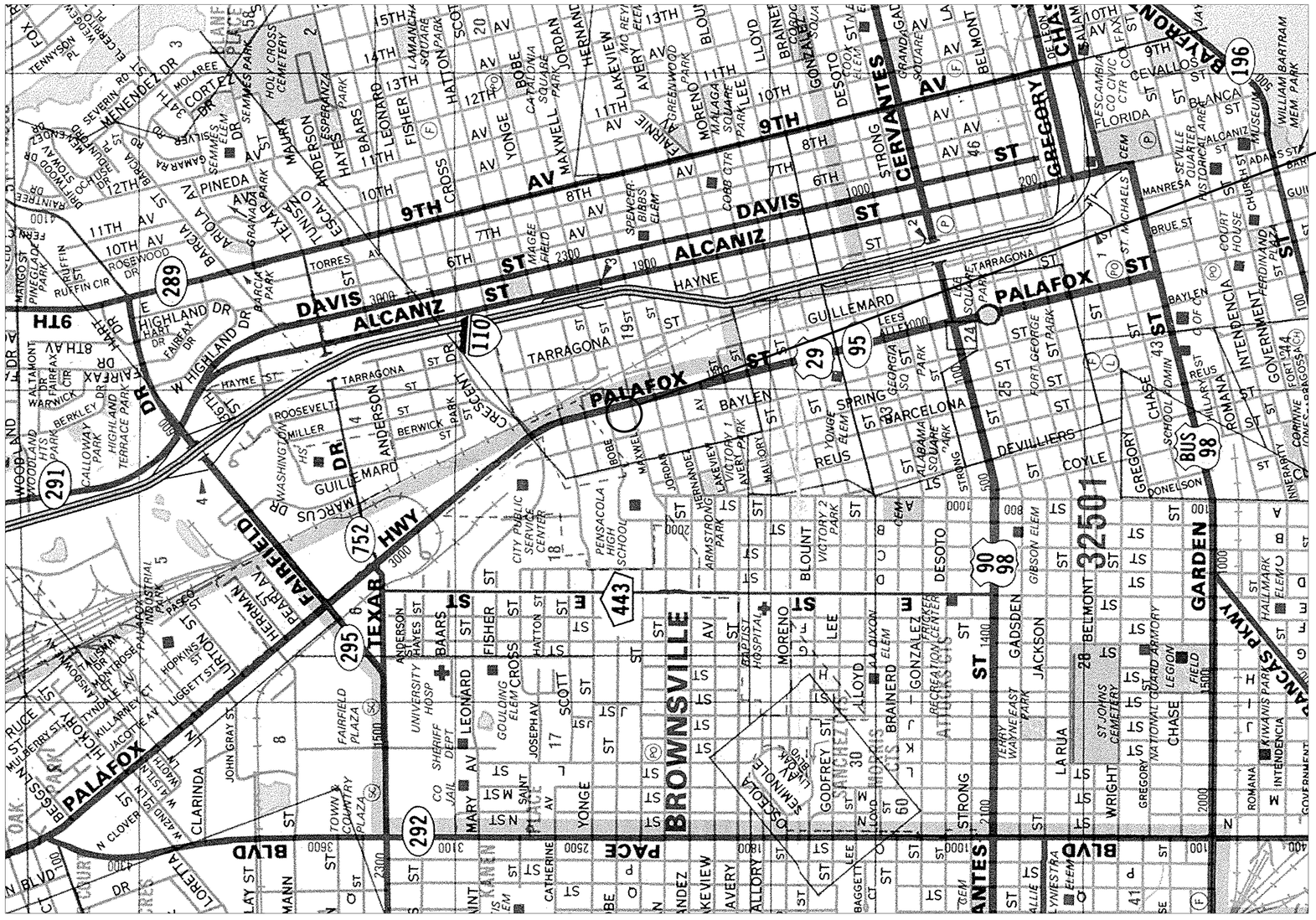
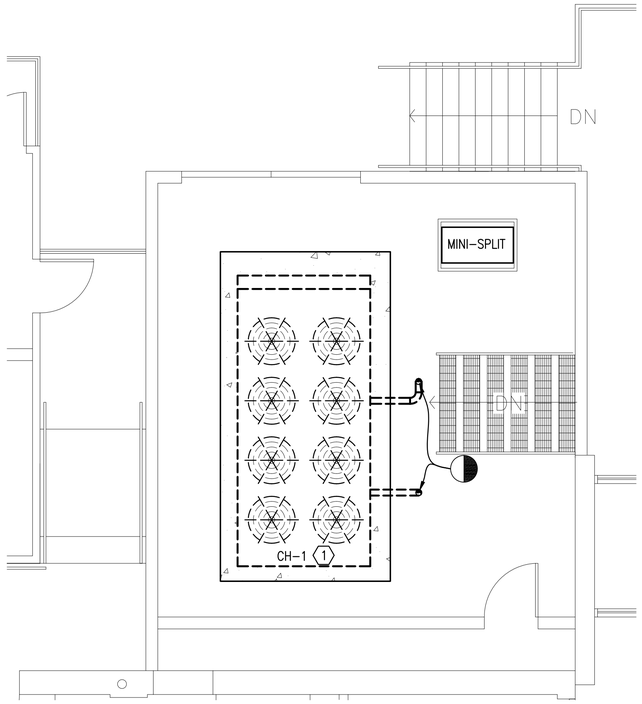
2251 N. PALAFOX
CHILLER REPLACEMENT II

INDEX OF DRAWINGS	
SHEET #	DESCRIPTION
T-001	TITLE, VICINITY MAP, SITE PLAN AND INDEX OF DRAWINGS
M-101	HVAC DEMOLITION AND NEW WORK PLAN

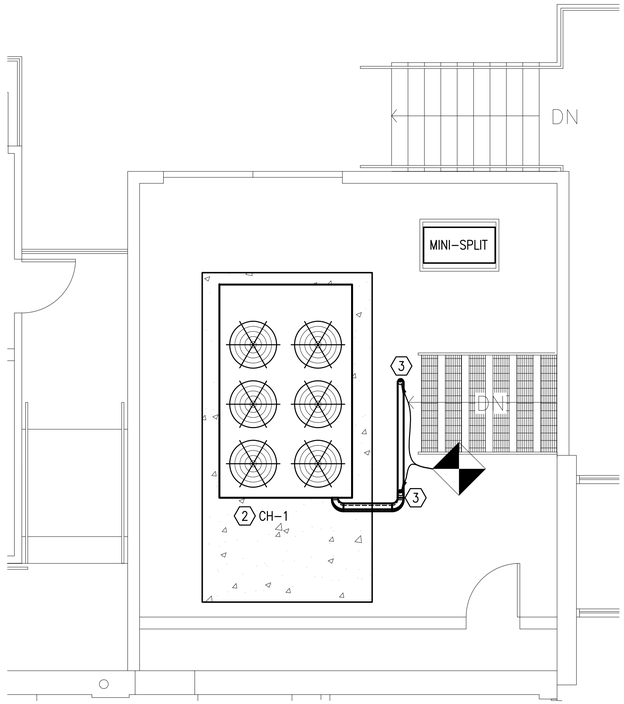


PETERSON ENGINEERING INC.			
(PROF. ENG. #: 3600) 75 SOUTH "F" STREET PENSACOLA, FLORIDA 32501 (850) 434-0513			
DATE: 19 AUG. 2016	JOB NO. 13140	DESIGNED BY: JLR	DRAWN BY: JLR

T-001	2251 N. PALAFOX CHILLER REPLACEMENT II TITLE SHEET



HVAC DEMOLITION PLAN
SCALE: 1/4" = 1'-0"



HVAC NEW WORK PLAN
SCALE: 1/4" = 1'-0"

SHEET NOTES

1. EXISTING CHILLER TO BE DEMOLISHED. EXISTING PIPING AND BUTTERFLY VALVE TO BE DEMOLISHED AS INDICATED.
2. PROVIDE NEW CHILLER, 4" CHWS/R PIPING, AND ASSOCIATED APPURTENANCES AS INDICATED. CHILLER SHALL BE MOUNTED ON 8" STRUCTURAL STEEL I-BEAMS W/ 4" FLANGE ANCHORED INTO EXISTING CONCRETE PAD. I-BEAMS SHALL BE PAINTED WITH RUST RESISTANT PAINT. CHILLER SHALL BE INSTALLED IN ACCORDANCE WITH ALL MANUFACTURERS' RECOMMENDED CLEARANCES.
3. BID ALTERNATE#1: PROVIDE 4" TEE FITTING, BUTTERFLY VALVES, AND DOUBLE BLIND FLANGE FOR FUTURE TEMPORARY CHILLER CONNECTION.

GENERAL NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK REQUIRED TO REMOVE, REPLACE, AND RE-INSTALL ALL EQUIPMENT AS INDICATED.
2. ALL WORK REQUIRING UTILITY OR EQUIPMENT SHUTDOWN SHALL BE PERFORMED AFTER HOURS AND ON WEEKENDS AND/OR HOLIDAYS. ALL WORK SHALL BE COMPLETED AND FUNCTIONAL BEFORE WORKING HOURS RESUME.
3. CONTRACTOR SHALL SUBMIT CONSTRUCTION SCHEDULE TO THE COUNTY PRIOR TO STARTING ANY WORK.
4. THE DDC CONTROLS CONTRACTOR SHALL BE TRANE. THE DDC CONTROLS CONTRACTOR SHALL FULLY INTEGRATE THE CHILLER CONTROL PANEL INTO THE EXISTING TRACER SUMMIT SYSTEM. AT A MINIMUM, THE OWNER SHALL BE ABLE TO VIEW ANY STATUS OR ALARM, VIEW CHW SUPPLY AND RETURN TEMPERATURES, AND START/STOP OVERRIDE CHILLER OPERATION ALL FROM THE EXISTING GRAPHICAL USER INTERFACE/HOST STATION.

LEGEND

- NEW CONNECTION POINT
- DISCONNECTION POINT
- PIPING TO BE DEMOLISHED
- NEW 4"ø PIPING
- HIDDEN PIPING

DDC CONTROLS NOTES

THE DDC CONTROLS SYSTEM SHALL DISPLAY ALL POINTS PROVIDED OUT OF THE CHILLER CONTROL PANEL ON THE HOST COMPUTER LOCATED IN THE MAINTENANCE OFFICE. WHERE THE CHILLER CONTROL PANEL UTILIZES A NUMERICAL CODE TO INDICATE A STATUS, MODE, OR ALARM THE COORESPONDING TEXT SHALL BE DISPLAYED ALSO. AT A MINIMUM THE CHILLER CONTROL PANEL SHALL DISPLAY THE FOLLOWING POINTS:

CHILLED WATER SETPOINT (°F)
CURRENT LIMIT SETPOINT (%)
ACTIVE CURRENT LIMIT SETPOINT (%)
ACTUAL RUNNING CAPACITY (%)
SUCTION PRESSURE- CKT 1 (PSI)
SUCTION PRESSURE- CKT 2 (PSI)
CONDENSER REFRIGERANT PRESSURE-CKT 1 CIRCUIT (PSI)
CONDENSER REFRIGERANT PRESSURE-CKT 2 CIRCUIT 2 (PSI)
CONDENSER SATURATED REFRIGERANT TEMP-CKT 1 (°F)
CONDENSER SATURATED REFRIGERANT TEMP-CKT 2 (°F)
UNIT POWER CONSUMPTION (KW)
COMPRESSOR 1A NUMBER OF STARTS
COMPRESSOR 1B NUMBER OF STARTS
COMPRESSOR 2A NUMBER OF STARTS
COMPRESSOR 2B NUMBER OF STARTS
RUN TIME- COMPRESSOR 1A (HOURS)
RUN TIME- COMPRESSOR 1B TOTAL (HOURS)
RUN TIME- COMPRESSOR 2A TOTAL (HOURS)
RUN TIME- COMPRESSOR 2B TOTAL (HOURS)
EVAPORATOR ENTERING WATER TEMP (°F)
EVAPORATOR LEAVING WATER TEMP (°F)
OUTDOOR AIR TEMPERATURE (°F)
PHASE AB VOLTAGE- COMPRESSOR 1A (VOLTS)
PHASE BC VOLTAGE- COMPRESSOR 1A (VOLTS)
PHASE CA VOLTAGE- COMPRESSOR 1A (VOLTS)
PHASE AB VOLTAGE- COMPRESSOR 1B (VOLTS)
PHASE BC VOLTAGE- COMPRESSOR 1B (VOLTS)
PHASE CA VOLTAGE- COMPRESSOR 1B (VOLTS)
PHASE AB VOLTAGE- COMPRESSOR 2A (VOLTS)
PHASE BC VOLTAGE- COMPRESSOR 2A (VOLTS)
PHASE CA VOLTAGE- COMPRESSOR 2A (VOLTS)
PHASE AB VOLTAGE- COMPRESSOR 2B (VOLTS)
PHASE BC VOLTAGE- COMPRESSOR 2B (VOLTS)
PHASE CA VOLTAGE- COMPRESSOR 2B (VOLTS)
COMPRESSOR 1A LINE 1 CURRENT (AMPS)
COMPRESSOR 1A LINE 2 CURRENT (AMPS)
COMPRESSOR 1A LINE 3 CURRENT (AMPS)
COMPRESSOR 1B LINE 1 CURRENT (AMPS)
COMPRESSOR 1B LINE 2 CURRENT (AMPS)
COMPRESSOR 1B LINE 3 CURRENT (AMPS)
COMPRESSOR 2A LINE 1 CURRENT (AMPS)
COMPRESSOR 2A LINE 2 CURRENT (AMPS)
COMPRESSOR 2A LINE 3 CURRENT (AMPS)
COMPRESSOR 2B LINE 1 CURRENT (AMPS)
COMPRESSOR 2B LINE 2 CURRENT (AMPS)
COMPRESSOR 2B LINE 3 CURRENT (AMPS)
COMPRESSOR 1A LINE 1 CURRENT (%RLA)
COMPRESSOR 1A LINE 2 CURRENT (%RLA)
COMPRESSOR 1A LINE 3 CURRENT (%RLA)
COMPRESSOR 1B LINE 1 CURRENT (%RLA)
COMPRESSOR 1B LINE 2 CURRENT (%RLA)
COMPRESSOR 1B LINE 3 CURRENT (%RLA)
COMPRESSOR 2A LINE 1 CURRENT (%RLA)
COMPRESSOR 2A LINE 2 CURRENT (%RLA)
COMPRESSOR 2A LINE 3 CURRENT (%RLA)
COMPRESSOR 2B LINE 1 CURRENT (%RLA)
COMPRESSOR 2B LINE 2 CURRENT (%RLA)
COMPRESSOR 2B LINE 3 CURRENT (%RLA)
RUNNING MODE
REMOTE DIAGNOSTIC RESET COMMAND
CHILLER AUTO STOP COMMAND
RUN ENABLED
LOCAL SETPOINT CONTROL
CAPACITY LIMITED
CHILLER RUNNING STATE
COMPRESSOR 1A STATUS
COMPRESSOR 1B STATUS
COMPRESSOR 2A STATUS
COMPRESSOR 2B STATUS
EVAPORATOR WATER FLOW STATUS
ALARM PRESENT
SHUTDOWN ALARM PRESENT
LAST DIAGNOSTIC

PACKAGE AIR COOLED WATER CHILLER SCHEDULE

MARK	NOMINAL CAPACITY TONS	REFRIG. TYPE	MINIMUM EER	MINIMUM IPLV	EVAPORATOR DATA					CONDENSER DATA			COMPRESSOR DATA			ELECTRICAL DATA				REMARKS
					WATER FLOW GPM	ENTERING WATER TEMP. °F	LEAVING WATER TEMP. °F	MAX. WATER PRESS. DROP FEET H_2O	FOULING FACTOR HR-FT^2-°F/BTU	AMB. TEMP. °F db	LOW AMB. TEMP. °F db	CONDENSER FANS QUANTITY/KW	MIN. COMP. QUANT.	CAPACITY REDUCTION		TOTAL POWER INPUT AMPS	VOLTS	PHASE	HERTZ	
														MINIMUM UNLOADING	APPROX. STEPS PERCENT					
CH-1	80	R-410A	10.2	15.3	169	52	42	10.0	.00025	95	0	6 / 1.2	2	20 TONS	25	358	208	3	60	MAXIMUM SOUND PRESSURE SHALL BE 65 dBA PER AHRI 370-2011 AT 30 FEET

PACKAGED AIR COOLED CHILLER SCHEDULE NOTES

THE EXISTING MAIN SERVICE IS LOCATED IN AN ADJACENT PART OF THE BUILDING. CHILLER IS CURRENTLY SERVED BY EXISTING 500 AMP/3 POLE BREAKER FROM SIEMENS 1600 AMP MAIN SB1 SWITCHBOARD, 120/208V, 3 PHASE, 4W, 100K AIC. CONTRACTOR SHALL INSTALL NEW BREAKER (SIZED AS RECOMMENDED BY MANUFACTURER) IN THE SWITCHBOARD AND RECONNECT TO EXISTING CIRCUIT AS REQUIRED TO PERFORM IN THE SWITCHBOARD AND RECONNECT TO EXISTING CIRCUIT AS REQUIRED TO PERFORM CHILLER REPLACEMENT.

PROVIDE FACTORY WEATHERPROOF CONTROL PANEL WITH MICROPROCESSOR BASED OPERATING AND SAFETY CONTROLS, STARTERS, AND CONTROL VOLTAGE TRANSFORMER.

PROVIDE CHILLER CONTROL PANEL W/ TRANE TRACER COMMUNICATION CARD OR 3RD PARTY INTERFACE TO EXISTING TRANE TRACER SYSTEM. LON/BACNET SHALL NOT BE AN ACCEPTABLE ALTERNATIVE.

EER – ENERGY EFFICIENCY RATIO. POWER INPUTS SHALL INCLUDE ALL COMPRESSORS, CONDENSER FANS AND CONTROL POWER AT FULL LOAD CONDITIONS.

PROVIDE A SINGLE POINT POWER SOURCE FOR THE COMPRESSORS, FANS, AND CONTROLS AND HEAT TAPE.

PROVIDE FACTORY MOUNTED DISCONNECT SWITCH AND POWER SUPPLY MONITOR.

PROVIDE CHILLER WITH TWO COMPLETELY INDEPENDENT REFRIGERANT CIRCUITS.

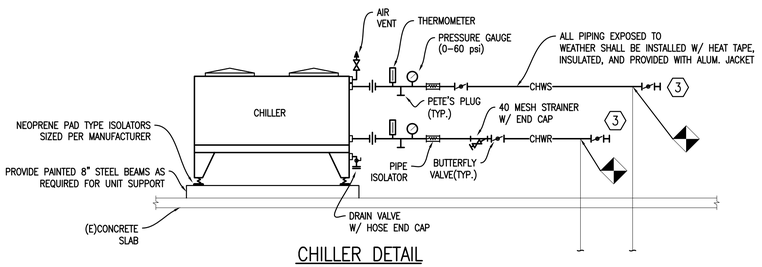
PROVIDE LOW AMBIENT CONTROLS FOR CHILLER OPERATION DOWN TO 0°F.

EXISTING CHILLED WATER PUMPS LOCATED IN MECHANICAL BASEMENT.

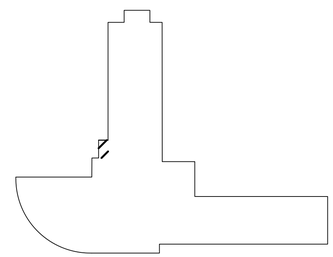
PROVIDE TEST AND BALANCE OF CHILLED WATER SYSTEM.

BASIS OF DESIGN TRANE CGAM080A

PROVIDE COIL GUARDS.



CHILLER DETAIL
SCALE: NTS



KEYPLAN

5' 0 5'
SCALE: 1/4"= 1'-0"

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19 AUG 2016	13140	JLR	JLR

M-101

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HVAC DEMOLITION AND NEW WORK PLAN