STATE OF ALASKA : LIBRARY ARCHIVES MUSEUM

ECI/HYER :: THA ARCHITECTURE

CLIENT
STATE OF ALASKA DOT&PF
STATE OF ALASKA DEED
PO BOX 110571
JUNEAU, ALASKA 99811

ARCHITECT
ECI / HYER, INC.
101 WEST BENSON BLVD
SUITE 306
ANCHORAGE, ALASKA 99503

ARCHITECT
THA ARCHITECTURE
733 SW OAK STREET
PORTLAND, OREGON 97205

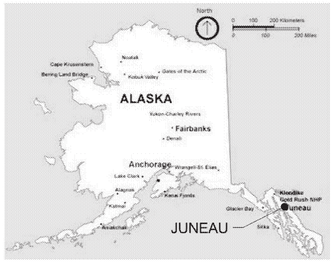
STRUCTURAL
SCHNEIDER & ASSOCIATES
4060 B STREET
ANCHORAGE, ALASKA 99503

MECH. / ELECT. / PLUMB.
AMC ENGINEERS, INC
701 EAST TUDOR ROAD
SUITE 250
ANCHORAGE, ALASKA 99503

CIVIL
R&M ENGINEERING, INC.
6205 GLACIER HIGHWAY
JUNEAU, ALASKA 99801

LANDSCAPE
WALKER MACY
111 SW OAK STREET
PORTLAND, OREGON 97024

LAB
THE ESTIME GROUP
1030 NW 12TH AVENUE
SUITE 2
PORTLAND, OREGON 97209



LOCATION MAP

VICINITY MAP

CONTRACTING AGENCY: DOTPF STATEWIDE PUBLIC FACILITIES

USING AGENCY: DEED DIVISION OF LIBRARIES ARCHIVES & MUSEUMS

STATE PROJECT NUMBER: 68816

LEGAL ADDRESS: LOT 1: CONSOLIDATED FROM LOTS 4, 5 AND FRACTIONS OF LOTS 6,9,10,12, BLOCK 66 AND A FRACTION OF LOT 2, BLOCK 67, ALASKA TIDELANDS SURVEY # 3

PHYSICAL ADDRESS: 395 WHITTIER STREET, JUNEAU AK 99801-1718

CONSTRUCTION DOCUMENTS
05.01.2012

State of Alaska
Department of Transportation
and Public Facilities
Central Region

Project No. 68816

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E751 DETAILS AND DIAGRAMS - AUDIO VIDEO
E752 DETAILS AND DIAGRAMS - AUDIO VIDEO
E753 DETAILS AND DIAGRAMS - AUDIO VIDEO
E754 DETAILS AND DIAGRAMS - AUDIO VIDEO
E801 SPECIAL SYSTEMS ONE-LINE DIAGRAM - TELECOM
E802 SPECIAL SYSTEMS ONE-LINE DIAGRAM - ACCESS CONTROL
E803 SPECIAL SYSTEMS ONE-LINE DIAGRAM - CCTV
E901 POWER ONE-LINE DIAGRAM - SERVICE ENTRANCE
E902 POWER ONE-LINE DIAGRAM - NORMAL & STANDBY DISTRIBUTION
E903 POWER ONE-LINE DIAGRAM - EMERGENCY DISTRIBUTION
E904 POWER ONE-LINE DIAGRAM - UPS DISTRIBUTION

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ABBREVIATIONS

@	AT	IMC	INTERNATIONAL MECHANICAL CODE
&	AND	IN	INCH
#	NUMBER	IN HG	INCHES MERCURY
%	PERCENT	IN WC	INCHES WATER COLUMN
AD	ACCESS DOOR	INSUL	INSULATION
AAP	AREA ALARM PANEL	IPS	INTERNATIONAL PIPE STANDARD
ADA	AMERICANS WITH DISABILITIES ACT	K	THERMAL CONDUCTIVITY
ADJ	ADJUSTABLE	KW	KILOWATT
AFF	ABOVE FINISHED FLOOR	KWH	KILOWATT HOUR
AFG	ABOVE FINISHED GRADE	LAT	LEAVING AIR TEMPERATURE
AHJ	AUTHORITY HAVING JURISDICTION	LB/HR	POUNDS PER HOUR
AHU	AIR-HANDLING UNIT	LBS	POUNDS
ALT	ALTERNATE	LF	LINEAR FEET
AMB	AMBIENT	L	LENGTH
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	LWT	LEAVING WATER TEMPERATURE
APD	AIR PRESSURE DROP	LOC	LOCATION/LOCATED
APPROX	APPROXIMATE	LP	LOW PRESSURE
AR	ACID RESISTANT	LR	LONG RADIUS
ARCH	ARCHITECTURAL	MAN	MANUAL
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS	MAT	MIXED AIR TEMPERATURE
ATM	ATMOSPHERE	MAV	MANUAL AIR VENT
AUTO	AUTOMATIC	MAX	MAXIMUM
AVG	AVERAGE	MBH	THOUSAND BTU PER HOUR
AWG	AMERICAN WIRE GAUGE	MECH	MECHANICAL
BAS	BUILDING AUTOMATION SYSTEM	MFR	MANUFACTURER
BDD	BACKDRAFT DAMPER	MH	MANHOLE
BHP	BRAKE HORSEPOWER, BOILER HORSEPOWER	MIN	MINIMUM, MINUTE
BLDG	BUILDING	MPH	MILES PER HOUR
BLW	BELOW	MTD	MOUNTED
BOD	BOTTOM OF DUCT	N/A	NOT APPLICABLE
BOP	BOTTOM OF PIPE	NC	NOISE CRITERIA, NORMALLY CLOSED
BTU	BRITISH THERMAL UNIT	NFPA	NATIONAL FIRE PROTECTION AGENCY
BTUH	BTU PER HOUR	NIC	NOT IN CONTRACT
C	COMMON, CONDENSATE	NO	NORMALLY OPEN, NUMBER
C-C	CENTER TO CENTER	NTS	NOT TO SCALE
CAP	CAPACITY, END CAP	OD	OUTSIDE DIAMETER
CCW	COUNTER-CLOCKWISE	OFOI	OWNER FURNISHED, OWNER INSTALLED
CF	COOLING FAN, CIRCULATING FAN, CUBIC FOOT	OSA	OUTSIDE AIR
CFM	CUBIC FEET PER MINUTE	OZ	OUNCE
CI	CAST IRON	PD	PRESSURE DROP OR DIFFERENCE
CL	CENTER LINE	PG	PROPYLENE GLYCOL
CLG	CEILING	PL	PLATE
CMPR	COMPRESSOR	PLBG	PLUMBING
COEF	COEFFICIENT	POC	POINT OF CONNECTION
CONC	CONCRETE	PNL	PANEL
COND	CONDENSER	PH	PHASE (ELECTRICAL)
CTR	CENTER	PPM	PARTS PER MILLION
CU	COPPER	PSI	POUNDS PER SQUARE INCH
CU IN	CUBIC INCH	PSIA	POUNDS PER SQUARE INCH - ABSOLUTE
CV	VALVE FLOW COEFFICIENT	PSID	POUNDS PER SQUARE INCH - DIFFERENTIAL
CW	CLOCKWISE	PSIG	POUNDS PER SQUARE INCH - GAUGE
DB	DECIBEL	PRESS	PRESSURE
DBT	DRY-BULB TEMPERATURE	PRI	PRIMARY
DDC	DIRECT DIGITAL CONTROL	R-401A	REFRIGERANT (401A,ETC.)
DEG OR °	DEGREE	R/A	RETURN AIR
DEG C	DEGREE CENTIGRADE	RAD	RADIANT OR RADIATION
DEG F	DEGREE FAHRENHEIT	RCVR	RECEIVER
DEMO	DEMOLITION	RECIRC	RECIRCULATE
DENS	DENSITY	RED	REDUCER
DGM	DIAGRAM	REFRIG	REFRIGERATION
DI	DUCTILE IRON	REV	REVOLUTIONS
DIA OR ø	DIAMETER	RF	RELIEF FAN OR RETURN FAN
DIFF	DIFFERENCE OR DELTA	RH	RELATIVE HUMIDITY
DIP	DUCTILE IRON PIPE	RM	ROOM
DN	DOWN	RPM	REVOLUTIONS PER MINUTE
DO	DITTO	RPS	REVOLUTIONS PER SECOND
DTL	DETAIL	S/A	SUPPLY AIR
DWDI	DOUBLE WIDTH DOUBLE INLET	SAT	SATURATION
DWG	DRAWING	SCHD	SCHEDULE
(E)	EXISTING	SCFM	STANDARD CUBIC FEET PER MINUTE
EA	EACH	SD	STORM DRAIN
E/A	EXHAUST AIR	SEC	SECONDARY
EAT	ENTERING AIR TEMPERATURE	SF	SQUARE FEET
EF	EXHAUST FAN	SH	SENSIBLE HEAT
EFF	EFFICIENCY	SHG	SENSIBLE HEAT GAIN
EG	ETHYLENE GLYCOL	SHR	SENSIBLE HEAT RATIO
ELEC	ELECTRICAL	SHT	SHEET
ELEV	ELEVATION	SHWR	SHOWER
EMB	EMBEDMENT	SP	STATIC PRESSURE
ENT	ENTERING	SPD	STATIC PRESSURE DROP
EQIV FT	EQUIVALENT FEET	SPEC	SPECIFICATION, SPECIFIED
ESP	EXTERNAL STATIC PRESSURE	SPKLR	SPRINKLER
EVAP	EVAPORATOR	SR	SHORT RADIUS
EXP	EXPANSION	SWSI	SINGLE WIDTH SINGLE INLET
EWT	ENTERING WATER TEMPERATURE	SQ	SQUARE
°F	FAHRENHEIT	SS	STAINLESS STEEL, SANITARY SEWER
FA	FACE AREA	STD	STANDARD
F-F	FACE TO FACE	SUCT	SUCTION
FD	FIRE DAMPER, FLOOR DRAIN	TA	TRANSFER AIR
FLEX	FLEXIBLE	TCWS/R	TEMPERED CHILLED WATER SUPPLY/RETURN
FLR	FLOOR	TEMP	TEMPERATURE, TEMPORARY
FOB	FLAT ON BOTTOM	THRU	THROUGH
FOT	FLAT ON TOP	TOD	TOP OF DUCT
FP	FREEZING POINT	TONS	TONS OF REFRIGERATION
FPM	FEET PER MINUTE	TOP	TOP OF PIPE
FPS	FEET PER SECOND	TYP	TYPICAL
FSD	FIRE-SMOKE DAMPER	UG	UNDERGROUND
FSDM	FIRE-SMOKE DAMPER, MODULATING	UNO	UNLESS NOTED OTHERWISE
FT	FOOT OR FEET	UPC	UNIFORM PLUMBING CODE
FV	FACE VELOCITY	V	VOLTS OR VOLTAGE
GA	GAGE OR GAUGE	VAC	VACUUM
GAL	GALLONS	VAC	VOLTS (ALTERNATING CURRENT)
GPD	GALLONS PER DAY	VAL	VALVE
GPH	GALLONS PER HOUR	VAP PR	VAPOR PRESSURE
GPM	GALLONS PER MINUTE	VAR	VARIABLE
GR	GRAINS	VAV	VARIABLE AIR VOLUME
GRD	GRILLES, REGISTERS, DIFFUSERS	VDC	VOLTS (DIRECT CURRENT)
HD	HEAD	VEL	VELOCITY
HDPE	HIGH DENSITY POLYETHYLENE	VERT	VERTICAL
HG	HEAT GAIN	VFD	VARIABLE FREQUENCY DRIVE
HT	HEIGHT	VOL	VOLUME
HP	HORSEPOWER	VP	VELOCITY PRESSURE
HR	HOUR(S)	VSD	VARIABLE SPEED DRIVE
HVAC	HEATING, VENTILATING & AIR-CONDITIONING	VTR	VENT THROUGH ROOF
HZ	FREQUENCY	W	WATT
IAW	IN ACCORDANCE WITH	W/	WITH
ID	INSIDE DIAMETER	W/O	WITHOUT
IE	INVERT ELEVATION	WB	WET BULB TEMPERATURE
IBC	INTERNATIONAL BUILDING CODE	WC	WATER COLUMN
IFC	INTERNATIONAL FIRE CODE	WH	WATT-HOUR
		WP	WEATHER PROOF, WATER PROOF
		WPD	WATER PRESSURE DROP
		WT	WEIGHT
		YD	YARD
		ZVB	ZONE VALVE BOX

GENERAL

DESCRIPTION	SYMBOL
REFERENCED SHEET NOTE	1
GENERAL SHEET NOTE	2.
ROOM NAME & NUMBER DESIGNATION	MECHANICAL ROOM 101
LINE CONVENTION	
NEW OR REINSTALLED ITEM	
ITEM TO BE DEMOLISHED	
EXISTING ITEM TO REMAIN	
EXISTING ITEM TO BE RELOCATED	
PLUMBING FIXTURE SYMBOL	
PLUMBING FIXTURE NUMBER	P-#
VAV BOX SYMBOL	
VAV BOX NUMBER	#
EXHAUST AIR VALVE SYMBOL	
EXHAUST VALVE NUMBER	#
DETAIL REFERENCE	
DETAIL NUMBER	1
SHEET WHERE DETAIL APPEARS	M2
SECTION REFERENCE	
SECTION NUMBER	A
SHEET WHERE SECTION APPEARS	M2
EQUIPMENT SYMBOL	
EQUIPMENT DESIGNATION	ID
EQUIPMENT NUMBER	EQ# DIMENSION OR COUNT
AIR OUTLET SYMBOL	
AIR OUTLET DESIGNATION	ID
AIRFLOW	CFM
BASEBOARD FINTUBE DESIGNATION	
FINTUBE DESIGNATION	FT#
LINEAL FEET OF FINTUBE ELEMENT	LF
HOT WATER SUPPLY FLOW	GPM

PLUMBING

SYMBOL	ABBR.	DESCRIPTION
	CW	COLD WATER
	HW	HOT WATER
	HWC	HOT WATER CIRCULATION
	TW	TEMPERED WATER
	TWC	TEMPERED WATER CIRCULATION
	TP	TRAP PRIMER
	NPO	NON-POTABLE WATER
	FM	FORCE MAIN, WASTE WATER
	W	WASTE WATER
	ARW	ACID RESISTANT WASTE
	ARV	ACID RESISTANT VENT
	IW	INDIRECT WASTE
	SD	STORM DRAIN
	RL, ORL	RAINLEADER, OVERFLOW RAINLEADER
	HB	HOSE BIB
	WHA	WATER HAMMER ARRESTER
A	PDI	PLUMBING AND DRAINAGE INSTITUTE WATER HAMMER ARRESTER SIZE A, B, C, D, OR E
TP		AUTOMATIC TRAP PRIMER VALVE
	FCO, YCO	FLOOR CLEANOUT, YARD CLEANOUT
	WCO	WALL CLEANOUT
	FD, FS	FLOOR DRAIN, FLOOR SINK
	RD, ORD	ROOF DRAIN, OVERFLOW ROOF DRAIN

FUEL

SYMBOL	ABBR.	DESCRIPTION
	FOS	FUEL OIL SUPPLY
	FOR	FUEL OIL RETURN
	FOV	FUEL OIL VENT
OSV	OSV	OIL SAFETY VALVE

GENERAL PIPING

SYMBOL	ABBR.	DESCRIPTION
	V	VENT
		BALL VALVE
	GV	GATE VALVE
		GLOBE VALVE
	BV	BUTTERFLY VALVE
	TDV	TRIPLE DUTY VALVE
	CV	CHECK VALVE
		BACKFLOW PREVENTER ASSEMBLY
	PRV	PRESSURE RELIEF VALVE
	PRV	PRESSURE REGULATOR VALVE
	PRV	PLUG VALVE
S	SOV	SOLENOID OPERATED VALVE
M OR M	MOV	2 WAY MOTOR OPERATED VALVE
M OR M	MOV	3 WAY MOTOR OPERATED VALVE
		2 WAY PNEUMATIC OPERATED VALVE
		3 WAY PNEUMATIC OPERATED VALVE
		BALANCING VALVE
	FCV	AUTOMATIC FLOW CONTROL VALVE
	SV	SAFETY VALVE, RELIEF VALVE
	VB	VACUUM BREAK
	AAV	AIR VENT, AUTO WITH ISOLATION VALVE
	MAV	AIR VENT, MANUAL
	PTTP	PRESSURE & TEMP TEST PLUG
		DUPLEX STRAINER
		STRAINER W/ BLOWDOWN HOSE FITTING
HOSE		EQUIPMENT OR PIPE DRAIN VALVE W/HOSE FITTING
END		EQUIPMENT OR PIPE DRAIN PLUG W/HOSE FITTING
		REDUCER (CONCENTRIC)
		REDUCER (ECCENTRIC)
		FLOW ARROW
		ANCHOR
		PIPE GUIDE
		PIPE SLEEVE
		PIPE UNION
		PIPE FLANGE
		FLEXIBLE CONNECTION
M		METER
		LINE BREAK
		END CAP
		PIPE UP / TEE UP
		PIPE DOWN (ELBOW)
		PIPE DOWN (TEE)

VENTILATION

ABBR.	DESCRIPTION	SYMBOL
CO	CARBON MONOXIDE DETECTOR	CO
S/A	SUPPLY AIR	
E/A	EXHAUST AIR	
R/A	RETURN AIR	
MOD	MOTOR OPERATED DAMPER	M
OBD	OPPOSED BLADE DAMPER	
PBD	PARALLEL BLADE DAMPER	
VD	BALANCING VOLUME DAMPER	
	FLEXIBLE CONNECTION	
FD	FIRE DAMPER	FD
FSD	COMBINATION FIRE/SMOKE DAMPER	FD FSD
	FLEXIBLE DUCT	
	SUPPLY AIR REGISTER OR GRILLE	
	SUPPLY AIR SLOT DIFFUSER	
	EXHAUST AIR REGISTER OR GRILLE	
	RETURN AIR REGISTER OR GRILLE	
AL	ACOUSTICAL DUCT LINING	
	DUCT INSULATION	
	DUCT: RECTANGULAR OR FLAT OVAL (F.O.) FIRST FIGURE SIDE SHOWN	12X20
	DUCT: ROUND	12ø
	ACCESS DOOR	

PIPING

SYMBOL	ABBR.	DESCRIPTION
	HWS	HEATING WATER SUPPLY
	HWR	HEATING WATER RETURN
	SMS	SNOWMELT SUPPLY
	SMR	SNOWMELT RETURN
	GHS	HEATING GLYCOL SUPPLY
	GHR	HEATING GLYCOL RETURN
	RHS	RADIANT HEATING SUPPLY
	RHR	RADIANT HEATING RETURN
	RFT	RADIANT FLOOR TUBING
	CWS	COOLING WATER SUPPLY
	CWR	COOLING WATER RETURN
	TCWS	TEMPERED COOLING WATER SUPPLY
	TCWR	TEMPERED COOLING WATER RETURN
	GCS	GLYCOL COOLING SUPPLY
	GCR	GLYCOL COOLING RETURN
	WWS	WELL WATER SUPPLY
	WWD	WELL WATER DISCHARGE
	HS	STEAM FOR HUMIDIFICATION

REFRIGERATION

ABBR.	DESCRIPTION	SYMBOL
LIQ	REFRIGERANT LIQUID	LIQ
SUC	REFRIGERANT SUCTION	SUC
	EXPANSION VALVE, THERMOSTATIC	

HEATING COMPONENTS

ABBR.	DESCRIPTION	SYMBOL
	HUMIDISTAT	H
T'STAT	THERMOSTAT	T
T'STAT	THERMOSTAT W/GUARD	T
FT	BASEBOARD FINTUBE RADIATION	FINTUBE ELEMENT ENCLOSURE
UH	UNIT HEATER, HORIZONTAL	
RP	RADIANT CEILING PANEL	TUBING
CUH	CABINET UNIT HEATER, VERTICAL	
CUH	CABINET UNIT HEATER, HORIZONTAL/ CEILING RECESSED	

FIRE PROTECTION

ABBR.	DESCRIPTION	SYMBOL
F	FIRE PROTECTION SYSTEM	F
PAS	PREACTION SYSTEM	PAS
	SPRINKLER HEAD	

DRAWING INDEX

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M002	SCHEDULES
M003	SCHEDULES
M004	SCHEDULES
M005	SCHEDULES
M006	SCHEDULES
M007	SCHEDULES
M101	UNDER FLOOR PLAN - MECHANICAL
M102	PARKING FLOOR PLAN - MECHANICAL
M103	KEYPLAN - PARKING FLOOR SOFFIT - MECHANICAL
M103A	PARKING FLOOR SOFFIT - NE - MECHANICAL
M103C	PARKING FLOOR SOFFIT - SW - MECHANICAL
M103D	PARKING FLOOR SOFFIT - NW - MECHANICAL
M104	SITE PLANS - SNOW-MELT SYSTEM ZONING
M105	DETAILS AND DIAGRAMS - SNOW-MELT SYSTEM
M201	KEYPLAN - FIRST FLOOR PLAN - PLUMBING
M201A	FIRST FLOOR PLAN - NE - PLUMBING
M201C	FIRST FLOOR PLAN - SW - PLUMBING
M201D	FIRST FLOOR PLAN - NW - PLUMBING
M203	KEYPLAN - SECOND FLOOR PLAN - PLUMBING
M203A	SECOND FLOOR PLAN - NE - PLUMBING
M203B	SECOND FLOOR PLAN - SE - PLUMBING
M203C	SECOND FLOOR PLAN - SW - PLUMBING
M203D	SECOND FLOOR PLAN - NW - PLUMBING
M301	KEYPLAN - FIRST FLOOR PLAN - HEATING
M301A	FIRST FLOOR PLAN - NE - HEATING
M301B	FIRST FLOOR PLAN - SE - HEATING
M301C	FIRST FLOOR PLAN - SW - HEATING
M301D	FIRST FLOOR PLAN - NW - HEATING
M302	KEYPLAN - FIRST FLOOR PLAN - RADIANT FLOOR HEATING
M302A	FIRST FLOOR PLAN - NE - RADIANT FLOOR HEATING
M302B	FIRST FLOOR PLAN - SE - RADIANT FLOOR HEATING
M302C	FIRST FLOOR PLAN - SW - RADIANT FLOOR HEATING
M302D	FIRST FLOOR PLAN - NW - RADIANT FLOOR HEATING
M303	GALLERY PLAN - PLUMBING AND HEATING
M304	KEYPLAN - SECOND FLOOR PLAN - HEATING
M304A	SECOND FLOOR PLAN - NE - HEATING
M304B	SECOND FLOOR PLAN - SE - HEATING
M304C	SECOND FLOOR PLAN - SW - HEATING
M304D	SECOND FLOOR PLAN - NW - HEATING
M305	SECOND FLOOR CLERESTORY PLAN - HEATING
M306	ENLARGED SECTIONS - STAIRWELLS - HEATING
M401	FIRST FLOOR PLAN - INDOOR ENVIRONMENT MAP
M402	SECOND FLOOR PLAN - INDOOR ENVIRONMENT MAP
M501	KEYPLAN - FIRST FLOOR PLAN - VENTILATION
M501A	FIRST FLOOR PLAN - NE - VENTILATION
M501B	FIRST FLOOR PLAN - SE - VENTILATION
M501C	FIRST FLOOR PLAN - SW - VENTILATION
M501D	FIRST FLOOR PLAN - NW - VENTILATION
M502	GALLERY PLAN - VENTILATION
M503	KEYPLAN - SECOND FLOOR PLAN - VENTILATION
M503A	SECOND FLOOR PLAN - NE - VENTILATION
M503B	SECOND FLOOR PLAN - SE - VENTILATION
M503C	SECOND FLOOR PLAN - SW - VENTILATION
M503D	SECOND FLOOR PLAN - NW - VENTILATION
M601	ROOF PLAN - MECHANICAL
M701	ENLARGED PLANS AND DIAGRAMS - PLUMBING
M702	ENLARGED PLANS AND DIAGRAMS - PLUMBING
M703	ENLARGED PLANS AND DIAGRAMS
M711	ENLARGED SECTION - OVERALL BOILER ROOM AND FAN ROOMS
M712	ENLARGED PLAN - BOILER ROOM AND FAN ROOM (AHU-3) - LOWER
M713	ENLARGED PLAN - BOILER ROOM AND FAN ROOM (AHU-3) - UPPER
M714	ENLARGED PLAN - FAN ROOM (AHU-1)
M715	ENLARGED PLAN - FAN ROOM (AHU-2 & AHU-4)
M716	ENLARGED PLAN - FAN ROOM (AHU-5 & AHU-6) - LOWER
M717	ENLARGED PLAN - FAN ROOM (AHU-5 & AHU-6) - UPPER
M718	ENLARGED PLAN - LAB AREA - PIPING
M719	ENLARGED PLAN - LAB AREA - VENTILATION
M720	ENLARGED PLAN - WOOD SHOP
M721	ENLARGED SECTIONS
M722	ENLARGED SECTIONS
M723	ENLARGED SECTIONS
M801	DIAGRAMS - PLUMBING
M802	DIAGRAMS - FUEL OIL
M811	DIAGRAMS - HEATING SYSTEMS
M812	DIAGRAMS - HEATING SYSTEMS
M813	DIAGRAMS - HEATING & COOLING SYSTEMS
M814	DIAGRAMS - COOLING SYSTEMS
M815	DIAGRAMS - COOLING SYSTEMS
M816	DIAGRAMS - COOLING SYSTEMS
M831	DIAGRAMS - VENTILATION SYSTEMS
M832	DIAGRAMS - VENTILATION SYSTEMS
M833	DIAGRAMS - VENTILATION SYSTEMS
M834	DIAGRAMS - VENTILATION SYSTEMS
M901	DETAILS - PLUMBING
M902	DETAILS - PLUMBING
M903	DETAILS - PLUMBING
M911	DETAILS - HEATING
M912	DETAILS - HEATING
M913	DETAILS - HEATING
M921	DETAILS - VENTILATION
M922	DETAILS - VENTILATION
M923	DETAILS - VENTILATION

NOTE: THIS IS A STANDARD LEGEND, SOME OF THE SYMBOLS SHOWN ON LEGEND ARE NOT NECESSARILY ON THE DRAWINGS.

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LEGEND, SCHEDULES AND DRAWING INDEX

M001

MISCELLANEOUS EQUIPMENT SCHEDULE

SYMBOL	LOCATION	MOTOR (HP,V,PH)	DESCRIPTION
H-1	FAN AHU-1 226A	21.0 KW, 480, 3 25.3 AMP	ELECTRIC STEAM HUMIDIFIER: 59.9 LBS/HR NET STEAM CAPACITY APPROXIMATE OPERATING WEIGHT: 157 LBS EQUIPMENT Ip = 1.5 MFR: DRI-STEEM MODEL: VAPORSTREAM MODEL VLC 21-1.
H-2	FAN AHU-2 226B	21.0 KW, 480, 3 25.3 AMP	ELECTRIC STEAM HUMIDIFIER: 59.9 LBS/HR NET STEAM CAPACITY, APPROXIMATE OPERATING WEIGHT: 157 LBS EQUIPMENT Ip = 1.5 MFR: DRI-STEEM MODEL: VAPORSTREAM MODEL VLC 21-1.
H-3	FAN AHU-3 120	75.0 KW, 480, 3 90.2 AMP	ELECTRIC STEAM HUMIDIFIER: 213.8 LBS/HR NET STEAM CAPACITY. APPROXIMATE OPERATING WEIGHT: 326 LBS EQUIPMENT Ip = 1.5 MFR: DRI-STEEM MODEL: VAPORSTREAM MODEL VLC 75-3.
H-4	FAN AHU-4 225	63.0 KW, 480, 3 75.8 AMP	ELECTRIC STEAM HUMIDIFIER: 179.6 LBS/HR NET STEAM CAPACITY APPROXIMATE OPERATING WEIGHT: 326 LBS EQUIPMENT Ip = 1.5 MFR: DRI-STEEM MODEL: VAPORSTREAM MODEL VLC 63-3.
H-5	FAN AHU-5&6 242	100.0 KW, 480, 3 120.3 AMP	ELECTRIC STEAM HUMIDIFIER: 285.0 LBS/HR NET STEAM CAPACITY, APPROXIMATE OPERATING WEIGHT: 427 LBS EQUIPMENT Ip = 1.5 MFR: DRI-STEEM MODEL: VAPORSTREAM MODEL VLC 100-4.
H-6	FAN AHU-5&6 242	75.0 KW, 480, 3 90.2 AMP	ELECTRIC STEAM HUMIDIFIER: 213.8 LBS/HR NET STEAM CAPACITY APPROXIMATE OPERATING WEIGHT: 326 LBS EQUIPMENT Ip = 1.5 MFR: DRI-STEEM MODEL: VAPORSTREAM MODEL VLC 75-3.
LS-1	WATER SERVICE P02	2,480,3 (EACH PUMP)	SEWAGE LIFT STATION: 42" X 42" X 78" DEEP CONCRETE SUMP SEE PUMP SCHEDULE (PMP-15A/B) FOR ADDITONAL PUMP INFORMATION. SUMP: 42" X 42" X 78" DEEP CONCRETE UNDER STRUCTURAL. 2" PUMPED DISCHARGE CONNECTIONS. 4" INFLUENT WASTE AND 4" VENT REFER TO SECTION 22 11 23 FOR LIFT STATION REQUIREMENTS. MFR: ALASKA PUMP AND SUPPLY. MODEL: CUSTOM SYSTEM
PB-1	SPRAY BOOTH 136	SEE EF-2	PAINT BOOTH ENCLOSURE: FILTERED DOUBLE ENTRY DOORS, 3' X 7' ACCESS DOOR ON EACH SIDE, FILTERED EXHAUST CHAMBER, 30" EXHAUST DUCT WITH INTERIOR EXHAUST FAN (EF-2), 4 LIGHT FIXTURES. OVERALL DIMENSIONS: 10'-4" WIDE X 8'-2" HIGH X 15'-2" DEEP. WORKING DIMENSIONS: 10' WIDE X 8' HIGH X 15' DEEP. EQUIPMENT Ip = 1.0 MFR: GLOBAL FINISHING SOLUTIONS MODEL: IFP-10812
PT-1	FAN AHU-4 225	-	REVERSE OSMOSIS (RO) WATER SYSTEM PRESSURE TANK: NOMINAL 86.7 GALLON CAPACITY PRECHARGE TO 36 PSIG. 26 GALLON DRAWDOWN (OPERATING 40/60 PSIG), APPROXIMATE OPERATING WEIGHT: 420 LBS EQUIPMENT Ip = 1.0 MFR: WELLMATE MODEL: WM-25WB
PT-2	FAN-AHU 5&6 242	-	RO WATER SYSTEM PRESSURE TANK: SIMILAR TO PT-1.
RO-1	FAN AHU-4 225	1-1/2,480,3	PACKAGED REVERSE OSMOSIS WATER SYSTEM: EQUIPMENT Ip = 1.5 MFR: AXEON WATER TECHNOLOGIES MODEL: FLEXEON CT-4000P
RO-2	FAN-AHU 5&6 242	1-1/2, 480,3	PACKAGED REVERSE OSMOSIS WATER SYSTEM: SIMILAR TO RO-1.
WH-1	FAN-AHU 5&6 242	2A,120,1	INDIRECT WATER HEATER: DOUBLE WALL HEAT EXCHANGER TUBING, 60 GALLON STORAGE CAPACITY, 320 GALLON FIRST HOUR RECOVERY AT 90 DEG F RISE. APPROXIMATE OPERATING WEIGHT: 680 LBS EQUIPMENT Ip = 1.0 MFR: AMTROL MODEL: COMMERCIAL BOILERMATE WHS-60ZC-DW
WH-2	FAN-AHU 5&6 242	2A,120,1	INDIRECT WATER HEATER: SIMILAR TO WH-1.
WH-3	FAN-AHU 5&6 242	2A,120,1	INDIRECT WATER HEATER: SINGLE WALL HEAT EXCHANGER TUBING, 40 GALLON STORAGE CAPACITY, 304 GALLON FIRST HOUR RECOVERY AT 90 DEG F RISE. APPROXIMATE OPERATING WEIGHT: 680 LBS EQUIPMENT Ip = 1.0 MFR: AMTROL MODEL: COMMERCIAL BOILERMATE WH-7C
WH-4	BOILER ROOM 121	9KW,277,1	ELECTRIC WATER HEATER 6 GALLON TANK, 2.5 KW, 277V ,1PH 13 GALLON RECOVERY, 19 GALLONS FIRST HOUR EQUIPMENT Ip = 1.0 MFR: STATE MODEL: PCE 6 10MSA

MISCELLANEOUS EQUIPMENT SCHEDULE

SYMBOL	LOCATION	MOTOR (HP,V,PH)	DESCRIPTION
AC-1	WORKSHOP 132	5,480,3	AIR COMPRESSOR: SHOP GRADE, VERTICAL DESIGN, TWO-STAGE, OIL LUBED PUMPS, 80 GALLON, ASME STAMPED TANK. MAX PRESSURE: 175 PSIG. APPROXIMATE OPERATING WEIGHT: 476 LBS EQUIPMENT Ip = 1.0 MFR: CAMPBELL HAUSFELD MODEL: CE6001
AS-1	BOILER ROOM 121	--	CENTRIFUGAL AIR SEPARATOR WITH INTEGRAL STRAINER: 5" FLANGED CONNECTIONS, MAXIMUM OPERATING PRESSURE 125 PSIG, MAXIMUM PRESSURE DROP OF 0.7 FT AT 520 GPM. APPROXIMATE OPERATING WEIGHT: 300 LBS EQUIPMENT Ip = 1.5 MFR: AMTROL MODEL: 6 AS.
AS-2	FAN-AHU 3 120	--	CENTRIFUGAL AIR SEPARATOR WITH INTEGRAL STRAINER: 5" FLANGED CONNECTIONS, MAXIMUM OPERATING PRESSURE 125 PSIG, MAXIMUM PRESSURE DROP OF 0.6 FT AT 490 GPM. APPROXIMATE OPERATING WEIGHT: 300 LBS EQUIPMENT Ip = 1.5 MFR: AMTROL MODEL: 6 AS.
CH-1	FAN-AHU 5&6 242	5,480,3	PACKAGED BOOSTER CHILLER: 63 MBH (5.2 TON), WATER COOLED, R-410A REFRIGERANT, 20A MOCPD. EVAPORATOR: 35 GPM, 45F EWT/42F LWT, 12.5 PSI DP. SEE PMP-19. CONDENSER: 5 GPM, 55F EWT/85F LWT, 1.4 PSI DP. SEE PMP-20. APPROXIMATE OPERATING WEIGHT: 600 LBS EQUIPMENT Ip = 1.5 MFR: ARCTICHILL MODEL: PWCCMV0050S4
BLR-1	BOILER ROOM 121	1296 AMPS 480,3	ELECTRIC HOT WATER BOILER: UL LISTED, 1080 KW INPUT (3,688 MBH). VERTICAL CONFIG, 50 ASME RELIEF, TEMP/PRESS GAUGES, OPERATING CONTROLS, PROP STEP CONTROLLER, NON-FUSED DISCONNECT, VOLT/AMP METERS, BAS INTERFACE, . APPROXIMATE OPERATING WEIGHT: 5,000 LBS EQUIPMENT Ip = 1.5 MFR: CEMLINE MODEL: B600FTB1080
BLR-2 BLR-3	BOILER ROOM 121	3/4,120,1	OIL-FIRED CAST IRON SECTIONAL WATER BOILER WITH POWER BURNER: 30 PSIG WORKING PRESSURE, 50 PSIG ASME SAFETY RELIEF VALVE, GAUGES AND PACKAGED CONTROLS, TOP FLUE. 16.6 GPH OIL INPUT, 1,987 MBH GROSS IBR OUTPUT. APPROXIMATE OPERATING WEIGHT: 6,600 LBS EQUIPMENT Ip = 1.5 BOILER: WEIL MCLAIN 888 BURNER: POWERFLAME WCR2-OBS
ET-1 ET-2	BOILER ROOM 121	-	HYDRONIC HEATING SYSTEM EXPANSION TANK: ASME STAMPED, STEEL SHELL WITH HEAVY DUTY BUTYL BLADDER, FULL ACCEPTANCE. 106 GALLON TANK VOLUME, 125 PSIG MAXIMUM WORKING PRESSURE, 240 DEG F MAXIMUM OPERATING TEMP. PRE-CHARGED TO 15 PSIG. BASE MOUNTED IN VERTICAL POSTION. APPROXIMATE OPERATING WEIGHT: 1,190 LBS EQUIPMENT Ip = 1.5 MFR: AMTROL MODEL: EXTROL 400-L
ET-3	FAN-AHU 5&6 242	-	GLYCOL HEATING SYSTEM EXPANSION TANK: STEEL SHELL WITH HEAVY DUTY BUTYL BLADDER, FULL ACCEPTANCE. 4.4 GALLON TANK VOLUME, 100 PSIG MAXIMUM WORKING PRESSURE, 240 DEG F MAXIMUM OPERATING TEMPERATURE. PRE-CHARGE TO 12 PSIG. APPROXIMATE OPERATING WEIGHT: 45 LBS EQUIPMENT Ip = 1.5 MFR: AMTROL MODEL: EXTROL 30
ET-4	WORKSHOP 132 (MEZZANINE)	-	GLYCOL HEATING SYSTEM EXPANSION TANK: SIMILAR TO ET-3. MFR: AMTROL MODEL: EXTROL 30
ET-5	MECH P06	-	GLYCOL SNOW-MELT HEATING SYSTEM EXPANSION TANK: ASME STAMPED, STEEL SHELL WITH HEAVY DUTY BUTYL BLADDER, FULL ACCEPTANCE. 33.6 GAL TANK VOL, 11.3 GAL ACCEPT VOL, 125 PSIG MAX WORKING PRESSURE, 240 DEG F MAXIMUM OPERATING TEMPERATURE. PRE-CHARGED TO 12 PSIG. BASE MOUNTED IN VERTICAL POSITION. APPROXIMATE OPERATING WEIGHT: 395 LBS EQUIPMENT Ip = 1.0 MFR: AMTROL MODEL: EXTROL AX-60(V)
ET-6	FAN-AHU 5&6 242	-	DOMESTIC HOT WATER EXPANSION TANK: STEEL SHELL WITH BUTYL DIAPHRAGM, 9 GALLONS ACCEPTANCE VOLUME, 14 GALLONS TOTAL VOLUME, PRE-CHARGED TO 80 PSIG, EQUIPMENT Ip = 1.0 APPROXIMATE OPERATING WEIGHT: 160 LBS MFR: AMTROL MODEL: THERM-X-TROL ST-30V-C.
ET-7	FAN-AHU 5&6 242	-	NON-POTABLE HOT WATER EXPANSION TANK: STEEL SHELL WITH BUTYL DIAPHRAGM, 3 GALLONS ACCEPTANCE VOLUME, 8 GALLONS TOTAL VOLUME, PRE-CHARGED TO 80 PSIG, 150 PSI WORKING PRESSURE, 200 DEG F MAXIMUM OPERATING TEMP. APPROXIMATE OPERATING WEIGHT: 66 LBS EQUIPMENT Ip = 1.0 MFR: AMTROL MODEL: THERM-X-TROL ST-20V-C.
ET-8	FAN AHU-3 120	-	COOLING SYSTEM EXPANSION TANK: ASME STAMPED, STEEL SHELL WITH HEAVY DUTY BUTYL BLADDER, FULL ACCEPTANCE. 53 GAL TANK VOL, 53 GAL ACCEPT VOL, 125 PSIG MAX WORKING PRESSURE, 240 DEG F MAXIMUM OPERATING TEMPERATURE. PRE-CHARGED TO 12 PSIG. BASE MOUNTED IN VERTICAL POSITION. APPROXIMATE OPERATING WEIGHT: 640 LBS EQUIPMENT Ip = 1.5 MFR: AMTROL MODEL: EXTROL L-SERIES, SIZE 200-L.

PLUMBING FIXTURE CONNECTION SCHEDULE

SYMBOL	FIXTURE	WASTE (INCH)	VENT (INCH)	HW (INCH)	CW (INCH)	REMARKS
P-1	WATER CLOSET	4	2	-	1	WALL MOUNTED, TOP SPUD, ELONGATED BOWL, MANUAL FLUSH VALVE.
P-1H	WATER CLOSET	4	2	-	1	WALL MOUNTED, TOP SPUD, ELONGATED BOWL, MANUAL FLUSH VALVE, ADA COMPLIANT.
P-2	URINAL	2	1-1/2	-	3/4	WALL MOUNTED, MANUAL FLUSH VALVE.
P-2H	URINAL	2	1-1/2	-	3/4	WALL MOUNTED, MANUAL FLUSH VALVE, ADA COMPLIANT.
P-3H	LAVATORY	1-1/2	1-1/2	1/2	1/2	TRIM HARDWARE ONLY: MANUAL, ADA COMPLIANT. FOR INTEGRAL UNDERMOUNT LAVATORY, SEE ARCH.
P-3HS	LAVATORY	1-1/2	1-1/2	1/2	1/2	TRIM HARDWARE ONLY: 120V SENSOR ACTIVATED WITH THERMOSTATIC MIXING VALVE, ADA COMPLIANT. FOR INTEGRAL UNDERMOUNT LAVATORY, SEE ARCH.
P-4H	SINGLE COMPARTMENT SINK	1-1/2	1-1/2	1/2	1/2	STAINLESS STEEL, SINGLE BOWL, 6-1/2" DEPTH, WITH GOOSENECK FAUCET, ADA COMPLIANT.
P-5H	SINGLE COMPARTMENT SINK	1-1/2	1-1/2	1/2	1/2	SAME AS P-4H EXCEPT WITH SINGLE HANDLE DETACHABLE SPRAYER FAUCET AND HOT WATER DISPENSER, ADA COMPLIANT.
P-6H	STAFF BREAK ROOM SINK	1-1/2	1-1/2	1/2	1/2	STAINLESS STEEL, TWO COMPARTMENT SINK, 6-1/2" DEPTH, WITH SINGLE HANDLE DETACHABLE SPRAYER FAUCET, HOT WATER DISPENSER, GARBAGE DISPOSAL, ADA COMPLIANT.
P-7	MOP SINK	3	2	1/2	1/2	FLOOR MOUNTED, 24" x 24", WALL-MOUNTED EXPOSED YOKE FAUCET WITH TOP FORK BRACE AND VACUUM BREAKER, MOP HANGER, STAINLESS STEEL RIM GUARDS AND WALL PANELS.
P-8	UTILITY SINK	3	2	1/2	1/2	WALL MOUNTED, CAST IRON, WALL-MOUNT EXPOSED YOKE FAUCET WITH TOP FORK BRACE AND VACUUM BREAKER.
P-9	SHOWER SYSTEM	2	1-1/2	1/2	1/2	PREFORMED ACRYLIC SHOWER SYSTEM, HAND-HELD SHOWER HEAD WITH SLIDE BAR AND FLEX HOSE, PRESSURE BALANCE SINGLE HANDLE MIXING VALVE, GRID DRAIN, ADA COMPLIANT.
EWS-1	EMERGENCY SHOWER AND EYE WASH	2	1-1/2	1 TW	-	COMBINATION EMERGENCY EYEWASH AND SHOWER, RECESSED WALL-MOUNTED SAFETY STATION.
DF-1H	DRINKING FOUNTAIN	1-1/2	1-1/4	-	1/2	WALL MOUNTED, DUAL HEIGHT, NON-REFRIGERATED, ADA COMPLIANT.
TV-1	TEMPERING VALVE	-	-	1 HW 1-1/4 TW	1	TEMPERED WATER BLENDING SYSTEM FOR COMBINATION EMERGENCY EYEWASH/SHOWER.
TV-2	TEMPERING VALVE	-	-	3/4 HW 3/4 TW	3/4	TEMPERED WATER BLENDING SYSTEM FOR DOMESTIC HOT WATER.
HB-1	HOSE BIBB	-	-	-	3/4	FREEZE PROOF, AUTOMATIC DRAINING, INTEGRAL VACUUM BREAKER, FLUSH MOUNTED, KEY OPERATED DOOR.
FD-1	FLOOR DRAIN	2	2	-	-	CAST IRON BODY WITH 6" ADJUSTABLE POLISHED NICKEL BRONZE TOP.
FD-2	FLOOR DRAIN	3	2	-	-	CAST IRON BODY WITH 8" ADJUSTABLE POLISHED NICKEL BRONZE TOP.
FD-3	FLOOR DRAIN	3	2	-	-	MEDIUM DUTY, CAST IRON BODY WITH ADJUSTABLE TOP AND TRACTOR GRATE.
FS-1	FLOOR SINK	3	2	-	-	MEDIUM DUTY, CAST IRON, WHITE ACID RESISTANT COATED INTERIOR AND TOP, DOME STRAINER.
FS-2	FLOOR SINK	4	2	-	-	MEDIUM DUTY, CAST IRON, WHITE ACID RESISTANT COATED INTERIOR AND TOP, DOME STRAINER.
TD-1	TRENCH DRAIN	4	-	-	-	HEAVY DUTY, GLASS-FIBER REINFORCED POLYESTER, PREFORMED SECTIONS, DUCTILE IRON RAILS, ADA COMPLIANT GALVANIZED STEEL MESH GRATE, SILT BOX WITH SEDIMENT BUCKET AT OUTLET. (1)
RD-1	ROOF DRAIN	AS NOTED	-	-	-	COATED CAST IRON BODY WITH COMBINED FLASHING CLAMP AND GRAVEL STOP, ADJUSTABLE EXTENSION, SUMP RECEIVER, AND UNDERDECK CLAMP. (1)
RD-2	OVERFLOW ROOF DRAIN	AS NOTED	-	-	-	COATED CAST IRON BODY WITH COMBINED FLASHING CLAMP AND GRAVEL STOP, ADJUSTABLE EXTENSION, SUMP RECEIVER, UNDERDECK CLAMP, AND TWO INCH WATER DAM. (1)
RD-3	OVERFLOW RAINLEADER WALL SPOUT	AS NOTED	-	-	-	STAINLESS STEEL OVERFLOW RAINLEADER WALL SPOUT WITH PERFORATED HINGED COVER. (1)

(1) SPECIFIED UNDER SECTION 22 40 00

CONSULTANT NAME :: AMC ENGINEERS
ECI/HYER :: THA ARCHITECTURE
DEPARTMENT OF EDUCATION & EARLY DEVELOPMENT
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
AKSAS PROJECT NO. 68816

STATE OF ALASKA
LIBRARY ARCHIVES MUSEUM

REVISIONS:

CONSTRUCTION DOCUMENTS

05.01.2012

SCHEDULES

M002

PUMP SCHEDULE

SYMBOL	LOCATION	SERVICE	FLUID	TEMP. (DEG F)	GPM	HEAD (FT)	IMPLR SIZE (INCH)	MIN. EFF. (%)	RPM	MOTOR (HP,V,PH)	REMARKS
PMP-1	BOILER ROOM 121	BOILER BLR-1 CIRC	WATER	190	270	30	–	–	–	3,480,3	INLINE CENTRIFUGAL PUMPS: CONSTANT SPEED. OP WEIGHT: 167 LBS. EQUIP Ip = 1.5 MFR: GRUNDFOS. MODEL: VERSAFLO, TP100-160
PMP-2 PMP-3	BOILER ROOM 121	BOILER BLR-2&3 CIRC	WATER	190	135	22	–	–	–	1.5,480,3	INLINE CENTRIFUGAL PUMPS: CONSTANT SPEED. OP WEIGHT: 108 LBS. EQUIP Ip = 1.5 MFR: GRUNDFOS. MODEL: VERSAFLO, TP80-80
PMP-4A PMP-4B	BOILER ROOM 121	BUILDING HEATING CIRC (AHU-1-4)	WATER	190	98	30	–	–	–	3,480,3 (2 VSD'S)	INLINE CENTRIFUGAL PUMPS: INVERTER DUTY MOTOR. OP WEIGHT: 98 LBS. EQUIP Ip = 1.5 MFR: GRUNDFOS. MODEL: UPS80-160/2
PMP-5A PMP-5B PMP-5C	BOILER ROOM 121	BUILDING HEATING CIRC	WATER	190	210	56	8.3	70	1,750	7.5,480,3 (3 VSD'S)	INLINE CENTRIFUGAL PUMPS: INVERTER DUTY MOTOR. OP WEIGHT: 200 LBS. EQUIP Ip = 1.5 MFR: GRUNDFOS. MODEL: 3.0 LM 8/8.3
PMP-6A PMP-6B	FAN AHU-3 120	RADIANT FLOOR HEATING CIRC	WATER	110	103	42	–	–	–	3,480,3	INLINE CENTRIFUGAL PUMPS: INVERTER DUTY MOTOR. OP WEIGHT: 80 LBS. EQUIP Ip = 1.5 MFR: GRUNDFOS. MODEL: TP50-240
PMP-7A PMP-7B	FAN AHU-5&6 242	PHC-6/HC-6 GLYCOL CIRC	50% PG	180	25	30	–	–	–	3/4,480,3	INLINE CENTRIFUGAL PUMPS: INVERTER DUTY MOTOR. MFR: GRUNDFOS. MODEL: UPS 32-160/2
PMP-8	WORK SHOP 132 (MEZZ)	HC-7A/7B GLYCOL CIRC	50% PG	180	70	43	–	–	–	1-1/2,480,3	INLINE CENTRIFUGAL PUMPS: INVERTER DUTY MOTOR. OP WEIGHT: 72 LBS. EQUIP Ip = 1.0 MFR: GRUNDFOS. MODEL: TP40-240/2
PMP-9	MECH P06	SNOWMELT GLYCOL CIRC	50% PG	110	101	58	8.0	65	1,750	5,480,3	INLINE CENTRIFUGAL PUMPS: INVERTER DUTY MOTOR. OP WEIGHT: 166 LBS. EQUIP Ip = 1.0 MFR: GRUNDFOS. MODEL: 2.5 LM 8/8.0
PMP-10A PMP-10B PMP-10C	SITE WELL CASINGS	COOLING WATER WELL PUMPS	SALT WATER	42	290	140	4.69 (2 STG)	73	3,450	20,480,3 (3 VSD'S)	WELL WATER PUMP: VERTICAL SUBMERSIBLE TURBINE PUMP, STAINLESS STEEL CONSTRUCTION MFR: GOULD MODEL: VIS-T, SIZE: 7CLC (2 STAGE)
PMP-11	FAN AHU-5&6 242	DOMESTIC HWC	POTABLE WATER	120	2.5	12	–	–	1,750	1/25,120,1	INLINE CIRCULATOR PUMP: SS OR BRONZE CONSTRUCTION. MFR: GRUNDFOS. MODEL: UP SERIES.
PMP-12	FAN AHU-5&6 242	EMER. SHOWER/ EYEWASH CIRC	TEMP WATER	85	2.5	11	–	–	1,750	1/25,120,1	INLINE CIRCULATOR PUMP: SS OR BRONZE CONSTRUCTION. MFR: GRUNDFOS. MODEL: UP SERIES.
PMP-13	FAN AHU-5&6 242	LAB NON POTABLE HWC	NON POTABLE	120	1	9	–	–	1,750	1/25,120,1	INLINE CIRCULATOR PUMP: SS OR BRONZE CONSTRUCTION. MFR: GRUNDFOS. MODEL: UP SERIES.
PMP-14A	ELEV. 1 SUMP	SUMP PUMP	WATER	70	48	20	–	–	3,600	1/2,120,1	PACKAGED SUBMERSIBLE PUMP/ CONTROL SYSTEM: 2" DISCHARGE CONNECTION, SS CONSTRUCTION WITH PUMP BASE. OIL AND LEVEL SENSOR PROBES, CONTROL/ ALARM PANEL. MFR: STANCOR. MODEL: SE-50.
PMP-14B	ELEV. 2 SUMP	SUMP PUMP	WATER	70	48	20	–	–	3,600	1/2,120,1	PACKAGED SUBMERSIBLE PUMP/CONTROL SYSTEM: SIMILAR TO PMP-14A.
PMP-15A PMP-15B	WATER SERVICE P02	SEWAGE LIFT STATION	SEWAGE	70	57	35	–	–	3,290	SEE LS-1	LIFT STATION PUMPS: TWO INCH SUBMERSIBLE GRINDER PUMPS, UL/FM APPROVED EXPLOSION PROOF, DUPLEX PUMP CONTROLLER. MFR: ITT FLYGT MODEL: MP3068.890HT-218
PMP-16A PMP-16B	FAN AHU-3 120	COOLING SYSTEM	WATER	45	490	50	4.9	70	3,450	10,480,3	INLINE CENTRIFUGAL PUMPS: INVERTER DUTY MOTOR. OP WEIGHT: 200 LBS. EQUIP Ip = 1.5 MFR: GRUNDFOS. MODEL: 4.0LP5/4.9
PMP-17	FAN AHU-5&6 242	CC-6 CIRC	WATER	42	35	36	–	–	–	3/4,480,3	INLINE CENTRIFUGAL PUMPS: MFR: GRUNDFOS. MODEL: UPS 32-160/2
PMP-18A PMP-18B	FAN AHU-5&6 242	TELECOM COOLING SYSTEM	WATER	52	70	35	–	–	–	1-1/2,480,3	INLINE CENTRIFUGAL PUMPS: MFR: GRUNDFOS. MODEL: UPS 50-160/2
PMP-19	FAN AHU-5&6 242	CH-1 BOOSTER CHILLER (EVAP)	WATER	42	35	37	–	–	1,750	3/4,480,3	INLINE CENTRIFUGAL PUMP: MFR: GRUNDFOS. MODEL: UPS40-160.
PMP-20	FAN AHU-5&6 242	CH-1 BOOSTER CHILLER (COND)	WATER	55	5	6	–	–	1,750	1/25,120,1	INLINE CENTRIFUGAL PUMP: MFR: GRUNDFOS. MODEL: UPS 15-42 FC.

TERMINAL HEATING UNIT SCHEDULE

SYMBOL	LOCATION	MBH	FLUID	GPM	MAX WPD (FT)	FLUID TEMP IN/OUT (DEG F)	REMARKS (1)
CUH-1	LOBBY P05	8.0	WATER	0.75	0.2	190/160	RECESSED CEILING-MOUNTED CABINET UNIT HEATER: STANDARD COIL, 2-SPEED FAN (250 CFM HIGH SPEED), FAN MOTOR 1/20 HP, 120V, 1 PH, INTEGRAL DISCHARGE AND INTAKE GRILLES, FLAT FILTER, KEYLOCK ACCESS DOORS, TAMPER PROOF FASTENERS, PERMA-LAP FRAME. 80 LBS OPERATING WEIGHT. MFR: MODINE. MODEL: CW, SIZE 2, ARRANGEMENT 00.
CUH-2	VESTIBULE P08	8.0	WATER	0.75	0.2	190/160	RECESSED CEILING-MOUNTED CABINET UNIT HEATER: SIMILAR TO CUH-1.
CUH-3	STAIR 3 (LEVEL 1)	8.0	WATER	0.75	0.2	190/160	WALL MOUNTED CABINET UNIT HEATER: SIMILAR TO CUH-1.
CUH-4	HALLWAY 139	35.0	WATER	2.5	0.5	190/160	RECESSED CEILING-MOUNTED CABINET UNIT HEATER: STANDARD COIL, 3-SPEED FAN (450 CFM HIGH SPEED), FAN MOTOR 1/20 HP, 120V, 1 PH, INTEGRAL DISCHARGE AND INTAKE GRILLES, FLAT FILTER, KEYLOCK ACCESS DOORS, TAMPER PROOF FASTENERS, PERMA-LAP FRAME. 160 LBS OPERATING WEIGHT. MFR: MODINE. MODEL: CW, SIZE 8, ARRANGEMENT 58.
CUH-5A	VESTIBULE 100	30.0	WATER	2.5	0.5	190/160	CABINET UNIT HEATER: STANDARD COIL, 3-SPEED FAN (520 CFM HIGH SPEED), HIGH STATIC MOTOR 1/10 HP, 120V, 1 PH, FLAT FILTER, HINGED FRONT PANEL WITH SAFETY CHAINS, INLET AND OUTLET DUCT COLLARS, INSULATED INTERNAL CABINET. 160 LBS OPERATING WEIGHT. MFR: RITTLING. MODEL: RC, SIZE 4, ARRANGEMENT 370.
CUH-5B	VESTIBULE 100	30.0	WATER	2.5	0.5	190/160	CABINET UNIT HEATER: SIMILAR TO CUH-5A.
FT-1	SEE FLOOR PLANS	1.1/FT	WATER	SEE PLANS	--	190/160	SINGLE TIER FINNED-TUBE WITH ENCLOSURE: ELEMENT: 3/4" CU TUBE, 4-1/4" X 3-5/8" AL FINS, 40 FPF, 0.020" THICK. CABINET: 14" HEIGHT, CLASSIC WALL MOUNT, TOP OUTLET. MFR: STERLING-CLASSIC MODEL: JVB-AR-14
FT-2	SEE FLOOR PLANS	1.1/FT	WATER	SEE PLANS	--	190/160	SINGLE TIER FINNED-TUBE WITH DOUBLE SLOPE TOP ENCLOSURE: 3/4" CU TUBE, 3-5/8" X 4-1/4" AL FINS, C3/4-434, 40 FPF, BACKPLATE, BRACKETS. MFR: STERLING-VERSA-LINE MODEL: JVB-SS
FT-3	SEE FLOOR PLANS	1500 WATTS	ELEC	N/A	N/A	N/A	ELECTRIC FIN TUBE ELEMENT: 7.5" H X 2.5" D X 6 FT L 16 GAUGE COATED STEEL CABINET, BOTTOM IN / TOP OUT AIR FLOW PATTERN, T'STAT, RELAY AND DISCONNECT. MFR: DIMPLEX MODEL: AS8F615
FT-4	SEE FLOOR PLANS	1.6/FT	WATER	SEE PLANS	--	190/160	THREE TIER PANEL RADIATORS: 4-3/4" THICK X 8-5/8" TALL PANEL, CUSTOM POWDERCOAT, 3/4" NPT INLET AND OUTLET CONNECTIONS, 1/8" NPT VENT. MFR: RUNTAL MODEL: R3F-3, TYPE D
FT-5	SEE FLOOR PLANS	1.0/FT	WATER	SEE PLANS	--	190/160	SINGLE TIER FINNED-TUBE BARE ELEMENT: 3/4" CU TUBE, 3-5/8" X 4-1/4" AL FINS, C3/4-434, 40 FPF, BACKPLATE, BRACKETS. MFR: STERLING MODEL: BARE ELEMENT "B"
FT-6	SEE FLOOR PLANS	0.7/FT	WATER	SEE PLANS	--	190/160	SINGLE TIER PANEL RADIATORS: 4-3/4" THICK X 2-3/4" TALL PANEL, CUSTOM POWDERCOAT, 3/4" NPT INLET AND OUTLET CONNECTIONS, 1/8" NPT VENT. MFR: RUNTAL MODEL: R3F-1, TYPE D
RP-1	WOMENS 259 MENS 260	320 BTUH/ LF	WATER	SEE PLANS	--	190/160	RADIANT CEILING PANEL: 18" WIDE LINEAR EXTRUDED METAL PANEL, SURFACE MOUNT, ALUMINUM BORDER. MFR: STERLING MODEL: LRP
UH-1	WATER SERVICE P02	15.0	WATER	1.0	0.8	190/160	HORIZONTAL UNIT HEATER: 370 CFM, FAN MOTOR 1/25 HP, 120V,1 PH, AIR DEFLECTORS, SAFETY GUARD. 21 LBS OPERATING WEIGHT. MFR: MODINE. MODEL: HC-24.
UH-2	SITE MAINT. STORAGE P01	25.0	WATER	2.0	0.4	190/160	HORIZONTAL UNIT HEATER: 730 CFM FAN MOTOR 1/12 HP, 120V,1 PH, AIR DEFLECTORS, SAFETY GUARD. 40 LBS OPERATING WEIGHT. MFR: MODINE. MODEL: HC-47.
UH-3	BOILER RM 121	25.0	WATER	2.0	0.4	190/160	HORIZONTAL UNIT HEATER: SIMILAR TO UH-2.
UH-4	FAN AHU-1 226A	25.0	WATER	2.0	0.4	190/160	HORIZONTAL UNIT HEATER: SIMILAR TO UH-2.
UH-5	FAN AHU-2 226B	25.0	WATER	2.0	0.4	190/160	HORIZONTAL UNIT HEATER: SIMILAR TO UH-2.
UH-6A	FAN AHU-3 120	25.0	WATER	2.0	0.4	190/160	HORIZONTAL UNIT HEATER: SIMILAR TO UH-2.
UH-6B	FAN AHU-3 226	25.0	WATER	2.0	0.4	190/160	HORIZONTAL UNIT HEATER: SIMILAR TO UH-2.

(1) EQUIPMENT Ip = 1.0 FOR ALL TERMINAL HEATING EQUIPMENT.

TERMINAL HEATING UNIT SCHEDULE

SYMBOL	LOCATION	MBH	FLUID	GPM	MAX WPD (FT)	FLUID TEMP IN/OUT (DEG F)	REMARKS(1)
UH-7A	FAN AHU-4 225	25.0	WATER	2	0.4	190/160	HORIZONTAL UNIT HEATER: SIMILAR TO UH-2.
UH-7B	FAN AHU-4 225	25.0	WATER	2	0.4	190/160	HORIZONTAL UNIT HEATER: SIMILAR TO UH-2.
UH-8	FAN AHU-5&6 242	25.0	WATER	2	0.4	190/160	HORIZONTAL UNIT HEATER: SIMILAR TO UH-2.
UH-9	MECH P06	15.0	WATER	1	0.8	160/130	HORIZONTAL UNIT HEATER: SIMILAR TO UH-1.
UH-10	STORAGE P07	25.0	WATER	2	0.4	190/160	HORIZONTAL UNIT HEATER: SIMILAR TO UH-2.
UH-11	WORKSHOP 132	25.0	WATER	2	0.4	190/130	HORIZONTAL UNIT HEATER: SIMILAR TO UH-2.
UH-12	CRATE STORAGE 131	25.0	WATER	2	0.4	190/130	HORIZONTAL UNIT HEATER: SIMILAR TO UH-2.

(1) EQUIPMENT Ip = 1.0 FOR ALL TERMINAL HEATING EQUIPMENT.

HEAT EXCHANGER SCHEDULE

SYMBOL	LOCATION	HOT SIDE FLUID	GPM	TEMP. IN (F)	TEMP. OUT (F)	MAX WPD (PSI)	COLD SIDE FLUID	GPM	TEMP. IN (F)	TEMP. OUT (F)	MAX WPD (PSI)	MIN. OUTPUT (MBH)	REMARKS
HX-1	FAN-AHU 5&6 242 (PHC-6/HC-6)	WATER	24	190	160	5.0	50% PG	26	150	180	5.0	347	PLATE & FRAME HEAT EXCHANGER: MOUNTED ON FREE-STANDING STEEL SUPPORT STAND. OP WEIGHT: 180 LBS. EQUIP Ip = 1.5 MFR: B & G MODEL: P8
HX-2	WORKSHOP 132 (HC-7A/7B)	WATER	63	190	160	5.0	50% PG	69	150	180	5.0	917	PLATE & FRAME HEAT EXCHANGER: OP WEIGHT: 483 LBS. EQUIP Ip = 1.5 MFR: B & G MODEL: P20
HX-3	MECH P06 (SNOWMELT)	WATER	76	160	130	5.0	50% PG	100	85	110	5.0	1125	BRAZED PLATE TYPE HEAT EXCHANGER: OP WEIGHT: 110 LBS. EQUIP Ip = 1.0 MFR: B & G MODEL: BP423-60
HX-4A HX-4B	FAN-AHU 3 120	CHILLED WATER	490	56	44	4.0	WELL WATER	580	42.0	52.1	5.0	2954	PLATE & FRAME HEAT EXCHANGER: OP WEIGHT: 3760 LBS. EQUIP Ip = 1.5 MFR: ALPHA LAVAL MODEL: M15-BFG

FUEL OIL EQUIPMENT SCHEDULE

SYMBOL	LOCATION	MOTOR (HP,V,PH)	DESCRIPTION
AST-1	BUILDING EXTERIOR	--	ABOVEGROUND FUEL OIL STORAGE TANK: U.L. LISTED, 8,000 GALLON NOMINAL (90 PERCENT) CAPACITY, TYPE 1 DOUBLE WALLED STEEL CONSTRUCTION, SKID-MOUNT BASE WITH TOW BAR, END MOUNTED TOP ACCESS LADDER, MANHOLE MOUNTED TOP FILL CONNECTION WITH SMALL SPILL CONTAINMENT AND OVERFLOW PREVENTER, STANDARD TANK BUNG TYPE THREADED CONNECTIONS WITH THREADED PLUGS, CLOCK TYPE TANK LEVEL GAUGE, REMOTE OVERFILL ALARM, THREADED NORMAL AND EMERGENCY VENT ASSEMBLIES. MOUNTING BRACKETS FOR REMOTE TRANSFER PUMP CABINET. APPROXIMATE OPERATING WEIGHT: 73,000 LBS (90% FULL) EQUIPMENT Ip = 1.5 MFR: ANCHORAGE TANK AND WELDING. MODEL: AT8MULAG.
DT-1	BOILER ROOM 121	1/2,120,1 (RETURN PUMP)	PACKAGED FUEL OIL DAYTANK: U.L. LISTED, 50 GALLON CAPACITY, SECONDARY CONTAINMENT SUMP, AUTOMATIC TANK LEVEL CONTROL AND MONITORING WITH BAS CONNECTION, REMOTE FUEL TRANSFER PUMPS (SEE RFP-1), OVERFILL RETURN PUMP (7 GPM), MANUAL FILL CONNECTION. APPROXIMATE OPERATING WEIGHT: 800 LBS EQUIPMENT Ip = 1.5 MFR: SIMPLEX MODEL: SST-50.
RFP-1	BUILDING EXTERIOR (AST-1)	1/3,120,1 (SUPPLY PUMP)	REMOTE FUEL TRANSFER PUMP SET: REMOTE MOUNTED TO AST-1 IN NEMA 4X (STAINLESS STEEL) CABINET, SUPPLY PUMP, 1 PH STARTER, DOOR MOUNTED DISCONNECT W/INTERLOCK, SHUT-OFF VALVES, PRESSURE RELIEF, CHECK VALVE, CONTAINMENT SUMP /LEAK SENSOR. MFR: SIMPLEX MODEL: SPS-10.

GLYCOL MAKE-UP SCHEDULE

SYMBOL	LOCATION	SERVICE	FLUID	TEMP. (DEG F)	GPM	HEAD (FT)	RPM	MOTOR (HP,V,PH)	REMARKS
GM-1	MECH P06	GLYCOL MAKE-UP SYSTEM (SNOWMELT)	50% PG	70	2	50	1750	1/3,120,1	PACKAGED GLYCOL MAKE-UP: INCLUDES PUMP, 50 GALLON SOLUTION TANK, PRESSURE TANK, STEEL SUPPORT FRAME, MAGNETIC STARTER, PRIMING VALVE, PRESSURE GAUGE, PRV AND SHUT-OFF VALVE. WEIGHT: 530 LBS EQUIPMENT Ip = 1.0 MFR: WESSELS COMPANY MODEL: GMP-13050

CONSULTANT NAME :: AMC ENGINEERS
ECI/HYER :: THA ARCHITECTURE
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SCHEDULES

M003

AIR HANDLING UNIT SCHEDULE

SYMBOL	LOCATION	SCFM	SP (IN WC)	RPM	MOTOR (HP,V,PH)	CONTROLLER TYPE	COIL NO.	FAN SIZE (INCH)	FAN TYPE	REMARKS
AHU-1	FAN AHU-1 226A	23,000	4.0 (TSP) 1.0 (ESP)	1862	15,480,3 (2 FANS)	VSD W/O BYPASS (2 TOTAL)	HC-1 CC-1	25	CP-63	CENTRAL AIR HANDLING UNIT: DRAW THROUGH ARRANGEMENT, SWSI AIR FOIL BLADE PLUG FAN ARRAY WITH INVERTER DUTY DIRECT DRIVE FAN MOTORS CABINET: 4" WALL THICKNESS WITH 8" BASE RAIL. CABINET SECTIONS: ENTRY PLENUM, MERV 8 PREFILTER, PLENUM, MERV 14 FINAL /CARBON /MERV 8 DUSTING FILTER, PLENUM, HEATING COIL, PLENUM, COOLING COIL, HUMIDIFIER, DUAL PLUG FAN ARRAY, DISCHARGE PLENUM. OVERALL DIMENSIONS: 316"L X 90"H (W/BASE RAIL) X 118"W. APPROXIMATE OPERATING WEIGHT: 16,400 LBS EQUIPMENT Ip = 1.5 MFR: SCOTT-SPRINGFIELD, HAAKON, MAFNA. MODEL: CUSTOM.
AHU-2	FAN AHU-2 226B	23,000	4.0 (TSP) 1.0 (ESP)	1862	15,480,3 (2 FANS)	VSD W/O BYPASS (2 TOTAL)	HC-2 CC-2	25	CP-63	CENTRAL AIR HANDLING UNIT: SIMILAR TO AHU-1.
AHU-3	FAN AHU-3 120	32,000	5.4 (TSP) 1.6 (ESP)	1700	15,480,3 (4 FANS)	VSD W/O BYPASS (4 TOTAL)	HC-3 CC-3	25	CP-63	CENTRAL AIR HANDLING UNIT: DRAW THROUGH ARRANGEMENT, SWSI AIR FOIL BLADE PLUG FAN ARRAY WITH INVERTER DUTY DIRECT DRIVE FAN MOTORS CABINET: 4" WALL THICKNESS WITH 8" BASE RAIL. CABINET SECTIONS: ENTRY PLENUM, MERV 8 PREFILTER, PLENUM, MERV 14 FINAL /CARBON /MERV 8 DUSTING FILTER, PLENUM, HEATING COIL, PLENUM, COOLING COIL, HUMIDIFIER, QUAD PLUG FAN ARRAY, CUSTOM DISCHARGE PLENUM WITH BELLMOUTH TOP AND END DUCT CONNECTIONS. OVERALL DIMENSIONS: 330"L X 90"H (W/BASE RAIL) X 118"W. APPROXIMATE OPERATING WEIGHT: 21,950 LBS EQUIPMENT Ip = 1.5 MFR: SCOTT-SPRINGFIELD, HAAKON, MAFNA. MODEL: CUSTOM.
AHU-4	FAN AHU-4 225	32,000	5.6 (TSP) 2.0 (ESP)	1722	15,480,3 (4 FANS)	VSD W/O BYPASS (4 TOTAL)	HC-4 CC-4	25	CP-63	CENTRAL AIR HANDLING UNIT: DRAW THROUGH ARRANGEMENT, SWSI AIR FOIL BLADE PLUG FAN ARRAY WITH INVERTER DUTY DIRECT DRIVE FAN MOTORS. CABINET: 4" WALL THICKNESS WITH 8" BASE RAIL. CABINET SECTIONS: ENTRY PLENUM, MERV 8 PREFILTER, PLENUM, MERV 14 FINAL /CARBON /MERV 8 DUSTING FILTER, PLENUM, HEATING COIL, PLENUM, COOLING COIL, HUMIDIFIER, QUAD PLUG FAN ARRAY, CUSTOM DISCHARGE PLENUM WITH BELLMOUTH TOP AND END DUCT CONNECTIONS AND PLENUM "BOX" FLOOR PENETRATION WITH OPEN FLOOR GRATING. OVERALL DIMENSIONS: 356"L X 118"H (W/BASE RAIL) X 130"W. APPROXIMATE OPERATING WEIGHT: 23,200 LBS EQUIPMENT Ip = 1.5 MFR: SCOTT-SPRINGFIELD, HAAKON, MAFNA. MODEL: CUSTOM.
AHU-5	FAN AHU-5&6 242	26,000	6.0 (TSP) 2.0 (ESP)	2369	10,480,3 (4 FANS)	VSD W/O BYPASS (4 TOTAL)	HC-5 CC-5	20	CP-50	CENTRAL AIR HANDLING UNIT: DRAW THROUGH ARRANGEMENT, SWSI AIR FOIL BLADE PLUG FAN ARRAY WITH INVERTER DUTY DIRECT DRIVE FAN MOTORS. CABINET: 4" WALL THICKNESS WITH 8" BASE RAIL. CABINET SECTIONS: MERV 8 PREFILTER, PLENUM, MERV 14 FINAL /CARBON /MERV 8 DUSTING FILTER, PLENUM, HEATING COIL, PLENUM, COOLING COIL, HUMIDIFIER, QUAD PLUG FAN ARRAY, CUSTOM DISCHARGE PLENUM WITH BELLMOUTH TOP AND END DUCT CONNECTIONS AND PLENUM "BOX" FLOOR PENETRATION WITH OPEN FLOOR GRATING. OVERALL DIMENSIONS: 276"L X 102"H (W/BASE RAIL) X 118"W. APPROXIMATE OPERATING WEIGHT: 17,000 LBS EQUIPMENT Ip = 1.5 MFR: SCOTT-SPRINGFIELD, HAAKON, MAFNA. MODEL: CUSTOM.
AHU-6	FAN AHU-5&6 242	4,500	6.4 (TSP) 2.0 (ESP)	3490	5,480,3 (2 FANS)	VSD W/O BYPASS (2 TOTAL) ENTHALPY WHEEL VSD (1 TOTAL)	PHC-6 HC-6 CC-6	12.5	CP-31	CENTRAL AIR HANDLING UNIT: DRAW THROUGH ARRANGEMENT, SWSI AIR FOIL BLADE PLUG FAN ARRAYS WITH INVERTER DUTY DIRECT DRIVE FAN MOTORS. CABINET: 4" WALL THICKNESS WITH 8" BASE RAIL. SUPPLY FAN CABINET SECTIONS: ENTRY PLENUM WITH INSULATED 2-POSITON DAMPER, MERV 8 PREFILTER, ENTHALPY WHEEL, MERV 14 FINAL /CARBON /MERV 8 DUSTING FILTER, PLENUM, COOLING COIL, PLENUM, HEATING COIL, HUMIDIFIER, DUAL PLUG SUPPLY FAN ARRAY, CUSTOM DISCHARGE PLENUM WITH "BOX" FLOOR PENETRATION WITH OPEN FLOOR GRATING.
EFU-6	FAN AHU-5&6 242	5,000	3.5 (TSP) 1.8 (ESP)	3342	3,480,3 (2 FANS)	VSD W/O BYPASS (2 TOTAL)		12.5	CP-31	EXHAUST FAN CABINET SECTIONS: ENTRY PLENUM WITH BELL MOUTH DUCT CONNECTION, MERV 8 FILTER, ENTHALPY WHEEL, DUAL PLUG EXHAUST FAN ARRAY, CUSTOM DISCHARGE PLENUM WITH 2-POSITON INSULATED DAMPER AND VERTICAL PRESSURE EXHAUST STACK DISCHARGE ADAPTER. OVERALL DIMENSIONS: 328"L X 112"H (W/BASE RAIL) X 72"W. APPROXIMATE OPERATING WEIGHT: 12,900 LBS EQUIPMENT Ip = 1.5 MFR: SCOTT-SPRINGFIELD, HAAKON, MAFNA. MODEL: CUSTOM

INDOOR AIR QUALITY DOCUMENTATION

THE VENTILATION SYSTEMS FOR THIS FACILITY WERE DESIGNED IN ACCORDANCE WITH ASHRAE STANDARD 62-2007, BASED ON THE FOLLOWING ASSUMPTIONS:

50	NORMAL BUILDING POPULATION
350	MAXIMUM BUILDING POPULATION
2,000	AHU-1 MINIMUM OUTSIDE AIR CFM FOR INDOOR AIR QUALITY
2,000	AHU-2 MINIMUM OUTSIDE AIR CFM FOR INDOOR AIR QUALITY
4,600	AHU-3 MINIMUM OUTSIDE AIR CFM FOR INDOOR AIR QUALITY
3,600	AHU-4 MINIMUM OUTSIDE AIR CFM FOR INDOOR AIR QUALITY
5,250	AHU-5 MINIMUM OUTSIDE AIR CFM FOR INDOOR AIR QUALITY
4,500	AHU-6 MINIMUM OUTSIDE AIR CFM (100% EXHAUST)
4	OUTSIDE WINTER DESIGN TEMPERATURE (DEGREES F)

ASSUMPTION: OUTSIDE AIR MEETS NATIONAL PRIMARY AMBIENT AIR QUALITY STANDARDS SET BY THE U.S. EPA.

ASSUMPTION: SOURCES OF IAQ CONTAMINATION ARE LIMITED TO NORMAL BUILDING FURNISHINGS, MATERIALS AND SURFACE COATINGS, AND HUMAN BIO-EFFLUENTS ASSOCIATED WITH ORDINARY HUMAN ACTIVITIES.

AHU AND FAN SOUND POWER LEVELS

(dB Re: 10E-12 WATTS)

SYMBOL	OCTAVE BAND FREQ.	1 63	2 125	3 250	4 500	5 1K	6 2K	7 4K	8 8K	LWA	REMARKS
AHU-1&2											
INLET		81	80	86	82	75	70	69	74	dBA	
OUTLET		87	90	101	99	101	93	90	88	dBA	
RADIATED		73	73	71	65	56	44	41	37	dBA	
AHU-3											
INLET		78	80	83	81	75	70	70	70	dBA	
OUTLET		88	90	99	99	103	93	91	86	dBA	
RADIATED		75	75	70	64	57	43	41	33	dBA	
AHU-4											
INLET		80	80	84	81	76	70	70	70	dBA	
OUTLET		88	90	100	99	103	93	91	86	dBA	
RADIATED		76	75	71	64	57	43	41	33	dBA	
AHU-5											
INLET		79	82	84	83	77	72	71	73	dBA	
OUTLET		83	88	97	100	101	97	91	88	dBA	
RADIATED		71	74	69	66	56	47	42	36	dBA	
AHU-6	SUPPLY										
INLET		93	75	68	76	66	64	65	65	dBA	
OUTLET		98	84	85	93	93	89	86	81	dBA	
RADIATED		89	69	56	59	48	39	37	30	dBA	
AHU-6	EXHAUST										
INLET		90	77	79	83	79	78	76	73	dBA	
OUTLET		86	76	81	89	87	83	79	75	dBA	
RADIATED		79	64	56	57	45	36	33	27	dBA	
SCF-1A											
INLET		97	77	75	85	77	77	75	73	dBA	
OUTLET		97	79	82	90	88	84	81	77	dBA	
RADIATED		74	68	58	51	42	39	29	29	dBA	
SCF-1B											
INLET		97	77	75	85	77	77	75	73	dBA	
OUTLET		97	79	82	90	88	84	81	77	dBA	
RADIATED		74	68	58	51	42	39	29	29	dBA	
SCF-2											
INLET		77	79	73	76	70	66	64	60	dBA	
OUTLET		90	87	82	71	67	63	62	58	dBA	
RADIATED		67	59	58	58	47	38	31	30	dBA	
SCF-3											
INLET		83	84	76	78	71	68	65	62	dBA	
OUTLET		92	89	77	72	68	65	64	61	dBA	
RADIATED		73	64	61	60	48	40	32	32	dBA	

COMPUTER ROOM A/C UNIT SCHEDULE

SYMBOL	LOCATION	MBH TOTAL/SENS.	SCFM (MAX)	AIR TEMP IN (DB/WB)	AIR TEMP OUT (DB/WB)	VEL. (FPM)	VOLTS PHASE FREQ.	FLUID	GPM	FLUID TEMP IN/OUT (DEG F)	MAX WPD (FT)	REMARKS
CRAC-1A	TELECOM 217	34.4/34.4	2,750 (1)	75/61.1 (45%RH)	63.3/56.7	400	208,1,60	WATER	10	52/60	6.0	IN-ROW RACK COOLING UNIT: TWO-WAY CV MFR: LIEBERT MODEL: CR030RC
CRAC-1B	TELECOM 217	34.4/34.4	2,750 (1)	75/61.1 (45%RH)	63.3/56.7	400	208,1,60	WATER	10	52/60	6.0	IN-ROW RACK COOLING UNIT: TWO-WAY CV MFR: LIEBERT MODEL: CR030RC
CRAC-2A	TELECOM 217	54.4/54.4	3,325 (2)	75/62.5 (50%RH)	59.7/56.9	500	208,3,60	WATER	10	52/64	5.0	IN-ROW RACK COOLING UNIT: TWO-WAY CV MFR: LIEBERT MODEL: CR040RC
CRAC-2B	TELECOM 217	54.4/54.4	3,325 (2)	75/62.5 (50%RH)	59.7/56.9	500	208,3,60	WATER	10	52/64	5.0	IN-ROW RACK COOLING UNIT: THREE-WAY CV MFR: LIEBERT MODEL: CR040RC
CRAC-3	TELECOM 118	34.4/34.4	2,750 (1)	75/61.1 (45%RH)	63.3/56.7	400	208,1,60	WATER	10	52/60	6.0	IN-ROW RACK COOLING UNIT: TWO-WAY CV MFR: LIEBERT MODEL: CR030RC
CRAC-4	TELECOM P04	34.4/34.4	2,750	75/61.1	63.3/56.7	400	208,1,60	WATER	10	52/60	6.0	IN-ROW RACK COOLING UNIT: THREE-WAY CV MFR: LIEBERT MODEL: CR030RC

NOTES:
(1) FIVE VARIABLE SPEED EC FANS. TOTAL MOTOR HP = 1.15 HP.
(2) TWO VARIABLE SPEED EC PLUG FANS. TOTAL MOTOR HP = 3 HP.

COOLING COIL SCHEDULE

SYMBOL	LOCATION	MBH TOTAL/SENS.	SCFM (MAX)	AIR TEMP IN (DB/WB)	AIR TEMP OUT (DB/WB)	MAX VEL (FPM)	MAX APD (IN WC)	FLUID	GPM (1)	FLUID TEMP IN/OUT (DEG F)	MAX WPD (FT)	REMARKS
CC-1	AHU-1	112/112	23,000	63.4/50.1	55.0/45.9	500	0.3	WATER	35	45/57	5.0	TWO SECTION COIL (33"H X 100"W) 4 ROWS, 10 FPI MFR: HEATCRAFT
CC-2	AHU-2	136/136	23,000	63.4/50.1	55.0/45.9	500	0.3	WATER	35	45/57	5.0	TWO SECTION COIL (33"H X 100"W) 4 RLWS, 10 FPI MFR: HEATCRAFT
CC-3	AHU-3	623/600	32,000	76.0/58.4	58.8/51.2	500	0.3	WATER	95	45/58	10.0	TWO SECTION (45"H X 112"W) 4 ROW, 8 FPI MFR: HEATCRAFT
CC-4	AHU-4	656/656	32,000	75.0/59.4	56.4/51.8	500	0.3	WATER	110	45/57	6.5	TWO SECTION (45"H X 112"W) 4 ROW, 10 FPI MFR: HEATCRAFT
CC-5	AHU-5	717/717	26,000	80.4/60.3	55.0/50.6	550	0.75	WATER	120	45/57	6.0	FOUR SECTION STAGGERED (36"H X 50"W) 4 ROWS, 12 FPI MFR: HEATCRAFT
CC-6 (2)	AHU-6	214/135	4,500	73.7/63.5	46.3/46.3	275	0.5	WATER	35	42/54	16.0	SINGLE SECTION (45"H X 54"W) 6 ROW, 11 FPI MFR: HEATCRAFT
CC-7 (3)	SCF-4	47.3/46.8	1,800	80.0/61.0	56.2/51.9	350	0.5	WATER	10	52/61	8.0	SINGLE SECTION (17.5"H X 43"W) 6 ROW, 10 FPI MFR: HEATCRAFT

NOTES:
(1) WHERE MULTIPLE COIL SECTIONS ARE LISTED IN THE REMARKS, GPM IS FOR ALL COILS.
(2) CC-6 USED FOR DEHUMIDIFICATION.
(3) CC-7 FED FROM TEMPERED CHILLED WATER LOOP TO AVOID CONDENSATION ON PIPES.

HYDRONIC HEATING COIL SCHEDULE

SYMBOL	LOCATION	MBH	SCFM	AIR TEMP (IN/OUT)	MAX VEL. (FPM)	MAX APD (IN WC)	FLUID	GPM (1)	FLUID TEMP IN/OUT (DEG F)	MAX WPD (FT)	REMARKS
HC-1	AHU-1	371	23,000	55/70	500	0.10	WATER	25	190/160	3.0	TWO SECTION (33"H X 96"W), 1 ROW, 4 FPI MFR: HEATCRAFT
HC-2	AHU-2	371	23,000	55/70	500	0.10	WATER	25	190/160	3.0	TWO SECTION (33"H X 96"W), 1 ROW, 4 FPI MFR: HEATCRAFT
HC-3	AHU-3	330	32,000	60/70	500	0.10	WATER	22	190/160	3.0	TWO SECTION (36"H X 100"W), 1 ROW, 4 FPI MFR: HEATCRAFT
HC-4	AHU-4	212	32,000	62/70	500	0.10	WATER	14	190/160	3.0	TWO SECTION (36"H X 100"W), 1 ROW, 4 FPI MFR: HEATCRAFT
HC-5	AHU-5	331	26,000	58/70	500	0.10	WATER	22	190/160	3.0	FOUR SECTION (STAGGERED) (36"H X 50"W), 1 ROW, 6 FPI MFR: HEATCRAFT
PHC-6	AHU-6	166	4,500	4/38	500	0.10	50% PG	12	180/150	3.0	SINGLE SECTION (45"H X 54"W) 1 ROW, 6 FPI MFR: HEATCRAFT
HC-6	AHU-6	181	4,500	38/75	500	0.10	50% PG	13	180/150	3.0	SINGLE SECTION (45"H X 54"W) 1 ROW, 9 FPI MFR: HEATCRAFT
HC-7A	SCF-1A	262	3,400	4/75	520	0.15	50% PG	20	180/150	7.0	SINGLE SECTION (22.5"H X 42"W) 2 ROW, 10 FPI MFR: HEATCRAFT
HC-7B	SCF-1B	655	8,500	4/75	500	0.20	50% PG	50	180/150	4.0	SINGLE SECTION (45"H X65"W) 2 ROW, 12 FPI MFR: HEATCRAFT

NOTES:
(1) WHERE MULTIPLE COIL SECTIONS ARE LISTED IN THE REMARKS, GPM IS FOR ALL COILS.

CONSULTANT NAME :: AMC ENGINEERS
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David F. Shumway
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ME-8815
REGISTERED PROFESSIONAL ENGINEER

REVISIONS:

CONSTRUCTION DOCUMENTS

05.01.2012

SCHEDULES

M004

DEDICATED OUTSIDE AIR HANDLING UNIT (DOA) SCHEDULE

TAG	SERVES	WEIGHT LBS	NET SUPPLY SCFM	VOLT/PH (2)	FLA	MIN CKT AMPACITY	MOP (AMPS)	SCCR (AMPS)	OUTSIDE AIR FAN								EXHAUST AIR FAN								REGENERATION AIR FAN								NOTES
									FAN SCFM	ESP/TSP (IN WC)	TYPE/ CLASS	SIZE	RPM	BHP/HP	DRIVE TYPE	SPEED CONTROL	FAN SCFM	ESP/TSP (IN. WC)	TYPE/ CLASS	SIZE (IN)	RPM	BHP/HP	MOTOR TYPE	DRIVE TYPE	SPEED CONTROL	FAN SCFM	TSP (IN. WC)	TYPE/ CLASS	SIZE	RPM	BHP/HP	DRIVE TYPE	SPEED CONTROL	
DOA-1	AHU-1	6,900	2,000	480/3	88.2	93.0	100	5,000	2000	0.25/5.3	AF/3	16	3315	2.9/5	DIRECT	VSD	2120	.25/2.7	CPN-BIA/2	14	3401	1.66/2	TEFC	DIRECT	VSD	498	6.12	JRW/SD	806F	3465	0.94/1.5	DIRECT	NONE	(1)(2)(3)
DOA-2	AHU-2	6,900	2,000	480/3	88.2	93.0	100	5,000	2000	0.25/5.3	AF/3	16	3315	2.9/5	DIRECT	VSD	2120	.25/2.7	CPN-BIA/2	14	3401	1.66/2	TEFC	DIRECT	VSD	498	6.12	JRW/SD	807N	3465	0.94/1.5	DIRECT	NONE	(1)(2)(3)
DOA-3	AHU-3	6,900	4,600	480/3	192	202	225	5,000	4600	0.25/5.6	AF/3	16	3431	6.9/7.5	DIRECT	VSD	4876	1.0/3.5	AF/3	16	3136	4.58/7.5	TEFC	DIRECT	VSD	1166	8.01	AF/3	16	3465	2.19/3	DIRECT	VSD	(1)(2)
DOA-4	AHU-4	6,900	3,600	480/3	108	116	125	5,000	3,600	0.25/5.5	AF/3	16	3356	5.3/7.5	DIRECT	VSD	3806	0.9/3.4	AF/3	16	3380	3.45/5	TEFC	DIRECT	VSD	584	7.74	JRW/SD	807N	3465	1.44/2	DIRECT	VSD	(1)(2)
DOA-5	AHU-5	6,900	5,250	480/3	238	249	275	5,000	5,250	0.25/5.4	AF/3	18	3,321	8.2/10	DIRECT	VSD	5565	2.6/5.0	AF/3	18	2807	6.69/10	TEFC	DIRECT	VSD	1444	6.71	AF/3	16	3465	2.55/3	DIRECT	VSD	(1)(2)

NOTES:
(1) EQUIPMENT Ip = 1.5 FOR ALL DOA UNITS.
(2) FAN SCFM'S ARE TYPICAL FOR SUMMER AND WINTER CONDITIONS.
(3) ALSO PROVIDE ONE DEDICATED 120/1 CIRCUIT FOR SERVICE LIGHTS AND CONVENIENCE RECEPTACLE (TYP ALL UNITS).

DOA UNIT DEHUMIDIFICATION ROTOR SCHEDULE

TAG	LOCATION	MODEL NUMBER	PROCESS AIR (CFM/APD)	REACT AIR (CFM/APD)	ROTOR SIZE (mm x mm)	DAMPER TYPE	PROCESS AIR			REACTIVATION AIR				NOTES
							AIR VEL. (SFPM)	EAT (DB/gr/lb)	LAT (DB/gr/lb)	AIR VEL. (SFPM)	EAT (DB/WB)	LAT (DB)	HEATER CONTROL	
DH-1	DOA-1	DH-130	2000/0.86	498/.90	770 x 200	(1)	532	63.4/44.5	109.5/7.9	498	73.7/70.8	135	SCR	(1)
DH-2	DOA-2	DH-130	2000/0.86	498/.90	770 x 200	(1)	532	63.4/44.5	109.5/7.9	498	73.7/70.8	135	SCR	(1)
DH-3	DOA-3	DH-142	4600/1.09	1166/1.12	1070 x 200	(1)	634	71.1/55.3	118	482	73.7/70.8	135	SCR	(1)
DH-4	DOA-4	DH-130	2160/.96	584/1.08	770 x 200	(1)	575	72.5/57.7	122.5	584	73.7/70.8	135	SCR	(1)
DH-5	DOA-5	DH-148	5250	1444	1220 x 200	(1)	557	72.5/57.7	123.4	459	73.7/70.8	135	SCR	(1)

NOTES:
(1) FACE AND BYPASS DAMPERS. BYPASS DAMPERS SIZED FOR FULL PROCESS AIR FLOW.

SILENCER SCHEDULE

SYMBOL	LOCATION	SCFM	MAX APD (IN WC)	FACE AREA (MIN) (SQ FT)	LENGTH (INCH)	REMARKS
SDS-1	FAN AHU-1 226A	23,000	0.15	48 EIGHT - 24X36	60	SUPPLY AIR DUCT SILENCER: WEIGHT: 1,088 LBS. EQUIP Ip = 1.0 MFR: IAC MODEL: 5 LFS 24 X 36
SDS-2	FAN AHU-2 226B	23,000	0.15	48 EIGHT - 24X36	60	SUPPLY AIR DUCT SILENCER: WEIGHT: 1,088 LBS. EQUIP Ip = 1.0 MFR: IAC MODEL: 5 LFS 24 X 36
SDS-3A	FAN AHU-3 120	17,000	0.10	48" (DIA)	96	SUPPLY AIR DUCT SILENCER: WEIGHT: 650 LBS. EQUIP Ip = 1.0 MFR: IAC MODEL: 48 NS 96
SDS-3B	FAN AHU-3 120	15,000	0.80	48" (DIA)	96	SUPPLY AIR DUCT SILENCER: WEIGHT: 650 LBS. EQUIP Ip = 1.0 MFR: IAC MODEL: 48 NS 96
RDS-3	FAN AHU-3 120	30,500	0.16	60 SIX - 48X30	60	RETURN AIR DUCT SILENCER: WEIGHT: 1,452 LBS. EQUIP Ip = 1.0 MFR: IAC MODEL: 5 LFS 24 X 36
SDS-4A	FAN AHU-3 120	11,250	0.21	32" (DIA)	64	SUPPLY AIR DUCT SILENCER: WEIGHT: 365 LBS. EQUIP Ip = 1.0 MFR: IAC MODEL: 32 NS 64
SDS-4B	FAN AHU-4 225	9,400	0.15	32" (DIA)	64	SUPPLY AIR DUCT SILENCER: WEIGHT: 365 LBS. EQUIP Ip = 1.0 MFR: IAC MODEL: 32 NS 64
SDS-4C	FAN AHU-4 225	9,500	0.15	32" (DIA)	64	SUPPLY AIR DUCT SILENCER: WEIGHT: 365 LBS. EQUIP Ip = 1.0 MFR: IAC MODEL: 32 NS 64
RDS-4	FAN AHU-4 225	28,650	0.40	36 SIX - 36X24	60	RETURN AIR DUCT SILENCER: WEIGHT: 1,044 LBS. EQUIP Ip = 1.0 MFR: IAC MODEL: 5 LFS 36 X 24
SDS-5A	OFFICE 246	7,450	0.17	28" (DIA)	56	SUPPLY AIR DUCT SILENCER: WEIGHT: 255 LBS. EQUIP Ip = 1.0 MFR: IAC MODEL: 28 NS 56
SDS-5B	CORRIDOR 241	4,800	0.13	24" (DIA)	48	SUPPLY AIR DUCT SILENCER: WEIGHT: 140 LBS. EQUIP Ip = 1.0 MFR: IAC MODEL: 24 NS 48
SDS-5C	CONFERENCE 245	500	0.05	12" (DIA)	36	SUPPLY AIR DUCT SILENCER: WEIGHT: 40 LBS. EQUIP Ip = 1.0 MFR: IAC MODEL: 12 NS 36
SDS-5D	FAN AHU-5&6 GALLERY LEVEL	11,000	0.13	36" (DIA)	72	SUPPLY AIR DUCT SILENCER: WEIGHT: 425 LBS. EQUIP Ip = 1.0 MFR: IAC MODEL: 36 NS 72
SDS-5E	FAN AHU-5&6 GALLERY LEVEL	2,250	0.13	16" (DIA)	36	SUPPLY AIR DUCT SILENCER: WEIGHT: 75 LBS. EQUIP Ip = 1.0 MFR: IAC MODEL: 16 NS 36
RDS-5A	FAN AHU-5&6 242	6,400	0.18	12 THREE - 24X24	60	RETURN AIR DUCT SILENCER: WEIGHT: 312 LBS. EQUIP Ip = 1.0 MFR: IAC MODEL: 5 LFS 24 X 24
RDS-5B	FAN AHU-5&6 242	2,600	0.16	5 ONE - 30X24	60	RETURN AIR DUCT SILENCER: WEIGHT: 121 LBS. EQUIP Ip = 1.0 MFR: IAC MODEL: 5 LFS 30 X 24
RDS-5C	FAN AHU-5&6 242	11,850	0.16	24 SIX - 24X24	60	RETURN AIR DUCT SILENCER: WEIGHT: 624 LBS. EQUIP Ip = 1.0 MFR: IAC MODEL: 5 LFS 24 X 24
RDS-5D	MICROGRAPHICS 234	1,500	0.07	5 ONE - 30X24	60	RETURN AIR DUCT SILENCER: WEIGHT: 121 LBS. EQUIP Ip = 1.0 MFR: IAC MODEL: 5 LFS 30 X 24

SILENCER SCHEDULE

SYMBOL	LOCATION	SCFM	MAX APD (IN WC)	FACE AREA (MIN) (SQ FT)	LENGTH (INCH)	REMARKS
SDS-6	FAN AHU-5&6 GALLERY LEVEL	4,500	0.12	24" (DIA)	48	SUPPLY AIR DUCT SILENCER: WEIGHT: 140 LBS. EQUIP Ip = 1.0 MFR: IAC MODEL: 24 NS 48
EDS-6	FAN AHU-5&6 242	5,000	0.10	26" (DIA)	52	EXHAUST AIR SILENCER: WEIGHT: 200 LBS. EQUIP Ip = 1.0 MFR: IAC MODEL: 26 NS 52
SDS-7	WORKSHOP 132 (SCF-1A DUCT)	3,400	0.05	28" (DIA)	56	SUPPLY AIR DUCT SILENCER: WEIGHT: 255 LBS. EQUIP Ip = 1.0 MFR: IAC MODEL: 28 NS 56
EDS-7	WORKSHOP 132 (EF-1 DUCT)	1,500	0.05	18" (DIA)	36	EXHAUST AIR SILENCER: WEIGHT: 95 LBS. EQUIP Ip = 1.0 MFR: IAC MODEL: 18 NS 36

DYNAMIC INSERTION LOSS (dB)

SILENCER MODEL	OCTAVE BAND FREQ.	1 63	2 125	3 250	4 500	5 1K	6 2K	7 4K	8 8K	MAX FACE VELOCITY (FPM)
IAC 5-LFS	DIL	12	19	31	36	40	27	22	16	+1000
	SN	46	42	45	43	45	49	44	37	
IAC 5-LFS	DIL	13	21	35	41	41	28	21	15	-1000
	SN	45	42	45	43	45	49	44	37	
IAC 12 NS 36	DIL	3	4	9	14	21	21	14	11	+700
	SN	43	37	33	32	35	32	21	20	
IAC 16 NS 36	DIL	3	4	9	14	19	21	14	12	+1600
	SN	51	44	40	40	42	40	31	25	
IAC 24 NS 48	DIL	4	10	14	18	23	21	12	12	+1500
	SN	50	43	39	39	41	39	29	24	
IAC 28 NS 56	DIL	4	10	14	18	23	21	12	12	+1500
	SN	50	43	39	39	41	39	29	24	
IAC 32 NS 64	DIL	6	13	17	20	22	17	11	10	+2000
	SN	56	48	45	45	47	46	38	28	
IAC 36 NS 72	DIL	6	13	17	20	22	17	11	10	+1600
	SN	51	44	40	40	42	40	31	25	
IAC 48 NS 96	DIL	7	15	19	23	20	12	10	8	+1400
	SN	49	42	38	38	50	50	43	34	
IAC 18 NS 36	DIL	3	7	12	17	24	21	12	11	-900
	SN	37	34	33	33	35	38	26	20	
IAC 26 NS 52	DIL	4	10	15	20	24	21	12	11	-1400
	SN	43	40	39	39	41	43	33	27	

NOTE: DIL= DYNAMIC INSERTION LOSS
SN= RESULTANT SELF NOISE

ELECTRIC PREHEAT COIL SCHEDULE

SYMBOL	LOCATION	CAP (MBH)	HTR SIZE (KW)	SCFM	AIR TEMP (IN/OUT)	MAX APD (IN WC)	CONTROL	NOTES
PHC-1	DOA-1	13.6	4.0	2000	4/10	0.1	SCR	(1)
PHC-2	DOA-2	13.6	4.0	2,000	4/10	0.10	SCR	(1)
PHC-3	DOA-3	34.1	10.0	4,600	4/10	0.10	SCR	(1)
PHC-4	DOA-4	27.3	8.0	3,600	4/10	0.10	SCR	(1)
PHC-5	DOA-5	37.5	11.0	5,250	4/10	0.25	SCR	(1)

NOTES:
(1) PART OF DOA UNIT. ELECTRICAL REQ'S INCLUDED IN DOA SCHEDULE.

ENERGY RECOVERY (ENTHALPY) WHEEL SCHEDULE

SYMBOL	LOCATION	AIRFLOW CFM IN	AIRFLOW CFM OUT	AIRFLOW PURGE CFM	FACE VEL. (FPM)	MAX APD (IN WC)	WINTER DESIGN EDB/EWB (DEG F)	WINTER DESIGN LDB/LWB (DEG F)	SUMMER DESIGN EDB/EWB (DEG F)	SUMMER DESIGN LDB/LWB (DEG F)	DIA. (INCHES)	DEPTH (INCHES)	ROTATE SPEED (RPM)	SUPPLY AIR ENERGY RECOVERED SUMR/WNTR (MBH)	TOTAL EFFECTIVENESS SUMR/WNTR (%)	REMARKS
EW-1	DOA-1 S/A	2,120	2000	120	571	0.04	4/3.1	45.6/39.7	73.7/63.5	63.6/53.5	38.6	11.0	20	(58.3)/121.4	73.0/74.3	(1)
	DOA-1 E/A	2,000	2120	120	501	0.06	60/49.3	16.9/15.2	60/49.3	70.5/60.4						
EW-2	DOA-2 S/A	2120	2000	120	571	0.04	4/3.2	45.6/39.7	73.7/63.5	63.6/53.5	38.6	11.0	20	(58.3)/121.4	73.0/74.3	(1)
	DOA-2 E/A	2000	2120	120	501	0.06	60/49.3	16.9/15.2	60/49.3	70.5/60.4						
EW-3	DOA-3 S/A	4876	4600	276	672	0.55	4/3.2	50.9/45.2	73.7/63.5	71.1/59.2	53.1	11.0	20	(62.3)/385.9	69.4/71.1	(1)
	DOA-3 E/A	4600	4876	276	604	0.64	70/57.1	21.8/21.0	70/57.1	72.7/61.7						
EW-4	DOA-4 S/A	3806	3600	206	702	0.66	4/3.2	53.9/47.7	73.7/63.5	72.5/60.1	45.3	11.0	20	(30.4)/256.5	73.0/74.3	(1)
	DOA-4 E/A	3600	3806	206	705	0.62	72/58.7	22.2/21.8	72/58.7	73.3/62.3						
EW-5	DOA-5 S/A	5565	5250	315	592	0.57	4/3.2	54.0/47.8	73.7/63.5	72.5/60.1	61.0	16.5	20	(77.9)/464.6	72.2/73.6	(1)
	DOA-5 E/A	5250	5565	315	527	0.48	72/58.7	20.6/20.0	72/58.7	73.3/62.3						
EW-6	AHU-6 S/A	4725	4500	225	620	0.67	40/35	65.5/55.1	73.7/63.5	70.6/58.5	55.0	14.0		(20)/59	78.6/82.3	(1)
	AHU-6 E/A	5000	5225	225	689	0.75	70.6/58.5	47.6/42.1	70/57.1	72.8/61.9						

NOTES:
(1) RECOVERED ENERGY PARAMETERS IN PARENTHESES INDICATE A LOSS OF ENERGY (I.E. COOLING).

RADIANT FLOOR HEATING AND SNOWMELT ZONE SCHEDULE

SYMBOL	AREA SERVED	SERVICE	AREA (SF)	ZONE MBH	NO. OF CIRCUITS	ZONE GPM	HEAD LOSS (FT)	FLUID TEMP SUP / RTN (DEG F)	FLUID	TUBE DIA. (IN.)	TUBE SPACING (INCHES)	CIRCUIT LENGTH (FT)
RHZ-1	SPRAY, WD WORKSHOP	RADIANT FLOOR HEATING	2400	60.0	11	6.0	2.2	110/90	WATER	5/8	9	300
RHZ-2	WD WORKSHOP, CRATE STORAGE	RADIANT FLOOR HEATING	1920	48.0	9	4.8	1.8	110/90	WATER	5/8	9	300
RHZ-3	CRATE STOR., CORRIDOR, ELEC, TELECOM	RADIANT FLOOR HEATING	1900	47.5	9	4.8	1.8	110/90	WATER	5/8	9	300
RHZ-4	SUPPLY, RSTRMS, CLASSROOM, STORAGE	RADIANT FLOOR HEATING	2380	59.5	11	6.0	2.2	110/90	WATER	5/8	9	300
RHZ-5	HALLWAY, CORRIDOR, OFFICE	RADIANT FLOOR HEATING	1170	29.3	6	2.9	1.4	110/90	WATER	5/8	9	300
RHZ-6	LAB	RADIANT FLOOR HEATING	2230	55.8	10	5.6	2.2	110/90	WATER	5/8	9	300
RHZ-7	WEST LOBBY	RADIANT FLOOR HEATING	1570	39.3	7	3.9	1.7	110/90	WATER	5/8	9	300
RHZ-8	MULTI PURPOSE, VOLUNTEERS	RADIANT FLOOR HEATING	2570	64.3	12	6.4	2.5	110/90	WATER	5/8	9	300
RHZ-9	EAST LOBBY, VESTIBULE	RADIANT FLOOR HEATING	2040	51.0	10	5.1	1.9	110/90	WATER	5/8	9	300
RHZ-10	COFFEE BAR, RSTRMS, LOCKERS	RADIANT FLOOR HEATING	2100	52.5	10	5.3	1.9	110/90	WATER	5/8	9	300
RHZ-11	PERMANENT EXHIBITS WEST	RADIANT FLOOR HEATING	2200	55.0	10	5.5	1.9	110/90	WATER	5/8	9	300
RHZ-12	PERMANENT EXHIBITS EAST	RADIANT FLOOR HEATING	1850	46.3	9	4.6	1.8	110/90	WATER	5/8	9	300
RHZ-13	TEMPORARY GALLERY WEST	RADIANT FLOOR HEATING	2350	58.8	11	5.9	2.2	110/90	WATER	5/8	9	300
RHZ-14	MUSEUM GALLERY WEST	RADIANT FLOOR HEATING	2110	52.8	10	5.3	1.9	110/90	WATER	5/8	9	300
RHZ-15	MUSEUM GALLERY CENTRAL	RADIANT FLOOR HEATING	2400	60.0	11	6.0	2.1	110/90	WATER	5/8	9	300
RHZ-16	TEMPORARY GALLERY EAST	RADIANT FLOOR HEATING	2670	66.8	12	6.7	3.1	110/90	WATER	5/8	9	300
RHZ-17	MUSEUM GALLERY EAST	RADIANT FLOOR HEATING	2470	61.8	11	6.2	2.3	110/90	WATER	5/8	9	300
RHZ-18	KIDS AREA, SOS GALLERY	RADIANT FLOOR HEATING	2270	56.8	11	5.7	2.1	110/90	WATER	5/8	9	300
RHZ-19	RECEPTION, GIFT SHOP	RADIANT FLOOR HEATING	2400	60.0	11	6.0	2.1	110/90	WATER	5/8	9	300
SMZ-1	EAST DRIVEWAY	SNOWMELT	2440	366.0	10	33	4.8	100/85	50% PG	1	10	350
SMZ-2	WEST DRIVEWAY	SNOWMELT	2790	418.5	10	38	6.8	100/85	50% PG	1	10	350
SMZ-3	PARKING GARAGE	SNOWMELT	1970	195.5	8	27	4.9	100/85	50% PG	1	10	350
SMZ-4	PARKING GARAGE TRENCH DRAIN	SNOWMELT	225	33.8	2	3	0.6	100/85	50% PG	1	10	500

NOTES:
1. CIRCUIT LENGTHS INCLUDE 10 FOOT LEADER LENGTHS.
2. INSTALL TUBES EMBEDDED IN CONCRETE. DIP TUBING BELOW CONCRETE AS RECOMMENDED BY THE MANUFACTURER AT EXPANSION JOINTS, CONTROL JOINTS AND CONSTRUCTION JOINTS.
3. PROVIDE INSULATION BELOW CONCRETE SLAB.

CONSULTANT NAME :: AMC ENGINEERS
ECI/HYER :: THA ARCHITECTURE
DEPARTMENT OF EDUCATION & EARLY DEVELOPMENT
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
AKSAS PROJECT NO. 68816

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STATE OF ALASKA 49TH David F. Shumway 04/27/2012 ME-8815 REGISTERED PROFESSIONAL ENGINEER

REVISIONS:

CONSTRUCTION DOCUMENTS

05.01.2012

SCHEDULES

M005

FAN SCHEDULE

SYMBOL	LOCATION	USE	SCFM	SP (IN WC)	FAN RPM	MOTOR (HP,V,PH)	CONTROLLER TYPE	REMARKS
SCF–1A	WORKSHOP 132	EXHAUST MAKE–UP AIR	3,400	1.25 (ESP)	1,303	3,480,3	MAGNETIC WITH HOA SWITCH	SMALL CABINET FAN: INSULATED INLET DAMPER, FILTER (MERV 8), FAN SECTION, INTERNALLY MOUNTED BELT DRIVE, UL FAN MOTOR, SIDE ACCESS PANEL, HEATING COIL. OP WEIGHT: 657 LBS. EQUIP Ip = 1.0 MFR: GREENHECK MODEL: MSCF–65L–FC–30
SCF–1B	WORKSHOP 132	PAINT BOOTH EXHAUST MAKE–UP AIR	8,500	1.25 (ESP)	1,355	10,480,3	MAGNETIC WITH HOA SWITCH	SMALL CABINET FAN: INSULATED INLET DAMPER, FILTER (MERV 8), FAN SECTION, INTERNALLY MOUNTED BELT DRIVE, UL FAN MOTOR, SIDE ACCESS PANEL, HEATING COIL. OP WEIGHT: 1016 LBS. EQUIP Ip = 1.0 MFR: MCQUAY DESTINY MODEL: LAH020A
SCF–2	BOILER ROOM 121	COOLING	2,000	1.0 (ESP)	971	1.5,480,3	MAGNETIC WITH HOA SWITCH	SMALL CABINET FAN: MIXING BOX, FILTER (MERV 8), FAN SECTION, INTERNALLY MOUNTED BELT DRIVE, UL FAN MOTOR, BOTTOM ACCESS PANEL. OP WEIGHT: 695 LBS. EQUIP Ip = 1.0 MFR: GREENHECK MODEL: MSCF–65L–FC–15
SCF–3	BOILER ROOM 121	COOLING MAIN ELEC 122/123	2,000	1.4 (ESP)	1097	1.5,480,3	MAGNETIC WITH HOA SWITCH	SMALL CABINET FAN: SIMILAR TO SCF–2. MFR: GREENHECK MODEL: MSCF–65L–FC–15
SCF–4	ELEC ROOM 240	COOLING	1,800	0.25 (ESP)	953	3/4,480,3	MAGNETIC WITH HOA SWITCH	LOW PROFILE FAN COIL: FILTER, COOLING COIL (CC–7), FAN SECTION, INTERNALLY MOUNTED BELT DRIVE, UL FAN MOTOR. OP WEIGHT: 580 LBS. EQUIP Ip = 1.0 MFR: GREENHECK MODEL: LFC–50–FC–7
RF–1 RF–2 RF–3	PARKING P00	EXHAUST VENTILATION	9,250	0.5	1160	1.5,480,3	MAGNETIC WITH HOA SWITCH	SIDEWALL PROPELLER FAN: 30" WHEEL, DIRECT DRIVE UL MOTOR, MOTOR SIDE GUARD, WALL COLLAR, MOTORIZED TWO–POSITION DAMPER. OP WEIGHT: 125 LBS. EQUIP Ip = 1.0 MFR: GREENHECK MODEL: SCE3–30–620–B15
EF–1	ROOF	WORKSHOP 132 GENERAL EXHAUST	1,500	0.75	1,228	1/2,120,1	MAGNETIC WITH HOA SWITCH	ROOF EXHAUSTER: HINGED ACCESS. ARCHITECTURAL ROOF CURB. OP WEIGHT: 75 LBS. EQUIP Ip = 1.0 MFR: GREENHECK MODEL: CUBE–141–5.
EF–2	SPRAY BOOTH 136	PAINT BOOTH EXHAUST	10,000	1.0	1,494	5,480,3	MAGNETIC WITH HOA SWITCH	TUBE AXIAL FAN: BELT DRIVE, UL MOTOR, VERTICAL MOUNTING BRACKET, HINGED INSPECTION DOOR, SPARK RESISTANT CONSTRUCTION. MFR: GREENHECK MODEL: TAUB–30H–50
EF–3	METAL WORKSHOP 133	METAL WORKSHOP EXHAUST	1,000	1.5	1,765	3/4,480,3	MAGNETIC WITH HOA SWITCH	SQUARE INLINE FAN: BELT DRIVE, UL MOTOR, SPARK RESISTANT CONSTRUCTION. MFR: GREENHECK MODEL: BSQ–130–7
CF–1	WATER SERVICE P02	VENTILATION	800	0.75	1,272	1/4,120,1	MAGNETIC WITH HOA SWITCH	SQUARE INLINE FAN: BELT DRIVE, UL MOTOR, MFR: GREENHECK MODEL: BSQ–120–4
TF–1	SITE MAINT STORAGE P01	TRANSFER AIR COOLING	700	0.5	1,275	1/4,120,1	MANUAL SPEED CONTROL	INLINE EXHAUST FAN: ALUMINUM CONSTRUCTION, DIRECT DRIVE, INTEGRAL DUCT CONNECTION FLANGES, INLET GUARD, VIBRATION ISOLATION, INSULATED HOUSING. MFR: GREENHECK MODEL: SQ
TF–2	ELEC ROOM 155	TRANSFER AIR COOLING	350	0.5	1,550	1/8,120,1	MANUAL SPEED CONTROL	INLINE EXHAUST FAN: SIMILAR TO TF–1. MFR: GREENHECK MODEL: SQ
TF–3	ELEC ROOM 110	TRANSFER AIR COOLING	500	0.5	1,585	1/6,120,1	MANUAL SPEED CONTROL	INLINE EXHAUST FAN: SIMILAR TO TF–1. MFR: GREENHECK MODEL: SQ
TF–4	TELECOM ROOM 118	COOLING	200	0.5	1,550	1/12,120,1	MANUAL SPEED CONTROL	INLINE EXHAUST FAN: SIMILAR TO TF–1. MFR: GREENHECK MODEL: SQ
TF–5	ELEC ROOM 126	TRANSFER AIR COOLING	350	0.5	1,550	1/8,120,1	MANUAL SPEED CONTROL	INLINE EXHAUST FAN: SIMILAR TO TF–1. MFR: GREENHECK MODEL: SQ
TF–6	ELEC ROOM 256	TRANSFER AIR COOLING	200	0.5	1,550	1/12,120,1	MANUAL SPEED CONTROL	INLINE EXHAUST FAN: SIMILAR TO TF–1. MFR: GREENHECK MODEL: SQ
TF–7	ELEC ROOM 202	TRANSFER AIR COOLING	200	0.5	1,550	1/12,120,1	MANUAL SPEED CONTROL	INLINE EXHAUST FAN: SIMILAR TO TF–1. MFR: GREENHECK MODEL: SQ

VAV BOX SCHEDULE

VAV–NUMBER	AHU	ROOM DESCRIPTION	MIN CFM	MAX HTG. CFM	MAX COOL. CFM	MIN EAT (DEG F)	MAX LAT (DEG F)	MAX APD (IN WC) (2)	COIL MBH (1)	COIL GPM	COIL PD (FT WC)	REMARKS (3)
VAV–301	AHU–3	MUSEUM 104 (1 OF 6)	5,000	5,000	5,000	55	70	0.3	81.4	6.0	3.0	24"X16" INLET (F.O.), 24 X 18 OUTLET, SEPARATE COIL @ 60W X 24H FINAL SIZING PENDING TI DESIGN.
VAV–302	AHU–3	MUSEUM 104 (2 OF 6)	5,000	5,000	5,000	55	68	0.3	73.1	6.0	3.0	24"X16" INLET (F.O.), 24 X 18 OUTLET, SEPARATE COIL @ 60W X 24H FINAL SIZING PENDING TI DESIGN.
VAV–303	AHU–3	MUSEUM 104 (3 OF 6)	5,000	5,000	5,000	55	71	0.3	88.5	6.0	3.0	24"X16" INLET (F.O.), 24 X 18 OUTLET, SEPARATE COIL @ 60W X 24H FINAL SIZING PENDING TI DESIGN.
VAV–304	AHU–3	MUSEUM 104 (4 OF 6)	5,000	5,000	5,000	55	72	0.3	93.2	6.0	3.0	24"X16" INLET (F.O.), 24 X 18 OUTLET, SEPARATE COIL @ 60W X 24H FINAL SIZING PENDING TI DESIGN.
VAV–305	AHU–3	MUSEUM 104 (5 OF 6)	5,000	5,000	5,000	55	70	0.3	81.4	6.0	3.0	24"X16" INLET (F.O.), 24 X 18 OUTLET, SEPARATE COIL @ 60W X 24H FINAL SIZING PENDING TI DESIGN.
VAV–306	AHU–3	MUSEUM 104 (6 OF 6)	5,000	5,000	5,000	55	70	0.3	81.4	6.0	3.0	24"X16" INLET (F.O.), 24 X 18 OUTLET, SEPARATE COIL @ 60W X 24H FINAL SIZING PENDING TI DESIGN.
VAV–307	AHU–3	PROCESSING 128	2,000	2,000	2,000	55	70	0.3	32.6	2.0	3.0	14" INLET,20 X 17.5 OUTLET, SEPARATE COIL @ 44W X 18H
VAV–401A	AHU–4	READING ROOM 200	4,200	4,200	4,200	55	72	0.3	77.5	6.0	3.0	24"X16" INLET (F.O.), 24 X 18 OUTLET, SEPARATE COIL @ 60W X 24H
VAV–401B	AHU–4	READING ROOM 200	4,200	4,200	4,200	55	72	0.3	77.5	6.0	3.0	24"X16" INLET (F.O.), 24 X 18 OUTLET, SEPARATE COIL @ 60W X 24H
VAV–402A	AHU–4	RESEARCH ROOM 201	1,450	1,450	1,450	55	72	0.1	26.7	2.0	3.0	12" INLET,16 X 15 OUTLET, SEPARATE COIL @ 24W X 18H
VAV–402B	AHU–4	RESEARCH ROOM 201	1,450	1,450	1,450	55	72	0.1	26.7	2.0	3.0	12" INLET,16 X 15 OUTLET, SEPARATE COIL @ 24W X 18H
VAV–403	AHU–4	STAFF OFFICES 203	800	800	2,200	55	72	0.1	14.8	1.0	3.0	14" INLET,20 X 17.5 OUTLET, SEPARATE COIL @ 44W X 18H
VAV–404	AHU–4	STAFF OFFICES 203	1,000	1,000	2,600	55	69	0.1	15.6	1.0	3.0	14" INLET,20 X 17.5 OUTLET, SEPARATE COIL @ 44W X 18H
VAV–405	AHU–4	STAFF OFFICES 203	1,100	1,100	3,100	55	72	0.1	20.4	1.5	3.0	16" INLET, 24 X 18 OUTLET, SEPARATE COIL @ 38W X 24H
VAV–406	AHU–4	OFFICES 204/205	200	200	200	55	82	0.1	5.9	0.50	3.0	6" INLET, 12 X 8 OUTLET, SEPARATE COIL @ 12W X 8H
VAV–407	AHU–4	OFFICES 207/208	200	200	200	55	83	0.1	6.0	0.50	3.0	6" INLET, 12 X 8 OUTLET, SEPARATE COIL @ 12W X 8H
VAV–408	AHU–4	PROCESS 210/PROJ 212	1,200	1,200	1,200	55	82	0.1	35.5	2.5	3.0	10" INLET, 14 X 12.5 OUTLET, SEPARATE COIL @ 20W X 17–1/2H
VAV–409	AHU–4	STAFF OFF/PROJ 213 & 214	1,400	1,400	1,400	55	85	0.1	45.7	3.5	3.0	12" INLET,16 X 15 OUTLET, SEPARATE COIL @ 24W X 18H
VAV–410	AHU–4	MAIL 216	750	750	750	55	85	0.1	24.4	2.0	3.0	8" INLET, 12 X 10 OUTLET, SEPARATE COIL @ 16W X 15H
VAV–411	AHU–4	OFFICE 218/CORR 219	500	500	500	55	85	0.1	16.3	1.5	3.0	8" INLET, 12 X 10 OUTLET, SEPARATE COIL @ 16W X 15H
VAV–412	AHU–4	PROJECTS 220	250	250	250	55	83	0.1	7.6	0.50	3.0	6" INLET, 12 X 8 OUTLET, SEPARATE COIL @ 12W X 8H
VAV–413	AHU–4	PROJECTS 221	250	250	250	55	83	0.1	7.6	0.50	3.0	6" INLET, 12 X 8 OUTLET, SEPARATE COIL @ 12W X 8H
VAV–414	AHU–4	ELEC RECORDS 222	350	350	350	55	85	0.1	11.4	1.0	3.0	6" INLET, 12 X 8 OUTLET, SEPARATE COIL @ 12W X 8H
VAV–415	AHU–4	CAMERA ROOM 223	250	250	250	55	84	0.1	7.8	0.50	3.0	6" INLET, 12 X 8 OUTLET, SEPARATE COIL @ 12W X 8H
VAV–416	AHU–4	GIFT SHOP	1,000	1,000	1,000	55	72	0.1	18.4	1.5	3.0	10" INLET, 14 X 12.5 OUTLET, SEPARATE COIL @ 20W X 17–1/2H
VAV–417	AHU–4	MARQUIS 112	2,000	2,000	2,000	55	72	0.1	7.4	0.50	3.0	14" INLET,20 X 17.5 OUTLET, SEPARATE COIL @ 44W X 18H
VAV–418	AHU–4	RECEPTION 106	2,600	2,600	2,600	55	68	0.1	35.4	2.5	3.0	14" INLET,20 X 17.5 OUTLET, SEPARATE COIL @ 44W X 18H
VAV–501	AHU–5	LECTURE HALL 154	1,750	1,750	1,750	55	72	0.1	32.3	2.5	3.0	12" INLET,16 X 15 OUTLET, SEPARATE COIL @ 24W X 18H
VAV–502	AHU–5	LECTURE HALL 154	1,750	1,750	1,750	55	72	0.1	32.3	2.5	3.0	12" INLET,16 X 15 OUTLET, SEPARATE COIL @ 24W X 18H
VAV–503	AHU–5	CONTROL ROOM 153	450	450	450	55	70	0.1	7.5	0.50	3.0	8" INLET, 12 X 10 OUTLET, SEPARATE COIL @ 16W X 15H
VAV–504	AHU–5	VOLUNTEER 152	550	550	550	55	68	0.1	7.5	0.50	3.0	8" INLET, 12 X 10 OUTLET, SEPARATE COIL @ 16W X 15H
VAV–505	AHU–5	LOBBY 101	4,500	4,500	4,500	55	71	0.3	79.2	6.0	3.0	24"X16" INLET (F.O.), 24 X 18 OUTLET, SEPARATE COIL @ 60W X 24H
VAV–506	AHU–5	CLASSROOM 113	1,400	1,400	1,400	55	72	0.1	25.8	2.0	3.0	12" INLET,16 X 15 OUTLET, SEPARATE COIL @ 24W X 18H
VAV–507	AHU–5	MUSEUM OFFICES 141	700	700	700	55	72	0.1	12.9	1.0	3.0	8" INLET, 12 X 10 OUTLET, SEPARATE COIL @ 16W X 15H
VAV–508	AHU–5	SECURITY 138	150	150	150	55	72	0.1	2.8	0.50	3.0	6" INLET, 12 X 8 OUTLET, SEPARATE COIL @ 12W X 8H
VAV–509	AHU–5	MULTIPURPOSE 262	1,300	1,300	1,300	55	72	0.1	24.0	2.0	3.0	12" INLET,16 X 15 OUTLET, SEPARATE COIL @ 24W X 18H
VAV–510	AHU–5	CONFERENCE 255	650	650	650	55	72	0.1	12.0	1.0	3.0	8" INLET, 12 X 10 OUTLET, SEPARATE COIL @ 16W X 15H
VAV–511	AHU–5	OFFICE 254	300	300	300	55	72	0.1	5.5	0.50	3.0	6" INLET, 12 X 8 OUTLET, SEPARATE COIL @ 12W X 8H
VAV–512	AHU–5	OFFICE 253	200	200	200	55	72	0.1	3.7	0.50	3.0	6" INLET, 12 X 8 OUTLET, SEPARATE COIL @ 12W X 8H
VAV–513	AHU–5	ADMIN 247	500	500	500	55	84	0.1	15.5	1.0	3.0	8" INLET, 12 X 10 OUTLET, SEPARATE COIL @ 16W X 15H
VAV–514	AHU–5	OFFICE 252	200	200	200	55	72	0.1	3.7	0.50	3.0	6" INLET, 12 X 8 OUTLET, SEPARATE COIL @ 12W X 8H
VAV–515	AHU–5	OFFICES 250/251	400	400	400	55	72	0.1	7.4	0.50	3.0	6" INLET, 12 X 8 OUTLET, SEPARATE COIL @ 12W X 8H
VAV–516	AHU–5	OFFICE 246	500	500	500	55	85	0.1	16.4	1.5	3.0	8" INLET, 12 X 10 OUTLET, SEPARATE COIL @ 16W X 15H
VAV–517	AHU–5	OFFICES 248/249	400	400	400	55	72	0.1	7.4	0.50	3.0	6" INLET, 12 X 8 OUTLET, SEPARATE COIL @ 12W X 8H
VAV–518	AHU–5	UPPER LOBBY	3,000	3,000	3,000	55	72	0.1	55.3	4.0	3.0	16" INLET, 24 X 18 OUTLET, SEPARATE COIL @ 38W X 24H
VAV–519	AHU–5	CONFERENCE 245	500	500	500	55	80	0.1	13.7	1.0	3.0	8" INLET, 12 X 10 OUTLET, SEPARATE COIL @ 16W X 15H
VAV–520	AHU–5	CORRIDOR 241	700	700	700	55	92	0.1	28.4	2.0	3.0	12" INLET,16 X 15 OUTLET, SEPARATE COIL @ 24W X 18H
VAV–521	AHU–5	ISOLATION 238	500	500	500	55	69	0.1	7.5	0.50	3.0	8" INLET, 12 X 10 OUTLET, SEPARATE COIL @ 16W X 15H
VAV–522	AHU–5	MICROGRAPHICS 234	1,500	1,500	1,500	55	69	0.1	23.3	2.0	3.0	12" INLET,16 X 15 OUTLET, SEPARATE COIL @ 24W X 18H
VAV–523	AHU–5	STUDIO 232	200	200	200	55	82	0.1	5.9	0.50	3.0	6" INLET, 12 X 8 OUTLET, SEPARATE COIL @ 12W X 8H
VAV–524	AHU–5	STUDIO 233	200	200	200	55	80	0.1	5.5	0.50	3.0	6" INLET, 12 X 8 OUTLET, SEPARATE COIL @ 12W X 8H
VAV–525	AHU–5	DARKROOM 228	300	300	300	55	83	0.1	9.0	1.0	3.0	6" INLET, 12 X 8 OUTLET, SEPARATE COIL @ 12W X 8H
VAV–526	AHU–5	DARKROOM 229	300	300	300	55	81	0.1	8.4	1.0	3.0	6" INLET, 12 X 8 OUTLET, SEPARATE COIL @ 12W X 8H
VAV–527	AHU–5	FILM DUPLICATION 230	300	300	300	55	83	0.1	9.1	1.0	3.0	6" INLET, 12 X 8 OUTLET, SEPARATE COIL @ 12W X 8H
VAV–528	AHU–5	FILM DUPLICATION 231	400	400	400	55	75	0.1	8.6	1.0	3.0	6" INLET, 12 X 8 OUTLET, SEPARATE COIL @ 12W X 8H
VAV–529	AHU–5	COFFEE BAR 161	1,100	1,100	2,000	55	78	0.1	27.4	2.0	3.0	14" INLET,20 X 17.5 OUTLET, SEPARATE COIL @ 44W X 18H
VAV–601	AHU–6	P–CONS LAB 144/OFF 142	700	1,600	1,600	55	75	0.1	34.7	2.5	3.0	12" INLET,16 X 15 OUTLET, SEPARATE COIL @ 24W X 18H
VAV–602	AHU–6	CHEMISTRY 147	450	1,250	1,250	55	75	0.1	27.1	2.0	3.0	10" INLET, 14 X 12.5 OUTLET, SEPARATE COIL @ 20W X 17–1/2H
VAV–603	AHU–6	LAB SUPPORT 148	100	100	100	55	75	0.1	2.2	0.50	3.0	4" INLET, 12 X 8 OUTLET, SEPARATE COIL @ 12W X 8H
VAV–604	AHU–6	LAB SUPPLIES 149	150	300	300	55	75	0.1	6.5	0.50	3.0	6" INLET, 12 X 8 OUTLET, SEPARATE COIL @ 12W X 8H
VAV–605	AHU–6	O–CONS LAB 150/OFF 151	500	1,200	1,200	55	75	0.1	26.0	2.0	3.0	10" INLET, 14 X 12.5 OUTLET, SEPARATE COIL @ 20W X 17–1/2H

(1) REHEAT COIL PERFORMANCE SCHEDULED AT HEATING CFM.
(2) AIR SIDE PRESSURE DROP FOR VAV ASSEMBLY TO INCLUDE REHEAT COIL AND ACOUSTICALLY LINED DISCHARGE PLENUM
(3) BASIS OF DESIGN: TITUS DESV

AIR INLET/OUTLET SCHEDULE

SYMBOL	SCFM (MAX)	MAX NC	MAX APD (IN WC)	ACTIVE FACE SIZE (INCHES)	DUCT SIZE (INCHES)	BASIS OF DESIGN	REMARKS
SA	100 200 300 400 500 700	10 16 19 19 18 17	0.04 0.06 0.08 0.09 0.07 0.06	9X9 12X12 12X12 12X12 15X15 18X18	6 8 10 12 14 16	TITUS TDCA–AA	CEILING DIFFUSER: ALUMINUM, 24X24 MODULE, ADJUSTABLE PATTERN, ROUND NECK, COORDINATE BORDER (LAY–IN OR SURFACE MOUNT) WITH RCP, COORDINATE DISCHARGE PATTERN WITH FLOOR PLANS.
SB	200 500 1800 8500	– 12 22 39	0.04 0.04 0.05 0.18	16X8 20X14 38X18 38X50	14X6 18X12 36X16 36X48	TITUS 301FL	WALL MOUNTED LOUVERED SUPPLY GRILLE: ALUMINUM, 22 DEGREE SINGLE DEFLECTION, BLADES PARALLEL TO LONG DIMENSION, 3/4" BLADE SPACING, SURFACE MOUNT.
SC	700	13	0.05	20X12	N/A	TITUS DL	DUCT MOUNTED SUPPLY GRILLE: ALUMINUM DRUM AND ALUMINUM SURFACE MOUNT BORDER, OPPOSED–BLADE DAMPER.
SD	170 CFM/ L.F.	26	0.03	VARIES SEE DWGS	VARIES SEE DWGS	TITUS CT–581	LINEAR BAR DIFFUSER: ALUMINUM, 1/8" BARS, 1/2" BAR SPACING, 15 DEGREE DEFLECTION, CORE ONLY.
SE	120 CFM/ L.F.	12	0.04	VARIES SEE DWGS	VARIES SEE DWGS	TITUS CT–480	LINEAR BAR DIFFUSER: ALUMINUM, 1/8" BARS, 1/4" BAR SPACING, 0 DEGREE DEFLECTION, BRUSHED ALUMINUM HEAVY DUTY FLOOR MOUNT FRAME W/ OBD & CORE CLIPS.
SF	320	10	0.04	6"X228" (TOTAL) 6"X48" (ACTIVE SECTIONS)	12 (OVAL)	TITUS FL–10–JT W/ FBPI–10	CEILING FLOW BAR DIFFUSER: ALUMINUM, JET THROW PATTERN CONTROLLER, 2 SLOTS (2CRA), 1" SLOT WIDTH, HIDDEN FLANGE INSTALLATION, CUSTOM CONSTRUCTED INSULATED PLENUM FOR ACTIVE SECTIONS.
SG	400	28	0.167	24X24	10	TITUS RADIATEC–AL	CRITICAL ENVIRONMENT DIFFUSER: HIGH VOLUME, LOW VELOCITY, RADIAL DIFFUSION. ALUMINUM FACE AND BACKPAN, STD WHITE COLOR.
SH	400 500	16 17	0.10 0.10	20X10 20X12	18X8 18X10	TITUS S300FS	DUCT MOUNTED GRILLE: DOUBLE DEFLECTION, ALUMINUM, SHORT FRONT BLADES, 3/4 INCH BLADE SPACING, AIR SCOOP DAMPER.
SI	350 500	25 20	0.04 0.03	10.5 12.5 DIAMETER	10 12	TITUS XC–310	ROUND CEILING MOUNTED DIFFUSER: STEEL, OPTIONAL HORIZONAL OR VERTICAL THROW PATTERN.
SJ	280	19	0.09	3X48	12	TITUS FL–10–JT W/ FBPI–10	CEILING FLOW BAR DIFFUSER: ALUMINUM, JET THROW PATTERN CONTROLLER, 1 SLOT, 1" SLOT WIDTH, HIDDEN FLANGE INSTALLATION, CUSTOM CONSTRUCTED INSULATED PLENUM.
RA	500 1,000	– 13	0.04 0.03	12X24 24X24	–	TITUS PAR–AA	PERFORATED RETURN GRILLE: ALUMINUM, 3/16" HOLES ON STAGGARD CENTERS.
RB	300 500 800 2,000 6,000	18 – 14 26 27	0.10 0.04 0.07 0.08 0.07	16X8 18X12 16X16 36X14 36X42	–	TITUS 350FL	WALL MOUNTED LOUVERED RETURN GRILLE: ALUMINUM, 35 DEGREE DEFLECTION, BLADES PARALLEL TO LONG DIMENSION, 3/4" BLADE SPACING, SURFACE MOUNT.
RC	180 CFM/ L.F.	25	0.03	VARIES SEE DWGS	–	TITUS CT–580	LINEAR BAR DIFFUSER: ALUMINUM, 1/8" BARS, 1/2" BAR SPACING, 0 DEGREE DEFLECTION. CORE ONLY (NO FRAME OR BORDER).
RD	480	20	0.09	6"X228" (TOTAL) 6"X48" (ACTIVE SECTIONS)	12 (OVAL)	TITUS FL–10–JT W/ FBPI–10	CEILING FLOW BAR DIFFUSER: ALUMINUM, JET THROW PATTERN CONTROLLER, 2 SLOT, 1" SLOT WIDTH, HIDDEN FLANGE INSTALLATION, CUSTOM CONSTRUCTED INSULATED PLENUM FOR ACTIVE SECTIONS.
RE	250	17	0.06	3X48	–	TITUS FL–10–JT	CEILING FLOW BAR DIFFUSER: ALUMINUM, JET THROW PATTERN CONTROLLER, 1 SLOT, 1" SLOT WIDTH, HIDDEN FLANGE INSTALLATION.
EA	200 300 400 500 600	17 18 17 19 20	0.13 0.08 0.09 0.08 0.07	24X24 24X24 24X24 24X24 24X24	8 10 12 14 16	TITUS PAR–AA	PERFORATED EXHAUST GRILLE: ALUMINUM, 24X24 MODULE, 3/16" HOLES ON STAGGARD CENTERS, SQUARE TO ROUND TRANSITION.
TA	400 500	29 26	0.05 0.03	18X14 24X16	N/A	TITUS CT–700L	DOOR MOUNTED TRANSFER GRILLE: ALUMINUM, SIGHT PROOF 77 DEG DEFLECTION V–BLADES, COUNTERSUNK SCREWS, SURFACE MOUNT.

CONSULTANT NAME :: AMC ENGINEERS
ECI/HYER :: THA ARCHITECTURE
DEPARTMENT OF EDUCATION & EARLY DEVELOPMENT
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
AKSAS PROJECT NO. 68816

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REVISIONS:

CONSTRUCTION DOCUMENTS

05.01.2012

SCHEDULES

M006

COLD STORAGE EQUIPMENT SCHEDULE

SYMBOL	LOCATION	MOTOR (HP,V,PH)	DESCRIPTION
C-1	ROOF	480/3	OUTDOOR AIR COOLED CONDENSING UNIT: SERVES E-1. 23,500 BTU/H HEAT REJECTION CAPACITY. MFR: KOLPAK. MODEL: PR-249MZ-OP.
C-2	ROOF	480/3	OUTDOOR AIR COOLED CONDENSING UNIT: SERVES E-2. 23,500 BTU/H HEAT REJECTION CAPACITY. MFR: KOLPAK. MODEL: PR-249MZ-OP.
C-3	ROOF	480/3	OUTDOOR AIR COOLED CONDENSING UNIT: SERVES E-3. 23,500 BTU/H HEAT REJECTION CAPACITY. MFR: KOLPAK. MODEL: PR-249MZ-OP.
E-1	40 DEG. STORAGE 227A	120/1	AIR DEFROST UNIT COOLER: 1,710 CFM, 10,400 BTUH CAPACITY AT 10 DEG TD. MFR: BOHN. MODEL: ADT-104AJ.
E-2	50 DEG. STORAGE 227B	120/1	AIR DEFROST UNIT COOLER: 1,710 CFM, 10,400 BTUH CAPACITY AT 10 DEG TD. MFR: BOHN. MODEL: ADT-104AJ.
E-3	0 DEG. STORAGE 227C	120/1	AIR DEFROST UNIT COOLER: 1,710 CFM, 10,400 BTUH CAPACITY AT 10 DEG TD. MFR: BOHN. MODEL: ADT-104AJ.
DH-1	40 DEG. STORAGE 227A	1400 W,120,1	DESSICANT DEHUMIDIFIER UNIT: 50 CFM PROCESS AIR, 15 CFM REACTIVATION AIR. (620 BTU HEAT GAIN), 2-5 MM SILICA GEL DESSICANT. PROCESS IN/OUT – 4" DIA, REACTIVATION IN/OUT: 8"X8"/ 4" DIA., MERV 8 REPLACEABLE FILTER. APPROXIMATE OPERATING WEIGHT: 85 LBS EQUIPMENT Ip = 1.0 MFR: INNOVATIVE AIR TECHNOLOGIES MODEL: IAT-50.
DH-2	50 DEG. STORAGE 227B	1400 W,120,1	DESSICANT DEHUMIDIFIER UNIT: 50 CFM PROCESS AIR, 15 CFM REACTIVATION AIR. (620 BTU HEAT GAIN), 2-5 MM SILICA GEL DESSICANT. PROCESS IN/OUT: 4" DIA, REACTIVATION IN/OUT: 8"X8"/ 4" DIA., MERV 8 REPLACEABLE FILTER. APPROXIMATE OPERATING WEIGHT: 85 LBS EQUIPMENT Ip = 1.0 MFR: INNOVATIVE AIR TECHNOLOGIES MODEL: IAT-50.
DH-3	0 DEG. STORAGE 227C	3850 W,480,3	DESSICANT DEHUMIDIFIER UNIT: 150 CFM PROCESS AIR, 45 CFM REACTIVATION AIR. (2514 BTU HEAT GAIN), 2-5 MM SILICA GEL DESSICANT. PROCESS IN/OUT: 8"/ 6" DIA, REACTIVATION IN/OUT: 8"X8"/ 4" DIA., MERV 8 REPLACEABLE FILTER. APPROXIMATE OPERATING WEIGHT: 190 LBS EQUIPMENT Ip = 1.0 MFR: INNOVATIVE AIR TECHNOLOGIES MODEL: IAT-150.

EXHAUST AIR VALVE SCHEDULE

VALVE NUMBER	ROOM NUMBER	DESCRIPTION	SERVICE DESCRIPTION	EXHAUST SYSTEM	MIN CFM	MAX CFM	MAX APD (IN WC)	CONTROL (1)	SPEED (2)	MATERIAL (3)	SIZE
EAV-301	120	FAN-AHU-3	GENERAL (RESTROOM) EXHAUST	EF-3	1,500	1,500	0.06	CV	SA	GS	12
EAV-302	120	FAN-AHU-3	GENERAL EXHAUST	EF-3	3,100	3,100	0.16	CV	SA	GS	14
EAV-401	224	CORRIDOR	GENERAL EXHAUST	EF-4	1,500	1,500	0.06	CV	SA	GS	12
EAV-402	225	FAN-AHU-4	GENERAL EXHAUST	EF-4	2,100	2,100	0.11	CV	SA	GS	12
EAV-501	230	FILM DUPLICATION	GENERAL ROOM EXHAUST	EF-5	200	400	0.51	RPC	SA	SS	6
EAV-502	230	FILM DUPLICATION	SNORKEL EXHAUST	EF-5	0	200	0.12	CV	FA	SS	6
EAV-503	229	DARKROOM	GENERAL ROOM EXHAUST	EF-5	200	400	0.51	RPC	SA	SS	6
EAV-504	229	DARKROOM	SNORKEL EXHAUST	EF-5	0	200	0.12	CV	FA	SS	6
EAV-505	228	DARKROOM	GENERAL ROOM EXHAUST	EF-5	200	400	0.51	RPC	SA	SS	6
EAV-506	228	DARKROOM	SNORKEL EXHAUST	EF-5	0	200	0.12	CV	FA	SS	6
EAV-507	231	FILM DUPLICATION	SNORKEL EXHAUST	EF-5	200	200	0.12	CV	FA	SS	6
EAV-508	231	FILM DUPLICATION	SNORKEL EXHAUST	EF-5	200	200	0.12	CV	FA	SS	6
EAV-509	242	FAN-AHU-5&6	GENERAL (RESTROOM) EXHAUST	EF-5	1,000	1,000	0.14	CV	SA	GS	10
EAV-510	242	FAN-AHU-5&6	GENERAL (RESTROOM) EXHAUST	EF-5	2,150	2,150	0.10	CV	SA	GS	12
EAV-601	142/144	P-CONS LAB/OFFICE	GENERAL ROOM EXHAUST	EFU-6	550	1,650	0.37	LRC	FA	GS	10
EAV-602	144	P-CONS LAB	SNORKEL EXHAUST	EFU-6	0	200	0.12	CV	FA	SS	6
EAV-603	147	CHEMISTRY	FUME HOOD EXHAUST	EFU-6	500	1,300	0.25	FHC	FA	SS	10
EAV-604	147	CHEMISTRY	FLAMMABLE STORAGE EXHAUST	EFU-6	100	100	0.10	CV	FA	SS	4
EAV-605	148	LAB SUPPORT	GENERAL ROOM EXHAUST	EFU-6	150	300	0.32	RPC	SA	GS	6
EAV-606	149	LAB SUPPLIES	GENERAL ROOM EXHAUST	EFU-6	200	200	0.12	RPC	SA	GS	6
EAV-607	150/151	O-CONS LAB/OFFICE	GENERAL ROOM EXHAUST	EFU-6	200	1,300	0.25	LRC	FA	GS	10
EAV-608	150	O-CONS LAB	SNORKEL EXHAUST	EFU-6	0	200	0.12	CV	FA	SS	6
EAV-609	150	O-CONS LAB	SNORKEL EXHAUST	EFU-6	0	200	0.12	CV	FA	SS	6

(1) RPC = ROOM PRESSURIZATION CONTROLLER. LRC = LAB ROOM CONTROLLER. FHC = FUME HOOD CONTROLLER,
PXCC = PROGRAMMABLE CONTROLLER, CV =CONSTANT VOLUME.
(2) FA = FAST SPEED ACTUATOR. SA = STANDARD SPEED ACTUATOR.
(3) SS = STAINLESS STEEL CONSTRUCTION. GS = GALVANIZED STEEL CONSTRUCTION.

LOUVER SCHEDULE

SYMBOL	UNIT AND USAGE	SCFM	SIZE	MIN. FREE AREA (SF)	MAX. FREE AREA VEL. (FPM)	MAX APD (IN WC)	REMARKS
LV-1	SCF-1A,B OSA INTAKE	11,900	96"H X 66"W (TOTAL SIZE) 72"H X 66"W (ACTIVE)	14.84	840	0.11	STORM RESISTANT FIXED BLADE LOUVER: PROVIDE LOUVER IN TWO EQUAL SECTIONS. BLANK OFF UNUSED PORTION OF LOUVER. REFER TO SPECIFICATION SECTION 08 44 00.
LV-2	SCF-2 & 3 OSA INTAKE	4,000	48"H X 66"W (TOTAL SIZE) 30"H X 66"W (ACTIVE)	6.03	663	0.08	SIMILAR TO LV-1. PROVIDE LOUVER IN ONE SECTION. BLANK OFF UNUSED PORTION OF LOUVER.
LV-3	COMBUSTION AIR INTAKE/ SCF-2 & 3 RELIEF	4,000	48"H X 66"W (TOTAL SIZE) 30"H X 66"W (ACTIVE)	6.03	663	0.08	SIMILAR TO LV-1. PROVIDE LOUVER IN ONE SECTION. BLANK OFF UNUSED PORTION OF LOUVER.
LV-4	AHU-6 OSA INTAKE	4,500	96"H X 240"W (TOTAL SIZE) 30"H X 90"W (ACTIVE)	8.11	555	0.06	SIMILAR TO LV-1. PROVIDE LOUVER IN EIGHT SECTIONS. BLANK OFF UNUSED PORTIONS OF LOUVER.
LV-5	EF-3 EXHAUST AIR	1,000	48"H X 66"W (TOTAL SIZE) 24"H X 24"W (ACTIVE)	1.59	629	0.08	SIMILAR TO LV-1. PROVIDE LOUVER IN 1 SECTION. BLANK OFF UNUSED PORTIONS OF LOUVER.
LV-6	CUH-5A/5B OSA INTAKE	200	18"H X 60"W (TOTAL SIZE) 18"H X 18"W (ACTIVE)	0.81	250	0.01	SIMILAR TO LV-1. PROVIDE LOUVER IN ONE SECTION. BLANK OFF UNUSED PORTIONS OF LOUVER.

WOODWORKING EQUIPMENT SCHEDULE

SYMBOL	WORKSHOP STATION NUMBER	ITEM	COLLECTOR OUTLET SIZE (IN)	CFM	BRANCH DUCT SIZE (IN)	MOTOR (HP,V,PH)	REMARKS
DC-1	--	DUST COLLECTOR	8	1,500	8	5,480,3	SELF CONTAINED DUST COLLECTION SYSTEM: FUNNEL BOTTOM WITH 55 GALLON DUST COLLECTION DRUM, FILTER CARTRIDGE SECTION, TEFC FAN MOTOR, 8" DIA INLET, EXPLOSION VENTS, FINAL FILTER, SILENCER. OPERATING WEIGHT: 650 LBS EQUIPMENT Ip = 1.0 MFR: AAF MODEL: CYCLONE AAF-CY20-5-D1
FS-1	--	FLOOR SWEEP	5	550	5	--	FLOOR SWEEP: 5" WITH BLAST GATE.
CS-1	--	COUNTER SWEEP	4	350	4	--	COUNTER SWEEP: 4" WITH BLAST GATE.
THE FOLLOWING WOOD/METAL WORKING EQUIPMENT WAS SELECTED AS BASIS OF DESIGN. IF THE ACTUAL EQUIPMENT SELECTED IS MODIFIED FROM THIS LIST OR IF THE EQUIPMENT IS RELOCATED WITHIN THE SHOP AREAS, THE SAWDUST COLLECTION SYSTEM AND ELECTRICAL SYSTEM DESIGNS MUST BE REEVALUATED AND REDESIGNED ACCORDINGLY.							
EQ-1	1	JOINER	4	350	4	1,120,1	6" JOINER: 66" INFEED/OUTFEED TABLES MFR: POWERMATIC MODEL: 54A
EQ-2	2	PLANER	4	785	6	3,208,1	PLANER: MFR: POWERMATIC MODEL: 15S
EQ-3	3	TABLE SAW	4	350	4	5,208,3	10" TABLE SAW MFR: POWERMATIC MODEL: PM2000
EQ-4	4	DRILL PRESS	–	0	–	1/120/1	18" VARIABLE-SPEED DRILL PRESS MFR: POWERMATIC MODEL: PM2800
EQ-5	5	DISC SANDER	4	350	4	2,208,1	20" DISC SANDER MFR: POWERMATIC MODEL: DS20
EQ-6	6	VERTICAL PANEL SAW	4	500	4	3,120,1 (13A)	8" VERTICAL PANEL SAW MFR: POWERMATIC MODEL: 511
EQ-7	7	BANDSAW	4	600	6	2,208,1	20" BANDSAW MFR: POWERMATIC MODEL: 2013
EQ-8	8	COMPOUND MITER SAW	2	300	4	16A,120,1	12" COMPOUND MITER SAW MFR: DEWALT MODEL: DWS780
EQ-9	9	BENCH GRINDER/BUFFER	–	0	–	16A,120,1	8" VARIABLE SPEED GRINDER/BUFFER MFR: DELTA MODEL: GR450
EQ-10	10	MULTI PROCESS WELDER	–	0	–	37A/208/1	MULTI PROCESS WELDER MFR: THERMAL ARC MODEL: 181i
EQ-11	11	METAL LATHE	–	0	–	1,120,1 (13.6A)	METAL BENCHTOP LATHE MFR: GRIZZLY MODEL: G0602
EQ-12	12	MILL DRILL PRESS	–	0	–	2/120/1 (18A)	MILL / DRILL PRESS COMBO MFR: GRIZZLY MODEL: G1006
EQ-13	13	METAL CUTOFF SAW	–	0	–	15A,120,1	14" CARBIDE CUTOFF SAW MFR: MILWAUKEE MODEL: 6190-20
EQ-14	14	METAL SURFACE GRINDER	–	0	–	3/4,120,1 (7.3A)	SURFACE GRINDER (6"X12") WITH STAND MFR: GRIZZLY MODEL: G5963
EQ-15	15	METAL BANDSAW	–	0	–	1-1/4,208,1 (4.8A)	14" CARBIDE CUTOFF SAW MFR: GRIZZLY MODEL: G0621X
EQ-16	16	SHEET METAL MACHINE	–	0	–	–	SHEET METAL MACHINE (3 IN 1) MFR: GRIZZLY MODEL: G0629

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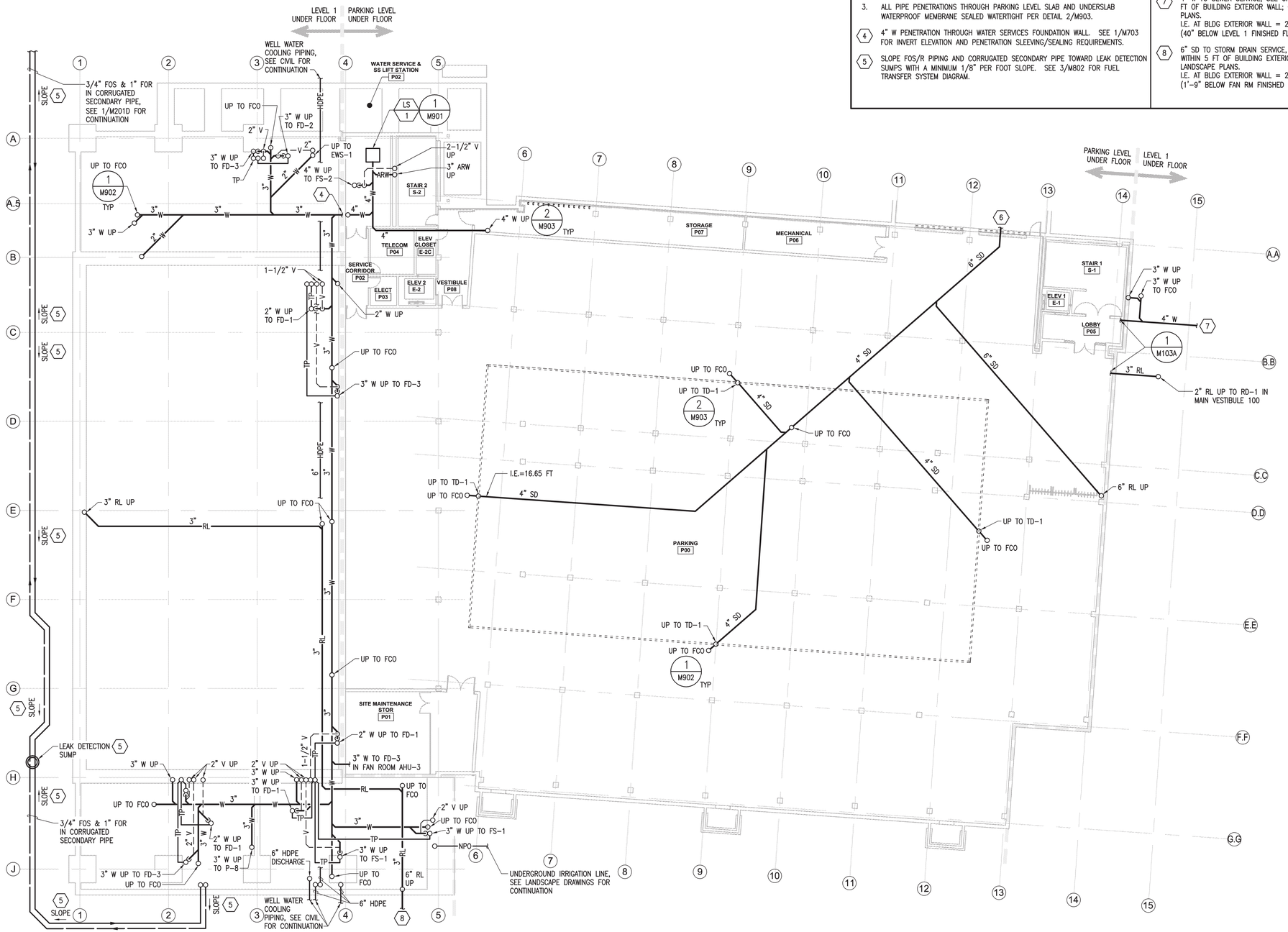
SCHEDULES

M007

SHEET NOTES

1. STORM DRAIN AND RAINLEADER PIPING UNDER PARKING LEVEL SLAB TO BE FUSION WELDED HDPE PIPE. SLOPE 1/8" PER FOOT.
2. WASTE AND VENT PIPING UNDER PARKING LEVEL SLAB TO BE FUSION WELDED HDPE PIPE. SLOPE WASTE LINES 1/4" PER FOOT.
3. ALL PIPE PENETRATIONS THROUGH PARKING LEVEL SLAB AND UNDERSLAB WATERPROOF MEMBRANE SEALED WATERTIGHT PER DETAIL 2/M903.
4. 4" W PENETRATION THROUGH WATER SERVICES FOUNDATION WALL. SEE 1/M703 FOR INVERT ELEVATION AND PENETRATION SLEEVING/SEALING REQUIREMENTS.
5. SLOPE FOS/R PIPING AND CORRUGATED SECONDARY PIPE TOWARD LEAK DETECTION SUMPS WITH A MINIMUM 1/8" PER FOOT SLOPE. SEE 3/M802 FOR FUEL TRANSFER SYSTEM DIAGRAM.
6. 6" SD TO STORM DRAIN LIFT STATION, SEE CIVIL FOR CONTINUATION. PROVIDE YCO WITHIN 5 FT OF BUILDING EXTERIOR WALL; COORDINATE LOCATION WITH CIVIL AND LANDSCAPE PLANS.
   I.E. AT BLDG EXTERIOR WALL = 14.7 FT
7. 4" W TO SEWER SERVICE, SEE CIVIL FOR CONTINUATION. PROVIDE YCO WITHIN 5 FT OF BUILDING EXTERIOR WALL; COORDINATE LOCATION WITH CIVIL AND LANDSCAPE PLANS.
   I.E. AT BLDG EXTERIOR WALL = 29.5 FT
   (40" BELOW LEVEL 1 FINISHED FLOOR)
8. 6" SD TO STORM DRAIN SERVICE, SEE CIVIL FOR CONTINUATION. PROVIDE YCO WITHIN 5 FT OF BUILDING EXTERIOR WALL; COORDINATE LOCATION WITH CIVIL AND LANDSCAPE PLANS.
   I.E. AT BLDG EXTERIOR WALL = 26.25 FT
   (1'-9" BELOW FAN RM FINISHED FLOOR)



1 M101 UNDER FLOOR PLAN – MECHANICAL

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

0 8' 16' 32' 48'

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UNDER FLOOR PLAN - MECHANICAL

M101

SHEET NOTES

1. SEAL DUCTWORK WHICH PENETRATES THROUGH FULL HEIGHT WALLS WITH ACOUSTICAL SEALANT SYSTEM; SEE DETAIL 2/M921. SEAL FLOOR/CEILING PENETRATIONS WITH ACOUSTICAL SEALANT SYSTEM; SEE DETAIL 4/M911. PROVIDE APPROPRIATE UL LISTED FIRESTOP SYSTEMS AT PENETRATIONS THROUGH RATED ASSEMBLIES.
2. MOUNT THERMOSTATS AT 54" AFF.

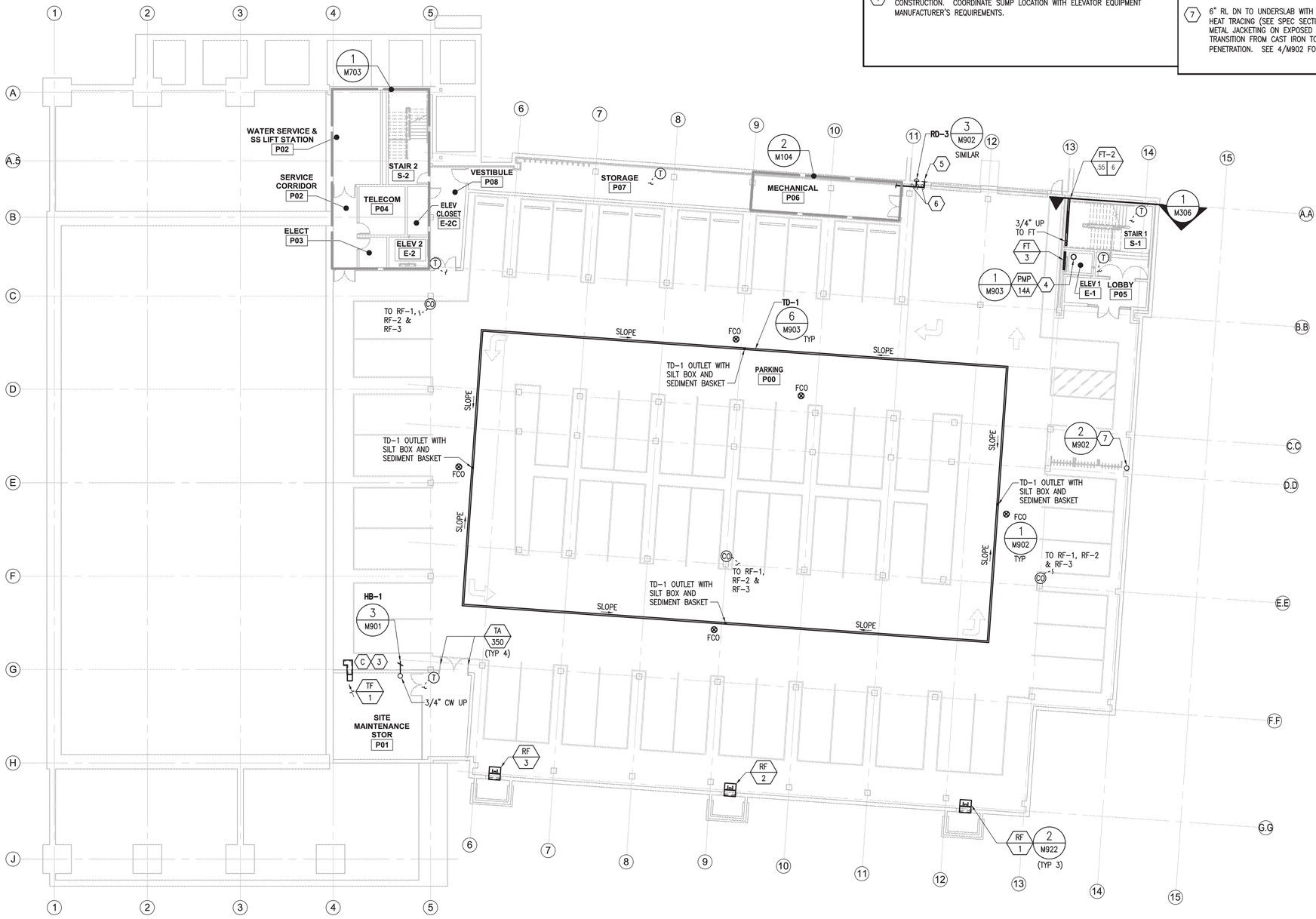
3. SEE DETAIL 3/M921 FOR ACOUSTICAL RETURN AIR TRANSFER ELBOW SIZING.

4. ELEVATOR SUMP PUMP IN ELEVATOR PIT SUMP; SEE STRUCTURAL FOR SUMP CONSTRUCTION. COORDINATE SUMP LOCATION WITH ELEVATOR EQUIPMENT MANUFACTURER'S REQUIREMENTS.

5. 2" ELEVATOR SUMP PUMP DISCHARGE TO BUILDING EXTERIOR WITH 45 DEG ELBOW TURNED DN. EXPOSED PIPE AND FITTINGS TO BE POLISHED CHROME OR STAINLESS STEEL.

6. 1-1/2" INSULATION WITH VAPOR BARRIER AND PROTECTIVE METAL JACKETING ON EXPOSED ORL AND PUMPED DISCHARGE LINES IN UNHEATED PARKING GARAGE SPACE. INSERTION TYPE HEAT TRACING (SEE SPEC SECTION 22 14 23) IN ORL LINE THROUGH UNHEATED PARKING GARAGE SPACE. EXTERNAL TYPE HEAT TRACING (SEE SPEC SECTION 22 14 00) ON PUMPED DISCHARGE LINE THROUGH UNHEATED PARKING GARAGE SPACE. LOCATE HEAT TRACE CONTROLLER/JUNCTION BOXES IN MECHANICAL RM P06. SEE 4/M902 FOR ORL HEAT TRACE CONNECTION DETAIL.

7. 6" RL DN TO UNDERSLAB WITH CLEANOUT AT BASE OF RISER. INSERTION TYPE HEAT TRACING (SEE SPEC SECTION 22 14 23) AND INSULATION WITH PROTECTIVE METAL JACKETING ON EXPOSED RISER THROUGH PARKING GARAGE LEVEL. TRANSITION FROM CAST IRON TO HDPE PIPE ABOVE PARKING GARAGE SLAB PENETRATION. SEE 4/M902 FOR RL HEAT TRACE CONNECTION DETAIL.



1 M102 PARKING FLOOR PLAN – MECHANICAL

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

0 8' 16' 32' 48'

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PARKING FLOOR PLAN - MECHANICAL

M102

1 M103 KEYPLAN – PARKING FLOOR SOFFIT – MECHANICAL

SCALE: 1/16" = 1'–0"

0 8' 16' 32' 48'

CONSULTANT NAME :: AMC ENGINEERS

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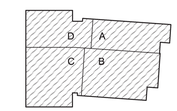

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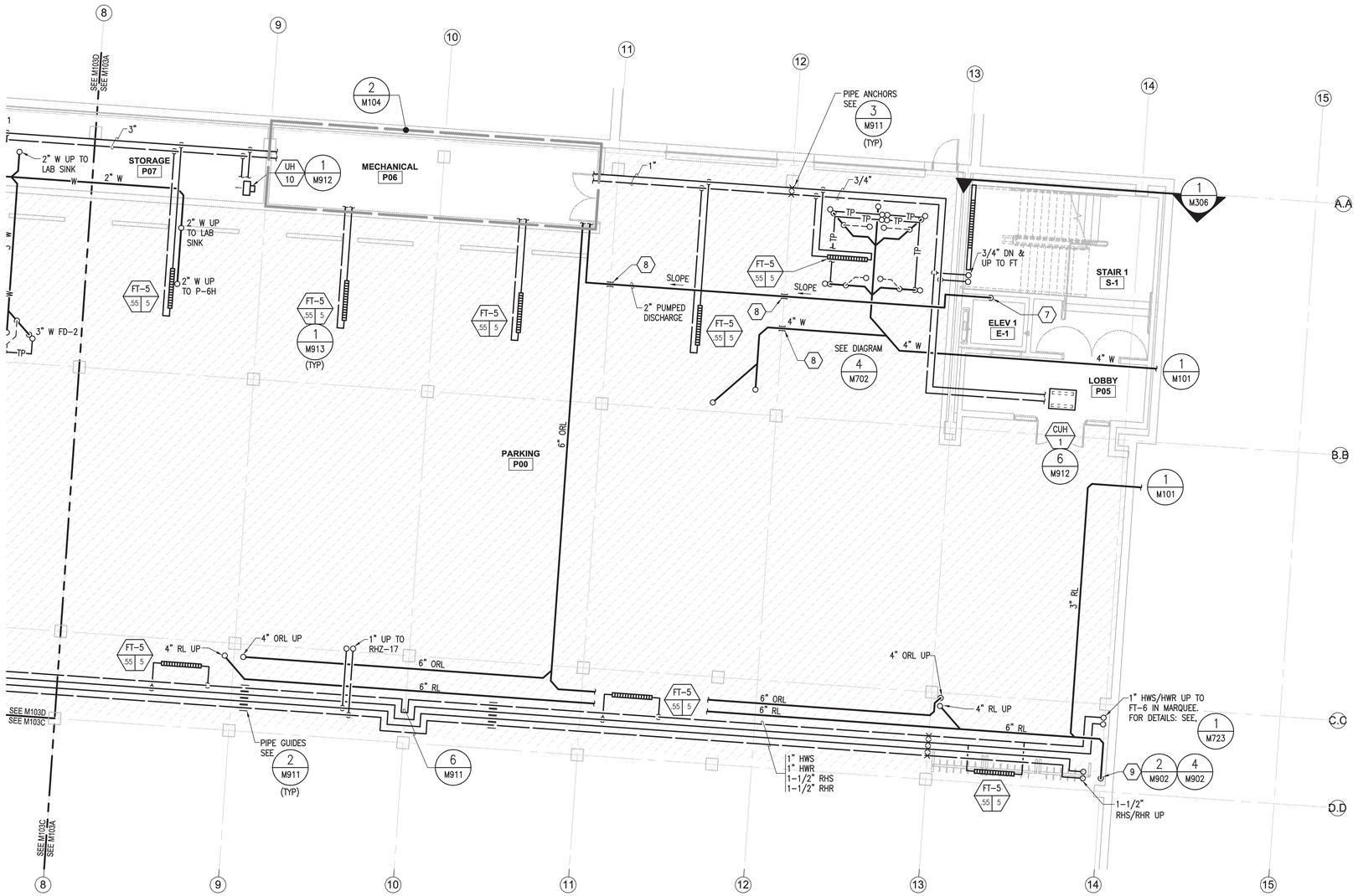
KEYPLAN - PARKING FLOOR SOFFIT - MECHANICAL

M103



SHEET NOTES

1. MINIMUM PIPE SIZE IS 3/4". TERMINAL DEVICE BRANCH PIPE SIZE IS 3/4" UNLESS OTHERWISE NOTED.
2. COORDINATE PIPE ROUTING WITH VENTILATION, FIRE PROTECTION, ELECTRICAL AND STRUCTURAL. STRUCTURAL CONDITIONS AND ABOVE-CEILING CLEARANCE LIMITATIONS REQUIRE CLOSE COORDINATION BETWEEN TRADES. IN GENERAL, ROUTE PIPING TO AVOID DUCTWORK. WHERE NECESSARY, ROUTE PIPING THROUGH JOISTS AND/OR PENETRATION IN STRUCTURAL BEAMS. COORDINATE WITH STRUCTURAL ENGINEER FOR APPROVAL OF PENETRATIONS IN STRUCTURE.
3. MOUNT THERMOSTATS AT 54" AFF.
4. WHERE COILS OR OTHER HYDRONIC EQUIPMENT AND ACCESSORIES REQUIRING MAINTENANCE ARE LOCATED ABOVE A HARD-LID CEILING, PROVIDE ACCESS DOORS WHICH MATCH THE CEILING RATING FOR PROPER MAINTENANCE FROM A SINGLE LOCATION.
5. PROVIDE MANUAL HIGH POINT VENTS, LOW POINT DRAINS (WITH CAPPED HOSE CONNECTIONS) AND SLOPE PIPING AS NECESSARY TO ALLOW FOR THE COMPLETE DRAINAGE OF THE HYDRONIC SYSTEM.
6. SEE DETAIL 4/M911 FOR TYPICAL PIPE PENETRATION THROUGH FLOOR OR WALL.

(7) 2" PUMPED DISCHARGE LINE DOWN TO PMP-14A, COORDINATE WITH ELEVATOR EQUIPMENT FOR ROUTING IN ELEVATOR SHAFT.

(8) SLEEVE THROUGH BEAM, COORDINATE WITH STRUCTURAL.

(9) 6" RL DN TO UNDERSLAB. INSERTION TYPE HEAT TRACING (SEE SPEC SECTION 22 14 23) AND INSULATION WITH PROTECTIVE METAL JACKETING ON EXPOSED RISER THROUGH PARKING GARAGE LEVEL. TRANSITION FROM CAST IRON TO HDPE PIPE ABOVE PARKING GARAGE SLAB PENETRATION.

1 / M103A PARKING FLOOR SOFFIT PLAN – NE – MECHANICAL

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

0 4' 8' 16' 24'

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PARKING FLOOR SOFFIT - NE - MECHANICAL

M103A

SHEET NOTES

1. MINIMUM PIPE SIZE IS 3/4". TERMINAL DEVICE BRANCH PIPE SIZE IS 3/4" UNLESS OTHERWISE NOTED.
2. COORDINATE PIPE ROUTING WITH VENTILATION, FIRE PROTECTION, ELECTRICAL AND STRUCTURAL. STRUCTURAL CONDITIONS AND ABOVE-CEILING CLEARANCE LIMITATIONS REQUIRE CLOSE COORDINATION BETWEEN TRADES. IN GENERAL, ROUTE PIPING TO AVOID DUCTWORK. WHERE NECESSARY, ROUTE PIPING THROUGH JOISTS AND/OR PENETRATION IN STRUCTURAL BEAMS. COORDINATE WITH STRUCTURAL ENGINEER FOR APPROVAL OF PENETRATIONS IN STRUCTURE.
3. MOUNT THERMOSTATS AT 54" AFF.
4. WHERE COILS OR OTHER HYDRONIC EQUIPMENT AND ACCESSORIES REQUIRING MAINTENANCE ARE LOCATED ABOVE A HARD-LID CEILING, PROVIDE ACCESS DOORS WHICH MATCH THE CEILING RATING FOR PROPER MAINTENANCE FROM A SINGLE LOCATION.
5. PROVIDE MANUAL HIGH POINT VENTS, LOW POINT DRAINS (WITH CAPPED HOSE CONNECTIONS) AND SLOPE PIPING AS NECESSARY TO ALLOW FOR THE COMPLETE DRAINAGE OF THE HYDRONIC SYSTEM.
6. SEE DETAIL 4/M911 FOR TYPICAL PIPE PENETRATION THROUGH FLOOR OR WALL.

1 / M103C PARKING FLOOR SOFFIT PLAN – SW – MECHANICAL

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

0 4' 8' 16' 24'

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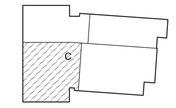

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PARKING FLOOR SOFFIT - SW - MECHANICAL

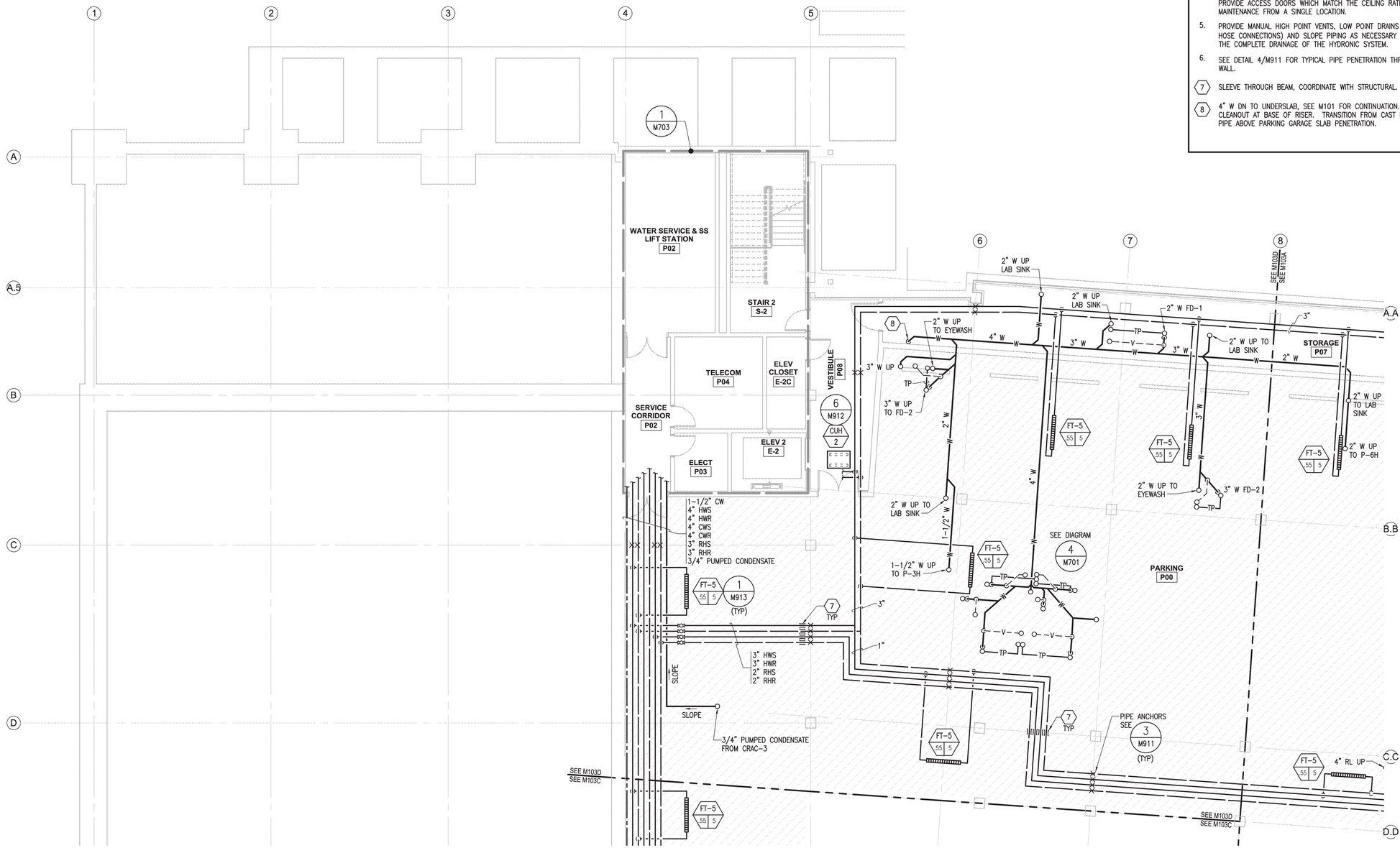
M103C

SHEET NOTES

1. MINIMUM PIPE SIZE IS 3/4". TERMINAL DEVICE BRANCH PIPE SIZE IS 3/4" UNLESS OTHERWISE NOTED.
2. COORDINATE PIPE ROUTING WITH VENTILATION, FIRE PROTECTION, ELECTRICAL AND STRUCTURAL. STRUCTURAL CONDITIONS AND ABOVE-CEILING CLEARANCE LIMITATIONS REQUIRE CLOSE COORDINATION BETWEEN TRADES. IN GENERAL, ROUTE PIPING TO AVOID DUCTWORK. WHERE NECESSARY, ROUTE PIPING THROUGH JOISTS AND/OR PENETRATION IN STRUCTURAL BEAMS. COORDINATE WITH STRUCTURAL ENGINEER FOR APPROVAL OF PENETRATIONS IN STRUCTURE.
3. MOUNT THERMOSTATS AT 54" AFF.
4. WHERE COILS OR OTHER HYDRONIC EQUIPMENT AND ACCESSORIES REQUIRING MAINTENANCE ARE LOCATED ABOVE A HARD-LID CEILING, PROVIDE ACCESS DOORS WHICH MATCH THE CEILING RATING FOR PROPER MAINTENANCE FROM A SINGLE LOCATION.
5. PROVIDE MANUAL HIGH POINT VENTS, LOW POINT DRAINS (WITH CAPPED HOSE CONNECTIONS) AND SLOPE PIPING AS NECESSARY TO ALLOW FOR THE COMPLETE DRAINAGE OF THE HYDRONIC SYSTEM.
6. SEE DETAIL 4/M911 FOR TYPICAL PIPE PENETRATION THROUGH FLOOR OR WALL.

(7) SLEEVE THROUGH BEAM, COORDINATE WITH STRUCTURAL.

(8) 4" W DN TO UNDERSLAB, SEE M101 FOR CONTINUATION. PROVIDE CLEANOUT AT BASE OF RISER. TRANSITION FROM CAST IRON TO HDPE PIPE ABOVE PARKING GARAGE SLAB PENETRATION.



1 M103D PARKING FLOOR SOFFIT PLAN – NW – MECHANICAL

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

0 4' 8' 16' 24'

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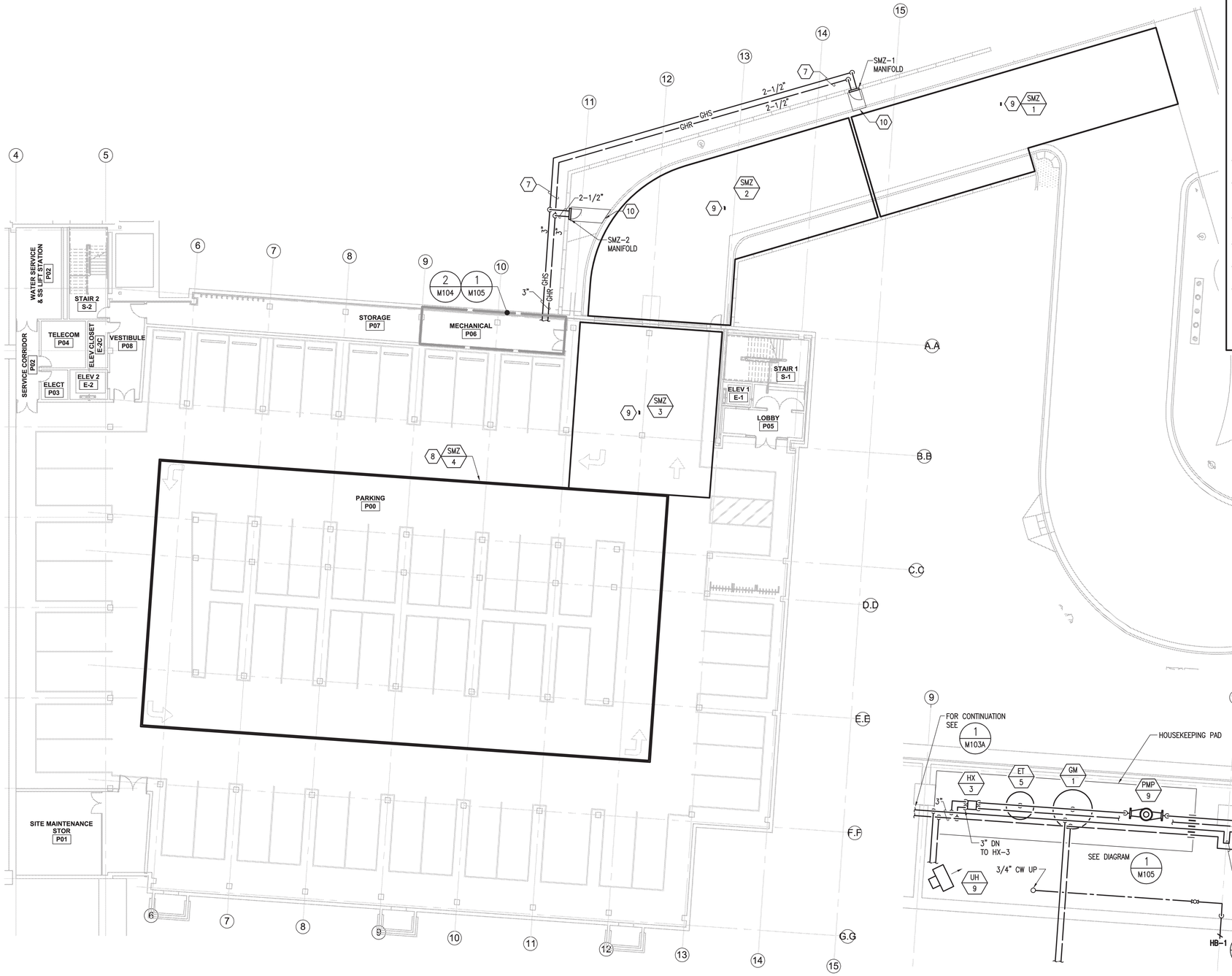
PARKING FLOOR SOFFIT - NW - MECHANICAL

M103D



1 M104 SITE PLAN – SNOWMELT

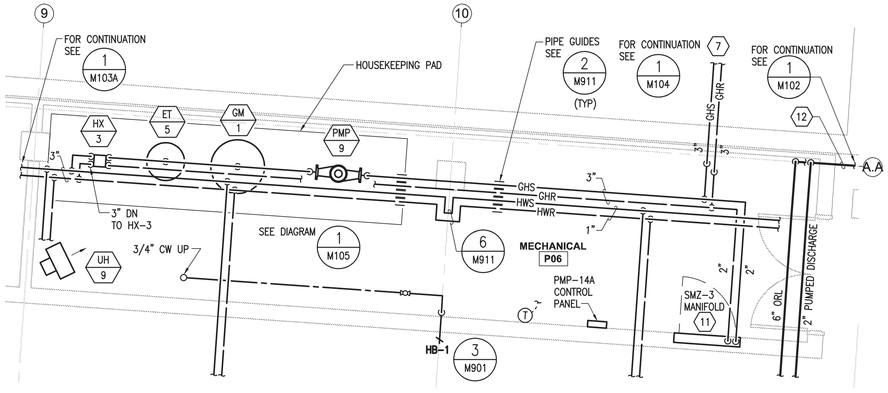
SCALE: 1/16" = 1'-0"

0 8' 16' 32' 48'

SHEET NOTES

1. MINIMUM PIPE SIZE IS 3/4". TERMINAL DEVICE BRANCH PIPE SIZE IS 3/4" UNLESS OTHERWISE NOTED.
2. COORDINATE PIPE ROUTING WITH VENTILATION, FIRE PROTECTION, ELECTRICAL AND STRUCTURAL. STRUCTURAL CONDITIONS AND ABOVE-CEILING CLEARANCE LIMITATIONS REQUIRE CLOSE COORDINATION BETWEEN TRADES. IN GENERAL, ROUTE PIPING TO AVOID DUCTWORK. WHERE NECESSARY, ROUTE PIPING THROUGH JOISTS AND/OR PENETRATION IN STRUCTURAL BEAMS. COORDINATE WITH STRUCTURAL ENGINEER FOR APPROVAL OF PENETRATIONS IN STRUCTURE.
3. MOUNT THERMOSTATS AT 54" AFF.
4. WHERE COILS OR OTHER HYDRONIC EQUIPMENT AND ACCESSORIES REQUIRING MAINTENANCE ARE LOCATED ABOVE A HARD-LID CEILING, PROVIDE ACCESS DOORS WHICH MATCH THE CEILING RATING FOR PROPER MAINTENANCE FROM A SINGLE LOCATION.
5. PROVIDE MANUAL HIGH POINT VENTS, LOW POINT DRAINS (WITH CAPPED HOSE CONNECTIONS) AND SLOPE PIPING AS NECESSARY TO ALLOW FOR THE COMPLETE DRAINAGE OF THE HYDRONIC SYSTEM.
6. SEE DETAIL 4/M911 FOR TYPICAL PIPE PENETRATION THROUGH FLOOR OR WALL.

7. BURIED ARCTIC PIPE TO SMZ (SNOWMELT ZONE) MANIFOLDS.
8. PROVIDE TWO 500' PEX SNOWMELT LOOPS BELOW TRENCH DRAIN FOR FREEZE PROTECTION. INSTALL THE TWO LOOPS IN OPPOSITE FLOW DIRECTIONS. SEE 6/M903 FOR DETAILS.
9. SLAB SENSOR INSIDE 1/2 INCH CONDUIT EMBEDDED IN CONCRETE. REFER TO DETAIL 1/M105.
10. INSTALL PAVERS FOR ACCESS TO SNOWMELT MANIFOLDS. SEE LANDSCAPING FOR DETAILS.
11. SMZ-3 MANIFOLD SERVES BOTH SNOWMELT ZONES 3 & 4.
12. 1-1/2" INSULATION WITH VAPOR BARRIER AND PROTECTIVE METAL JACKETING ON EXPOSED ORL AND PUMPED DISCHARGE LINES IN UNHEATED PARKING GARAGE SPACE. INSERTION TYPE HEAT TRACING (SEE SPEC SECTION 22 14 23) IN ORL LINE THROUGH UNHEATED PARKING GARAGE SPACE. EXTERNAL TYPE HEAT TRACING (SEE SPEC SECTION 22 14 00) ON PUMPED DISCHARGE LINE THROUGH UNHEATED PARKING GARAGE SPACE. LOCATE HEAT TRACE CONTROLLER/JUNCTION BOXES IN MECHANICAL RM P06. SEE 4/M902 FOR ORL HEAT TRACE CONNECTION DETAIL.



2 M104 ENLARGED PLAN – SNOWMELT EQUIPMENT

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

0 2' 4' 8' 12'

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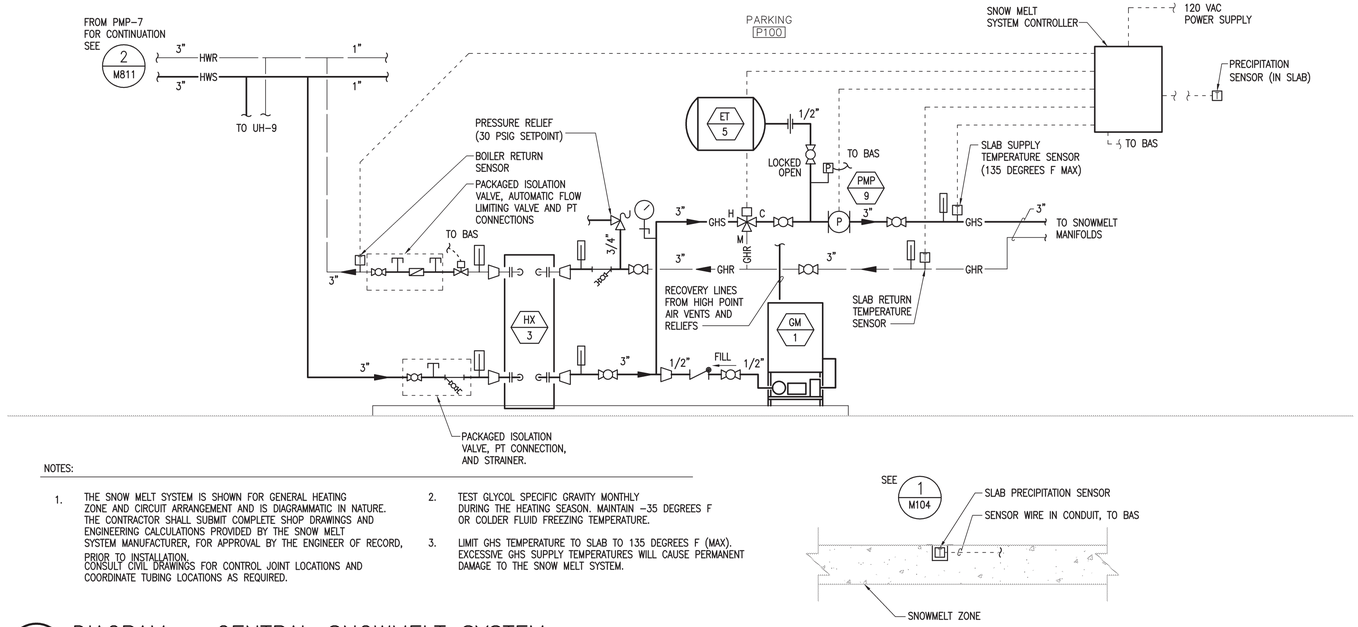
SITE PLANS - SNOW-MELT SYSTEM ZONING

M104

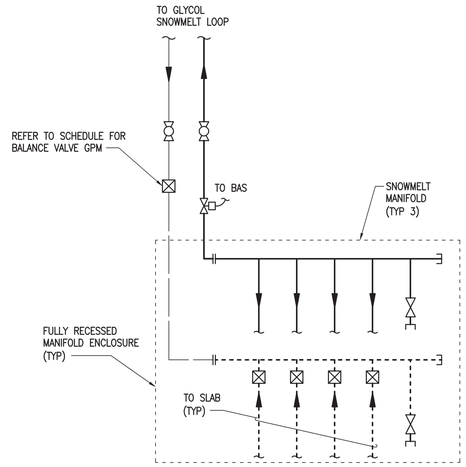


NOTES:

1. THE SNOW MELT SYSTEM IS SHOWN FOR GENERAL HEATING ZONE AND CIRCUIT ARRANGEMENT AND IS DIAGRAMMATIC IN NATURE. THE CONTRACTOR SHALL SUBMIT COMPLETE SHOP DRAWINGS AND ENGINEERING CALCULATIONS PROVIDED BY THE SNOW MELT SYSTEM MANUFACTURER, FOR APPROVAL BY THE ENGINEER OF RECORD, PRIOR TO INSTALLATION.
   CONSULT CIVIL DRAWINGS FOR CONTROL JOINT LOCATIONS AND COORDINATE TUBING LOCATIONS AS REQUIRED.
2. TEST GLYCOL SPECIFIC GRAVITY MONTHLY DURING THE HEATING SEASON. MAINTAIN -35 DEGREES F OR COLDER FLUID FREEZING TEMPERATURE.
3. LIMIT GHS TEMPERATURE TO SLAB TO 135 DEGREES F (MAX). EXCESSIVE GHS SUPPLY TEMPERATURES WILL CAUSE PERMANENT DAMAGE TO THE SNOW MELT SYSTEM.

1 M105 DIAGRAM – CENTRAL SNOWMELT SYSTEM

SCALE: NONE



2 M105 DIAGRAM – SNOWMELT MANIFOLD (TYP)

SCALE: NONE

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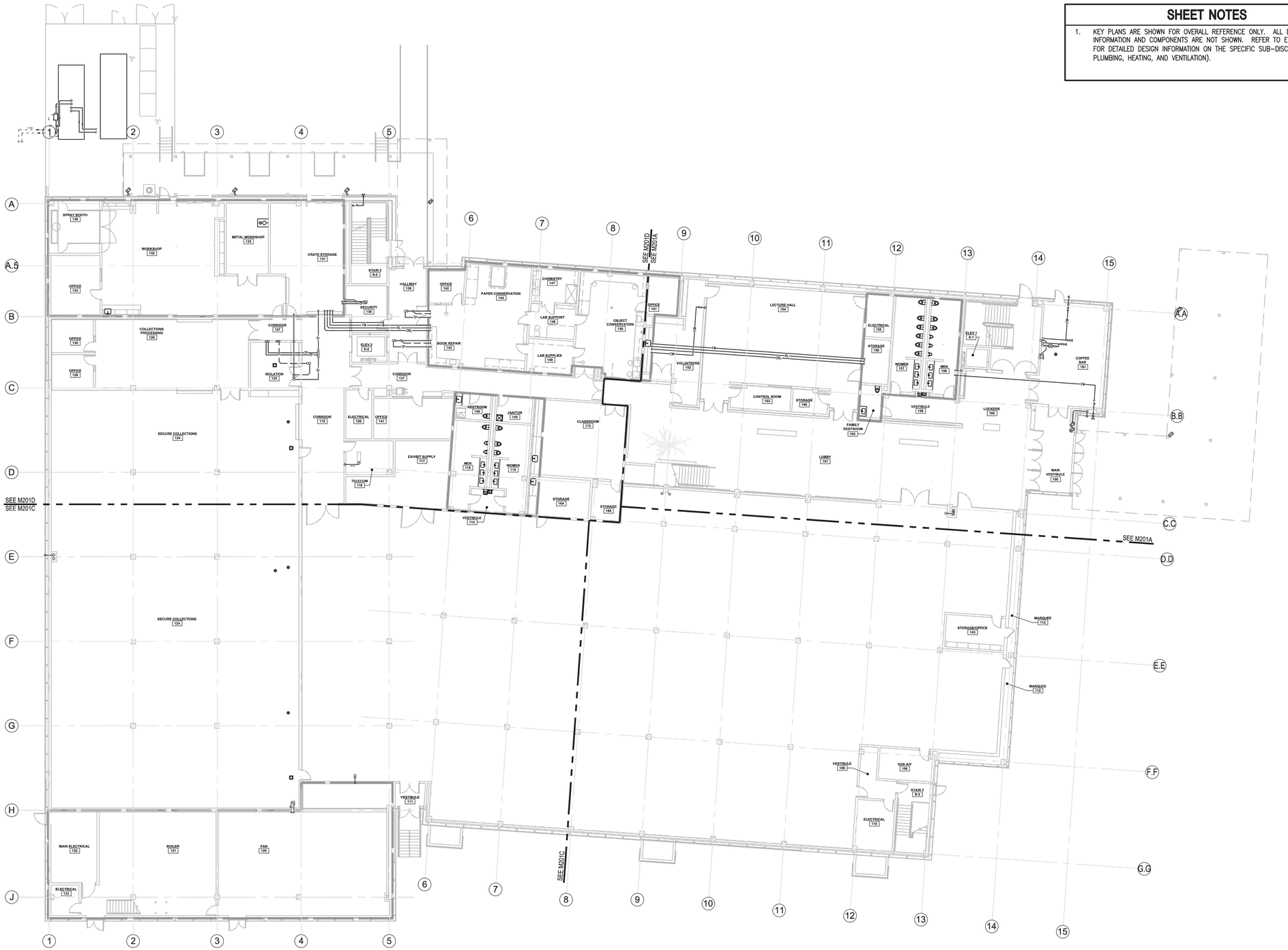
DETAILS AND DIAGRAMS
- SNOW-MELT SYSTEM

M105

SHEET NOTES

1. KEY PLANS ARE SHOWN FOR OVERALL REFERENCE ONLY. ALL DESIGN INFORMATION AND COMPONENTS ARE NOT SHOWN. REFER TO ENLARGED PLANS FOR DETAILED DESIGN INFORMATION ON THE SPECIFIC SUB-DISCIPLINE (E.G. PLUMBING, HEATING, AND VENTILATION).



1 M201 KEYPLAN – FIRST FLOOR PLAN – PLUMBING

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

0 8' 16' 32' 48'

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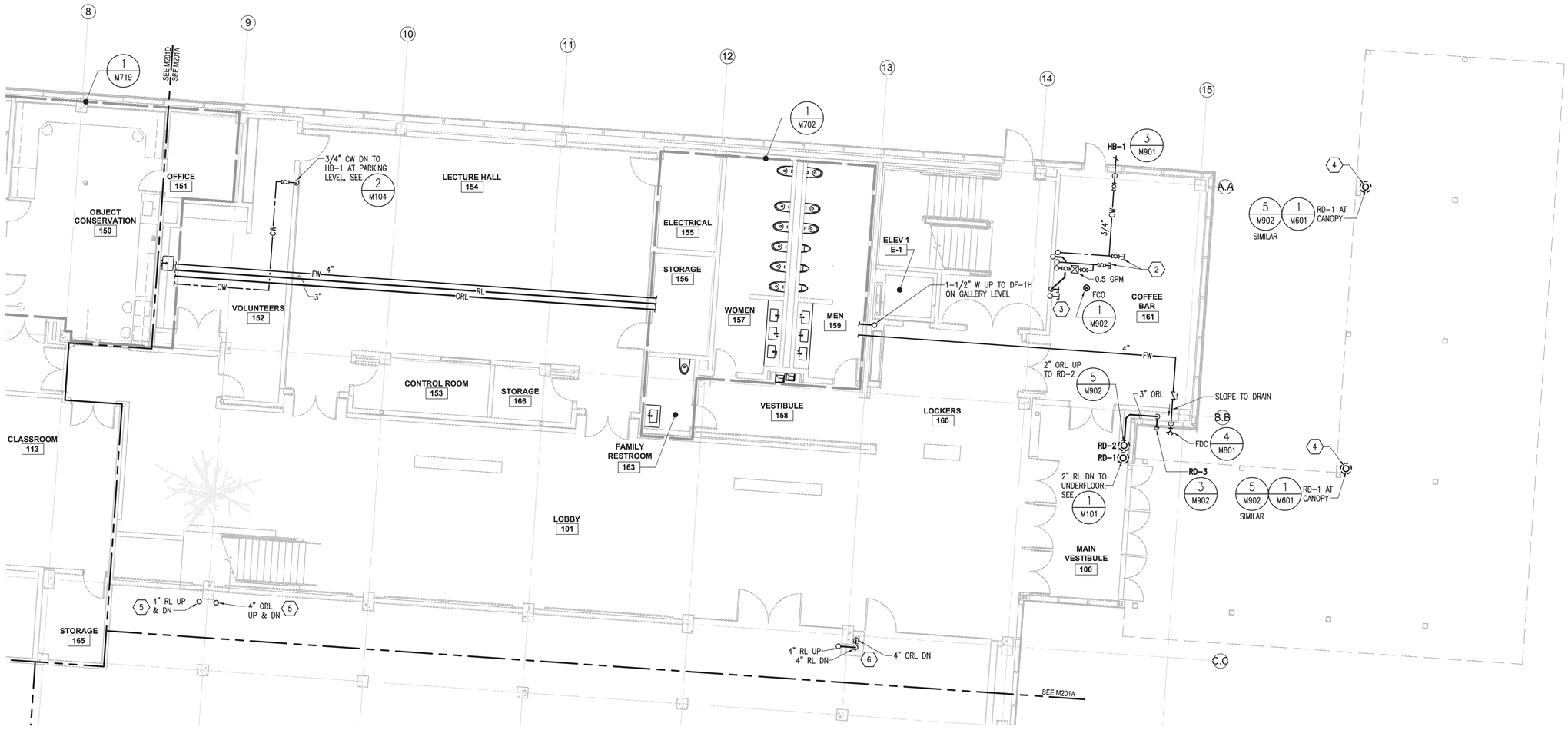
KEYPLAN - FIRST FLOOR PLAN - PLUMBING

M201

SHEET NOTES

1. HORIZONTAL RL AND ORL LINES SLOPED AT 1/8" PER FOOT.
2. 3/4" CW, 3/4" HW VALVED AND CAPPED ABOVE CEILING FOR FUTURE CONNECTION. SEE DIAGRAM 3/M702.
3. 3" W CAPPED NEAR FLOOR LEVEL AND 2-1/2" V CAPPED ABOVE CEILING FOR FUTURE CONNECTION. SEE DIAGRAM 4/M702.
4. 2" RL DN TO UNDERSLAB, SEE CIVIL FOR CONTINUATION. ROUTE RL EXPOSED DN ALONG COLUMN; SEE ARCHITECTURAL AND STRUCTURAL FOR PIPE RESTRAINT/ATTACHMENT DETAILS. SEE ARCHITECTURAL FOR PROTECTIVE PIPE COVERING. PROVIDE CLEANOUT AT BASE OF RISER, SEE 2/M902.
5. 4" RL AND ORL ROUTED EXPOSED DN THRU LEVEL 1. COORDINATE CONTRACTOR'S SEISMIC RESTRAINT DESIGN, PIPING SHOP DRAWINGS AND PIPE SUPPORT LOCATIONS TO MINIMIZE EXPOSED PIPE RESTRAINTS THROUGH LEVEL 1.
6. OFFSET RL AND ORL LINES AT LEVEL 1 CEILING.



1 M201A FIRST FLOOR PLAN – NE – PLUMBING

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

0 4' 8' 16' 24'

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FIRST FLOOR PLAN - NE - PLUMBING

M201A

1 M201C FIRST FLOOR PLAN – SW – PLUMBING

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

0 4' 8' 16' 24'

CONSULTANT NAME :: AMC ENGINEERS
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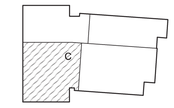

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FIRST FLOOR PLAN - SW - PLUMBING

M201C

SHEET NOTES

1. HORIZONTAL RL AND ORL LINES SLOPED AT 1/8" PER FOOT.
2. 3/4" FOS AND 1" FOR IN CORRUGATED SECONDARY PIPE BELOW GRADE. SEE 1/M101 FOR CONTINUATION AND 2/M802 FOR PIPING DIAGRAM.
3. ROUTE FDC LINE TIGHT TO UNDERSIDE OF INTERMEDIATE STAIR LANDING. SLOPE LINE TO DRAIN TO FDC BALL DRIP.
4. 3/4" PUMPED CONDENSATE DN IN WALL TO PARKING GARAGE SOFFIT, SEE 1/M103D FOR CONTINUATION. SLEEVE FLOOR PENETRATION AND SEAL ANNULUS WITH SILICON.
5. WET PIPE SPRINKLER MAIN TO SERVE PHASE 2B. INSTALL MAIN AND CAP UNDER PHASE 2A FOR CONNECTION UNDER PHASE 2B. COORDINATE PIPE ROUTING AND CAP LOCATION WITH CONSTRUCTION PHASING.
6. 4" FIRE WATER LINE TO PHASE 2B FDC. INSTALL MAIN AND CAP UNDER PHASE 2A FOR CONNECTION UNDER PHASE 2B. COORDINATE PIPE ROUTING AND CAP LOCATION WITH CONSTRUCTION PHASING.
7. 2" RL DN TO UNDERSLAB, SEE CIVIL FOR CONTINUATION. ROUTE RL EXPOSED DN ALONG COLUMN; SEE ARCHITECTURAL AND STRUCTURAL FOR PIPE RESTRAINT/ATTACHMENT DETAILS. SEE ARCHITECTURAL FOR PROTECTIVE PIPE COVERING. PROVIDE CLEANOUT AT BASE OF RISER, SEE 2/M902.

SPRAY BOOTH 136
WORKSHOP 132
METAL WORKSHOP 133
CRATE STORAGE 131
OFFICE 134
COLLECTIONS PROCESSING 128
OFFICE 130
OFFICE 129
SECURE COLLECTIONS 124
CORRIDOR 127
ISOLATION 125
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OFFICE 141
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TRANSITION SUMP WITH LEAK DETECTION
SLOPE
RD-1 AT CANOPY, SEE 1/M601 5/M902 SIMILAR
FDC 4/M801
FD-1
FD-3
FCO 1/M902 TYP
1-1/2" V
1-1/2" V DN
1-1/2" V UP
2" W
2" W DN
3" UP TO FS-1
4" RL UP & DN
3/4" PUMPED CONDENSATE FROM CRAC-3
TO FD-1
SEE M201D
SEE M201C
SEE M201D
SEE M201A

1 M201D FIRST FLOOR PLAN – NW – PLUMBING

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

0 4' 8' 16' 24'

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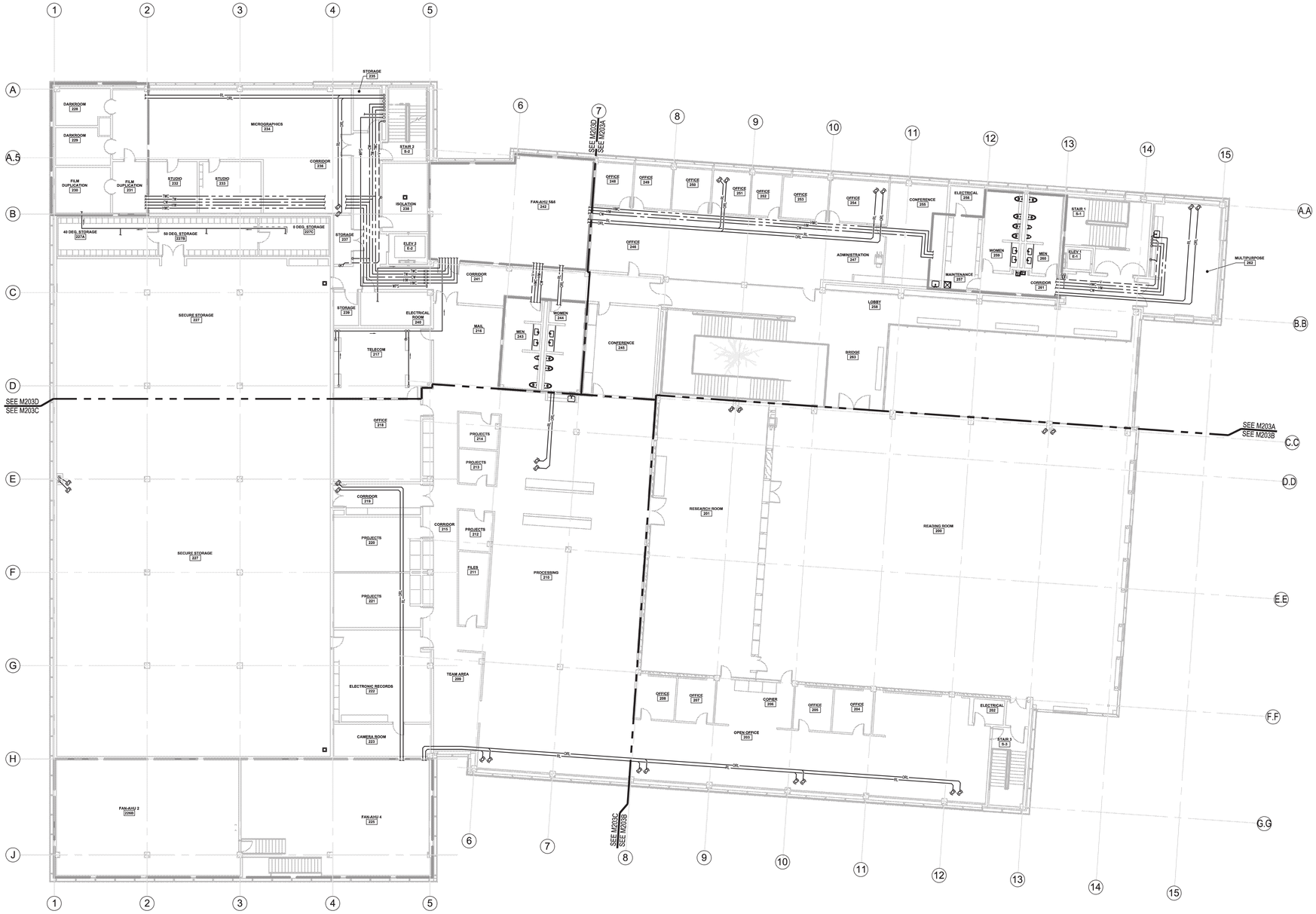
FIRST FLOOR PLAN - NW - PLUMBING

M201D

SHEET NOTES

1. KEY PLANS ARE SHOWN FOR OVERALL REFERENCE ONLY. ALL DESIGN INFORMATION AND COMPONENTS ARE NOT SHOWN. REFER TO ENLARGED PLANS FOR DETAILED DESIGN INFORMATION ON THE SPECIFIC SUB-DISCIPLINE (E.G. PLUMBING, HEATING, AND VENTILATION).



1 M203 KEYPLAN – SECOND FLOOR PLAN – PLUMBING

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

0 8' 16' 32' 48'

CONSULTANT NAME :: AMC ENGINEERS

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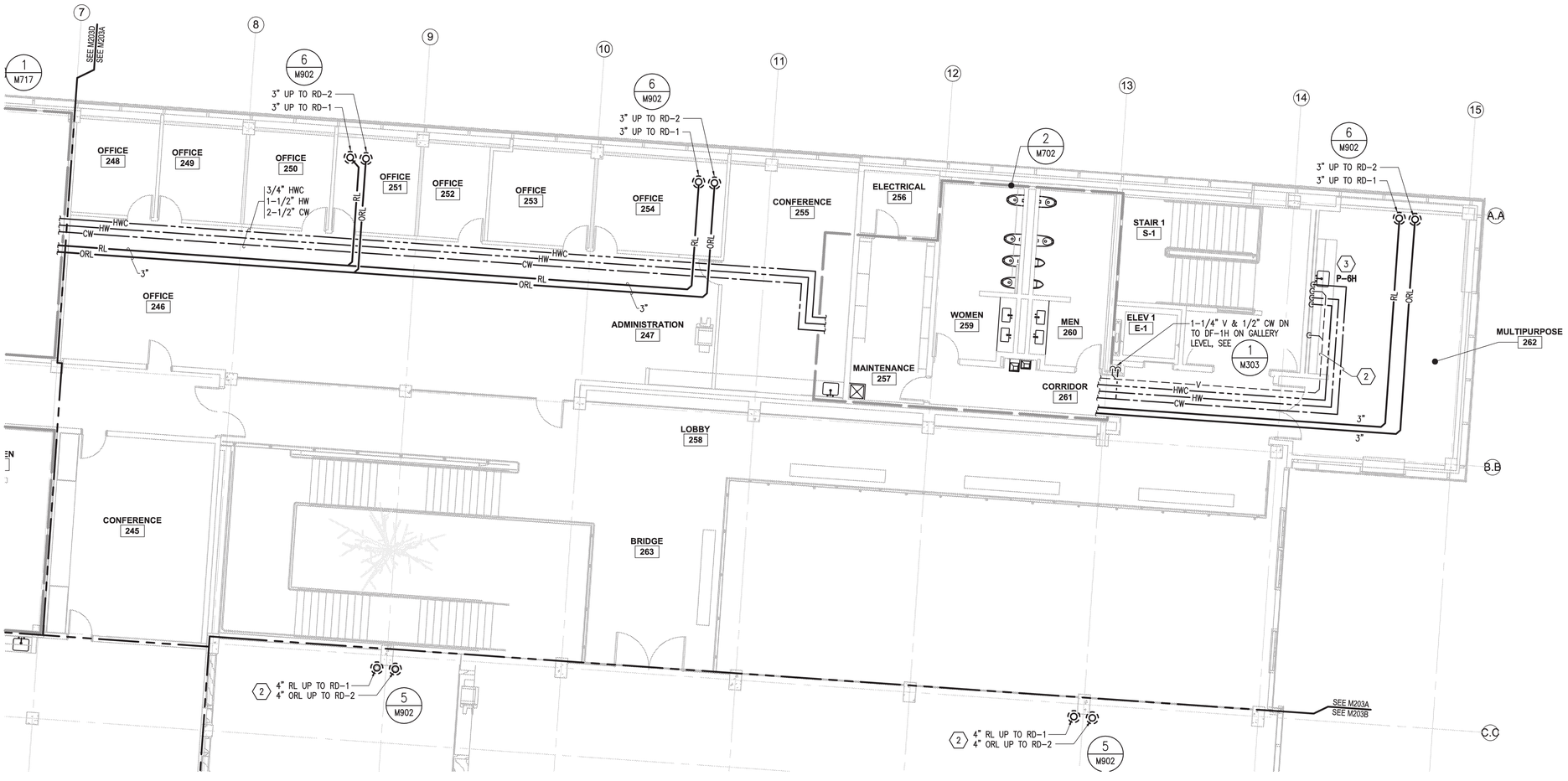
KEYPLAN - SECOND FLOOR PLAN - PLUMBING

M203

SHEET NOTES

1. HORIZONTAL RL AND ORL LINES SLOPED AT 1/8" PER FOOT.
2. SEE DIAGRAMS 3/M702 AND 4/M702 FOR PIPE SIZES.
3. PROVIDE PIPING CONNECTIONS AND APPURTENANCES FOR INSTA-HOT HOT WATER MAKER IN ACCORDANCE WITH EQUIPMENT MFR'S INSTALLATION INSTRUCTIONS.



1 M203A SECOND FLOOR PLAN – NE – PLUMBING

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

0 4' 8' 16' 24'

CONSULTANT NAME :: AMC ENGINEERS
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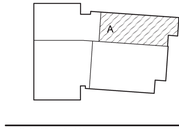

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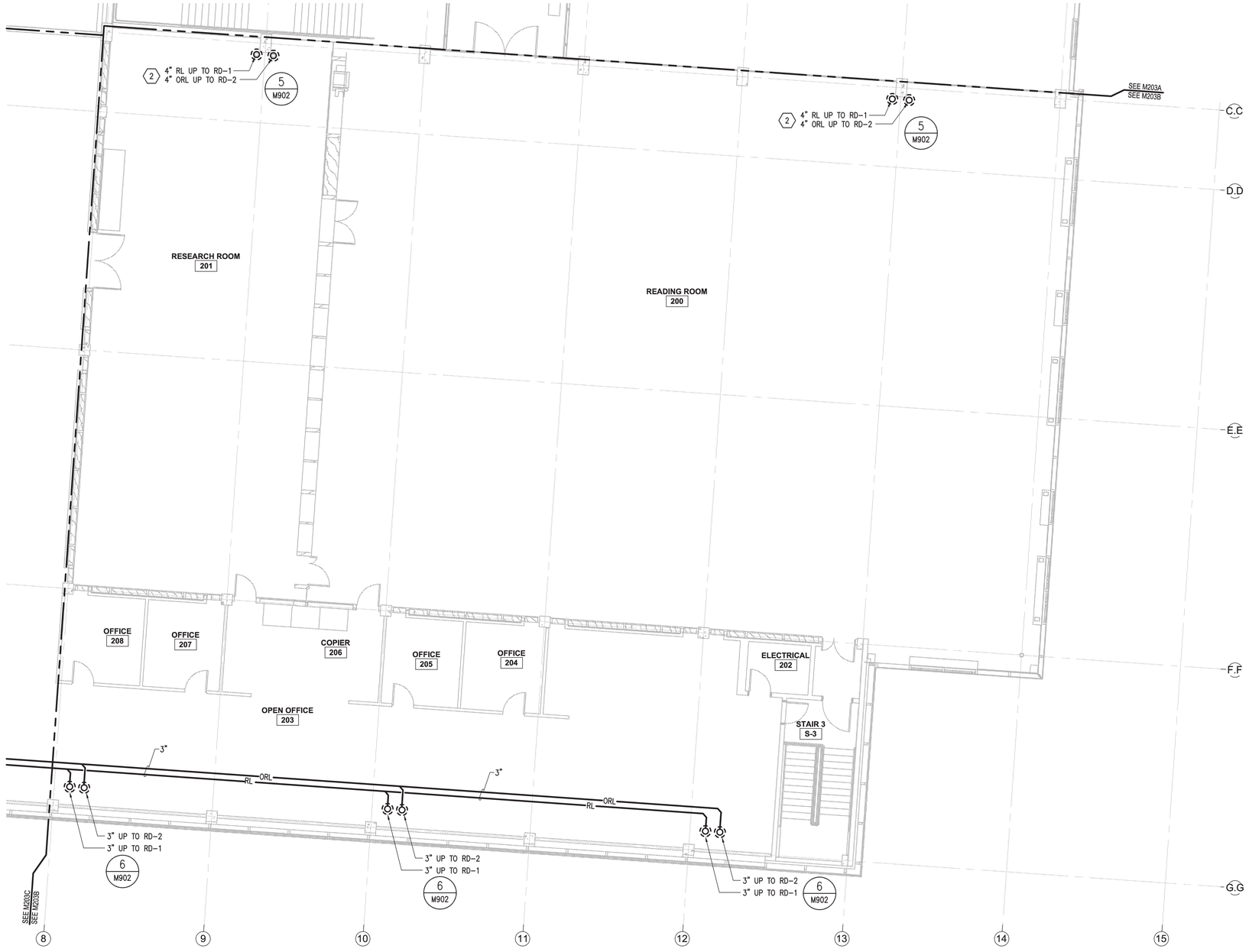
SECOND FLOOR PLAN - NE - PLUMBING

M203A

SHEET NOTES

1. HORIZONTAL RL AND ORL LINES SLOPED AT 1/8" PER FOOT.
2. 4" RL AND ORL ROUTED EXPOSED DN THRU LEVEL 2. REFER TO ARCHITECTURAL DETAILS FOR PIPE RESTRAINT CONCEPT AT STEEL LIGHT TROUGH. COORDINATE CONTRACTOR'S SEISMIC RESTRAINT DESIGN, PIPING SHOP DRAWINGS AND PIPE SUPPORT LOCATIONS TO MINIMIZE EXPOSED PIPE RESTRAINTS THROUGH LEVEL 2.



1 M203B SECOND FLOOR PLAN – SE – PLUMBING

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

0 4' 8' 16' 24'

CONSULTANT NAME :: AMC ENGINEERS
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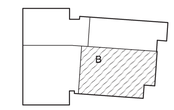

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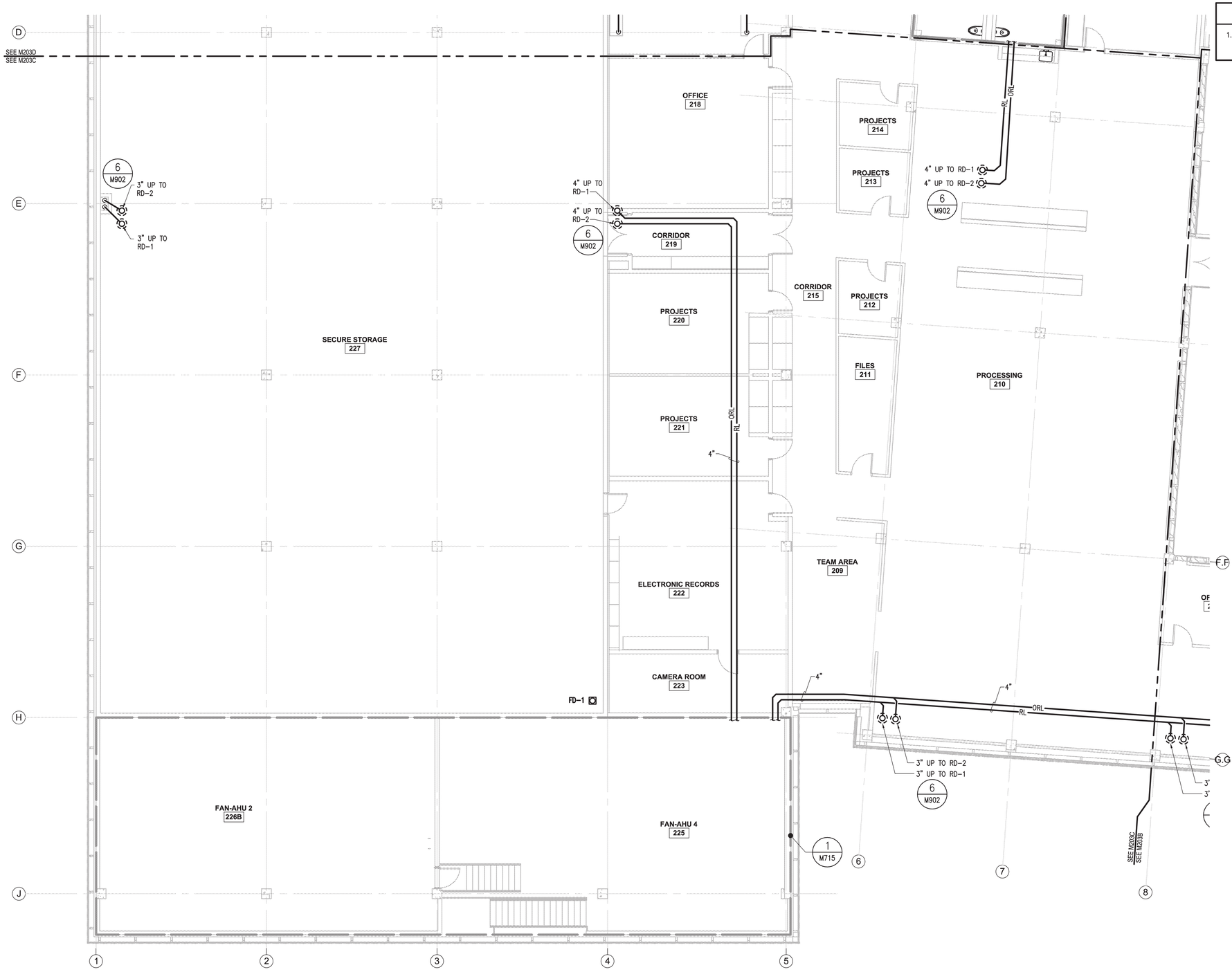
SECOND FLOOR PLAN - SE - PLUMBING

M203B

SHEET NOTES

1. HORIZONTAL RL AND ORL LINES SLOPED AT 1/8" PER FOOT.



1 M203C SECOND FLOOR PLAN – SW – PLUMBING

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

0 4' 8' 16' 24'

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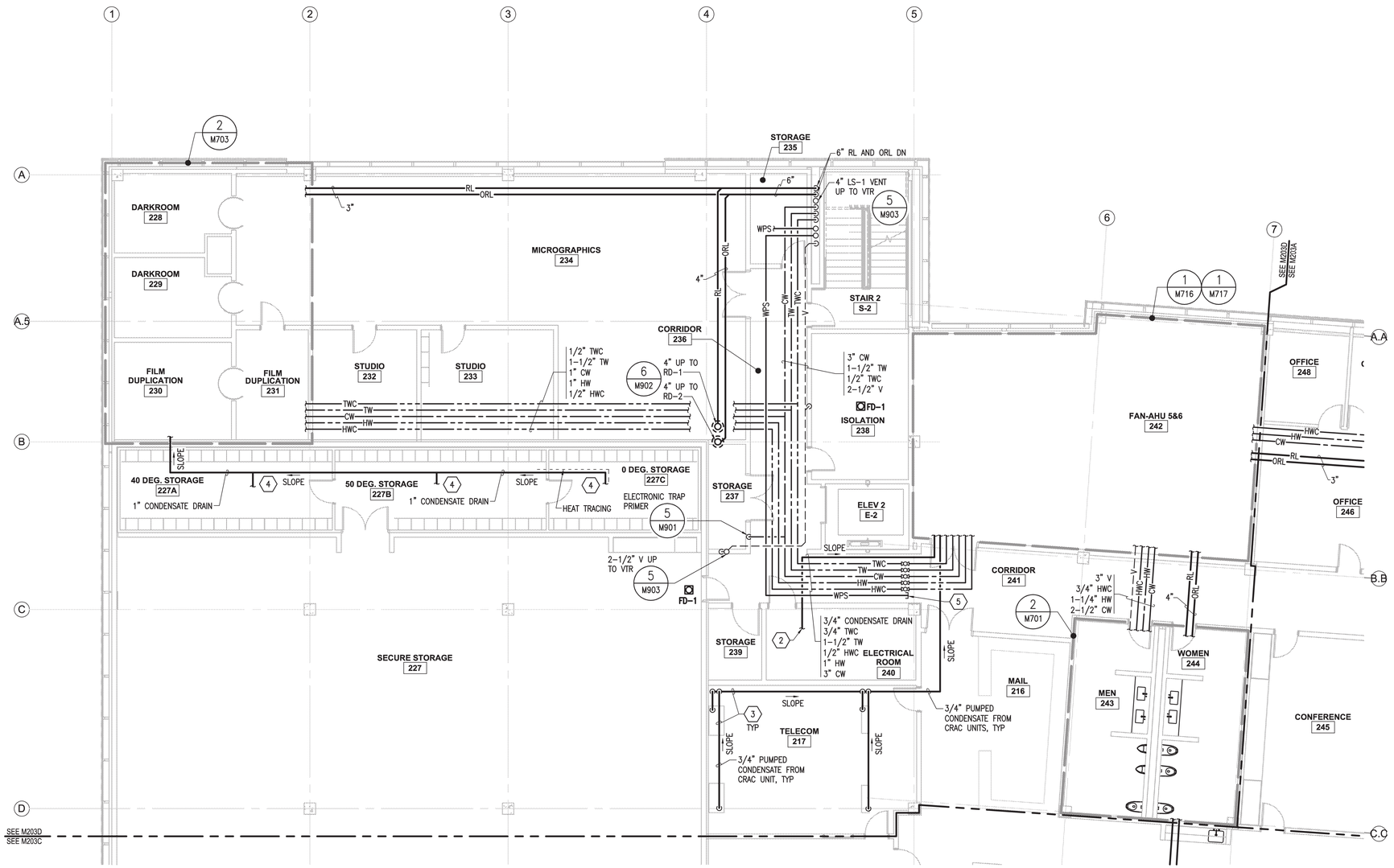
SECOND FLOOR PLAN - SW - PLUMBING

M203C

SHEET NOTES

1. HORIZONTAL RL AND ORL LINES SLOPED AT 1/8" PER FOOT.
2. 3/4" CONDENSATE GRAVITY DRAIN FROM SCF-4 COOLING COIL DRAIN PAN. COORDINATE ROUTING WITH ELECTRICAL EQUIPMENT; DO NOT ROUTE DRAIN LINE OVER ELECTRICAL EQUIPMENT OR PANEL BOARDS.
3. COORDINATE CONDENSATE DRAIN LINE ROUTING WITH ELECTRICAL EQUIPMENT; DO NOT ROUTE DRAIN LINES OVER TELECOM RACKS/EQUIPMENT.
4. 3/4" CONDENSATE GRAVITY DRAIN FROM COLD STORAGE ROOM EVAPORATOR UNIT. INSULATION WITH VAPOR BARRIER ON DRAIN LINES THROUGH COLD STORAGE ROOMS. EXTERNAL TYPE HEAT TRACING (SEE SPEC SECTION 22 14 00) ON DRAIN LINES IN 0 DEGREE STORAGE ROOM. COORDINATE DRAIN LINE ROUTING WITH STORAGE RACK LAYOUT; DO NOT ROUTE DRAIN LINES OVER STORAGE RACKS. ROUTE DRAIN LINES TO FLOOR SINK IN FILM DUPLICATION RM 230.
5. WET PIPE SPRINKLER MAIN TO SERVE PHASE 2B. INSTALL MAIN AND CAP UNDER PHASE 2A FOR CONNECTION UNDER PHASE 2B. COORDINATE PIPE ROUTING AND CAP LOCATION WITH CONSTRUCTION PHASING.



1 M203D SECOND FLOOR PLAN – NW – PLUMBING

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

0 4' 8' 16' 24'

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SECOND FLOOR PLAN - NW - PLUMBING

M203D

SHEET NOTES

1. KEY PLANS ARE SHOWN FOR OVERALL REFERENCE ONLY. ALL DESIGN INFORMATION AND COMPONENTS ARE NOT SHOWN. REFER TO ENLARGED PLANS FOR DETAILED DESIGN INFORMATION ON THE SPECIFIC SUB-DISCIPLINE (E.G. PLUMBING, HEATING, AND VENTILATION).

1 M301 KEYPLAN – FIRST FLOOR PLAN – HEATING

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

0 8' 16' 32' 48'

CONSULTANT NAME :: AMC ENGINEERS

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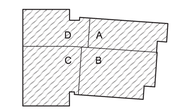

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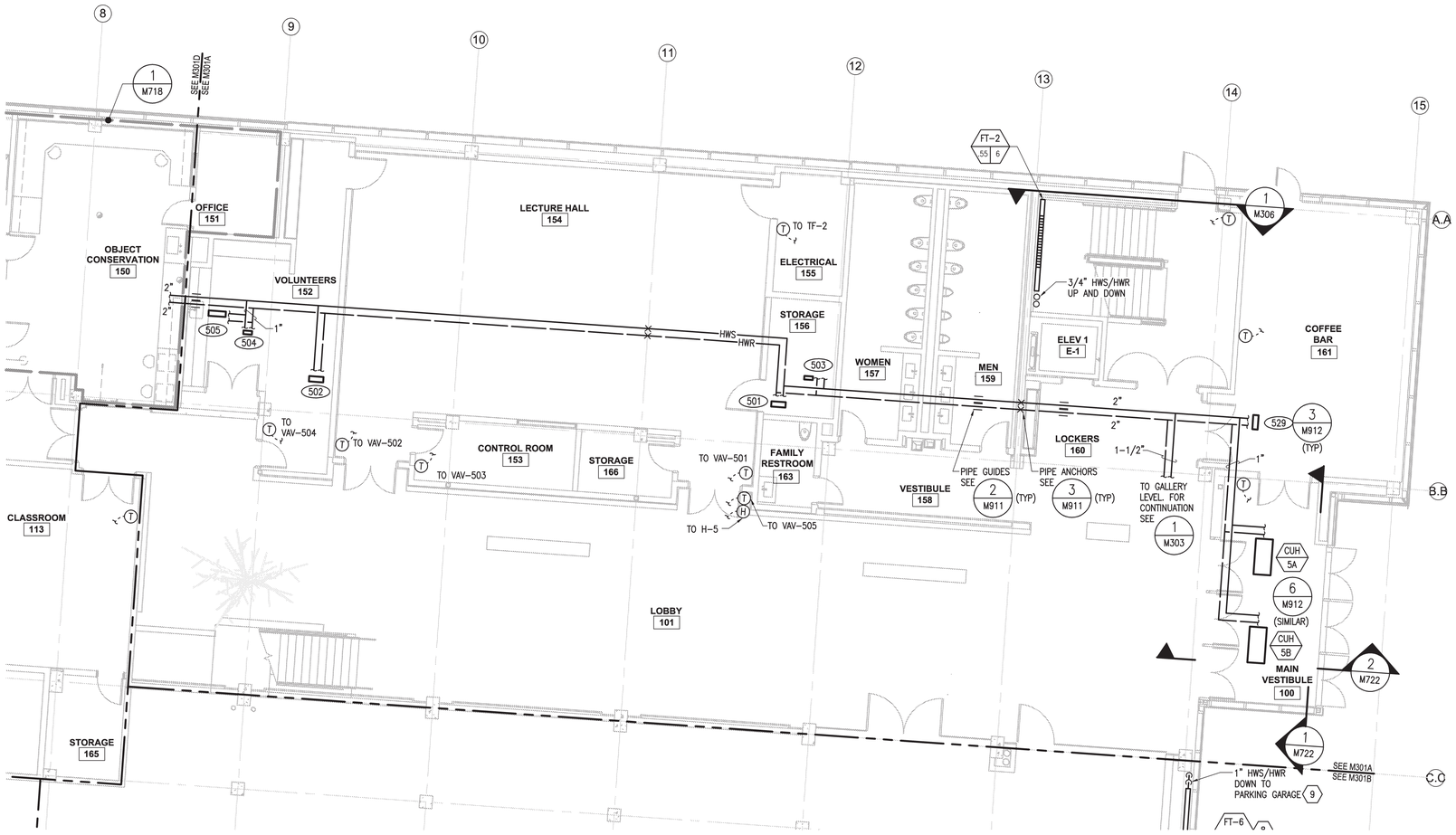
KEYPLAN - FIRST FLOOR PLAN - HEATING

M301

SHEET NOTES

1. MINIMUM PIPE SIZE IS 3/4". TERMINAL DEVICE BRANCH PIPE SIZE IS 3/4" UNLESS OTHERWISE NOTED.
2. COORDINATE PIPE ROUTING WITH VENTILATION, FIRE PROTECTION, ELECTRICAL AND STRUCTURAL. STRUCTURAL CONDITIONS AND ABOVE-CEILING CLEARANCE LIMITATIONS REQUIRE CLOSE COORDINATION BETWEEN TRADES. IN GENERAL, ROUTE PIPING TO AVOID DUCTWORK. WHERE NECESSARY, ROUTE PIPING THROUGH JOISTS AND/OR PENETRATION IN STRUCTURAL BEAMS. COORDINATE WITH STRUCTURAL ENGINEER FOR APPROVAL OF PENETRATIONS IN STRUCTURE.
3. MOUNT THERMOSTATS AT 54" AFF.
4. WHERE COILS OR OTHER HYDRONIC EQUIPMENT AND ACCESSORIES REQUIRING MAINTENANCE ARE LOCATED ABOVE A HARD-LID CEILING, PROVIDE ACCESS DOORS WHICH MATCH THE CEILING RATING FOR PROPER MAINTENANCE FROM A SINGLE LOCATION.
5. PROVIDE MANUAL HIGH POINT VENTS, LOW POINT DRAINS (WITH CAPPED HOSE CONNECTIONS) AND SLOPE PIPING AS NECESSARY TO ALLOW FOR THE COMPLETE DRAINAGE OF THE HYDRONIC SYSTEM.
6. SEE DETAIL 4/M911 FOR TYPICAL PIPE PENETRATION THROUGH FLOOR OR WALL.



1 M301A FIRST FLOOR PLAN – NE – HEATING

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

0 4' 8' 16' 24'

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FIRST FLOOR PLAN - NE - HEATING

M301A

1 M301B FIRST FLOOR PLAN – SE – HEATING

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

0 4' 8' 16' 24'

SHEET NOTES

1. MINIMUM PIPE SIZE IS 3/4". TERMINAL DEVICE BRANCH PIPE SIZE IS 3/4" UNLESS OTHERWISE NOTED.
2. COORDINATE PIPE ROUTING WITH VENTILATION, FIRE PROTECTION, ELECTRICAL AND STRUCTURAL. STRUCTURAL CONDITIONS AND ABOVE-CEILING CLEARANCE LIMITATIONS REQUIRE CLOSE COORDINATION BETWEEN TRADES. IN GENERAL, ROUTE PIPING TO AVOID DUCTWORK. WHERE NECESSARY, ROUTE PIPING THROUGH JOISTS AND/OR PENETRATION IN STRUCTURAL BEAMS. COORDINATE WITH STRUCTURAL ENGINEER FOR APPROVAL OF PENETRATIONS IN STRUCTURE.
3. MOUNT THERMOSTATS AT 54" AFF.
4. WHERE COILS OR OTHER HYDRONIC EQUIPMENT AND ACCESSORIES REQUIRING MAINTENANCE ARE LOCATED ABOVE A HARD-LID CEILING, PROVIDE ACCESS DOORS WHICH MATCH THE CEILING RATING FOR PROPER MAINTENANCE FROM A SINGLE LOCATION.
5. PROVIDE MANUAL HIGH POINT VENTS, LOW POINT DRAINS (WITH CAPPED HOSE CONNECTIONS) AND SLOPE PIPING AS NECESSARY TO ALLOW FOR THE COMPLETE DRAINAGE OF THE HYDRONIC SYSTEM.
6. SEE DETAIL 4/M911 FOR TYPICAL PIPE PENETRATION THROUGH FLOOR OR WALL.
7. PROVIDE 7 THERMOSTATS AND 1 ZONE HUMIDISTAT (CONTROL TO H-3). LOCATE DURING TI DESIGN.
8. PIPE FOUR SECTIONS OF RADIANT PANEL IN MARQUEE TOGETHER WITH A SINGLE CONTROL VALVE IN THE PARKING GARAGE SOFFIT.
9. LOCATE ISOLATION VALVES, BALANCE VALVE, AND THREE-WAY CONTROL VALVE IN THE SOFFIT OF THE PARKING GARAGE. PROVIDE ACCESS PANEL FOR ALL VALVES. SEE 1/M723 FOR DETAILS.

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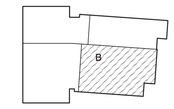

KEYPLAN - (NTS)

CONSTRUCTION DOCUMENTS

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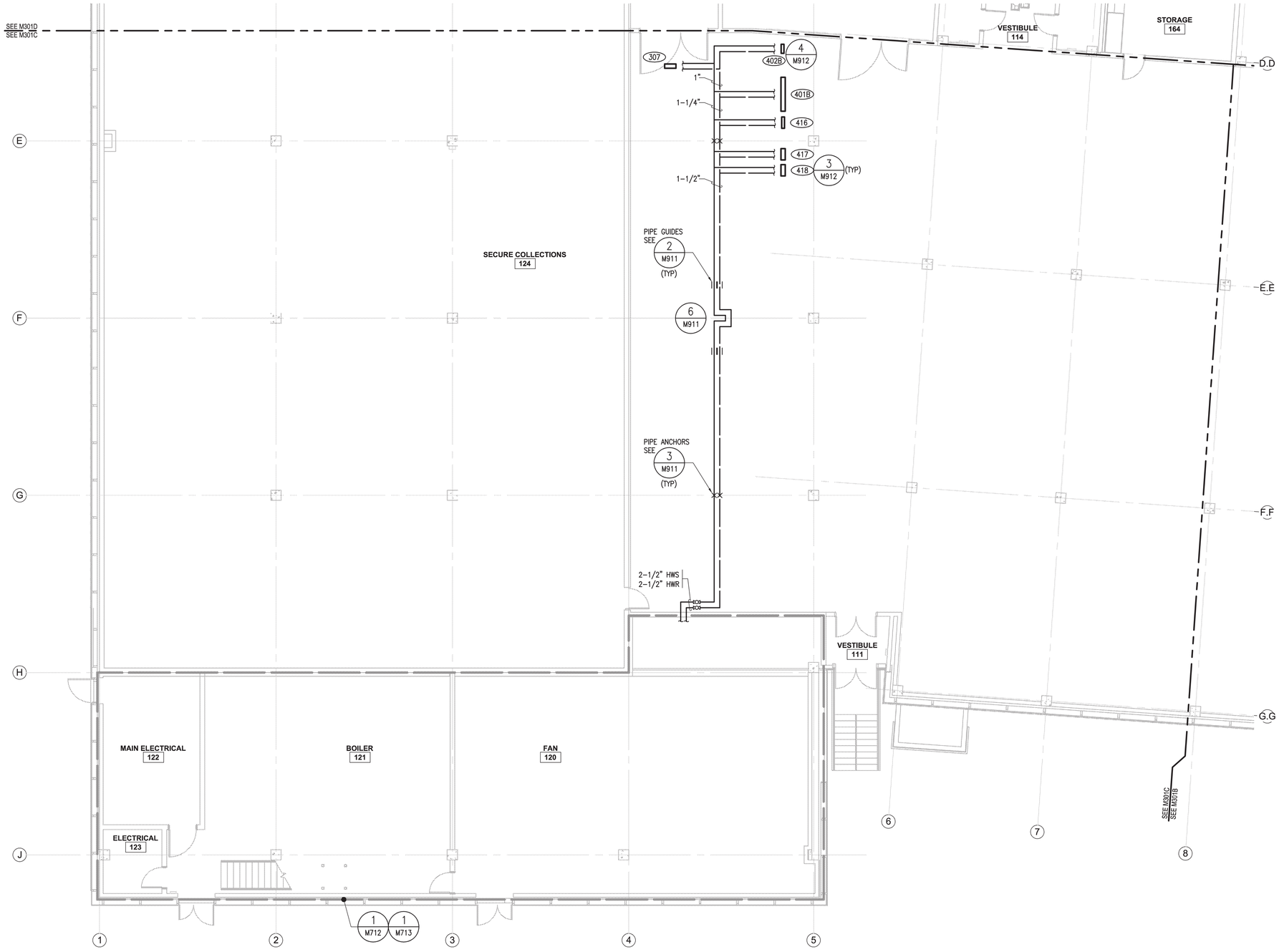
FIRST FLOOR PLAN - SE - HEATING

M301B



1 M301C FIRST FLOOR PLAN – SW – HEATING

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

0 4' 8' 16' 24'

SHEET NOTES

1. MINIMUM PIPE SIZE IS 3/4". TERMINAL DEVICE BRANCH PIPE SIZE IS 3/4" UNLESS OTHERWISE NOTED.
2. COORDINATE PIPE ROUTING WITH VENTILATION, FIRE PROTECTION, ELECTRICAL AND STRUCTURAL. STRUCTURAL CONDITIONS AND ABOVE-CEILING CLEARANCE LIMITATIONS REQUIRE CLOSE COORDINATION BETWEEN TRADES. IN GENERAL, ROUTE PIPING TO AVOID DUCTWORK. WHERE NECESSARY, ROUTE PIPING THROUGH JOISTS AND/OR PENETRATION IN STRUCTURAL BEAMS. COORDINATE WITH STRUCTURAL ENGINEER FOR APPROVAL OF PENETRATIONS IN STRUCTURE.
3. MOUNT THERMOSTATS AT 54" AFF.
4. WHERE COILS OR OTHER HYDRONIC EQUIPMENT AND ACCESSORIES REQUIRING MAINTENANCE ARE LOCATED ABOVE A HARD-LID CEILING, PROVIDE ACCESS DOORS WHICH MATCH THE CEILING RATING FOR PROPER MAINTENANCE FROM A SINGLE LOCATION.
5. PROVIDE MANUAL HIGH POINT VENTS, LOW POINT DRAINS (WITH CAPPED HOSE CONNECTIONS) AND SLOPE PIPING AS NECESSARY TO ALLOW FOR THE COMPLETE DRAINAGE OF THE HYDRONIC SYSTEM.
6. SEE DETAIL 4/M911 FOR TYPICAL PIPE PENETRATION THROUGH FLOOR OR WALL.

CONSULTANT NAME :: AMC ENGINEERS
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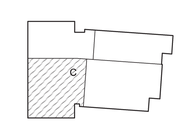


KEYPLAN - (NTS)

CONSTRUCTION DOCUMENTS

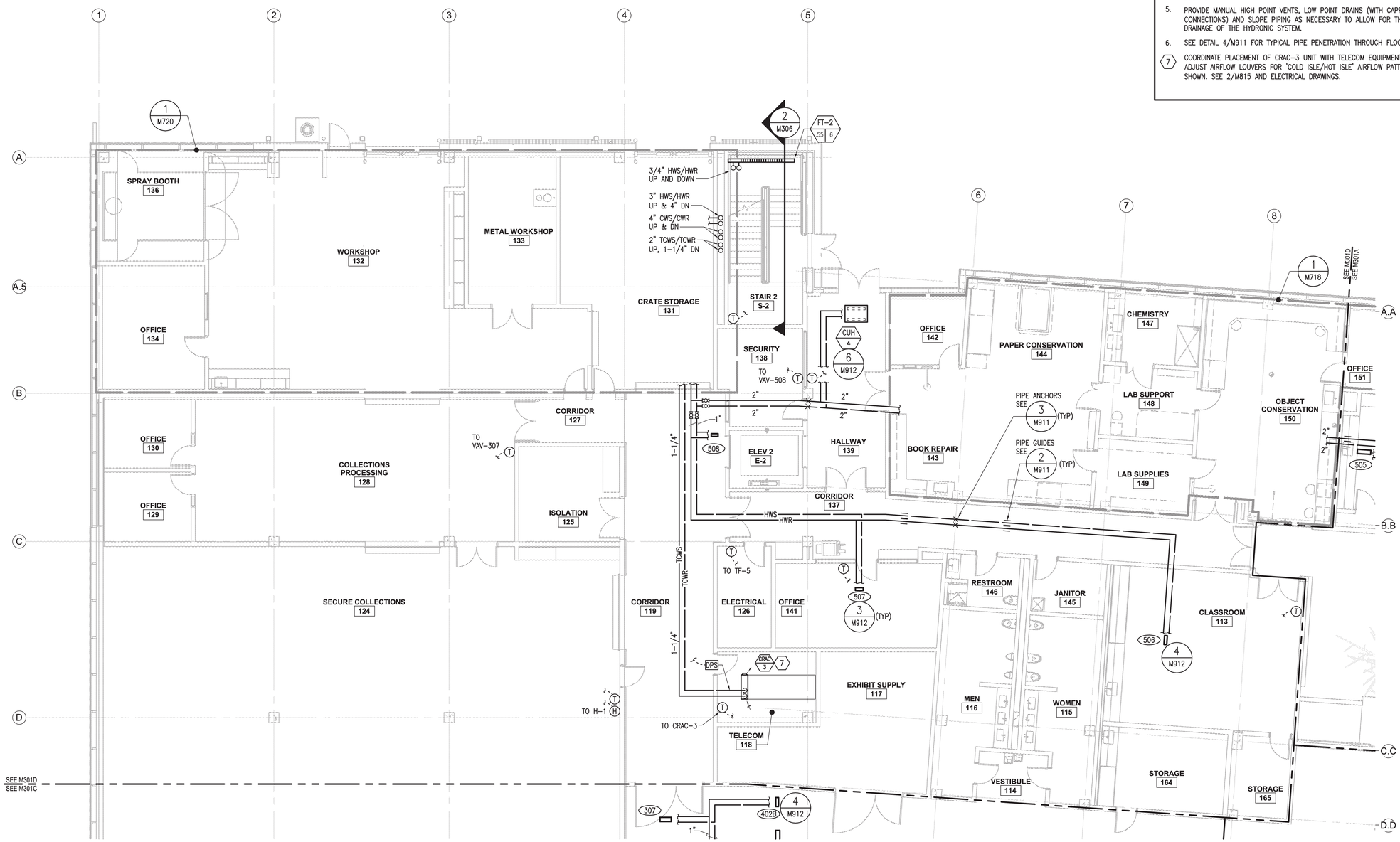
05.01.2012

FIRST FLOOR PLAN - SW - HEATING

M301C

SHEET NOTES

1. MINIMUM PIPE SIZE IS 3/4". TERMINAL DEVICE BRANCH PIPE SIZE IS 3/4" UNLESS OTHERWISE NOTED.
2. COORDINATE PIPE ROUTING WITH VENTILATION, FIRE PROTECTION, ELECTRICAL AND STRUCTURAL. STRUCTURAL CONDITIONS AND ABOVE-CEILING CLEARANCE LIMITATIONS REQUIRE CLOSE COORDINATION BETWEEN TRADES. IN GENERAL, ROUTE PIPING TO AVOID DUCTWORK. WHERE NECESSARY, ROUTE PIPING THROUGH JOISTS AND/OR PENETRATION IN STRUCTURAL BEAMS. COORDINATE WITH STRUCTURAL ENGINEER FOR APPROVAL OF PENETRATIONS IN STRUCTURE.
3. MOUNT THERMOSTATS AT 54" AFF.
4. WHERE COILS OR OTHER HYDRONIC EQUIPMENT AND ACCESSORIES REQUIRING MAINTENANCE ARE LOCATED ABOVE A HARD-LID CEILING, PROVIDE ACCESS DOORS WHICH MATCH THE CEILING RATING FOR PROPER MAINTENANCE FROM A SINGLE LOCATION.
5. PROVIDE MANUAL HIGH POINT VENTS, LOW POINT DRAINS (WITH CAPPED HOSE CONNECTIONS) AND SLOPE PIPING AS NECESSARY TO ALLOW FOR THE COMPLETE DRAINAGE OF THE HYDRONIC SYSTEM.
6. SEE DETAIL 4/M911 FOR TYPICAL PIPE PENETRATION THROUGH FLOOR OR WALL.
7. COORDINATE PLACEMENT OF CRAC-3 UNIT WITH TELECOM EQUIPMENT RACK AND ADJUST AIRFLOW LOUVERS FOR 'COLD ISLE/HOT ISLE' AIRFLOW PATTERNS AS SHOWN. SEE 2/M815 AND ELECTRICAL DRAWINGS.



1 / M301D FIRST FLOOR PLAN – NW – HEATING

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

0 4' 8' 16' 24'

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FIRST FLOOR PLAN - NW - HEATING

M301D

SHEET NOTES

1. KEY PLANS ARE SHOWN FOR OVERALL REFERENCE ONLY. ALL DESIGN INFORMATION AND COMPONENTS ARE NOT SHOWN. REFER TO ENLARGED PLANS FOR DETAILED DESIGN INFORMATION ON THE SPECIFIC SUB-DISCIPLINE (E.G. PLUMBING, HEATING, AND VENTILATION).

1 / M302 KEYPLAN – FIRST FLOOR PLAN – RADIANT FLOOR HEATING

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

0 8' 16' 32' 48'

CONSULTANT NAME :: AMC ENGINEERS

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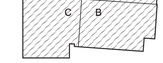


KEYPLAN - (NTS)

CONSTRUCTION DOCUMENTS

05.01.2012

KEYPLAN - FIRST FLOOR PLAN - RADIANT FLOOR HEATING

M302

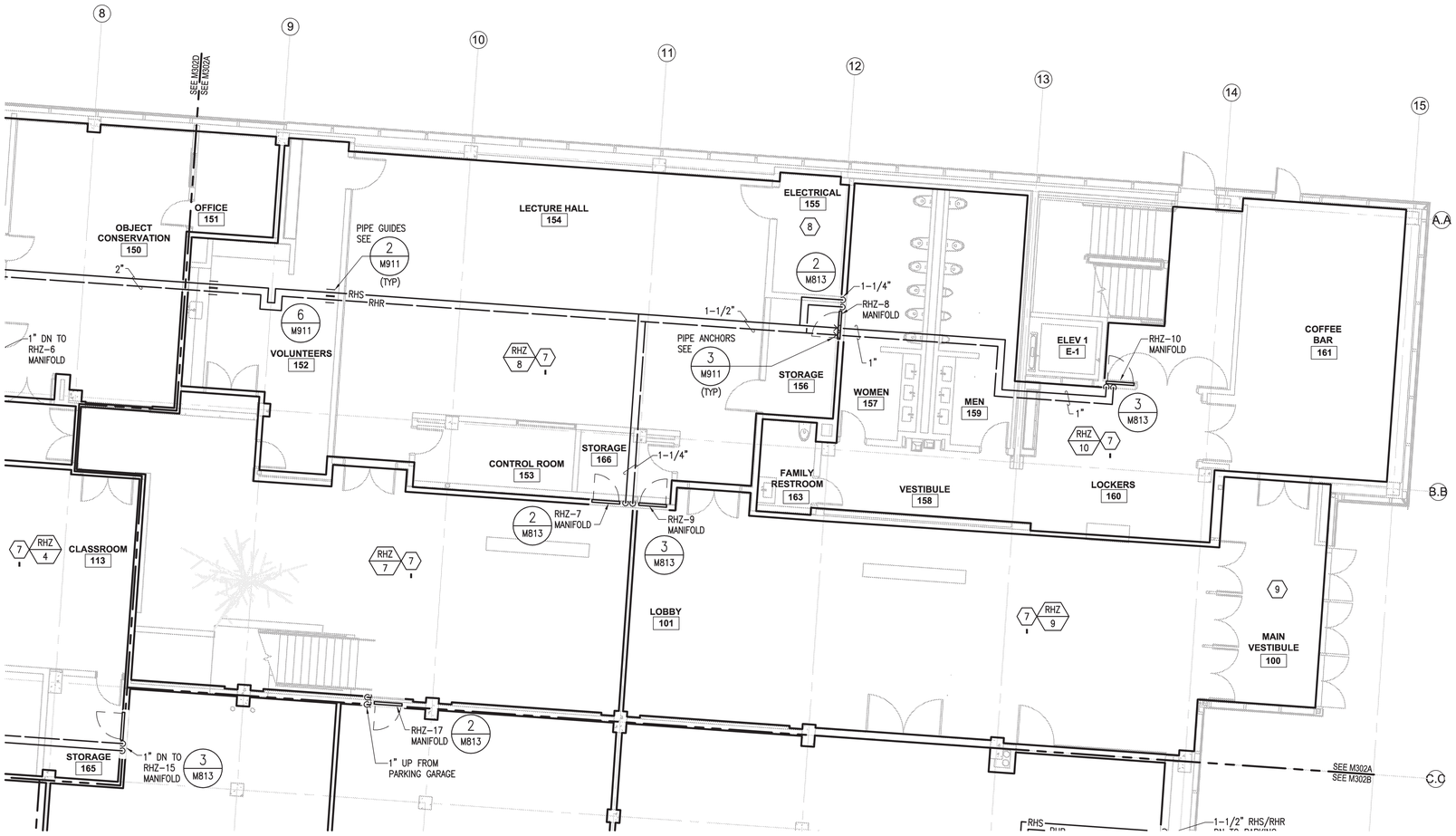
SHEET NOTES

1. MINIMUM PIPE SIZE IS 3/4". TERMINAL DEVICE BRANCH PIPE SIZE IS 3/4" UNLESS OTHERWISE NOTED.
2. COORDINATE PIPE ROUTING WITH VENTILATION, FIRE PROTECTION, ELECTRICAL AND STRUCTURAL. STRUCTURAL CONDITIONS AND ABOVE-CEILING CLEARANCE LIMITATIONS REQUIRE CLOSE COORDINATION BETWEEN TRADES. IN GENERAL, ROUTE PIPING TO AVOID DUCTWORK. WHERE NECESSARY, ROUTE PIPING THROUGH JOISTS AND/OR PENETRATION IN STRUCTURAL BEAMS. COORDINATE WITH STRUCTURAL ENGINEER FOR APPROVAL OF PENETRATIONS IN STRUCTURE.
3. MOUNT THERMOSTATS AT 54" AFF.
4. WHERE COILS OR OTHER HYDRONIC EQUIPMENT AND ACCESSORIES REQUIRING MAINTENANCE ARE LOCATED ABOVE A HARD-LID CEILING, PROVIDE ACCESS DOORS WHICH MATCH THE CEILING RATING FOR PROPER MAINTENANCE FROM A SINGLE LOCATION.
5. PROVIDE MANUAL HIGH POINT VENTS, LOW POINT DRAINS (WITH CAPPED HOSE CONNECTIONS) AND SLOPE PIPING AS NECESSARY TO ALLOW FOR THE COMPLETE DRAINAGE OF THE HYDRONIC SYSTEM.
6. SEE DETAIL 4/M911 FOR TYPICAL PIPE PENETRATION THROUGH FLOOR OR WALL.

(7) SLAB SENSOR INSIDE 1/2 INCH CONDUIT EMBEDDED IN CONCRETE. REFER TO DETAIL 2/M813.

(8) PROVIDE A SEPARATE DEDICATED SNOWMELT LOOP FOR THE ELECTRICAL AND TELECOM ROOMS.

(9) PROVIDE RADIANT FLOOR HEATING TUBING AT 6" ON CENTER IN VESTIBULE.



1 / M302A FIRST FLOOR PLAN – NE – RADIANT FLOOR HEATING

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

0 4' 8' 16' 24'

CONSULTANT NAME :: AMC ENGINEERS

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FIRST FLOOR PLAN - NE - RADIANT FLOOR HEATING

M302A

1 M302B FIRST FLOOR PLAN – SE – RADIANT FLOOR HEATING

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

0 4' 8' 16' 24'

SHEET NOTES

1. MINIMUM PIPE SIZE IS 3/4". TERMINAL DEVICE BRANCH PIPE SIZE IS 3/4" UNLESS OTHERWISE NOTED.
2. COORDINATE PIPE ROUTING WITH VENTILATION, FIRE PROTECTION, ELECTRICAL AND STRUCTURAL. STRUCTURAL CONDITIONS AND ABOVE-CEILING CLEARANCE LIMITATIONS REQUIRE CLOSE COORDINATION BETWEEN TRADES. IN GENERAL, ROUTE PIPING TO AVOID DUCTWORK. WHERE NECESSARY, ROUTE PIPING THROUGH JOISTS AND/OR PENETRATION IN STRUCTURAL BEAMS. COORDINATE WITH STRUCTURAL ENGINEER FOR APPROVAL OF PENETRATIONS IN STRUCTURE.
3. MOUNT THERMOSTATS AT 54" AFF.
4. WHERE COILS OR OTHER HYDRONIC EQUIPMENT AND ACCESSORIES REQUIRING MAINTENANCE ARE LOCATED ABOVE A HARD-LID CEILING, PROVIDE ACCESS DOORS WHICH MATCH THE CEILING RATING FOR PROPER MAINTENANCE FROM A SINGLE LOCATION.
5. PROVIDE MANUAL HIGH POINT VENTS, LOW POINT DRAINS (WITH CAPPED HOSE CONNECTIONS) AND SLOPE PIPING AS NECESSARY TO ALLOW FOR THE COMPLETE DRAINAGE OF THE HYDRONIC SYSTEM.
6. SEE DETAIL 4/M911 FOR TYPICAL PIPE PENETRATION THROUGH FLOOR OR WALL.

7 SLAB SENSOR INSIDE 1/2 INCH CONDUIT EMBEDDED IN CONCRETE. REFER TO DETAIL 2/M813.

8 PROVIDE A SEPARATE DEDICATED SNOWMELT LOOP FOR THE ELECTRICAL AND TELECOM ROOMS.

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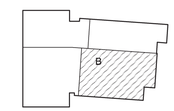

KEYPLAN - (NTS)

CONSTRUCTION DOCUMENTS

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FIRST FLOOR PLAN - SE - RADIANT FLOOR HEATING

M302B

SHEET NOTES

1. MINIMUM PIPE SIZE IS 3/4". TERMINAL DEVICE BRANCH PIPE SIZE IS 3/4" UNLESS OTHERWISE NOTED.
2. COORDINATE PIPE ROUTING WITH VENTILATION, FIRE PROTECTION, ELECTRICAL AND STRUCTURAL. STRUCTURAL CONDITIONS AND ABOVE-CEILING CLEARANCE LIMITATIONS REQUIRE CLOSE COORDINATION BETWEEN TRADES. IN GENERAL, ROUTE PIPING TO AVOID DUCTWORK. WHERE NECESSARY, ROUTE PIPING THROUGH JOISTS AND/OR PENETRATION IN STRUCTURAL BEAMS. COORDINATE WITH STRUCTURAL ENGINEER FOR APPROVAL OF PENETRATIONS IN STRUCTURE.
3. MOUNT THERMOSTATS AT 54" AFF.
4. WHERE COILS OR OTHER HYDRONIC EQUIPMENT AND ACCESSORIES REQUIRING MAINTENANCE ARE LOCATED ABOVE A HARD-LID CEILING, PROVIDE ACCESS DOORS WHICH MATCH THE CEILING RATING FOR PROPER MAINTENANCE FROM A SINGLE LOCATION.
5. PROVIDE MANUAL HIGH POINT VENTS, LOW POINT DRAINS (WITH CAPPED HOSE CONNECTIONS) AND SLOPE PIPING AS NECESSARY TO ALLOW FOR THE COMPLETE DRAINAGE OF THE HYDRONIC SYSTEM.
6. SEE DETAIL 4/M911 FOR TYPICAL PIPE PENETRATION THROUGH FLOOR OR WALL.

(7) SLAB SENSOR INSIDE 1/2 INCH CONDUIT EMBEDDED IN CONCRETE. REFER TO DETAIL 2/M813.

1/M302C FIRST FLOOR PLAN – SW – RADIANT FLOOR HEATING

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

0 4' 8' 16' 24'

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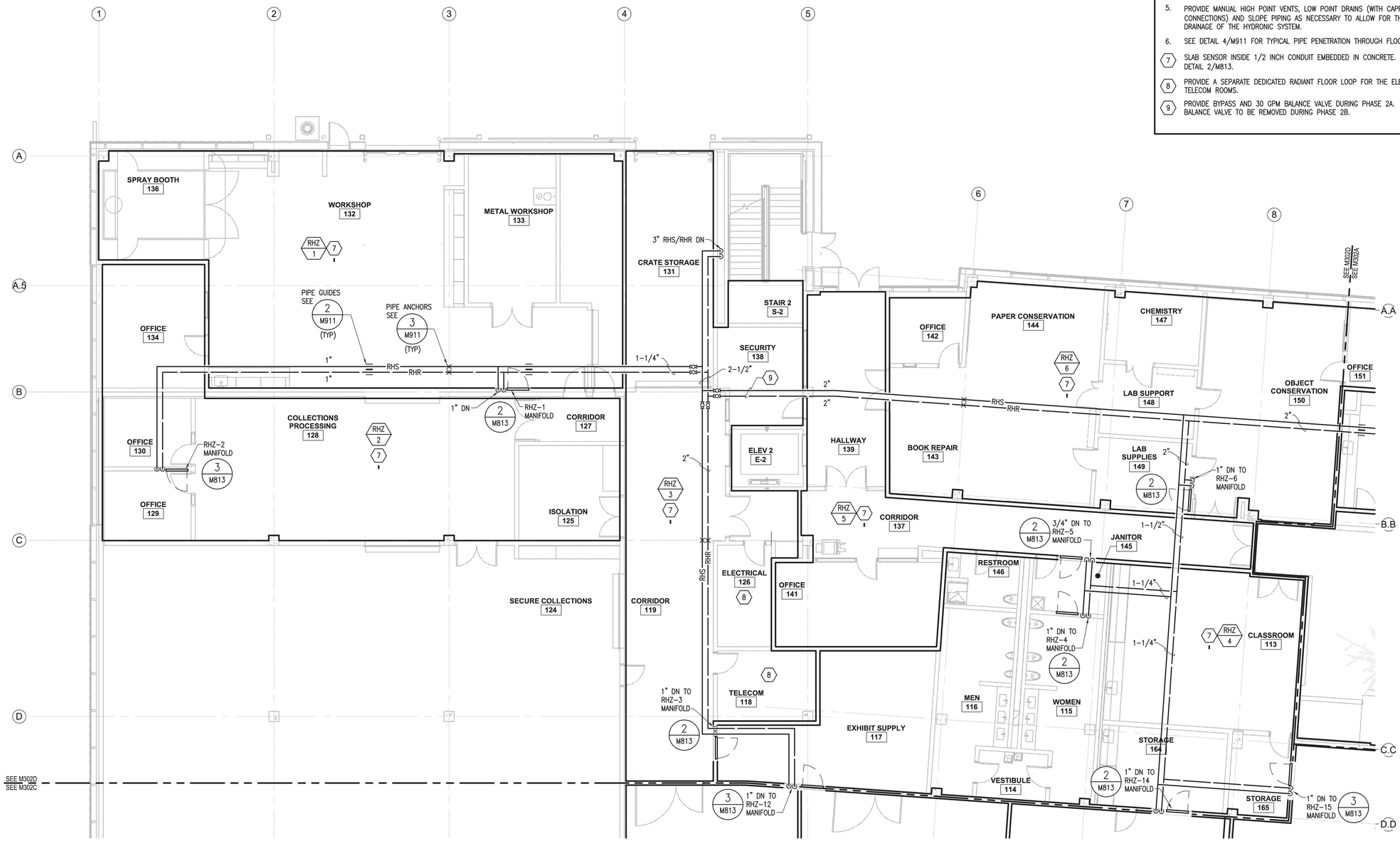
FIRST FLOOR PLAN - SW - RADIANT FLOOR HEATING

M302C

SHEET NOTES

1. MINIMUM PIPE SIZE IS 3/4". TERMINAL DEVICE BRANCH PIPE SIZE IS 3/4" UNLESS OTHERWISE NOTED.
2. COORDINATE PIPE ROUTING WITH VENTILATION, FIRE PROTECTION, ELECTRICAL AND STRUCTURAL. STRUCTURAL CONDITIONS AND ABOVE-CEILING CLEARANCE LIMITATIONS REQUIRE CLOSE COORDINATION BETWEEN TRADES. IN GENERAL, ROUTE PIPING TO AVOID DUCTWORK. WHERE NECESSARY, ROUTE PIPING THROUGH JOISTS AND/OR PENETRATION IN STRUCTURAL BEAMS. COORDINATE WITH STRUCTURAL ENGINEER FOR APPROVAL OF PENETRATIONS IN STRUCTURE.
3. MOUNT THERMOSTATS AT 54" AFF.
4. WHERE COILS OR OTHER HYDRONIC EQUIPMENT AND ACCESSORIES REQUIRING MAINTENANCE ARE LOCATED ABOVE A HARD-LID CEILING, PROVIDE ACCESS DOORS WHICH MATCH THE CEILING RATING FOR PROPER MAINTENANCE FROM A SINGLE LOCATION.
5. PROVIDE MANUAL HIGH POINT VENTS, LOW POINT DRAINS (WITH CAPPED HOSE CONNECTIONS) AND SLOPE PIPING AS NECESSARY TO ALLOW FOR THE COMPLETE DRAINAGE OF THE HYDRONIC SYSTEM.
6. SEE DETAIL 4/M911 FOR TYPICAL PIPE PENETRATION THROUGH FLOOR OR WALL.
7. SLAB SENSOR INSIDE 1/2 INCH CONDUIT EMBEDDED IN CONCRETE. REFER TO DETAIL 2/M813.
8. PROVIDE A SEPARATE DEDICATED RADIANT FLOOR LOOP FOR THE ELECTRICAL AND TELECOM ROOMS.
9. PROVIDE BYPASS AND 30 GPM BALANCE VALVE DURING PHASE 2A. BYPASS AND BALANCE VALVE TO BE REMOVED DURING PHASE 2B.



1 M302D FIRST FLOOR PLAN – NW – RADIANT FLOOR HEATING

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

0 4' 8' 16' 24'

CONSULTANT NAME :: AMC ENGINEERS

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FIRST FLOOR PLAN - NW - RADIANT FLOOR HEATING

M302D

SHEET NOTES

1. MINIMUM PIPE SIZE IS 3/4". TERMINAL DEVICE BRANCH PIPE SIZE IS 3/4" UNLESS OTHERWISE NOTED.
2. COORDINATE PIPE ROUTING WITH VENTILATION, FIRE PROTECTION, ELECTRICAL AND STRUCTURAL. STRUCTURAL CONDITIONS AND ABOVE-CEILING CLEARANCE LIMITATIONS REQUIRE CLOSE COORDINATION BETWEEN TRADES. IN GENERAL, ROUTE PIPING TO AVOID DUCTWORK. WHERE NECESSARY, ROUTE PIPING THROUGH JOISTS AND/OR PENETRATION IN STRUCTURAL BEAMS. COORDINATE WITH STRUCTURAL ENGINEER FOR APPROVAL OF PENETRATIONS IN STRUCTURE.
3. MOUNT THERMOSTATS AT 54" AFF.
4. WHERE COILS OR OTHER HYDRONIC EQUIPMENT AND ACCESSORIES REQUIRING MAINTENANCE ARE LOCATED ABOVE A HARD-LID CEILING, PROVIDE ACCESS DOORS WHICH MATCH THE CEILING RATING FOR PROPER MAINTENANCE FROM A SINGLE LOCATION.
5. PROVIDE MANUAL HIGH POINT VENTS, LOW POINT DRAINS (WITH CAPPED HOSE CONNECTIONS) AND SLOPE PIPING AS NECESSARY TO ALLOW FOR THE COMPLETE DRAINAGE OF THE HYDRONIC SYSTEM.
6. SEE DETAIL 4/M911 FOR TYPICAL PIPE PENETRATION THROUGH FLOOR OR WALL.

1 M303 GALLERY PLAN – PLUMBING AND HEATING

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

0 4' 8' 16' 24'

CONSULTANT NAME :: AMC ENGINEERS

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REVISIONS:

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GALLERY PLAN - PLUMBING AND HEATING

M303

SHEET NOTES

1. KEY PLANS ARE SHOWN FOR OVERALL REFERENCE ONLY. ALL DESIGN INFORMATION AND COMPONENTS ARE NOT SHOWN. REFER TO ENLARGED PLANS FOR DETAILED DESIGN INFORMATION ON THE SPECIFIC SUB-DISCIPLINE (E.G. PLUMBING, HEATING, AND VENTILATION).

1 M304 KEYPLAN – SECOND FLOOR PLAN – HEATING

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

0 8' 16' 32' 48'

CONSULTANT NAME :: AMC ENGINEERS

ECI/HYER :: THA ARCHITECTURE

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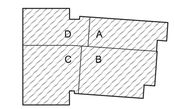

KEYPLAN - (NTS)

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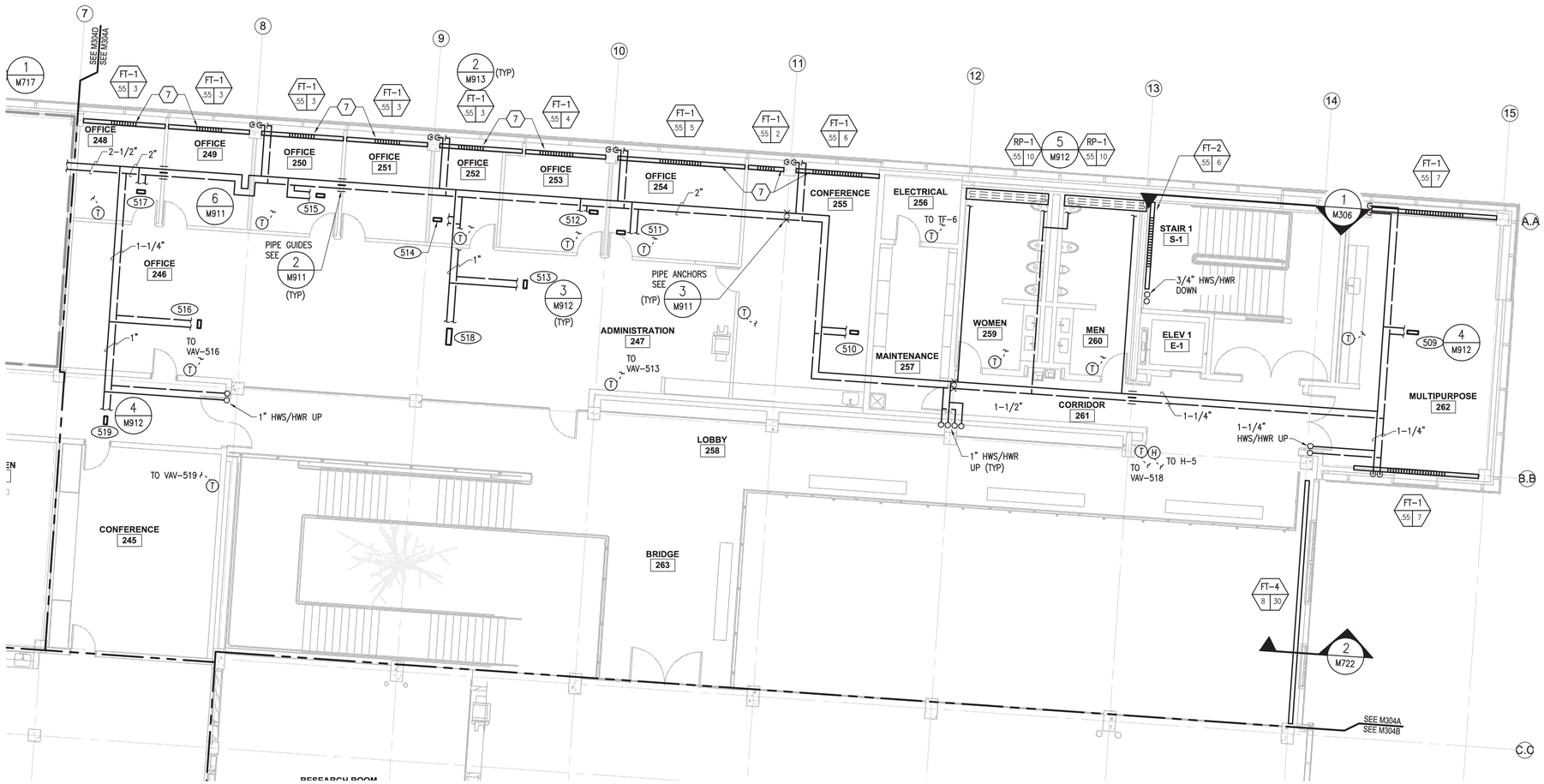
KEYPLAN - SECOND FLOOR PLAN - HEATING

M304

SHEET NOTES

1. MINIMUM PIPE SIZE IS 3/4". TERMINAL DEVICE BRANCH PIPE SIZE IS 3/4" UNLESS OTHERWISE NOTED.
2. COORDINATE PIPE ROUTING WITH VENTILATION, FIRE PROTECTION, ELECTRICAL AND STRUCTURAL. STRUCTURAL CONDITIONS AND ABOVE-CEILING CLEARANCE LIMITATIONS REQUIRE CLOSE COORDINATION BETWEEN TRADES. IN GENERAL, ROUTE PIPING TO AVOID DUCTWORK. WHERE NECESSARY, ROUTE PIPING THROUGH JOISTS AND/OR PENETRATION IN STRUCTURAL BEAMS. COORDINATE WITH STRUCTURAL ENGINEER FOR APPROVAL OF PENETRATIONS IN STRUCTURE.
3. MOUNT THERMOSTATS AT 54" AFF.
4. WHERE COILS OR OTHER HYDRONIC EQUIPMENT AND ACCESSORIES REQUIRING MAINTENANCE ARE LOCATED ABOVE A HARD-LID CEILING, PROVIDE ACCESS DOORS WHICH MATCH THE CEILING RATING FOR PROPER MAINTENANCE FROM A SINGLE LOCATION.
5. PROVIDE MANUAL HIGH POINT VENTS, LOW POINT DRAINS (WITH CAPPED HOSE CONNECTIONS) AND SLOPE PIPING AS NECESSARY TO ALLOW FOR THE COMPLETE DRAINAGE OF THE HYDRONIC SYSTEM.
6. SEE DETAIL 4/M911 FOR TYPICAL PIPE PENETRATION THROUGH FLOOR OR WALL.

(7) USE COMMON CONTROL AND FLOW VALVE LOCATED IN THE CEILING FOR BOTH LENGTHS OF FIN TUBE.



1 M304A SECOND FLOOR PLAN – NE – HEATING

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

0 4' 8' 16' 24'

CONSULTANT NAME :: AMC ENGINEERS
ECI/HYER :: THA ARCHITECTURE
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SECOND FLOOR PLAN - NE - HEATING

M304A

SHEET NOTES

1. MINIMUM PIPE SIZE IS 3/4". TERMINAL DEVICE BRANCH PIPE SIZE IS 3/4" UNLESS OTHERWISE NOTED.
2. COORDINATE PIPE ROUTING WITH VENTILATION, FIRE PROTECTION, ELECTRICAL AND STRUCTURAL. STRUCTURAL CONDITIONS AND ABOVE-CEILING CLEARANCE LIMITATIONS REQUIRE CLOSE COORDINATION BETWEEN TRADES. IN GENERAL, ROUTE PIPING TO AVOID DUCTWORK. WHERE NECESSARY, ROUTE PIPING THROUGH JOISTS AND/OR PENETRATION IN STRUCTURAL BEAMS. COORDINATE WITH STRUCTURAL ENGINEER FOR APPROVAL OF PENETRATIONS IN STRUCTURE.
3. MOUNT THERMOSTATS AT 54" AFF.
4. WHERE COILS OR OTHER HYDRONIC EQUIPMENT AND ACCESSORIES REQUIRING MAINTENANCE ARE LOCATED ABOVE A HARD-LID CEILING, PROVIDE ACCESS DOORS WHICH MATCH THE CEILING RATING FOR PROPER MAINTENANCE FROM A SINGLE LOCATION.
5. PROVIDE MANUAL HIGH POINT VENTS, LOW POINT DRAINS (WITH CAPPED HOSE CONNECTIONS) AND SLOPE PIPING AS NECESSARY TO ALLOW FOR THE COMPLETE DRAINAGE OF THE HYDRONIC SYSTEM.
6. SEE DETAIL 4/M911 FOR TYPICAL PIPE PENETRATION THROUGH FLOOR OR WALL.

(7) USE COMMON CONTROL AND FLOW VALVE LOCATED IN THE CEILING FOR BOTH LENGTHS OF FIN TUBE.

RESEARCH ROOM 201
READING ROOM 200
OFFICE 208
OFFICE 207
COPIER 206
OFFICE 205
OFFICE 204
ELECTRICAL 202
OPEN OFFICE 203
STAIR 3 S-3
401A
407
406
404
403
TO VAV-402A AND VAV-402B
TO H-4
TO VAV 405
TO VAV 404
TO TF-7
PIPE ANCHORS SEE 3/M911
1" HWS/HWR UP
1-1/4" HWS/HWR UP
1-1/4" RHS/RHR DN TO RHZ-16 MANIFOLD
TO VAV-401A AND VAV-401B
1-1/2"
2"
1"
3/4"
3/4" DOWN TO ALL FT AND CUH IN STAIR 3
HWS
HWR
RHS
RHR
SEE M304A
SEE M304B
SEE M304C
SEE M304B
FT-1 75 10
FT-1 75 3
FT-2 55 7
2/M722
6/M911
3/M912 (TYP)
4/M912
2/M913 (TYP)
3/M911
C.C
D.D
E.E
F.F
G.G
8
9
10
11
12
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14
15

1/M304B SECOND FLOOR PLAN – SE – HEATING
SCALE: 1/8" = 1'-0"

0 4' 8' 16' 24'

CONSULTANT NAME :: AMC ENGINEERS
ECI/HYER :: THA ARCHITECTURE
DEPARTMENT OF EDUCATION & EARLY DEVELOPMENT
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
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SECOND FLOOR PLAN - SE - HEATING

M304B

SHEET NOTES

1. MINIMUM PIPE SIZE IS 3/4". TERMINAL DEVICE BRANCH PIPE SIZE IS 3/4" UNLESS OTHERWISE NOTED.
2. COORDINATE PIPE ROUTING WITH VENTILATION, FIRE PROTECTION, ELECTRICAL AND STRUCTURAL. STRUCTURAL CONDITIONS AND ABOVE-CEILING CLEARANCE LIMITATIONS REQUIRE CLOSE COORDINATION BETWEEN TRADES. IN GENERAL, ROUTE PIPING TO AVOID DUCTWORK. WHERE NECESSARY, ROUTE PIPING THROUGH JOISTS AND/OR PENETRATION IN STRUCTURAL BEAMS. COORDINATE WITH STRUCTURAL ENGINEER FOR APPROVAL OF PENETRATIONS IN STRUCTURE.
3. MOUNT THERMOSTATS AT 54" AFF.
4. WHERE COILS OR OTHER HYDRONIC EQUIPMENT AND ACCESSORIES REQUIRING MAINTENANCE ARE LOCATED ABOVE A HARD-LID CEILING, PROVIDE ACCESS DOORS WHICH MATCH THE CEILING RATING FOR PROPER MAINTENANCE FROM A SINGLE LOCATION.
5. PROVIDE MANUAL HIGH POINT VENTS, LOW POINT DRAINS (WITH CAPPED HOSE CONNECTIONS) AND SLOPE PIPING AS NECESSARY TO ALLOW FOR THE COMPLETE DRAINAGE OF THE HYDRONIC SYSTEM.
6. SEE DETAIL 4/M911 FOR TYPICAL PIPE PENETRATION THROUGH FLOOR OR WALL.

(7) MOUNT BOTTOM OF FIN TUBE ENCLOSURE 4" AFF MINIMUM.

1 M304C SECOND FLOOR PLAN – SW – HEATING

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

0 4' 8' 16' 24'

CONSULTANT NAME :: AMC ENGINEERS
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SECOND FLOOR PLAN - SW - HEATING

M304C

SHEET NOTES

1. MINIMUM PIPE SIZE IS 3/4". TERMINAL DEVICE BRANCH PIPE SIZE IS 3/4" UNLESS OTHERWISE NOTED.
2. COORDINATE PIPE ROUTING WITH VENTILATION, FIRE PROTECTION, ELECTRICAL AND STRUCTURAL. STRUCTURAL CONDITIONS AND ABOVE-CEILING CLEARANCE LIMITATIONS REQUIRE CLOSE COORDINATION BETWEEN TRADES. IN GENERAL, ROUTE PIPING TO AVOID DUCTWORK. WHERE NECESSARY, ROUTE PIPING THROUGH JOISTS AND/OR PENETRATION IN STRUCTURAL BEAMS. COORDINATE WITH STRUCTURAL ENGINEER FOR APPROVAL OF PENETRATIONS IN STRUCTURE.
3. MOUNT THERMOSTATS AT 54" AFF.
4. WHERE COILS OR OTHER HYDRONIC EQUIPMENT AND ACCESSORIES REQUIRING MAINTENANCE ARE LOCATED ABOVE A HARD-LID CEILING, PROVIDE ACCESS DOORS WHICH MATCH THE CEILING RATING FOR PROPER MAINTENANCE FROM A SINGLE LOCATION.
5. PROVIDE MANUAL HIGH POINT VENTS, LOW POINT DRAINS (WITH CAPPED HOSE CONNECTIONS) AND SLOPE PIPING AS NECESSARY TO ALLOW FOR THE COMPLETE DRAINAGE OF THE HYDRONIC SYSTEM.
6. SEE DETAIL 4/M911 FOR TYPICAL PIPE PENETRATION THROUGH FLOOR OR WALL.
7. USE COMMON CONTROL AND FLOW VALVE LOCATED IN THE CEILING FOR BOTH LENGTHS OF FIN TUBE.
8. SEE 1/M816 FOR CRAC UNIT PIPING DETAILS.
9. COORDINATE PLACEMENT OF CRAC UNITS WITH TELECOM EQUIPMENT RACKS AND ADJUST AIRFLOW LOUVERS FOR 'COLD ISLE/HOT ISLE' AIRFLOW PATTERNS. TYPICAL ALL CRAC UNITS. SEE 2/M816 AND ELECTRICAL DRAWINGS.
10. LOCATE PIPING APPURTENANCES FOR CRAC COOLING UNITS ALONG WALL ABOVE HOT ISLE.
11. PROVIDE BYPASS WITH 60 GPM BALANCE VALVE DURING PHASE 2A. BYPASS AND BALANCE VALVE ARE TO BE REMOVED DURING PHASE 2B.
12. PROVIDE BYPASS WITH 150 GPM BALANCE VALVE DURING PHASE 2A. BYPASS AND BALANCE VALVE ARE TO BE REMOVED DURING PHASE 2B.

1 M304D SECOND FLOOR PLAN – NW – HEATING

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

0 4' 8' 16' 24'

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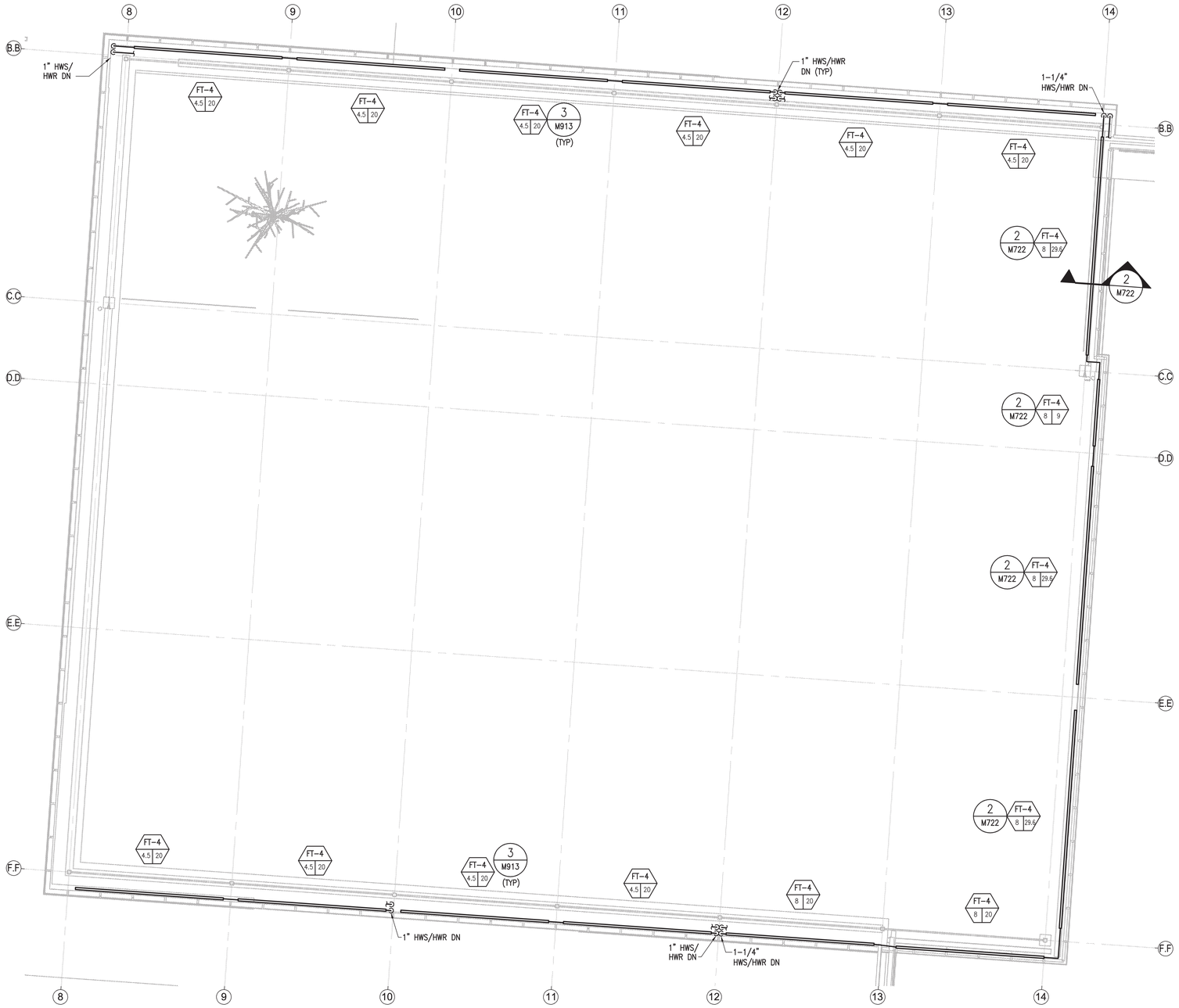
SECOND FLOOR PLAN - NW - HEATING

M304D



SHEET NOTES

1. MINIMUM PIPE SIZE IS 3/4". TERMINAL DEVICE BRANCH PIPE SIZE IS 3/4" UNLESS OTHERWISE NOTED.
2. COORDINATE PIPE ROUTING WITH VENTILATION, FIRE PROTECTION, ELECTRICAL AND STRUCTURAL. STRUCTURAL CONDITIONS AND ABOVE-CEILING CLEARANCE LIMITATIONS REQUIRE CLOSE COORDINATION BETWEEN TRADES. IN GENERAL, ROUTE PIPING TO AVOID DUCTWORK. WHERE NECESSARY, ROUTE PIPING THROUGH JOISTS AND/OR PENETRATION IN STRUCTURAL BEAMS. COORDINATE WITH STRUCTURAL ENGINEER FOR APPROVAL OF PENETRATIONS IN STRUCTURE.
3. MOUNT THERMOSTATS AT 54" AFF.
4. WHERE COILS OR OTHER HYDRONIC EQUIPMENT AND ACCESSORIES REQUIRING MAINTENANCE ARE LOCATED ABOVE A HARD-LID CEILING, PROVIDE ACCESS DOORS WHICH MATCH THE CEILING RATING FOR PROPER MAINTENANCE FROM A SINGLE LOCATION.
5. PROVIDE MANUAL HIGH POINT VENTS, LOW POINT DRAINS (WITH CAPPED HOSE CONNECTIONS) AND SLOPE PIPING AS NECESSARY TO ALLOW FOR THE COMPLETE DRAINAGE OF THE HYDRONIC SYSTEM.
6. SEE DETAIL 4/M911 FOR TYPICAL PIPE PENETRATION THROUGH FLOOR OR WALL.

1 M305 UPPER SECOND FLOOR PLAN – NE & SE – HEATING

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

0 4' 8' 16' 24'

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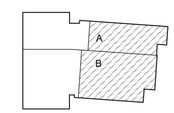

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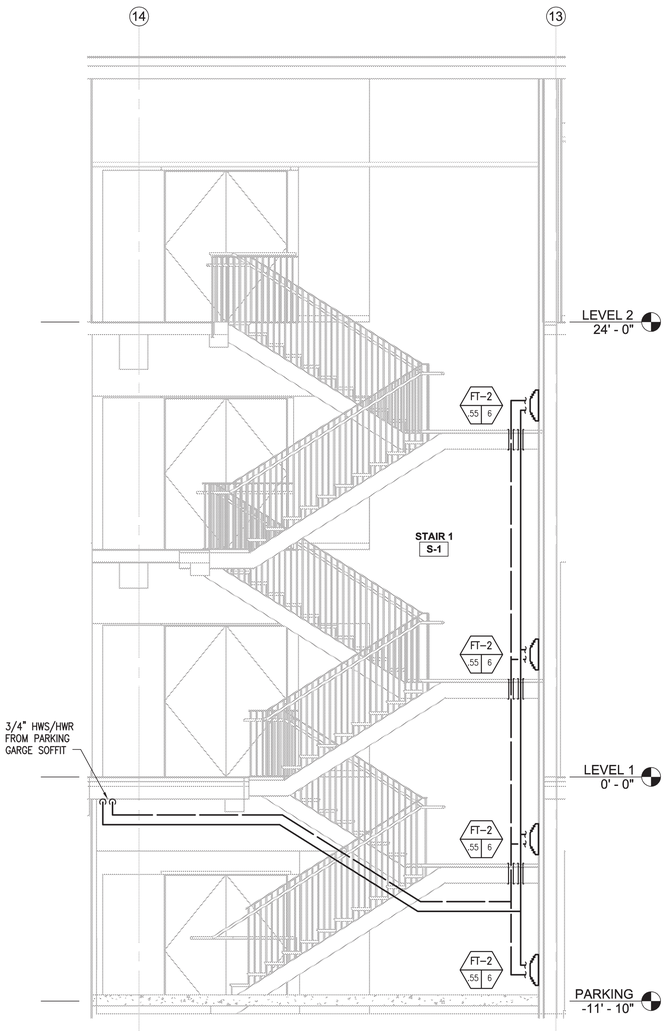
SECOND FLOOR CLERESTORY PLAN - HEATING

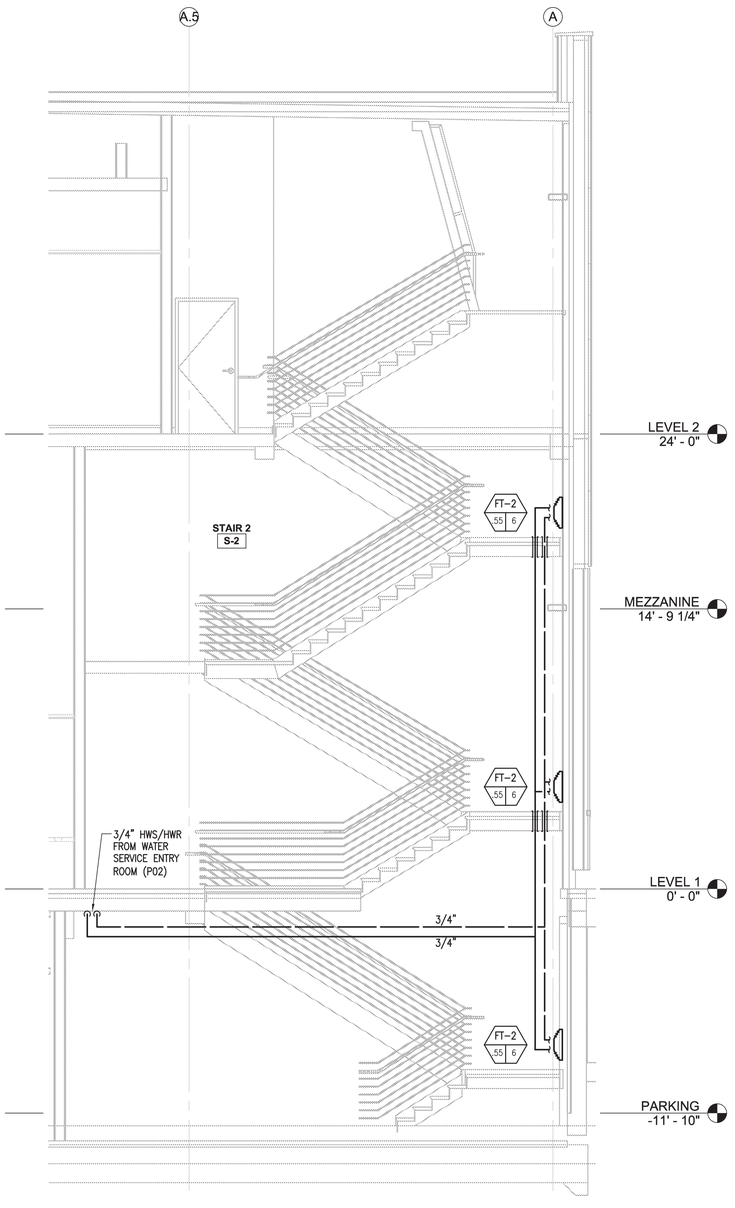
M305

SHEET NOTES

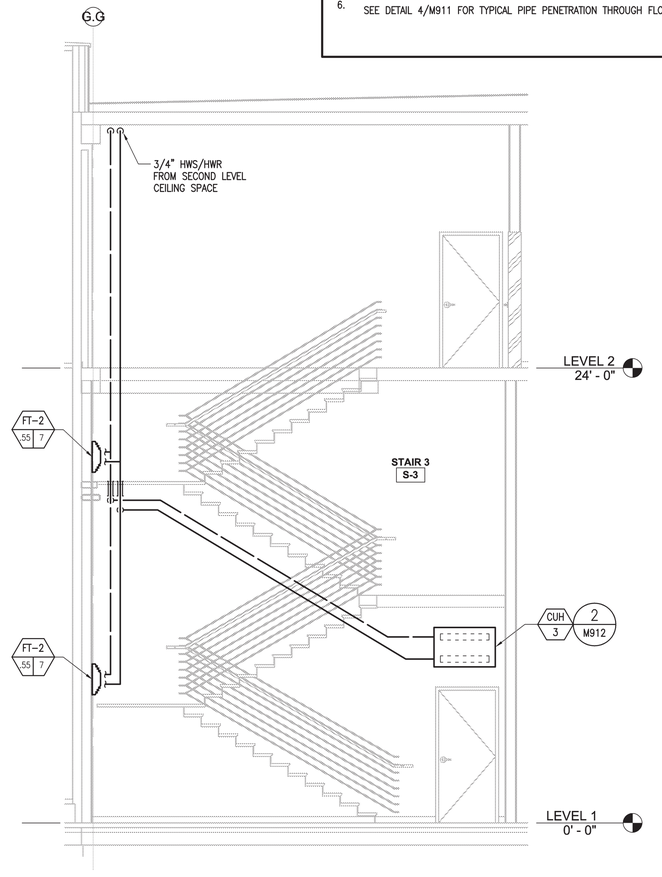
1. MINIMUM PIPE SIZE IS 3/4". TERMINAL DEVICE BRANCH PIPE SIZE IS 3/4" UNLESS OTHERWISE NOTED.
2. COORDINATE PIPE ROUTING WITH VENTILATION, FIRE PROTECTION, ELECTRICAL AND STRUCTURAL. STRUCTURAL CONDITIONS AND ABOVE-CEILING CLEARANCE LIMITATIONS REQUIRE CLOSE COORDINATION BETWEEN TRADES. IN GENERAL, ROUTE PIPING TO AVOID DUCTWORK. WHERE NECESSARY, ROUTE PIPING THROUGH JOISTS AND/OR PENETRATION IN STRUCTURAL BEAMS. COORDINATE WITH STRUCTURAL ENGINEER FOR APPROVAL OF PENETRATIONS IN STRUCTURE.
3. MOUNT THERMOSTATS AT 54" AFF.
4. WHERE COILS OR OTHER HYDRONIC EQUIPMENT AND ACCESSORIES REQUIRING MAINTENANCE ARE LOCATED ABOVE A HARD-LID CEILING, PROVIDE ACCESS DOORS WHICH MATCH THE CEILING RATING FOR PROPER MAINTENANCE FROM A SINGLE LOCATION.
5. PROVIDE MANUAL HIGH POINT VENTS, LOW POINT DRAINS (WITH CAPPED HOSE CONNECTIONS) AND SLOPE PIPING AS NECESSARY TO ALLOW FOR THE COMPLETE DRAINAGE OF THE HYDRONIC SYSTEM.
6. SEE DETAIL 4/M911 FOR TYPICAL PIPE PENETRATION THROUGH FLOOR OR WALL.



1 M-315 ENLARGED SECTION – STAIR 1 – HEATING
SCALE: 1/4" = 1'-0"



2 M-315 ENLARGED SECTION – STAIR 2 – HEATING
SCALE: 1/4" = 1'-0"



3 M-315 ENLARGED SECTION – STAIR 3 – HEATING
SCALE: 1/4" = 1'-0"

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ENLARGED SECTIONS - STAIRWELLS - HEATING

M306

SHEET NOTES

1. THE INDOOR ENVIRONMENTAL MAP GRAPHICALLY DEPICTS THE BUILDING'S DESIGN TEMPERATURE/RELATIVE HUMIDITY SET POINTS (WITH TOLERANCES) AND BOTH INDOOR AIR AND VAPOR PRESSURIZATION LEVELS WITH RESPECT TO OUTDOOR AMBIENT PRESSURE/RELATIVE HUMIDITY AND ADJACENT AIR HANDLER ZONES. AIR FLOW DIRECTION BETWEEN ADJACENT ROOMS IS ALSO INDICATED.

   OUTDOOR AMBIENT PRESSURE IS ASSUMED AS DATUM (0). THE BUILDING INTERIOR WILL GENERALLY BE MAINTAINED AT A NEUTRAL PRESSURE WITH RESPECT TO OUTDOOR AMBIENT PRESSURE TO MINIMIZE MOISTURE MIGRATION/DAMAGE TO THE BUILDING ENVELOPE.

   (+) EQUALS ONE INCREMENT OF POSITIVE BUILDING PRESSURE RELATIVE TO OUTDOOR AMBIENT PRESSURE (APPROXIMATELY +0.02 IN WC PER INCREMENT).

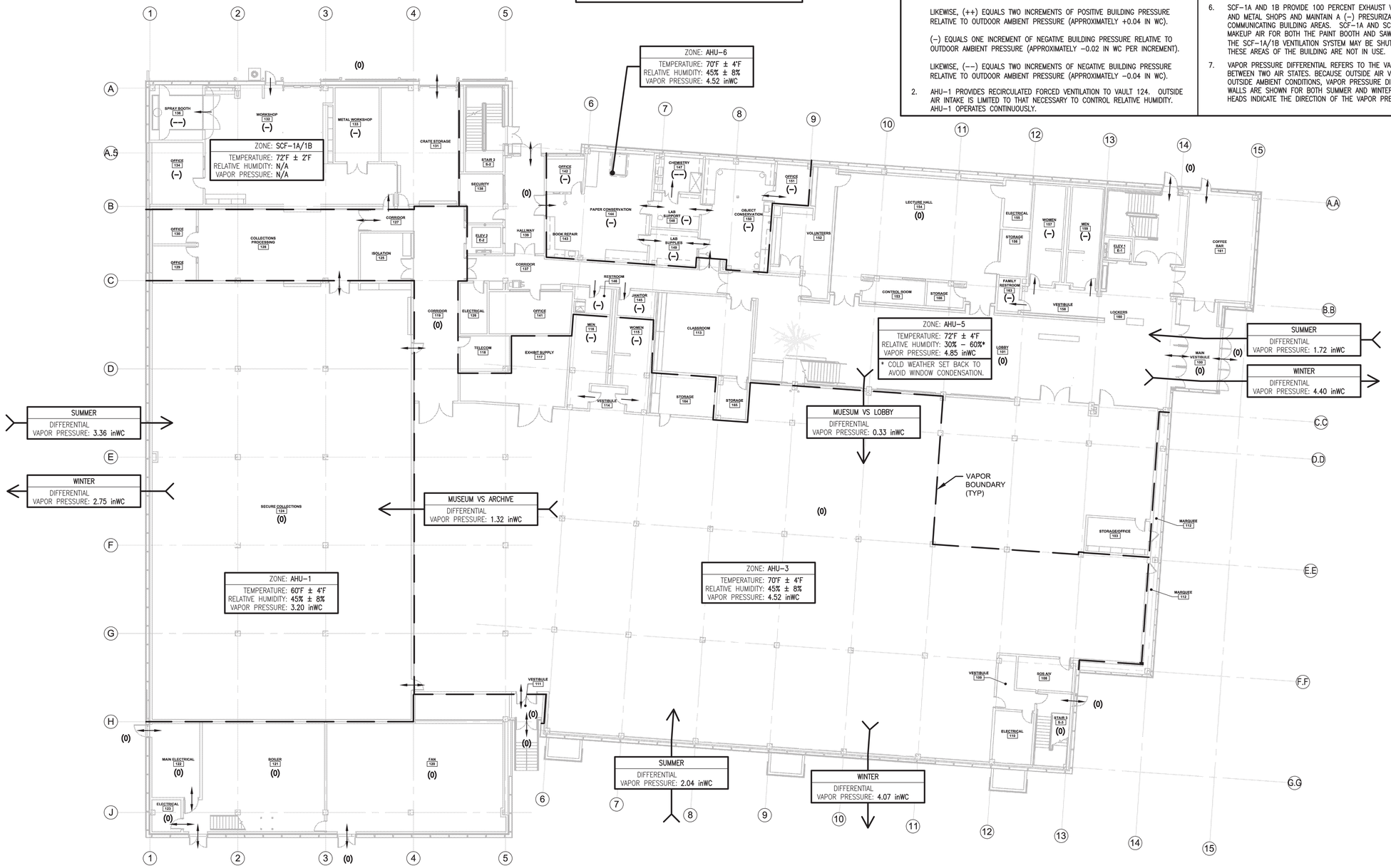
   LIKEWISE, (++) EQUALS TWO INCREMENTS OF POSITIVE BUILDING PRESSURE RELATIVE TO OUTDOOR AMBIENT PRESSURE (APPROXIMATELY +0.04 IN WC).

   (–) EQUALS ONE INCREMENT OF NEGATIVE BUILDING PRESSURE RELATIVE TO OUTDOOR AMBIENT PRESSURE (APPROXIMATELY –0.02 IN WC PER INCREMENT).

   LIKEWISE, (––) EQUALS TWO INCREMENTS OF NEGATIVE BUILDING PRESSURE RELATIVE TO OUTDOOR AMBIENT PRESSURE (APPROXIMATELY –0.04 IN WC).

2. AHU–1 PROVIDES RECIRCULATED FORCED VENTILATION TO VAULT 124. OUTSIDE AIR INTAKE IS LIMITED TO THAT NECESSARY TO CONTROL RELATIVE HUMIDITY. AHU–1 OPERATES CONTINUOUSLY.
3. AHU–3 PROVIDES RECIRCULATED FORCED VENTILATION TO THE FIRST FLOOR MUSEUM AREA AND OPERATES CONTINUOUSLY.
4. AHU–5 PROVIDES RECIRCULATED FORCED VENTILATION FOR THE MAJORITY OF FIRST AND SECOND FLOOR AREAS NORTH OF GRID C AND OPERATES CONTINUOUSLY. THE AHU–5 AND AHU–4 VENTILATION SYSTEMS FREELY "COMMUNICATE" AND CONTROL TO THE SAME INDOOR SETPOINT TEMPERATURE AND RELATIVE HUMIDITY.
5. AHU–6/EFU–6 PROVIDE 100 PERCENT EXHAUST VENTILATION FOR THE FIRST FLOOR LABORATORY SUITE AND MAINTAINS A (–) PRESSURIZATION LEVEL WITH RESEPCT TO COMMUNICATING AREAS UTILIZING THE "AIR–FLOW TRACKING METHOD" TO PREVENT MIGRATION OF AIRBORNE CONTAMINATES. THE AHU–6/EFU–6 VENTILATION SYSTEM MAY BE SHUTDOWN AT NIGHT WHEN THE BUILDING IS UNOCCUPIED AND ARTIFCATS AND CHEMICALS ARE PROPERLY STORAGE.
6. SCF–1A AND 1B PROVIDE 100 PERCENT EXHAUST VENTILATION FOR THE WOOD AND METAL SHOPS AND MAINTAIN A (–) PRESURIZATION LEVEL WITH RESPECT TO COMMUNICATING BUILDING AREAS. SCF–1A AND SCF–1B ALSO PROVIDE EXHAUST MAKEUP AIR FOR BOTH THE PAINT BOOTH AND SAWDUST COLLECTION SYSTEM. THE SCF–1A/1B VENTILATION SYSTEM MAY BE SHUTDOWN AT NIGHT OR WHENVER THESE AREAS OF THE BUILDING ARE NOT IN USE.
7. VAPOR PRESSURE DIFFERENTIAL REFERS TO THE VAPOR PRESSURE DIFFERENCE BETWEEN TWO AIR STATES. BECAUSE OUTSIDE AIR VAPOR PRESSURES VARY WITH OUTSIDE AMBIENT CONDITIONS, VAPOR PRESSURE DIFFERENTIALS ACROSS EXTERIOR WALLS ARE SHOWN FOR BOTH SUMMER AND WINTER DESIGN CONDITIONS. ARROW HEADS INDICATE THE DIRECTION OF THE VAPOR PRESSURE DRIVING FORCE.

HUMIDITY CONTROL DESIGN CONDITIONS	
SUMMER	WINTER
TEMPERATURE: 73.7°F (DB) RELATIVE HUMIDITY: 57.5% VAPOR PRESSURE: 6.56 inWC	TEMPERATURE: 9.8°F* RELATIVE HUMIDITY: 31.7%* VAPOR PRESSURE: 0.450 inWC
* 2009 ASHRAE 99.6% HUMIDIFICATION DP/MCDB DATA	



1 M401 FIRST FLOOR PLAN – INDOOR ENVIRONMENT MAP

SCALE: 1/16" = 1'–0"

0 8' 16' 32' 48'

CONSULTANT NAME :: AMC ENGINEERS
ECI/HYER :: THA ARCHITECTURE
DEPARTMENT OF EDUCATION & EARLY DEVELOPMENT
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FIRST FLOOR PLAN - INDOOR ENVIRONMENT MAP

M401

HUMIDITY CONTROL DESIGN CONDITIONS	
SUMMER	WINTER
TEMPERATURE: 73.7°F (DB) RELATIVE HUMIDITY: 57.5% VAPOR PRESSURE: 6.56 inWC	TEMPERATURE: 9.8°F* RELATIVE HUMIDITY: 31.7%* VAPOR PRESSURE: 0.450 inWC
* 2009 ASHRAE 99.6% HUMIDIFICATION DP/MCDB DATA	

SHEET NOTES

1. THE INDOOR ENVIORMENTAL MAP GRAPHICALLY DEPICTS THE BUILDING'S DESIGN TEMPERATURE/RELATIVE HUMIDITY SET POINTS (WITH TOLERANCES) AND BOTH INDOOR AIR AND VAPOR PRESSURIZATION LEVELS WITH RESPECT TO OUTDOOR AMBIENT PRESSURE/RELATIVE HUMIDITY AND ADJACENT AIR HANDLER ZONES. AIR FLOW DIRECTION BETWEEN ADJACENT ROOMS IS ALSO INDICATED.

   OUTDOOR AMBIENT PRESSURE IS ASSUMED AS DATUM (0). THE BUILDING INTERIOR WILL GENERALLY BE MAINTAINED AT A NEUTRAL PRESSURE WITH RESPECT TO OUTDOOR AMBIENT PRESSURE TO MINIMIZE MOISTURE MIGRATION/DAMAGE TO THE BUILDING ENVELOPE.

   (+) EQUALS ONE INCREMENT OF POSITIVE BUILDING PRESSURE RELATIVE TO OUTDOOR AMBIENT PRESSURE (APPROXIMATELY +0.05 IN WC PER INCREMENT).

   LIKEWISE, (++) EQUALS TWO INCREMENTS OF POSITIVE BUILDING PRESSURE RELATIVE TO OUTDOOR AMBIENT PRESSURE (APPROXIMATELY +0.10 IN WC).

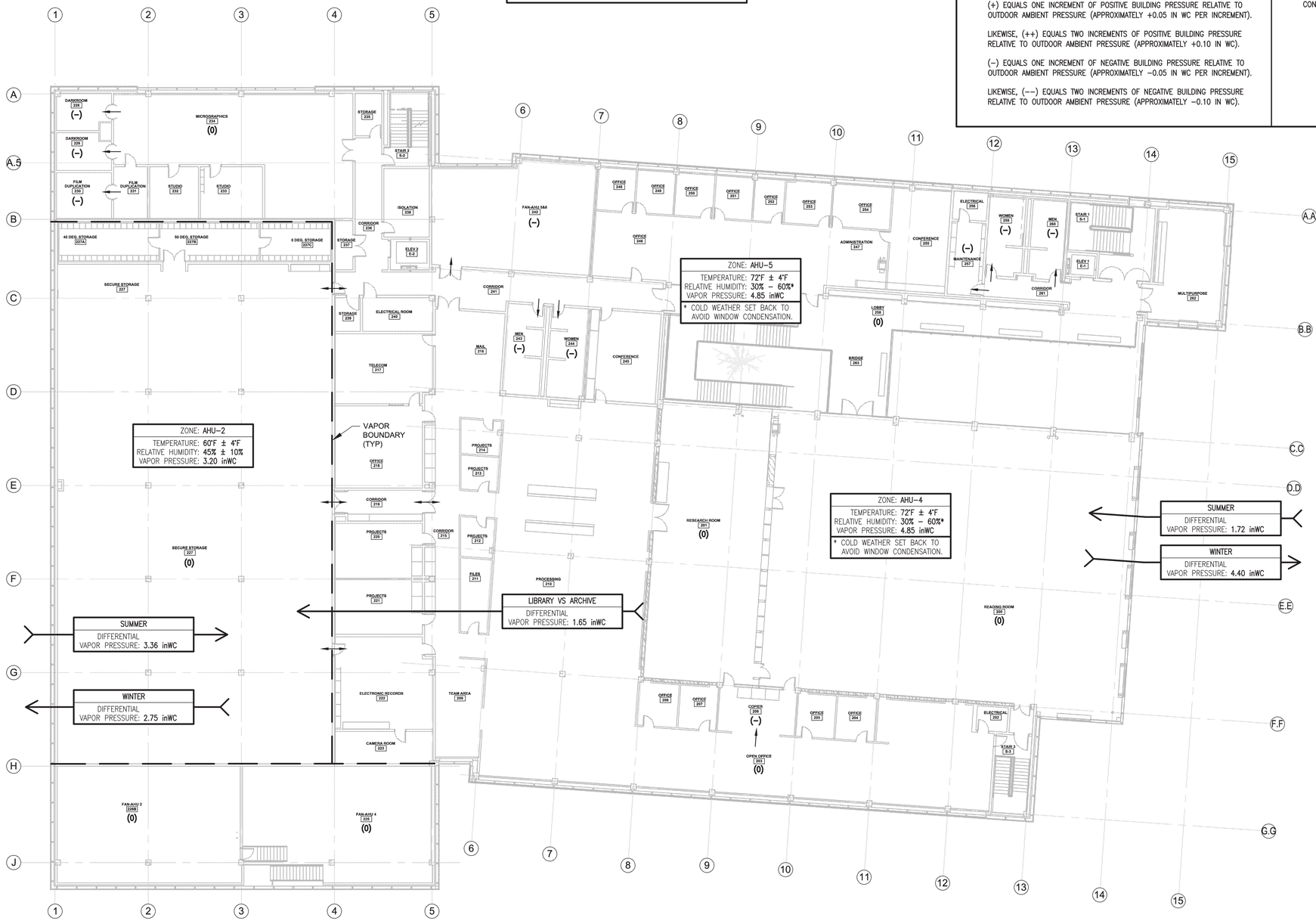
   (–) EQUALS ONE INCREMENT OF NEGATIVE BUILDING PRESSURE RELATIVE TO OUTDOOR AMBIENT PRESSURE (APPROXIMATELY –0.05 IN WC PER INCREMENT).

   LIKEWISE, (––) EQUALS TWO INCREMENTS OF NEGATIVE BUILDING PRESSURE RELATIVE TO OUTDOOR AMBIENT PRESSURE (APPROXIMATELY –0.10 IN WC).

2. AHU–2 PROVIDES RECIRCULATED FORCED VENTILATION TO VAULT 227. OUTSIDE AIR INTAKE IS LIMITED TO THAT NECESSARY TO CONTROL RELATIVE HUMIDITY. AHU–1 OPERATES CONTINUOUSLY.

3. AHU–4 PROVIDES RECIRCULATED FORCED VENTILATION TO THE SECOND FLOOR READING, RESEARCH AND ADMINISTRATIVE SPACES SOUTH OF GRID C AND OPERATES CONTINUOUSLY.

4. AHU–5 PROVIDES RECIRCULATED FORCED VENTILATION FOR THE MAJORITY OF FIRST AND SECOND FLOOR AREAS NORTH OF GRID C AND OPERATES CONTINUOUSLY. THE AHU–4 AND AHU–5 VENTILATION SYSTEMS FREELY "COMMUNICATE" AND CONTROL TO THE SAME INDOOR SETPOINT TEMPERATURE AND RELATIVE HUMIDITY.



1 M402 SCALE: 1/16" = 1'–0"

SECOND FLOOR PLAN – INDOOR ENVIRONMENT MAP

0 8' 16' 32' 48'

CONSULTANT NAME :: AMC ENGINEERS
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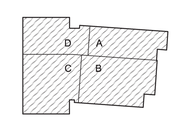

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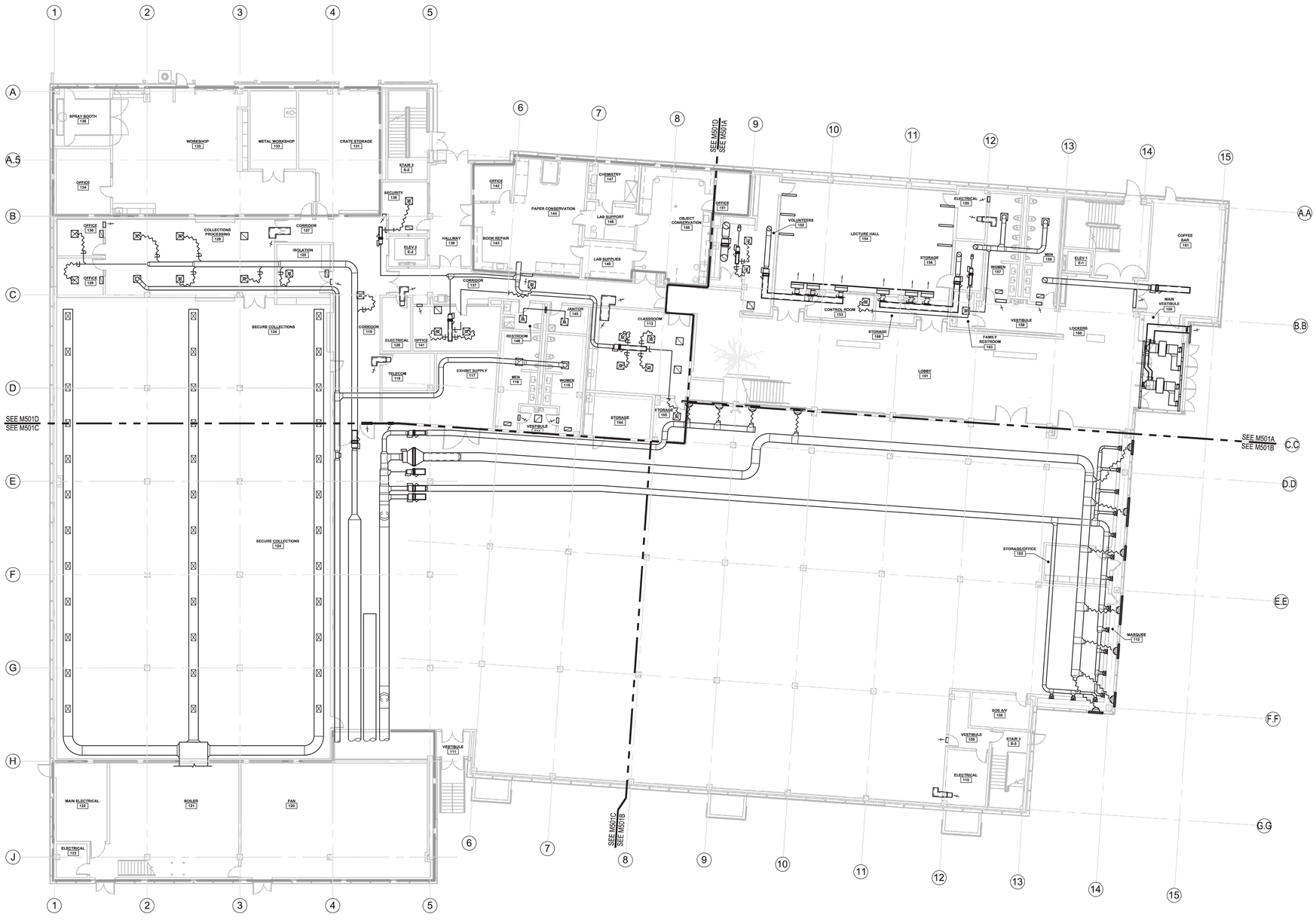
SECOND FLOOR PLAN - INDOOR ENVIRONMENT MAP

M402

SHEET NOTES

1. KEY PLANS ARE SHOWN FOR OVERALL REFERENCE ONLY. ALL DESIGN INFORMATION AND COMPONENTS ARE NOT SHOWN. REFER TO ENLARGED PLANS FOR DETAILED DESIGN INFORMATION ON THE SPECIFIC SUB-DISCIPLINE (E.G. PLUMBING, HEATING, AND VENTILATION).



1 M501 KEYPLAN – FIRST FLOOR PLAN – VENTILATION

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

0 8' 16' 32' 48'

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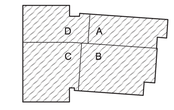

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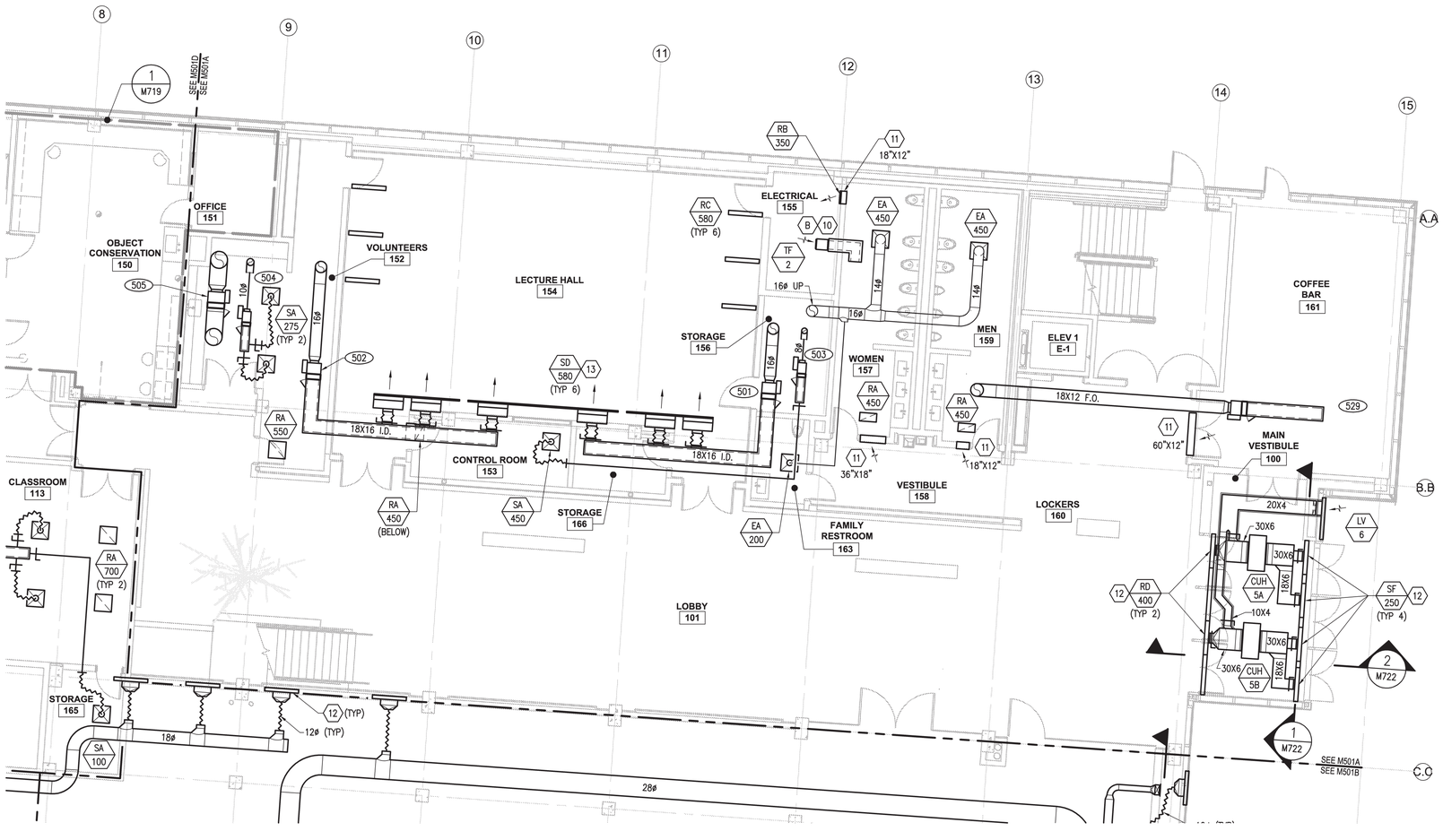
KEYPLAN - FIRST FLOOR PLAN - VENTILATION

M501

SHEET NOTES

1. SEE DETAIL 1/M921 FOR TYPICAL DUCTWORK FITTINGS.
2. SEAL DUCTWORK WHICH PENETRATES THROUGH FULL HEIGHT WALLS WITH ACOUSTICAL SEALANT SYSTEM; SEE DETAIL 2/M921. SEAL FLOOR/CEILING PENETRATIONS WITH ACOUSTICAL SEALANT SYSTEM; SEE DETAIL 4/M911. PROVIDE APPROPRIATE UL LISTED FIRESTOP SYSTEMS AT PENETRATIONS THROUGH RATED ASSEMBLIES.
3. PROVIDE REMOTE VOLUME DAMPER OPERATORS FOR BALANCING DAMPERS LOCATED ABOVE HARD-LID CEILINGS; SEE DETAIL 4/M921. REFER TO ARCHITECTURAL FOR HARD-LID CEILING LOCATIONS.
4. PROVIDE ORIFICE PLATES AS NEEDED AND IN ACCORDANCE WITH 23 31 00 DUCTS AND ACCESSORIES; SEE DETAIL 5/M921.
5. REFER TO HEATING SHEETS FOR ZONE THERMOSTAT LOCATIONS. CONTROL ZONE REHEAT COILS AND ASSOCIATED TERMINAL HEATING UNIT CONTROL VALVES IN PARALLEL AS APPLICABLE.
6. LOCATE VAV TERMINAL UNIT CONTROLLER, COIL ACCESS DOORS AND COIL HYDRONIC PIPING/VALVING ON SAME SIDE OF TERMINAL UNIT FOR COMPLETE ACCESS THROUGH SINGLE CEILING TILE OR ACCESS DOOR. SEE 3/M912 AND 4/M912 FOR VAV BOX DETAILS.
7. LOCATE BOTTOM OF VAV TERMINAL UNIT BETWEEN 6 INCHES AND 24 INCHES ABOVE TOP OF CEILING GRID FOR IMPROVED ACCESSIBILITY.
8. PROVIDE A MINIMUM OF 3 DUCT DIAMETERS OF STRAIGHT DUCT UPSTREAM THE VAV BOX INLET.
9. FLEX DUCT CONNECTION DIAMETER EQUALS AIR OUTLET NECK SIZE. SEE AIR INLET/OUTLET SCHEDULE.
10. SEE DETAIL 3/M921 FOR ACOUSTICAL RETURN AIR TRANSFER ELBOW SIZING.
11. PROVIDE SHEET METAL FRAMED RETURN AIR TRANSFER OPENING THROUGH FULL HEIGHT WALL. PROVIDE MINIMUM NET FREE AREA AS INDICATED. COORDINATE RETURN AIR TRANSFER OPENINGS WITH ARCHITECTURAL AND STRUCTURAL.
12. PROVIDE DIFFUSER CONTINUOUS ACROSS LENGTH OF VESTIBULE. PROVIDE MANUFACTURER'S INSULATED PLENUM, ON 48" LONG ACTIVE PORTIONS ONLY, FOR DUCT CONNECTION.
13. PROVIDE DIFFUSER CONTINUOUS, AS SHOWN. BOTTOM OF DIFFUSER AT APPROX. 9'-3". COORDINATE WITH WOOD SLAT WALL SYSTEM AND PROJECTOR LENSES; SEE 3/A265. 6"H X 42"L ACTIVE SECTIONS OF DIFFUSER DUCTED SIMILAR TO 2/M923.



1 M501A FIRST FLOOR PLAN – NE – VENTILATION

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

0 4' 8' 16' 24'

CONSULTANT NAME :: AMC ENGINEERS
ECI/HYER :: THA ARCHITECTURE
DEPARTMENT OF EDUCATION & EARLY DEVELOPMENT
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
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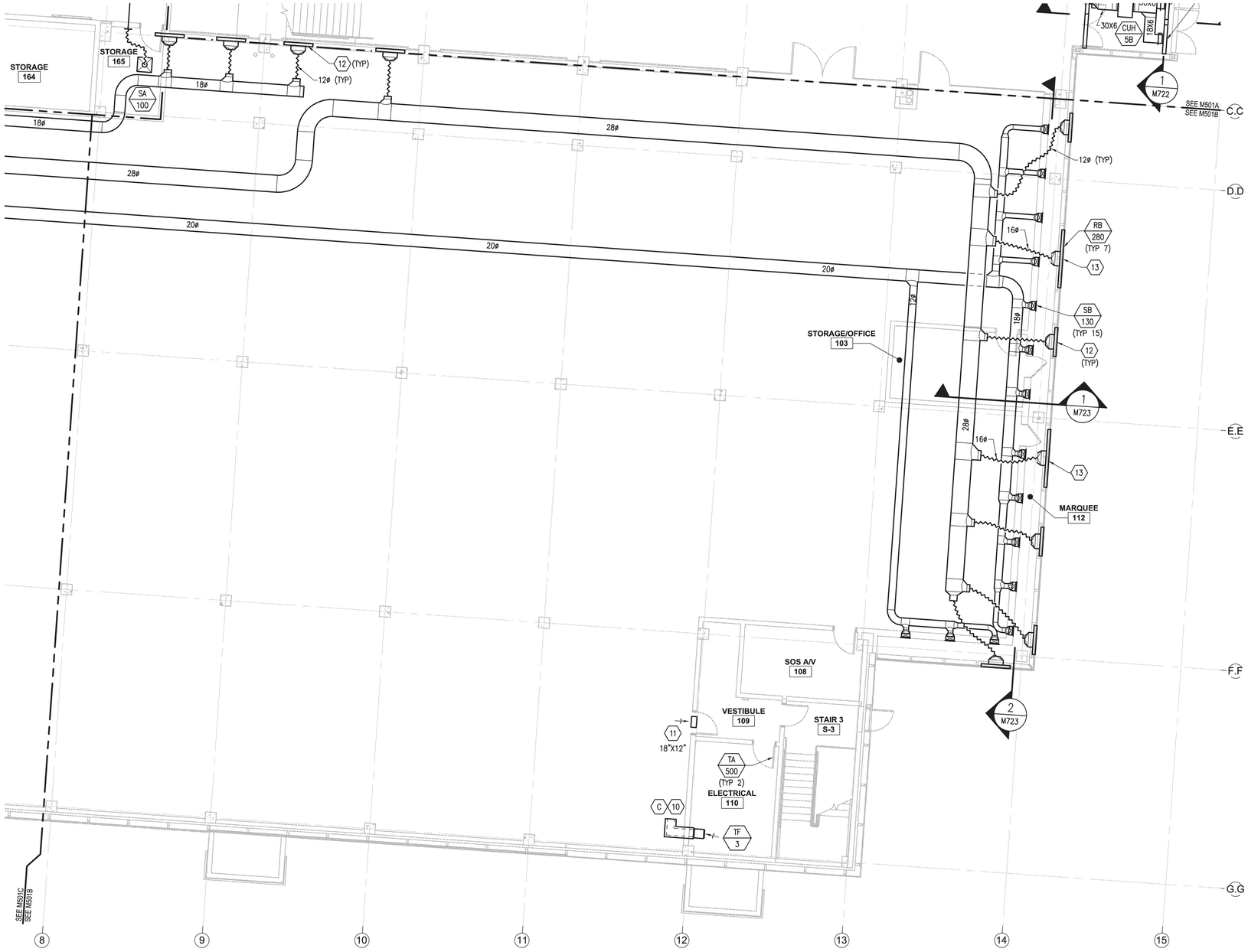
FIRST FLOOR PLAN - NE - VENTILATION

M501A



SHEET NOTES

1. SEE DETAIL 1/M921 FOR TYPICAL DUCTWORK FITTINGS.
2. SEAL DUCTWORK WHICH PENETRATES THROUGH FULL HEIGHT WALLS WITH ACOUSTICAL SEALANT SYSTEM; SEE DETAIL 2/M921. SEAL FLOOR/CEILING PENETRATIONS WITH ACOUSTICAL SEALANT SYSTEM; SEE DETAIL 4/M911. PROVIDE APPROPRIATE UL LISTED FIRESTOP SYSTEMS AT PENETRATIONS THROUGH RATED ASSEMBLIES.
3. PROVIDE REMOTE VOLUME DAMPER OPERATORS FOR BALANCING DAMPERS LOCATED ABOVE HARD-LID CEILINGS; SEE DETAIL 4/M921. REFER TO ARCHITECTURAL FOR HARD-LID CEILING LOCATIONS.
4. PROVIDE ORIFICE PLATES AS NEEDED AND IN ACCORDANCE WITH 23 31 00 DUCTS AND ACCESSORIES; SEE DETAIL 5/M921.
5. REFER TO HEATING SHEETS FOR ZONE THERMOSTAT LOCATIONS. CONTROL ZONE REHEAT COILS AND ASSOCIATED TERMINAL HEATING UNIT CONTROL VALVES IN PARALLEL AS APPLICABLE.
6. LOCATE VAV TERMINAL UNIT CONTROLLER, COIL ACCESS DOORS AND COIL HYDRONIC PIPING/VALVING ON SAME SIDE OF TERMINAL UNIT FOR COMPLETE ACCESS THROUGH SINGLE CEILING TILE OR ACCESS DOOR. SEE 3/M912 AND 4/M912 FOR VAV BOX DETAILS.
7. LOCATE BOTTOM OF VAV TERMINAL UNIT BETWEEN 6 INCHES AND 24 INCHES ABOVE TOP OF CEILING GRID FOR IMPROVED ACCESSIBILITY.
8. PROVIDE A MINIMUM OF 3 DUCT DIAMETERS OF STRAIGHT DUCT UPSTREAM THE VAV BOX INLET.
9. FLEX DUCT CONNECTION DIAMETER EQUALS AIR OUTLET NECK SIZE. SEE AIR INLET/OUTLET SCHEDULE.

10. SEE DETAIL 3/M921 FOR ACOUSTICAL RETURN AIR TRANSFER ELBOW SIZING.
11. PROVIDE SHEET METAL FRAMED RETURN AIR TRANSFER OPENING THROUGH FULL HEIGHT WALL. PROVIDE MINIMUM NET FREE AREA AS INDICATED. COORDINATE RETURN AIR TRANSFER OPENINGS WITH ARCHITECTURAL AND STRUCTURAL.
12. PROVIDE 12ø TO 24X8 TRANSITION TO SERVE 5"W X 48"L SUPPLY AIR PLENUM UP TO FLOOR GRILLE; SEE 1/M503B.
13. PROVIDE 16ø TO 24X12 TRANSITION TO SERVE 5"W X 96"L SUPPLY AIR PLENUM UP TO FLOOR GRILLE; SEE 1/M503B.

1 / M501B FIRST FLOOR PLAN – SE – VENTILATION

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

0 4' 8' 16' 24'

CONSULTANT NAME :: AMC ENGINEERS
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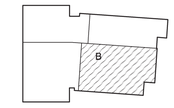

KEYPLAN - (NTS)

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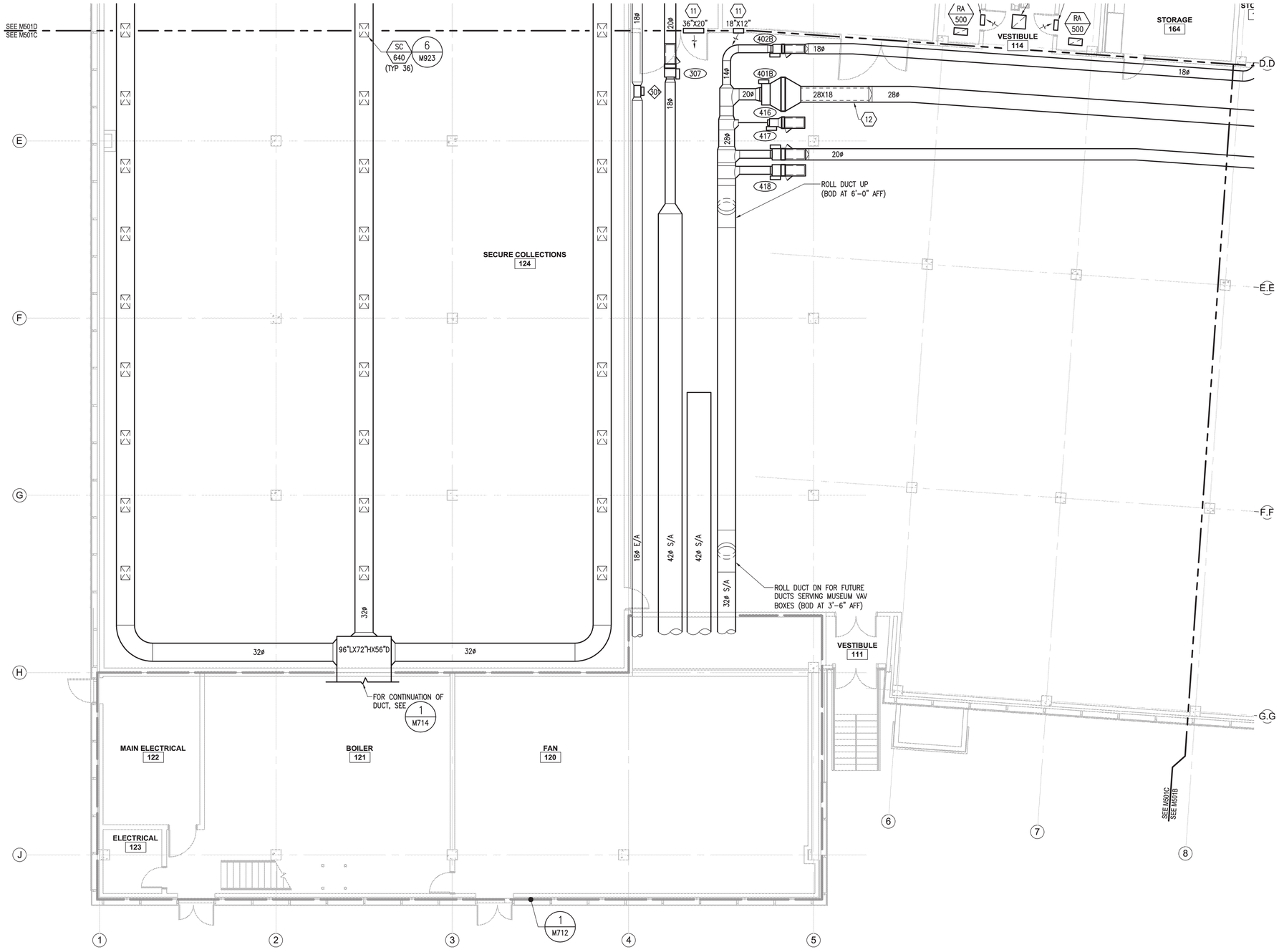
FIRST FLOOR PLAN - SE - VENTILATION

M501B



SHEET NOTES

1. SEE DETAIL 1/M921 FOR TYPICAL DUCTWORK FITTINGS.
2. SEAL DUCTWORK WHICH PENETRATES THROUGH FULL HEIGHT WALLS WITH ACOUSTICAL SEALANT SYSTEM; SEE DETAIL 2/M921. SEAL FLOOR/CEILING PENETRATIONS WITH ACOUSTICAL SEALANT SYSTEM; SEE DETAIL 4/M911. PROVIDE APPROPRIATE UL LISTED FIRESTOP SYSTEMS AT PENETRATIONS THROUGH RATED ASSEMBLIES.
3. PROVIDE REMOTE VOLUME DAMPER OPERATORS FOR BALANCING DAMPERS LOCATED ABOVE HARD-LID CEILINGS; SEE DETAIL 4/M921. REFER TO ARCHITECTURAL FOR HARD-LID CEILING LOCATIONS.
4. PROVIDE ORIFICE PLATES AS NEEDED AND IN ACCORDANCE WITH SECTION 23 31 00 DUCTS AND ACCESSORIES; SEE DETAIL 5/M921.
5. REFER TO HEATING SHEETS FOR ZONE THERMOSTAT LOCATIONS. CONTROL ZONE REHEAT COILS AND ASSOCIATED TERMINAL HEATING UNIT CONTROL VALVES IN PARALLEL AS APPLICABLE.
6. LOCATE VAV TERMINAL UNIT CONTROLLER, COIL ACCESS DOORS AND COIL HYDRONIC PIPING/VALVING ON SAME SIDE OF TERMINAL UNIT FOR COMPLETE ACCESS THROUGH SINGLE CEILING TILE OR ACCESS DOOR. SEE 3/M912 AND 4/M912 FOR VAV BOX DETAILS.
7. LOCATE BOTTOM OF VAV TERMINAL UNIT BETWEEN 6 INCHES AND 24 INCHES ABOVE TOP OF CEILING GRID FOR IMPROVED ACCESSIBILITY.
8. PROVIDE A MINIMUM OF 3 DUCT DIAMETERS OF STRAIGHT DUCT UPSTREAM THE VAV BOX INLET.
9. FLEX DUCT CONNECTION DIAMETER EQUALS AIR OUTLET NECK SIZE. SEE AIR INLET/OUTLET SCHEDULE.
10. SEE DETAIL 3/M921 FOR ACOUSTICAL RETURN AIR TRANSFER ELBOW SIZING.
11. PROVIDE SHEET METAL FRAMED RETURN AIR TRANSFER OPENING THROUGH FULL HEIGHT WALL. PROVIDE MINIMUM NET FREE AREA AS INDICATED. COORDINATE RETURN AIR TRANSFER OPENINGS WITH ARCHITECTURAL AND STRUCTURAL.
12. PROVIDE TEN (10) FEET OF ACOUSTICALLY LINED RECTANGULAR DUCT DOWNSTREAM FROM THE REHEAT COIL.

1 M501C FIRST FLOOR PLAN – SW – VENTILATION

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

0 4' 8' 16' 24'

CONSULTANT NAME :: AMC ENGINEERS
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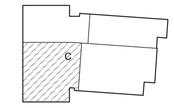

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FIRST FLOOR PLAN - SW - VENTILATION

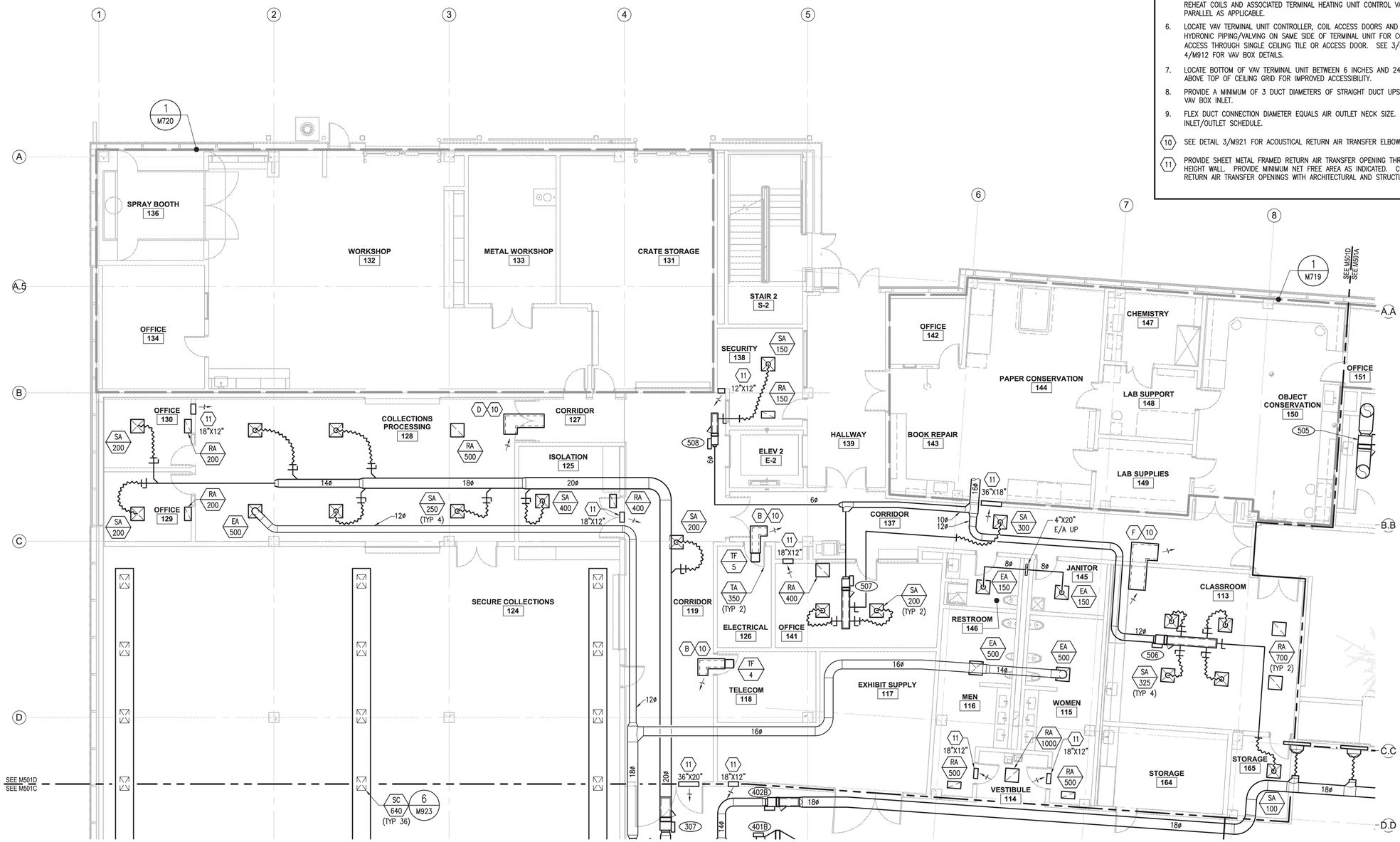
M501C

SHEET NOTES

1. SEE DETAIL 1/M921 FOR TYPICAL DUCTWORK FITTINGS.
2. SEAL DUCTWORK WHICH PENETRATES THROUGH FULL HEIGHT WALLS WITH ACOUSTICAL SEALANT SYSTEM; SEE DETAIL 2/M921. SEAL FLOOR/CEILING PENETRATIONS WITH ACOUSTICAL SEALANT SYSTEM; SEE DETAIL 4/M911. PROVIDE APPROPRIATE UL LISTED FIRESTOP SYSTEMS AT PENETRATIONS THROUGH RATED ASSEMBLIES.
3. PROVIDE REMOTE VOLUME DAMPER OPERATORS FOR BALANCING DAMPERS LOCATED ABOVE HARD-LID CEILINGS; SEE DETAIL 4/M921. REFER TO ARCHITECTURAL FOR HARD-LID CEILING LOCATIONS.
4. PROVIDE ORIFICE PLATES AS NEEDED AND IN ACCORDANCE WITH 23 31 00 DUCTS AND ACCESSORIES; SEE DETAIL 5/M921.
5. REFER TO HEATING SHEETS FOR ZONE THERMOSTAT LOCATIONS. CONTROL ZONE REHEAT COILS AND ASSOCIATED TERMINAL HEATING UNIT CONTROL VALVES IN PARALLEL AS APPLICABLE.
6. LOCATE VAV TERMINAL UNIT CONTROLLER, COIL ACCESS DOORS AND COIL HYDRONIC PIPING/VALVING ON SAME SIDE OF TERMINAL UNIT FOR COMPLETE ACCESS THROUGH SINGLE CEILING TILE OR ACCESS DOOR. SEE 3/M912 AND 4/M912 FOR VAV BOX DETAILS.
7. LOCATE BOTTOM OF VAV TERMINAL UNIT BETWEEN 6 INCHES AND 24 INCHES ABOVE TOP OF CEILING GRID FOR IMPROVED ACCESSIBILITY.
8. PROVIDE A MINIMUM OF 3 DUCT DIAMETERS OF STRAIGHT DUCT UPSTREAM THE VAV BOX INLET.
9. FLEX DUCT CONNECTION DIAMETER EQUALS AIR OUTLET NECK SIZE. SEE AIR INLET/OUTLET SCHEDULE.

(10) SEE DETAIL 3/M921 FOR ACOUSTICAL RETURN AIR TRANSFER ELBOW SIZING.

(11) PROVIDE SHEET METAL FRAMED RETURN AIR TRANSFER OPENING THROUGH FULL HEIGHT WALL. PROVIDE MINIMUM NET FREE AREA AS INDICATED. COORDINATE RETURN AIR TRANSFER OPENINGS WITH ARCHITECTURAL AND STRUCTURAL.



1 M501D FIRST FLOOR PLAN – NW – VENTILATION

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

0 4' 8' 16' 24'

CONSULTANT NAME :: AMC ENGINEERS
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DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
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CONSTRUCTION DOCUMENTS

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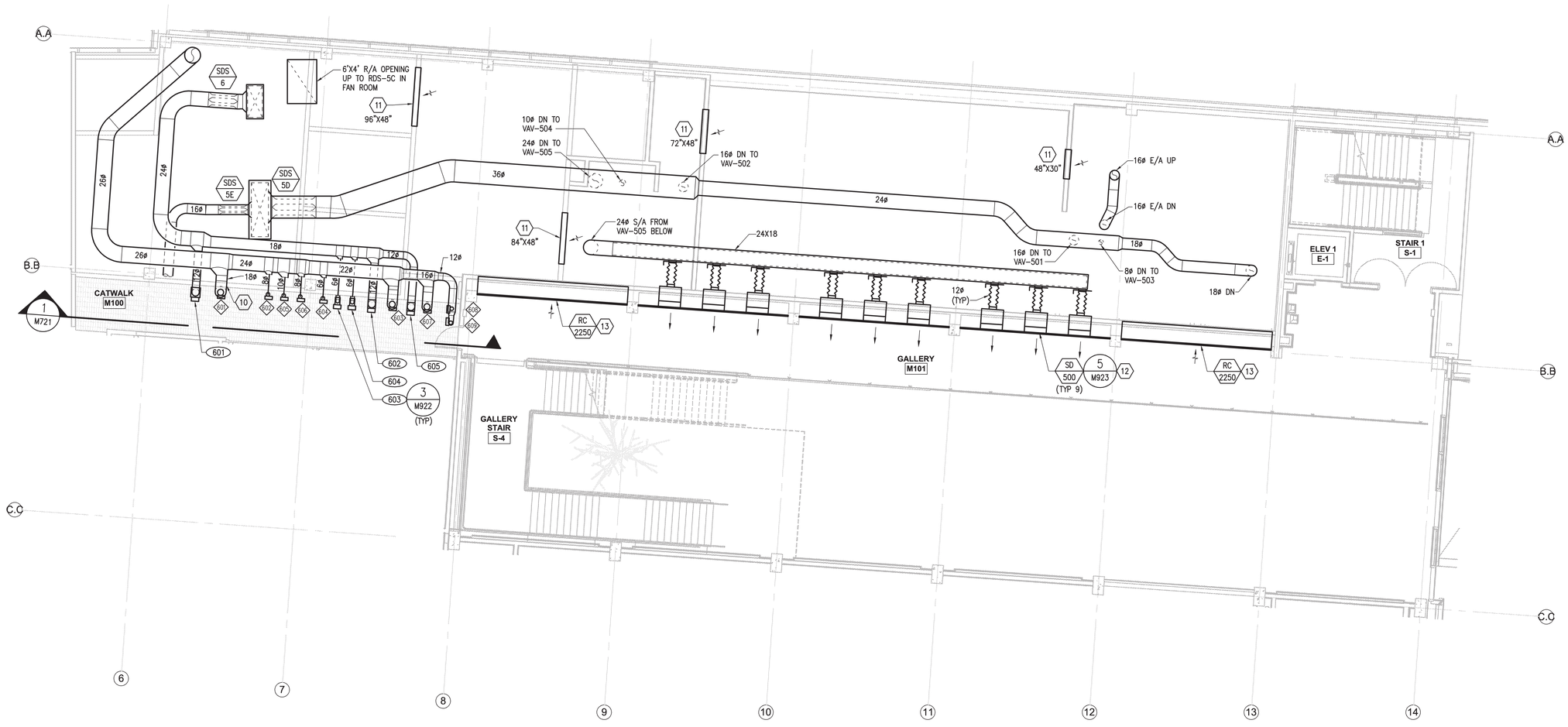
FIRST FLOOR PLAN - NW - VENTILATION

M501D

SHEET NOTES

1. SEE DETAIL 1/M921 FOR TYPICAL DUCTWORK FITTINGS.
2. SEAL DUCTWORK WHICH PENETRATES THROUGH FULL HEIGHT WALLS WITH ACOUSTICAL SEALANT SYSTEM; SEE DETAIL 2/M921. SEAL FLOOR/CEILING PENETRATIONS WITH ACOUSTICAL SEALANT SYSTEM; SEE DETAIL 4/M911. PROVIDE APPROPRIATE UL LISTED FIRESTOP SYSTEMS AT PENETRATIONS THROUGH RATED ASSEMBLIES.
3. PROVIDE REMOTE VOLUME DAMPER OPERATORS FOR BALANCING DAMPERS LOCATED ABOVE HARD-LID CEILINGS; SEE DETAIL 4/M921. REFER TO ARCHITECTURAL FOR HARD-LID CEILING LOCATIONS.
4. PROVIDE ORIFICE PLATES AS NEEDED AND IN ACCORDANCE WITH 23 31 00 DUCTS AND ACCESSORIES; SEE DETAIL 5/M921.
5. REFER TO HEATING SHEETS FOR ZONE THERMOSTAT LOCATIONS. CONTROL ZONE REHEAT COILS AND ASSOCIATED TERMINAL HEATING UNIT CONTROL VALVES IN PARALLEL AS APPLICABLE.
6. LOCATE VAV TERMINAL UNIT CONTROLLER, COIL ACCESS DOORS AND COIL HYDRONIC PIPING/VALVING ON SAME SIDE OF TERMINAL UNIT FOR COMPLETE ACCESS THROUGH SINGLE CEILING TILE OR ACCESS DOOR. SEE 3/M912 AND 4/M912 FOR VAV BOX DETAILS.
7. LOCATE BOTTOM OF VAV TERMINAL UNIT BETWEEN 6 INCHES AND 24 INCHES ABOVE TOP OF CEILING GRID FOR IMPROVED ACCESSIBILITY.
8. PROVIDE A MINIMUM OF 3 DUCT DIAMETERS OF STRAIGHT DUCT UPSTREAM THE VAV BOX INLET.
9. FLEX DUCT CONNECTION DIAMETER EQUALS AIR OUTLET NECK SIZE. SEE AIR INLET/OUTLET SCHEDULE.
10. PROVIDE SHORT RADIUS ELBOW.
11. PROVIDE SHEET METAL FRAMED RETURN AIR TRANSFER OPENING THROUGH FULL HEIGHT WALL. PROVIDE MINIMUM NET FREE AREA AS INDICATED. COORDINATE RETURN AIR TRANSFER OPENINGS WITH ARCHITECTURAL AND STRUCTURAL.
12. PROVIDE CONTINUOUS LINEAR BAR SUPPLY DIFFUSER BETWEEN COLUMNS. AIR INLET/OUTLET TAG REPRESENTS FLOW OUT OF EACH ACTIVE THREE (3) FOOT LONG SECTIONS, FOR AIR BALANCING.
13. PROVIDE CONTINUOUS LINEAR BAR RETURN GRILLE BETWEEN COLUMNS. PROVIDE OPENING THROUGH FULL HEIGHT WALL BEHIND ENTIRE GRILLE FOR RETURN AIR TRANSFER. COORDINATE OPENINGS WITH ARCHITECTURAL AND STRUCTURAL.



1 M502 GALLERY PLAN – VENTILATION

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

0 4' 8' 16' 24'

CONSULTANT NAME :: AMC ENGINEERS

ECI/HYER :: THA ARCHITECTURE

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CONSTRUCTION DOCUMENTS

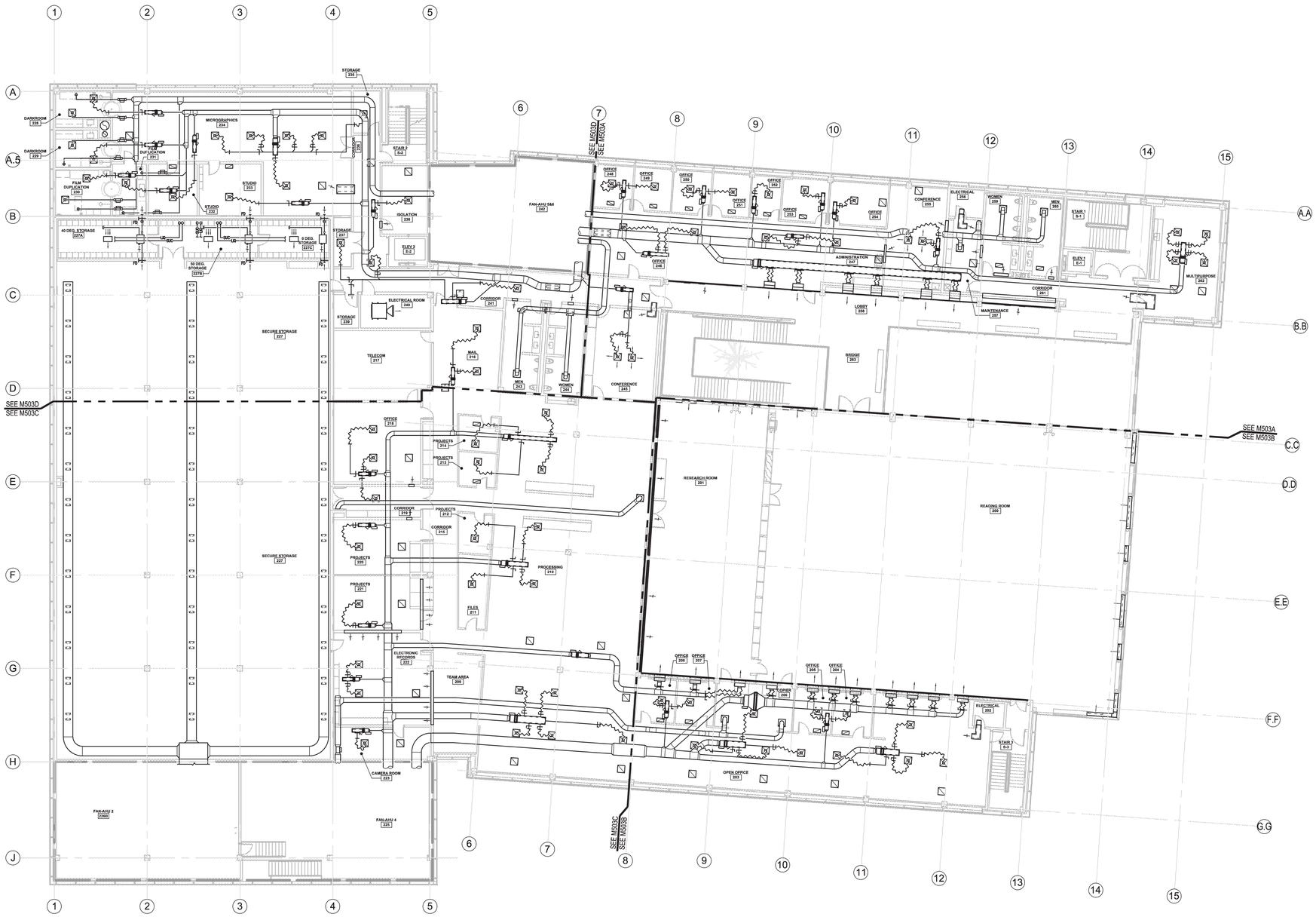
05.01.2012

GALLERY PLAN - VENTILATION

M502

SHEET NOTES

1. KEY PLANS ARE SHOWN FOR OVERALL REFERENCE ONLY. ALL DESIGN INFORMATION AND COMPONENTS ARE NOT SHOWN. REFER TO ENLARGED PLANS FOR DETAILED DESIGN INFORMATION ON THE SPECIFIC SUB-DISCIPLINE (E.G. PLUMBING, HEATING, AND VENTILATION).



1 M503 KEYPLAN – SECOND FLOOR PLAN – VENTILATION

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

0 8' 16' 32' 48'

CONSULTANT NAME :: AMC ENGINEERS

ECI/HYER :: THA ARCHITECTURE

DEPARTMENT OF EDUCATION & EARLY DEVELOPMENT

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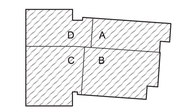

KEYPLAN - (NTS)

CONSTRUCTION DOCUMENTS

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KEYPLAN - SECOND FLOOR PLAN - VENTILATION

M503

SHEET NOTES

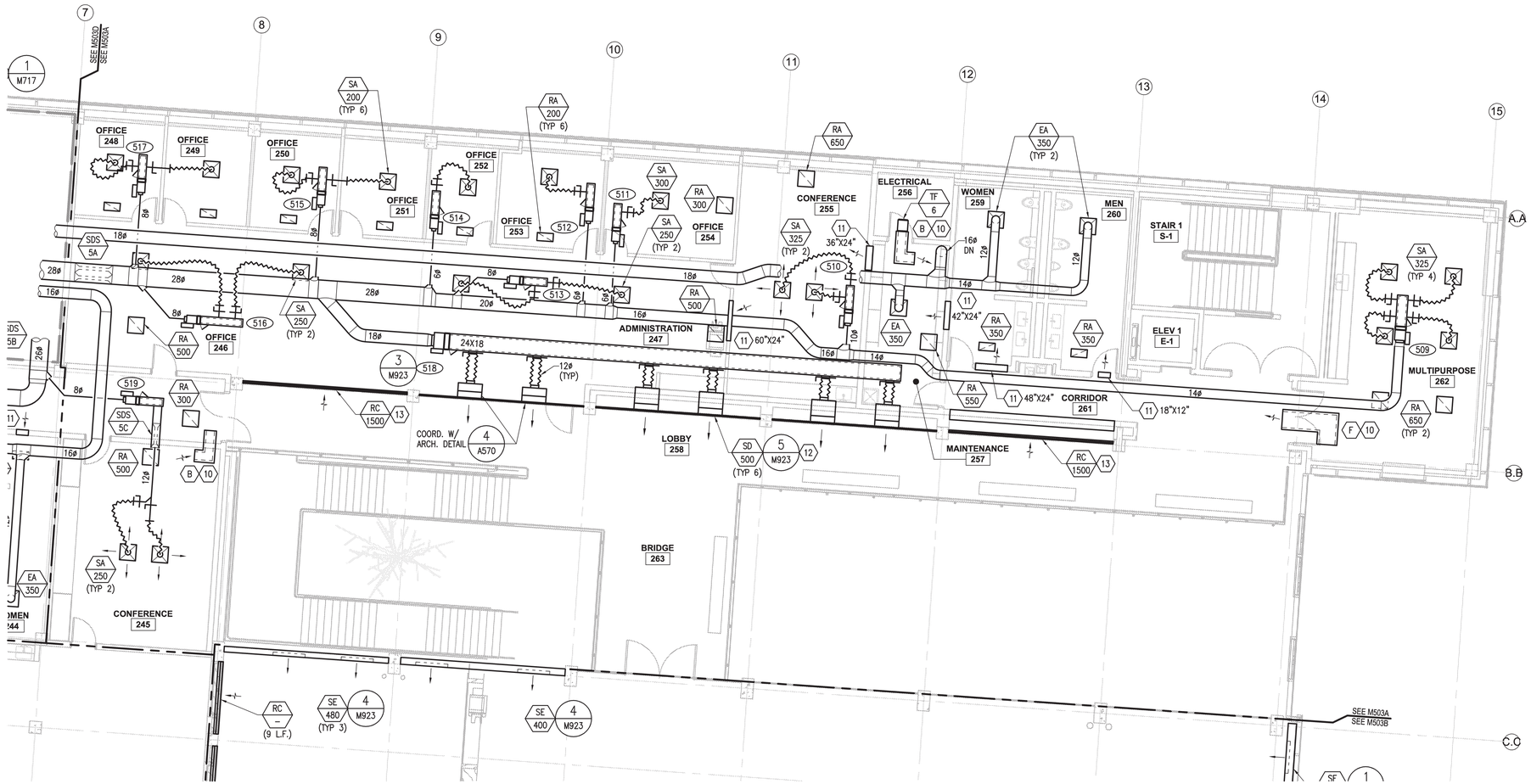
1. SEE DETAIL 1/M921 FOR TYPICAL DUCTWORK FITTINGS.
2. SEAL DUCTWORK WHICH PENETRATES THROUGH FULL HEIGHT WALLS WITH ACOUSTICAL SEALANT SYSTEM; SEE DETAIL 2/M921. SEAL FLOOR/CEILING PENETRATIONS WITH ACOUSTICAL SEALANT SYSTEM; SEE DETAIL 4/M911. PROVIDE APPROPRIATE UL LISTED FIRESTOP SYSTEMS AT PENETRATIONS THROUGH RATED ASSEMBLIES.
3. PROVIDE REMOTE VOLUME DAMPER OPERATORS FOR BALANCING DAMPERS LOCATED ABOVE HARD-LID CEILINGS; SEE DETAIL 4/M921. REFER TO ARCHITECTURAL FOR HARD-LID CEILING LOCATIONS.
4. PROVIDE ORIFICE PLATES AS NEEDED AND IN ACCORDANCE WITH 23 31 00 DUCTS AND ACCESSORIES; SEE DETAIL 5/M921.
5. REFER TO HEATING SHEETS FOR ZONE THERMOSTAT LOCATIONS. CONTROL ZONE REHEAT COILS AND ASSOCIATED TERMINAL HEATING UNIT CONTROL VALVES IN PARALLEL AS APPLICABLE.
6. LOCATE VAV TERMINAL UNIT CONTROLLER, COIL ACCESS DOORS AND COIL HYDRONIC PIPING/VALVING ON SAME SIDE OF TERMINAL UNIT FOR COMPLETE ACCESS THROUGH SINGLE CEILING TILE OR ACCESS DOOR. SEE 3/M912 AND 4/M912 FOR VAV BOX DETAILS.
7. LOCATE BOTTOM OF VAV TERMINAL UNIT BETWEEN 6 INCHES AND 24 INCHES ABOVE TOP OF CEILING GRID FOR IMPROVED ACCESSIBILITY.
8. PROVIDE A MINIMUM OF 3 DUCT DIAMETERS OF STRAIGHT DUCT UPSTREAM THE VAV BOX INLET.
9. FLEX DUCT CONNECTION DIAMETER EQUALS AIR OUTLET NECK SIZE. SEE AIR INLET/OUTLET SCHEDULE.

10 SEE DETAIL 3/M921 FOR ACOUSTICAL RETURN AIR TRANSFER ELBOW SIZING.

11 PROVIDE SHEET METAL FRAMED RETURN AIR TRANSFER OPENING THROUGH FULL HEIGHT WALL. PROVIDE MINIMUM NET FREE AREA AS INDICATED. COORDINATE RETURN AIR TRANSFER OPENINGS WITH ARCHITECTURAL AND STRUCTURAL.

12 PROVIDE CONTINUOUS LINEAR BAR SUPPLY DIFFUSER BETWEEN COLUMNS. AIR INLET/OUTLET TAG REPRESENTS FLOW OUT OF EACH ACTIVE THREE (3) FOOT LONG SECTIONS, FOR AIR BALANCING.

13 PROVIDE CONTINUOUS LINEAR BAR RETURN GRILLE BETWEEN COLUMNS. PROVIDE OPENING THROUGH FULL HEIGHT WALL BEHIND ENTIRE GRILLE FOR RETURN AIR TRANSFER. COORDINATE OPENINGS WITH ARCHITECTURAL AND STRUCTURAL.



1 / M503A SECOND FLOOR PLAN – NE – VENTILATION

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

0 4' 8' 16' 24'

CONSULTANT NAME :: AMC ENGINEERS

ECI/HYER :: THA ARCHITECTURE

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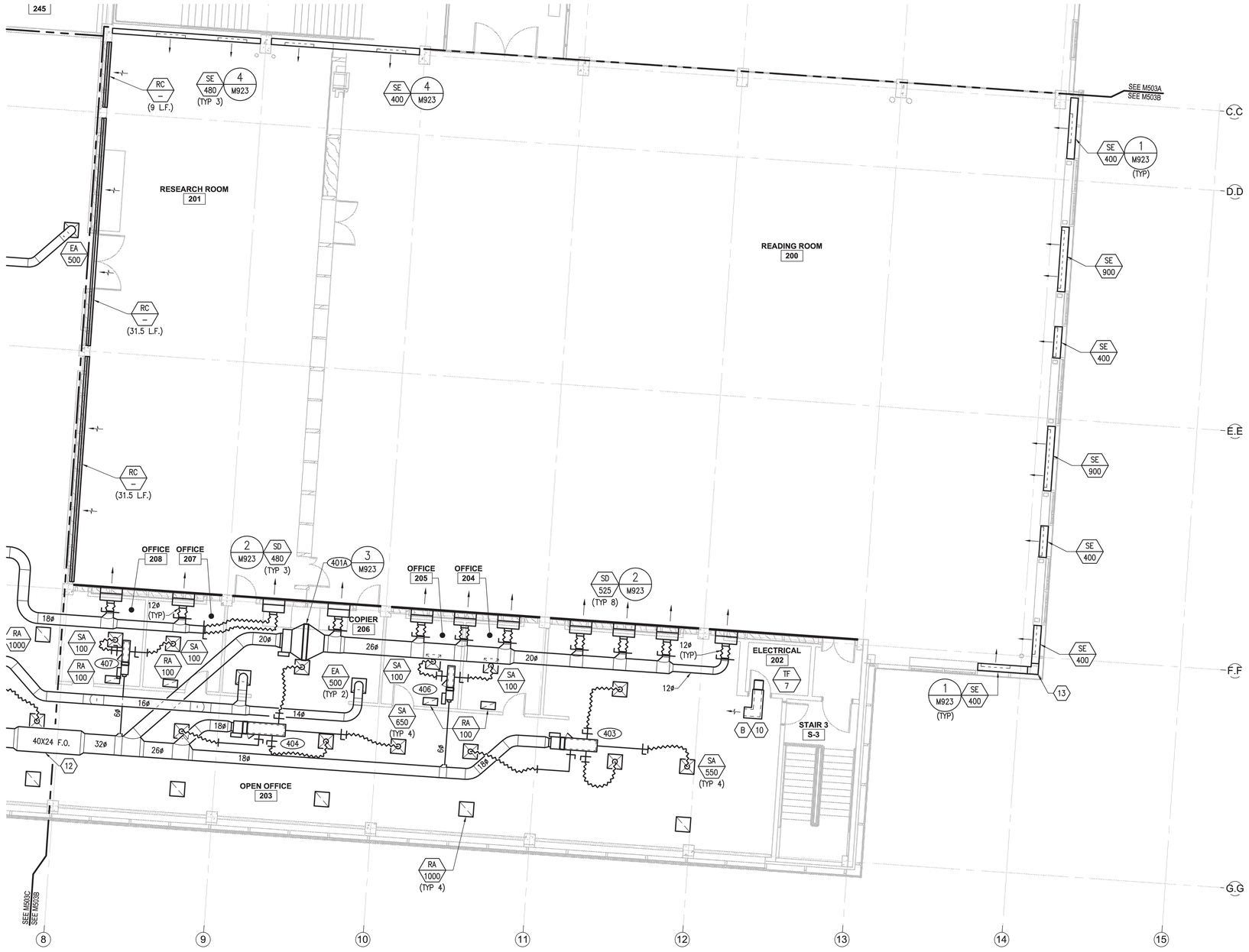
SECOND FLOOR PLAN - NE - VENTILATION

M503A



SHEET NOTES

1. SEE DETAIL 1/M921 FOR TYPICAL DUCTWORK FITTINGS.
2. SEAL DUCTWORK WHICH PENETRATES THROUGH FULL HEIGHT WALLS WITH ACOUSTICAL SEALANT SYSTEM; SEE DETAIL 2/M921. SEAL FLOOR/CEILING PENETRATIONS WITH ACOUSTICAL SEALANT SYSTEM; SEE DETAIL 4/M911. PROVIDE APPROPRIATE UL LISTED FIRESTOP SYSTEMS AT PENETRATIONS THROUGH RATED ASSEMBLIES.
3. PROVIDE REMOTE VOLUME DAMPER OPERATORS FOR BALANCING DAMPERS LOCATED ABOVE HARD-LID CEILINGS; SEE DETAIL 4/M921. REFER TO ARCHITECTURAL FOR HARD-LID CEILING LOCATIONS.
4. PROVIDE ORIFICE PLATES AS NEEDED AND IN ACCORDANCE WITH 23 31 00 DUCTS AND ACCESSORIES; SEE DETAIL 5/M921.
5. REFER TO HEATING SHEETS FOR ZONE THERMOSTAT LOCATIONS. CONTROL ZONE REHEAT COILS AND ASSOCIATED TERMINAL HEATING UNIT CONTROL VALVES IN PARALLEL AS APPLICABLE.
6. LOCATE VAV TERMINAL UNIT CONTROLLER, COIL ACCESS DOORS AND COIL HYDRONIC PIPING/VALVING ON SAME SIDE OF TERMINAL UNIT FOR COMPLETE ACCESS THROUGH SINGLE CEILING TILE OR ACCESS DOOR. SEE 3/M912 AND 4/M912 FOR VAV BOX DETAILS.
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8. PROVIDE A MINIMUM OF 3 DUCT DIAMETERS OF STRAIGHT DUCT UPSTREAM THE VAV BOX INLET.
9. FLEX DUCT CONNECTION DIAMETER EQUALS AIR OUTLET NECK SIZE. SEE AIR INLET/OUTLET SCHEDULE.
10. SEE DETAIL 3/M921 FOR ACOUSTICAL RETURN AIR TRANSFER ELBOW SIZING.
11. PROVIDE SHEET METAL FRAMED RETURN AIR TRANSFER OPENING THROUGH FULL HEIGHT WALL. PROVIDE MINIMUM NET FREE AREA AS INDICATED. COORDINATE RETURN AIR TRANSFER OPENINGS WITH ARCHITECTURAL AND STRUCTURAL.
12. TRANSITION 32ø S/A DUCT TO 40X24 F.O. TO ROUTE UNDER CONCRETE BEAM.
13. PROVIDE MITERED CORNER (BASIS OF DESIGN: TITUS MC-480)

1 M503B SECOND FLOOR PLAN – SE – VENTILATION

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

0 4' 8' 16' 24'

CONSULTANT NAME :: AMC ENGINEERS
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SECOND FLOOR PLAN - SE - VENTILATION

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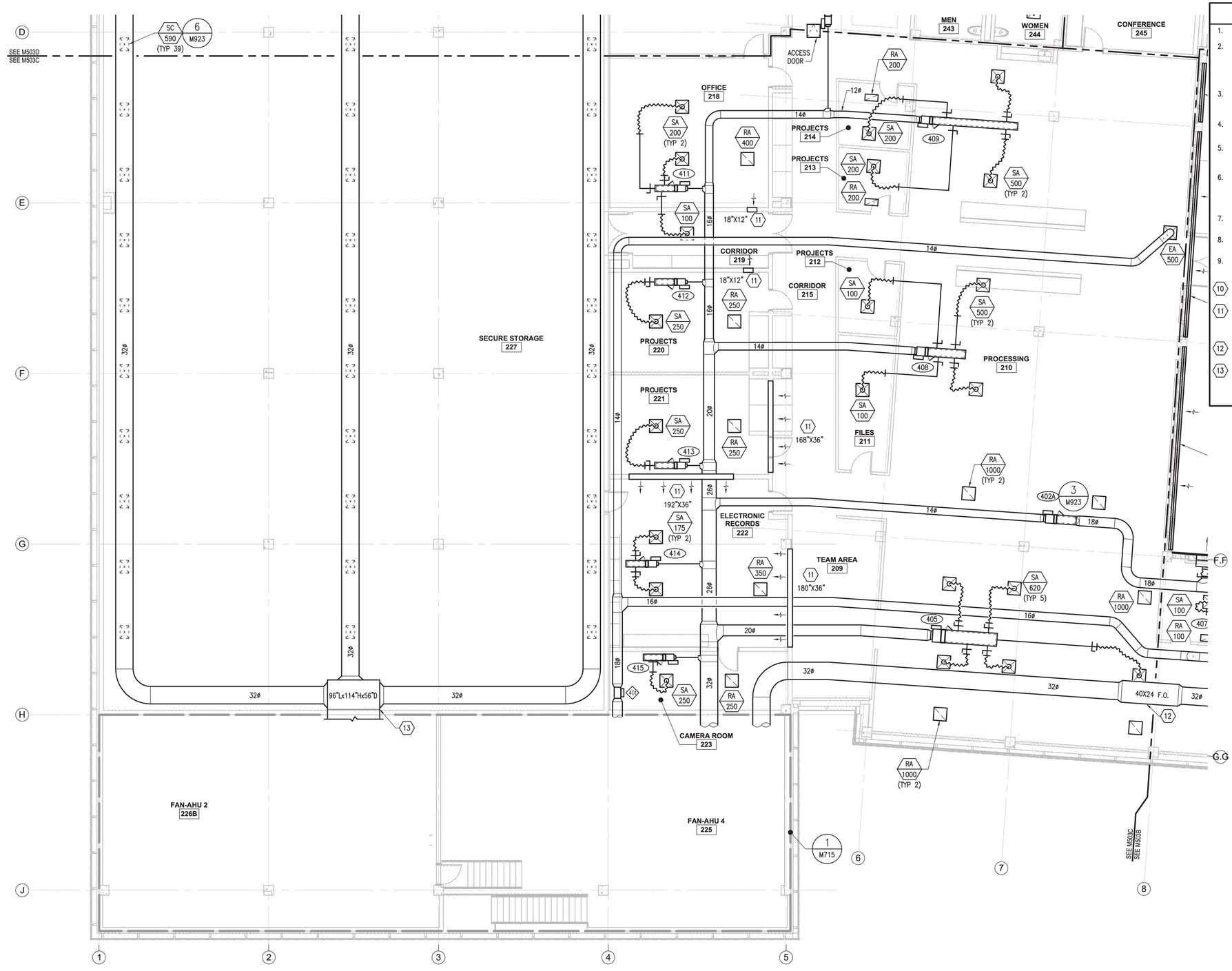

SHEET NOTES

1. SEE DETAIL 1/M921 FOR TYPICAL DUCTWORK FITTINGS.
2. SEAL DUCTWORK WHICH PENETRATES THROUGH FULL HEIGHT WALLS WITH ACOUSTICAL SEALANT SYSTEM; SEE DETAIL 2/M921. SEAL FLOOR/CEILING PENETRATIONS WITH ACOUSTICAL SEALANT SYSTEM; SEE DETAIL 4/M911. PROVIDE APPROPRIATE UL LISTED FIRESTOP SYSTEMS AT PENETRATIONS THROUGH RATED ASSEMBLIES.
3. PROVIDE REMOTE VOLUME DAMPER OPERATORS FOR BALANCING DAMPERS LOCATED ABOVE HARD-LID CEILINGS; SEE DETAIL 4/M921. REFER TO ARCHITECTURAL FOR HARD-LID CEILING LOCATIONS.
4. PROVIDE ORIFICE PLATES AS NEEDED AND IN ACCORDANCE WITH 23 31 00 DUCTS AND ACCESSORIES; SEE DETAIL 5/M921.
5. REFER TO HEATING SHEETS FOR ZONE THERMOSTAT LOCATIONS. CONTROL ZONE REHEAT COILS AND ASSOCIATED TERMINAL HEATING UNIT CONTROL VALVES IN PARALLEL AS APPLICABLE.
6. LOCATE VAV TERMINAL UNIT CONTROLLER, COIL ACCESS DOORS AND COIL HYDRONIC PIPING/VALVING ON SAME SIDE OF TERMINAL UNIT FOR COMPLETE ACCESS THROUGH SINGLE CEILING TILE OR ACCESS DOOR. SEE 3/M912 AND 4/M912 FOR VAV BOX DETAILS.
7. LOCATE BOTTOM OF VAV TERMINAL UNIT BETWEEN 6 INCHES AND 24 INCHES ABOVE TOP OF CEILING GRID FOR IMPROVED ACCESSIBILITY.
8. PROVIDE A MINIMUM OF 3 DUCT DIAMETERS OF STRAIGHT DUCT UPSTREAM THE VAV BOX INLET.
9. FLEX DUCT CONNECTION DIAMETER EQUALS AIR OUTLET NECK SIZE. SEE AIR INLET/OUTLET SCHEDULE.
10. SEE DETAIL 3/M921 FOR ACOUSTICAL RETURN AIR TRANSFER ELBOW SIZING.
11. PROVIDE SHEET METAL FRAMED RETURN AIR TRANSFER OPENING THROUGH FULL HEIGHT WALL. PROVIDE MINIMUM NET FREE AREA AS INDICATED. COORDINATE RETURN AIR TRANSFER OPENINGS WITH ARCHITECTURAL AND STRUCTURAL.
12. TRANSITION 32ø S/A DUCT TO 40X24 F.O. TO ROUTE UNDER CONCRETE BEAM.
13. TRANSITION FROM 96"W X 72"H DUCTED FIRE/SMOKE DAMPER ASSEMBLY TO 96"W X 114"H SUPPLY AIR PLENUM IN ORDER TO PROVIDE 32ø S/A DUCT TAKE-OFFS HIGH ENOUGH TO CLEAR STORAGE.

1 / M503C SECOND FLOOR PLAN – SW – VENTILATION

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

0 4' 8' 16' 24'

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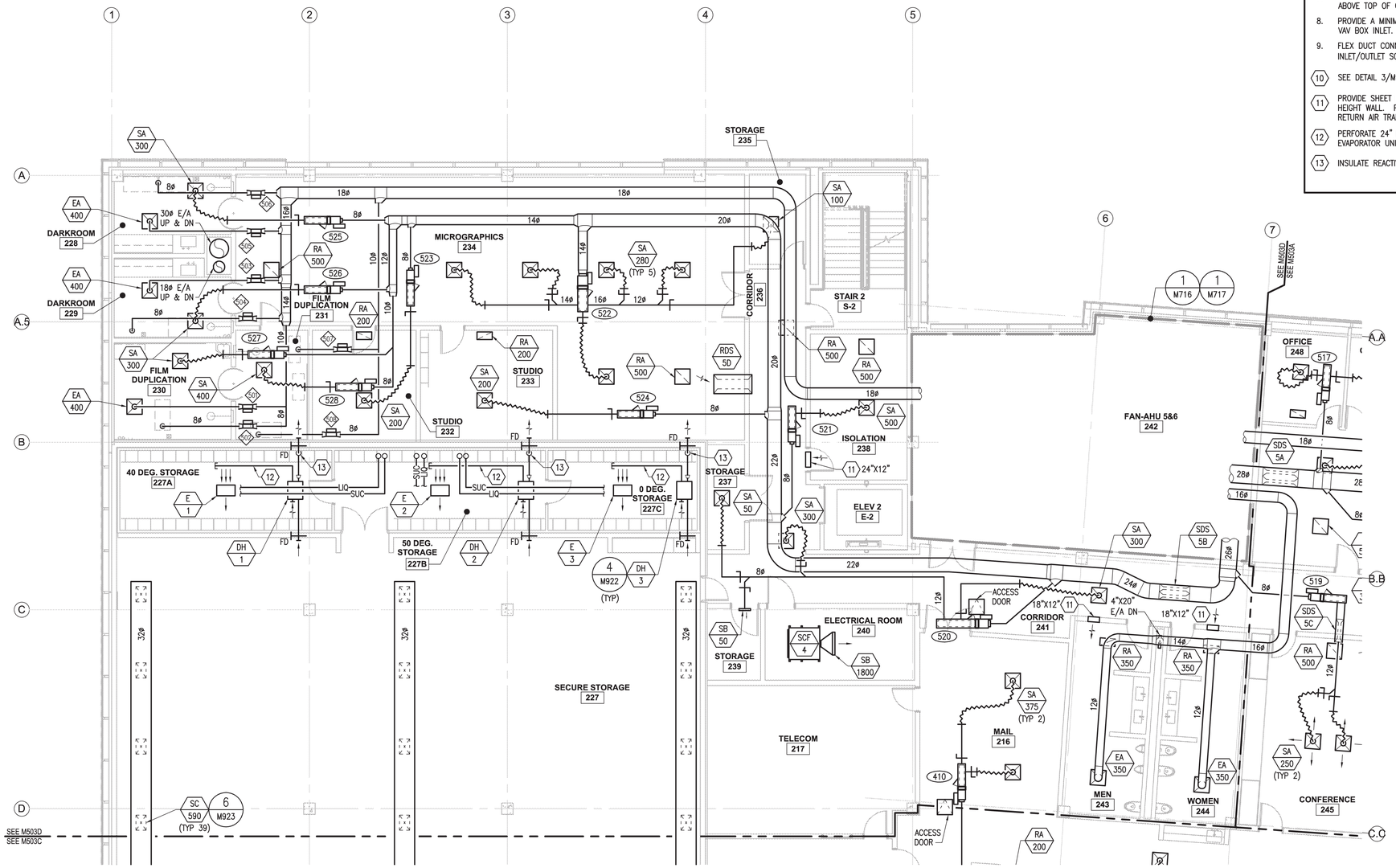
SECOND FLOOR PLAN - SW - VENTILATION

M503C

SHEET NOTES

1. SEE DETAIL 1/M921 FOR TYPICAL DUCTWORK FITTINGS.
2. SEAL DUCTWORK WHICH PENETRATES THROUGH FULL HEIGHT WALLS WITH ACOUSTICAL SEALANT SYSTEM; SEE DETAIL 2/M921. SEAL FLOOR/CEILING PENETRATIONS WITH ACOUSTICAL SEALANT SYSTEM; SEE DETAIL 4/M911. PROVIDE APPROPRIATE UL LISTED FIRESTOP SYSTEMS AT PENETRATIONS THROUGH RATED ASSEMBLIES.
3. PROVIDE REMOTE VOLUME DAMPER OPERATORS FOR BALANCING DAMPERS LOCATED ABOVE HARD-LID CEILINGS; SEE DETAIL 4/M921. REFER TO ARCHITECTURAL FOR HARD-LID CEILING LOCATIONS.
4. PROVIDE ORIFICE PLATES AS NEEDED AND IN ACCORDANCE WITH 23 31 00 DUCTS AND ACCESSORIES; SEE DETAIL 5/M921.
5. REFER TO HEATING SHEETS FOR ZONE THERMOSTAT LOCATIONS. CONTROL ZONE REHEAT COILS AND ASSOCIATED TERMINAL HEATING UNIT CONTROL VALVES IN PARALLEL AS APPLICABLE.
6. LOCATE VAV TERMINAL UNIT CONTROLLER, COIL ACCESS DOORS AND COIL HYDRONIC PIPING/VALVING ON SAME SIDE OF TERMINAL UNIT FOR COMPLETE ACCESS THROUGH SINGLE CEILING TILE OR ACCESS DOOR. SEE 3/M912 AND 4/M912 FOR VAV BOX DETAILS.
7. LOCATE BOTTOM OF VAV TERMINAL UNIT BETWEEN 6 INCHES AND 24 INCHES ABOVE TOP OF CEILING GRID FOR IMPROVED ACCESSIBILITY.
8. PROVIDE A MINIMUM OF 3 DUCT DIAMETERS OF STRAIGHT DUCT UPSTREAM THE VAV BOX INLET.
9. FLEX DUCT CONNECTION DIAMETER EQUALS AIR OUTLET NECK SIZE. SEE AIR INLET/OUTLET SCHEDULE.

10. SEE DETAIL 3/M921 FOR ACOUSTICAL RETURN AIR TRANSFER ELBOW SIZING.
11. PROVIDE SHEET METAL FRAMED RETURN AIR TRANSFER OPENING THROUGH FULL HEIGHT WALL. PROVIDE MINIMUM NET FREE AREA AS INDICATED. COORDINATE RETURN AIR TRANSFER OPENINGS WITH ARCHITECTURAL AND STRUCTURAL.
12. PERFORATE 24" LONG SECTION OF PROCESS AIR DUCT DIRECTLY BEHIND EVAPORATOR UNIT.
13. INSULATE REACTIVATION AIR DISCHARGE DUCTWORK.



1 M503D SECOND FLOOR PLAN – NW – VENTILATION

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

0 4' 8' 16' 24'

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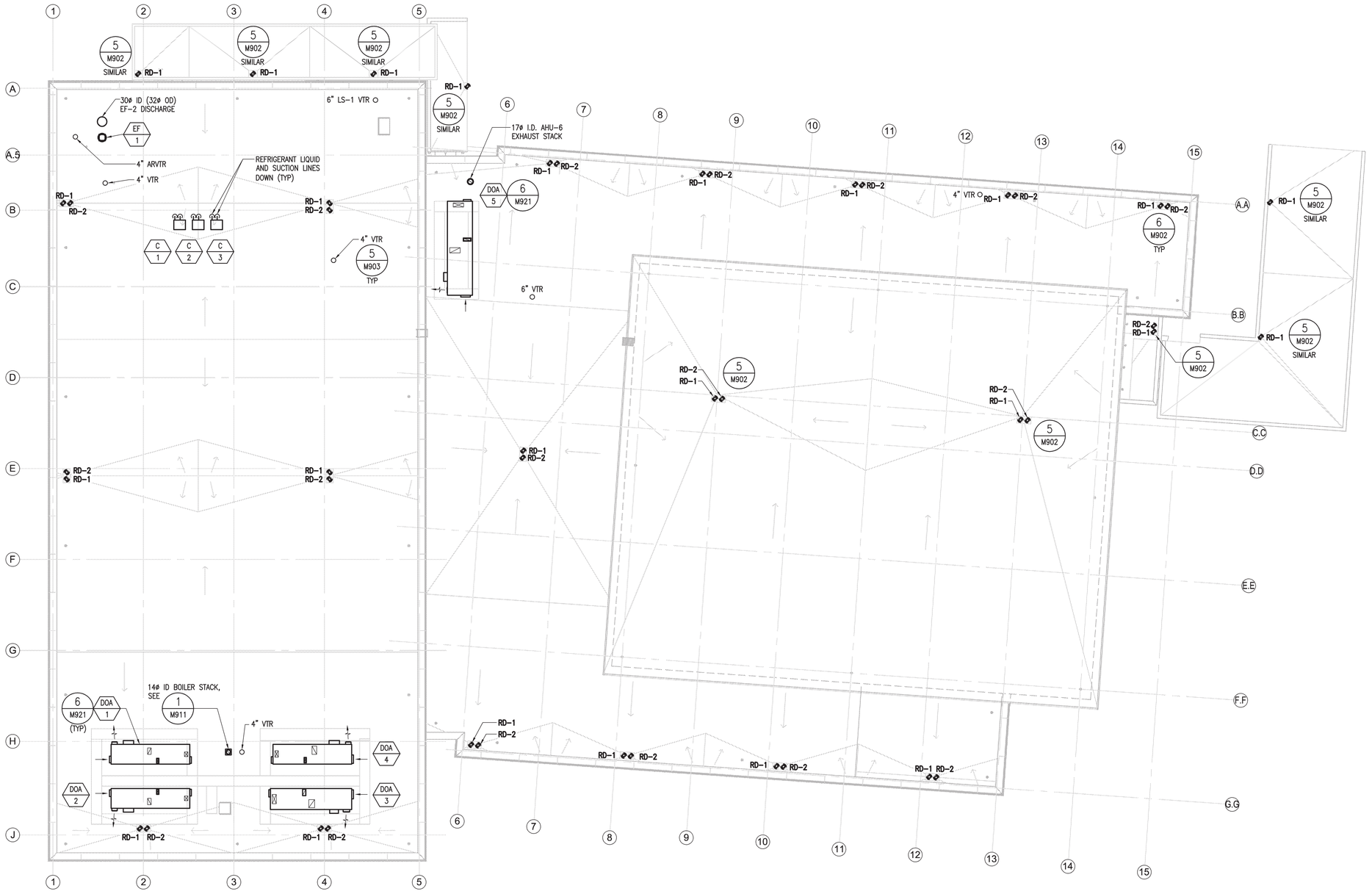
SECOND FLOOR PLAN - NW - VENTILATION

M503D



1 M601 ROOF PLAN – MECHANICAL

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

0 8' 16' 32' 48'

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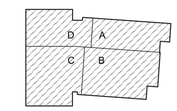

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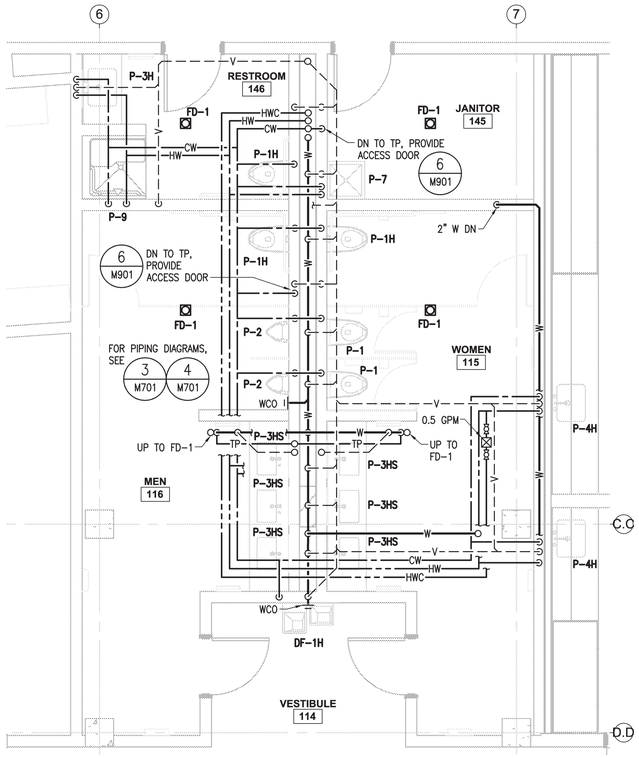
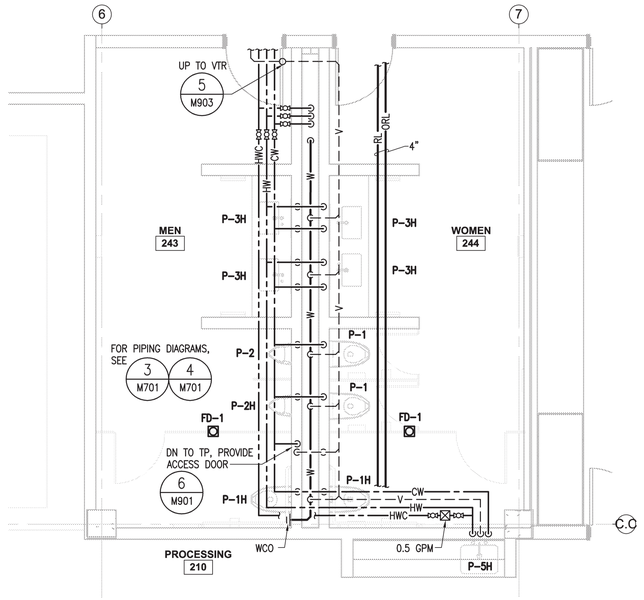
ROOF PLAN - MECHANICAL

M601

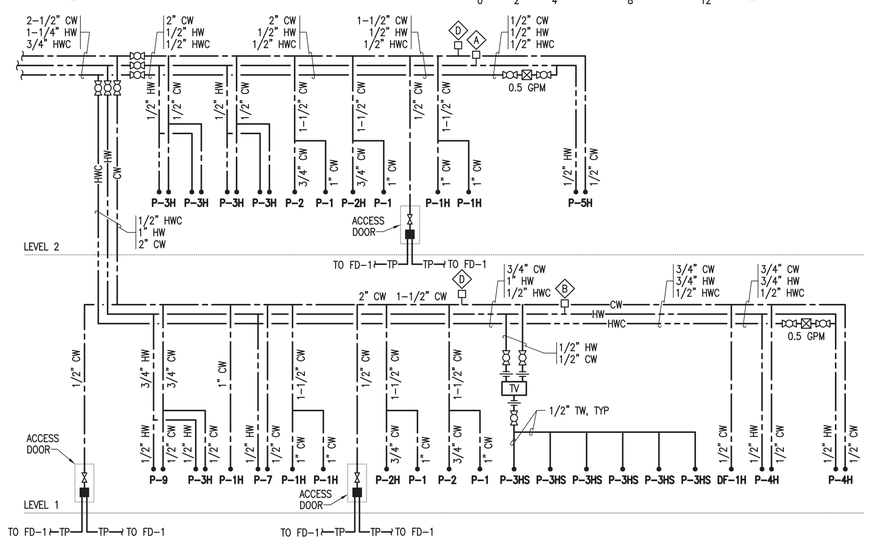




1 M701 ENLARGED FIRST FLOOR PLAN – NW – PLUMBING

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

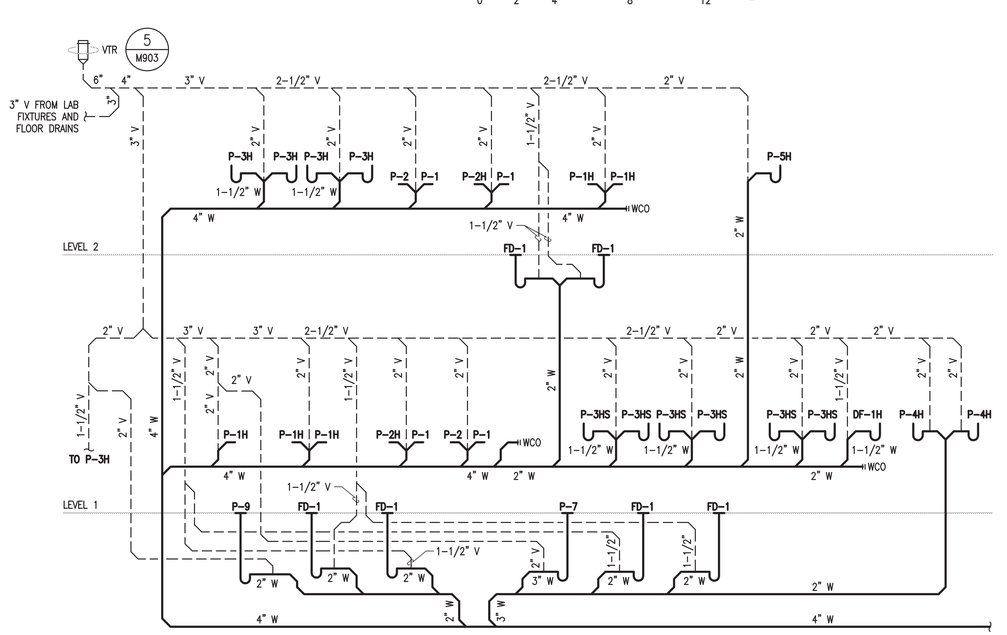
0 2' 4' 8' 12'



2 M701 ENLARGED SECOND FLOOR PLAN – NW – PLUMBING

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

0 2' 4' 8' 12'



3 M701 DIAGRAM – NW RESTROOM AREA – CW AND HW

SCALE: NONE

4 M701 DIAGRAM – NW RESTROOM AREA – WASTE AND VENT

SCALE: NONE

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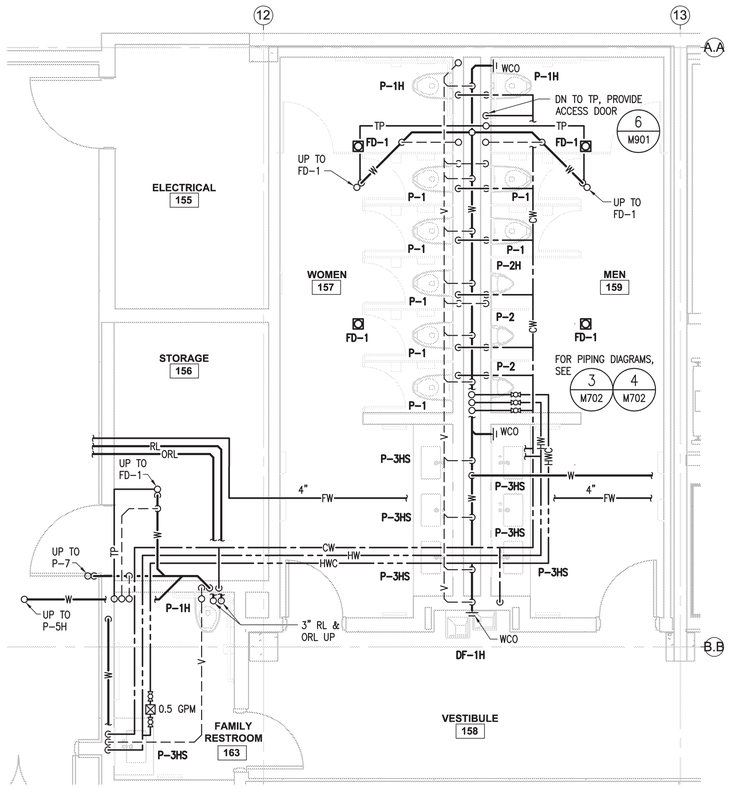
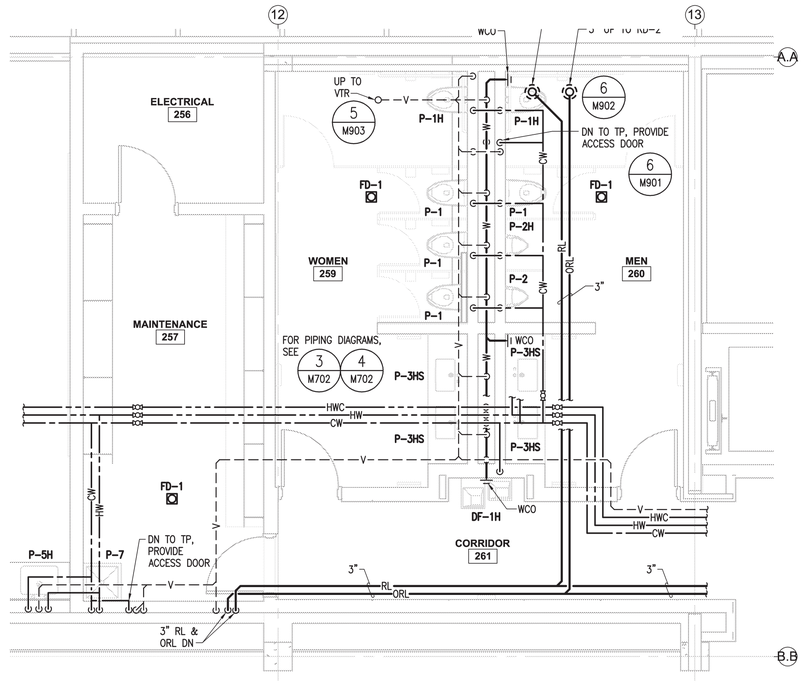
ENLARGED PLANS AND DIAGRAMS - PLUMBING

M701



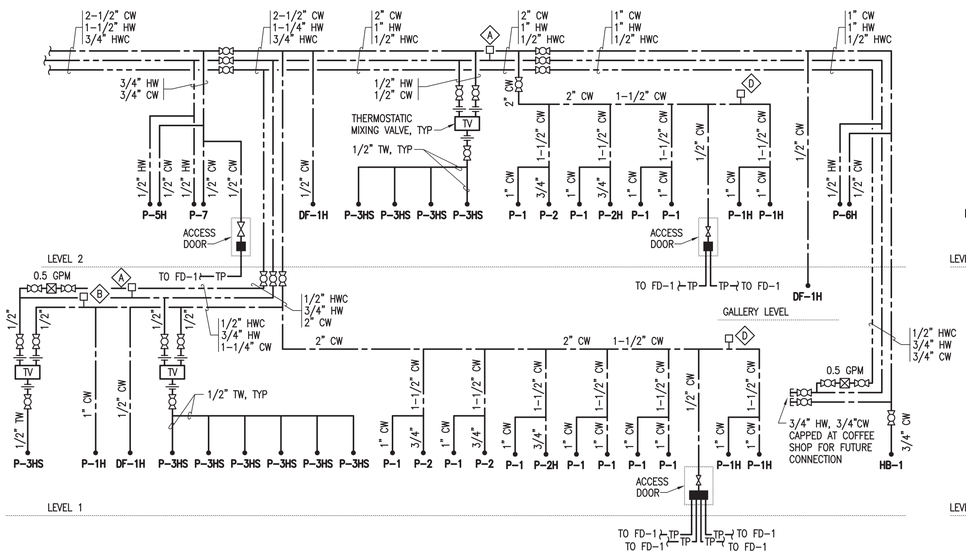
1 M702 ENLARGED FIRST FLOOR PLAN – NE – PLUMBING

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



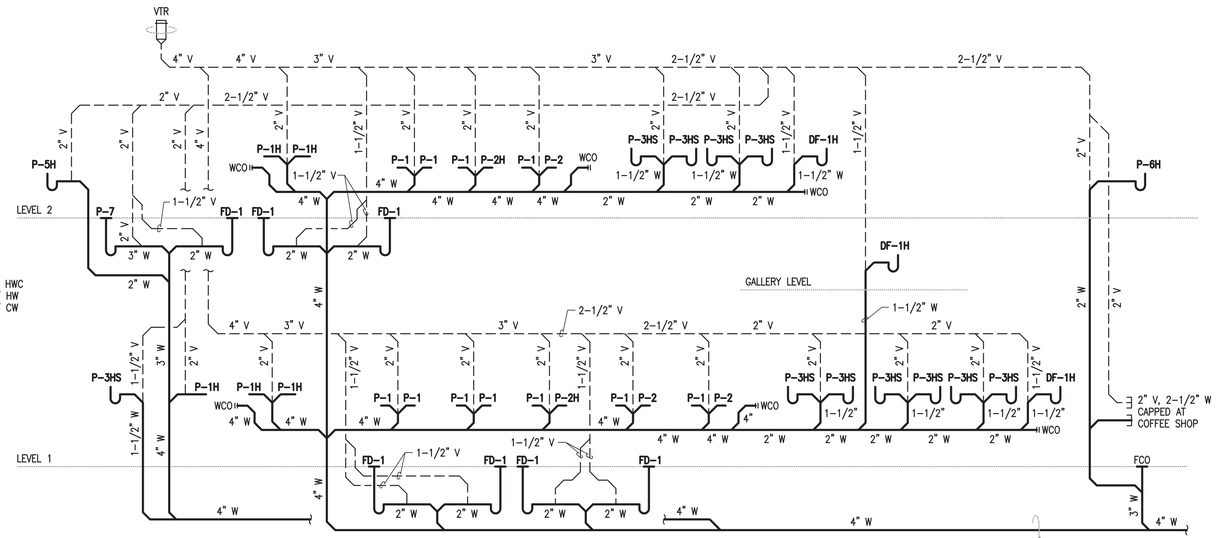
2 M702 ENLARGED SECOND FLOOR PLAN – NE – PLUMBING

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



3 M702 DIAGRAM – NE RESTROOM AREA – CW AND HW

SCALE: NONE



4 M702 DIAGRAM – NE RESTROOM AREA – WASTE AND VENT

SCALE: NONE

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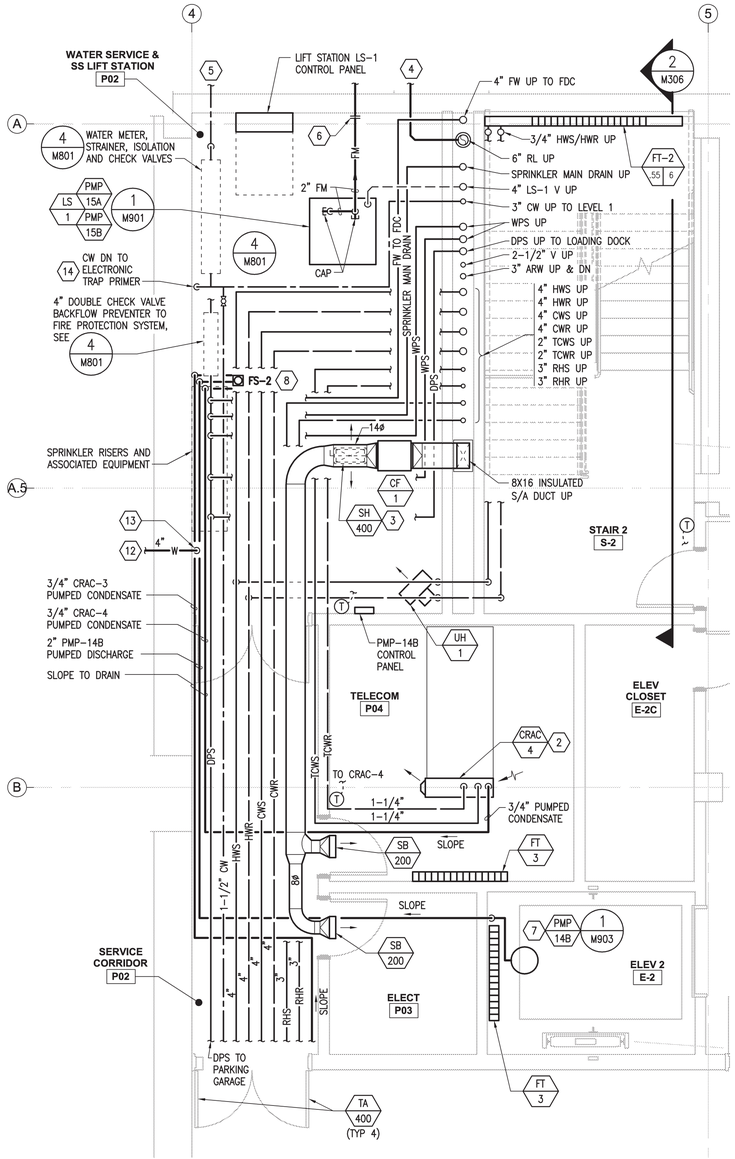
ENLARGED PLANS AND DIAGRAMS - PLUMBING

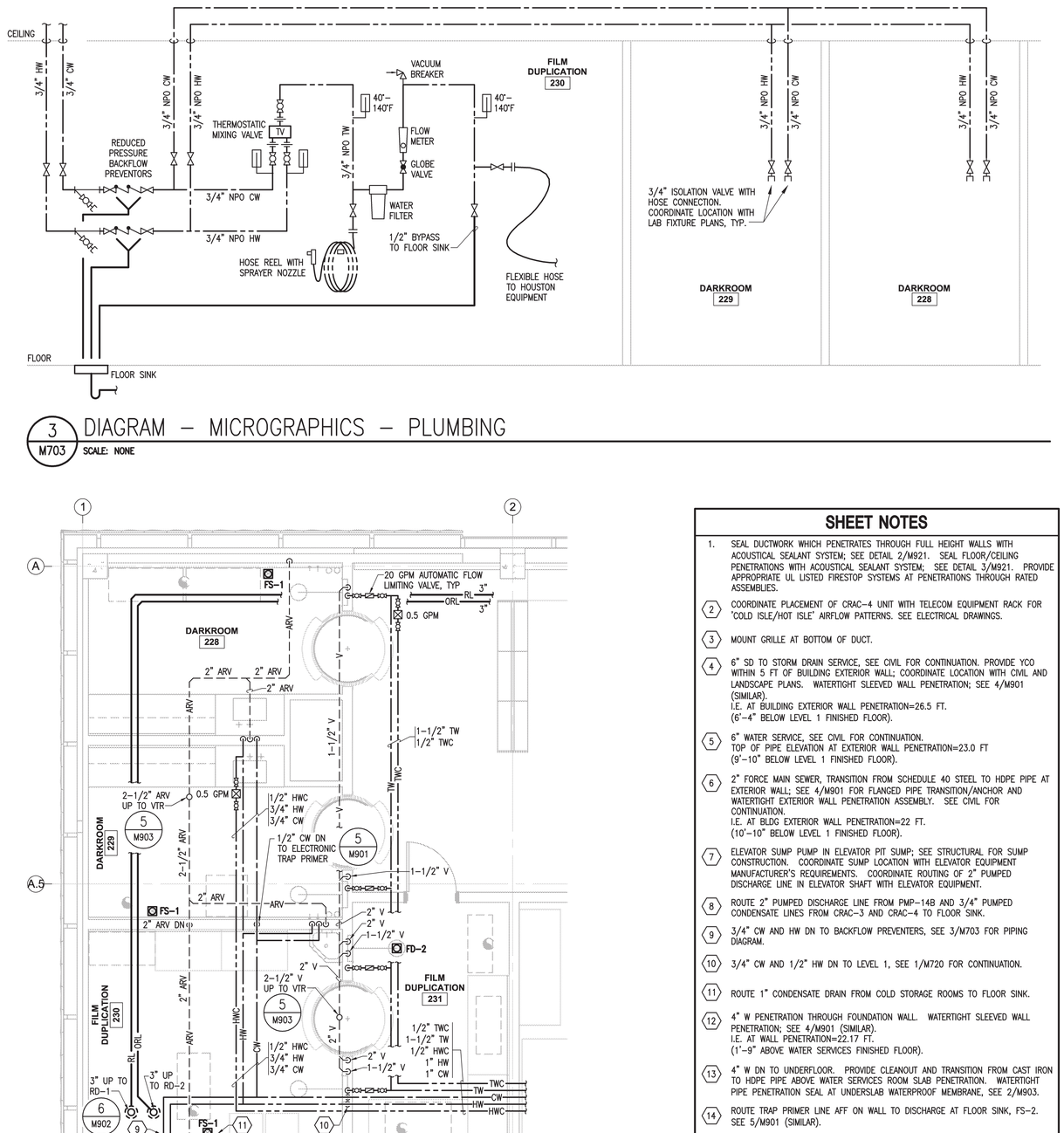
M702



1 M703 ENLARGED PLAN – SERVICE WATER ENTRY

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

0 2' 4' 8' 12'



3 M703 DIAGRAM – MICROGRAPHICS – PLUMBING

SCALE: NONE

2 M703 ENLARGED PLUMBING PLAN – MICROGRAPHICS

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

0 2' 4' 8' 12'

SHEET NOTES

1. SEAL DUCTWORK WHICH PENETRATES THROUGH FULL HEIGHT WALLS WITH ACOUSTICAL SEALANT SYSTEM; SEE DETAIL 2/M921. SEAL FLOOR/CEILING PENETRATIONS WITH ACOUSTICAL SEALANT SYSTEM; SEE DETAIL 3/M921. PROVIDE APPROPRIATE UL LISTED FIRESTOP SYSTEMS AT PENETRATIONS THROUGH RATED ASSEMBLIES.

2. COORDINATE PLACEMENT OF CRAC-4 UNIT WITH TELECOM EQUIPMENT RACK FOR 'COLD ISLE/HOT ISLE' AIRFLOW PATTERNS. SEE ELECTRICAL DRAWINGS.

3. MOUNT GRILLE AT BOTTOM OF DUCT.

4. 6" SD TO STORM DRAIN SERVICE, SEE CIVIL FOR CONTINUATION. PROVIDE YCO WITHIN 5 FT OF BUILDING EXTERIOR WALL; COORDINATE LOCATION WITH CIVIL AND LANDSCAPE PLANS. WATERTIGHT SLEEVED WALL PENETRATION; SEE 4/M901 (SIMILAR).
I.E. AT BUILDING EXTERIOR WALL PENETRATION=26.5 FT.
(6'-4" BELOW LEVEL 1 FINISHED FLOOR).

5. 6" WATER SERVICE, SEE CIVIL FOR CONTINUATION.
TOP OF PIPE ELEVATION AT EXTERIOR WALL PENETRATION=23.0 FT
(9'-10" BELOW LEVEL 1 FINISHED FLOOR).

6. 2" FORCE MAIN SEWER, TRANSITION FROM SCHEDULE 40 STEEL TO HDPE PIPE AT EXTERIOR WALL; SEE 4/M901 FOR FLANGED PIPE TRANSITION/ANCHOR AND WATERTIGHT EXTERIOR WALL PENETRATION ASSEMBLY. SEE CIVIL FOR CONTINUATION.
I.E. AT BLDG EXTERIOR WALL PENETRATION=22 FT.
(10'-10" BELOW LEVEL 1 FINISHED FLOOR).

7. ELEVATOR SUMP PUMP IN ELEVATOR PIT SUMP; SEE STRUCTURAL FOR SUMP CONSTRUCTION. COORDINATE SUMP LOCATION WITH ELEVATOR EQUIPMENT MANUFACTURER'S REQUIREMENTS. COORDINATE ROUTING OF 2" PUMPED DISCHARGE LINE IN ELEVATOR SHAFT WITH ELEVATOR EQUIPMENT.

8. ROUTE 2" PUMPED DISCHARGE LINE FROM PMP-14B AND 3/4" PUMPED CONDENSATE LINES FROM CRAC-3 AND CRAC-4 TO FLOOR SINK.

9. 3/4" CW AND HW DN TO BACKFLOW PREVENTERS, SEE 3/M703 FOR PIPING DIAGRAM.

10. 3/4" CW AND 1/2" HW DN TO LEVEL 1, SEE 1/M720 FOR CONTINUATION.

11. ROUTE 1" CONDENSATE DRAIN FROM COLD STORAGE ROOMS TO FLOOR SINK.

12. 4" W PENETRATION THROUGH FOUNDATION WALL. WATERTIGHT SLEEVED WALL PENETRATION; SEE 4/M901 (SIMILAR).
I.E. AT WALL PENETRATION=22.17 FT.
(1'-9" ABOVE WATER SERVICES FINISHED FLOOR).

13. 4" W DN TO UNDERFLOOR. PROVIDE CLEANOUT AND TRANSITION FROM CAST IRON TO HDPE PIPE ABOVE WATER SERVICES ROOM SLAB PENETRATION. WATERTIGHT PIPE PENETRATION SEAL AT UNDERSLAB WATERPROOF MEMBRANE, SEE 2/M903.

14. ROUTE TRAP PRIMER LINE AFF ON WALL TO DISCHARGE AT FLOOR SINK, FS-2. SEE 5/M901 (SIMILAR).

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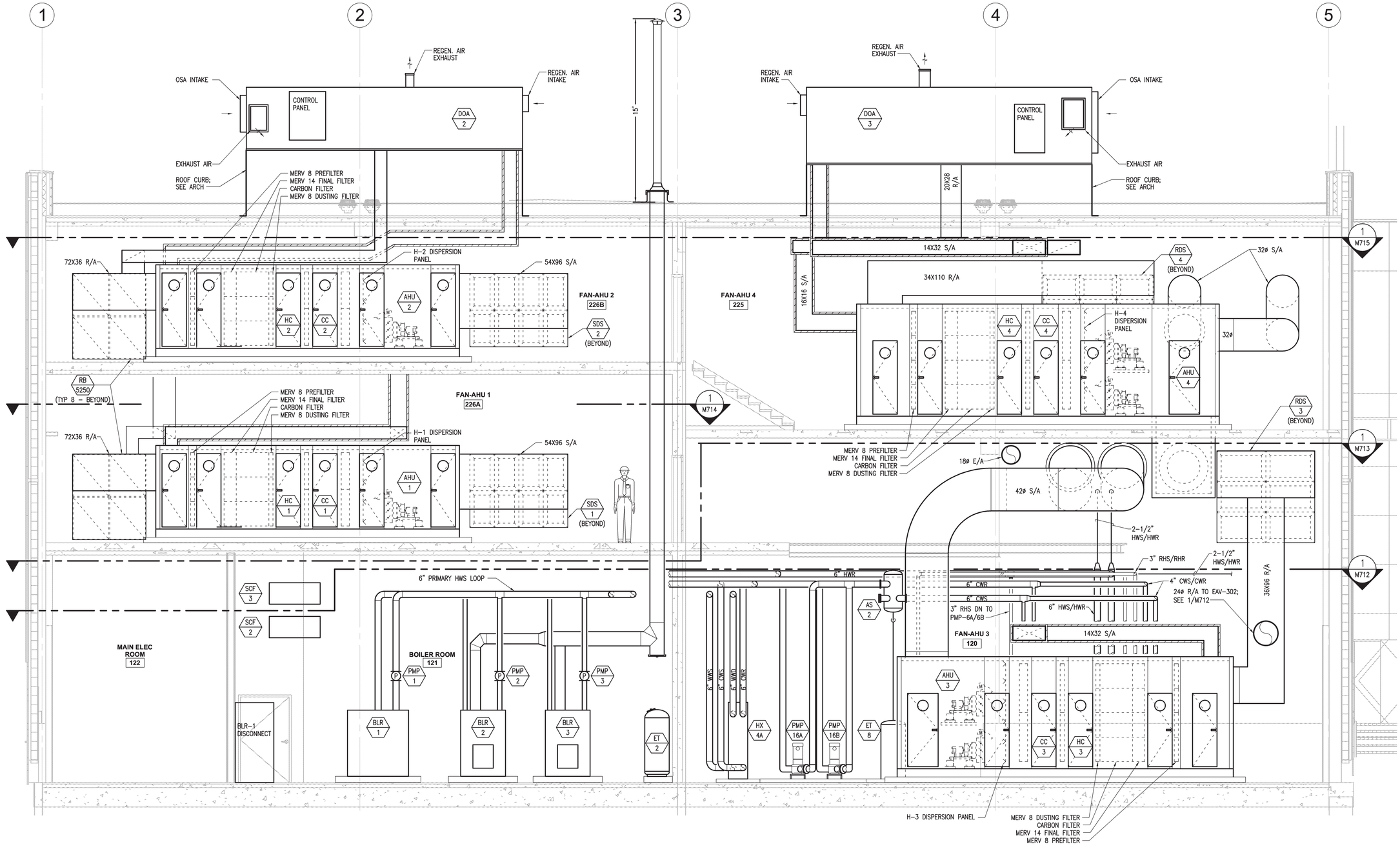
ENLARGED PLANS AND DIAGRAMS

M703



1 M711 ENLARGED SECTION – OVERALL BOILER ROOM AND FAN ROOMS

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

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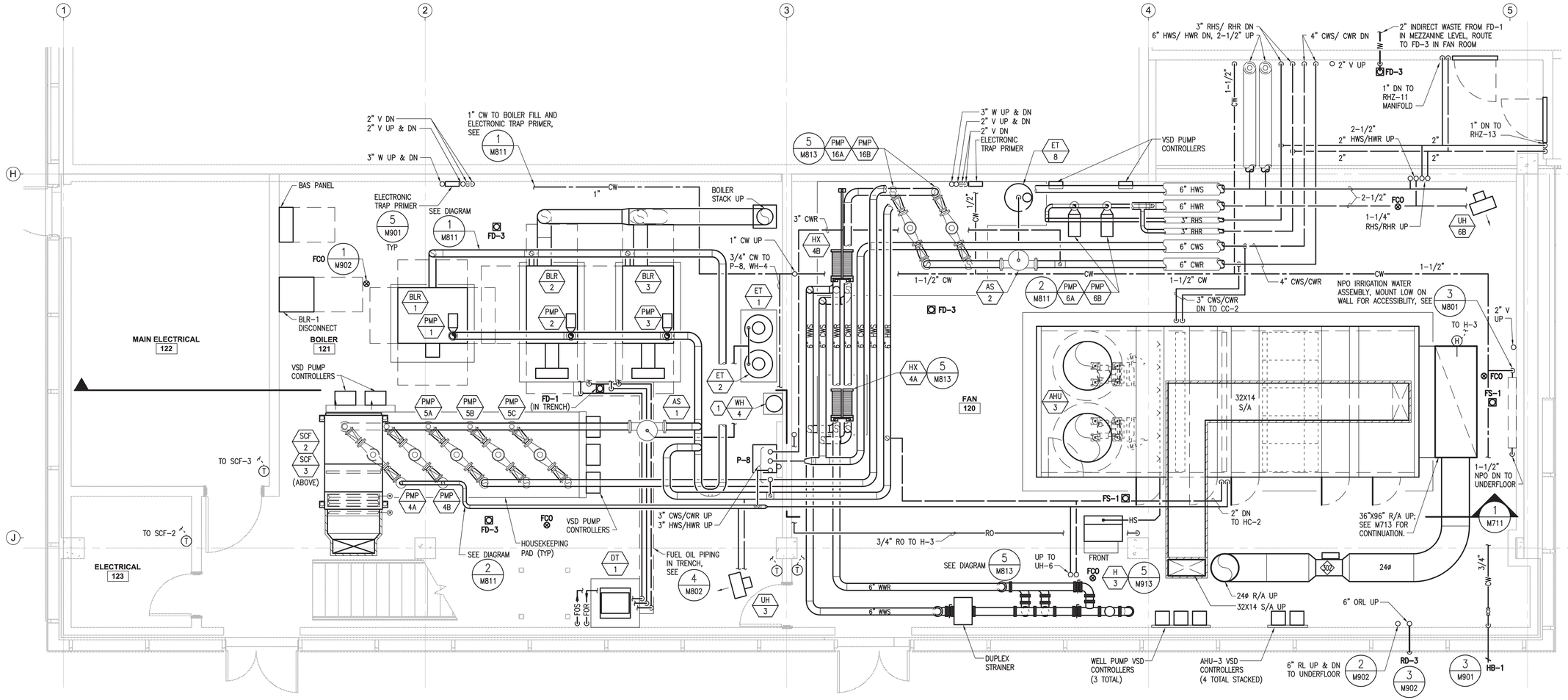
ENLARGED SECTION - OVERALL BOILER ROOM AND FAN ROOMS

M711

SHEET NOTES

1. WH-4 ON WALL 8 FT AFF ON FIELD FABRICATED WALL BRACKET AND SHELF ASSEMBLY. PIPE SAFETY RELIEF VALVE DN TO FLOOR BELOW. PROVIDE ISOLATION BALL VALVES AT WH-4 INLET AND OUTLET. ROUTE 1/2" HW FROM WH-4 TO P-8 FAUCET.



1/M712 ENLARGED PLAN – BOILER ROOM AND FAN ROOM (AHU-3) – LOWER

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

0 2' 4' 8' 12'

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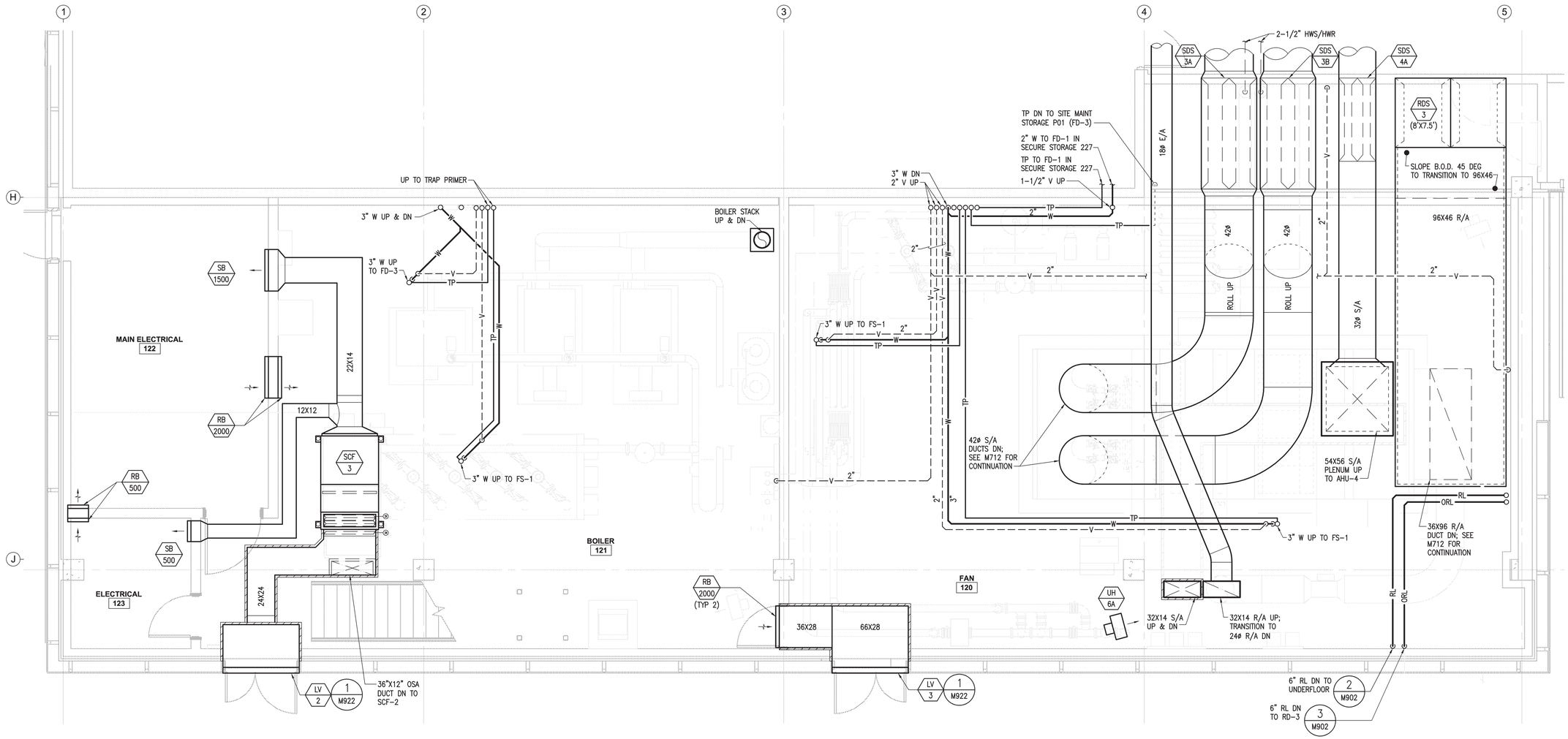
ENLARGED PLAN - BOILER ROOM AND FAN ROOM (AHU-3) - LOWER

M712



1 M713 ENLARGED PLAN – BOILER ROOM AND FAN ROOM (AHU-3) – UPPER

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

0 2' 4' 8' 12'

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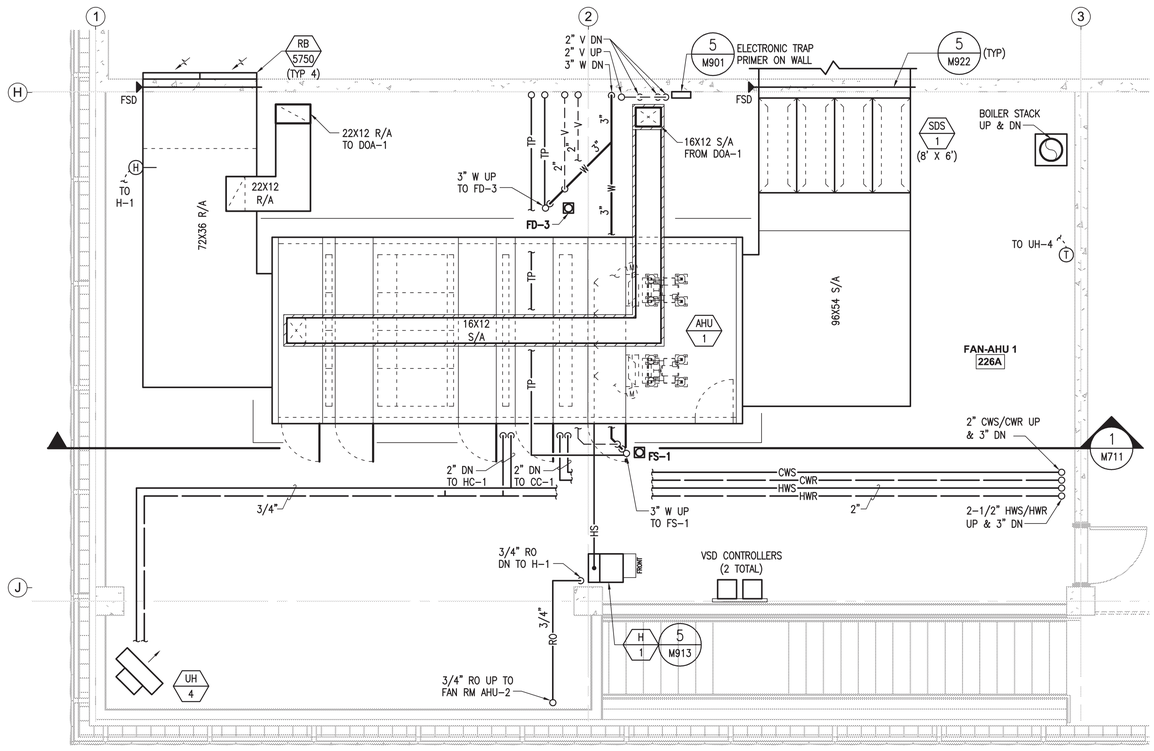
ENLARGED PLAN - BOILER ROOM AND FAN ROOM (AHU-3) - UPPER

M713



1 M714 ENLARGED PLAN – FAN ROOM (AHU-1)

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

0 2' 4' 8' 12'

CONSULTANT NAME :: AMC ENGINEERS

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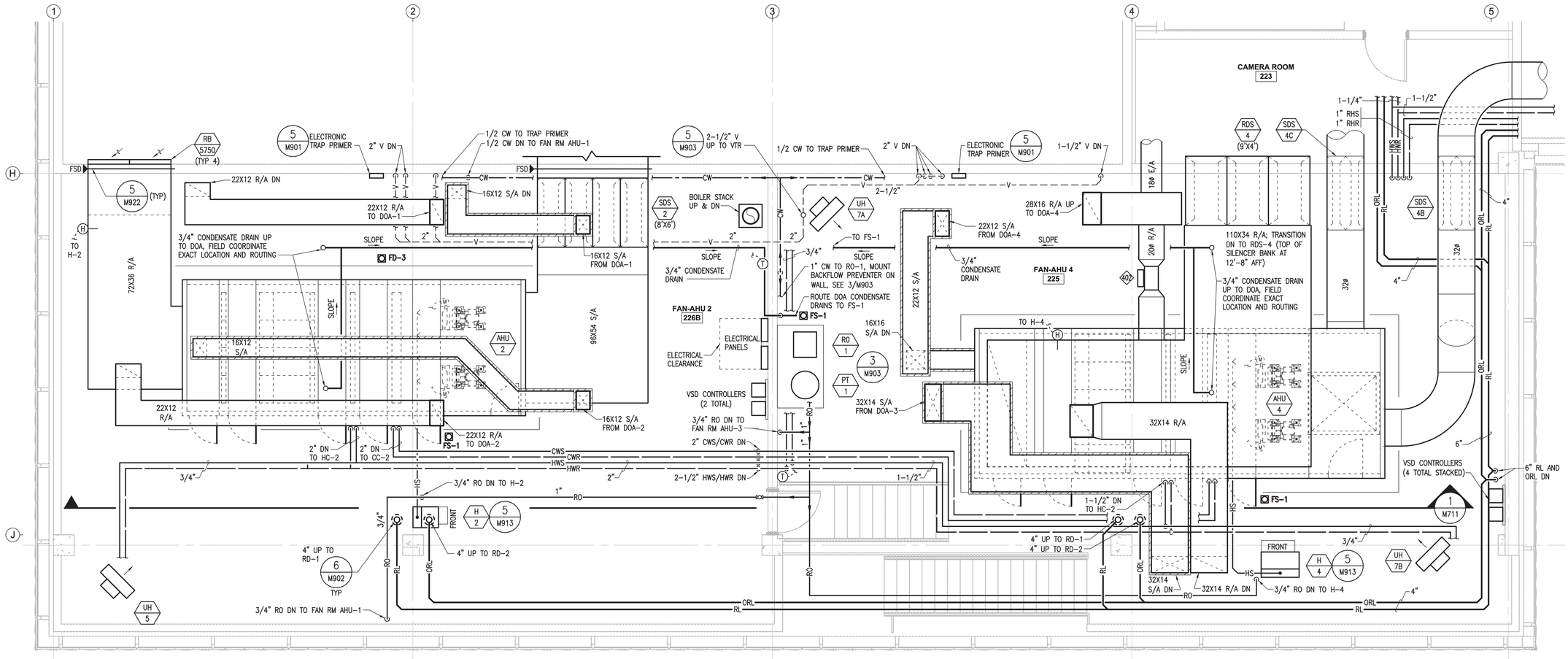
ENLARGED PLAN - FAN ROOM (AHU-1)

M714



1 M715 ENLARGED PLAN – FAN ROOM (AHU-2 AND AHU-4)

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

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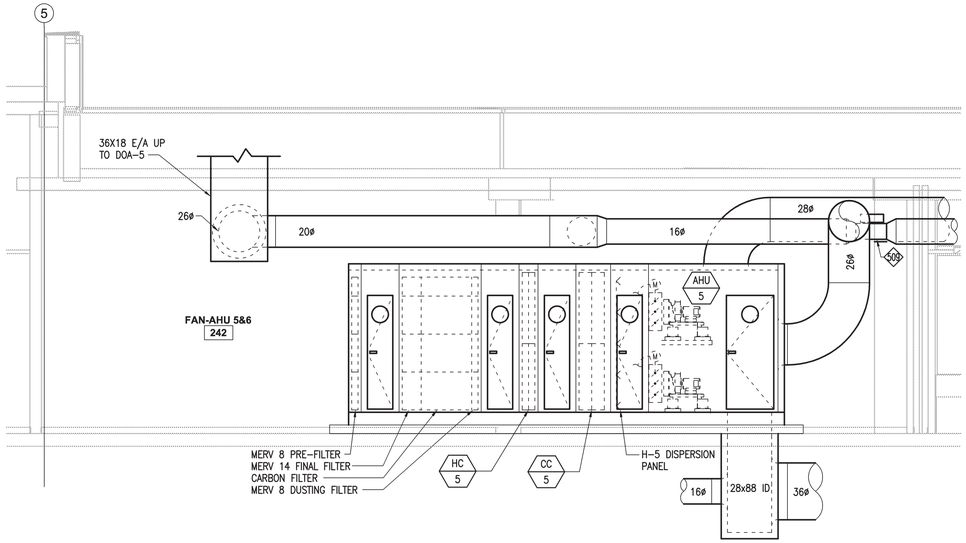
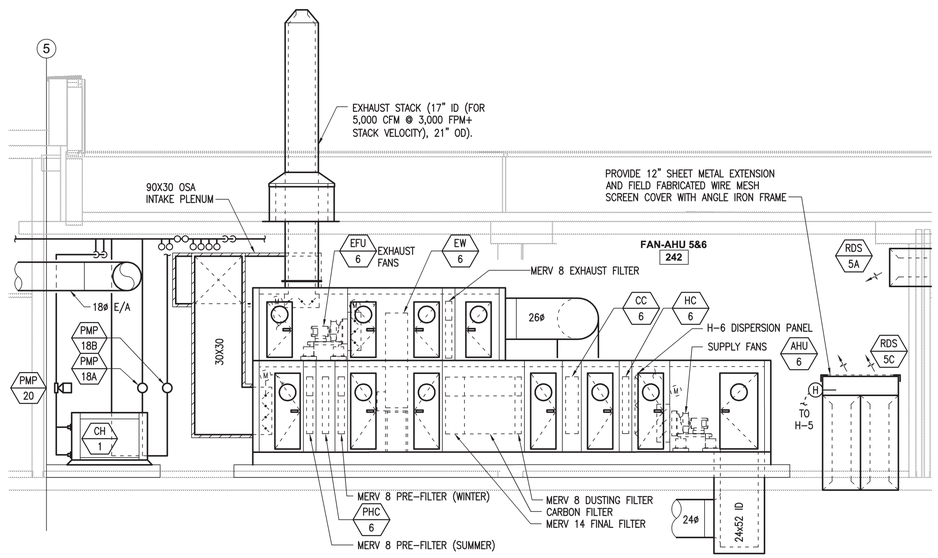
ENLARGED PLAN - FAN ROOM (AHU-2 & AHU-4)

M715



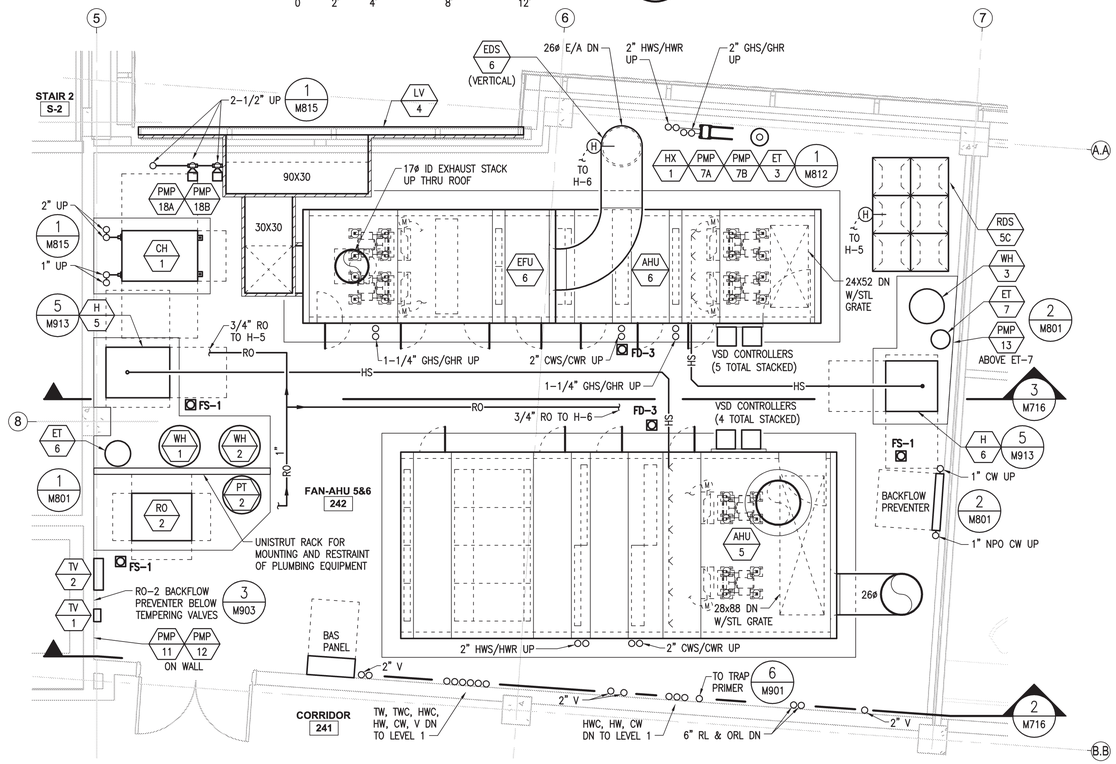
2 M716 SECTION – AHU-5

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



3 M716 SECTION – AHU-6

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



1 M716 ENLARGED PLAN – FAN ROOM (AHU-5 & AHU-6) – LOWER

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

0 2' 4' 8' 12'

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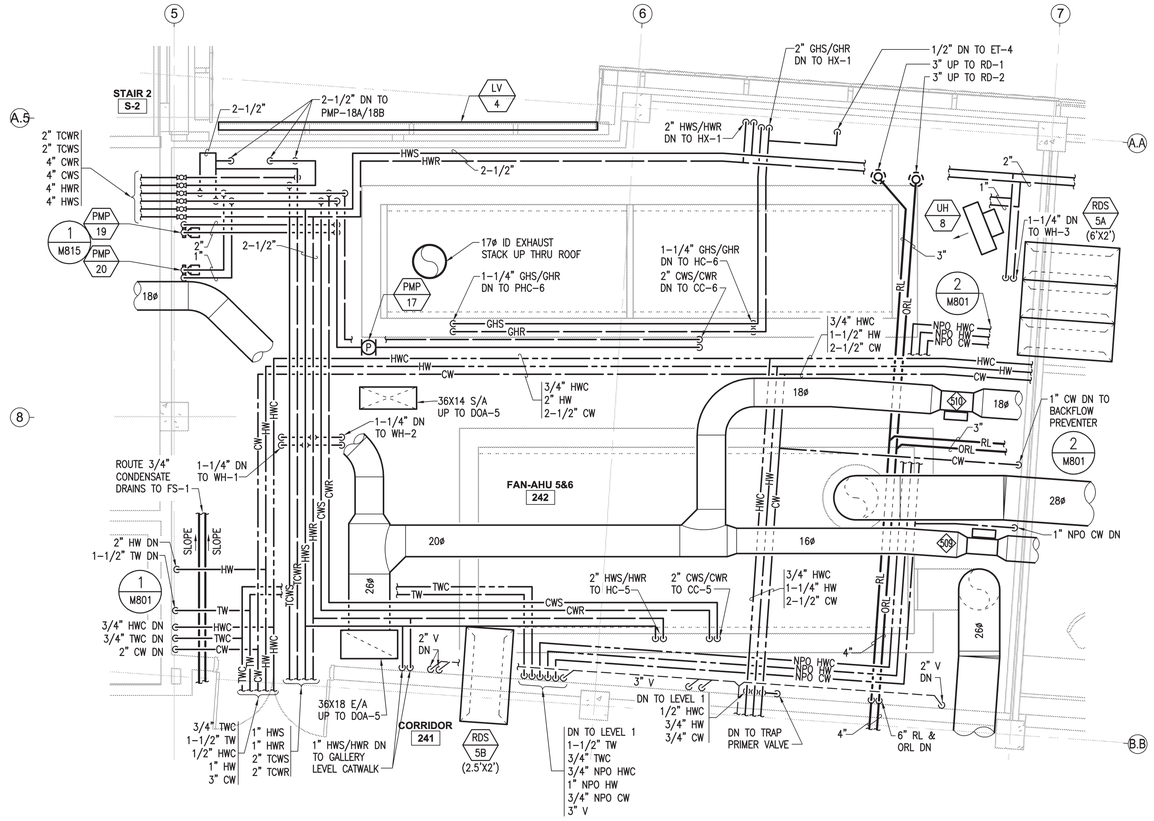
ENLARGED PLAN - FAN ROOM (AHU-5 & AHU-6) - LOWER

M716



1 M717 ENLARGED PLAN – FAN ROOM (AHU-5 & AHU-6) – UPPER

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

0 2' 4' 8' 12'

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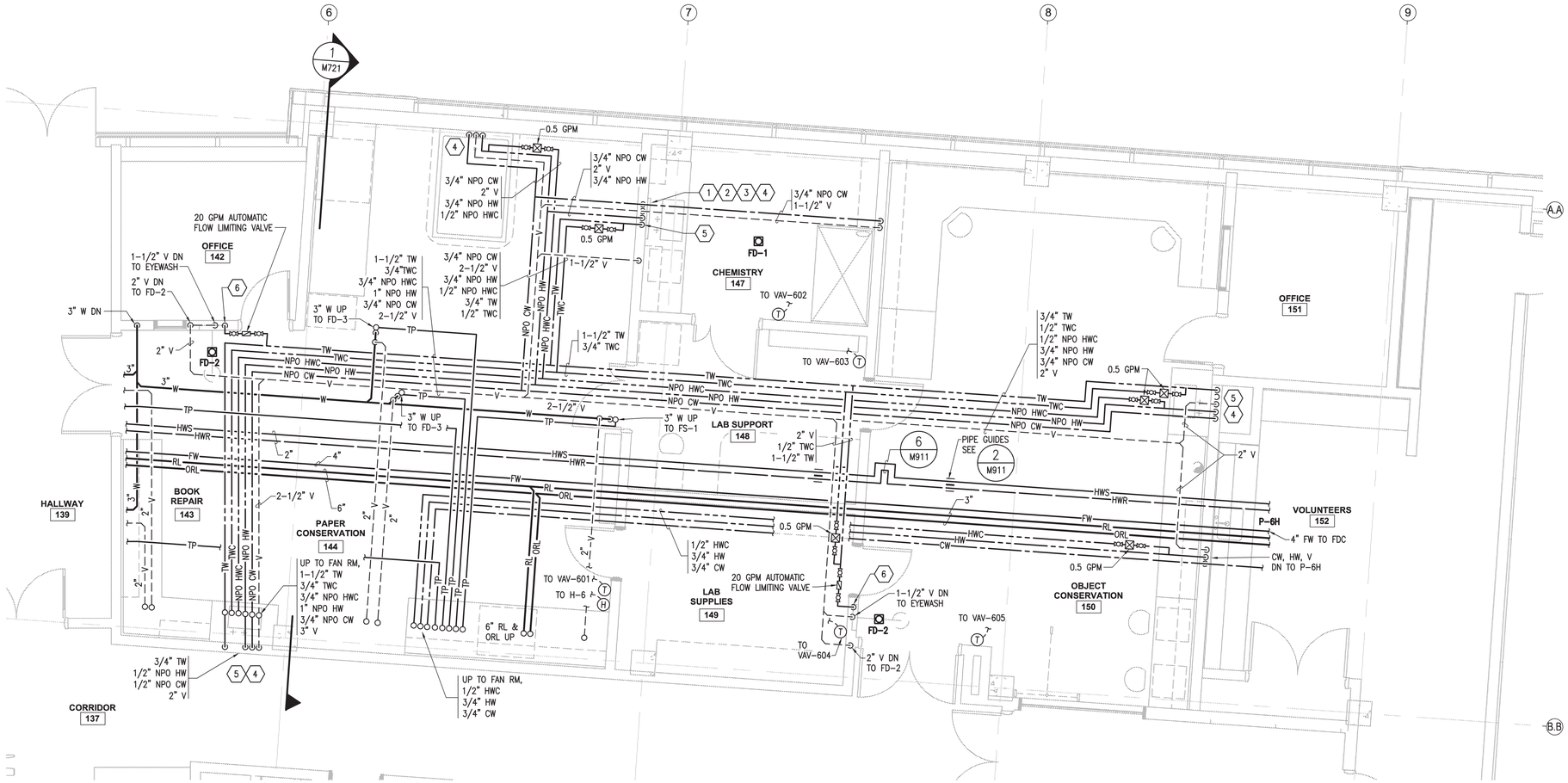
ENLARGED PLAN - FAN ROOM (AHU-5 & AHU-6) - UPPER

M717

SHEET NOTES

1. PROVIDE ELECTRONIC TRAP PRIMER WITH RECESSED WALL CABINET. COORDINATE LOCATION WITH CASEWORK AND LAB EQUIPMENT.
2. PROVIDE ICW CONNECTION FOR DE-IONIZED WATER PURIFICATION SYSTEM AND ASSOCIATED STORAGE TANK AND DISPENSER(S); COORDINATE WITH LAB EQUIPMENT PLANS. PROVIDE PIPING AND APPURTENANCES IN ACCORDANCE WITH EQUIPMENT MFR'S INSTALLATION INSTRUCTIONS.
3. PROVIDE IHW AND W CONNECTIONS FOR UNDER-COUNTER GLASS WASHER. PROVIDE PIPING AND APPURTENANCES IN ACCORDANCE WITH EQUIPMENT MFR'S INSTALLATION INSTRUCTIONS.
4. ICW, IHW, AND V DN TO LAB SINK, COORDINATE WITH LAB FIXTURE PLANS.
5. 3/4" TW DN TO EMERGENCY EYE/FACE WASH OR DRENCH HOSE; COORDINATE WITH LAB FIXTURE PLANS FOR EXACT LOCATION.
6. 1-1/2" TW DN TO EMERGENCY SHOWER/EYEWASH STATION; COORDINATE WITH LAB FIXTURE PLANS FOR EXACT LOCATION. PROVIDE 1/2" BRANCH LINE TO ELECTRONIC TRAP PRIMER WITH RECESSED WALL CABINET.



1 M718 ENLARGED PLAN – LAB AREA – PIPING

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

0 2' 4' 8' 12'

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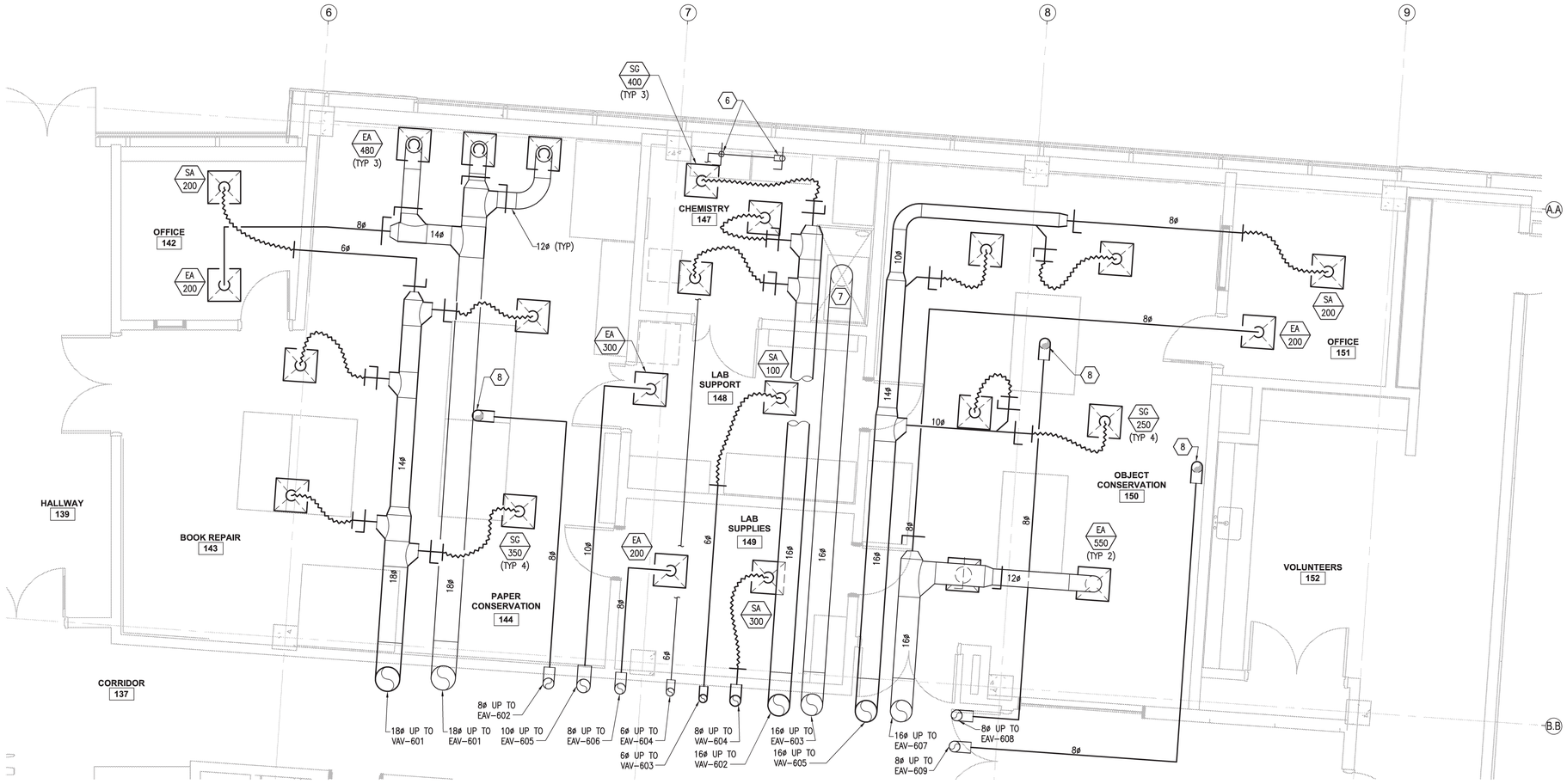
ENLARGED PLAN - LAB AREA - PIPING

M718

SHEET NOTES

1. SEE DETAIL 1/M921 FOR TYPICAL DUCTWORK FITTINGS.
2. SEAL DUCTWORK WHICH PENETRATES THROUGH FULL HEIGHT WALLS WITH ACOUSTICAL SEALANT SYSTEM; SEE DETAIL 2/M921. SEAL FLOOR/CEILING PENETRATIONS WITH ACOUSTICAL SEALANT SYSTEM; SEE DETAIL 4/M911. PROVIDE APPROPRIATE UL LISTED FIRESTOP SYSTEMS AT PENETRATIONS THROUGH RATED ASSEMBLIES.
3. PROVIDE ORIFICE PLATES AS NEEDED AND IN ACCORDANCE WITH 23 31 00 DUCTS AND ACCESSORIES; SEE DETAIL 5/M921.
4. REFER TO 1/M718 FOR ZONE THERMOSTAT LOCATIONS.
5. FLEX DUCT CONNECTION DIAMETER EQUALS AIR OUTLET NECK SIZE. SEE AIR INLET/OUTLET SCHEDULE.

6. 4ø EXHAUST DUCT DOWN TO FLAMMABLE STORAGE CABINET. BALANCE TO 50 CFM EXHAUST FROM EACH CABINET.
7. DUCT DOWN TO FUME HOOD.
8. DUCT DOWN TO SNORKEL.



1 / M719 ENLARGED PLAN – LAB AREA – VENTILATION

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

0 2' 4' 8' 12'

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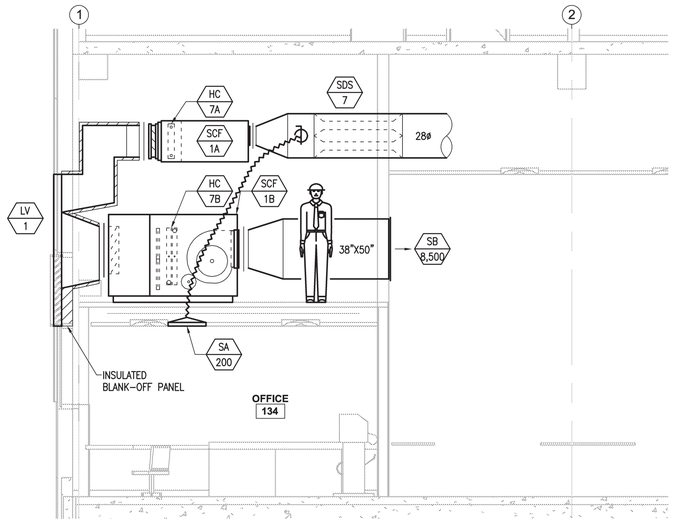
ENLARGED PLAN - LAB AREA - VENTILATION

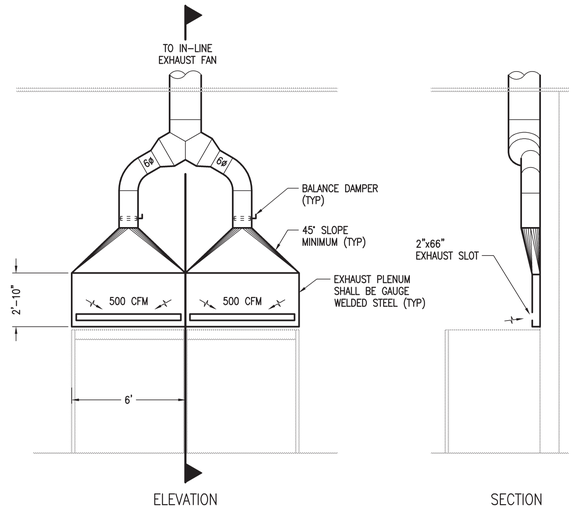
M719



2 M720 SECTION – MECHANICAL MEZZANINE

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

0 2' 4' 8' 12'

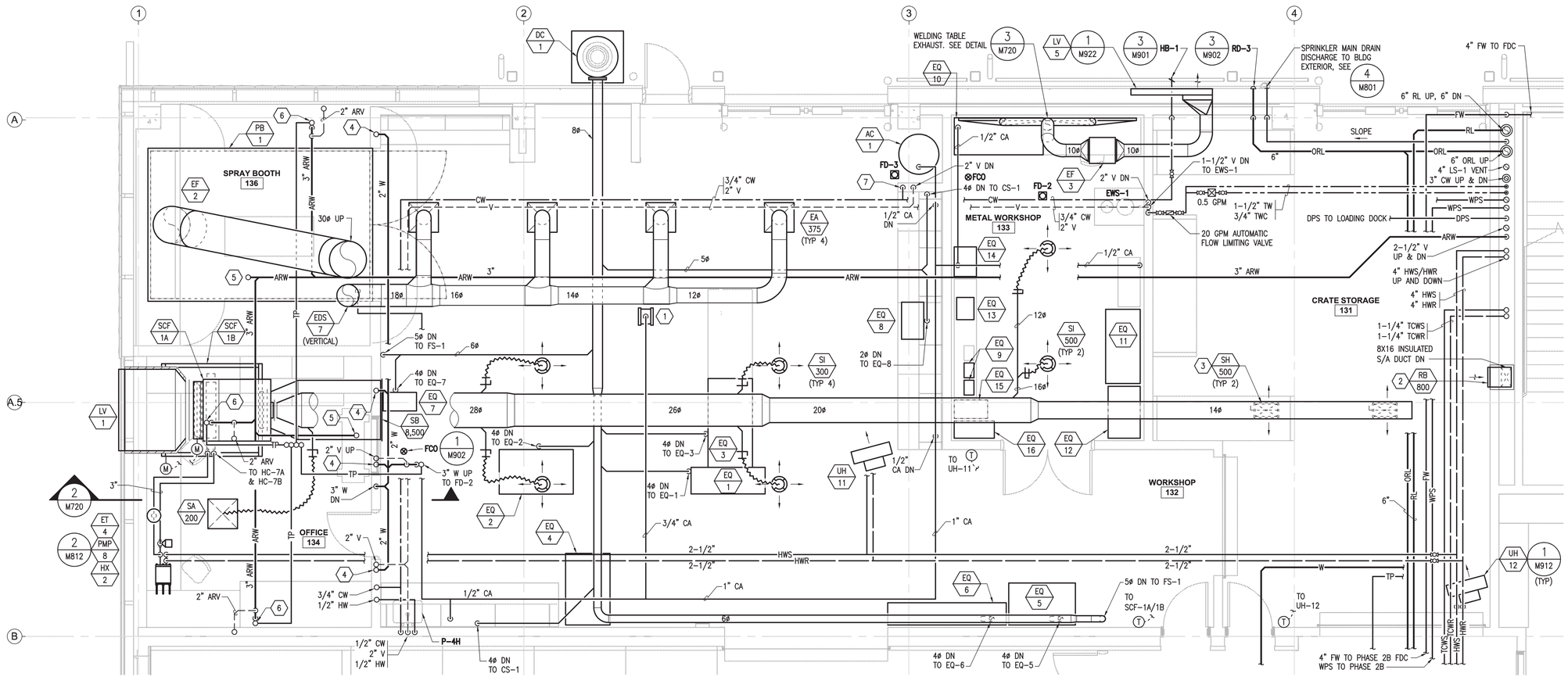


3 M720 DETAIL – WELDING TABLE EXHAUST

SCALE: NONE

SHEET NOTES

1. 1/2" CA DN TO HOSE REEL. MOUNT HOSE REEL AT CEILING HEIGHT.
2. TRANSFER AIR GRILLE 12" AFF.
3. MOUNT GRILLE AT BOTTOM OF DUCT.
4. 2" W UP TO EYEWASH.
5. 2" ARW UP TO LAB SINK.
6. 3" ARW UP TO FS-1.
7. 1/2" CW DN TO ELECTRONIC TRAP PRIMER IN RECESSED WALL CABINET.
8. SEE DETAIL 1/M921 FOR TYPICAL DUCTWORK FITTINGS.
9. SEAL DUCTWORK WHICH PENETRATES THROUGH FULL HEIGHT WALLS WITH ACOUSTICAL SEALANT SYSTEM; SEE DETAIL 2/M921. SEAL FLOOR/CEILING PENETRATIONS WITH ACOUSTICAL SEALANT SYSTEM; SEE DETAIL 4/M911. PROVIDE APPROPRIATE UL LISTED FIRESTOP SYSTEMS AT PENETRATIONS THROUGH RATED ASSEMBLIES.
10. PROVIDE REMOTE VOLUME DAMPER OPERATORS FOR BALANCING DAMPERS LOCATED ABOVE HARD-LID CEILINGS; SEE DETAIL 4/M921. REFER TO ARCHITECTURAL FOR HARD-LID CEILING LOCATIONS.
11. FLEX DUCT CONNECTION DIAMETER EQUALS AIR OUTLET NECK SIZE. SEE AIR INLET/OUTLET SCHEDULE.



1 M720 ENLARGED PLAN – WOOD SHOP

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

0 2' 4' 8' 12'

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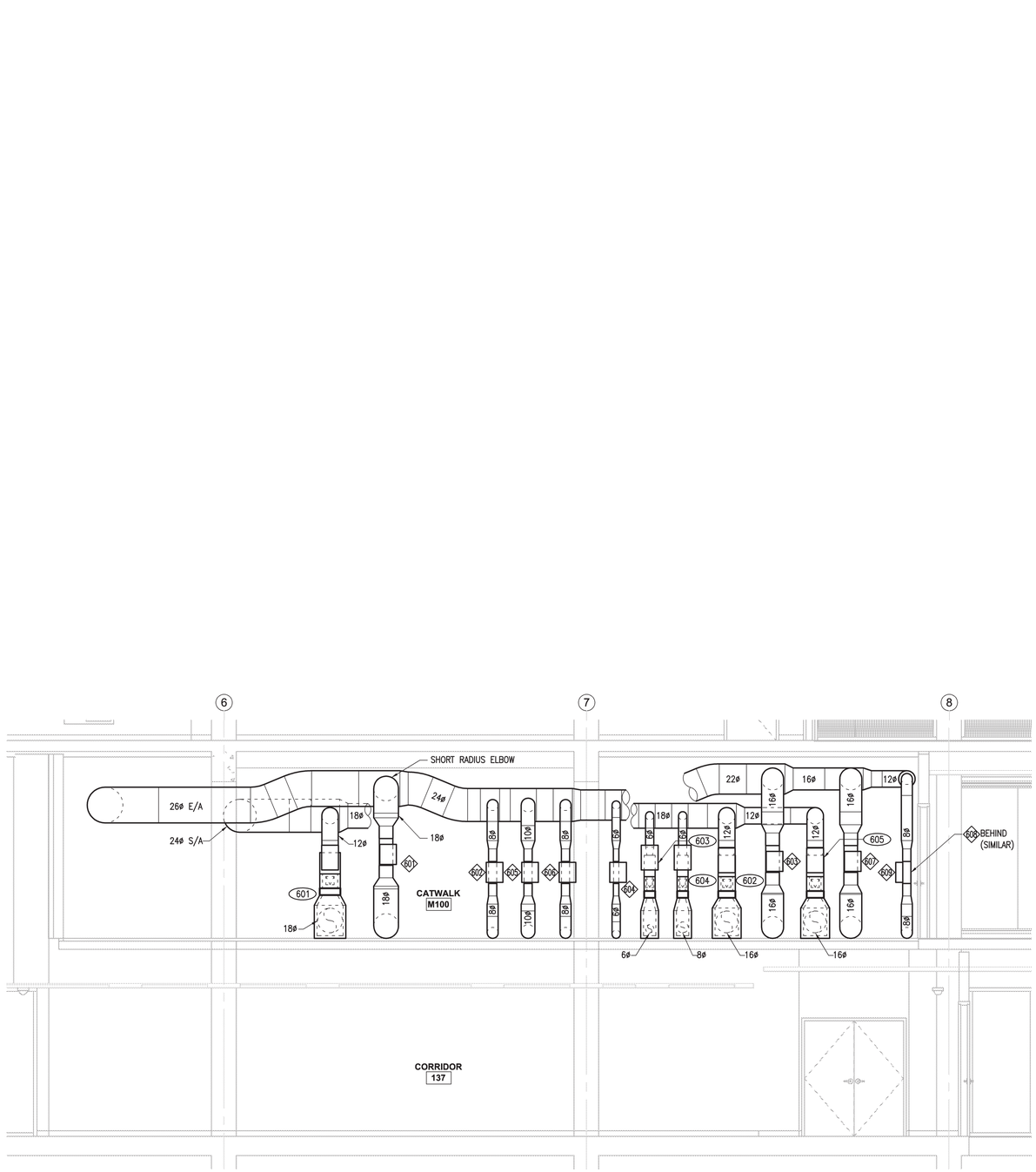
ENLARGED PLAN - WOOD SHOP

M720



1 / M721 ENLARGED SECTION – MECHANICAL MEZZANINE

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

0 2' 4' 8' 12'

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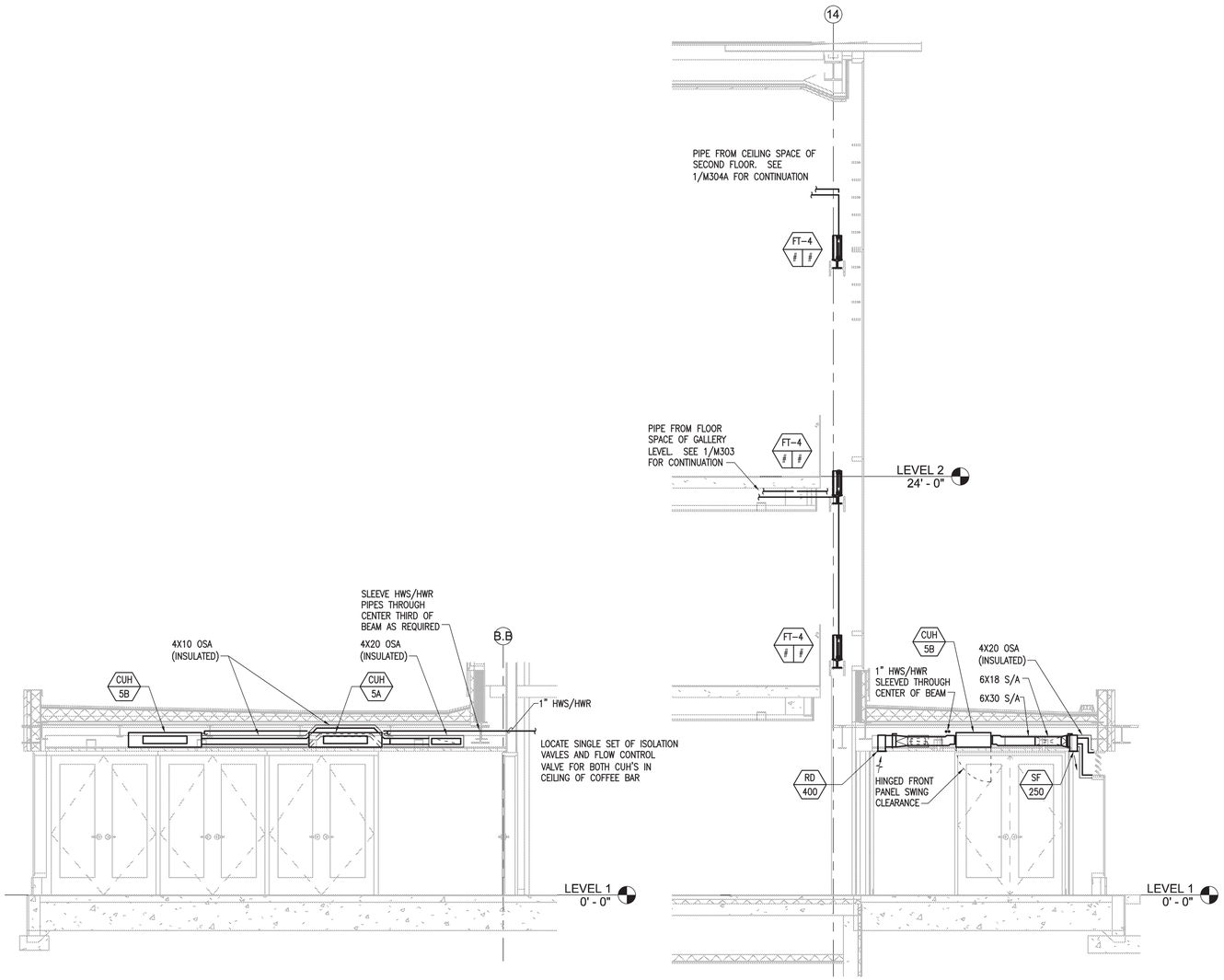
ENLARGED SECTIONS

M721



1 M722 ENLARGED SECTION – VESTIBULE 100 (WEST)

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

2 M722 ENLARGED SECTION – VESTIBULE 100 (NORTH)

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

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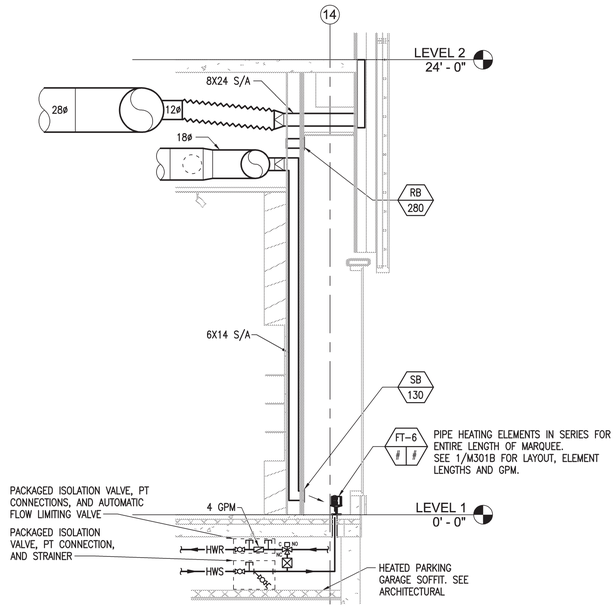
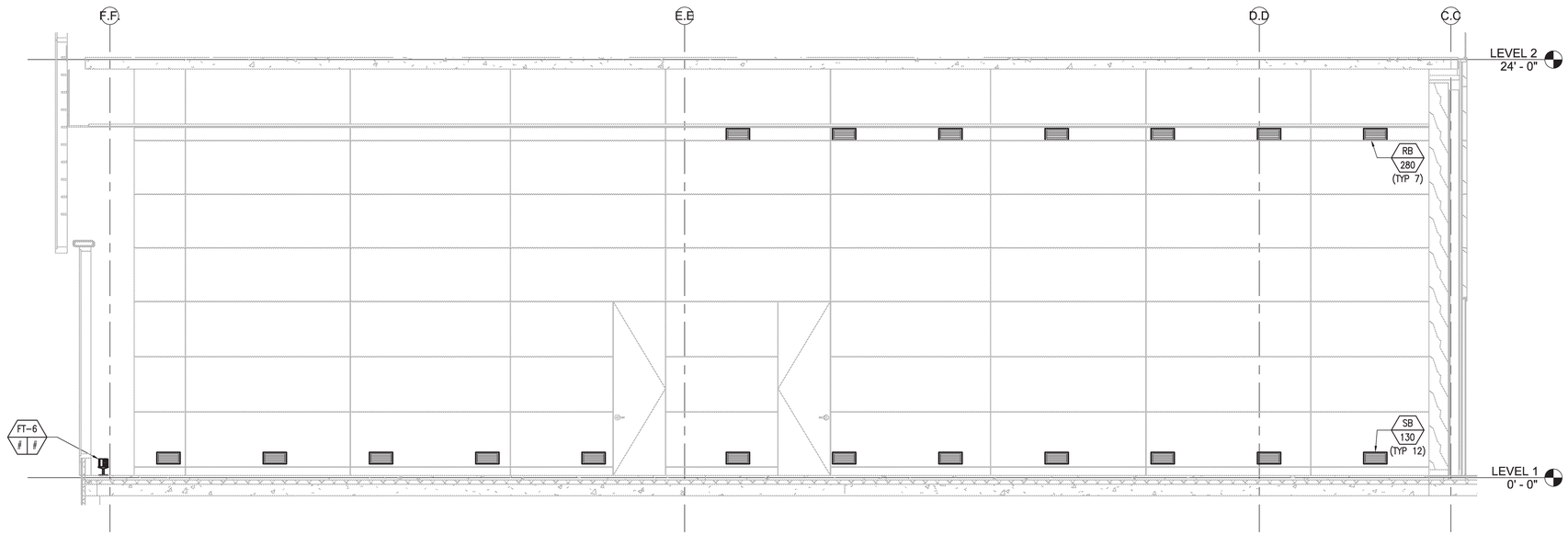
M722



1 / M723 ENLARGED SECTION – MARQUEE (NORTH)

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



2 / M723 ENLARGED SECTION – MARQUEE (WEST)

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

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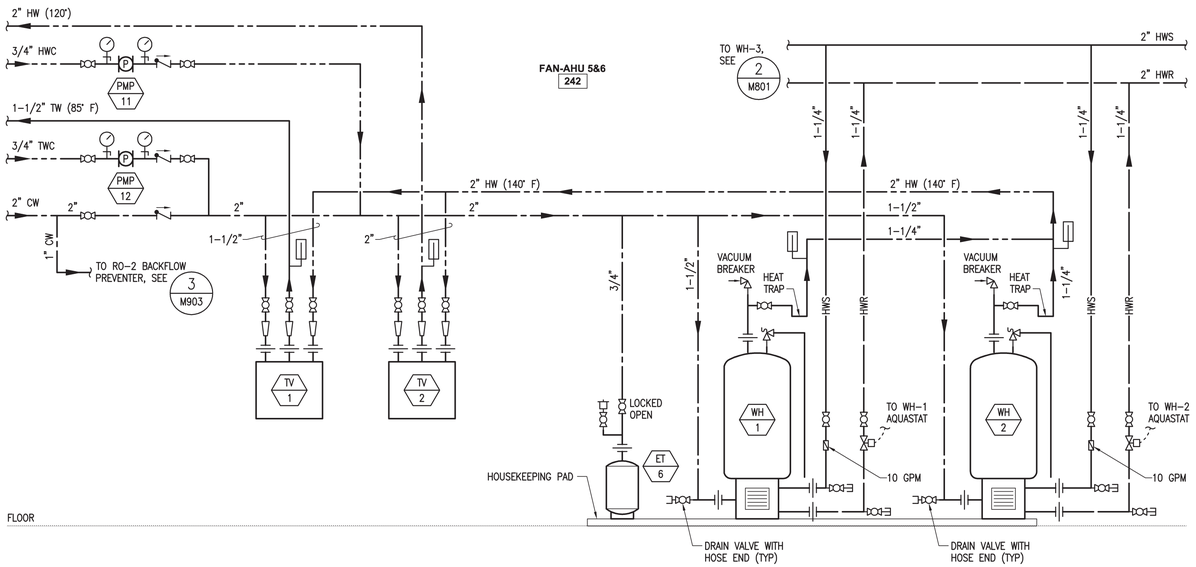
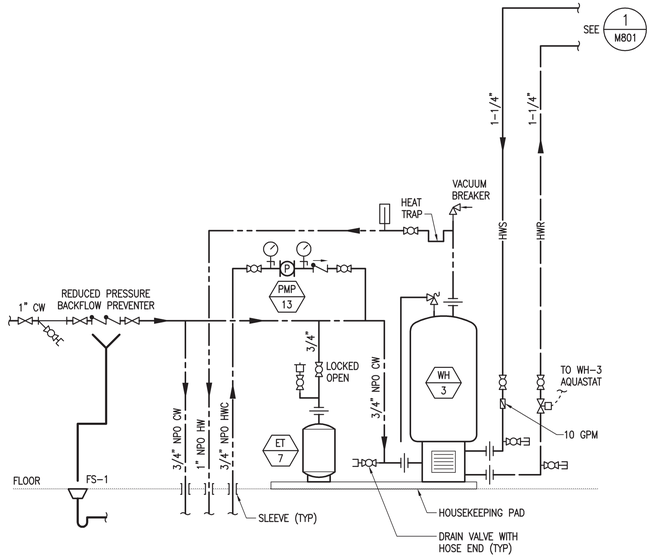
ENLARGED SECTIONS

M723



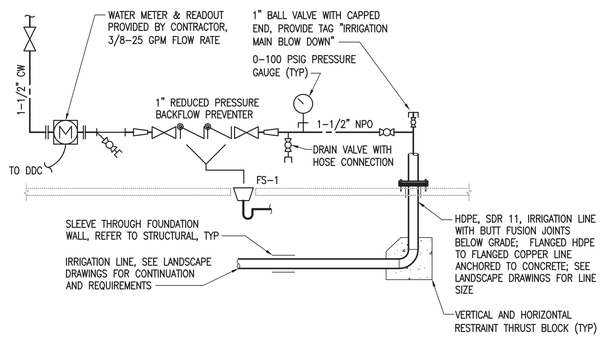
1 M801 DIAGRAM – DOMESTIC HOT WATER SYSTEM

SCALE: NONE



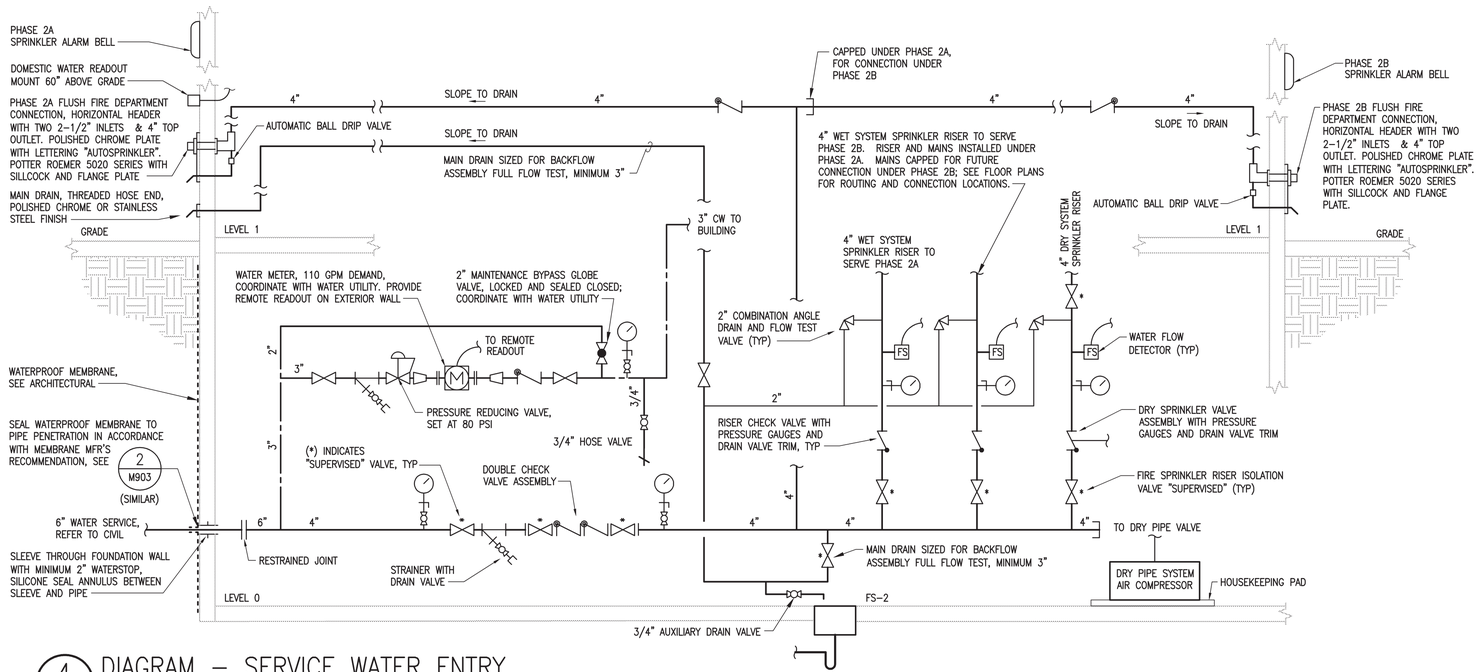
2 M801 DIAGRAM – NON-POTABLE LAB CW & HW

SCALE: NONE



3 M801 DIAGRAM – NON-POTABLE IRRIGATION WATER

SCALE: NONE



4 M801 DIAGRAM – SERVICE WATER ENTRY

SCALE: NONE

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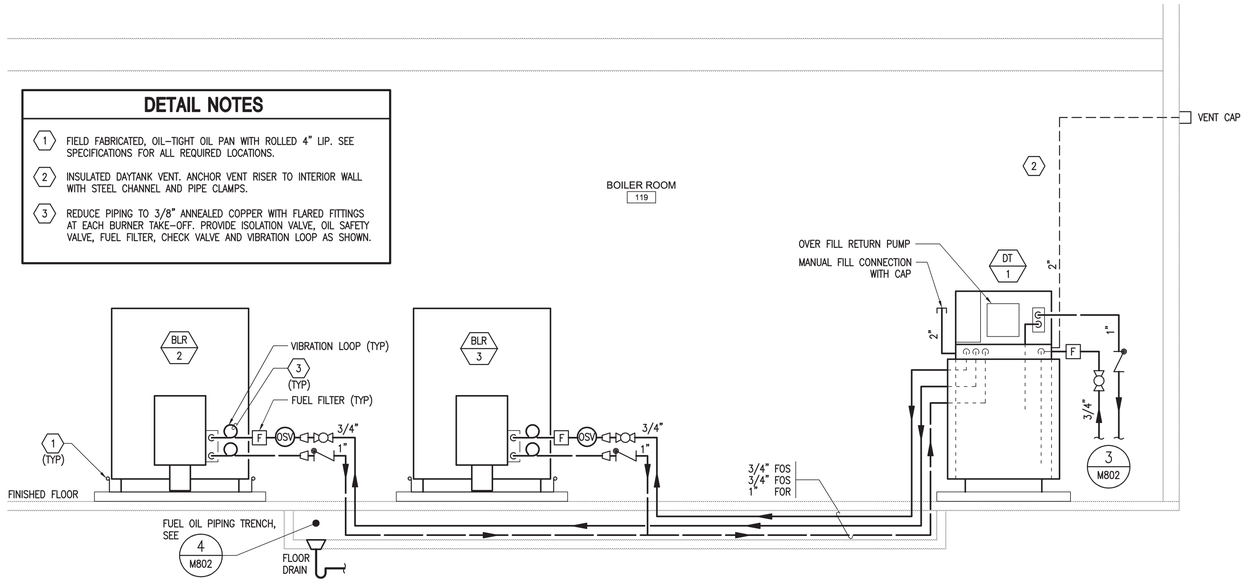
DIAGRAMS - PLUMBING

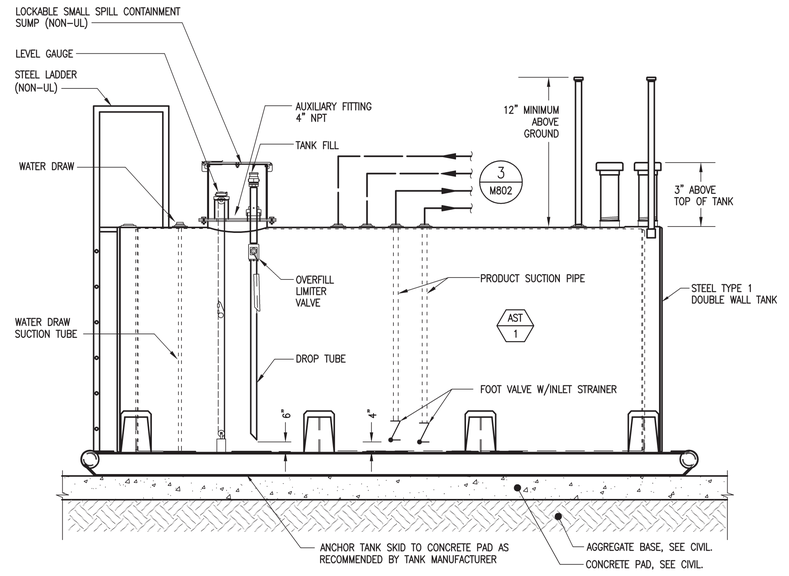
M801

DETAIL NOTES

1. FIELD FABRICATED, OIL–TIGHT OIL PAN WITH ROLLED 4" LIP. SEE SPECIFICATIONS FOR ALL REQUIRED LOCATIONS.
2. INSULATED DAYTANK VENT. ANCHOR VENT RISER TO INTERIOR WALL WITH STEEL CHANNEL AND PIPE CLAMPS.
3. REDUCE PIPING TO 3/8" ANNEALED COPPER WITH FLARED FITTINGS AT EACH BURNER TAKE–OFF. PROVIDE ISOLATION VALVE, OIL SAFETY VALVE, FUEL FILTER, CHECK VALVE AND VIBRATION LOOP AS SHOWN.



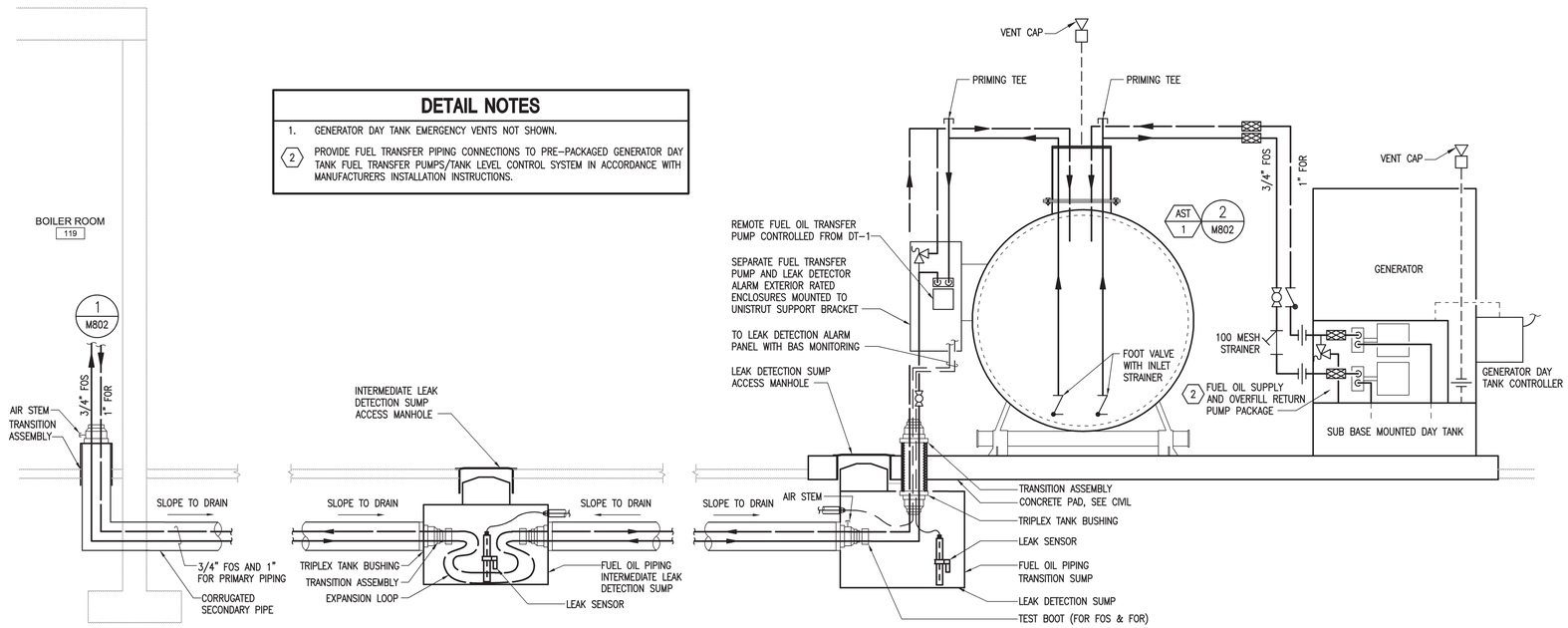
1 M802 DIAGRAM – FUEL OIL DAY STORAGE AND TRANSFER SYSTEM
SCALE: NONE



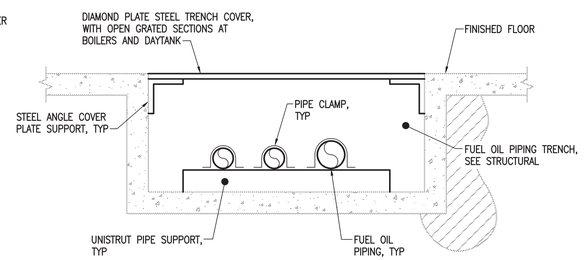
2 M802 DETAIL – ABOVEGROUND FUEL OIL STORAGE TANK (AST–1)
SCALE: NONE

DETAIL NOTES

1. GENERATOR DAY TANK EMERGENCY VENTS NOT SHOWN.
2. PROVIDE FUEL TRANSFER PIPING CONNECTIONS TO PRE–PACKAGED GENERATOR DAY TANK FUEL TRANSFER PUMPS/TANK LEVEL CONTROL SYSTEM IN ACCORDANCE WITH MANUFACTURERS INSTALLATION INSTRUCTIONS.



3 M802 DIAGRAM – BULK FUEL OIL STORAGE AND TRANSFER SYSTEM
SCALE: NONE



4 M802 DETAIL – FUEL OIL PIPING TRENCH
SCALE: NONE

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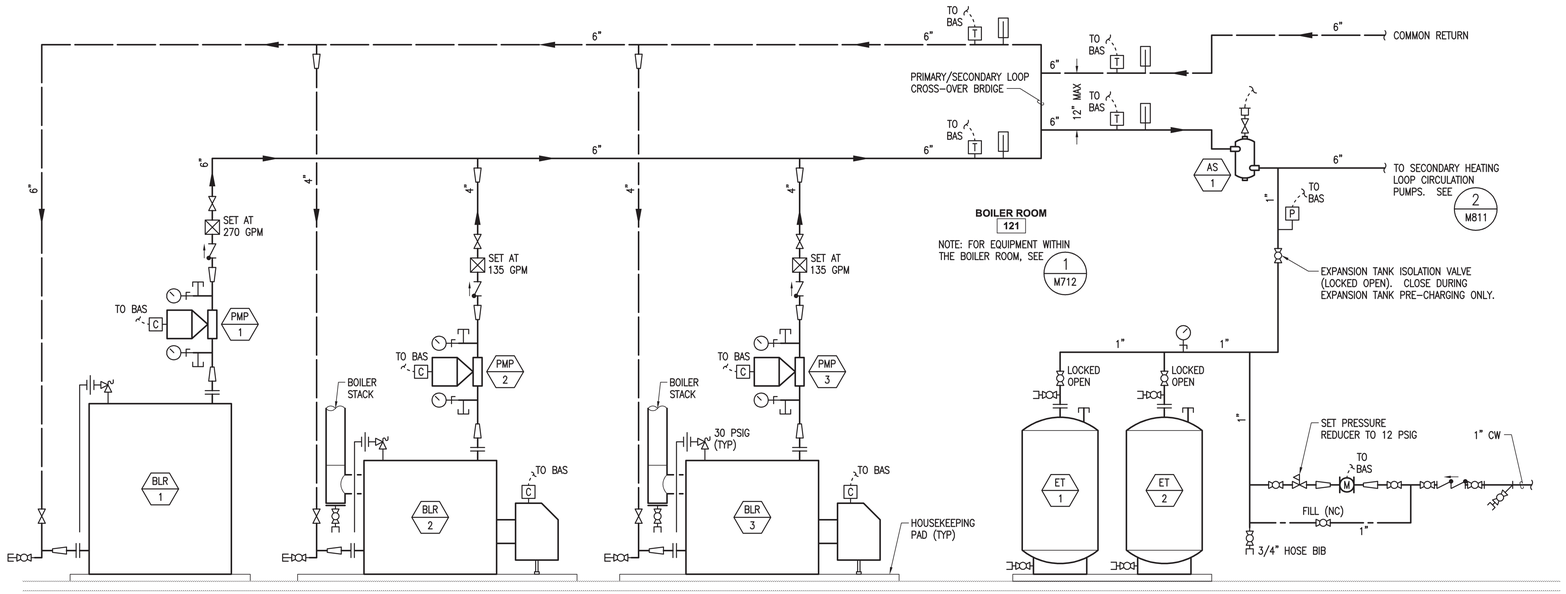
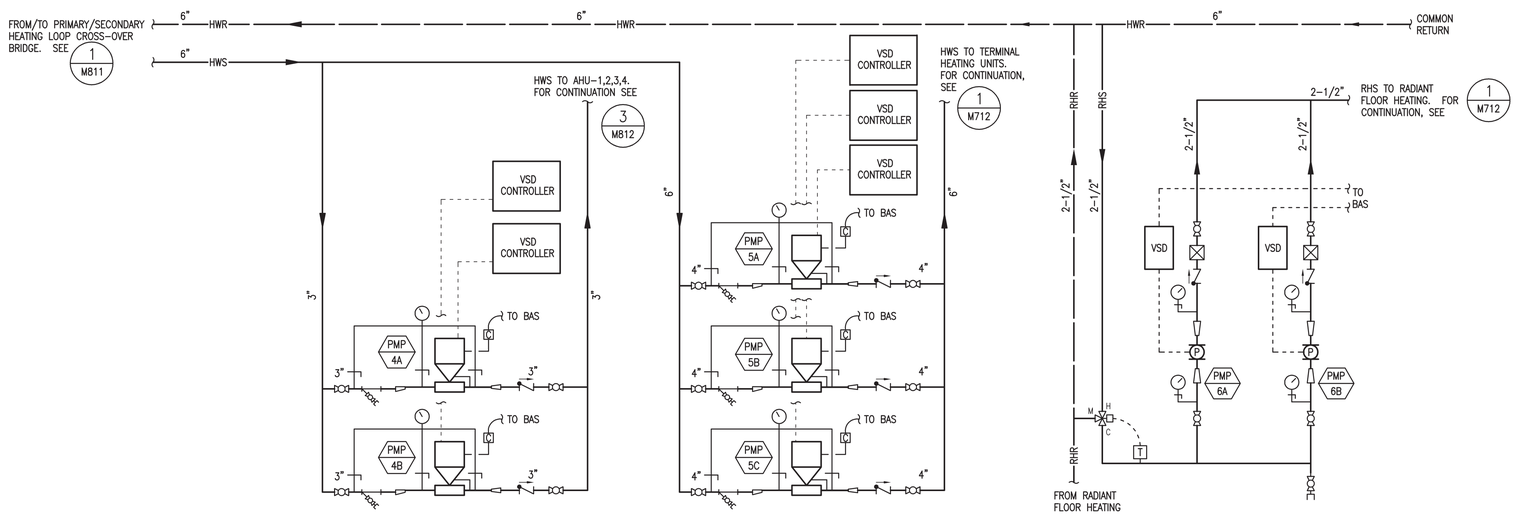
DIAGRAMS - FUEL OIL

M802



1 M811 DIAGRAM – CENTRAL HEATING SYSTEM

SCALE: NONE



2 M811 DIAGRAM – SECONDARY HEATING LOOP

SCALE: NONE

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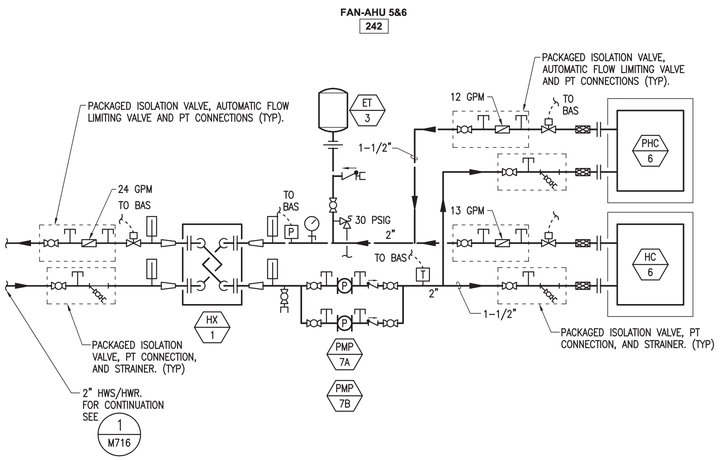
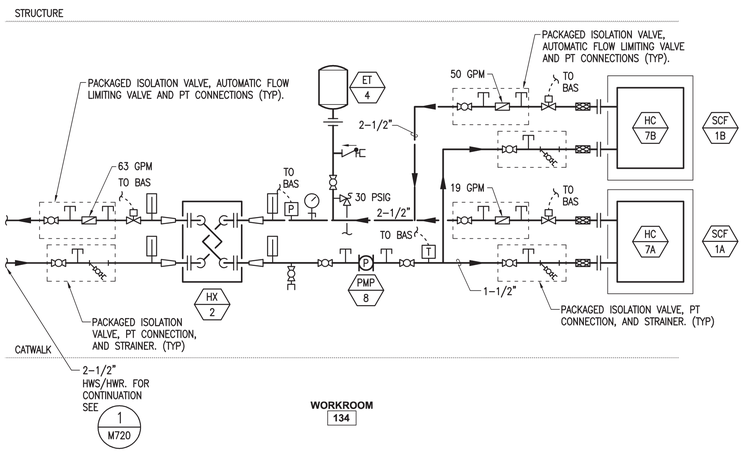
DIAGRAMS - HEATING SYSTEMS

M811



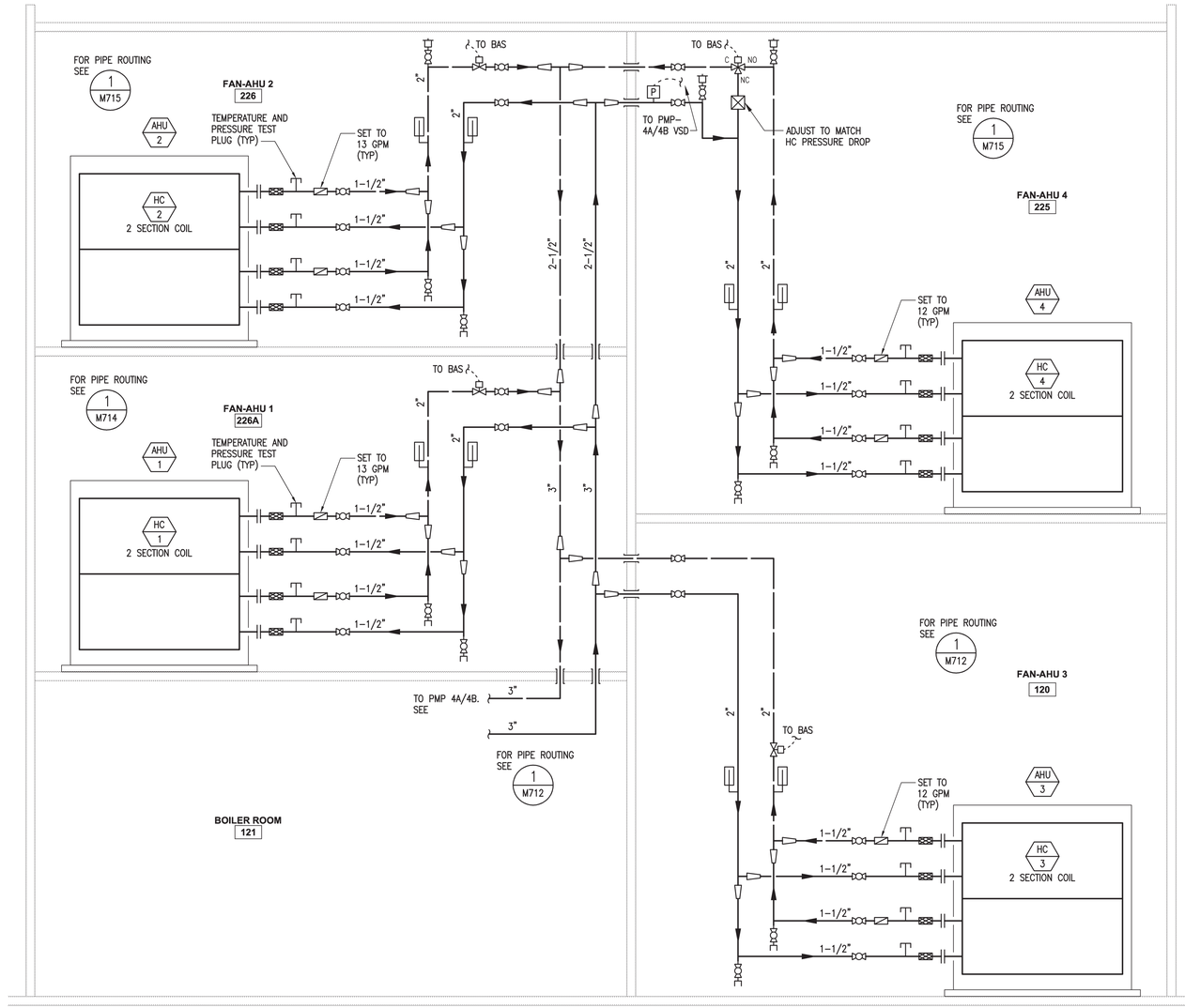
1 M812 DIAGRAM – PHC–6/HC–6 SECONDARY GLYCOL LOOP

SCALE: NONE



2 M812 DIAGRAM – HC–7A/7B SECONDARY GLYCOL LOOP

SCALE: NONE



3 M812 DIAGRAM – HC–1 THRU HC–4 SECONDARY HEATING LOOP

SCALE: NONE

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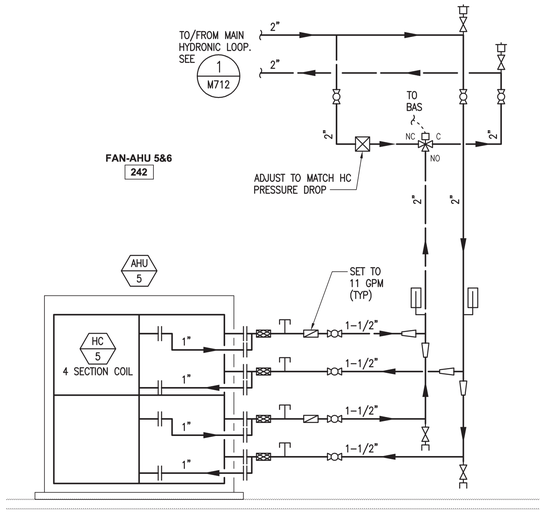
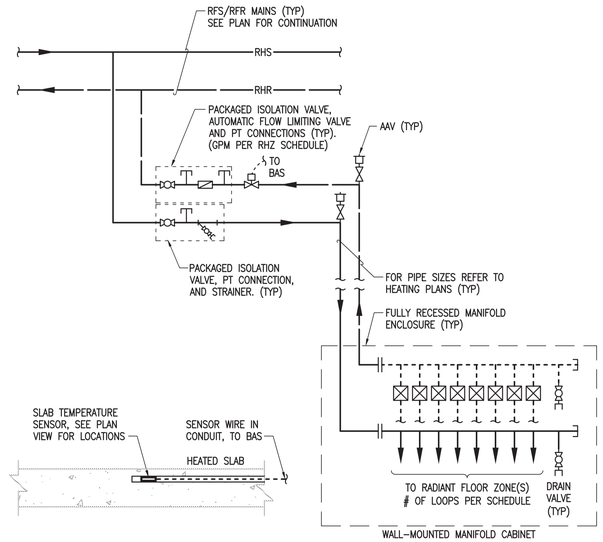
DIAGRAMS - HEATING SYSTEMS

M812



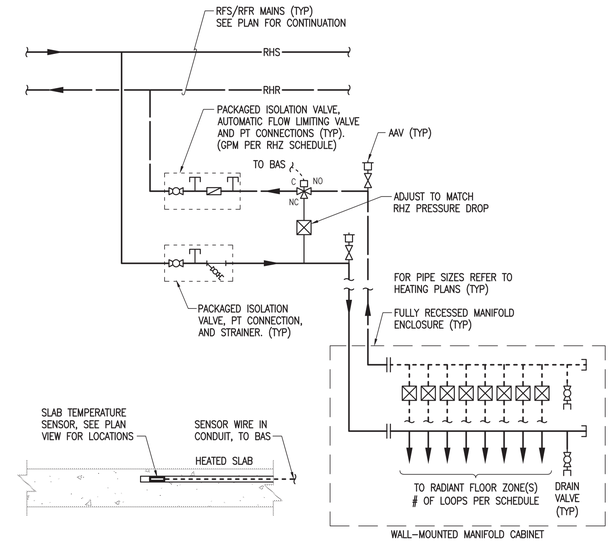
1 M813 DIAGRAM – HC–5 SECONDARY HEATING LOOP

SCALE: NONE



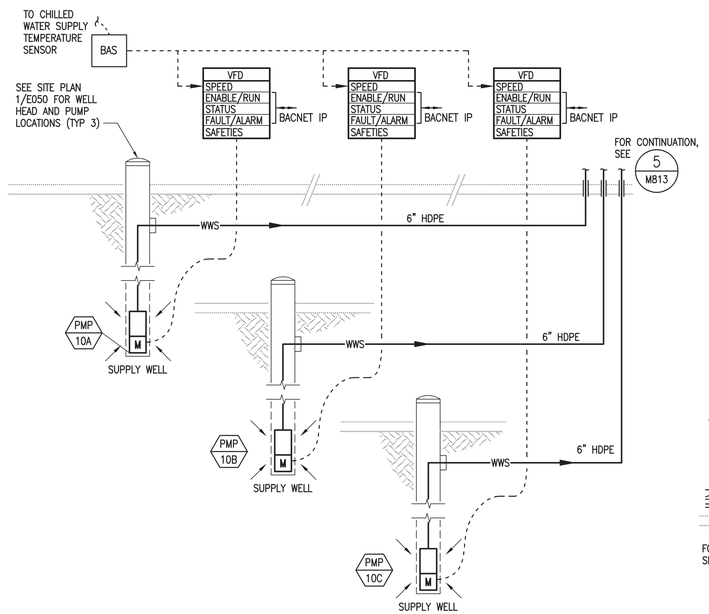
2 M813 DIAGRAM – RADIANT FLOOR HEATING LOOP MANIFOLD (TWO–WAY)

SCALE: NONE



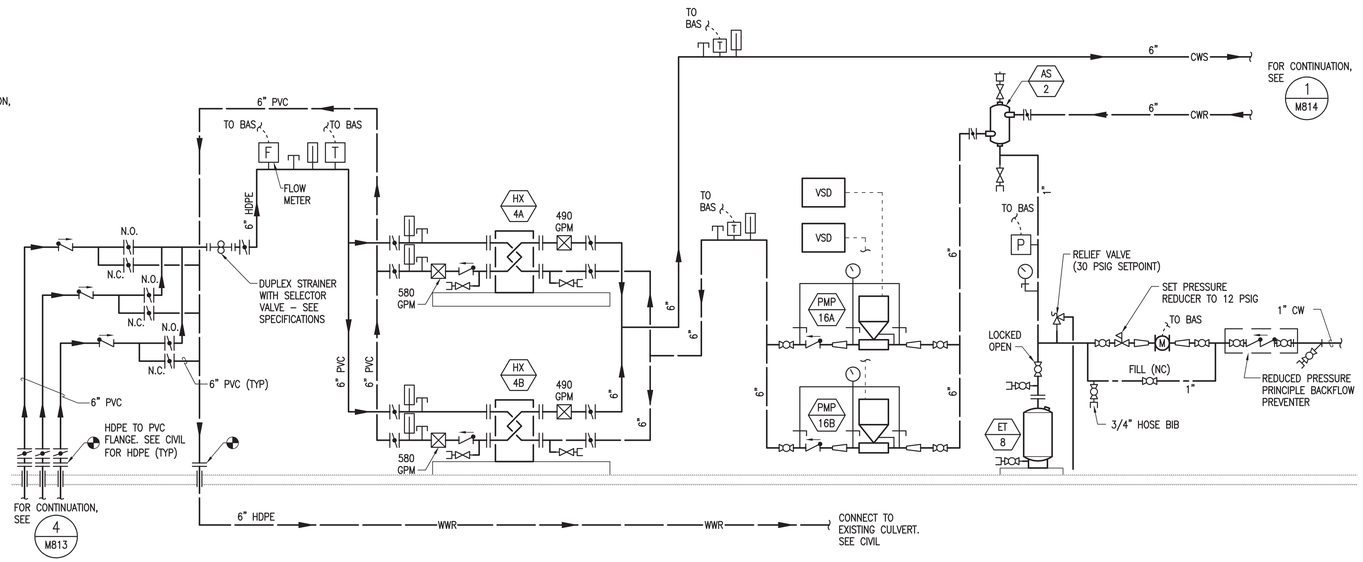
3 M813 DIAGRAM – RADIANT FLOOR HEATING LOOP MANIFOLD (THREE–WAY)

SCALE: NONE



4 M813 DIAGRAM – COOLING WELLS

SCALE: NONE



5 M813 DIAGRAM – CENTRAL COOLING SYSTEM

SCALE: NONE

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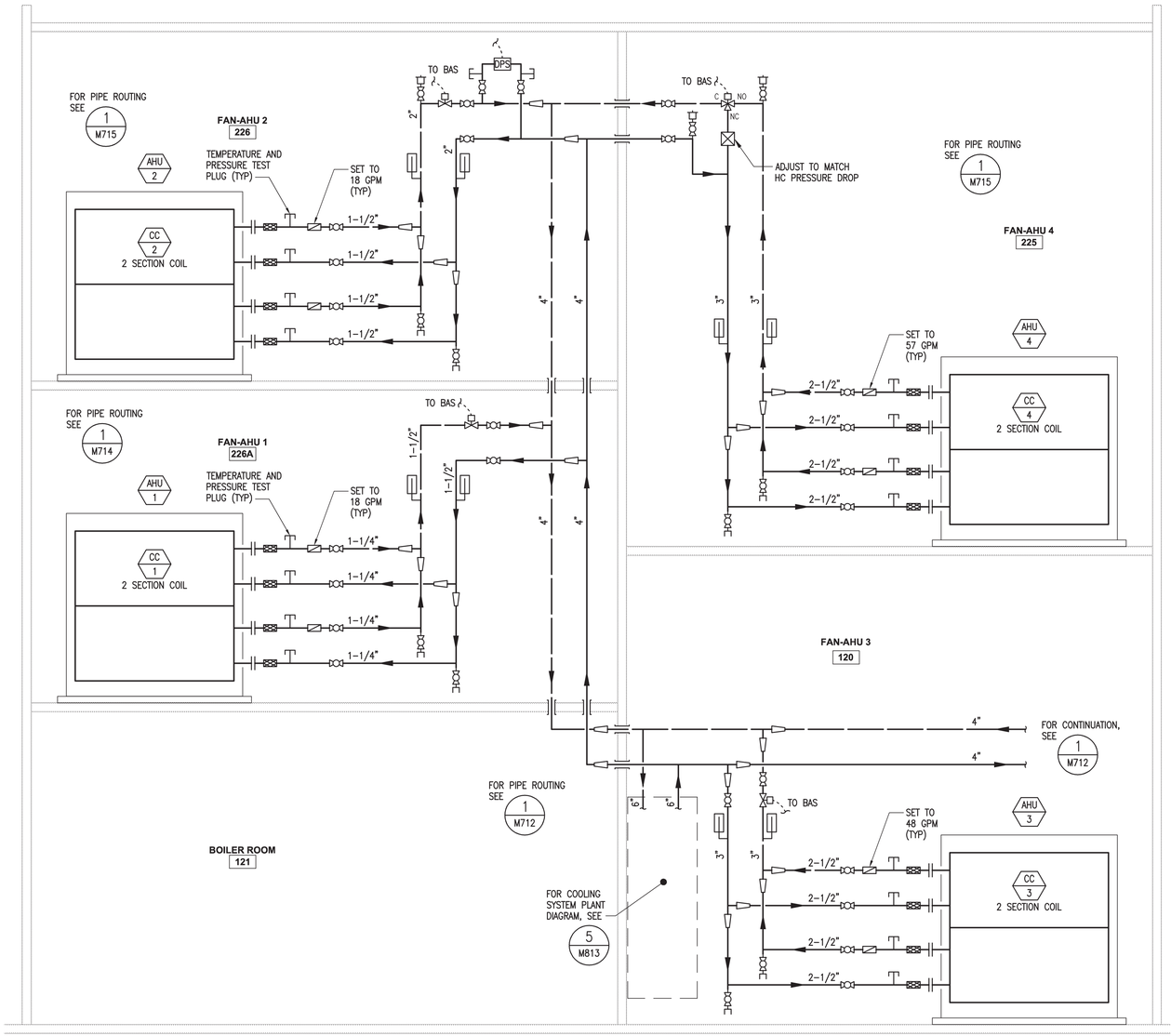
DIAGRAMS - HEATING & COOLING SYSTEMS

M813



1 M814 DIAGRAM – CC–1 THRU CC–4 SECONDARY COOLING LOOP

SCALE: NONE

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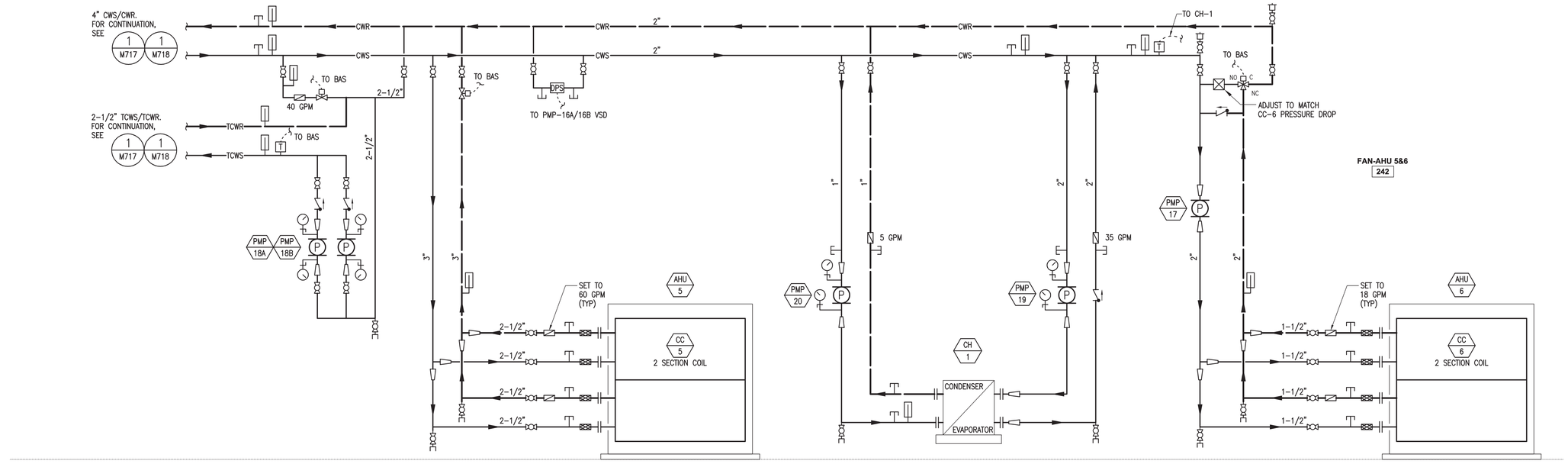
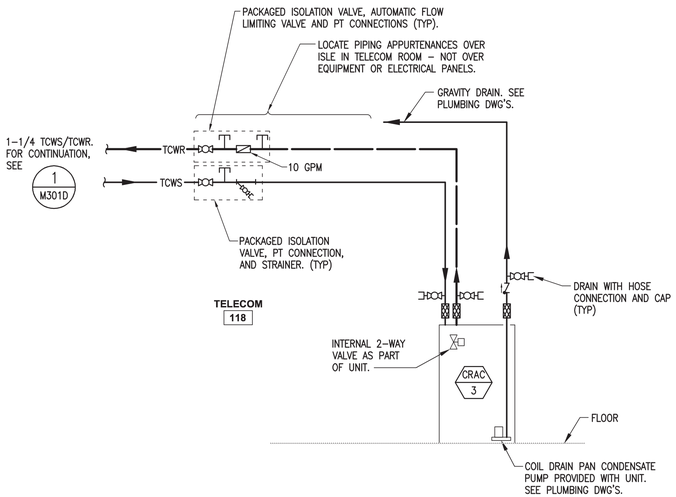
DIAGRAMS - COOLING SYSTEMS

M814



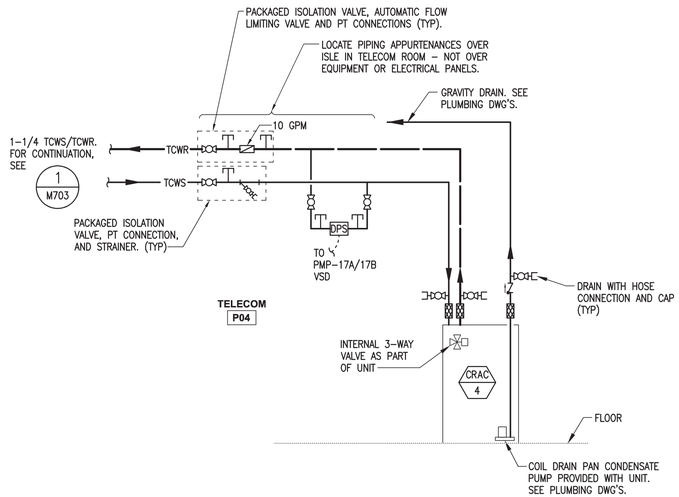
1/M815 DIAGRAM – CC-5 & CC-6 SECONDARY COOLING LOOP & TEMPERED COOLING LOOP

SCALE: NONE



2/M815 DIAGRAM – CRAC-3 PIPING (TWO-WAY)

SCALE: NONE



3/M815 DIAGRAM – CRAC-4 PIPING (THREE-WAY)

SCALE: NONE

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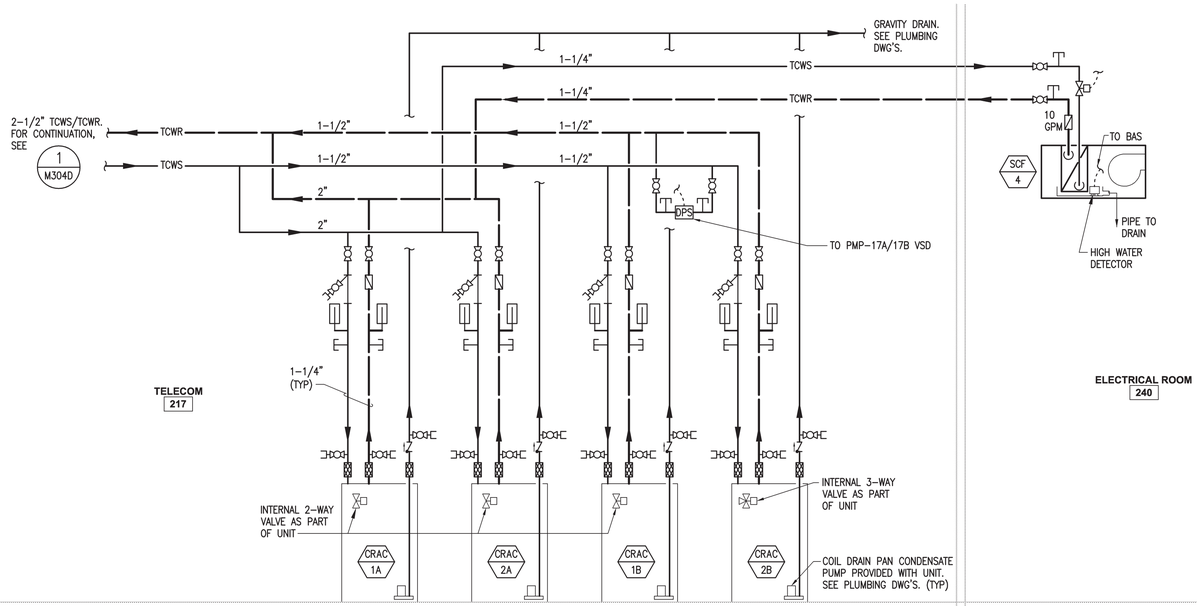
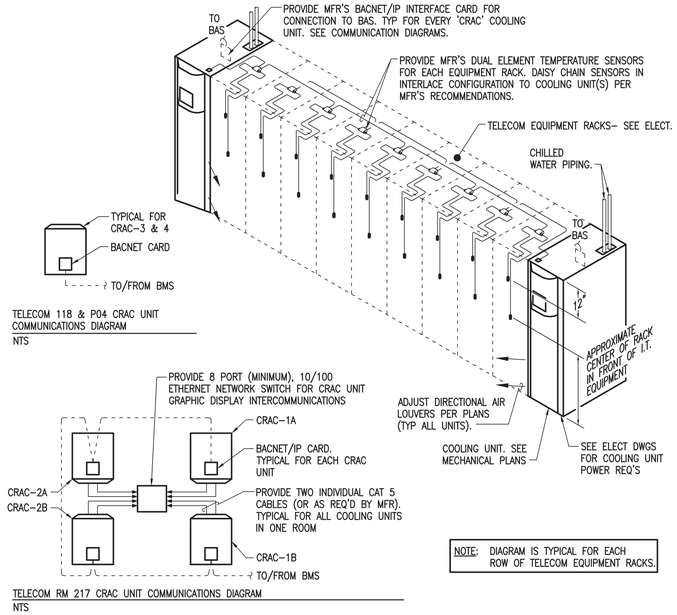
DIAGRAMS - COOLING SYSTEMS

M815



1 M816 DIAGRAM – CRAC–1A/1B, CRAC–2A/2B & SCF–4 PIPING

SCALE: NONE



2 M816 DIAGRAM – COMPUTER ROOM AC (CRAC) UNITS

SCALE: NONE

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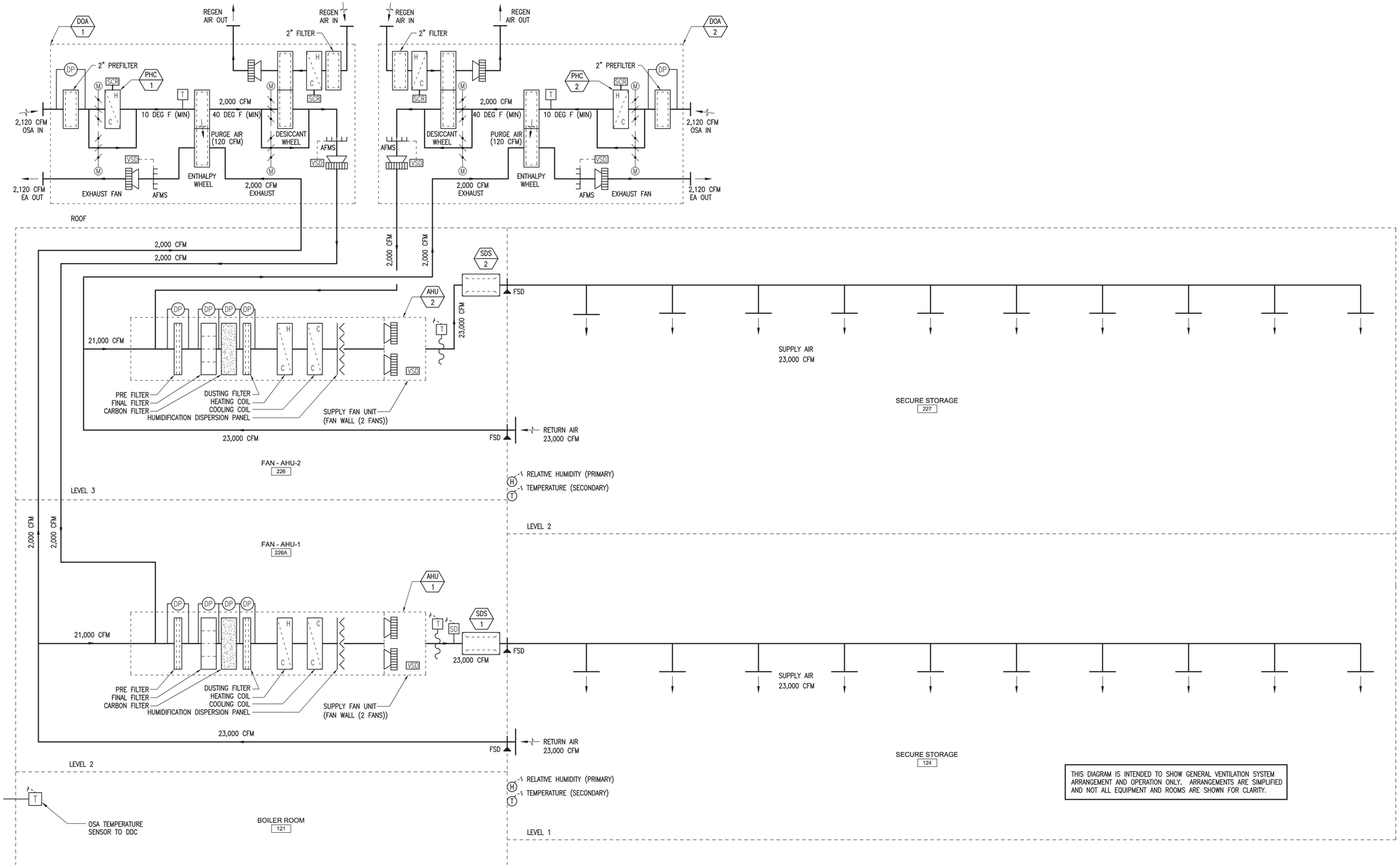
DIAGRAMS - COOLING SYSTEMS

M816



1 M831 DIAGRAM – AHU–1 & AHU–2 VENTILATION SYSTEMS

SCALE: NONE

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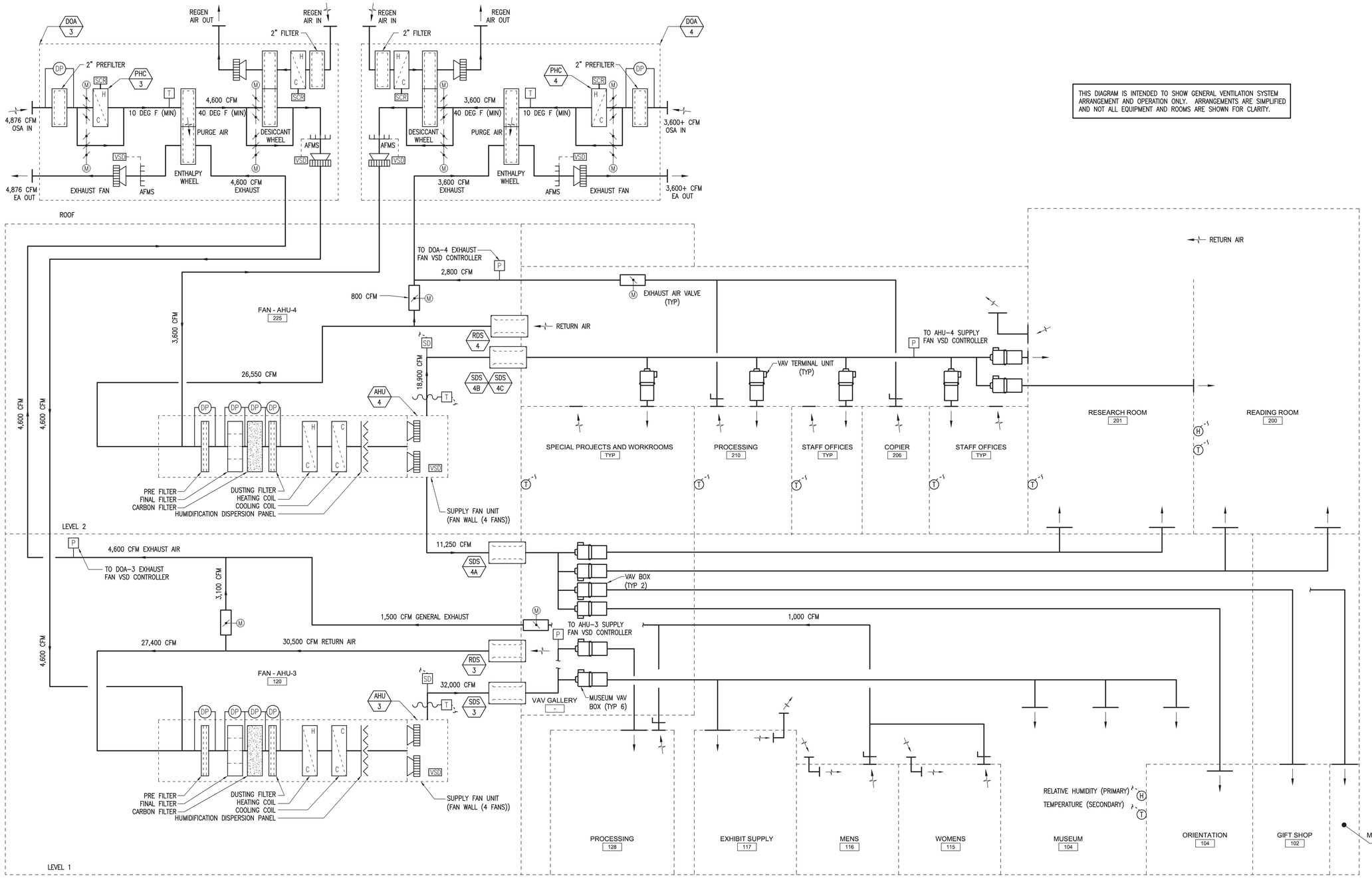
DIAGRAMS - VENTILATION SYSTEMS

M831



1 M832 DIAGRAM – AHU-3 & AHU-4 VENTILATION SYSTEMS

SCALE: NONE

THIS DIAGRAM IS INTENDED TO SHOW GENERAL VENTILATION SYSTEM ARRANGEMENT AND OPERATION ONLY. ARRANGEMENTS ARE SIMPLIFIED AND NOT ALL EQUIPMENT AND ROOMS ARE SHOWN FOR CLARITY.

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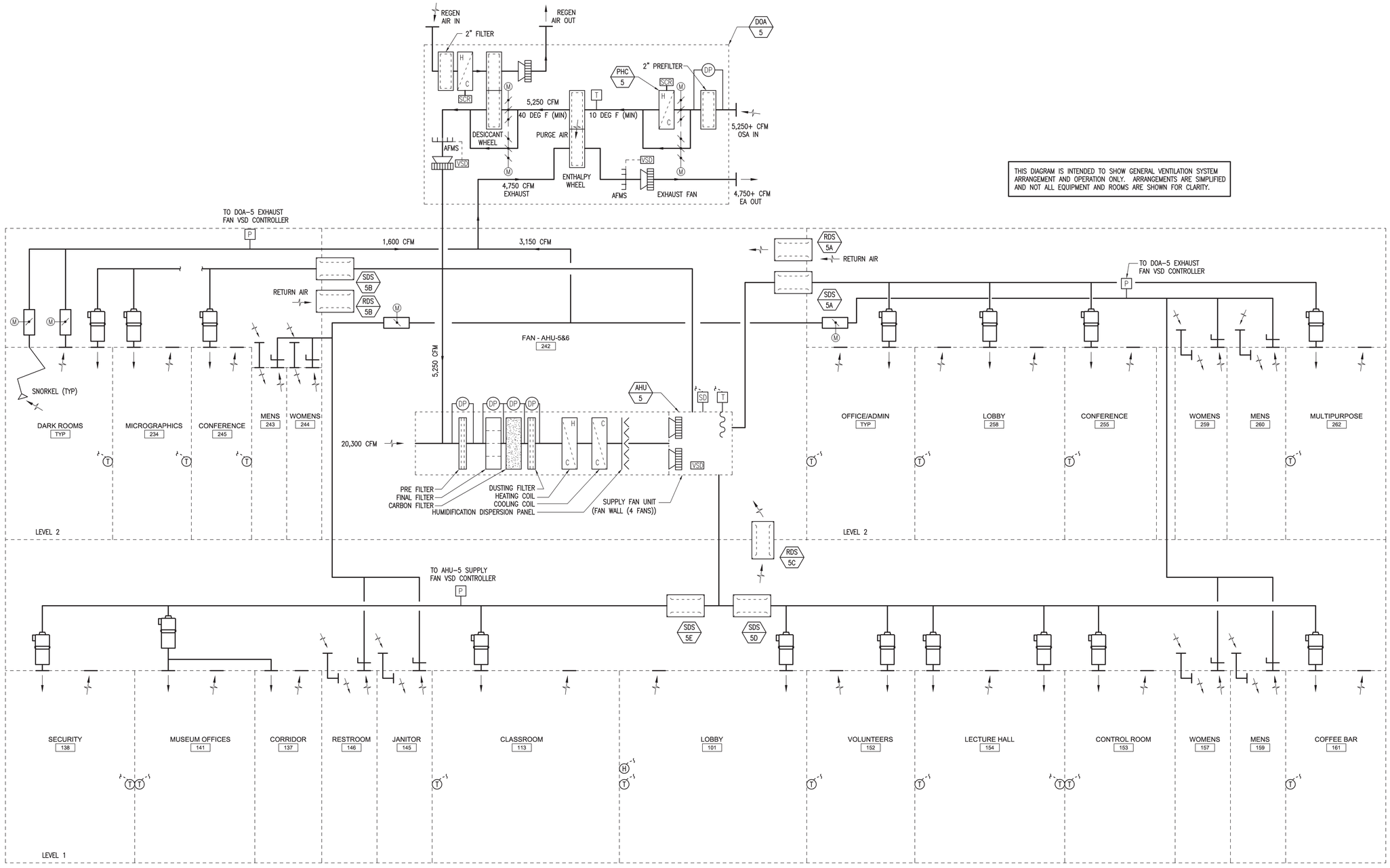
DIAGRAMS - VENTILATION SYSTEMS

M832



1 M833 DIAGRAM – AHU-5 VENTILATION SYSTEM

SCALE: NONE

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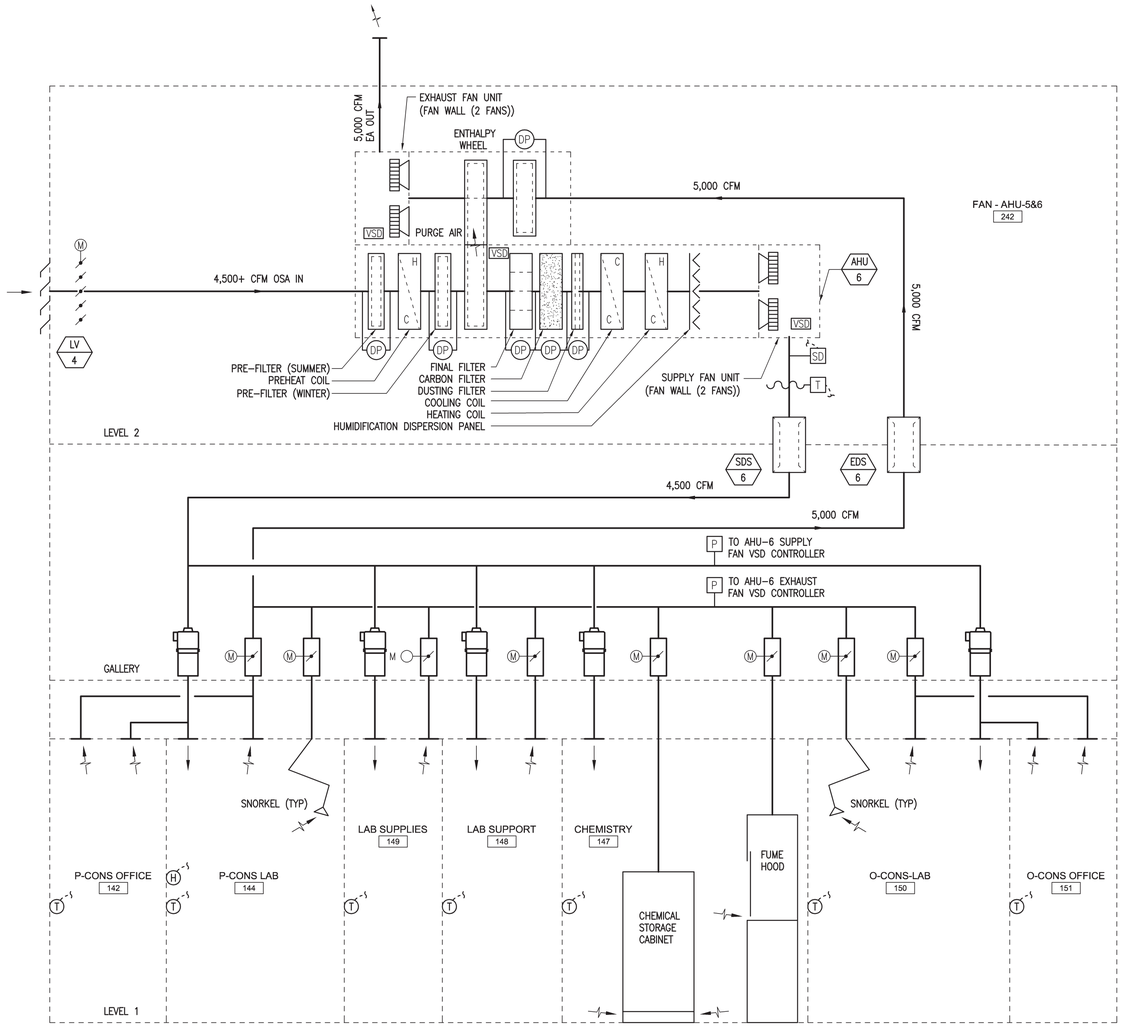
DIAGRAMS - VENTILATION SYSTEMS

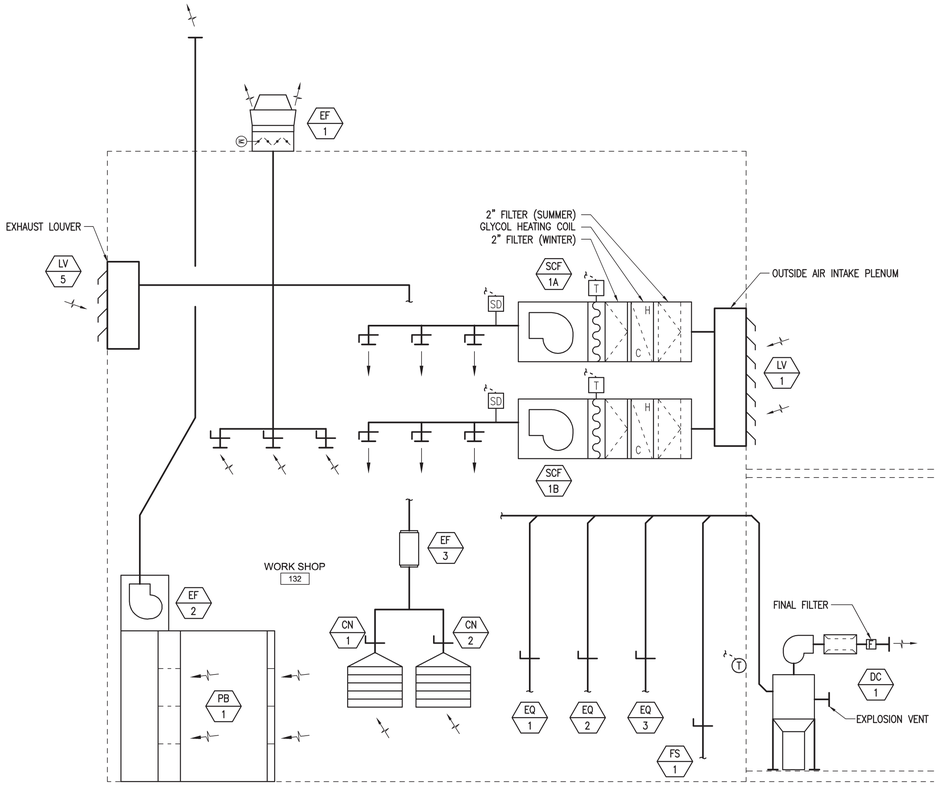
M833



1 M834 DIAGRAM – AHU-6/EF-6 LAB VENTILATION SYSTEM

SCALE: NONE

THESE DIAGRAMS ARE INTENDED TO SHOW GENERAL VENTILATION SYSTEM ARRANGEMENT AND OPERATION ONLY. ARRANGEMENTS ARE SIMPLIFIED AND NOT ALL EQUIPMENT AND ROOMS ARE SHOWN FOR CLARITY.



2 M834 DIAGRAM – SCF-1A/1B WORKSHOP VENTILATION SYSTEM

SCALE: NONE

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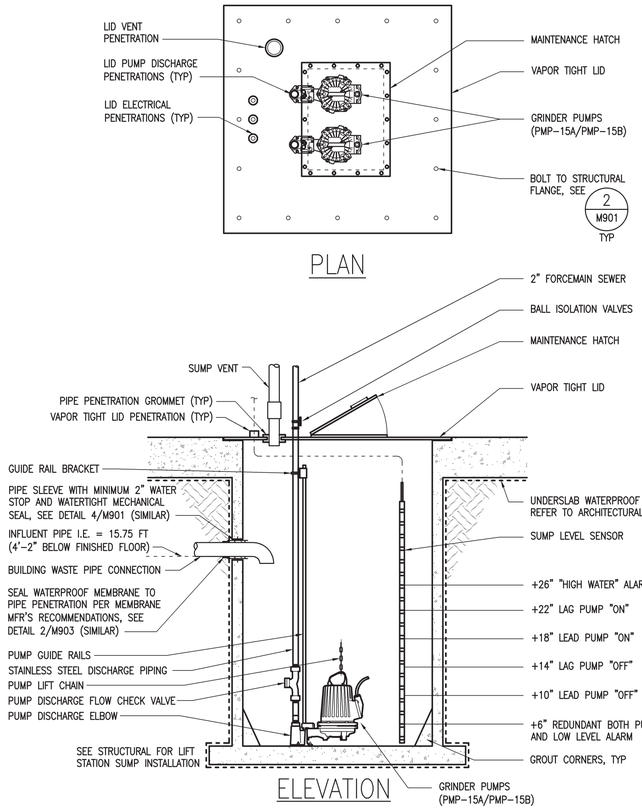
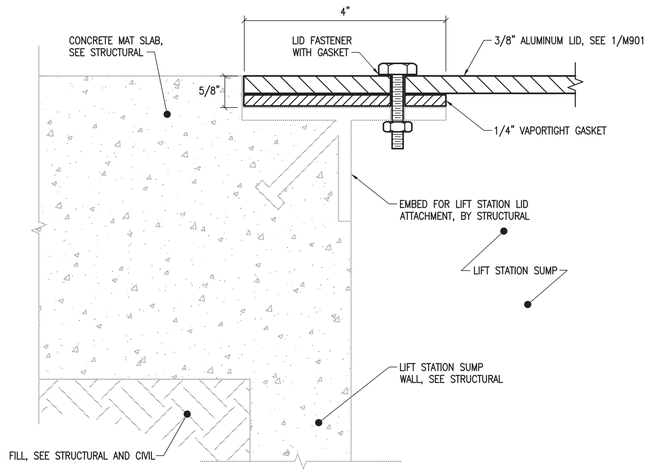
DIAGRAMS - VENTILATION SYSTEMS

M834



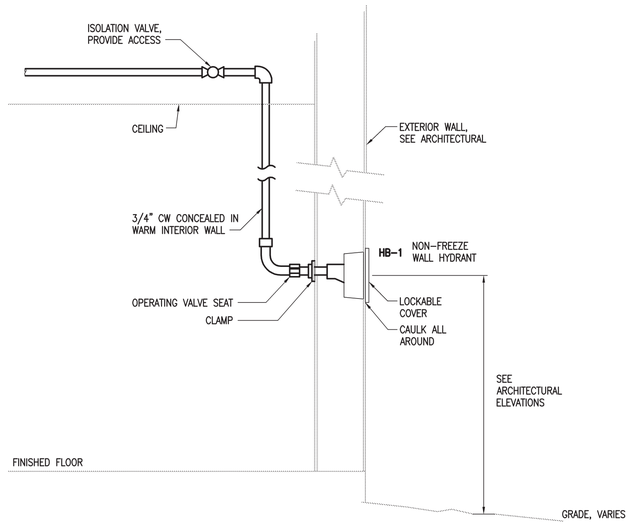
1 M901 DETAIL – SEWAGE LIFT STATION

SCALE: NONE



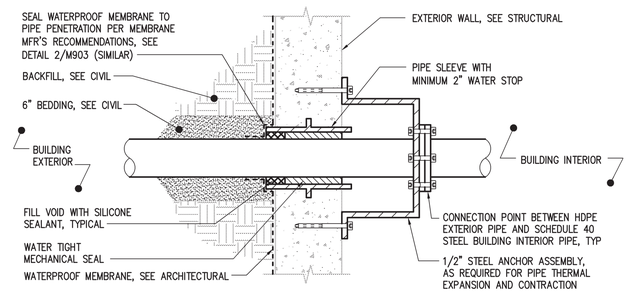
2 M901 DETAIL – LIFT STATION LID ATTACHMENT

SCALE: NONE



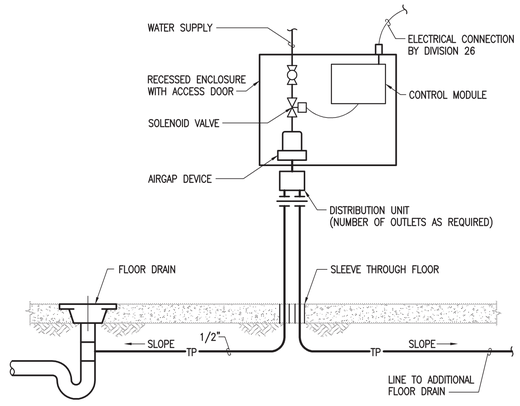
3 M901 DETAIL – NON-FREEZE HOSE BIBB (TYP)

SCALE: NONE



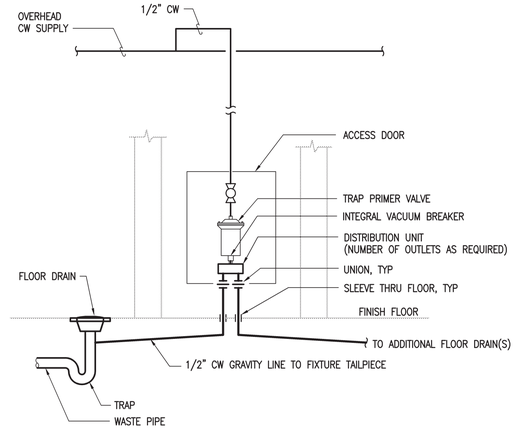
4 M901 DETAIL – FORCE MAIN PIPE WALL PENETRATION

SCALE: NONE



5 M901 DETAIL – ELECTRONIC TRAP PRIMER

SCALE: NONE



6 M901 DETAIL – FLOOR DRAIN TRAP PRIMER

SCALE: NONE

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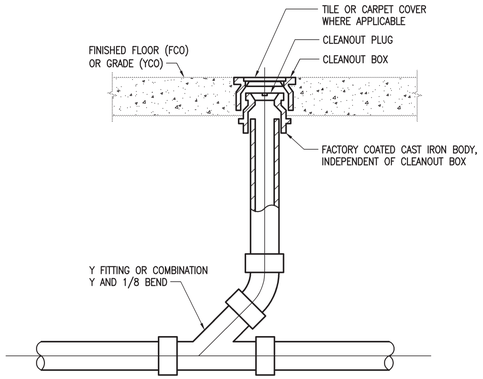
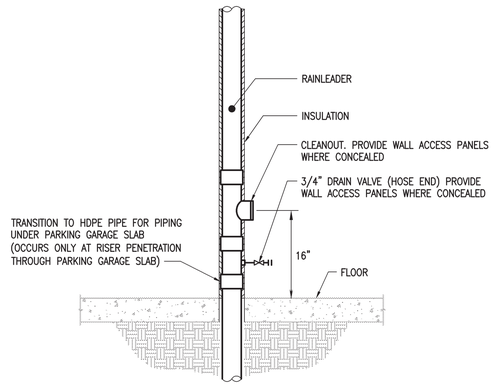
DETAILS - PLUMBING

M901



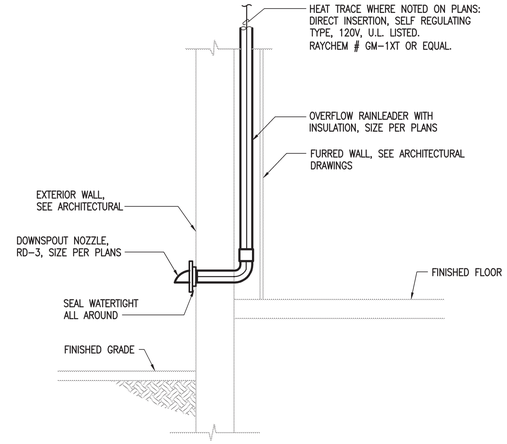
1 M902 DETAIL – FLOOR / YARD CLEANOUT

SCALE: NONE



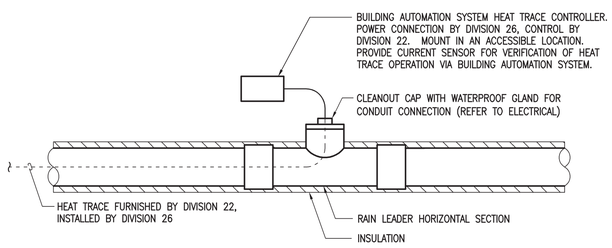
2 M902 DETAIL – RAIN LEADER CLEANOUT

SCALE: NONE



3 M902 DETAIL – OVERFLOW RAIN LEADER DOWNSPOUT

SCALE: NONE

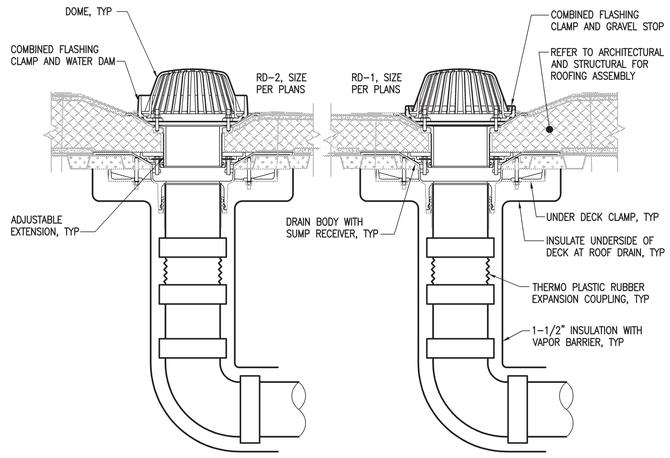


NOTES

1. CONTROL HEAT TRACE WITH DDC CONTROLLED CONTACT. TURN HEAT TRACE ON AT OUTSIDE AIR TEMPERATURES BELOW 32 DEGREES F.

4 M902 DETAIL – ROOF DRAIN HEAT TRACE CONNECTION

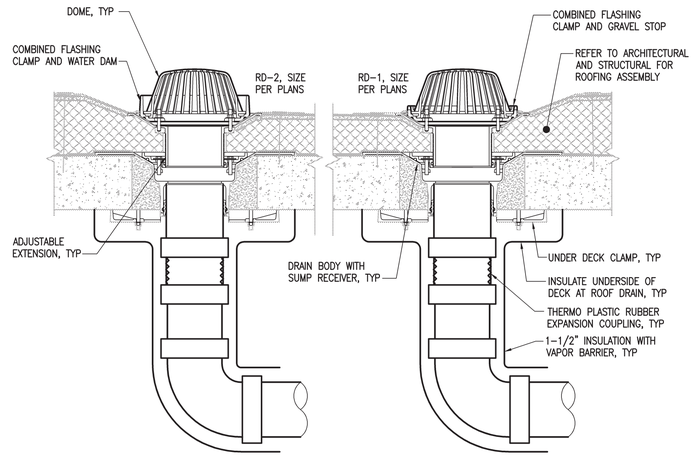
SCALE: NONE



NOTE: SEE ARCHITECTURAL FOR ADDITIONAL ROOF DRAIN INSTALLATION REQUIREMENTS

5 M902 DETAIL – ROOF DRAINS AT METAL DECK

SCALE: NONE



NOTE: SEE ARCHITECTURAL FOR ADDITIONAL ROOF DRAIN INSTALLATION REQUIREMENTS

6 M902 DETAIL – ROOF DRAINS AT PT SLAB

SCALE: NONE

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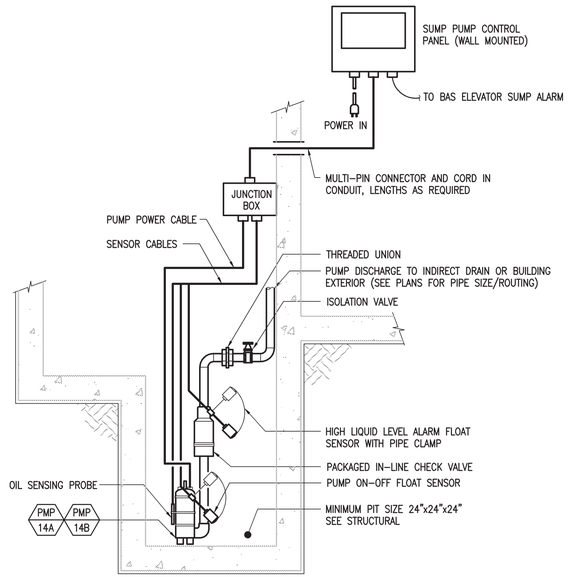
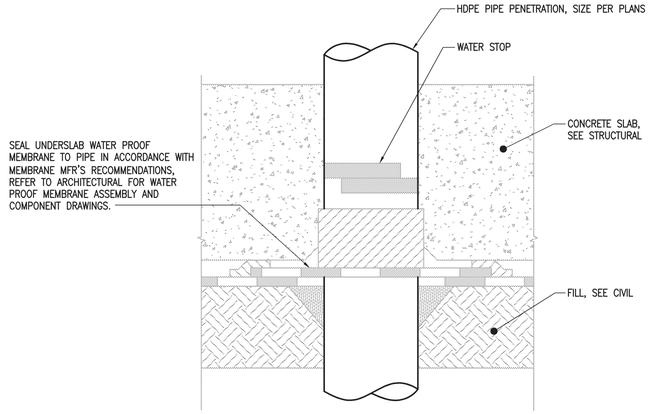
DETAILS - PLUMBING

M902



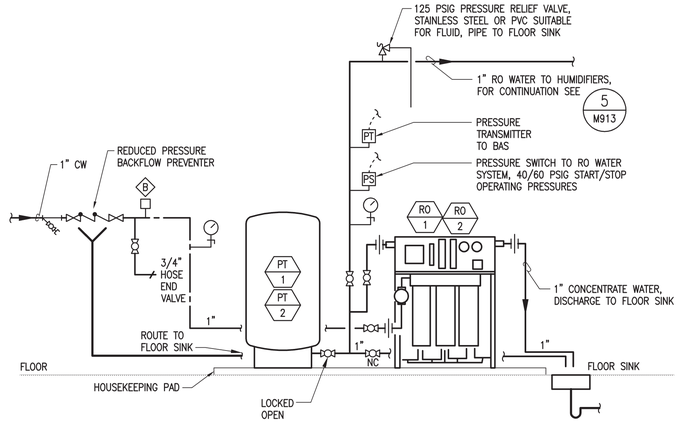
1 M903 DETAIL – ELEVATOR SUMP PUMP

SCALE: NONE



2 M903 DETAIL – PIPE PENETRATION AT UNDERSLAB MEMBRANE

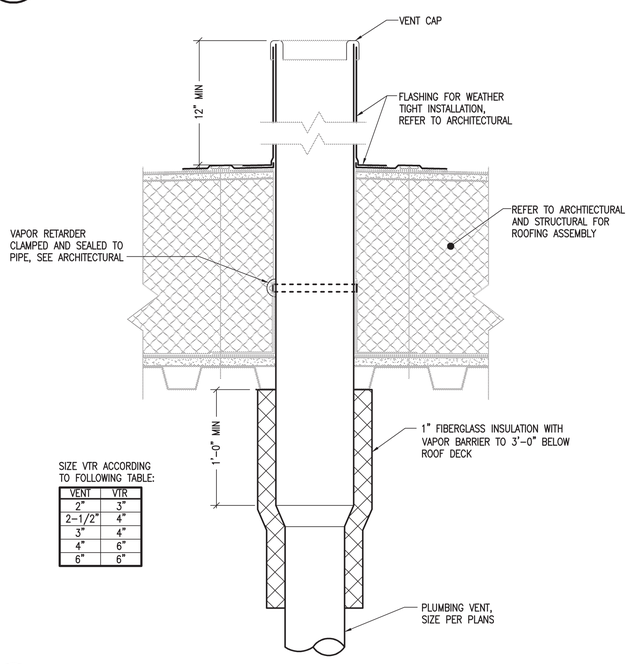
SCALE: NONE



NOTE: RO WATER PIPING SHALL BE SCHEDULE 80 PVC PIPE AND FITTINGS. ALL APPURTENANCES SHALL BE COMPATIBLE WITH FLUID.

3 M903 DIAGRAM – REVERSE OSMOSIS WATER SYSTEM

SCALE: NONE

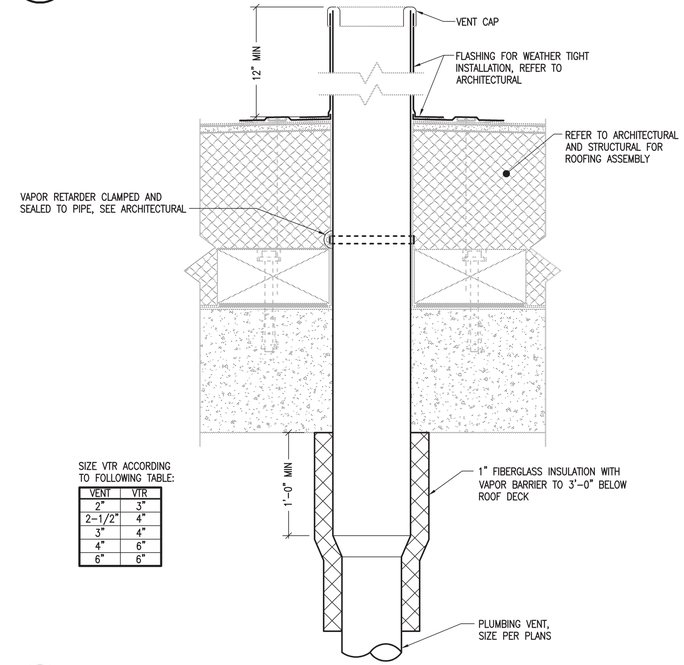


SIZE VTR ACCORDING TO FOLLOWING TABLE:

VENT	VTR
2"	3"
2-1/2"	4"
3"	4"
4"	6"
6"	6"

4 M903 DETAIL – VENT THROUGH ROOF AT METAL DECK

SCALE: NONE

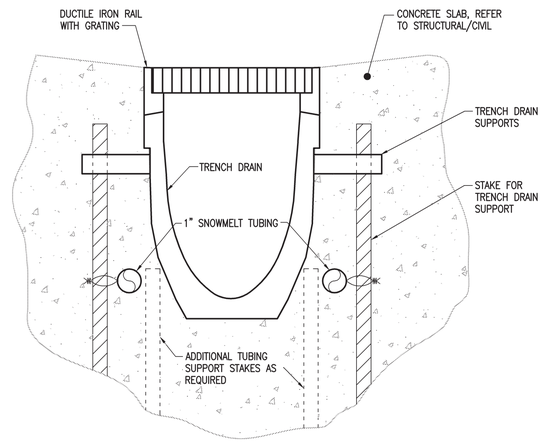


SIZE VTR ACCORDING TO FOLLOWING TABLE:

VENT	VTR
2"	3"
2-1/2"	4"
3"	4"
4"	6"
6"	6"

5 M903 DETAIL – VENT THROUGH ROOF AT PT SLAB

SCALE: NONE



6 M903 DETAIL – TRENCH DRAIN WITH SNOWMELT TUBING

SCALE: NONE

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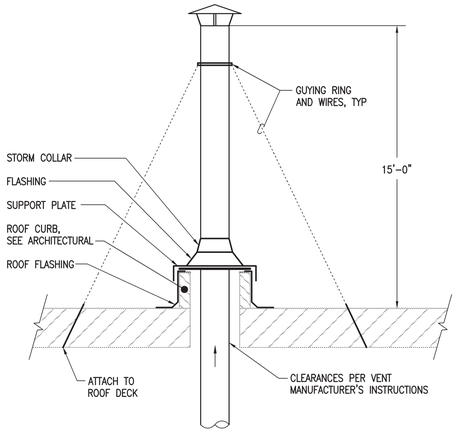
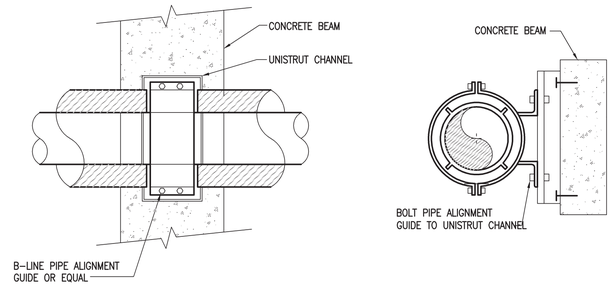
DETAILS - PLUMBING

M903



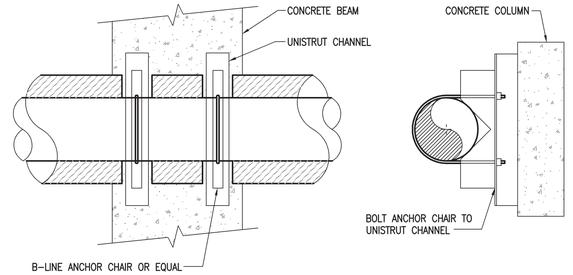
1 M911 DETAIL – BOILER VENT STACK

SCALE: NONE



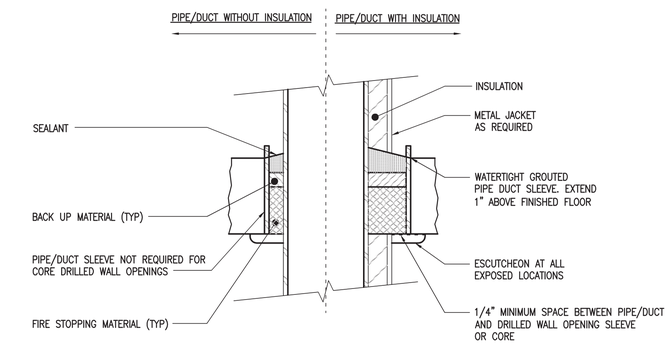
2 M911 DETAIL – PIPE ALIGNMENT GUIDE

SCALE: NONE



3 M911 DETAIL – PIPE ANCHOR

SCALE: NONE

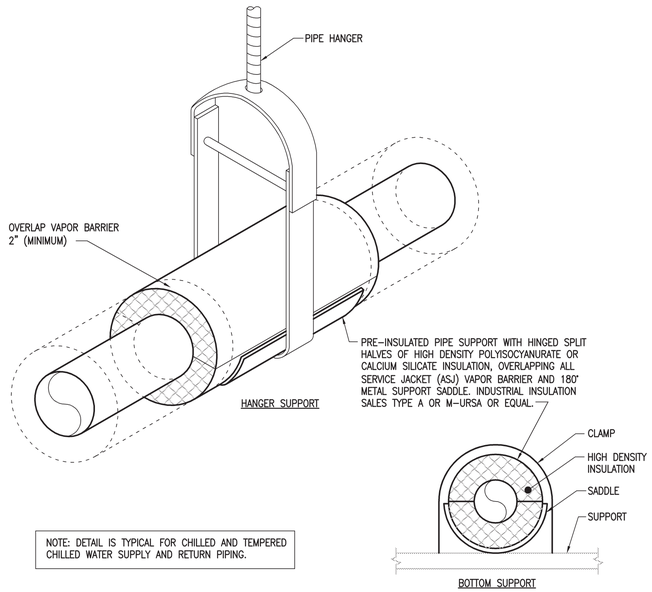


DETAIL NOTES

1. DISCONTINUE INSULATION THROUGH PENETRATION AND SEAL PENETRATION WITH FIRE STOPPING MATERIAL.
2. FLOOR PENETRATIONS SHALL BE SEALED.
3. PROVIDE SIMILAR CONSTRUCTION FOR PIPE WALL PENETRATIONS.

4 M911 DETAIL – TYPICAL PIPE/DUCT FLOOR PENETRATION

SCALE: NONE

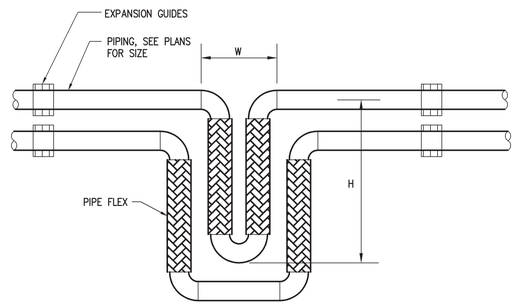


NOTE: DETAIL IS TYPICAL FOR CHILLED AND TEMPERED CHILLED WATER SUPPLY AND RETURN PIPING.

5 M911 DETAIL – CHILLED WATER PIPE SUPPORT

SCALE: NONE

PIPE SIZE	MODEL #	H	W
1"	MLS80100	21"	10-1/4"
1-1/4"	MLS80125	22"	11-1/4"
1-1/2"	MLS80150	24"	11-3/4"
2"	MLS80200	26"	14"
2-1/2"	MLS80250	27"	15"



NOTES

1. METRAFLEX METRALOOPS BASIS OF DESIGN.
2. ALL EXPANSION LOOPS SIZED ACCORDING TO A 4" CONTRACTION OR EXPANSION.
3. PROVIDE ADDITIONAL SUPPORT FOR HORIZONTAL INSTALLATION, PER MANUFACTURER.

6 M911 DETAIL – PIPE EXPANSION LOOP

SCALE: NONE

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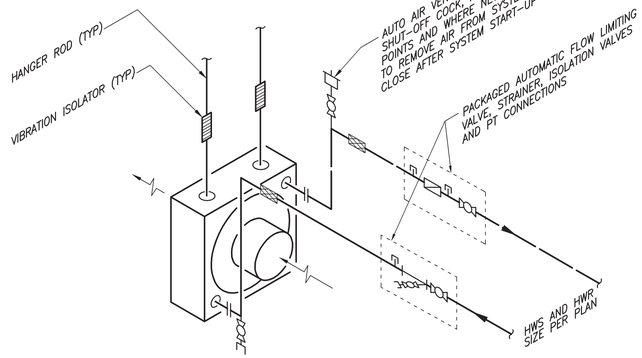
DETAILS - HEATING

M911

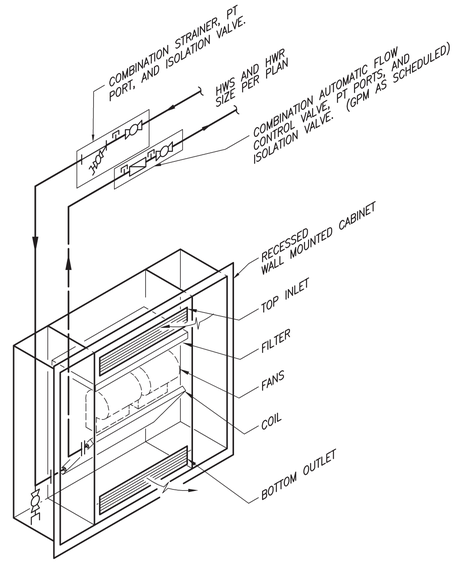


DETAIL NOTES

1. FOR THREADED STEEL UH CONNECTIONS, PROVIDE DIELECTRIC UNION CONNECTIONS.
2. UNIT HEATER "RUNS WILD." CYCLE FAN MOTOR TO CONTROL ZONE TEMPERATURE.

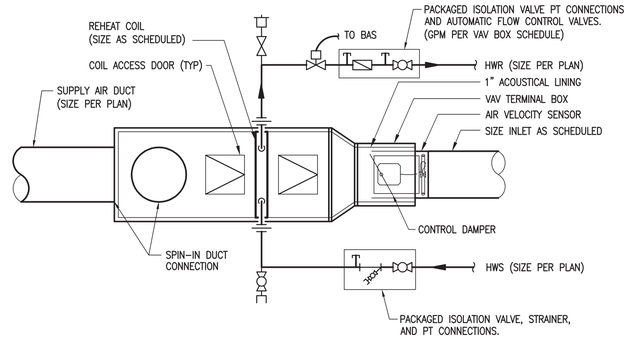
1 M912 DETAIL – HORIZONTAL UNIT HEATER

SCALE: NONE



2 M912 DETAIL – RECESSED WALL MOUNTED CUH

SCALE: NONE

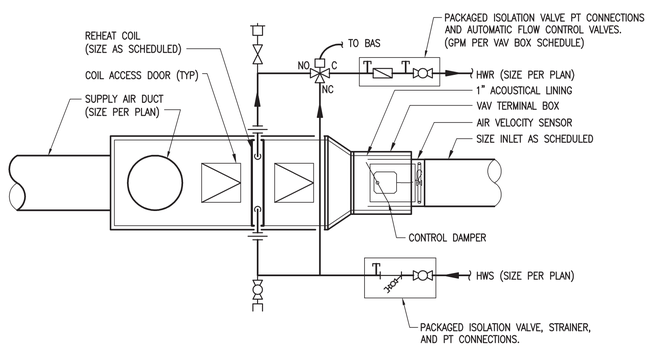


DETAIL NOTES

1. HWS AND HWR HYDRONIC PIPING SHOWN OFFSET FOR CLARITY.
2. MINIUM LOW PRESSURE DUCT DIMENSION EQUALS MAXIMUM DUCT CONNECTION DIAMETER PLUS 4 INCHES.
3. CENTER DUCT CONNECTIONS IN SIDES OF LOW PRESSURE PLENUMS.

3 M912 DETAIL – VAV BOX W/REHEAT COIL (TWO-WAY)

SCALE: NONE

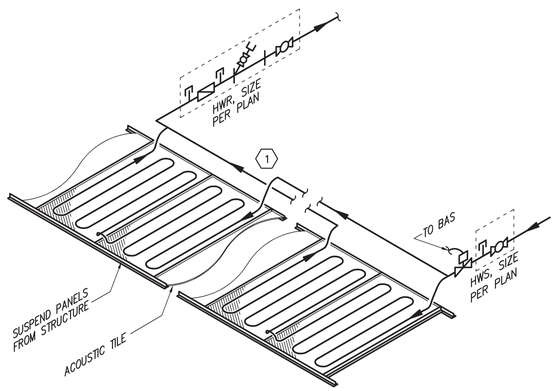


DETAIL NOTES

1. HWS AND HWR HYDRONIC PIPING SHOWN OFFSET FOR CLARITY.
2. MINIMUM LOW PRESSURE DUCT DIMENSION EQUALS MAXIMUM DUCT CONNECTION DIAMETER PLUS 4 INCHES.
3. CENTER DUCT CONNECTIONS IN SIDES OF LOW PRESSURE PLENUMS.

4 M912 DETAIL – VAV BOX W/REHEAT COIL (THREE-WAY)

SCALE: NONE

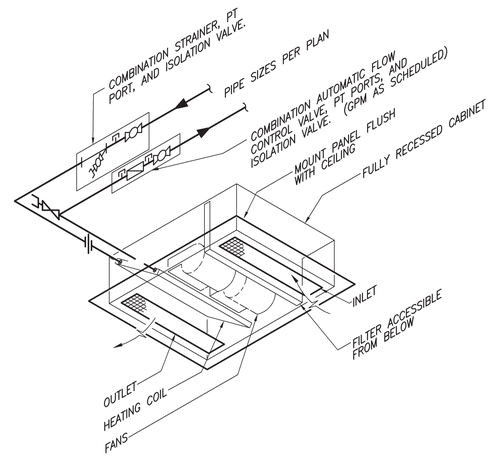


NOTES

1. SEE HEATING PLANS FOR QUANTITY AND LENGTH OF PANELS PER CONTROL VALVE.

5 M912 DETAIL – LAY-IN RADIANT PANELS

SCALE: NONE



DETAIL NOTES

1. FOR THREADED STEEL UH CONNECTIONS, PROVIDE DIELECTRIC UNION CONNECTIONS.
2. UNIT HEATER "RUN WILD." CYCLE FAN MOTOR TO CONTROL ZONE TEMPERATURE.
3. PROVIDE HIGH POINT VENT AS SPECIFIED.

6 M912 DETAIL – RECESSED CEILING MOUNTED CUH

SCALE: NONE

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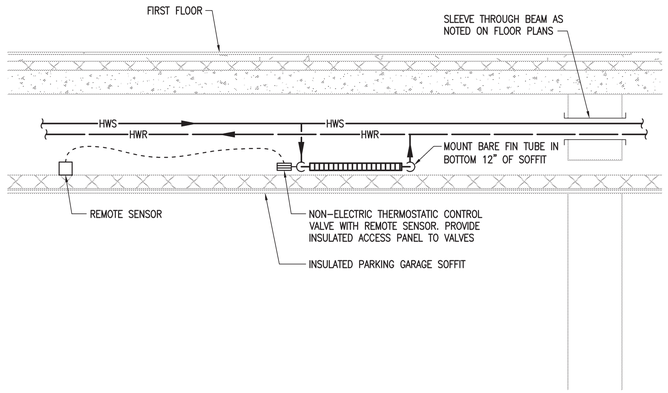
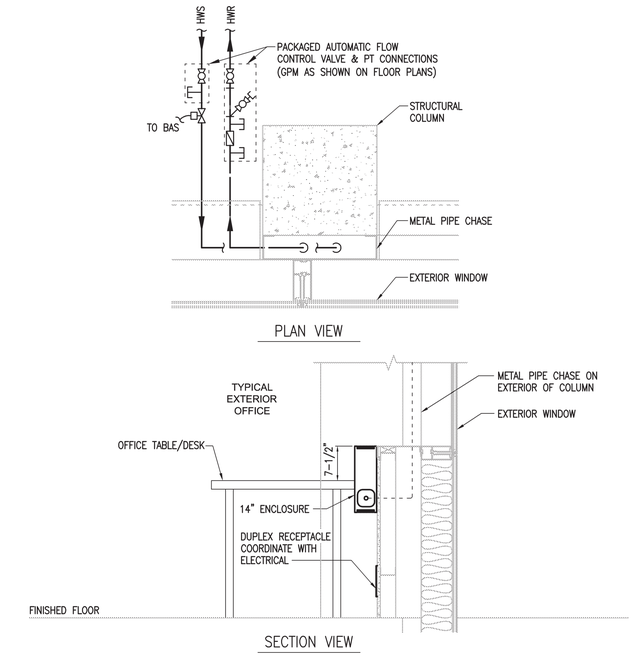
DETAILS - HEATING

M912



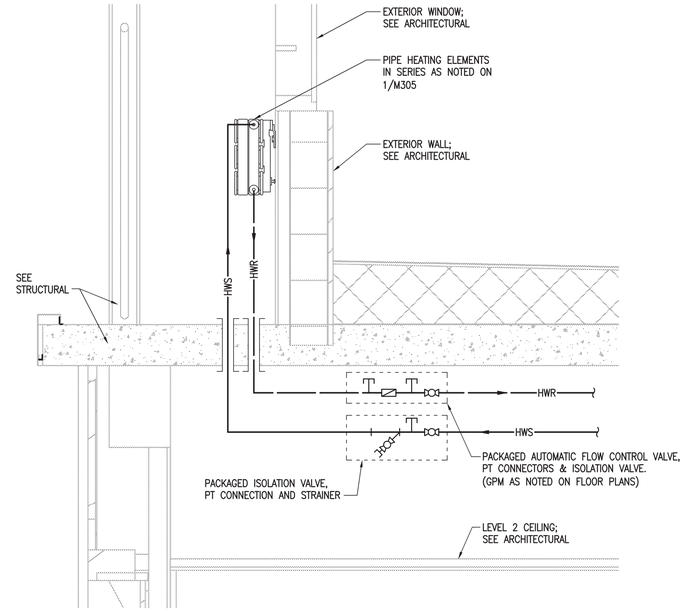
1 M913 DETAIL – TYPICAL SOFFIT FIN TUBE (FT-5)

SCALE: NONE



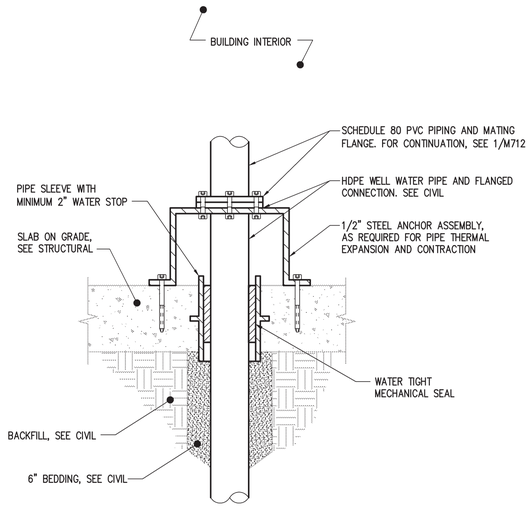
2 M913 DETAIL – TYPICAL OFFICE FINNED TUBE (FT-1)

SCALE: NONE



3 M913 DETAIL – CLEARSTORY HEATING ELEMENT (FT-4)

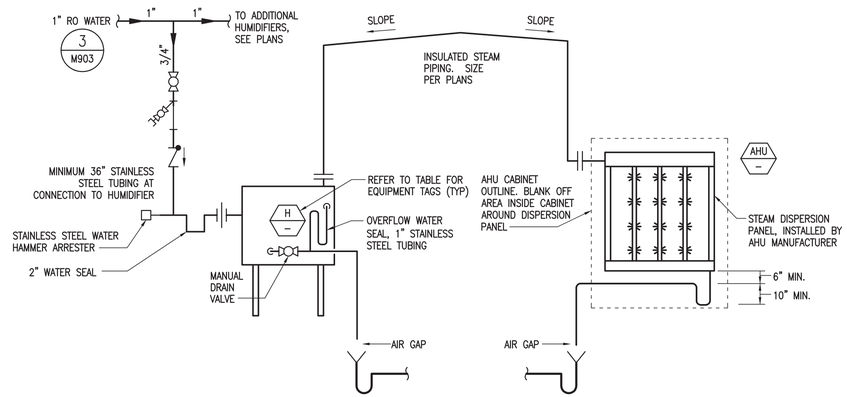
SCALE: NONE



4 M913 DETAIL – WELL WATER PIPE FLOOR PENETRATION

SCALE: NONE

EQUIPMENT TAGS		
LOCATION	HUMIDIFIER EQUIP TAGS	WATER TREATMENT TAG
FAN AHU 1	H-1	RO-1
FAN AHU 2	H-2	RO-1
FAN AHU 3	H-3	RO-1
FAN AHU 4	H-4	RO-1
FAN AHU 5&6	H-5	RO-2
FAN AHU 5&6	H-6	RO-2



5 M913 DETAIL – HUMIDIFICATION SYSTEM (TYP)

SCALE: NONE

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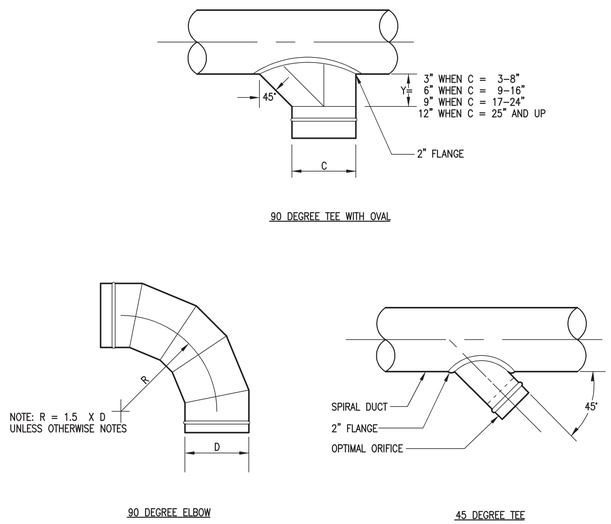
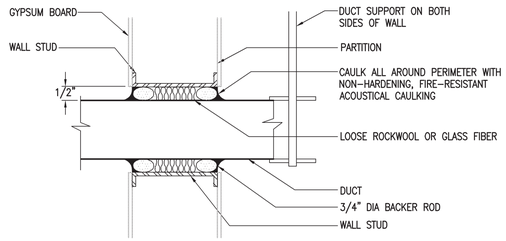
DETAILS - HEATING

M913



1 DETAIL – TYPICAL DUCT FITTINGS

M921 SCALE: NONE



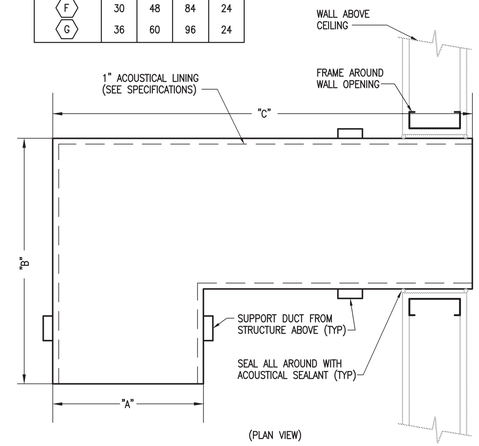
DETAIL NOTES

1. DUCT SHALL NOT CONTACT WALL.
2. CAULKING SHALL FORM AIR–TIGHT SEAL AROUND DUCT.
3. TERMINATE AND SEAL DUCT INSULATION ON BOTH SIDES OF WALL PENETRATION, WHERE APPLICABLE.

2 DETAIL – TYPICAL DUCT WALL PENETRATION

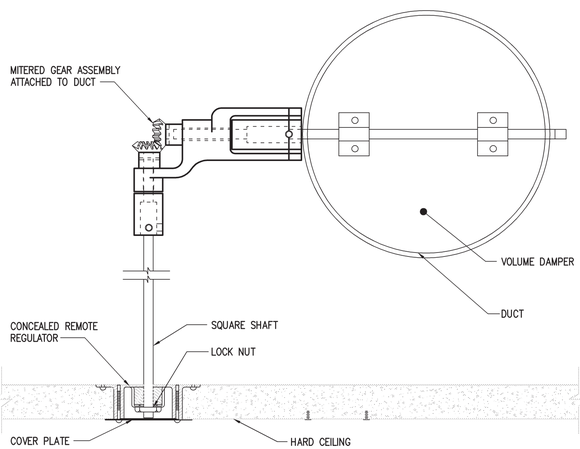
M921 SCALE: NONE

ELBOW DESIGNATION	A (IN)	B (IN)	C (IN)	DEPTH (IN)
A	12	18	36	12
B	18	30	48	12
C	18	30	48	18
D	24	36	72	18
E	24	36	72	24
F	30	48	84	24
G	36	60	96	24



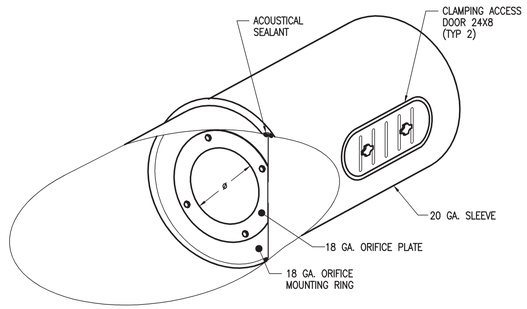
3 DETAIL – ACOUSTICAL RETURN AIR TRANSFER ELBOW

M921 SCALE: NONE



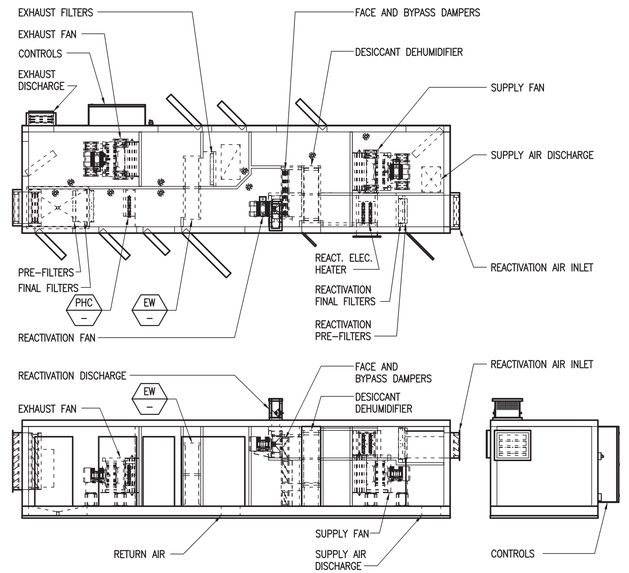
4 DETAIL – REMOTE VOLUME DAMPER OPERATOR

M921 SCALE: NONE



5 DETAIL – DUCT MOUNTED ORIFICE PLATE

M921 SCALE: NONE



6 DETAIL – DEDICATED OUTSIDE AIR HANDLING UNIT

M921 SCALE: NONE

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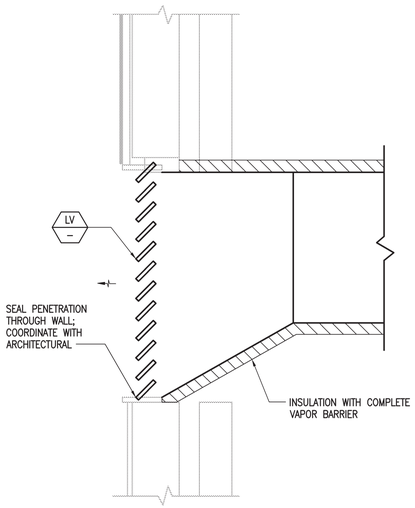
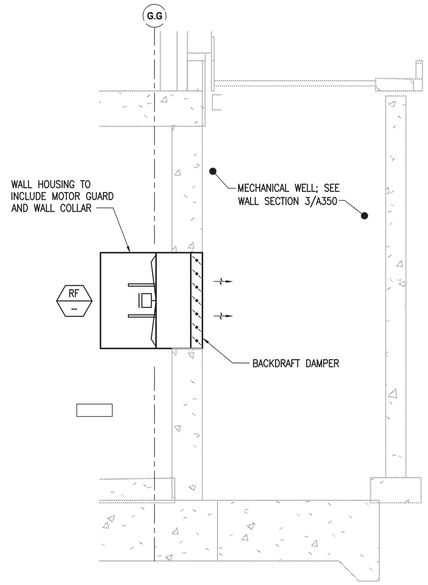
DETAILS - VENTILATION

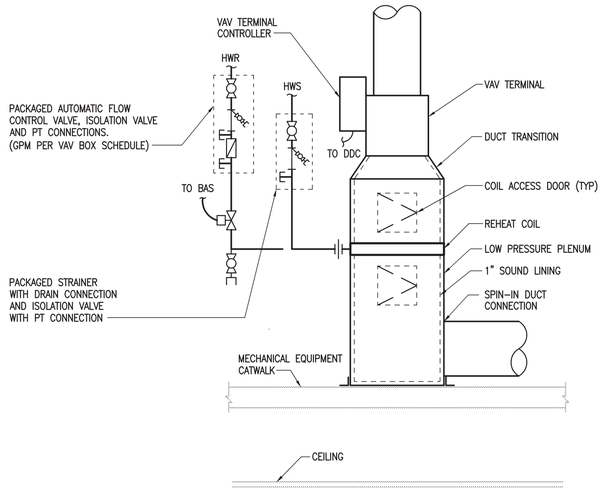
M921



1 DETAIL – LOUVER
M922 SCALE: NONE



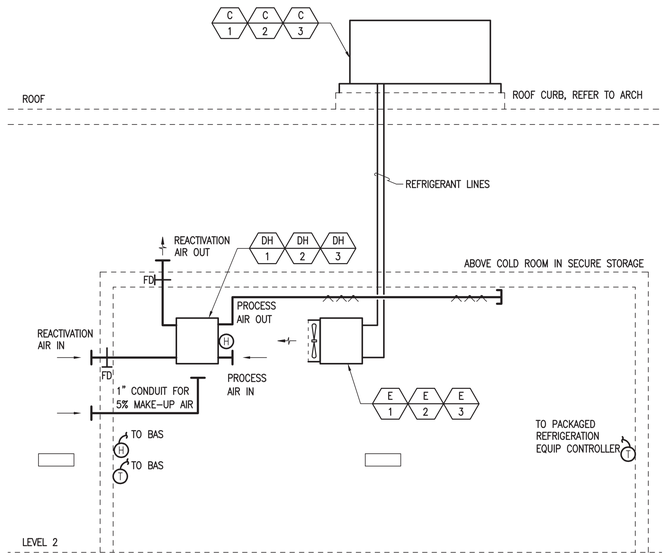
2 DETAIL – PARKING GARAGE RELIEF FANS
M922 SCALE: NONE



DETAIL NOTES

1. PROVIDE DUCT CONNECTIONS AS INDICATED ON PLAN DRAWINGS.
2. MINIMUM LOW PRESSURE PLENUM DIMENSION EQUALS MAXIMUM DUCT CONNECTION DIAMETER PLUS 4 INCHES.
3. CENTER DUCT CONNECTIONS IN SIDES OF LOW PRESSURE PLENUMS.

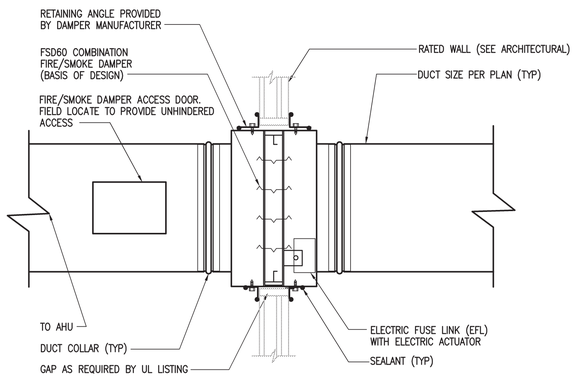
3 DETAIL – VERTICAL MOUNTED VAV
M922 SCALE: NONE



DETAIL NOTES

1. SIZE PROCESS AIR AND REACTIVATION AIR DUCTS AS SCHEDULED.

4 DETAIL – COLD STORAGE VENTILATION (TYP)
M922 SCALE: NONE



NOTES

1. PROVIDE FIRE/SMOKE DAMPER INSTALLATION IN ACCORDANCE WITH MANUFACTURER'S UL LISTING.
2. SEAL DUCT CONNECTIONS TO DAMPER WITH DUCT SEALANT.

5 DETAIL – VERTICAL FIRE/SMOKE DAMPER (DUCTED)
M922 SCALE: NONE

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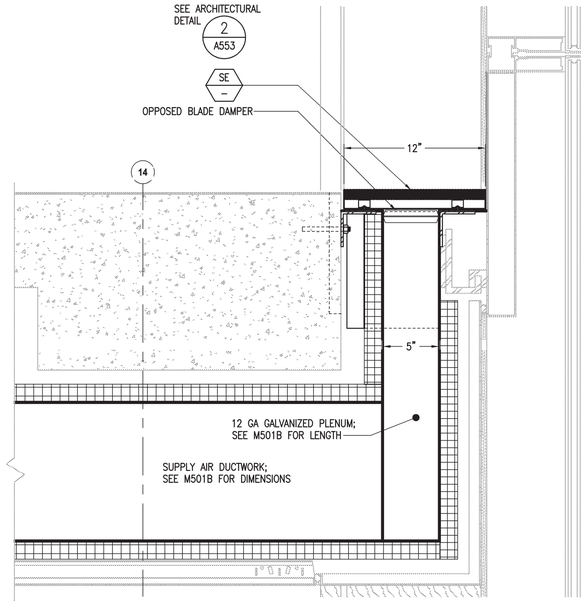
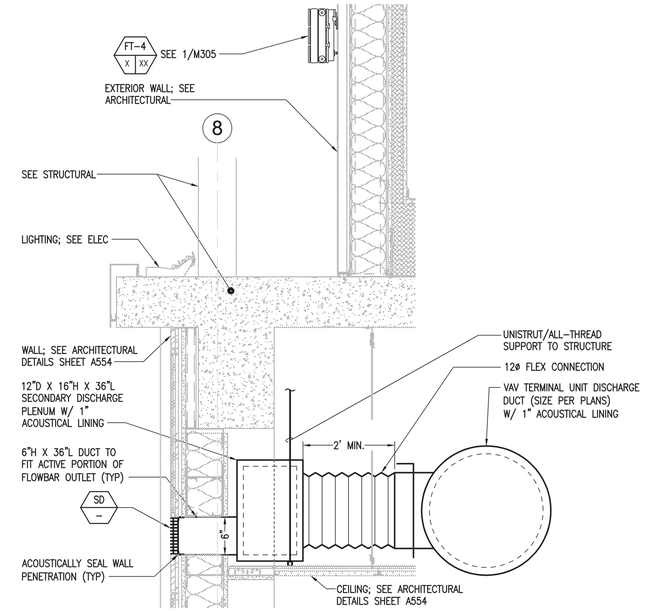
M922



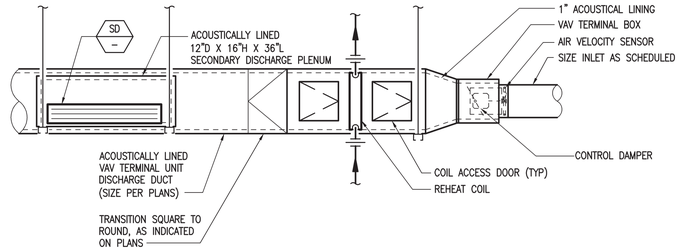
1 M923 DETAIL – FLOOR SUPPLY AIR DIFFUSER

SCALE: NONE



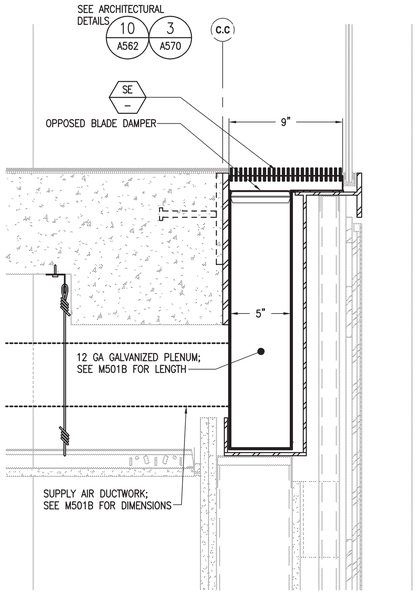
2 M923 DETAIL – VAV BOXES (401A & 402A)

SCALE: NONE



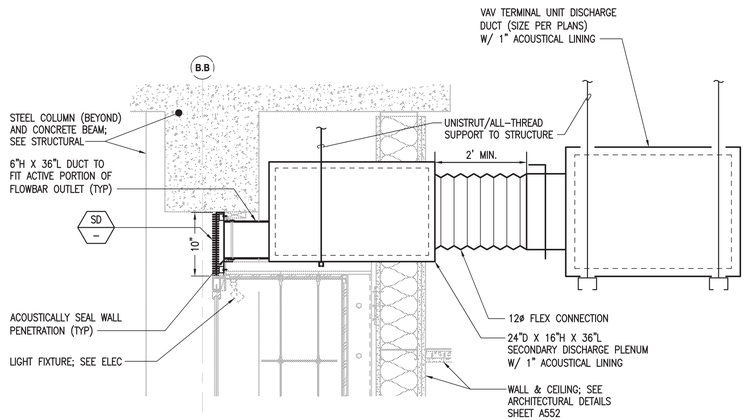
3 M923 DETAIL – VAV BOXES (401A, 402A, 505 & 518)

SCALE: NONE



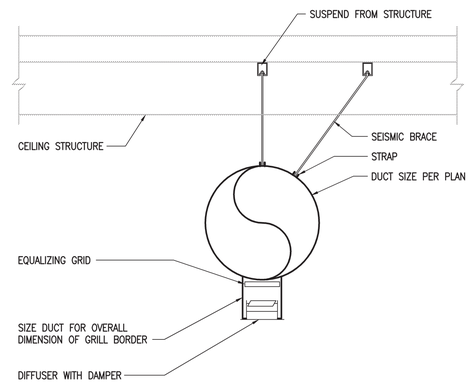
4 M923 DETAIL – FLOOR SUPPLY AIR DIFFUSER

SCALE: NONE



5 M923 DETAIL – VAV BOXES (505 & 518)

SCALE: NONE



6 M923 DETAIL – SECURE STORAGE VENTILATION

SCALE: NONE

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DETAILS - VENTILATION

M923

GENERAL

SYMBOL	DESCRIPTION
1 / 2.	SHEET NOTE CONVENTION: REFERENCED SHEET NOTE GENERAL SHEET NOTE
#	FEEDER IDENTIFICATION TAG FEEDER NUMBER
1 / E0.1	DETAIL REFERENCE DETAIL NUMBER SHEET WHERE DETAIL APPEARS
1 / E0.1	SECTION REFERENCE SECTION NUMBER SHEET WHERE SECTION APPEARS
	LINE WORK CONVENTION:
	NEW OR REINSTALLED ITEM
	ITEM TO BE DEMOLISHED
	EXISTING ITEM TO REMAIN
	FUTURE ITEM
	EXISTING ITEM TO BE RELOCATED
	CONDUIT/FEEDER LINE CONVENTION:
	CONCEALED
	UNDERGROUND OR CONCEALED IN FLOOR
	EXPOSED
	FLEXIBLE CONDUIT
P–1,3	CIRCUITING CONVENTION CIRCUIT NUMBER(S) PANEL
	BRANCH CIRCUIT HOMERUN TO PANELBOARD NUMBER OF MARKS INDICATE NUMBER OF CONDUCTORS IN RACEWAY, NOT COUNTING GROUNDING CONDUCTORS. (ABSENCE OF MARKS INDICATE TWO CONDUCTORS, PLUS ANY REQUIRED GROUNDS) NUMBER OF ARROWS INDICATE NUMBER OF CIRCUITS UNSWITCHED CONDUCTORS SHOWN ON HOMERUN SIDE OF NEUTRAL NEUTRAL SWITCHED CONDUCTORS SHOWN ON LOAD SIDE OF NEUTRAL

ABBREVIATIONS

ACS	ACCESS CONTROL SYSTEM
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AL	ALUMINUM
APPROX	APPROXIMATE
AHJ	AUTHORITY HAVING JURISDICTION
BAS	BUILDING AUTOMATION SYSTEM
CKT	CIRCUIT
CCTV	CLOSED CIRCUIT TELEVISION
CMH	COMMUNICATIONS MANHOLE
C.	CONDUIT
C.O.	CONDUIT ONLY
CU	COPPER
D	DEMOLISH
DB	DECIBEL
DBC	DATABASE CONTROLLER (ACS DOOR CONTROLLER)
EL	EMERGENCY LIGHT
ELU	EMERGENCY LIGHTING UNIT
ENL	EMERGENCY NIGHT LIGHT
(E)	EXISTING
(F)	FUTURE
FAA	FIRE ALARM ANNUNCIATOR
FACP	FIRE ALARM CONTROL PANEL
FO	FIBER OPTIC
FOPP	FIBER OPTIC PATCH PANEL
FSD	FIRE/SMOKE DAMPER
HZ	FREQUENCY
HP	HORSEPOWER
IAW	IN ACCORDANCE WITH
IDS	INTRUSION DETECTION SYSTEM
ISC	INTELLIGENT SYSTEM CONTROLLER
K	KELVIN
KPTO	KEYPAD TIME OVERRIDE (SPEC SECTION 28 13 33)
KVA	KILO VOLT–AMPS
KW	KILOWATT
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CONTROL PANEL
MDS	MAIN DISTRIBUTION SWITCHBOARD
MIN	MINIMUM
MM	MULTIMODE FIBER OPTIC CABLE
MTR	MAIN TELECOM ROOM
NEC	NATIONAL ELECTRICAL CODE
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NL	NIGHT LIGHT
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OFC	OPTICAL FIBER CABLE
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED, OWNER INSTALLED
PA	PUBLIC ADDRESS
PH	PHASE (ELECTRICAL)
PLC	PROGRAMMABLE LOGIC CONTROLLER
PMCS	POWER MONITORING CONTROL SYSTEM
RIM	READER INTERFACE MODULE
SM	SINGLEMODE FIBER OPTIC CABLE
SMR	SURFACE MOUNTED RACEWAY
SMS	SECURITY MANAGEMENT SYSTEM (SPEC SECTION 28 13 33)
SPD	SURGE PROTECTIVE DEVICE
TELECOM	TELECOMMUNICATION
TCS	TERMINAL CONSTRUCTION STANDARDS
TR	TELECOMMUNICATION ROOM
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
VR	VANDAL RESISTANT
VSD	VARIABLE SPEED DRIVE
VAC	VOLTS (ALTERNATING CURRENT)
VDC	VOLTS (DIRECT CURRENT)
V	VOLTS OR VOLTAGE
W	WATT
WP	WEATHERPROOF
WG	WIRE GUARD

LIGHTING

SYMBOL	DESCRIPTION
	LIGHTING FIXTURE, LINEAR LAMP(S)
	LIGHTING FIXTURE – WALL MOUNTED
	LIGHTING FIXTURE – SURFACE OR PENDANT MOUNTED
	LIGHTING FIXTURE – RECESS MOUNTED
	LIGHTING FIXTURE CONNECTED TO EMERGENCY POWER CIRCUIT
	EXIT FIXTURE – WALL MOUNTED SHADED AREA(S) DENOTE FACE(S) OF SIGN, ARROWS AS NOTED (FIXTURE TYPE EX)
	EXIT FIXTURE – CEILING MOUNTED SHADED AREA(S) DENOTE FACE(S) OF SIGN, ARROWS AS NOTED (FIXTURE TYPE EX)
	EMERGENCY LIGHTING UNIT – WALL MOUNTED (FIXTURE TYPE XA)
	EMERGENCY LIGHTING UNIT – CEILING MOUNTED (FIXTURE TYPE XA)
	SITE LIGHTING – POLE MOUNTED
$	SINGLE POLE SWITCH
$3	THREE–WAY SWITCH
$4	FOUR–WAY SWITCH
$a	SWITCH FOR FIXTURES MARKED 'a'
$D	DIMMER SWITCH
$Da	DIMMER SWITCH FOR FIXTURES MARKED 'a'
$K	KEYED SWITCH
$M	MOMENTARY SWITCH
$O	OCCUPANCY SENSOR/SWITCH
$P	PILOT LIGHTED SWITCH
PC	PHOTOCELL
DS	DAYLIGHT SENSOR (ARROW INDICATES SENSOR VIEWING DIRECTION)
DS	WALL MOUNTED DAYLIGHT SENSOR (ARROW INDICATES SENSOR VIEWING DIRECTION)
	OCCUPANCY SENSOR – WALL MOUNTED
	OCCUPANCY SENSOR – CEILING MOUNTED
$a,b,c LV	LOW VOLTAGE SWITCH(ES) FOR FIXTURES MARKED 'a', 'b', 'c' AS NOTED
$a,b,c KLV	KEYED LOW VOLTAGE SWITCH(ES) FOR FIXTURES MARKED 'a', 'b', 'c', ETC
$LV2	LOW VOLTAGE SWITCH(ES) WITH 2 BUTTONS FOR 2 ZONES OF SWITCHING

SPECIAL SYSTEMS

SYMBOL	DESCRIPTION
X	TELECOMMUNICATION OUTLET – WALL MOUNTED (X DENOTES NUMBER OF PORTS)
X	TELECOMMUNICATION OUTLET – FLOOR MOUNTED (X DENOTES NUMBER OF PORTS)
C,X	TELECOMMUNICATION OUTLET – CEILING MOUNTED (X DENOTES NUMBER OF PORTS)
WP	TELECOM OUTLET FOR WIRELESS ACCESS POINT
	TELEPHONE OUTLET, SINGLE JACK – WALL MOUNTED
A	INTERCOM ADMIN PHONE
IC	INTERCOM CALL IN STATION
GB	GLASS BREAK DETECTOR – WALL MOUNTED
GB	GLASS BREAK DETECTOR – CEILING MOUNTED
IR L	SECURITY INFRARED MOTION DETECTOR – LONG RANGE – WALL MOUNTED
IR 360	SECURITY INFRARED MOTION DETECTOR – 360 DEGREE COVERAGE – CEILING MOUNTED
D	DOOR CONTACT
KP	SECURITY KEYPAD
	SECURITY CARD READER
	CCTV CAMERA – PAN TILT ZOOM
	CCTV CAMERA – FIXED
S	SPEAKER – WALL MOUNTED
S	SPEAKER – CEILING OR PENDANT MOUNTED
R	HEARING IMPAIRED INFRARED RADIATOR
M	MICROPHONE – WALL MOUNTED
M	MICROPHONE – FLOOR MOUNTED
TV	TELEVISION OUTLET, +90" AFF, UON.
DC	DOCUMENT CAMERA – CEILING MOUNTED
OP	OVERHEAD PROJECTOR
	ANALOG CLOCK
S	ANALOG CLOCK/SPEAKER UNIT
S	DIGITAL CLOCK/SPEAKER UNIT
F	FIRE ALARM MANUAL PULL STATION
	FIRE ALARM STROBE – WALL MOUNTED
	FIRE ALARM STROBE – CEILING MOUNTED
H	FIRE ALARM HORN – CEILING MOUNTED
S	FIRE ALARM SPEAKER – WALL MOUNTED
S	FIRE ALARM SPEAKER – CEILING MOUNTED
	BELL – WALL MOUNTED
	FIRE ALARM HORN/STROBE – WALL MOUNTED
	FIRE ALARM HORN/STROBE – CEILING MOUNTED
	FIRE ALARM SPEAKER/STROBE – WALL MOUNTED
C	FIRE ALARM SPEAKER/STROBE – CONCEALED
	FIRE ALARM SPEAKER/STROBE – CEILING MOUNTED
I	IONIZATION SMOKE DETECTOR
P	PHOTOELECTRIC SMOKE DETECTOR
	MULTI–TECHNOLOGY SMOKE DETECTOR
T	BEAM SMOKE DETECTOR – TRANSMITTER
R	BEAM SMOKE DETECTOR – REFLECTOR
V	VESDA – SMOKE DETECTOR INLET
H	HEAT DETECTOR
DD	DUCT DETECTOR
FS	FLOW SWITCH
TS	TAMPER SWITCH
PS	PRESSURE SWITCH
	DOOR HOLDER
DC	DOOR CONTACT
FACP	FIRE ALARM CONTROL PANEL
FAA	FIRE ALARM ANNUNICATOR

POWER

SYMBOL	DESCRIPTION
	RECEPTACLE MOUNTING:
	RECEPTACLE – WALL MOUNTED (SEE "RECEPTACLE TYPES" BELOW)
A	RECEPTACLE – SINGLE SERVICE FLOOR BOX (SEE "RECEPTACLE TYPES" BELOW AND SPECIFICATION SECTION 26 05 33)
B	RECEPTACLE – DUAL SERVICE FLOOR BOX – RECEPTACLE CONFIGURATION AS SHOWN ON DRAWINGS (SEE "RECEPTACLE TYPES" BELOW AND SPECIFICATION SECTION 26 05 33)
	RECEPTACLE – CEILING MOUNTED (SEE "RECEPTACLE TYPES" BELOW)
	RECEPTACLE TYPES:
	DUPLEX RECEPTACLE
	GROUND FAULT INTERRUPTER, DUPLEX RECEPTACLE
	COMPUTER SERVICE, DUPLEX RECEPTACLE (POWERED FROM TVSS PROTECTED PANEL)
	GROUND FAULT INTERRUPTER, COMPUTER SERVICE, DUPLEX RECEPTACLE (POWERED FROM TVSS PROTECTED PANEL)
	DOUBLE DUPLEX RECEPTACLE
	GROUND FAULT INTERRUPTER, DOUBLE DUPLEX RECEPTACLE
	COMPUTER SERVICE, DOUBLE DUPLEX RECEPTACLE (POWERED FROM TVSS PROTECTED PANEL)
	GROUND FAULT INTERRUPTER, COMPUTER SERVICE, DOUBLE DUPLEX RECEPTACLE (POWERED FROM TVSS PROTECTED PANEL)
	RANGE RECEPTACLE – 50 AMP/250 VOLT

POWER (CONTINUED)

SYMBOL	DESCRIPTION
	ELECTRICAL DEVICES:
	SPECIAL PURPOSE RECEPTACLE, NEMA TYPE AS NOTED
	POWER POLE
	DRYER
	MOTOR
T	SWITCH – THERMAL TRIP WITH HEATER
SR	SURFACE MOUNTED RACEWAY
	FUSED DISCONNECT
	NON–FUSED DISCONNECT
	COMBINATION STARTER/FUSED DISCONNECT
	STARTER OR CONTACTOR
J	JUNCTION BOX AND/OR CONNECTION TO EQUIPMENT
M	METERING DEVICE
VSD	VARIABLE SPEED DRIVE
PB	PUSHBUTTON – SPECIAL
	PUSHBUTTON (1 BUTTON)
	PUSHBUTTON (2 BUTTON)
	PUSHBUTTON (3 BUTTON)
	PANEL – SURFACE MOUNTED
	PANEL – FLUSH MOUNTED
	TRANSFORMER

NOTE: THIS IS A STANDARD LEGEND. NOT ALL SYMBOLS NECESSARILY APPEAR ON THE DRAWINGS

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LEGEND AND DRAWING INDEX

E001

LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	LAMPS	BALLAST/DRIVER	MOUNTING
A	FINELITE HPR-A-2x4-SCO-LED-HO-3500-277-SC 2'X4', LED, DIE-FORMED COLD-ROLLED STEEL FIXTURE AND REFLECTOR ASSEMBLY, 6000 LUMENS, ANGLED LENS WITH SLOTTED CENTER OPTIC, WHITE FINISH, FROSTED DIFFUSE ACRYLIC LENS	WITH UNIT	DIGITAL ADDRESSABLE DIMMING DRIVER	RECESSED CEILING SEE NOTE 2
B	VODE LIGHTING WG-01-X-WA-16"-IB--2-0-HE4"-A-0 3" WIDE, 1-LAMP, WALL MOUNT CANTILEVERED FIXTURE, SINGLE RAIL, SURFACE BALLAST, NO LENS, BRUSHED ALUMINUM HOUSING FINISH, CUSTOM FIXTURE LENGTH CONFIGURATIONS TO BE SUBMITTED BY MANUFACTURER	T5/RE835 QUANTITY AS DETERMINED BY MANUFACTURER	DIGITAL ADDRESSABLE DIMMING BALLAST QUANTITY AS DETERMINED BY MANUFACTURER	CANTILEVER 17" FROM WALL SEE FLOOR PLANS FOR MOUNTING HEIGHTS SEE NOTE 9
C2	LITHONIA 2SP5-G-2-28T5-A12125-277V 2'X4', 2-LAMP, FLUSH STEEL FRAME, LENS, STATIC GRID TROFFER WHITE FINISH	2-F28T5/RE835	(1) 2-LAMP ELECTRONIC	RECESSED CEILING SEE NOTE 2
C3	LITHONIA 2SP5-G-3-28T5-A12125-277V SAME AS TYPE C2 EXCEPT WITH 3 LAMPS	3-F28T5/RE835	(1) 3-LAMP ELECTRONIC	RECESSED CEILING SEE NOTE 2
D	LITHONIA EIS-2-28T5-PCL-120-WLF 9"X4', 2-LAMP, FULLY GASKETED, TOTALLY ENCLOSED FIXTURE, CLEAR PRISMATIC LENS, IP65 RATED, 120V, WET LOCATION RATED	2-F28T5/RE835	(1) 2-LAMP ELECTRONIC	SURFACE WALL MOUNT AT 3'-0" AFF
E	PRUDENTIAL LIGHTING S1-1T5HO-08-SAL-YGW-277-CA 2"X8', 2-LAMP, LENSED STRIP WITH MINIMAL PROFILE, 277V WHITE FINISH, SATIN ACRYLIC LENS, PROVIDE AIRCRAFT CABLE LENGTH NECESSARY TO MEET MOUNTING HEIGHT REQUIREMENTS	2-F54T5HO/RE835	(1) 2-LAMP ELECTRONIC	CHAIN HANG TO 12'-0" AFF IN SECURE STORAGE 124 AND 15'-0" AFF IN STORAGE 227 SEE NOTE 2
F	EUREKA MOONRISE PLUS 3540-35-F.T5.21-277V-SC-WH-3980 2.25"X3', 1-LAMP, VERTICAL WALL MOUNTED FIXTURE WITH DIFFUSE LENS, WHITE DIFFUSER, SATIN CHROME FINISH, MINI JUNCTION BOX	1-F21T5/RE835	(1) 1-LAMP ELECTRONIC	SURFACE WALL MOUNT VERTICALLY AT 5'-6" AFF
G	GOTHAM ECSR-35-10-4-AR-277-MFLG 4" DIAMETER LED DOWNLIGHT, 1000 LUMEN OUTPUT, CLEAR TRIM, SEMI-SPECULAR FINISH, MICROFLANGE	WITH UNIT	WITH UNIT	RECESSED CEILING SEE NOTE 2
H	SELUX CARDANIC R2D-PRO20C-SM-070PAR38-NOL-SV-277-RL 11"X3', 2 FLOOD LIGHTS WITH CIRCULAR GIMBALS CONNECTED BY EXTERNAL BALLAST, DIRECT MOUNTING, DIE CAST ALUMINUM,	CMH 70W T6	(2) ELECTRONIC HID	PENDANT MOUNT WITH AIRCRAFT CABLE TO 35'-0" AFF
J	GOTHAM ECSR-35-10-4-AR-277 SAME AS TYPE G EXCEPT WITH DIGITAL ADDRESSABLE DIMMABLE DRIVER	WITH UNIT	DIGITAL ADDRESSABLE DIMMING DRIVER	RECESSED CEILING SEE NOTE 2
K	SELUX NEOW-1T5HO-OD-F-004-FE-277 3'x4', 1-LAMP, WALL MOUNT, EXTRUDED ALUMINUM HOUSING	1-F54T5HO/RE835	(1) 1-LAMP DIGITAL ADDRESSABLE DIMMING BALLAST	WALL MOUNT AT 8'-0" AFF SEE NOTE 2
L	LITHONIA Z-2-28T5-277-WGZ46 3"X4', 2-LAMP T5, STRIP LIGHT, COLD ROLLED STEEL, WIREGUARD	2-F28T5/RE835	(1) 2-LAMP ELECTRONIC	CHAIN HANG TO 10'-0" AFF SEE NOTE 2 AND 4
M	SELUX L6R1U-1L35-35-LW-XX-RUN-SV-277 3" WIDE, LED, CUSTOM FIXTURE LENGTH CONFIGURATIONS TO BE SUBMITTED BY MANUFACTURER, EXTRUDED ALUMINUM PROFILE, WHITE ACRYLIC DIFFUSER LENS, SLIVER FINISH	LED, QUANTITY AS DETERMINED BY MANUFACTURER	DIGITAL ADDRESSABLE DIMMING DRIVER QUANTITY AS DETERMINED BY MANUFACTURER	RECESSED CEILING SEE NOTE 2
N	JESCO PK716LED-60-30-BA 5" DIAMETER, LED, MACHINED ALUMINUM HOUSING, BRUSHED ALUMINUM FINISH, 120V LED DRIVER, 38 DEGREE BEAM, 3000K COLOR TEMPERATURE,	WITH UNIT	0-10V DIMMING DRIVERS, (6) FIXTURES PER 20W DRIVER	RECESSED CEILING IN EXHIBIT CASE
P	JESCO CARL MTSL-204-38-SN-3000K 2", 3-LED, SATIN NICKEL FINISH, ADJUSTABLE ACCENT TRACK LIGHT WITH 38 DEGREE BEAM ANGLE, 0-12V DIMMING, 3000K COLOR TEMP	WITH UNIT	0-10V DIMMING DRIVERS, (5) FIXTURES PER 20W DRIVER	TRACK MOUNTED ON CEILING IN EXHIBIT CASE, SEE FLOOR PLANS FOR TRACK INFORMATION
Q	VODE LIGHTING 105-WG-12-6-X-TA-18-IB-A-1-0-E35-AL-0-0-1 (RECEP) 2"X6', 4-LAMP PER FIXTURE, DESK LIGHT FIXTURE, EXTRUDED ALUMINUM, ASYMMETRIC DISTRIBUTION, 120V, ON/OFF SWITCH, ALUMINUM FINISH	4-F21T5/RE835	(2) 2-LAMP ELECTRONIC	SURFACE MOUNTED TO TOP OF TABLE, LIGHT FIXTURE MOUNTED 1'-6' ABOVE BALLAST CHANNEL
R	VODE LIGHTING 125-WG-3-6-CH-Z-HE-AL-0-0 6"X3', 1-LAMP, STACK LIGHT FIXTURE, EXTRUDED ALUMINUM, BRUSHED ALUMINUM FINISH, HARDWIRED 277V CONNECTION	1-F21T5/RE835	(1) 1-LAMP ELECTRONIC	SURFACE MOUNTED TO TOP OF STACK SEE NOTE 6
S	LSI VMT607-00-G 5.5"X10", ALUMINUM FIXTURE, ON/OFF SWITCH, VERTICAL FOCUSING AND SELF-LOCKING SWIVEL, SAFETY SHIELD, 277V, GRAPHITE FINISH	1-70W T6 CERAMIC METAL HALIDE	ELECTRONIC HID	SURFACE MOUNTED FIXTURE ON TRACK
T	LEDALITE CHOPSTICK 7505-F02-Q-N-4-1-2-E-W 4"X4', 2-LAMP, SEMI-INDIRECT, DIE-FORMED STEEL, WHITE FINISH MESO-OPTIC FILM ON LENS	2-F28T5/RE835	(1) 2-LAMP DIGITAL ADDRESSABLE DIMMING BALLAST	PENDANT MOUNT WITH AIRCRAFT CABLE TO 1'-6" AFF. BELOW CEILING
U	SELUX M1WO-1T5HO-SG-004-WH-277-TB 4"X4', 1-LAMP, DIRECT WALL WASH, EXTRUDED ALUMINUM HOUSING	1-F54T5HO/RE835	(1) 1-LAMP DIGITAL ADDRESSABLE DIMMING BALLAST	RECESSED CEILING
V3	LITHONIA N2S-21T5-277 6"X3', 1-LAMP, SOLID FRONT UNDERCABINET FIXTURE	1-F21T5/RE835	(1) 1-LAMP ELECTRONIC	SURFACE MOUNT UNDER CABINETS
V4	LITHONIA N2S-28T5-277 6"X4', 1-LAMP, SOLID FRONT UNDERCABINET FIXTURE	1-F28T5/RE835	(1) 1-LAMP ELECTRONIC	SURFACE MOUNT UNDER CABINETS
W	LITHONIA DOM6R LED-900L-35K-277-DL61 6" DIAMETER, LED, DOWNLIGHT, GALVANIZED STEEL FRAME, WHITE SPLAY WITH FLAT CLEAR LENS	WITH UNIT	WITH UNIT	RECESSED CEILING
X	NIGHT3-SN-120V EDGE LIGHTING WALL MOUNTED LED LIGHT ON FLEXIBLE GOOSENECK ARM, SATIN NICKEL FINISH, 120V HARDWIRE CONNECT.	WITH UNIT	WITH UNIT	WALL MOUNTED AT 42" AFF
Y	ELLIPTIPAR FJ07-T25S-S-00-2-00-0 8"X8', 2-LAMP PER 4' LENGTH, COVE FIXTURE, EXTRUDED ANODIZED ALUMINUM	4-F54T5HO/RE835	(2) 2-LAMP DIGITAL ADDRESSABLE DIMMING BALLASTS	ARCHITECTURAL COVE SEE NOTE 2 AND 8
Z	COLE PHB10-2PB-X-X-T-120V DARK ROOM SAFELIGHT WITH (2) SAFELIGHT FILTER COMPARTMENTS NON-INSULATED CEILING. COORDINATE SAFELIGHT FILTER COLOR WITH OWNER PRIOR TO INSTALLATION, 120V	2-15W INCANDESCENT	NONE	RECESSED CEILING
AA	GOTHAM ECSR-35-10-4-AR-277 SAME AS TYPE G EXCEPT WITH NO MICROFLANGE AND DIGITAL ADDRESSABLE DIMMING DRIVER	WITH UNIT	DIGITAL ADDRESSABLE DIMMING DRIVER	RECESSED CEILING SEE NOTE 2
BB	BETALED ESA-ADR-8-56-C-WD-SSGC-FF-277-525-35K-SCA(BLACK TRIM) 8" DIAMETER, 56 LED, ACCESSIBLE WIDE DISTRIBUTION, SLOPE CEILING ADAPTER OPTION WITH BLACK TRIM MOUNTED IN FIRE RATED BOX PROVIDED BY ARCHITECTURAL	WITH UNIT	WITH UNIT	RECESSED CEILING PROVIDE SLANTED CEILING ADAPTOR KIT SEE NOTE 7
CC	PRUDENTIAL WALWV-SL-2T5-04'-TWW-SC-277-WM 6"X4', 2-LAMP, WALL MOUNT DIRECT/INDIRECT FIXTURE, EXTRUDED ALUMINUM, SLOTTED FASCIA, WHITE FINISH	2-F28T5/RE835	(1) 2-LAMP DIGITAL ADDRESSABLE DIMMING BALLAST	WALL MOUNT AT 8'-0" AFF

LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	LAMPS	BALLAST/DRIVER	MOUNTING
DD	LSI V-LX2044-E-3-M6-00-G, XXXX (ACCESSORY REQUIREMENT BELOW) 4"X10", LED TRACK FIXTURE, GRAPHITE FINISH, 3000K, 97 CRI 860 LUMEN, 60 DEGREE REFLECTOR, HIDDEN ELECTRONIC DRIVER PROVIDE FOUR ADDITIONAL LENS ACCESSORIES WITH EACH FIXTURE COORDINATE ACCESSORIES WITH OWNER PRIOR TO ORDERING	WITH UNIT	WITH UNIT	SURFACE MOUNT TO TRACK
EE	COLE LIGHTING S193-DIU-L 9"x15", LED, BACK MOUNT, READ OUT FACE: "DARKROOM IN USE", EXTRUDED ALUMINUM FIXTURE, BLACK POLYESTER COATED FINISH,	WITH UNIT	WITH UNIT	BACK MOUNTED AT 8'-0" AFF
FF	GOTHAM ECSR-35-10-4-AR-277 SAME AS TYPE G EXCEPT WITH NO MICROFLANGE	WITH UNIT	WITH UNIT	RECESSED CEILING SEE NOTE 2
GG	ELLIPTIPAR FJ05-T15S-S-00-2-0 6"X4', 1-LAMP, EXTRA SMALL CONCEALED COVE FIXTURE, EXTRUDED ALUMINUM REFLECTOR AND FIXTURE	1-F54T5HO/RE835	(1) 1-LAMP ELECTRONIC	SURFACE WALL MOUNT SEE FLOOR PLANS FOR MOUNTING HEIGHTS
HH	ELLIPTIPAR F406-H232-W-00-2-00-0, ELA-RAL PPG UC51713XL-000 9"X12", 2-LAMP, WALL MOUNTED AIMABLE FIXTURE, ALUMINUM REFLECTOR, SEPARATE ENCLOSURE ATTACHES TO FIXTURE AT WALL	2-CFL32/RE835	(1) 2-LAMP ELECTRONIC	SURFACE WALL MOUNT AT 9'-0" AFF
SA	BETALED CAN-EDG-5M-PD-10-D-UL-SV-525-43K-ML 18"X20" DIAMETER, CAST ALUMINUM HOUSING, 525mA DRIVE CURRENT SILVER FINISH, MULTI-LEVEL CONTROL, 4300 COLOR TEMPERATURE PROVIDE MOUNTING ACCESSORIES AS NECESSARY	WITH UNIT	WITH UNIT	PENDANT MOUNT FIXTURE SO TOP OF FIXTURE IS AT EQUAL HEIGHT TO BOTTOM OF STRUCTURAL BEAMS SEE NOTE 2
SB	BETALED CAN-EDG-5M-DM-10-D-UL-SV-525-43K-ML SAME AS TYPE SA EXCEPT WITH SURFACE MOUNTING OPTIONS	WITH UNIT	WITH UNIT	SURFACE MOUNT SEE NOTE 2
SC	SELUX P3D-PRO21C-FM-H070-NOL-SP/RAL-277V-RL, AT106-30-SP/RAL-REC 6 @ 70W METAL HALIDE, MODULAR GIMBAL RING BASED FLOODLIGHTS MOUNTED ON ROUND TAPERED ALUMINUM POLE WITH RECEPTACLE, POLE PART NUMBER LISTED ADJACENT TO FIXTURE PART NUMBER, ONE GROUP OF 3 GIMBAL FIXTURE HEADS MOUNTED ON EITHER SIDE OF POLE. POLE AND FIXTURE CUSTOM RAL COLOR AS SELECTED BY ARCHITECT.	6-70W MH	(6) ELECTRONIC HID	30 FOOT POLE HEIGHT SELUX POLE TYPE NOTED IN DESCRIPTION COLUMN SEE NOTE 5
SD	KIM LIGHTING 1SA-WP9-L-E-3-120L-3K-480 120 LED AREA LUMINAIRE WITH TYPE III ASYMMETRIC DISTRIBUTION, 3500 DEG COLOR TEMP, ROUND TAPERED ALUMINUM POLE, POLE AND FIXTURE CUSTOM RAL COLOR AS SELECTED BY ARCHITECT.	WITH UNIT	WITH UNIT	30 FOOT POLE HEIGHT
SE	KIM LIGHTING 1SA-WP9-L-E-4-120L-3K-480 SAME AS TYPE SD EXCEPT WITH TYPE IV DISTRIBUTION	WITH UNIT	WITH UNIT	30 FOOT POLE HEIGHT SEE NOTE 3
SF	KIM LIGHTING 1SA-WP9-S-E-2-60-L3K-480 60 LED AREA LUMINAIRE WITH TYPE II ASYMMETRIC DISTRIBUTION, 3500 DEG COLOR TEMP, ROUND TAPERED ALUMINUM POLE, POLE AND FIXTURE CUSTOM RAL COLOR AS SELECTED BY ARCHITECT.	WITH UNIT	WITH UNIT	15 FOOT POLE HEIGHT SEE NOTE 3
SG	BEGA 4405P.537 4"X4', 1-LAMP, WALL MOUNT DIRECT FIXTURE, FIXTURE COLOR AS SELECTED BY ARCHITECT, WET LOCATION RATED, 120/277V	F54T5HO/RE835	(1) 1-LAMP ELECTRONIC COLD WEATHER BALLAST	WALL MOUNT AND CENTER 1'-0" ABOVE TOP OF DOOR SEE NOTE 2
SH	KIRLIN LRR-06300-79-277V 6" DIAMETER, LED, OPEN APPEARANCE DOWNLIGHT WITH CLEAR ALUMINUM REFLECTOR, 3500K COLOR TEMP, WET LOCATION RATED	WITH UNIT	WITH UNIT	RECESSED MOUNT IN CANOPY SEE NOTE 2
SJ	FRAQTIR S170-0700-S-99-2-WD-0-30-00 SMALL OUTDOOR LED CEILING WALL WASH FIXTURE WITH EXTRUDED ALUMINUM HOUSING, INTEGRAL DRIVER AND CUSTOM RAL COLOR AS SELECTED BY ARCHITECT.	WITH UNIT 3100K	WITH UNIT	SURFACE MOUNT TO TUBE STEEL COLUMN AT 3'-0" BELOW CANOPY CEILING
SK	HYDREL PDX10-BSS-150M-MVOLT-NFL-FLC-IHL-GEB-LPI 10" MODULAR WET LOCATION, INGRADE METAL HALIDE FIXTURE WITH BRUSHED STAINLESS STEEL TRIM, NARROW FLOOD DISTRIBUTION AND INTERNAL HONEYCOMB LOUVER	1-150W METAL HALIDE	ELECTRONIC HID	IN-GRADE
SL	ARCHITECTURAL AREA LTG ON-ONR39R111EB-40-RAL-NRL-NAH-NST 39W SMALL METAL HALIDE ADJUSTABLE FLOODLIGHT WITH 40 DEGREE BEAM SPREAD, CONCENTRIC RING LOUVER, ANGLED HOOD SHIELD, ON 18" TALL CAST STANCHION AND CUSTOM RAL COLOR AS SELECTED BY ARCHITECT.	1-39W R111 METAL HALIDE	ELECTRONIC HID	STANCHION MOUNT AT 18" ABOVE FINISHED GRADE SEE NOTE 10
EX	LITHONIA LRP-LED-GC/GMR-#-120/277 LED EDGE-LIT EXIT SIGN WITH BRUSHED ALUMINUM HOUSING, GREEN TEXTURED LETTERS, ARROWS AND NUMBER OF FACES AS SHOWN ON DRAWINGS	WITH UNIT	N/A	WALL OVER DOOR OR CEILING AS NOTED SEE NOTE 2
EX2	LITHONIA LE-S-1-G-#-120/277 LED EDGE-LIT EXIT SIGN WITH BRUSHED ALUMINUM HOUSING, GREEN TEXTURED LETTERS, ARROWS AND NUMBER OF FACES AS SHOWN ON DRAWINGS	WITH UNIT	N/A	WALL OVER DOOR OR CEILING AS NOTED SEE NOTE 2
XA	LITHONIA ELM618-120/277V EMERGENCY LIGHTING UNIT, (2) 9W HALOGENS, UNIVERSAL BALLAST 120/277V, DAMP LOCATION RATED	WITH UNIT	N/A	WALL MOUNT AT +8'-6" AFF OR CEILING AS NOTED SEE NOTE 2

FIXTURE SCHEDULE NOTES

1 REFER TO SPECIFICATION SECTIONS 26 50 00 AND 26 50 10 FOR ADDITIONAL REQUIREMENTS REGARDING LIGHT FIXTURES, LAMPS AND BALLASTS.

2 PROVIDE AN EMERGENCY CIRCUIT CONNECTION (CIRCUIT AS NOTED ON DRAWINGS) TO ALL EXIT SIGNS, EMERGENCY LIGHTING UNITS AND EMERGENCY LIGHTING FIXTURES. WIRING FOR FIXTURES CONNECTED TO EMERGENCY CIRCUITS SHALL BE KEPT ENTIRELY INDEPENDENT OF ALL OTHER WIRING AND EQUIPMENT IN ACCORDANCE WITH NEC ARTICLE 700. PROVIDE LOCAL AREA/ROOM SWITCHING WHERE SWITCHES ARE SHOWN ON THE DRAWINGS. REFER TO DETAILS ON SHEET E703 FOR SWITCHING REQUIREMENTS IN ROOMS/AREAS WITH SWITCHED EMERGENCY LIGHT FIXTURES (FIXTURES SHALL FAIL "ON" REGARDLESS OF THE SWITCH POSITION.

3 PROVIDE CCTV CAMERA MOUNTING PLATE IN ACCORDANCE WITH SPECIFICATION 27 05 24 ON POLES WITH CCTV CAMERAS. REFER TO SITE PLAN ON SHEET E050 FOR CAMERA LOCATIONS.

4 SURFACE CEILING MOUNT FIXTURES IN ROOM/AREAS WITH 10 FOOT CEILINGS. IN AREAS WITHOUT CEILINGS OR WITH HIGH CEILINGS PENDANT FIXTURES DOWN TO BOTTOM OF STRUCTURE. IN AREAS WITH MECHANICAL EQUIPMENT, DUCTWORK AND PIPING, PENDANT FIXTURES DOWN TO BOTTOM OF MECHANICAL DUCTWORK OR PIPING AS APPROPRIATE. FIXTURE PENDANTS SHALL BE RIGID (THREADED HANGAR RODS) AND SHALL BE SWAY BRACED WHERE PENDANTS EXCEED 24 INCHES IN LENGTH.

5 PROVIDE RECEPTACLE IN POLE AT APPROXIMATELY +36" FROM BASE OF POLE, INLINE WITH HANDHOLE. REFER TO ELECTRICAL SITE PLAN ON SHEET E050 FOR ADDITIONAL INFORMATION REGARDING RECEPTACLE CONFIGURATION.

6 REFER TO ARCHITECTURAL DETAIL FOR ADDITIONAL INFORMATION REGARDING MOUNTING OF STACK LIGHTS TO TOP OF STACKS

7 REFER TO ARCHITECTURAL DETAILS FOR ADDITIONAL INFORMATION REGARDING RECESSED DOWNLIGHT INSTALLATION IN SLOPED WOOD CEILING.

8 REFER TO ARCHITECTURAL DETAILS FOR ADDITIONAL INFORMATION REGARDING LINEAR COVE INSTALLATION ABOVE SECOND FLOOR.

9 REFER TO ARCHITECTURAL DETAIL FOR ADDITIONAL INFORMATION REGARDING CANTILEVER MOUNTING AT ART WALLS ON FIRST FLOOR.

10 MOUNT FIXTURE ON 3" PIPE STANCHION. PROVIDE SUITABLE CONCRETE EMBEDMENT OF STANCHION IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.

CONSULTANT NAME :: AMC ENGINEERS
ECI/HYER :: THA ARCHITECTURE
DEPARTMENT OF EDUCATION & EARLY DEVELOPMENT
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES

AKSAS PROJECT NO. 68816

STATE OF ALASKA
LIBRARY ARCHIVES MUSEUM

STATE OF ALASKA 49TH
Kenneth T. Ratcliffe
04/27/2012
EE-8811
REGISTERED PROFESSIONAL ENGINEER

REVISIONS:

CONSTRUCTION DOCUMENTS

05.01.2012

LIGHTING FIXTURE SCHEDULE

E002

LIGHTING CONTROL SCHEDULE

BUILDING LEVEL	BAS ZONE	SPACE NAME(S)	LOCAL EQUIPMENT	LOCAL SPACE SEQUENCE
Area Site Lighting Canopies Building Mounted Accent Lighting Flag Lighting	Site lighting Site Accent Site Plaza Site Flag *See Note 3	All exterior lighting	photocell	ON: a. Site lighting, Site Accent, and Site Plaza are turned on via photocell input to the BAS, other BAS inputs, or from HOA manual overrides. b. Flag pole lights are controlled separately via the BAS schedule or HOA manual override. OFF: a. Area lights are turned off via photocell input to the BAS, other inputs to the BAS or via HOA override. BAS schedule will override area fixtures off at time specified in Spec Section 25 90 00. b. Flag lights will turn off when specified in Spec Section 25 90 00.
Basement (St 1) First Floor Gallery Second Floor	Public	Stair 1 Stair 3	Occupancy Sensors	ON: The lights automatically turn on at time specified in Spec Section 25 90 00. ADJUST: When occupancy sensor senses movement it turns lights in stairwell to high output at 100%. After 15 minutes of no movement, sensor turns lights to low output at 50%. OFF: The lights automatically turn off at time specified in Spec Section 25 90 00.
Basement First Floor Gallery Second Floor	Back of House	Stair 2	Occupancy Sensors	ON: The lights automatically turn on at time specified in Spec Section 25 90 00. ADJUST: When occupancy sensor senses movement it turns lights in stairwell to high output at 100%. After 15 minutes of no movement, sensor turns lights to low output at 50%. OFF: The lights automatically turn off at time specified in Spec Section 25 90 00.
Basement	Maintenance	Water Service P02 Service Corridor P02 Telecom P04 Elect P03 Elev Closet E-2C Site Maint Stor P01 Elev 2 E-2 Stor P07 Mech P06	Light Switch	ON: The lights are controlled via the light switch. OFF: The lights are turned off via light switch.
Basement	Public	Parking P00	Occupancy Sensors	ON: The lights automatically turn on at time specified in Spec Section 25 90 00. ADJUST: When occupancy sensor senses movement it turns lights to high output at 100%. After 15 minutes of no movement, sensor turns lights to low output specified by manufacturer. OFF: The lights automatically turn off at time specified in Spec Section 25 90 00.
Basement	Public	Lobby P05		ON: The lights automatically turn on at time specified in Spec Section 25 90 00. OFF: The lights automatically turn off at time specified in Spec Section 25 90 00.
Basement	Back of House	Vestibule P08		ON: The lights automatically turn on at time specified in Spec Section 25 90 00. OFF: The lights automatically turn off at time specified in Spec Section 25 90 00.
First Floor	Staff	Spray Booth 136 Workshop 132 Metal Workshop 133 Crate Storage 131 Isolation 125	Light Switch(s)	ON: The lights are controlled via the light switch. OFF: The lights are turned off via light switch.
First Floor	Staff	Office 129 Office 130 Office 134 Security 138 Office 142 Chemistry 147 Lab Support 148 Lab Supplies 149 Office 151 Office 141	Dimming Switch	ON: The lights are controlled via dimming switch. OFF: The lights are turned off via dimming switch.
First Floor	Staff	Workshop 132 Paper Conservation 144 Object Conservation 148	Dimming Switches	ON: The lighting zones are controlled via separate dimming switches. OFF: The lighting zones are turned off via separate dimming switches.
First Floor	Staff	Secure Collections 124	Low Voltage Switches	ON: The lighting zones are controlled via low voltage switches. OFF: The lighting zones are turned off via low voltage switches.
First Floor	Maintenance	Main Electrical 122 Electrical 123, Boiler 121 Fan 120, Electrical 126 Telecom 118 Electrical 110 Electrical 155	Light Switch	ON: The lights are controlled via the light switch. OFF: The lights are turned off via light switch.
First Floor	Back of House	Corridor 119 Corridor 137 Hallway 139		ON: The lights automatically turn on at time specified in Spec Section 25 90 00. OFF: The lights automatically turn off at time specified in Spec Section 25 90 00.
First Floor	Museum	Men 116 Women 115	Occupancy Sensors	ON: The lights are controlled via occupancy sensors. OFF: The lights are turned off via occupancy sensors.
First Floor	Museum	Museum	Unknown	This is a Tenant Improvement area and local controls will be provided during the Tenant Improvement Project

LIGHTING CONTROL SCHEDULE

BUILDING LEVEL	BAS ZONE	SPACE NAME(S)	LOCAL EQUIPMENT	LOCAL SPACE SEQUENCE
First Floor	Museum	SOS A/V Exhibit Supply 117	Occupancy Sensor	ON: The lights are controlled via occupancy sensor. OFF: The lights are turned off via occupancy sensor.
First Floor	Public	Main Vestibule 100 Lockers 160 Vestibule 158 Hall northwest of Lobby		ON: The lights automatically turn on at time specified in Spec Section 25 90 00. OFF: The lights automatically turn off at time specified in Spec Section 25 90 00.
First Floor Gallery Second Floor Upper Second Floor	Public	Lobby *See Note 1 and 2	Daylighting Sensors Switches Dimming Switches	ON: All lights in space turn on to 100% AJUST: 1. Type FF fixtures: The lights will be controlled via the lighting control system, they will have an override switch at the Lobby Control Panel. 2. Type B fixtures: The three groups will be controlled via a dimming switch at the Lobby Control Panel for each group of fixtures. 3. Type S fixtures: These fixtures are controlled via switches at the fixtures, they will have two override switches at the Lobby Control, Panel: one for fixtures west of the bridge and one for fixtures east of the bridge. 4. Type AA fixtures: Lights will continuously adjust to maintain specified foot-candles at the floor level based on available daylight within the space, they will have a local override dimming switch. 5. Type DD fixtures: Lights for each exhibit will have a group dimming switch located behind the column adjacent to the fixtures. All of the DD fixtures will have an override switch at the Lobby Control Panel. 6. Type N fixtures: Lights for each exhibit will have a group dimming switch located behind the column adjacent to the fixtures. All of the N fixtures on each level will have an override switch at the Lobby Control Panel. 7. Type P fixtures: Lights for each exhibit will have a group dimming switch located behind the column adjacent to the fixtures. All of the P fixtures will have an override switch at the Lobby Control Panel. 8. Type G fixtures: The lights will be controlled via the lighting control system, they will have an override switch at the Lobby Control Panel. 9. Type Y fixtures: Lights will continuously adjust to maintain specified foot-candles at the floor level based on available daylight within the space, they will have an override dimming switch at the Lobby Control Panel 10. Type H fixtures: These fixtures will have three override switches at the Lobby Control Panel: one for fixtures west of the bridge, one for fixtures over the bridge, and one for fixtures east of the bridge. OFF: All lights in space turn off.
First Floor	Public	Men 159, Women 157 Family 163, Storage 156 Storage 166, Storage 165	Occupancy Sensors	ON: The lights are controlled via occupancy sensors. OFF: The lights are turned off via occupancy sensors.
First Floor	Public	Lecture Hall 154	Keypad Low Voltage Switches	ON: The lights will automatically turn on to 100% when the space becomes occupied. ADJUST: The lights are adjusted between preset scenes using a keypad with default scene configurations and raise/lower buttons. OFF: The lights are turned off using a keypad with default scene configurations and raise/lower buttons.
First Floor	Public	Classroom 113	Keypad Low Voltage Switches Vacancy Sensors	ON: The lights will automatically turn on to 100% when the space becomes occupied. ADJUST: The lights are adjusted between preset scenes using a keypad with default scene configurations and raise/lower buttons. OFF: The lights are turned off using a keypad with default scene configurations and raise/lower buttons. After the space has been vacant for approximately 15 minutes, the lights will automatically turn off.
First Floor	Public	Volunteers 152 Control Room 163	Dimming Switch Switch	ON: One zone is controlled via dimming switch. OFF: One zone is turned off via dimming switch. ON: One zone is controlled via switch. OFF: One zone is turned off via switch.
First Floor	Public	Gift Shop	Unknown	This is a Tenant Improvement area and local controls will be provided during the Tenant Improvement Project
First Floor	Coffee Shop	Coffee Shop Storage	Unknown	This is a Tenant Improvement area and local controls will be provided during the Tenant Improvement Project
Gallery Floor	Public	Vestibule to Stairs		ON: The lights automatically turn on at time specified in Spec Section 25 90 00. OFF: The lights automatically turn off at time specified in Spec Section 25 90 00.
Gallery Floor	Maintenance	Catwalk M100	Switch	ON: The lights are controlled via switch. OFF: The lights are turned off via switch.
Second Floor	Public	Vestibule to Stairs Corridor 261		ON: The lights automatically turn on at time specified in Spec Section 25 90 00. OFF: The lights automatically turn off at time specified in Spec Section 25 90 00.

LIGHTING CONTROL SCHEDULE

BUILDING LEVEL	BAS ZONE	SPACE NAME(S)	LOCAL EQUIPMENT	LOCAL SPACE SEQUENCE
Second Floor	Public	Men 259 Women 260	Occupancy Sensors	ON: The lights are controlled via occupancy sensors. OFF: The lights are turned off via occupancy sensors.
Second Floor	Back of House	Men 243 Women 244 Storage 237 Storage 235	Occupancy Sensors	ON: The lights are controlled via occupancy sensors. OFF: The lights are turned off via occupancy sensors.
Second Floor	Maintenance	Fan 226 Fan 224 Fan 242 Electrical 240 Telecom 217 Electrical 256 Electrical 202 Maintenance 257	Light Switch(es)	ON: The lights are controlled via the light switch. OFF: The lights are turned off via light switch.
Second Floor	Staff	Office 248, Office 249 Office 250, Office 251 Office 252, Office 253 Office 254, Office 208 Office 207, Office 205 Office 204, Projects 220 Projects 221	Dimming Switch(es) Vacancy Sensor(s)	ON: The lights are controlled via dimming switch. OFF: The lights are turned off via dimming switch. After the space has been vacant for approximately 15 minutes, the lights will automatically turn off.
Second Floor	Staff	Admin 247, Projects 214 Projects 213, Projects 212 Office 218, Camera 223 Electronic Records 222 Studio 232, Studio 234 Film Duplication 230 Film Duplication 231 Darkroom 228 Darkroom 229	Dimming Switches	ON: The lights are controlled via dimming switch. OFF: The lights are turned off via dimming switch.
Second Floor	Public	Conference 255 Conference 245	Keypad Low Voltage Switches Vacancy Sensors	ON: The lights will automatically turn on to 100% when the space becomes occupied. ADJUST: The lights are adjusted between preset scenes using a keypad with default scene configurations and raise/lower buttons. OFF: The lights are turned off using a keypad with default scene configurations and raise/lower buttons. After the space has been vacant for approximately 15 minutes, the lights will automatically turn off.
Second Floor	Staff	Multipurpose 262	Switch Dimming Switch	ON: One zone is controlled via dimming switch. OFF: One zone is turned off via dimming switch. ON: Two zones are controlled via switch. OFF: Two zones are turned off via switch.
Second Floor	Staff	Processing 210 Open Office 203 Micrographics 234 *See Note 2		ON: The lights are turned on to a preset scene using a wired or wireless control with default scene configurations. ADJUST: The lights are adjusted between default scene presets using wired and/or wireless controls. The lights in the daylighting zones indicated on the drawings will continuously adjust to maintain 50 foot-candles at a height of 36 inches based on the available daylight within the space OFF: The lights are turned off using a wireless control with default scene configurations.
Second Floor	Library	Reading Room/ Research Room *See Note 2		ON: All lights are turned on to 100%. ADJUST: 1. Type B fixtures: Each wall, west, south, and east, will be controlled via a separate dimming switch. 2. Type R fixtures: Fixtures will be controlled via one override switch 3. Type Q fixtures: Reading room fixture will be controlled via one override switch. Research room fixtures will be controlled via a separate override switch. 4. Type N Fixtures: Fixtures will be controlled via one dimming switch. 5. Type Y fixtures: Lights will continuously adjust to maintain specified foot-candles at the floor level based on available daylight within the space, they will have an override dimming switch at the Lobby Control Panel 6. Type HH fixtures: Lights will be controlled via one override switch. OFF: All lights are turned off.
Second Floor	Staff	Secure Storage 227	Low Voltage Switches	ON: The lighting zones are controlled via low voltage switches. OFF: The lighting zones are turned off via low voltage switches.
Second Floor	Staff	Corridor 224 Corridor 219 Isolation 238	Light Switch(es)	ON: The lights are controlled via the light switches. OFF: The lights are turned off via light switches.
Second Floor	Back of House	Corridor 241 Corridor 215 Team Area 209 Corridor 236		ON: The lights automatically turn on at time specified in Spec Section 25 90 00. OFF: The lights automatically turn off at time specified in Spec Section 25 90 00.

CONTROL SCHEDULE NOTES

1. REFER TO DETAIL 4/E703 FOR LOBBY CONTROL PANEL ELEVATION.
2. REFER TO ELECTRICAL FLOOR PLANS FOR DAYLIGHTING ZONES. LIGHTING ZONES ARE NUMBERED INSTEAD OF LETTERED AS SHOWN ON FLOOR PLANS BECAUSE ZONES ARE REFERRING TO OVERRIDE SWITCHES IN PANEL, NOT LOCAL CONTROLS.
3. REFER TO ELECTRICAL SITE PLAN FOR SITE LIGHTING CONTROL ZONES.

CONSULTANT NAME :: AMC ENGINEERS
ECI/HYER :: THA ARCHITECTURE
DEPARTMENT OF EDUCATION & EARLY DEVELOPMENT
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AKSAS PROJECT NO. 68816

STATE OF ALASKA
LIBRARY ARCHIVES MUSEUM

REVISIONS:

CONSTRUCTION DOCUMENTS

05.01.2012

LIGHTING CONTROL SCHEDULE

E003

PANEL SCHEDULE – 'L0A'
480Y/277 VOLTS, 3-PH, 4-W
225 AMP LUG

NEMA 1 SURFACE MOUNTED
A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS

CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
LTG: UTILITY SPACES AND STORAGE ROOMS	2.85	20	1	1+--2	6.40	15	3	LS-1 – WATER SERVICES P02
LTG: VEST P08, LOBBY P05	0.88	20	1	3--+-4	---	---	---	---
LTG: PARKING P00 NORTHWEST FIXTURES	2.05	20	1	5--+6	---	---	---	---
LTG: PARKING P00 NORTHEAST FIXTURES	2.23	20	1	7+--8	6.32	15	3	PMP-9 – MECH P06
LTG: PARKING P00 SOUTHWEST FIXTURES	1.86	20	1	9--+-10	---	---	---	---
LTG: PARKING P00 SOUTHEAST FIXTURES	2.05	20	1	11--+12	---	---	---	---
SPARE	---	20	1	13+--14	2.49	15	3	RF-1 – PARKING P00
SPARE	---	20	1	15--+-16	---	---	---	---
SPARE	---	20	1	17--+18	---	---	---	---
SPARE	---	20	1	19+--20	2.49	15	3	RF-2 – PARKING P00
SPACE	---	---	---	21--+-22	---	---	---	---
SPACE	---	---	---	23--+24	---	---	---	---
SPACE	---	---	---	25+--26	2.49	15	3	RF-3 – PARKING P00
SPACE	---	---	---	27--+-28	---	---	---	---
SPACE	---	---	---	29--+30	---	---	---	---
SPACE	---	---	---	31+--32	23.28	50	3	STORM WATER LIFT STATION – EXTERIOR
SPACE	---	---	---	33--+-34	---	---	---	---
SPACE	---	---	---	35--+36	---	---	---	---
SPACE	---	---	---	37+--38	---	---	---	SPACE
SPACE	---	---	---	39--+-40	---	---	---	SPACE
SPACE	---	---	---	41--+42	---	---	---	SPACE

TOTAL CONNECTED LOADS – A	19.6	KVA		28 POLE SPACES USED	
" – B	17.0	"			
" – C	18.6	"			
" – ALL	55.2	"	=	66 AMPS	@ 480 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	58.1	"	=	70 AMPS	

PANEL SCHEDULE – 'L1A'
480Y/277 VOLTS, 3-PH, 4-W
225 AMP LUG

NEMA 1 SURFACE MOUNTED
A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS

CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
LTG: MAIN ELEC, ELEC, BOILER, AHU-3	2.85	20	1	1+--2	1.41	20	2	LTG: WEST AND SOUTH EXTERIOR AREA LIGHTS
LTG: SECURE COLLECT 124	2.64	20	1	3--+-4	---	---	---	---
LTG: SECURE COLLECT 124	2.64	20	1	5--+6	---	---	---	SPACE
LTG: AHU-1 FAN ROOM & ADJACENT MEZZANINE	2.36	20	1	7+--8	---	---	---	SPACE
SPARE	---	20	1	9--+-10	---	---	---	SPACE
SPARE	---	20	1	11--+12	---	---	---	SPACE
SPARE	---	20	1	13+--14	---	---	---	SPACE
SPARE	---	20	1	15--+-16	---	---	---	SPACE
SPARE	---	20	1	17--+18	---	---	---	SPACE
PMP-6A – FAN-AHU 3 120	3.99	15	3	19+--20	---	---	---	SPACE
---	---	---	---	21--+-22	---	---	---	SPACE
---	---	---	---	23--+24	---	---	---	SPACE
PMP-6B – FAN-AHU 3 120	3.99	15	3	25+--26	22.45	60	3	PMP-10A – EXTERIOR
---	---	---	---	27--+-28	---	---	---	---
---	---	---	---	29--+30	---	---	---	---
PMP-16A – FAN-AHU 3 120	11.64	25	3	31+--32	22.45	60	3	PMP-10B – EXTERIOR
---	---	---	---	33--+-34	---	---	---	---
---	---	---	---	35--+36	---	---	---	---
PMP-16B – FAN-AHU 3 120	11.64	25	3	37+--38	22.45	60	3	PMP-10C – EXTERIOR
---	---	---	---	39--+-40	---	---	---	---
---	---	---	---	41--+42	---	---	---	---

TOTAL CONNECTED LOADS – A	38.8	KVA		32 POLE SPACES USED	
" – B	36.2	"			
" – C	35.5	"			
" – ALL	110.5	"	=	133 AMPS	@ 480 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	113.1	"	=	136 AMPS	

PANEL SCHEDULE – 'L1B'
480Y/277 VOLTS, 3-PH, 4-W
225 AMP LUG

NEMA 1 SURFACE MOUNTED
A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS

SUB-FEED LUGS

CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
PMP-1 – BOILER ROOM 121	3.99	15	3	1+--2	9.15	20	3	PMP-5A – BOILER ROOM 121
---	---	---	---	3--+-4	---	---	---	---
---	---	---	---	5--+6	---	---	---	---
PMP-2 – BOILER ROOM 121	2.49	15	3	7+--8	9.15	20	3	PMP-5B – BOILER ROOM 121
---	---	---	---	9--+-10	---	---	---	---
---	---	---	---	11--+12	---	---	---	---
PMP-3 – BOILER ROOM 121	2.49	15	3	13+--14	9.15	20	3	PMP-5C – BOILER ROOM 121
---	---	---	---	15--+-16	---	---	---	---
---	---	---	---	17--+18	---	---	---	---
PMP-4A – BOILER ROOM 121	3.99	15	3	19+--20	2.49	15	3	SCF-2 – BOILER ROOM 121
---	---	---	---	21--+-22	---	---	---	---
---	---	---	---	23--+24	---	---	---	---
PMP-4B – BOILER ROOM 121	3.99	15	3	25+--26	2.49	15	3	SCF-3 – BOILER ROOM 121
---	---	---	---	27--+-28	---	---	---	---
---	---	---	---	29--+30	---	---	---	---
SPACE	---	---	---	31+--32	---	---	---	SPACE
SPACE	---	---	---	33--+-34	---	---	---	SPACE
SPACE	---	---	---	35--+36	---	---	---	SPACE
WH-4 – BOILER 121	2.50	15	1	37+--38	---	---	---	SPACE
---	---	---	---	39--+-40	---	---	---	SPACE
SPACE	---	---	---	41--+42	---	---	---	SPACE

TOTAL CONNECTED LOADS – A	19.0	KVA		31 POLE SPACES USED	
" – B	16.5	"			
" – C	16.5	"			
" – ALL	51.9	"	=	62 AMPS	@ 480 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	51.9	"	=	62 AMPS	

PANEL SCHEDULE – 'L1C'
480Y/277 VOLTS, 3-PH, 4-W
225 AMP LUG

NEMA 1 SURFACE MOUNTED
A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS

SUB-FEED LUGS

CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
LTG – SPRAY BOOTH 136	0.51	20	1	1+--2	0.88	20	2	LTG: NORTH EXTERIOR AREA LIGHTS
LTG: COLLECTIONS PROC 128, ISOLATION 125, OFF 129 & 130	2.36	20	1	3--+-4	---	---	---	---
LTG: OFF 134, WORKSHOP 132, MEZZ	2.91	20	1	5--+6	---	20	1	SPARE
LTG: METAL WORK 133, CRATE STOR 131, SECURITY 138	1.76	20	1	7+--8	---	20	1	SPARE
LTG: CORR 127, 119, 137, HALL 139, EXTERIOR CANOPY	2.01	20	1	9--+-10	---	20	1	SPARE
LTG: OFF 141, 142, PAPER CONS 144, ELEC 126, TELECOM 118	2.58	20	1	11--+12	---	20	1	SPARE
LTG: CONSERV LAB, CHEM, OFFICE, AND SUPPORT SPACES	1.83	20	1	13+--14	---	20	1	SPARE
LTG: SUPPLY 117, RESTROOMS, STOR ROOMS, CLASSROOM	2.23	20	1	15--+-16	---	20	1	SPARE
SPARE	---	20	1	17--+18	---	---	---	SPACE
SPARE	---	20	1	19+--20	---	---	---	SPACE
SPARE	---	20	1	21--+-22	---	---	---	SPACE
SPACE	---	---	---	23--+24	---	---	---	SPACE
SPACE	---	---	---	25+--26	---	---	---	SPACE
SPACE	---	---	---	27--+-28	---	---	---	SPACE
SPACE	---	---	---	29--+30	---	---	---	SPACE
SPACE	---	---	---	31+--32	---	---	---	SPACE
SPACE	---	---	---	33--+-34	---	---	---	SPACE
SPACE	---	---	---	35--+36	---	---	---	SPACE
SPACE	---	---	---	37+--38	---	---	---	SPACE
SPACE	---	---	---	39--+-40	---	---	---	SPACE
SPACE	---	---	---	41--+42	---	---	---	SPACE

TOTAL CONNECTED LOADS – A	4.5	KVA		19 POLE SPACES USED	
" – B	7.0	"			
" – C	5.5	"			
" – ALL	17.1	"	=	21 AMPS	@ 480 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	21.3	"	=	26 AMPS	

TOTAL LOAD FOR PANEL AND SUBPANEL	17.3	KVA			
" – B	19.8	"			
" – C	18.3	"			
" – ALL	55.5	"	=	67 AMPS	@ 480 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	59.7	"	=	72 AMPS	

PANEL SCHEDULE – 'L1D'
480Y/277 VOLTS, 3-PH, 4-W
225 AMP LUG

NEMA 1 SURFACE MOUNTED
A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS

CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
PMP-8 – OFFICE 134 (MEZZANINE)	2.49	15	3	1+--2	---	---	---	SPACE
---	---	---	---	3--+-4	---	---	---	SPACE
---	---	---	---	5--+6	---	---	---	SPACE
SCF-1A – OFFICE 134 (MEZZANINE)	3.99	15	3	7+--8	---	---	---	SPACE
---	---	---	---	9--+-10	---	---	---	SPACE
---	---	---	---	11--+12	---	---	---	SPACE
SCF-1B – OFFICE 134 (MEZZANINE)	11.64	25	3	13+--14	---	---	---	SPACE
---	---	---	---	15--+-16	---	---	---	SPACE
---	---	---	---	17--+18	---	---	---	SPACE
DC-1 – WOOD SHOP 132 (EXTERIOR)	6.32	15	3	19+--20	---	---	---	SPACE
---	---	---	---	21--+-22	---	---	---	SPACE
---	---	---	---	23--+24	---	---	---	SPACE
AC-1 – WOOD SHOP 132	6.32	15	3	25+--26	---	---	---	SPACE
---	---	---	---	27--+-28	---	---	---	SPACE
---	---	---	---	29--+30	---	---	---	SPACE
EF-2 – SPRAY BOOTH 136 (ABOVE)	6.32	15	3	31+--32	---	---	---	SPACE
---	---	---	---	33--+-34	---	---	---	SPACE
---	---	---	---	35--+36	---	---	---	SPACE
EF-3 – METAL WORKSHOP 133	1.33	15	3	37+--38	---	---	---	SPACE
---	---	---	---	39--+-40	---	---	---	SPACE
---	---	---	---	41--+42	---	---	---	SPACE

TOTAL CONNECTED LOADS – A	12.8	KVA		21 POLE SPACES USED	
" – B	12.8	"			
" – C	12.8	"			
" – ALL	38.4	"	=	46 AMPS	@ 480 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	38.4	"	=	46 AMPS	

PANEL SCHEDULE – 'L1E'
480Y/277 VOLTS, 3-PH, 4-W
225 AMP LUG

NEMA 1 SURFACE MOUNTED
A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS

CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
LTG: LECTURE HALL, OFFICE, AND CONTROL, STOR 166	2.36	20	1	1+--2	---	20	1	SPARE
LTG: RESTROOMS , LOCKERS 160, ELEC 155, STORAGE, VEST	1.60	20	1	3--+-4	---	20	1	SPARE
LTG: EXTERIOR CANOPY, FLAG, GARAGE SIGN	2.10	20	1	5--+6	---	20	1	SPARE
LTG: EAGLE TREE , LOBBY NORTH DISPLAYS	0.75	20	1	7+--8	---	20	1	SPARE
SPARE	---	20	1	9--+-10	---	20	1	SPARE
SPARE	---	20	1	11--+12	---	20	1	SPARE
SPARE	---	20	1	13+--14	---	20	1	SPARE
SPARE	---	20	1	15--+-16	---	20	1	SPARE
SPARE	---	20	1	17--+18	---	20	1	SPARE
SPARE	---	20	1	19+--20	---	---	---	SPACE
SPACE	---	---	---	21--+-22	---	---	---	SPACE
SPACE	---	---	---	23--+24	---	---	---	SPACE
SPACE	---	---	---	25+--26	---	---	---	SPACE
SPACE	---	---	---	27--+-28	---	---	---	SPACE
SPACE	---	---	---	29--+30	---	---	---	SPACE
SPACE	---	---	---	31+--32	---	---	---	SPACE
SPACE	---	---	---	33--+-34	---	---	---	SPACE
SPACE	---	---	---	35--+36	---	---	---	SPACE
SPACE	---	---	---	37+--38	---	---	---	SPACE
SPACE	---	---	---	39--+-40	---	---	---	SPACE
SPACE	---	---	---	41--+42	---	---	---	SPACE

TOTAL CONNECTED LOADS – A	3.1	KVA		19 POLE SPACES USED	
" – B	1.6	"			
" – C	2.1	"			
" – ALL	6.8	"	=	8 AMPS	@ 480 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	8.5	"	=	10 AMPS	

PANEL SCHEDULE – 'L1I'
480Y/277 VOLTS, 3-PH, 4-W
225 AMP LUG

NEMA 1 SURFACE MOUNTED
A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS

SUB-FEED LUGS

CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
SPACE	---	---	---	1+--2	---	---	---	SPACE
SPACE	---	---	---	3--+-4	---	---	---	SPACE
SPACE	---	---	---	5--+6	---	---	---	SPACE
SPACE	---	---	---	7+--8	---	---	---	SPACE
SPACE	---	---	---	9--+-10	---	---	---	SPACE
SPACE	---	---	---	11--+12	---	---	---	SPACE
SPACE	---	---	---	13+--14	---	---	---	SPACE
SPACE	---	---	---	15--+-16	---	---	---	SPACE
SPACE	---	---	---	17--+18	---	---	---	SPACE
SPACE	---	---	---	19+--20	---	---	---	SPACE
SPACE	---	---	---	21--+-22	---	---	---	SPACE
SPACE	---	---	---	23--+24	---	---	---	SPACE
SPACE	---	---	---	25+--26	---	---	---	SPACE
SPACE	---	---	---	27--+-28	---	---	---	SPACE
SPACE	---	---	---	29--+30	---	---	---	SPACE
SPACE	---	---	---	31+--32	---	---	---	SPACE
SPACE	---	---	---	33--+-34	---	---	---	SPACE
SPACE	---	---	---	35--+36	---	---	---	SPACE
SPACE	---	---	---	37+--38	---	---	---	SPACE
SPACE	---	---	---	39--+-40	---	---	---	SPACE
SPACE	---	---	---	41--+42	---	---	---	SPACE

TOTAL CONNECTED LOADS – A	0.0	KVA		0 POLE SPACES USED	
" – B	0.0	"			
" – C	0.0	"			
" – ALL	0.0	"	=	0 AMPS	@ 480 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	0.0	"	=	0 AMPS	

TOTAL LOAD FOR PANEL AND SUBPANEL	0.0	KVA			
" – B	0.0	"			
" – C	0.0	"			
" – ALL	0.0	"	=	0 AMPS	@ 480 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	0.0	"	=	0 AMPS	

PANEL SCHEDULE – 'L1G'
480Y/277 VOLTS, 3-PH, 4-W
225 AMP LUG

NEMA 1 SURFACE MOUNTED
A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS

SUB-FEED LUGS

CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
LTG: MARQUEE 112, STORAGE 103 & MEZZ	2.85	20	1	1+--2	---	20	1	SPARE
LTG: SOS/AV 108, VEST 109, ELEC 110	0.75	20	1	3--+-4	---	20	1	SPARE
LTG: PLAZA, ACCENT	2.46	20	1	5--+6	---	20	1	SPARE
SPARE	---	20	1	7+--8	---	20	1	SPARE
SPARE	---	20	1	9--+-10	---	20	1	SPARE
SPARE	---	20	1	11--+12	---	20	1	SPARE
SPARE	---	20	1	13+--14	---	20	1	SPARE
SPARE	---	20	1	15--+-16	---	20	1	SPARE
SPARE	---	20	1	17--+18	---	20	1	SPARE
SPACE	---	---	---	19+--20	---	---	---	SPACE
SPACE	---	---	---	21--+-22	---	---	---	SPACE
SPACE	---	---	---	23--+24	---	---	---	SPACE
SPACE	---	---	---	25+--26	---	---	---	SPACE
SPACE	---	---	---	27--+-28	---	---	---	SPACE
SPACE	---	---	---	29--+30	---	---	---	SPACE
SPACE	---	---	---	31+--32	---	---	---	SPACE
SPACE	---	---	---	33--+-34	---	---	---	SPACE
SPACE	---	---	---	35--+36	---	---	---	SPACE
SPACE	---	---	---	37+--38	---	---	---	SPACE
SPACE	---	---	---	39--+-40	---	---	---	SPACE
SPACE	---	---	---	41--+42	---	---	---	SPACE

TOTAL CONNECTED LOADS – A	2.9	KVA		18 POLE SPACES USED	
" – B	0.7	"			
" – C	2.5	"			
" – ALL	6.1	"	=	7 AMPS	@ 480 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	7.6	"	=	9 AMPS	

TOTAL LOAD FOR PANEL AND SUBPANEL	2.9	KVA			
" – B	0.7	"			
" – C	2.5	"			
" – ALL	6.1	"	=	7 AMPS	@ 480 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	7.6	"	=	9 AMPS	

PANEL SCHEDULE – 'L1H'
480Y/277 VOLTS, 3-PH, 4-W
225 AMP LUG

NEMA 1 SURFACE MOUNTED
A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS

CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
SPACE	---	---	---	1+--2	---	---	---	SPACE
SPACE	---	---	---	3--+-4	---	---	---	SPACE
SPACE	---	---	---	5--+6	---	---	---	SPACE
SPACE	---	---	---	7+--8	---	---	---	SPACE
SPACE	---	---	---	9--+-10	---	---	---	SPACE
SPACE	---	---	---	11--+12	---	---	---	SPACE
SPACE	---	---	---	13+--14	---	---	---	SPACE
SPACE	---	---	---	15--+-16	---	---	---	SPACE
SPACE	---	---	---	17--+18	---	---	---	SPACE
SPACE	---	---	---	19+--20	---	---	---	SPACE
SPACE	---	---	---	21--+-22	---	---	---	SPACE
SPACE	---	---	---	23--+24	---	---	---	SPACE
SPACE	---	---	---	25+--26	---	---	---	SPACE
SPACE	---	---	---	27--+-28	---	---	---	SPACE
SPACE	---	---	---	29--+30	---	---	---	SPACE
SPACE	---	---	---	31+--32	---	---	---	SPACE
SPACE	---	---	---	33--+-34	---	---	---	SPACE
SPACE	---	---	---	35--+36	---	---	---	SPACE
SPACE	---	---	---	37+--38	---	---	---	SPACE
SPACE	---	---	---	39--+-40	---	---	---	SPACE
SPACE	---	---	---	41--+42	---	---	---	SPACE

TOTAL CONNECTED LOADS – A	0.0	KVA		0 POLE SPACES USED	
" – B	0.0	"			
" – C	0.0	"			
" – ALL	0.0	"	=	0 AMPS	@ 480 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	0.0	"	=	0 AMPS	

CONSULTANT NAME :: AMC ENGINEERS
ECI/HYER :: THA ARCHITECTURE
DEPARTMENT OF EDUCATION & EARLY DEVELOPMENT
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
AKSAS PROJECT NO. 68816

STATE OF ALASKA
LIBRARY ARCHIVES MUSEUM

STATE OF ALASKA 49TH
Kenneth T. Ratcliffe
04/27/2012
EE-8811
REGISTERED PROFESSIONAL ENGINEER

REVISIONS:

CONSTRUCTION DOCUMENTS

05.01.2012

PANEL SCHEDULES

E010

PANEL SCHEDULE – 'L1J'
480Y/277 VOLTS, 3-PH, 4-W
225 AMP LUG

NEMA 1 SURFACE MOUNTED
A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS

CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
SPACE	---	---	---	1+---2	---	---	---	SPACE
SPACE	---	---	---	3---+4	---	---	---	SPACE
SPACE	---	---	---	5---+6	---	---	---	SPACE
SPACE	---	---	---	7+---8	---	---	---	SPACE
SPACE	---	---	---	9---+10	---	---	---	SPACE
SPACE	---	---	---	11---+12	---	---	---	SPACE
SPACE	---	---	---	13+---14	---	---	---	SPACE
SPACE	---	---	---	15---+16	---	---	---	SPACE
SPACE	---	---	---	17---+18	---	---	---	SPACE
SPACE	---	---	---	19+---20	---	---	---	SPACE
SPACE	---	---	---	21---+22	---	---	---	SPACE
SPACE	---	---	---	23---+24	---	---	---	SPACE
SPACE	---	---	---	25+---26	---	---	---	SPACE
SPACE	---	---	---	27---+28	---	---	---	SPACE
SPACE	---	---	---	29---+30	---	---	---	SPACE
SPACE	---	---	---	31+---32	---	---	---	SPACE
SPACE	---	---	---	33---+34	---	---	---	SPACE
SPACE	---	---	---	35---+36	---	---	---	SPACE
SPACE	---	---	---	37+---38	---	---	---	SPACE
SPACE	---	---	---	39---+40	---	---	---	SPACE
SPACE	---	---	---	41---+42	---	---	---	SPACE

TOTAL CONNECTED LOADS – A	0.0	KVA	0 POLE SPACES USED		
" – B	0.0	"			
" – C	0.0	"			
" – ALL	0.0	"	=	0 AMPS	@ 480 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	0.0	"	=	0 AMPS	

PANEL SCHEDULE – 'L2A'
480Y/277 VOLTS, 3-PH, 4-W
225 AMP LUG

NEMA 1 SURFACE MOUNTED
A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS

CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
RO-1 – FAN-AHU 4 225	2.91	15	3	1+---2	---	---	---	SPACE
---	---	---	---	3---+4	---	---	---	SPACE
---	---	---	---	5---+6	---	---	---	SPACE
SPACE	---	---	---	7+---8	---	---	---	SPACE
SPACE	---	---	---	9---+10	---	---	---	SPACE
SPACE	---	---	---	11---+12	---	---	---	SPACE
SPACE	---	---	---	13+---14	---	---	---	SPACE
SPACE	---	---	---	15---+16	---	---	---	SPACE
SPACE	---	---	---	17---+18	---	---	---	SPACE
SPACE	---	---	---	19+---20	---	---	---	SPACE
SPACE	---	---	---	21---+22	---	---	---	SPACE
SPACE	---	---	---	23---+24	---	---	---	SPACE
SPACE	---	---	---	25+---26	---	---	---	SPACE
SPACE	---	---	---	27---+28	---	---	---	SPACE
SPACE	---	---	---	29---+30	---	---	---	SPACE
SPACE	---	---	---	31+---32	---	---	---	SPACE
SPACE	---	---	---	33---+34	---	---	---	SPACE
SPACE	---	---	---	35---+36	---	---	---	SPACE
SPACE	---	---	---	37+---38	---	---	---	SPACE
SPACE	---	---	---	39---+40	---	---	---	SPACE
SPACE	---	---	---	41---+42	---	---	---	SPACE

TOTAL CONNECTED LOADS – A	1.0	KVA	3 POLE SPACES USED		
" – B	1.0	"			
" – C	1.0	"			
" – ALL	2.9	"	=	4 AMPS	@ 480 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	3.6	"	=	4 AMPS	

PANEL SCHEDULE – 'L2B'
480Y/277 VOLTS, 3-PH, 4-W
225 AMP LUG

NEMA 1 SURFACE MOUNTED
A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS

SUB-FEED LUGS

CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
LTG: TELECOM 217, ELEC 240, FAN-AHU 5&6	2.11	20	1	1+---2	---	20	1	SPARE
LTG: DARKROMS, STUDIOS, MICRO, ISO 238, STOR 235, 237, 239	2.91	20	1	3---+4	---	20	1	SPARE
LTG: HALLS, RESTROOMS, CONF 245, TEAM 209, MAIL 216,	2.90	20	1	5---+6	---	20	1	SPARE
LTG: SECURE STORAGE 227	2.64	20	1	7+---8	---	20	1	SPARE
LTG: SECURE STORAGE 227	2.64	20	1	9---+10	---	20	1	SPARE
LTG: SECURE STORAGE 227	1.32	20	1	11---+12	---	20	1	SPARE
LTG: CAMERA RM 223, ELEC REC 222, PROJ 220, 221, OFFICE 218	2.14	20	1	13+---14	---	20	1	SPARE
LTG: FAN AHU 2 & 4	2.60	20	1	15---+16	---	20	1	SPARE
SPARE	---	20	1	17---+18	---	20	1	SPARE
SPARE	---	20	1	19+---20	---	20	1	SPARE
SPACE	---	---	---	21---+22	---	---	---	SPACE
SPACE	---	---	---	23---+24	---	---	---	SPACE
SPACE	---	---	---	25+---26	---	---	---	SPACE
SPACE	---	---	---	27---+28	---	---	---	SPACE
SPACE	---	---	---	29---+30	---	---	---	SPACE
SPACE	---	---	---	31+---32	---	---	---	SPACE
SPACE	---	---	---	33---+34	---	---	---	SPACE
SPACE	---	---	---	35---+36	---	---	---	SPACE
SPACE	---	---	---	37+---38	---	---	---	SPACE
SPACE	---	---	---	39---+40	---	---	---	SPACE
SPACE	---	---	---	41---+42	---	---	---	SPACE

TOTAL CONNECTED LOADS – A	6.9	KVA	20 POLE SPACES USED		
" – B	8.2	"			
" – C	4.2	"			
" – ALL	19.3	"	=	23 AMPS	@ 480 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	23.4	"	=	28 AMPS	
TOTAL LOAD FOR PANEL AND SUBPANEL	15.1	KVA			
" – B	16.4	"			
" – C	12.5	"			
" – ALL	44.0	"	=	53 AMPS	@ 480 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	48.2	"	=	58 AMPS	

PANEL SCHEDULE – 'L2C'
480Y/277 VOLTS, 3-PH, 4-W
225 AMP LUG

NEMA 1 SURFACE MOUNTED
A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS

CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
CH-1 – FAN-AHU 5&6 242	6.32	15	3	1+---2	1.33	15	3	PMP-19 – FAN-AHU 5&6 242
---	---	---	---	3---+4	---	---	---	---
---	---	---	---	5---+6	---	---	---	---
RO-2 – FAN-AHU 5&6 242	2.91	15	3	7+---8	3.85	15	3	DH-3 – O DEG STORAGE
---	---	---	---	9---+10	---	---	---	---
---	---	---	---	11---+12	---	---	---	---
PMP-7A – FAN-AHU 5&6 242	1.33	15	3	13+---14	---	20	3	C-1 – ROOF
---	---	---	---	15---+16	---	---	---	---
---	---	---	---	17---+18	---	---	---	---
PMP-7B – FAN-AHU 5&6 242	1.33	15	3	19+---20	---	20	3	C-2 – ROOF
---	---	---	---	21---+22	---	---	---	---
---	---	---	---	23---+24	---	---	---	---
PMP-17 – FAN-AHU 5&6 242	1.33	15	3	25+---26	---	20	3	C-3 – ROOF
---	---	---	---	27---+28	---	---	---	---
---	---	---	---	29---+30	---	---	---	---
PMP-18A – FAN-AHU 5&6 242	2.49	15	3	31+---32	---	---	---	SPACE
---	---	---	---	33---+34	---	---	---	SPACE
---	---	---	---	35---+36	---	---	---	SPACE
PMP-18B – FAN-AHU 5&6 242	2.49	15	3	37+---38	1.33	15	3	SCF-4 – ELECTRICAL ROOM 240
---	---	---	---	39---+40	---	---	---	---
---	---	---	---	41---+42	---	---	---	---

TOTAL CONNECTED LOADS – A	8.2	KVA	39 POLE SPACES USED		
" – B	8.2	"			
" – C	8.2	"			
" – ALL	24.7	"	=	30 AMPS	@ 480 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	24.7	"	=	30 AMPS	

PANEL SCHEDULE – 'L2D'
480Y/277 VOLTS, 3-PH, 4-W
100 AMP LUG

NEMA 1 SURFACE MOUNTED
A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS

SUB-FEED LUGS

CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
LTG: CATWALK, EXHIBITS (N & D), GALLERY HALL	1.86	20	1	1+---2	2.52	20	1	LTG: ADMIN SUITE, OFFICES 246-254
LTG: TRACK FIXTURES, BRIDGE LIGHTS, HANDRAILS	0.90	20	1	3---+4	1.66	20	1	LTG: CONF 255, WAIVT 257, RESTROOMS, HALL, ELEC 255
SPARE	---	20	1	5---+6	1.34	20	1	LTG: MULTIPURPOSE, EXHIBITS (N & P), TRACK FIXT
SPARE	---	20	1	7+---8	2.66	20	1	LTG: LOBBY UPPER LEVEL HANGING FIXTURES
SPARE	---	20	1	9---+10	---	20	1	SPARE
SPARE	---	20	1	11---+12	---	20	1	SPARE
SPARE	---	20	1	13+---14	---	20	1	SPARE
SPARE	---	20	1	15---+16	---	20	1	SPARE
SPARE	---	20	1	17---+18	---	20	1	SPARE
SPARE	---	20	1	19+---20	---	20	1	SPARE
SPACE	---	---	---	21---+22	---	---	---	SPACE
SPACE	---	---	---	23---+24	---	---	---	SPACE
SPACE	---	---	---	25+---26	---	---	---	SPACE
SPACE	---	---	---	27---+28	---	---	---	SPACE
SPACE	---	---	---	29---+30	---	---	---	SPACE
SPACE	---	---	---	31+---32	---	---	---	SPACE
SPACE	---	---	---	33---+34	---	---	---	SPACE
SPACE	---	---	---	35---+36	---	---	---	SPACE
SPACE	---	---	---	37+---38	---	---	---	SPACE
SPACE	---	---	---	39---+40	---	---	---	SPACE
SPACE	---	---	---	41---+42	---	---	---	SPACE

TOTAL CONNECTED LOADS – A	7.0	KVA	20 POLE SPACES USED		
" – B	2.6	"			
" – C	1.3	"			
" – ALL	10.9	"	=	13 AMPS	@ 480 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	13.7	"	=	16 AMPS	

PANEL SCHEDULE – 'L2E'
480Y/277 VOLTS, 3-PH, 4-W
225 AMP LUG

NEMA 1 SURFACE MOUNTED
A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS

SUB-FEED LUGS

CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
LTG: LOBBY GALLERY SOUTH 5 FIXTURES	0.95	20	1	1+---2	---	20	1	SPARE
LTG: READING/RESEARCH ROOM WEST DOWNLIGHTS	2.88	20	1	3---+4	---	20	1	SPARE
LTG: READING/RESEARCH ROOM CENTER DOWNLIGHTS	2.88	20	1	5---+6	---	20	1	SPARE
LTG: READING/RESEARCH ROOM EAST DOWNLIGHTS	2.88	20	1	7+---8	---	20	1	SPARE
LTG: READING ROOM WEST STACK LIGHTS	3.15	20	1	9---+10	---	20	1	SPARE
LTG: READING ROOM EAST STACK LIGHTS	2.70	20	1	11---+12	---	---	---	SPACE
LTG: READING ROOM CANVAS LIGHTS	1.06	20	1	13+---14	---	---	---	SPACE
LTG: READING DISPLAY LIGHTS & TABLE LIGHTS	1.84	20	1	15---+16	---	---	---	SPACE
LTG: PROCESSING EAST, ELEC 202	2.64	20	1	17---+18	---	---	---	SPACE
LTG: PROCESSING WEST AND PROJECTS 211-214	2.52	20	1	19+---20	---	---	---	SPACE
LTG: FILES 211, PROJECTS 212-214	0.63	20	1	21---+22	---	---	---	SPACE
SPARE	---	20	1	23---+24	---	---	---	SPACE
SPARE	---	20	1	25+---26	---	---	---	SPACE
SPARE	---	20	1	27---+28	---	---	---	SPACE
SPARE	---	20	1	29---+30	---	---	---	SPACE
SPARE	---	20	1	31+---32	---	---	---	SPACE
SPARE	---	20	1	33---+34	---	---	---	SPACE
SPARE	---	20	1	35---+36	---	---	---	SPACE
SPACE	---	---	---	37+---38	---	---	---	SPACE
SPACE	---	---	---	39---+40	---	---	---	SPACE
SPACE	---	---	---	41---+42	---	---	---	SPACE

TOTAL CONNECTED LOADS – A	7.4	KVA	23 POLE SPACES USED		
" – B	8.5	"			
" – C	8.2	"			
" – ALL	24.1	"	=	29 AMPS	@ 480 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	30.2	"	=	36 AMPS	

CONSULTANT NAME :: AMC ENGINEERS
ECI/HYER :: THA ARCHITECTURE
DEPARTMENT OF EDUCATION & EARLY DEVELOPMENT
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
AKSAS PROJECT NO. 68816

STATE OF ALASKA
LIBRARY ARCHIVES MUSEUM

STATE OF ALASKA 49TH
Kenneth T. Ratcliffe
04/27/2012
EE-8811
REGISTERED PROFESSIONAL ENGINEER

REVISIONS:

CONSTRUCTION DOCUMENTS

05.01.2012

PANEL SCHEDULES

E011

PANEL SCHEDULE – 'P0A'
208Y/120 VOLTS, 3-PH, 4-W
175 AMP MAIN BREAKER

NEMA 1 SURFACE MOUNTED
A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS

CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
RECEPTS – PARKING P00	0.90	1	20	1+--2	1.18	20	1	PMP-14B – ELEV 2 PIT E-2
RECEPTS – PARKING P00, STOR P07, MECH P06	1.08	1	20	3--+-4	1.50	15	2	FT-3 – ELEV 2 PIT E-2
RECEPTS – PARKING P00 AND SITE MAINT P01	1.08	1	20	5--+-6	---	---	---	---
RECEPTS – WATER SVC P02,STAIR S-2, VEST P08	0.90	1	20	7+--8	0.50	20	1	ELEVATOR RECEPT AND LTG – ELEV 2 E-2
RECEPTS – LOBBY P05 AND STAIR S-1	0.36	1	20	9--+-10	0.30	15	1	CUH-2, UH-1, TRAP PRIMER –P02, P08
RECEPTS – ELECT P03	0.36	1	20	11--+12	1.20	20	1	HEAT TRACE – MECH P06 AND PARKING P00*
LIGHT AND RECEPT – ELEVATOR 1 E-1	0.28	1	20	13+--14	1.30	15	1	GM-1, UH-9 UH-10 – MECH P06, STOR P07
LIGHT AND RECEPT – ELEVATOR 2 E-2	0.28	1	20	15--+-16	1.18	20	1	GARAGE DOOR – PARKING P00
AIR COMPRESSOR RECEPT – WATER SVC P02	0.50	1	20	17--+18	1.18	20	1	GARAGE DOOR – PARKING P00
SPACE	---	---	---	19+--20	1.50	15	2	FT-3 – ELEV 1 PIT E-1
SPACE	---	---	---	21--+-22	---	---	---	---
SPACE	---	---	---	23--+24	0.20	20	1	ELEV 1 CONTROL PANEL – STAIR 1 ST-1
SPACE	---	---	---	25+--26	1.18	20	1	PMP-14A – ELEV 2 PIT E-2
SPACE	---	---	---	27--+-28	0.14	15	1	CUH-1 – LOBBY P05
SPACE	---	---	---	29--+30	1.08	15	1	UH-2, TF-1 – SITE MAINT P01
SPACE	---	---	---	31+--32	1.50	15	2	FT-3 – TELECOM P04
SPACE	---	---	---	33--+-34	---	---	---	---
SPACE	---	---	---	35--+36	0.70	15	1	CF-1 – WATER SERVICES P02
SPACE	---	---	---	37+--38	---	---	---	SPACE
SPACE	---	---	---	39--+-40	---	---	---	SPACE
SPACE	---	---	---	41--+42	1.00	20	1	ACCESS CONTROL DOORS – PARKING LEVEL

199 POLE SPACES USED

TOTAL CONNECTED LOADS – A	5.8	KVA			
" – B	4.1	"			
" – C	6.3	"			
" – ALL	16.2	"	=	45 AMPS	@ 208 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	16.2	"	=	45 AMPS	

* PROVIDE 30 mA TRIP GFI BREAKER.

PANEL SCHEDULE – 'P1A'
208Y/120 VOLTS, 3-PH, 4-W
225 AMP LUG

NEMA 1 FLUSH MOUNTED
A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS
SUB-FEED LUGS

CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
BLR-2 – BOILER ROOM 121	0.50	15	1	1+--2	0.58	15	1	UH-6A AND UH-6B – FAN-AHU 3 120
BLR-3 – BOILER ROOM 121	0.50	15	1	3--+-4	0.54	20	1	RECEPTS – FAN-AHU 3 120
DT-1 – BOILER ROOM 121	1.18	20	1	5--+-6	0.54	20	1	RECEPTS – FAN-AHU 3 120
UH-3 – BOILER ROOM 121	0.29	15	1	7+--8	0.04	20	1	TRAP PRIMER – FAN-AHU 3 120
RECEPTS – BOILER ROOM 121	0.54	20	1	9--+-10	0.54	20	1	RECEPTS – MECH MEZZANINE ABOVE MUSEUM
RECEPTS – BOILER ROOM 121	0.72	20	1	11--+12	---	---	---	SPACE
BAS PANEL – BOILER ROOM 121	0.50	20	1	13+--14	---	---	---	SPACE
TRAP PRIMER – BOILER ROOM 121	0.04	20	1	15--+-16	---	---	---	SPACE
SPACE	---	---	---	17--+18	---	---	---	SPACE
SPACE	---	---	---	19+--20	---	---	---	SPACE
SPACE	---	---	---	21--+-22	---	---	---	SPACE
SPACE	---	---	---	23--+24	---	---	---	SPACE
SPACE	---	---	---	25+--26	---	---	---	SPACE
SPACE	---	---	---	27--+-28	---	---	---	SPACE
SPACE	---	---	---	29--+30	---	---	---	SPACE
SPACE	---	---	---	31+--32	---	---	---	SPACE
SPACE	---	---	---	33--+-34	---	---	---	SPACE
SPACE	---	---	---	35--+36	---	---	---	SPACE
SPACE	---	---	---	37+--38	---	---	---	SPACE
SPACE	---	---	---	39--+-40	---	---	---	SPACE
SPACE	---	---	---	41--+42	1.00	20	1	ACCESS CONTROL DOORS – 1ST FLOOR SW

16 POLE SPACES USED

TOTAL CONNECTED LOADS – A	1.9	KVA			
" – B	2.7	"			
" – C	3.8	"			
" – ALL	8.4	"	=	23 AMPS	@ 208 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	8.4	"	=	23 AMPS	
TOTAL LOAD FOR PANEL AND SUBPANEL	3.7	KVA			
" – B	5.6	"			
" – C	6.8	"			
" – ALL	16.1	"	=	45 AMPS	@ 208 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	16.1	"	=	45 AMPS	

PANEL SCHEDULE – 'P1C'
208Y/120 VOLTS, 3-PH, 4-W
225 AMP LUG

NEMA 1 FLUSH MOUNTED
A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS
SUB-FEED LUGS

CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
RECEPTS – ELECTRICAL 126	0.54	20	1	1+--2	0.90	20	1	RECEPTS – OFFICE 134
RECEPTS – SECURE COLLECTIONS 124	1.08	20	1	3--+-4	0.72	20	1	RECEPTS – OFFICE 134
RECEPTS – SECURE COLLECTIONS 124	0.90	20	1	5--+-6	0.72	20	1	RECEPTS – OFFICE 134
RECEPTS – CORRIDOR 119 AND 137	0.72	20	1	7+--8	1.00	20	1	PLOTTER RECEPT – OFFICE 134
COPIER RECEPT – CORRIDOR 137	1.00	20	1	9--+-10	0.72	20	1	RECEPTS – OFFICE 130
RECEPTS – OFFICE 141	0.54	20	1	11--+12	0.54	20	1	RECEPTS – OFFICE 130
RECEPTS – OFFICE 141	0.54	20	1	13+--14	0.72	20	1	RECEPTS – OFFICE 129 AND 130
RECEPTS – OFFICE 141	1.08	20	1	15--+-16	0.54	20	1	RECEPTS – OFFICE 129
RECEPTS – EXHIBIT SUPPLY 117	0.72	20	1	17--+18	0.72	20	1	RECEPTS – OFFICE 129
RECEPTS – MEN 116, WOMEN 115	0.72	20	1	19+--20	0.72	20	1	RECEPTS – COLLECTIONS PROCESSING 128
RECEPTS – RESTROOM 146, JANITOR 145	0.72	20	1	21--+-22	0.54	20	1	RECEPTS – COLLECTIONS PROCESSING 128
RECEPTS – CLASSROOM 113	0.72	20	1	23--+24	0.90	20	1	RECEPTS – ISO 125
A/V EQUIPMENT RECEPT – CLASSROOM 113	1.00	20	1	25+--26	0.54	20	1	RECEPTS – SECURITY 138
INSTA-HOT RECEPT – CLASSROOM 113	0.75	20	1	27--+-28	0.72	20	1	RECEPTS – SECURITY 138
RECEPTS – CLASSROOM 113	0.72	20	1	29--+30	0.72	20	1	RECEPTS – HALLWAY 139, STAIR S-2, EXTERIOR
RECEPTS – STORAGE 164, 165	0.90	20	1	31+--32	0.72	20	1	RECEPTS – CRATE STORAGE 131
RECEPTS – SECURE COLLECTIONS 124	0.72	20	1	33--+-34	0.54	20	1	DOCK LIGHT RECEPTS – LOADING DOCK
SPARE	---	20	1	35--+36	0.72	20	1	RECEPTS – LOADING DOCK
SPARE	---	20	1	37+--38	0.18	20	1	RECEPTS – MECH MEZZANINE ABOVE OFFICE 134
SPARE	---	20	1	39--+-40	---	20	1	SPARE
SPARE	---	20	1	41--+42	---	---	---	SPACE

41 POLE SPACES USED

TOTAL CONNECTED LOADS – A	9.2	KVA			
" – B	9.1	"			
" – C	7.9	"			
" – ALL	26.3	"	=	73 AMPS	@ 208 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	20.0	"	=	56 AMPS	
TOTAL LOAD FOR PANEL AND SUBPANEL	15.7	KVA			
" – B	14.9	"			
" – C	15.9	"			
" – ALL	46.6	"	=	129 AMPS	@ 208 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	40.4	"	=	112 AMPS	

PANEL SCHEDULE – 'P1D'
208Y/120 VOLTS, 3-PH, 4-W
225 AMP LUG

NEMA 1 SURFACE MOUNTED
A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS

CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
UH-11,12 – WORKSHOP 132, CRATE STORAGE 131	0.58	15	1	1+--2	0.17	15	1	CUH-4 – HALLWAY 139
AST-1 LEAK DETECTION PANEL – EQUIPMENT YARD	1.00	20	1	3--+-4	0.43	15	1	TF-5 – ELECTRICAL 126
GENERATOR TRANSFER PUMP – EQUIPMENT YARD	1.18	20	1	5--+-6	0.29	15	1	TF-4 – TELECOM 118
DOCKLOADER WEST – LOADING DOCK	1.56	20	1	7+--8	0.75	20	1	SINK SENSOR POWER SUPPLIES – STORAGE 156
DOCKLOADER CENTER – LOADING DOCK	1.56	20	1	9--+-10	1.50	20	1	HAND DRYER – WOMEN 115
DOCKLOADER EAST – LOADING DOCK	1.56	20	1	11--+12	1.50	20	1	HAND DRYER – MEN 116
RFP-1 – LOADING DOCK	1.73	20	1	13+--14	0.50	20	1	LIGHTING CONTROLS – CLASSROOM 113
TRAP PRIMER – WORKSHOP 132	0.04	20	1	15--+-16	---	---	---	SPACE
CHEST FREEZER – ISOLATION 125	2.50	20	2	17--+18	---	---	---	SPACE
---	---	---	---	19+--20	---	---	---	SPACE
CHEST FREEZER – ISOLATION 125	2.50	20	2	21--+-22	---	---	---	SPACE
---	---	---	---	23--+24	---	---	---	SPACE
SPACE	---	---	---	25+--26	---	---	---	SPACE
SPACE	---	---	---	27--+-28	---	---	---	SPACE
SPACE	---	---	---	29--+30	---	---	---	SPACE
SPACE	---	---	---	31+--32	---	---	---	SPACE
SPACE	---	---	---	33--+-34	---	---	---	SPACE
SPACE	---	---	---	35--+36	---	---	---	SPACE
SPACE	---	---	---	37+--38	---	---	---	SPACE
SPACE	---	---	---	39--+-40	---	---	---	SPACE
SPACE	---	---	---	41--+42	1.00	20	1	ACCESS CONTROL DOORS – 1ST FLOOR NW

20 POLE SPACES USED

TOTAL CONNECTED LOADS – A	6.5	KVA			
" – B	5.8	"			
" – C	8.0	"			
" – ALL	20.3	"	=	56 AMPS	@ 208 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	20.3	"	=	56 AMPS	

PANEL SCHEDULE – 'P1E'
208Y/120 VOLTS, 3-PH, 4-W
225 AMP LUG

NEMA 1 FLUSH MOUNTED
A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS
SUB-FEED LUGS

CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
JOINER – WOOD WORKSHOP 132	1.56	20	1	1+--2	0.54	20	1	RECEPTS – WOOD WORKSHOP 132
PLANER – WOOD WORKSHOP 132	3.12	20	2	3--+-4	0.72	20	1	RECEPTS – WOOD WORKSHOP 132
---	---	---	---	5--+-6	0.36	20	1	RECEPTS – WOOD WORKSHOP 132
TABLE SAW – WOOD WORKSHOP 132	14.55	35	3	7+--8	0.54	20	1	RECEPTS – WOOD WORKSHOP 132
---	---	---	---	9--+-10	0.72	20	1	RECEPTS – WOOD WORKSHOP 132
---	---	---	---	11--+12	---	---	---	SPACE
DRILL PRESS – WOOD WORKSHOP 132	1.80	20	1	13+--14	---	---	---	SPACE
DISC SANDER – WOOD WORKSHOP 132	2.50	30	2	15--+-16	---	---	---	SPACE
---	---	---	---	17--+18	---	---	---	SPACE
PANEL SAW – WOOD WORKSHOP 132	1.56	20	1	19+--20	---	---	---	SPACE
BAND SAW – WOOD WORKSHOP 132	2.50	30	2	21--+-22	---	---	---	SPACE
---	---	---	---	23--+24	---	---	---	SPACE
MITER SAW – WOOD WORKSHOP 132	1.80	20	1	25+--26	---	---	---	SPACE
SPACE	---	---	---	27--+-28	---	---	---	SPACE
SPACE	---	---	---	29--+30	---	---	---	SPACE
SPACE	---	---	---	31+--32	---	---	---	SPACE
SPACE	---	---	---	33--+-34	---	---	---	SPACE
SPACE	---	---	---	35--+36	---	---	---	SPACE
SPACE	---	---	---	37+--38	---	---	---	SPACE
SPACE	---	---	---	39--+-40	---	---	---	SPACE
SPACE	---	---	---	41--+42	---	---	---	SPACE

18 POLE SPACES USED

TOTAL CONNECTED LOADS – A	12.6	KVA			
" – B	10.3	"			
" – C	9.3	"			
" – ALL	32.3	"	=	90 AMPS	@ 208 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	32.3	"	=	90 AMPS	
TOTAL LOAD FOR PANEL AND SUBPANEL	17.1	KVA			
" – B	19.5	"			
" – C	17.7	"			
" – ALL	54.3	"	=	151 AMPS	@ 208 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	54.3	"	=	151 AMPS	

PANEL SCHEDULE – 'P1F'
208Y/120 VOLTS, 3-PH, 4-W
225 AMP LUG

NEMA 1 SURFACE MOUNTED
A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS

CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
WELDER FUME HOOD – METAL WKSHP 133	0.18	20	1	1+--2	0.90	20	1	RECEPTS – METAL WORKSHOP 133
WELDER – METAL WORKSHOP 133	7.70	50	2	3--+-4	---	20	1	SPARE
---	---	---	---	5--+-6	---	20	1	SPARE
SURFACE GRINDER – METAL WORKSHOP 133	0.89	15	1	7+--8	---	---	---	SPACE
METAL CHOP SAW – METAL WORKSHOP 133	1.80	20	1	9--+-10	---	---	---	SPACE
BUFFER – METAL WORKSHOP 133	1.92	20	1	11--+12	---	---	---	SPACE
GRINDER – METAL WORKSHOP 133	1.92	20	1	13+--14	---	---	---	SPACE
BUFFER – METAL WORKSHOP 133	1.92	20	1	15--+-16	---	---	---	SPACE
METAL BAND SAW – METAL WORKSHOP 133	1.04	15	2	17--+18	---	---	---	SPACE
---	---	---	---	19+--20	---	---	---	SPACE
METAL LATHE – METAL WORKSHOP 133	1.63	20	1	21--+-22	---	---	---	SPACE
MILLING MACHINE – METAL WORKSHOP 133	2.16	20	1	23--+24	---	---	---	SPACE
SPACE	---	---	---	25+--26	---	---	---	SPACE
SPACE	---	---	---	27--+-28	---	---	---	SPACE
SPACE	---	---	---	29--+30	---	---	---	SPACE
SPACE	---	---	---	31+--32	---	---	---	SPACE
SPACE	---	---	---	33--+-34	---	---	---	SPACE
SPACE	---	---	---	35--+36	---	---	---	SPACE
SPACE	---	---	---	37+--38	---	---	---	SPACE
SPACE	---	---	---	39--+-40	---	---	---	SPACE
SPACE	---	---	---	41--+42	---	---	---	SPACE

15 POLE SPACES USED

TOTAL CONNECTED LOADS – A	4.4	KVA			
" – B	9.2	"			
" – C	8.4	"			
" – ALL	22.1	"	=	61 AMPS	@ 208 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	22.1	"	=	61 AMPS	

CONSULTANT NAME :: AMC ENGINEERS
ECI/HYER :: THA ARCHITECTURE
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AKSAS PROJECT NO. 68816

STATE OF ALASKA
LIBRARY ARCHIVES MUSEUM

STATE OF ALASKA 49TH
Kenneth T. Ratcliffe
04/27/2012
EE-8811
REGISTERED PROFESSIONAL ENGINEER

REVISIONS:

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05.01.2012

PANEL SCHEDULES

E012

PANEL SCHEDULE – 'P1G'
208Y/120 VOLTS, 3-PH, 4-W
225 AMP LUG

NEMA 1 SURFACE MOUNTED
A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS

SUB-FEED LUGS

CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
RECEPTS – ELECTRICAL 155	0.54	20	1	1+--2	0.72	20	1	RECEPTS – STORAGE 156, FAMILY RESTROOM 163
RECEPTS – VOLUNTEERS 152	0.72	20	1	3--+4	0.54	20	1	RECEPTS – WOMEN 157
RECEPTS – VOLUNTEERS 152	0.54	20	1	5--+6	0.54	20	1	RECEPTS – MEN 159
MICROWAVE RECEPT – VOLUNTEERS 152	1.50	20	1	7+--8	1.08	20	1	RECEPTS – LOCKERS 160, LOBBY 101 STAIR S-1
COFFEE MAKER RECEPT – VOLUNTEERS 152	1.00	20	1	9--+-10	0.72	20	1	RECEPTS – LOBBY 101
RECEPTS – VOLUNTEERS 152	0.18	20	1	11--+12	0.72	20	1	RECEPTS – LOBBY 101 FLOOR
INSTA-HOT RECEPT – VOLUNTEERS 152	0.75	20	1	13+--14	0.90	20	1	RECEPTS – LOBBY 101
GARBAGE DISPOSAL RECEPT – VOLUNTEERS 152	0.97	20	1	15--+-16	0.36	20	1	RECEPTS – MAIN VESTIBULE 100, EXTERIOR
RECEPTS – VOLUNTEERS 152	0.18	20	1	17--+18	---	20	1	SPARE
RECEPTS – LECTURE HALL 154	0.54	20	1	19+--20	---	20	1	SPARE
RECEPTS – LECTURE HALL 154 FLOOR	0.72	20	1	21--+-22	---	20	1	SPARE
RECEPTS – LECTURE HALL 154, STORAGE 166	0.54	20	1	23--+24	---	20	1	SPARE
RECEPTS – CONTROL ROOM 153	0.54	20	1	25+--26	---	---	---	SPACE
RECEPTS – CONTROL ROOM 153	0.36	20	1	27--+-28	---	---	---	SPACE
RECEPTS – CONTROL ROOM 153	0.36	20	1	29--+30	---	---	---	SPACE
RECEPTS – CONTROL ROOM 153	0.36	20	1	31+--32	---	---	---	SPACE
RECEPTS – CONTROL ROOM 153	0.36	20	1	33--+-34	---	---	---	SPACE
PROJECTOR RECEPTS – CTRL RM 153, STOR 166	0.50	20	1	35--+36	---	---	---	SPACE
RECEPTS – CONTROL ROOM 153	0.36	20	1	37+--38	---	---	---	SPACE
IPAD DOCK, LTG CTRL – CONTROL ROOM 153	0.50	20	1	39--+-40	---	---	---	SPACE
SPARE	---	20	1	41--+42	---	---	---	SPACE

33 POLE SPACES USED

TOTAL CONNECTED LOADS – A	7.3	KVA			
" – B	6.3	"			
" – C	3.6	"			
" – ALL	17.1	"	=	47 AMPS	@ 208 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	16.3	"	=	45 AMPS	

TOTAL LOAD FOR PANEL AND SUBPANEL	14.5	KVA			
" – B	17.6	"			
" – C	13.7	"			
" – ALL	45.8	"	=	127 AMPS	@ 208 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	36.4	"	=	101 AMPS	

PANEL SCHEDULE – 'P1H'
208Y/120 VOLTS, 3-PH, 4-W
225 AMP LUG

NEMA 1 SURFACE MOUNTED
A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS

CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
RECEPTS – OFFICE 151	0.54	20	1	1+--2	0.36	20	1	WATER PURIFIER RECEPT – CHEMISTRY 147
RECEPTS – OBJECT CONSERVATION 150	0.90	20	1	3--+4	1.50	20	1	MICROWAVE RECEPT – CHEMISTRY 147
RECEPTS – OBJECT CONSERVATION 150	0.72	20	1	5--+6	1.50	20	1	OVEN RECEPT – CHEMISTRY 147
RECEPTS – OBJECT CONSERVATION 150	0.54	20	1	7+--8	0.18	20	1	RECEPTS – CHEMISTRY 147
RECEPTS – OBJECT CONSERVATION 150	0.72	20	1	9--+-10	0.90	20	1	RECEPTS – PAPER CONSERVATION 144
RECEPTS – OBJECT CONSERVATION 150	0.72	20	1	11--+12	0.72	20	1	RECEPTS – PAPER CONSERVATION 144
RECEPTS – OBJECT CONSERVATION 150	0.72	20	1	13+--14	0.54	20	1	RECEPTS – PAPER CONSERVATION 144
RECEPTS – OBJECT CONSERVATION 150	0.54	20	1	15--+-16	0.72	20	1	RECEPTS – PAPER CONSERVATION 144 FLOOR
RECEPTS – OBJECT CONSERVATION 150	0.36	20	1	17--+18	0.72	20	1	RECEPTS – PAPER CONSERVATION 144 FLOOR
RECEPTS – OBJECT CONSERVATION 150	0.36	20	1	19+--20	0.54	20	1	RECEPTS – BOOK REPAIR 143
RECEPTS – OBJECT CONSERVATION 150	0.36	20	1	21--+-22	0.72	20	1	RECEPTS – BOOK REPAIR 143
RECEPTS – OBJECT CONSERVATION 150 FLOOR	0.72	20	1	23--+24	1.08	20	1	RECEPTS – PAPER CONSERVATION 144
RECEPTS – OBJECT CONSERVATION 150 FLOOR	0.72	20	1	25+--26	0.18	20	1	RECEPTS – PAPER CONSERVATION 144 CEILING
RECEPTS – LAB SUPPLIES 149	1.08	20	1	27--+-28	0.90	20	1	RECEPTS – OFFICE 142
RECEPTS – LAB SUPPORT 148	0.72	20	1	29--+30	0.48	20	1	FUME HOOD – CHEMISTRY 147
RECEPTS – LAB SUPPORT 148	0.54	20	1	31+--32	---	20	1	SPARE
REFRIGERATOR RECEPT – LAB SUPPORT 148	1.00	20	1	33--+-34	---	20	1	SPARE
RECEPTS – LAB SUPPORT 148	0.36	20	1	35--+36	---	20	1	SPARE
SPARE	---	20	1	37+--38	6.00	20	3	GLASS WASH – CHEMISTRY 147
SPARE	---	20	1	39--+-40	---	---	---	---
SPARE	---	20	1	41--+42	---	---	---	---

42 POLE SPACES USED

TOTAL CONNECTED LOADS – A	7.2	KVA			
" – B	11.3	"			
" – C	10.1	"			
" – ALL	28.7	"	=	80 AMPS	@ 208 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	25.0	"	=	69 AMPS	

PANEL SCHEDULE – 'P1I'
208Y/120 VOLTS, 3-PH, 4-W
100 AMP LUG

NEMA 1 SURFACE MOUNTED
A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS

INTEGRAL TVSS AND 200% NEUTRAL

CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
TF-2 – ELECTRICAL 155	0.48	15	1	1+--2	---	---	---	SPACE
CUH-5A, CUH-5B – MAIN VESTIBULE 100	0.70	15	1	3--+4	---	---	---	SPACE
ADA DOOR OPENER – MAIN VEST 100,FAM RR 163	0.60	15	1	5--+6	---	---	---	SPACE
HAND DRYER – WOMEN 157	1.50	20	1	7+--8	---	---	---	SPACE
HAND DRYER – WOMEN 157	1.50	20	1	9--+-10	---	---	---	SPACE
HAND DRYER – MEN 159	1.50	20	1	11--+12	---	---	---	SPACE
HAND DRYER – MEN 159	1.50	20	1	13+--14	---	---	---	SPACE
SINK SENSOR POWER SUPPLIES – STORAGE 156	0.75	20	1	15--+-16	---	---	---	SPACE
MOTORIZED SCREENS – LECTURE HALL 154	0.29	20	1	17--+18	---	---	---	SPACE
TRAP PRIMERS – LAB AREA	0.11	20	1	19+--20	---	---	---	SPACE
SPACE	---	---	---	21--+-22	---	---	---	SPACE
SPACE	---	---	---	23--+24	---	---	---	SPACE
SPACE	---	---	---	25+--26	---	---	---	SPACE
SPACE	---	---	---	27--+-28	---	---	---	SPACE
SPACE	---	---	---	29--+30	---	---	---	SPACE
SPACE	---	---	---	31+--32	---	---	---	SPACE
SPACE	---	---	---	33--+-34	---	---	---	SPACE
SPACE	---	---	---	35--+36	---	---	---	SPACE
SPACE	---	---	---	37+--38	---	---	---	SPACE
SPACE	---	---	---	39--+-40	---	---	---	SPACE
SPACE	---	---	---	41--+42	1.00	20	1	ACCESS CONTROL DOORS – 1ST FLOOR NE

11 POLE SPACES USED

TOTAL CONNECTED LOADS – A	3.6	KVA			
" – B	2.9	"			
" – C	3.4	"			
" – ALL	9.9	"	=	28 AMPS	@ 208 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	9.9	"	=	28 AMPS	

PANEL SCHEDULE – 'P1J'
208Y/120 VOLTS, 3-PH, 4-W
225 AMP LUG

NEMA 1 SURFACE MOUNTED
A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS

CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
SPACE	---	---	---	1+--2	---	---	---	SPACE
SPACE	---	---	---	3--+4	---	---	---	SPACE
SPACE	---	---	---	5--+6	---	---	---	SPACE
SPACE	---	---	---	7+--8	---	---	---	SPACE
SPACE	---	---	---	9--+-10	---	---	---	SPACE
SPACE	---	---	---	11--+12	---	---	---	SPACE
SPACE	---	---	---	13+--14	---	---	---	SPACE
SPACE	---	---	---	15--+-16	---	---	---	SPACE
SPACE	---	---	---	17--+18	---	---	---	SPACE
SPACE	---	---	---	19+--20	---	---	---	SPACE
SPACE	---	---	---	21--+-22	---	---	---	SPACE
SPACE	---	---	---	23--+24	---	---	---	SPACE
SPACE	---	---	---	25+--26	---	---	---	SPACE
SPACE	---	---	---	27--+-28	---	---	---	SPACE
SPACE	---	---	---	29--+30	---	---	---	SPACE
SPACE	---	---	---	31+--32	---	---	---	SPACE
SPACE	---	---	---	33--+-34	---	---	---	SPACE
SPACE	---	---	---	35--+36	---	---	---	SPACE
SPACE	---	---	---	37+--38	---	---	---	SPACE
SPACE	---	---	---	39--+-40	---	---	---	SPACE
SPACE	---	---	---	41--+42	---	---	---	SPACE

0 POLE SPACES USED

TOTAL CONNECTED LOADS – A	0.0	KVA			
" – B	0.0	"			
" – C	0.0	"			
" – ALL	0.0	"	=	0 AMPS	@ 208 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	0.0	"	=	0 AMPS	

PANEL SCHEDULE – 'P1K'
208Y/120 VOLTS, 3-PH, 4-W
225 AMP LUG

NEMA 1 SURFACE MOUNTED
A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS

SUB-FEED LUGS

CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
RECEPTS – ELECTRICAL 110	0.54	20	1	1+--2	0.72	20	1	RECEPTS – MUSEUM GALLERIES 104 FLOOR
RECEPTS – SOS A/V 108	0.36	20	1	3--+4	0.72	20	1	RECEPTS – MUSEUM GALLERIES 104 FLOOR
RECEPTS – SOS A/V 108	0.36	20	1	5--+6	0.54	20	1	RECEPTS – MUSEUM GALLERIES 104 FLOOR
RECEPTS – SOS A/V 108	0.36	20	1	7+--8	0.72	20	1	RECEPTS – MUSEUM GALLERIES 104 FLOOR
RECEPTS – SOS A/V 108	0.36	20	1	9--+-10	0.72	20	1	RECEPTS – MUSEUM GALLERIES 104 FLOOR
RECEPTS – SOS A/V 108	0.36	20	1	11--+12	0.72	20	1	RECEPTS – MUSEUM GALLERIES 104 FLOOR
RECEPTS – VESTIBULE 109 AND STAIR S-3	0.54	20	1	13+--14	0.54	20	1	RECEPTS – MUSEUM GALLERIES 104 FLOOR
RECEPTS – MARQUIS 112	0.90	20	1	15--+-16	0.72	20	1	RECEPTS – MUSEUM GALLERIES 104 FLOOR
RECEPTS – MARQUIS 112	0.90	20	1	17--+18	0.72	20	1	RECEPTS – MUSEUM GALLERIES 104 FLOOR
RECEPTS – GIFT SHOP FLOOR	0.36	20	1	19+--20	0.72	20	1	RECEPTS – MUSEUM GALLERIES 104 FLOOR
RECEPT – MECH MEZZANINE ABOVE GIFT SHOP	0.18	20	1	21--+-22	0.72	20	1	RECEPTS – MUSEUM GALLERIES 104 FLOOR
SPARE	---	20	1	23--+24	---	---	---	SPACE
SPARE	---	20	1	25+--26	---	---	---	SPACE
SPACE	---	---	---	27--+-28	---	---	---	SPACE
SPACE	---	---	---	29--+30	---	---	---	SPACE
SPACE	---	---	---	31+--32	---	---	---	SPACE
SPACE	---	---	---	33--+-34	---	---	---	SPACE
SPACE	---	---	---	35--+36	---	---	---	SPACE
SPACE	---	---	---	37+--38	---	---	---	SPACE
SPACE	---	---	---	39--+-40	---	---	---	SPACE
SPACE	---	---	---	41--+42	---	---	---	SPACE

24 POLE SPACES USED

TOTAL CONNECTED LOADS – A	4.5	KVA			
" – B	4.7	"			
" – C	3.6	"			
" – ALL	12.8	"	=	35 AMPS	@ 208 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	11.4	"	=	32 AMPS	

TOTAL LOAD FOR PANEL AND SUBPANEL	5.3	KVA			
" – B	5.1	"			
" – C	4.2	"			
" – ALL	14.6	"	=	40 AMPS	@ 208 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	13.2	"	=	37 AMPS	

PANEL SCHEDULE – 'P1L'
208Y/120 VOLTS, 3-PH, 4-W
225 AMP LUG

NEMA 1 SURFACE MOUNTED
A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS

CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
TF-3 – ELECTRICAL 110	0.53	15	1	1+--2	0.30	30	1	RECEPT – EXTERIOR POLE MOUNTED *
CHU-3 – STAIR 3 S-3	0.12	15	1	3--+-4	0.30	30	1	RECEPT – EXTERIOR POLE MOUNTED *
SPACE	---	---	---	5--+-6	0.30	30	1	RECEPT – EXTERIOR POLE MOUNTED *
SPACE	---	---	---	7+--8	---	---	---	SPACE
SPACE	---	---	---	9--+-10	---	---	---	SPACE
SPACE	---	---	---	11--+12	---	---	---	SPACE
SPACE	---	---	---	13+--14	---	---	---	SPACE
SPACE	---	---	---	15--+-16	---	---	---	SPACE
SPACE	---	---	---	17--+18	---	---	---	SPACE
SPACE	---	---	---	19+--20	---	---	---	SPACE
SPACE	---	---	---	21--+-22	---	---	---	SPACE
SPACE	---	---	---	23--+24	---	---	---	SPACE
SPACE	---	---	---	25+--26	---	---	---	SPACE
SPACE	---	---	---	27--+-28	---	---	---	SPACE
SPACE	---	---	---	29--+30	---	---	---	SPACE
SPACE	---	---	---	31+--32	---	---	---	SPACE
SPACE	---	---	---	33--+-34	---	---	---	SPACE
SPACE	---	---	---	35--+36	---	---	---	SPACE
SPACE	---	---	---	37+--38	---	---	---	SPACE
SPACE	---	---	---	39--+-40	---	---	---	SPACE
SPACE	---	---	---	41--+42	0.25	20	1	ACCESS CONTROL DOORS – 1ST FLOOR SE

6 POLE SPACES USED

TOTAL CONNECTED LOADS – A	0.8	KVA			
" – B	0.4	"			
" – C	0.6	"			
" – ALL	1.8	"	=	5 AMPS	@ 208 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	1.8	"	=	5 AMPS	

CONSULTANT NAME :: AMC ENGINEERS
ECI/HYER :: THA ARCHITECTURE
DEPARTMENT OF EDUCATION & EARLY DEVELOPMENT
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
AKSAS PROJECT NO. 68816

STATE OF ALASKA
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STATE OF ALASKA 49TH
Kenneth T. Ratcliffe
04/27/2012
EE-8811
REGISTERED PROFESSIONAL ENGINEER

REVISIONS:

CONSTRUCTION DOCUMENTS

05.01.2012

PANEL SCHEDULES

E013

PANEL SCHEDULE – 'P2A'
208Y/120 VOLTS, 3-PH, 4-W
225 AMP LUG

NEMA 1 SURFACE MOUNTED
A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS

CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
UH-4 – FAN-AHU 1 226A	0.29	15	1	1+--+2	0.29	15	1	UH-5 – FAN-AHU 2 226B
RECEPTS – FAN-AHU 1 226A	0.72	20	1	3--+-4	0.54	20	1	RECEPT S – FAN-AHU 2 226B
RECEPTS – FAN-AHU 1 226A	0.54	20	1	5--+-6	0.54	20	1	RECEPT S – FAN-AHU 2 226B
TRAP PRIMERS – FAN-AHU 1 226A	0.04	15	1	7+--+8	0.04	15	1	TRAP PRIMER – FAN-AHU 2 226B
FIRE SMOKE DAMPER – FAN-AHU 1 226A	0.20	20	1	9--+-10	0.20	20	1	FIRE SMOKE DAMPER – FAN-AHU 2 226B
SPACE	---	---	---	11--+12	---	---	---	SPACE
SPACE	---	---	---	13+--14	---	---	---	SPACE
SPACE	---	---	---	15--+-16	---	---	---	SPACE
SPACE	---	---	---	17--+18	---	---	---	SPACE
SPACE	---	---	---	19+--20	---	---	---	SPACE
SPACE	---	---	---	21--+-22	---	---	---	SPACE
SPACE	---	---	---	23--+24	---	---	---	SPACE
SPACE	---	---	---	25+--26	---	---	---	SPACE
SPACE	---	---	---	27--+-28	---	---	---	SPACE
SPACE	---	---	---	29--+30	---	---	---	SPACE
SPACE	---	---	---	31+--32	---	---	---	SPACE
SPACE	---	---	---	33--+-34	---	---	---	SPACE
DOA-1 LTG AND RECEPT – ROOF	0.66	20	1	35--+36	0.04	15	1	TRAP PRIMER – FAN-AHU 4 225
DOA-2 LTG AND RECEPT – ROOF	0.66	20	1	37+--38	0.54	20	1	RECEPT S – FAN-AHU 4 225
DOA-3 LTG AND RECEPT – ROOF	0.66	20	1	39--+-40	0.54	20	1	RECEPT S – FAN-AHU 4 225
DOA-4 LTG AND RECEPT – ROOF	0.66	20	1	41--+42	0.58	15	1	UH-7A AND UH-7B – FAN-AHU 4 225

TOTAL CONNECTED LOADS – A	1.8	KVA		18 POLE SPACES USED	
" – B	2.9	"			
" – C	3.0	"			
" – ALL	7.7	"	=	21 AMPS	@ 208 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	7.7	"	=	21 AMPS	

PANEL SCHEDULE – 'P2B'
208Y/120 VOLTS, 3-PH, 4-W
225 AMP LUG

NEMA 1 SURFACE MOUNTED
A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS
SUB-FEED LUGS

CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
RECEPTS – ELECTRICAL ROOM 240	0.54	20	1	1+--2	0.54	20	1	RECEPTS – STUDIO 232
PROSTAR RECEPT – DARKROOM 232*	1.44	20	1	3--+-4	0.72	20	1	RECEPTS – STUDIO 232
PROSTAR RECEPT – DARKROOM 232*	1.44	20	1	5--+6	0.72	20	1	RECEPTS – STUDIO 233
RECEPTS – DARKROOM 232*	0.54	20	1	7+--8	0.72	20	1	RECEPTS – STUDIO 233
RECEPTS – DARKROOM 231 AND 232*	0.36	20	1	9--+-10	0.72	20	1	RECEPTS – MICROGRAPHICS 234
RECEPTS – DARKROOM 231*	0.54	20	1	11--+12	0.72	20	1	RECEPTS – MICROGRAPHICS 234
REFRIGERATOR RECEPT – DARKROOM 231*	1.00	20	1	13+--14	0.72	20	1	RECEPTS – MICROGRAPHICS 234
RECEPTS – DARKROOM 231*	0.18	20	1	15--+-16	0.72	20	1	RECEPTS – MICROGRAPHICS 234
EXTEX RECEPT – FILM DUPLICATION 230*	1.80	20	1	17--+18	0.72	20	1	RECEPTS – MICROGRAPHICS 234
RECEPTS – FILM DUPLICATION 230*	0.54	20	1	19+--20	0.72	20	1	RECEPTS – MICROGRAPHICS 234
RECEPTS – FILM DUPLICATION 230*	0.54	20	1	21--+-22	0.72	20	1	RECEPTS – MICROGRAPHICS 234
RECEPTS – FILM DUPLICATION 231*	0.36	20	1	23--+24	0.54	20	1	RECEPTS – STORAGE 235
RECEPTS – FILM DUPLICATION 231*	0.36	20	1	25+--26	0.90	20	1	RECEPTS – STOR 237 AND 239, CORRIDORS
RECEPTS – FILM DUPLICATION 231*	0.54	20	1	27--+-28	0.72	20	1	RECEPTS – ISOLATION 238
OZALID RECEPT – FILM DUPLICATION 231*	2.04	20	1	29--+30	2.50	20	2	CHEST FREEZER – ISOLATION 238
PLANETARY CAMERA – STUDIO 232	4.00	20	3	31+--32	---	---	---	---
---	---	---	---	33--+-34	2.50	20	2	CHEST FREEZER – ISOLATION 238
---	---	---	---	35--+36	---	---	---	---
RECEPT – FILM DUPLICATION 230	2.00	25	2	37+--38	---	---	---	SPACE
---	---	---	---	39--+-40	---	---	---	SPACE
SPACE	---	---	---	41--+42	---	---	---	SPACE

TOTAL CONNECTED LOADS – A	10.2	KVA		38 POLE SPACES USED	
" – B	10.2	"			
" – C	12.7	"			
" – ALL	33.1	"	=	92 AMPS	@ 208 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	30.9	"	=	86 AMPS	

TOTAL LOAD FOR PANEL AND SUBPANEL	16.8	KVA			
" – B	16.7	"			
" – C	18.9	"			
" – ALL	52.4	"	=	146 AMPS	@ 208 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	41.1	"	=	114 AMPS	

* PROVIDE 6 mA TRIP GFI BREAKER.

PANEL SCHEDULE – 'P2C'
208Y/120 VOLTS, 3-PH, 4-W
225 AMP LUG

NEMA 1 SURFACE MOUNTED
A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS

CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
RECEPTS – OFFICE 218	0.72	20	1	1+--2	1.08	20	1	RECEPTS – CORRIDOR 241, MEN 243, WOMEN 244
RECEPTS – OFFICE 218	0.72	20	1	3--+-4	1.08	20	1	RECEPTS – MAIL 216
RECEPTS – OFFICE 218	0.72	20	1	5--+6	1.00	20	1	A/V EQUIP RECEPT – CONFERENCE 245
RECEPTS – CORRIDOR 219	0.90	20	1	7+--8	0.36	20	1	RECEPTS – CONFERENCE 245
RECEPTS – PROJECTS 220	0.72	20	1	9--+-10	0.72	20	1	RECEPTS – CONFERENCE 245
RECEPTS – PROJECTS 220	0.72	20	1	11--+12	0.72	20	1	RECEPTS – CONFERENCE 245 FLOOR
RECEPTS – PROJECTS 221	0.72	20	1	13+--14	0.50	20	1	LIGHTING CONTROLS – CONFERENCE 245
RECEPTS – PROJECTS 221	0.72	20	1	15--+-16	---	20	1	SPARE
RECEPTS – ELECTRONIC RECORDS 222	0.72	20	1	17--+18	---	20	1	SPARE
RECEPTS – ELECTRONIC RECORDS 222	0.72	20	1	19+--20	---	20	1	SPARE
RECEPTS – ELECTRONIC RECORDS 222	0.72	20	1	21--+-22	---	20	1	SPARE
RECEPTS – ELECTRONIC RECORDS 222	0.72	20	1	23--+24	---	20	1	SPARE
RECEPTS – CAMERA ROOM 223	0.72	20	1	25+--26	---	---	---	SPACE
RECEPTS – CAMERA ROOM 223	0.90	20	1	27--+-28	---	---	---	SPACE
RECEPTS – SECURE STORAGE 227	0.90	20	1	29--+30	---	---	---	SPACE
RECEPTS – SECURE STORAGE 227	0.90	20	1	31+--32	---	---	---	SPACE
RECEPTS – SECURE STORAGE 227	0.90	20	1	33--+-34	---	---	---	SPACE
RECEPTS – SECURE STORAGE 227	0.72	20	1	35--+36	---	---	---	SPACE
SPACE	---	---	---	37+--38	---	---	---	SPACE
SPACE	---	---	---	39--+-40	---	---	---	SPACE
SPACE	---	---	---	41--+42	---	---	---	SPACE

TOTAL CONNECTED LOADS – A	6.6	KVA		30 POLE SPACES USED	
" – B	6.5	"			
" – C	6.2	"			
" – ALL	19.3	"	=	54 AMPS	@ 208 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	15.2	"	=	42 AMPS	

PANEL SCHEDULE – 'P2D'
208Y/120 VOLTS, 3-PH, 4-W
225 AMP LUG

NEMA 1 SURFACE MOUNTED
A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS

CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
RECEPTS – PROJECTS 214	0.90	20	1	1+--2	0.72	20	1	RECEPTS – PROCESSING 210 FLOOR
RECEPTS – PROJECTS 213	0.90	20	1	3--+-4	0.72	20	1	RECEPTS – PROCESSING 210
RECEPTS – PROJECTS 212	0.90	20	1	5--+6	0.72	20	1	RECEPTS – PROCESSING 210
RECEPTS – CORR 215, FILES 211	1.08	20	1	7+--8	0.72	20	1	RECEPTS – PROCESSING 210 FLOOR
RECEPTS – TEAM AREA 209	0.72	20	1	9--+-10	0.72	20	1	RECEPTS – PROCESSING 210 FLOOR
RECEPTS – TEAM AREA 209	0.90	20	1	11--+12	0.72	20	1	RECEPTS – PROCESSING 210 FLOOR
SPARE	---	20	1	13+--14	0.72	20	1	RECEPTS – PROCESSING 210 FLOOR
SPARE	---	20	1	15--+-16	0.72	20	1	RECEPTS – PROCESSING 210
SPARE	---	20	1	17--+18	1.08	20	1	RECEPTS – PROCESSING 210
SPACE	---	---	---	19+--20	0.54	20	1	RECEPTS – PROCESSING 210
SPACE	---	---	---	21--+-22	1.08	20	1	RECEPTS – PROCESSING 210
SPACE	---	---	---	23--+24	1.08	20	1	RECEPTS – PROCESSING 210
SPACE	---	---	---	25+--26	1.08	20	1	RECEPTS – PROCESSING 210
SPACE	---	---	---	27--+-28	1.08	20	1	RECEPTS – PROCESSING 210
SPACE	---	---	---	29--+30	0.18	20	1	RECEPT – PROCESSING 210
SPACE	---	---	---	31+--32	0.18	20	1	RECEPT – PROCESSING 210
SPACE	---	---	---	33--+-34	0.75	20	1	INSTA-HOT RECEPT – PROCESSING 210
SPACE	---	---	---	35--+36	---	---	---	SPACE
SPACE	---	---	---	37+--38	---	---	---	SPACE
SPACE	---	---	---	39--+-40	---	---	---	SPACE
SPACE	---	---	---	41--+42	---	---	---	SPACE

TOTAL CONNECTED LOADS – A	5.9	KVA		26 POLE SPACES USED	
" – B	6.7	"			
" – C	5.6	"			
" – ALL	18.2	"	=	51 AMPS	@ 208 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	14.5	"	=	40 AMPS	

PANEL SCHEDULE – 'P2E'
208Y/120 VOLTS, 3-PH, 4-W
225 AMP LUG

NEMA 1 SURFACE MOUNTED
A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS

CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
208V PDU – CAB – A	1.25	30	2	1+--2	0.48	20	1	120V RECEPT – CAB – A
---	---	---	---	3--+-4	0.48	20	1	120V RECEPT – CAB – B
208V PDU – CAB – B	1.25	30	2	5--+6	0.48	20	1	120V RECEPT – CAB – C
---	---	---	---	7+--8	0.48	20	1	120V RECEPT – CAB – D
208V PDU – CAB – C	1.25	30	2	9--+-10	0.48	20	1	120V RECEPT – CAB – E
---	---	---	---	11--+12	0.48	20	1	120V RECEPT – CAB – F
208V PDU – CAB – D	1.25	30	2	13+--14	0.48	20	1	120V RECEPT – CAB – G
---	---	---	---	15--+-16	0.48	20	1	120V RECEPT – CAB – H
208V PDU – CAB – E	1.25	30	2	17--+18	0.48	20	1	120V RECEPT – CAB – I
---	---	---	---	19+--20	---	---	---	SPACE
208V PDU – CAB – F	1.25	30	2	21--+-22	---	---	---	SPACE
---	---	---	---	23--+24	---	---	---	SPACE
208V PDU – CAB – G	1.25	30	2	25+--26	---	---	---	SPACE
---	---	---	---	27--+-28	---	---	---	SPACE
208V PDU – CAB – H	1.25	30	2	29--+30	---	---	---	SPACE
---	---	---	---	31+--32	---	---	---	SPACE
208V PDU – CAB – I	1.25	30	2	33--+-34	---	---	---	SPACE
---	---	---	---	35--+36	---	---	---	SPACE
SPARE		30	2	37+--38	---	---	---	SPACE
---	---	---	---	39--+-40	---	---	---	SPACE
SPARE	---	20	1	41--+42	---	---	---	SPACE
SPACE	---	---	---	43+--44	---	---	---	SPACE
SPACE	---	---	---	45--+-46	2.08	20	2	CRAC-1A
SPACE	---	---	---	47--+48	---	---	---	
SPACE	---	---	---	49+--50	3.46	20	3	CRAC-2A
SPACE	---	---	---	51--+-52	---	---	---	---
SPACE	---	---	---	53--+54	---	---	---	---

TOTAL CONNECTED LOADS – A	6.3	KVA		35 POLE SPACES USED	
" – B	7.4	"			
" – C	7.4	"			
" – ALL	21.1	"	=	59 AMPS	@ 208 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	21.1	"	=	59 AMPS	

PANEL SCHEDULE – 'P2F'
208Y/120 VOLTS, 3-PH, 4-W
225 AMP LUG

NEMA 1 SURFACE MOUNTED
A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS

CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
208V PDU – CAB – A	1.25	30	2	1+--2	0.48	20	1	120V RECEPT – CAB – A
---	---	---	---	3--+-4	0.48	20	1	120V RECEPT – CAB – B
208V PDU – CAB – B	1.25	30	2	5--+6	0.48	20	1	120V RECEPT – CAB – C
---	---	---	---	7+--8	0.48	20	1	120V RECEPT – CAB – D
208V PDU – CAB – C	1.25	30	2	9--+-10	0.48	20	1	120V RECEPT – CAB – E
---	---	---	---	11--+12	0.48	20	1	120V RECEPT – CAB – F
208V PDU – CAB – D	1.25	30	2	13+--14	0.48	20	1	120V RECEPT – CAB – G
---	---	---	---	15--+-16	0.48	20	1	120V RECEPT – CAB – H
208V PDU – CAB – E	1.25	30	2	17--+18	0.48	20	1	120V RECEPT – CAB – I
---	---	---	---	19+--20	---	---	---	SPACE
208V PDU – CAB – F	1.25	30	2	21--+-22	---	---	---	SPACE
---	---	---	---	23--+24	---	---	---	SPACE
208V PDU – CAB – G	1.25	30	2	25+--26	---	---	---	SPACE
---	---	---	---	27--+-28	---	---	---	SPACE
208V PDU – CAB – H	1.25	30	2	29--+30	---	---	---	SPACE
---	---	---	---	31+--32	---	---	---	SPACE
208V PDU – CAB – I	1.25	30	2	33--+-34	---	---	---	SPACE
---	---	---	---	35--+36	---	---	---	SPACE
SPARE		30	2	37+--38	---	---	---	SPACE
---	---	---	---	39--+-40	---	---	---	SPACE
SPARE	---	20	1	41--+42	---	---	---	SPACE
SPACE	---	---	---	43+--44	---	---	---	SPACE
SPACE	---	---	---	45--+-46	2.08	20	2	CRAC-1B
SPACE	---	---	---	47--+48	---	---	---	---
SPACE	---	---	---	49+--50	3.46	20	3	CRAC-2B
SPACE	---	---	---	51--+-52	---	---	---	---
SPACE	---	---	---	53--+54	---	---	---	---

TOTAL CONNECTED LOADS – A	6.3	KVA		35 POLE SPACES USED	
" – B	7.4	"			
" – C	7.4	"			
" – ALL	21.1	"	=	59 AMPS	@ 208 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	21.1	"	=	59 AMPS	

PANEL SCHEDULE – 'P2G'
208Y/120 VOLTS, 3-PH, 4-W
225 AMP LUG

NEMA 1 SURFACE MOUNTED
A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS

CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
208V PDU – CAB – 1	1.25	30	2	1+--2	0.48	20	1	120V RECEPT – CAB – 1
---	---	---	---	3--+-4	0.48	20	1	120V RECEPT – CAB – 2
208V PDU – CAB – 2	1.25	30	2	5--+6	0.48	20	1	120V RECEPT – CAB – 3
---	---	---	---	7+--8	0.48	20	1	120V RECEPT – CAB – 4
208V PDU – CAB – 3	1.25	30	2	9--+-10	0.48	20	1	120V RECEPT – CAB – 5
---	---	---	---	11--+12	0.48	20	1	120V RECEPT – CAB – 6
208V PDU – CAB – 4	1.25	30	2	13+--14	0.48	20	1	120V RECEPT – CAB – 7
---	---	---	---	15--+-16	0.48	20	1	120V RECEPT – CAB – 8
208V PDU – CAB – 5	1.25	30	2	17--+18	0.48	20	1	120V RECEPT – CAB – 9
---	---	---	---	19+--20	---	---	---	SPACE
208V PDU – CAB – 6	1.25	30	2	21--+-22	---	---	---	SPACE
---	---	---	---	23--+24	---	---	---	SPACE
208V PDU – CAB – 7	1.25	30	2	25+--26	---	---	---	SPACE
---	---	---	---	27--+-28	---	---	---	SPACE
208V PDU – CAB – 8	1.25	30	2	29--+30	---	---	---	SPACE
---	---	---	---	31+--32	---	---	---	SPACE
208V PDU – CAB – 9	1.25	30	2	33--+-34	---	---	---	SPACE
---	---	---	---	35--+36	---	---	---	SPACE
SPARE		30	2	37+--38	---	---	---	SPACE
---	---	---	---	39--+-40	---	---	---	SPACE
SPARE	---	20	1	41--+42	---	---	---	SPACE
SPACE	---	---	---	43+--44	---	---	---	SPACE
SPACE	---	---	---	45--+-46	2.08	20	2	CRAC-1B
SPACE	---	---	---	47--+48	---	---	---	---
SPACE	---	---	---	49+--50	3.46	20	3	CRAC-2B
SPACE	---	---	---	51--+-52	---	---	---	---
SPACE	---	---	---	53--+54	---	---	---	---

TOTAL CONNECTED LOADS – A	6.3	KVA		35 POLE SPACES USED	
" – B	7.4	"			
" – C	7.4	"			
" – ALL	21.1	"	=	59 AMPS	@ 208 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	21.1	"	=	59 AMPS	

CONSULTANT NAME :: AMC ENGINEERS
ECI/HYER :: THA ARCHITECTURE
DEPARTMENT OF EDUCATION & EARLY DEVELOPMENT
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
AKSAS PROJECT NO. 68816

STATE OF ALASKA
LIBRARY ARCHIVES MUSEUM

STATE OF ALASKA 49TH
Kenneth T. Ratcliffe
04/27/2012
EE-8811
REGISTERED PROFESSIONAL ENGINEER

REVISIONS:

CONSTRUCTION DOCUMENTS

05.01.2012

PANEL SCHEDULES

E014

PANEL SCHEDULE – 'P2H'
208Y/120 VOLTS, 3-PH, 4-W
100 AMP LUG

NEMA 1 SURFACE MOUNTED
A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS

CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
WH-1, WH-2, WH-3 – FAN-AHU 5&6 242	0.72	15	1	1+--+2	0.66	20	1	DOA-5 LTG AND RECEPT – ROOF
PMP-11, PMP-12, PMP-13 – FAN-AHU 5&6 242	0.54	15	1	3--+4	1.36	20	1	EF-1 – ROOF
PMP-20 – FAN-AHU 5&6 242	0.29	15	1	5--+6	---	---	---	SPACE
UH-8 – FAN-AHU 5&6 242	0.29	15	1	7+--+8	---	---	---	SPACE
RECEPTS – FAN-AHU 5&6 242	0.54	20	1	9--+10	---	---	---	SPACE
RECEPTS – FAN-AHU 5&6 242	0.54	20	1	11--+12	---	---	---	SPACE
BAS PANEL – FAN-AHU 5&6 242	0.20	15	1	13+--+14	---	---	---	SPACE
SPACE	---	---	---	15--+16	---	---	---	SPACE
SPACE	---	---	---	17--+18	---	---	---	SPACE
SPACE	---	---	---	19+--20	---	---	---	SPACE
SPACE	---	---	---	21--+22	---	---	---	SPACE
SPACE	---	---	---	23--+24	1.50	20	1	HAND DRYER – WOMEN 244
SPACE	---	---	---	25+--26	1.50	20	1	HAND DRYER – MEN 243
SPACE	---	---	---	27--+28	---	20	1	E-1 – 40 DEG STORAGE
SPACE	---	---	---	29--+30	---	20	1	E-2 – 50 DEG STORAGE
SPACE	---	---	---	31+--32	---	20	1	E-3 – 0 DEG STORAGE
SPACE	---	---	---	33--+34	1.40	20	1	DH-1 – 40 DEG STORAGE
SPACE	---	---	---	35--+36	1.40	20	1	DH-2 – 50 DEG STORAGE
SPACE	---	---	---	37+--38	0.36	20	1	HEAT TRACE – 0 DEG STORAGE 227C*
SPACE	---	---	---	39--+40	0.07	20	1	TRAP PRIMERS – STORAGE 237, DARKROOM 229
SPACE	---	---	---	41--+42	0.25	20	1	ACCESS CONTROL DOORS – 2ND FLOOR NW

TOTAL CONNECTED LOADS – A	3.7	KVA		19 POLE SPACES USED	
" – B	3.9	"			
" – C	4.0	"			
" – ALL	11.6	"	=	32 AMPS	@ 208 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	11.6	"	=	32 AMPS	

* PROVIDE 30 mA TRIP GFI BREAKER.

PANEL SCHEDULE – 'P2I'
208Y/120 VOLTS, 3-PH, 4-W
225 AMP LUG

NEMA 1 SURFACE MOUNTED
A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS
SUB-FEED LUGS

CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
RECEPTS – OFFICE 248	0.72	20	1	1+--+2	0.90	20	1	RECEPTS – ADMINISTRATION 247
RECEPTS – OFFICE 249	0.72	20	1	3--+4	0.54	20	1	RECEPTS – OFFICE 246
RECEPTS – OFFICE 250	0.72	20	1	5--+6	0.36	20	1	RECEPTS – ADMINISTRATION 247
RECEPTS – OFFICE 251	0.72	20	1	7+--+8	0.72	20	1	RECEPTS – ADMINISTRATION 247
RECEPTS – OFFICE 252	0.72	20	1	9--+10	0.36	20	1	RECEPTS – ADMINISTRATION 247
RECEPTS – OFFICE 253	0.90	20	1	11--+12	0.36	20	1	RECEPTS – ADMINISTRATION 247
RECEPTS – OFFICE 254	0.90	20	1	13+--+14	1.00	20	1	COPIER RECEPT – ADMINISTRATION 247
RECEPTS – CONFERENCE 255	0.90	20	1	15--+16	0.72	20	1	RECEPTS – LOBBY
RECEPTS – CONFERENCE 255	0.54	20	1	17--+18	0.72	20	1	RECEPTS – LOBBY DISPLAY CASE
RECEPTS – CONFERENCE 255	0.72	20	1	19+--20	---	20	1	SPARE
INSTA-HOT RECEPT – CONFERENCE 255	0.75	20	1	21--+22	---	20	1	SPARE
A/V EQUIPMENT RACK RECEPT – CONFERENCE 255	1.00	20	1	23--+24	---	20	1	SPARE
LIGHTING CONTROLS – CONFERENCE 255	0.50	20	1	25+--26	---	---	---	SPACE
SPACE	---	---	---	27--+28	---	---	---	SPACE
SPACE	---	---	---	29--+30	---	---	---	SPACE
SPACE	---	---	---	31+--32	---	---	---	SPACE
SPACE	---	---	---	33--+34	---	---	---	SPACE
SPACE	---	---	---	35--+36	---	---	---	SPACE
SPACE	---	---	---	37+--38	---	---	---	SPACE
SPACE	---	---	---	39--+40	---	---	---	SPACE
SPACE	---	---	---	41--+42	---	---	---	SPACE

TOTAL CONNECTED LOADS – A	6.2	KVA		25 POLE SPACES USED	
" – B	4.7	"			
" – C	4.6	"			
" – ALL	15.5	"	=	43 AMPS	@ 208 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	14.7	"	=	41 AMPS	

TOTAL LOAD FOR PANEL AND SUBPANEL	13.4	KVA			
" – B	9.5	"			
" – C	9.7	"			
" – ALL	32.5	"	=	90 AMPS	@ 208 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	28.3	"	=	78 AMPS	

PANEL SCHEDULE – 'P2J'
208Y/120 VOLTS, 3-PH, 4-W
225 AMP LUG

NEMA 1 SURFACE MOUNTED
A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS

CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
RECEPTS – ELECTRICAL 256	0.36	20	1	1+--+2	0.54	20	1	RECEPTS – STAIR S-1 GALLERY LEVEL
RECEPTS – MAINTENANCE 257	0.90	20	1	3--+4	0.54	20	1	RECEPTS – CATWALK M100
RECEPTS – WOMEN259, MEN 260	0.72	20	1	5--+6	0.90	20	1	RECEPTS – GALLERY M101
RECEPTS – STAIR S-1 LEVEL 2	0.36	20	1	7+--+8	0.90	20	1	RECEPTS – GALLERY M101 DISPLAY CASE
RECEPTS – MULTIPURPOSE 262	0.72	20	1	9--+10	---	20	1	SPARE
RECEPTS – MULTIPURPOSE 262	0.72	20	1	11--+12	---	20	1	SPARE
REFRIGERATOR RECEPT – MULTIPURPOSE 262	1.00	20	1	13+--+14	---	20	1	SPARE
RECEPT – MULTIPURPOSE 262	0.18	20	1	15--+16	---	20	1	SPARE
GARBAGE DISP RECEPT – MULTIPURPOSE 262	0.97	20	1	17--+18	---	20	1	SPARE
INSTA-HOT RECEPT – MULTIPURPOSE 262	0.75	20	1	19+--20	---	---	---	SPACE
RECEPT – MULTIPURPOSE 262	0.18	20	1	21--+22	---	---	---	SPACE
COFFEE MAKER RECEPT – MULTIPURPOSE 262	1.00	20	1	23--+24	---	---	---	SPACE
MICROWAVE RECEPT – MULTIPURPOSE 262	1.50	20	1	25+--26	---	---	---	SPACE
SPACE	---	---	---	27--+28	---	---	---	SPACE
SPACE	---	---	---	29--+30	---	---	---	SPACE
SPACE	---	---	---	31+--32	1.50	20	1	HAND DRYER – WOMEN 259
SPACE	---	---	---	33--+34	1.50	20	1	HAND DRYER – MEN 260
SPACE	---	---	---	35--+36	0.50	20	1	ELEVATOR RECEPT AND LTG – ELEV 1 E-1
SPACE	---	---	---	37+--38	0.29	15	1	TF-6 – ELECTRICAL 256
SPACE	---	---	---	39--+40	0.75	20	1	SINK SENSOR POWER SUPPLIES – STORAGE 156
SPACE	---	---	---	41--+42	0.25	20	1	ACCESS CONTROL DOORS – 2ND FLOOR NE

TOTAL CONNECTED LOADS – A	7.2	KVA		28 POLE SPACES USED	
" – B	4.8	"			
" – C	5.1	"			
" – ALL	17.0	"	=	47 AMPS	@ 208 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	17.0	"	=	47 AMPS	

PANEL SCHEDULE – 'P2L'
208Y/120 VOLTS, 3-PH, 4-W
225 AMP LUG

NEMA 1 SURFACE MOUNTED
A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS
SUB-FEED LUGS

CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
RECEPTS – PROCESSING 210	0.72	20	1	1+--+2	0.72	20	1	RECEPTS – OFFICE 208
RECEPTS – PROCESSING 210	0.72	20	1	3--+4	0.72	20	1	RECEPTS – OFFICE 207
RECEPTS – PROCESSING 210	0.72	20	1	5--+6	0.54	20	1	RECEPTS – COPIER 206
RECEPTS – PROCESSING 210	0.72	20	1	7+--+8	0.54	20	1	RECEPTS – COPIER 206
RECEPTS – PROCESSING 210	0.72	20	1	9--+10	0.72	20	1	RECEPTS – OFFICE 205
RECEPTS – OPEN OFFICE 203	0.72	20	1	11--+12	0.72	20	1	RECEPTS – OFFICE 204
RECEPTS – OPEN OFFICE 203	0.72	20	1	13+--+14	1.08	20	1	RECEPTS – OPEN OFFICE 203
RECEPTS – OPEN OFFICE 203	0.72	20	1	15--+16	0.90	20	1	RECEPTS – OPEN OFFICE 203, STAIR 3 S-3
RECEPTS – OPEN OFFICE 203	0.72	20	1	17--+18	0.54	20	1	RECEPTS – ELECTRICAL 202
RECEPTS – OPEN OFFICE 203	0.72	20	1	19+--20	---	20	1	SPARE
RECEPTS – OPEN OFFICE 203	0.72	20	1	21--+22	---	20	1	SPARE
RECEPTS – OPEN OFFICE 203	0.72	20	1	23--+24	---	20	1	SPARE
RECEPTS – OPEN OFFICE 203	0.72	20	1	25+--26	---	20	1	SPARE
RECEPTS – OPEN OFFICE 203	0.72	20	1	27--+28	---	20	1	SPARE
RECEPTS – OPEN OFFICE 203	0.72	20	1	29--+30	---	20	1	SPARE
RECEPTS – OPEN OFFICE 203	0.72	20	1	31+--32	---	---	---	SPACE
RECEPTS – OPEN OFFICE 203	0.72	20	1	33--+34	---	---	---	SPACE
RECEPTS – OPEN OFFICE 203	0.72	20	1	35--+36	---	---	---	SPACE
SPACE	---	---	---	37+--38	---	---	---	SPACE
SPACE	---	---	---	39--+40	---	---	---	SPACE
SPACE	---	---	---	41--+42	---	---	---	SPACE

TOTAL CONNECTED LOADS – A	6.7	KVA		33 POLE SPACES USED	
" – B	6.7	"			
" – C	6.1	"			
" – ALL	19.4	"	=	54 AMPS	@ 208 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	14.7	"	=	41 AMPS	

TOTAL LOAD FOR PANEL AND SUBPANEL	13.7	KVA			
" – B	14.7	"			
" – C	12.6	"			
" – ALL	41.0	"	=	114 AMPS	@ 208 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	25.8	"	=	71 AMPS	

PANEL SCHEDULE – 'P2M'
208Y/120 VOLTS, 3-PH, 4-W
225 AMP LUG

NEMA 1 SURFACE MOUNTED
A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS

CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
RECEPTS – RESEARCH ROOM 201 FLOOR	0.72	20	1	1+--+2	0.72	20	1	RECEPTS – READING ROOM 200 FLOOR
RECEPTS – RESEARCH ROOM 201 FLOOR	0.72	20	1	3--+4	0.72	20	1	RECEPTS – READING ROOM 200 FLOOR
RECEPTS – RESEARCH ROOM 201 FLOOR	0.72	20	1	5--+6	0.72	20	1	RECEPTS – READING ROOM 200 FLOOR
RECEPTS – RESEARCH ROOM 201 FLOOR	0.72	20	1	7+--+8	0.72	20	1	RECEPTS – READING ROOM 200 FLOOR
RECEPTS – RESEARCH ROOM 201 FLOOR	0.72	20	1	9--+10	0.72	20	1	RECEPTS – READING ROOM 200 FLOOR
RECEPTS – RESEARCH ROOM 201 FLOOR	0.72	20	1	11--+12	0.72	20	1	RECEPTS – READING ROOM 200 FLOOR
RECEPTS – RESEARCH ROOM 201 FLOOR	0.72	20	1	13+--+14	0.72	20	1	RECEPTS – READING ROOM 200 FLOOR
RECEPTS – RESEARCH ROOM 201 FLOOR	0.72	20	1	15--+16	0.72	20	1	RECEPTS – READING ROOM 200 FLOOR
RECEPTS – RESEARCH ROOM 201	0.54	20	1	17--+18	0.72	20	1	RECEPTS – READING ROOM 200 FLOOR
RECEPTS – RESEARCH ROOM 201	0.54	20	1	19+--20	0.72	20	1	RECEPTS – READING ROOM 200 FLOOR
RECEPTS – RESEARCH ROOM 201	0.72	20	1	21--+22	0.72	20	1	RECEPTS – READING ROOM 200 FLOOR
BOOK THEFT RECEPT – RESEARCH ROOM 201	0.50	20	1	23--+24	0.72	20	1	RECEPTS – READING ROOM 200 FLOOR
SPARE	---	20	1	25+--26	0.54	20	1	RECEPTS – READING ROOM 200 FLOOR
SPARE	---	20	1	27--+28	1.08	20	1	RECEPTS – READING ROOM 200 FLOOR
SPACE	---	---	---	29--+30	1.08	20	1	RECEPTS – READING ROOM 200 FLOOR
SPACE	---	---	---	31+--32	0.54	20	1	RECEPTS – READING ROOM 200
SPACE	---	---	---	33--+34	0.72	20	1	RECEPTS – READING ROOM 200
SPACE	---	---	---	35--+36	0.54	20	1	RECEPTS – READING ROOM 200
SPACE	---	---	---	37+--38	0.36	20	1	RECEPTS – READING ROOM 200 FLOOR
SPACE	---	---	---	39--+40	0.50	20	1	BOOK THEFT RECEPT – READING ROOM 200
SPACE	---	---	---	41--+42	---	20	1	SPARE

TOTAL CONNECTED LOADS – A	7.0	KVA		35 POLE SPACES USED	
" – B	8.1	"			
" – C	6.5	"			
" – ALL	21.6	"	=	60 AMPS	@ 208 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	16.0	"	=	44 AMPS	

PANEL SCHEDULE – 'P2N'
208Y/120 VOLTS, 3-PH, 4-W
100 AMP LUG

NEMA 1 SURFACE MOUNTED
A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS
SUB-FEED LUGS

CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
TF-7 – ELECTRICAL 202	0.29	15	1	1+--+2	---	---	---	SPACE
ADA DOOR OPERATOR – READING ROOM 200	0.50	15	1	3--+4	---	---	---	SPACE
SPACE	---	---	---	5--+6	---	---	---	SPACE
SPACE	---	---	---	7+--+8	---	---	---	SPACE
SPACE	---	---	---	9--+10	---	---	---	SPACE
SPACE	---	---	---	11--+12	---	---	---	SPACE
SPACE	---	---	---	13+--+14	---	---	---	SPACE
SPACE	---	---	---	15--+16	---	---	---	SPACE
SPACE	---	---	---	17--+18	---	---	---	SPACE
SPACE	---	---	---	19+--20	---	---	---	SPACE
SPACE	---	---	---	21--+22	---	---	---	SPACE
SPACE	---	---	---	23--+24	---	---	---	SPACE
SPACE	---	---	---	25+--26	---	---	---	SPACE
SPACE	---	---	---	27--+28	---	---	---	SPACE
SPACE	---	---	---	29--+30	---	---	---	SPACE
SPACE	---	---	---	31+--32	---	---	---	SPACE
SPACE	---	---	---	33--+34	---	---	---	SPACE
SPACE	---	---	---	35--+36	---	---	---	SPACE
SPACE	---	---	---	37+--38	---	---	---	SPACE
SPACE	---	---	---	39--+40	---	---	---	SPACE
SPACE	---	---	---	41--+42	0.25	20	1	ACCESS CONTROL DOORS – 2ND FLOOR SE

TOTAL CONNECTED LOADS – A	0.3	KVA		3 POLE SPACES USED	
" – B	0.5	"			
" – C	0.3	"			
" – ALL	1.0	"	=	3 AMPS	@ 208 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	1.0	"	=	3 AMPS	

CONSULTANT NAME :: AMC ENGINEERS
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DEPARTMENT OF EDUCATION & EARLY DEVELOPMENT
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AKSAS PROJECT NO. 68816

STATE OF ALASKA
LIBRARY ARCHIVES MUSEUM

STATE OF ALASKA 49TH
Kenneth T. Ratcliffe
04/27/2012
EE-8811
REGISTERED PROFESSIONAL ENGINEER

REVISIONS:

CONSTRUCTION DOCUMENTS

05.01.2012

PANEL SCHEDULES

E015

PANEL SCHEDULE – 'E0A'
480Y/277 VOLTS, 3-PH, 4-W
100 AMP LUG

NEMA 1 SURFACE MOUNTED
A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS

CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
LTG: ELEV LOBBIES, PARKING GARAGE, EXITS & ELUS	2.91	20	1	1+--2	---	20	1	SPARE
SPARE	---	20	1	3--+4	---	20	1	SPARE
SPARE	---	20	1	5--+6	---	20	1	SPARE
SPARE	---	20	1	7+--8	---	20	1	SPARE
SPARE	---	20	1	9--+-10	---	20	1	SPARE
SPARE	---	20	1	11---+12	---	20	1	SPARE
SPARE	---	20	1	13+---14	---	20	1	SPARE
SPARE	---	20	1	15--+-16	---	20	1	SPARE
SPARE	---	20	1	17---+18	---	20	1	SPARE
SPARE	---	20	1	19+---20	---	---	---	SPACE
SPACE	---	---	---	21--+-22	---	---	---	SPACE
SPACE	---	---	---	23---+24	---	---	---	SPACE
SPACE	---	---	---	25+---26	---	---	---	SPACE
SPACE	---	---	---	27--+-28	---	---	---	SPACE
SPACE	---	---	---	29---+30	---	---	---	SPACE
SPACE	---	---	---	31+---32	---	---	---	SPACE
SPACE	---	---	---	33--+-34	---	---	---	SPACE
SPACE	---	---	---	35---+36	---	---	---	SPACE
SPACE	---	---	---	37+---38	---	---	---	SPACE
SPACE	---	---	---	39--+-40	---	---	---	SPACE
SPACE	---	---	---	41---+42	---	---	---	SPACE

TOTAL CONNECTED LOADS – A	2.9	KVA		19 POLE SPACES USED	
" – B	0.0	"			
" – C	0.0	"			
" – ALL	2.9	"	=	3 AMPS	@ 480 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	3.6	"	=	4 AMPS	

PANEL SCHEDULE – 'E1A'
480Y/277 VOLTS, 3-PH, 4-W
100 AMP LUG

NEMA 1 SURFACE MOUNTED
A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS

CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
LTG: EXTERIOR BLDG MOUNTED, SECURE STOR, VEST	2.26	20	1	1+--2	---	20	1	SPARE
SPARE	---	20	1	3--+4	---	20	1	SPARE
SPARE	---	20	1	5--+6	---	20	1	SPARE
SPARE	---	20	1	7+--8	---	20	1	SPARE
SPARE	---	20	1	9--+-10	---	20	1	SPARE
SPARE	---	20	1	11---+12	---	20	1	SPARE
SPARE	---	20	1	13+---14	---	20	1	SPARE
SPARE	---	20	1	15--+-16	---	20	1	SPARE
SPARE	---	20	1	17---+18	---	20	1	SPARE
SPARE	---	20	1	19+---20	---	---	---	SPACE
SPACE	---	---	---	21--+-22	---	---	---	SPACE
SPACE	---	---	---	23---+24	---	---	---	SPACE
SPACE	---	---	---	25+---26	---	---	---	SPACE
SPACE	---	---	---	27--+-28	---	---	---	SPACE
SPACE	---	---	---	29---+30	---	---	---	SPACE
SPACE	---	---	---	31+---32	---	---	---	SPACE
SPACE	---	---	---	33--+-34	---	---	---	SPACE
SPACE	---	---	---	35---+36	---	---	---	SPACE
SPACE	---	---	---	37+---38	---	---	---	SPACE
SPACE	---	---	---	39--+-40	---	---	---	SPACE
SPACE	---	---	---	41---+42	---	---	---	SPACE

TOTAL CONNECTED LOADS – A	2.3	KVA		19 POLE SPACES USED	
" – B	0.0	"			
" – C	0.0	"			
" – ALL	2.3	"	=	3 AMPS	@ 480 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	2.8	"	=	3 AMPS	

PANEL SCHEDULE – 'E1B'
480Y/277 VOLTS, 3-PH, 4-W
100 AMP LUG

NEMA 1 SURFACE MOUNTED
A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS
SUB-FEED LUGS

CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
LTG: STAIR 2	0.74			1+--2	---	20	1	SPARE
LTG: WORKSHOP, HALLS, EXTERIOR CANOPIES, RESTROOMS	1.46	20	1	3--+4	---	20	1	SPARE
SPARE	---	20	1	5--+6	---	20	1	SPARE
SPARE	---	20	1	7+--8	---	20	1	SPARE
SPARE	---	20	1	9--+-10	---	20	1	SPARE
SPARE	---	20	1	11---+12	---	20	1	SPARE
SPARE	---	20	1	13+---14	---	20	1	SPARE
SPARE	---	20	1	15--+-16	---	20	1	SPARE
SPARE	---	20	1	17---+18	---	20	1	SPARE
SPARE	---	20	1	19+---20	---	---	---	SPACE
SPACE	---	---	---	21--+-22	---	---	---	SPACE
SPACE	---	---	---	23---+24	---	---	---	SPACE
SPACE	---	---	---	25+---26	---	---	---	SPACE
SPACE	---	---	---	27--+-28	---	---	---	SPACE
SPACE	---	---	---	29---+30	---	---	---	SPACE
SPACE	---	---	---	31+---32	---	---	---	SPACE
SPACE	---	---	---	33--+-34	---	---	---	SPACE
SPACE	---	---	---	35---+36	---	---	---	SPACE
SPACE	---	---	---	37+---38	---	---	---	SPACE
SPACE	---	---	---	39--+-40	---	---	---	SPACE
SPACE	---	---	---	41---+42	---	---	---	SPACE

TOTAL CONNECTED LOADS – A	0.0	KVA		18 POLE SPACES USED	
" – B	1.5	"			
" – C	0.0	"			
" – ALL	1.5	"	=	2 AMPS	@ 480 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	1.8	"	=	2 AMPS	

TOTAL LOAD FOR PANEL AND SUBPANEL	2.0	KVA			
" – B	2.9	"			
" – C	1.1	"			
" – ALL	5.9	"	=	7 AMPS	@ 480 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	7.4	"	=	9 AMPS	

PANEL SCHEDULE – 'E1C'
480Y/277 VOLTS, 3-PH, 4-W
100 AMP LUG

NEMA 1 SURFACE MOUNTED
A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS
SUB-FEED LUGS

CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
LTG: STAIR 1	1.47	20	1	1+--2	---	20	1	SPARE
LTG: HALLWAYS, LECTURE HALL, EXTERIOR CANOPIES	1.75	20	1	3--+4	---	20	1	SPARE
SPARE	---	20	1	5--+6	---	20	1	SPARE
SPARE	---	20	1	7+--8	---	20	1	SPARE
SPARE	---	20	1	9--+-10	---	20	1	SPARE
SPARE	---	20	1	11---+12	---	20	1	SPARE
SPARE	---	20	1	13+---14	---	20	1	SPARE
SPARE	---	20	1	15--+-16	---	20	1	SPARE
SPARE	---	20	1	17---+18	---	20	1	SPARE
SPARE	---	20	1	19+---20	---	---	---	SPACE
SPACE	---	---	---	21--+-22	---	---	---	SPACE
SPACE	---	---	---	23---+24	---	---	---	SPACE
SPACE	---	---	---	25+---26	---	---	---	SPACE
SPACE	---	---	---	27--+-28	---	---	---	SPACE
SPACE	---	---	---	29---+30	---	---	---	SPACE
SPACE	---	---	---	31+---32	---	---	---	SPACE
SPACE	---	---	---	33--+-34	---	---	---	SPACE
SPACE	---	---	---	35---+36	---	---	---	SPACE
SPACE	---	---	---	37+---38	---	---	---	SPACE
SPACE	---	---	---	39--+-40	---	---	---	SPACE
SPACE	---	---	---	41---+42	---	---	---	SPACE

TOTAL CONNECTED LOADS – A	1.5	KVA		19 POLE SPACES USED	
" – B	1.7	"			
" – C	0.0	"			
" – ALL	3.2	"	=	4 AMPS	@ 480 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	3.6	"	=	4 AMPS	

TOTAL LOAD FOR PANEL AND SUBPANEL	2.1	KVA			
" – B	4.6	"			
" – C	0.3	"			
" – ALL	7.0	"	=	8 AMPS	@ 480 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	8.3	"	=	10 AMPS	

PANEL SCHEDULE – 'E1D'
480Y/277 VOLTS, 3-PH, 4-W
100 AMP LUG

NEMA 1 SURFACE MOUNTED
A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS
SUB-FEED LUGS

CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
STAIR 3	0.74	20	1	1+--2	---	20	1	SPARE
SPARE	---	20	1	3--+4	---	20	1	SPARE
SPARE	---	20	1	5--+6	---	20	1	SPARE
SPARE	---	20	1	7+--8	---	20	1	SPARE
SPARE	---	20	1	9--+-10	---	20	1	SPARE
SPARE	---	20	1	11---+12	---	20	1	SPARE
SPARE	---	20	1	13+---14	---	20	1	SPARE
SPARE	---	20	1	15--+-16	---	20	1	SPARE
SPARE	---	20	1	17---+18	---	20	1	SPARE
SPARE	---	20	1	19+---20	---	---	---	SPACE
SPACE	---	---	---	21--+-22	---	---	---	SPACE
SPACE	---	---	---	23---+24	---	---	---	SPACE
SPACE	---	---	---	25+---26	---	---	---	SPACE
SPACE	---	---	---	27--+-28	---	---	---	SPACE
SPACE	---	---	---	29---+30	---	---	---	SPACE
SPACE	---	---	---	31+---32	---	---	---	SPACE
SPACE	---	---	---	33--+-34	---	---	---	SPACE
SPACE	---	---	---	35---+36	---	---	---	SPACE
SPACE	---	---	---	37+---38	---	---	---	SPACE
SPACE	---	---	---	39--+-40	---	---	---	SPACE
SPACE	---	---	---	41---+42	---	---	---	SPACE

TOTAL CONNECTED LOADS – A	0.7	KVA		19 POLE SPACES USED	
" – B	0.0	"			
" – C	0.0	"			
" – ALL	0.7	"	=	1 AMPS	@ 480 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	0.9	"	=	1 AMPS	

TOTAL LOAD FOR PANEL AND SUBPANEL	4.4	KVA			
" – B	2.9	"			
" – C	2.9	"			
" – ALL	10.2	"	=	12 AMPS	@ 480 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	12.7	"	=	15 AMPS	

PANEL SCHEDULE – 'E2A'
480Y/277 VOLTS, 3-PH, 4-W
100 AMP LUG

NEMA 1 SURFACE MOUNTED
A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS

CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
LTG: SECURE STORAGE	1.95	20	1	1+--2	---	20	1	SPARE
LTG: SECURE STORAGE	1.46	20	1	3--+4	---	20	1	SPARE
LTG: MICROGRAPHICS, CORRIDORS	1.06	20	1	5--+6	---	20	1	SPARE
SPARE	---	20	1	7+--8	---	20	1	SPARE
SPARE	---	20	1	9--+-10	---	20	1	SPARE
SPARE	---	20	1	11---+12	---	20	1	SPARE
SPARE	---	20	1	13+---14	---	20	1	SPARE
SPARE	---	20	1	15--+-16	---	20	1	SPARE
SPARE	---	20	1	17---+18	---	20	1	SPARE
SPARE	---	20	1	19+---20	---	---	---	SPACE
SPACE	---	---	---	21--+-22	---	---	---	SPACE
SPACE	---	---	---	23---+24	---	---	---	SPACE
SPACE	---	---	---	25+---26	---	---	---	SPACE
SPACE	---	---	---	27--+-28	---	---	---	SPACE
SPACE	---	---	---	29---+30	---	---	---	SPACE
SPACE	---	---	---	31+---32	---	---	---	SPACE
SPACE	---	---	---	33--+-34	---	---	---	SPACE
SPACE	---	---	---	35---+36	---	---	---	SPACE
SPACE	---	---	---	37+---38	---	---	---	SPACE
SPACE	---	---	---	39--+-40	---	---	---	SPACE
SPACE	---	---	---	41---+42	---	---	---	SPACE

TOTAL CONNECTED LOADS – A	2.0	KVA		19 POLE SPACES USED	
" – B	1.5	"			
" – C	1.1	"			
" – ALL	4.5	"	=	5 AMPS	@ 480 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	5.6	"	=	7 AMPS	

PANEL SCHEDULE – 'E2B'
480Y/277 VOLTS, 3-PH, 4-W
100 AMP LUG

NEMA 1 SURFACE MOUNTED
A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS

CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
LTG: ADMIN 247, RESTROOMS, CORRIDOR 261	0.64	20	1	1+--2	---	20	1	SPARE
LTG: LOBBY NORTH WALL COVE FIXTURES	2.88	20	1	3--+4	---	20	1	SPARE
LTG: GALLERY LOBBY NORTH HALL, BRIDGE	0.26	20	1	5--+6	---	20	1	SPARE
SPARE	---	20	1	7+--8	---	20	1	SPARE
SPARE	---	20	1	9--+-10	---	20	1	SPARE
SPARE	---	20	1	11---+12	---	20	1	SPARE
SPARE	---	20	1	13+---14	---	20	1	SPARE
SPARE	---	20	1	15--+-16	---	20	1	SPARE
SPARE	---	20	1	17---+18	---	20	1	SPARE
SPARE	---	20	1	19+---20	---	---	---	SPACE
SPACE	---	---	---	21--+-22	---	---	---	SPACE
SPACE	---	---	---	23---+24	---	---	---	SPACE
SPACE	---	---	---	25+---26	---	---	---	SPACE
SPACE	---	---	---	27--+-28	---	---	---	SPACE
SPACE	---	---	---	29---+30	---	---	---	SPACE
SPACE	---	---	---	31+---32	---	---	---	SPACE
SPACE	---	---	---	33--+-34	---	---	---	SPACE
SPACE	---	---	---	35---+36	---	---	---	SPACE
SPACE	---	---	---	37+---38	---	---	---	SPACE
SPACE	---	---	---	39--+-40	---	---	---	SPACE
SPACE	---	---	---	41---+42	---	---	---	SPACE

TOTAL CONNECTED LOADS – A	0.6	KVA		19 POLE SPACES USED	
" – B	2.9	"			
" – C	0.3	"			
" – ALL	3.8	"	=	5 AMPS	@ 480 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	4.7	"	=	6 AMPS	

PANEL SCHEDULE – 'E2C'
480Y/277 VOLTS, 3-PH, 4-W
100 AMP LUG

NEMA 1 SURFACE MOUNTED
A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS

CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
LTG: PROCESSING, VEST	0.81	20	1	1+--2	---	20	1	SPARE
LTG: LOBBY SOUTH COVE LIGHTS	2.88	20	1	3--+4	---	20	1	SPARE
LTG: READING ROOM NORTH COVE LIGHTS	2.88	20	1	5--+6	---	20	1	SPARE
LTG: READ ROOM SOUTH COVE LIGHTS	2.88	20	1	7+--8	---	20	1	SPARE
SPARE	---	20	1	9--+-10	---	20	1	SPARE
SPARE	---	20	1	11---+12	---	20	1	SPARE
SPARE	---	20	1	13+---14	---	20	1	SPARE
SPARE	---	20	1	15--+-16	---	20	1	SPARE
SPARE	---	20	1	17---+18	---	20	1	SPARE
SPARE	---	20	1	19+---20	---	---	---	SPACE
SPACE	---	---	---	21--+-22	---	---	---	SPACE
SPACE	---	---	---	23---+24	---	---	---	SPACE
SPACE	---	---	---	25+---26	---	---	---	SPACE
SPACE	---	---	---	27--+-28	---	---	---	SPACE
SPACE	---	---	---	29---+30	---	---	---	SPACE
SPACE	---	---	---	31+---32	---	---	---	SPACE
SPACE	---	---	---	33--+-34	---	---	---	SPACE
SPACE	---	---	---	35---+36	---	---	---	SPACE
SPACE	---	---	---	37+---38	---	---	---	SPACE
SPACE	---	---	---	39--+-40	---	---	---	SPACE
SPACE	---	---	---	41---+42	---	---	---	SPACE

TOTAL CONNECTED LOADS – A	3.7	KVA		19 POLE SPACES USED	
" – B	2.9	"			
" – C	2.9	"			
" – ALL	9.5	"	=	11 AMPS	@ 480 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS	11.8	"	=	14 AMPS	

CONSULTANT NAME :: AMC ENGINEERS
ECI/HYER :: THA ARCHITECTURE
DEPARTMENT OF EDUCATION & EARLY DEVELOPMENT
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES

AKSAS PROJECT NO. 68816

STATE OF ALASKA
LIBRARY ARCHIVES MUSEUM

STATE OF ALASKA 49TH
Kenneth T. Ratcliffe
04/27/2012
EE-8811
REGISTERED PROFESSIONAL ENGINEER

REVISIONS:

CONSTRUCTION DOCUMENTS

05.01.2012

PANEL SCHEDULES

E016

PANEL SCHEDULE – 'U0A' 208Y/120 VOLTS, 3-PH, 4-W 100 AMP LUG	NEMA 1 SURFACE MOUNTED A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS							
CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
RECEPTS – TELECOM P04 RACK 1	0.36	20	1	1+--2	0.36	20	1	RECEPTS – TELECOM P04 RACK 1
RECEPTS – TELECOM P04 RACK 2	0.36	20	1	3--+-4	0.36	20	1	RECEPTS – TELECOM P04 RACK 2
RECEPTS – TELECOM P04 RACK 3	0.36	20	1	5--+-6	0.36	20	1	RECEPTS – TELECOM P04 RACK 3
RECEPTS – TELECOM P04 RACK 4	0.36	20	1	7+--8	0.36	20	1	RECEPTS – TELECOM P04 RACK 4
RECEPTS – TELECOM P04 WEST	0.36	20	1	9--+-10	0.36	20	1	RECEPTS – TELECOM P04 EAST
RECEPTS – TELECOM P04 SOUTH	0.36	20	1	11--+12	---	---	---	SPACE
SPACE	---	---	---	13+--14	---	---	---	SPACE
SPACE	---	---	---	15--+-16	---	---	---	SPACE
SPACE	---	---	---	17--+18	---	---	---	SPACE
SPACE	---	---	---	19+--20	---	---	---	SPACE
SPACE	---	---	---	21--+-22	---	---	---	SPACE
SPACE	---	---	---	23--+24	---	---	---	SPACE
SPACE	---	---	---	25+--26	---	---	---	SPACE
SPACE	---	---	---	27--+-28	---	---	---	SPACE
SPACE	---	---	---	29--+30	---	---	---	SPACE
SPACE	---	---	---	31+--32	---	---	---	SPACE
SPACE	---	---	---	33--+-34	---	---	---	SPACE
SPACE	---	---	---	35--+36	---	---	---	SPACE
SPACE	---	---	---	37+--38	---	---	---	SPACE
SPACE	---	---	---	39--+-40	2.08	20	2	CRAC-4 – TELECOM P04
SPACE	---	---	---	41--+42	---	---	---	---

TOTAL CONNECTED LOADS – A 1.4 KVA — 13 POLE SPACES USED
" – B 2.5 "
" – C 2.1 "
" – ALL 6.0 " = 17 AMPS @ 208 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS 6.0 " = 17 AMPS

PANEL SCHEDULE – 'U1A' 208Y/120 VOLTS, 3-PH, 4-W 100 AMP LUG	NEMA 1 SURFACE MOUNTED A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS							
CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
RECEPTS – TELECOM 118 RACK 1	0.36	20	1	1+--2	0.36	20	1	RECEPTS – TELECOM 118 RACK 1
RECEPTS – TELECOM 118 RACK 2	0.36	20	1	3--+-4	0.36	20	1	RECEPTS – TELECOM 118 RACK 2
RECEPTS – TELECOM 118 RACK 3	0.36	20	1	5--+-6	0.36	20	1	RECEPTS – TELECOM 118 RACK 3
RECEPTS – TELECOM 118 RACK 4	0.36	20	1	7+--8	0.36	20	1	RECEPTS – TELECOM 118 RACK 4
RECEPTS – TELECOM 118 RACK 5	0.36	20	1	9--+-10	0.36	20	1	RECEPTS – TELECOM 118 RACK 5
SPACE	---	---	---	11--+12	0.36	20	1	RECEPTS – TELECOM 118 NORTH
SPACE	---	---	---	13+--14	0.36	20	1	RECEPTS – TELECOM 118 SOUTH
SPACE	---	---	---	15--+-16	0.36	20	1	RECEPTS – TELECOM 118 SOUTH
SPACE	---	---	---	17--+18	0.36	20	1	RECEPTS – TELECOM 118 NORTH
SPACE	---	---	---	19+--20	0.36	20	1	RECEPTS – TELECOM 118 WEST
SPACE	---	---	---	21--+-22	---	---	---	SPACE
SPACE	---	---	---	23--+24	---	---	---	SPACE
SPACE	---	---	---	25+--26	---	---	---	SPACE
SPACE	---	---	---	27--+-28	---	---	---	SPACE
SPACE	---	---	---	29--+30	---	---	---	SPACE
SPACE	---	---	---	31+--32	---	---	---	SPACE
SPACE	---	---	---	33--+-34	---	---	---	SPACE
SPACE	---	---	---	35--+36	---	---	---	SPACE
SPACE	---	---	---	37+--38	---	---	---	SPACE
SPACE	---	---	---	39--+-40	2.08	20	2	CRAC-4 – TELECOM P04
SPACE	---	---	---	41--+42	---	---	---	---

TOTAL CONNECTED LOADS – A 2.2 KVA — 17 POLE SPACES USED
" – B 2.8 "
" – C 2.5 "
" – ALL 7.5 " = 21 AMPS @ 208 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS 7.5 " = 21 AMPS

PANEL SCHEDULE – 'U2A' 208Y/120 VOLTS, 3-PH, 4-W 225 AMP LUG	NEMA 1 SURFACE MOUNTED A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS							
CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
208V PDU – CAB – A	1.25	30	2	1+--2	0.48	20	1	120V RECEPT – CAB – A
---	---	---	---	3--+-4	0.48	20	1	120V RECEPT – CAB – B
208V PDU – CAB – B	1.25	30	2	5--+-6	0.48	20	1	120V RECEPT – CAB – C
---	---	---	---	7+--8	0.48	20	1	120V RECEPT – CAB – D
208V PDU – CAB – C	1.25	30	2	9--+-10	0.48	20	1	120V RECEPT – CAB – E
---	---	---	---	11--+12	0.48	20	1	120V RECEPT – CAB – F
208V PDU – CAB – D	1.25	30	2	13+--14	0.48	20	1	120V RECEPT – CAB – G
---	---	---	---	15--+-16	0.48	20	1	120V RECEPT – CAB – H
208V PDU – CAB – E	1.25	30	2	17--+18	0.48	20	1	120V RECEPT – CAB – I
---	---	---	---	19+--20				
208V PDU – CAB – F	1.25	30	2	21--+-22				
---	---	---	---	23--+24				
208V PDU – CAB – G	1.25	30	2	25+--26				
---	---	---	---	27--+-28				
208V PDU – CAB – H	1.25	30	2	29--+30				
---	---	---	---	31+--32				
208V PDU – CAB – I	1.25	30	2	33--+-34				
---	---	---	---	35--+36				
SPARE		30	2	37+--38				
---	---	---	---	39--+-40				
SPARE	---	20	1	41--+42				
				43+--44				
				45--+-46				
				47--+48				
				49+--50				
				51--+-52				
				53--+54				

TOTAL CONNECTED LOADS – A 5.2 KVA — 30 POLE SPACES USED
" – B 5.2 "
" – C 5.2 "
" – ALL 15.6 " = 43 AMPS @ 208 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS 15.6 " = 43 AMPS

PANEL SCHEDULE – 'U2B' 208Y/120 VOLTS, 3-PH, 4-W 225 AMP LUG	NEMA 1 SURFACE MOUNTED A.I.R. PER POWER ONE-LINE AND SPECIFICATIONS							
CIRCUIT DESCRIPTION	KVA	AMP	POLE	ABC	KVA	AMP	POLE	CIRCUIT DESCRIPTION
208V PDU – CAB – 1	1.25	30	2	1+--2	0.48	20	1	RECEPTS – CABINET 1
---	---	---	---	3--+-4	0.48	20	1	RECEPTS – CABINET 2
208V PDU – CAB – 2	1.25	30	2	5--+-6	0.48	20	1	RECEPTS – CABINET 3
---	---	---	---	7+--8	0.48	20	1	RECEPTS – CABINET 4
208V PDU – CAB – 3	1.25	30	2	9--+-10	0.48	20	1	RECEPTS – CABINET 5
---	---	---	---	11--+12	0.48	20	1	RECEPTS – CABINET 6
208V PDU – CAB – 4	1.25	30	2	13+--14	0.48	20	1	RECEPTS – CABINET 7
---	---	---	---	15--+-16	0.48	20	1	RECEPTS – CABINET 8
208V PDU – CAB – 5	1.25	30	2	17--+18	0.48	20	1	RECEPTS – CABINET 9
---	---	---	---	19+--20				
208V PDU – CAB – 6	1.25	30	2	21--+-22				
---	---	---	---	23--+24				
208V PDU – CAB – 7	1.25	30	2	25+--26				
---	---	---	---	27--+-28				
208V PDU – CAB – 8	1.25	30	2	29--+30				
---	---	---	---	31+--32				
208V PDU – CAB – 9	1.25	30	2	33--+-34				
---	---	---	---	35--+36				
SPARE		30	2	37+--38				
---	---	---	---	39--+-40				
SPARE	---	20	1	41--+42				
				43+--44				
				45--+-46				
				47--+48				
				49+--50				
				51--+-52				
				53--+54				

TOTAL CONNECTED LOADS – A 5.2 KVA — 30 POLE SPACES USED
" – B 5.2 "
" – C 5.2 "
" – ALL 15.6 " = 43 AMPS @ 208 VOLTS, 3-PHASE
TOTAL LOAD WITH NEC FACTORS 15.6 " = 43 AMPS

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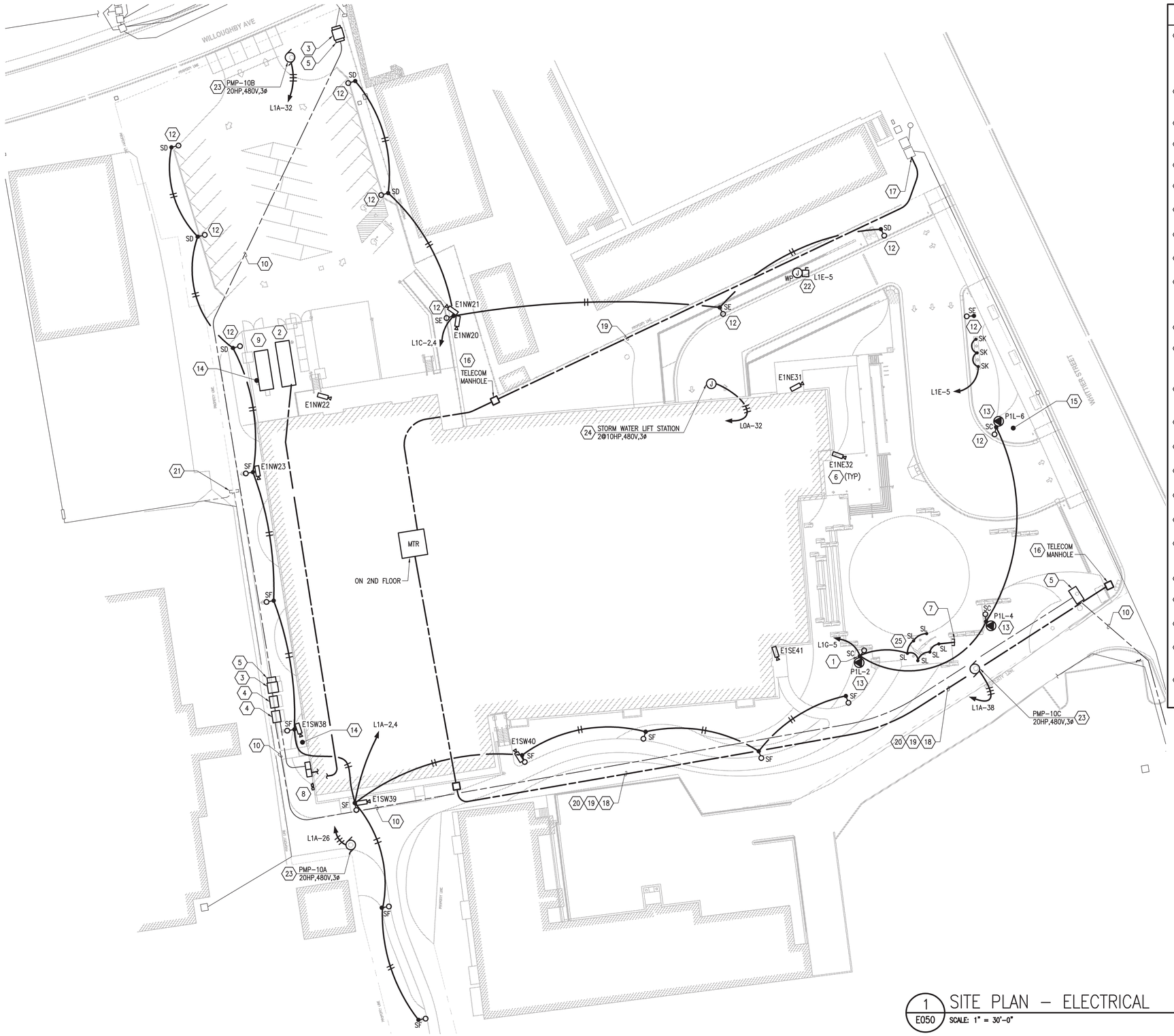
PANEL SCHEDULES

E017



SHEET NOTES

1. PROVIDE PIN AND SLEEVE RECEPTACLE WITH INTEGRAL INTERLOCKED DISCONNECT FOR EXTERIOR EVENT POWER. HUBBELL PART NUMBER HBL5100MI9W OR APPROVED EQUAL. MOUNT ON UNI-STRUT BRACKET AT BASE OF POLE. RECEPTACLE IS FED FROM DISTRIBUTION PANEL DP1C. REFER TO POWER ONE LINE DIAGRAM FOR ADDITIONAL INFORMATION. PROVIDE MATCHING PLUG HBL5100P9W AND DELIVER TO OWNER.
2. DIESEL GENERATOR IN WEATHER PROTECTIVE ENCLOSURE WITH LEVEL II SOUND ATTENUATION. REFER TO SPECIFICATION SECTION 26 30 00 AND POWER ONE-LINE DIAGRAM FOR ADDITIONAL INFORMATION.
3. SWITCH CABINET BY ALASKA ELECTRIC LIGHT AND POWER (AEL&P).
4. TRANSFORMER BY AEL&P.
5. UTILITY VAULT BY AEL&P.
6. PROVIDE CCTV CAMERA AT LOCATION INDICATED. REFER TO SHEET E803 FOR CAMERA SCHEDULE AND SHEET E741 FOR MOUNTING DETAILS.
7. PROVIDE 3/4" CONDUIT ONLY STUBBED FROM LAST FIXTURE TO THIS APPROXIMATE LOCATION FOR FUTURE NIMBUS SCULPTURE PLAQUE ILLUMINATION.
8. PROVIDE SHUNT TRIP SERVICE DISCONNECTS AT THIS LOCATION. REFER TO ONE-LINE DIAGRAM ON SHEET E901 FOR ADDITIONAL INFORMATION.
9. ABOVE GROUND STORAGE TANK. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
10. UNDERGROUND MEDIUM VOLTAGE LINE EXTENSION BY AEL&P.
11. SITE LIGHTING POLE BASES SHALL BE IN ACCORDANCE WITH DETAIL 2/E701 UNLESS OTHERWISE NOTED.
12. PROVIDE SITE LIGHTING POLE BASE IN ACCORDANCE WITH DETAIL 1/E701.
13. PROVIDE NEMA L5-30 RECEPTACLE RECESSED IN BASE OF ALUMINUM POLE. PROVIDE LOCKING WEATHERPROOF COVER AND CONNECT TO GFCI PROTECTED CIRCUIT AS NOTED WITH #8 AWG CONDUCTORS VIA SWITCH IN ELECTRICAL ROOM 110.
14. PROVIDE 1 INCH CONDUIT BETWEEN SUMP LEAK DETECTION AT THIS LOCATION AND LEAK DETECTION PANEL LOCATED AT AST-1. PROVIDE REQUIRED CONTROL WIRING IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS.
15. PROVIDE 1" CONDUIT ONLY STUBBED FROM ELECTRICAL ROOM 110 TO THIS APPROXIMATE LOCATION FOR FUTURE MONUMENT SIGN.
16. PROVIDE TELECOM MANHOLE – UTILITY VAULT COMPANY 444-LA OR APPROVED EQUAL.
17. EXTEND 2 @ 4 INCH TELECOM CONDUITS (1 FOR GCI, 1 SPARE) INTO EXISTING TELECOM MANHOLE. GROUT AND SEAL CONDUIT PENETRATIONS.
18. EXTEND 2 @ 4 INCH TELECOM CONDUITS (1 FOR ACS, 1 SPARE) INTO EXISTING TELECOM MANHOLE. GROUT AND SEAL CONDUIT PENETRATIONS.
19. TELECOM BACKBONE CONDUITS FOR BUILDING CONNECTION TO TELECOM UTILITIES. REFERENCE SHEET E801 FOR ADDITIONAL INFORMATION.
20. 1 @ 4 INCH TELECOM BACKBONE CONDUIT FOR FUTURE LIBRARY, MUSEUM, ARCHIVES CONNECTION TO ADJACENT TELEVISION STATION (FOR LIBRARY, MUSEUM, ARCHIVES USE ONLY). REFERENCE SHEET E801 FOR ADDITIONAL INFORMATION.
21. EXISTING THREE PHASE JUNCTION BOX TO BE DEMOLISHED BY AEL&P.
22. CONNECT LED SIGN DISPLAYING PARKING GARAGE HOURS TO CIRCUIT NOTED. COORDINATE REQUIREMENTS WITH SIGN SUPPLIER.
23. CONNECT WELL PUMP TO CIRCUIT SHOWN VIA VSD LOCATED MECHANICAL SPACE. REFER TO SHEET E603 FOR VSD LOCATIONS..
24. CONNECT TO PACKAGE LIFT STATION (LS-1) AT THIS APPROXIMATE LOCATION. PROVIDE REQUIRED WIRING AND CONDUIT BETWEEN CONTROL PANEL AND LIFT STATION. REFER TO CIVIL PLANS FOR ADDITIONAL INFORMATION.
25. FIELD COORDINATE EXACT PLACEMENT OF TYPE SL FIXTURES WITH THE DEPARTMENT PRIOR TO INSTALLATION.

1 E050 SITE PLAN – ELECTRICAL

SCALE: 1" = 30'-0"

0 15' 30' 60' 90'

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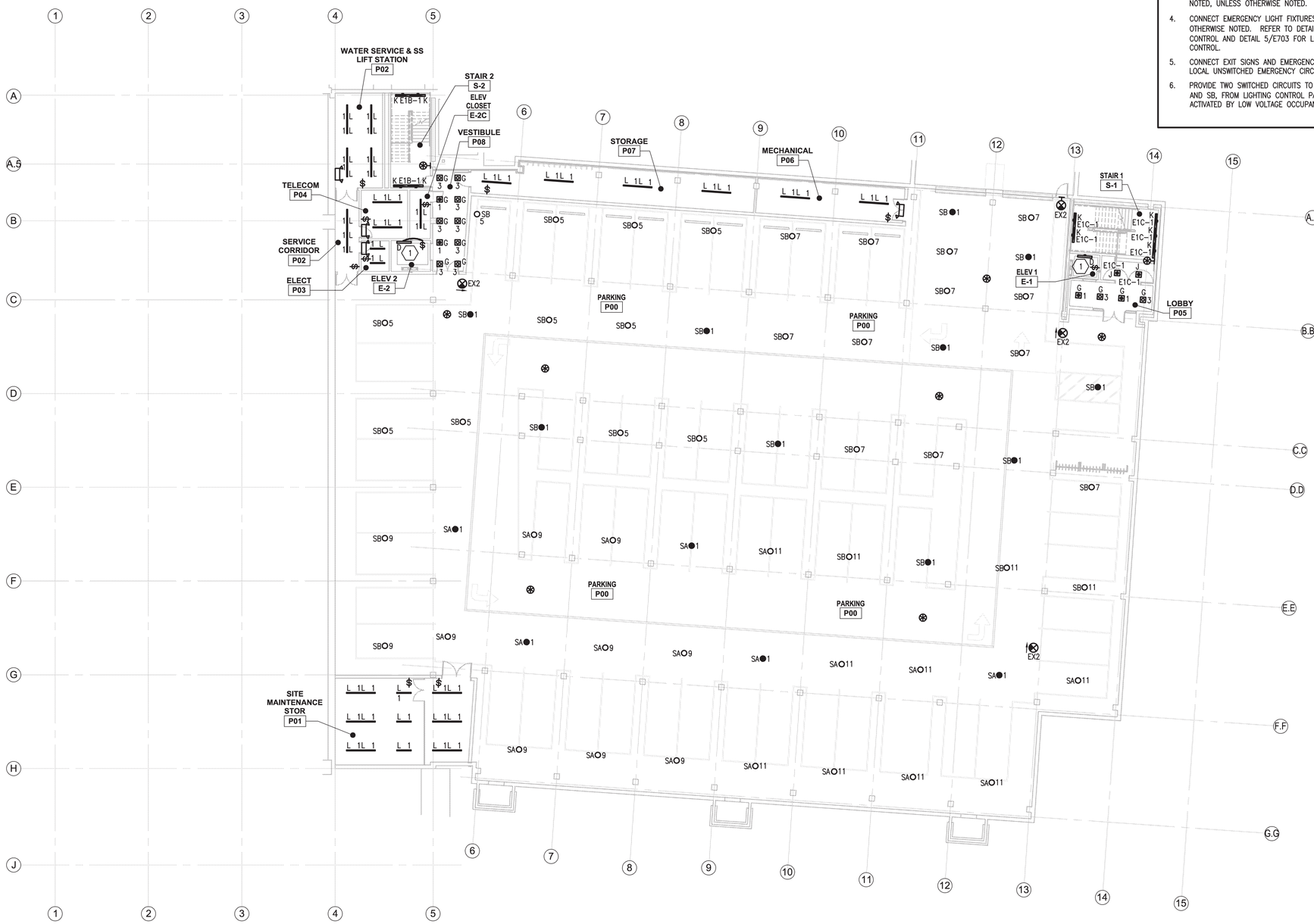
SITE PLAN - ELECTRICAL

E050

SHEET NOTES

1. CONNECT ELEVATOR PIT LIGHT FIXTURE ON 120V CIRCUIT UPSTREAM OF ELEVATOR GFCI RECEPTACLE.
2. CONDUIT SHALL BE CONCEALED AT ALL LOCATIONS IN PARKING GARAGE. ROUTE CONDUIT SERVING OCCUPANCY SENSORS AND TYPE SA AND SB LIGHT FIXTURES IN MIDDLE VERTICAL THIRD OF FIRST FLOOR SLAB. SEE STRUCTURAL DRAWINGS FOR CONDUIT ROUTING LIMITATIONS. PROVIDE COORDINATED SHOP DRAWINGS OF FIRST FLOOR SLAB ELECTRICAL CONDUIT ROUTING TO STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.
3. CONNECT NORMAL LIGHT FIXTURES ON THIS SHEET TO PANEL L0A, CIRCUIT AS NOTED, UNLESS OTHERWISE NOTED.
4. CONNECT EMERGENCY LIGHT FIXTURES ON THIS SHEET TO PANEL E0A UNLESS OTHERWISE NOTED. REFER TO DETAIL 1/E703 FOR GENERAL EMERGENCY LIGHTING CONTROL AND DETAIL 5/E703 FOR LINE VOLTAGE SWITCHED EMERGENCY LIGHTING CONTROL.
5. CONNECT EXIT SIGNS AND EMERGENCY LIGHTING UNITS ON THIS SHEET TO THE LOCAL UNSWITCHED EMERGENCY CIRCUIT.
6. PROVIDE TWO SWITCHED CIRCUITS TO EACH PARKING GARAGE FIXTURE, TYPE SA AND SB, FROM LIGHTING CONTROL PANEL TO ENABLE HIGH/LOW FUNCTIONALITY ACTIVATED BY LOW VOLTAGE OCCUPANCY SENSORS.



1 / E101 PARKING FLOOR PLAN – LIGHTING

SCALE: 1/16" = 1'–0"

0 8' 16' 32' 48'

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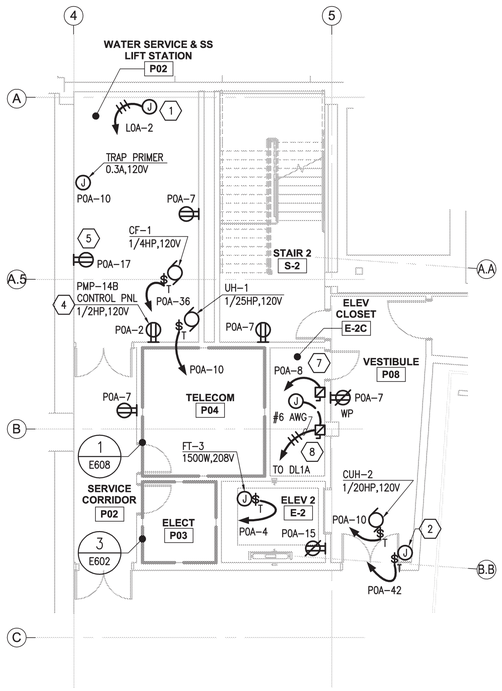
PARKING FLOOR PLAN - LIGHTING

E101

SHEET NOTES

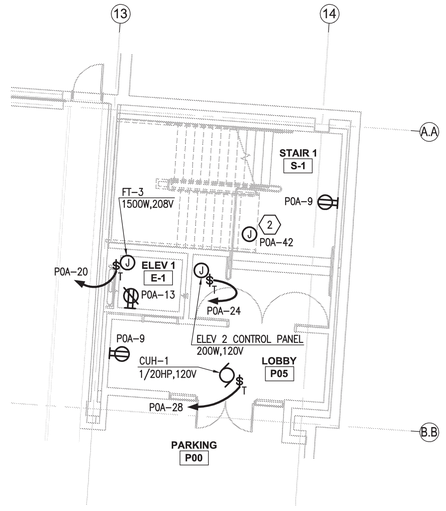
1. CONNECT TO PACKAGE LIFT STATION (LS-1) AT THIS APPROXIMATE LOCATION. PROVIDE REQUIRED WIRING AND CONDUIT BETWEEN CONTROL PANEL AND LIFT STATION. THE AREA WITHIN 3 FEET OF THE LIFT STATION SHALL BE CLASSIFIED AS CLASS 1, DIVISION 2, GROUPS C AND D. EXPLOSION PROOF CONDUIT SEALS SHALL BE INSTALLED WHEREVER THE CONDUITS PASS THROUGH THE BOUNDARIES OF THE HAZARDOUS LOCATION.
2. CONNECT TO ACS POWER SUPPLY IN THIS APPROXIMATE LOCATION. REFER TO SHEET E103 FOR ADDITIONAL INFORMATION. CIRCUIT AS NOTED.
3. CONNECT TO MOTORIZED GARAGE DOOR. PROVIDE 1 INCH CONDUIT AND CONTROL WIRING TO CONNECT MOTORIZED GARAGE DOOR AND GARAGE DOOR CONTROLLER. COORDINATE CONTROL WIRING WITH MANUFACTURERS REQUIREMENTS.
4. PROVIDE 1 INCH CONDUIT PATHWAY FOR CONTROL WIRING PROVIDED UNDER DIVISION 22 TO CONNECT ELEVATOR SUMP PUMP CONTROL PANEL AND REMOTELY LOCATED SUMP PUMP. REFER TO MECHANICAL DRAWINGS FOR SUMP PUMP LOCATION.
5. COORDINATE RECEPTACLE LOCATION WITH SPRINKLER SYSTEM COMPRESSOR.
6. CONDUIT SHALL BE CONCEALED AT ALL LOCATIONS IN PARKING GARAGE. ROUTE CONDUIT SERVING ELECTRICAL EQUIPMENT IN MIDDLE VERTICAL THIRD OF FIRST FLOOR SLAB. SEE STRUCTURAL DRAWINGS FOR CONDUIT ROUTING LIMITATIONS. PROVIDE COORDINATED SHOP DRAWINGS OF FIRST FLOOR SLAB ELECTRICAL CONDUIT ROUTING TO STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.
7. PROVIDE FUSED DISCONNECT FOR ELEVATOR CAR LIGHT AND RECEPTACLES. LABEL DISCONNECT IN ACCORDANCE WITH NEC ARTICLE 620.53.
8. CONNECT TO ELEVATOR CONTROLLER IN ACCORDANCE WITH NEC ARTICLE 620. COORDINATE CONNECTION REQUIREMENTS WITH DIVISION 14.



2 E102 ENLARGED PLAN – NW – POWER

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

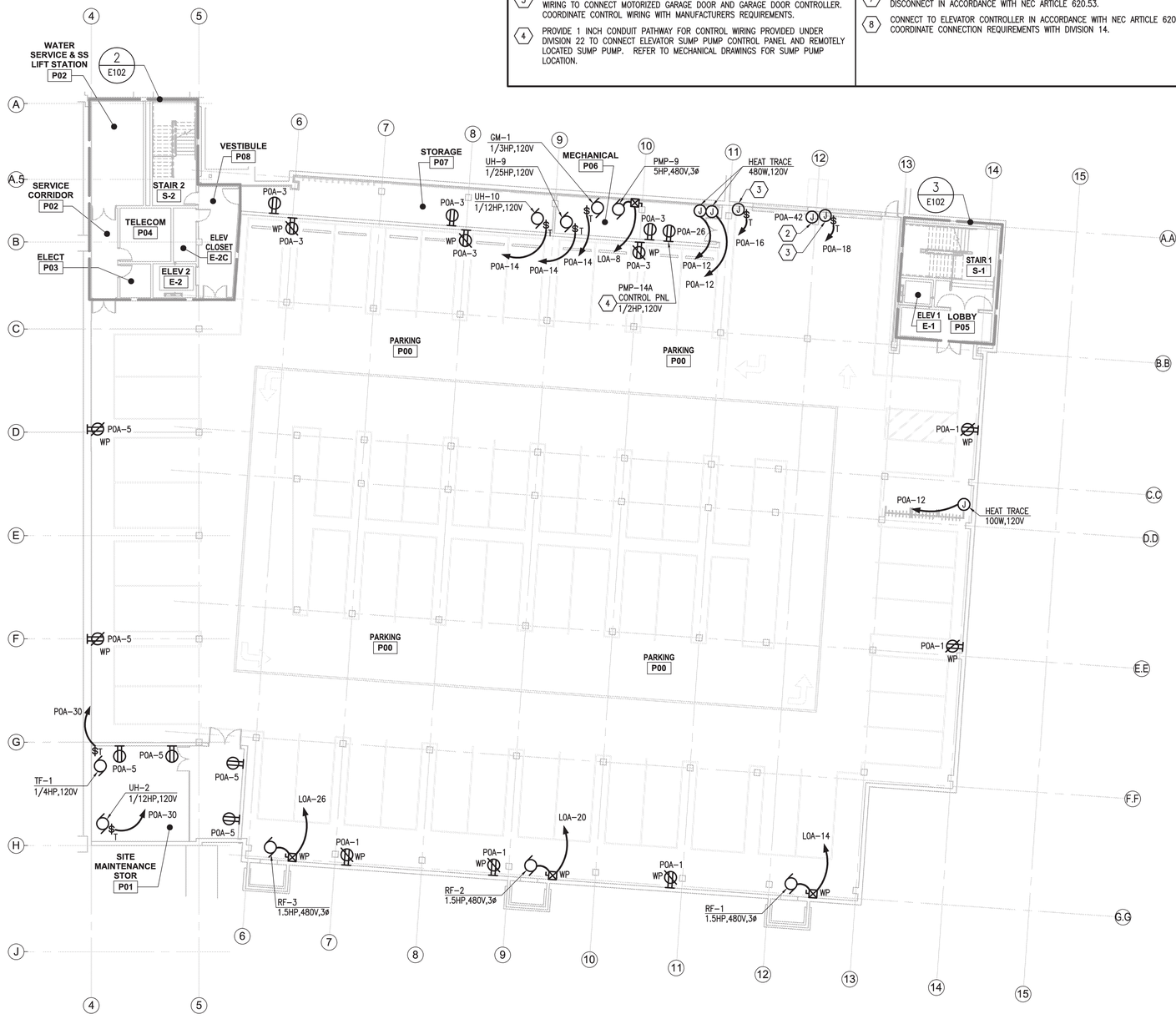
0 8' 16' 32' 48'



3 E102 ENLARGED PLAN – NE – POWER

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

0 8' 16' 32' 48'



1 E102 PARKING FLOOR PLAN – POWER

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

0 8' 16' 32' 48'

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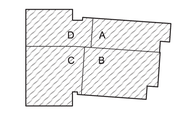

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PARKING FLOOR PLAN - POWER

E102

SHEET NOTES

1. STROBES ARE 15 CD UNLESS OTHERWISE NOTED. FIELD COORDINATE FIRE ALARM SYSTEM SPEAKER/STROBE LOCATIONS AND STROBE ONLY LOCATIONS TO PROVIDE COVERAGE OF AREAS IN ACCORDANCE WITH NFPA 72 REQUIREMENTS.

(2) PROVIDE ELEVATOR RECALL PER SPECIFICATION SECTION 16723.

(3) PROVIDE CCTV CAMERA AT LOCATION INDICATED. REFER TO SHEET E803 FOR ONE-LINE DIAGRAMM, CCTV CAMERA SCHEDULES, AND SHEET E741 FOR MOUNTING DETAILS.

(4) PROVIDE ACS RIM AND RIM ENCLOSURE FOR THE DOOR(S) NOTED IN ACCORDANCE WITH ACS ONE-LINE DIAGRAM ON SHEET E802. PROVIDE REQUIRED POWER SUPPLIES, CONDUIT, WIRE, TERMINAL BLOCKS ETC. FOR A COMPLETE AND FUNCTIONAL SYSTEM IN ACCORDANCE WITH THE SPECIFICATIONS, APPLICABLE CODES AND STANDARDS. LOCATE ENCLOSURE ABOVE DOOR ON SECURE SIDE IN ACCESSIBLE CEILING SPACE UNLESS OTHERWISE NOTED. REFER TO SPECIFICATION SECTION 16725 FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

(5) PROVIDE FLOW SWITCH FOR EACH SPRINKLER RISER. PROVIDE TAMPER SWITCH FOR EACH SPRINKLER VALVE. COORDINATE WITH MECHANICAL DRAWINGS FOR EXACT LOCATIONS AND QUANTITIES.

(6) REFER TO DETAIL 2/E735 FOR OVERHEAD DOOR CONTROL, INTERCOM, AND CARD READER PEDESTAL MOUNTING REQUIREMENTS.

(7) REFERENCE DETAILS ON SHEETS E731–E733, SPECIFICATION SECTION 08710, AND THE ARCHITECTURAL DOOR HARDWARE SCHEDULE FOR ADDITIONAL INFORMATION.

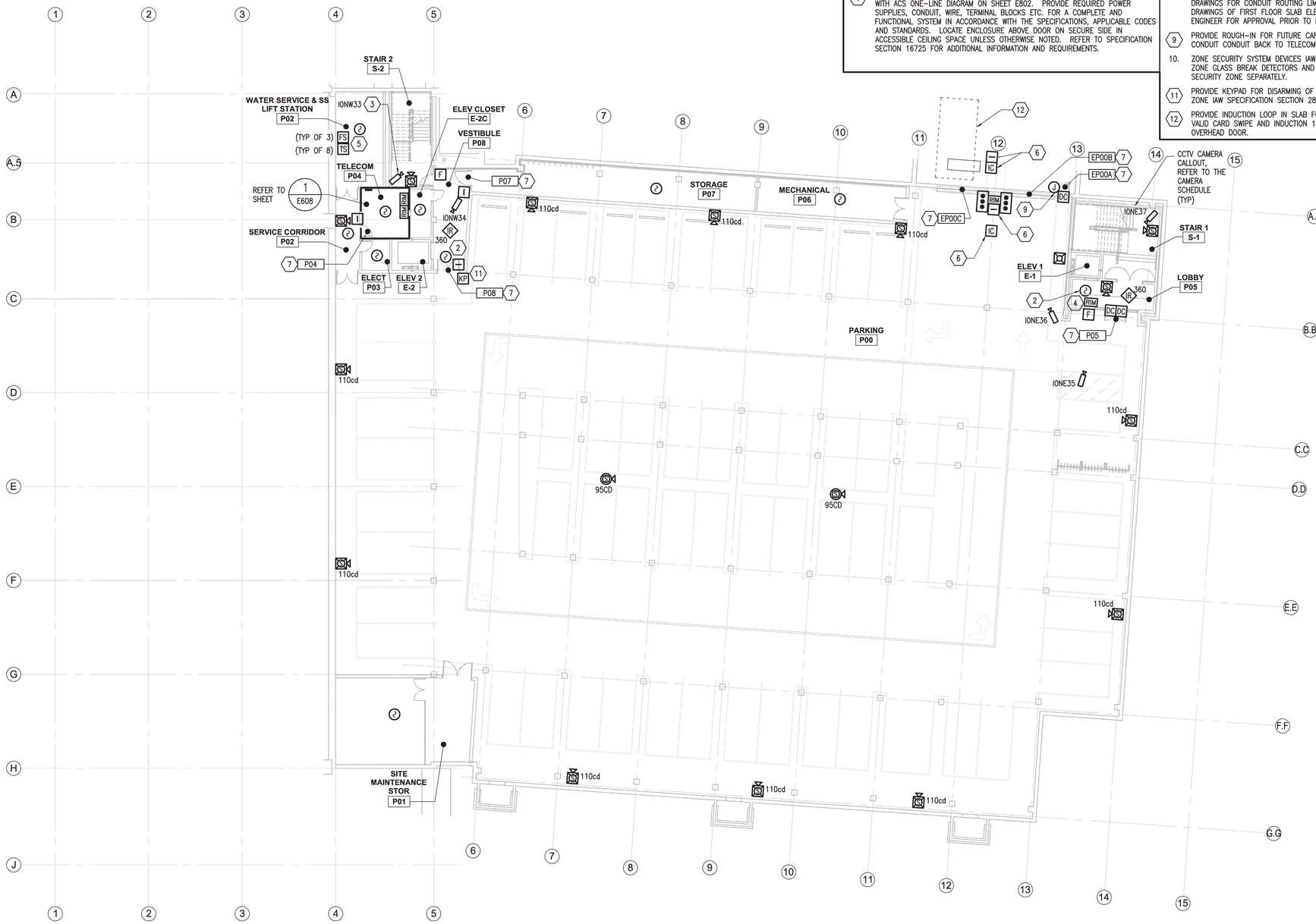
8. CONDUIT SHALL BE CONCEALED AT ALL LOCATIONS IN PARKING GARAGE. ROUTE CONDUIT IN MIDDLE VERTICAL THIRD OF FIRST FLOOR SLAB.? SEE STRUCTURAL DRAWINGS FOR CONDUIT ROUTING LIMITATIONS. PROVIDE COORDINATED SHOP DRAWINGS OF FIRST FLOOR SLAB ELECTRICAL CONDUIT ROUTING TO STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.

(9) PROVIDE ROUGH-IN FOR FUTURE CARD READER AT LOCATION INDICATED. ROUTE CONDUIT CONDUIT BACK TO TELECOM ROOM P04.

10. ZONE SECURITY SYSTEM DEVICES IAW SHEET E737 AND THE SPECIFICATIONS. ZONE GLASS BREAK DETECTORS AND MOTION DETECTORS IN EACH INDIVIDUAL SECURITY ZONE SEPARATELY.

(11) PROVIDE KEYPAD FOR DISARMING OF SECURITY SYSTEM SERVING LOCAL SECURITY ZONE IAW SPECIFICATION SECTION 28 13 33.

(12) PROVIDE INDUCTION LOOP IN SLAB FOR OPERATION OF OVERHEAD DOOR EP00C. VALID CARD SWIPE AND INDUCTION 100P SIGNAL REQUIRED FOR OPERATION OF OVERHEAD DOOR.



1 E103 PARKING FLOOR PLAN – SPECIAL SYSTEMS

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

0 8' 16' 32' 48'

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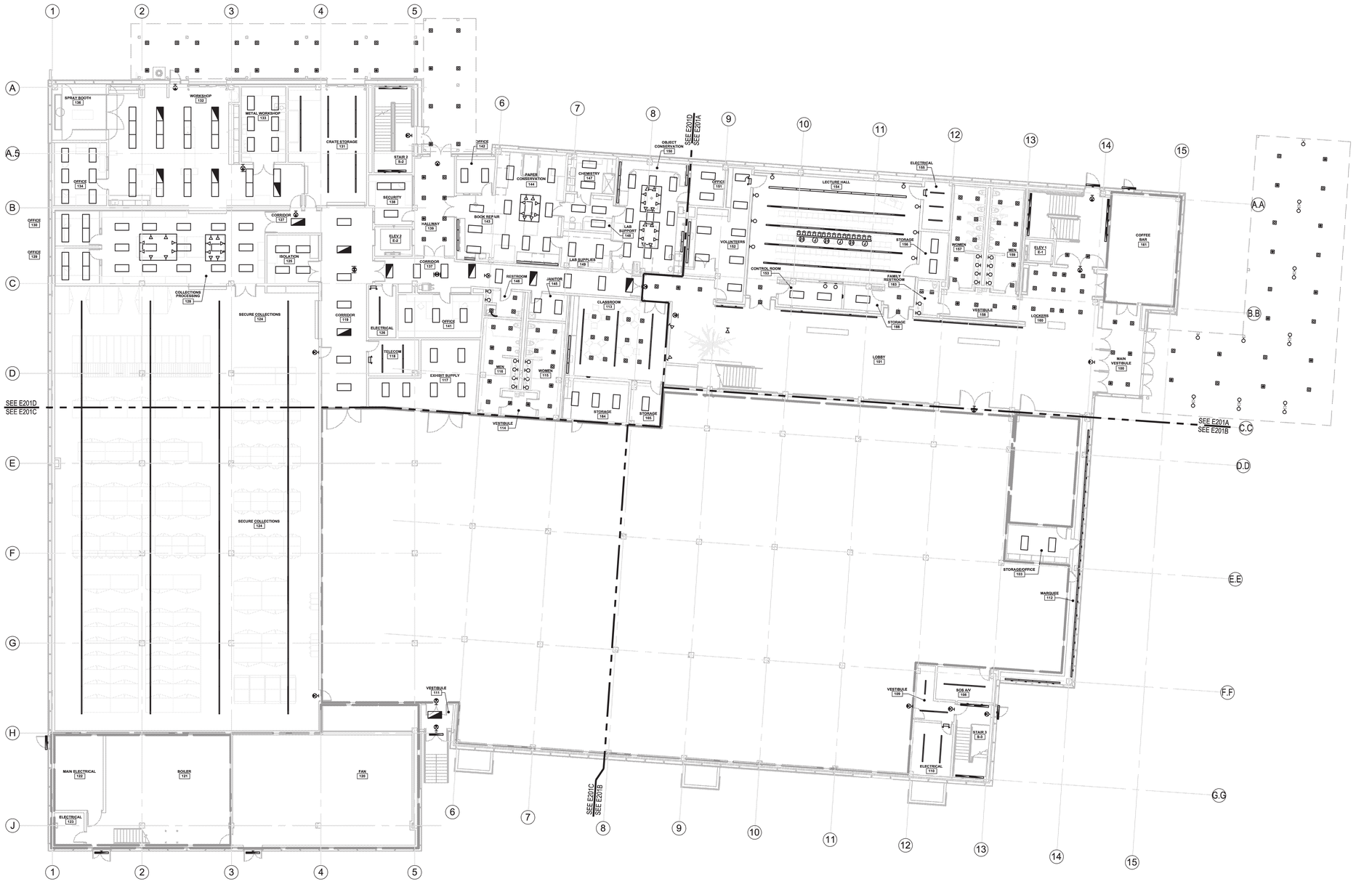
PARKING FLOOR PLAN - SPECIAL SYSTEMS

E103

SHEET NOTES

1. KEY PLANS ARE SHOWN FOR OVERALL REFERENCE ONLY. ALL DESIGN INFORMATION AND COMPONENTS ARE NOT SHOWN. REFER TO ENLARGED PLANS FOR DETAILED DESIGN INFORMATION ON THE SPECIFIC SUB-DISCIPLINE (E.G. LIGHTING, POWER, AND SPECIAL SYSTEMS).



1 E201 KEYPLAN – FIRST FLOOR PLAN – LIGHTING

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

0 8' 16' 32' 48'

CONSULTANT NAME :: AMC ENGINEERS

ECI/HYER :: THA ARCHITECTURE

DEPARTMENT OF EDUCATION & EARLY DEVELOPMENT

DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES

AKSAS PROJECT NO. 68816

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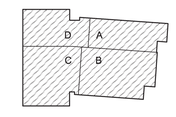


KEYPLAN - (NTS)

CONSTRUCTION DOCUMENTS

05.01.2012

KEYPLAN - FIRST FLOOR PLAN - LIGHTING

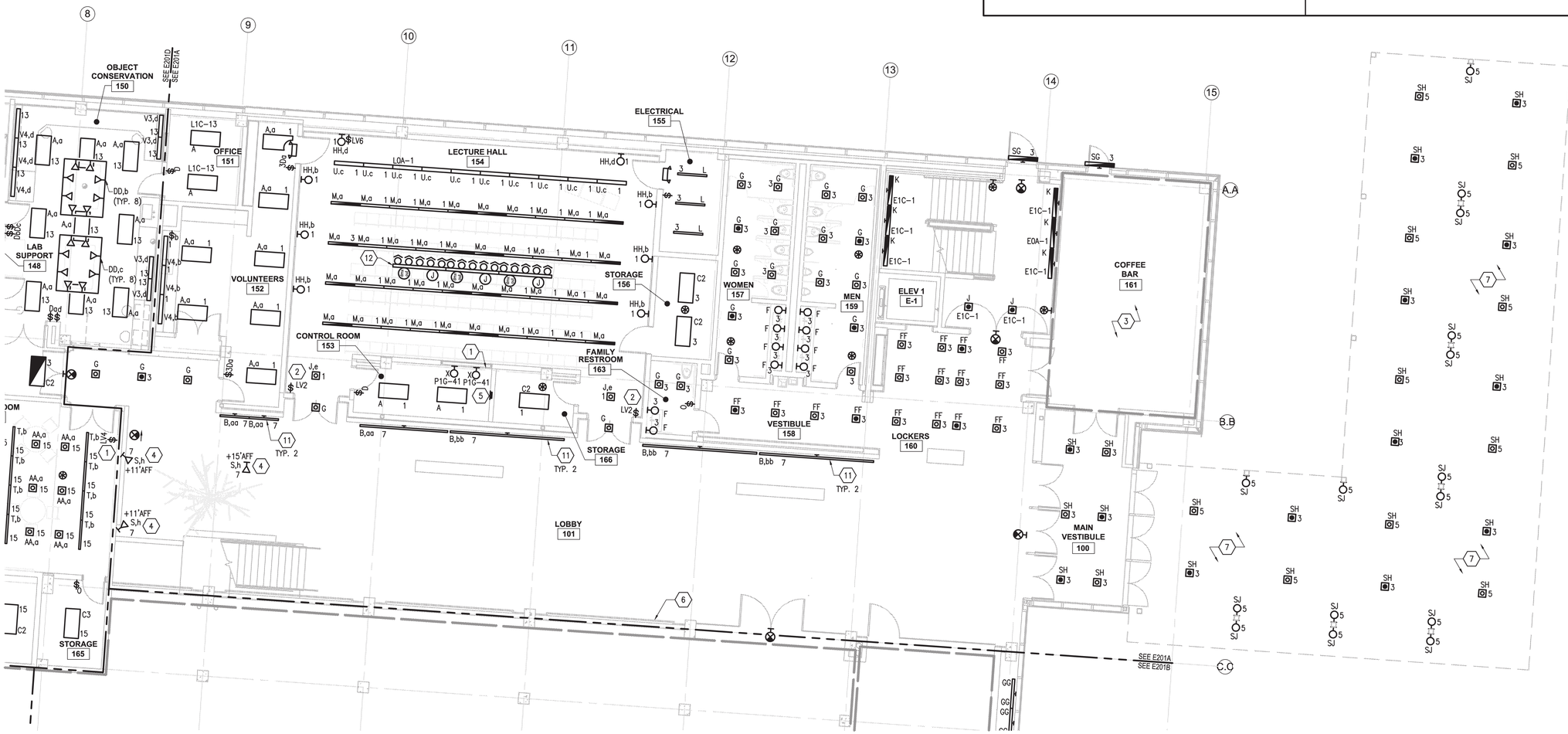
E201

SHEET NOTES

1. PROVIDE PULLBOX AND CONDUIT ROUGH-IN BACK TO STAGE DIMMER PANEL LOCATION. SEE ELECTRICAL SHEETS E753 AND E754 FOR ADDITIONAL INFORMATION.
2. PROVIDE LOW VOLTAGE CONTROLS IN THIS ROOM. REFER TO SHEETS E701, E702, AND SPECIFICATION SECTION 26 27 49 FOR SYSTEM COMPONENTS AND ADDITIONAL INFORMATION.
3. FUTURE TENANT IMPROVEMENT PROJECT.
4. PROVIDE ONE FOOT OF SILVER, 277V, SURFACE MOUNTED EXTRUDED ALUMINUM LIGHTING SERVICES, INC TRACK FOR FIXTURE. PROVIDE PARTS AND ACCESSORIES AS NECESSARY FOR A COMPLETE SYSTEM. REFER TO ARCHITECTURAL DRAWINGS FOR TRACK MOUNTING DETAILS.
5. PROVIDE LUTRON GRAFIK EYE QS LIGHTING CONTROLLER AT THIS LOCATION. REFER TO SHEETS E701, E702, AND SPECIFICATION SECTION 26 27 49 FOR SYSTEM COMPONENTS AND ADDITIONAL INFORMATION.
6. PROVIDE STAINLESS STEEL PANEL WITH FLUSH MOUNT COVER. PROVIDE OVERRIDE SWITCHES FOR LOBBY LIGHTING CIRCUITS AS SHOWN ON ELECTRICAL SHEET E-703.
7. COORDINATE LOCATION OF DOWNLIGHTS IN CANOPY WITH OTHER TRADES PRIOR TO INSTALLATION. CONDUIT SHALL BE CONCEALED IN THE BEAM FRAMING. SEE STRUCTURAL FOR BEAM PENETRATION DETAILS AND LIMITATIONS ON PENETRATIONS.
8. CONNECT NORMAL LIGHT FIXTURES ON THIS SHEET TO PANEL L1E, CIRCUIT AS NOTED, UNLESS OTHERWISE NOTED.
9. CONNECT EMERGENCY LIGHT FIXTURES ON THIS SHEET TO PANEL E1C UNLESS OTHERWISE NOTED. REFER TO DETAIL 1/E703 FOR GENERAL EMERGENCY LIGHTING CONTROL AND DETAIL 5/E703 FOR LINE VOLTAGE SWITCHED EMERGENCY LIGHTING CONTROL.
10. CONNECT EXIT SIGNS AND EMERGENCY LIGHTING UNITS ON THIS SHEET TO THE LOCAL UNSWITCHED EMERGENCY CIRCUIT.
11. INSTALL FIXTURES AT 10'-7" ABOVE FINISHED FLOOR. REFER TO ARCHITECTURAL DETAILS FOR EXACT LOCATION OF FIXTURES.
12. PROVIDE DIMMABLE STAGE LIGHTING SYSTEM COMPLETE WITH PORTABLE LIGHTING CONTROL CONSOLE. PROVIDE THREE DMX RECEPTACLES IN ABOVE CEILING SPACE. ROUTE CABLES BETWEEN DMX INPUTS ON SMART BARS AND DMX RECEPTACLES IN CEILING. PROVIDE SMART BAR MOUNTED IN LINEAR WOOD CEILING VIA STRUCTURAL SUPPORTS TO STRUCTURAL CEILING. PROVIDE SUPPORTS AND ACCESSORIES AS NECESSARY FOR A COMPLETE SYSTEM. PROVIDE AND INSTALL SYSTEM BASED UPON THE FOLLOWING MATERIAL LIST. MATERIAL LIST IS BASED ON ETC OR APPROVED EQUAL.

BILL OF MATERIALS:

QTY	ITEM
1	SF2496 CONTROL CONSOLE, 24 CHANNEL
	1 – DMX INPUT CONTROL PLUG-IN STATION
	3 – ECPB DMXOUT – DMX OUTPUT CONTROL PLUG-IN STATION
	3 – 1-GANG SURFACE MOUNT BACK BOX
	3 – U BOLT KIT FOR 1 & 2 GANG PLUG-IN STATION
	1 – PATHWAY 4807 – SPLITTER WITH ENCLOSURE AND POWER SUPPLY
	3 – 10' DMX CABLE
	1 – 25' DMX CABLE
3	SMART BAR, RDM ENABLED, WITH INTEGRATED FIXTURE SUSPENSION AND LOCAL CONTROL WITH BUILT-IN PRESETS, INCLUDES:
	6 – 10A DIMMERS
	6 – L5-20R TWIST LOCK OUTPUT RECEPTACLES
	1 – 12' FLEXIBLE CABLE FOR MAIN POWER CONNECTION (THREE PHASE, 20A)
	1 – EDISON DUPLEX (5-20RD) CONVENIENCE OUTLET
	1 – (UL) INPUT CONNECTOR – NEMA 21-20
3	3 PHASE MALE TWIST-LOCK CONNECTOR INSTALLED ON SMARTBAR
3	SAFETY CABLE BLACK
3	U / U-BOLT PIPE MOUNTING ASSEMBLY (1 PAIR)
6	ETC SOURCE FOUR PAR EA LIGHT FIXTURES



1 E201A FIRST FLOOR PLAN – NE – LIGHTING

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

0 4' 8' 16' 24'

CONSULTANT NAME :: AMC ENGINEERS

ECI/HYER :: THA ARCHITECTURE

DEPARTMENT OF EDUCATION & EARLY DEVELOPMENT

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REGISTERED PROFESSIONAL ENGINEER

REVISIONS:

KEYPLAN - (NTS)

CONSTRUCTION DOCUMENTS

05.01.2012

FIRST FLOOR PLAN - NE - LIGHTING

E201A

SHEET NOTES

1. FUTURE TENANT IMPROVEMENT PROJECT.
2. FIXTURES ARE WALL MOUNTED ON EAST WALL OF MARQUIS. AT EACH LOCATION SHOWN PROVIDE TWO FIXTURES, ONE MOUNTED AT 13'-0" AFF AND ONE MOUNTED AT 13'-6" AFF. THE UPPER FIXTURE SHALL LIGHT THE VERTICAL WALL SURFACE ABOVE THE FIXTURE AND THE LOWER FIXTURE SHALL LIGHT THE VERTICAL WALL SURFACE BELOW THE FIXTURE. REFER TO THE ARCHITECTURAL DETAILS FOR SECTION VIEWS OF THE FIXTURE LAYOUTS.
3. CONNECT NORMAL LIGHT FIXTURES ON THIS SHEET TO PANEL L1G, CIRCUIT AS NOTED, UNLESS OTHERWISE NOTED.
4. CONNECT EMERGENCY LIGHT FIXTURES ON THIS SHEET TO PANEL E1D UNLESS OTHERWISE NOTED. REFER TO DETAIL 1/E703 FOR GENERAL EMERGENCY LIGHTING CONTROL AND DETAIL 5/E703 FOR LINE VOLTAGE SWITCHED EMERGENCY LIGHTING CONTROL.
5. CONNECT EXIT SIGNS AND EMERGENCY LIGHTING UNITS ON THIS SHEET TO THE LOCAL UNSWITCHED EMERGENCY CIRCUIT.
6. PROVIDE PILOT LIGHTED SWITCH TO LIGHT FIXTURES ON MECHANICAL MEZZANINE. PROVIDE ENGRAVED NAMEPLATE ON SWITCH THE READS, "MEZZANINE LIGHTING."

STORAGE 164
STORAGE 165
STORAGE/OFFICE 103
MARQUEE 112
VESTIBULE 109
SOS A/V 108
ELECTRICAL 110
STAIR 3 S-3
SEE E201A
SEE E201B
SEE E201C
SEE E201B
TYP. 36
TYP. 8

1 FIRST FLOOR PLAN – SE – LIGHTING
E201B SCALE: 1/8" = 1'-0"

0 4' 8' 16' 24'

CONSULTANT NAME :: AMC ENGINEERS
ECI/HYER :: THA ARCHITECTURE
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REVISIONS:

KEYPLAN - (NTS)

CONSTRUCTION DOCUMENTS

05.01.2012

FIRST FLOOR PLAN - SE - LIGHTING

E201B

SHEET NOTES

1. FUTURE TENANT IMPROVEMENT PROJECT.
2. PROVIDE LOW VOLTAGE CONTROLS IN THIS ROOM. REFER TO SHEETS E701, E702, AND SPECIFICATION SECTION 26 27 49 FOR SYSTEM COMPONENTS AND ADDITIONAL INFORMATION.
3. CENTER LIGHT FIXTURE BETWEEN MECHANICAL LOUVER AND DOOR. COORDINATE EXACT HEIGHT WITH OTHER TRADES PRIOR TO INSTALLATION.
4. CONNECT NORMAL LIGHT FIXTURES ON THIS SHEET TO PANEL L1A, CIRCUIT AS NOTED, UNLESS OTHERWISE NOTED.
5. CONNECT EMERGENCY LIGHT FIXTURES ON THIS SHEET TO PANEL E1A UNLESS OTHERWISE NOTED. REFER TO DETAIL 1/E703 FOR GENERAL EMERGENCY LIGHTING CONTROL AND DETAIL 5/E703 FOR LINE VOLTAGE SWITCHED EMERGENCY LIGHTING CONTROL.
6. CONNECT EXIT SIGNS AND EMERGENCY LIGHTING UNITS ON THIS SHEET TO THE LOCAL UNSWITCHED EMERGENCY CIRCUIT.

1 / E201C FIRST FLOOR PLAN – SW – LIGHTING

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

0 4' 8' 16' 24'

CONSULTANT NAME :: AMC ENGINEERS
ECI/HYER :: THA ARCHITECTURE
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CONSTRUCTION DOCUMENTS

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FIRST FLOOR PLAN - SW - LIGHTING

E201C

SHEET NOTES

1. PROVIDE LOW VOLTAGE CONTROLS IN THIS ROOM. REFER TO SHEETS E701, E702, AND SPECIFICATION SECTION 26 27 49 FOR SYSTEM COMPONENTS AND ADDITIONAL INFORMATION.
2. CONNECT PRE-MANUFACTURED SPRAY BOX LIGHTING TO CIRCUIT SHOWN ON SHEET E304.
3. COORDINATE LOCATION OF DOWNLIGHTS IN CANOPY WITH OTHER TRADES PRIOR TO INSTALLATION. CONDUIT SHALL BE CONCEALED IN THE BEAM FRAMING. SEE STRUCTURAL FOR BEAM PENETRATION DETAILS AND LIMITATIONS ON PENETRATIONS.
4. CFCI BLEACHING LIGHT FIXTURES LOCATED IN AREA SURROUNDED BY CURTAIN TRACK. SEE LF2.01 AND E609 FOR ADDITIONAL INFORMATION.
5. PROVIDE LUTRON GRAFIK EYE QS LIGHTING CONTROLLER AT THIS LOCATION. REFER TO SHEETS E701, E702, AND SPECIFICATION SECTION 26 27 49 FOR SYSTEM COMPONENTS AND ADDITIONAL INFORMATION.
6. CONNECT NORMAL LIGHT FIXTURES ON THIS SHEET TO PANEL L1C, CIRCUIT AS NOTED, UNLESS OTHERWISE NOTED.
7. CONNECT EMERGENCY LIGHT FIXTURES ON THIS SHEET TO PANEL E1B UNLESS OTHERWISE NOTED. REFER TO DETAIL 1/E703 FOR GENERAL EMERGENCY LIGHTING CONTROL AND DETAIL 5/E703 FOR LINE VOLTAGE SWITCHED EMERGENCY LIGHTING CONTROL.
8. CONNECT EXIT SIGNS AND EMERGENCY LIGHTING UNITS ON THIS SHEET TO THE LOCAL UNSWITCHED EMERGENCY CIRCUIT.
9. PROVIDE PILOT LIGHTED SWITCH TO LIGHT FIXTURES ON MECHANICAL MEZZANINE. PROVIDE ENGRAVED NAMEPLATE ON SWITCH THE READS, "MEZZANINE LIGHTING."

SPRAY BOOTH 136 · WORKSHOP 132 · METAL WORKSHOP 133 · CRATE STORAGE 131 · OFFICE 134 · OFFICE 130 · OFFICE 129 · CORRIDOR 127 · ISOLATION 125 · COLLECTIONS PROCESSING 128 · SECURE COLLECTIONS 124 · CORRIDOR 119 · ELECTRICAL 126 · TELECOM 118 · EXHIBIT SUPPLY 117 · STAIR 2 S-2 · SECURITY 138 · ELEV 2 E-2 · HALLWAY 139 · OFFICE 142 · PAPER CONSERVATION 144 · CHEMISTRY 147 · OBJECT CONSERVATION 150 · BOOK REPAIR 143 · LAB SUPPORT 148 · LAB SUPPLIES 149 · CORRIDOR 137 · RESTROOM 146 · JANITOR 145 · OFFICE 141 · MEN 116 · WOMEN 115 · CLASSROOM 113 · STORAGE 164 · STORAGE 165 · VESTIBULE 114

SEE E201D
SEE E207C

1 E201D FIRST FLOOR PLAN – NW – LIGHTING
SCALE: 1/8" = 1'-0"

0 4' 8' 16' 24'

CONSULTANT NAME :: AMC ENGINEERS
ECI/HYER :: THA ARCHITECTURE
DEPARTMENT OF EDUCATION & EARLY DEVELOPMENT
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REVISIONS:

KEYPLAN - (NTS)

CONSTRUCTION DOCUMENTS

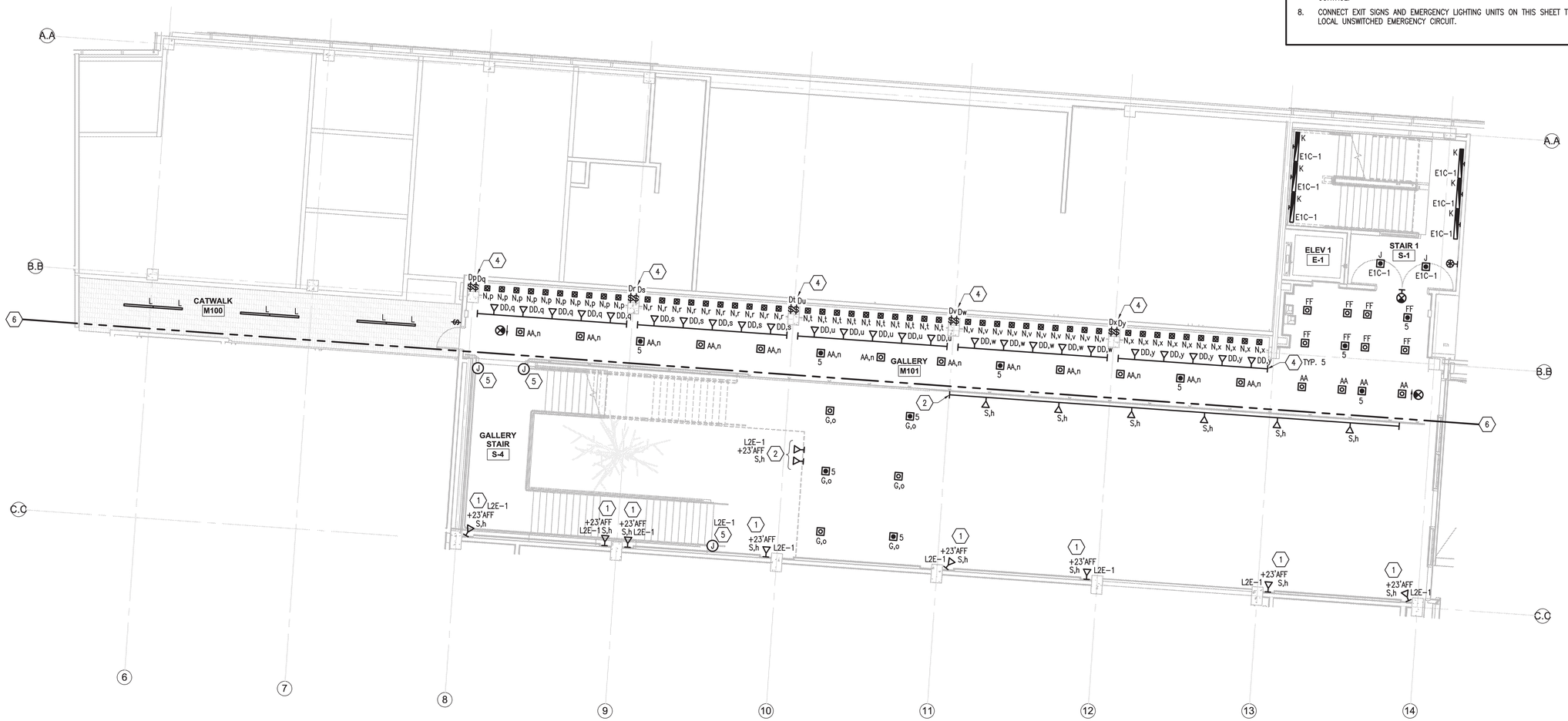
05.01.2012

FIRST FLOOR PLAN - NW - LIGHTING

E201D

SHEET NOTES

1. PROVIDE ONE FOOT OF SILVER, 277V, SURFACE MOUNTED EXTRUDED ALUMINUM LIGHTING SERVICES, INC TRACK FOR FIXTURE. PROVIDE PARTS AND ACCESSORIES AS NECESSARY FOR A COMPLETE SYSTEM. REFER TO ARCHITECTURAL DRAWINGS FOR TRACK MOUNTING DETAILS.
2. PROVIDE 62 FEET OF SILVER, 277V, SURFACE MOUNTED LIGHTING SERVICES, INC EXTRUDED ALUMINUM LIGHTING SERVICES, INC TRACK CENTERED ON VERTICAL FACE OF SPACE BETWEEN GALLERY CEILING AND 2ND FLOOR. PROVIDE PARTS AND ACCESSORIES AS NECESSARY FOR A COMPLETE SYSTEM. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
3. PROVIDE 20 FEET OF SILVER, 277V, SURFACE MOUNTED LIGHTING SERVICES, INC EXTRUDED ALUMINUM LIGHTING SERVICES, INC TRACK ON GALLERY SUSPENDED CEILING. PROVIDE PARTS AND ACCESSORIES AS NECESSARY FOR A COMPLETE SYSTEM. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
4. LOCATE REMOTE TRANSFORMER AND DIMMING DRIVER FOR RECESSED FIXTURES IN EXHIBIT ABOVE DIMMER SWITCH CONTROLS FOR LIGHT FIXTURES.
5. CONNECT TO LIGHTED STAIR RAIL. LIGHTING FOR STAIR RAIL IS FURNISHED UNDER DIVISION 12 AND INSTALLED UNDER DIVISION 26. PROVIDE POWER AND CONTROL CONNECTIONS TO DRIVER/POWER SUPPLY IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS. LOCATE POWER SUPPLIES IN NEARBY ACCESSIBLE CEILING SPACE. PROVIDE PARTS AND ACCESSORIES AS NECESSARY TO PRODUCE A COMPLETE SYSTEM. REFER TO LIGHTING CONTROL SCHEDULE FOR LIGHTING CONTROL REQUIREMENTS. FIELD COORDINATE EXACT LOCATION OF STAIR CONNECTION POINT WITH OTHER TRADES PRIOR TO INSTALLATION.
6. CONNECT NORMAL LIGHT FIXTURES NORTH OF THIS LINE TO PANEL L2D, CIRCUIT 1. CONNECT NORMAL LIGHT FIXTURES SOUTH OF THIS LINE TO PANEL L2D, CIRCUIT 3, UNLESS OTHERWISE NOTED.
7. CONNECT EMERGENCY LIGHT FIXTURES ON THIS SHEET TO PANEL E2B UNLESS OTHERWISE NOTED. REFER TO DETAIL 1/E703 FOR GENERAL EMERGENCY LIGHTING CONTROL AND DETAIL 5/E703 FOR LINE VOLTAGE SWITCHED EMERGENCY LIGHTING CONTROL.
8. CONNECT EXIT SIGNS AND EMERGENCY LIGHTING UNITS ON THIS SHEET TO THE LOCAL UNSWITCHED EMERGENCY CIRCUIT.



1 / E202 GALLERY PLAN – LIGHTING

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

0 4' 8' 16' 24'

CONSULTANT NAME :: AMC ENGINEERS

ECI/HYER :: THA ARCHITECTURE

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04/27/2012
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REVISIONS:

KEYPLAN - (NTS)

CONSTRUCTION DOCUMENTS

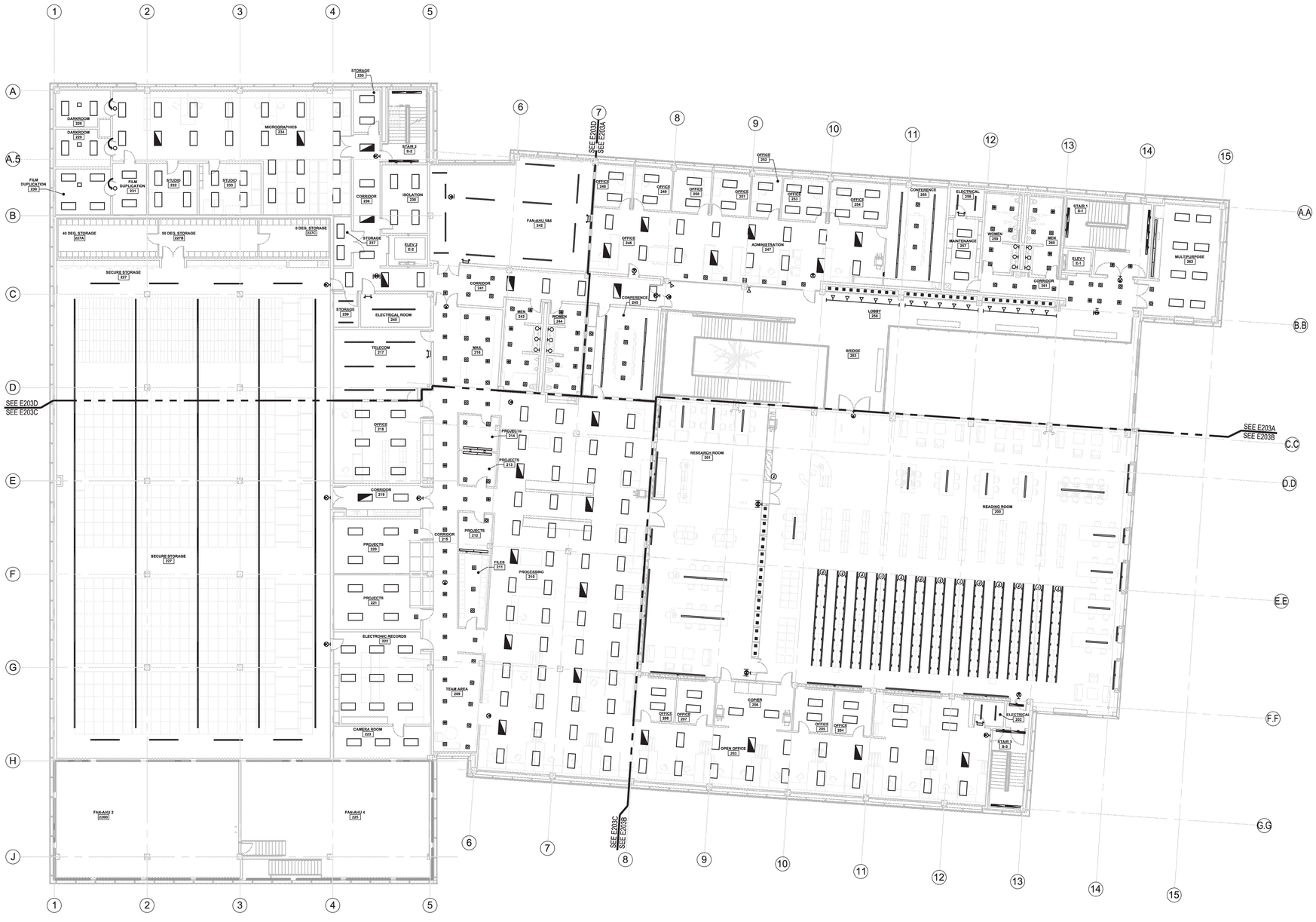
05.01.2012

GALLERY PLAN - LIGHTING

E202

SHEET NOTES

1. KEY PLANS ARE SHOWN FOR OVERALL REFERENCE ONLY. ALL DESIGN INFORMATION AND COMPONENTS ARE NOT SHOWN. REFER TO ENLARGED PLANS FOR DETAILED DESIGN INFORMATION ON THE SPECIFIC SUB-DISCIPLINE (E.G. LIGHTING, POWER, AND SPECIAL SYSTEMS).



1 E203 KEYPLAN – SECOND FLOOR PLAN – LIGHTING

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

0 8' 16' 32' 48'

CONSULTANT NAME :: AMC ENGINEERS

ECI/HYER :: THA ARCHITECTURE

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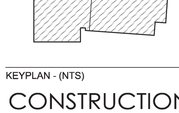

KEYPLAN - (NTS)

CONSTRUCTION DOCUMENTS

05.01.2012

KEYPLAN - SECOND FLOOR PLAN - LIGHTING

E203

SHEET NOTES

1. PROVIDE LOW VOLTAGE CONTROLS IN THIS ROOM. REFER TO SHEETS E701, E702, AND SPECIFICATION SECTION 26 27 49 FOR SYSTEM COMPONENTS AND ADDITIONAL INFORMATION.
2. PROVIDE ONE FOOT OF SILVER, 277V, SURFACE MOUNTED EXTRUDED ALUMINUM LIGHTING SERVICES, INC TRACK FOR FIXTURE. PROVIDE PARTS AND ACCESSORIES AS NECESSARY FOR A COMPLETE SYSTEM. REFER TO ARCHITECTURAL DRAWINGS FOR TRACK MOUNTING DETAILS.
3. PROVIDE 3 LENGTHS OF JESCO MA–R8 (8 FOOT TRACK) AND FIELD CUT TO 20 FEET EXHIBIT LENGTH. PROVIDE DRIVER/POWER SUPPLY, TRACK, AND ACCESSORIES AS NECESSARY FOR A COMPLETE SYSTEM. LOCATE FIXTURES AND TRACK IN RECESSED PORTION OF EXHIBIT CASE. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
4. PROVIDE LUTRON GRAFIK EYE QS LIGHTING CONTROLLER AT THIS LOCATION. REFER TO SHEETS E701, E702, AND SPECIFICATION SECTION 26 27 49 FOR SYSTEM COMPONENTS AND ADDITIONAL INFORMATION.
5. PROVIDE EXIT SIGN CENTERED HORIZONTALLY BETWEEN VERTICAL COLUMNS. FLUSH MOUNT AND CENTER JUNCTION BOX IN VERTICAL FACE OF OVERHANG BETWEEN DROP CEILING AND CONCRETE BEAM.
6. LOCATE REMOTE TRANSFORMER AND DIMMING DRIVER FOR RECESSED AND TRACK MOUNTED FIXTURES ABOVE DIMMER SWITCH CONTROLS FOR LIGHT FIXTURES. CIRCUIT TYPE N AND P FIXTURES TO PANEL L2D, CIRCUIT 6.
7. CONNECT NORMAL LIGHT FIXTURES ON THIS SHEET TO PANEL L2D, CIRCUIT AS NOTED, UNLESS OTHERWISE NOTED.
8. CONNECT EMERGENCY LIGHT FIXTURES ON THIS SHEET TO PANEL E2B UNLESS OTHERWISE NOTED. REFER TO DETAIL 1/E703 FOR GENERAL EMERGENCY LIGHTING CONTROL AND DETAIL 5/E703 FOR LINE VOLTAGE SWITCHED EMERGENCY LIGHTING CONTROL.
9. CONNECT EXIT SIGNS AND EMERGENCY LIGHTING UNITS ON THIS SHEET TO THE LOCAL UNSWITCHED EMERGENCY CIRCUIT.

1 E203A SECOND FLOOR PLAN – NE – LIGHTING

SCALE: 1/8" = 1'–0"

0 4' 8' 16' 24'

CONSULTANT NAME :: AMC ENGINEERS

ECI/HYER :: THA ARCHITECTURE

DEPARTMENT OF EDUCATION & EARLY DEVELOPMENT

DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES

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04/27/2012
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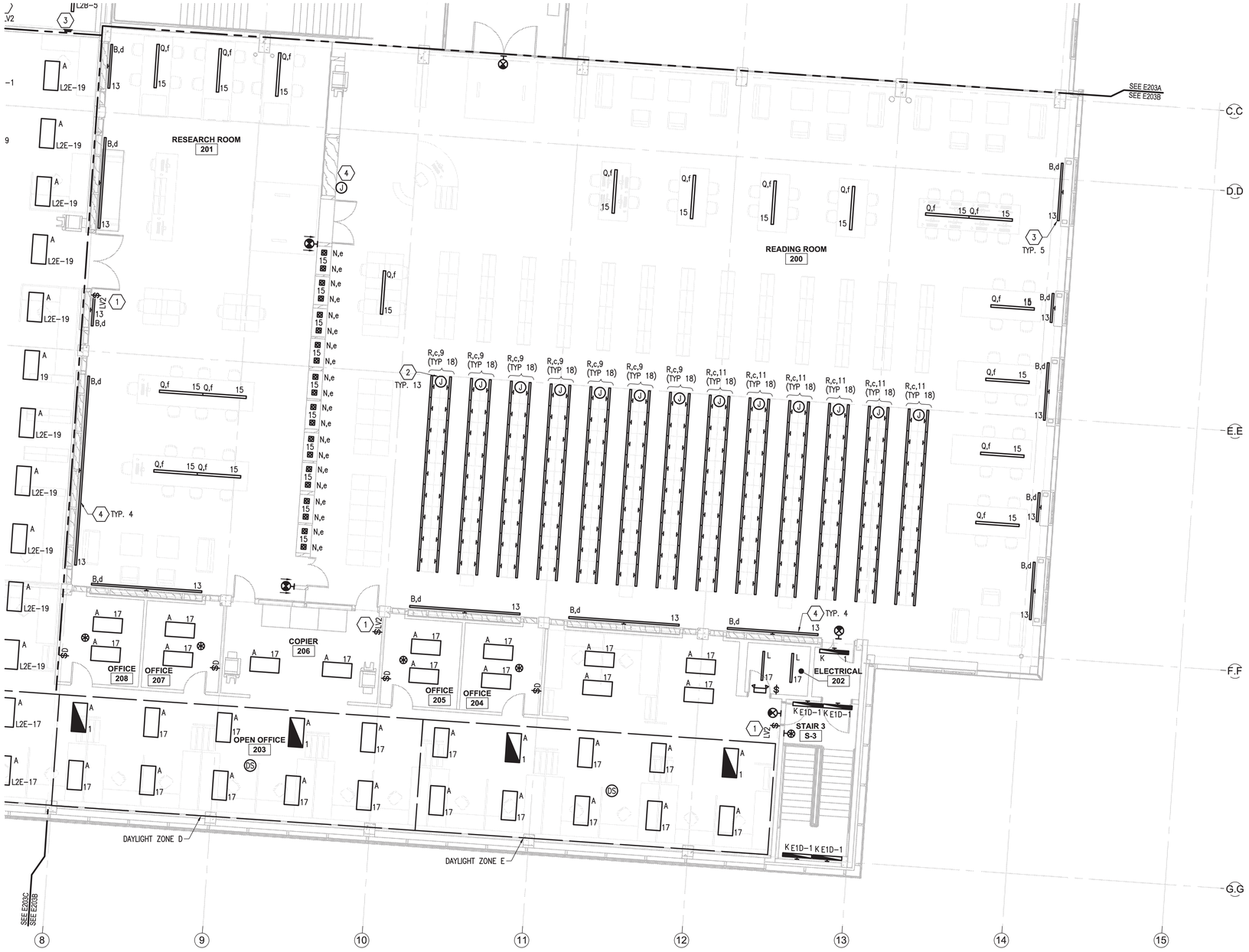
SECOND FLOOR PLAN - NE - LIGHTING

E203A



1 E203B SECOND FLOOR PLAN – SE – LIGHTING

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

0 4' 8' 16' 24'

SHEET NOTES

1. PROVIDE LOW VOLTAGE CONTROLS IN THIS ROOM. REFER TO SHEETS E701, E702, AND SPECIFICATION SECTION 26 27 49 FOR SYSTEM COMPONENTS AND ADDITIONAL INFORMATION.
2. CONNECT JUNCTION BOX TO STACK MOUNTED LIGHT FIXTURES. REFER TO ARCHITECTURAL DETAILS FOR VERTICAL CONDUIT ROUTING IN STACKS AND MOUNTING DETAILS. COORDINATION EXACT LOCATION OF CONDUIT AND JUNCTION BOX WITH OTHER TRADES PRIOR TO INSTALLATION.
3. INSTALL WALL MOUNTED FIXTURES ON EAST WALL AT 12'-9" ABOVE FINISHED FLOOR. REFER TO ARCHITECTURAL DETAILS FOR EXACT LOCATION OF FIXTURES.
4. INSTALL WALL MOUNTED FIXTURES ON SOUTH WALL AT 9'-7" ABOVE FINISHED FLOOR. REFER TO ARCHITECTURAL DETAILS FOR EXACT LOCATION OF FIXTURES.
5. PROVIDE LUTRON GRAFIK EYE QS LIGHTING AND SHADE CONTROLLER AT THIS LOCATION. REFER TO SHEETS E701, E702, AND SPECIFICATION SECTION 26 27 49 FOR SYSTEM COMPONENTS AND ADDITIONAL INFORMATION.
6. CONNECT NORMAL LIGHT FIXTURES ON THIS SHEET TO PANEL L2E, CIRCUIT AS NOTED, UNLESS OTHERWISE NOTED.
7. CONNECT EMERGENCY LIGHT FIXTURES ON THIS SHEET TO PANEL E2C UNLESS OTHERWISE NOTED. REFER TO DETAIL 1/E703 FOR GENERAL EMERGENCY LIGHTING CONTROL AND DETAIL 5/E703 FOR LINE VOLTAGE SWITCHED EMERGENCY LIGHTING CONTROL.
8. CONNECT EXIT SIGNS AND EMERGENCY LIGHTING UNITS ON THIS SHEET TO THE LOCAL UNSWITCHED EMERGENCY CIRCUIT.

CONSULTANT NAME :: AMC ENGINEERS
ECI/HYER :: THA ARCHITECTURE
DEPARTMENT OF EDUCATION & EARLY DEVELOPMENT
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REVISIONS:

KEYPLAN - (NTS)

CONSTRUCTION DOCUMENTS

05.01.2012

SECOND FLOOR PLAN - SE - LIGHTING

E203B

SHEET NOTES

1. PROVIDE LOW VOLTAGE CONTROLS IN THIS ROOM. REFER TO SHEETS E701, E702, AND SPECIFICATION SECTION 26 27 49 FOR SYSTEM COMPONENTS AND ADDITIONAL INFORMATION.
2. CONNECT NORMAL LIGHT FIXTURES ON THIS SHEET TO PANEL L2B, CIRCUIT AS NOTED, UNLESS OTHERWISE NOTED.
3. CONNECT EMERGENCY LIGHT FIXTURES ON THIS SHEET TO PANEL E2A UNLESS OTHERWISE NOTED. REFER TO DETAIL 1/E703 FOR GENERAL EMERGENCY LIGHTING CONTROL AND DETAIL 5/E703 FOR LINE VOLTAGE SWITCHED EMERGENCY LIGHTING CONTROL.
4. CONNECT EXIT SIGNS AND EMERGENCY LIGHTING UNITS ON THIS SHEET TO THE LOCAL UNSWITCHED EMERGENCY CIRCUIT.

1 E203C SECOND FLOOR PLAN – SW – LIGHTING

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

0 4' 8' 16' 24'

CONSULTANT NAME :: AMC ENGINEERS
ECI/HYER :: THA ARCHITECTURE
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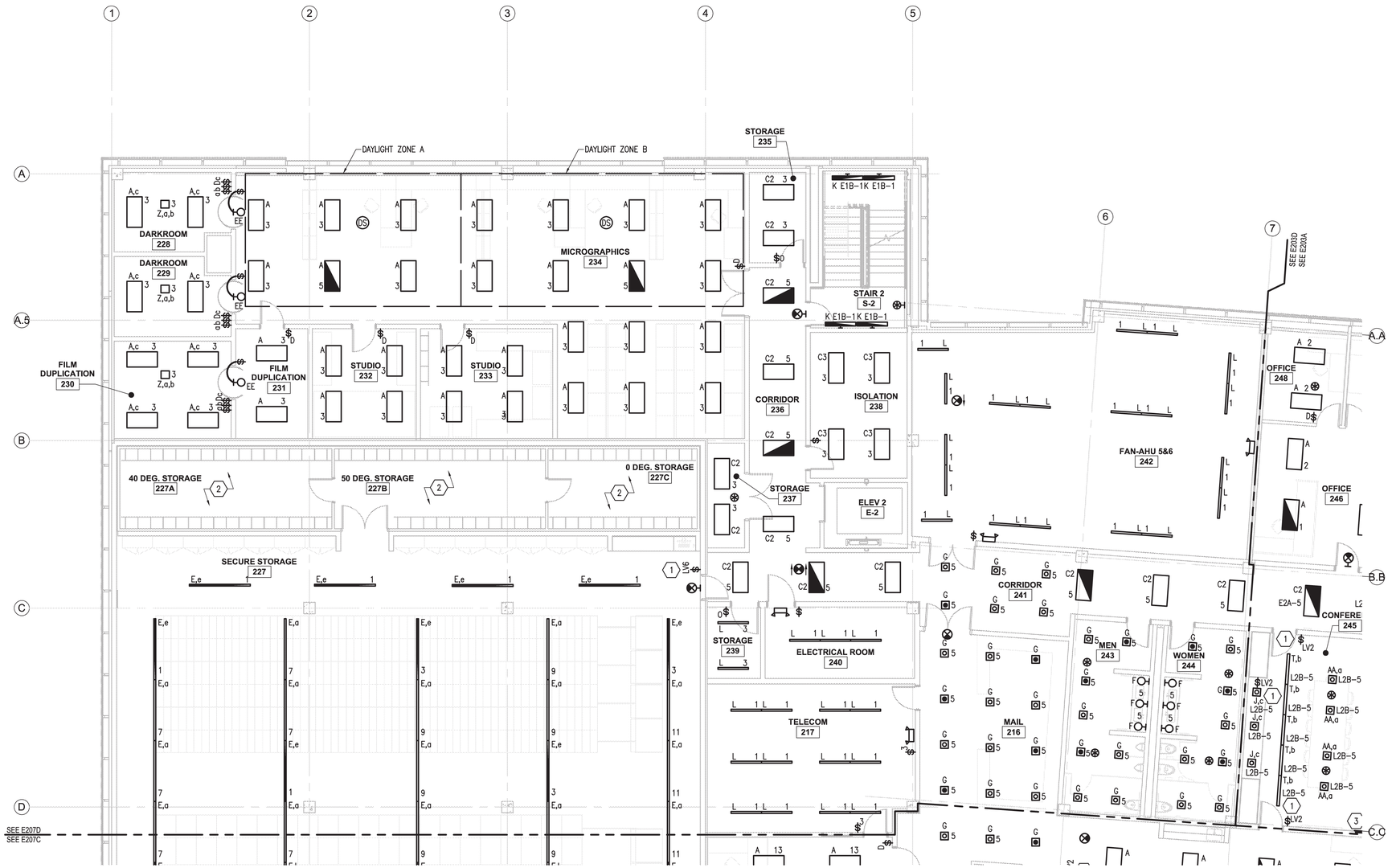
SECOND FLOOR PLAN - SW - LIGHTING

E203C

SHEET NOTES

1. PROVIDE LOW VOLTAGE CONTROLS IN THIS ROOM. REFER TO SHEETS E701, E702, AND SPECIFICATION SECTION 26 27 49 FOR SYSTEM COMPONENTS AND ADDITIONAL INFORMATION.
2. CONNECT PRE-MANUFACTURED 0 DEGREE FILM STORAGE UNIT LIGHTING TO CIRCUIT SHOWN ON SHEET E309.
3. PROVIDE LUTRON GRAFIK EYE QS LIGHTING AND SHADE CONTROLLER AT THIS LOCATION. REFER TO DETAIL 1/E702 AND SPECIFICATION SECTION 26 27 49 FOR ADDITIONAL INFORMATION.
4. CONNECT NORMAL LIGHT FIXTURES ON THIS SHEET TO PANEL L2B, CIRCUIT AS NOTED, UNLESS OTHERWISE NOTED.
5. CONNECT EMERGENCY LIGHT FIXTURES ON THIS SHEET TO PANEL E2A UNLESS OTHERWISE NOTED. REFER TO DETAIL 1/E703 FOR GENERAL EMERGENCY LIGHTING CONTROL AND DETAIL 5/E703 FOR LINE VOLTAGE SWITCHED EMERGENCY LIGHTING CONTROL.
6. CONNECT EXIT SIGNS AND EMERGENCY LIGHTING UNITS ON THIS SHEET TO THE LOCAL UNSWITCHED EMERGENCY CIRCUIT.



1 E203D SECOND FLOOR PLAN – NW – LIGHTING

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

0 4' 8' 16' 24'

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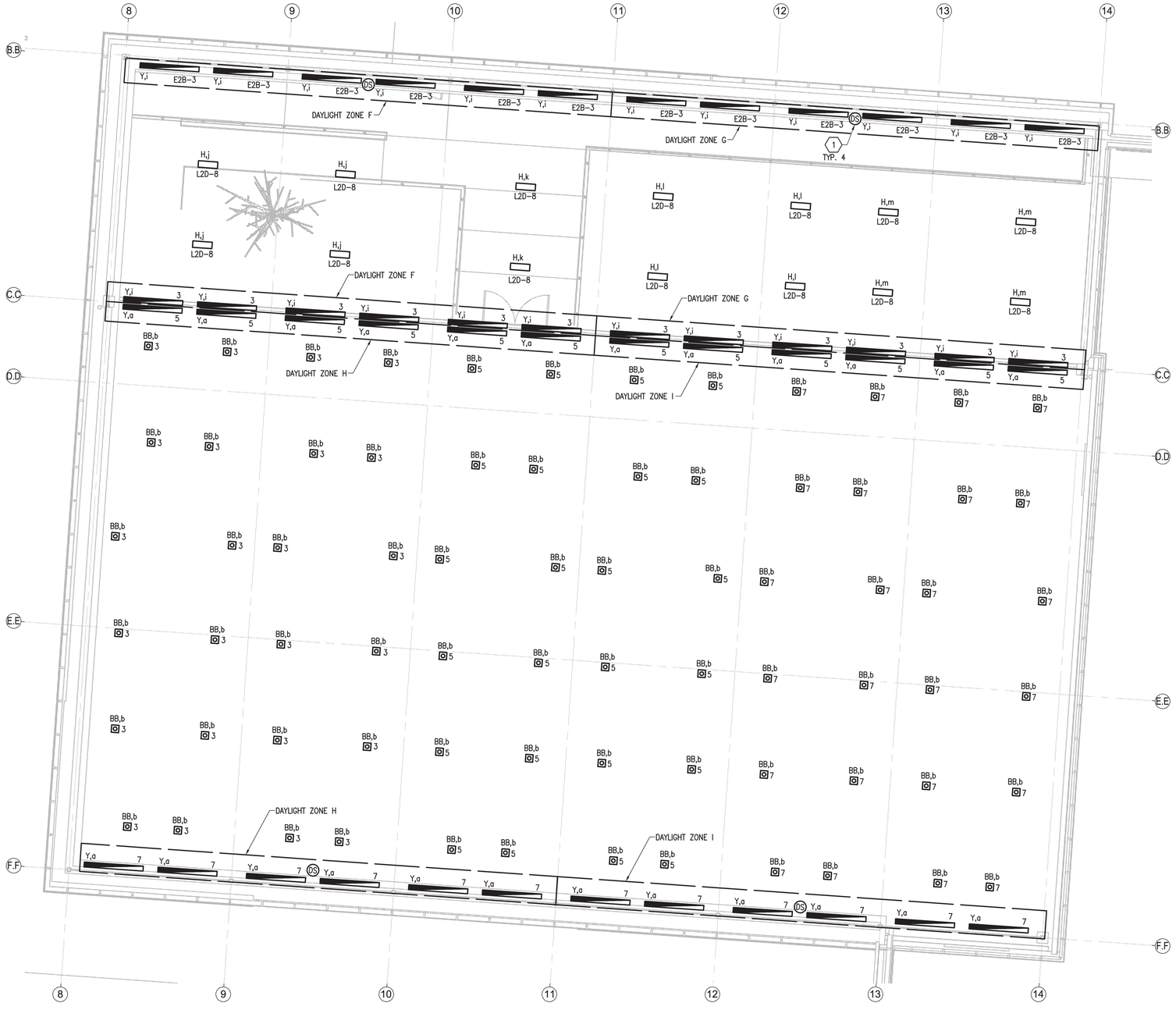
SECOND FLOOR PLAN - NW - LIGHTING

E203D

SHEET NOTES

1. PROVIDE DAYLIGHTING SENSOR SURFACE MOUNTED ON ARCHITECTURAL COVE IN SPACE BETWEEN LIGHT FIXTURES. COORDINATE SENSOR LOCATION WITH JUNCTION BOXES FOR SPEAKERS SHOWN E403A AND 403B
2. CONNECT NORMAL LIGHT FIXTURES ON THIS SHEET TO PANEL L2E, CIRCUIT AS NOTED, UNLESS OTHERWISE NOTED.
3. CONNECT EMERGENCY LIGHT FIXTURES ON THIS SHEET TO PANEL E2C UNLESS OTHERWISE NOTED.



1 SECOND FLOOR CLERESTORY PLAN – NE & SE – LIGHTING
E204 SCALE: 1/8" = 1'-0"

0 4' 8' 16' 24'

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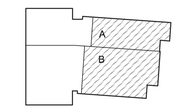

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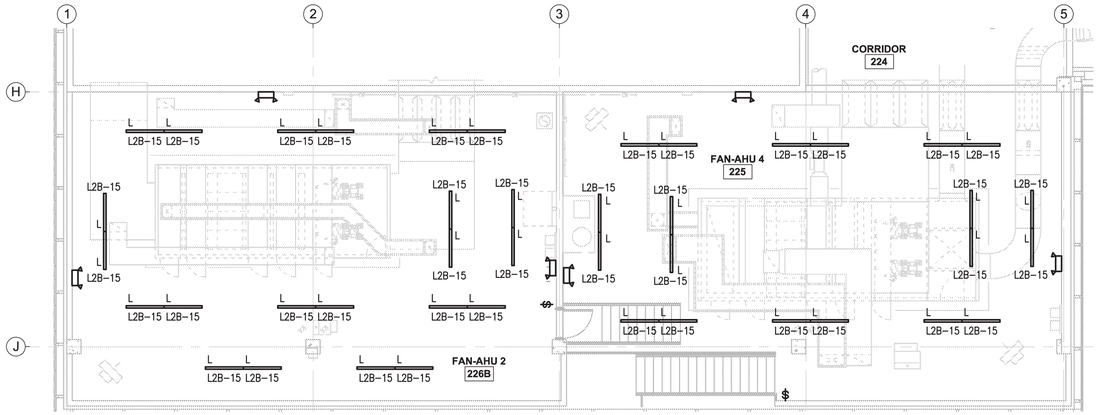
SECOND FLOOR CLERESTORY PLAN - LIGHTING

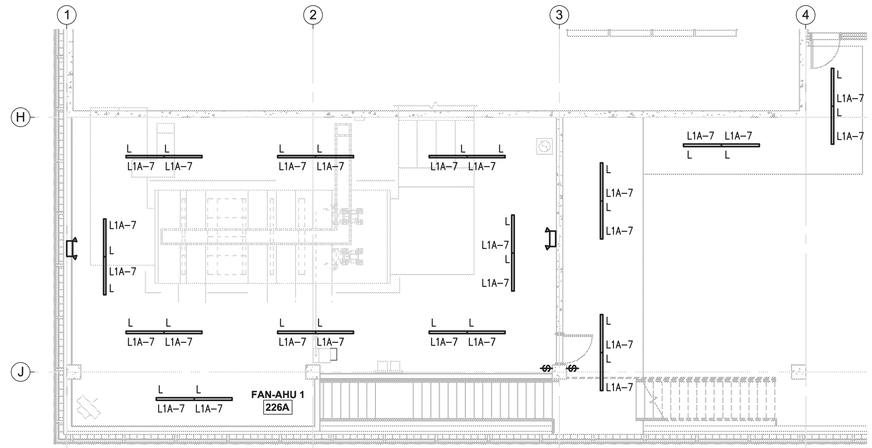
E204



3 E205 FLOOR PLAN – FAN ROOM (AHU-2 AND AHU-4) – LIGHTING

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

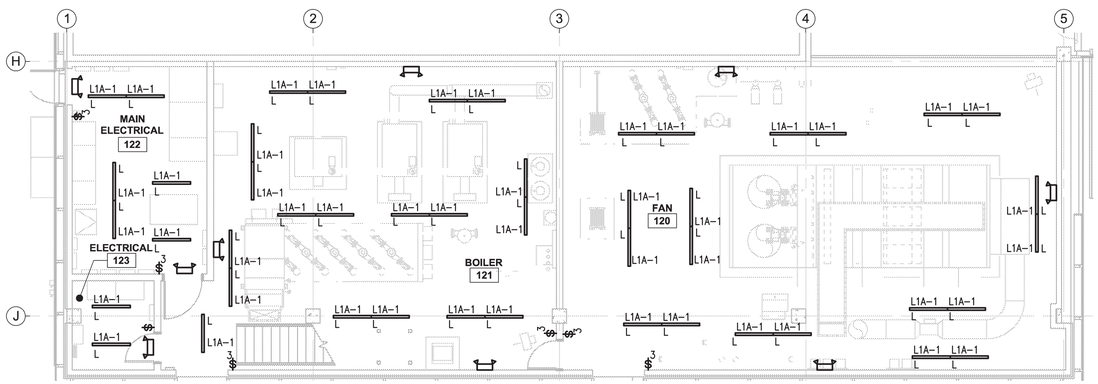
0 4' 8' 16' 24'



2 E205 FLOOR PLAN – FAN ROOM (AHU-1) – LIGHTING

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

0 4' 8' 16' 24'



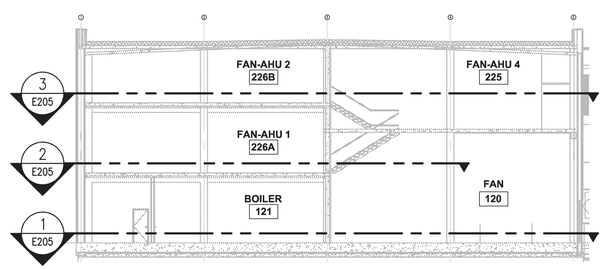
1 E205 FLOOR PLAN – BOILER ROOM AND AHU-3 – LIGHTING

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

0 4' 8' 16' 24'

SHEET NOTES

1. CONNECT EXIT SIGNS AND EMERGENCY LIGHTING UNITS ON THIS SHEET TO THE LOCAL UNSWITCHED EMERGENCY CIRCUIT.



FLOOR PLAN REFERENCE GUIDE

CONSULTANT NAME :: AMC ENGINEERS
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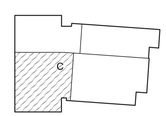


KEYPLAN - (NTS)

CONSTRUCTION DOCUMENTS

05.01.2012

FAN ROOM PLANS - LIGHTING

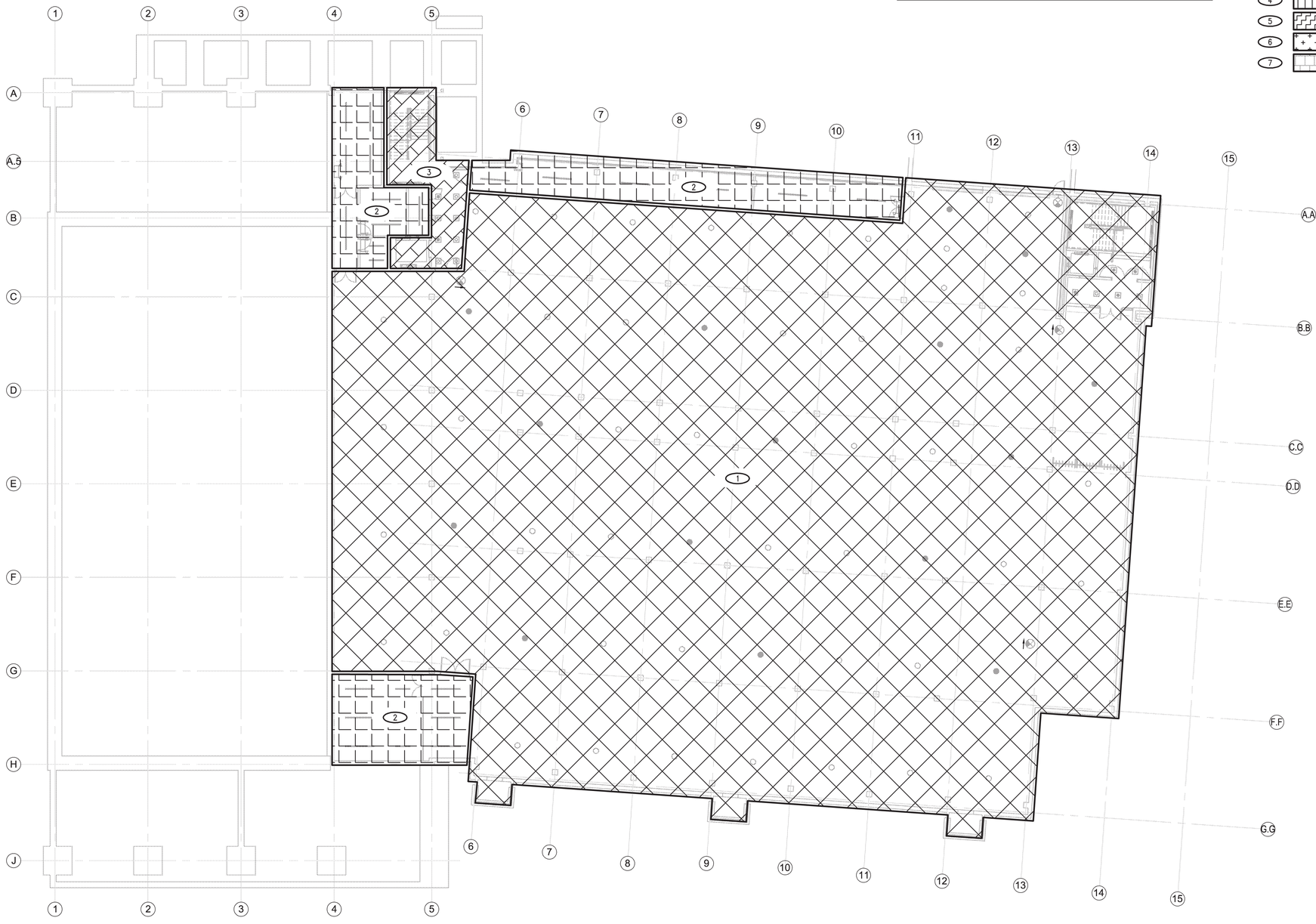
E205

SHEET NOTES

1. PROGRAM INDICATED LIGHTING ZONES INTO THE LIGHTING CONTROL SYSTEM AND CONTROL VIA INPUTS FROM THE BAS SYSTEM TO THE LIGHTING CONTROL SYSTEM. REFER TO LIGHTING CONTROL SCHEDULE, LIGHTING FLOOR PLANS, LIGHTING CONTROL DETAILS, AND SPECIFICATION SECTION 25 90 00 FOR ADDITIONAL LIGHTING CONTROL REQUIREMENTS.

LEGEND

- 1 Public
- 2 Maintenance
- 3 Back of House
- 4 Staff
- 5 Museum
- 6 Site
- 7 Reading and Research



1 / E210 PARKING FLOOR PLAN – LIGHTING CONTROL ZONES

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

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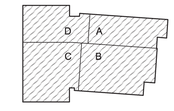

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CONSTRUCTION DOCUMENTS

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PARKING FLOOR PLAN - LIGHTING CONTROL ZONES

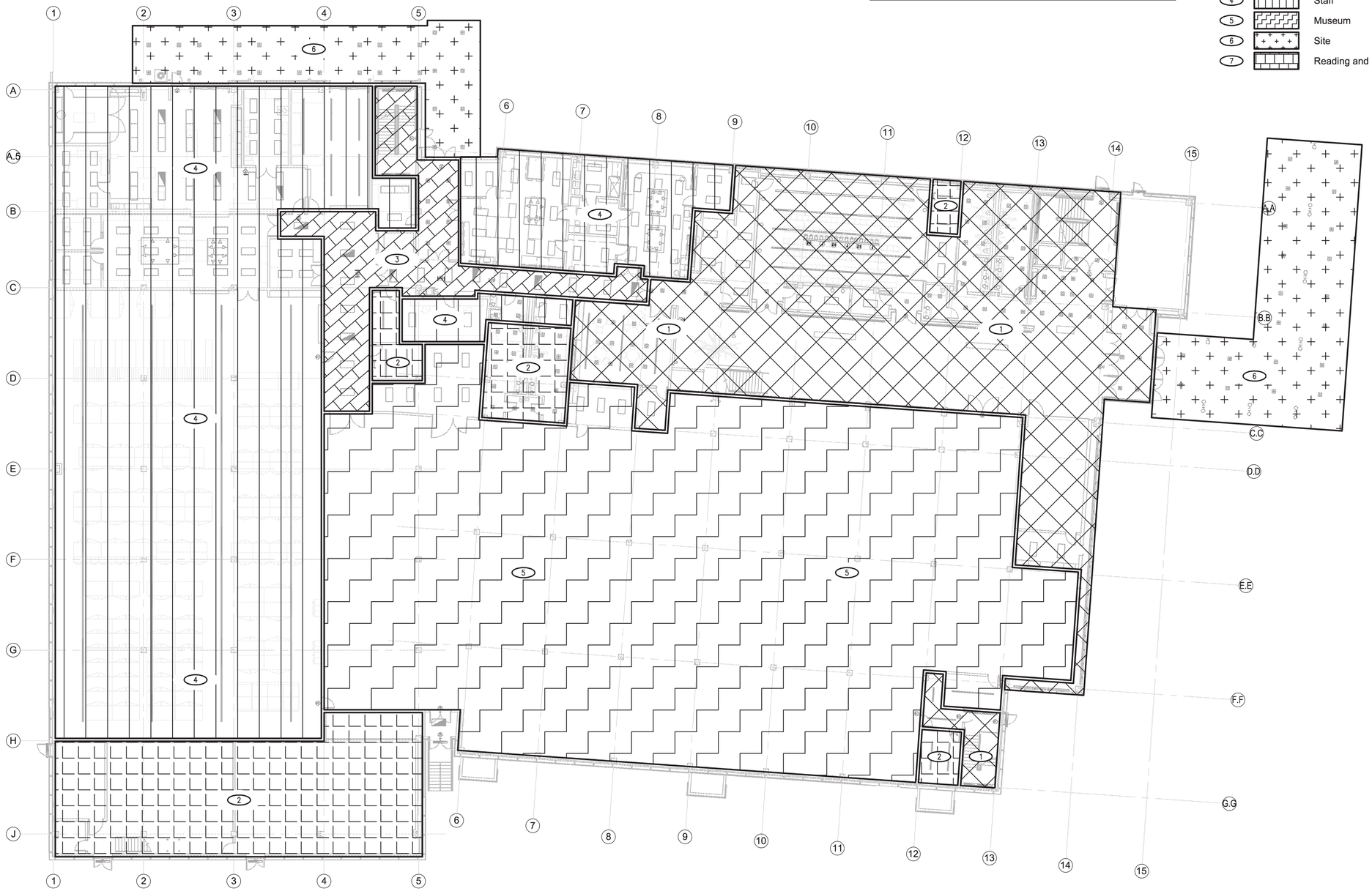
E210

SHEET NOTES

1. PROGRAM INDICATED LIGHTING ZONES INTO THE LIGHTING CONTROL SYSTEM AND CONTROL VIA INPUTS FROM THE BAS SYSTEM TO THE LIGHTING CONTROL SYSTEM. REFER TO LIGHTING CONTROL SCHEDULE, LIGHTING FLOOR PLANS, LIGHTING CONTROL DETAILS, AND SPECIFICATION SECTION 25 90 00 FOR ADDITIONAL LIGHTING CONTROL REQUIREMENTS.

LEGEND

- 1 — Public
- 2 — Maintenance
- 3 — Back of House
- 4 — Staff
- 5 — Museum
- 6 — Site
- 7 — Reading and Research



1 / E211 FIRST FLOOR PLAN – LIGHTING CONTROL ZONES

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

0 8' 16' 32' 48'

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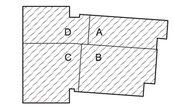

KEYPLAN - (NTS)

CONSTRUCTION DOCUMENTS

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FIRST FLOOR PLAN - LIGHTING CONTROL ZONES

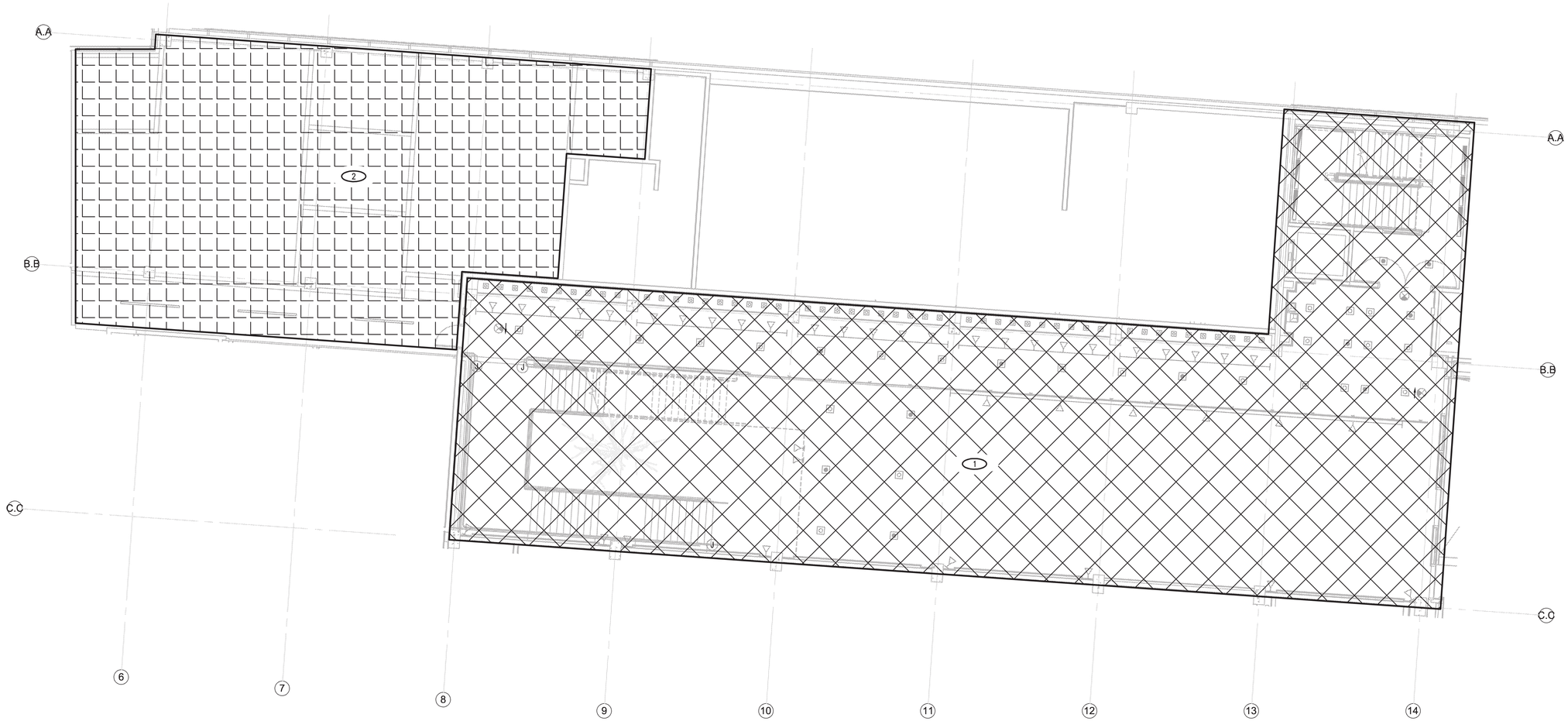
E211

SHEET NOTES

1. PROGRAM INDICATED LIGHTING ZONES INTO THE LIGHTING CONTROL SYSTEM AND CONTROL VIA INPUTS FROM THE BAS SYSTEM TO THE LIGHTING CONTROL SYSTEM. REFER TO LIGHTING CONTROL SCHEDULE, LIGHTING FLOOR PLANS, LIGHTING CONTROL DETAILS, AND SPECIFICATION SECTION 25 90 00 FOR ADDITIONAL LIGHTING CONTROL REQUIREMENTS.

LEGEND

- 1 Public
- 2 Maintenance
- 3 Back of House
- 4 Staff
- 5 Museum
- 6 Site
- 7 Reading and Research



1 / E212 GALLERY PLAN – LIGHTING CONTROL ZONES

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

0 4' 8' 16' 24'

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GALLERY PLAN - LIGHTING CONTROL ZONES

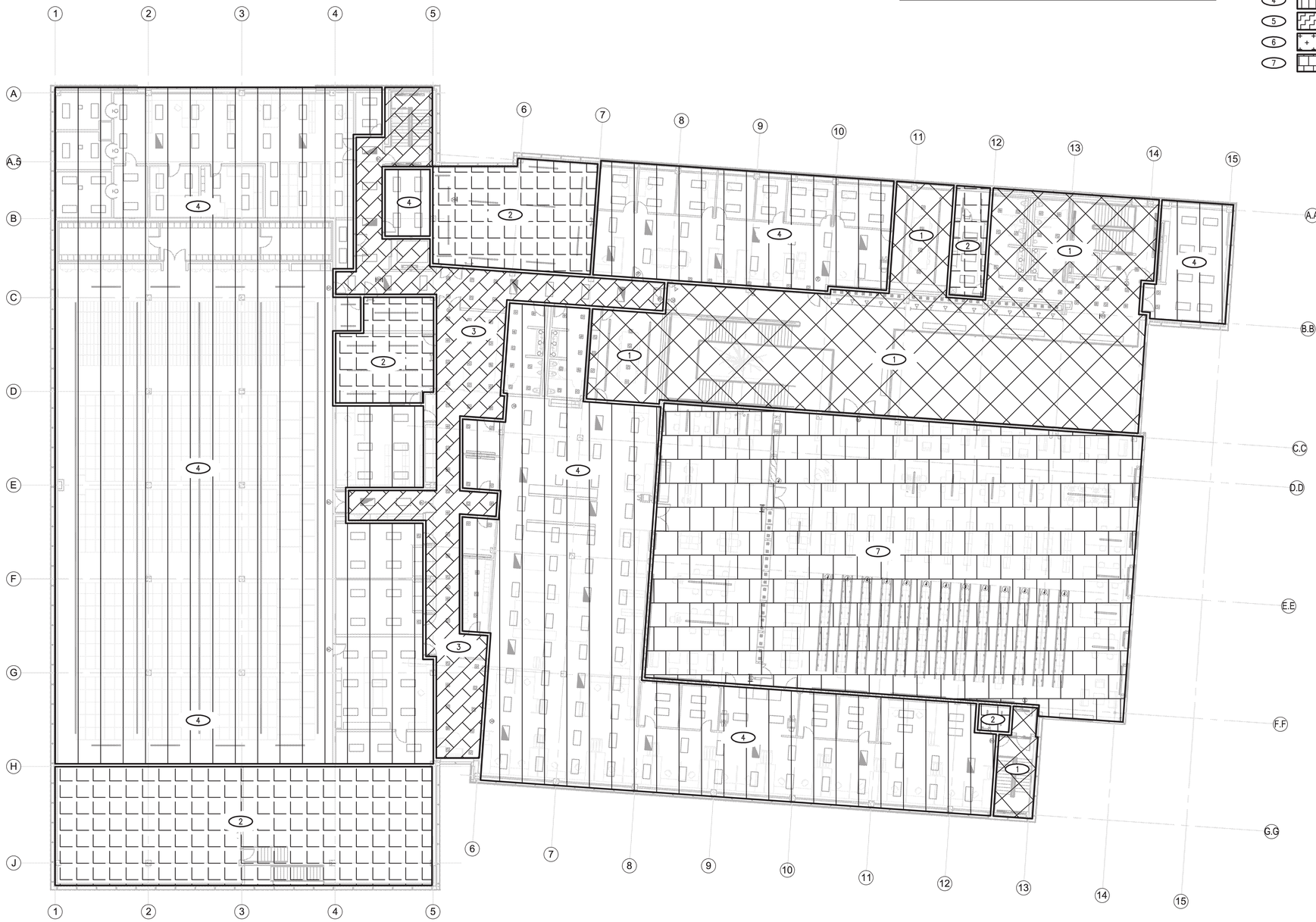
E212

SHEET NOTES

1. PROGRAM INDICATED LIGHTING ZONES INTO THE LIGHTING CONTROL SYSTEM AND CONTROL VIA INPUTS FROM THE BAS SYSTEM TO THE LIGHTING CONTROL SYSTEM. REFER TO LIGHTING CONTROL SCHEDULE, LIGHTING FLOOR PLANS, LIGHTING CONTROL DETAILS, AND SPECIFICATION SECTION 25 90 00 FOR ADDITIONAL LIGHTING CONTROL REQUIREMENTS.

LEGEND

- 1 Public
- 2 Maintenance
- 3 Back of House
- 4 Staff
- 5 Museum
- 6 Site
- 7 Reading and Research



1 / E213 SECOND FLOOR PLAN – LIGHTING CONTROL ZONES

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

0 8' 16' 32' 48'

CONSULTANT NAME :: AMC ENGINEERS

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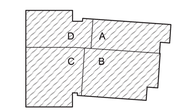

KEYPLAN - (NTS)

CONSTRUCTION DOCUMENTS

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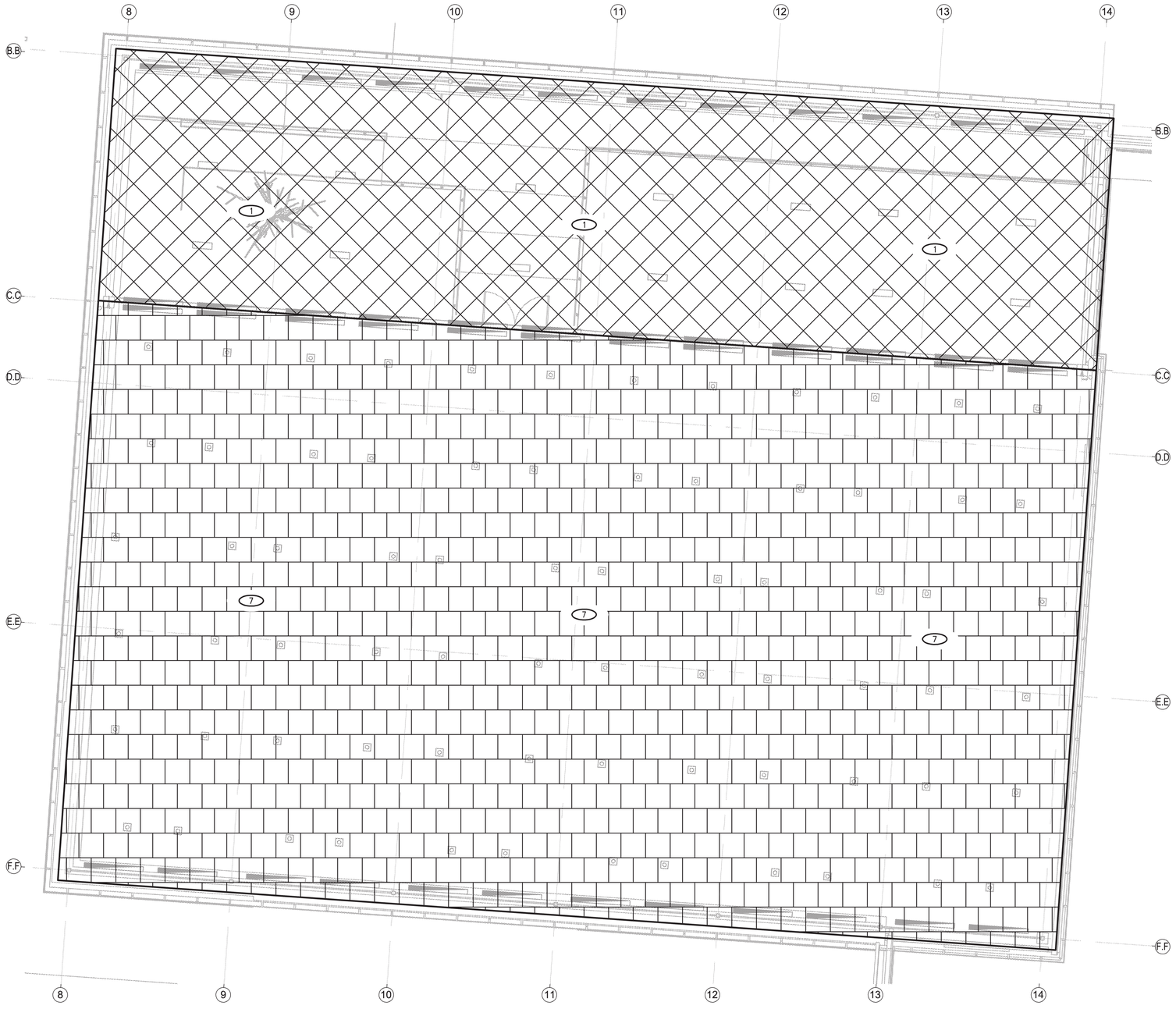
SECOND FLOOR PLAN - LIGHTING CONTROL ZONES

E213



SHEET NOTES

1. PROGRAM INDICATED LIGHTING ZONES INTO THE LIGHTING CONTROL SYSTEM AND CONTROL VIA INPUTS FROM THE BAS SYSTEM TO THE LIGHTING CONTROL SYSTEM. REFER TO LIGHTING CONTROL SCHEDULE, LIGHTING FLOOR PLANS, LIGHTING CONTROL DETAILS, AND SPECIFICATION SECTION 25 90 00 FOR ADDITIONAL LIGHTING CONTROL REQUIREMENTS.

LEGEND

1. Public
2. Maintenance
3. Back of House
4. Staff
5. Museum
6. Site
7. Reading and Research

1 E214 SECOND FLOOR CLERESTORY PLAN – LIGHTING CONTROL ZONES

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

0 4' 8' 16' 24'

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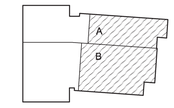

KEYPLAN - (NTS)

CONSTRUCTION DOCUMENTS

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SECOND FLOOR CLERESTORY PLAN - LIGHTING CONTROL ZONES

E214

SHEET NOTES

1. KEY PLANS ARE SHOWN FOR OVERALL REFERENCE ONLY. ALL DESIGN INFORMATION AND COMPONENTS ARE NOT SHOWN. REFER TO ENLARGED PLANS FOR DETAILED DESIGN INFORMATION ON THE SPECIFIC SUB-DISCIPLINE (E.G. LIGHTING, POWER, AND SPECIAL SYSTEMS).

1 E301 KEYPLAN – FIRST FLOOR PLAN – POWER

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

0 8' 16' 32' 48'

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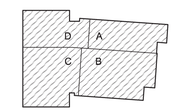


KEYPLAN - (NTS)

CONSTRUCTION DOCUMENTS

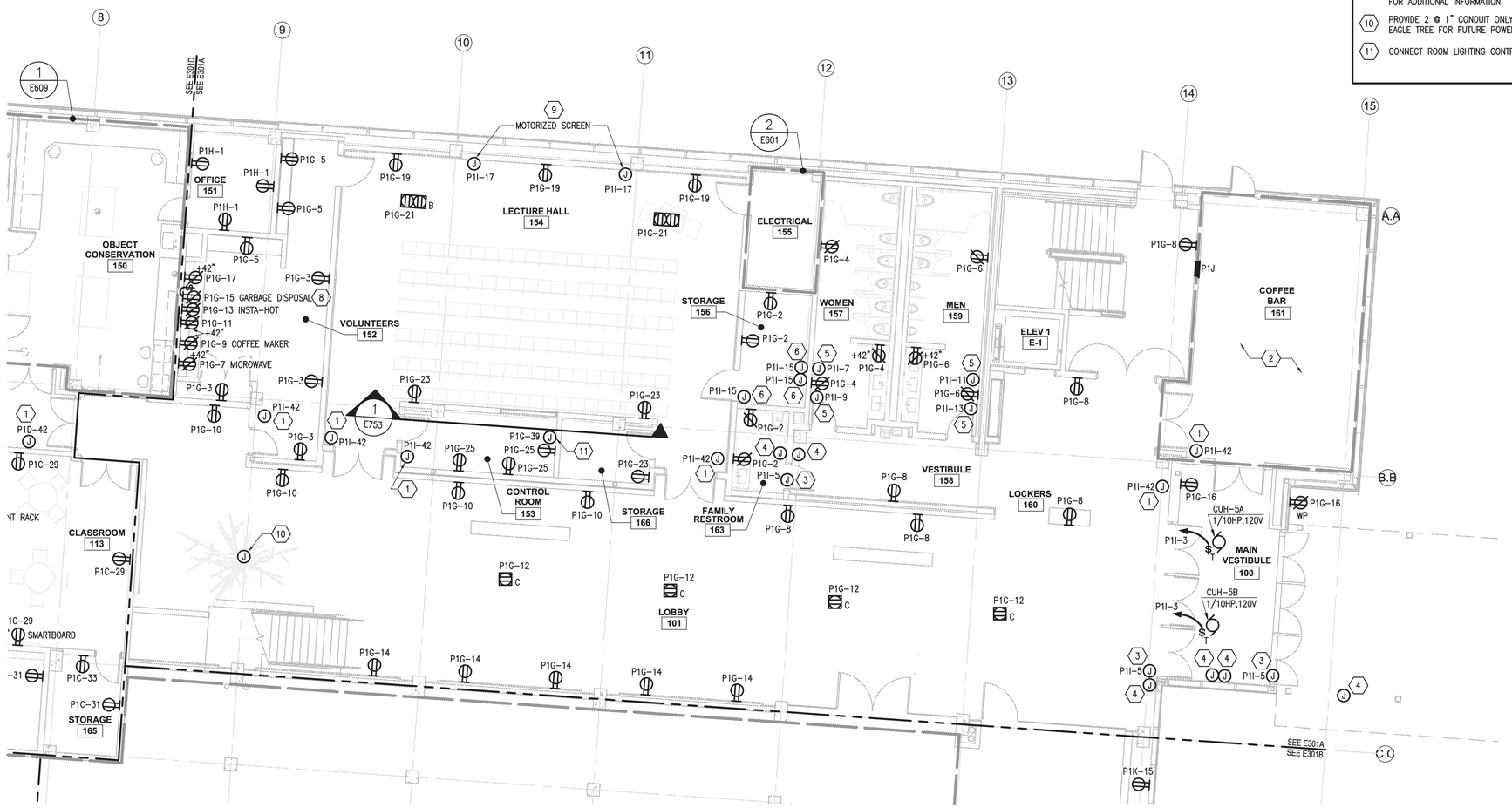
05.01.2012

KEYPLAN - FIRST FLOOR PLAN - POWER

E301

SHEET NOTES

1. CONNECT TO ACS POWER SUPPLY LOCATED IN ACCESSIBLE CEILING SPACE AT THIS APPROXIMATE LOCATION. CIRCUIT AS NOTED.
2. FUTURE TENANT IMPROVEMENT AREA.
3. CONNECT TO ADA AUTOMATIC DOOR OPENER AT THIS LOCATION. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION. COORDINATE CONNECTION DETAILS WITH MANUFACTURER.
4. PROVIDE JUNCTION BOX FOR ADA AUTOMATIC DOOR OPENER CONTROLS AT THIS LOCATION. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION. CONNECT TO DOOR OPENER IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS.
5. CONNECT ELECTRIC HAND DRYER TO CIRCUIT NOTED. COORDINATE EXACT DRYER LOCATION WITH ARCHITECTURAL ELEVATION.
6. INSTALL TRANSFORMER FOR ELECTRONIC FAUCET SENSORS PROVIDED UNDER DIVISION 22 IN APPROPRIATELY SIZED JUNCTION BOX IN ACCESSIBLE CEILING SPACE, PROVIDE ACCESS HATCH PER SPECIFICATION SECTION 26 05 00 IF NO ACCESSIBLE LOCATION IS AVAILABLE. PROVIDE ENGRAVED NAMEPLATE ON JUNCTION BOX TO READ, "FAUCET VALVE SENSORS". PROVIDE LOW VOLTAGE WIRING BETWEEN TRANSFORMER, CONTROLLER, SOLENOID AND FAUCET SENSORS PER MANUFACTURERS RECOMMENDATION. ALL WIRING SHALL BE IN CONDUIT. CONNECT TRANSFORMERS TO CIRCUIT AS NOTED.
7. COORDINATE RECEPTACLE PLACEMENT IN CONTROL ROOM 153 WITH A/V INSTALLATION. REFER TO SECTION CALLED OUT IN PLANS FOR RECEPTACLE ELEVATION AND CIRCUITING INFORMATION.
8. PROVIDE SWITCHED RECEPTACLE FOR GARBAGE DISPOSAL. CIRCUIT AS NOTED.
9. CONNECT TO MOTORIZED PROJECTION SCREEN PROVIDED UNDER DIVISION 11 TO CIRCUIT AS NOTED. PROVIDE CONTROL CONNECTIONS IN ACCORDANCE WITH MANUFACTURERS REQUIREMENTS AND COORDINATE OPERATION VIA LOW VOLTAGE ROOM CONTROL SYSTEM PROVIDED UNDER DIVISION 27. REFER TO DETAIL 1/E751 FOR ADDITIONAL INFORMATION.
10. PROVIDE 2 ⌀ 1" CONDUIT ONLY STUBS FROM ELECTRICAL ROOM 155 TO BASE OF EAGLE TREE FOR FUTURE POWER TO EAGLE TREE COMPONENTS.
11. CONNECT ROOM LIGHTING CONTROLLER TO CIRCUIT NOTED.



1 E301A FIRST FLOOR PLAN – NE – POWER

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

0 4' 8' 16' 24'

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FIRST FLOOR PLAN - NE - POWER

E301A

SHEET NOTES

1. CONNECT TO ACS POWER SUPPLY LOCATED IN ACCESSIBLE CEILING SPACE AT THIS APPROXIMATE LOCATION. CIRCUIT AS NOTED.
2. FUTURE TENANT IMPROVEMENT AREA.

1 E301B FIRST FLOOR PLAN – SE – POWER

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

0 4' 8' 16' 24'

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FIRST FLOOR PLAN - SE - POWER

E301B

SHEET NOTES

1. FUTURE TENANT IMPROVEMENT AREA.

1 E301C FIRST FLOOR PLAN – SW – POWER

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

0 4' 8' 16' 24'

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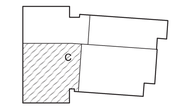

KEYPLAN - (NTS)

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FIRST FLOOR PLAN - SW - POWER

E301C

SHEET NOTES

1. CONNECT TO ACS POWER SUPPLY LOCATED IN ACCESSIBLE CEILING SPACE AT THIS APPROXIMATE LOCATION. CIRCUIT AS NOTED.
2. PROVIDE RECEPTACLE FOR DOCK LEVELER AND JUNCTION BOX FOR DOCK LEVELER CONTROLS. REFER TO MANUFACTURERS INSTALLATION INSTRUCTIONS AND ARCHITECTURAL ELEVATIONS FOR EXACT LOCATIONS. CONNECT CONTROLS AND RECEPTACLE PER MANUFACTURERS REQUIREMENTS. CIRCUIT AS NOTED.
3. CONNECT ROOM LIGHTING CONTROLLER TO CIRCUIT NOTED.
4. CONNECT TO GENERATOR SHORE POWER PANEL AT EXTERIOR OF GENERATOR ENCLOSURE. COORDINATE EXACT LOCATION OF PANEL WITH EQUIPMENT MANUFACTURER.
5. PROVIDE RECEPTACLE FOR DOCK LIGHTING. MOUNT AT 54" AFF.
6. CONNECT ELECTRIC HAND DRYER TO CIRCUIT NOTED. COORDINATE EXACT DRYER LOCATION WITH ARCHITECTURAL ELEVATION.
7. INSTALL TRANSFORMER FOR ELECTRONIC FAUCET SENSORS PROVIDED UNDER DIVISION 22 IN APPROPRIATELY SIZED JUNCTION BOX IN ACCESSIBLE CEILING SPACE, PROVIDE ACCESS HATCH PER SPECIFICATION SECTION 26 05 00 IF NO ACCESSIBLE LOCATION IS AVAILABLE. PROVIDE ENGRAVED NAMEPLATE ON JUNCTION BOX TO READ, "FAUCET VALVE SENSORS". PROVIDE LOW VOLTAGE WIRING BETWEEN TRANSFORMER, CONTROLLER, SOLENOID AND FAUCET SENSORS PER MANUFACTURERS RECOMMENDATION. ALL WIRING SHALL BE IN CONDUIT. CONNECT TRANSFORMERS TO CIRCUIT AS NOTED.
8. CONNECT TO LEAK DETECTION CONTROL PANEL. CIRCUIT AS NOTED.
9. PROVIDE CONTROL WIRE AND CONDUIT BETWEEN AST SUPPLY PUMP RFP-1 AND DAY TANK RETURN PUMP DT-1, LOCATED IN BOILER ROOM 121.
10. CONNECT TO SUB-BASE TANK TRANSFER PUMP CONTROL PANEL. PROVIDE REQUIRED CONNECTIONS BETWEEN CONTROL PANEL AND TRANSFER PUMP.

1 E301D FIRST FLOOR PLAN – NW – POWER

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

0 4' 8' 16' 24'

CONSULTANT NAME :: AMC ENGINEERS

ECI/HYER :: THA ARCHITECTURE

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REVISIONS:

KEYPLAN - (NTS)

CONSTRUCTION DOCUMENTS

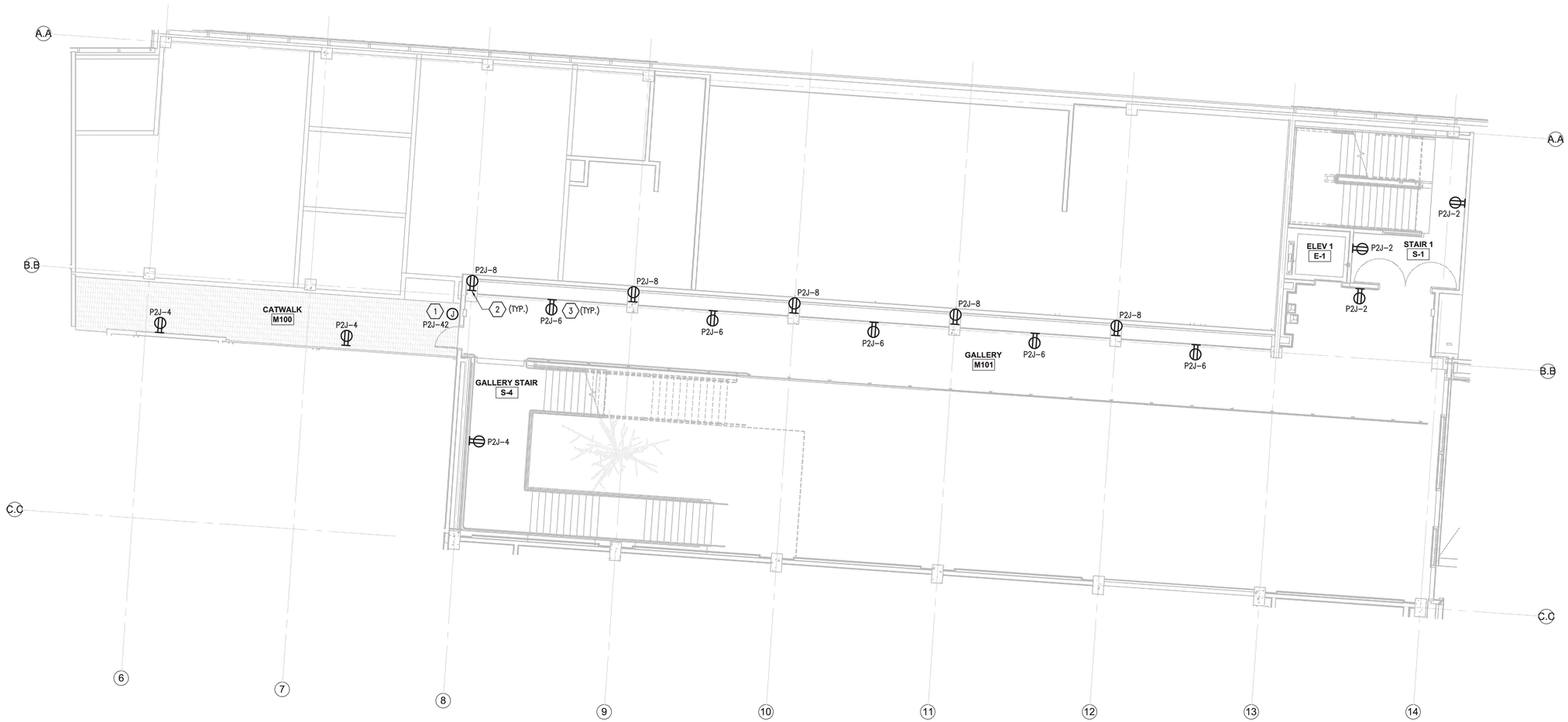
05.01.2012

FIRST FLOOR PLAN - NW - POWER

E301D

SHEET NOTES

1. CONNECT TO ACS POWER SUPPLY LOCATED IN ACCESSIBLE CEILING SPACE AT THIS APPROXIMATE LOCATION. CIRCUIT AS NOTED.
2. SURFACE MOUNT RECEPTACLE TO NORTH SIDE OF STRUCTURAL COLUMN. ROUTE SURFACE RACEWAY TO RECEPTACLE LOCATION. REFER TO ARCHITECTURAL DETAIL 7/A542 FOR ADDITIONAL INFORMATION.
3. MOUNT RECEPTACLE ORIENTED HORIZONATLLY IN METAL FACE AT BASE OF DISPLAY.



1 / E302 GALLERY PLAN – POWER

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

0 4' 8' 16' 24'

CONSULTANT NAME :: AMC ENGINEERS

ECI/HYER :: THA ARCHITECTURE

DEPARTMENT OF EDUCATION & EARLY DEVELOPMENT

DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES

AKSAS PROJECT NO. 68816

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04/27/2012
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REVISIONS:

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CONSTRUCTION DOCUMENTS

05.01.2012

GALLERY PLAN - POWER

E302

SHEET NOTES

1. KEY PLANS ARE SHOWN FOR OVERALL REFERENCE ONLY. ALL DESIGN INFORMATION AND COMPONENTS ARE NOT SHOWN. REFER TO ENLARGED PLANS FOR DETAILED DESIGN INFORMATION ON THE SPECIFIC SUB-DISCIPLINE (E.G. LIGHTING, POWER, AND SPECIAL SYSTEMS).

1 E303 KEYPLAN – SECOND FLOOR PLAN – POWER

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

0 8' 16' 32' 48'

CONSULTANT NAME :: AMC ENGINEERS
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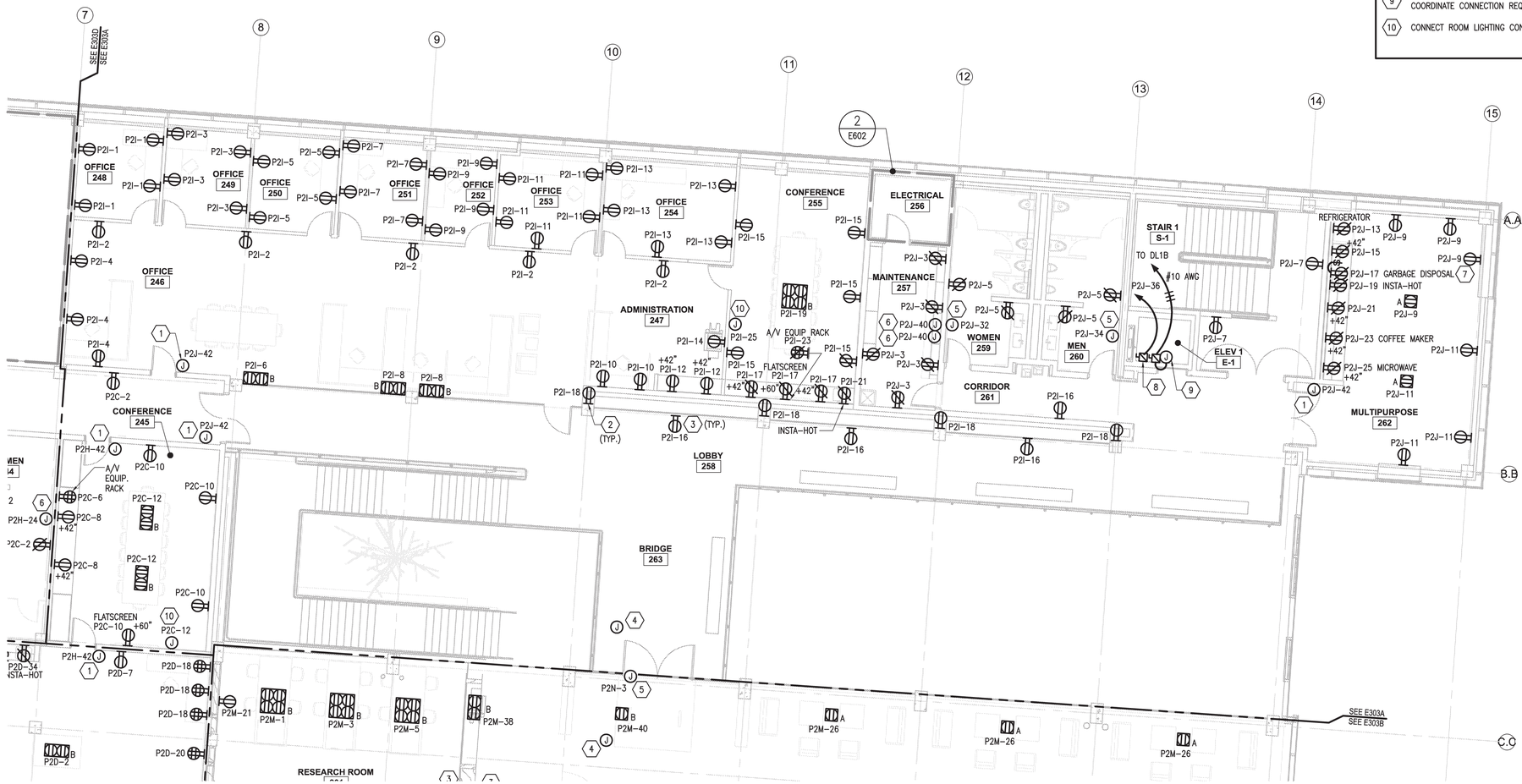
KEYPLAN - SECOND FLOOR PLAN - POWER

E303

SHEET NOTES

1. CONNECT TO ACS POWER SUPPLY LOCATED IN ACCESSIBLE CEILING SPACE AT THIS APPROXIMATE LOCATION. CIRCUIT AS NOTED.
2. SURFACE MOUNT RECEPTACLE TO NORTH SIDE OF STRUCTURAL COLUMN. ROUTE SURFACE RACEWAY TO RECEPTACLE LOCATION. REFER TO ARCHITECTURAL DETAILS FOR ADDITIONAL INFORMATION.
3. MOUNT RECEPTACLE ORIENTED HORIZONATLLY IN METAL FACE AT BASE OF DISPLAY.
4. PROVIDE JUNCTION BOX FOR ADA AUTOMATIC DOOR OPENER CONTROLS AT THIS LOCATION. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION. CONNECT TO DOOR OPENER IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS.
5. CONNECT ELECTRIC HAND DRYER TO CIRCUIT NOTED. COORDINATE EXACT DRYER LOCATION WITH ARCHITECTURAL ELEVATION.
6. INSTALL TRANSFORMER FOR ELECTRONIC FAUCET SENSORS PROVIDED UNDER DIVISION 22 IN APPROPRIATELY SIZED JUNCTION BOX IN ACCESSIBLE CEILING SPACE, PROVIDE ACCESS HATCH PER SPECIFICATION SECTION 26 05 00 IF NO ACCESSIBLE LOCATION IS AVAILABLE. PROVIDE ENGRAVED NAMEPLATE ON JUNCTION BOX TO READ, "FAUCET VALVE SENSORS". PROVIDE LOW VOLTAGE WIRING BETWEEN TRANSFORMER, CONTROLLER, SOLENOID AND FAUCET SENSORS PER MANUFACTURERS RECOMMENDATION. ALL WIRING SHALL BE IN CONDUIT. CONNECT TRANSFORMERS TO CIRCUIT AS NOTED.
7. PROVIDE SWITCHED RECEPTACLE FOR GARBAGE DISPOSAL. CIRCUIT AS NOTED.
8. PROVIDE FUSED DISCONNECT FOR ELEVATOR CAR LIGHT AND RECEPTACLES. LABEL DISCONNECT IN ACCORDANCE WITH NEC ARTICLE 620.53.
9. CONNECT TO ELEVATOR CONTROLLER IN ACCORDANCE WITH NEC ARTICLE 620. COORDINATE CONNECTION REQUIREMENTS WITH DIVISION 14.
10. CONNECT ROOM LIGHTING CONTROLLER TO CIRCUIT NOTED.



1 E303A SECOND FLOOR PLAN – NE – POWER

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

0 4' 8' 16' 24'

CONSULTANT NAME :: AMC ENGINEERS
ECI/HYER :: THA ARCHITECTURE
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DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
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SECOND FLOOR PLAN - NE - POWER

E303A

SHEET NOTES

1. CONNECT TO ACS POWER SUPPLY LOCATED IN ACCESSIBLE CEILING SPACE AT THIS APPROXIMATE LOCATION. CIRCUIT AS NOTED.
2. PROVIDE 2-GANG JUNCTION BOX WITH BLANK COVER PLATE FOR FUTURE SHADE CONTROLS. PROVIDE 3/4" CONDUIT ONLY PATHWAY BETWEEN JUNCTION BOX AND ELECTRICAL ROOM 202.
3. MOUNT RECEPTACLE ORIENTED HORIZONTALLY IN WOOD KICK AT BOTTOM OF WALL.
4. PROVIDE JUNCTION BOX FOR ADA AUTOMATIC DOOR OPENER CONTROLS AT THIS LOCATION. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION. CONNECT TO DOOR OPENER IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS.
5. CONNECT TO ADA AUTOMATIC DOOR OPENER AT THIS LOCATION. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION. COORDINATE CONNECTION DETAILS WITH MANUFACTURER.
6. FIELD COORDINATE EXACT LOCATION OF CIRCULATION DESK WITH ARCHITECT PRIOR TO INSTALLATION OF FLOOR BOX.
7. PROVIDE JUNCTION BOX IN ARCHITECTURAL RECESS FOR FUTURE POWERED SHADES. PROVIDE 3/4" CONDUIT ONLY PATHWAY BETWEEN JUNCTION BOX AND SHADE CONTROL LOCATION.

1 E303B SECOND FLOOR PLAN – SE – POWER

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

0 4' 8' 16' 24'

CONSULTANT NAME :: AMC ENGINEERS

ECI/HYER :: THA ARCHITECTURE

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SECOND FLOOR PLAN - SE - POWER

E303B

SHEET NOTES

1. CONNECT TO ACS POWER SUPPLY LOCATED IN ACCESSIBLE CEILING SPACE AT THIS APPROXIMATE LOCATION. CIRCUIT AS NOTED.
2. MOUNT RECEPTACLE ORIENTED HORIZONTALLY IN WALL ONE INCH ABOVE TOP OF WORK SURFACE TO BOTTOM OF RECEPTACLE.

SEE E303D
SEE E303C

OFFICE 218
CORRIDOR 219
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CORRIDOR 215
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FLATSCREEN P2C-10 +60"
+42" P2D-30
+42" P2D-32
P2D-34 INSTA-HOT
P2H-42 J 1 P2D-7
P2C-12 10 J
P2D-18
P2D-20
P2D-22
P2D-24
P2D-26
P2D-28
P2L-2
P2M-
P2
F.F
G.G
7
P2D-1
P2D-2
P2D-3
P2D-4 +36"
P2D-5
P2D-6
P2D-7
P2D-8
P2D-9
P2D-10
P2D-11
P2D-12
P2D-14
P2D-16
P2C-1
P2C-3
P2C-5
P2C-7 +42"
P2C-9
P2C-11
P2C-13
P2C-15
P2C-19
P2C-21
P2C-23
P2C-25
P2C-27
P2C-29
P2C-31
P2C-33
P2C-35
P2M-17 B
P2H-42 J 1
P2L-1
P2L-3
P2L-5
P2L-7
P2L-9
P2L-11
P2L-13
1 E605
SEE E303C
SEE E303B
1 2 3 4 5 6 7 8
D E F G H J

1 E303C SECOND FLOOR PLAN – SW – POWER

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

0 4' 8' 16' 24'

CONSULTANT NAME :: AMC ENGINEERS
ECI/HYER :: THA ARCHITECTURE
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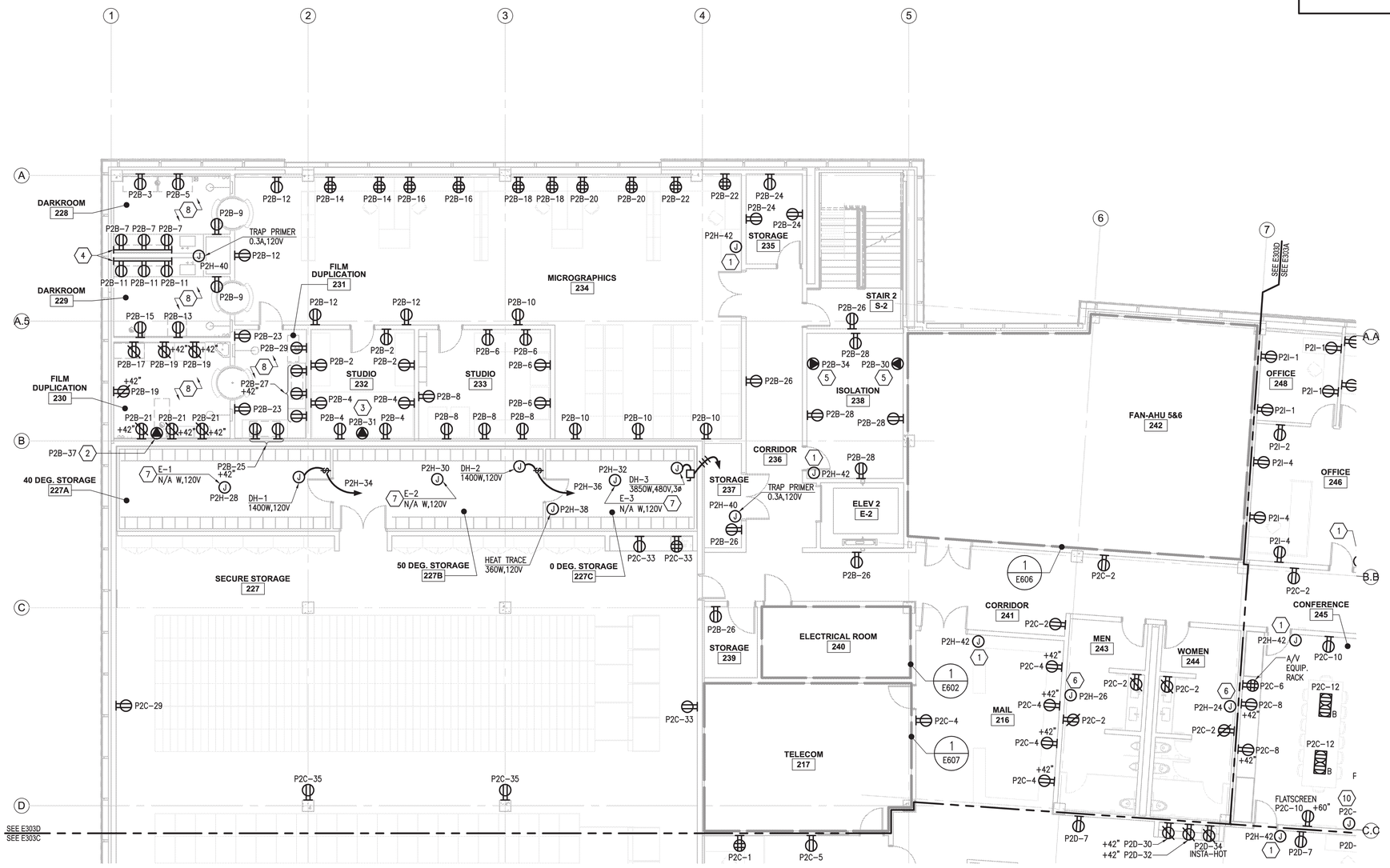
SECOND FLOOR PLAN - SW - POWER

E303C

SHEET NOTES

1. CONNECT TO ACS POWER SUPPLY LOCATED IN ACCESSIBLE CEILING SPACE AT THIS APPROXIMATE LOCATION. CIRCUIT AS NOTED.
2. PROVIDE NEMA TYPE 6-30 FOR OFOI EQUIPMENT. CIRCUIT AS NOTED.
3. PROVIDE NEMA TYPE 14-20 RECEPTACLE FOR PLANETARY CAMERA EQUIPMENT.
4. PROVIDE SURFACE RACEWAY AT LOCATION INDICATED. REFER TO LAB ELEVATIONS FOR MOUNTING HEIGHT. REFER TO SPECIFICATION SECTION 26 05 35 FOR ADDITIONAL INFORMATION.
5. PROVIDE DEDICATED RECEPTACLE FOR CHEST FREEZER. PROVIDE NEMA RECEPTACLE TYPE AND CIRCUIT BREAKER AS REQUIRED BY EQUIPMENT MANUFACTURER.
6. CONNECT ELECTRIC HAND DRYER TO CIRCUIT NOTED. COORDINATE EXACT DRYER LOCATION WITH ARCHITECTURAL ELEVATION.
7. CONNECT TO DEFROST UNIT. COORDINATE CONNECTION REQUIREMENTS AND BREAKER SIZE WITH EQUIPMENT MANUFACTURER. PROVIDE DISCONNECTING MEANS IN ACCORDANCE WITH NEC ARTICLE 422 SIZED FOR EQUIPMENT SELECTED.
8. RECEPTACLES IN DARKROOMS AND FILM DUPLICATION SHALL BE PROTECTED BY GFCI BREAKER. REFER TO PANEL SCHEDULES FOR ADDITIONAL INFORMATION.



1 SECOND FLOOR PLAN – NW – POWER

1 / E303D SCALE: 1/8" = 1'-0"

0 4' 8' 16' 24'

CONSULTANT NAME :: AMC ENGINEERS

ECI/HYER :: THA ARCHITECTURE

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SECOND FLOOR PLAN - NW - POWER

E303D

SHEET NOTES

1. KEY PLANS ARE SHOWN FOR OVERALL REFERENCE ONLY. ALL DESIGN INFORMATION AND COMPONENTS ARE NOT SHOWN. REFER TO ENLARGED PLANS FOR DETAILED DESIGN INFORMATION ON THE SPECIFIC SUB-DISCIPLINE (E.G. LIGHTING, POWER, AND SPECIAL SYSTEMS).

1 / E401 KEYPLAN – FIRST FLOOR PLAN – SPECIAL SYSTEMS

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

0 8' 16' 32' 48'

CONSULTANT NAME :: AMC ENGINEERS

ECI/HYER :: THA ARCHITECTURE

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REVISIONS:

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KEYPLAN - FIRST FLOOR PLAN - SPECIAL SYSTEMS

E401

SHEET NOTES

1. STROBES ARE 15CD UNLESS OTHERWISE NOTED. FIELD COORDINATE FIRE ALARM SYSTEM SPEAKER/STROBE LOCATIONS AND STROBE ONLY LOCATIONS TO PROVIDE COVERAGE OF AREAS IN ACCORDANCE WITH NFPA 72 REQUIREMENTS.

2. PROVIDE TELECOM CABLE TRAY ABOVE THE SUSPENDED CEILING IAW SPECIFICATIONS. CABLE TRAY WIDTH SHALL BE AS SCALED ON DRAWINGS. REFER TO SHEET E401 FOR CABLE TRAY ROUTING.

3. PROVIDE CCTV CAMERA AT LOCATION INDICATED. REFER TO SHEET E803 FOR ONE-LINE DIAGRAM AND CAMERA SCHEDULE AND SHEET E741 FOR MOUNTING DETAILS.

4. PROVIDE ACS RIM AND RIM ENCLOSURE FOR THE DOOR(S) NOTED IN ACCORDANCE WITH ACS ONE-LINE DIAGRAM ON SHEET E802. PROVIDE REQUIRED POWER SUPPLIES, CONDUIT, WIRE, TERMINAL BLOCKS ETC. FOR A COMPLETE AND FUNCTIONING SYSTEM IN ACCORDANCE WITH THE SPECIFICATIONS, APPLICABLE CODES AND STANDARDS. LOCATE ENCLOSURE ABOVE DOOR IN ACCESSIBLE CEILING SPACE UNLESS OTHERWISE NOTED.

5. PROVIDE DOOR CONTACTS ON EXTERIOR NON SMS DOORS. REFER TO SHEETS E731 THROUGHE736 FOR SMS DOOR DETAILS.

6. PROVIDE GLASS BREAK DETECTORS IN AREAS WITH GRADE LEVEL WINDOWS. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.

7. PROVIDE TELECOM OUTLET WITH A SINGLE TELECOM JACK ABOVE CEILING FOR CONNECTION TO FUTURE WIRELESS ACCESS POINT PROVIDED BY OTHERS. PROVIDE 1 INCH CONDUIT STUBBED TO NEAREST CABLE TRAY OR DIRECTLY TO TELECOM ROOM. PROVIDE A SINGLE TELECOM HORIZONTAL CABLE FROM TELECOM OUTLET TO TELECOM ROOM PATCH PANEL.

8. PROVIDE ELEVATOR RECALL PER SPECIFICATION SECTION 16723.

9. PROVIDE WALL PLATE FOR MICROPHONE AND SPEAKER CONNECTIONS AT LOCATION INDICATED. REFER TO DETAIL 1/E754 FOR ADDITIONAL INFORMATION.

10. REFERENCE DETAILS ON SHEETS E731-E736, SPECIFICATION SECTION 08 71 00, AND THE ARCHITECTURAL DOOR HARDWARE SCHEDULE FOR ADDITIONAL INFORMATION.

11. PROVIDE ACS CARD READER ON EXTERIOR PEDESTAL AT THIS APPROXIMATE LOCATION. COORDINATE CONDUIT AND CABLE ROUTING WITH ADA DOOR CONTROL BUTTON. REFER TO ARCHITECTURAL DRAWINGS FOR PEDESTAL DETAIL.

12. PROVIDE SOLID DRIVE PA SPEAKER AT LOCATION INDICATED. MOUNT SPEAKER TO INSIDE SURFACE OF WOOD PANEL AT HEIGHT INDICATED. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.

13. PROVIDE SINGLE GANG WALL PLATE AT LOCATION INDICATED APPROXIMATELY 30 INCHES BELOW CEILING RECESSED INSIDE WALL. PROVIDE ONE XLR CONNECTOR IN WALL PLATE. ROUTE CONDUIT AND CABLING BACK TO CONTROL ROOM 153. REFER TO SHEETS E753 AND E754 FOR ADDITIONAL INFORMATION.

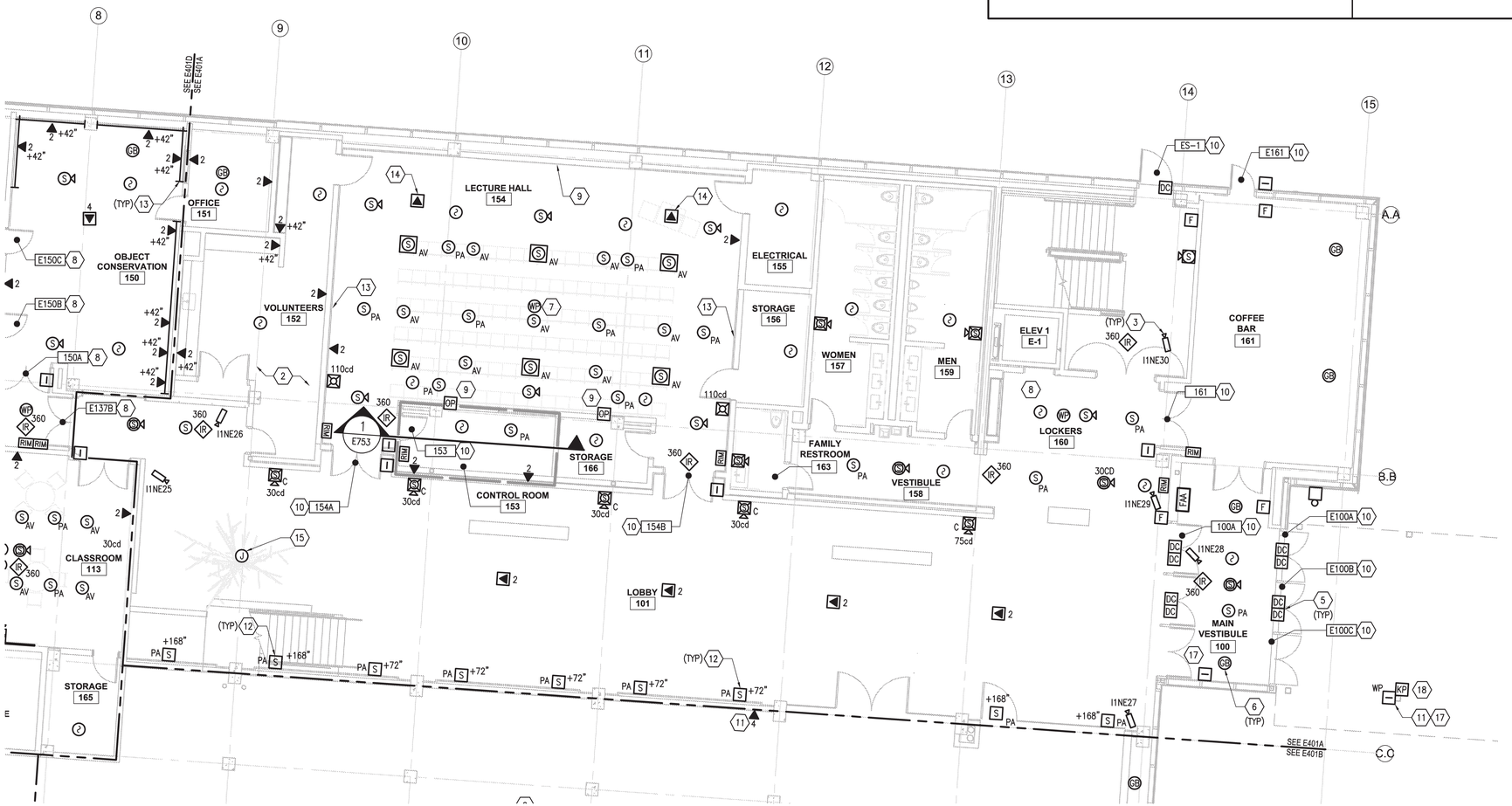
14. PROVIDE 4 RS-45 PORTS AND 1 XLR CONNECTOR IN PODIUM FLOOR BOX. FLOOR BOX PROVIDED IAW SHEET E301A. PROVIDE COLORED RJ-45 PORTS TO MATCH PODIUM PATCH CORDS AND CONTROL ROOM WALL PLATE. REFER TO SHEETS E751 AND E754 FOR ADDITIONAL INFORMATION.

15. PROVIDE 2 @ 1" CONDUIT ONLY STUBS FROM TELECOM ROOM 118 TO BASE OF EAGLE TREE FOR FUTURE TEELCOM/AUDIO/VIDEO TO EAGLE TREE COMPONENTS.

16. ZONE SECURITY SYSTEM DEVICES IAW SHEET E738 AND THE SPECIFICATIONS. ZONE GLASS BREAK DETECTORS AND MOTION DETECTORS IN EACH INDIVIDUAL SECURITY ZONE SEPARATELY.

17. PROVIDE CARD READER WITH INTEGRAL KEYPAD TO PROVIDE KEY CODE, TIME OVERRIDE FUNCTIONALITY FOR DOOR NOTED IAW SPECIFICATION SECTION 28 13 33.

18. PROVIDE KEYPAD FOR DISARMING OF SECURITY SYSTEM SERVING LOCAL SECURITY ZONE IAW SPECIFICATION SECTION 28 13 33.



1 E401A FIRST FLOOR PLAN – NE – SPECIAL SYSTEMS

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

0 4' 8' 16' 24'

CONSULTANT NAME :: AMC ENGINEERS

ECI/HYER :: THA ARCHITECTURE

DEPARTMENT OF EDUCATION & EARLY DEVELOPMENT

DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES

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REVISIONS:

KEYPLAN - (NTS)

CONSTRUCTION DOCUMENTS

05.01.2012

FIRST FLOOR PLAN - NE - SPECIAL SYSTEMS

E401A

SHEET NOTES

1. STROBES ARE 15CD UNLESS OTHERWISE NOTED. FIELD COORDINATE FIRE ALARM SYSTEM SPEAKER/STROBE LOCATIONS AND STROBE ONLY LOCATIONS TO PROVIDE COVERAGE OF AREAS IN ACCORDANCE WITH NFPA 72 REQUIREMENTS.
2. PROVIDE TELECOM CABLE TRAY ABOVE THE SUSPENDED CEILING IAW SPECIFICATIONS. CABLE TRAY WIDTH SHALL BE AS SCALED ON DRAWINGS. REFER TO SHEET E401 FOR CABLE TRAY ROUTING.
3. PROVIDE CCTV CAMERA AT LOCATION INDICATED. REFER TO SHEET E803 FOR ONE-LINE DIAGRAM AND CAMERA SCHEDULE AND SHEET E741 FOR MOUNTING DETAILS.
4. PROVIDE ACS RIM AND RIM ENCLOSURE FOR THE DOOR(S) NOTED IN ACCORDANCE WITH ACS ONE-LINE DIAGRAM ON SHEET E802. PROVIDE REQUIRED POWER SUPPLIES, CONDUIT, WIRE, TERMINAL BLOCKS ETC. FOR A COMPLETE AND FUNCTIONING SYSTEM IN ACCORDANCE WITH THE SPECIFICATIONS, APPLICABLE CODES AND STANDARDS. LOCATE ENCLOSURE ABOVE DOOR IN ACCESSIBLE CEILING SPACE UNLESS OTHERWISE NOTED.
5. PROVIDE DOOR CONTACTS ON EXTERIOR NON SMS DOORS. REFER TO SHEETS E731 THROUGH E736 FOR ACS DOOR DETAILS.
6. PROVIDE GLASS BREAK DETECTORS IN AREAS WITH GRADE LEVEL WINDOWS. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
7. REFERENCE DETAILS ON SHEETS E731-E736, SPECIFICATION SECTION 08710, AND THE ARCHITECTURAL DOOR HARDWARE SCHEDULE FOR ADDITIONAL INFORMATION.
8. PROVIDE TELECOM OUTLETS IN FLOOR BOX QUANTITY AS NOTED. FLOOR BOX PROVIDED IAW SHEET E301B.
9. ZONE SECURITY SYSTEM DEVICES IAW SHEET E738 AND THE SPECIFICATIONS. ZONE GLASS BREAK DETECTORS AND MOTION DETECTORS IN EACH INDIVIDUAL SECURITY ZONE SEPARATELY.
10. PROVIDE TELECOM OUTLET FOR FUTURE FLAT PANEL CCTV/DVRS MONITOR IAW SPECIFICATION SECTION 27 05 24.
11. PROVIDE DVR SYSTEM AND CCTV SYSTEM MONITORING WORKSTATIONS IN ACCORDANCE WITH THE SPECIFICATIONS.

1 E401B FIRST FLOOR PLAN – SE – SPECIAL SYSTEMS

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

0 4' 8' 16' 24'

CONSULTANT NAME :: AMC ENGINEERS
ECI/HYER :: THA ARCHITECTURE
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FIRST FLOOR PLAN - SE - SPECIAL SYSTEMS

E401B

SHEET NOTES

1. STROBES ARE 15CD UNLESS OTHERWISE NOTED. FIELD COORDINATE FIRE ALARM SYSTEM SPEAKER/STROBE LOCATIONS AND STROBE ONLY LOCATIONS TO PROVIDE COVERAGE OF AREAS IN ACCORDANCE WITH NFPA 72 REQUIREMENTS.
2. REFERENCE DETAILS ON SHEETS E731–E736, SPECIFICATION SECTION 08710, AND THE ARCHITECTURAL DOOR HARDWARE SCHEDULE FOR ADDITIONAL INFORMATION.
3. PROVIDE TELECOM OUTLETS IN FLOOR BOX QUANTITY AS NOTED. FLOOR BOX PROVIDED IAW SHEET E301B.
4. PROVIDE ACS RIM AND RIM ENCLOSURE FOR THE DOOR(S) NOTED IN ACCORDANCE WITH ACS ONE-LINE DIAGRAM ON SHEET E802. PROVIDE REQUIRED POWER SUPPLIES, CONDUIT, WIRE, TERMINAL BLOCKS ETC. FOR A COMPLETE AND FUNCTIONING SYSTEM IN ACCORDANCE WITH THE SPECIFICATIONS, APPLICABLE CODES AND STANDARDS. LOCATE ENCLOSURE ABOVE DOOR IN ACCESSIBLE CEILING SPACE UNLESS OTHERWISE NOTED. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
5. PROVIDE DOOR CONTACTS ON EXTERIOR NON ACS DOORS AND GLASS BREAK DETECTORS IN AREAS WITH GRADE LEVEL WINDOWS. REFER TO SHEET E731 AND E732 FOR ACS DOOR DETAILS. REFER TO SPECIFICATIONS SECURITY MANAGEMENT SYSTEM FOR ADDITIONAL INFORMATION.
6. PROVIDE TELECOM CONNECTION TO DDC CONTROL PANEL(S). COORDINATE EXACT REQUIREMENTS WITH DIVISION 15. FIELD VERIFY EXACT LOCATION.
7. PROVIDE TELECOM CONNECTION TO AUTOMATIC TRANSFER SWITCH (ATS) CONNECTIVITY MODULE TO ALLOW WEB BROWSER ACCESS TO ATS INFORMATION. TELECOM CABLE SHALL TERMINATE WITH A RJ-45 PLUG CONNECTION AND CONNECT TO THE CONNECTIVITY MODULE INTERNAL TO THE ATS. COORDINATE WITH ATS MANUFACTURER.
8. ZONE SECURITY SYSTEM DEVICES IAW SHEET E738 AND THE SPECIFICATIONS. ZONE GLASS BREAK DETECTORS AND MOTION DETECTORS IN EACH INDIVIDUAL SECURITY ZONE SEPARATELY.

1 E401C FIRST FLOOR PLAN – SW – SPECIAL SYSTEMS

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

0 4' 8' 16' 24'

CONSULTANT NAME :: AMC ENGINEERS
ECI/HYER :: THA ARCHITECTURE
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04/27/2012
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REVISIONS:

KEYPLAN - (NTS)

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05.01.2012

FIRST FLOOR PLAN - SW - SPECIAL SYSTEMS

E401C

SHEET NOTES

1. STROBES ARE 15CD UNLESS OTHERWISE NOTED. FIELD COORDINATE FIRE ALARM SYSTEM SPEAKER/STROBE LOCATIONS AND STROBE ONLY LOCATIONS TO PROVIDE COVERAGE OF AREAS IN ACCORDANCE WITH NFPA 72 REQUIREMENTS.
2. PROVIDE TELECOM CABLE TRAY ABOVE THE SUSPENDED CEILING IAW SPECIFICATIONS. CABLE TRAY WIDTH SHALL BE AS SCALED ON DRAWINGS. REFER TO SHEET E401 FOR CABLE TRAY ROUTING.
3. PROVIDE CCTV CAMERA AT LOCATION INDICATED. REFER TO SHEET E803 FOR ONE-LINE DIAGRAM AND CAMERA SCHEDULE AND SHEET E741 FOR MOUNTING DETAILS.
4. PROVIDE ACS RIM AND RIM ENCLOSURE FOR THE DOOR(S) NOTED IN ACCORDANCE WITH ACS ONE-LINE DIAGRAM ON SHEET E802. PROVIDE REQUIRED POWER SUPPLIES, CONDUIT, WIRE, TERMINAL BLOCKS ETC. FOR A COMPLETE AND FUNCTIONING SYSTEM IN ACCORDANCE WITH THE SPECIFICATIONS, APPLICABLE CODES AND STANDARDS. LOCATE ENCLOSURE ABOVE DOOR IN ACCESSIBLE CEILING SPACE UNLESS OTHERWISE NOTED.
5. PROVIDE GLASS BREAK DETECTORS IN AREAS WITH GRADE LEVEL WINDOWS. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
6. PROVIDE ELEVATOR RECALL PER SPECIFICATIONS.
7. PROVIDE SMART BOARD INTERACTIVE DISPLAY MODEL 8070i AND DISPLAY MOUNT AT LOCATION INDICATED. MOUNTING OF DISPLAY SHALL PROVIDE ADEQUATE SPACE FOR CONNECTIONS TO AUDIO/VIDEO WALL PLATE PROVIDED IAW SHEET NOTE 10. REFER TO SPECIFICATION FOR ADDITIONAL INFORMATION.
8. REFERENCE DETAILS ON SHEETS E731-E736, SPECIFICATION SECTION 08 71 00, AND THE ARCHITECTURAL DOOR HARDWARE SCHEDULE FOR ADDITIONAL INFORMATION.
9. PROVIDE PENDANT MOUNT VIDEO CONFERENCING MICROPHONE AT LOCATION INDICATED. REFER TO SHEET E752 AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
10. PROVIDE AUDIO/VIDEO WALL PLATE AT APPROXIMATELY 60" AFF. CENTERED BEHIND DISPLAY. REFER TO SHEET E752 AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
11. PROVIDE VIDEO CONFERENCE CAMERA AT LOCATION INDICATED. MOUNT CAMERA CENTERED DIRECTLY ABOVE DISPLAY. REFER TO SHEET E752 AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
12. PROVIDE AUDIO/VIDEO EQUIPMENT AND EQUIPMENT RACK IAW SHEET E752.
13. PROVIDE TELECOM PORTS IN WIREMOLD AT LOCATION INDICATED. WIREMOLD PROVIDED IAW SHEET E609.
14. PROVIDE AUDIO/VIDEO CONTROLLER FOR CONTROL OF DISPLAY AT LOCATION INDICATED. REFER TO DETAILS 1/E751 AND 1/E752 FOR ADDITIONAL INFORMATION.
15. ZONE SECURITY SYSTEM DEVICES IAW SHEET E738 AND THE SPECIFICATIONS. ZONE GLASS BREAK DETECTORS AND MOTION DETECTORS IN EACH INDIVIDUAL SECURITY ZONE SEPARATELY.
16. PROVIDE CARD READER WITH INTEGRAL KEYPAD TO PROVIDE KEY CODE, TIME OVERRIDE FUNCTIONALITY FOR DOOR NOTED IAW SPECIFICATION SECTION 28 13 33.
17. PROVIDE TELECOM OUTLET FOR FUTURE FLAT PANEL CCTV/DVRS MONITOR IAW SPECIFICATION SECTION 27 05 24.
18. PROVIDE KEYPAD FOR DISARMING OF SECURITY SYSTEM SERVING LOCAL SECURITY ZONE IAW SPECIFICATION SECTION 28 13 33.
19. PROVIDE DVR SYSTEM AND CCTV SYSTEM MONITORING WORKSTATIONS IN ACCORDANCE WITH THE SPECIFICATIONS.

1 E401D FIRST FLOOR PLAN – NW – SPECIAL SYSTEMS

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

0 4' 8' 16' 24'

CONSULTANT NAME :: AMC ENGINEERS

ECI/HYER :: THA ARCHITECTURE

DEPARTMENT OF EDUCATION & EARLY DEVELOPMENT

DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES

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FIRST FLOOR PLAN - NW - SPECIAL SYSTEMS

E401D

SHEET NOTES

1. STROBES ARE 15CD UNLESS OTHERWISE NOTED. FIELD COORDINATE FIRE ALARM SYSTEM SPEAKER/STROBE LOCATIONS AND STROBE ONLY LOCATIONS TO PROVIDE COVERAGE OF AREAS IN ACCORDANCE WITH NFPA 72 REQUIREMENTS.

(2) PROVIDE ACS RIM AND RIM ENCLOSURE FOR THE DOOR(S) NOTED IN ACCORDANCE WITH ACS ONE-LINE DIAGRAM ON SHEET E802. PROVIDE REQUIRED POWER SUPPLIES, CONDUIT, WIRE, TERMINAL BLOCKS ETC. FOR A COMPLETE AND FUNCTIONING SYSTEM IN ACCORDANCE WITH THE SPECIFICATIONS, APPLICABLE CODES AND STANDARDS. LOCATE ENCLOSURE ABOVE DOOR IN ACCESSIBLE CEILING SPACE UNLESS OTHERWISE NOTED.

(3) PROVIDE CCTV CAMERA AT LOCATION INDICATED. REFER TO SHEET E803 FOR ONE-LINE DIAGRAM AND CAMERA SCHEDULE AND SHEET E741 FOR MOUNTING DETAILS.

(4) PROVIDE ELEVATOR RECALL PER SPECIFICATIONS.

(5) REFERENCE DETAILS ON SHEETS E731-E736, SPECIFICATION SECTION 08710, AND THE ARCHITECTURAL DOOR HARDWARE SCHEDULE FOR ADDITIONAL INFORMATION.

1 / E402 GALLERY PLAN – SPECIAL SYSTEMS

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

0 4' 8' 16' 24'

CONSULTANT NAME :: AMC ENGINEERS

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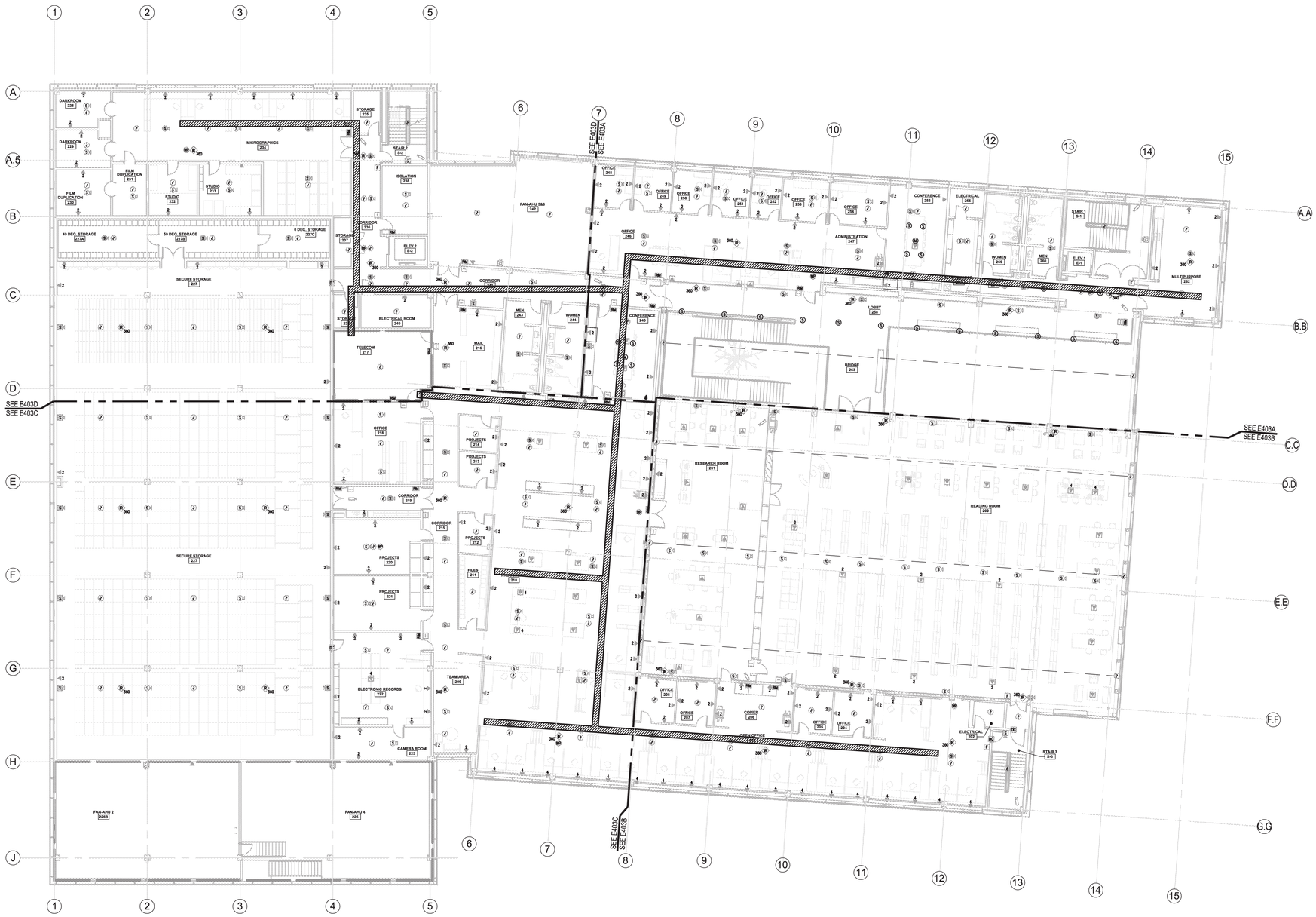
GALLERY PLAN - SPECIAL SYSTEMS

E402

SHEET NOTES

1. KEY PLANS ARE SHOWN FOR OVERALL REFERENCE ONLY. ALL DESIGN INFORMATION AND COMPONENTS ARE NOT SHOWN. REFER TO ENLARGED PLANS FOR DETAILED DESIGN INFORMATION ON THE SPECIFIC SUB-DISCIPLINE (E.G. LIGHTING, POWER, AND SPECIAL SYSTEMS).



1 E403 KEYPLAN – SECOND FLOOR PLAN – SPECIAL SYSTEMS

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

0 8' 16' 32' 48'

CONSULTANT NAME :: AMC ENGINEERS

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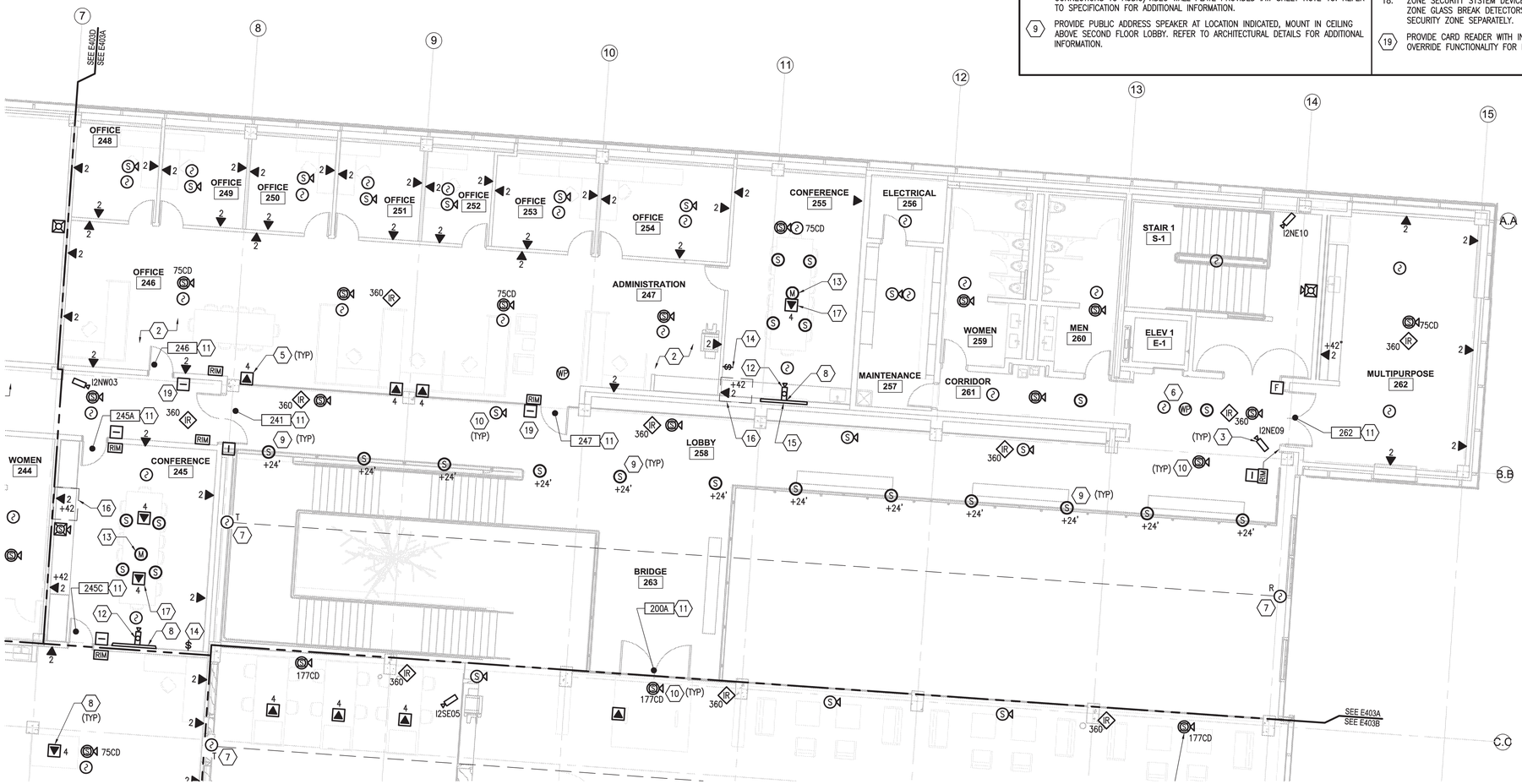
KEYPLAN - SECOND FLOOR PLAN - SPECIAL SYSTEMS

E403

SHEET NOTES

1. STROBES ARE 15CD UNLESS OTHERWISE NOTED. FIELD COORDINATE FIRE ALARM SYSTEM SPEAKER/STROBE LOCATIONS AND STROBE ONLY LOCATIONS TO PROVIDE COVERAGE OF AREAS IN ACCORDANCE WITH NFPA 72 REQUIREMENTS.
2. PROVIDE TELECOM CABLE TRAY ABOVE THE SUSPENDED CEILING IAW SPECIFICATIONS. CABLE TRAY WIDTH SHALL BE AS SCALED ON DRAWINGS. REFER TO SHEET E403 FOR CABLE TRAY ROUTING.
3. PROVIDE CCTV CAMERA AT LOCATION INDICATED. REFER TO SHEET E803 FOR ONE-LINE DIAGRAM AND CAMERA SCHEDULE AND SHEET E741 FOR MOUNTING DETAILS.
4. PROVIDE ACS RIM AND RIM ENCLOSURE FOR THE DOOR(S) NOTED IN ACCORDANCE WITH ACS ONE-LINE DIAGRAM ON SHEET E802. PROVIDE REQUIRED POWER SUPPLIES, CONDUIT, WIRE, TERMINAL BLOCKS ETC. FOR A COMPLETE AND FUNCTIONING SYSTEM IN ACCORDANCE WITH THE SPECIFICATIONS, APPLICABLE CODES AND STANDARDS. LOCATE ENCLOSURE ABOVE DOOR IN ACCESSIBLE CEILING SPACE UNLESS OTHERWISE NOTED.
5. PROVIDE TELECOM PORTS IN FLOOR BOX AT LOCATION INDICATED QUANTITY AS NOTED. FLOOR BOX PROVIDE IAW SHEET E303A.
6. PROVIDE ELEVATOR RECALL PER SPECIFICATIONS.
7. PROVIDE OPEN-AREA SMOKE IMAGING PROTECTION TRANSMITTER/RECEIVER SMOKE DETECTION SYSTEM TO PROVIDE DETECTION IN LOBBY AREA. LOCATE TRANSMITTER/RECEIVER PER MANUFACTURER'S RECOMMENDATIONS.
8. PROVIDE SMART BOARD INTERACTIVE DISPLAY MODEL 8070i AND DISPLAY MOUNT AT LOCATION INDICATED. MOUNTING OF DISPLAY SHALL PROVIDE ADEQUATE SPACE FOR CONNECTIONS TO AUDIO/VIDEO WALL PLATE PROVIDED IAW SHEET NOTE 15. REFER TO SPECIFICATION FOR ADDITIONAL INFORMATION.
9. PROVIDE PUBLIC ADDRESS SPEAKER AT LOCATION INDICATED, MOUNT IN CEILING ABOVE SECOND FLOOR LOBBY. REFER TO ARCHITECTURAL DETAILS FOR ADDITIONAL INFORMATION.
10. PROVIDE FIRE ALARM SYSTEM SPEAKER/STROBE AT LOCATION INDICATED. PROVIDE FLUSHED MOUNTED JUNCTION BOX IN SLAB CENTERED IN SLAB OVER HANG. COORDINATE EXACT REQUIREMENTS WITH STRUCTURAL DRAWINGS.
11. REFERENCE DETAILS ON SHEETS E731-E733, SPECIFICATION SECTION 08710, AND THE ARCHITECTURAL DOOR HARDWARE SCHEDULE FOR ADDITIONAL INFORMATION.
12. PROVIDE VIDEO CONFERENCE CAMERA AT LOCATION INDICATED. MOUNT CAMERA CENTERED DIRECTLY ABOVE DISPLAY. REFER TO SHEET E752 AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
13. PROVIDE PENDANT MOUNT VIDEO CONFERENCING MICROPHONE AT LOCATION INDICATED. REFER TO SHEET E752 AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
14. PROVIDE AUDIO/VIDEO CONTROLLER FOR CONTROL OF DISPLAY AT LOCATION INDICATED. REFER TO DETAILS 1/E751 AND 1/E752 FOR ADDITIONAL INFORMATION.
15. PROVIDE AUDIO/VIDEO WALL PLATE AT APPROXIMATELY 60" AFF. CENTERED BEHIND DISPLAY. REFER TO SHEET E752 AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
16. PROVIDE AUDIO/VIDEO EQUIPMENT AND EQUIPMENT RACK IAW DETAIL 3/E752.
17. PROVIDE HD-15 COMPUTER VIDEO CONNECTION, 3.5MM AUDIO CONNECTION, AND USB CONNECTION IN FLOOR BOX AND IN CONFERENCE TABLE. COORDINATE LOCATION OF CONFERENCE TABLE ROUGH IN WITH FURNITURE PROVIDER. FIBER BOX PROVIDED IAW SHEET E303A.
18. ZONE SECURITY SYSTEM DEVICES IAW SHEET E739 AND THE SPECIFICATIONS. ZONE GLASS BREAK DETECTORS AND MOTION DETECTORS IN EACH INDIVIDUAL SECURITY ZONE SEPARATELY.
19. PROVIDE CARD READER WITH INTEGRAL KEYPAD TO PROVIDE KEY CODE, TIME OVERRIDE FUNCTIONALITY FOR DOOR NOTED IAW SPECIFICATION SECTION 28 13 33.



1 E403A SECOND FLOOR PLAN – NE – SPECIAL SYSTEMS

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

0 4' 8' 16' 24'

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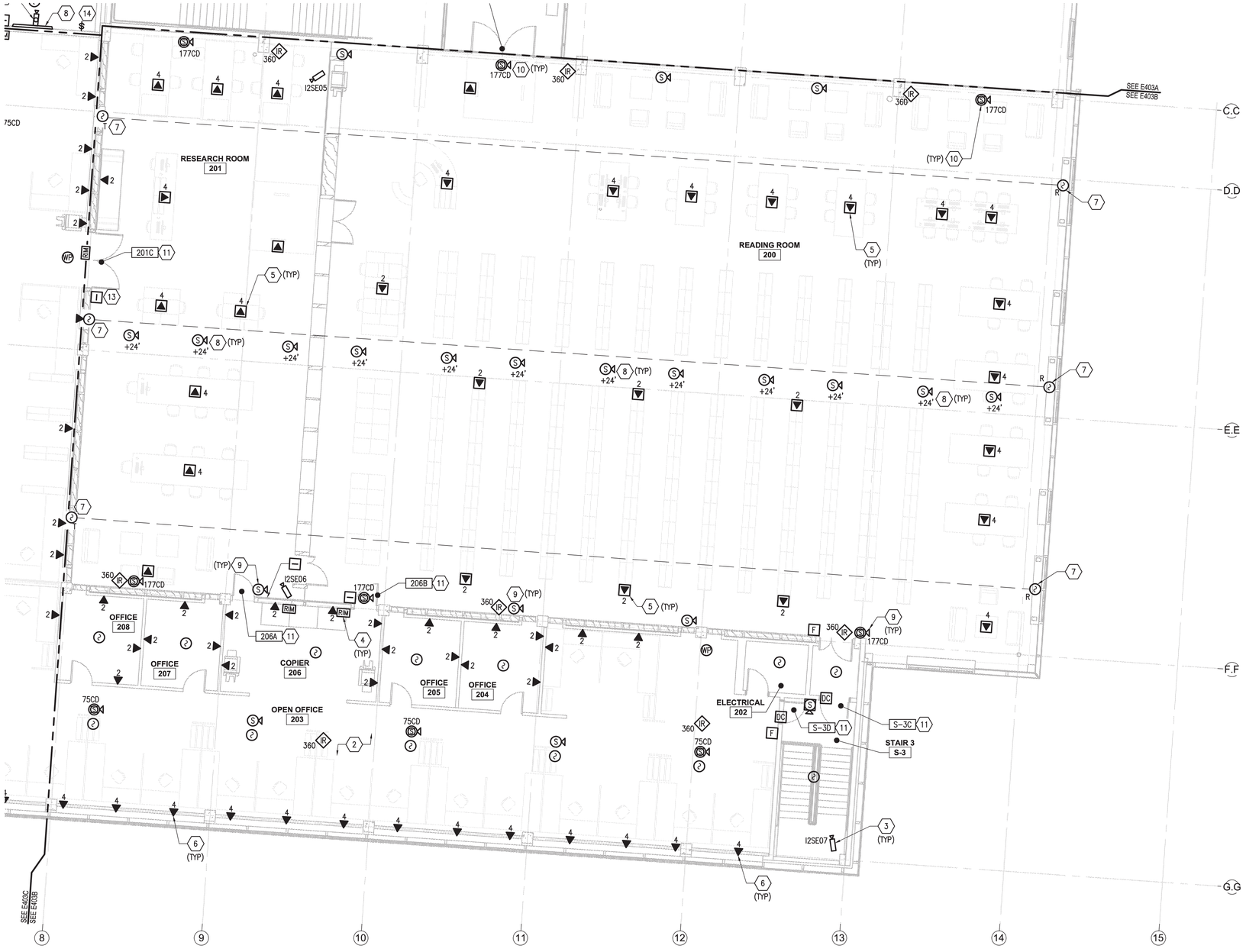
SECOND FLOOR PLAN - NE - SPECIAL SYSTEMS

E403A



1 E403B SECOND FLOOR PLAN – SE – SPECIAL SYSTEMS

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

0 4' 8' 16' 24'

SHEET NOTES

1. STROBES ARE 15CD UNLESS OTHERWISE NOTED. FIELD COORDINATE FIRE ALARM SYSTEM SPEAKER/STROBE LOCATIONS AND STROBE ONLY LOCATIONS TO PROVIDE COVERAGE OF AREAS IN ACCORDANCE WITH NFPA 72 REQUIREMENTS.
2. PROVIDE TELECOM CABLE TRAY ABOVE THE SUSPENDED CEILING IAW SPECIFICATION SECTIONS. CABLE TRAY WIDTH SHALL BE AS SCALED ON DRAWINGS. REFER TO SHEET E403 FOR CABLE TRAY ROUTING.
3. PROVIDE CCTV CAMERA AT LOCATION INDICATED. REFER TO SHEET E803 FOR ONE-LINE DIAGRAM AND CAMERA SCHEDULE AND SHEET E741 FOR MOUNTING DETAILS.
4. PROVIDE ACS RIM AND RIM ENCLOSURE FOR THE DOOR(S) NOTED IN ACCORDANCE WITH ACS ONE-LINE DIAGRAM ON SHEET E802. PROVIDE REQUIRED POWER SUPPLIES, CONDUIT, WIRE, TERMINAL BLOCKS ETC. FOR A COMPLETE AND FUNCTIONING SYSTEM IN ACCORDANCE WITH THE SPECIFICATIONS, APPLICABLE CODES AND STANDARDS. LOCATE ENCLOSURE ABOVE DOOR IN ACCESSIBLE CEILING SPACE UNLESS OTHERWISE NOTED.
5. PROVIDE TELECOM PORTS IN FLOOR BOX AT LOCATION INDICATED QUANTITY AS NOTED. FLOOR BOX PROVIDED IAW SHEET E303B.
6. PROVIDE TELECOM OUTLET UNDER BASEBOARD AT LOCATION INDICATED. COORDINATE INSTALLATION WITH MECHANICAL DRAWINGS.
7. PROVIDE OPEN-AREA SMOKE IMAGING PROTECTION TRANSMITTER/RECEIVER SMOKE DETECTION SYSTEM TO PROVIDE DETECTION IN READING ROOM AREA. LOCATE TRANSMITTER/RECEIVER PER MANUFACTURER'S RECOMMENDATIONS.
8. PROVIDE FIRE ALARM SYSTEM SPEAKER AT LOCATION INDICATED, MOUNT SPEAKER IN CEILING ABOVE READING AND RESEARCH. REFER TO ARCHITECTURAL DETAILS FOR ADDITIONAL INFORMATION.
9. PROVIDE FIRE ALARM SYSTEM SPEAKER/STROBE AT LOCATION INDICATED. PROVIDE FLUSHED MOUNTED JUNCTION BOX IN SLAB CENTERED IN SLAB OVER HANG. COORDINATE EXACT REQUIREMENTS WITH STRUCTURAL.
10. PROVIDE FIRE ALARM SYSTEM SPEAKER/STROBE AT LOCATION INDICATED. SURFACE MOUNT SPEAKER/STROBE TO BOTTOM OF LIGHT TROUGH. REFER TO ARCHITECTURAL DETAILS FOR ADDITIONAL INFORMATION.
11. REFERENCE DETAILS ON SHEETS E731–E733, SPECIFICATION SECTION 08710, AND THE ARCHITECTURAL DOOR HARDWARE SCHEDULE FOR ADDITIONAL INFORMATION.
12. ZONE SECURITY SYSTEM DEVICES IAW SHEET E739 AND THE SPECIFICATIONS. ZONE GLASS BREAK DETECTORS AND MOTION DETECTORS IN EACH INDIVIDUAL SECURITY ZONE SEPARATELY.
13. PROVIDE CARD READER WITH INTEGRAL KEYPAD TO PROVIDE KEY CODE, TIME OVERRIDE FUNCTIONALITY FOR DOOR NOTED IAW SPECIFICATION SECTION 28 13 33.

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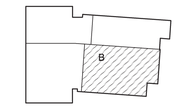

KEYPLAN - (NTS)

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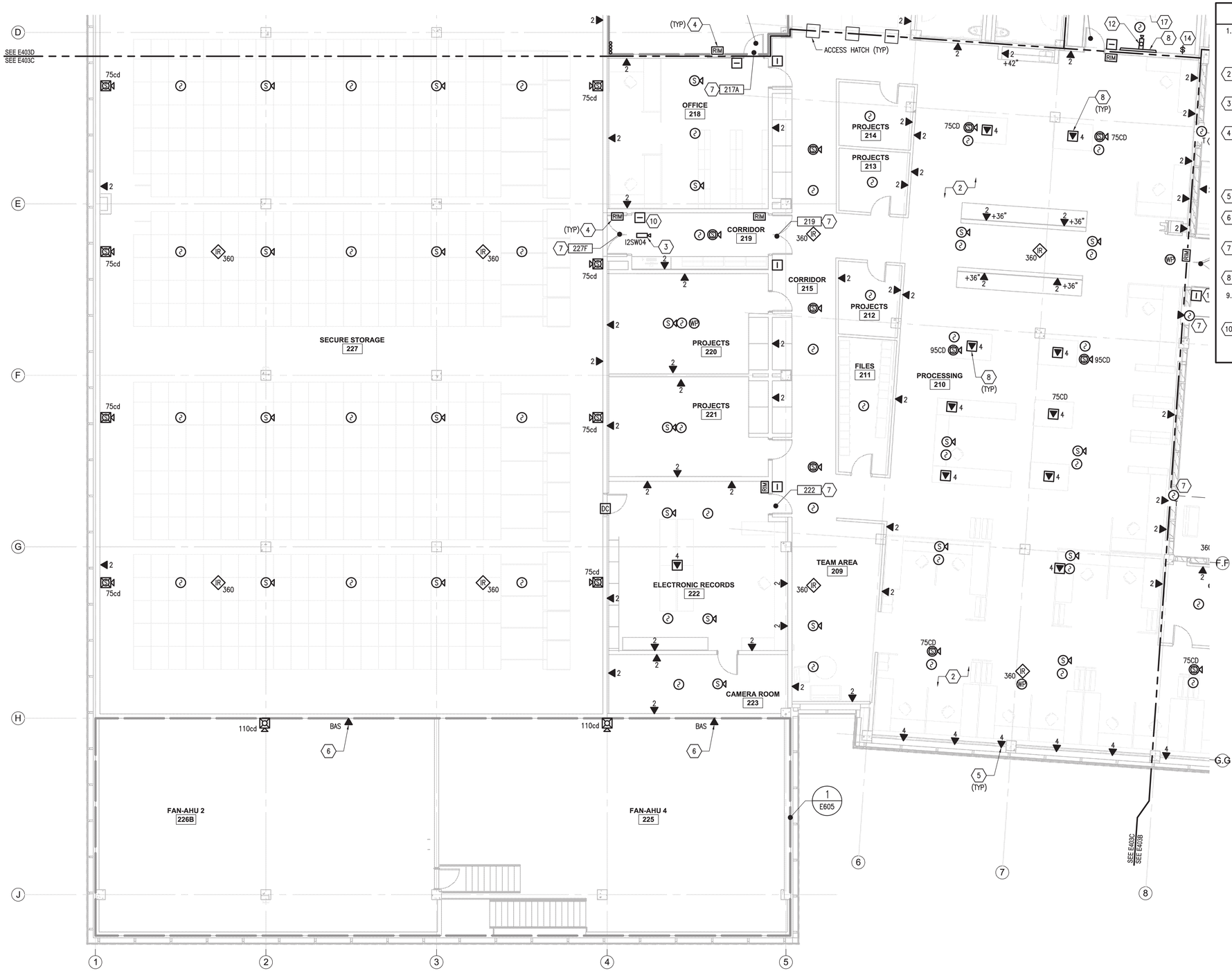
SECOND FLOOR PLAN - SE - SPECIAL SYSTEMS

E403B



SHEET NOTES

1. STROBES ARE 15CD UNLESS OTHERWISE NOTED. FIELD COORDINATE FIRE ALARM SYSTEM SPEAKER/STROBE LOCATIONS AND STROBE ONLY LOCATIONS TO PROVIDE COVERAGE OF AREAS IN ACCORDANCE WITH NFPA 72 REQUIREMENTS.
2. PROVIDE TELECOM CABLE TRAY ABOVE THE SUSPENDED CEILING IAW SPECIFICATION. CABLE TRAY WIDTH SHALL BE AS SCALED ON DRAWINGS. REFER TO SHEET E403 FOR CABLE TRAY ROUTING.
3. PROVIDE CCTV CAMERA AT LOCATION INDICATED. REFER TO SHEET E803 FOR ONE-LINE DIAGRAM AND CAMERA SCHEDULE AND SHEET E741 FOR MOUNTING DETAILS.
4. PROVIDE ACS RIM AND RIM ENCLOSURE FOR THE DOOR(S) NOTED IN ACCORDANCE WITH ACS ONE-LINE DIAGRAM ON SHEET E802. PROVIDE REQUIRED POWER SUPPLIES, CONDUIT, WIRE, TERMINAL BLOCKS ETC. FOR A COMPLETE AND FUNCTIONING SYSTEM IN ACCORDANCE WITH THE SPECIFICATIONS, APPLICABLE CODES AND STANDARDS. LOCATE ENCLOSURE ABOVE DOOR IN ACCESSIBLE CEILING SPACE UNLESS OTHERWISE NOTED.
5. PROVIDE TELECOM OUTLET UNDER BASEBOARD AT LOCATION INDICATED. COORDINATE INSTALLATION WITH MECHANICAL DRAWINGS.
6. PROVIDE TELECOM CONNECTION TO BAS CONTROL PANEL(S). COORDINATE EXACT REQUIREMENTS WITH DIVISION 15. FIELD VERIFY EXACT LOCATION.
7. REFERENCE DETAILS ON SHEETS E731–E733, SPECIFICATION SECTION 08 71 00, AND THE ARCHITECTURAL DOOR HARDWARE SCHEDULE FOR ADDITIONAL INFORMATION.
8. PROVIDE TELECOM PARTS IN FLOOR BOX AT LOCATION INDICATED QUANTITY AS NOTED. FLOOR BOX PROVIDED IAW SHEET E303C.
9. ZONE SECURITY SYSTEM DEVICES IAW SHEET E739 AND THE SPECIFICATIONS. ZONE GLASS BREAK DETECTORS AND MOTION DETECTORS IN EACH INDIVIDUAL SECURITY ZONE SEPARATELY.
10. PROVIDE CARD READER WITH INTEGRAL KEYPAD TO PROVIDE KEY CODE, TIME OVERRIDE FUNCTIONALITY FOR DOOR NOTED IAW SPECIFICATION SECTION 28 13 33.

1 E403C SECOND FLOOR PLAN – SW – SPECIAL SYSTEMS

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

0 4' 8' 16' 24'

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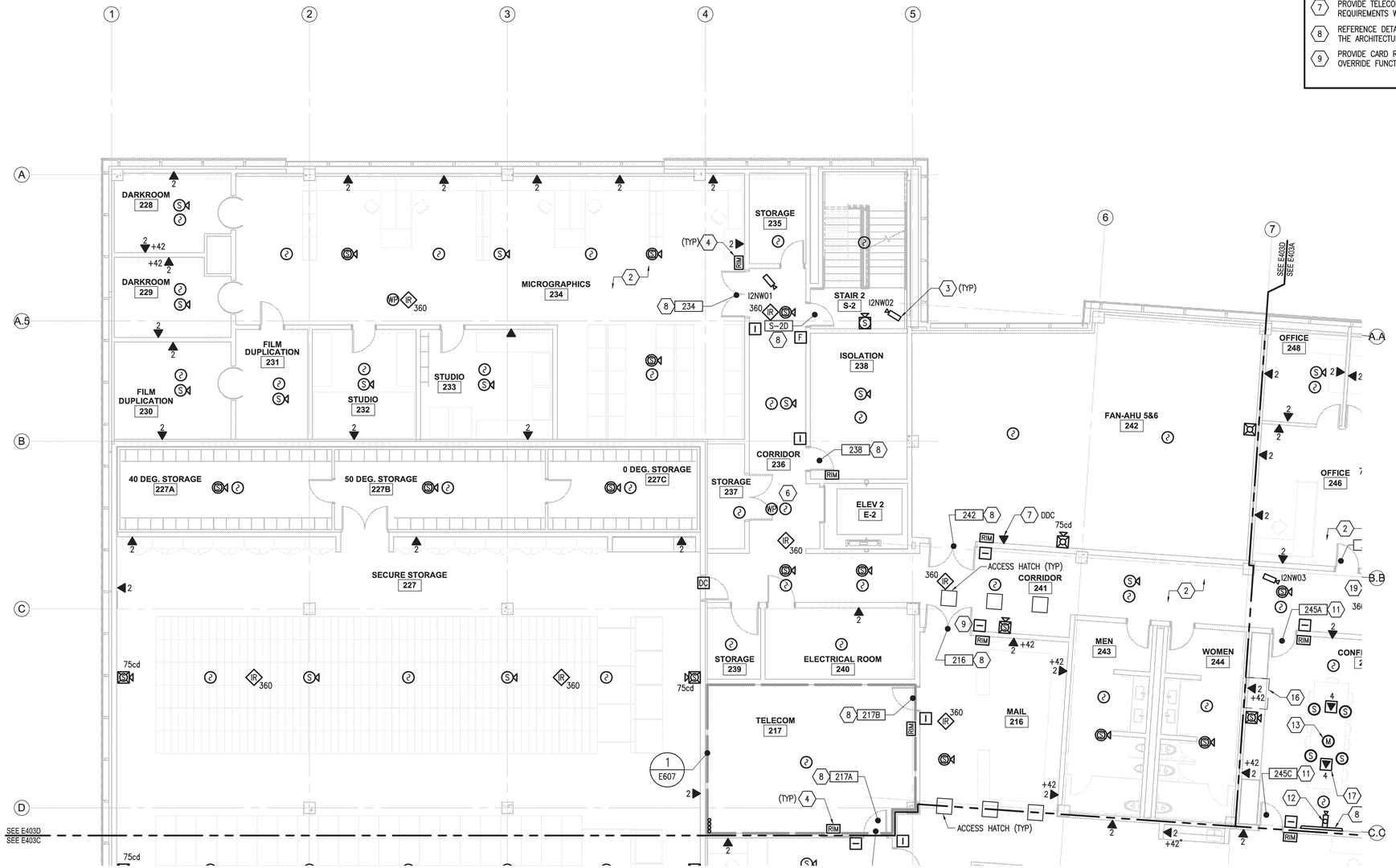
SECOND FLOOR PLAN - SW - SPECIAL SYSTEMS

E403C

SHEET NOTES

1. STROBES ARE 15CD UNLESS OTHERWISE NOTED. FIELD COORDINATE FIRE ALARM SYSTEM SPEAKER/STROBE LOCATIONS AND STROBE ONLY LOCATIONS TO PROVIDE COVERAGE OF AREAS IN ACCORDANCE WITH NFPA 72 REQUIREMENTS.
2. PROVIDE TELECOM CABLE TRAY ABOVE THE SUSPENDED CEILING IAW SPECIFICATIONS. CABLE TRAY WIDTH SHALL BE AS SCALED ON DRAWINGS. REFER TO SHEET E403 FOR CABLE TRAY ROUTING.
3. PROVIDE CCTV CAMERA AT LOCATION INDICATED. REFER TO SHEET E803 FOR ONE-LINE DIAGRAM AND CAMERA SCHEDULE AND SHEET E741 FOR MOUNTING DETAILS.
4. PROVIDE ACS RIM AND RIM ENCLOSURE FOR THE DOOR(S) NOTED IN ACCORDANCE WITH ACS ONE-LINE DIAGRAM ON SHEET E802. PROVIDE REQUIRED POWER SUPPLIES, CONDUIT, WIRE, TERMINAL BLOCKS ETC. FOR A COMPLETE AND FUNCTIONING SYSTEM IN ACCORDANCE WITH THE SPECIFICATIONS, APPLICABLE CODES AND STANDARDS. LOCATE ENCLOSURE ABOVE DOOR IN ACCESSIBLE CEILING SPACE UNLESS OTHERWISE NOTED.
5. ZONE SECURITY SYSTEM DEVICES IAW SHEET E739 AND THE SPECIFICATIONS. ZONE GLASS BREAK DETECTORS AND MOTION DETECTORS IN EACH INDIVIDUAL SECURITY ZONE SEPARATELY.
6. PROVIDE ELEVATOR RECALL PER SPECIFICATIONS.
7. PROVIDE TELECOM CONNECTION TO DDC CONTROL PANEL(S). COORDINATE EXACT REQUIREMENTS WITH DIVISION 15. FIELD VERIFY EXACT LOCATION.
8. REFERENCE DETAILS ON SHEETS E731-E733, SPECIFICATION SECTION 08710, AND THE ARCHITECTURAL DOOR HARDWARE SCHEDULE FOR ADDITIONAL INFORMATION.
9. PROVIDE CARD READER WITH INTEGRAL KEYPAD TO PROVIDE KEY CODE, TIME OVERRIDE FUNCTIONALITY FOR DOOR NOTED IAW SPECIFICATION SECTION 28 13 33.



1 E403D SECOND FLOOR PLAN – NW – SPECIAL SYSTEMS

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

0 4' 8' 16' 24'

CONSULTANT NAME :: AMC ENGINEERS
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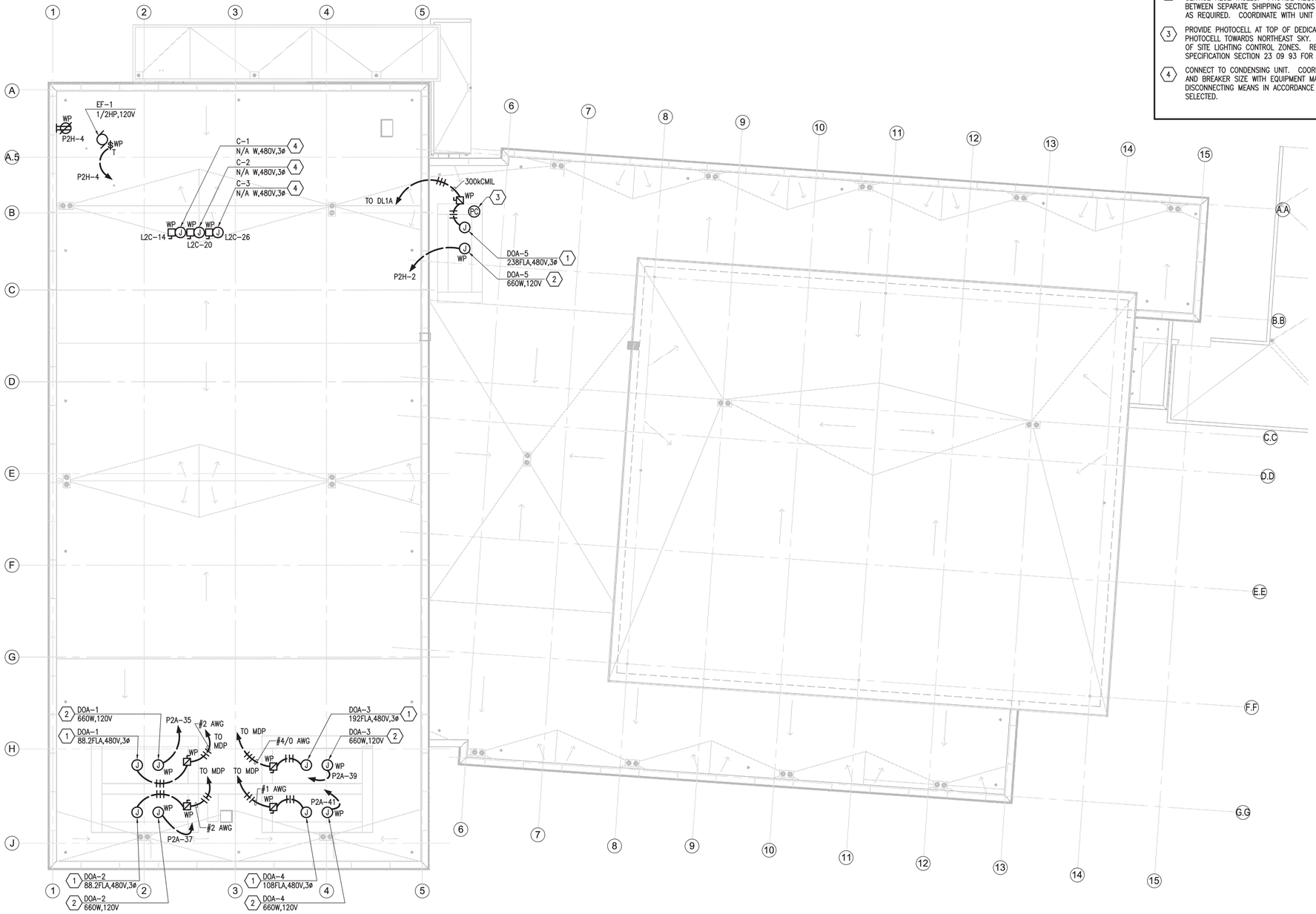
SECOND FLOOR PLAN - NW - SPECIAL SYSTEMS

E403D

SHEET NOTES

1. CONNECT TO DEDICATED OUTSIDE AIR UNIT. PROVIDE REQUIRED ELECTRICAL CONNECTIONS BETWEEN SEPARATE SHIPPING SECTIONS OF DEDICATED OUTSIDE AIR UNIT AS REQUIRED. COORDINATE WITH UNIT SUPPLIER.
2. CONNECT TO DEDICATED OUTSIDE AIR UNIT INTERIOR LIGHTING AND SERVICE RECEPTACLES. PROVIDE REQUIRED ELECTRICAL CONNECTIONS BETWEEN SEPARATE SHIPPING SECTIONS OF DEDICATED OUTSIDE AIR UNIT AS REQUIRED. COORDINATE WITH UNIT SUPPLIER.
3. PROVIDE PHOTOCELL AT TOP OF DEDICATED OUTSIDE AIR UNIT, ORIENT PHOTOCELL TOWARDS NORTHEAST SKY. CONNECT TO BAS FOR CONTROL OF SITE LIGHTING CONTROL ZONES. REFER TO CONTROL SCHEDULE AND SPECIFICATION SECTION 23 09 93 FOR ADDITIONAL INFORMATION.
4. CONNECT TO CONDENSING UNIT. COORDINATE CONNECTION REQUIREMENTS AND BREAKER SIZE WITH EQUIPMENT MANUFACTURER. PROVIDE DISCONNECTING MEANS IN ACCORDANCE WITH NEC, SIZED FOR EQUIPMENT SELECTED.



1 E501 ROOF PLAN – ELECTRICAL

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

0 8' 16' 32' 48'

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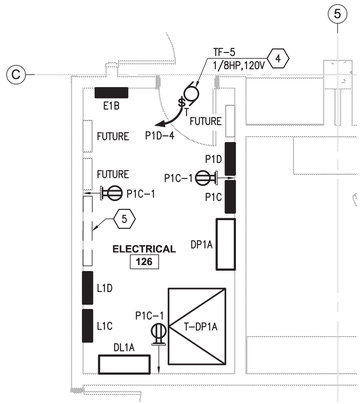
ROOF PLAN - ELECTRICAL

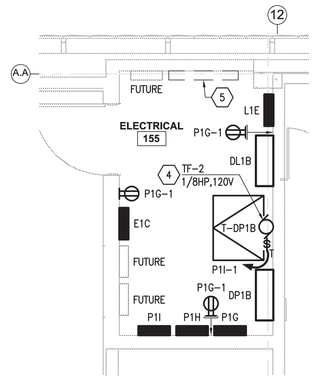
E501



1 E601 FIRST FLOOR – ELECTRICAL ROOM 126

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

0 2' 4' 8' 12'



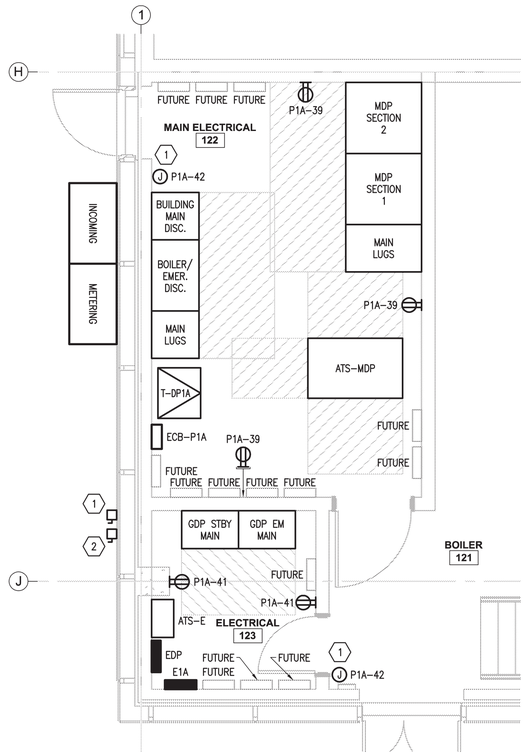
2 E601 FIRST FLOOR – ELECTRICAL ROOM 155

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

0 4' 8' 16' 24'

SHEET NOTES

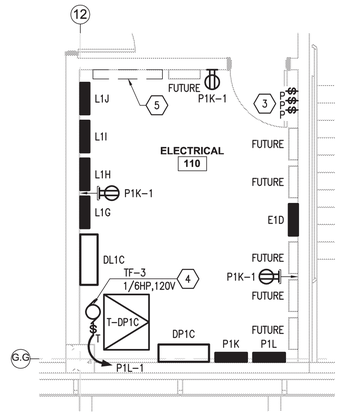
1. BUILDING SERVICE SHUNT TRIP SERVICE DISCONNECT AT THIS LOCATION. REFER TO ONE-LINE DIAGRAM FOR ADDITIONAL INFORMATION.
2. GENERATOR SHUNT TRIP SERVICE DISCONNECT AT THIS LOCATION. REFER TO ONE-LINE DIAGRAM FOR ADDITIONAL INFORMATION.
3. PROVIDE 30A PILOT LIGHTED SWITCH FOR CONTROL OF RECEPTACLES AT PLAZA LIGHT POLES. PROVIDE ENGRAVED NAMEPLATE, "PLAZA RECEPTACLE". REFER TO ELECTRICAL SITE PLAN ON SHEET E050 FOR RECEPTACLE LOCATIONS.
4. MOTOR SPEED CONTROLLER FURNISHED UNDER DIVISION 23, INSTALLED UNDER DIVISION 26.
5. DEDICATED SPACE FOR LIGHTING CONTROL PANELS. REFER TO LIGHTING CONTOLS DETAILS FOR ADDITIONAL INFORMATION.



3 E601 FIRST FLOOR – MAIN ELECTRICAL ROOM 122 AND 123

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

0 2' 4' 8' 12'



4 E601 FIRST FLOOR – ELECTRICAL ROOM 110

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

0 4' 8' 16' 24'

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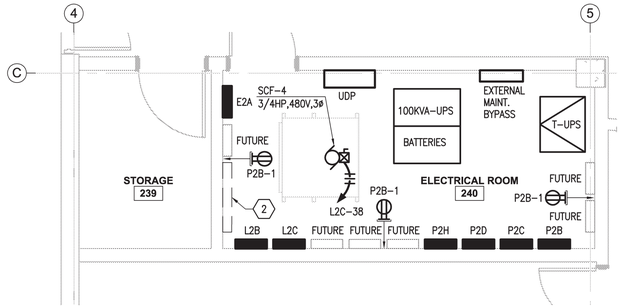
ENLARGED FLOOR PLANS - ELECTRICAL ROOMS

E601

SHEET NOTES

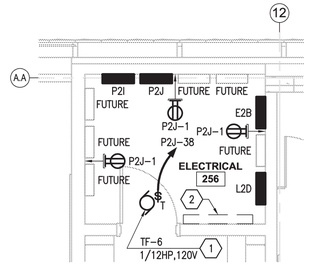
1. MOTOR SPEED CONTROLLER FURNISHED UNDER DIVISION 23, INSTALLED UNDER DIVISION 26.
2. DEDICATED SPACE FOR LIGHTING CONTROL PANELS. REFER TO LIGHTING CONTOLS DETAILS FOR ADDITIONAL INFORMATION.



1 E602 SECOND FLOOR – ELECTRICAL ROOM 240

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

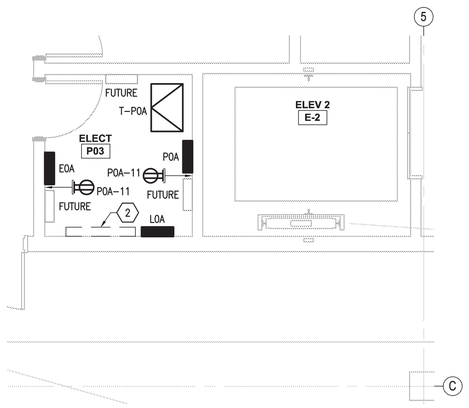
0 4' 8' 16' 24'



2 E602 SECOND FLOOR – ELECTRICAL ROOM 256

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

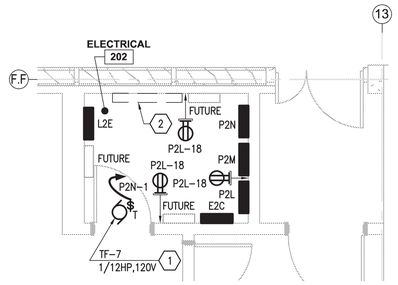
0 2' 4' 8' 12'



3 E602 PARKING FLOOR – ELECTRICAL ROOM P03

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

0 4' 8' 16' 24'



4 E602 SECOND FLOOR – ELECTRICAL ROOM 202

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

0 2' 4' 8' 12'

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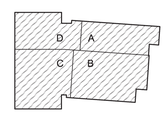

KEYPLAN - (NTS)

CONSTRUCTION DOCUMENTS

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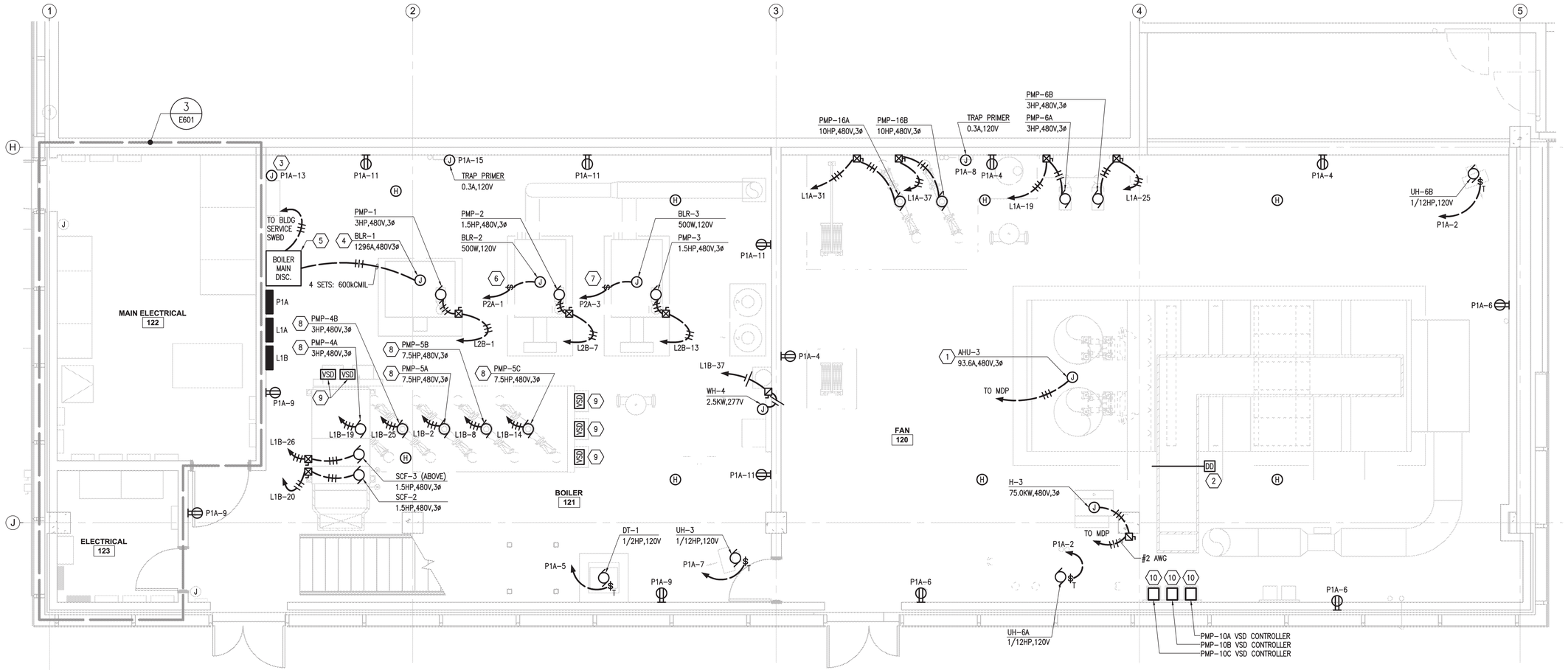
ENLARGED FLOOR PLANS - ELECTRICAL ROOMS

E602

SHEET NOTES

1. COORDINATE AHU CONNECTION REQUIREMENTS WITH EQUIPMENT MANUFACTURER. PROVIDE ALL CONTROL WIRING AS REQUIRED BY MANUFACTURER. PROVIDE WIRING FOR INTEGRAL 120V TRANSFORMER AND ASSOCIATED CONVENIENCE RECEPTACLES AND LIGHT FIXTURES AS REQUIRED BY MANUFACTURER. TRANSFORMER, RECEPTACLES AND LIGHT FIXTURES FURNISHED UNDER DIVISION 23 AND CONNECTED UNDER DIVISION 26.
2. PROVIDE DUCT SMOKE DETECTOR IN RETURN AIR PATH OF AIR HANDILING UNIT. COORDINATE EXACT MOUNTING LOCATION WITH DIVISION 23.
3. CONNECT TO BUILDING AUTOMATION SYSTEM PANEL.
4. COORDINATE ELECTRIC BOILER CONNECTION REQUIREMENTS WITH EQUIPMENT MANUFACTURER. PROVIDE CONTROL WIRING AS REQUIRED BY MANUFACTURER.
5. INSTALL AND CONNECT BOILER DISCONNECT PROVIDED UNDER DIVISION 23 IN ACCORDANCE WITH MANUFACTURERS REQUIREMENTS AND APPLICABLE CODES. PROVIDE WIRE AND CONDUIT BETWEEN BOILER AND DISCONNECT.
6. PROVIDE ENGRAVED FACEPLATE TO READ "BLR-2 CONTROLS".
7. PROVIDE ENGRAVED FACEPLATE TO READ "BLR-3 CONTROLS".
8. CONNECT PUMP TO CIRCUIT SHOWN VIA VSD. REFER TO MECHANICAL DRAWINGS FOR PUMP VSD LOCATIONS.
9. PROVIDE VARIABLE SPEED DRIVES FOR PUMPS 4A, 4B, 5A, 5B AND 5C (5 TOTAL). REFER TO MECHANICAL DRAWINGS FOR VSD LOCATIONS.
10. PROVIDE KLC DV/DT OUTPUT FILTER FOR COOLING WATER WELL PUMP VSD. TRANS-COIL INTERNATIONAL PART NUMBER KLCUL35A1. REFER TO SITE PLAN FOR PUMP LOCATION.



1 / E603 ENLARGED PLAN – BOILER ROOM AND FAN ROOM (AHU-3) – ELECTRICAL

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

0 2' 4' 8' 12'

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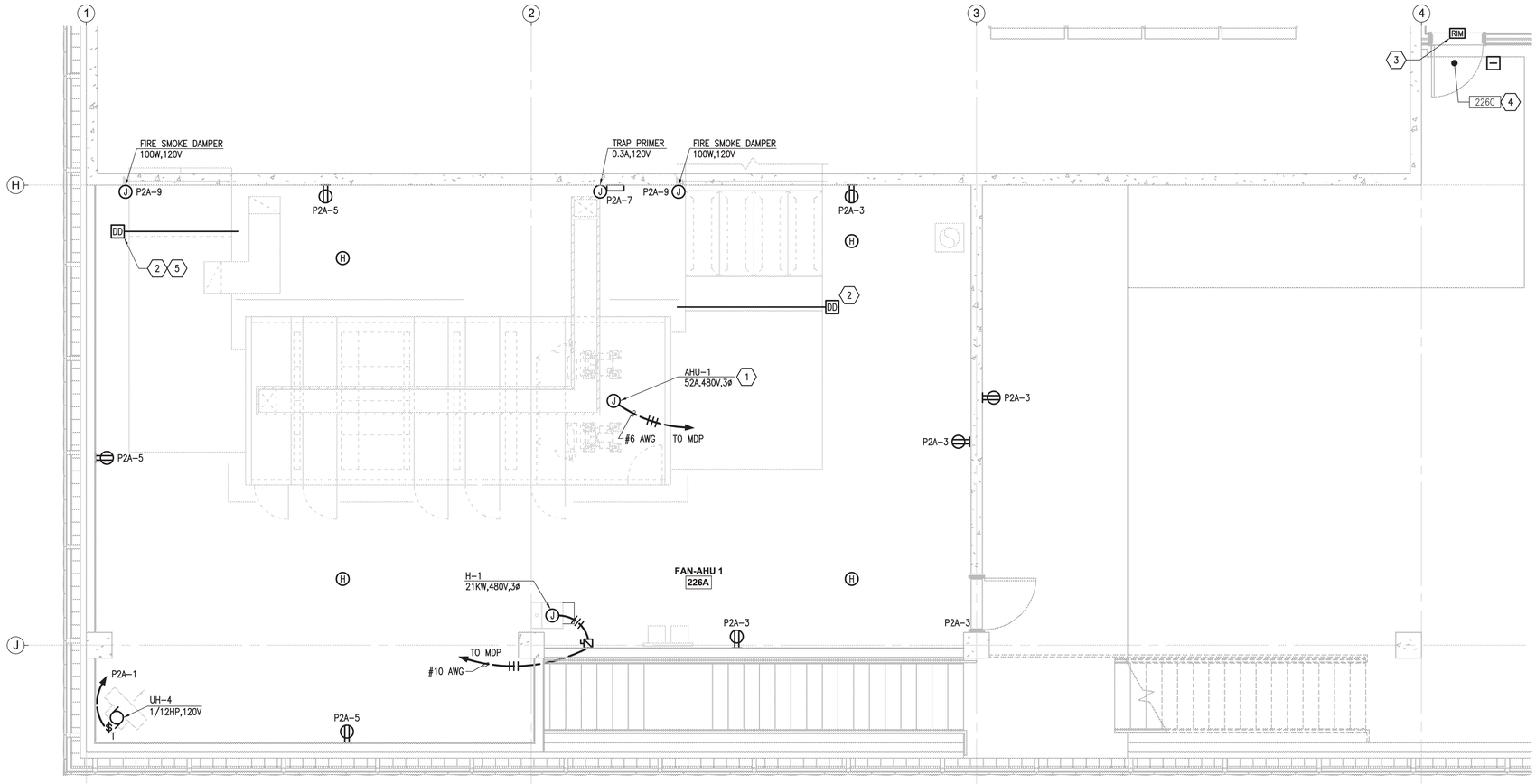
ENLARGED PLAN - BOILER ROOM AND FAN ROOM (AHU-3)

E603

SHEET NOTES

1. COORDINATE AHU CONNECTION REQUIREMENTS WITH EQUIPMENT MANUFACTURER. PROVIDE ALL CONTROL WIRING AS REQUIRED BY MANUFACTURER. PROVIDE WIRING FOR INTEGRAL 120V TRANSFORMER AND ASSOCIATED CONVENIENCE RECEPTACLES AND LIGHT FIXTURES AS REQUIRED BY MANUFACTURER. TRANSFORMER, RECEPTACLES AND LIGHT FIXTURES FURNISHED UNDER DIVISION 23 AND CONNECTED UNDER DIVISION 26.
2. PROVIDE DUCT SMOKE DETECTOR IN RETURN AIR PATH OF AIR HANDILING UNIT. COORDINATE EXACT MOUNTING LOCATION WITH DIVISION 15.
3. PROVIDE ACS RIM AND RIM ENCLOSURE FOR THE DOOR(S) NOTED IN ACCORDANCE WITH ACS ONE-LINE DIAGRAM ON SHEET E802. PROVIDE REQUIRED POWER SUPPLIES, CONDUIT, WIRE, TERMINAL BLOCKS ETC. FOR A COMPLETE AND FUNCTIONAL SYSTEM IN ACCORDANCE WITH THE SPECIFICATIONS, APPLICABLE CODES AND STANDARDS. LOCATE ENCLOSURE ABOVE DOOR ON SECURE SIDE IN ACCESSIBLE CEILING SPACE UNLESS OTHERWISE NOTED. REFER TO SPECIFICATION SECTION 16725 FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
4. REFERENCE DETAILS ON SHEETS E731-E736, SPECIFICATION SECTION 08 71 00, AND THE ARCHITECTURAL DOOR HARDWARE SCHEDULE FOR ADDITIONAL INFORMATION.
5. PROVIDE DUCT SMOKE DETECTOR IN DUCTS WITH FIRE SMOKE DAMPERS (FDS) FOR CONTROL OF DAMPERS. CONNECT TO FACP.



1 E604 ENLARGED PLAN – FAN ROOM (AHU-1) – ELECTRICAL

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

0 2' 4' 8' 12'

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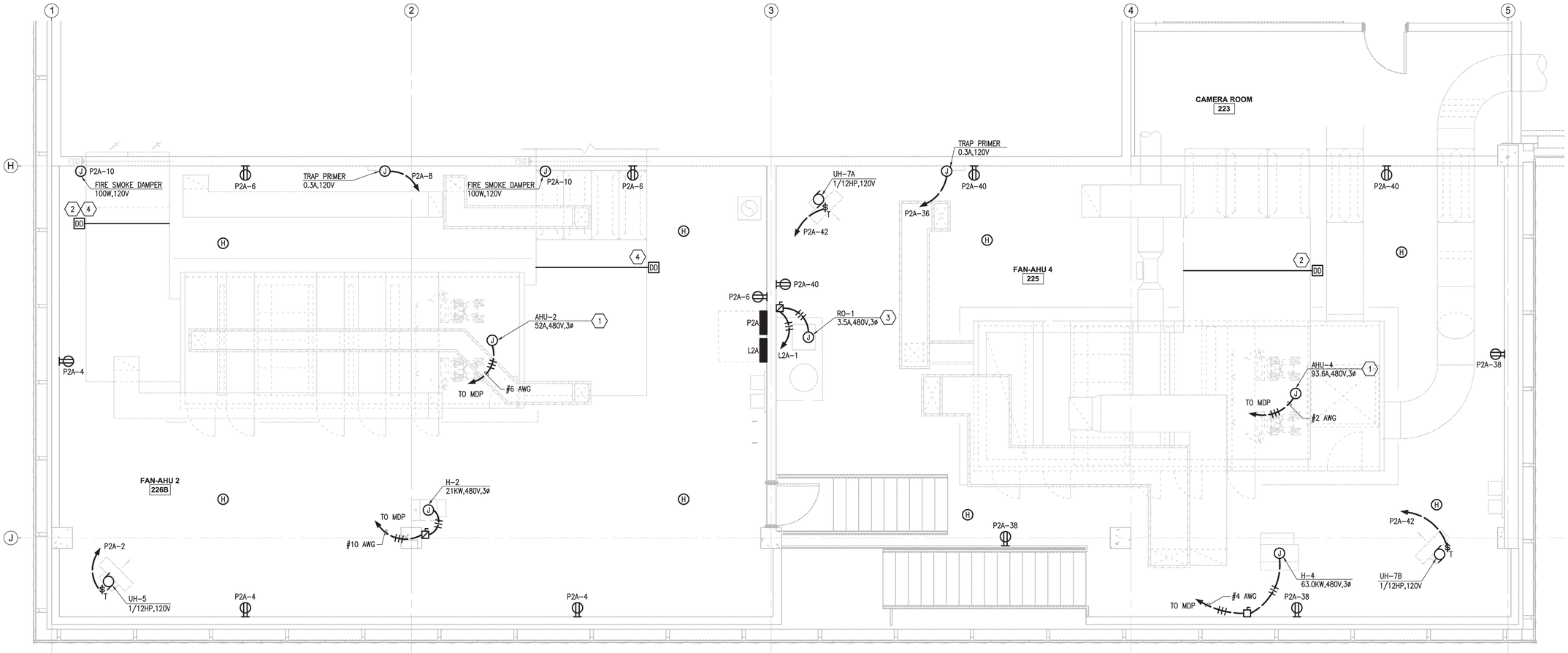
ENLARGED PLAN - FAN ROOM (AHU-1)

E604

SHEET NOTES

1. COORDINATE AHU CONNECTION REQUIREMENTS WITH EQUIPMENT MANUFACTURER. PROVIDE ALL CONTROL WIRING AS REQUIRED BY MANUFACTURER. PROVIDE WIRING FOR INTEGRAL 120V TRANSFORMER AND ASSOCIATED CONVENIENCE RECEPTACLES AND LIGHT FIXTURES AS REQUIRED BY MANUFACTURER. TRANSFORMER, RECEPTACLES AND LIGHT FIXTURES FURNISHED UNDER DIVISION 23 AND CONNECTED UNDER DIVISION 26.
2. PROVIDE DUCT SMOKE DETECTOR IN RETURN AIR PATH OF AIR HANDILING UNIT. COORDINATE EXACT MOUNTING LOCATION WITH DIVISION 15.
3. PROVIDE WIRING BETWEEN REVERSE OSMOSIS SYSTEM CONTROLS AND MOTOR. PROVIDE REQUIRED WIRING FOR SENSORS INCLUDED IN REVERSE OSMOSIS SYSTEM.
4. PROVIDE DUCT SMOKE DETECTOR IN DUCTS WITH FIRE SMOKE DAMPERS (FSD) FOR CONTROL OF DAMPER. CONNECT TO FACP.



1 / E605 ENLARGED PLAN – FAN ROOM (AHU-2 AND AHU-4) – ELECTRICAL

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

0 2' 4' 8' 12'

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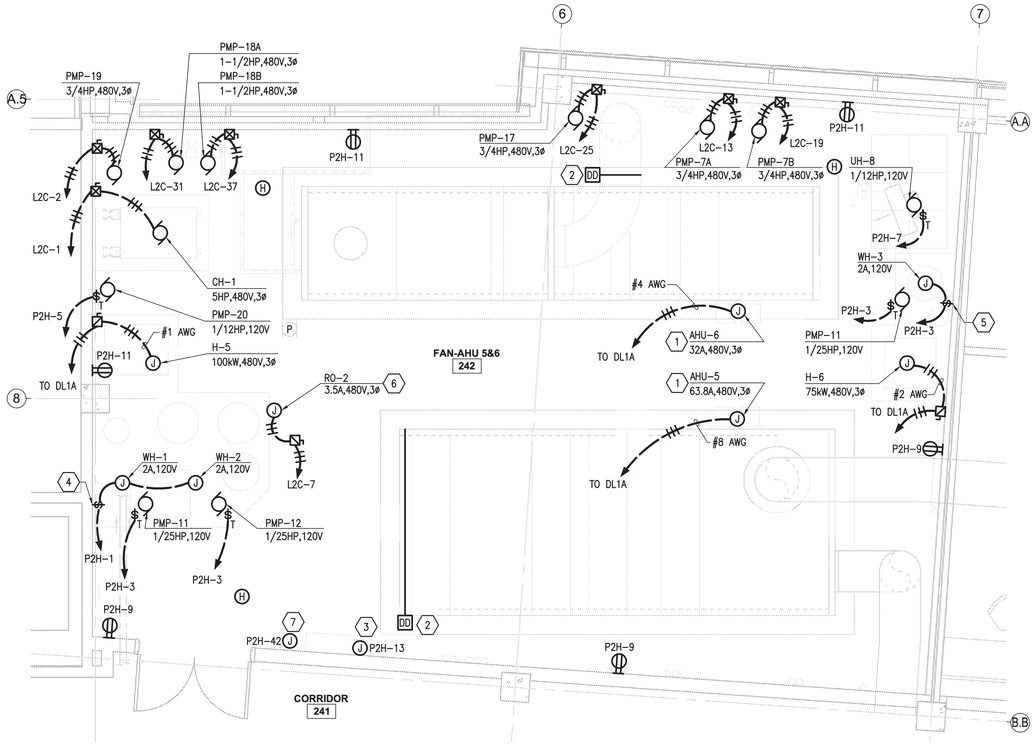
ENLARGED PLAN - FAN ROOM (AHU-2 AND AHU-4)

E605

SHEET NOTES

1. COORDINATE AHU CONNECTION REQUIREMENTS WITH EQUIPMENT MANUFACTURER. PROVIDE ALL CONTROL WIRING AS REQUIRED BY MANUFACTURER. PROVIDE WIRING FOR INTEGRAL 120V TRANSFORMER AND ASSOCIATED CONVENIENCE RECEPTACLES AND LIGHT FIXTURES AS REQUIRED BY MANUFACTURER. TRANSFORMER, RECEPTACLES AND LIGHT FIXTURES FURNISHED UNDER DIVISION 23 AND CONNECTED UNDER DIVISION 26.
2. PROVIDE DUCT SMOKE DETECTOR IN RETURN AIR PATH OF AIR HANDILING UNIT. COORDINATE EXACT MOUNTING LOCATION WITH DIVISION 15.
3. CONNECT TO BUILDING AUTOMATION SYSTEM PANEL.
4. PROVIDE ENGRAVED FACEPLATE TO READ "WH-1 AND WH-2 CONTROLS".
5. PROVIDE ENGRAVED FACEPLATE TO READ "WH-3 CONTROLS".
6. PROVIDE WIRING BETWEEN REVERSE OSMOSIS SYSTEM CONTROLS AND MOTOR. PROVIDE REQUIRED WIRING FOR SENSORS INCLUDED IN REVERSE OSMOSIS SYSTEM.
7. CONNECT TO ACS POWER SUPPLY AT THIS APPROXIMATE LOCATION. CIRCUIT AS NOTED.



1 E606 ENLARGED PLAN – FAN ROOM (AHU-5 AND AHU-6) – ELECTRICAL

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

0 2' 4' 8' 12'

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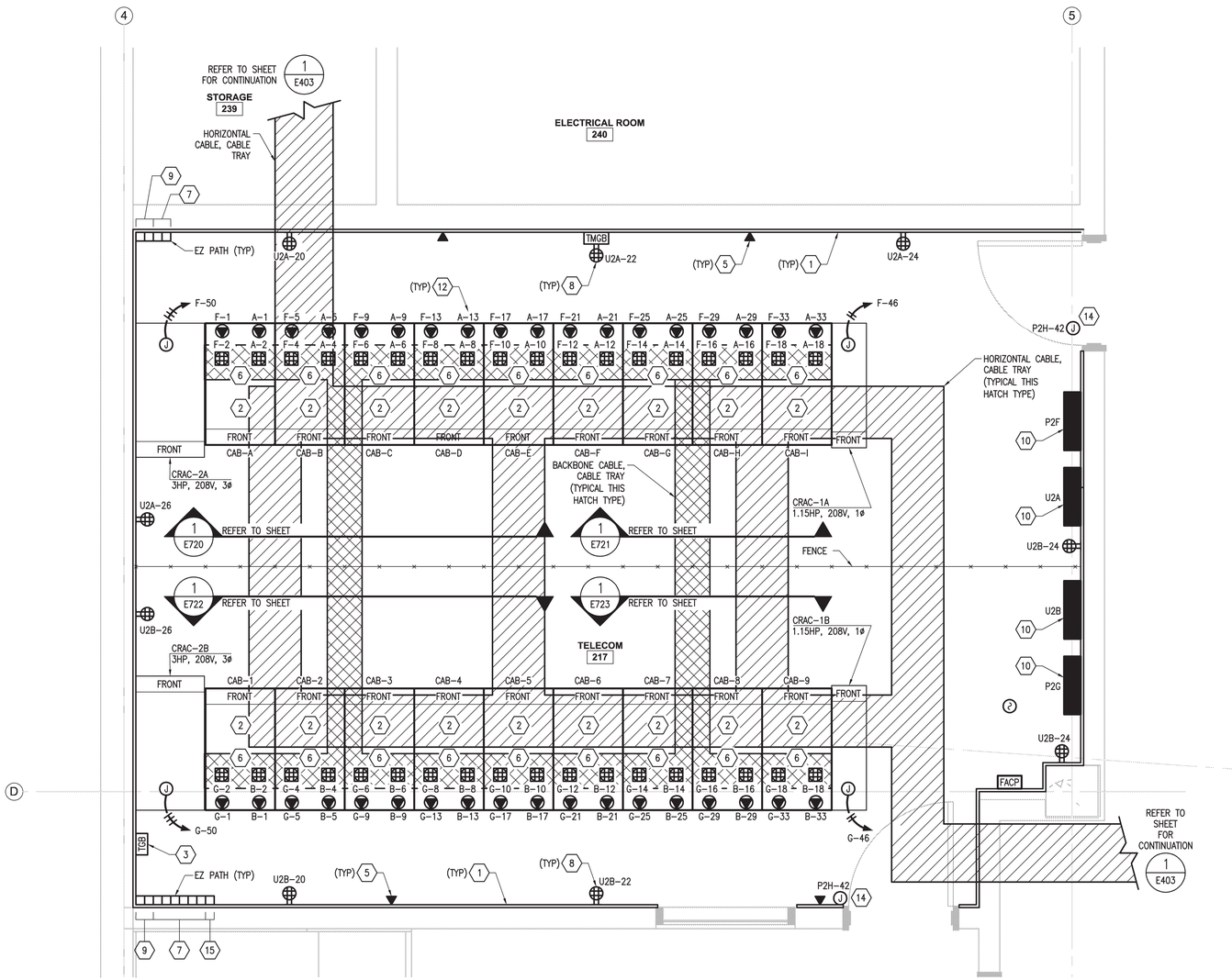
ENLARGED PLAN - FAN ROOM (AHU-5 AND AHU-6)

E606



1 E607 SECOND FLOOR – MAIN TELECOM ROOM MTR 217

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

0 1' 2' 4' 6'

SHEET NOTES

1. PROVIDE TELECOM BACKBOARD IAW THE TELECOM SPECIFICATION SECTIONS.
2. PROVIDE TELECOM CABINET IAW THE TELECOM SPECIFICATION SECTIONS.
3. PROVIDE TELECOMMUNICATION GROUNDING BUS BAR (TMGB OR TGB, AS NOTED) IAW THE TELECOM SPECIFICATION SECTIONS. WALL MOUNT GROUND BUS BAR AT +7'-8" TO CENTER, AFF. PROVIDE 1@ #3/0 AWG TELECOMMUNICATION BONDING BACKBONE (TBB) IN 1 INCH CONDUIT FROM TMGB IN TELECOM ROOM 217 TO THE ELECTRICAL SERVICE ENTRANCE GROUND BUSBAR, BUILDING STEEL, AND THE INCOMING WATER SERVICE METALLIC PIPE. PROVIDE 1@ #3/0 AWG TBB IN 1 INCH CONDUIT FROM THE TGB IN TELECOM ROOM 118 TO THE TMGB IN TELECOM ROOM 217. PROVIDE 1@ #3/0 AWG TBB IN 1 INCH CONDUIT FROM THE TGB IN TELECOM ROOM P04 TO THE TMGB IN TELECOM ROOM 212.
4. PROVIDE HORIZONTAL CABLE TRAY MOUNTED AT 7'-6" AFF IAW THE SPECIFICATIONS. PROVIDE BACKBONE CABLE TRAY AT 10'-6", AFF.
5. PROVIDE TELECOM OUTLET AT LOCATION INDICATED.
6. PROVIDE SURFACE MOUNTED FLOOR BOX IAW TELECOM SPECIFICATION. CONNECT TO UPS PANEL PROVIDED IAW SHEET NOTE 10.
7. TELECOM BACKBONE CONDUITS TO TELECOM ROOMS 118 AND P04. REFER TO SHEET E-801 FOR ADDITIONAL INFORMATION.
8. PROVIDE RECEPTACLE AT LOCATION INDICATED. CONNECT TO CIRCUIT NOTED. REFER TO PANEL SCHEDULES ADDITIONAL INFORMATION.
9. TELECOM BACK BONE CONDUITS TO UTILITY. REFER TO SHEET E-801 FOR ADDITIONAL INFORMATION.
10. PROVIDE UPS PANEL AT LOCATION INDICATED. REFER TO UPS POWER ONE-LINE DIAGRAM ON SHEET E-904 FOR ADDITIONAL INFORMATION.
11. CONNECT TO ACS POWER SUPPLY LOCATED IN ACCESSIBLE CEILING SPACE AT THIS APPROXIMATE LOCATION. CIRCUIT AS NOTED.
12. PROVIDE SUSPENDED NEMA L6-30R RECEPTACLE ABOVE EACH TELECOM CABINET. CONNECT TO CIRCUIT NOTED WITH 2-#10 AWG + 1-#10 GRND AS INDICATED.
13. CONNECT EQUIPMENT AND RECEPTACLES WITH CIRCUIT CALLOUTS BEGINNING WITH THE LETTER "F" ON THE NORTH SIDE OF THE FENCE TO PANEL P2F, CIRCUIT AS NOTED UNLESS OTHERWISE NOTED. CONNECT EQUIPMENT AND RECEPTACLES WITH CIRCUIT CALLOUTS BEGINNING WITH THE LETTER "A" ON THE NORTH SIDE OF THE FENCE TO PANEL U2A, CIRCUIT AS NOTED UNLESS OTHERWISE NOTED.

    CONNECT EQUIPMENT AND RECEPTACLES WITH CIRCUIT CALLOUTS BEGINNING WITH THE LETTER "G" ON THE SOUTH SIDE OF THE FENCE TO PANEL P2G, CIRCUIT AS NOTED UNLESS OTHERWISE NOTED. CONNECT EQUIPMENT AND RECEPTACLES WITH CIRCUIT CALLOUTS BEGINNING WITH THE LETTER "B" ON THE SOUTH SIDE OF THE FENCE TO PANEL U2B, CIRCUIT AS NOTED UNLESS OTHERWISE NOTED.
14. CONNECT TO ACS POWER SUPPLY AT THIS APPROXIMATE LOCATION. CIRCUIT AS NOTED.
15. TELECOM SPARE CONDUIT TO TELEVISION STATION. REFER TO SHEET E050 FOR ADDITIONAL INFORMATION.

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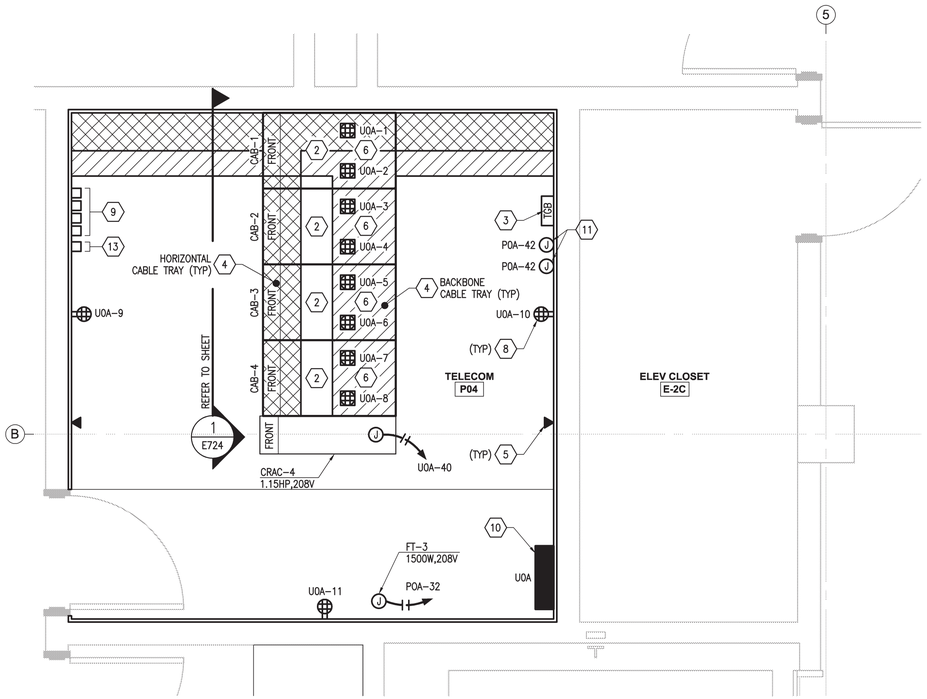
ENLARGED FLOOR PLANS - TELECOM ROOMS

E607

SHEET NOTES

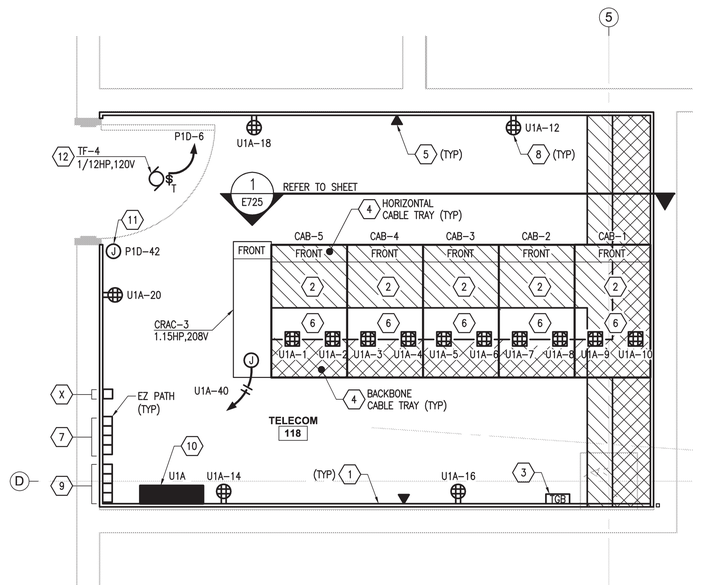
1. PROVIDE TELECOM BACKBOARD IAW TELECOM SPECIFICATIONS.
2. PROVIDE TELECOM RACK IAW TELECOM SPECIFICATIONS.
3. PROVIDE TELECOM GROUNDING BUS BAR TGB PER TELECOM SPECIFICATIONS. WALL MOUNT GROUND BUS BAR AT +7'-6" TO CENTER, AFF.
4. PROVIDE HORIZONTAL CABLE TRAY MOUNTED AT 7'-6" AFF. PROVIDE BACKBONE CABLE TRAY AT 10'-6", AFF.
5. PROVIDE TELECOM OUTLET AT LOCATION INDICATED.
6. PROVIDE SURFACE MOUNTED FLOOR BOX IAW TELECOM SPECIFICATION. CONNECT TO UPS PANEL PROVIDED IAW SHEET NOTE 10.
7. TELECOM BACKBONE CONDUITS TO TELECOM ROOM TR01. REFER TO SHEET E-801 FOR ADDITIONAL INFORMATION.
8. PROVIDE RECEPTACLE AT LOCATION INDICATED. CONNECT TO CIRCUIT NOTED. REFER TO PANEL SCHEDULES ADDITIONAL INFORMATION.
9. TELECOM BACK BONE CONDUITS TO UTILITY. REFER TO SHEET E-801 FOR ADDITIONAL INFORMATION.
10. PROVIDE UPS PANEL AT LOCATION INDICATED. REFER TO UPS POWER ONE-LINE DIAGRAM ON SHEET E-904 FOR ADDITIONAL INFORMATION.
11. CONNECT TO ACS POWER SUPPLY LOCATED IN CEILING SPACE AT THIS APPROXIMATE LOCATION. CIRCUIT AS NOTED.
12. MOTOR SPEED CONTROLLER FURNISHED UNDER DIVISION 23, INSTALLED UNDER DIVISION 26.
13. TELECOM SPARE CONDUIT TO TELEVISION STATION. REFER TO SHEET E050 FOR ADDITIONAL INFORMATION.



1 E608 PARKING FLOOR – TELECOM ROOM P04

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

0 1' 2' 4' 6'



2 E608 FIRST FLOOR – TELECOM ROOM 118

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

0 1' 2' 4' 6'

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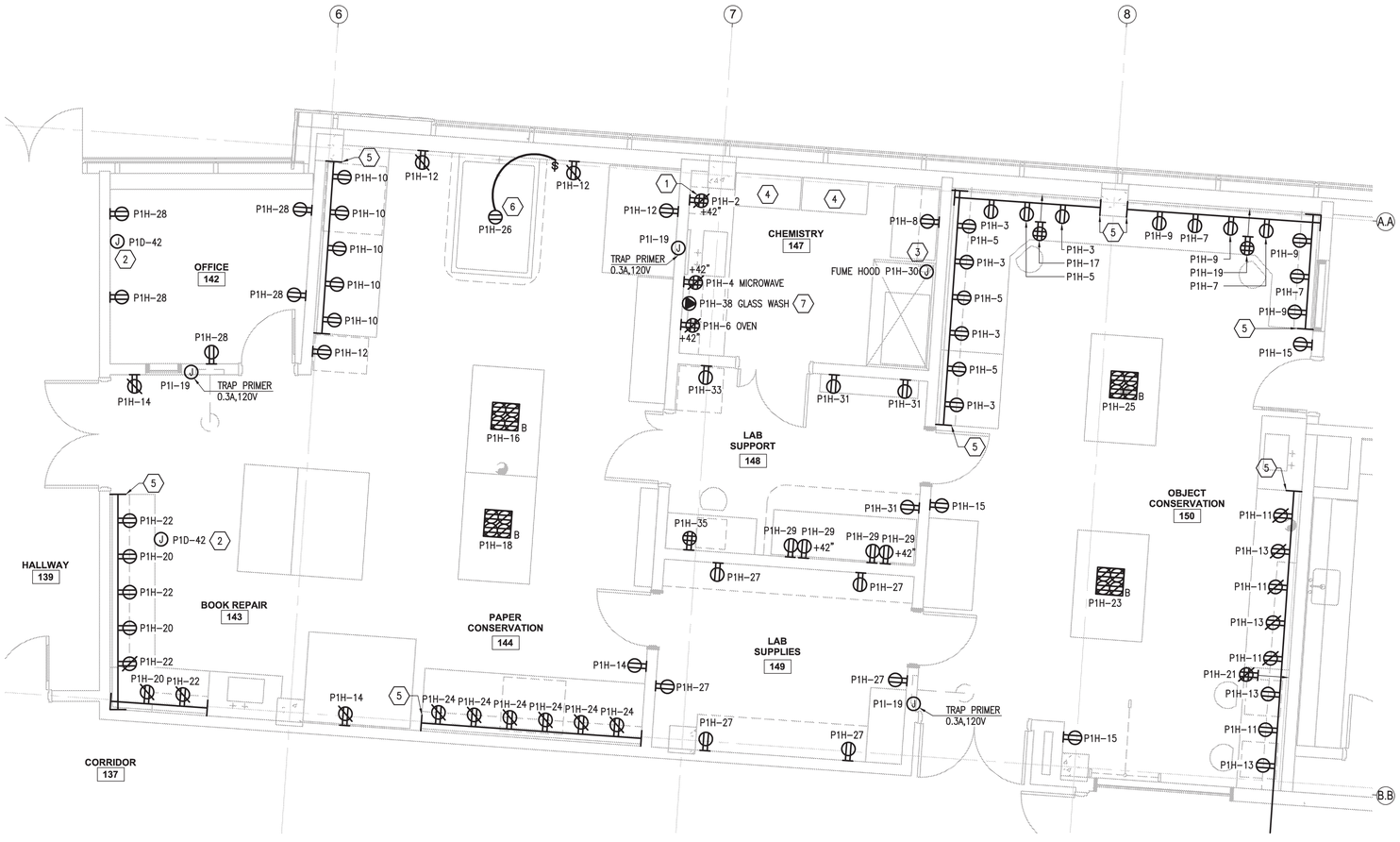
ENLARGED FLOOR PLANS - TELECOM ROOMS

E608

SHEET NOTES

1. PROVIDE DEDICATED RECEPTACLE FOR WATER DEIONIZER. CIRCUIT AS NOTED.
2. CONNECT TO ACS POWER SUPPLY LOCATED IN ACCESSIBLE CEILING SPACE AT THIS APPROXIMATE LOCATION. CIRCUIT AS NOTED.
3. CONNECT FUME HOOD LIGHT AND RECEPTACLES TO CIRCUIT SHOWN. COORDINATE CONNECTION REQUIREMENTS WITH EQUIPMENT MANUFACTURER.
4. PROVIDE #6 AWG GROUND CONDUCTOR FROM FLAMMABLE STORAGE CABINET TO BUILDING STEEL OR NEAREST GROUNDING ELECTRODE.
5. PROVIDE SURFACE RACEWAY AT LOCATION INDICATED. REFER TO LAB ELEVATIONS FOR MOUNTING HEIGHT. REFER TO SPECIFICATION SECTION 26 05 35 FOR ADDITIONAL INFORMATION.
6. PROVIDE SWITCHED RECEPTACLE FOR OVERHEAD LIGHT BLEACHING FIXTURES. CIRCUIT AS NOTED.
7. PROVIDE SPECIAL RECEPTACLE FOR GLASS WASH UNIT. COORDINATE CONNECTION REQUIREMENTS WITH EQUIPMENT MANUFACTURER. CIRCUIT AS NOTED.



1 / E609 ENLARGED PLAN – LAB AREA – ELECTRICAL

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

0 2' 4' 8' 12'

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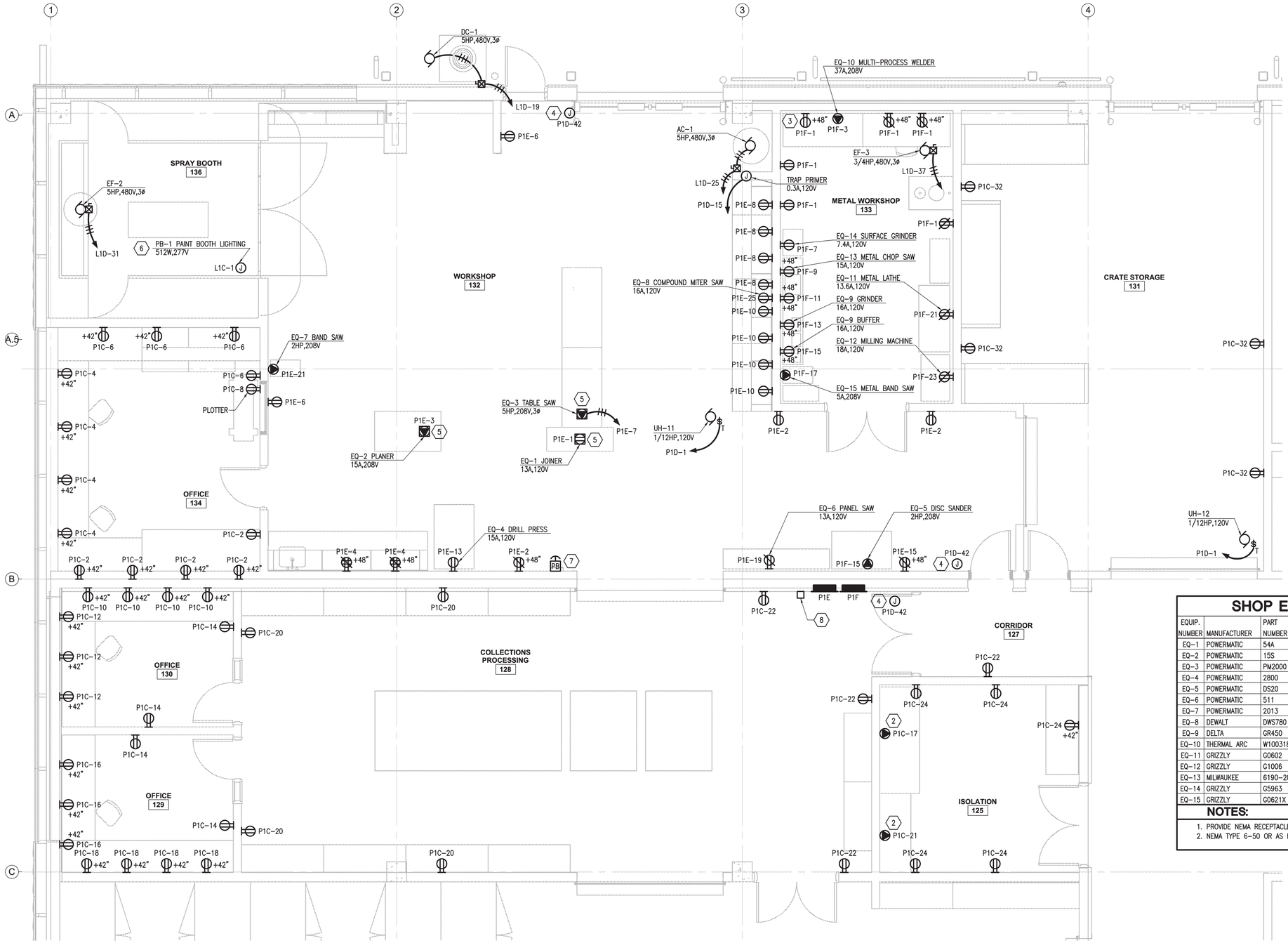
ENLARGED FLOOR PLAN - LAB AREA

E609



SHEET NOTES

1. COORDINATE SHOP EQUIPMENT CONNECTION REQUIREMENTS WITH FINAL EQUIPMENT SELECTION. PROVIDE ENGRAVED DEVICE PLATE WITH CIRCUIT NUMBER AND EQUIPMENT DESCRIPTION (FOR EXAMPLE: "TABLE SAW – P1F-8") FOR DEDICATED SHOP EQUIPMENT RECEPTACLES AS SHOWN ON THE PLAN.
2. PROVIDE DEDICATED RECEPTACLE FOR CHEST FREEZER. PROVIDE NEMA RECEPTACLE TYPE AND CIRCUIT BREAKER AS REQUIRED BY EQUIPMENT MANUFACTURER.
3. PROVIDE DEDICATED RECEPTACLE FOR WELDING TABLE EXHAUST UNIT.
4. CONNECT TO ACS POWER SUPPLY IN ACCESSIBLE CEILING SPACE AT THIS APPROXIMATE LOCATION.
5. PROVIDE HUBBELL WIRING DEVICE ENCLOSURE, PART NUMBER SA6688 OR APPROVED EQUAL. PROVIDE FACEPLATE AS REQUIRED BY EQUIPMENT CONNECTION. COORDINATE LOCATION OF FLOOR MOUNTED RECEPTACLE WITH SHOP EQUIPMENT LAYOUT.
6. CONECT TO PAINT BOOTH LIGHTING. COORDINATE CONNECTION REQUIREMENTS WITH PAINT BOOTH MANUFACTURER. PROVIDE CLASSIFIED SWITCH IN ACCORDANCE WITH NEC REQUIREMENTS FOR CONTROL OF PAINT BOOTH LIGHT FIXTURES. MOUNT SWITCH IN ACCORDANCE WITH PAINT BOOTH INSTALLATION INSTRUCTIONS.
7. SHOP EQUIPMENT EMERGENCY SHUTDOWN PUSH BUTTON. CONNECT AS SHOWN IN DETAIL 1/E711.
8. SHOP EQUIPMENT EMERGENCY DISCONNECT CONTACT. REFER TO DETAIL 1/E711 FOR ADDITIONAL INFORMATION.

SHOP EQUIPMENT SCHEDULE

EQUIP. NUMBER	MANUFACTURER	PART NUMBER	EQUIPMENT DESCRIPTION	VOLTAGE	PHASE	AMPS/	OCPD	CONNECTION TYPE
EQ-1	POWERMATIC	54A	JOINER	120	1	13.0	20A	NEMA 5-20
EQ-2	POWERMATIC	15S	PLANER	208	1	15.0	20A	NOTE 1
EQ-3	POWERMATIC	PM2000	TABLE SAW	208	3	17.5	20A	NOTE 1
EQ-4	POWERMATIC	2800	DRILL PRESS	120	1	15.0	20A	NEMA 5-20
EQ-5	POWERMATIC	DS20	DISC SANDER	208	1	14.0	30A	NOTE 1
EQ-6	POWERMATIC	511	PANEL SAW	120	1	13.0	20A	NEMA 5-20
EQ-7	POWERMATIC	2013	BAND SAW	208	1	14.0	30A	NOTE 1
EQ-8	DEWALT	DWS780	MITER SAW	120	1	16.0	20A	NEMA 5-20
EQ-9	DELTA	GR450	GRINDER	120	1	16.0	20A	NEMA 5-20
EQ-10	THERMAL ARC	W1003181i	WELDER	208	1	37.0	50A	NOTE 2
EQ-11	GRIZZLY	G0602	METAL LATHE	120	1	13.6	20A	NEMA 5-20
EQ-12	GRIZZLY	G1006	MILLING MACH.	120	1	16.0	20A	NEMA 5-20
EQ-13	MILWAUKEE	6190-20	CHOP SAW	120	1	15.0	20A	NEMA 5-20
EQ-14	GRIZZLY	G5963	SURFACE GRINDER	120	1	7.4	15A	NEMA 5-20
EQ-15	GRIZZLY	G0621X	METAL BAND SAW	208	1	4.8	15A	NOTE 1

NOTES:

1. PROVIDE NEMA RECEPTACLE TYPE AS REQUIRED BY SHOP EQUIPMENT.
2. NEMA TYPE 6-50 OR AS REQUIRED BY OFOI WELDING EQUIPMENT.

1 / E610 ENLARGED PLAN – SHOP AREA – ELECTRICAL

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

0 2' 4' 8' 12'

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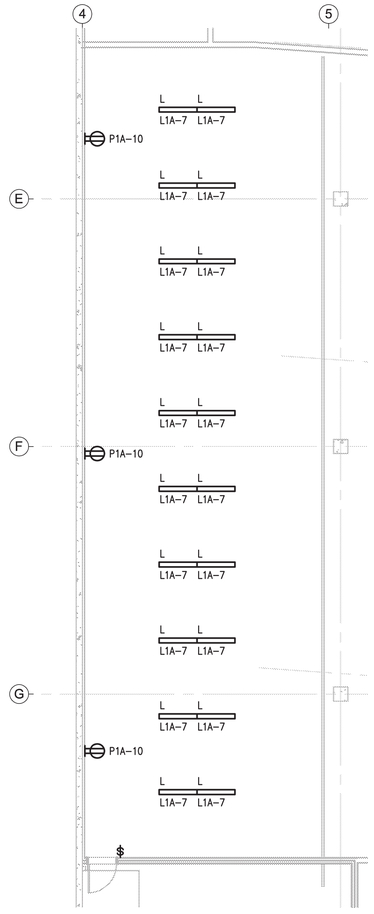
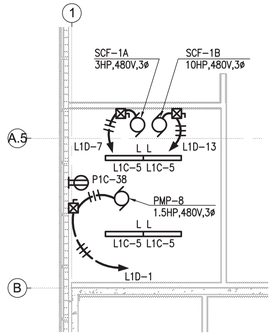
ENLARGED FLOOR PLAN - SHOP AREA

E610

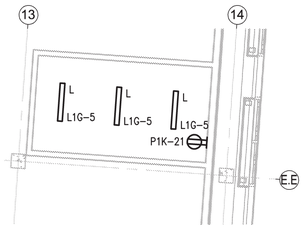


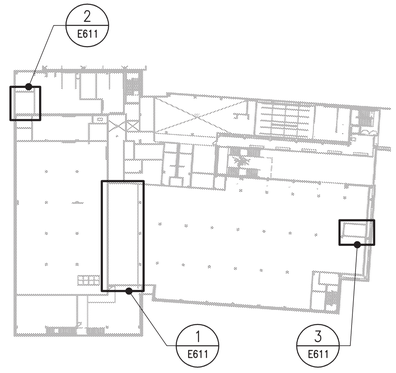


2 E611 ENLARGED MEZZANINE LEVEL PLAN – AREA D

SCALE: 1/8" = 1'–0"

0 4' 8' 16' 24'





1 E611 ENLARGED MEZZANINE LEVEL PLAN – AREA C

SCALE: 1/8" = 1'–0"

0 4' 8' 16' 24'

3 E611 ENLARGED MEZZANINE LEVEL PLAN – AREA B

SCALE: 1/8" = 1'–0"

0 4' 8' 16' 24'

KEY PLAN

SCALE: NONE

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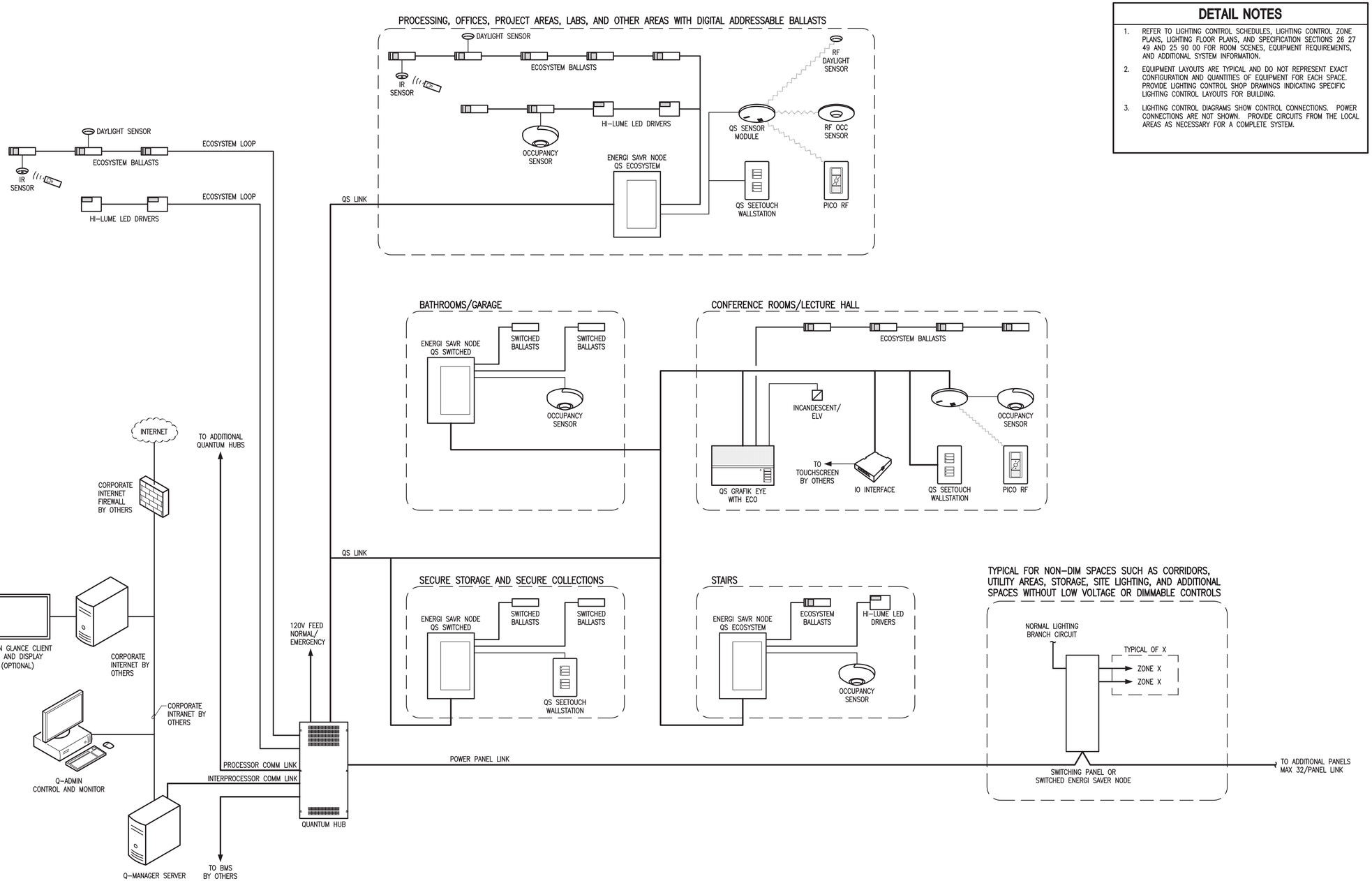
ENLARGED FLOOR PLANS - MEZZANINE LEVEL

E611



DETAIL NOTES

1. REFER TO LIGHTING CONTROL SCHEDULES, LIGHTING CONTROL ZONE PLANS, LIGHTING FLOOR PLANS, AND SPECIFICATION SECTIONS 26 27 49 AND 25 90 00 FOR ROOM SCENES, EQUIPMENT REQUIREMENTS, AND ADDITIONAL SYSTEM INFORMATION.
2. EQUIPMENT LAYOUTS ARE TYPICAL AND DO NOT REPRESENT EXACT CONFIGURATION AND QUANTITIES OF EQUIPMENT FOR EACH SPACE. PROVIDE LIGHTING CONTROL SHOP DRAWINGS INDICATING SPECIFIC LIGHTING CONTROL LAYOUTS FOR BUILDING.
3. LIGHTING CONTROL DIAGRAMS SHOW CONTROL CONNECTIONS. POWER CONNECTIONS ARE NOT SHOWN. PROVIDE CIRCUITS FROM THE LOCAL AREAS AS NECESSARY FOR A COMPLETE SYSTEM.

1 E701 DIAGRAM – LIGHTING CONTROL

SCALE: NONE

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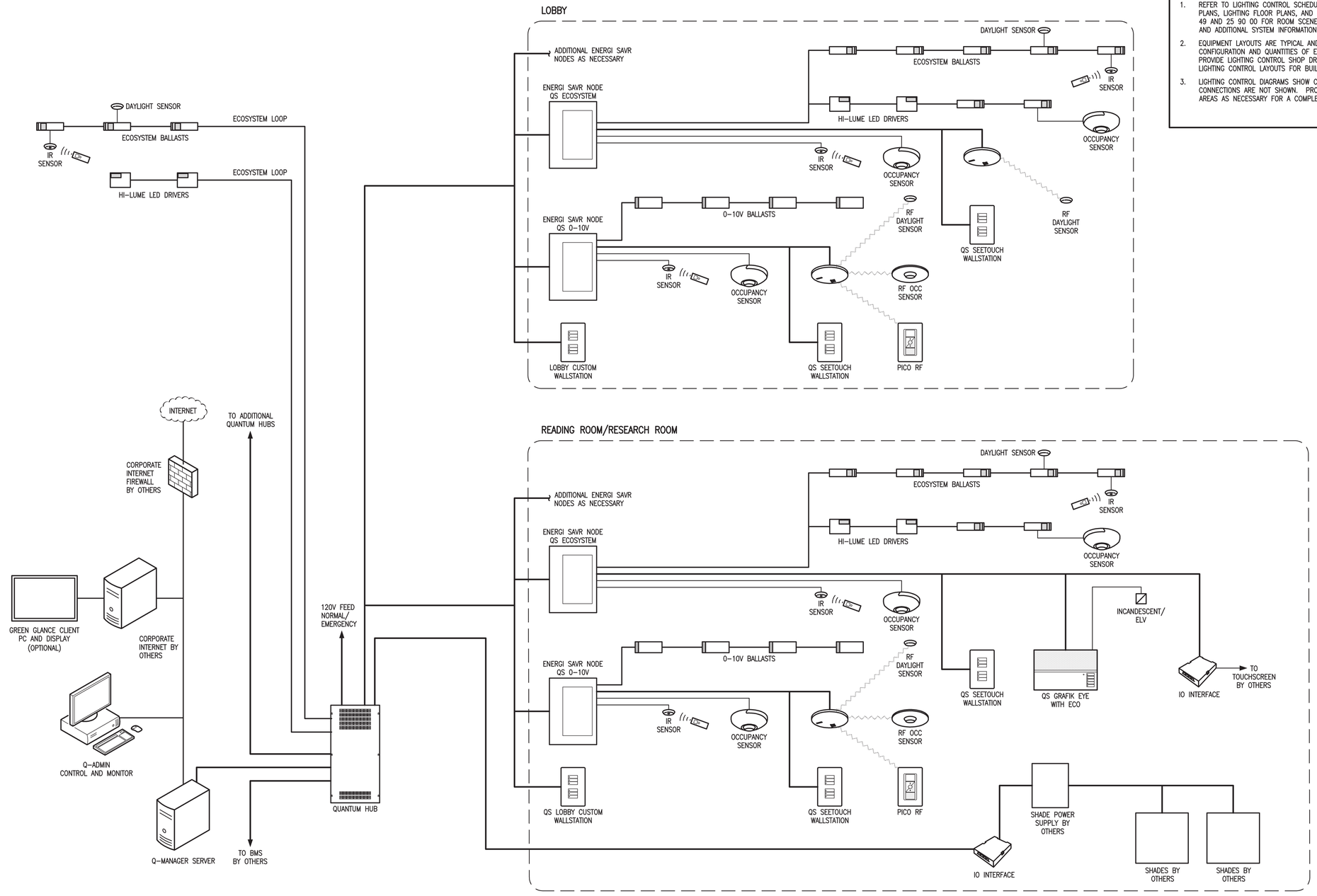
DETAILS AND DIAGRAMS - SITE LIGHTING

E701



DETAIL NOTES

1. REFER TO LIGHTING CONTROL SCHEDULES, LIGHTING CONTROL ZONE PLANS, LIGHTING FLOOR PLANS, AND SPECIFICATION SECTIONS 26 27 49 AND 25 90 00 FOR ROOM SCENES, EQUIPMENT REQUIREMENTS, AND ADDITIONAL SYSTEM INFORMATION.
2. EQUIPMENT LAYOUTS ARE TYPICAL AND DO NOT REPRESENT EXACT CONFIGURATION AND QUANTITIES OF EQUIPMENT FOR EACH SPACE. PROVIDE LIGHTING CONTROL SHOP DRAWINGS INDICATING SPECIFIC LIGHTING CONTROL LAYOUTS FOR BUILDING.
3. LIGHTING CONTROL DIAGRAMS SHOW CONTROL CONNECTIONS. POWER CONNECTIONS ARE NOT SHOWN. PROVIDE CIRCUITS FROM THE LOCAL AREAS AS NECESSARY FOR A COMPLETE SYSTEM.

1 E702 DIAGRAM – LIGHTING CONTROL

SCALE: NONE

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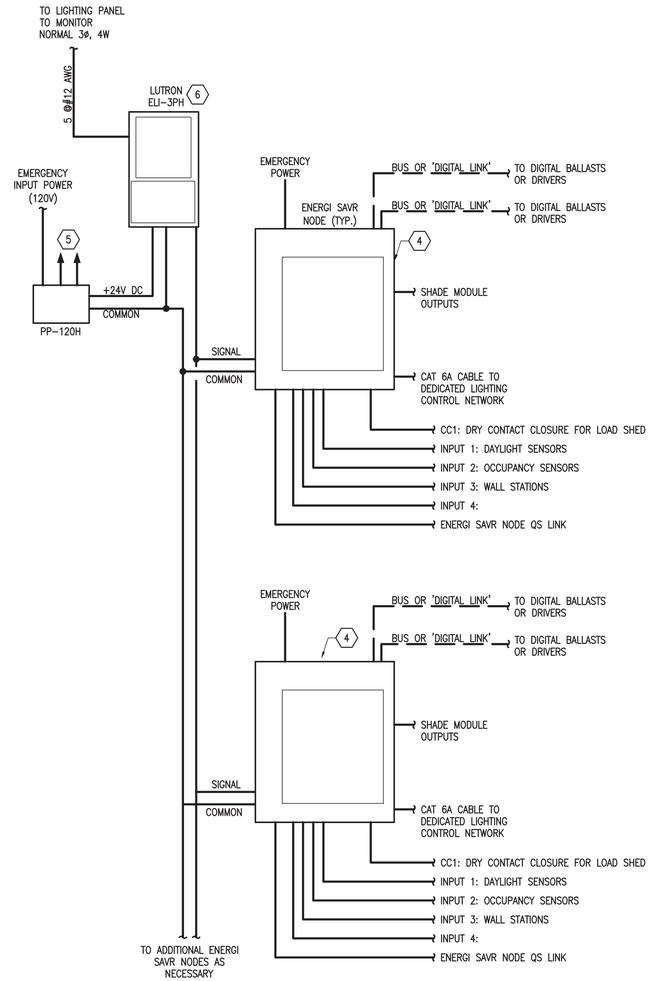
DETAILS AND DIAGRAMS - LIGHTING CONTROL

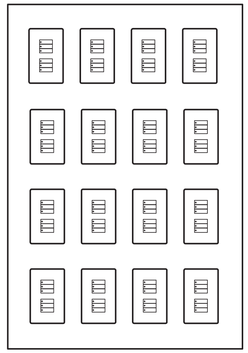
E702

DETAIL NOTES

1. PROVIDE EMERGENCY LIGHTING INTERFACES IN ELECTRICAL ROOM 126, 155 AND 110 TO SERVE RESPECTIVE LOCAL EMERGENCY LIGHTING ENERGY SAVR NODES.
2. EQUIPMENT LAYOUTS ARE TYPICAL AND DO NOT REPRESENT EXACT CONFIGURATION AND QUANTITIES OF EQUIPMENT FOR EACH SPACE. PROVIDE LIGHTING CONTROL SHOP DRAWINGS INDICATING SPECIFIC LIGHTING CONTROL LAYOUTS FOR BUILDING. REFER TO LIGHTING CONTROL SCHEDULE, LIGHTING CONTROL ZONE PLANS, LIGHTING FLOOR PLANS, AND SPECIFICATION SECTION 25 90 00 FOR ADDITIONAL INFORMATION.
3. LIGHTING CONTROL DIAGRAMS SHOW CONTROL CONNECTIONS. POWER CONNECTIONS ARE NOT SHOWN. PROVIDE CIRCUITS FROM THE LOCAL AREAS AS NECESSARY FOR A COMPLETE SYSTEM.
4. PROVIDE ENERGI SAVR NODES AS REQUIRED. SEE FLOOR PLANS AND OVERALL LIGHTING CONTROL SYSTEM DIAGRAM FOR ADDITIONAL INFORMATION.
5. POWER PACK LINE VOLTAGE CONNECTIONS ARE NOT USED FOR THIS APPLICATION.



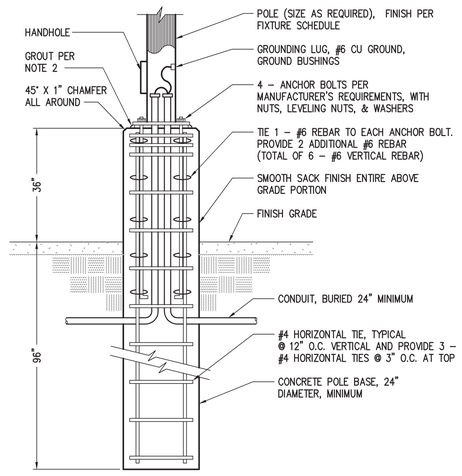
1 E703 DIAGRAM – EMERGENCY LIGHTING CONTROL
SCALE: NONE



NOTES:

1. REFER TO LIGHTING CONTROL SCHEDULE OR LIGHTING ZONES. REFER TO SPECIFICATION SECTION 25 90 00 FOR ADDITIONAL INFORMATION REGARDING BAS OVERRIDING OF LIGHTING CONTROL ZONES.
2. PROVIDE CUSTOM FABRICATED LOBBY LIGHTING CONTROL PANEL WITH STAINLESS STEEL FACEPLATE AND HINGED SMOKED GLASS COVER. PROVIDE LUTRON 6 BUTTON WALL STATIONS WITH ENGRAVED BUTTONS. EXTRA WALL STATIONS HAVE BEEN PROVIDED FOR FUTURE LIGHTING ZONE ADDITIONS. PROVIDE BLANK FACEPLATES AT FUTURE LIGHTING ZONE WALL STATIONS. PROVIDE SHOP DRAWING OF PANEL, COVER AND WALL STATIONS PRIOR TO ORDERING.

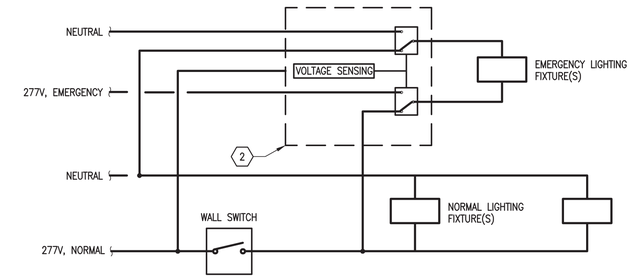
4 E703 DIAGRAM – LOBBY CONTROL ELEVATION
SCALE: NONE



NOTES, THIS DETAIL:

1. CONCRETE SHALL CONFORM TO ALASKA D.O.T. CLASS "A" SPECS.
2. GROUT SHALL BE 1" MINIMUM, 2" MAXIMUM THICKNESS; NON-SHRINK OR DRY-PACK. APPLY AFTER INSTALLATION AND LEVELING OF POLE
3. PRE-CAST VERSION OF ABOVE BASE IS AN ACCEPTABLE ALTERNATE.

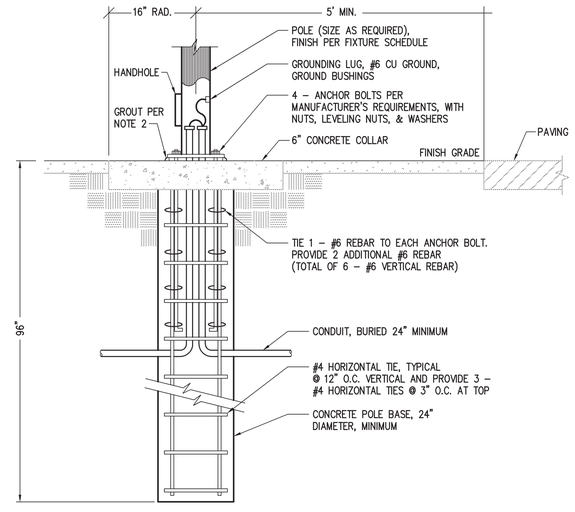
2 E703 DETAIL – ELEVATED POLE BASE – SITE LIGHTING
SCALE: NONE



NOTES

1. ALL CONTACTS ARE SHOWN IN THE DE-ENERGIZED STATE.
2. PROVIDE BODINE GENERATOR TRANSFER DEVICE (GTD) OR APPROVED EQUAL IN EMERGENCY LIGHTING FIXTURE(S). ALTERNATIVELY, PROVIDE REQUIRED RELAYS IN A SEPARATE NEMA 1 ENCLOSURE IN ACCESSIBLE CEILING SPACE TO PROVIDE FAIL ON CONTROL OF EMERGENCY LIGHTING FIXTURES.

5 E703 DETAIL – LIGHTING CONTROL IN ROOMS WITH SWITCHED EMERGENCY FIXTURES
SCALE: NONE



NOTES, THIS DETAIL:

1. CONCRETE SHALL CONFORM TO ALASKA D.O.T. CLASS "A" SPECS.
2. GROUT SHALL BE 1" MINIMUM, 2" MAXIMUM THICKNESS; NON-SHRINK OR DRY-PACK. APPLY AFTER INSTALLATION AND LEVELING OF POLE
3. PRE-CAST VERSION OF ABOVE BASE IS AN ACCEPTABLE ALTERNATE.

3 E703 DETAIL – FLUSH POLE BASE – SITE LIGHTING
SCALE: NONE

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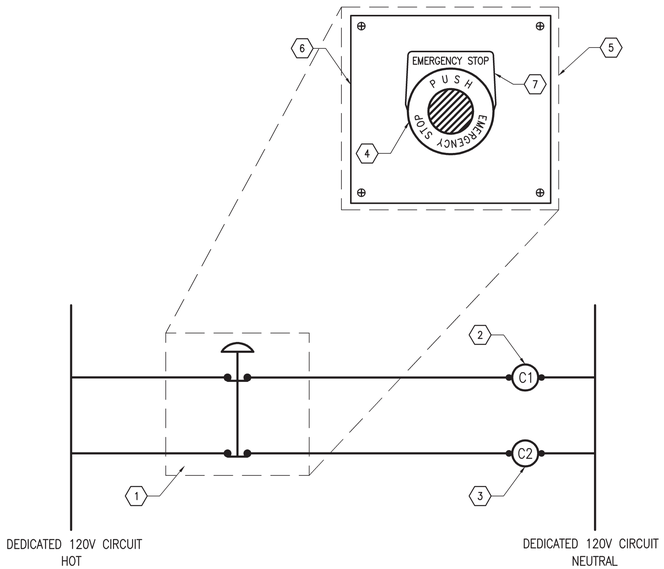
DETAILS AND DIAGRAMS - LIGHTING CONTROL

E703



DETAIL NOTES

1. PROVIDE ILLUMINATED PUSH PULL EMERGENCY SHUT DOWN BUTTON. THE EMERGENCY SHUT DOWN BUTTON SHALL BE CONNECTED SUCH THAT THE CONTACTOR COIL AND DUST COLLECTOR STARTER COIL ARE DE-ENERGIZED WHEN BUTTON IS PUSHED.
2. SHOP EQUIPMENT CONTACTOR COIL. COIL SHALL DE-ENERGIZED WHEN THE EMERGENCY SHUT DOWN BUTTON IS PUSHED.
3. DUST COLLECTOR STARTER COIL. COIL SHALL DE-ENERGIZED WHEN THE EMERGENCY SHUT DOWN BUTTON IS PUSHED.
4. PROVIDE SQUARE D, 2 POSITION PUSH-PULL, LED ILLUMINATED, RED KNOB WITH "PUSH EMERGENCY STOP" PRINTED ON KNOB, MUSHROOM TYPE BUTTON, WITH 2 NORMALLY CLOSED CONTACTS AND 2 NORMALLY OPEN CONTACTS, SQUARE D 9001KR9 SERIES.
5. PROVIDE STI MINI STOPPER, HINGED CLEAR POLYCARBONATE COVER. COVER INSTALLED SUCH THAT LIFTING UP ON COVER WILL GAIN ACCESS TO EMERGENCY SHUT DOWN BUTTON.
6. PROVIDE SQUARE D, SINGLE HOLE, DIE CAST ZINC ENCLOSURE. ENCLOSURE MODEL #9001KY1.
7. PROVIDE BLACK ALUMINUM LEGEND PLATE WITH WHITE LETTERS, TO READ "EMERGENCY STOP". SQUARE D MODEL #9001KN299.

1 / E711 SHOP EQUIPMENT SHUTDOWN CONTROL WIRING DIAGRAM AND PUSHBUTTON DETAIL

SCALE: NONE

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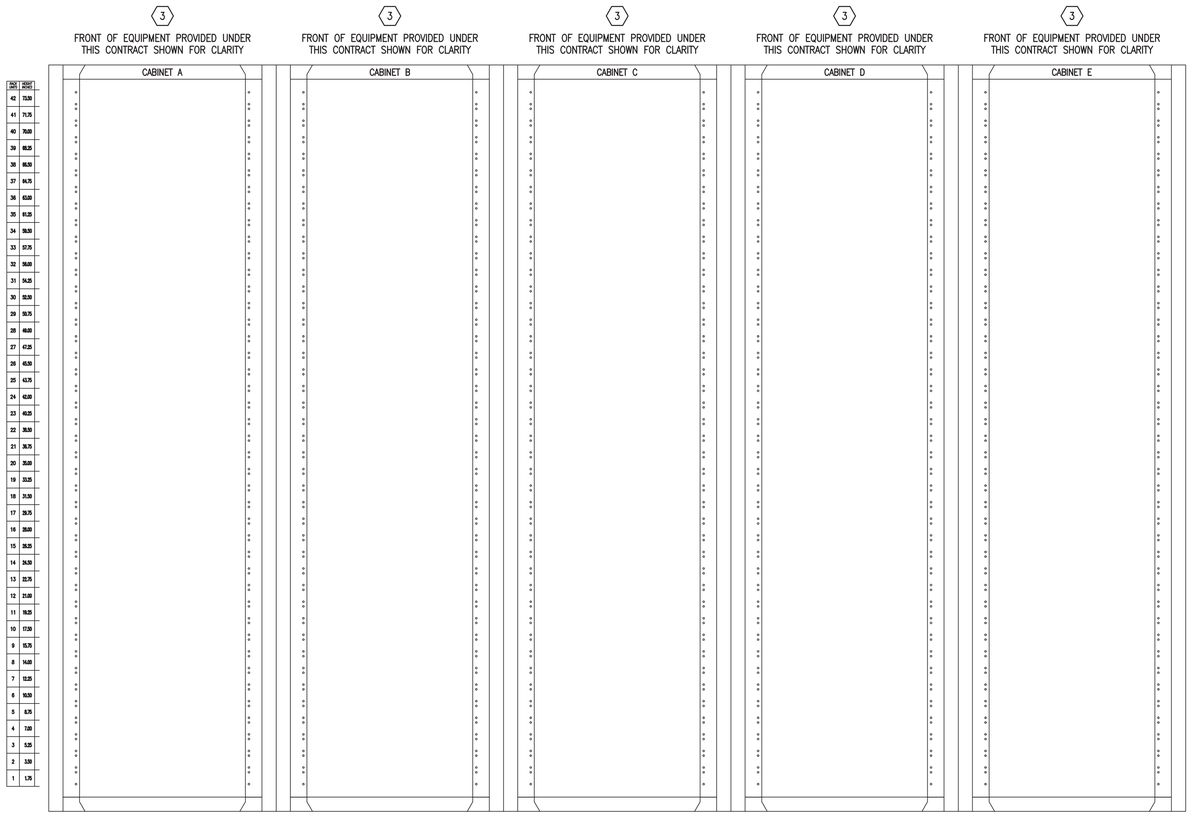
DETAILS AND DIAGRAMS - POWER

E711



1 / E720 DETAILS – RACK ELEVATION – MTR NORTHWEST

SCALE: NONE

SHEET NOTES

1. NOT ALL EQUIPMENT TO BE PROVIDED IS NECESSARILY INDICATED IN DETAIL. PROVIDE ALL EQUIPMENT IAW THE SPECIFICATIONS NECESSARY TO PROVIDE COMPLETE AND FUNCTIONAL SYSTEMS.
2. PROVIDE BLANK FILLER PLATES (AS SHOWN) IN ALL UNUSED SECTIONS OF TELECOM CABINETS TO PROVIDE COOLING AIR PATHWAY WITHIN CABINETS.

PROVIDE TELECOMMUNICATION CABINET IAW SPECIFICATION SECTION 27 20 10.

4. PROVIDE PDU'S IN EACH CABINET IAW SPECIFICATION SECTION 27 20 10.

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DETAILS - RACK ELEVATION - MTR NORTHWEST

E720

1 / E721 DETAILS – RACK ELEVATION – MTR NORTHEAST

SCALE: NONE

SHEET NOTES

1. NOT ALL EQUIPMENT TO BE PROVIDED IS NECESSARILY INDICATED IN DETAIL. PROVIDE ALL EQUIPMENT IAW THE SPECIFICATIONS NECESSARY TO PROVIDE COMPLETE AND FUNCTIONAL SYSTEMS.
2. PROVIDE BLANK FILLER PLATES (AS SHOWN) IN ALL UNUSED SECTIONS OF TELECOM CABINETS TO PROVIDE COOLING AIR PATHWAY WITHIN CABINETS.
3. PROVIDE TELECOMMUNICATION CABINET IAW SPECIFICATION SECTION 27 20 10.
4. PROVIDE PDU'S IN EACH CABINET IAW SPECIFICATION SECTION 27 20 10.

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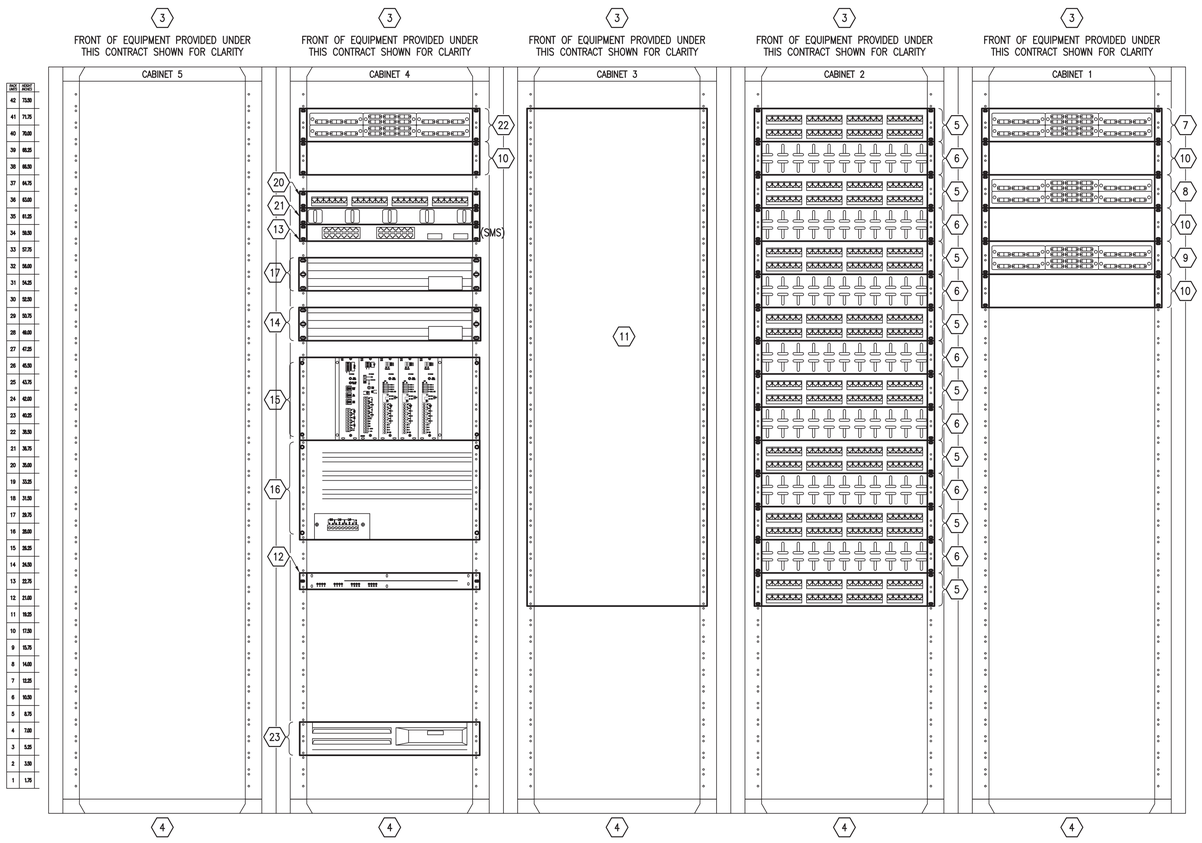
DETAILS - RACK ELEVATION - MTR NORTHEAST

E721



1 E722 DETAILS – RACK ELEVATION – MTR SOUTHWEST

SCALE: NONE

SHEET NOTES

1. NOT ALL EQUIPMENT TO BE PROVIDED IS NECESSARILY INDICATED IN DETAIL. PROVIDE ALL EQUIPMENT IAW THE SPECIFICATIONS NECESSARY TO PROVIDE COMPLETE AND FUNCTIONAL SYSTEMS.
2. PROVIDE BLANK FILLER PLATES (NOT SHOWN) IN ALL UNUSED SECTIONS OF TELECOM CABINETS TO PROVIDE COOLING AIR PATHWAY WITHIN CABINETS.
3. PROVIDE TELECOMMUNICATION CABINET IAW SPECIFICATION 27 20 10.
4. PROVIDE (2) VERTICAL ZERO RACK UNIT (0 RU) RACK PDU'S PER CABINET IAW SPECIFICATION 27 20 10.
5. PROVIDE 48 PORT HORIZONTAL CABLE PATCH PANELS FOR LEVEL 2 TELECOM CABLES IAW SPECIFICATION SECTION 27 20 10.
6. PROVIDE TWO RACK UNIT (2 RU) HORIZONTAL WIRE MANAGEMENT IAW SPECIFICATION SECTION 27 20 10.
7. PROVIDE SINGLE RACK UNIT (1 RU) MULTIMODE FIBER OPTIC CABLE PATCH PANEL AND SINGLE RACK UNIT (1 RU) SINGLEMODE FIBER OPTIC CABLE PATCH PANEL.
8. PROVIDE SINGLE RACK UNIT (1 RU) MULTIMODE FIBER OPTIC CABLE PATCH PANEL AND SINGLE RACK UNIT (1 RU) SINGLEMODE FIBER OPTIC CABLE PATCH PANEL FOR BACKBONE FIBER TO TELECOM ROOM TR01.
9. PROVIDE SINGLE RACK UNIT (1 RU) MULTIMODE FIBER OPTIC CABLE PATCH PANEL AND SINGLE RACK UNIT (1 RU) SINGLEMODE FIBER OPTIC CABLE PATCH PANEL FOR BACKBONE FIBER TO TELECOM ROOM TR11.
10. PROVIDE SINGLEMODE FIBER OPTIC CABLE SPLICE CASE FOR SPLICING OF SINGLEMODE "PIG TAILS" TO BACKBONE CABLE IAW SPECIFICATION SECTION 27 20 20.
11. SPACE RESERVED FOR OFOI NETWORK SWITCHES. PROVIDE HORIZONTAL WIRE MANAGEMENT IN SUFFICIENT QUANTITY TO ACCOMMODATE NETWORK SWITCH CONNECTIONS.
12. LIGHT MANAGEMENT SYSTEM SERVER (HEADLESS) – REFER TO SPECIFICATION SECTION 26 27 49.
13. PROVIDE ETHERNET NETWORK SWITCH DEDICATED FOR THE SMS/DVRS SYSTEM IAW SPECIFICATION SECTION 27 05 24.
14. PROVIDE DVRS ARCHIVE SERVER IAW SPECIFICATION SECTION 27 05 24.
15. BOGEN PCM2000 PAGING SYSTEM PROVIDED IAW SPECIFICATION SECTION 27 51 23.
16. BOGEN TPU250 PAGING SYSTEM AMPLIFIER PROVIDED IAW SPECIFICATION SECTION 27 51 23. TPU250 AMPLIFIER WILL BE DEDICATED TO CLASSROOM 113 AND LECTURE HALL 154. PROVIDE BOGEN REMOTE AMPLIFIER(S) (BOGEN M-CLASS) IN SUFFICIENT QUANTITY AND CAPACITY TO SERVE LOBBY ATRIUM AND EXHIBIT AREA (FUTURE) PAGING ZONES. LOCATE REMOTE AMPLIFIERS AT PAGING ZONE LOCATIONS. COORDINATE EXACT INSTALLATION LOCATIONS AND REQUIREMENTS WITH OWNER.
18. PROVIDE SMS SERVER IAW SPECIFICATION SECTION 16725.
19. PROVIDE SINGLE RACK UNIT (1 RU) MULTIMODE FIBER OPTICAL PATCH PANEL AND SINGLE RACK UNIT (1 RU) SINGLEMODE FIBER OPTIC CABLE PATCH PANEL DEDICATED FOR THE SMS/CCTV SYSTEM.
20. PROVIDE 24 PORT HORIZONTAL CABLE PATCH PANEL DEDICATED FOR THE SMS/DVRS SYSTEMS IAW SPECIFICATION SECTION 27 05 24 AND 27 20 10.
21. PROVIDE ONE RACK UNIT (1 RU) HORIZONTAL WIRE MANAGEMENT DEDICATED FOR THE SMS/DVRS SYSTEM IAW SPECIFICATION SECTION 27 05 24.
22. PROVIDE SINGLE RACK UNIT (1 RU) MULTIMODE FIBER OPTICAL PATCH PANEL AND SINGLE RACK UNIT (1 RU) SINGLEMODE FIBER OPTIC CABLE PATCH PANEL DEDICATED FOR THE SMS/CCTV SYSTEM.
23. PROVIDE RACK MOUNTED UPS FOR THE SMS/DVRS SYSTEM IAW SPECIFICATION SECTION 27 05 24.

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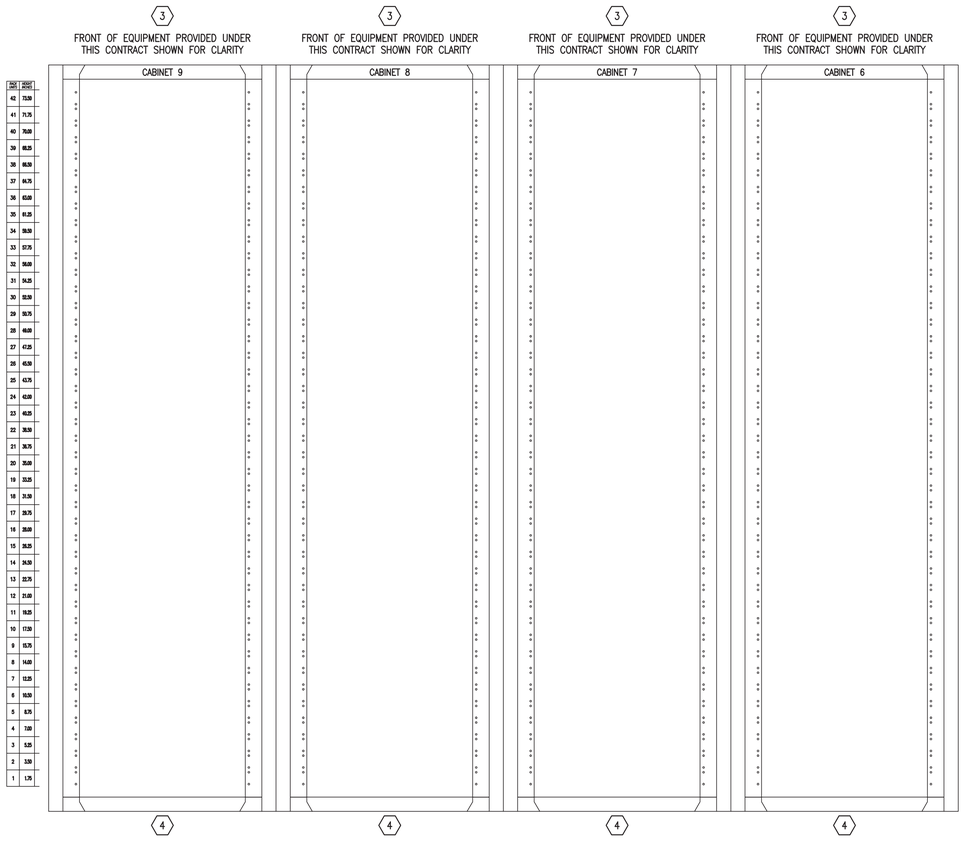
DETAILS - RACK ELEVATION - MTR SOUTHWEST

E722



1 / E723 DETAILS – RACK ELEVATION – MTR SOUTHEAST

SCALE: NONE

SHEET NOTES

1. NOT ALL EQUIPMENT TO BE PROVIDED IS NECESSARILY INDICATED IN DETAIL. PROVIDE ALL EQUIPMENT IAW THE SPECIFICATIONS NECESSARY TO PROVIDE COMPLETE AND FUNCTIONAL SYSTEMS.
2. PROVIDE BLANK FILLER PLATES (NOT SHOWN) IN ALL UNUSED SECTIONS OF TELECOM CABINETS TO PROVIDE COOLING AIR PATHWAY WITHIN CABINETS.

(3) PROVIDE TELECOMMUNICATION CABINET IAW SPECIFICATION 27 20 10.

(4) PROVIDE (2) VERTICAL ZERO RACK UNIT (0 RU) RACK PDU'S PER CABINET IAW SPECIFICATION 27 20 10.

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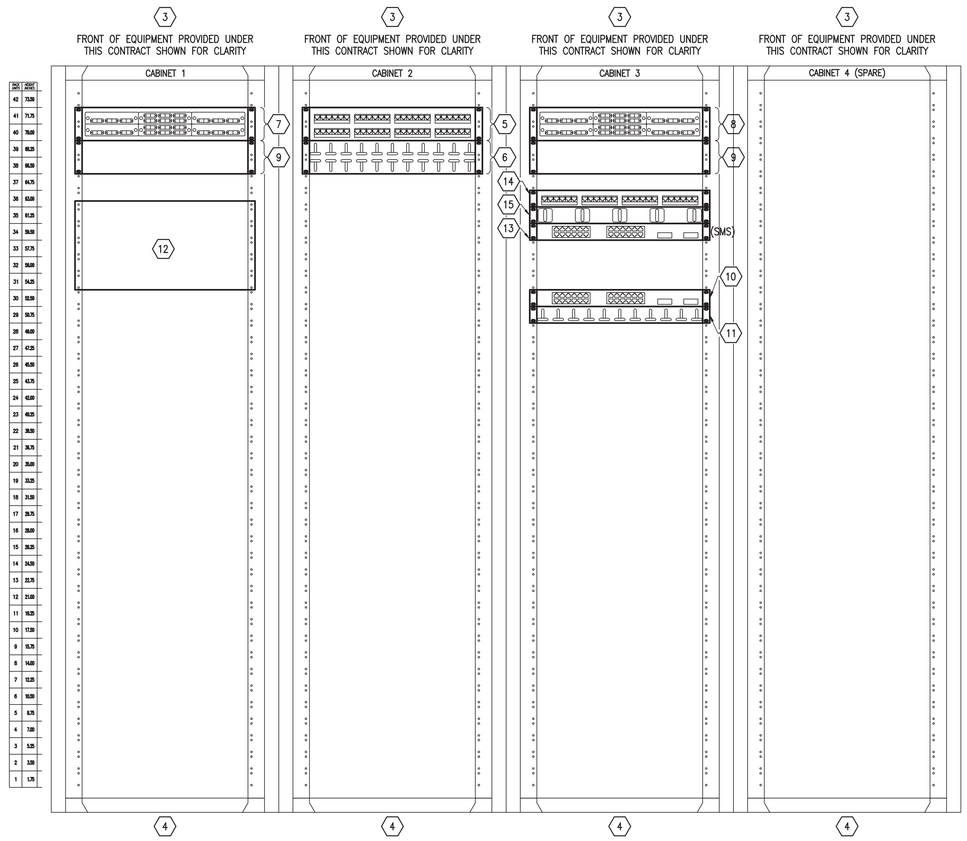
DETAILS - RACK ELEVATION - MTR SOUTHEAST

E723



1 / E724 DETAILS – RACK ELEVATION – TELECOM ROOM TR01

SCALE: NONE

SHEET NOTES

1. NOT ALL EQUIPMENT TO BE PROVIDED IS NECESSARILY INDICATED IN DETAIL. PROVIDE ALL EQUIPMENT IAW THE SPECIFICATIONS NECESSARY TO PROVIDE COMPLETE AND FUNCTIONAL SYSTEMS.
2. PROVIDE BLANK FILLER PLATES (AS SHOWN) IN ALL UNUSED SECTIONS OF TELECOM CABINETS TO PROVIDE COOLING AIR PATHWAY WITHIN CABINETS.
3. PROVIDE TELECOMMUNICATION CABINET IAW SPECIFICATION 27 20 10.
4. PROVIDE (2) VERTICAL ZERO RACK UNIT (0 RU) RACK PDU'S PER CABINET IAW SPECIFICATION 27 20 10.
5. PROVIDE 48 PORT HORIZONTAL CABLE PATCH PANELS FOR LEVEL 2 TELECOM CABLES IAW SPECIFICATION SECTION 27 20 10.
6. PROVIDE TWO RACK UNIT (2 RU) HORIZONTAL WIRE MANAGEMENT IAW SPECIFICATION SECTION 27 20 10.
7. PROVIDE SINGLE RACK UNIT (1 RU) MULTIMODE FIBER OPTIC CABLE PATCH PANEL AND SINGLE RACK UNIT (1 RU) SINGLEMODE FIBER OPTIC CABLE PATCH PANEL.
8. PROVIDE SINGLE RACK UNIT (1 RU) MULTIMODE FIBER OPTICAL PATCH PANEL AND SINGLE RACK UNIT (1 RU) SINGLEMODE FIBER OPTIC CABLE PATCH PANEL DEDICATED FOR THE ACS/CCTV SYSTEM.
9. PROVIDE SINGLEMODE FIBER OPTIC CABLE SPLICE CASE FOR SPLICING OF SINGLEMODE "PIG TAILS" TO BACKBONE CABLE IAW SPECIFICATION SECTION 27 20 20.
10. AIPHONE MULTIPLE INTERFACE UNIT AN8000MI PROVIDED IAW SHEET E103 AND E736.
11. PROVIDE ONE RACK UNIT (1 RU) HORIZONTAL WIRE MANAGEMENT DEDICATED FOR THE AIPHONE SYSTEM.
12. SPACE RESERVED FOR OFOI NETWORK SWITCHES. PROVIDE HORIZONTAL WIRE MANAGEMENT IN SUFFICIENT QUANTITY TO ACCOMMODATE NETWORK SWITCH CONNECTIONS.
13. PROVIDE ETHERNET NETWORK SWITCH DEDICATED FOR THE SMS/DVRS SYSTEM IAW SPECIFICATION SECTION 27 05 24.
14. PROVIDE 24 PORT HORIZONTAL CABLE PATCH PANEL DEDICATED FOR THE SMS/DVRS SYSTEMS IAW SPECIFICATION SECTION 27 05 24 AND 27 20 10.
15. PROVIDE ONE RACK UNIT (1 RU) HORIZONTAL WIRE MANAGEMENT DEDICATED FOR THE SMS/DVRS SYSTEM IAW SPECIFICATION SECTION 27 05 24.

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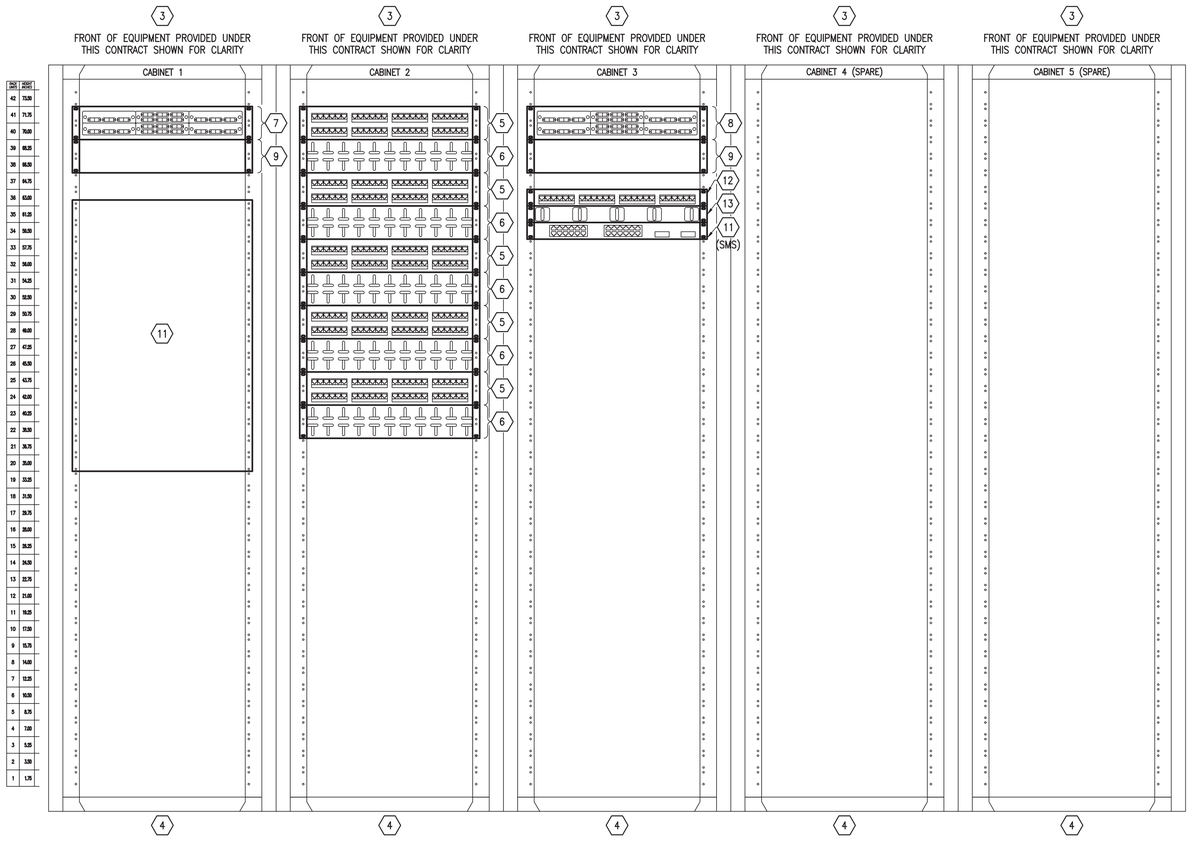
DETAILS - RACK ELEVATION - TELECOM ROOM TR01

E724



1 E725 DETAILS – RACK ELEVATION – TELECOM ROOM TR11

SCALE: NONE

SHEET NOTES

1. NOT ALL EQUIPMENT TO BE PROVIDED IS NECESSARILY INDICATED IN DETAIL. PROVIDE ALL EQUIPMENT IAW THE SPECIFICATIONS NECESSARY TO PROVIDE COMPLETE AND FUNCTIONAL SYSTEMS.

2. PROVIDE BLANK FILLER PLATES (AS SHOWN) IN ALL UNUSED SECTIONS OF TELECOM CABINETS TO PROVIDE COOLING AIR PATHWAY WITHIN CABINETS.

3. PROVIDE TELECOMMUNICATION CABINET IAW SPECIFICATION 27 20 10.

4. PROVIDE (2) VERTICAL ZERO RACK UNIT (0 RU) RACK PDU'S PER CABINET IAW SPECIFICATION 27 20 10.

5. PROVIDE 48 PORT HORIZONTAL CABLE PATCH PANELS FOR LEVEL 2 TELECOM CABLES IAW SPECIFICATION SECTION 27 20 10.

6. PROVIDE TWO RACK UNIT (2 RU) HORIZONTAL WIRE MANAGEMENT IAW SPECIFICATION SECTION 27 20 10.

7. PROVIDE SINGLE RACK UNIT (1 RU) MULTIMODE FIBER OPTIC CABLE PATCH PANEL AND SINGLE RACK UNIT (1 RU) SINGLEMODE FIBER OPTIC CABLE PATCH PANEL.

8. PROVIDE SINGLE RACK UNIT (1 RU) MULTIMODE FIBER OPTICAL PATCH PANEL AND SINGLE RACK UNIT (1 RU) SINGLEMODE FIBER OPTIC CABLE PATCH PANEL DEDICATED FOR THE ACS/CCTV SYSTEM.

9. PROVIDE SINGLEMODE FIBER OPTIC CABLE SPLICE CASE FOR SPLICING OF SINGLEMODE "PIG TAILS" TO BACKBONE CABLE IAW SPECIFICATION SECTION 27 20 20.

10. SPACE RESERVED FOR OFOI NETWORK SWITCHES. PROVIDE HORIZONTAL WIRE MANAGEMENT IN SUFFICIENT QUANTITY TO ACCOMMODATE NETWORK SWITCH CONNECTIONS.

11. PROVIDE ETHERNET NETWORK SWITCH DEDICATED FOR THE SMS/DVRS SYSTEM IAW SPECIFICATION SECTION 27 05 24.

12. PROVIDE 24 PORT HORIZONTAL CABLE PATCH PANEL DEDICATED FOR THE SMS/DVRS SYSTEMS IAW SPECIFICATION SECTION 27 05 24 AND 27 20 10.

13. PROVIDE ONE RACK UNIT (1 RU) HORIZONTAL WIRE MANAGEMENT DEDICATED FOR THE SMS/DVRS SYSTEM IAW SPECIFICATION SECTION 27 05 24.

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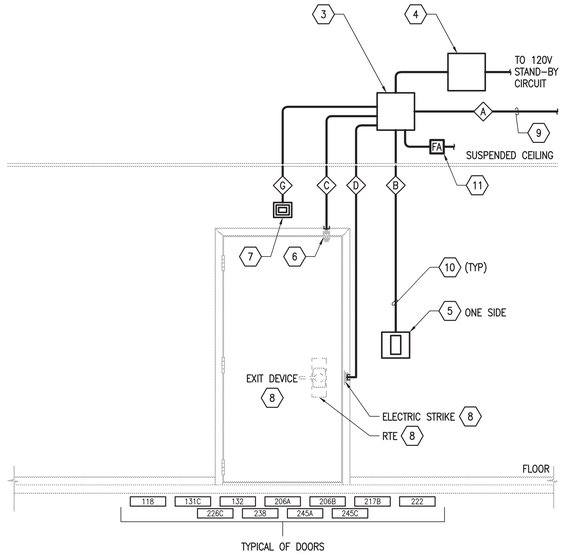
DETAILS - RACK ELEVATION - TELECOM ROOM TR11

E725



1 E731 DETAIL – SINGLE SMS DOOR – EQUIPMENT AND CONNECTIONS

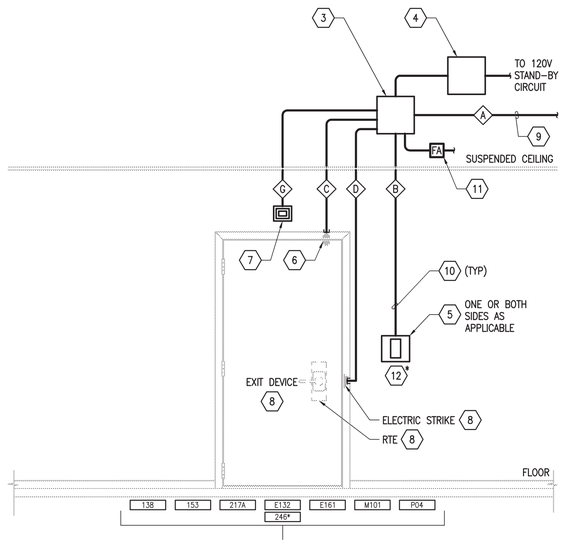
SCALE: NONE

SHEET NOTES

1. DETAILS ON THIS SHEET ARE REPRESENTATIVE OF MOST SITUATIONS ENCOUNTERED UNDER THIS CONTRACT. ALL DOOR EQUIPMENT AND DEVICES ARE NOT NECESSARILY SHOWN, AND ALL EQUIPMENT SHOWN WILL NOT NECESSARILY BE APPLICABLE TO EACH DOOR. FOR ADDITIONAL INFORMATION REFER TO SPECIAL SYSTEMS FLOOR PLANS AND COORDINATE WITH DIVISION 8 REQUIREMENTS.
2. REFER TO THE POWER FLOOR PLANS FOR LOCATIONS OF DOORS REQUIRING 120V CONNECTION TO AUTOMATIC DOOR OPERATORS. INTERFACE DOOR OPERATORS POWER WITH THE FIRE ALARM SYSTEM SUCH THAT DOORS CLOSE UPON FIRE ALARM SYSTEM ALARM. PROVIDE ALL REQUIRED FIRE ALARM SYSTEM ADDRESSABLE RELAYS, ENCLOSURES, PROGRAMMING ETC. COORDINATE EXACT LOCATIONS AND REQUIREMENTS WITH DIVISION 8.
3. PROVIDE SMS RIM IN SMS RIM ENCLOSURE IAW SPECIFICATION SECTION 28 13 33. REFER TO THE SPECIAL SYSTEMS AND POWER FLOOR PLANS FOR LOCATIONS OF SMS ISC AND SMS RIM ENCLOSURES.
4. PROVIDE SMS RIM POWER SUPPLY IAW SPECIFICATION SECTION 28 13 33. REFER TO THE SPECIAL SYSTEMS AND POWER FLOOR PLANS FOR SMS RIM LOCATIONS AND CIRCUITING. LOCATE POWER SUPPLY IN ACCESSIBLE CEILING SPACE.
5. PROVIDE CARD READER(S) ON ONE OR BOTH SIDES OF DOOR AS APPLICABLE (REFER TO THE SPECIAL SYSTEMS FLOOR PLANS). CONNECT TO SMS RIM IAW THE MANUFACTURER'S INSTRUCTIONS AND SPECIFICATION SECTION 28 13 33. REFER TO THE SPECIAL SYSTEM FLOOR PLANS FOR CARD READER LOCATIONS.
6. PROVIDE MAGNETIC DOOR CONTACT (BMS) IAW SPECIFICATION SECTION 28 13 33. CONNECT TO SMS RIM IAW THE MANUFACTURER'S INSTRUCTIONS AND SPECIFICATION SECTION 28 13 33.
7. PROVIDE AUDIO ONLY SMS HORN TO PROVIDE DOOR FORCED OR DOOR HELD OPEN LOCAL ALARM IAW SPECIFICATION SECTION 28 13 33. CONNECT TO SMS RIM IAW THE MANUFACTURER'S INSTRUCTION AND SPECIFICATION SECTION 28 13 33. REFER TO THE SPECIAL SYSTEMS FLOOR PLANS FOR SMS HORN LOCATIONS.
8. DOOR HARDWARE PROVIDED UNDER DIVISION 8 IAW SPECIFICATION SECTION 08 71 00. COORDINATE WITH SPECIFICATION SECTION 08 71 00 TO DETERMINE SCOPE OF WORK AT EACH DOOR AS IT RELATES TO CONNECTION TO AND PROGRAMMING OF THE SMS.
9. 1 INCH CONDUIT TO SMS ISC OR NEXT SMS RIM IAW THE SMS ONE-LINE DIAGRAM ON SHEET E802.
10. ROUTE CONDUIT CONCEALED IN ACCESSIBLE CEILING SPACE, WALL, OR DOOR FRAME AS APPROPRIATE.
11. PROVIDE FIRE ALARM CONTROL RELAY MODULE TO UNLOCK EMERGENCY EXIT/EGRESS DOORS. LOCATE RELAY WITHIN 36 INCHES OF DEVICE CONTROLLED. REFER TO ARCHITECTURAL AND EMERGENCY EGRESS DRAWINGS AND DIVISION 8 FOR ADDITIONAL INFORMATION AND LOCATIONS OF DOORS REQUIRING FIRE ALARM SYSTEM INTEGRATION.
12. PROVIDE CARD READER WITH INTEGRAL KEYPAD TO PROVIDE KEY CODE, TIME OVERRIDE FUNCTIONALITY FOR DOOR NOTED IAW SPECIFICATION SECTION 28 13 33. TYPICAL OF DOORS 100C, 119, 201C, 216, 227F, 246, 247, AND E100C (MARKED WITH * ON DOOR DETAILS).

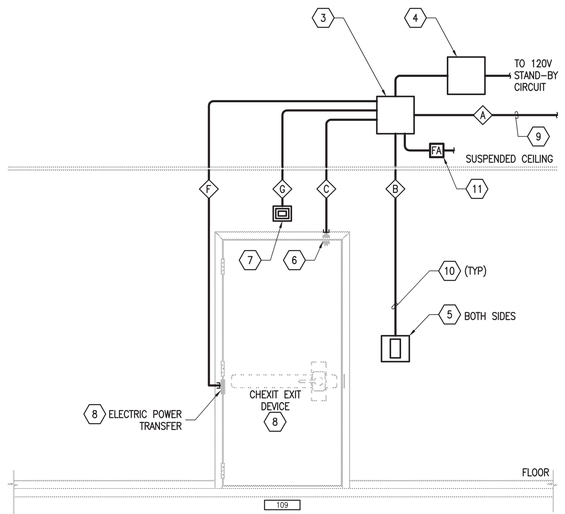
WIRING SCHEDULE

	DEVICE	LOCATION FROM	LOCATION TO	WIRE TYPE	CONDUIT	REMARKS
A	RS485	ISC/RIM	RIM	BELDEN #9842 (2) #24AWG	1"	
B	CARD READER	DOOR	RIM	ALPHA #5068/8C (8) #18AWG	3/4"	
C	DOOR CONTACT	DOOR	RIM	ALPHA #5062 (2) #18AWG	1/2"	
D	ELECTRIC STRIKE	DOOR	RIM	ALPHA #5064 (4) #18AWG	1/2"	
E	ELECTRIC HINGE	DOOR	PWR	(4) #18AWG	1/2"	
F	POWER TRANSFER	DOOR	RIM	(10) #24AWG	3/4"	
G	AUDIO ONLY HORN	DOOR	RIM	(2) #24AWG THHN	1/2"	
H	ELECTROMAGNETIC LOCK	DOOR	RIM	(2) #12AWG THHN	1/2"	



2 E731 DETAIL – SINGLE SMS DOOR – EQUIPMENT AND CONNECTIONS

SCALE: NONE



3 E731 DETAIL – SINGLE SMS DOOR – EQUIPMENT AND CONNECTIONS

SCALE: NONE

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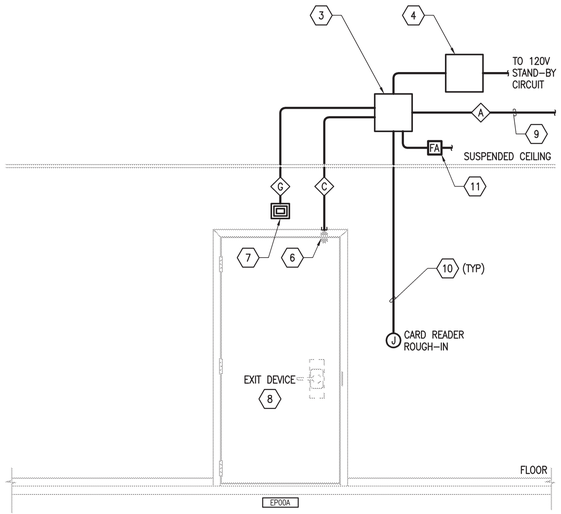
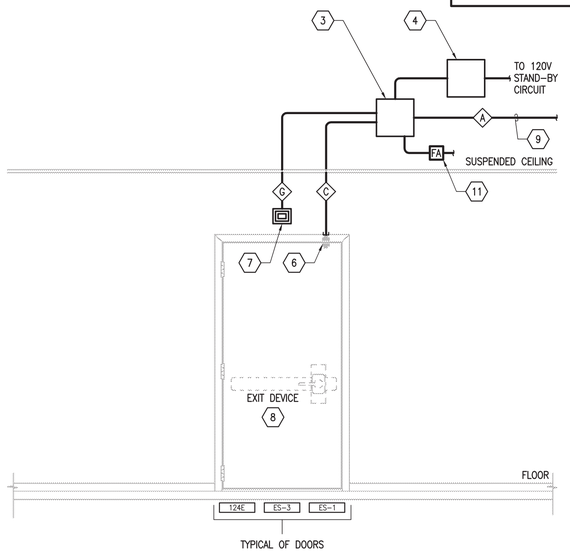
DETAILS AND DIAGRAMS - DOOR DETAILS

E731



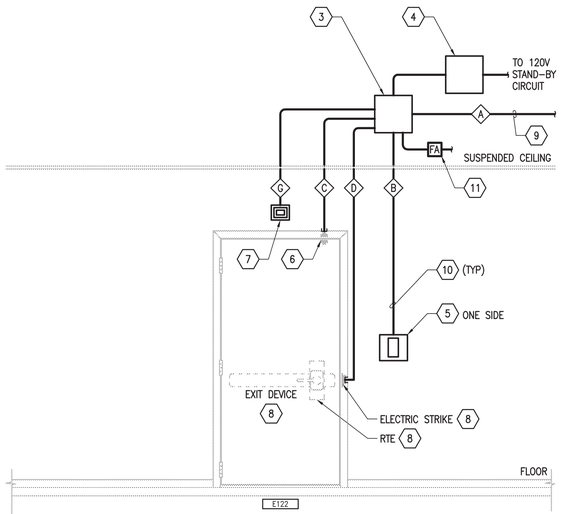
1 E732 DETAIL – SINGLE SMS DOOR – EQUIPMENT AND CONNECTIONS

SCALE: NONE



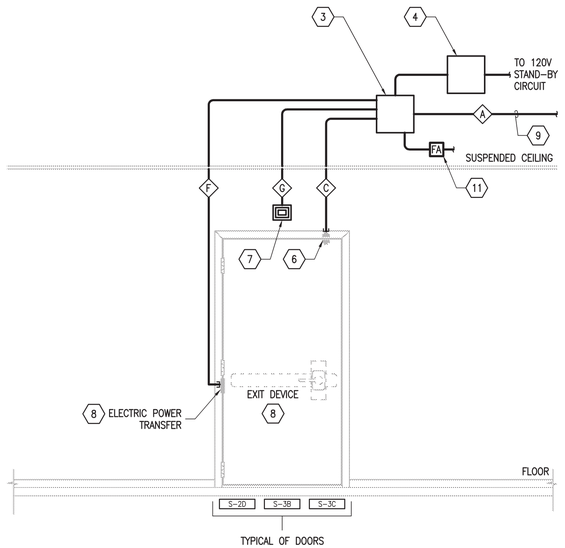
2 E732 DETAIL – SINGLE SMS DOOR – EQUIPMENT AND CONNECTIONS

SCALE: NONE



3 E732 DETAIL – SINGLE SMS DOOR – EQUIPMENT AND CONNECTIONS

SCALE: NONE



4 E732 DETAIL – SINGLE SMS DOOR – EQUIPMENT AND CONNECTIONS

SCALE: NONE

SHEET NOTES

1. REFER TO SHEET NOTES AND WIRING SCHEDULE ON SHEET E731 FOR ADDITIONAL INFORMATION.

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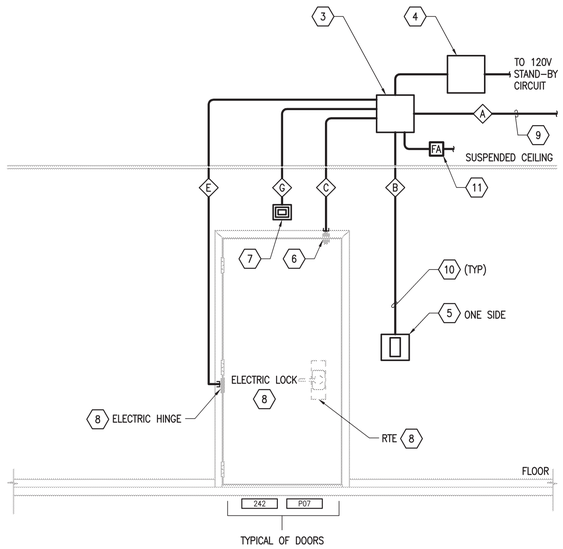
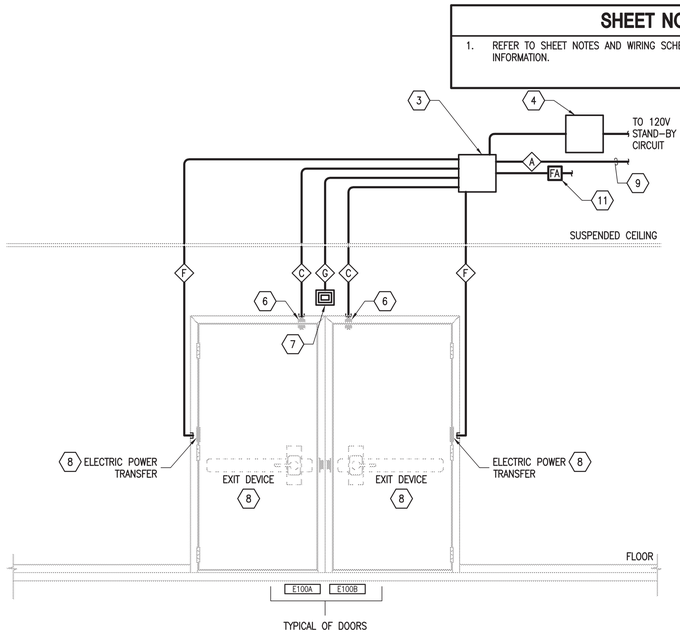
E732



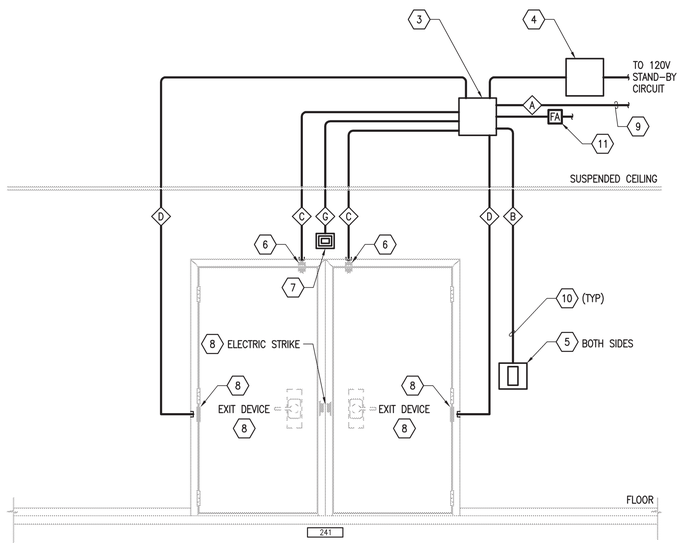
1 E733 DETAIL – SINGLE SMS DOOR – EQUIPMENT AND CONNECTIONS

SCALE: NONE



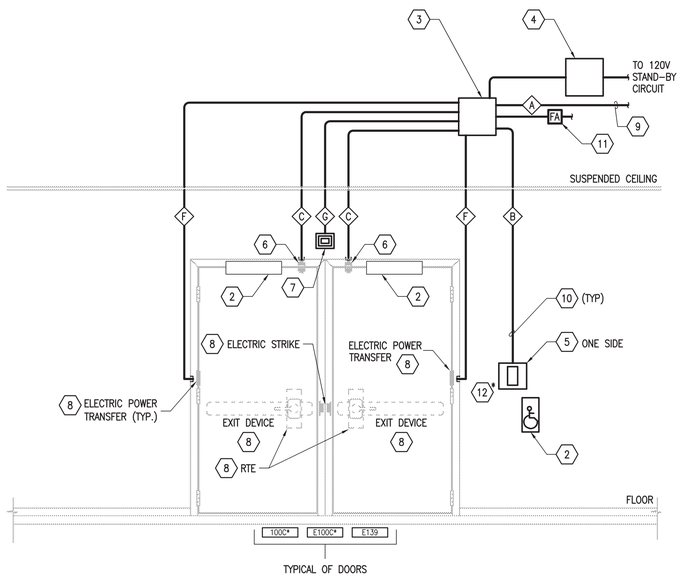
2 E733 DETAIL – DOUBLE SMS DOOR WITH TWO ACTIVE LEAFS

SCALE: NONE



3 E733 DETAIL – DOUBLE SMS DOOR WITH TWO ACTIVE LEAFS

SCALE: NONE



4 E733 DETAIL – DOUBLE SMS DOOR WITH TWO ACTIVE LEAFS

SCALE: NONE

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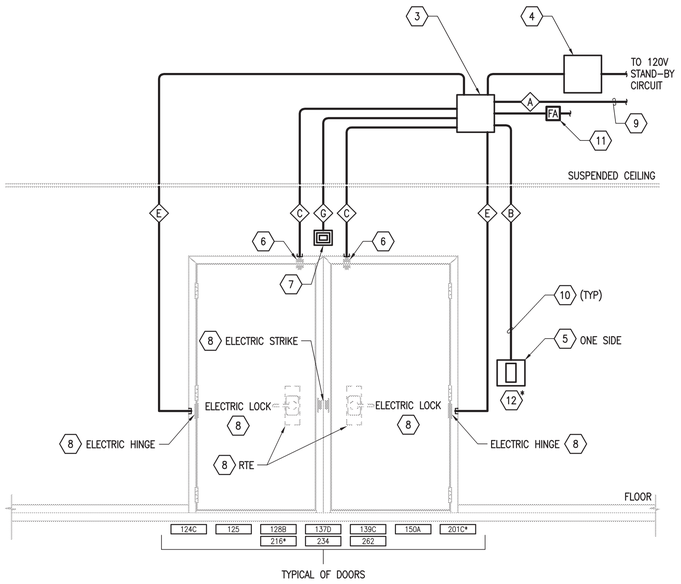
DETAILS AND DIAGRAMS - DOOR DETAILS

E733

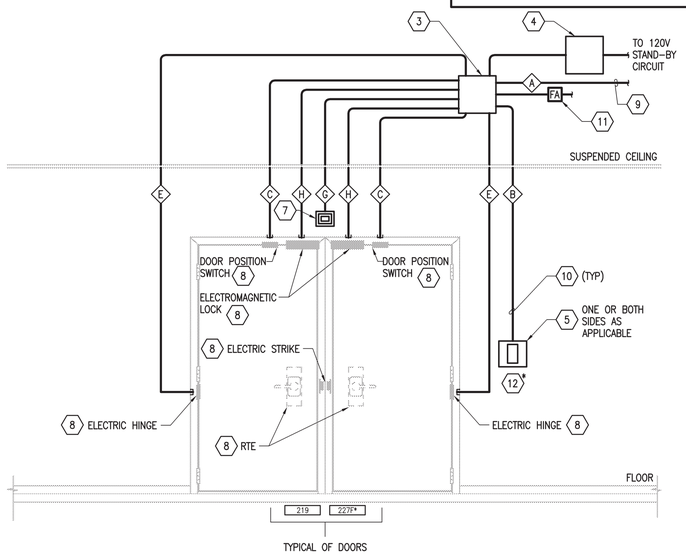


1 E734 DETAIL – DOUBLE SMS DOOR WITH TWO ACTIVE LEAFS

SCALE: NONE

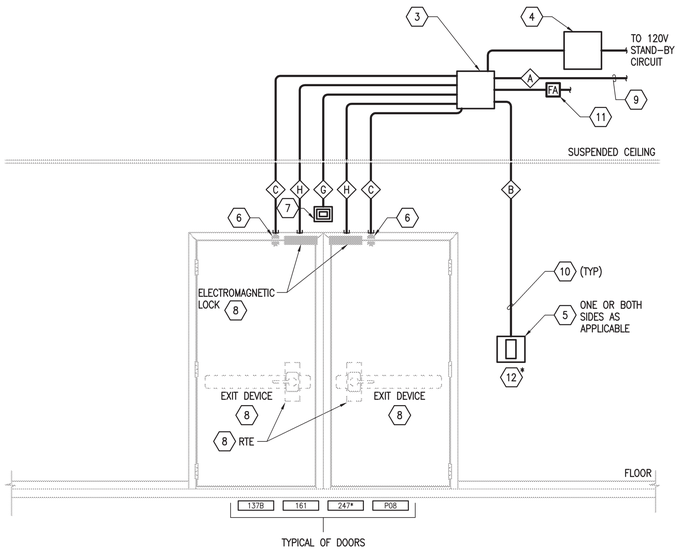
SHEET NOTES

1. REFER TO SHEET NOTES AND WIRING SCHEDULE ON SHEET E731 FOR ADDITIONAL INFORMATION.



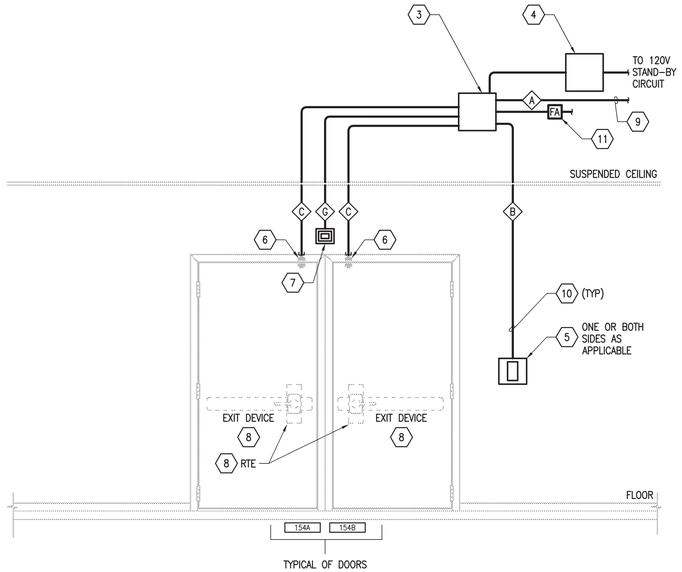
2 E734 DETAIL – DOUBLE SMS DOOR WITH TWO ACTIVE LEAFS

SCALE: NONE



3 E734 DETAIL – DOUBLE SMS DOOR WITH TWO ACTIVE LEAFS

SCALE: NONE



4 E734 DETAIL – DOUBLE SMS DOOR WITH TWO ACTIVE LEAFS

SCALE: NONE

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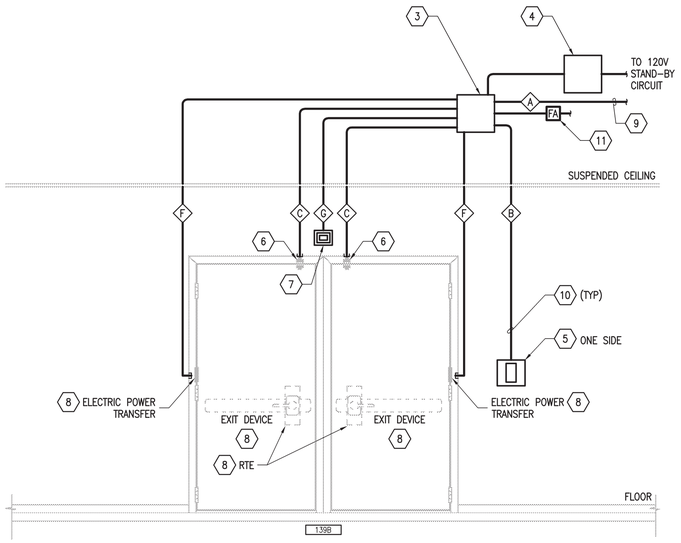
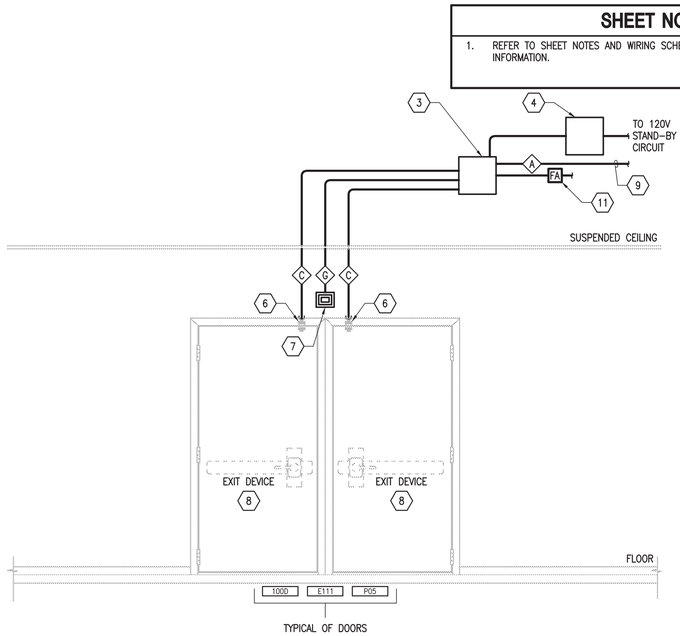
E734



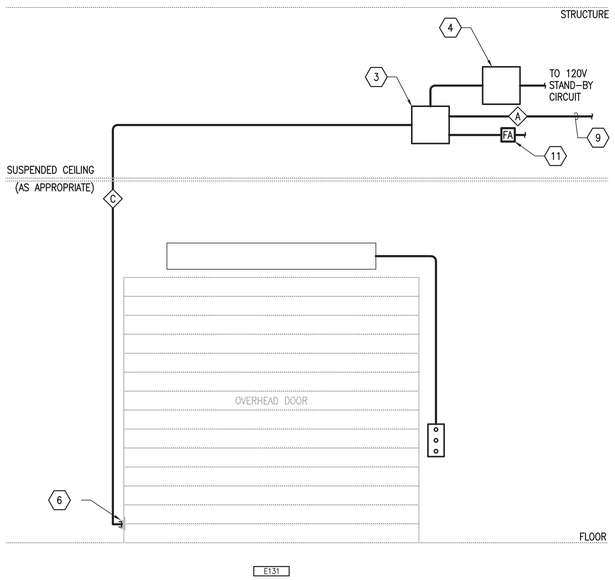
1 E735 DETAIL – DOUBLE SMS DOOR WITH TWO ACTIVE LEAFS

SCALE: NONE



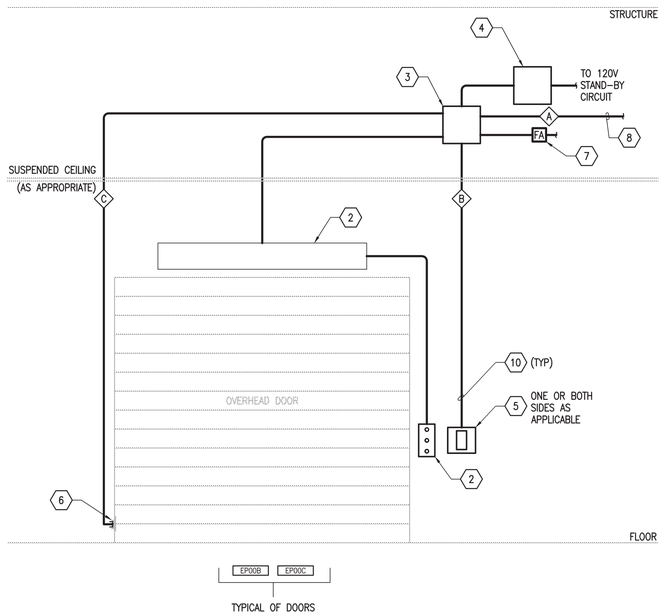
2 E735 DETAIL – DOUBLE SMS DOOR WITH TWO ACTIVE LEAFS

SCALE: NONE



3 E735 DETAIL – SMS OVERHEAD DOOR – EQUIPMENT AND CONNECTIONS

SCALE: NONE



4 E735 DETAIL – SMS OPERATION CONTROLLED OVERHEAD DOOR

SCALE: NONE

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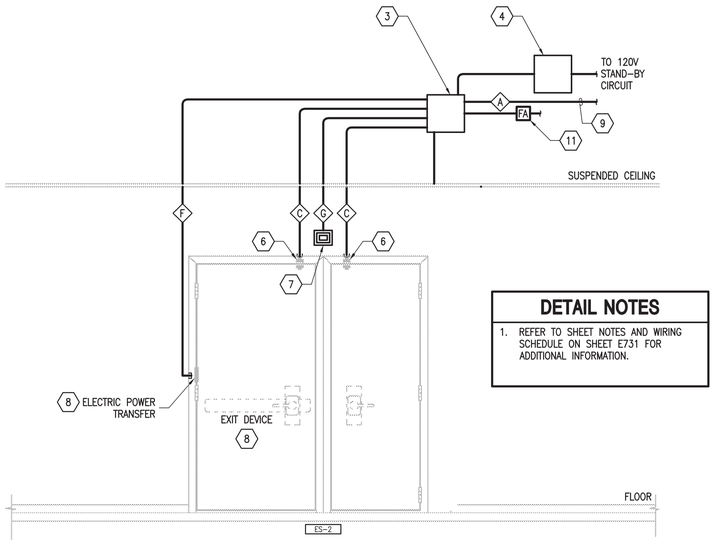
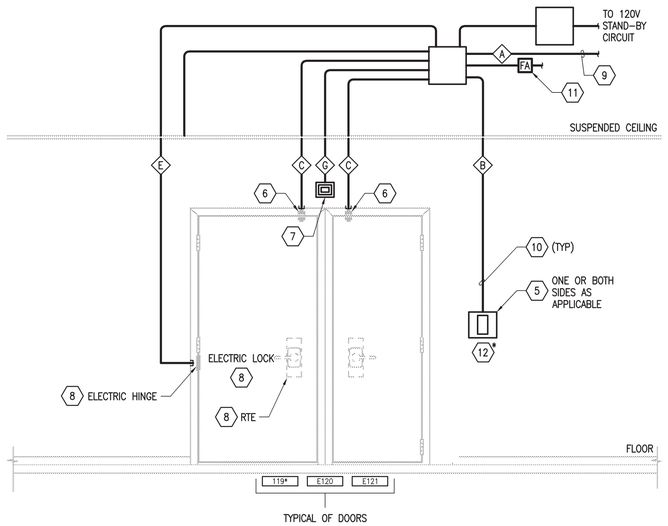
E735



1 E736 DETAIL – DOUBLE SMS DOOR WITH ONE INACTIVE LEAF

SCALE: NONE

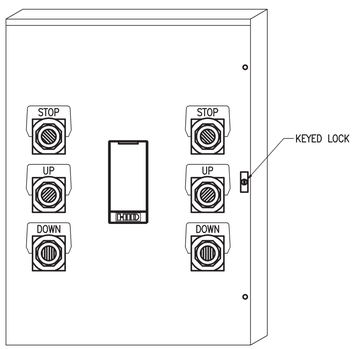


2 E736 DETAIL – DOUBLE SMS DOOR WITH ONE INACTIVE LEAF

SCALE: NONE

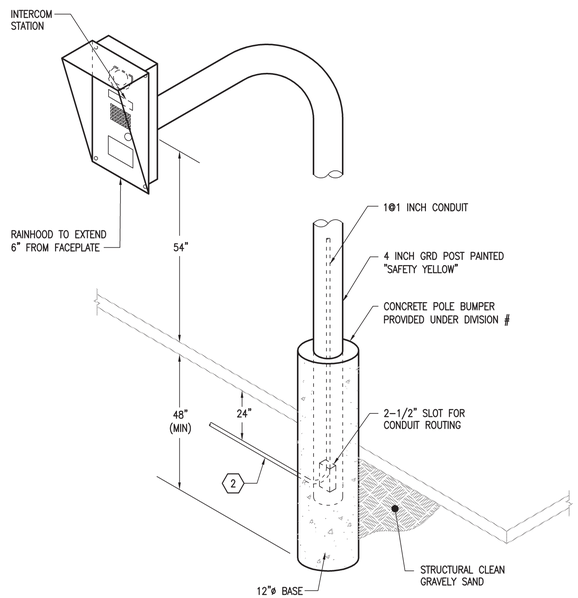
DETAIL NOTES

1. PROVIDE KEYED ENCLOSURE FOR ACS CARD READER, ACS RIM, AND OVERHEAD DOOR CONTROLS FOR DOORS EP00B AND EP00C.
2. VALID CARD SWIPE IS REQUIRED BEFORE CONTROL OF DOOR OPERATIONS IS ALLOWED. SYSTEM SHALL WORK IN CONJUNCTION WITH DOOR SENSORS, LIMIT SWITCHES, AND BAS. CONFIGURE SYSTEM SO DOORS CLOSE AFTER 5 MINUTES AFTER RECEIVING A CONTROL SIGNAL.



3 E736 DETAIL – GARAGE COILING DOOR OPERATORS

SCALE: NONE

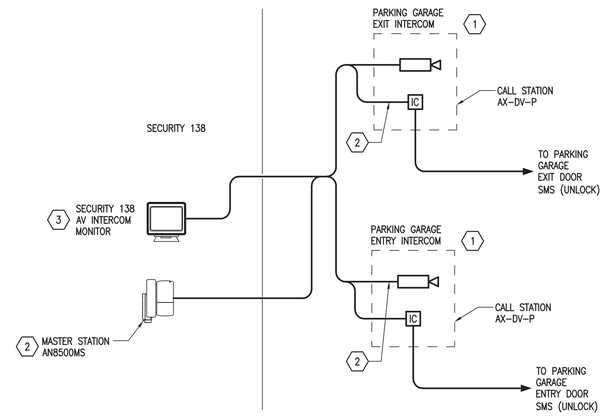


4 E736 DETAIL – EXTERIOR SMS CARD READER/INTERCOM MOUNTING PEDESTAL

SCALE: NONE

DETAIL NOTES

1. PROVIDE AIPHONE MODEL AX–DV–P VIDEO DOOR STATION EQUIPPED WITH CALL BUTTON SPEAKER, MICROPHONE, CAMERA, HID PROXIMITY CARD, AND LED. CONNECT MASTER STATIONS TO CALL STATIONS VIA 16 PORT POE RACK MOUNTED SWITCH (D–LINK MODEL DGS10165) LOCATED IN MAIN TELECOM ROOM 247.
2. ROUTE 1@ 1 INCH CONDUIT TO THE TELECOM ROOM 247 FOR THE INTERCOM CALL STATION CONNECTION TO THE INTERCOM HEADEND EQUIPMENT.
3. PROVIDE AIPHONE AN8500MS MASTER STATION AT SECURITY 138. CONNECT MASTER STATION TO CALL STATIONS VIA 16 PORT POE RACK MOUNTED SWITCH (D–LINK MODEL DGS10165) LOCATED IN MAIN TELECOM ROOM 247.
5. CONNECT MASTER CALL STATION AND CALL STATION TO DIGITAL VIDEO RECORDING SYSTEM (DVRS) TO ALLOW SECURITY TO SELECT AND DISPLAY CCTV CAMERA VIDEO ON LOCAL COMPUTERS.



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DETAILS AND DIAGRAMS - DOOR DETAILS

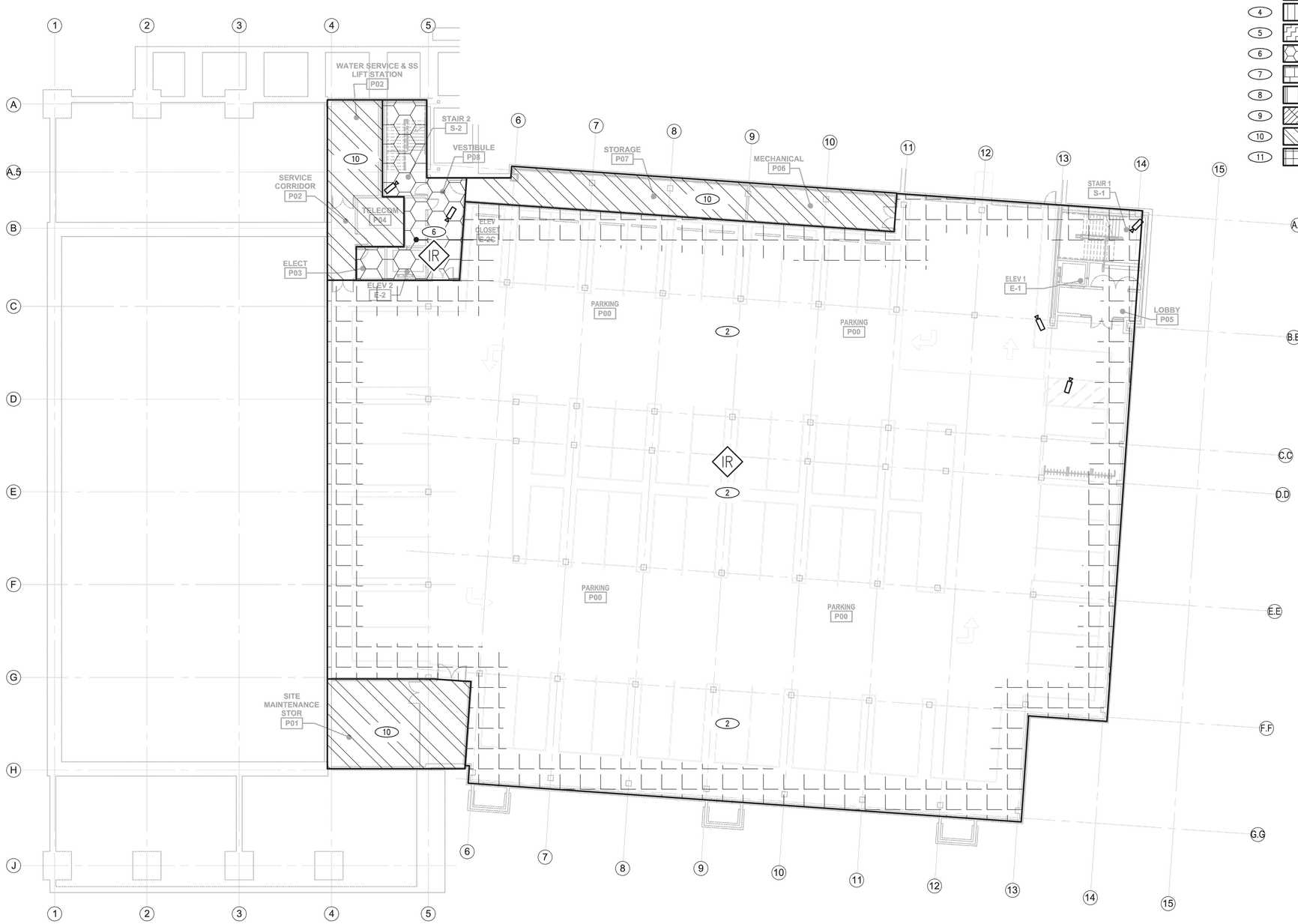
E736

SHEET NOTES

1. PROGRAM INDICATED SECURITY ZONES INTO THE SMS/IDS. REFER TO SPECIFICATION SECTION 28 13 33 FOR INFORMATION AND REQUIREMENTS.

LEGEND

- 1 — PUBLIC ZONE 1
- 2 — PUBLIC ZONE 2
- 3 — PUBLIC ZONE 3
- 4 — PUBLIC ZONE 4
- 5 — STAFF ZONE 1
- 6 — STAFF ZONE 2
- 7 — STAFF ZONE 3
- 8 — STAFF ZONE 4
- 9 — STAFF ZONE 5
- 10 — MAINTENANCE ZONE
- 11 — EMERGENCY ONLY



1 / E737 PARKING FLOOR PLAN – SECURITY

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

0 8' 16' 32' 48'

CONSULTANT NAME :: AMC ENGINEERS

ECI/HYER :: THA ARCHITECTURE

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KEYPLAN - (NTS)

CONSTRUCTION DOCUMENTS

05.01.2012

PARKING FLOOR PLAN - SECURITY

E737

SHEET NOTES

1. PROGRAM INDICATED SECURITY ZONES INTO THE SMS/IDS. REFER TO SPECIFICATION SECTION 28 13 33 FOR INFORMATION AND REQUIREMENTS.

LEGEND

- 1 — PUBLIC ZONE 1
- 2 — PUBLIC ZONE 2
- 3 — PUBLIC ZONE 3
- 4 — PUBLIC ZONE 4
- 5 — STAFF ZONE 1
- 6 — STAFF ZONE 2
- 7 — STAFF ZONE 3
- 8 — STAFF ZONE 4
- 9 — STAFF ZONE 5
- 10 — MAINTENANCE ZONE
- 11 — EMERGENCY ONLY

1 E738 FIRST FLOOR PLAN – SECURITY

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

0 8' 16' 32' 48'

CONSULTANT NAME :: AMC ENGINEERS

ECI/HYER :: THA ARCHITECTURE

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FIRST FLOOR PLAN - SECURITY

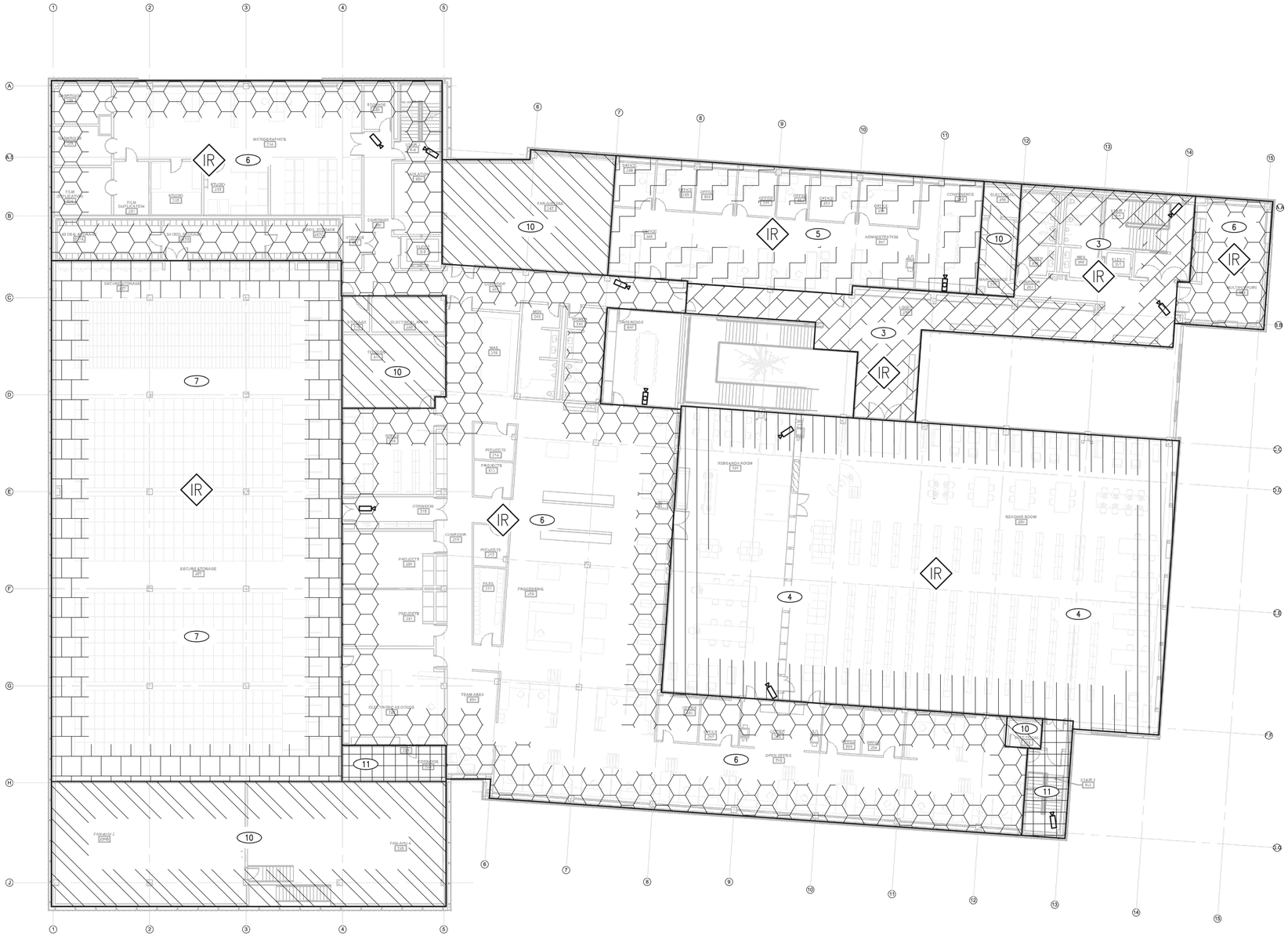
E738

SHEET NOTES

1. PROGRAM INDICATED SECURITY ZONES INTO THE SMS/IDS. REFER TO SPECIFICATION SECTION 28 13 33 FOR INFORMATION AND REQUIREMENTS.

LEGEND

- 1 — PUBLIC ZONE 1
- 2 — PUBLIC ZONE 2
- 3 — PUBLIC ZONE 3
- 4 — PUBLIC ZONE 4
- 5 — STAFF ZONE 1
- 6 — STAFF ZONE 2
- 7 — STAFF ZONE 3
- 8 — STAFF ZONE 4
- 9 — STAFF ZONE 5
- 10 — MAINTENANCE ZONE
- 11 — EMERGENCY ONLY



1 / E739 SECOND FLOOR PLAN – SECURITY

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

0 8' 16' 32' 48'

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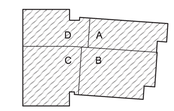


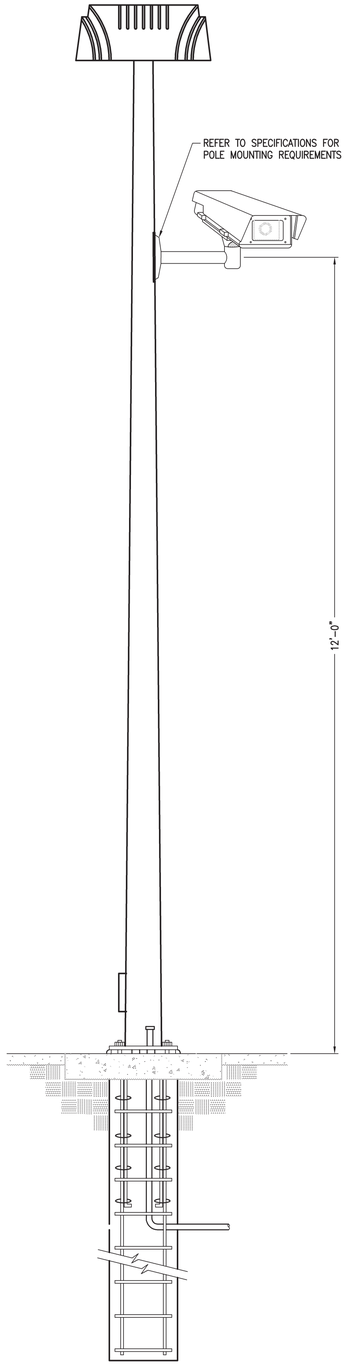
KEYPLAN - (NTS)

CONSTRUCTION DOCUMENTS

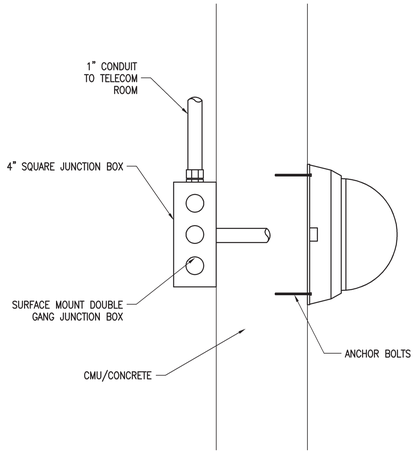
05.01.2012

SECOND FLOOR PLAN - SECURITY

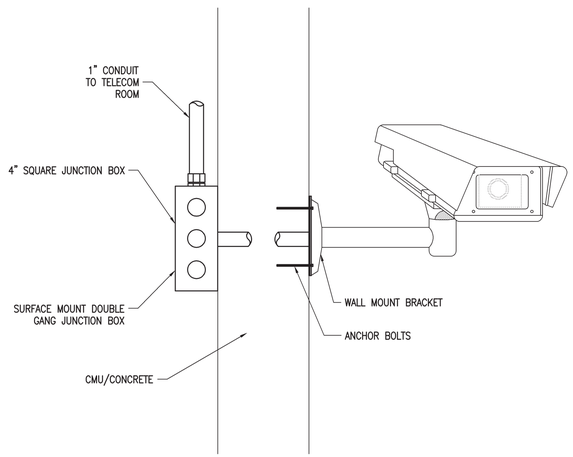
E739



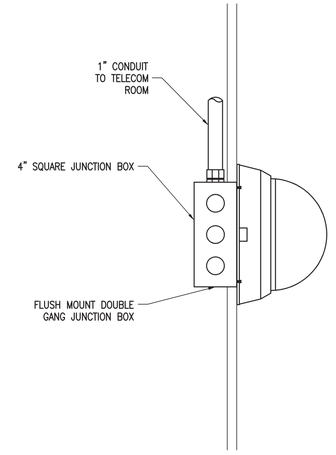
1 E741 DETAIL – MOUNTED ON POLE/ELECTROLIER
SCALE: NONE



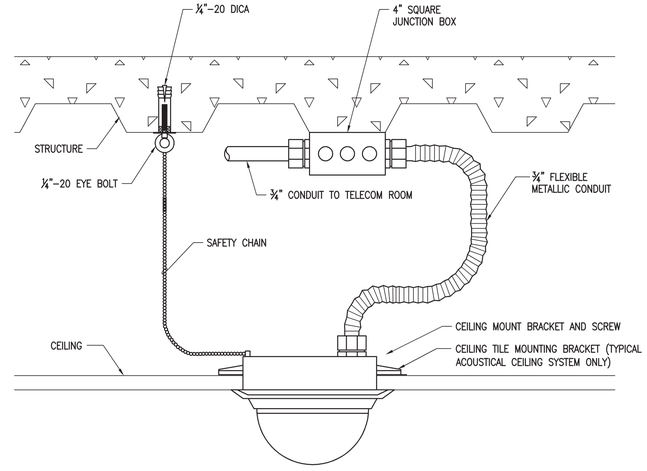
2 E741 CCTV CAMERA – EXTERIOR WALL/CEILING MOUNT
SCALE: NONE



4 E741 CCTV CAMERA – EXTERIOR WALL MOUNT
SCALE: NONE



3 E741 CCTV CAMERA – INTERIOR WALL/GWB CEILING MOUNT
SCALE: NONE



5 E741 CCTV CAMERA – DROP CEILING MOUNT
SCALE: NONE

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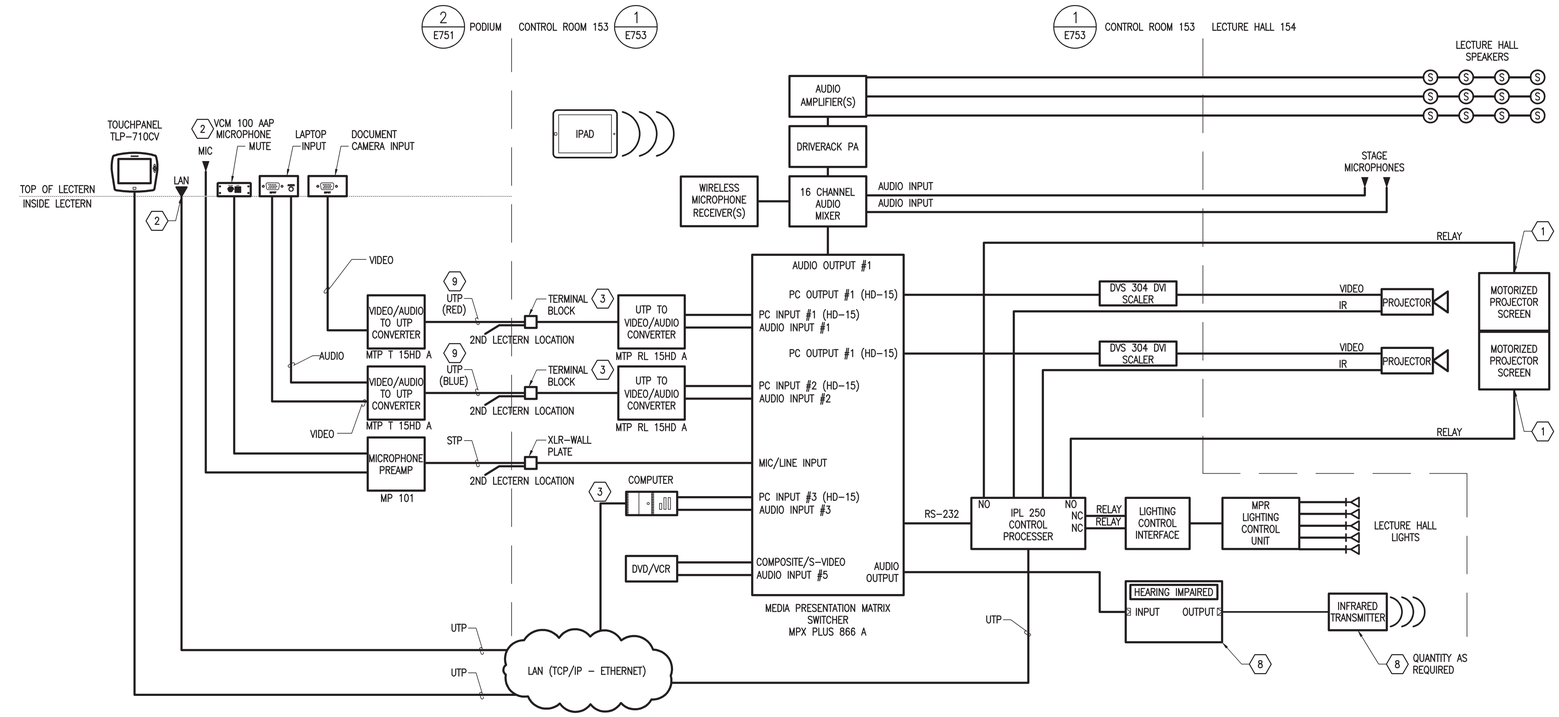
DETAILS AND DIAGRAMS - CCTV

E741

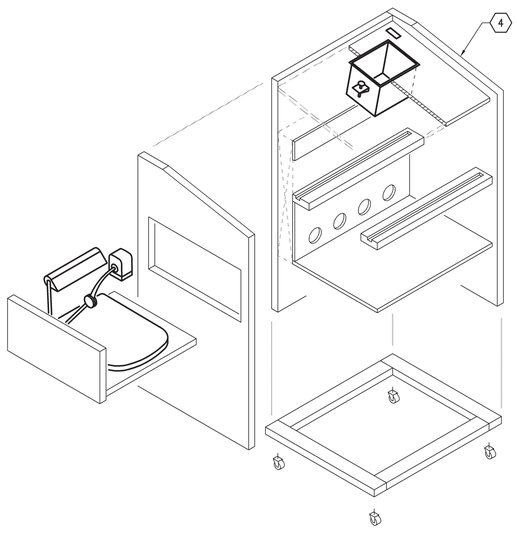


1 E751 AUDIO VIDEO DIAGRAM – LECTURE HALL 154

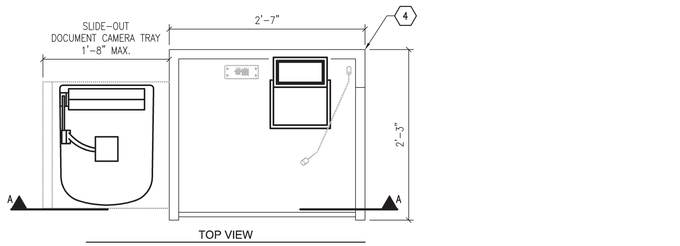
SCALE: NONE

SHEET NOTES

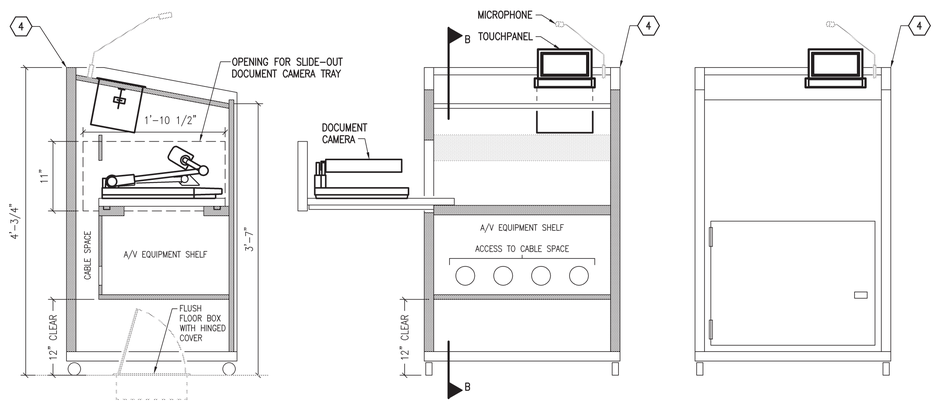
1. PROVIDE ANY RELAY(s), LIMIT SWITCH(es), AND/OR OTHER EQUIPMENT REQUIRED FOR PROPER CONTROL OF THE PROJECTOR SCREEN. THE PROJECTOR SCREEN SHALL BE UP WHEN THE NORMALLY OPEN CONTACT ON THE CONTROL PROCESSOR IS OPEN, AND DOWN WITH THE CONTACT IS CLOSED. COORDINATE INSTALLATION REQUIREMENTS WITH PROJECTOR SCREEN PROVIDER.
2. PODIUM NETWORK CONNECTION RJ-45 PORT, VIDEO HD-15, AND AUDIO 3.5MM JACK SHALL BE MOUNTED WITHIN THE TOUCHPANEL ENCLOSURE.
3. REFER TO SHEETS E753 AND E754 FOR TERMINAL BLOCK LOCATION AND REQUIREMENTS.
4. MOBILE PODIUM PROVIDED BY OTHERS. DETAIL PROVIDED FOR CLARIFICATION OF EQUIPMENT REQUIREMENTS ONLY.
5. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION ON AV SYSTEM. UNLESS OTHERWISE NOTED, PART NUMBERS INDICATED ARE AS MANUFACTURED BY EXTRON WHICH IS THE BASIS OF DESIGN.
6. PROVIDE CABLING TYPES AND TERMINATIONS AS REQUIRED BETWEEN EQUIPMENT INDICATED TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM.
7. REFER TO SHEETS E753 AND E754 FOR EQUIPMENT LOCATIONS.
8. PROVIDE HEARING IMPAIRED RF AUDIO SYSTEM IAW THE SPECIFICATION SECTION 27 30 10.
9. PROVIDE PATCH CORD WITH COLORD INSULATION AS NOTED. COLOR CODING PROVIDED TO MATCH RJ-45 PORTS IN PODIUM FLOOR BOX AND CONTROL ROOM WALL PLATE. REFER TO SHEETS E401A AND E754 FOR ADDITIONAL INFORMATION.



ISOMETRIC



TOP VIEW



SIDE SECTION B-B

FRONT SECTION A-A

FRONT ELEVATION

2 E751 DETAIL – MOBILE PODIUM

SCALE: NONE

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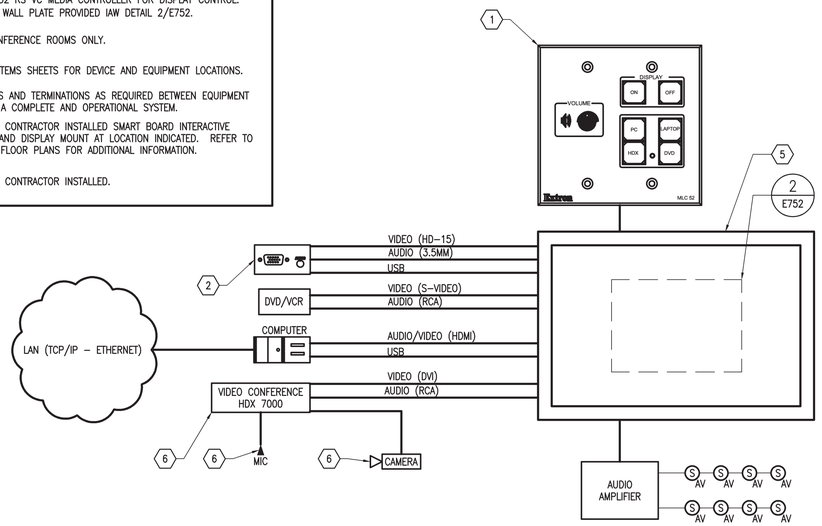
DETAILS AND DIAGRAMS - AUDIO VIDEO

E751

DETAIL NOTES

1. PROVIDE EXTRON MLC 52 RS VC MEDIA CONTROLLER FOR DISPLAY CONTROL. CONNECT IR CABLE TO WALL PLATE PROVIDED IAW DETAIL 2/E752.
2. LAPTOP INPUT FOR CONFERENCE ROOMS ONLY.
3. REFER TO SPECIAL SYSTEMS SHEETS FOR DEVICE AND EQUIPMENT LOCATIONS.
4. PROVIDE CABLING TYPES AND TERMINATIONS AS REQUIRED BETWEEN EQUIPMENT INDICATED TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM.
5. DEPARTMENT PROVIDED, CONTRACTOR INSTALLED SMART BOARD INTERACTIVE DISPLAY MODEL 8070i AND DISPLAY MOUNT AT LOCATION INDICATED. REFER TO THE SPECIAL SYSTEMS FLOOR PLANS FOR ADDITIONAL INFORMATION.
6. DEPARTMENT PROVIDED, CONTRACTOR INSTALLED.



1 E752 DIAGRAM - AUDIO VIDEO - CONFERENCE ROOM 255, 245 & CLASSROOM 113

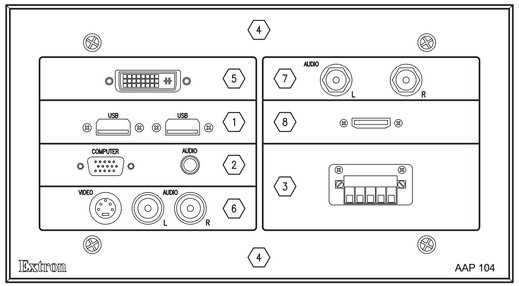
SCALE: NONE

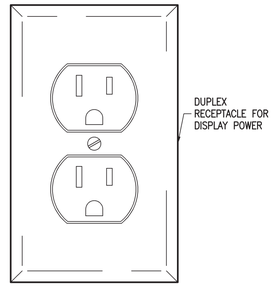
DETAIL NOTES

1. PROVIDE TWO USB CONNECTIONS FOR WALL PLATES IN CONFERENCE ROOMS. ONE CONNECTION TO MAIN COMPUTER IN EQUIPMENT CABINET AND THE SECOND TO LAPTOP CONNECTION IN CONFERENCE ROOM TABLES. PROVIDE ONE USB CONNECTION TO MAIN COMPUTER FOR CLASSROOM 113.
2. PROVIDE HD-15 VIDEO CONNECTION AND 3.5MM AUDIO CONNECTION AT WALL PLATES IN CONFERENCE ROOMS FOR LAPTOP CONNECTION IN CONFERENCE ROOM TABLES. PROVIDE BLANK PLATE FOR CLASSROOM 113.
3. PROVIDE ONE 3.8 5-PIN SCREW TERMINAL CONNECTOR FOR IR CONTROL OF DISPLAY AND AUDIO CONNECTION FROM DISPLAY TO AUDIO AMPLIFIER. PROVIDE CONNECTION TO MEDIA CONTROLLER PROVIDED IAW DETAIL 1/E752.
4. PROVIDE EXTRON AAP 104 4 GANG WALL PLATE WITH EIGHT OPENINGS FOR SINGLE-SPACE AAP PLATES.

DETAIL NOTES

5. PROVIDE ONE DVI-I FEMALE TO FEMALE BARREL FOR POLYCOM VIDEO CONFERENCING VIDEO CONNECTION.
6. PROVIDE ONE S-VIDEO FEMALE TO FEMALE BARREL AND TWO RCA FEMALE TO FEMALE BARRELS FOR AUDIO VIDEO CONNECTIONS TO DVD/VCR PROVIDED IAW DETAIL 3/E752.
7. PROVIDE TWO RCA FEMALE TO FEMALE BARRELS FOR POLYCOM VIDEO CONFERENCING AUDIO CONNECTION.
8. PROVIDE ONE HDMI FEMALE TO FEMALE BARREL FOR CONNECTION TO MAIN COMPUTER PROVIDED IAW DETAIL 3/E752.



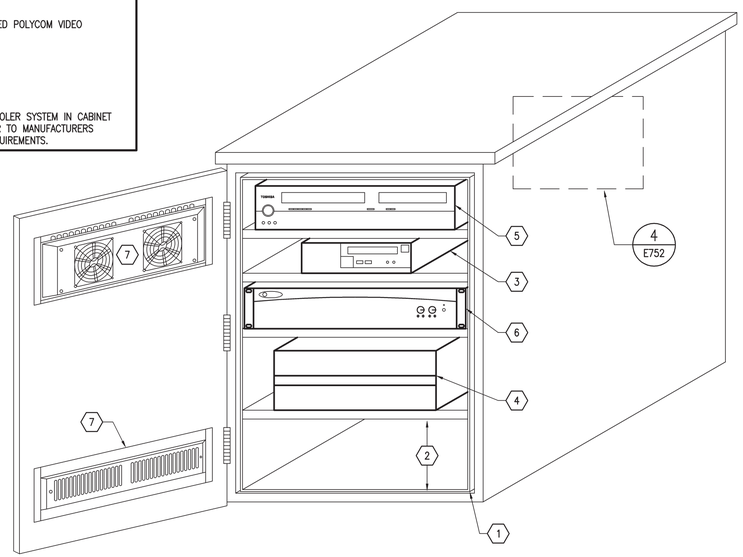


2 E752 AUDIO VIDEO WALL PLATE DETAIL - FLAT SCREEN

SCALE: NONE

DETAIL NOTES

1. PROVIDE MIDDLE ATLANTIC ASR-30, SLIDE OUT AND ROTATING SHELVING SYSTEM IN CASEWORK FOR AUDIO/VIDEO EQUIPMENT. PROVIDE ADDITIONAL SHELVING AS REQUIRED.
2. LEAVE ADEQUATE SPACE FOR ACCESS TO WALL PLATE AND POWER RECEPTACLE.
3. OFCI HORIZONTAL COMPUTER WITH HDMI OUTPUT AND BLURAY OPTICAL DRIVE.
4. DEPARTMENT PROVIDED, CONTRACTOR INSTALLED POLYCOM VIDEO CONFERENCE HDX 7000 SYSTEM.
5. OFCI DVD/VCR PLAYER.
6. PROVIDE CROWN 280A AUDIO AMPLIFIER
7. PROVIDE MID ATLANTIC CLS-COOL CLOSET COOLER SYSTEM IN CABINET DOOR. FINISH TO MATCH CASEWORK. REFER TO MANUFACTURERS INFORMATION FOR SPECIFIC INSTALLATION REQUIREMENTS.

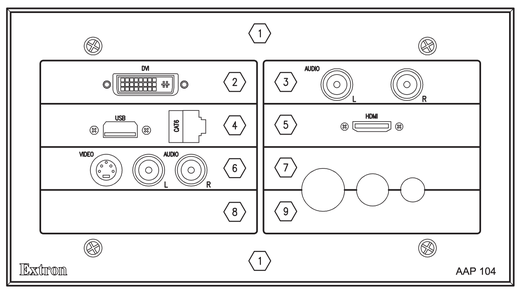


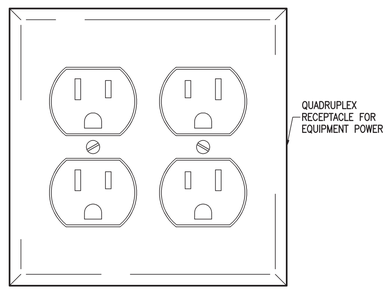
3 E752 DETAIL - AV EQUIPMENT CABINET

SCALE: NONE

DETAIL NOTES

1. PROVIDE EXTRON AAP 104 4 GANG WALL PLATE WITH EIGHT OPENINGS FOR SINGLE-SPACE AAP PLATES.
2. PROVIDE ONE DVI-I FEMALE TO FEMALE BARREL FOR POLYCOM VIDEO CONFERENCING VIDEO CONNECTION.
3. PROVIDE TWO RCA FEMALE TO FEMALE BARRELS FOR POLYCOM VIDEO CONFERENCING AUDIO CONNECTION.
4. PROVIDE ONE USB A TO 4-PIN CAPTIVE SCREW TERMINAL CONNECTOR AND ONE RJ-45 FEMALE TO FEMALE BARREL. USB TO CONNECT TO WALL PLATE PROVIDED IAW DETAIL 1/E752 AND RJ-45 PORT TO CONNECT TO LAN.
5. PROVIDE ONE HDMI FEMALE TO FEMALE BARREL FOR CONNECTION TO MAIN COMPUTER IAW DETAIL 3/E752.
6. PROVIDE ONE S-VIDEO FEMALE TO FEMALE BARREL AND TWO RCA FEMALE TO FEMALE BARRELS FOR AUDIO VIDEO CONNECTIONS TO DVD/VCR PROVIDED IAW DETAIL 3/E752.
7. PROVIDE RIGHT SIDE CABLE PASS-THROUGH FOR CONNECT OF VIDEO CONFERENCING CAMERA AND MICROPHONE CABLING.
8. PROVIDE BLANK SINGLE-SPACE PLATE FOR EMPTY OPENINGS.
9. PROVIDE LEFT SIDE CABLE PASS-THROUGH FOR CONNECT OF VIDEO CONFERENCING CAMERA AND MICROPHONE CABLING.





4 E752 AUDIO VIDEO WALL PLATE DETAIL - AV CABINET

SCALE: NONE

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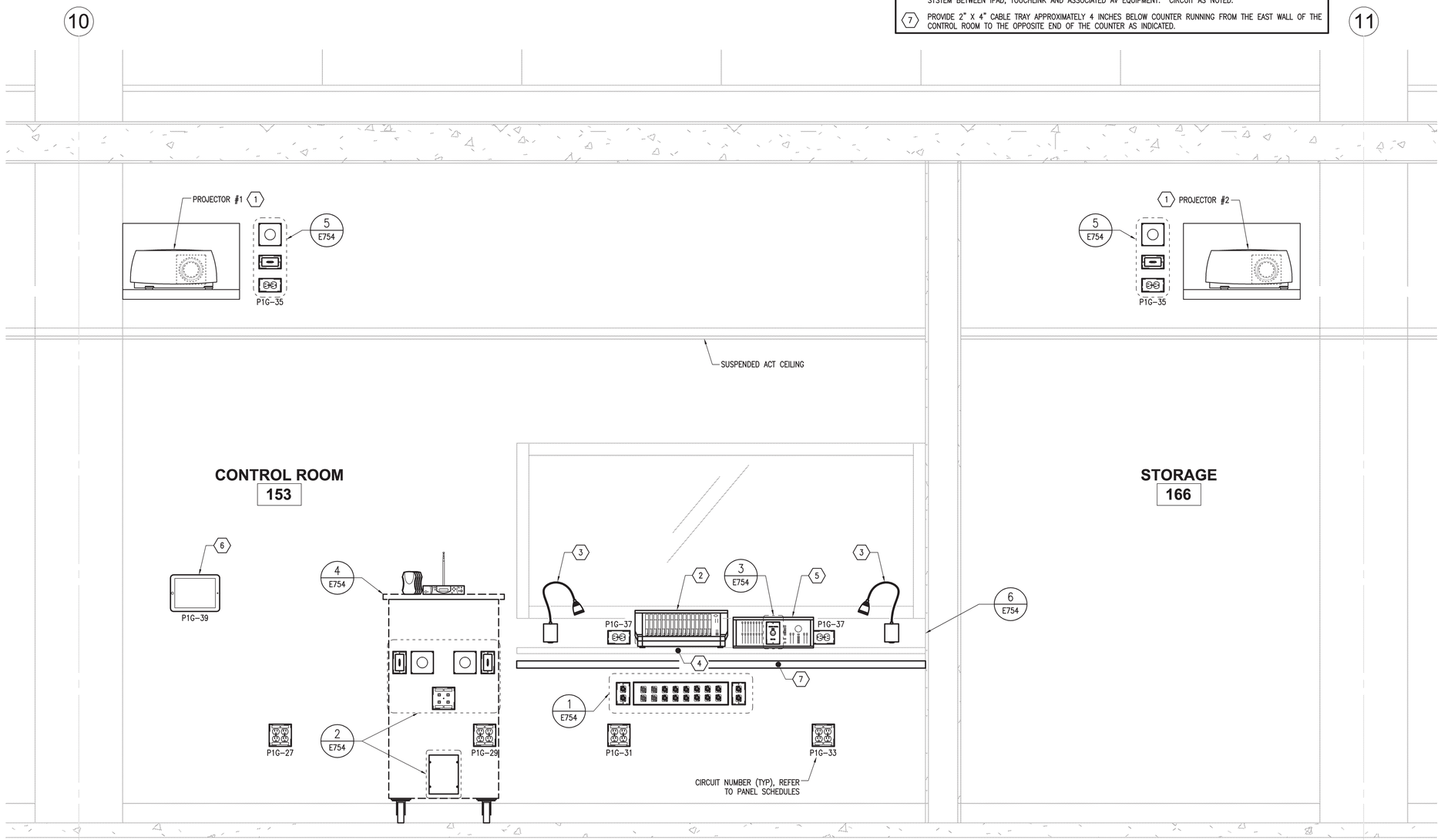
DETAILS AND DIAGRAMS - AUDIO VIDEO

E752

SHEET NOTES

1. OFCI HD PROJECTOR WITH DVI VIDEO INPUT ABOVE SUSPENDED CEILING AT LOCATION INDICATED. PROVIDE SHELVING AND SUPPORTS IAW ARCHITECTURAL DRAWINGS.
2. PROVIDE 16 CHANNEL, ALLEN & HEALTH, AUDIO MIXER CENTERED UNDER CONTROL ROOM WINDOWSILL ON COUNTERTOP. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
3. PROVIDE LED TASK LIGHTING ABOVE COUNTERTOP AT LOCATION INDICATED. REFER TO LIGHTING SHEET E201A FOR ADDITIONAL INFORMATION.
4. PROVIDE GROMMET OPENING IN COUNTER TOP FOR CABLING BETWEEN AUDIO MIXER PROVIDED IAW SHEET NOTE 2 AND WALL PLATE PROVIDED IAW DETAIL 1/E754.
5. PROVIDE SMARTFADE DMX LIGHTING CONTROLLER ON COUNTER TOP ADJACENT TO AUDIO MIXER. CONNECT CONTROLLER TO DMX WALL PLATE PROVIDED IAW DETAIL 3/E754. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
6. PROVIDE 64 GB CURRENT VERSION IPAD AND IPAD WALL MOUNT WITH CHARGING DOCK AT LOCATION INDICATED. INSTALL EXTRON IPAD TOUCHLINK APPLICATION. CONTRACTOR IS RESPONSIBLE TO ENSURE A FULLY FUNCTIONING SYSTEM BETWEEN IPAD, TOUCHLINK AND ASSOCIATED AV EQUIPMENT. CIRCUIT AS NOTED.
7. PROVIDE 2" X 4" CABLE TRAY APPROXIMATELY 4 INCHES BELOW COUNTER RUNNING FROM THE EAST WALL OF THE CONTROL ROOM TO THE OPPOSITE END OF THE COUNTER AS INDICATED.



1 / E753 DETAIL – AV CONTROL ROOM ELEVATION
SCALE: NONE

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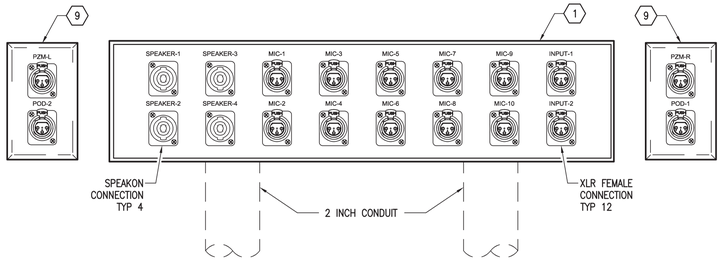
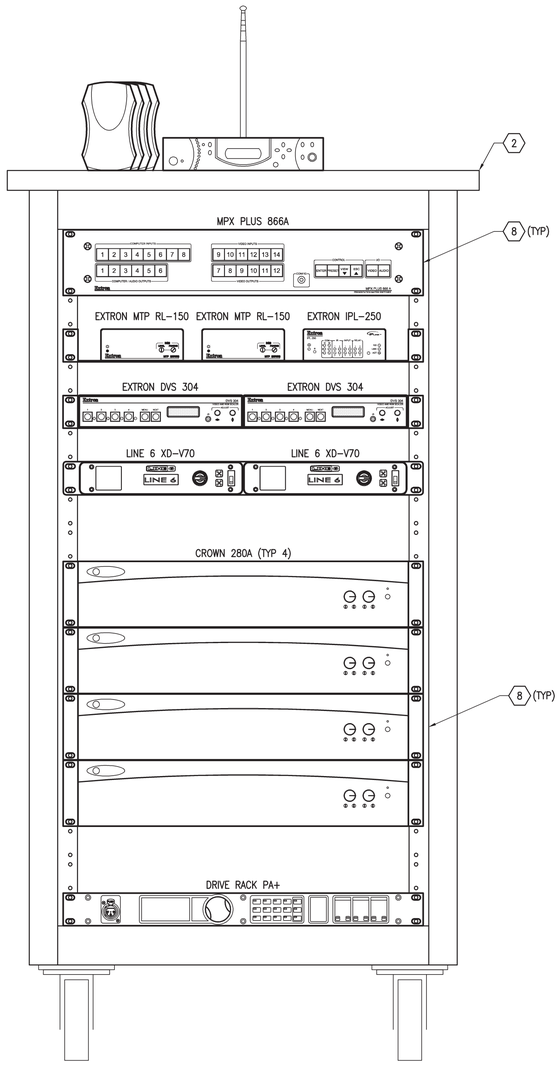
DETAILS AND DIAGRAMS - AUDIO VIDEO

E753



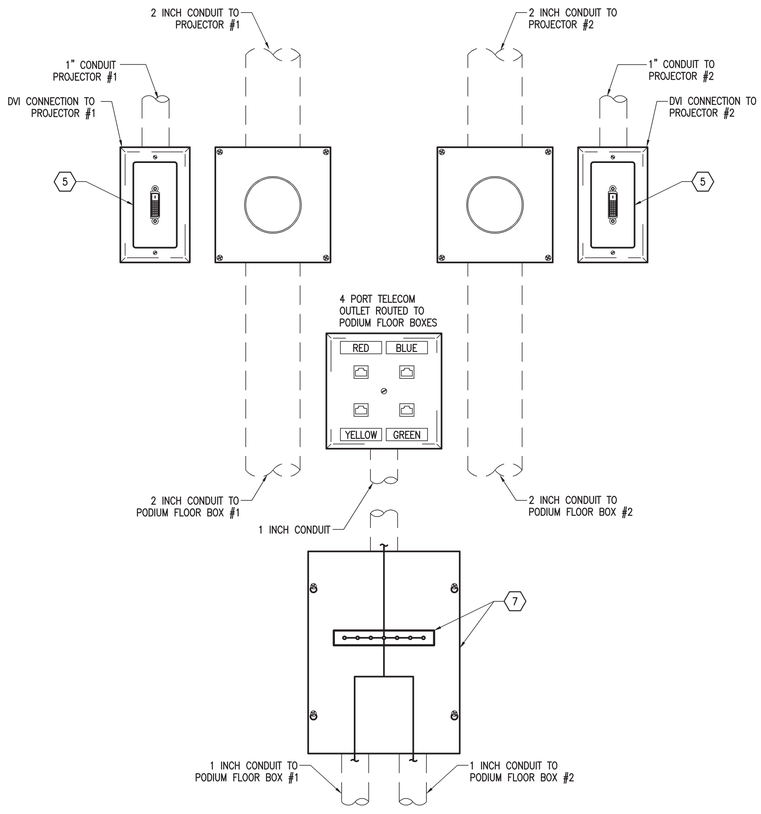
1 E754 DETAIL – AUDIO CONNECTOR WALL PLATE

SCALE: NONE



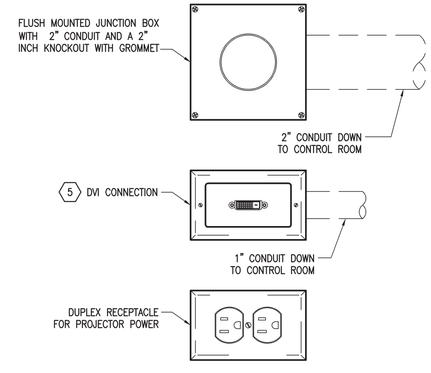
4 E754 DETAIL – MOBILE AV EQUIPMENT RACK

SCALE: NONE



2 E754 DETAIL – ROOM 153 AV WALL CONNECTORS

SCALE: NONE

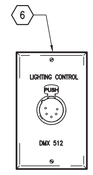


5 E754 DETAIL – AV CONNECTION AT PROJECTOR

SCALE: NONE

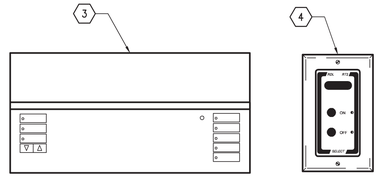
SHEET NOTES

1. PROVIDE WALL PLATE ON NORTH WALL OF LECTURE HALL 154 AND NORTH WALL OF CONTROL ROOM 153. PROVIDE CONNECTOR LABELING AS NOTED. ROUTE CONDUIT AND CABLING UNDER FLOOR BETWEEN THE WALL PLATE IN THE LECTURE HALL AND THE WALL PLATE IN THE CONTROL ROOM. REFER TO FLOOR PLANS ON SHEET E401A AND SHEET E753 FOR ADDITIONAL INFORMATION.
2. PROVIDE MIDDLE ATLANTIC PTRK–21NDK PORTABLE RACK FOR CONTROL ROOM 153 AUDIO/VIDEO EQUIPMENT. REFER TO SPECIFICATIONS AND SHEET E753 FOR ADDITIONAL INFORMATION.
3. PROVIDE LIGHTING CONTROL PANEL FOR LECTURE HALL 154 LIGHTING. CENTER CONTROL PANEL AT 4'–0" AFF AND 3'–0" BACK FROM NORTH INTERIOR CONTROL ROOM WALL. REFER TO LIGHTING SHEET E201A FOR ADDITIONAL INFORMATION.
4. PROVIDE RADIO DESIGN LABS (RDL) MODEL RT2 REMOTE CONTROL SELECTOR, OR APPROVED EQUAL, AND MOUNT IT ADJACENT TO LIGHTING CONTROL PANEL. PROVIDE RDL ST–SSR1 RELAY, OR APPROVED EQUAL, AND CONNECT TO SELECTOR. CONNECT LECTURE HALL 154 PA SPEAKERS TO RELAY/SELECTOR SUCH THAT WHEN THE ON BUTTON IS SELECTED THE LECTURE HALL PA SPEAKERS ARE ON AND WHEN THE OFF BUTTON IS SELECTED THE LECTURE HALL PA SPEAKERS ARE MUTED. CONTROL ROOM 153 PA SPEAKER TO REMAIN ON AT ALL TIMES. REFER TO SPECIFICATIONS AND MANUFACTURER'S INSTRUCTIONS FOR ADDITIONAL INFORMATION.
5. PROVIDE RAPID RUN DIGITAL DVI–I PASSIVE WALL PLATE, OR APPROVED EQUAL, BEHIND CONTROL ROOM EQUIPMENT RACK AND ABOVE ACCESSIBLE CEILING SPACE ADJACENT TO THE PROJECTOR. PROVIDE RAPID RUN DIGITAL RUNNER CABLE BETWEEN WALL PLATES.
6. PROVIDE DMX 5 PIN CONNECTOR OVER COUNTER TOP CENTERED BETWEEN WINDOWSILL AND TOP OF COUNTER. CONNECT TO DMX LIGHTING CONTROLLER PROVIDED IAW SHEET E753. REFER TO LIGHTING SHEET E201A FOR ADDITIONAL INFORMATION.
7. PROVIDE A 6" X 8" X 4" ENCLOSURE FLUSH MOUNTED IN WALL. PROVIDE TERMINAL BLOCKS IN SUFFICIENT QUANTITY TO TERMINATE AND JOIN CONDUCTORS FROM PODIUM FLOOR BOXES. BOTTOM OF ENCLOSURE SHALL BE APPROXIMATELY 6 INCHES AFF.
8. PROVIDE EQUIPMENT AS LISTED. REFER TO SHEET E751 AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
9. PROVIDE SINGLE GANG FLUSH MOUNTED BOX WITH WALL PLATE WITH TWO (2) XLR CONNECTORS BELOW COUNTER FOR CONNECTION TO AUDIO MIXER. ROUTE CONDUIT AND CABLING OVERHEAD FOR PZM CONNECTION IN LECTURE HALL. ROUTE CONDUIT AND CABLING IN–SLAB TO PODIUM FLOOR BOX(es) FOR PODIUM MICROPHONE CONNECTION. REFER TO FLOOR PLAN ON SHEET E401A FOR ADDITIONAL INFORMATION



3 E754 DETAIL – DMX 512 CONNECTOR

SCALE: NONE



6 E754 DETAIL – ROOM 153 EAST WALL

SCALE: NONE

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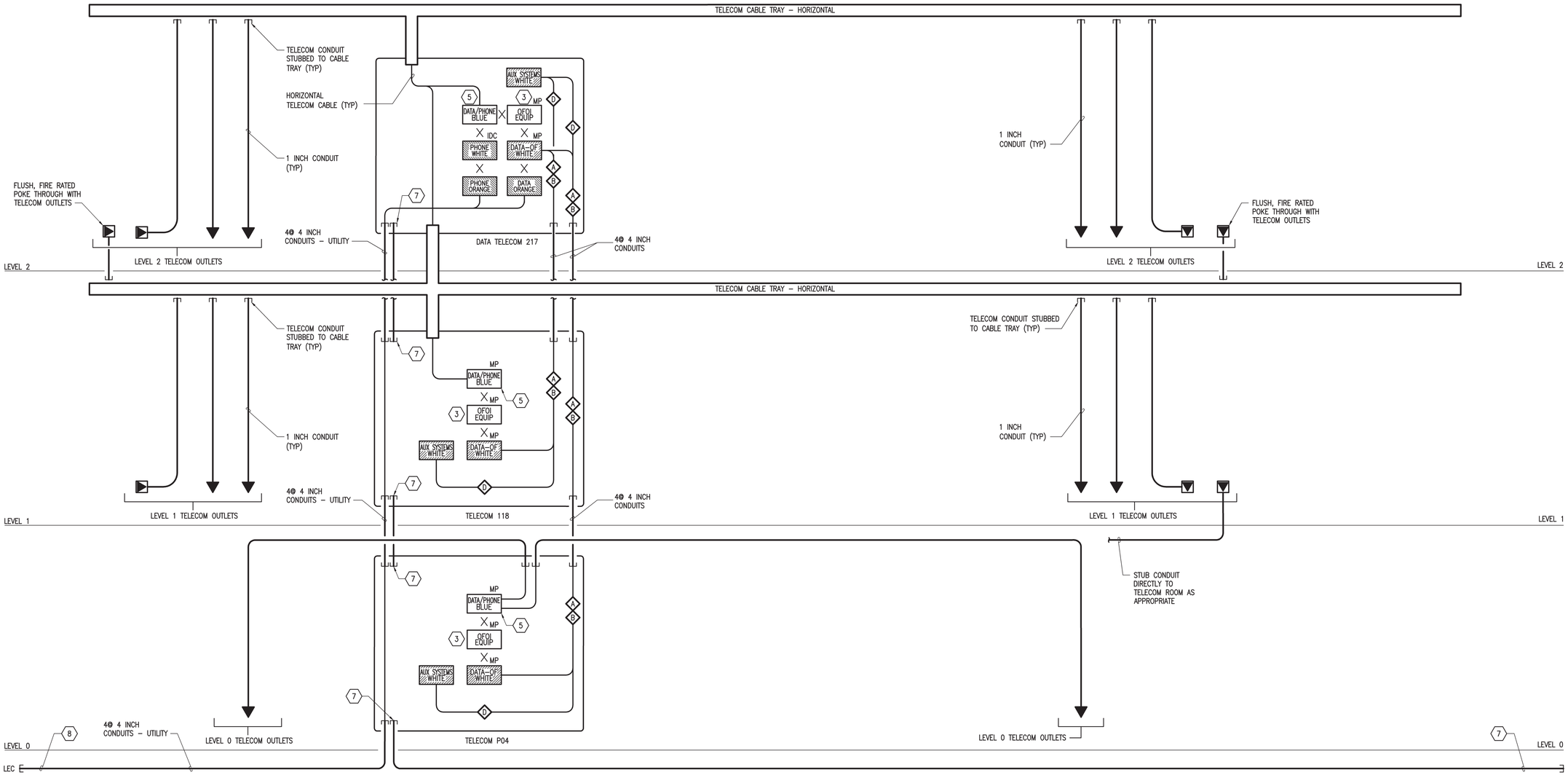
DETAILS AND DIAGRAMS - AUDIO VIDEO

E754



1 E801 ONE–LINE DIAGRAM – TELECOM

SCALE: NTS

CABLE DESCRIPTIONS

A	PROVIDE 24 STRANDS OF MULTIMODE FIBER OPTIC CABLE IAW SPECIFICATIONS.
B	PROVIDE 24 STRANDS OF SINGLEMODE FIBER OPTIC CABLE IAW SPECIFICATIONS
C	PROVIDE 12 STRANDS MM FIBER OPTIC CABLE IN ACCORDANCE WITH TELECOM SPECIFICAITONS FOR DEDICATED ACS/CCTV BACKBONE.
D	PROVIDE 50 PAIR CATEGORY 3 BACKBONE CABLE IN ACCORDANCE WITH TELECOM SPECIFICATIONS.

LEGEND

	DESCRIPTION
LEC	LOCAL EXCHANGE CARRIER (TELEPHONE COMPANY)
X	CROSS–CONNECT
TBB	TELECOMMUNICATION BONDING BACKBONE
OF	OPTICAL FIBER CABLE
MP	MODULAR PATCH PANEL
IDC	INSULATION DISPLACEMENT CONNECTOR BLOCK

SYMBOL	DESCRIPTION
PHONE COLOR	TELEPHONE CONNECTING HARDWARE (110 BLOCKS) LABEL COLOR AS INDICATED QUANTITY TO MATCH CONNECTED CABLES.
DATA/PHONE COLOR	DATA/TELEPHONE CONNECTING HARDWARE (110 BLOCKS) LABEL COLOR AS INDICATED QUANTITY TO MATCH CONNECTED CABLES.
DATA COLOR	DATA CONNECTING HARDWARE (110 BLOCKS) LABEL COLOR AS INDICATED QUANTITY TO MATCH CONNECTED CABLES.

SHEET NOTES

1. HORIZONTAL PATHWAYS SHOWN ARE DIAGRAMMATIC REPRESENTATIONS OF TYPICAL PATHWAY CONFIGURATIONS. PROVIDE TELECOM CABLES ROUTED TO THE TELECOM ROOMS DIRECTLY IN CONDUIT OR VIA AVAILABLE HORIZONTAL CABLE TRAYS.
2. REFER TO THE SPECIFICATIONS AND THE ENLARGED TELECOM ROOM DETAILS FOR ADDITIONAL INFORMATION.
3. PROVIDE RACK MOUNTED FIBER OPTIC CABLE PATCH PANELS IAW TELECOM SPECIFICATIONS. PROVIDE PATCH PANELS IN SUFFICIENT QUANTITY TO TERMINATE FIBER OPTIC CABLES PROVIDED UNDER THIS CONTRACT.
4. THE EXISTING MUSEUM IS CURRENTLY SERVED WITH A 12 STRAND SINGLEMODE FIBER OPTIC CABLE. PULL BACK EXISTING FIBER OPTIC CABLE AND PROTECT DURING CONSTRUCTION OF NEW BUILDING AND THEN EXTEND INTO THE MAIN TELECOM ROOM IAW SPECIFICATION SECTION 27 20 20.
5. PROVIDE RACK MOUNTED HORIZONTAL TELECOM CABLE PATCH PANELS IAW TELECOM SPECIFICATIONS. PROVIDE PATCH PANELS IN SUFFICIENT QUANTITY TO TERMINATE HORIZONTAL TELECOM CABLES PROVIDED UNDER THIS CONTRACT.
6. PROVIDE BLOCKED OUT OR CORE–DRILLED FLOOR PENETRATIONS TO ACCOMMODATE CONDUIT AND/OR CABLE TRAY PENETRATIONS. GROUT OR SEAL AROUND CONDUITS AND/OR CABLE TRAY WITH APPROPRIATE FIRESTOP TO MAINTAIN FIRE RATING OF FLOOR ASSEMBLY.
7. 1 @ 4 INCH TELECOM BACKBONE CONDUIT FOR FUTURE LIBRARY, MUSEUM, ARCHIVES CONNECTION TO ADJACENT TELEVISION STATION (FOR LIBRARY, MUSEUM, ARCHIVES USE ONLY). REFERENCE SHEET E801 FOR ADDITIONAL INFORMATION.
8. STUB CONDUITS OUT TO PROPERTY LINE. COORDINATE EXACT ROUTING WITH SERVING UTILITIES. REFER TO THE ELECTRICAL SITE PLAN FOR ADDITIONAL INFORMATION.

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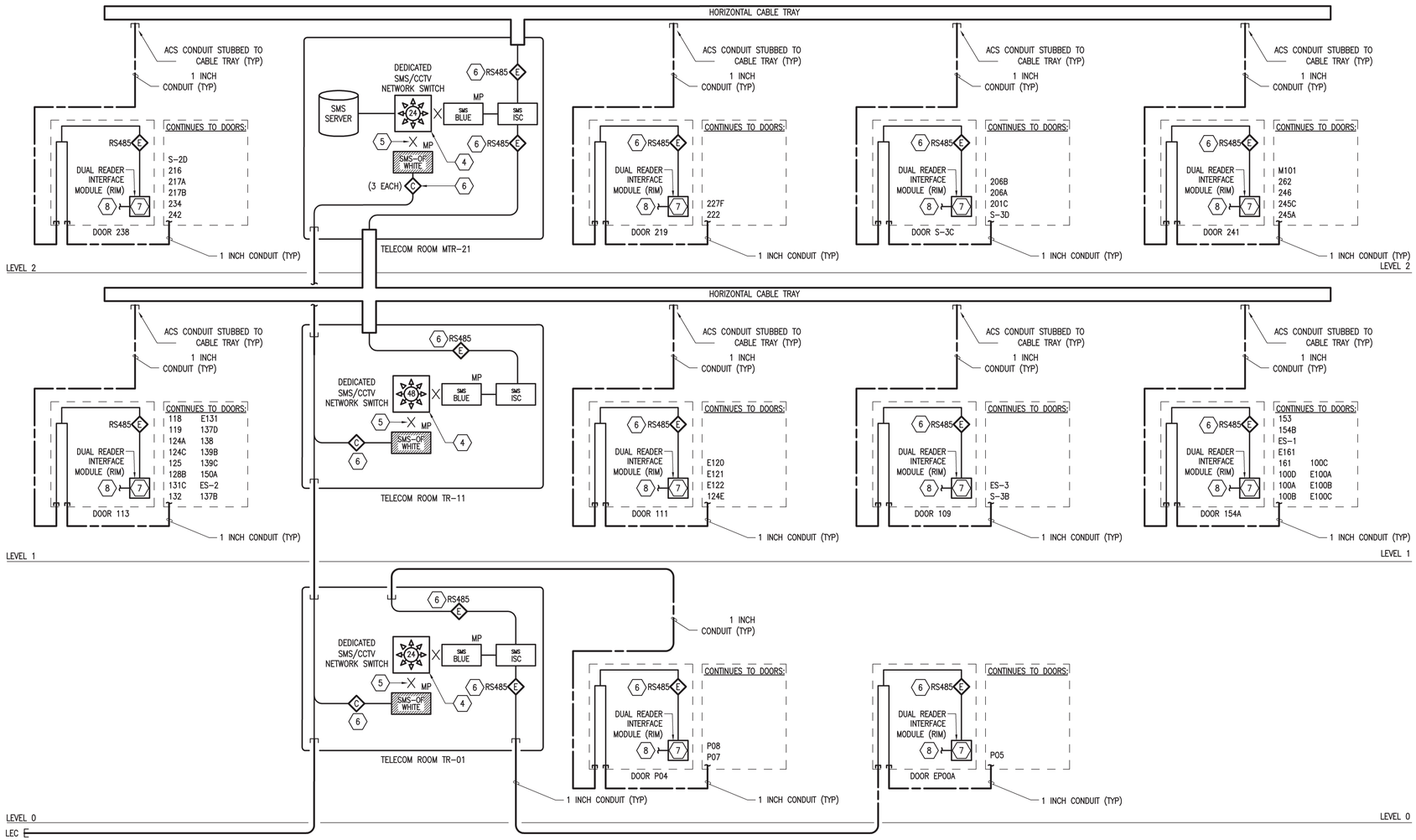
SPECIAL SYSTEMS ONE-LINE DIAGRAM - TELECOM

E801



DETAIL NOTES

1. REFER TO DIVISION 8, SPECIFICATION SECTION 28 13 33, AND THE DOOR DETAILS FOR GENERAL AND SPECIFIC REQUIREMENTS OF THE SECURITY MANAGEMENT SYSTEM AND THE OPERATION OF EACH DOOR.
2. PROVIDE A SECURITY MANAGEMENT SYSTEM POWER SUPPLY IN ACCORDANCE WITH SPECIFICATION SECTION 16725 AT EACH INTELLIGENT SYSTEM CONTROLLER (ISC) LOCATION AND EACH READER INTERFACE MODULE (RIM) LOCATION. CONNECT TO A STANDBY POWER CIRCUIT AS NOTED ON THE DRAWINGS.
3. PROVIDE ALL REQUIRED INTELLIGENT SYSTEM CONTROLLER (ISCs), READER INTERFACE MODULES (RIMs), INPUT CONTROL MODULES, OUTPUT CONTROL MODULES, CONDUIT, CABLE, POWER SUPPLIES, CONNECTIONS, ETC. TO PROVIDE A COMPLETE AND FUNCTIONING SYSTEM IN ACCORDANCE WITH THE SPECIFICATIONS.

(4) PROVIDE ACS/CCTV SYSTEM NETWORK SWITCH.

(5) PROVIDE FIBER OPTIC CABLE PATCH CORDS AND CONNECT TO THE ACS/CCTV SYSTEM NETWORK SWITCH.

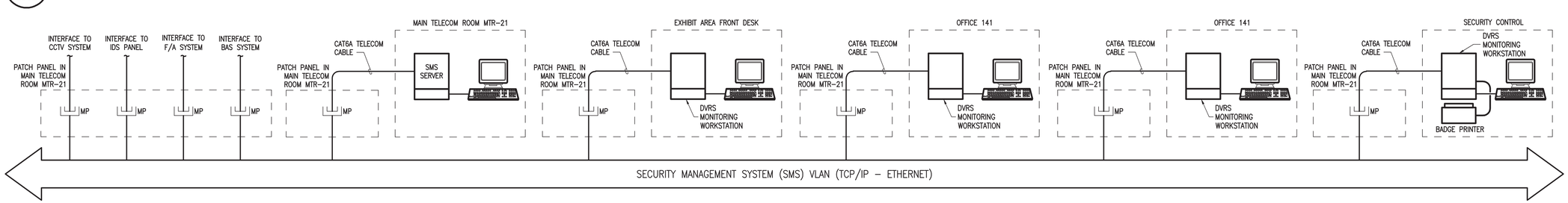
(6) REFER TO SHEET E801 FOR CABLE TYPE DESCRIPTIONS.

(7) REFER TO FLOOR PLANS FOR LOCATIONS AND QUANTITIES OF ACS RIMs.

(8) CONNECT READER INTERFACE MODULE TO CARD READER, DOOR CONTACTS, ELECTRIC DOOR STRIKE, ETC. AS REQUIRED FOR EACH SPECIFIC DOOR. REFER TO DOOR DETAILS FOR ADDITIONAL INFORMATION.

1 E802 ONE-LINE DIAGRAM – SECURITY MANAGEMENT SYSTEM (SMS)

SCALE: NONE



2 E802 BLOCK DIAGRAM – SECURITY MANAGEMENT SYSTEM (SMS)

SCALE: NONE

CONSULTANT NAME :: AMC ENGINEERS

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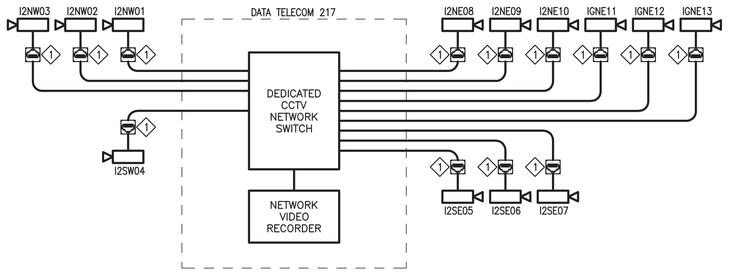
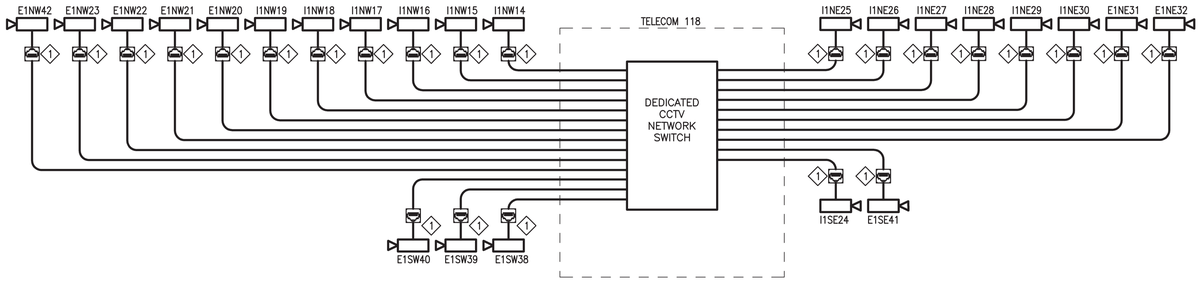
SPECIAL SYSTEMS ONE-LINE DIAGRAM - SECURITY MANAGEMENT SYSTEM

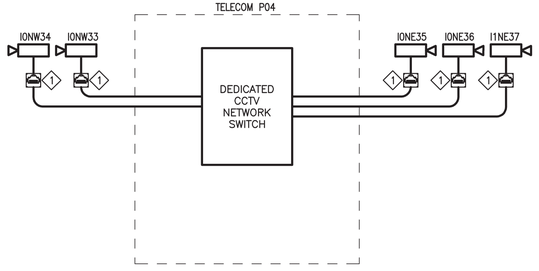
E802



LEVEL 2



LEVEL 1



LEVEL 0

CAMERA SCHEDULE

NO	CAMERA ID	SHEET NO.	LOCATION TYPE	LEVEL	CAMERA LOCATION	LENS TYPE	LENS FOCAL LENGTH	CAMERA TYPE	MOUNT
1	I2NW01	E403D	INT	2	NORTH WEST	VF w/AUTO IRIS	2.5–6mm	TYPE B	C(R)
2	I2NW02	E403D	INT	2	NORTH WEST	VF w/AUTO IRIS	2.5–6mm	TYPE B	W
3	I2NW03	E403D	INT	2	NORTH WEST	VF w/AUTO IRIS	2.5–6mm	TYPE B	C(R)
4	I2SW04	E403C	INT	2	SOUTH WEST	VF w/AUTO IRIS	2.5–6mm	TYPE B	C(R)
5	I2SE05	E403B	INT	2	SOUTH EAST	VF w/AUTO IRIS	2.5–6mm	TYPE B	W
6	I2SE06	E403B	INT	2	SOUTH EAST	VF w/AUTO IRIS	2.5–6mm	TYPE B	W
7	I2SE07	E403B	INT	2	SOUTH EAST	VF w/AUTO IRIS	2.5–6mm	TYPE B	C(S)
8	I2NE08	E403A	INT	2	NORTH EAST	VF w/AUTO IRIS	2.5–6mm	TYPE B	W
9	I2NE09	E403A	INT	2	NORTH EAST	VF w/AUTO IRIS	2.5–6mm	TYPE B	C(R)
10	I2NE10	E403A	INT	2	NORTH EAST	VF w/AUTO IRIS	2.5–6mm	TYPE B	WCN
11	IGNE11	E402	INT	G	NORTH EAST	VF w/AUTO IRIS	2.5–6mm	TYPE B	C(R)
12	IGNE12	E402	INT	G	NORTH EAST	VF w/AUTO IRIS	2.5–6mm	TYPE B	C(R)
13	IGNE13	E402	INT	G	NORTH EAST	VF w/AUTO IRIS	2.5–6mm	TYPE B	W
14	I1NW14	E401D	INT	1	NORTH WEST	VF w/AUTO IRIS	2.5–6mm	TYPE B	C(R)
15	I1NW15	E401D	INT	1	NORTH WEST	VF w/AUTO IRIS	2.5–6mm	TYPE B	WCN
16	I1NW16	E401D	INT	1	NORTH WEST	VF w/AUTO IRIS	2.5–6mm	TYPE B	C(R)
17	I1NW17	E401D	INT	1	NORTH WEST	VF w/AUTO IRIS	2.5–6mm	TYPE B	C(R)
18	I1NW18	E401D	INT	1	NORTH WEST	VF w/AUTO IRIS	2.5–6mm	TYPE B	C(R)
19	I1NW19	E401D	INT	1	NORTH WEST	VF w/AUTO IRIS	2.5–6mm	TYPE B	C(R)
20	E1NW20	E050	EXT	1	NORTH WEST	VF w/AUTO IRIS	3.3–12mm	TYPE A	P
21	E1NW21	E050	EXT	1	NORTH WEST	VF w/AUTO IRIS	3.3–12mm	TYPE A	P
22	E1NW22	E050	EXT	1	NORTH WEST	VF w/AUTO IRIS	3.3–12mm	TYPE A	P
23	E1NW23	E050	EXT	1	NORTH WEST	VF w/AUTO IRIS	3.3–12mm	TYPE A	P
24	I1SE24	E401B	INT	1	SOUTH EAST	VF w/AUTO IRIS	2.5–6mm	TYPE B	W
25	I1NE25	E401A	INT	1	NORTH EAST	VF w/AUTO IRIS	2.5–6mm	TYPE B	WCN
26	I1NE26	E401A	INT	1	NORTH EAST	VF w/AUTO IRIS	2.5–6mm	TYPE B	C(R)
27	I1NE27	E401A	INT	1	NORTH EAST	VF w/AUTO IRIS	2.5–6mm	TYPE B	WCN
28	I1NE28	E401A	INT	1	NORTH EAST	VF w/AUTO IRIS	2.5–6mm	TYPE B	C(R)
29	I1NE29	E401A	INT	1	NORTH EAST	VF w/AUTO IRIS	2.5–6mm	TYPE B	W
30	I1NE30	E401A	INT	1	NORTH EAST	VF w/AUTO IRIS	2.5–6mm	TYPE B	C(R)
31	E1NE31	E050	EXT	1	NORTH EAST	VF w/AUTO IRIS	3.3–12mm	TYPE A	ENCL
32	E1NE32	E050	EXT	1	NORTH EAST	VF w/AUTO IRIS	3.3–12mm	TYPE A	ENCL
33	IONW33	E103	INT	0	SOUTH WEST	VF w/AUTO IRIS	2.5–6mm	TYPE B	W
34	IONW34	E103	INT	0	SOUTH WEST	VF w/AUTO IRIS	2.5–6mm	TYPE B	C(R)
35	IONE35	E103	INT	0	SOUTH WEST	VF w/AUTO IRIS	2.5–6mm	TYPE B	C(S)
36	IONE36	E103	INT	0	SOUTH WEST	VF w/AUTO IRIS	2.5–6mm	TYPE B	W
37	IONE37	E103	INT	0	SOUTH WEST	VF w/AUTO IRIS	2.5–6mm	TYPE B	WCN
38	E1SW38	E050	EXT	1	SOUTH WEST	VF w/AUTO IRIS	3.3–12mm	TYPE A	P
39	E1SW39	E050	EXT	1	SOUTH WEST	VF w/AUTO IRIS	3.3–12mm	TYPE A	P
40	E1SW40	E050	EXT	1	SOUTH WEST	VF w/AUTO IRIS	3.3–12mm	TYPE A	P
41	E1SE41	E050	EXT	1	SOUTH EAST	VF w/AUTO IRIS	3.3–12mm	TYPE A	P
42	E1NW42	E401D	INT	1	NORTH WEST	VF w/AUTO IRIS	2.5–6mm		

LEGEND

C(R) – RECESSED, CEILING	CP – CEILING PENDANT	ALT. – ALTERNATE
C(S) – SURFACE, CEILING	EXT– EXTERIOR	VF – VARIFOCAL
W – WALL	ENCL – ENCLOSURE	WCN – WALL, CORNER
PTZ – PAN/TILT/ZOOM	EP – EXTERIOR PENDANT	P – POLE MOUNTED
CL – COLUMN	ES – EXTERIOR STANCHION	TYPE A – 3 MEGAPIXAL
CN – CORNER	INT – INTERIOR	TYPE B – 1 MEGAPIXAL

X X XX XX

- SEQUENTIAL CAMERA # (FROM 01 TO 99)
- AREA – (NE) NORTH EAST, (SW) SOUTH WEST, ETC
- LEVEL – (0) PARKING (1) FIRST FLOOR, (G) GALLERY, (2) SECOND FLOOR
- INTERIOR (I) OR EXTERIOR (E)

1 / E803 CCTV SYSTEM ONE–LINE DIAGRAM

SCALE: NONE

CONSULTANT NAME :: AMC ENGINEERS

ECI/HYER :: THA ARCHITECTURE

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SPECIAL SYSTEMS ONE-LINE DIAGRAM - CCTV

E803

BRANCH CIRCUIT PANEL NAMING CONVENTION

L2A

- LETTER DESIGNATES PANEL NUMBER IN SEQUENCE
- NUMBER DESIGNATES LEVEL PANEL IS LOCATED (0=GARAGE, 1=FIRST FLOOR, 2= SECOND FLOOR)
- LETTER DESIGNATES PANEL TYPE (L=480Y/277V, P=208Y/120V, E=EMERGENCY, U=UPS)

DISTRIBUTION PANEL NAMING CONVENTION

DL1A

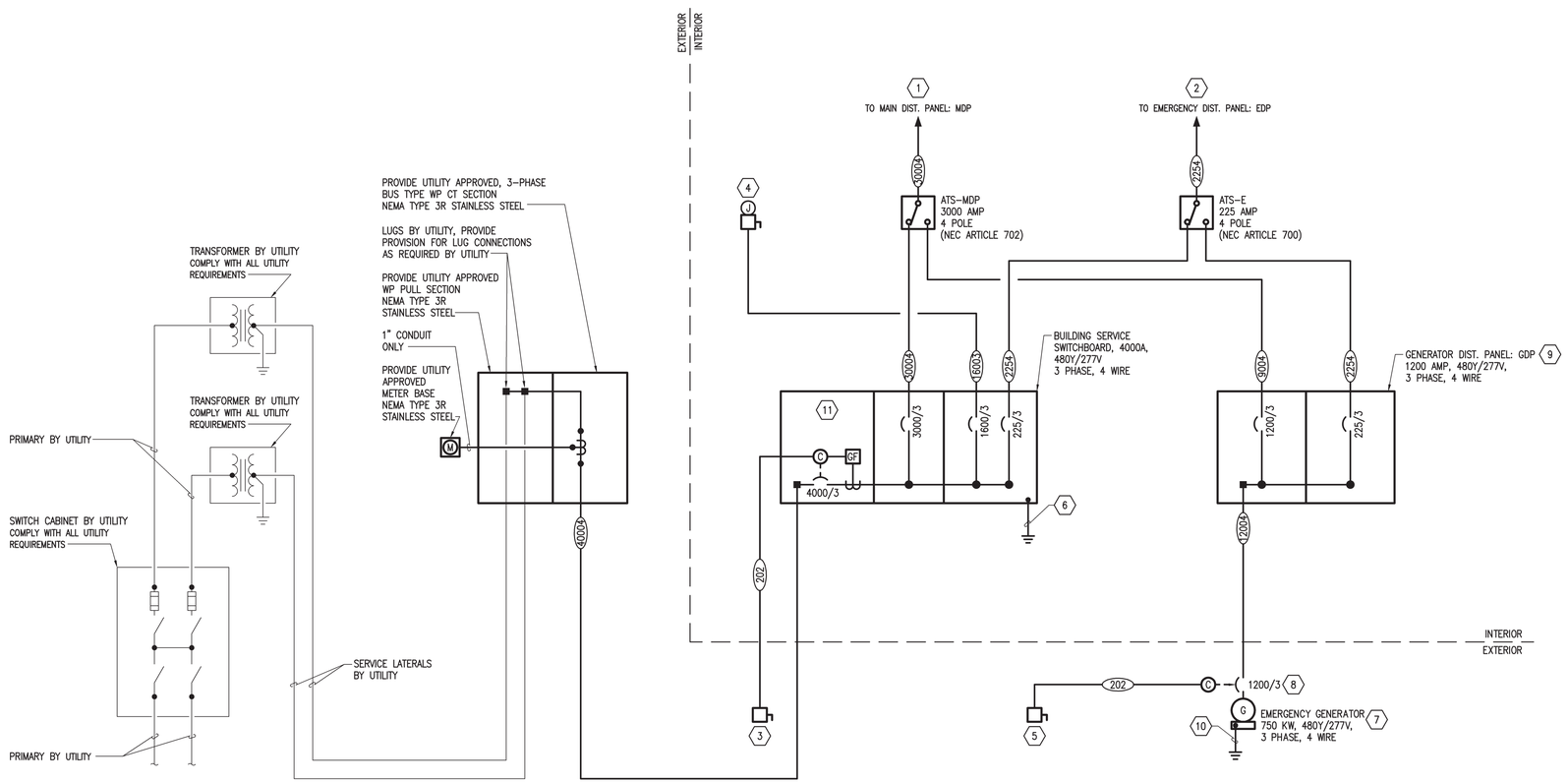
- LETTER DESIGNATES PANEL NUMBER IN SEQUENCE
- NUMBER DESIGNATES LEVEL PANEL IS LOCATED (0=GARAGE, 1=FIRST FLOOR, 2= SECOND FLOOR)
- LETTER DESIGNATES DISTRIBUTION PANEL TYPE (L=480Y/277V, P=208Y/120V)

FEEDER SCHEDULE

202	3/4" C., 2–#12 + 1–#12 GROUND
2254	2–1/2" C., 4–#4/0 + 1–#4 GROUND
12004	THREE SETS: 4" C., 4–#600 KCMIL + 1–#3/0 GROUND
16003	FOUR SETS: 3–1/2" C., 3–#600 KCMIL + 1–#4/0 GROUND
30004	EIGHT SETS: 4"C., 4–#500 KCMIL + 1–#400 KCMIL GROUND
40004	TEN SETS: 4"C., 4–#600 KCMIL + 1–#500 KCMIL GROUND

SHEET NOTES

1. REFER TO SHEET E902 FOR ADDITIONAL INFORMATION.
2. REFER TO SHEET E903 FOR ADDITIONAL INFORMATION.
3. PROVIDE NEMA 4X, NON–FUSED DISCONNECT TO FUNCTION AS REMOTE SHUNT–TRIP DISCONNECT FOR ELECTRICAL SERVICE. DISCONNECT SHALL BE WIRED SUCH THAT WHEN THE HANDLE IS IN THE "OFF" POSITION THE SHUNT TRIP DEVICE WILL BE TRIPPED. PROVIDE ELECTRICAL INTERLOCK KIT WITH THE DISCONNECT TO ENABLE THIS FUNCTIONALLY. PROVIDE ENGRAVED NAMEPLATE TO READ: "BUILDING SERVICE SHUNT TRIP DISCONNECT".
4. CONNECT TO ELECTRIC BOILER.
5. PROVIDE NEMA 4X, NON–FUSED DISCONNECT TO FUNCTION AS REMOTE SHUNT–TRIP DISCONNECT FOR GENERATOR. DISCONNECT SHALL BE WIRED SUCH THAT WHEN THE HANDLE IS IN THE "OFF" POSITION THE SHUNT TRIP DEVICE WILL BE TRIPPED. PROVIDE ELECTRICAL INTERLOCK KIT WITH THE DISCONNECT TO ENABLE THIS FUNCTIONALLY. PROVIDE ENGRAVED NAMEPLATE TO READ: "GENERATOR SHUNT TRIP DISCONNECT".
6. BOND #3/0 CU TO NEUTRAL, WATER SERVICE IN ROOM P02, BUILDING STEEL AND UFER GROUND.
7. PROVIDE GENERATOR IN EXTERIOR ENCLOSURE PER SPECIFICATION SECTION 26 30 00. REFER TO SITE PLAN FOR LOCATION.
8. PROVIDE MOLDED CASE SWITCH WITH SHUNT TRIP ACCESSORY AT GENERATOR IN ACCORDANCE WITH NEC 700.10(B)(5)(b).
9. PROVIDE CIRCUIT BREAKERS FOR NEC ARTICLE 700 (EMERGENCY) AND NEC ARTICLE 702 (OPTIONAL STANDBY) LOADS IN SEPARATE VERTICAL SWITCHBOARD SECTIONS IN ACCORDANCE WITH NEC 700.10(B)(5)(c).
10. GROUND GENERATOR AS A SEPARATELY DERIVED SYSTEM IN ACCORDANCE WITH THE NEC AND SPECIFICATION SECTION 26 25 00. BOND #3/0 CU TO NEUTRAL, WATER SERVICE IN ROOM P02, BUILDING STEEL AND UFER GROUND.
11. PROVIDE SURGE PROTECTIVE DEVICE (SPD) INTEGRATED INTO SWITCHBOARD IN ACCORDANCE WITH SECTION 26 26 10.



A.I.R. REQUIREMENTS

SHORT CIRCUIT AND SERVICE NOTES:

BASED ON THE FOLLOWING:

UTILITY	=	GENERIC	
TRANSFORMER SIZE	=	3,000	KVA
TRANSFORMER IMPEDANCE	=	5.18	% Z
LENGTH OF SERVICE CONDUCTORS	=	75	FEET
SERVICE CONDUCTOR SIZE	=	600 kcmil	
NUMBER OF PARALLEL RUNS	=	10	
CONDUIT TYPE	=	Copper in Metal Raceway	
MOTOR CONTRIBUTION	=	546	HP

AVAILABLE SHORT CIRCUIT AMPS SUMMARY

LOCATION	CT CAN	SVC SWBD	ATS–MDP	MDP	H–1
SCA RMS	66,900	66,200	64,300	63,200	7,600
LOCATION	H–2	H–3	H–4	DOA–1	DOA–2
SCA RMS	6,000	18,600	9,100	19,600	19,600
LOCATION	DOA–3	DOA–4	AHU–1	AHU–2	AHU–3
SCA RMS	28,900	18,700	13,800	11,500	13,400
LOCATION	AHU–4	T–P1A	ECB–P1A	P1A	P2A
SCA RMS	12,000	38,300	12,800	10,900	9,200
LOCATION	L1A	L1B	L2A	T–P0A	P0A
SCA RMS	53,500	51,100	31,900	4,300	7,700
LOCATION	L0A	DL1A	H–5	H–6	DOA–5
SCA RMS	9,500	38,600	20,300	15,200	21,800
LOCATION	AHU–5	AHU–6	ELEV–2	T–DP1A	DP1A
SCA RMS	11,700	4,600	11,500	37,400	24,500
LOCATION	GEN PNL	P2B	P2C	P2D	P2F
SCA RMS	11,500	15,200	14,300	15,200	12,100
LOCATION	P2G	P2H	P1C	P1D	P1E
SCA RMS	12,100	12,900	23,200	22,100	13,400
LOCATION	P1F	L2B	L2C	L1C	L1D
SCA RMS	13,100	27,500	26,300	36,800	35,100
LOCATION	DL1B	ELEV–1	XDP1B	DP1B	P2I
SCA RMS	12,900	4,400	12,700	10,800	8,500
LOCATION	P2J	P1G	P1H	P1I	P1J
SCA RMS	8,300	10,400	10,100	9,800	8,200
LOCATION	L2D	L1E	DL1C	XDP1C	DP1C
SCA RMS	10,800	12,600	28,300	27,500	16,900
LOCATION	P2L	P2M	P2N	P1K	P1L
SCA RMS	11,900	11,400	11,200	16,000	15,200
LOCATION	L2E	L1G	L1H	L1I	L1J
SCA RMS	21,600	27,400	26,600	25,800	25,000
LOCATION	T–UPS	UPS	UDP	U0A	U1A
SCA RMS	11,500	14,800	14,000	6,400	8,500
LOCATION	U2A	U2B	ATS–E	EDP	E0A
SCA RMS	10,900	10,900	50,700	48,300	12,800
LOCATION	E1A	E1B	E1C	E1D	E2A
SCA RMS	35,900	1,900	1,000	1,500	1,700
LOCATION	E2B				
SCA RMS	1,000				

THE ABOVE DATA (OTHER THAN MOTOR LOAD) SHALL BE CONFIRMED WITH THE SERVING UTILITY BEFORE EQUIPMENT IS ORDERED. ANY VARIATIONS THAT MIGHT INCREASE AVAILABLE SHORT–CIRCUIT CURRENT SHALL BE REPORTED TO THE CONTRACTING AGENCY.

SERVICE EQUIPMENT SHALL HAVE AN INTEGRATED SHORT CIRCUIT RATING SUITABLE FOR THE AVAILABLE SCA. DOWNSTREAM EQUIPMENT AND CIRCUIT BREAKER AIC RATINGS MAY BE SATISFIED BY UTILIZING ONE OF THE FOLLOWING METHODS:

1. EQUIPMENT RATED FOR THE AVAILABLE SCA AT EACH POINT IN THE SYSTEM.
2. UL–LISTED SERIES–CONNECTED CIRCUIT BREAKER COMBINATIONS RATED FOR THE AVAILABLE SCA AT EACH POINT.

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POWER ONE-LINE DIAGRAM - SERVICE ENTRANCE

E901

FEEDER SCHEDULE

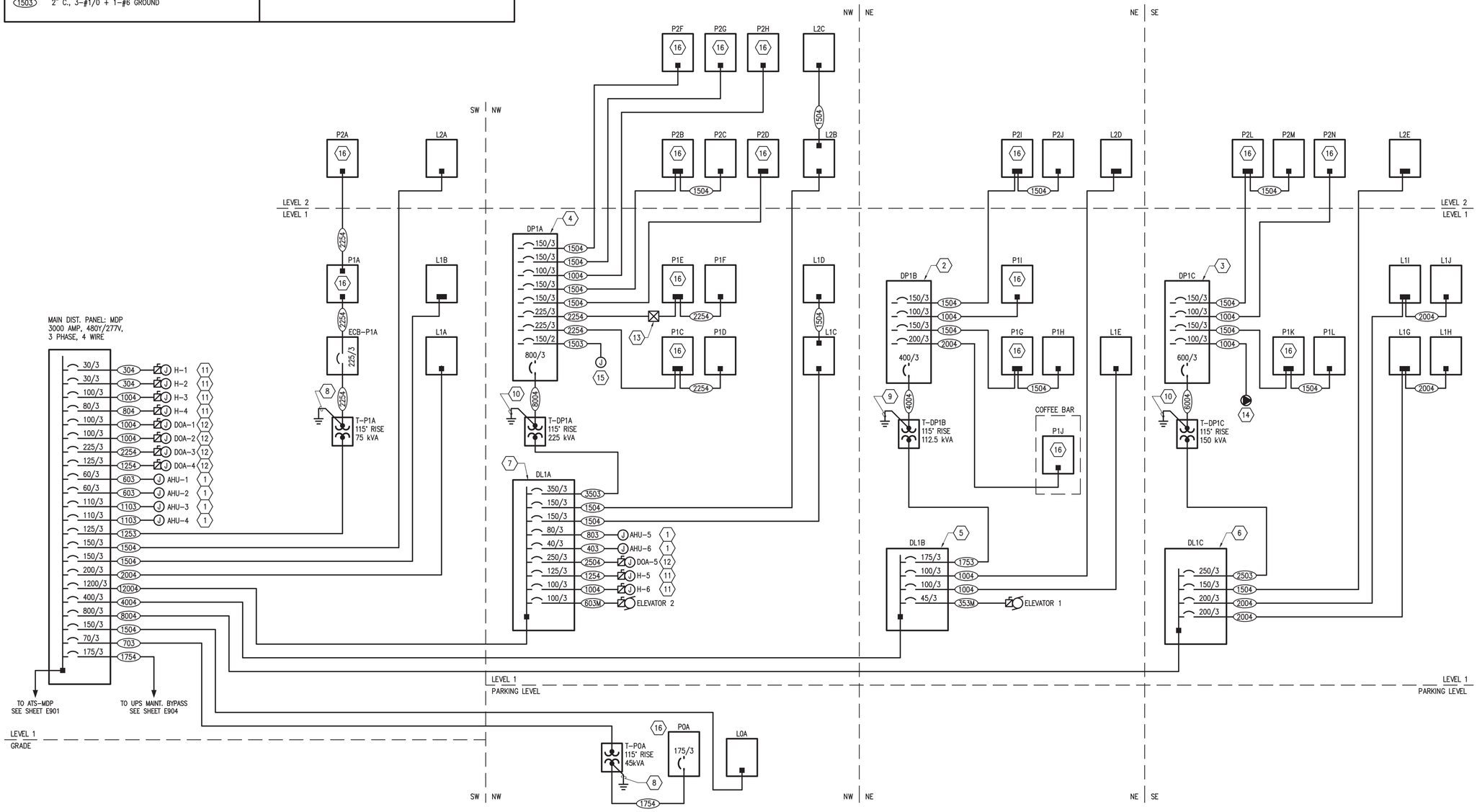
304	1/2" C., 4–#10 + 1–#10 GROUND
353M	1/2" C., 3–#10 + 1–#10 GROUND
403	3/4" C., 3–#8 + 1–#10 GROUND
603	3/4" C., 3–#6 + 1–#10 GROUND
603M	3/4" C., 3–#6 + 1–#8 GROUND
703	1" C., 3–#4 + 1–#8 GROUND
803	1" C., 3–#4 + 1–#8 GROUND
804	1–1/4" C., 4–#4 + 1–#8 GROUND
1004	1–1/4" C., 4–#2 + 1–#8 GROUND
1103	1–1/4" C., 3–#2 + 1–#6 GROUND
1253	1–1/4" C., 3–#1 + 1–#6 GROUND
1254	1–1/2" C., 4–#1 + 1–#6 GROUND
1503	2" C., 3–#1/0 + 1–#6 GROUND

FEEDER SCHEDULE

1504	2" C., 4–#1/0 + 1–#6 GROUND
1753	1–1/2" C., 3–#2/0 + 1–#6 GROUND
1754	2" C., 4–#2/0 + 1–#6 GROUND
2004	2" C., 4–#3/0 + 1–#6 GROUND
2254	2–1/2" C., 4–#4/0 + 1–#4 GROUND
2503	2" C., 3–#250 KCMIL + 1–#4 GROUND
2504	2–1/2" C., 4–#250 KCMIL + 1–#4 GROUND
3503	2–1/2" C., 3–#400 KCMIL + 1–#2 GROUND
4004	4" C., 4–#600 KCMIL + 1–#2 GROUND
8004	TWO SETS: 3" C., 4–#350 KCMIL + 1–#1 GROUND
8004	TWO SETS: 4" C., 4–#600 KCMIL + 1–#1/0 GROUND
12004	THREE SETS: 4" C., 4–#600 KCMIL + 1–#3/0 GROUND

SHEET NOTES

1. CONNECT TO AIR HANDLING UNIT IN MECHANICAL SPACE. REFER TO ENLARGED ELECTRICAL PLANS AND MECHANICAL PLANS FOR ADDITIONAL INFORMATION.
2. 400 AMP, 208Y/120V, 3–PHASE DISTRIBUTION PANEL WITH MAIN BREAKER AND 20% FUTURE BREAKER MOUNTING SPACE.
3. 600 AMP, 208Y/120V, 3–PHASE DISTRIBUTION PANEL WITH MAIN BREAKER AND 20% FUTURE BREAKER MOUNTING SPACE.
4. 800 AMP, 208Y/120V, 3–PHASE DISTRIBUTION PANEL WITH MAIN BREAKER AND 20% FUTURE BREAKER MOUNTING SPACE.
5. 400 AMP, 480Y/277V, 3–PHASE DISTRIBUTION PANEL WITH MAIN LUGS AND 20% FUTURE BREAKER MOUNTING SPACE.
6. 800 AMP, 480Y/277V, 3–PHASE DISTRIBUTION PANEL WITH MAIN LUGS AND 20% FUTURE BREAKER MOUNTING SPACE.
7. 1200 AMP, 480Y/277V, 3–PHASE DISTRIBUTION PANEL WITH MAIN LUGS AND 20% FUTURE BREAKER MOUNTING SPACE.
8. PROVIDE #4 AWG COPPER GROUNDING ELECTRODE CONDUCTOR AND #4 AWG COPPER BONDING JUMPER IN ACCORDANCE WITH NEC ARTICLE 250 AND SPECIFICATION SECTION 16450. ROUTE GROUNDING ELECTRODE CONDUCTOR AND COPPER BONDING JUMPER VIA NON–FERROUS, METALLIC CONDUIT.
9. PROVIDE #1/0 AWG COPPER GROUNDING ELECTRODE CONDUCTOR AND #1/0 AWG COPPER BONDING JUMPER IN ACCORDANCE WITH NEC ARTICLE 250 AND SPECIFICATION SECTION 16450. ROUTE GROUNDING ELECTRODE CONDUCTOR AND COPPER BONDING JUMPER VIA NON–FERROUS, METALLIC CONDUIT.
10. PROVIDE #2/0 AWG COPPER GROUNDING ELECTRODE CONDUCTOR AND #2/0 AWG COPPER BONDING JUMPER IN ACCORDANCE WITH NEC ARTICLE 250 AND SPECIFICATION SECTION 16450. ROUTE GROUNDING ELECTRODE CONDUCTOR AND COPPER BONDING JUMPER VIA NON–FERROUS, METALLIC CONDUIT.
11. CONNECT TO HUMIDIFIER IN MECHANICAL SPACE. REFER TO ENLARGED ELECTRICAL PLANS AND MECHANICAL PLANS FOR ADDITIONAL INFORMATION.
12. CONNECT TO CHILLER UNIT DOA LOCATED ON ROOF. REFER TO ROOF PLAN AND MECHANICAL PLANS FOR ADDITIONAL INFORMATION.
13. PROVIDE MECHANICALLY HELD, 3–POLE, 225 AMP CONTACTOR WITH 120 VOLT COIL IN ACCORDANCE WITH SECTION 26 26 40 FOR SHOP EQUIPMENT SHUTDOWN. REFER TO DETAIL 1/E711 FOR ADDITIONAL INFORMATION.
14. EXTERIOR PIN AND SLEEVE RECEPTACLE FOR EVENT POWER. REFER TO SITE PLAN ON SHEET E050 FOR ADDITIONAL INFORMATION.
15. CONNECT TO GENERATOR SHORE POWER PANEL AT EXTERIOR GENERATOR MODULE. REFER TO SHEET E301D FOR CONNECTION LOCATION.
16. PROVIDE SURGE PROTECTIVE DEVICE (SPD) INTEGRATED INTO PANEL IN ACCORDANCE WITH SECTION 26 26 10.



1 / E902 POWER ONE–LINE DIAGRAM – NORMAL/STANDBY DISTRIBUTION

SCALE: NONE

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ECI/HYER :: THA ARCHITECTURE
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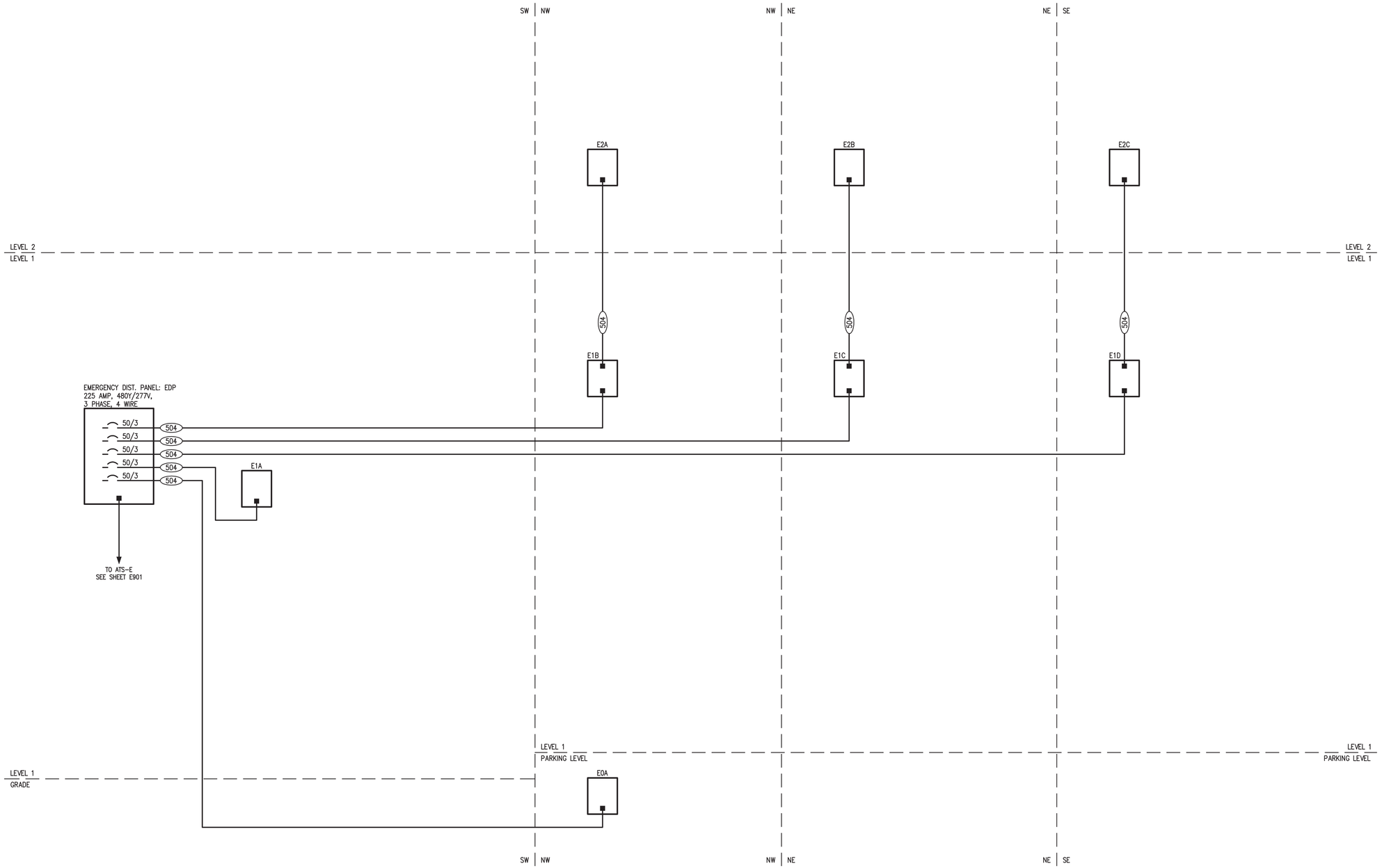
POWER ONE-LINE DIAGRAM - NORMAL & STANDBY DISTRIBUTION

E902

FEEDER SCHEDULE

504	3/4" C., 4-#8 + 1-#10 GROUND



1 E903 POWER ONE-LINE DIAGRAM - EMERGENCY DISTRIBUTION

SCALE: NONE

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POWER ONE-LINE DIAGRAM - EMERGENCY DISTRIBUTION

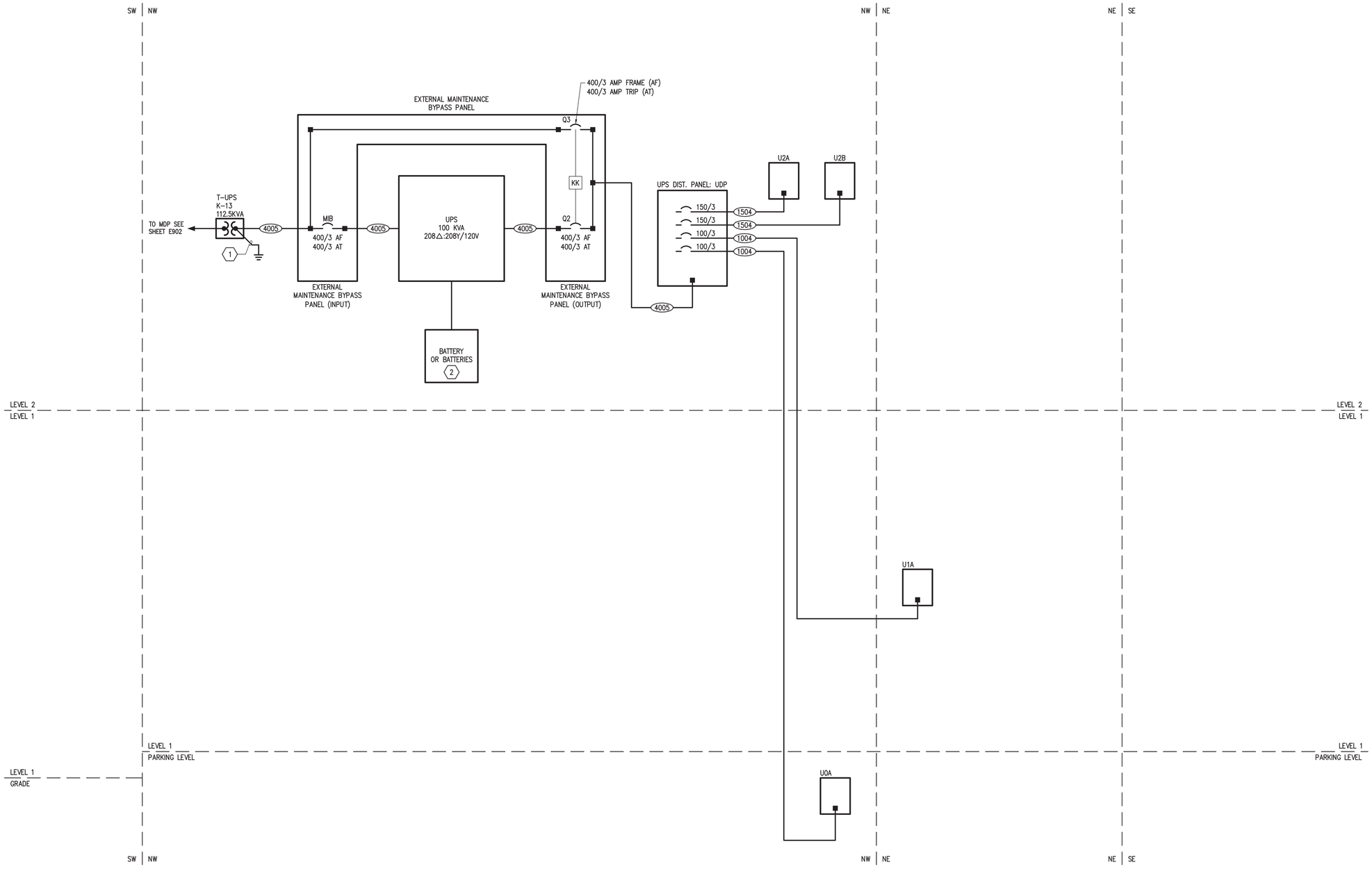
E903

FEEDER SCHEDULE

1504	2" C., 4–#1/0 + 1–#6 GROUND
2004	2" C., 4–#3/0 + 1–#6 GROUND
4005	4" C., 5–#600 KCMIL + 1–#2 GROUND

SHEET NOTES

1. PROVIDE #1/0 AWG COPPER GROUNDING ELECTRODE CONDUCTOR AND #1/0 AWG COPPER BONDING JUMPER IN ACCORDANCE WITH NEC ARTICLE 250 AND SPECIFICATION SECTION 16450. ROUTE GROUNDING ELECTRODE CONDUCTOR AND COPPER BONDING JUMPER VIA NON–FERROUS, METALLIC CONDUIT.
2. SIZE UPS BATTERY TO SUPPLY 15 MINUTES OF RUNTIME AT FULL LOAD.



1 E904 POWER ONE–LINE DIAGRAM – UNINTERRUPTIBLE POWER SUPPLY DISTRIBUTION

SCALE: NONE

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E904