

Key Largo School Chiller Replacement

PREPARED FOR
Monroe County School District
 241 Trumbo Road
 Key West, Florida 33040



SCHOOL BOARD MEMBERS
 District 1 - Bobby Highsmith
 District 2 - Andy Griffiths
 District 3 - Mindy Conn, Chair
 District 4 - John Dick, Vice Chair
 District 5 - Dr. Sue Woltanski

SUPERINTENDENT OF SCHOOLS
 Theresa Axford

PREPARED BY

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 Florida Engineering Business Number 6093

October 6, 2020

CONSTRUCTION DOCUMENTS

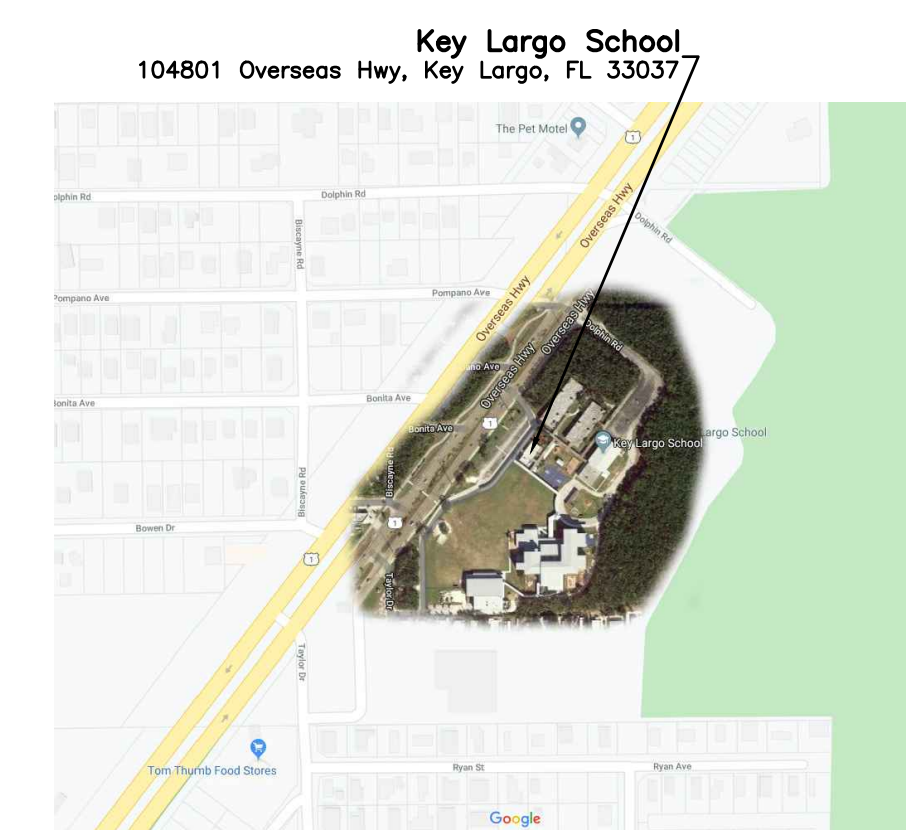
DRAWING INDEX

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LOCATION OF SITE

DATE
 10.06.2020

JOB NO.
 19070


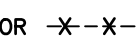






HVAC ABBREVIATIONS

A/E	ARCHITECT / ENGINEER	LF	LINEAR FOOT (FEET)
AAV	AUTOMATIC AIR VENT	LH	LATENT HEAT
AD	ACCESS DOOR	LD#	LINEAR SLOT DIFFUSER
AF#	ABOVE FINISHED FLOOR	LVR	LOUVER
AFM	AIR FLOW MEASURING DEVICE	LWT	LEAVING WATER TEMPERATURE
AH	AIR HANDLING UNIT		
AP	ACCESS PANEL	MA	MIXED AIR
APD	AIR PRESSURE DROP	MAT	MIXED AIR TEMPERATURE
AS#	AIR SEPARATOR	MAV	MANUAL AIR VENT
		MAX	MAXIMUM
		MB	MIXING BOX
BD	BUTTERFLY DAMPER	MBH	1000 BTUH
BDD	BACKDRAFT DAMPER	MERV	MINIMUM EFFICIENCY REPORTING VALUE
BFP	BACKFLOW PREVENTER	MHP	MOTOR HORSEPOWER
BOG	BOTTOM OF SIDEWALL GRILLE ELEVATION	MIN	MINIMUM
BOP	BOTTOM OF PIPE	MOV	MOTOR OPERATED VALVE
BHP	BRAKE HORSEPOWER	MTD	MOUNTED
BTU	BRITISH THERMAL UNIT	MVD	MANUAL VOLUME DAMPER
BTUH	BRITISH THERMAL UNIT PER HOUR		
		NA	NOT APPLICABLE
CAV	CONSTANT AIR VOLUME	NC	NOISE CRITERIA
CC	COOLING COIL	NC	NORMALLY CLOSED
CD#	CEILING DIFFUSER	NO	NORMALLY OPEN
CF#	CHEMICAL FEEDER	NOM	NOMINAL
CFM	CUBIC FEET PER MINUTE	NTS	NOT TO SCALE
CFT	CUBIC FEET		
CH#	CHILLER	OA	OUTSIDE AIR
CHWP	CHILLED WATER PUMP	OAI	OUTSIDE AIR INTAKE
CHWR	CHILLED WATER RETURN	OD	OUTSIDE DIAMETER
CHWS	CHILLED WATER SUPPLY		
CI	CAST IRON	P	PUMP
CLG	CEILING	PCF	POUNDS PER CUBIC FOOT (FEET)
CM	CARBON MONOXIDE	PD	PRESSURE DROP
CO	CLEAN OUT	PG	PRESSURE GAGE
CO2	CARBON DIOXIDE	PH#	LOUVERED PENTHOUSE AIR INTAKE/RELIEF
COP	COEFFICIENT OF PERFORMANCE	PPM	PARTS PER MILLION
CP	CONDENSATE PUMP	PRS	PRESSURE REGULATING (VALVE) STATION
CU#	CONDENSING UNIT	PRV	PRESSURE REGULATING VALVE
CV	CONSTANT VOLUME	PSI	POUNDS PER SQUARE INCH
CW	COLD WATER (POTABLE)	PSIA	POUNDS PER SQUARE INCH - ABSOLUTE
		PSIG	POUNDS PER SQUARE INCH - GAGE
D	DAMPER - AUTOMATIC	PTAC	PACKAGED TERMINAL AIR CONDITIONER
DB	DECIBELS		
DD	DRY-BULB TEMPERATURE	RA	RETURN AIR
DDC	DIRECT DIGITAL CONTROLS	RAT	RETURN AIR TEMPERATURE
DEG	DEGREE	REA	RELIEF AIR
DG#	DOOR GRILLE	RH	RELATIVE HUMIDITY
DH	DUCT HEATER	ROVD	REMOTE OPERATED VOLUME DAMPER
DIA	DIAMETER	RPM	REVOLUTIONS PER MINUTE
DIV	DIVISION	RR#	RETURN REGISTER
DP	DEW POINT TEMPERATURE	RS	REFRIGERANT SUCTION
DPS	DIFFERENTIAL PRESSURE SENSOR	RV	RELIEF VALVE
DX	DIRECT EXPANSION		
		SA	SUPPLY AIR
EG#	EXHAUST GRILLE	SAD	SOUND ATTENUATING DEVICE
EA	EXHAUST AIR	SAT	SUPPLY AIR TEMPERATURE
EAT	ENTERING AIR TEMPERATURE	SC	SHADING COEFFICIENT
EER	ENERGY EFFICIENCY RATIO	SCR	SILICON CONTROLLED RECTIFIER
EF	EXHAUST FAN	SD	SMOKE DETECTOR
EFF	EFFICIENCY	SDPR	SMOKE DAMPER
EJ	EXPANSION JOINT	SEN	SENSIBLE HEAT
ER#	ENERGY RECOVERY UNIT	SF	SUPPLY FAN
ESP	EXTERNAL STATIC PRESSURE	SI	SQUARE INCHES
ET#	EXPANSION TANK	SP	STATIC PRESSURE
EWT	ENTERING WATER TEMPERATURE	SP GR	SPECIFIC GRAVITY
(E)	EXISTING	SPS	STATIC PRESSURE SENSOR
		SQF	SQUARE FOOT (FEET)
F	FAHRENHEIT	SR#	SIDEWALL RETURN GRILLE
F#	FILTER/FILTER CABINET	SS	STAINLESS STEEL
F/SD	COMBINATION FIRE SMOKE DAMPER	SS#	SIDEWALL SUPPLY GRILLE
FA	FREE AREA	S#	SOLID SEPARATOR
FC	FLEXIBLE CONNECTION		
FCW	FORWARD CURVED WHEEL (FAN)	T&PCV	TEMPERATURE AND PRESSURE CONTROL VALVE
FD	FLOOR DRAIN	TAB	TESTING, ADJUSTING, BALANCE
FD	FIRE DAMPER	TD	TEMPERATURE DIFFERENCE
FM	FLOW METER	TDH	TOTAL DYNAMIC HEAD
FFM	FEET PER MINUTE	TDS	TOTAL DISSOLVED SOLIDS
FPS	FEET PER SECOND	TG	TOP OF SIDEWALL GRILLE ELEVATION
FRP	FIBER REINFORCED POLYESTER	TP	TRAP
FS	FLOW SWITCH	TSP	TOTAL STATIC PRESSURE
FT	FEET	TSTAT	THERMOSTAT
FT-LB	FOOT-POUND		
FV	FACE VELOCITY	UC	UNDER CUT
		UC	UNIT COOLER
		UH	UNIT HEATER
		V	VALVE
H&CW	HOT & COLD WATER	VAF	VANE-AXIAL FAN
HB	HOSE BIBB	VAV	VARIABLE AIR VOLUME
HC	HEATING COIL	VD	VOLUME DAMPER (MANUAL OPPOSED BLADE)
HD	HEAD	VFD#	VARIABLE FREQUENCY DRIVE
HEX	HEAT EXCHANGER	VI	VIBRATION ISOLATOR
HOA	HAND/OFF/AUTOMATIC	VP	VACUUM PUMP
HP	HORSEPOWER		
HSTAT	HUMIDISTAT	Wb	WET-BULB (TEMPERATURE)
HW	HOT WATER	WFMD	WATER FLOW MEASURING DEVICE
HX	HEAT EXCHANGER	WG	WATER GAGE
HZ	HERTZ	WM	WATER METER
		WPD	WATER PRESSURE DROP
I/O	INPUT/OUTPUT		
IAQ	INDOOR AIR QUALITY	XG#	TRANSFER GRILLE
ICF	IN-LINE CENTRIFUGAL FAN		
ID	INSIDE DIAMETER	YR	YEAR
IJS	LOCATED BETWEEN JOIST OR THROUGH JOIST WEB.		
IN	INCHES		
IN WC	INCH WATER COLUMN		
IN WG	INCH WATER GAUGE		
IN-LB	INCH-POUND		
IS	INSECT SCREEN		
J	(INTENTIONALLY LEFT BLANK)		
KW	KILOWATT		
KWH	KILOWATT HOUR		
LAT	LEAVING AIR TEMPERATURE		
LB/HR	POUNDS PER HOUR		

GENERAL MECHANICAL NOTES

- ALL MECHANICAL WORK SHALL MEET ALL OF THE REQUIREMENTS OF THE FOLLOWING:
 - FLORIDA BUILDING CODE (FBC) 6TH EDITION (2017): THIS CODE INCLUDES THE 2017 FBC BUILDING, MECHANICAL, PLUMBING, ENERGY CONSERVATION, FUEL GAS, ACCESSIBILITY, AND TEST PROTOCOLS VOLUMES. FURTHER, SEE "REFERENCED STANDARDS" IN THE FBC BUILDING CHAPTER 35; FBC MECHANICAL CHAPTER 15; FBC PLUMBING CHAPTER 14; FBC ENERGY CONSERVATION CHAPTER 6; AND FBC FUEL GAS CHAPTER 8) (EFFECTIVE DECEMBER 31, 2017).
 - 6TH EDITION OF THE FLORIDA FIRE PREVENTION CODE (FFPC): (THIS CODE ALSO INCLUDES THE FLORIDA VERSIONS OF NFPA 1 AND NFPA 101.) (EFFECTIVE DECEMBER 31, 2017).
 - 2014 NATIONAL ELECTRIC CODE.
 - 2014 STATE REQUIREMENTS FOR EDUCATIONAL FACILITIES (SREF): - (EFFECTIVE NOVEMBER 4, 2014)
- THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE LOCATION OF ALL UTILITIES IN ALL AREAS OF THE SITE BEFORE COMMENCING WORK.
- COORDINATE ALL WORK WITH OTHER AFFECTED TRADES. THE MECHANICAL CONTRACTOR SHALL FORWARD TO THE ELECTRICAL CONTRACTOR AN APPROVED COPY OF ALL EQUIPMENT SHOP DRAWINGS FOR ELECTRICAL POWER/CONTROL INTERFACE.
- COVER ALL ELECTRICAL AND MECHANICAL EQUIPMENT TO PROTECT THEM FROM DUST AND DAMAGE DURING CONSTRUCTION. RESTORE ALL FACTORY PAINTED SURFACES TO NEW CONDITION, REPAIR ALL SCRATCHES, DENTS AND ABRASIONS. THOROUGHLY CLEAN ALL SURFACES OF DUST DEBRIS, AND FOREIGN MATTER. THE EQUIPMENT, WHEN TURNED OVER TO THE OWNER, SHALL BE CLEAN AND FREE OF DEFECTS.
- AT SUBSTANTIAL COMPLETION, A LETTER FROM THE TEST AND BALANCE AGENCY SHALL BE PROVIDED INDICATING THAT THE SYSTEM IS OPERATING AS THE DESIGN INTENDS. THE COMPLETE DEFICENT-FREE TEST AND BALANCE REPORT SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW WITHIN TWO WEEKS OF SUBSTANTIAL, AND THEN TURNED INTO THE DISTRICT'S COORDINATOR WITH 30 DAYS OF SUBSTANTIAL. REFER TO THE SPECIFICATIONS FOR REQUIREMENTS.
- CHILLERS SHALL BE PLACED ON 1/4" NEOPRENE PADS ON CONCRETE HOUSEKEEPING PAD.
- IN GENERAL, PLANS ARE SCHEMATIC ONLY AND SHOULD NOT BE SCALED.
- PROVIDE SUPPLEMENTARY STEEL AS REQUIRED TO INSTALL MECHANICAL EQUIPMENT AND MATERIALS.
- RUST COAT ALL CHILLED WATER PIPING AND FITTINGS PER SPECIFICATION (TWO COATS MINIMUM AND SPECIFICALLY SMALL FITTINGS). INSTALL AIR BLEED IN APPROPRIATE LOCATIONS.
- CONTROLS CONDUITS SHALL CONFORM TO ALL REQUIREMENTS FOR DIVISION 26 CONDUITS. REFER TO DIVISION 26 SPECIFICATIONS AND DRAWINGS.
- CONCRETE SLAB/PAD IS TO HAVE NO CONTACT WITH ANY METAL PORTION OF THE EQUIPMENT OR THAT EQUIPMENT'S SUPPORT. PROVIDE 1/4" THICK RED, OR BLACK, RUBBER PAD UNDER THE ENTIRE METAL SURFACE INTENDED TO REST ON THE CONCRETE PAD.
- THE TEMPERATURE CONTROLS (INCLUDING GRAPHICS) SHALL BE IN OPERATION AT TIME OF SUBSTANTIAL COMPLETION. THIS SHALL OCCUR PRIOR TO OWNER TRAINING.
- PROVIDE DIELECTRIC UNIONS/PROTECTION AT ALL POINTS OF CONNECTION BETWEEN DISSIMILAR METALS; PIPE, PIPE HANGERS, CONNECTIONS TO STRUCTURAL STEEL, ETC.
- NOTIFY THE ARCHITECT/ENGINEER IMMEDIATELY SHOULD ANY MATTER ARISE THAT WILL NEGATIVELY AFFECT THE TESTING AND BALANCING DURING THE COURSE OF CONSTRUCTION.
- ALL SENSORS SHALL BE LABELED WITH THE ID MARK SHOWN IN THE CONTROLS CONSOLE.
- SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

HVAC LEGEND

       	BOTTOM OF PIPE ELEVATION (WITHOUT INSULATION) EXISTING - FIELD VERIFY EXACT SIZE AND LOCATION EXISTING TO BE DEMOLISHED EXISTING ITEM TO BE RELOCATED NEW LOCATION OF EXISTING ITEM CONNECT NEW TO EXISTING VIBRATION ISOLATOR ELEVATION REMOVE ALL HATCHED OR DASHED MECHANICAL ITEMS SHOWN IN THE DEMOLITION DRAWINGS.
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HVAC DRAWING INDEX

MO.1	HVAC GENERAL NOTES AND LEGEND
M1.1	CHILLER YARD HVAC PLAN AND HVAC SCHEDULES

REVISIONS	DATE

Key Largo School Chiller Replacement



Monroe County School District
241 Trumbo Road - Key West, Florida 33040

HVAC GENERAL NOTES, DETAILS, AND LEGEND



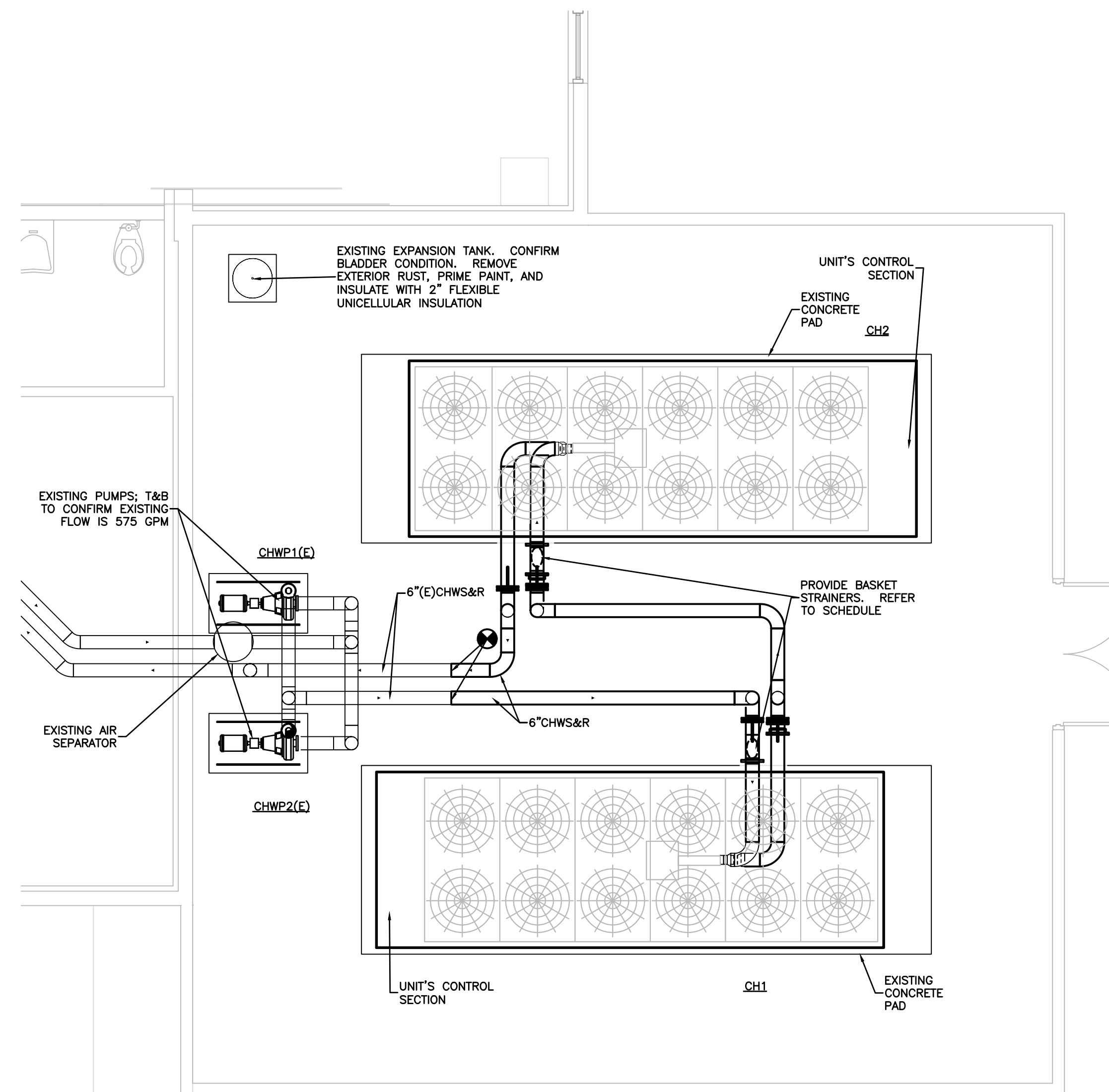
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M0.1

AIR COOLED CHILLER SCHEDULE			
MARK		CH1	CH2
COMPRESSOR TYPE	-	SCREW	SCREW
CAPACITY (MINIMUM)	TONS	192.4	171.6
CHILLED WATER FLOW	GPM	575	575
WATER PRESSURE DROP (MAX)	FT. H2O	13.7 (WITHOUT STRAINER)	13.7 (WITHOUT STRAINER)
ENTERING / LEAVING WATER TEMP.	°F/°F	57.0 / 49.1	49.1 / 42.0
AMBIENT AIR TEMPERATURE	°F	95	95
REFRIGERANT TYPE	-	R-134A	R-134A
CONDENSER FANS	QTY/FLA	12 / 3.3	12 / 3.3
COMPRESSORS	QTY	2	2
INDEPENDENT REFRIG. CIRCUITS (MIN.)	QTY	2	2
COMPRESSOR POWER INPUT	KW	211.9	212.7
ELECTRICAL	V/ø/Hz	480/3/60	480/3/60
WIRE SIZE AMPS	MCA	1 ø 363	1 ø 363
REC FUSE	MOCP AMPS	1 ø 400	1 ø 400
SOUND POWER LEVELS	1/2/3/4/5/6/7/8[dBA]	104/101/98/94/92/84/78/72[97]	105/101/98/95/93/85/79/72[97]
SOUND PRESSURE LEVELS	1/2/3/4/5/6/7/8[dBA]	77/73/71/67/65/57/51/45[70]	78/74/71/68/66/58/52/45[70]
UNIT TOTAL EER (MINIMUM)	EER	10.90	9.68
IPLV (MINIMUM)	IPLV	17.50	17.57
PERFORMANCE AT DESIGN CONDITIONS WITH AHRI AMBIENT RELIEF			
100% AT DESIGN CONDITIONS	EER	10.90	9.682
75% AT DESIGN CONDITIONS	EER	14.75	13.25
50% AT DESIGN CONDITIONS	EER	21.58	19.03
25% AT DESIGN CONDITIONS	EER	24.05	21.32
OPERATING WEIGHT	LBS.	13,010	13,010
DIMENSIONS	L"xW"xH"	255 x 88 x 100	255 x 88 x 100
LOCATION	-	CHILLER YARD	CHILLER YARD
MANUFACTURER	-	DAIKIN	DAIKIN
MODEL	-	AWV012A	AWV012A
NOTES:	-	1 THROUGH 17	1 THROUGH 17
<p>NOTES:</p> <ol style="list-style-type: none"> 1. PROVIDE SINGLE POINT POWER CONNECTION - 480V/3Ø. PROVIDE 120V TRANSFORMER AS REQUIRED FOR HEATER OR OTHER INTERNAL NEEDS. 2. PROVIDE FACTORY MOUNTED DOOR INTERLOCKING NON-FUSED DISCONNECT SWITCH. 3. CHILLER MANUFACTURER SHALL PROVIDE INTEGRAL STARTERS. 4. PROVIDE SUCTION LINE ISOLATION SHUT-OFF VALVES FOR EACH CIRCUIT. 5. PROVIDE BACNET COMMUNICATION HARDWARE, SOFTWARE AND DDC BASED WATER TEMPERATURE CONTROLS. PROVIDE INTERFACE PANEL TO CHILLER. CHILLER FAULTS AND ALARMS SHALL BE INDICATED AT THE DDC SYSTEM HEAD END. THE CHILLER MANUFACTURER SHALL ASSIST THE CONTROLS CONTRACTOR WITH MAPPING THE CHILLER'S CONTROL POINTS (CHILLED WATER SUPPLY TEMP, CHILLED WATER RETURN TEMP, PUMP START/STOP, CHILLED WATER FLOW, CHILLER START/STOP, CHILLER ALARM/RESET, ETC.) INTO THE CAMPUS CONTROLS SYSTEM. 6. PROVIDE DUAL CHILLED WATER PUMP RELAY CONTACTS FOR DDC NOTIFICATION FOR CHILLED WATER PUMP(S) OPERATION. 7. MAXIMUM ALLOWABLE SOUND POWER AND SOUND PRESSURE DATA IS LISTED ABOVE. SOUND PRESSURE LEVELS RATED IN ACCORDANCE WITH ARI STANDARD 370. ALL SOUND VALUES AT 100% FAN SPEED. 8. MAXIMUM WEIGHTED SOUND PRESSURE IS 70.0 DBA AT 30.0 FEET FROM SIDES OF UNIT, MAXIMUM WEIGHTED SOUND POWER IS 99.0 DBA. PROVIDE COMPRESSOR SOUND ENCLOSURES AND QUIET FANS AS REQUIRED TO MEET THESE LEVELS. 9. PROVIDE PHASE VOLTAGE MONITOR, UNDER/ OVERVOLTAGE PROTECTION. 10. PROVIDE FACTORY MOUNTED AND WIRED THERMAL DISPERSION WATER FLOW PROVING SENSOR. 11. CAPACITIES LISTED ARE MINIMUM REQUIRED AT DESIGN CONDITIONS LISTED. 12. SHOULD THE CHILLER'S CONTROLLER DETECT LOSS OF EVAPORATOR WATER FLOW, THE CHILLER SHALL BE LATCHED OUT OF OPERATION UNTIL CLEARED AT THE CHILLER'S CONTROL PANEL. LOSS OF POWER AT THE CHILLER SHALL NOT CLEAR ITS CONTROLLER'S OPERATIONAL STATUS OR CONTROL LATCHED-OUT STATES. 13. CHILLERS ARE CONFIGURED FOR SERIES FLOW. 14. PROVIDE FACTORY COIL COATING. ENTIRE CHILLER FRAME AND CABINET SHALL BE COATED. 15. PROVIDE ALTERNATE PRICING FOR THE FOLLOWING (SEE SPECIFICATION 23 6423.20-1.6.B): <ol style="list-style-type: none"> A. ALTERNATE A - 5-YEAR PARTS, LABOR, REFRIGERANT WARRANTY, AND PREVENTATIVE MAINTENANCE. 16. THE EXISTING POWER CIRCUITS ARE BEING REUSED. CONTRACTOR / CHILLER VENDOR SHALL CONFIRM THE CHILLER'S COMPATIBILITY WITH THE EXISTING POWER SERVICE OR PROVIDE NEW POWER SERVICE INCLUDING ENGINEERING AT NO ADDITIONAL COST TO THE OWNER. 17. REFER TO SPECIFICATIONS. <p>CONTRACTOR SHALL FIELD INSTALL THE FOLLOWING:</p> <ol style="list-style-type: none"> A. INSTALLING CONTRACTOR SHALL PROVIDE FIELD APPLIED STRAINER WITH PERFORATED (0.0625" HOLES) BASKET AT CHILLER INLET CONNECTION SIZE SHALL BE THE CONNECTING LINE SIZE AND NOT THE CHILLER INLET SIZE. B. INSTALLING CONTRACTOR SHALL FIELD APPLY 2" FLEXIBLE UNICELLULAR INSULATION EQUIVALENT TO ARMAFLEX ON ALL COLD SURFACES AND FACTORY INSULATION. C. ALL EXPOSED WIRING OTHER THAN THAT IN THE CHILLER'S POWER OR CONTROLS CABINET INCLUDING LOW VOLTAGE SHALL BE SHEATHED. FIELD APPLIED SHEATHING IS ACCEPTABLE. 			

CONTROLS SCOPE

EXISTING CONTROLS ARE SCHNEIDER ELECTRIC BY ADVANCED CONTROL CORPORATION. DISCONNECT EXISTING CONTROLS AT CHILLERS AND EXTEND CONDUITS AND CONTROL WIRING AND RECONNECT TO NEW CHILLER CONTROL PANEL. COORDINATE WITH CHILLER SHOP DRAWINGS. EXISTING CHILLER PLANT CONTROL SEQUENCE SHALL REMAIN AS IS. REFER TO SPECIFICATIONS SECTION 23 0900.



CHILLER YARD HVAC PLAN
SCALE: 1/8" = 1'-0"

REVISIONS	DATE

**Key Largo School
Chiller Replacement**

Monroe County School District
241 Trumbo Road - Key West, Florida 33040


 BUILDING BRIDGES
TOWARDS SUCCESS

CHILLER YARD HVAC PLAN AND
HVAC SCHEDULES

AGI
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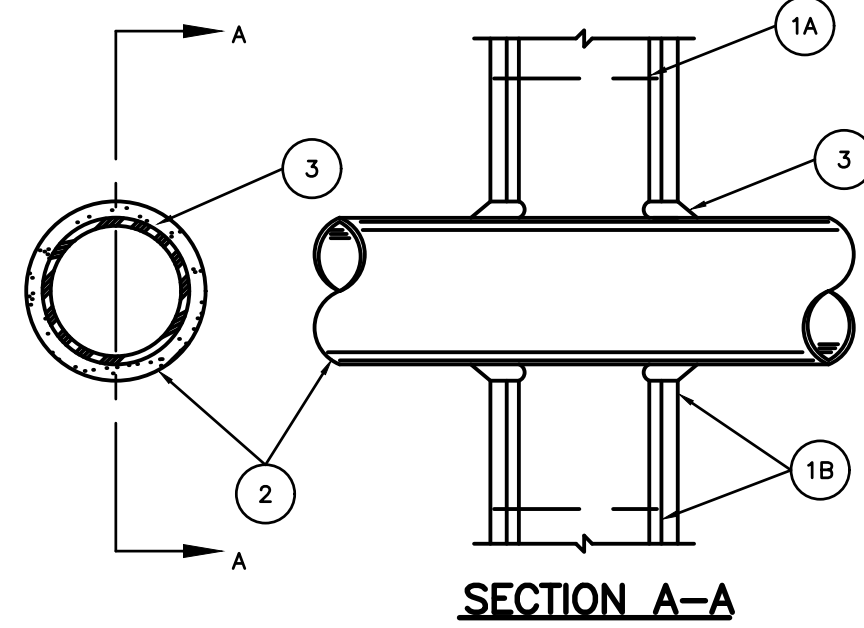
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DATE	10.06.2020
SCALE	AS NOTED
JOB NO.	19070
DRAWING NO.	M1.1

STEPHEN R. FORKNER, P.E. 80532
TO THE BEST OF MY KNOWLEDGE, THESE DRAWINGS AND THE PROJECT MANUAL ARE COMPLETE AND COMPLY WITH THE 2017 FLORIDA BUILDING CODE

System No. W-L-1001

June 15, 2005

F Ratings - 1, 2, 3 and 4 Hr (See Items 2 and 3)
T Ratings - 0, 1, 2, 3, and 4 Hr (See Item 3)
L Rating At Ambient - less than 1 CFM/sq ft
L Rating At 400 F - less than 1 CFM/sq ft



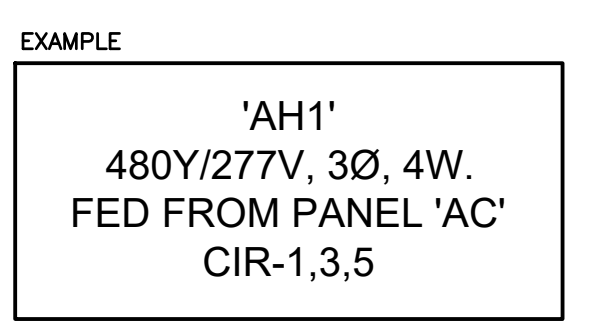
FIRE-RATED WALL PENETRATION DETAIL FOR PIPE OR CONDUIT NOT TO SCALE

- 1. WALL ASSEMBLY - THE 1, 2, 3 OR 4 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 DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:
A. STUDS - WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS (MAX 2 H FIRE RATED ASSEMBLIES) OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 BY 4 IN. (51 BY 102 MM) LUMBER SPACED 16 IN. (406 MM) OC WITH NOM 2 BY 4 IN. (51 BY 102 MM) LUMBER END PLATES AND CROSS BRACES. STEEL STUDS TO BE MIN 3-5/8 IN. (92 MM) WIDE BY 1-3/8 IN. (35 MM) DEEP CHANNELS SPACED MAX 24 IN. (610 MM) OC.
B. GYPSUM BOARD* - NOM 1/2 OR 5/8 IN. (13 OR 16 MM) THICK, 4 FT. (122 CM) 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 DIAMETER OF OPENING IS 26 IN. (660 MM).
C. THROUGH-PENETRANT - ONE METALLIC PIPE, CONDUIT OR TUBING INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. THE ANNULAR SPACE BETWEEN PIPE, CONDUIT OR TUBING AND PERIPHERY OF OPENING SHALL BE MIN OF 0 IN./ (0 MM). (POINT CONTACT) TO MAX 2 IN. (51 MM) 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 24 IN. (610 MM) DIAM (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE.
B. IRON PIPE - NOM 24 IN. (610 MM) DIAMETER (OR SMALLER) SERVICE WEIGHT (OR HEAVIER) CAST IRON SOIL PIPE, NOM 12 IN (305 MM) DIAMETER (OR SMALLER) OR CLASS 50 (OR HEAVIER) DUCTILE IRON PRESSURE PIPE.
C. CONDUIT - NOM 6 IN. (152 MM) DIAMETER (OR SMALLER) STEEL CONDUIT OR NOM 4 IN (102 MM) DIAMETER (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING
D. COPPER TUBING - NOM 6 IN. (152 MM) DIAMETER (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING
E. COPPER PIPE - NOM 6 IN. (152 MM) DIAMETER (OR SMALLER) REGULAR (OR HEAVIER) COPPER PIPE.
F. THROUGH PENETRATING PRODUCT* - FLEXIBLE METAL PIPING THE FOLLOWING TYPES OF STEEL FLEXIBLE METAL GAS PIPING MAY BE USED:
1) NOM 2 IN. (51 MM) DIAMETER (OR SMALLER) STEEL FLEXIBLE METAL GAS PIPING. PLASTIC COVERING ON PIPING MAY OR MAY NOT BE REMOVED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY. OMEGA FLEX INC
2) NOM 1 IN. (25 MM) DIAMETER (OR SMALLER) STEEL FLEXIBLE METAL GAS PIPING. PLASTIC COVERING ON PIPING MAY OR MAY NOT BE REMOVED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY. GASTITE, DIV OF TITFLEX
3) NOM 1 IN. (25 MM) DIAMETER (OR SMALLER) STEEL FLEXIBLE METAL GAS PIPING. PLASTIC COVERING ON PIPING MAY OR MAY NOT BE REMOVED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY. WARD MFG L L C
3. FILL, VOID OR CAVITY MATERIAL* - CAULK OR SEALANT - MIN 5/8, 1-1/4, 1-7/8 AND 2-1/2 IN. (16, 32, 48 AND 64 MM) THICKNESS OF CAULK FOR 1, 2, 3 AND 4 HR RATED ASSEMBLIES, RESPECTIVELY, APPLIED WITHIN ANNULUS, FLUSH WITH BOTH SURFACES OF WALL, MIN 1/4 IN. (6 MM) DIAMETER BEAD OF CAULK APPLIED TO GYPSUM BOARD/PENETRANT INTERFACE AT POINT CONTACT LOCATION ON BOTH SIDES OF WALL. THE HOURLY F RATING OF THE FIRESTOP SYSTEM IS DEPENDENT UPON THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED, AS SHOWN IN THE FOLLOWING TABLE. THE HOURLY T RATING OF THE FIRESTOP SYSTEM IS DEPENDENT UPON THE TYPE OR SIZE OF THE PIPE OR CONDUIT AND THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED, AS TABULATED BELOW:
TABLE: MAX PIPE OR CONDUIT DIAM. IN (MM), F RATING HR, T RATING HR
MAX PIPE OR CONDUIT DIAM. IN (MM) | F RATING HR | T RATING HR
1 (25) | 1 or 2 | 0+, 1 or 2
1 (25) | 3 or 4 | 3 or 4
4 (102) | 1 or 2 | 0
6 (152) | 3 or 4 | 0
12 (305) | 1 or 2 | 0
+WHEN COPPER PIPE IS USED, T RATING IS 0 H.
3M COMPANY - CP 25WB+ OR FB-3000 WT.
* INDICATES SUCH PRODUCTS SHALL BEAR THE UL OR CUL CERTIFICATION MARK FOR JURISDICTIONS EMPLOYING THE UL OR CUL CERTIFICATION (SUCH AS CANADA), RESPECTIVELY.
LAST UPDATED ON 2005-06-15

ELECTRICAL LEGEND

Table with columns: SYMBOL, DESCRIPTION, MOUNTING. Contains various electrical symbols like branch circuit conduit, raceway, homerun, conduit capped, communication outlets, receptacles, switches, motors, etc.

THIS IS A STANDARD LEGEND. NOT ALL DEVICES SHOWN ARE USED IN THESE DOCUMENTS.



- NOTES:
1. EQUIPMENT NAME.
2. VOLTAGE AND PHASE.
3. LOCATION FROM WHICH EQUIPMENT IS BEING FED FROM. INCLUDE CIRCUIT NUMBERS.

TYPICAL NAMEPLATE DETAIL NOT TO SCALE

ELECTRICAL GENERAL NOTES: (THESE NOTES APPLY TO ALL SHEETS)

- 1. ALL ELECTRICAL WORK SHALL MEET ALL OF THE REQUIREMENTS OF THE FOLLOWING:
A. FLORIDA BUILDING CODE (FBC) 6TH EDITION (2017); THIS CODE INCLUDES THE 2017 FBC BUILDING MECHANICAL, PLUMBING, ENERGY CONSERVATION, FUEL GAS, ACCESSIBILITY, AND TEST PROTOCOLS VOLUMES; FURTHER, SEE "REFERENCED STANDARDS" IN THE FBC BUILDING CHAPTER 35; FBC MECHANICAL CHAPTER 15; FBC PLUMBING CHAPTER 14; FBC ENERGY CONSERVATION CHAPTER 6; AND FBC FUEL GAS CHAPTER 8) (EFFECTIVE DECEMBER 31, 2017)
B. 6TH EDITION OF THE FLORIDA FIRE PREVENTION CODE (FFPC); (THIS CODE ALSO INCLUDES THE FLORIDA VERSIONS OF NFPA 1 AND NFPA 101.) (EFFECTIVE DECEMBER 31, 2017)
C. 2014 NATIONAL ELECTRIC CODE
D. 2014 STATE REQUIREMENTS FOR EDUCATIONAL FACILITIES (SREF): (EFFECTIVE NOVEMBER 4, 2014)
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VISIT THE SITE AND VERIFY THE EXISTING CONDITIONS TO GAIN KNOWLEDGE OF THE SCOPE OF WORK INVOLVED.
3. "PROVIDE" SHALL MEAN "FURNISH AND INSTALL".
4. IN GENERAL, THESE DRAWINGS ARE SCHEMATIC IN NATURE AND SHOULD NOT BE SCALED. IT SHALL NOT BE THE INTENT OF THESE PLANS AND/OR SPECIFICATIONS TO SHOW EVERY MINOR DETAIL OF CONSTRUCTION. PROVIDE ALL ITEMS NECESSARY FOR A COMPLETE AND OPERATIONAL SYSTEM.
5. ELECTRICAL INSTALLATION SHALL BE CLOSELY COORDINATED WITH ALL OTHER TRADES. REVIEW THE ENTIRE SET OF DOCUMENTS FOR COORDINATION. NO COST SHALL BE ASSOCIATED WITH ILL-TIMED INSTALLATION INCLUDING ANY REPAIRS OR REPLACEMENTS.
6. ALL CONDUITS AND BOXES SHALL BE CONCEALED UNLESS OTHERWISE NOTED. ALL CONDUIT RUNS ARE SCHEMATIC IN NATURE. EXACT ROUTING IS TO BE DETERMINED IN THE FIELD UNLESS OTHERWISE NOTED.
7. APPLY A BITUMASTIC COATING FOR ALL CONDUITS PENETRATING FLOOR SLABS FROM BELOW GRADE.
8. PROVIDE ALL REQUIRED PULL BOXES, JUNCTION BOXES, ETC. FOR A COMPLETE INSTALLATION.
9. PATCH, REPAIR AND REPAINT ALL WALLS THAT HAVE BEEN DAMAGED DUE TO ELECTRICAL ROUGH-IN. REMOVE ANY UNUSED CONDUIT AND WIRE.
10. PROVIDE FIRE-STOPPING AT ALL FIRE WALL PENETRATIONS. USE A U.L. APPROVED SYSTEM LISTED FOR THE ASSOCIATED INSTALLATION.
11. ALL CONDUCTORS SHALL BE STRANDED COPPER, THN/THWN, MINIMUM #12 AWG. ALL CONDUCTORS SHALL BE IN CONDUIT. FLEXIBLE CONDUIT SHALL BE LIMITED TO A MAXIMUM OF 6'-0" IN LENGTH.
12. MC CABLE OR OTHER PREMANUFACTURED CABLING SHALL NOT BE USED UNLESS APPROVED BY THE OWNER AND ENGINEER.
13. ALL CIRCUITS SHALL CONTAIN A SEPARATE, GREEN, COPPER GROUNDING CONDUCTOR.
14. ALL RECEPTACLES SHALL HAVE A GROUND TERMINAL.
15. WHEN REUSING OR EXTENDING EXISTING CIRCUITS, VERIFY ALL CIRCUIT NUMBERS AND VERIFY ANY EXISTING LOAD. CIRCUITS MAY BE PICKED UP AT AN EXISTING JUNCTION BOX IF AVAILABLE RATHER THAN PROVIDING A SEPARATE HOMERUN TO A PANEL.
16. RECESSED LIGHTING FIXTURES SHALL BE SUPPORTED FROM THE STRUCTURE AT (4) POINTS. DO NOT SUPPORT FIXTURES FROM THE CEILING GRID, MECHANICAL PIPING, DUCTWORK, CONDUIT OR OTHER NON-STRUCTURAL BUILDING MEMBERS. PROVIDE SUPPLEMENTAL STEEL AS REQUIRED FOR INSTALLATION.
17. THE COLOR OF ALL RECEPTACLES, TOGGLE SWITCHES AND COVERPLATES SHALL BE VERIFIED WITH THE ARCHITECT PRIOR TO ORDERING.
18. PANELBOARDS SHALL BE ACCURATELY LABELED TO IDENTIFY FINAL CIRCUIT NUMBERS UTILIZED, THEIR LOAD AND LOCATION.
19. ALL HVAC CONTROLS CONDUIT SHALL BE FURNISHED AND INSTALLED BY DIVISION 26 IN ACCORDANCE WITH DIVISION 26 REQUIREMENTS. ALL LOW VOLTAGE (120V AND UNDER) HVAC CONTROL WIRING FOR DIVISION 23 EQUIPMENT AND DEVICES SHALL BE PROVIDED BY DIVISION 26. INSTALLED IN ACCORDANCE WITH REQUIREMENTS OF DIVISION 26. REFER TO SPECIFICATION SECTION HVAC CONTROLS - 23 0900 AND THE HVAC CONTROLS SPECIFIED ON THE DRAWINGS, FOR CONTROLS RACEWAYS, BOXES AND WIRING TO BE PROVIDED BY DIVISION 26.
20. ALL EXTERIOR FASTENERS, ANCHORS, SUPPORTS, AND MOUNTING HARDWARE SHALL BE HOT DIPPED GALVANIZED OR STAINLESS STEEL.
21. PROVIDE FIRE RETARDANT U.L. APPROVED SEALANT ON ALL PENETRATIONS OF FIRE RATED PARTITIONS, WALLS AND STRUCTURAL SLABS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY, PRIOR TO SUBMITTING BID, LOCATIONS OF ALL SUCH FIRE RATED PARTITIONS, WALL AND STRUCTURAL SLABS.
22. SEE SPECIFICATION FOR ADDITIONAL REQUIREMENTS.

ABBREVIATIONS:

Table with columns: ABBREVIATION, DESCRIPTION. Lists terms like AFF (Above Finished Floor), AFG (Above Finished Grade), E (Existing), ETR (Existing to Remain), etc.

ELECTRICAL DRAWING INDEX

Table with columns: DRAWING NO., DESCRIPTION. Lists E0.1 (Electrical Legend, General Notes, and Details), E1.1 (Bldg. 10 1st Floor Electrical Plan), and E1.2 (Enlarged Chiller Yard Plan and Panel Schedules).

REVISIONS | DATE table with columns for revision tracking.

Key Largo School Chiller Replacement Monroe County School District 241 Trumbo Road, Key West, Florida 33040



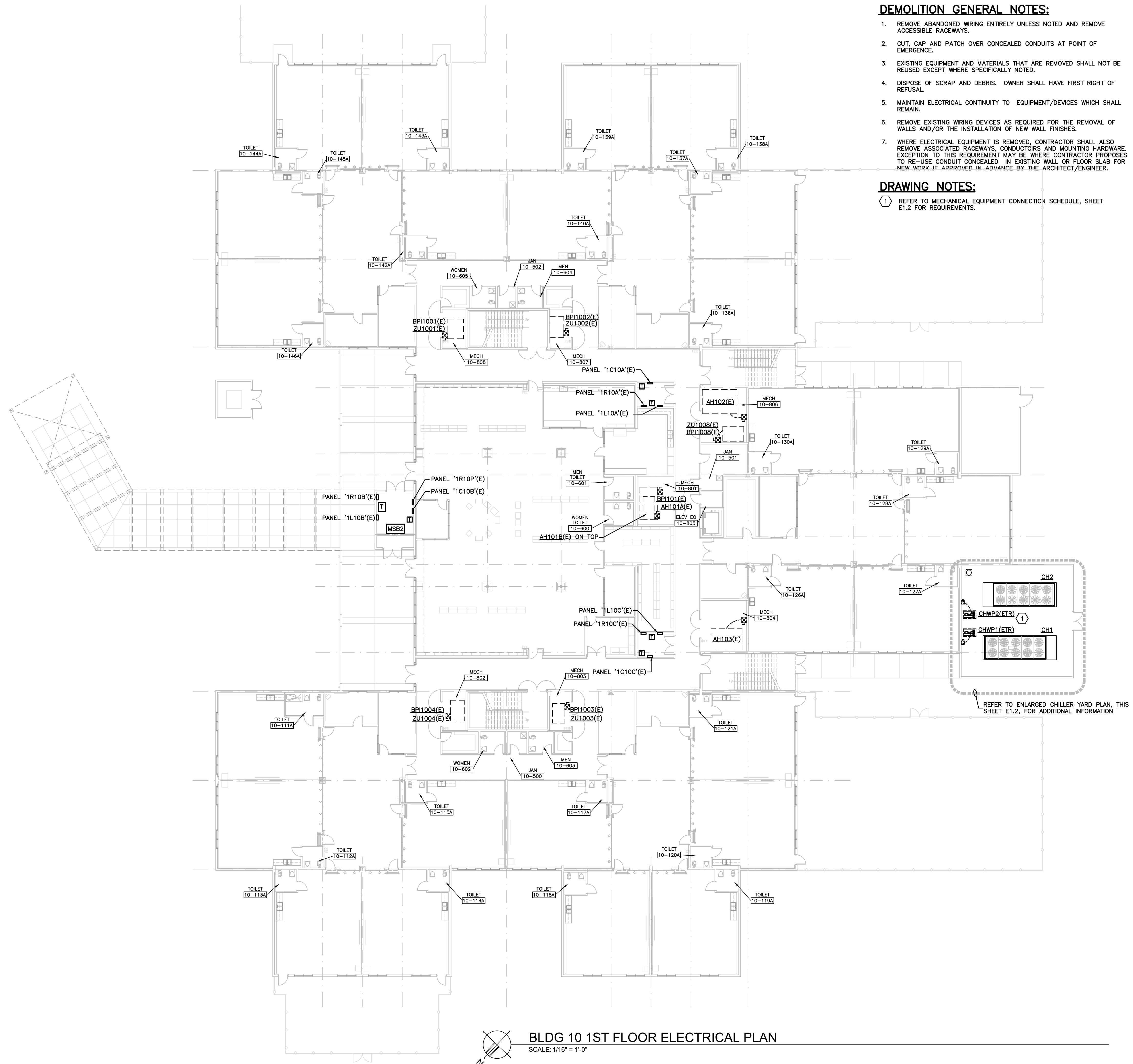
ELECTRICAL LEGEND, GENERAL NOTES, AND DETAILS

Anston-Greenlees, Inc. Mechanical & Electrical Consulting Engineers AGI

DRAWN TRG CHECKED RCA DATE 10.06.2020 SCALE AS NOTED JOB NO. 19070 DRAWING NO.

E0.1

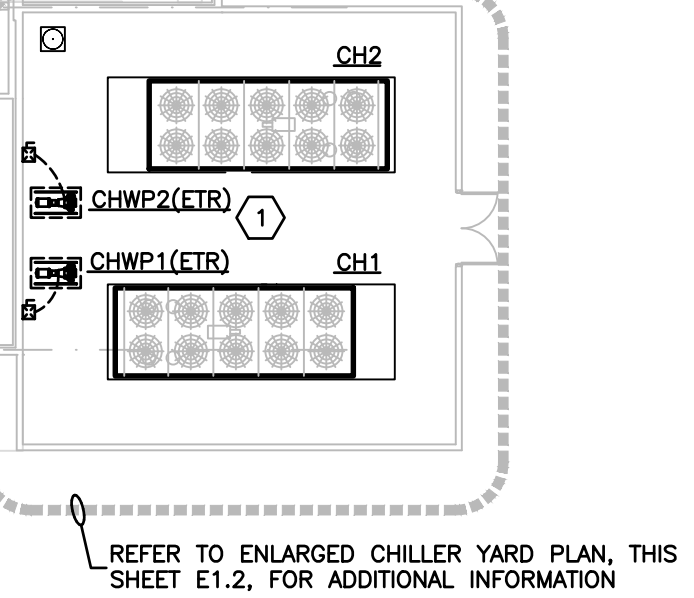
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 Plotted by: Chris Oct 06, 2020 - 3:59pm



BLDG 10 1ST FLOOR ELECTRICAL PLAN
 SCALE: 1/16" = 1'-0"

- DEMOLITION GENERAL NOTES:**
1. REMOVE ABANDONED WIRING ENTIRELY UNLESS NOTED AND REMOVE ACCESSIBLE RACEWAYS.
 2. OUT, CAP AND PATCH OVER CONCEALED CONDUITS AT POINT OF EMERGENCE.
 3. EXISTING EQUIPMENT AND MATERIALS THAT ARE REMOVED SHALL NOT BE REUSED EXCEPT WHERE SPECIFICALLY NOTED.
 4. DISPOSE OF SCRAP AND DEBRIS. OWNER SHALL HAVE FIRST RIGHT OF REFUSAL.
 5. MAINTAIN ELECTRICAL CONTINUITY TO EQUIPMENT/DEVICES WHICH SHALL REMAIN.
 6. REMOVE EXISTING WIRING DEVICES AS REQUIRED FOR THE REMOVAL OF WALLS AND/OR THE INSTALLATION OF NEW WALL FINISHES.
 7. WHERE ELECTRICAL EQUIPMENT IS REMOVED, CONTRACTOR SHALL ALSO REMOVE ASSOCIATED RACEWAYS, CONDUITORS AND MOUNTING HARDWARE. EXCEPTION TO THIS REQUIREMENT MAY BE WHERE CONTRACTOR PROPOSES TO RE-USE CONDUIT CONCEALED IN EXISTING WALL OR FLOOR SLAB FOR NEW WORK IF APPROVED IN ADVANCE BY THE ARCHITECT/ENGINEER.

- DRAWING NOTES:**
- 1 REFER TO MECHANICAL EQUIPMENT CONNECTION SCHEDULE, SHEET E1.2 FOR REQUIREMENTS.



REVISIONS	DATE

**Key Largo School
Chiller Replacement**

Monroe County School District
241 Trumbo Road - Key West, Florida 33040



**BUILDING BRIDGES
TO SUCCESS**

BUILDING 10 1ST FLOOR ELECTRICAL PLAN

AGI
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Florida Engineering License Number 805

DRAWN	TRG
CHECKED	RCA
DATE	10.06.2020
SCALE	AS NOTED
JOB NO.	19070
DRAWING NO.	E1.1

ROBERT C. ANSTON, P.E. 40858
 TO THE BEST OF MY KNOWLEDGE, THESE DRAWINGS AND THE PROJECT MANUAL ARE COMPLETE AND COMPLY WITH THE 2017 FLORIDA BUILDING CODE

MECHANICAL EQUIPMENT CONNECTION SCHEDULE											COMBINATION STARTER/DISCONNECT SWITCH				INTERLOCK/REMARKS
MARK	ROOM NO.	VOLTAGE/PHASE	KW	HP	FLA	MCA	BREAKER	HOMERUN CIRCUIT	CONDUIT & CABLE	SIZE AMPS	POLES	FUSE	STARTER SIZE	NEMA RATING	
AIR COOLED CHILLER															
CH1	YARD	480/3	-	-	309.5	363.0	400	MSB2-19,21,23	3" C.; 3-#400 KCMIL, 1-#3 GND.	DIV23	-	-	-	-	SEE NOTE 1
		120/1	-	-	12.0	15.0	20	1R10C-33	3/4" C.; 2-#12, 1-#12 GND.	MRS	-	-	-	3R	SEE NOTE 2
CH2	YARD	480/3	-	-	309.5	327.8	400	MSB2-20,22,24	3" C.; 3-#400 KCMIL, 1-#3 GND.	DIV23	-	-	-	-	SEE NOTE 1
		120/1	-	-	12.0	15.0	20	1R10C-35	3/4" C.; 2-#12, 1-#12 GND.	MRS	-	-	-	3R	SEE NOTE 2

MFS = MANUFACTURER'S RECOMMENDED FUSE SIZE
MRS = MOTOR RATED TOGGLE SWITCH BY DIVISION 26
VFD = VARIABLE FREQUENCY DRIVE (FURNISHED BY DIVISION 23) INSTALLED BY DIVISION 26

NF = NON-FUSED
DIV23 = DISCONNECTING MEANS PROVIDED BY THE MANUFACTURER OR DIVISION 23 CONTRACTOR

MECHANICAL EQUIPMENT CONNECTION SCHEDULE NOTES:

- REUSE EXISTING BREAKER, CONDUIT AND WIRE. PROVIDE ALL REQUIRED EXTENSIONS TO EXISTING CIRCUIT TO MAKE CONNECTION TO NEW EQUIPMENT.
- USE EXISTING SPARE BREAKER FROM PANEL AND PROVIDE NEW CONDUIT AND WIRE TO NEW EQUIPMENT.

DEMOLITION GENERAL NOTES:

- REMOVE ABANDONED WIRING ENTIRELY UNLESS NOTED AND REMOVE ACCESSIBLE RACEWAYS.
- CUT, CAP AND PATCH OVER CONCEALED CONDUITS AT POINT OF EMERGENCE.
- EXISTING EQUIPMENT AND MATERIALS THAT ARE REMOVED SHALL NOT BE REUSED EXCEPT WHERE SPECIFICALLY NOTED.
- DISPOSE OF SCRAP AND DEBRIS. OWNER SHALL HAVE FIRST RIGHT OF REFUSAL.
- MAINTAIN ELECTRICAL CONTINUITY TO EQUIPMENT/DEVICES WHICH SHALL REMAIN.
- WHERE ELECTRICAL EQUIPMENT IS REMOVED, CONTRACTOR SHALL ALSO REMOVE ASSOCIATED RACEWAYS, CONDUCTORS AND MOUNTING HARDWARE. EXCEPTION TO THIS REQUIREMENT MAY BE WHERE CONTRACTOR PROPOSES TO RE-USE CONDUIT CONCEALED IN EXISTING WALL OR FLOOR SLAB FOR NEW WORK IF APPROVED IN ADVANCE BY THE ARCHITECT/ENGINEER.

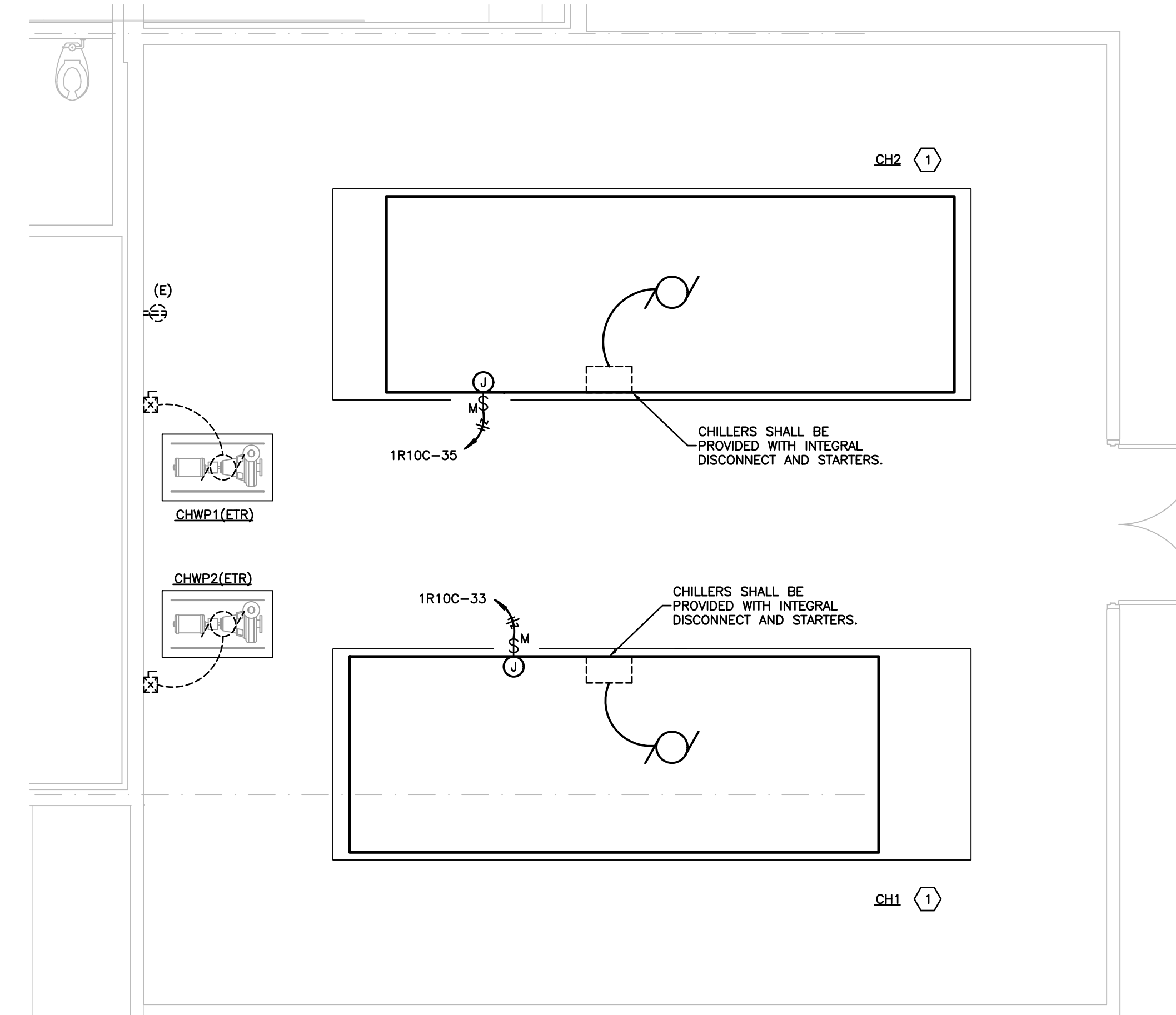
DRAWING NOTES:

- THE EXISTING CHILLER WILL BE DEMOLISHED IN THIS PROJECT. REMOVE ANY AND ALL OBSOLETE OR DEMOLISHED RACEWAYS, BOXES, CIRCUITS, AND EQUIPMENT, ETC. ALL DEMOLITION SHALL BE CAREFULLY COORDINATED WITH THE NEW WORK.

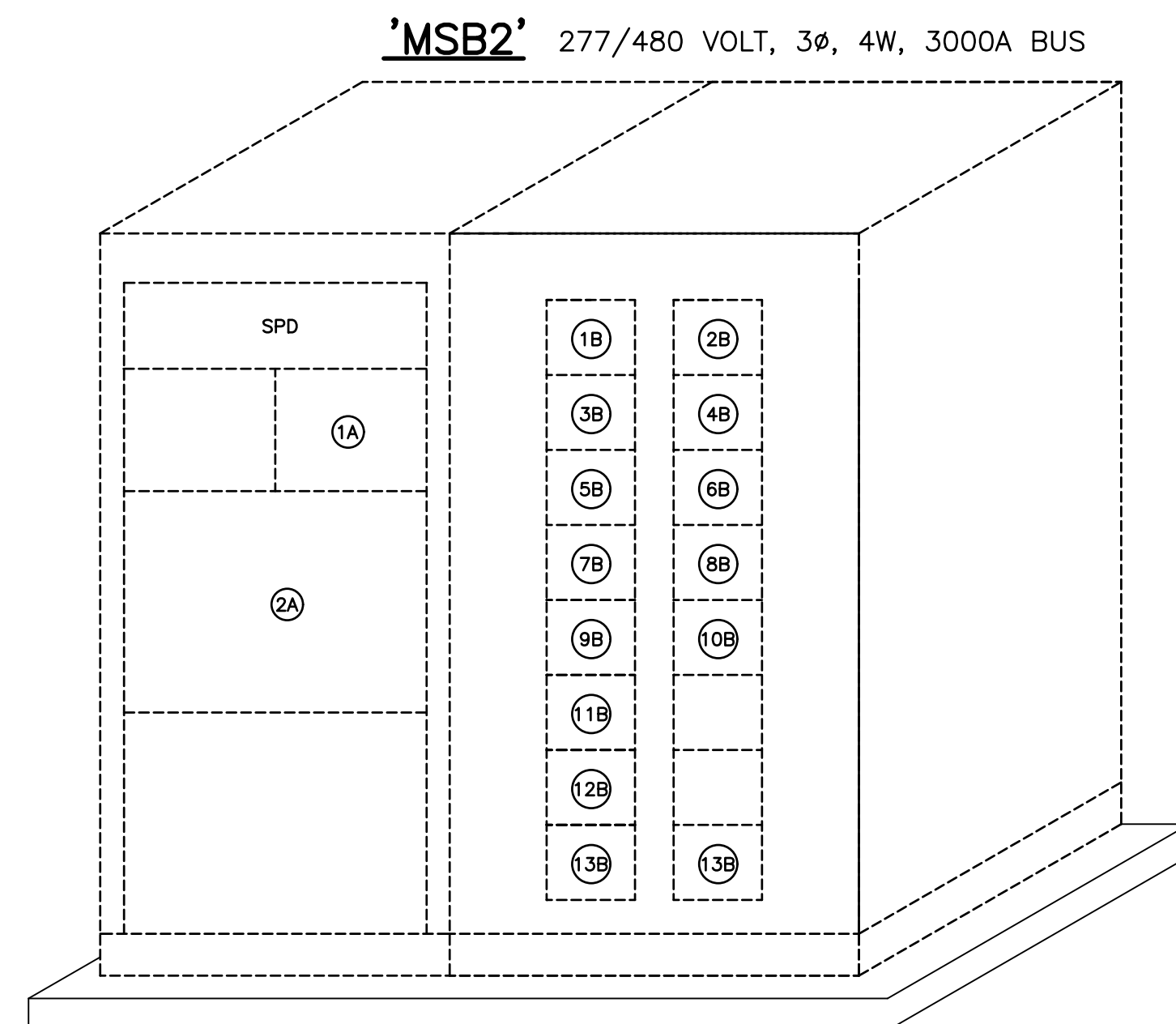
EXISTING PANEL '1R10C'											BUILDING 10										
PANEL: 1R10C AIC RATING: EXIST AMPS SERVICE: 120/208 V.,											3PH,4W										
DESCRIPTION											DESCRIPTION										
E REC; 1406, 08	1	20	1								2	20	1.2	REC; 1506, 08	E						
E REC; 1405, 07	1	20	3								4	20	1	REC; 1505, 07	E						
E REC; 1404, 05, 06	0.9	20	5								6	20	0.9	REC; 1504, 05	E						
E REC; 1404, 05	1	20	7								8	20	1	REC; 1504, 05	E						
E REC; 1403, 04, 06	0.9	20	9								10	20	1.2	REC; 1503, 04, 06	E						
E REC; 1402, 03	0.7	20	11								12	20	1	REC; 1501, 02	E						
E REC; 1402, 03	1	20	13								14	20	1	REC; 1502, 03	E						
E REC; 1401	1	20	15								16	20	0.2	EQ; CARD ACCESS	E						
E REC; 1401, 02	1.2	20	17								18	20	0.5	EQ; DDC	E						
E REC; 1501, JAN, CORR	1	20	19								20	20	0.5	EQ; DDC	E						
E EQ; HAND DRYER	1	20	21								22	20	0.5	EQ; DDC	E						
E EQ; HAND DRYER	1	20	23								24	2P	2.3	REC; RANGE	E						
E EQ; HAND DRYER	1	20	25								26	50	2.3	REC; RANGE	E						
E EQ; HAND DRYER	1	20	27								28	20	0.5	EQ; RANGE HOOD	E						
E EQ; HAND DRYER	1	20	29								30	20	1	EQ; HAND DRYER	E						
E SPACE	0	-	31								32	20	1	EQ; HAND DRYER	E						
RS EQ; CH1	1.4	20	33								34	-	0	SPACE	E						
RS EQ; CH2	1.4	20	35								36	20	1	EQ; HAND DRYER	E						
E SPARE	0	20	37								38	20	1	EQ; HAND DRYER	E						
E SPARE	0	20	39								40	20	1	EQ; HAND DRYER	E						
E SPARE	0	20	41								42	20	0	SPARE	E						

ABBREVIATIONS:

E = EXISTING CIRCUIT TO REMAIN.
RS = USE EXISTING SPARE CIRCUIT BREAKER. PROVIDE NEW CONDUIT AND WIRE TO NEW EQUIPMENT



ENLARGED CHILLER YARD PLAN
SCALE: 1/4" = 1'-0"



ELEVATION - EXISTING MAIN DISTRIBUTION SWITCHBOARD 'MSB2'
NOT TO SCALE

MAIN SWITCHBOARD 'MSB2'

NOTE: ALL BREAKERS ARE EXISTING TO REMAIN

- DIGITAL INSTRUMENTS: PER SPECIFICATIONS.
- 3000 AMP FRAME/2500 AMP TRIP/3POLE, MAIN CIRCUIT BREAKER WITH PE TRIP, 100,000 AIC RATED, 100% RATED WITH GF PROTECTION
- 200 AMP, 3 POLE CIRCUIT BREAKER - PANEL 1L10A
- 150 AMP, 3 POLE CIRCUIT BREAKER - PANEL 1L10C
- 200 AMP, 3 POLE CIRCUIT BREAKER - PANEL 2L10A
- 150 AMP, 3 POLE CIRCUIT BREAKER - PANEL 2L10C
- 125 AMP, 3 POLE CIRCUIT BREAKER - PANEL 3L10A
- 125 AMP, 3 POLE CIRCUIT BREAKER - PANEL 3L10B
- 60 AMP, 3 POLE CIRCUIT BREAKER - PANEL 3L10C
- 60 AMP, 3 POLE CIRCUIT BREAKER - ELEVATOR (24V SHUNT TRIP)
- 400 AMP, 3 POLE CIRCUIT BREAKER - CH1
- 400 AMP, 3 POLE CIRCUIT BREAKER - CH2
- 400 AMP, 3 POLE CIRCUIT BREAKER - PANEL 1L10B
- 150 AMP, 3 POLE CIRCUIT BREAKER - PANEL 2L10B
- FULLY BUSSED SPACE

LOAD CALCULATIONS

EXISTING HVAC LOAD BEING REMOVED

CHILLER (CH-1)	=	247.7 KVA
CHILLER (CH-2)	=	247.7 KVA
TOTAL LOAD BEING REMOVED	=	- 495.4 KVA

NEW HVAC LOAD BEING ADDED

CHILLER (CH-1)	=	257.3 KVA
CHILLER (CH-2)	=	+ 257.3 KVA
TOTAL LOAD BEING ADDED	=	+ 514.6 KVA

514.6 KVA - 495.4 KVA = 19.2 KVA

EXISTING 2500 AMP 480Y/277 VOLT, 3 PHASE SERVICE IS ADEQUATE

REVISIONS	DATE

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ENLARGED CHILLER YARD PLAN

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Florida Engineering License Number 8093

AGI

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CHECKED	RCA
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