICAL DRAWINGS FOR CIRCUITING. SCREEN MOTOR DRAWS 2.4 AMPS MAX.
9. CEILING MOUNTED SPEAKER. AUDIO VISUAL CONTRACTOR SHALL PROVIDE AND INSTALL IN-CEILING MOUNTED SPEAKER AT LOCATION SHOWN.
10. CABLE PROVIDED AND INSTALLED IN J-HOOKS ON 4' CENTERS BY AUDIO VISUAL CONTRACTOR. CABLE TO BE INSTALLED FREE OF SPLICES BETWEEN DEVICES AND SHALL BE PLENUM RATED. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL 3/4" CONDUIT WITHIN ALL OPEN CEILING, NON-ACCESSIBLE CEILING, OR HARD CEILING AREAS. COORDINATE WITH ARCHITECTURAL DOCUMENTS TO VERIFY EXACT LOCATIONS.
11. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL AN FSR MODEL CB-22P CEILING BOX WITH OPTIONAL FAN KIT FROM FSR INC. PROJECTOR INTERFACE CEILING BOX IS TO INCLUDE AN INDUSTRY STANDARD 1 1/2" NPT FITTING TO HANG UP TO A 50LB PROJECTOR. REFERENCE DETAILS FOR TYPES AND QUANTITIES OF CONNECTIONS.
12. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL A 120V CONNECTION TO INCLUDE RECEPTACLE IN CEILING BOX FROM DEDICATED 20A CIRCUIT IN HOUSE POWER PANEL. TELECOM CONTRACTOR TO PROVIDE AND INSTALL DATA OUTLETS ADJACENT TO POWER DUPLEX IN CEILING BOX. SEE TELECOM DRAWINGS FOR ADDITIONAL INFORMATION.
13. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL ONE (1) 2-GANG BACK BOX FOR CEILING MOUNTED AUDIO VIDEO CAMERA (CAM-2). PROVIDE AND INSTALL ONE (1) 1" CONDUIT FROM BACK BOX TO CABLE PATHWAY SYSTEM TO AV RACK ROOM 113.
14. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL TWO (2) 120V/1-PHASE DUPLEX RECEPTACLE 18" AFF. FROM SINGLE DEDICATED 20A/1-PHASE CIRCUIT IN HOUSE PANEL. SE PROJECT ELECTRICAL DRAWINGS FOR CIRCUITING.
15. TELECOM CONTRACTOR TO PROVIDE AND INSTALL FOUR (4) DATA OUTLETS WALL MOUNTED AT 18" AFF. ADJCENT TO AV BACK BOX. SEE TELECOM DRAWINGS FOR ADDITIONAL INFORMATION.
16. AUDIO VISUAL EQUIPMENT RACK PROVIDED AND INSTALLED BY AUDIO VISUAL CONTRACTOR.

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525 Vine Street, Suite 350
Winston-Salem, NC 27101
p. 336.724.1503
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FAX: (678) 234-6878

CONSTRUCTION DOCUMENTS

#	Description	Date

10.24.23

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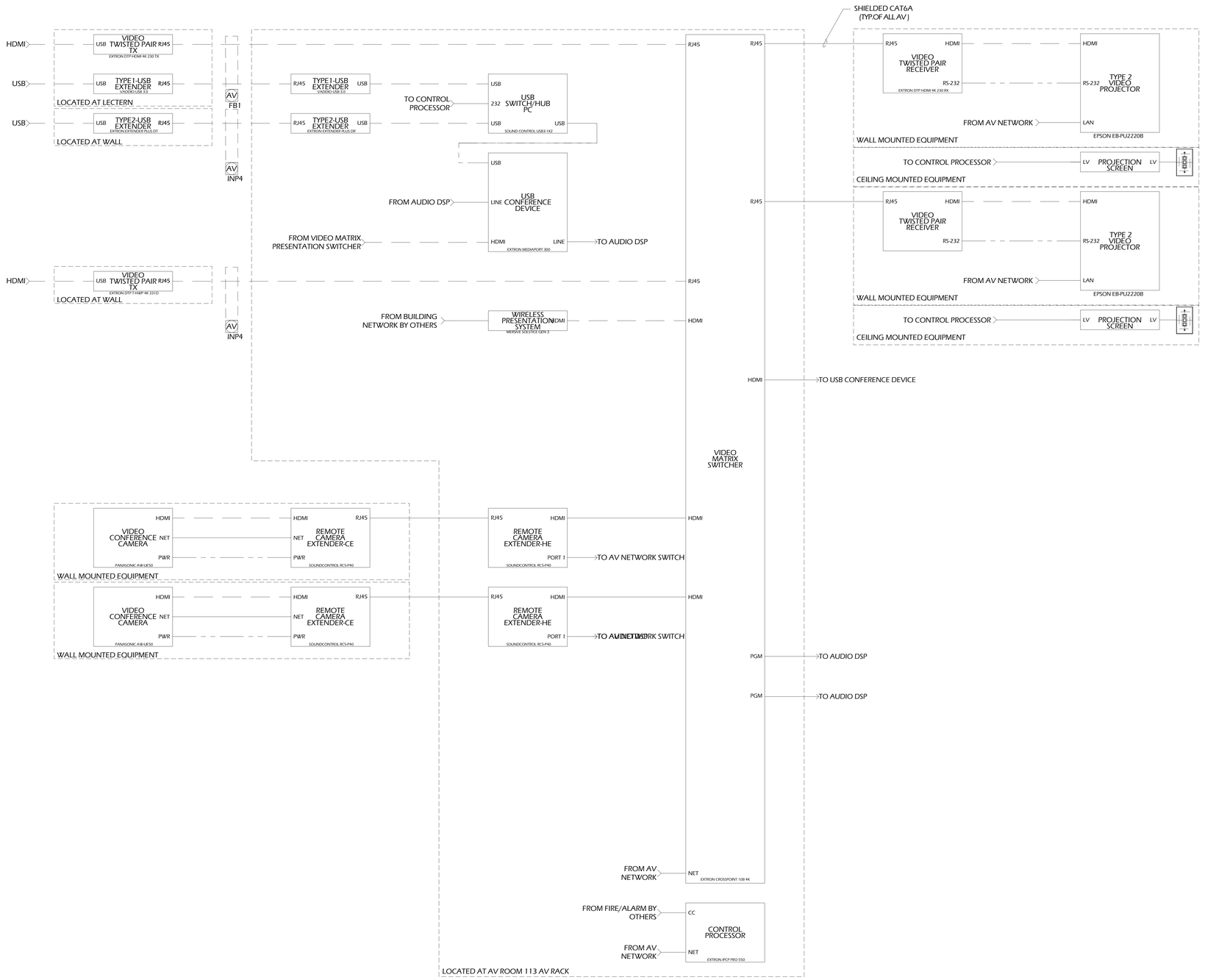
LARGE SCALES - CLASSROOM 114, 115

AV-302

ISSUE DATE: 10-24-2023
PROJECT NUMBER: 22-0410
DRAWN BY: JG
CHECKED BY: JG



NOTES:

A. REFERENCE FLOOR PLANS FOR LOCATIONS.

B. AUDIO VISUAL ROUGH-IN FOR EQUIPMENT SHALL BE PROVIDED AND INSTALLED AS DESIGNED.

PROGRAMMING NOTES:

A. AUDIO VISUAL CONTRACTOR TO DETERMINE FINAL CONTROL FUNCTION WITH OWNER PRIOR TO DEVICE PROGRAMMING PHASE.

B. ALL EQUIPMENT EXCEPT CONTROL PROCESSOR TO BE TURNED OFF WHEN SYSTEM NOT IN USE TO CONSERVE POWER.

ONE-LINE N.T.S. — 1 — ONE-LINE DIAGRAM - GREAT HALL 102 - VIDEO

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525 Vine Street, Suite 350
Winston-Salem, NC 27101
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ONE-LINE DIAGRAMS

AV-401

ISSUE DATE: 10-24-2023
PROJECT NUMBER: 22-0410
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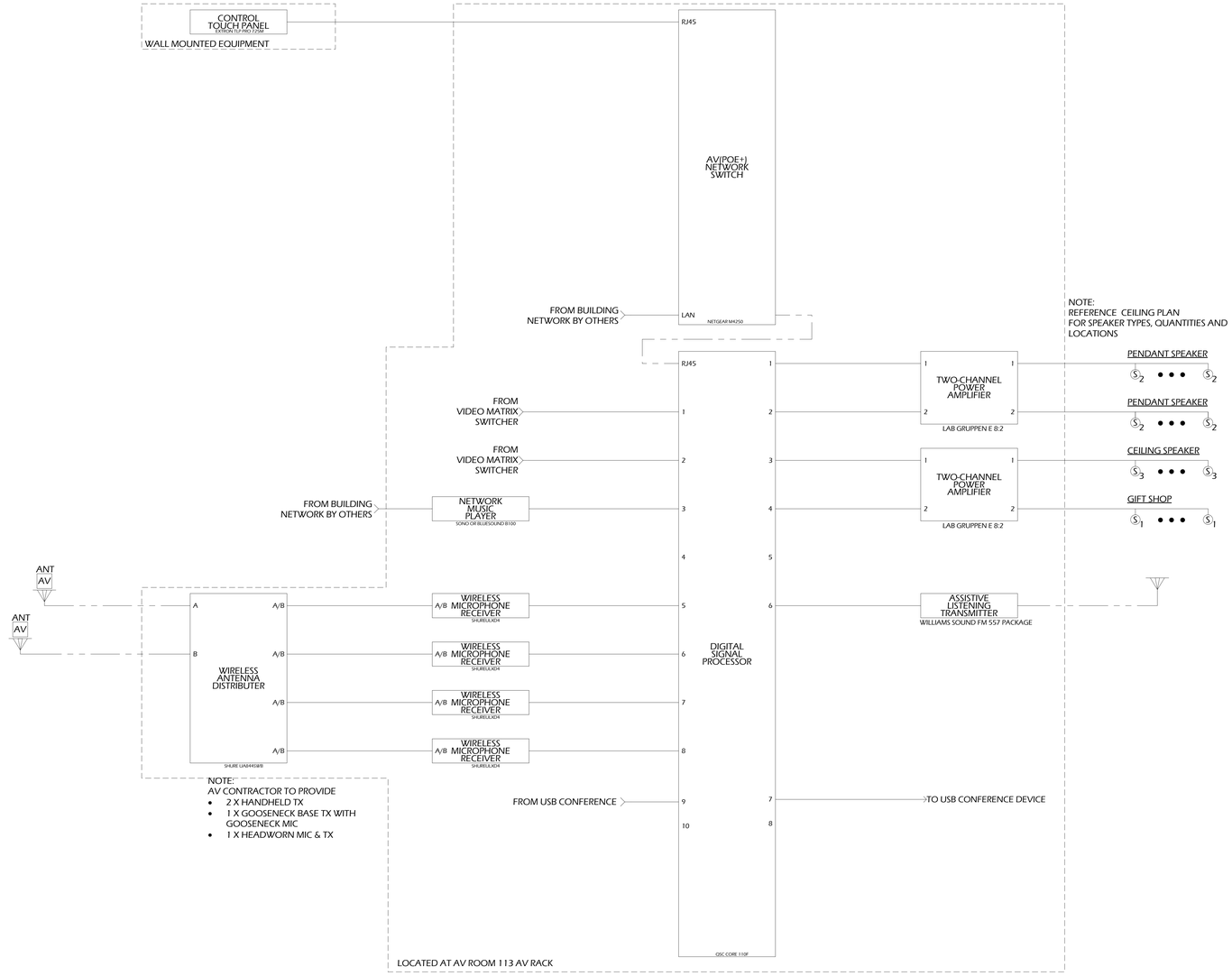

ONE-LINE
N.T.S.

1 ONE-LINE DIAGRAM - GREAT HALL 102 - AUDIO

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Winston-Salem, NC 27101
p. 336.724.1503
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MARIETTA, GEORGIA 30068
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ONE-LINE DIAGRAMS

AV-402

ISSUE DATE: 10-24-2023
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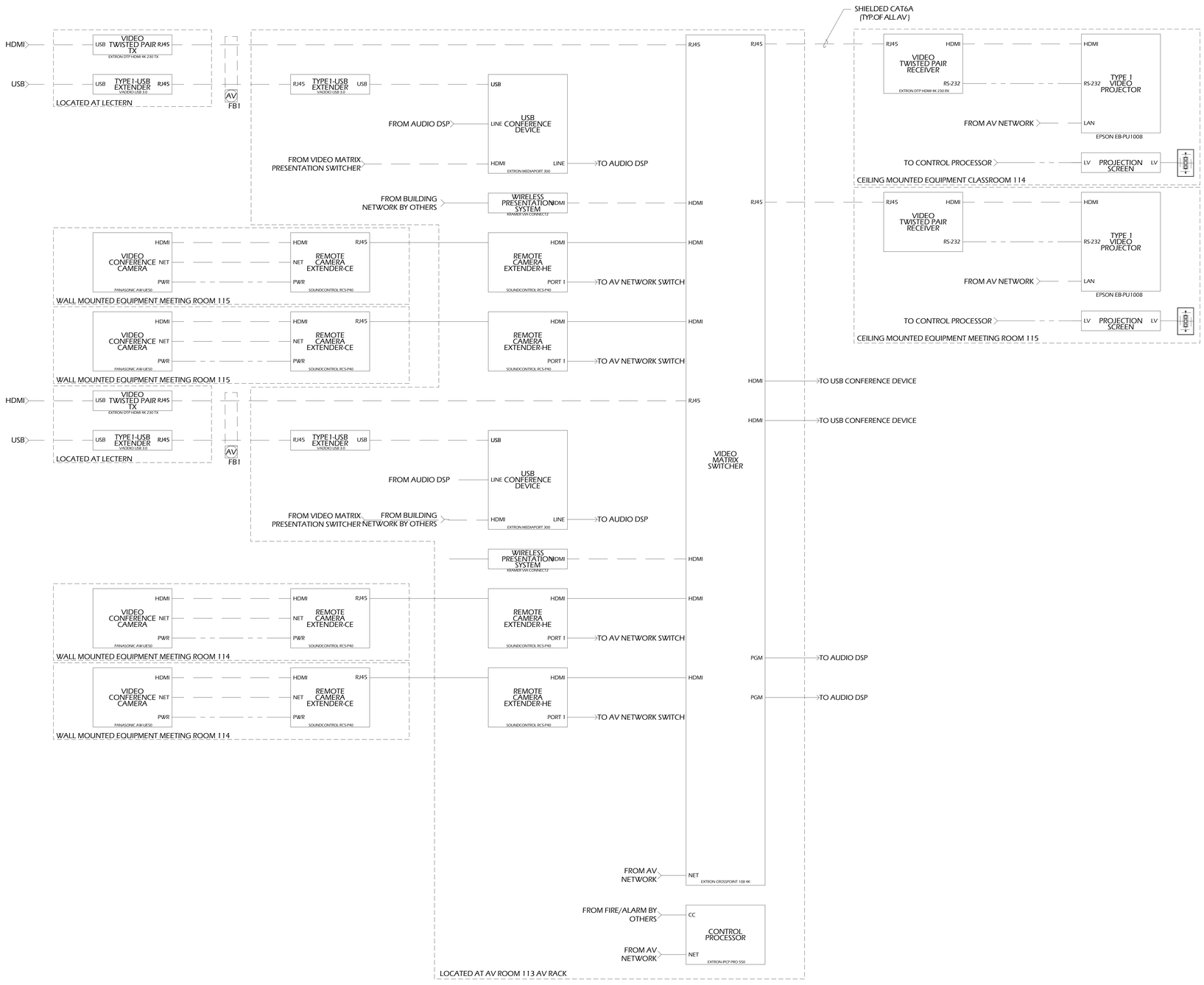

NOTES:

A. REFERENCE FLOOR PLANS FOR LOCATIONS.

B. AUDIO VISUAL ROUGH-IN FOR EQUIPMENT SHALL BE PROVIDED AND INSTALLED AS DESIGNED.

PROGRAMMING NOTES:

A. AUDIO VISUAL CONTRACTOR TO DETERMINE FINAL CONTROL FUNCTION WITH OWNER PRIOR TO DEVICE PROGRAMMING PHASE.

B. ALL EQUIPMENT EXCEPT CONTROL PROCESSOR TO BE TURNED OFF WHEN SYSTEM NOT IN USE TO CONSERVE POWER.

ONE-LINE N.T.S. 1 ONE-LINE DIAGRAM - CLASSROOM 114 & MEETING ROOM 115 - VIDEO

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Winston-Salem, NC 27101
p. 336.724.1503
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ONE-LINE DIAGRAMS

AV-403

ISSUE DATE: 10-24-2023
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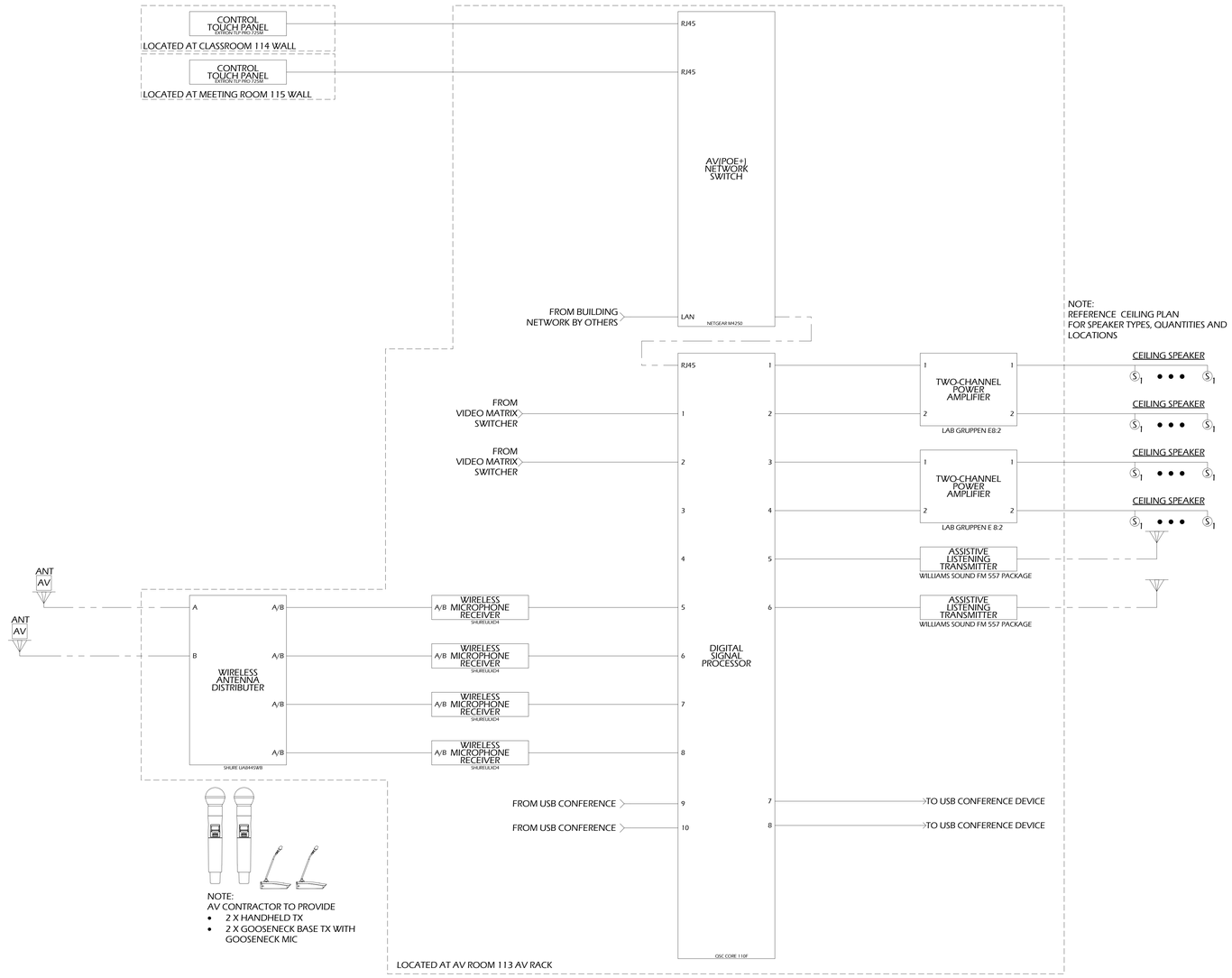
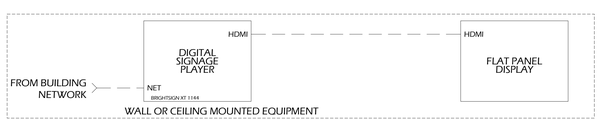


ONE-LINE N.T.S. 1 ONE-LINE DIAGRAM - CLASSROOM 114 & MEETING ROOM 115 - AUDIO



NOTES:

A. REFERENCE FLOOR PLANS FOR LOCATION AND QUANTITIES.

B. AUDIO VISUAL ROUGH-IN FOR EQUIPMENT SHALL BE PROVIDED AND INSTALLED AS DESIGNED.

ONE-LINE N.T.S. 2 ONE-LINE DIAGRAM - DIGITAL SIGNAGE

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4994 LOWER ROSWELL ROAD, SUITE ONE
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ONE-LINE DIAGRAMS

AV-404

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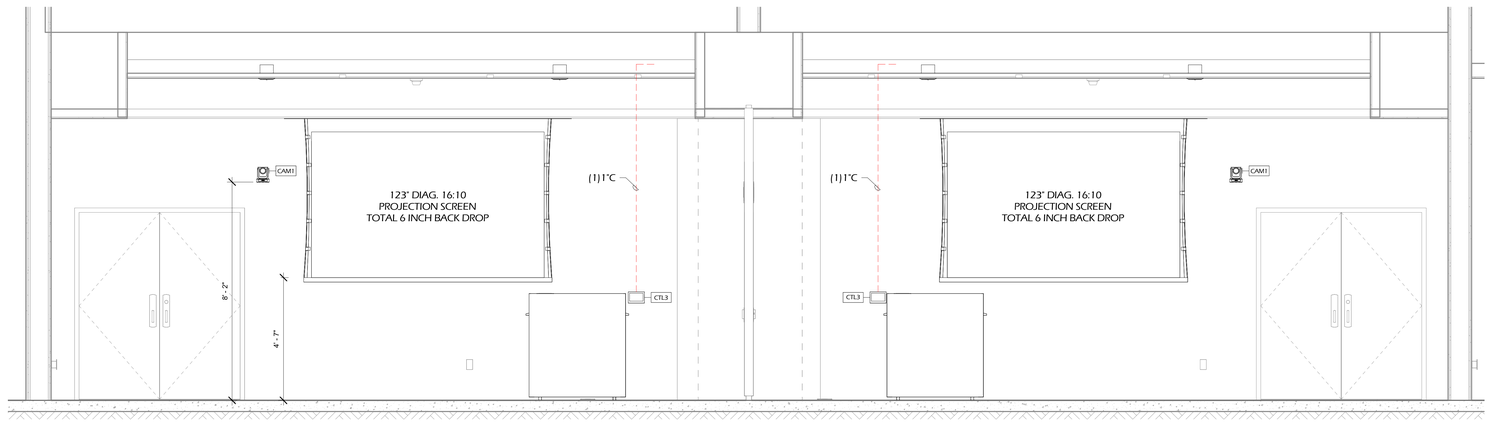
ELEVATION 1 — GREAT HALL 102
1/2" = 1'-0"



ELEVATION 2 — CLASSROOM 114 & MEETING ROOM 115
1/2" = 1'-0"

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525 Vine Street, Suite 350
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DETAILS

AV-501

ISSUE DATE: 10-24-2023
PROJECT NUMBER: 22-0410
DRAWN BY: JG
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DISPLAY SCHEDULE				
DISPLAY No.	SIZE	LOCATION	BACKBOX HEIGHT	NOTES
TV01	75"D	GIFT SHOP 103	5' - 7"	DIGITAL SIGNAGE

SCHEDULE 1 DISPLAY SCHEDULE
N.T.S.

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Winston-Salem, NC 27101
p. 336.724.1503
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MARIETTA, GEORGIA 30068
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DISPLAY SCHEDULE

AV-601

ISSUE DATE: 10-24-2023
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