

# ORANGE COUNTY CORRECTIONS

2400 W 33rd STREET, ORLANDO, FL 32819

MAYOR  
MRS. TERESA JACOBS

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MR. S. SCOTT BOYD

DISTRICT 2 COMMISSIONER

BRYAN NELSON



DISTRICT 3 COMMISSIONER

MR. PETE CLARKE

DISTRICT 4 COMMISSIONER

MRS. JENNIFER THOMPSON

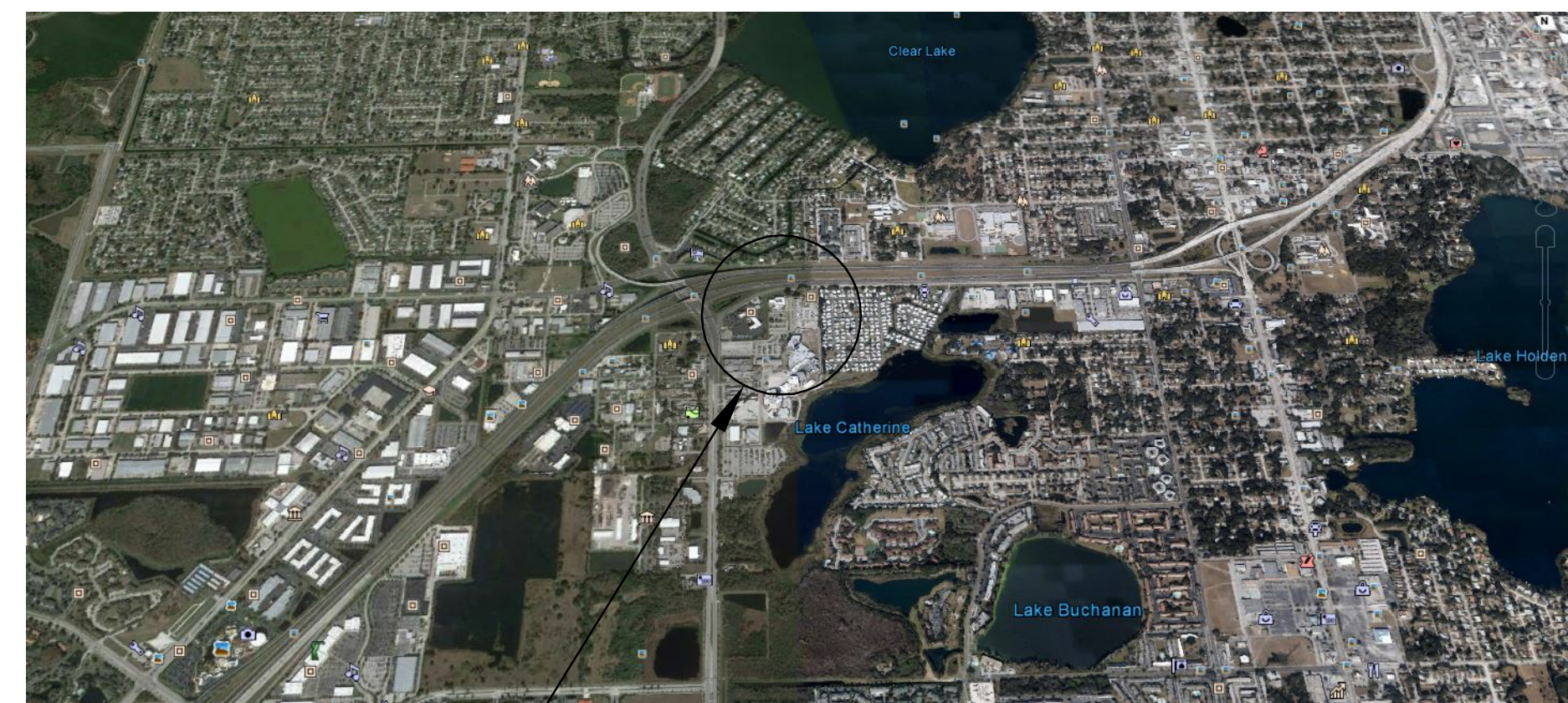
DISTRICT 5 COMMISSIONER

MR. TED EDWARDS

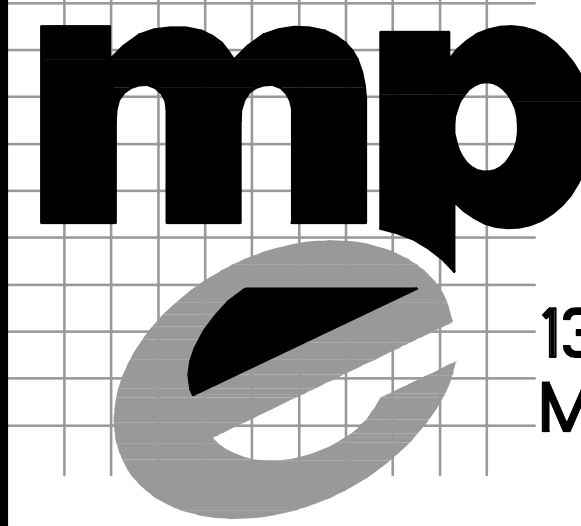
DISTRICT 6 COMMISSIONER

VICTORIA P. SIPLIN

## SHERIFF SECTOR IV ELEVATOR MODERNIZATION



PROJECT LOCATION



**MATERN  
PROFESSIONAL  
ENGINEERING, INC.**  
ENG. BUS. No. EB-0005096  
CERT. OF AUTH. No. 5096  
130 Candace Drive  
Maitland, FL 32751-3331  
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BID DOCUMENTS  
MAY 03, 2016

SHEET NO.	MECHANICAL SHEET INDEX	SCALE
M001	GENERAL NOTES AND LEGENDS - MECHANICAL	NONE
M100	OVERALL FLOOR PLAN - MECHANICAL	1/8" = 1'-0"
M101	PARTIAL DEMO & NEW FLOOR PLANS - MECHANICAL	1/4" = 1'-0"
M601	DETAILS - MECHANICAL	AS NOTED

SHEET NO.	ELECTRICAL SHEET INDEX FOR	SCALE
E001	GENERAL NOTES, LEGENDS AND SHEET INDEX	NONE
E002	SYMBOL LEGEND AND FIXTURE SCHEDULE	NONE
E100	OVERALL FLOOR PLAN - POWER	1/8" = 1'-0"
E101	PARTIAL FLOOR PLANS DEMO AND RENO - ELECTRICAL	1/4" = 1'-0"
E501	ELECTRICAL SCHEDULES	NONE
E901	DETAILS ELECTRICAL	NONE



MECHANICAL ABBREVIATIONS

A	AMPERES	EVAP	EVAPORATOR	MCA	MAXIMUM CIRCUIT AMPS
AC	AIR CONDITIONING	EWB	ENTERING WET BULB TEMPERATURE	MOCP	MAXIMUM OVERCURRENT PROTECTION
AD	ACCESS DOOR	EWT	ENTERING WATER TEMPERATURE	LRA	LOCK ROTOR AMPS
AFF	ABOVE FINISHED FLOOR	EXIST	EXISTING	RLA	RATED LOAD AMPS
AHU	AIR HANDLING UNIT	EXP	EXPANSION	PC	PLUMBING CONTRACTOR
APPROX	APPROXIMATELY	F	FIRE SPRINKLER PIPING	PCHWP	PRIMARY CHILLED WATER PUMP
AP	ACCESS PANEL	'F	DEGREES FAHRENHEIT	PD	PRESSURE DROP
ARCH	ARCHITECTURAL	FA	FREE AREA (SQ. FT.) OR FACE AREA	PHC	PREHEAT COIL
AS	AIR SEPARATOR	FBP	FIELD BUILT PLENUM	PSI	POUNDS PER SQUARE INCH
AUTO	AUTOMATIC	FCO	FLOOR CLEANOUT	PSIA	PSI ABSOLUTE
AUX	AUXILIARY	FCU	FAN COIL UNIT	PSIG	PSI GAUGE
BCS	BUILDING CONTROL SYSTEM	FD	FLOOR DRAIN	PRESS	PRESSURE
BHP	BRAKE HORSEPOWER	FDPR	FIRE DAMPER	PVC	POLYVINYL CHLORIDE
BLDG	BUILDING	FLA	FULL LOAD AMPERES	RA	RETURN AIR
BOD	BOTTOM OF DUCT	FLEX	FLEXIBLE	RAF	RETURN AIR FAN
BTU	BRITISH THERMAL UNIT	FPI	FINS PER INCH	REQ'D	REQUIRED
BTUH	BRITISH THERMAL UNITS PER HOUR	FPM	FEET PER MINUTE	RF	RELIEF FAN
CC	COOLING COIL	FPS	FEET PER SECOND	RH	RELATIVE HUMIDITY
CD	CONDENSATE DRAIN	FTB	FAN POWERED TERMINAL BOX	RHC	REHEAT COIL
CFM	CUBIC FEET PER MINUTE	FV	FACE VELOCITY	RHG	*REFRIGERANT HOT GAS DISCHARGE
CH	CHILLER	GA	GAUGE	RLI	*REFRIGERANT LIQUID LINE
CHR	CHILLED WATER RETURN	GAL	GALLONS	RM	ROOM
CHS	CHILLED WATER SUPPLY	GPH	GALLONS PER HOUR	RPM	REVOLUTIONS PER MINUTE
CHWP	CHILLED WATER PUMP	GPM	GALLONS PER MINUTE	RSL	*REFRIGERANT SUCTION LINE
CLG	CEILING	HB	HOSE BIBB	RV	RELIEF VALVE
CMU	CONCRETE MASONARY UNIT	H2O	WATER	S/FDPR	COMBINED SMOKE AND FIRE DAMPER
CO	CLEAN-OUT	HC	HEATING COIL	SA	SUPPLY AIR
COMB	COMBINATION	HD	HEAD	SAF	SUPPLY AIR FAN
COMPR	COMPRESSOR	HORIZ	HORIZONTAL	SAN	SANITARY
COND	CONDENSATE OR CONDENSER	HP	HORSEPOWER OR HEAT PUMP	SAU	SOUND ATTENUATION UNIT
CONN	CONNECTION	HW	HOT WATER	SCHWP	SECONDARY CHILLED WATER PUMP
CONT	CONTINUATION	HR	HOUR	SGCS	SECONDARY GLYCOL CHILLED WATER SUPPLY
CU	CONDENSING UNIT	HT	HEIGHT	SGCHR	SECONDARY GLYCOL CHILLED WATER RETURN
CU FT	CUBIC FEET	HZ	FREQUENCY (HERTZ)	SDPR	SMOKE DAMPER
CUH	CABINET UNIT HEATER	ID	INSIDE DIAMETER	SP	STATIC PRESSURE
CU IN	CUBIC INCHES	IN	INCH OR INCHES	SPEC	SPECIFICATION
CW	COLD WATER (CITY)	INSUL	INSULATION	TAO	TRANSFER AIR OPENING
CWP	CONDENSER WATER PUMP	KW	KILOWATT	TD	TRENCH DRAIN
CWR	CONDENSER WATER RETURN	LAT	LEAVING AIR TEMPERATURE	TDH	TOTAL DYNAMIC HEAD
CWS	CONDENSER WATER SUPPLY	LB/HR	POUNDS PER HOUR	TEMP	TEMPERATURE
D	DRAIN LINE	LBS	POUNDS	TS	TIPSPEED
DB	DRY BULB	LDB	LEAVING DRY BULB TEMPERATURE	TYP	TYPICAL
DG	DOOR GRILLE	LIN FT	LINEAR FEET	UG	UNDERGROUND
DHW	DOMESTIC HOT WATER	LWB	LEAVING WET BULB	UH	UNIT HEATER
DIAM	DIAMETER	LWT	LEAVING WATER TEMPERATURE	VAV	VARIABLE AIR VOLUME UNIT
DN	DOWN	MAX	MAXIMUM	VD	VOLUME DAMPER
DWG	DRAWING	MB	MIXING BOX	W	WATT
DX	DIRECT EXPANSION	MBH	BTUH, THOUSANDS	W/O	WITHOUT
EA	EXHAUST AIR	MC	MECHANICAL CONTRACTOR	WB	WET BULB
EAT	ENTERING AIR TEMPERATURE	MIN	MINIMUM	WC	WATER COLUMN
EDB	ENTERING DRY BULB TEMPERATURE	NC	NORMALLY CLOSED	WCO	WALL CLEANOUT
EDH	ELECTRIC DUCT HEATER	NIC	NOT IN CONTRACT	WG	WATER GAUGE
EF	EXHAUST FAN	NO	NORMALLY OPEN	WP	WORKING PRESSURE
EH	ELECTRIC HEATER	NO.	NUMBER	WMS	WIRE MESH SCREEN
EL	ELEVATION	NTS	NOT TO SCALE	ZD	ZONE DAMPER
ELEC	ELECTRICAL	OA	OUTSIDE AIR		
EQ	EQUAL	OD	OUTSIDE DIAMETER		
ET	EXPANSION TANK	OV	OUTLET VELOCITY		

GENERAL LEGEND

	PIPE SECTION-SUPPLY		PIPE REDUCTION
	PIPE SECTION-RETURN		THERMOMETER
	DIRECTION OF FLOW IN PIPE		THERMOMETER WELL
	PITCH PIPE DOWN IN DIRECTION OF ARROW		ROUND DUCT
	PIPE UP		FLAT OVAL DUCT
	PIPE DOWN		SIDEWALL SUPPLY SIZE, NECK SIZE, TYPE CAPACITY
	PIPE ANCHOR		SIDEWALL RETURN SIZE, NECK SIZE, TYPE CAPACITY
	EXPANSION JOINT		CEILING DIFFUSER SUPPLY SIZE, NECK SIZE, TYPE CAPACITY
	FLEXIBLE PIPE CONNECTOR		CEILING RETURN OR EXHAUST SIZE, NECK SIZE, TYPE CAPACITY
	BALL VALVE		FLOOR SUPPLY SIZE, NECK SIZE, TYPE CAPACITY
	CHECK VALVE, HORIZONTAL SWING		FLOOR RETURN OR EXHAUST SIZE, NECK SIZE, TYPE CAPACITY
	CHECK VALVE, VERTICAL SPRING LOADED		SUPPLY LINEAR - LENGTH, WIDTH, G#, PLENUM SIZE XXX CFM PER PLENUM
	GATE VALVE		RETURN LINEAR - LENGTH, WIDTH, G#, PLENUM SIZE XXX CFM PER PLENUM
	GLOBE VALVE		DOOR UNDERCUT 3/4" MAX., CAPACITY
	BALANCING COCK		DELTA T (TEMPERATURE DIFFERENCE)
	BUTTERFLY VALVE TAPPED LUG WAFER		ROUND DUCT SECTION-SUPPLY
	STRAINER, Y-TYPE AND BLOWOFF VALVE		ROUND DUCT SECTION-RETURN
	STRAINER/SHUT-OFF VALVE & PRESSURE TAP		DUCT SECTION-SUPPLY
	SHUT-OFF VALVE & PRESSURE TAP		DUCT SECTION-RETURN OR EXHAUST
	AUTOMATIC CONTROL VALVE (2-WAY, 3-WAY)		FLEXIBLE DUCT CONNECTION
	NEEDLE VALVE		FIRE DAMPER & ACCESS DOOR
	MANUAL AIR VENT		VOLUME DAMPER
	AUTOMATIC AIR VENT		TURNING VANES
	TEMPERATURE & PRESSURE TAP (PETE'S PLUG)		SMOKE DAMPER & ACCESS DOOR
	PRESSURE GAUGE W/BALL VL. (WATER)		FLEXIBLE ROUND DUCT
	PRESSURE GAUGE TAPPING (WATER)		SECTION DESIGNATION
	SOLENOID VALVE		SHEET WHERE SECTION APPEARS
	CAPPED LINE		SHEET WHERE SECTION CUT
	CHILLED WATER SUPPLY (BELOW GRADE)		THERMOSTAT
	CHILLED WATER SUPPLY (ABOVE GRADE)		SMOKE DETECTOR
	CHILLED WATER RETURN (BELOW GRADE)		DOWN DUCT STATIC PRESSURE SENSOR
	CHILLED WATER RETURN (ABOVE GRADE)		INDOOR AIR QUALITY SENSOR
	CHEMICAL FEED PIPING		MOTORIZED VALVE
	CONDENSATE DRAIN (BELOW GRADE)		REMOTE TEMPERATURE SENSOR
	CONDENSATE DRAIN (ABOVE GRADE)		HUMIDISTAT
	CONDENSER WATER SUPPLY (BELOW GRADE)		MOTORIZED DAMPER
	CONDENSER WATER SUPPLY (ABOVE GRADE)		AIR FLOW MEASURING STATION
	CONDENSER WATER RETURN (BELOW GRADE)		FLOW METER
	CONDENSER WATER RETURN (ABOVE GRADE)		POINT OF DISCONNECTION
			POINT OF CONNECTION

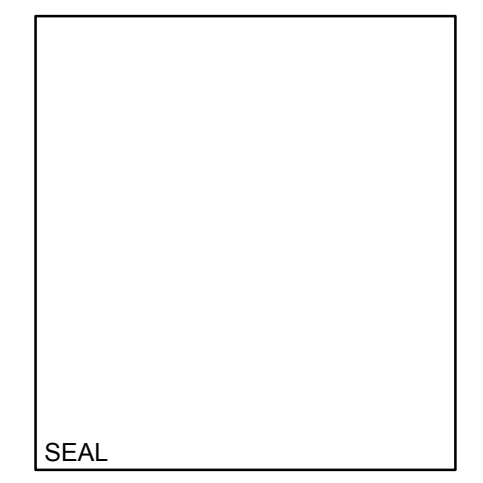
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 ENG. BUS. No. E9-0005096 CERT. OF AUTH. No. 5208

**ORANGE COUNTY CORRECTIONS SHERIFF SECTOR IV ELEVATOR MODERNIZATION**

Key Plan

Revisions

No.	Date	Description



GENERAL NOTES

- REFER TO THE DIVISION 23 SPECIFICATIONS.
- THE CONTRACTOR SHALL DEMONSTRATE EACH HVAC SYSTEMS PERFORMANCE IN THE PRESENCE OF THE ARCHITECT AND THE OWNER'S PROJECT MANAGER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF ANY ADDITIONAL SYSTEM TEST REQUIRED IF IN THE OPINION OF THE ARCHITECT AND THE OWNER'S PROJECT MANAGER THE SYSTEMS DO NOT PERFORM AS SPECIFIED.
- VISIT AND CAREFULLY EXAMINE THOSE PORTIONS OF THE BUILDING AND SITE AFFECTED BY THIS WORK BEFORE SUBMITTING PROPOSALS, SO AS TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND DIFFICULTIES THAT WILL AFFECT EXECUTION OF THE WORK. SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH EXAMINATION HAS BEEN MADE AND LATER CLAIMS FOR LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WILL NOT BE RECOGNIZED.
- UNFORESEEN CONDITIONS MAY EXIST AND WORK MAY NOT BE FIELD LOCATED EXACTLY AS SHOWN ON THE DRAWINGS. COOPERATION WITH OTHER TRADES IN ROUTING AS DETERMINED DURING CONSTRUCTION AND AS DIRECTED BY THE ENGINEER MAY BE NECESSARY. IT IS INTENDED THAT SUCH DEVIATIONS SHALL BE CONSIDERED AS PART OF THIS CONTRACT. SUCH DEVIATIONS MAY NOT BE CONSIDERED AS PART OF THIS CONTRACT WHEN PROPERLY DOCUMENTED IN WRITING. THE PLANS ARE NOT COMPLETELY TO SCALE.
- WORK SHALL BE PERFORMED, IN STRICT COMPLIANCE WITH THE ESTABLISHED WORK SCHEDULE BEING SET FORTH BY THE OWNER. COORDINATE ALL WORK WITH GENERAL CONTRACTOR. THIS CONTRACTOR SHALL FURNISH ADEQUATE FORCES, CONSTRUCTION PLANT AND EQUIPMENT, AND SHALL WORK SUCH HOURS, INCLUDING NIGHT SHIFTS, OVERTIME OPERATIONS, SUNDAYS AND HOLIDAYS IN ACCORDANCE WITH THE OWNER'S OPERATIONAL SCHEDULE AS LISTED IN DIVISION 1 OF THE SPECIFICATIONS. IF THE CONTRACTOR DOES NOT MAINTAIN THE CONSTRUCTION SCHEDULE BECAUSE OF INADEQUATE FORCES, SUPERVISION OR ANY OTHER REASON UNDER THE CONTRACTOR'S CONTROL, THE OWNER MAY REQUIRE THE CONTRACTOR TO INCREASE THE NUMBER OF SHIFTS AND/OR OVERTIME OPERATIONS, DAY OF WORK AND/OR THE AMOUNT OF CONSTRUCTION PLANT, AT NO ADDITIONAL COST TO THE OWNER UNDER THIS CONTRACT. FAILURE TO MAINTAIN THE CONSTRUCTION SCHEDULE DUE TO OWNER'S OPERATIONAL INTERFERENCES, WHICH WERE NOT IDENTIFIED IN OR PRIOR TO THE PRE-BID CONFERENCE, SHALL NOT BE THE

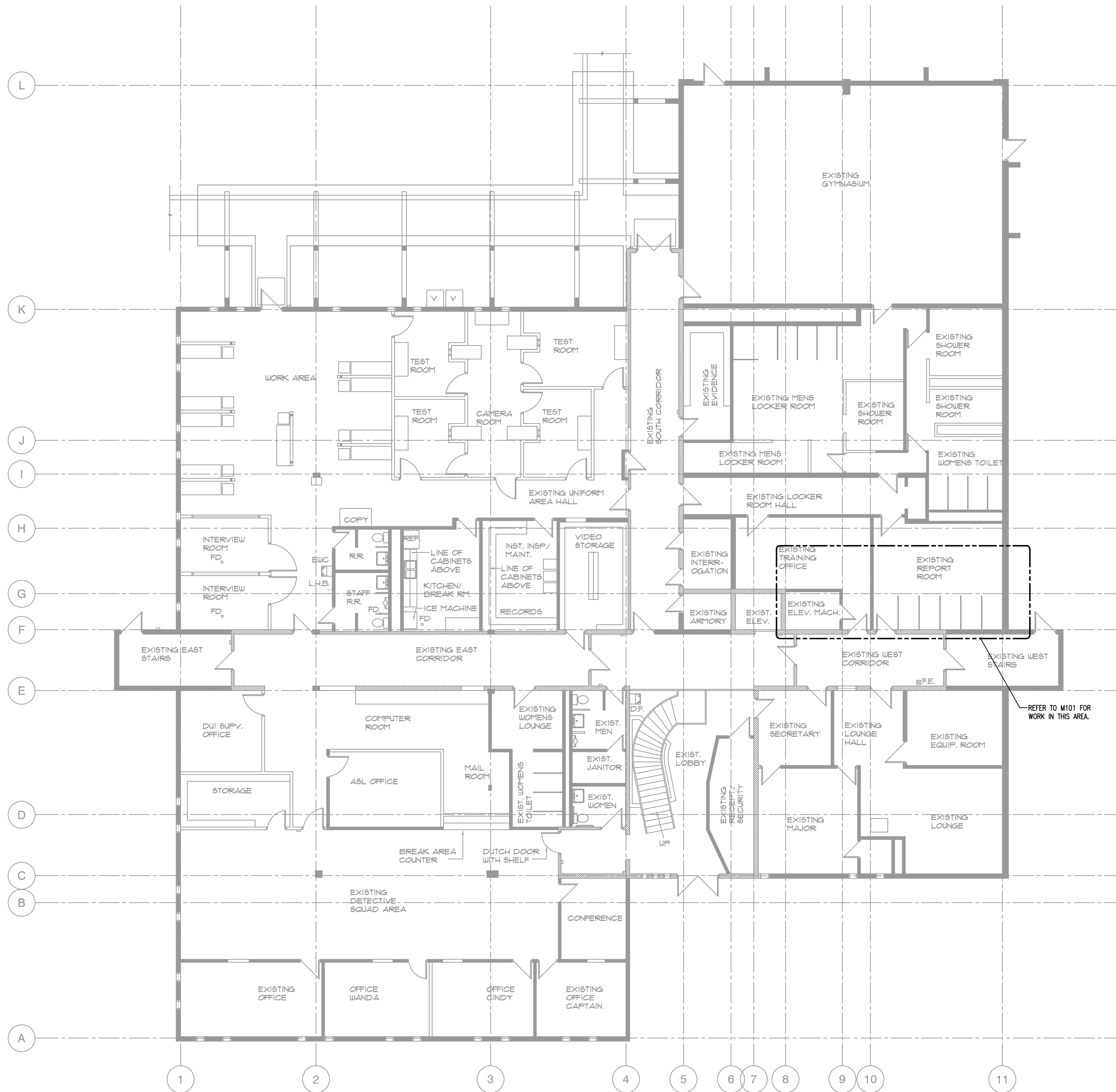
CONTRACTOR'S LIABILITY.

- ALL CONCRETE, WALL PATCHING, CEILING REPAIR, FENCE WORK AND OTHER GENERAL CONSTRUCTION WORK REQUIRED FOR INSTALLING MECHANICAL/PLUMBING OR FIRE PROTECTION SYSTEMS SHALL BE PROVIDED BY MECHANICAL CONTRACTOR AND FULLY COORDINATED WITH GENERAL CONTRACTOR USING THE APPROPRIATE CONSTRUCTION TRADES.
- ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND SHALL BE UL LISTED WHERE APPLICABLE.
- THE FLOOR DECK SHALL NOT SUPPORT DUCTWORK, PIPING, EQUIPMENT OR ANY OTHER DEVICES. ALL SUPPORTS SHALL BE SPAN BETWEEN THE STRUCTURAL BEAMS TO SUPPORT THE MECHANICAL EQUIPMENT. PENETRATION OF THE FLOOR DECK WILL NOT BE ACCEPTED.
- IN GENERAL, PLANS AND DIAGRAMS ARE SCHEMATIC ONLY AND SHOULD NOT BE SCALED. CONTRACTOR SHALL COORDINATE ALL PLUMBING, HEATING AND ELECTRICAL WORK AT THE SITE, SO AS NOT TO CONFLICT IN LOCATION WITH OTHER WORK UNDER THE CONTRACT.
- THE MECHANICAL CONTRACTOR IS DIRECTED TO COMPLY WITH DIVISION 26 OF THE CONTRACT SPECIFICATIONS REFERRING TO MOTORS, STARTERS, ETC.
- WHENEVER A REFERENCE IS MADE TO STANDARD, INSTALLATION AND MATERIALS SHALL COMPLY WITH THE LATEST PUBLISHED EDITION AT THE TIME THE PROJECT IS BID UNLESS OTHERWISE SPECIFIED.
- ALL MATERIAL STORED ON SITE SHALL BE PROPERLY PROTECTED FROM INJURY OR DETERIORATION. MATERIAL SHALL NOT BE STORED IN CONTACT WITH THE GROUND OR FLOOR. ALL EQUIPMENT STORED SHALL BE SEALED AT ANY OPENING TO PREVENT ANY DEBRIS OR DIRT ENTERING THE INSIDE OF THE EQUIPMENT.
- CONTRACTOR SHALL COORDINATE WORK WITH ALL OTHER TRADES.
- ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE 2014 FLORIDA BUILDING CODE, 2014 FLORIDA BUILDING CODE - PLUMBING AND 2014 FLORIDA BUILDING CODE - MECHANICAL, 2014 FLORIDA FIRE PREVENTION CODE & STANDARDS AS REFERENCED IN DIVISION 1 AND THROUGHOUT THE SPECIFICATIONS.

- THESE FACILITIES SHALL REMAIN OCCUPIED AND OPERATIONAL FOR THE DURATION OF THE PROJECT. ALL INDOOR WORK SHALL BE PERFORMED AFTER NORMAL BUSINESS HOURS DURING THE WEEK AND ON WEEKENDS. NORMAL BUSINESS HOURS ARE DEFINED AS 7:00 AM TO 5:00 PM, MONDAY TO FRIDAY. MATERIAL AND EQUIPMENT DELIVERIES WILL BE AFTER NORMAL BUSINESS HOURS. AFTER HOURS IS DEFINED AS 5:00 PM TO 7:00 AM MONDAY THROUGH FRIDAY.
- PIPING CARRYING REFRIGERANTS SHALL BE TYPE ACR HARD-DRAWN COPPER TUBING, ASTM B88, ANSI H23.1. FITTINGS SHALL BE WROUGHT COPPER: ASTM B16.22, ANSI B16.22. ALL 90 ELBOWS SHALL BE THE LONG RADIUS TYPE. REFER TO SPECIFICATION SECTION 23 23 00 FOR BRAZING OPTIONS.

SHEET NO.	MECHANICAL SHEET INDEX	SCALE
M001	GENERAL NOTES AND LEGENDS - MECHANICAL	NONE
M100	OVERALL FLOOR PLAN - MECHANICAL	1/8"=1'-0"
M101	PARTIAL DEMO & NEW FLOOR PLANS - MECHANICAL	1/4"=1'-0"
M601	DETAILS - MECHANICAL	AS NOTED

MPE PROJ#: 2014-197B  
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 Drawn By: AG/RN  
 Checked By: BP  
 Issue Date: 05/03/16  
 Drawing Scale: NONE  
 Drawing Title:  
**GENERAL NOTES AND LEGENDS MECHANICAL**  
 BID DOCUMENTS  
 Drawing No.  
**M001**



**OVERALL FLOOR PLAN - MECHANICAL**  
 1/8"=1'-0"  
 0 4' 8' 16'

**GENERAL NOTES**

- REFER TO GENERAL NOTES FOR THIS DISCIPLINE.
- REFER TO SPECIFICATIONS.
- ALL HEX NOTES NOT NECESSARILY USED ON ALL SHEETS.
- ALL UNUSED SLAB PENETRATIONS WITH ELEVATOR MACHINE ROOMS SHALL BE PROPERLY SEALED WITH FIRESTOPPING. REFER TO SPECIFICATIONS.
- MAINTAIN CONTINUITY OF SYSTEM FOR BUILDING OPERATIONAL HOURS DURING CONSTRUCTION. ALL WORK SHALL BE DONE AT NIGHT AND ON WEEKENDS. REFER TO SPECIFICATION SECTION 01 11 00.
- THE FACILITY SHALL REMAIN FULLY OCCUPIED AND OPERATIONAL FOR THE DURATION OF THE PROJECT. ALL INDOOR AND OUTDOOR WORK SHALL BE PERFORMED AFTER NORMAL BUSINESS HOURS DURING THE WEEK. NORMAL BUSINESS HOURS ARE DEFINED AS 7:00 AM TO 5:00 PM, MONDAY TO FRIDAY. MATERIAL AND EQUIPMENT DELIVERIES WILL BE AFTER NORMAL BUSINESS HOURS. AFTER HOURS IS DEFINED AS 5:00 PM TO 7:00 AM MONDAY THROUGH FRIDAY.
- MECHANICAL CONTRACTOR TO REMOVE AND PRESERVE CEILING TILES IN ORDER TO FACILITATE THE INSTALLATION OF EQUIPMENT, DUCTWORK, AND GRILLES/DIFFUSERS AS NEEDED THROUGHOUT THE FLOOR. ALL CEILING GRIDS ARE TO BE RE-INSTALLED BACK INTO ORIGINAL PLACEMENT AS FOUND BEFORE CONSTRUCTION. CONTRACTOR TO REPLACE ALL BROKEN CEILING TILES AND GRID WITH NEW AS REQUIRED. REFER TO SPECIFICATION SECTION 09 51 00.
- LIGHTING IS TO BE REMOVED AND PRESERVED IN ORDER TO FACILITATE THE INSTALLATION OF MECHANICAL EQUIPMENT, DUCTWORK, AND GRILLES/DIFFUSERS AS NEEDED. ALL LIGHTS ARE TO BE RE-INSTALLED BACK INTO ORIGINAL PLACEMENT AS FOUND BEFORE CONSTRUCTION. CONTRACTOR TO REPLACE ALL BROKEN CEILING TILES AND GRID WITH NEW AS REQUIRED.
- REFER TO MANUFACTURER'S RECOMMENDATIONS FOR ALL REFRIGERANT PIPE SIZES ACCORDING TO FINAL LENGTH OF RUN.

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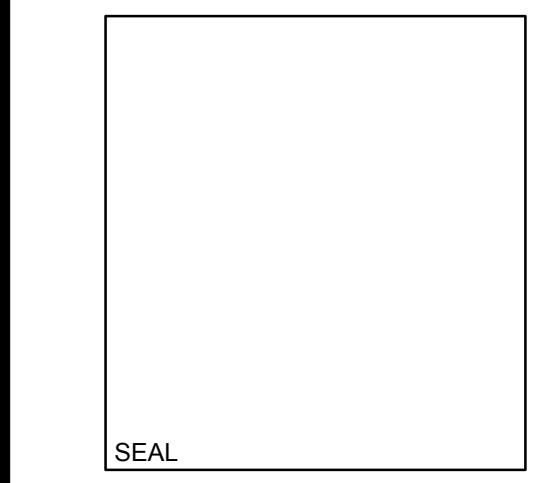
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 SHERIFF SECTOR IV  
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**Key Plan**

**Revisions**

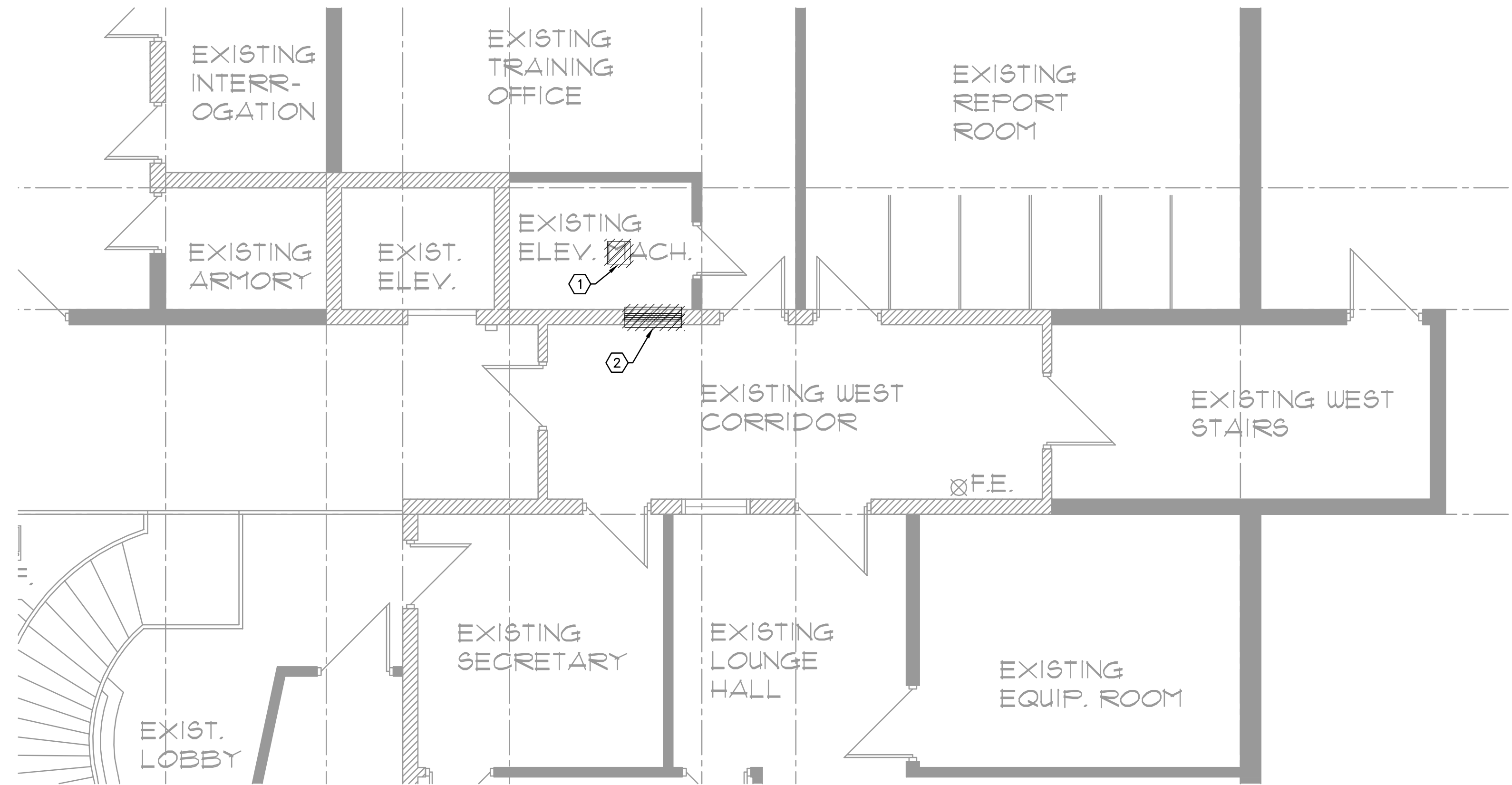
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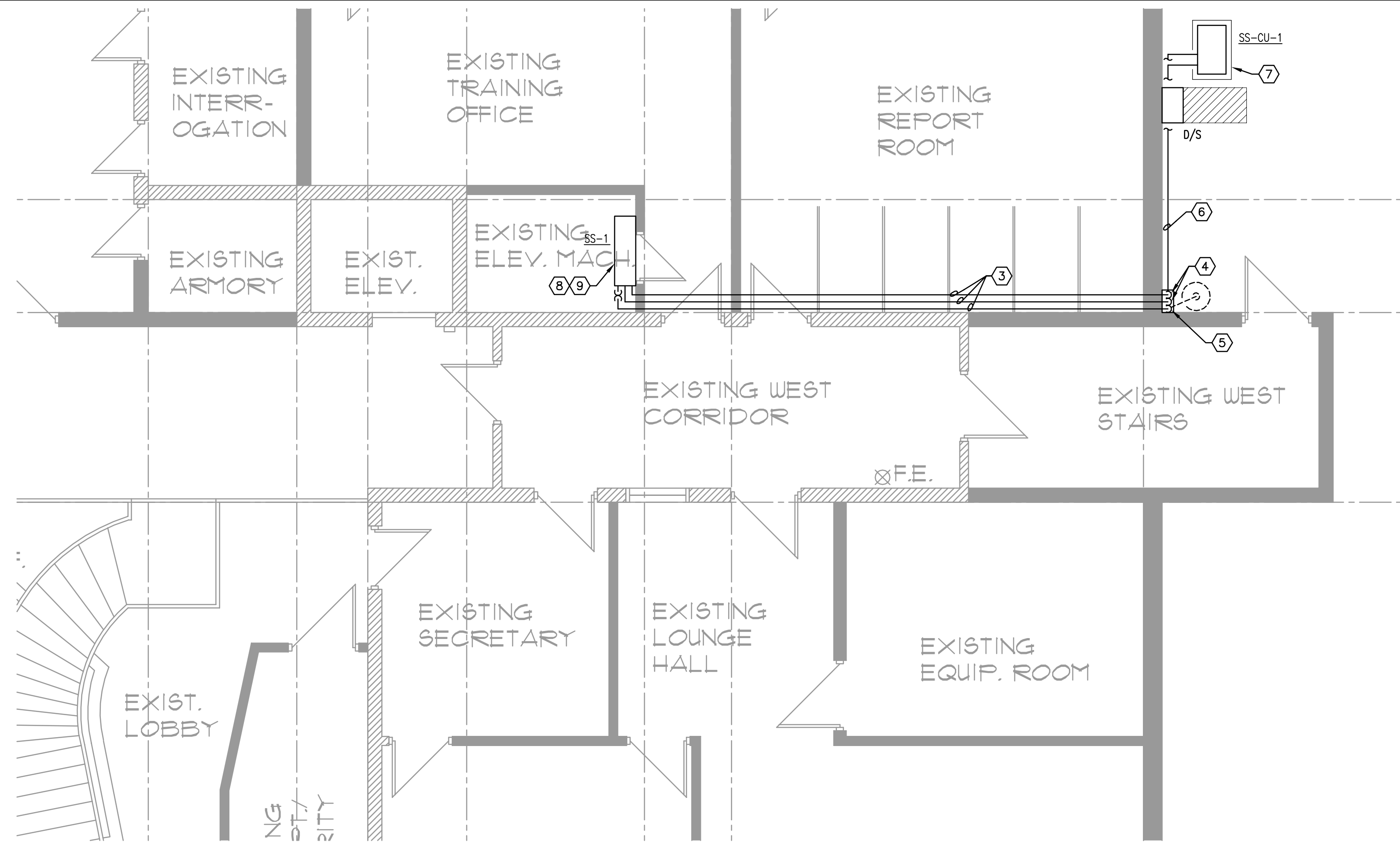
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 Checked By: BP  
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 Drawing Scale: 1/8"=1'-0"

**Drawing Title:**  
**OVERALL FLOOR PLAN  
 MECHANICAL**

BID DOCUMENTS  
 Drawing No.  
**M100**



**PARTIAL DEMO FLOOR PLAN - MECHANICAL**  
 1/4" = 1'-0"  
 0 2' 4' 8'



**PARTIAL NEW FLOOR PLAN - MECHANICAL**  
 1/4" = 1'-0"  
 0 2' 4' 8'

**GENERAL NOTES**

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9. REFER TO MANUFACTURER'S RECOMMENDATIONS FOR ALL REFRIGERANT PIPE SIZES ACCORDING TO FINAL LENGTH OF RUN.

**HEX NOTES**

- ① REMOVE EXISTING 12x12 GRILLE IN CEILING PATCH OPENING AND PAINT TO MATCH EXISTING.
- ② REMOVE TWO(2) EXISTING TRANSFER GRILLES IN WALL. SET EXISTING FIRE DAMPER TO CLOSED POSITION. PATCH EXISTING WALL TO MAINTAIN 1-HOUR RATING AND PAINT TO MATCH EXISTING COLOR ON BOTH SIDES OF WALL.
- ③ REFRIGERANT PIPING AND 3/4" CD ABOVE CEILING.
- ④ ROUTE RS/RL PIPING AND 3/4" CD ON EXTERIOR WALL BEHIND SHEET METAL SHROUD.
- ⑤ 3/4" CD TO 24" DRYWELL.
- ⑥ ROUTE RS/RL PIPING AT GRADE.
- ⑦ 4" TURNED DOWN CONCRETE HOUSEKEEPING PAD.
- ⑧ PROVIDE CONDENSATE PUMP AND NEW RECEPTACLE FOR DUCTLESS SPLIT SYSTEM AHU. COORDINATE W/ ELECTRICAL.
- ⑨ NEW DUCTLESS SPLIT SYSTEM AHU MOUNTED ABOVE DOOR WAY.

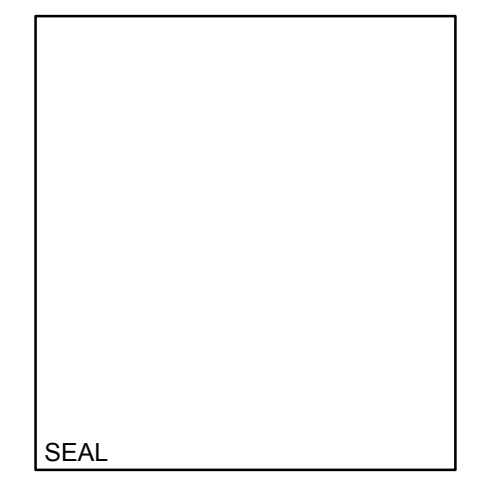
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Key Plan

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 Drawing Scale: 1/4"=1'-0"

Drawing Title:  
**PARTIAL DEMO & NEW FLOOR PLANS MECHANICAL**

BID DOCUMENTS  
 Drawing No.  
**M101**

**ORANGE COUNTY  
 CORRECTIONS  
 SHERIFF SECTOR IV  
 ELEVATOR  
 MODERNIZATION**

**SPLIT SYSTEM AIR COOLED CONDENSING UNIT SCHEDULE:**

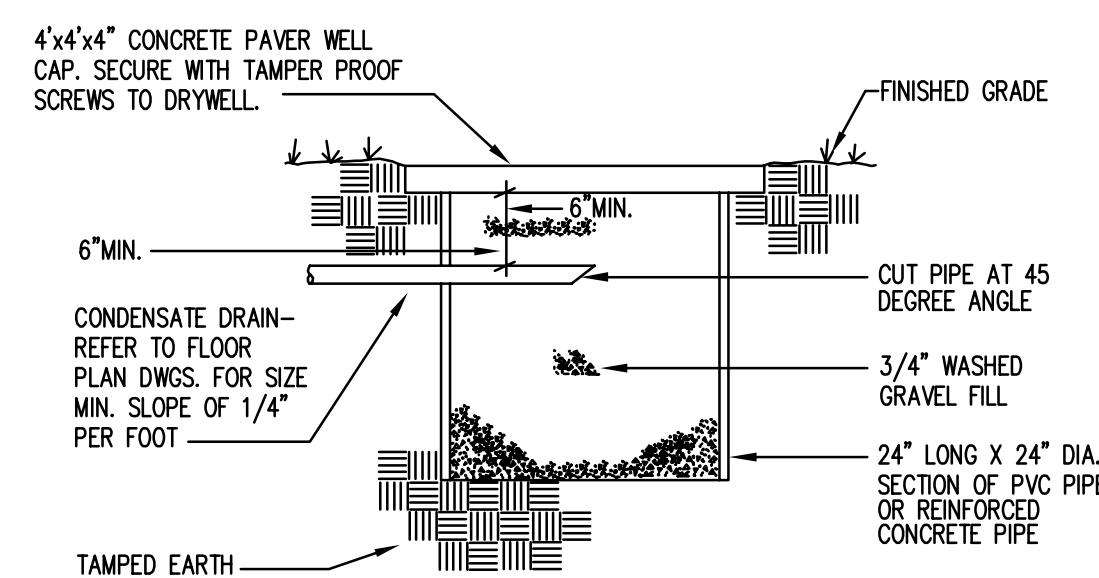
UNIT NO.	SERVING	UNIT DATA					FAN MOTOR					COMPRESSOR DATA					UNIT ELECTRIC DATA					SELECTION BASED ON		REMARKS	
		CAPACITY MBH	SEER	COND. EAT F	SUCT. TEMP F	REFRIG TYPE	NO.	FLA	HP	VOLT	PH	QTY	STEPS	VOLT	PH	RLA	LRA	VOLT	PH	FLA	MCA	MOC	MANUFACTURER		MODEL
SS-CU-1	SS-1	12.00	13.0	95	-	410a	1	-	-	120	1	1	1	120	1	-	-	120	1	0.93	16	20	MITSUBISHI OR APPROVED EQUAL	MU-A12WA	SEE NOTE

NOTE:  
 1) ...

**DUCTLESS SPLIT SYSTEM AIR HANDLING UNIT SCHEDULE:**

UNIT NO.	SERVING	FAN DATA			DX COOLING COIL DATA			MOTOR DATA					SELECTION BASED ON:		REMARKS		
		CFM	O.A.	EXT. STATIC P. IN H2O	TOTAL CAPACITY MBH	SENSIBLE CAPACITY MBH	EAT F		FLA	MCA	WATTS	VOLT	PH	MOC		MANUFACTURER	MODEL
SS-1	ELEVATOR EQUIP. ROOM	363	-	N/A	12.00	-	78.00	67.00	0.95	1.20	1070	120	1	20	MITSUBISHI OR APPROVED EQUAL	MS-A12WA	1,2,3,4,5

REMARKS  
 1 PROVIDE W/ WIRELESS REMOTE CONTROLLER  
 2 PROVIDE DISCONNECT  
 3 WALL MOUNTED UNITS  
 4 PROVIDE CD PUMP FOR EACH UNIT.



**DRYWELL DIAGRAM**

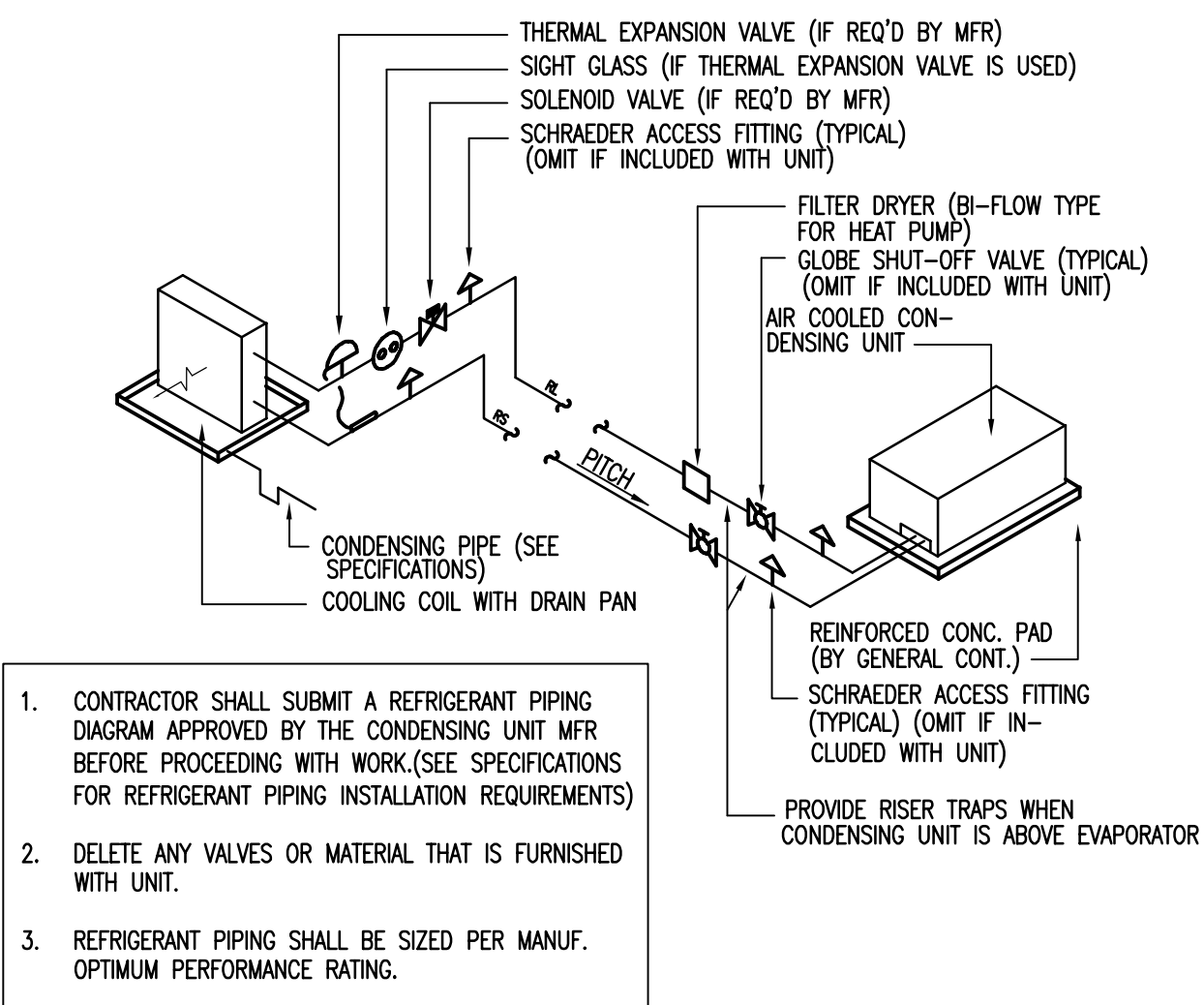
N.T.S.

Duct & Pipe Construction & Insulation Requirements Schedule			
Service	Thickness	Type	Notes
Refrigerant Piping			
RS (Suction) (Temp < 40 deg F):		Up to 3/4": 3/4" Closed Cell Elast. 1" thru 8": 1-1/2" Foamglas	
RL (Temp 90 - 130 deg F):		Up to 2": Not Required 2-1/2" thru 4": Not Required 5" thru 8": 1-1/2" Foamglas	
Condensate Drain (CD): All sizes	1/2"	Closed Cell Elastomeric	
NOTES: Refer to specification section 23 07 00 for more details and information Insulation must meet or exceed FBC 2010 - Energy Conservation Code sections 503.2.7 through 503.2.8 Insulation must meet or exceed FBC 2010 - Mechanical Code sections 604.1 through 604.13 Insulation must meet or exceed ASHRAE 90.1-2010, Table 6.8.3			

Key Plan

**Revisions**

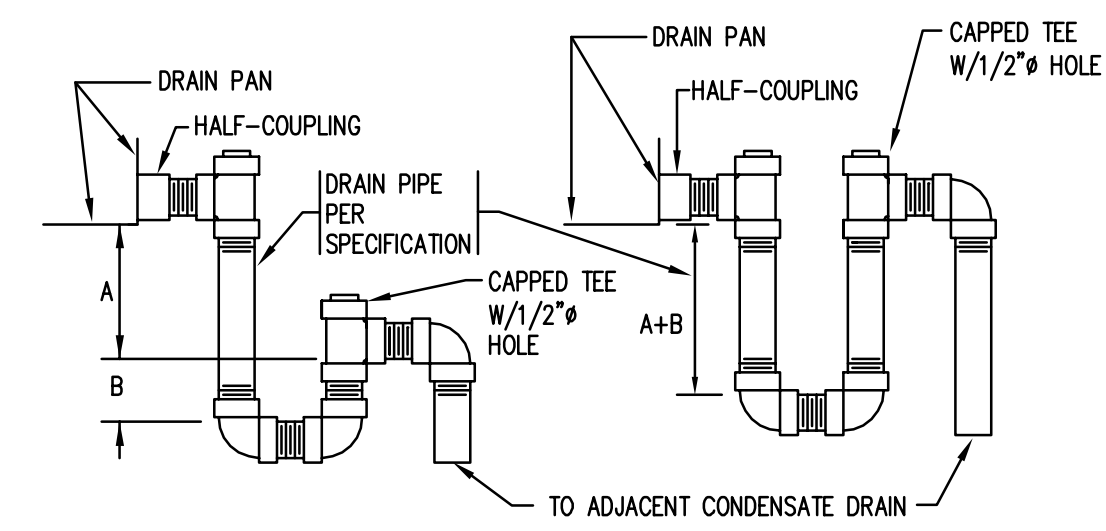
No.	Date	Description



- CONTRACTOR SHALL SUBMIT A REFRIGERANT PIPING DIAGRAM APPROVED BY THE CONDENSING UNIT MFR BEFORE PROCEEDING WITH WORK.(SEE SPECIFICATIONS FOR REFRIGERANT PIPING INSTALLATION REQUIREMENTS)
- DELETE ANY VALVES OR MATERIAL THAT IS FURNISHED WITH UNIT.
- REFRIGERANT PIPING SHALL BE SIZED PER MANUF. OPTIMUM PERFORMANCE RATING.

**REFRIGERANT PIPING DIAGRAM**

NO SCALE

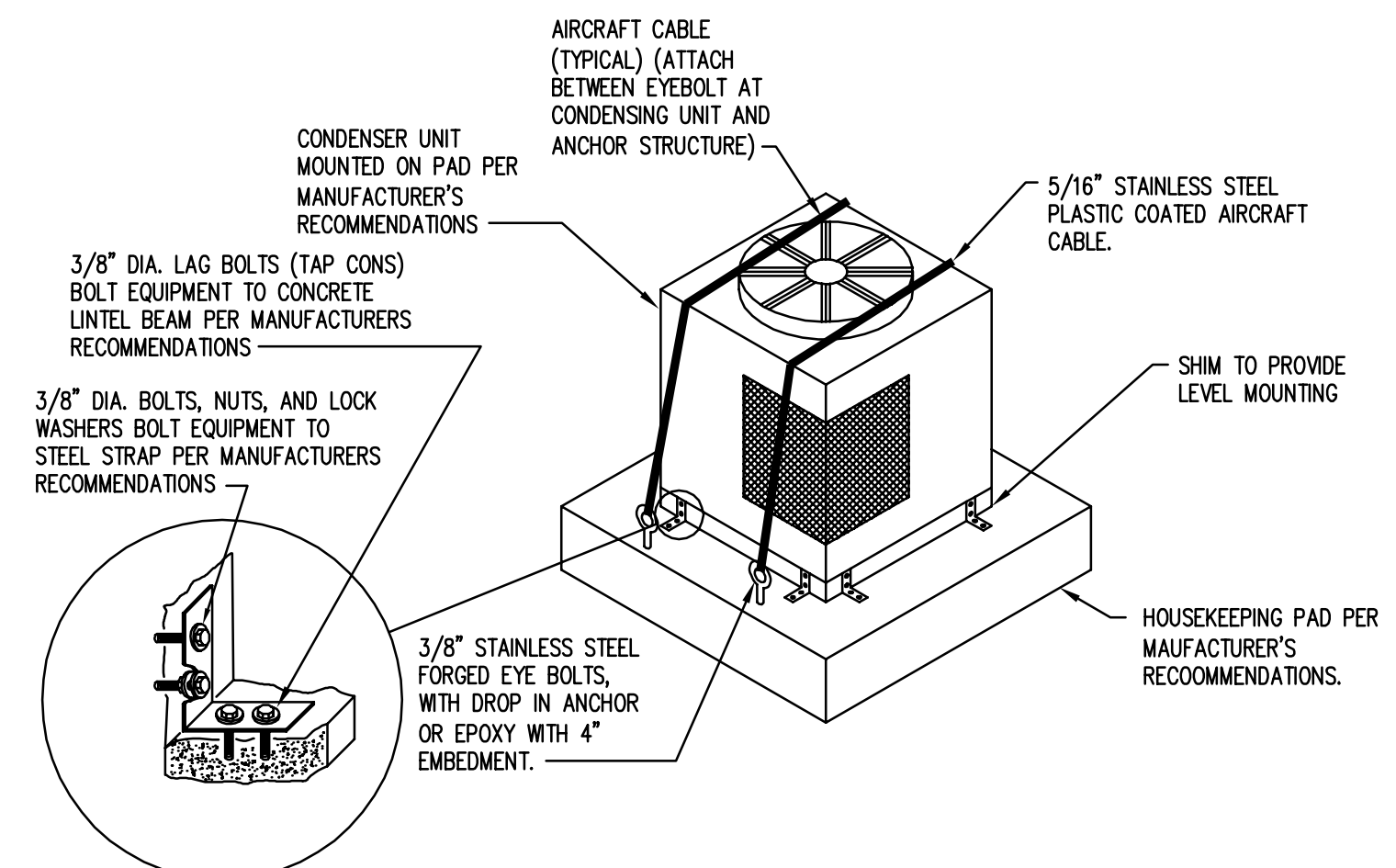


DRAIN PAN ON FAN INLET (NEGATIVE PRESSURE)      DRAIN PAN ON FAN OUTLET (POSITIVE PRESSURE)

- NOTE:  
 1. DRAIN PIPE TO BE SAME SIZE AS UNIT OUTLET, BUT NOT LESS THAN 3/4" PIPE SIZE.  
 2. "A"=SYSTEM STATIC IN INCHES AT DRAIN POINT.  
 "B"=1/2 SYSTEM STATIC IN INCHES AT DRAIN POINT.

**AIR HANDLING UNIT DRAINS**

N.T.S.



NOTE:  
 IT IS THE INTENT OF THIS DETAIL THAT THE CONTRACTOR PROPERLY INSTALL THE CONDENSER TO INSURE THAT THE CONDENSER SHALL WITHSTAND HURRICANE FORCE WINDS.

**CONDENSING UNIT MOUNTING DETAIL**

N.T.S.

MPE PROJ#: 2014-197B

Designed By: BP

Drawn By: AG/RN

Checked By: BP

Issue Date: 05/03/16

Drawing Scale: AS NOTED

Drawing Title:  
**DETAILS  
 AND SCHEDULES  
 MECHANICAL**

BID DOCUMENTS

Drawing No.

M601



GENERAL NOTES

- 120 VOLT BRANCH CIRCUITS, WHERE THE LENGTH OF CIRCUIT CONDUCTORS COMPLETE FROM CIRCUIT BREAKER IN SOURCE PANEL TO ANY DEVICE ON THE CIRCUIT IS 0-100 FEET FROM THE PANEL, ARE TO HAVE #12 MINIMUM BRANCH CIRCUIT WIRING THROUGHOUT CIRCUIT. (CONDUIT SIZE PER SPECIFICATION AND NEC).
- 120 VOLT BRANCH CIRCUITS, WHERE THE LENGTH OF CIRCUIT CONDUCTORS COMPLETE FROM CIRCUIT BREAKER IN SOURCE PANEL TO ANY DEVICE ON THE CIRCUIT IS 101-175 FEET FROM THE PANEL, ARE TO HAVE #10 MINIMUM BRANCH CIRCUIT WIRING HOMERUN (3/4"). FROM PANEL CIRCUIT BREAKER TO FIRST DEVICE AND #12 BRANCH CIRCUIT WIRING THROUGHOUT THE REMAINDER OF THE CIRCUIT. (CONDUIT SIZE PER SPECIFICATION AND NEC). FIRST 75 FEET OF COMBINED HOMERUN AND BRANCH CIRCUIT TO BE MINIMUM #10 WIRE. (3/4").
- 120 VOLT BRANCH CIRCUITS, WHERE THE LENGTH OF CIRCUIT CONDUCTORS COMPLETE FROM CIRCUIT BREAKER IN SOURCE PANEL TO ANY DEVICE ON THE CIRCUIT IS 176-225 FEET FROM THE PANEL, ARE TO HAVE #10 MINIMUM BRANCH CIRCUIT WIRING HOMERUN (3/4"). FROM PANEL CIRCUIT BREAKER TO FIRST DEVICE AND #10 BRANCH CIRCUIT WIRING THROUGHOUT THE REMAINDER OF THE CIRCUIT (3/4").
- 120 VOLT BRANCH CIRCUITS, WHERE THE LENGTH OF CIRCUIT CONDUCTORS COMPLETE FROM CIRCUIT BREAKER IN SOURCE PANEL TO ANY DEVICE ON THE CIRCUIT IS 226 FEET OR MORE FROM THE PANEL, ARE TO HAVE #8 MINIMUM BRANCH CIRCUIT WIRING HOMERUN (1") FROM PANEL CIRCUIT BREAKER TO FIRST DEVICE AND #10 BRANCH CIRCUIT WIRING THROUGHOUT THE REMAINDER OF THE CIRCUIT (3/4"). FIRST 125 FEET OF COMBINED HOMERUN AND BRANCH CIRCUIT TO BE MINIMUM #8 WIRE (1").
- ALL 277V, 20A CIRCUIT HOMERUNS OVER 100 FT. SHALL BE #10 CU. MINIMUM, UNLESS OTHERWISE NOTED.
- ALL 277V, 20A CIRCUITS WITH HOMERUNS OVER 150 FT. SHALL BE #10 CU. THROUGHOUT ENTIRE CIRCUIT MINIMUM, UNLESS OTHERWISE NOTED.
- NO MULTI-WIRE BRANCH CIRCUITS ARE TO BE USED. EACH CIRCUIT IS TO HAVE SEPARATE INDIVIDUAL NEUTRAL.
- VERIFY EXACT LOCATION OF ALL MECH. EQUIP. INCLUDING WALL SWITCHES, T'STATS, ETC. WITH MECH. CONTRACTOR AND MECH. DRAWINGS.
- REFER TO MECHANICAL EQUIPMENT SCHEDULE, FOR RESPECTIVE CONDUIT/CONDUCTORS, DISCONNECTS, MISC. EQUIPMENT REQUIRED FOR ALL MECHANICAL AND PLUMBING EQUIPMENT. REFER TO PANEL SCHEDULES FOR CIRCUITS NUMBERS OF CIRCUITS FOR MECHANICAL AND PLUMBING EQUIPMENT.
- VISIT AND CAREFULLY EXAMINE THOSE PORTIONS OF THE BUILDING AND SITE AFFECTED BY THIS WORK BEFORE SUBMITTING PROPOSALS, SO AS TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND DIFFICULTIES THAT WILL AFFECT EXECUTION OF THE WORK. SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH EXAMINATION HAS BEEN MADE AND LATER CLAIMS FOR LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WILL NOT BE RECOGNIZED.
- READ SPECIFICATIONS.
- WHERE CONDUIT ROUTING IS SHOWN, THE CONDUITS ARE SHOWN FOR DIAGRAMMATIC PURPOSES AND ARE NOT NECESSARILY REPRESENTATIVE OF EXACT PLACEMENT. THE ROUTINGS SHOWN ARE PROPOSED CONDUIT ROUTINGS. CONTRACTOR TO COORDINATE ALL ROUTING WITH OTHER TRADES PRIOR TO BID. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS AND ROUTING OF CONDUIT PRIOR TO BID. CONTRACTOR IS RESPONSIBLE FOR RELOCATING CONDUIT FROM THE PROPOSED ROUTING SHOWN TO THE ROUTING REQUIRED TO FACILITATE INSTALLATION PER SPECIFICATIONS AND APPLICABLE CODES. COMPLETE WITH ALL COORDINATION AND EXISTING CONDITIONS TAKEN INTO ACCOUNT. CONTRACTOR IS RESPONSIBLE FOR ALL CEILING AND WALL REPAIR/REPLACEMENT AFTER ROUTING OF CONDUIT.
- SPLICES IN POWER AND LIGHTING OUTLET BOXES SHALL BE KEPT TO A MINIMUM, PULL CONDUCTORS THROUGH TO DEVICES, EQUIPMENT CABINETS/PANELBOARDS. SPLICING IN WIREWAYS IS NOT PERMITTED UNLESS SPECIAL WRITTEN PERMISSION IS GRANTED BY A/E.
- NO SPLICES SHALL BE MADE IN COMMUNICATIONS OUTLET BOXES OR PULL BOXES (I.E., FIRE ALARM, COMPUTER, TELEPHONE, ETC.) UNLESS SPECIFIC WRITTEN APPROVAL HAS BEEN GIVEN BY ENGINEER. PULL CABLES THROUGH TO EQUIPMENT/TERMINAL CABINETS.
- CONTRACTOR SHALL INCLUDE IN HIS BID THE TRANSPORT AND DISPOSAL OR RECYCLING OF ALL WASTE MATERIALS GENERATED BY THIS PROJECT IN ACCORDANCE WITH ALL RULES, REGULATIONS AND GUIDELINES APPLICABLE. CONTRACTOR SHALL COMPLY FULLY WITH FLORIDA STATUTE 403.7186 REGARDING MERCURY CONTAINING DEVICES AND LAMPS. LAMPS, BALLASTS AND OTHER MATERIALS SHALL BE TRANSPORTED AND DISPOSED OF IN ACCORDANCE WITH ALL DEP AND EPA GUIDELINES APPLICABLE AT TIME OF DISPOSAL. CONTRACTOR SHALL PROVIDE OWNER WITH WRITTEN CERTIFICATION OF ACCEPTED DISPOSAL.
- MOUNT ALL DISCONNECT SWITCHES FOR MECHANICAL EQUIPMENT WITHIN 6 FT. OF EQUIPMENT CONNECTION POINT. VERIFY LOCATION OF POINT OF CONNECTION WITH EQUIPMENT INSTALLER PRIOR TO ELECTRICAL ROUGH-IN. (DRAWINGS ONLY SHOW DIAGRAMMATIC LOCATION OF CONNECTION).
- EXISTING CONDITIONS AND UTILITIES INDICATED ARE TAKEN FROM EXISTING CONSTRUCTION DOCUMENTS, VARIOUS SURVEYS, AND FIELD INVESTIGATIONS. IT IS TO BE UNDERSTOOD THAT UNFORESEEN CONDITIONS PROBABLY EXIST AND NEW WORK MAY NOT BE FIELD LOCATED EXACTLY AS SHOWN ON THE DRAWINGS. COOPERATION WITH OTHER TRADES IN ROUTING AS DETERMINED DURING CONSTRUCTION AND AS DIRECTED BY THE ENGINEER MAY BE NECESSARY AND IT IS INTENDED THAT SUCH DEVIATIONS SHALL BE CONSIDERED A PART OF THIS CONTRACT. IT IS ALSO UNDERSTOOD THAT THE PLANS ARE NOT COMPLETELY TO SCALE. THIS CONTRACTOR IS TO FIELD VERIFY DIMENSIONS OF ALL SITE UTILITIES, ETC., PRIOR TO BID AND INCLUDE ANY DEVIATIONS IN THE CONTRACT.
- REMOVE EXISTING POWER, LIGHTING, SYSTEMS, MATERIAL AND EQUIPMENT WHICH ARE MADE OBSOLETE OR WHICH INTERFERE WITH THE CONSTRUCTION OF THE PROJECT.
- REINSTALL ANY SUCH POWER, LIGHTING, SYSTEMS, MATERIALS AND EQUIPMENT WHICH ARE REQUIRED TO REMAIN ACTIVE FOR THE FACILITY TO BE FULLY FUNCTIONAL.
- ALL EXISTING ELECTRICAL IS NOT SHOWN. IT IS THE CONTRACTORS RESPONSIBILITY TO BECOME FAMILIAR WITH ALL EXISTING CONDITIONS PRIOR TO BID, AND INCLUDE IN HIS BID THE REMOVAL OF ALL ELECTRICAL EQUIPMENT, WIRE, CONDUIT, DEVICES, FIXTURES, ETC. THAT IS NOT BEING REUSED, BACK TO ITS SOURCE.
- ALL RECEPTACLES, DEVICES AND EQUIPMENT NOT SHOWN, AND IN AREAS OUTSIDE OF REMODELING SHALL REMAIN ACTIVE UNLESS OTHERWISE NOTED. FURNISH AND INSTALL ACCESSIBLE JUNCTION BOXES AND REWORK EXISTING CIRCUITS AS REQUIRED TO MAINTAIN CIRCUIT CONTINUITY TO RECEPTACLES, DEVICES AND EQUIPMENT REMAINING.
- ALL CONDUIT TO BE CONCEALED UNLESS IMPOSSIBLE DUE TO EXISTING CONDITIONS (I.E. EXPOSED CEILINGS, BUILDING EXTERIOR WALL RUNS, IMPOSSIBLE UNDERGROUND RUNS). CONCEAL ALL CONDUITS ABOVE CEILINGS OR IN WALL/COUNTERS.
- ALL OUTLET BOXES WHERE FIXTURES OR DEVICES ARE REMOVED SHALL BE REMOVED AND CEILING OR WALL SHALL BE PATCHED TO MATCH EXISTING OR NEW FINISH. IF OUTLET BOX MUST REMAIN TO MAINTAIN CONTINUITY OF CIRCUITY, AN APPROPRIATE ACCESSIBLE BLANK PLATE SHALL BE INSTALLED WITH FINISH TO MATCH EXISTING OR NEW, WHERE APPLICABLE. ALL OUTLET BOXES WHICH MUST BE REMOVED DUE TO REMOVAL OF WALL, AND WHICH MUST REMAIN ACTIVE IN ORDER TO MAINTAIN CIRCUIT CONTINUITY SHALL BE RELOCATED IN CEILING OR FLOOR, SHALL BE ACCESSIBLE, AND SHALL HAVE BLANK COVERPLATE AS DESCRIBED ABOVE.
- ALL EXISTING AND NEW CIRCUIT BREAKERS WITHIN EACH EXISTING PANELBOARD SHALL BE THE SAME MFG. TYPE, STYLE AND A.I.C. RATING OF EXISTING PANELBOARD REGARDLESS OF WHAT IS SHOWN ON PANEL SCHEDULE. FIELD VERIFY ALL EXISTING PANELBOARD(S) RELATED WITH CONTRACT AND REPLACE CIRCUIT BREAKERS AS NECESSARY TO COMPLY WITH THIS REQUIREMENT.
- ALL PATCHES OR CEILING PLATES SHALL BE PATCHED OR PAINTED.
- PAINT ALL EXPOSED CONDUIT, BOXES, ETC. TO MATCH WALL SURFACE.
- ALL OPENINGS IN FIRE RATED WALLS AND FLOORS, ETC. MADE BY RENOVATION SHALL BE SEALED AND FIREPROOFED. PROVIDE AND INSTALL FIRESTOPPING ON ALL NEW OR EXISTING CONDUIT AND/OR CABLE THAT PENETRATES ANY FIRE RATED NEW OR EXISTING WALL IN ALL AREAS AFFECTED BY THIS PROJECT. VERIFY LOCATION OF FIRE RATED WALLS WITH ARCHITECTURAL PLANS PRIOR TO BID. FIRESTOPPING SYSTEM SHALL BE AS REQUIRED BY UL FOR RATINGS OF WALL AND CONDUIT/CABLE PENETRATION.
- ALL ITEMS REMOVED AND NOT RE-USED SHALL BE IMMEDIATELY TURNED OVER TO OWNER AS THEY ARE MADE AVAILABLE BY RENOVATION. REMOVE ITEMS FROM JOB SITE AND DELIVER TO OWNERS STORAGE LOCATION(S) AS DIRECTED BY PROJECT MANAGER. DISCARD COMPLETE ITEMS WHICH OWNER ELECTS TO REFUSE.
- WORK TO BE PERFORMED IN STRICT COMPLIANCE WITH ESTABLISHED WORK SCHEDULE BEING SET FORTH BY OWNER/TENANT. COORDINATE ALL WORK. THE CONTRACTOR SHALL FURNISH ADEQUATE FORCES, CONSTRUCTION PLANT, AND EQUIPMENT, AND SHALL WORK SUCH HOURS, INCLUDING NIGHT SHIFTS, OVERTIME OPERATIONS, SUNDAY, AND HOLIDAYS IN ACCORDANCE WITH THE OWNERS OPERATIONAL SCHEDULE. IF THE CONTRACTOR FALLS BEHIND PROGRESS REQUIRED IN THE OPERATIONAL SCHEDULE, THE CONTRACTOR SHALL TAKE SUCH STEPS AS MAY BE NECESSARY TO IMPROVE HIS PROGRESS, AND THE OWNER MAY REQUIRE HIM TO INCREASE THE NUMBER OF SHIFTS AND/OR OVERTIME OPERATIONS, DAY OF WORK AND/OR THE AMOUNT OF CONSTRUCTION PLANT, AT NO ADDITIONAL COST TO THE OWNER UNDER THIS CONTRACT.
- COORDINATE WITH OWNER DEMOLITION IN BLDG. INCLUDING POWER SHUTDOWNS AND FIRE ALARM SERVICE TO AREAS. PROVIDE ALL ELECTRICAL AS REQUIRED, WHETHER SHOWN OR NOT, TO PROVIDE TEMPORARY RELOCATION AND REACTIVATION OF POWER AND FIRE ALARM TO EXISTING BUILDING AREAS DURING DEMOLITION IN EXISTING BUILDING.
- EXISTING FIRE ALARM SYSTEM CONSISTS OF MANY DIFFERENT BRANDS. EXISTING SYSTEM WIRING/CONDUIT COULD NOT ALL BE VERIFIED. WHAT IS SHOWN IS FROM AS-BUILT DRAWINGS FURNISHED THIS ENGINEER AND IS SHOWN FOR CONVENIENCE OF CONTRACTOR. IN GENERAL, SYSTEM HAS TO BE REWORKED FOR NEW SYSTEM SHOWN. PROVIDE ALL WIRE/CONDUIT, ETC. AS REQUIRED FOR PROPER OPERATION OF NEW SYSTEM AS DIRECTED BY THE ENGINEER.

DEMOLITION LEGEND

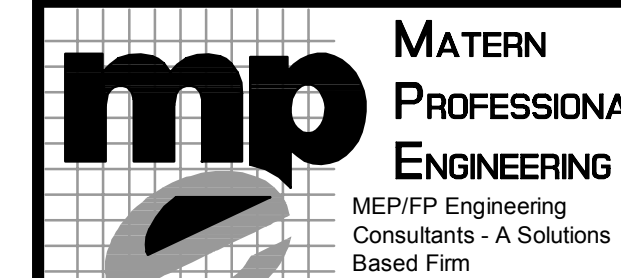
- (R1) REMOVE ALL ELECTRICAL ASSOCIATED WITH THIS ITEM, COMPLETE BACK TO ITS SOURCE. SOURCE IS CONSIDERED TO BE FIRST UPSTREAM DEVICE OR CIRCUIT BREAKER THAT FEEDS THIS AFFECTED CIRCUIT. SEE GENERAL NOTES AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- (R2) REMOVE ALL ELECTRICAL IN AREA OF REMODEL/RENOVATION COMPLETE BACK TO ITS SOURCE. SOURCE IS CONSIDERED TO BE FIRST UPSTREAM DEVICE OR CIRCUIT BREAKER OUTSIDE OF AREA OF REMODEL THAT FEEDS CIRCUITS/DEVICES WITHIN AREA OF REMODEL/RENOVATION. SEE GENERAL NOTES AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- (R3) REMOVE THE DEVICE ONLY. REFER TO RENOVATION PLAN FOR ADDITIONAL ELECTRICAL.

SYMBOL LEGEND					
SYMBOL	DESCRIPTION	DESIGN SELECTION	APPROVED SUBSTITUTION	APPROVED SUBSTITUTION	REMARKS
\$m	OUTLET BOX AND 20 AMP, 1P MANUAL MOTOR CONTROLLER WITHOUT OVERLOADS. RATED 1 HP @ 120V, 2 HP @ 277V.	P&S #PS20AC1	HUBBELL #HBL1221		c
\$2m	OUTLET BOX AND 20 AMP, 2P MANUAL MOTOR CONTROLLER WITHOUT OVERLOADS. RATED 2 HP @ 240V.	P&S #PS20AC2	HUBBELL #HBL1222		c
⊙	JUNCTION BOX AND BLANK PLATE ABOVE CEILING	STEEL CITY	RACO		b,c
⊞	CAST IRON ZINC PLATED SURFACE MTD. OUTLET BOX AND BLANK PLATE	APPLETON #FS-ID WITH #DS-100 COVER			d, e, g, c
⊞WP	CAST IRON ZINC PLATED SURFACE MTD. OUTLET BOX AND WEATHERPROOF BLANK PLATE	APPLETON #FS-ID WITH #DS-100G COVER			a, d, e, f, g, c
⊞	RELAY, AS NOTED				
⊞	CONTROL AND/OR POWER CONNECTION ON EQUIPMENT				h
⊞	DISCONNECT SWITCH, SIZE AS NOTED	SQUARE "D"	G.E.	SIEMENS	h, f
—	120/208V BRANCH CIRCUIT PANELBOARD SURFACE MOUNTED	SQUARE "D"	G.E.	SIEMENS	h
⊞	277/480V BRANCH CIRCUIT PANELBOARD SURFACE MOUNTED	SQUARE "D"	G.E.	SIEMENS	h
⊞	BRANCH CIRCUIT CONDUIT CONCEALED ABOVE CEILING OR IN WALL. SLASH MARKS INDICATE NUMBER OF CONDUCTORS (GROUND WIRE NOT SHOWN). TWO CONDUCTORS PLUS GROUND REQUIRED (UNLESS OTHERWISE NOTED OR MARKED)				
⊞	BRANCH CIRCUIT CONDUIT CONCEALED BELOW SLAB OR UNDERGROUND				
⊞	BRANCH CIRCUIT CONDUIT EXPOSED				
⊞	HOME RUN WIRING. ONE CIRCUIT PER ARROW HEAD				
⊞	CONDUIT CAPPED OFF				
⊞	CONDUIT CONTINUED				
○	CONDUIT RUN UP				
•	CONDUIT RUN DOWN				
—	CONDUIT SEAL-OFF FITTING	CROUSE HINDS	APPLETON		d
—G—	GROUND WIRE, CONCEALED				
—+—	GROUND OR GROUND ROD AS NOTED				

NOTES:

- ALL DEVICES TO BE GREY WITH SMOOTH METAL #302 S.S. PLATES UNLESS OTHERWISE NOTED.
- MOUNT SWITCHES AT 48" AFF TO TOP.
- SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- ALL ITEMS NOTED ON THE LEGENDS DO NOT NECESSARILY APPEAR ON PLANS.
  - REMARKS:
  - a) U.L. LISTED FOR WET LOCATION IN CLOSED POSITION.
  - b) SUPPORT OUTLET BOX FROM STRUCTURE WITH (1) 3/8" ALL THREADS MINIMUM. BOXES LARGER THAN 25 SQUARE INCHES SHALL BE SUPPORTED WITH (2) 3/8" ALL THREADS MINIMUM.
  - c) JUNCTION/OUTLET BOX SHALL BE SIZED AS REQUIRED FOR CONDUCTOR/DEVICE FILL PER N.E.C.
  - d) THREADED CONDUIT HUBS SHALL BE SIZED AND CONFIGURED AS REQUIRED FOR APPLICATION.
  - e) IF WITHIN 30 MILES OF THE COAST LINE, COPPER FREE CAST ALUMINUM OUTLET BOXES SHALL BE USED FOR EXTERIOR APPLICATIONS.
  - f) PROVIDE KINDORF MTG. RACK FOR FREE STANDING APPLICATIONS. KINDORF SHALL BE PVC COATED FOR EXTERIOR APPLICATIONS. ALL CUT ENDS ARE TO BE SEALED.
  - g) WHEN SURFACE JUNCTION BOX SYMBOL IS COMBINED WITH DEVICE SYMBOL, PROVIDE APPROPRIATE SURFACE PLATE FOR OUTLET APPLICATION.
  - h) MAINTAIN WORKING CLEARANCES IN STRICT ACCORDANCE WITH N.E.C. COORDINATE EXACT LOCATION OF EQUIPMENT WITH ALL DISCIPLINES (I.E. STRUCTURAL, HVAC, PLUMBING, FIRE PROTECTION, KITCHEN, MILLWORK, ETC.) PRIOR TO ROUGH-IN TO MAINTAIN CLEARANCES.

SHEET NO.	ELECTRICAL SHEET INDEX FOR	SCALE
E001	GENERAL NOTES, LEGENDS AND SHEET INDEX	NONE
E002	SYMBOL LEGEND AND FIXTURE SCHEDULE	NONE
E100	OVERALL FLOOR PLAN - POWER	1/8" = 1'-0"
E101	PARTIAL FLOOR PLANS DEMO AND RENO - ELECTRICAL	1/4" = 1'-0"
E001	ELECTRICAL SCHEDULES	NONE
E001	DETAILS ELECTRICAL	NONE



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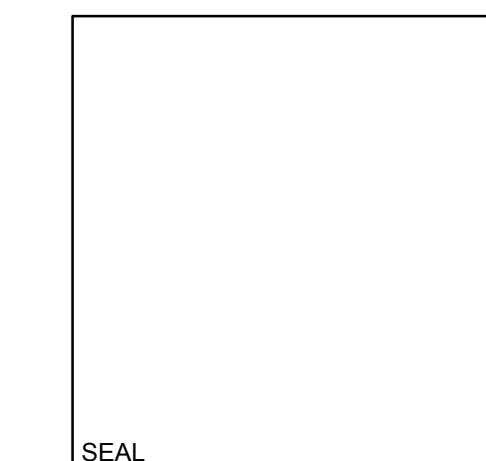
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 ENG. BUS. No. EP-0005096 CERT. OF AUTH. No. 5096

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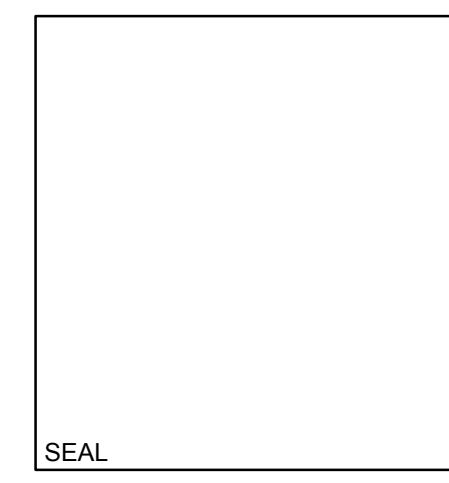
BID DOCUMENTS  
 Drawing No.  
**E001**

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**SYMBOL LEGEND AND  
 FIXTURE SCHEDULE**

BID DOCUMENTS

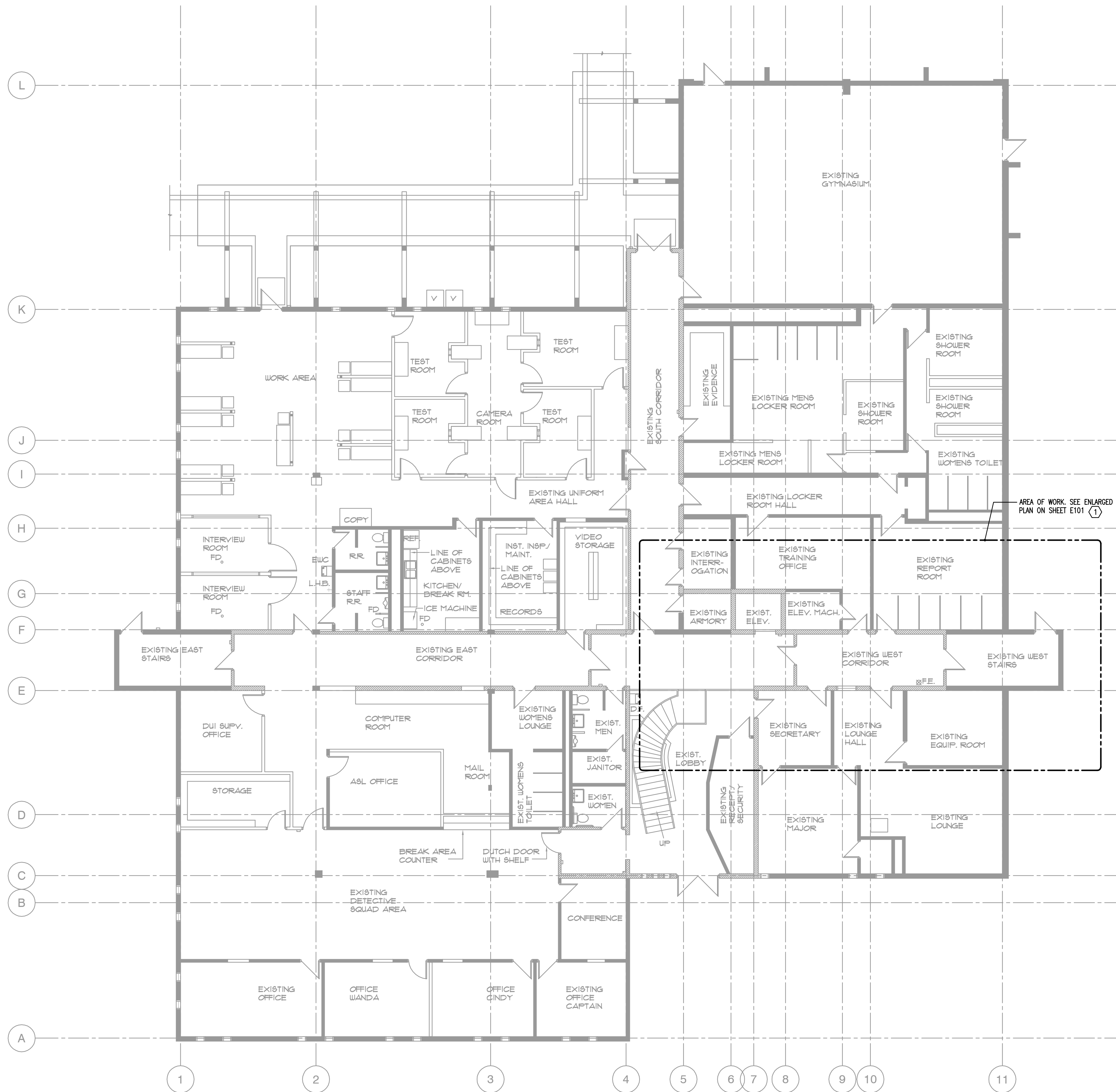
Drawing No.  
**E002**

FIRE ALARM SYSTEM SYMBOL LEGEND			
SYMBOL	DESCRIPTION	MOUNTING HEIGHT	MOUNTING
	SINGLE REMOTE SMOKE DETECTOR/ALARM INDICATING LIGHT AND TEST SWITCH STATION. NUMBER INDICATES QUANTITY OF STATIONS.	6'-0" A.F.F. TO C/L OR FLUSH IN CEILING	FLUSH
	DUCT SMOKE DETECTOR, PHOTO-ELECTRIC TYPE, WITH TUBES SIZED AS REQUIRED FOR DUCT (R/A--DENOTES RETURN AIR DUCT, S--DENOTES SUPPLY DUCT)	---	DUCT
	AHU/EXHAUST FAN SHUT-DOWN RELAY, ADDRESSABLE	WITHIN THREE FEET (3') OF STARTER	SURFACE
	FIRE ALARM CONTROL PANEL WITH SMOKE DETECTOR MOUNTED ABOVE PANEL PER NFPA.	6'-0" A.F.F. TO TOP OF FACP (UNLESS OTHERWISE NOTED)	SURFACE
	FIRE ALARM TERMINAL CABINET	6'-0" A.F.F. TO TOP OF FATC (UNLESS OTHERWISE NOTED)	SURFACE
	FIRE ALARM SYSTEM CONDUIT	---	CONCEALED
	RACEWAY INTERCEPTION POINT (TYPICAL)	CONCEALED	CONCEALED
	SMOKE DAMPER FURNISHED BY DIVISION 23, CONNECTED BY DIVISION 26	ABOVE CEILING REFER TO MECH. DRAWINGS	CONCEALED

- FIRE ALARM SYSTEM GENERAL NOTES:
- REFER TO SPECIFICATIONS.
  - REFER TO RISER DIAGRAM.
  - ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL PULL STRINGS IN ALL EMPTY RACEWAYS/CONDUITS.
  - LOCATION OF ALL DEVICES ON PLANS ARE APPROXIMATE ONLY. CONTRACTOR SHALL VERIFY EXACT LOCATIONS, HEIGHTS, ETC. WITH OWNER AND/OR ARCHITECT PRIOR TO ROUGH-IN.
  - PROVIDE FIRE STOPPING ON ALL CONDUITS PENETRATING A RATED WALL OR FLOOR.
  - ALL CABLES AND RACEWAYS TO BE CONCEALED UNLESS SPECIFICALLY NOTED OTHERWISE OR APPROVED BY ENGINEER. SEE SPECIFICATIONS AND GENERAL NOTES FOR ADDITIONAL CLARIFICATIONS.
  - ALL RACEWAY TERMINATIONS SHALL HAVE BUSHINGS AND BE GROUNDED WHERE RACEWAY IS METAL.
  - ALL WIRE/CABLE SHALL BE IN A COMPLETE RACEWAY/CONDUIT SYSTEM. INSTALL/SIZE RACEWAY SYSTEM AS REQUIRED TO COMPLY WITH SPECIFICATIONS, THE N.E.C. AND AS RECOMMENDED BY MANUFACTURER.
  - MINIMUM RACEWAY/CONDUIT SIZE TO BE 3/4".
  - CIRCUIT ALL DEVICES TO LOCAL RESPECTIVE FIRE ALARM TERMINAL CABINET (FATC).
  - PROVIDE AND INSTALL CABLE/WIRING AS RECOMMENDED BY MANUFACTURER AND APPLICABLE CODES AND STANDARDS, UNLESS OTHERWISE CALLED FOR ON DRAWINGS OR IN SPECIFICATIONS. WHERE CONFLICT EXISTS, THE LARGEST SIZE CALLED FOR SHALL BE USED.
  - SIZE PATHWAYS AS RECOMMENDED BY MANUFACTURER AND APPLICABLE CODES AND STANDARDS UNLESS OTHERWISE CALLED FOR ON DRAWINGS OR IN SPECIFICATIONS. WHERE CONFLICT EXISTS, THE LARGEST SIZE CALLED FOR SHALL BE USED.
  - ALL NEW EQUIPMENT MUST BE COMPATIBLE WITH EXISTING CONTROL PANEL. REWORK EXISTING FACP AND PROVIDE ALL ELECTRICAL AS REQUIRED FOR NEW ZONES, HORNS, DETECTORS, ETC. AND AS REQUIRED FOR PROPER INTERFACE AND OPERATION OF SYSTEM.
  - COORDINATE WITH AUTHORITY HAVING JURISDICTION PRIOR TO BID.
  - ALL EQUIPMENT/DEVICES TO BE ADDRESSABLE TYPE.
  - EACH DEVICE TO BE INDIVIDUAL ZONE/ANNUNCIATION POINT.
  - PROVIDE ALL PROGRAMMING, UPDATING, REVISIONS, ETC. REQUIRED TO MAIN CONTROL PANEL PROGRAMMING, ETC.
  - MECHANICAL AIR SYSTEM SHUT-DOWN:
    - COORDINATE SHUT-DOWN OF ALL MECHANICAL AIR SYSTEMS WITH DIVISION 15 SPECIFICATIONS, DRAWINGS, AND INSTALLER (AHU'S, EXHAUST FAN'S, FAN TERMINAL BOXES ETC.).
    - PROVIDE ALL WORK AND EQUIPMENT TO SHUT-DOWN ALL AIR MOVING EQUIPMENT AS REQUIRED BY APPLICABLE CODES.
    - VERIFY, WITH DIVISION 15 CONTRACTOR, LOCATION AND REQUIREMENTS FOR THE INTERFACE TO SHUT DOWN EQUIPMENT UPON FIRE ALARM SIGNAL.
    - UNITS REQUIRED TO BE SHUT DOWN BY THE STANDARD MECHANICAL CODE AND NOT REQUIRED TO BE SHUT-DOWN BY THE FIRE ALARM SYSTEM ARE TO HAVE ALL WORK AND EQUIPMENT PROVIDED AND INSTALLED BY DIVISION 15 CONTRACTOR.
    - WHERE REQUIRED, INSTALLER SHALL PROVIDE AND INSTALL AN INDIVIDUAL ADDRESSABLE RELAY OR MODULE AT EACH PIECE OF EQUIPMENT (I.E. AHU, EXHAUST FAN TERMINAL BOX, ETC.) FOR SHUTDOWN. DAISY-CHAINING MULTIPLE PIECES OF EQUIPMENT TO A COMMON RELAY OR MODULE SHALL NOT BE ACCEPTABLE.
  - COMPLY WITH ADA REQUIREMENTS.
  - CONTRACTOR SHALL PROVIDE, INSTALL AND TERMINATE ALL ELECTRICAL AND FIRE ALARM SYSTEM EQUIPMENT INCLUDING, BUT NOT LIMITED TO, RACEWAYS, WIRE/CABLE, CIRCUIT BREAKERS, MODULES, RELAYS (UL LISTED FOR USE WITH FIRE ALARMS), ETC., NECESSARY TO SHUT DOWN ANY AIR HANDLING UNIT (AHU), SUPPLY FAN, FAN TERMINAL BOX (FTB), ETC. (I.E. ANY AIR MOVING EQUIPMENT) REQUIRED TO BE SHUTDOWN BY FIRE ALARM SYSTEM. THIS REQUIREMENT FOR CONNECTION OF THE FIRE ALARM SYSTEM TO ANOTHER DEVICE OR SYSTEM SHALL BE EXTENDED TO INCLUDE ANY APPLICABLE CODE OR STANDARD, DIRECTLY OR INDIRECTLY REFERENCED BY THE SPECIFICATIONS, THAT REQUIRES INTERFACE WITH THE FIRE ALARM SYSTEM FOR CONTROLS OR MONITORING OF AN AIR MOVING DEVICE IN ORDER TO PROVIDE A COMPLETE CODE COMPLIANT FIRE ALARM SYSTEM. COORDINATE ALL WORK WITH DIVISION 15 (AND/OR ANY OTHER APPLICABLE DIVISION) PRIOR TO ROUGH-IN.
  - ALL ITEMS NOTED ON THE LEGENDS DO NOT NECESSARILY APPEAR ON PLANS.

TYPE	DESCRIPTION	DESIGN SELECTION	APPROVED SUBSTITUTION	APPROVED SUBSTITUTION	APPROVED SUBSTITUTION	VOLTS	LAMPS/FIX
DS1	PARABOLIC SURFACE FLUORESCENT, 8 OR 10 CELL, 1 FT X 4 FT, STATIC, 1 LAMP. LOW IRIDESCENCE SEMISPECULAR LOUVER.	DAYBRITE # 1S3P1(32)18SL	LIGHTOLIER # PLMJ8S10LS 1(32)	LITHONIA # PM3X1(32)8LD	COLUMBIA # SP214149183	120	(1)FO32T8
S2	FOUR (4) FOOT FLUORESCENT STRIP, 2 LAMP.	DAYBRITE # T2(32)	LIGHTOLIER # SW2(32)	LITHONIA # C2(32)	COLUMBIA # CS2(32)	120	(2)FO32T8
V4	FOUR (4) FOOT LONG VAPOR TIGHT FLUORESCENT, ONE-PIECE HIGH IMPACT THERMOPLASTIC BODY, .125" NOMINAL HIGH IMPACT ACRYLIC LENS, UL LISTED FOR DAMP LOCATIONS, 2 LAMP.	DAYBRITE # VD2(32)	LIGHTOLIER # STD2(32)	LITHONIA # DM2(32)	COLUMBIA # LU42(32)DMR	120	(2)FO32T8

- LIGHTING FIXTURE SCHEDULE GENERAL NOTES:
- PROVIDE ALL FLUORESCENT LIGHTING FIXTURES WITH ELECTRONIC BALLASTS AND "T8" LAMPS. CONTRACTOR SHALL UTILIZE 2, 3, OR 4 LAMP BALLASTS WHEREVER POSSIBLE FOR MASTER/SLAVE OPERATION WHILE MAINTAINING SWITCHING ARRANGEMENTS INDICATED ON DRAWINGS.
  - CONTRACTOR SHALL CAREFULLY COORDINATE THE LIGHTING FIXTURE TRIM TYPES WITH THE TYPE OF CEILING WHERE THE LIGHTING FIXTURES ARE TO BE INSTALLED. MODIFY FIXTURE CATALOG NUMBER AS REQUIRED TO COORDINATE FIXTURE WITH CEILING.
  - WHEN FIXTURE MODEL NUMBER DIFFERS FROM FIXTURE DESCRIPTION, THEN FIXTURE DESCRIPTION SHALL GOVERN.



- GENERAL NOTES
- 1) REFER TO GENERAL NOTES FOR THIS DISCIPLINE.
  - 2) REFER TO SPECIFICATIONS.

HEX NOTES  
 ① REFER TO DEMO AND RENO PLANS.

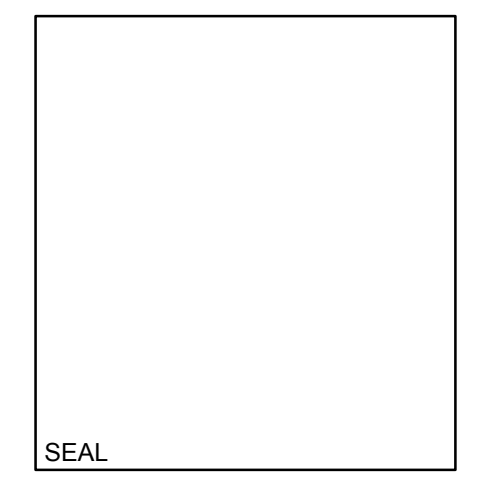
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**ORANGE COUNTY CORRECTIONS SHERIFF SECTOR IV ELEVATOR MODERNIZATION**

Key Plan

Revisions

No.	Date	Description

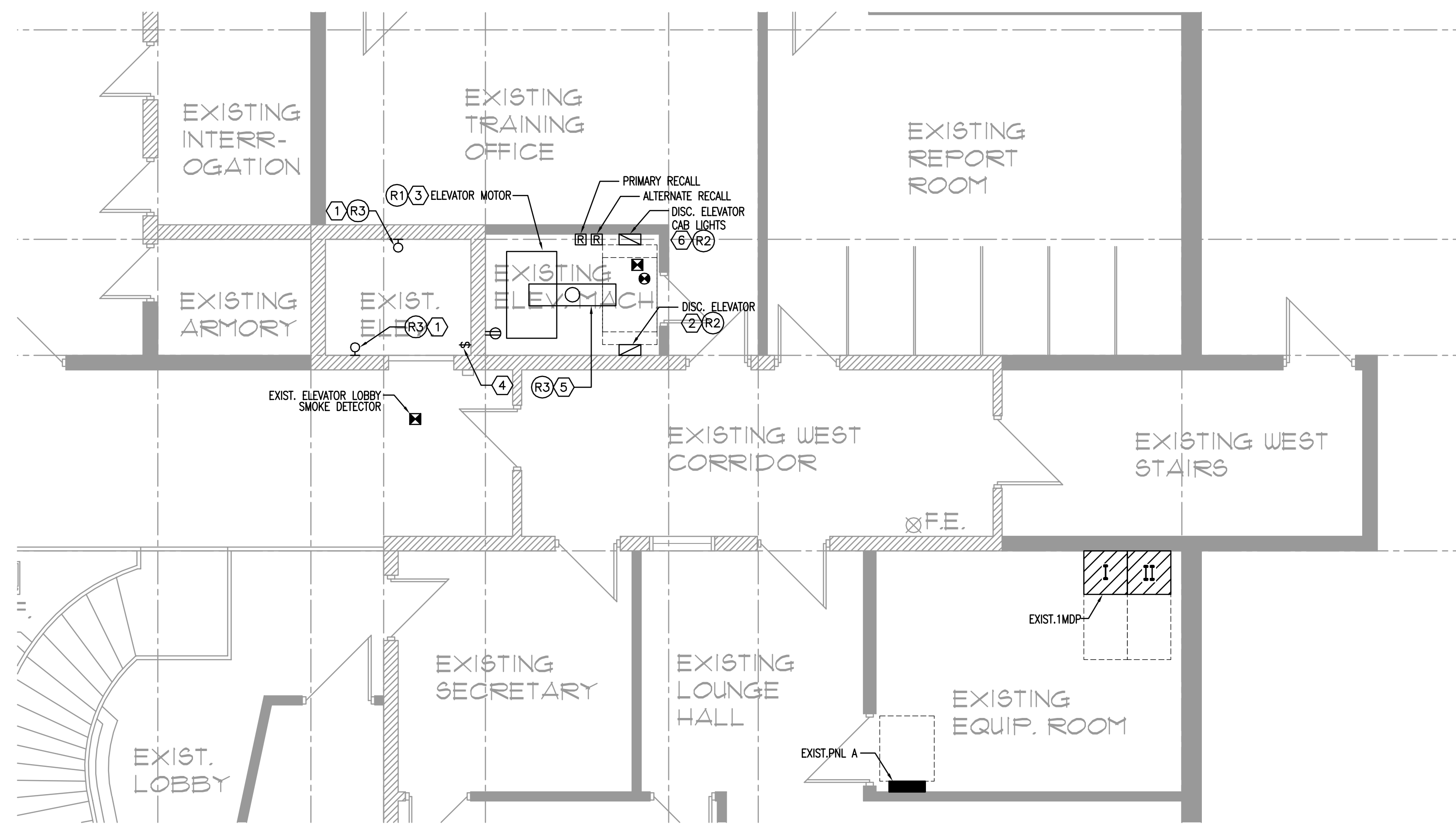


MPE PROJ#: 2014-197B  
 Designed By: RB  
 Drawn By: AG/RB  
 Checked By: CT  
 Issue Date: 05/03/16  
 Drawing Scale: 1/8"=1'-0"  
 Drawing Title:  
**OVERALL FLOOR PLAN POWER**

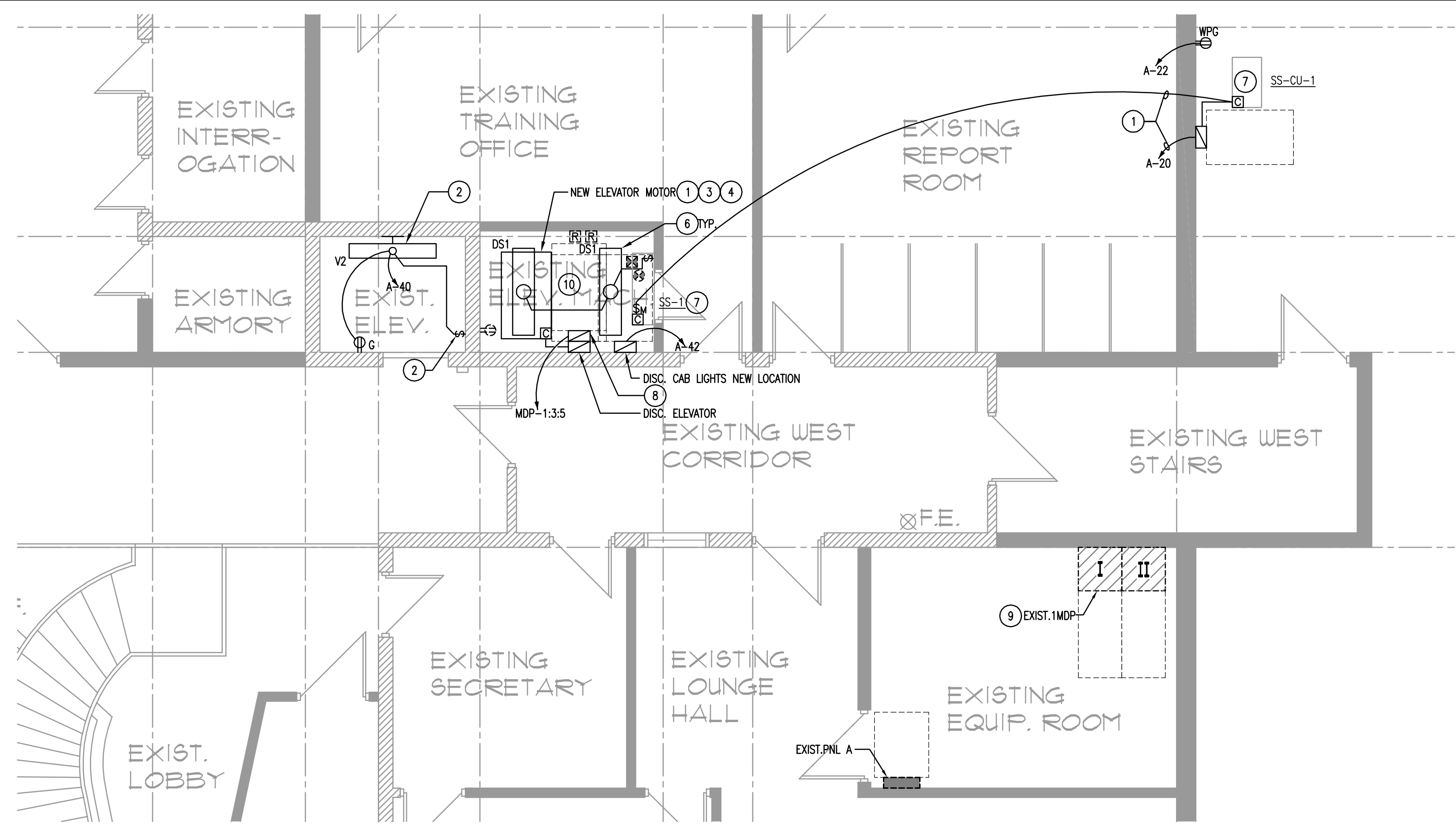
BID DOCUMENTS  
 Drawing No.  
**E100**

**OVERALL FLOOR PLAN - POWER**  
 1/8"=1'-0"  
 0 4' 8' 16'





**PARTIAL DEMO FLOOR PLAN - ELECTRICAL**  
 1/4" = 1'-0"  
 0 2' 4' 8'



**PARTIAL RENO FLOOR PLAN - ELECTRICAL**  
 1/4" = 1'-0"  
 0 2' 4' 8'

- GENERAL NOTES**
- REFER TO GENERAL NOTES FOR THIS DISCIPLINE.
  - REFER TO SPECIFICATIONS.
  - NO MULTI-WIRE BRANCH CIRCUITS ARE TO BE USED. EACH CIRCUIT IS TO HAVE SEPARATE INDIVIDUAL NEUTRAL.
  - REWORK/RELOCATE EXISTING ELECTRICAL AS REQUIRED TO FACILITATE REMODELING.
  - CONTRACTOR SHALL MAINTAIN CONTINUITY TO EXISTING DEVICES REMAINING.
  - ALL DISCONNECTING MEANS (SWITCHES) FEEDING FAN TERMINAL BOXES SHALL BE MOTOR RATED SWITCHES.
  - REFER TO MECHANICAL EQUIPMENT FEEDER AND PANEL SCHEDULES FOR ELECTRICAL REQUIREMENTS FOR MECHANICAL AND PLUMBING EQUIPMENT.
  - MOUNT ALL DISCONNECT SWITCHES FOR MECHANICAL EQUIPMENT WITHIN SIX (6) FEET OF EQUIPMENT AS REQUIRED BY APPLICABLE CODES AND STANDARDS. RELOCATE DISCONNECT SWITCHES SHOWN ON DRAWINGS TO LOCATION REQUIRED TO COMPLY WITH THIS REQUIREMENT AND APPLICABLE CODES/STANDARDS. LOCATIONS FOR DISCONNECT SWITCHES SHOWN ON DRAWINGS IS FOR GENERAL INFORMATION ONLY.
  - ALL HEX NOTES NOT NECESSARILY USED ON ALL SHEETS.
  - EXISTING CONDUIT ROUTING IS UNKNOWN.
  - WHERE CONDUIT ROUTING IS SHOWN, THE CONDUITS ARE SHOWN FOR DIAGRAMMATIC PURPOSES AND ARE NOT NECESSARILY REPRESENTATIVE OF EXACT PLACEMENT.
  - ALL EQUIPMENT ROOM PENETRATIONS SHALL BE SEALED AND ANY PATCHES PAINTED TO MATCH EXISTING WALL COLOR, INSIDE AND OUTSIDE THE EQUIPMENT ROOM.
  - CERTIFIED FIRE ALARM CONTRACTOR SHALL PERFORM TESTING ON FIRE ALARM SYSTEM AFTER PROJECT COMPLETION FOR FIRE ALARM SYSTEM FUNCTIONALITY AND COMPLIANCE WITH ALL CURRENT CODES AND STANDARDS.

- DEMO HEX NOTES**
- REMOVE EXISTING ELEVATOR PIT LIGHTS, INCLUDING WIRING AND CONDUIT WHERE CONDITION IS FOUND TO BE UNACCEPTABLE PER SPECIFICATION. REFER TO RENO PLAN THIS SHEET FOR REPLACEMENT REQUIREMENT.
  - EXISTING ELEVATOR DISCONNECT TO BE REMOVED AND REPLACED. REFER TO RENO PLAN THIS SHEET OTHER FOR REQUIREMENTS.
  - EXISTING ELEVATOR MOTOR TO BE REMOVED. SEE RENO PLAN, THIS SHEET.
  - EXISTING SWITCH FOR ELEVATOR PIT LIGHTS TO BE REPLACE AND RELOCATED IN ACCESSIBLE LOCATION REFER TO RENO PLAN.
  - REMOVE EXISTING LIGHT FIXTURE, INCLUDING WIRING AND CONDUIT WHERE CONDITION IS FOUND TO BE UNACCEPTABLE PER SPECIFICATION. REFER TO RENO PLAN THIS SHEET FOR REPLACEMENT REQUIREMENT.
  - EXISTING DISCONNECT FOR CAB LIGHTS TO BE RELOCATED. SEE RENO PLAN THIS SHEET.

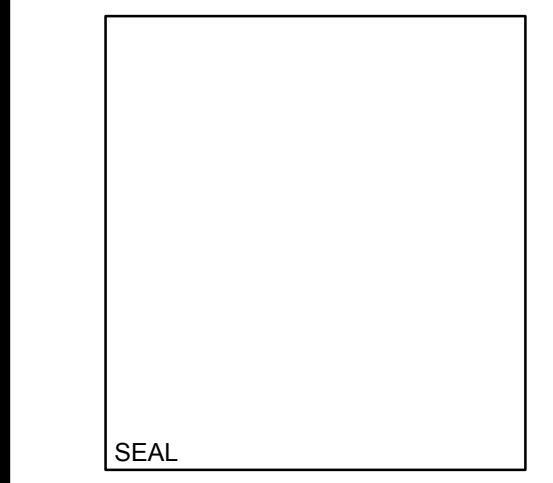
- RENO CIRCLE NOTES**
- REFER TO MECHANICAL FEEDER SCHEDULE.
  - CONNECT NEW LIGHT FIXTURES TO NEW SWITCH IN NEW LOCATION AS SHOWN. CONNECT TO EXISTING LIGHTING CIRCUIT PREVIOUSLY FEEDING PIT LIGHTING MADE SPARE BY RENOVATION. PROVIDE ALL ELECTRICAL REQUIRED TO FACILITATE RENOVATION.
  - PROVIDE ALL ELECTRICAL AS REQUIRED TO SHUNT TRIP ELEVATOR MAIN POWER SOURCE PER NFPA 70 & 72. SYSTEM IS REQUIRED TO BE SUPERVISED BY NFPA 70 & 72.
  - PROVIDE CONNECTION TO NEW ELEVATOR MOTOR. PROVIDE NEW LOCKABLE DISCONNECT WITH 20A AUX CONTACTS REJECTION CLIPS AND R4-S FUSES AS REQUIRED BY ELEVATOR INSTALLER. SEE MECHANICAL FEEDER SCHEDULE FOR MINIMUM SIZE AND NEW WIRE REQUIREMENTS.
  - PROVIDE NEW LIGHT SWITCH TO SIDE OF PIT LADDER. LOCATION SHALL BE EASILY ACCESSIBLE FROM ELEVATOR ENTRANCE. MOUNT AT 48" AFF FROM ELEVATOR LANDING.
  - CONNECT NEW LIGHT FIXTURES TO EXISTING SWITCH LOCATIONS AS SHOWN. CONNECT TO EXISTING LIGHTING CIRCUIT PREVIOUSLY FEEDING LIGHTING IN THIS SPACE MADE SPARE BY RENOVATION. PROVIDE ALL ELECTRICAL REQUIRED TO FACILITATE RENOVATION.
  - INDOOR UNIT IS FEED FROM OUTDOOR UNIT. CONFIRM REQUIREMENTS WITH MECHANICAL SPECIFICATION PRIOR TO ROUGH-IN.
  - PROVIDE ENCLOSED SHUNT TRIP DEVICE UNDER AND AHEAD OF THE ELEVATOR DISCONNECT.
  - PROVIDE NEW FUSE FOR NEW ELEVATOR EQUIPMENT SIZED AS INDICATED IN MECHANICAL FEED SCHEDULE. EXISTING BOARD IS A SQUARE-D QMB FUSIBLE SWITCH BOARD.
  - RUN AND PROVIDE A SIGNAL WIRE FROM THE EMERGENCY POWER SOURCE TO THE ELEVATOR MACHINE ROOM CONTROLLER.

**ORANGE COUNTY CORRECTIONS SHERIFF SECTOR IV ELEVATOR MODERNIZATION**

Key Plan

Revisions

No.	Date	Description



MPE PROJ#: 2014-197B  
 Designed By: RB  
 Drawn By: AG/  
 Checked By: CT  
 Issue Date: 05/03/16  
 Drawing Scale: 1/4"=1'-0"

Drawing Title:  
**PARTIAL FLOOR PLANS DEMO AND RENO ELECTRICAL**

**ORANGE COUNTY CORRECTIONS SHERIFF SECTOR IV ELEVATOR MODERNIZATION**

Key Plan

Revisions

No.	Date	Description

SEAL

MPE PROJ#: 2014-197B

Designed By: RB

Drawn By: AG/RB

Checked By: CT

Issue Date: 05/03/16

Drawing Scale: NONE

Drawing Title:

**ELECTRICAL SCHEDULES**

BID DOCUMENTS

Drawing No.

**E501**

MECHANICAL/KITCHEN EQUIPMENT FEEDER SCHEDULE FOR (9): SHERIFF SECTOR IV ELEVATOR MODERNIZATION														COPYRIGHT ME, LLC			Version: W6		REVISED: 10-30-2013		DATE: May 3, 2016							
EQUIPMENT DESCRIPTION	VOLTS	PH	NEUTRAL Y/N	LARGEST MOTOR HP	LARGEST MOTOR FLA	LARGEST MOTOR LRA	COMPRESSOR FLA(11)	ADD'L MOTORS FLA	HEAT STRIPS KW	MISC AMPS	TOTAL FLA	MCA (10)	MOCP (10)	PANEL CB (5)	DISCONNECT SWITCH			STARTER TYPE	WIRE PER PHASE (6)	NEUTRAL WIRE (7)	GROUND WIRE	WIRE MATERIAL	# OF RUNS	CONDUIT SIZE	% VD	NOTES (SEE BELOW)		
															CODE	SIZE (1)	FUSE (2)										TYPE (3)	
SS-CU-1/SS-1	120	1	Y	0.17	4.4	26.4	11	83			15	20	25		1	30	NF	3R			#10	#10	#10	COPPER	1	0.75	1.33	E.O
ELEVATOR	480	3	N	20.00	27.0	145.0					27				2	60	50	1			#8	#8	#8	COPPER	1	0.75	0.34	P

NOTES ( )

(1) PROVIDE DISC SW AT ALL PIECES OF EQUIPMENT AS REQUIRED BY THE N.E.C. AND AHJ UNLESS PROVIDED BY OTHERS (INCLUDING AT MOTORS AND AT STARTERS).

(2) FUSES SHOWN FOR REFERENCE ONLY. PROVIDE FUSES AS RECOMMENDED BY EQUIPMENT MANUFACTURER.

(3) PROVIDE NEMA OUTDOOR RATED ENCLOSURES FOR ALL DISC SWS MOUNTED OUTDOORS.

(4) COORDINATE STARTER TYPE WITH MECH EQUIP INSTALLER.

(5) CONTRACTOR TO VERIFY THAT C.B. FOR COMPRESSORS IS SUFFICIENT TO ALLOW STARTING OF UNIT, IF REQUIRED FOR STARTING C.B. TO BE INCREASED TO A MAX ALLOWED BY N.E.C. CB TO BE HACR RATED.

(6) #12 FEEDERS SHOWN AND OVER 50FT. LONG TO BE #10 FOR 120V CIRCUITS. #12 FEEDERS SHOWN AND OVER 100 FT. LONG TO BE #10 FOR 277 V CIRCUITS.

(7) NEUTRAL CONDUCTOR TO BE SAME SIZE AS PHASE CONDUCTORS.

(8) MOTOR CB IS SIZED BASED ON NEMA CODE "F" OR HIGHER. CHANGE CB SIZE IF REQUIRED DUE TO NEMA CODE OF MOTOR PER N.E.C.

(9) ALL FEEDERS 100 AMP AND LESS ARE BASED ON 60 DEGREE CONDUCTOR/TERMINATION RATING. ALL OTHER FEEDERS ARE BASED ON 75 DEGREE CONDUCTOR TERMINATIONS. PROVIDE AND INSTALL PROPER TERMINATIONS ON ALL EQUIPMENT PROVIDED BY ANY DIVISION AND/OR SECTION OF THE CONTRACT DOCUMENTS. PROPER TERMINATIONS TO BE AS REQUIRED TO MATCH CONDUCTOR WITH REQUIRED AMPACITY.

(10) BASED ON MANUFACTURER'S RECOMMENDATION.

(11) OR BRANCH CIRCUIT SELECTION CURRENT WHEN AVAILABLE.

MCP = MOTOR CIRCUIT PROTECTOR W/COMBINATION STARTER  
MMS = MANUAL MOTOR STARTER SWITCH WITH OVERLOADS AND PILOT LIGHT  
I = NEMA I ENCLOSURE  
3R = NEMA 3R ENCLOSURE  
4SS = NEMA 4 WATER TIGHT STAINLESS STEEL ENCLOSURE  
4 = NEMA 4 WATER TIGHT NON-CORROSIVE ENCLOSURE  
VFD/AFD = VARIABLE (ADJUSTABLE-FD) FREQ DRIVE UNIT  
NF = NON-FUSED, WHERE ACCEPTABLE TO AHJ, CONTRACTOR MAY USE PROPERLY RATED MOTOR SWITCH FOR DISCONNECT SWITCH  
AHJ = AUTHORITY HAVING JURISDICTION.  
FNVR = FULL VOLTAGE NON-REVERSING  
DFNVR = DUAL VOLTAGE NON-REVERSING  
FVC = FULL VOLTAGE CONTACTOR

NOTES:  
(A)=CONNECT VIA LINE VOLTAGE TSTAT BY DIV. 15/23 CONTRACTOR.  
(B)=CONNECT VIA CONTROL DEVICES BY DIV. 15/23 CONTRACTOR.  
(C)=CONNECT VIA VFD/AFD WITH INTEGRAL DISC. SW.  
(D)=CONNECT VIA COMBINATION DISC/STARTER BY DIV. 15/23 CONTRACTOR.  
(E)=CONNECT VIA DISC SWITCH AT EQUIP. BY DIV. 15/23 CONTRACTOR.  
(F)=PROVIDE FULL SIZE NEUTRAL.  
(G)=MMS WITHOUT OVERLOADS.  
(H)=CONNECT VIA STARTER IN MCC (BY DIV 16/26).  
(I)=SPEED, 1 WINDING MOTOR/STARTER.  
(J)=COORDINATE WITH DIV.15 TO BALANCE LOAD OF 1 PHASE FTB MOTORS.  
(K)=PROVIDE NEW STARTER IN MCC TO MATCH EXISTING. SEE MCC SCHED.  
(L)=WHERE MOTOR IS FED FROM MCC, PANEL CB NOT REQUIRED  
(M)=CONNECT EXIST DISC SWITCH AT MOTOR. MODIFY AS NOTED ON DRWGS  
(N)=CONNECT EXIST DISC SWITCH AT MOTOR. MODIFY AS NOTED ON DRWGS  
(O)=CONNECT VIA CONDENSING UNIT (SS-CU-1)  
(P)=PROVIDE LOCKABLE DISCONNECT SWITCH WITH 20A AUXILIARY CONTACT, REJECTION CLIPS AND PK5 FUSE AS REQUIRED BY ELEVATOR INTALLER.

SECTION 1 WITH MAINS														COPYRIGHT ME, LLC 06/01/03			VERSION: C1a		REVISED: 04/28/14						
VOLTS LN: 277 VOLTS PH: 480 PHASE : 3 MOUNTING : SURFACE TYPE : MFR :														DIST PANEL MDP (EXIST.)			EXISTING : YES								
VOLTS LN: 277 VOLTS PH: 480 PHASE : 3 MOUNTING : SURFACE TYPE : MFR :														DIST PANEL MDP (EXIST.)			EXISTING : YES								
GENERAL NOTES: (1) ALL C.B.'S FEEDING HVAC EQUIPMENT TO BE HACR TYPE. (2) ALL C.B.'S FEEDING ELEV EQUIP TO BE SHUNT-TRIP TYPE. (3) ALL C.B.'S FEEDING ELEV EQUIP TO BE SIZED AS REQ'D BY MFR. (4) ALL C.B.'S FEEDING HLD LGT TO BE HLD RATED. (5) NO MULTIWIRE BRANCH CKTS ARE ALLOWED (6) NOT USED. (7) IF HCP-SU PANEL THEN ALL BREAKERS TO BE ON ONE SIDE.														SERIES RATED FULLY RATED		AIC RATING 65 KA'		MFR = SIZE CB PER MFR. RECOMMENDATIONS. \$ = NEW CB IN EXIST SPACE & = REPLACE EXIST CB WITH NEW SH = SHUNT TRIP C.B. AF = ARC FAULT CB		OPTIONAL CALC ACTUAL CONN LOAD DEMAND DIVERSITY TRANSFORMER SIZE		NO 772 KVA 587 KVA 587 KVA KVA		928 AMPS 706 AMPS 706 AMPS KVA	
TOTAL AMPS A PH 928 TOTAL AMPS B PH 928 TOTAL AMPS C PH 928 INFO CODE:														SERIES RATED FULLY RATED		AIC RATING 65 KA'		MFR = SIZE CB PER MFR. RECOMMENDATIONS. \$ = NEW CB IN EXIST SPACE & = REPLACE EXIST CB WITH NEW SH = SHUNT TRIP C.B. AF = ARC FAULT CB		OPTIONAL CALC ACTUAL CONN LOAD DEMAND DIVERSITY TRANSFORMER SIZE		NO 772 KVA 587 KVA 587 KVA KVA		928 AMPS 706 AMPS 706 AMPS KVA	

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LOAD														DIST PANEL MDP (EXIST.)			EXISTING : YES								
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TOTAL AMPS A PH 915 TOTAL AMPS B PH 915 TOTAL AMPS C PH 915 INFO CODE:														SERIES RATED FULLY RATED		AIC RATING 65 KA'		MFR = SIZE CB PER MFR. RECOMMENDATIONS. \$ = NEW CB IN EXIST SPACE & = REPLACE EXIST CB WITH NEW SH = SHUNT TRIP C.B. AF = ARC FAULT CB		OPTIONAL CALC ACTUAL CONN LOAD DEMAND DIVERSITY TRANSFORMER SIZE		NO 772 KVA 587 KVA 587 KVA KVA		915 AMPS 706 AMPS 696 AMPS KVA	

SECTION 1 WITH MAINS														COPYRIGHT ME, LLC 06/01/03			VERSION: C1a		REVISED: 04/28/14						
VOLTS LN: 120 VOLTS PH: 208 PHASE : 3 MOUNTING : SURFACE TYPE : MFR :														PANEL: A (EXIST.)			EXISTING : YES								
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TOTAL AMPS A PH 68 TOTAL AMPS B PH 54 TOTAL AMPS C PH 78 INFO CODE:														SERIES RATED FULLY RATED		AIC RATING 65 KA'		MFR = SIZE CB PER MFR. RECOMMENDATIONS. \$ = NEW CB IN EXIST SPACE & = REPLACE EXIST CB WITH NEW SH = SHUNT TRIP C.B. AF = ARC FAULT CB		OPTIONAL CALC ACTUAL CONN LOAD DEMAND DIVERSITY TRANSFORMER SIZE		NO 24 KVA 19 KVA 19 KVA KVA		73 AMPS 59 AMPS 59 AMPS KVA	

SECTION 1 WITH MAINS														COPYRIGHT ME, LLC 06/01/03			VERSION: C1a		REVISED: 04/28/14						
LOAD														PANEL: A (EXIST-REVISED)			EXISTING : YES								
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VOLTS LN: 277 VOLTS PH: 480 PHASE : 3 MOUNTING : SURFACE TYPE : MFR :														DIST PANEL MDP (EXIST-REV)			EXISTING : YES								
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GENERAL NOTES: (1) ALL C.B.'S FEEDING HVAC EQUIPMENT TO BE HACR TYPE. (2) ALL C.B.'S FEEDING ELEV EQUIP TO BE SHUNT-TRIP TYPE. (3) ALL C.B.'S FEEDING ELEV EQUIP TO BE SIZED AS REQ'D BY MFR. (4) ALL C.B.'S FEEDING HLD LGT TO BE HLD RATED. (5) NO MULTIWIRE BRANCH CKTS ARE ALLOWED (6) NOT USED. (7) IF HCP-SU PANEL THEN ALL BREAKERS TO BE ON ONE SIDE.														SERIES RATED FULLY RATED		AIC RATING 65 KA'		MFR = SIZE CB PER MFR. RECOMMENDATIONS. \$ = NEW CB IN EXIST SPACE & = REPLACE EXIST CB WITH NEW SH = SHUNT TRIP C.B. AF = ARC FAULT CB		OPTIONAL CALC ACTUAL CONN LOAD DEMAND DIVERSITY TRANSFORMER SIZE		NO 772 KVA 587 KVA 587 KVA KVA		915 AMPS 706 AMPS 696 AMPS KVA	
TOTAL AMPS A PH 915 TOTAL AMPS B PH 915 TOTAL AMPS C PH 915 INFO CODE:														SERIES RATED FULLY RATED		AIC RATING 65 KA'		MFR = SIZE CB PER MFR. RECOMMENDATIONS. \$ = NEW CB IN EXIST SPACE & = REPLACE EXIST CB WITH NEW SH = SHUNT TRIP C.B. AF = ARC FAULT CB		OPTIONAL CALC ACTUAL CONN LOAD DEMAND DIVERSITY TRANSFORMER SIZE		NO 772 KVA 587 KVA 587 KVA KVA		915 AMPS 706 AMPS 696 AMPS KVA	

SECTION 1 WITH MAINS														COPYRIGHT ME, LLC 06/01/03			VERSION: C1a		REVISED: 04/28/14						
LOAD														DIST PANEL MDP (EXIST-REV)			EXISTING : YES								
LOAD														DIST PANEL MDP (EXIST-REV)			EXISTING : YES								
GENERAL NOTES: (1) ALL C.B.'S FEEDING HVAC EQUIPMENT TO BE HACR TYPE. (2) ALL C.B.'S FEEDING ELEV EQUIP TO BE SHUNT-TRIP TYPE. (3) ALL C.B.'S FEEDING ELEV EQUIP TO BE SIZED AS REQ'D BY MFR. (4) ALL C.B.'S FEEDING HLD LGT TO BE HLD RATED. (5) NO MULTIWIRE BRANCH CKTS ARE ALLOWED (6) NOT USED. (7) IF HCP-SU PANEL THEN ALL BREAKERS TO BE ON ONE SIDE.														SERIES RATED FULLY RATED		AIC RATING 65 KA'		MFR = SIZE CB PER MFR. RECOMMENDATIONS. \$ = NEW CB IN EXIST SPACE & = REPLACE EXIST CB WITH NEW SH = SHUNT TRIP C.B. AF = ARC FAULT CB		OPTIONAL CALC ACTUAL CONN LOAD DEMAND DIVERSITY TRANSFORMER SIZE		NO 26 KVA 21 KVA 21 KVA KVA		73 AMPS 59 AMPS 59 AMPS KVA	
TOTAL AMPS A PH 84 TOTAL AMPS B PH 56 TOTAL AMPS C PH 78 INFO CODE:														SERIES RATED FULLY RATED		AIC RATING 65 KA'		MFR = SIZE CB PER MFR. RECOMMENDATIONS. \$ = NEW CB IN EXIST SPACE & = REPLACE EXIST CB WITH NEW SH = SHUNT TRIP C.B. AF = ARC FAULT CB		OPTIONAL CALC ACTUAL CONN LOAD DEMAND DIVERSITY TRANSFORMER SIZE		NO 26 KVA 21 KVA 21 KVA KVA		73 AMPS 59 AMPS 59 AMPS KVA	

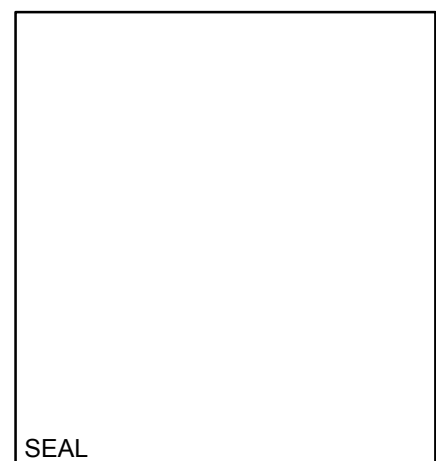
SECTION 1 WITH MAINS														COPYRIGHT ME, LLC 06/01/03			VERSION: C1a		REVISED: 04/28/14						
LOAD														PANEL: A (EXIST)			EXISTING : YES								
LOAD														PANEL: A (EXIST)			EXISTING : YES								
GENERAL NOTES: (1) ALL C.B.'S FEEDING HVAC EQUIPMENT TO BE HACR TYPE. (2) ALL C.B.'S FEEDING ELEV EQUIP TO BE SHUNT-TRIP TYPE. (3) ALL C.B.'S FEEDING ELEV EQUIP TO BE SIZED AS REQ'D BY MFR. (4) ALL C.B.'S FEEDING HLD LGT TO BE HLD RATED. (5) NO MULTIWIRE BRANCH CKTS ARE ALLOWED (6) NOT USED.														SERIES RATED FULLY RATED		AIC RATING 65 KA'		MFR = SIZE CB PER MFR. RECOMMENDATIONS. \$ = NEW CB IN EXIST SPACE & = REPLACE EXIST CB WITH NEW SH = SHUNT TRIP C.B. AF = ARC FAULT CB		OPTIONAL CALC ACTUAL CONN LOAD DEMAND DIVERSITY TRANSFORMER SIZE		NO 24 KVA 19 KVA 19 KVA KVA		67 AMPS 53 AMPS 53 AMPS KVA	
TOTAL AMPS A PH 68 TOTAL AMPS B PH 54 TOTAL AMPS C PH 78 INFO CODE:														SERIES RATED FULLY RATED		AIC RATING 65 KA'		MFR = SIZE CB PER MFR. RECOMMENDATIONS. \$ = NEW CB IN EXIST SPACE & = REPLACE EXIST CB WITH NEW SH = SHUNT TRIP C.B. AF = ARC FAULT CB		OPTIONAL CALC ACTUAL CONN LOAD DEMAND DIVERSITY TRANSFORMER SIZE		NO 24 KVA 19 KVA 19 KVA KVA		73 AMPS 53 AMPS 53 AMPS KVA	

**ORANGE COUNTY**  
**CORRECTIONS**  
**SHERIFF SECTOR IV**  
**ELEVATOR**  
**MODERNIZATION**

Key Plan

Revisions

No.	Date	Description



MPE PROJ#: 2014-197B

Designed By: RB

Drawn By: AG/RB

Checked By: CT

Issue Date: 05/03/16

Drawing Scale: NONE

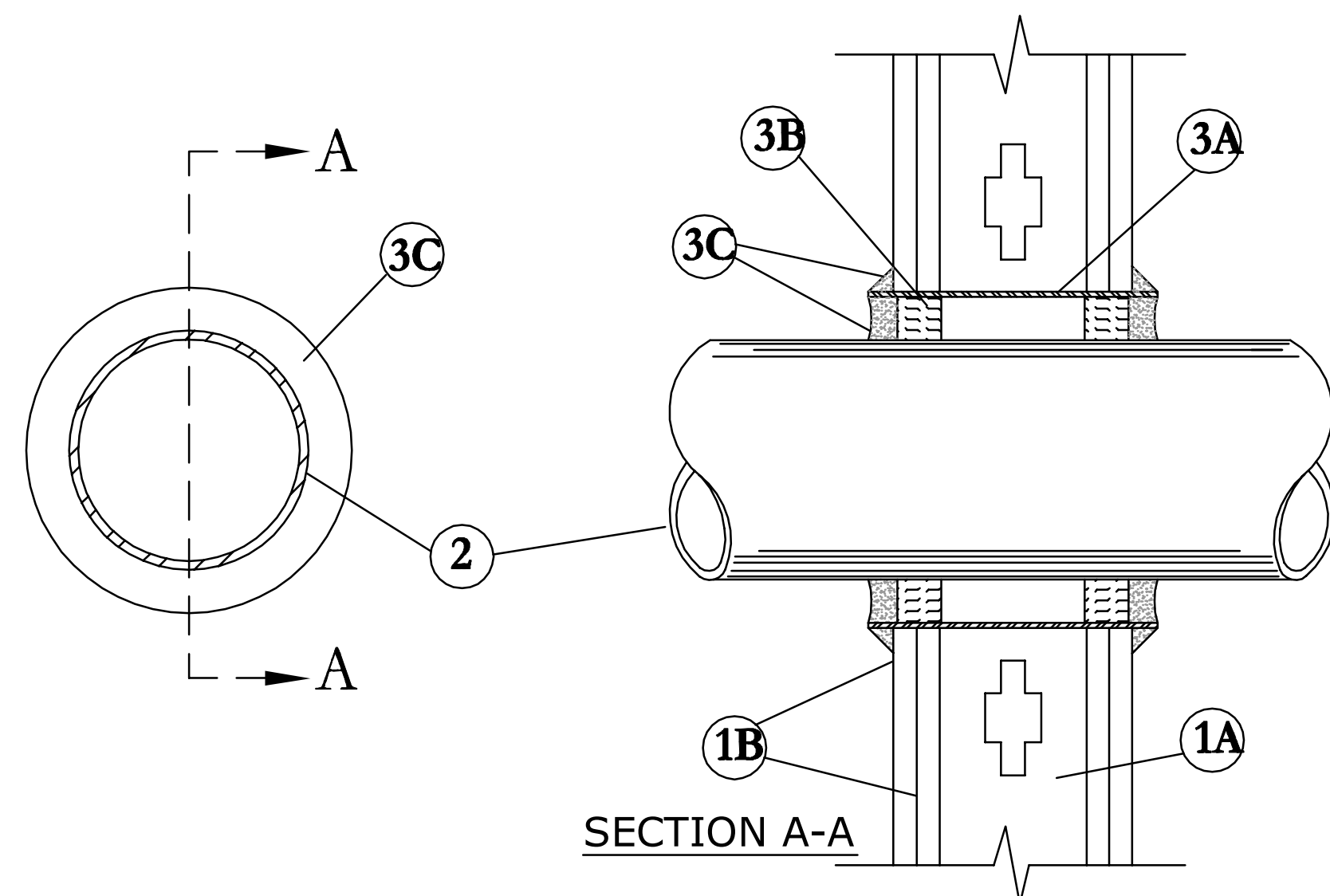
Drawing Title:  
**DETAILS**  
**ELECTRICAL**

BID DOCUMENTS

Drawing No.

**E901**

**System No. W-L-1003**  
 September 03, 2004  
 (Formerly System No. 147)  
 F Ratings - 1 and 2 Hr (See Item 1)  
 T Rating - 0 Hr



**PENETRATION FIRESTOP FOR 12" MAX. DIA. METAL PIPE/CONDUIT THROUGH GYPSUM WALLBOARD ASSEMBLY**  
 N.T.S. UL SYSTEM #147A (1 OR 2 HOUR RATING) FIREST5

1. Wall Assembly - The 1 or 2 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

A. Studs - Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC with nom 2 by 4 in. lumber end plates and cross braces. Steel studs to be min 3-1/2 in. wide by 1-3/8 in. deep channels spaced max 24 in. OC.  
 B. Gypsum Board\* - Nom 5/8 in. thick, 4 ft. wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 15 in.  
 The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

2. Through Penetrant - One metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the firestop system. The space between pipes, conduits or tubing and the steel sleeve (Item 3A) shall be min 0 in. (point contact) to max 2-3/8 in. Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:

- A. Steel Pipe - Nom 12 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.
- B. Iron Pipe - Nom 12 in. diam (or smaller) service weight (or heavier) cast iron soil pipe, nom 12 in. diam (or smaller) or Class 50 (or heavier) ductile iron pressure pipe.
- C. Conduit - Nom 6 in. diam (or smaller) steel conduit or nom 4 in. diam (or smaller) steel electrical metallic tubing.
- D. Copper Tubing - Nom 6 in. diam (or smaller) Type L (or heavier) copper tubing.
- E. Copper Pipe - Nom 6 in. diam (or smaller) Regular (or heavier) copper pipe.

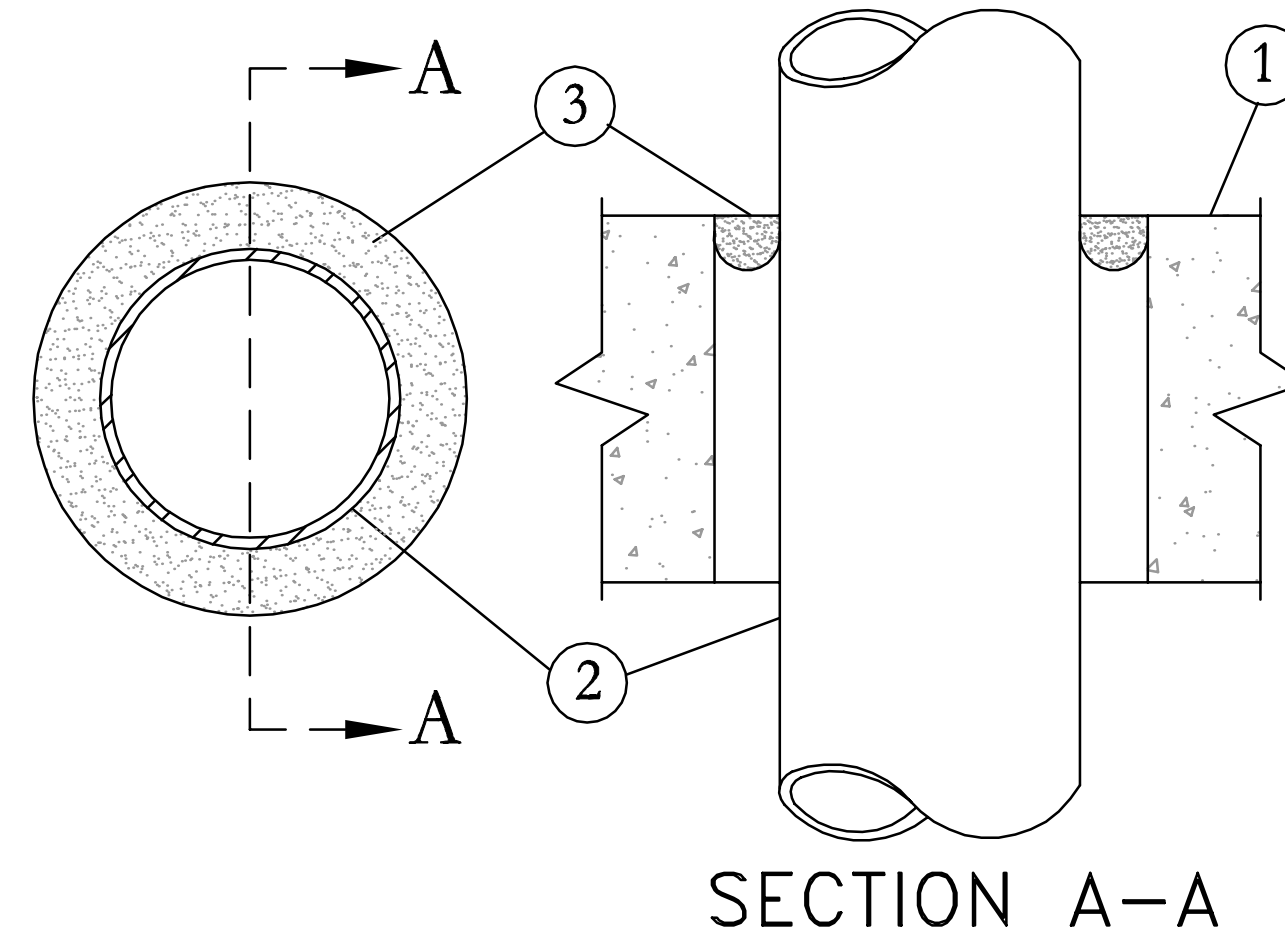
3. Firestop System - Installed symmetrically on both sides of wall assembly. The details of the firestop system shall be as follows.

- A. Steel Sleeve - Cylindrical sleeve fabricated from min 0.019 in. thick (No. 28 gauge) galv steel sheet and having a min 2 in. lap along the longitudinal seam. Length of steel sleeve to be equal to thickness of wall plus 1 to 4 in. such that, when installed, the ends of the sleeve will project approximately 1/2 to 2 in. beyond the surface of the wall on both sides of the wall assembly. Sleeve installed by coiling the sheet steel to a diam smaller than the through opening, inserting the coil through the openings and releasing the coil to let it uncoil against the circular cutouts in the gypsum wallboard layers.
- B. Packing Material - Min 1 in. thickness of mineral wool batt insulation firmly packed into steel sleeve on both sides of the wall assembly as permanent forms. Packing material to be recessed min 1/2 in. from end of steel sleeve (flush with or recessed into gypsum wallboard surface) on both sides of wall assembly.
- B1. Packing Material - (Not shown) - As an alternate to Item B, nom 1 in. thick polyethylene backer rod may be used. The backer rod is to be recessed within the steel sleeve a min of 1 in. from each surface of wall.
- C. Fill/Void or Cavity Materials\* - Caulk or Sealant - When mineral wool batt insulation is used, applied to fill the steel sleeve to a min depth of 1/2 in. on both sides of wall assembly. When backer rod is used, a min thickness of 1 in. of CP-25WB+ caulk is required flush with surface of wall. A nom 1/4 in. diam continuous bead of caulk or sealant shall be applied around the circumference of the steel sleeve at its egress from the gypsum wallboard layers on both sides of the wall assembly.

3M COMPANY - CP 25WB+ caulk or FB-3000 WT sealant.

\*Bearing the UL Classification Marking

**SYSTEM NO C-AJ-1027**  
 F RATING--3 HR  
 T RATING--0 HR



**PENETRATION FIRESTOP FOR 10" MAX. DIA. METAL PIPE/CONDUIT THROUGH A CONCRETE WALL**  
 N.T.S. UL SYSTEM #202 (1 OR 2 HOUR RATING)

- 1. Floor or Wall Assembly - Min 4-1/2 in. thick lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL Classified Concrete Blocks\*. Max diam of through opening is 12-1/4 in. See Concrete Blocks (CBT) category in Fire Resistance Directory for names of manufacturers.
- 2. Through Penetrants - One metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the firestop system. Min annular space between pipe, conduit or tubing and edge of opening is 0 in. (point contact). Max annular space is dependent on pipe, conduit or tubing type and size as well as the F Rating of the system, as shown in the table below. Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:
- A. Steel Pipe - Nom 10 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.
- B. Conduit - Nom 6 in. diam (or smaller) rigid steel conduit.
- C. Conduit - Nom 4 in. diam (or smaller) steel electrical metallic tubing or steel conduit.
- D. Copper - Tubing Nom 3 in. diam (or smaller) Type L (or heavier) copper tubing.
- E. Copper - Pipe Nom 3 in. diam (or smaller) Regular (or heavier) copper pipe.
- F. Iron Pipe - Nom 10 in. diam (or smaller) cast or ductile iron pipe.

Pipe Conduit or Tubing Type	Max Nom Pipe Conduit or Tubing Diam In.	F Rating Hr	Max Annular Space In.
2-1/2	1/2-12	3	3/4
2-1/2	1/2-12	3	3/4
4-1/2	1/2-6	3	1-1/2
4-1/2	1/2-12	3	3/4
4-1/2	1/2-20	2	7/8

- 3. Fill/Void or Cavity Materials\* - Putty - Moldable putty material kneaded by hand and applied to fill annular space to a min depth of 1 in., flush with top surface of floor. In wall assemblies, required putty thickness to be installed symmetrically on both sides of wall.

MINNESOTA MINING & MFG CO - MPS-2+

\*Bearing the UL Classification Marking

NOTES FOR FIRE STOPPING DETAILS (NEC & UL)

- 1) FIRE STOPPING DETAILS ARE SHOWN FOR GENERAL INTENT. PROVIDE FIRE STOPPING ASSEMBLY SUITABLE FOR THE APPLICATION IN COMPLIANCE WITH N.E.C. AND U.L.
- 2) DETAILS ARE BASED ON 3M PRODUCTS AND THEIR RECOMMENDED USAGE/ DETAILS. SUBSTITUTED PRODUCTS SHALL BE SUBMITTED AS OUTLINED IN SPECIFICATIONS. U.L. FIRE STOPPING ASSEMBLY DETAILS SHALL BE INCLUDED WITH PRODUCT DATA FOR REVIEW PRIOR TO INSTALLATION.