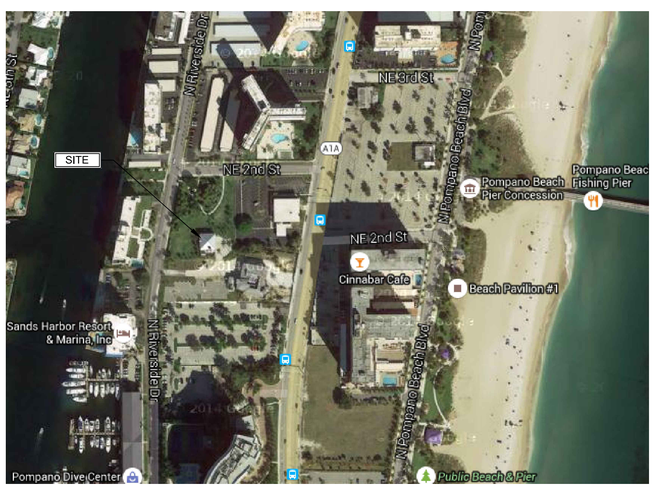
CITY OF POMPANO BEACH

pompano beach
Florida's Warmest Welcome

MASTER LIFT STATION NO. 12 (A.K.A. "NO. 21")
AIR CONDITIONING UNIT NO. 1 REPLACEMENT



LOCATION MAP

OCTOBER 2015
ISSUED FOR BID

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JOB NO.
8386M.10

DRAWING NO.
G-01

MECHANICAL NOTES

1. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY FOR THE INSTALLATION OF A COMPLETE SYSTEM IN ACCORDANCE WITH THESE DRAWINGS, THE FLORIDA BUILDING CODE AND ALL OTHER APPLICABLE STATE, COUNTY AND LOCAL ORDINANCES.

2. THE CONTRACTOR SHALL PAY ALL COSTS OF PERMIT, INSPECTIONS AND ALL OTHER COSTS INCIDENTAL TO THE COMPLETION AND TESTING OF THIS WORK.

3. CONTRACTOR SHALL SUBMIT, FOR APPROVAL PDF ELECTRONIC COPIES OF MANUFACTURER'S DRAWINGS FOR EACH PIECE OF EQUIPMENT AND CONTROLS INCLUDED IN CONTRACT.

4. ALL MATERIAL SHALL BE NEW OF U.S. MANUFACTURER OF GOOD QUALITY. ALL WORK SHALL BE PERFORMED AT INDUSTRY STANDARD QUALITY LEVEL BY CERTIFIED PROFESSIONALS. ALL EQUIPMENT SHALL BE UL OR ETL LISTED.

5. TEMPERATURE CONTROLS/THERMOSTAT:
   A. IT SHALL BE COMBINATION COOLING/HEATING, WITH SYSTEM "COOL-AUTO- HEAT-OFF" AND FAN "ON-AUTO" SELECTOR SWITCHES. PROVIDE PROGRAMMABLE RECOMMENDED BY MANUFACTURER, HONEYWELL OR EQUAL.

6. THERMOSTAT LOCATION SHALL BE APPROVED BY OWNER AND ENGINEER BEFORE INSTALLATION. INSTALL THERMOSTAT 48" TO 54" A.F.F. PER A.D.A REQUIREMENTS WHERE APPLICABLE. MECHANICAL CONTRACTOR SHALL COORDINATE WITH ELECTRICAL TRADE ALL REQUIREMENTS FOR JUNCTION BOXES, CONDUITS, CONTROL WIRING, POWER, ETC. AND DEFINE RESPONSIBILITIES AND SCOPE OF WORK FOR EACH TRADE PRIOR TO ANY PURCHASING OR INSTALLATION.

7. REFRIGERANT LINES SHALL BE COPPER, TYPE "L" HARD DRAWN WITH WROUGHT COPPER BRAZING-JOINT TYPE FITTINGS, USE BRAZING MATERIALS FOR HIGH PRESSURE PIPING PER AWS A5.8: BCuP SERIES COPPER-PHOSPHORUS ALLOY OR BAg1 SILVER ALLOY. REFRIGERANT LINES SHALL BE SIZED PER MANUFACTURER'S RECOMMENDATIONS. SOFT COPPER TYPE "M" SHALL BE ALLOWED FOR RISER PIPING INSIDE CHASE TO LIMIT NUMBER OF JOINTS. COORDINATE WITH ENGINEER FOR PRIOR APPROVAL. ALL EXPOSED INSULATION SHALL BE PROTECTED WITH UV RESISTANT PAINT OR ALUMIN. SHIELD. ALL REFRIGERANT LINES TO BE RUN IN PVC CONDUIT.

8. ARMAFLEX INSULATION SHALL BE USED FOR SUCTION LINES (1/2" FOR ABOVE 40° F AND 1" FOR BELOW 40° F) PER FLORIDA ENERGY CODE TABLE 4-11 FOR PIPING INSULATION. FILTER/DRYER AND SIGHT GLASS SHALL BE PROVIDED AT LIQUID LINES.

9. PROVIDE NEW FILTERS FOR ALL AIR CONDITIONING EQUIPMENT BEFORE START-UP, REPLACE PRIOR TO FINAL ACCEPTANCE BY OWNER.

10. PROVIDE IONIZATION TYPE SMOKE DETECTORS WITH SERVICE ACCESS DOORS IN ALL SUPPLY AIR DUCTS FOR AHU'S SERVING A COMMON PLENUM OF 2OOO CFM OR ABOVE. FOR SMOKE DETECTORS NOT VISIBLE, IN CONCEALED SPACES, PROVIDE REMOTE ANNUNCIATION/TEST STATION AS REQUIRED BY AUTHORITY HAVING JURISDICTION, COORDINATE PRIOR TO INSTALLATION. DETECTORS SHALL BE BY ONE MANUFACTURER, COORDINATE VOLTAGE ETC. WITH ELECTRICAL CONTRACTOR AND FIRE ALARM SYSTEM BEFORE ORDERING. UPON DETECTION, SMOKE DETECTORS SHUT DOWN ASSOCIATED AIR MOVING EQUIPMENT AND ALL AIR MOVING EQUIPMENT SERVING THAT COMMON PLENUM.

11. RUN INSULATED FIRE RATED CONDENSATE DRAINS AS REQUIRED.

12. PROVIDE A MIN. OF 36" CLEARANCE IN FRONT OF ALL 120-208 VOLT PANELS AND MIN. 42" CLEARANCE IN FRONT OF ANY 240-480 VOLT PANEL. PROVIDE ADEQUATE SIDE CLEARANCE PER NEC.

13. THE CONTRACTOR SHALL VISIT HE SITE VERIFY EXISTING CONDITIONS PRIOR TO BIDDING, ORDERING, FABRICATION OR INSTALLATION OF MATERIALS OR EQUIPMENT, IN ORDER TO PROVIDE A FULLY INTEGRATED MECHANICAL AND CONTROLS SYSTEMS WITH THE EXISTING ONES. ANY DISCREPANCY BETWEEN EXISTING CONDITIONS AND PLANS, OR ADDITIONAL CLARIFICATION REQ'D SHALL BE BROUGHT TO THE ATTENTION OF ENGINEER PRIOR TO FINAL BIDDING AND WORK.

14. CONDENSATE DRAIN PIPING TO BE TYPE "L" COPPER OR PVC WHERE ALLOWED BY CODE WITH 1/2" ARMAFLEX INSULATION. PROVIDE APPROVED WATER LEVEL DETECTOR OR FLOAT SWITCH TO AUTOMATICALLY SHUT DOWN THE AIR COND. UNIT, AS A SECONDARY DRAIN SYSTEM PROVIDE CONDENSATE PUMP AND PIPE TO CONDENSATE DRAIN PER

15. MANUFACTURER'S WARRANTY: CONTRACTOR SHALL PROVIDE WARRANTY FOR A PERIOD OF (1) ONE YEAR AFTER SYSTEM ACCEPTANCE FOR ALL MECHANICAL SYSTEMS, CONTROLS ACCESSORIES AND ALL OTHER EQUIPMENT, PARTS AND LABOR COMPRESSOR WARRANTY BY MANUFACTURER SHALL BE 5 YEARS

MECHANICAL LEGEND

- SUPPLY AIR CEILING DIFFUSER
- RETURN AIR CEILING GRILLE
- MANUAL VOLUME CONTROL DAMPER
- REDUCER OR INCREASER
- FLEX DUCT
- ROUND UP
- SHOE TAP DAMPER

- SUPPLY AIR
- RETURN AIR
- U/C DOOR UNDER CUT
- VCD VOLUME CONTROL DAMPER
- MOD MANUALLY OPERATED DAMPER
- TAG / CFM SUPPLY AIR DIFFUSER OR GRILLE DESIGNATION
- TAG / CFM RETURN/EXHAUST AIR DIFFUSER OR GRILLE DESIGNATION
- TAG - # EQUIPMENT TAG
  - AHU- AIR HANDLED UNIT
  - KSF- KITCHEN SUPPLY FAN
  - KEF- KITCHE EXHAUST FAN
  - TEF- TOILET EXHAUST FAN

NOT ALL SYMBOLS MAY APPLY TO THESE PLANS

HVAC ABBREVIATION LEGEND

AC	AIR CONDITIONING
AFF	ABOVE FINISH FLOOR
BDD	BACK DRAFT DAMPER
CD	CONDENSATE DRAIN
COP	COEFFICIENT OF PERFORMANCE
DB	DRY BULB
DIA.	DIAMETER
	EXISTING TO REMAIN
EER	ENERGY EFFICIENCY RATIO
EDH	ELECTRIC DUCT HEATER
EF	EXHAUST FAN
ESP	EXTERNAL STATIC PRESSURE
	FILTER
FD	FIRE DAMPER
FLA	FULL LOAD AMPS.
FMS	FLOW MEASURING STATION
IPLV	INTEGRATED PART-LOAD VALUE.
MCA	MINIMUM CIRCUIT AMPS (FOR WIRE SIZING)
MOD	MANUALLY OPERATED DAMPER
MOCP	MAXIMUM OVERCURRENT PROTECTION DEVICE AMPS
NC	NOISE CRITERIA
O/A	OUTSIDE AIR
OBD	OPOSITE BLADE DAMPER
PD	PRESSURE DROP.
R	EXISTING TO BE RELOCATED
R/A	RETURN AIR
RLA	RATED LOAD AMPS.
SEER	STANDARD ENERGY EFFICIENCY RATIO
TSP	TOTAL STATIC PRESSURE
VD	VOLUME CONTROL DAMPER
VFD	VARIABLE FRECUENCY DRIVE
WB	WET BULB

NOTE: NOT ALL SYMBOLS MAY APPLY TO THESE PLAN.

AIR CONDITIONING SPLIT SYSTEM EQUIPMENT SCHEDULE

F

CONDENSING UNIT

CU TAG	MANUFACTURER & MODEL	NOMINAL TONNAGE	CAP. STAGES	EER	REFRIG.	SUCT./LIQ. LINES	NO. FANS	NO. COMP./ RLA	VOLT/PH/HZ	MCA/MOCP	WEIGHT (LBS)	H x W x D (IN)	NOTES
CU-1	TRANE 4TTA3060	5	1	12.5	R-410A	1-1/8" / 1/2"	1	1/ 7.8	408/3/60	10/15	261	37 X 34 X 37	1-5,8,9,10

AIR HANDLING UNIT

AHU TAG	MANUFACTURER & MODEL	TOTAL MBH COOLING	TOTAL MBH HEATING	TOTAL CFM	O/A CFM	E.S.P.("W.G.)	ENT. DB/WB (°F)	FAN HP/FLA	HEATER KW @ VOLT	VOLT/PH/HZ	MCA/MOCP	WEIGHT (LBS)	H x W x D (IN)	NOTES
AHU-1	TRANE TWE061	60,000 MIN	N/A	2,000	N/A	0.5	85/72	1.5 /4.2	N/A	408/3/60	6 / 15	163	48 X 23 X 38	1,6,7,8,9

NOTES:

1. UNITS SHALL BE COMMERCIAL RATED PER ARI 210, 240 AND 270, AS MANUFACTURED BY TRANE, CARRIER, OR APPROVED EQUAL
2. PROVIDE WITH ELECTRIC EXPANSION VALVES, LIQUID LINE FILTER DRYER AND MULTI-USE SERVICE VALVES
3. PROVIDE COMPRESSOR WITH CRANKCASE HEATER AND MIN. 5-YEAR WARRANTY
4. PROVIDE HIGH AND LOW PRESSURE CONTROL AND OVER TEMPERATURE PROTECTION.
5. PROVIDE WEATHERPROOF ELECTRIC CONTROLS AND SINGLE SIDE SERVICE ACCESS
6. PROVIDE PERMANENT WASHABLE FILTER FOR AHU.
7. PROVIDE REMOTE PROGRAMMABLE SEVEN DAY-TOUCH SCREEN- COMERCIAL APPLICATION THERMOSTAT AND CONTROLS AND RELAYS FOR PROPER OPERATION OF THERMOSTAT.
8. PROVIDE REFRIGERANT LINES SIZE AS RECOMMENDED BY MANUFACTURER, NOT TO EXCEED 150 FT. EQUIV. LENGTH FOR LONGER RUNS COORDINATE WITH MANUFACTURER PRIOR TO PURCHASE OR ANY WORK.
9. PROVIDE CORROSION RESISTANT COATING SUITABLE FOR MARINE ENVIRONMENT FOR BOTH AIR HANDLING UNIT AND CONDENSING UNIT (BY MANUFACTURER)
10. PROVIDE HAIL GUARD FOR CONDENSING UNIT.
11. PROVIDE CONDENSATE 120 VOLT LIFT PUMP WITH FLOAT SWITCH CONTROL.

COORDINATION NOTE:

MECHANICAL CONTRACTOR SHALL COORDINATE ALL ELECTRICAL REQUIREMENTS AND ACCESSORIES WITH OWNER REPRESENTATIVE.

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PROJECT ENGINEER

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LIFT STATION NO. 12
AIR CONDITIONING UNIT NO.1 REPLACEMENT
MECHANICAL
LEGEND, ABBREVIATIONS AND SCHEDULE

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SHEET NO.

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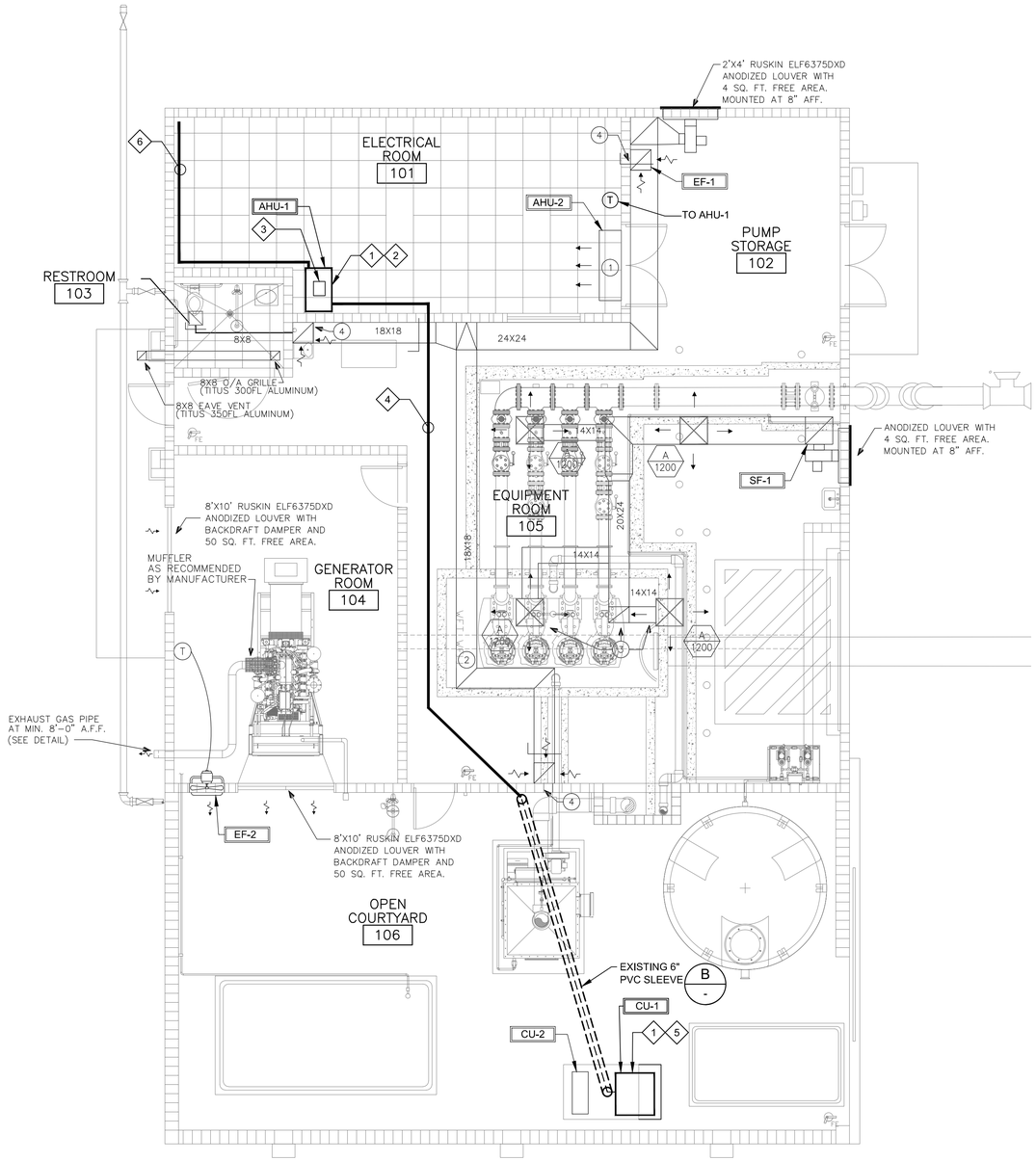


A — LIFT STATION AC UNIT 1 - REPLACEMENT

SCALE: 3/16"=1'-0"
FILE: -

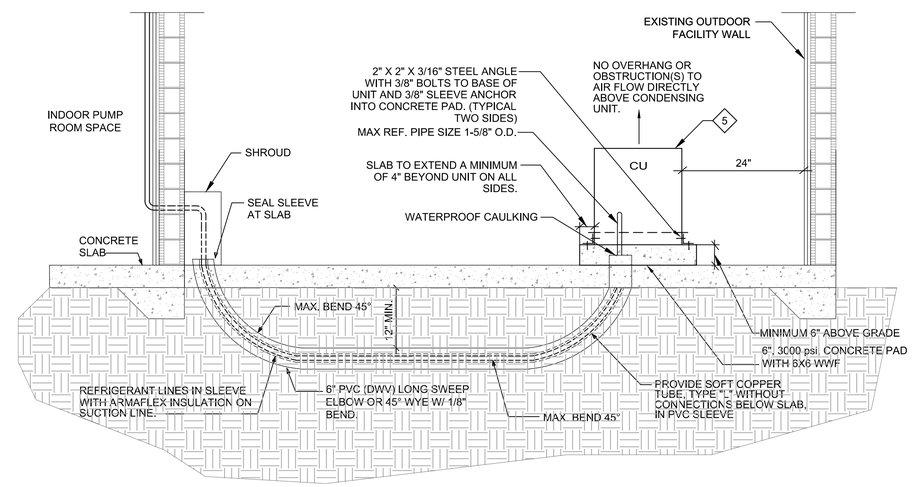
0 5' 10'

GENERAL NOTES:

1. ELECTRICAL POWER WIRING AND DISCONNECT SWITCHES PROVIDED BY OWNER.
2. NO 316 S.S. OR NON-FERROUS METALS SHALL BE USED IN THE MECHANICAL SYSTEM (INCLUDING SUPPORT FITTINGS, FASTENERS, ANCHORS, AND FANS) OUTSIDE OF THE ELECTRICAL ROOM DUE TO THE PRESENCE OF SULFURIC ACID.
3. REFRIGERANT PIPING SHALL BE FIELD ROUTED TO MATCH EXISTING REFRIGERANT PIPING ROUTING.

KEY NOTES:

1. CONTRACTOR TO COORDINATE AHU LOCATION WITH CITY (OWNER). LOCATION SHALL PROVIDE MAXIMUM AMOUNT OF CLEARANCE POSSIBLE OF UNIT FOR ACCESS TO FRONT OF UNIT.
2. AHU DIMENSION SHALL FIT IN EXISTING AVAILABLE SPACE.
3. PROVIDE TOP AIR DISCHARGE W/ 90 DEGREES ELBOW .
4. REFRIGERANT LINES ROUTED IN DROP CEILING AND SUPPORTED FROM STRUCTURAL TRUSSES
5. PROVIDE STAINLESS STEEL TIE-DOWN SUPPORTS RESISTANT TO HURRICANE WIND LOADING.
6. PROVIDE CONDENSATE LIFT PUMP INLINE WITH AHU P-TRAP. ROUTE CONDENSATE DRAIN UP THROUGH DROP CEILING AND SUPPORTED FROM STRUCTURAL TRUSSES.



B — CONDENSING UNIT PIPING VIA EXISTING PVC SLEEVE - DETAIL

SCALE: N.T.S.
FILE: -

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MECHANICAL
AIR CONDITIONING PLAN

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A - AHU NO.1 AVAILABLE SPACE

SCALE: N.T.S.
FILE: -

NOTES:

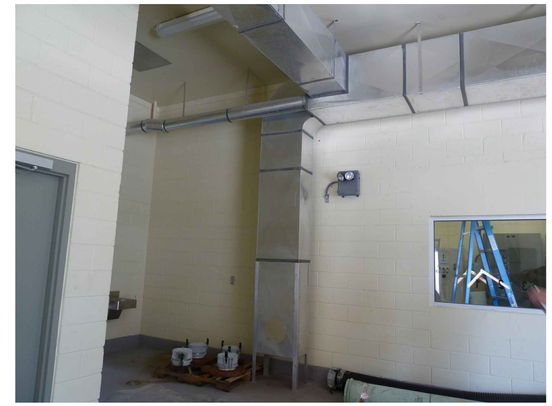
1. NEW AHU MUST FIT IN EXISTING SPACE WITH CLEARANCES REQUIRED PER CODE.
2. EXTEND CONCRETE PAD FOR NEW AHU-1.
3. PROVIDE DRAIN PAN, FLOAT SWITCH AND DRAIN PUMP.

B - REFRIGERANT LINES - ROUTING 1

SCALE: N.T.S.
FILE: -

NOTES:

1. REPLACE EXISTING REFRIGERANT LINES AS REQUIRED FOR NEW SPLIT AC-SYSTEM 1



C - REFRIGERANT LINES - ROUTING 2

SCALE: N.T.S.
FILE: -

NOTES:

1. INSTALL NEW LINES ABOVE DROP CEILING.
2. PROVIDE SUPPORT FROM STRUCTURAL TRUSSES.

D - REFRIGERANT LINES TROUGH WALL

SCALE: N.T.S.
FILE: -

NOTES:

1. REPLACE EXISTING REFRIGERANT LINES AS REQUIRED FOR NEW SPLIT AC-SYSTEM 1

E - REFRIGERANT LINES UNDERGROUND

SCALE: N.T.S.
FILE: -

NOTES:

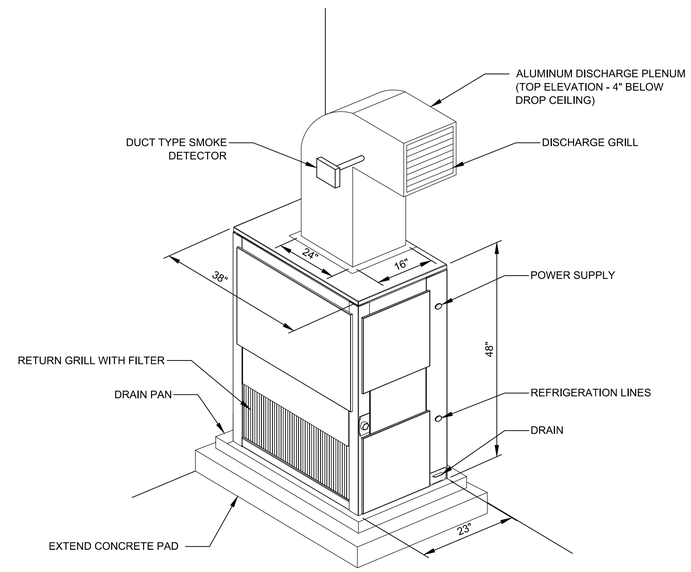
1. INSTALL NEW REFRIGERATION LINES VIA EXISTING PVC PIPE.
2. REMOVE EXISTING REFRIGERATION LINES.

F - CONDENSER UNITS

SCALE: N.T.S.
FILE: -

NOTES:

1. REPLACE EXISTING CONDENSER WITH NEW UNIT.
2. REMOVE EXISTING REFRIGERATION LINES.
3. EXTEND CONCRETE PAD FOR NEW CONDENSER NO. 1
4. CONNECT NEW CONDENSER TO EXISTING SWITCH.
5. PROVIDE NEW CONTROL WIRING BETWEEN AHU-1 & CONDENSER 1.



G - AHU NO. 1 DETAIL

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AIR CONDITIONING UNIT NO.1 REPLACEMENT
MECHANICAL
PHOTO DETAILS

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DRAWING NO. M-03
SHEET NO.

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ELECTRICAL LEGEND

- RACEWAY EXPOSED
- RACEWAY CONCEALED
- RACEWAY TURNED UP/DOWN
- MOTOR
- TRANSFORMER
- FUSE
- CIRCUIT BREAKER
- SAFETY DISCONNECT SWITCH, HP RATED
- GROUND
- DUPLEX, 14" AFF
- THERMOSTAT
- NORMALLY OPEN CONTACT
- NORMALLY CLOSED CONTACT
- LEVEL SWITCH, FLOAT SWITCH
- PRESSURE SWITCH
- THERMAL SWITCH
- HEATER
- PILOT LIGHT
- ELAPSED TIME METER
- SELECTOR SWITCH
- PUSH BUTTON ON-OFF SWITCH
- EQUIPMENT POWER RECEPTACLE
- SWITCH 48"AFF,
- SWITCH 48"AFF, 3-WAY
- JUNCTION BOX
- PANELBOARD, ELECTRICAL EQUIP. ENCL
- SOLENOID VALVE
- MOTOR OPERATED VALVE
- CROSS HATCH DENOTES DELETION
- MANUAL MOTOR STARTER
- RED, MAINTAINED PUSH BUTTON
- TIMING CONTACT
- FLOW SWITCH
- ENCLOSED COMBINATION STARTER
- CONTROL RELAY, MOTOR STARTER, ETC.
- C01 — DENOTES CONDUIT TAG 01
- C01, C02 — DENOTES SEPARATE CONDUITS WITH SEPARATE WIRE
- A-3 — DENOTES PANELBOARD A, CIRCUIT 3

ELECTRICAL ABBREVIATIONS

A/C	AIR CONDITIONER
AHU	AIR HANDLING UNIT
AI	ANALOG INPUT
AO	ANALOG OUTPUT
AIC	AMPS INTERRUPTING CURRENT
ALT	ALTERNATOR
ATS	AUTOMATIC TRANSFER SWITCH
BATT	BATTERIES
CB	CIRCUIT BREAKER
CR	CONTROL RELAY
CP	CONTROL PANEL
CPB	CONTROL PULL BOX
CPT	CONTROL POWER TRANSFORMER
CPU	CENTRAL PROCESSING UNIT
CR	CARD READER
CS	CONTROL STATION
CT	CURRENT TRANSFORMER
CTB	CONTROL TERM. BOX
CU	COPPER
DI	DISCRETE INPUT
DO	DISCRETE OUTPUT
DISC	DISCONNECT SWITCH
DIST	DISTRIBUTION
DMM	DIGITAL MULTI-METER
EN	ETHERNET
ENCL	ENCLOSURE
ETM	ELAPSED TIME METER
F	FUSE
FE	FLOW ELEMENT
FIT	FLOW INDICATING TRANSMITTER
FLT	FLOAT
FO	FIBER OPTIC
FO-E-CBL	FIBER OPTIC ETHERNET CABLE
FP	FIELD PANEL
GEN	GENERATOR
GFI	GROUND FAULT INTERRUPTER
GND	GROUND
GRS	GALVANIZED RIGID STEEL
HOA	HAND-OFF-AUTO
HOR	HAND-OFF-REMOTE
H2S	HYDROGEN SULFIDE
INSTR	INSTRUMENT
I/O	INPUT/OUTPUT
IPB	INSTRUMENT PULL BOX
ISC	INTERRUPTING SHORT CIRCUIT
ISR	INTRINSICALLY SAFE RELAY
ITB	INSTRUMENT TERMINAL BOX
JKT	JACKET
KAIC	1,000 AMPS INTERRUPTING CURRENT
LA	LIGHTNING ARRESTER
LSIG	LONG, SHORT, INSTANTANEOUS, GROUND
LOR	LOCAL-OFF-REMOTE
LT	LEVEL TRANSDUCER
M	MOTOR STARTER
MB+	MODBUS PLUS
MCC	MOTOR CONTROL CENTER
MLO	MAIN LUG ONLY
NF	NON FUSED
OCP	OPERATOR CONTROL PANEL
OHC	OPEN-HOLD-CLOSE
OHU	OVER HEAD ELEC UTILITIES
OL	OVER LOAD RELAY
P	PUMP
PB	PUSH BUTTON
PC	PHOTOCELL
PDP	POWER DIST. PANEL
PIT	PRESSURE INDICATING TRANSMITTER
PLC	PROGRAMMABLE LOGIC CONTROLLER
PM	PHASE MONITOR
PNLBD	PANELBOARD
PPB	POWER PULL BOX
PSA	PANEL SURGE ARRESTOR
R-I/O CBL	REMOTE I/O CABLE
R,G,A	RED, GREEN, AMBER PILOT LIGHT
RGS	RIGID GALV. STEEL
RO	READ OUT
SA	SURGE ARRESTER
SCHEM	SCHEMATIC
SS	SELECTOR SWITCH OR 316 STAINLESS STEEL
SW	SWITCH
SWBD	SWITCH BOARD
TDR	TIME DELAY RELAY
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
UPS	UNINTERRUPTABLE POWER SYSTEM
VCP	VENDOR CP
VFD	VARIABLE FREQUENCY DRIVE
WP, W/P	WEATHER PROOF
WW	WIRE WAY
XFMR	TRANSFORMER
ZSL	POSITION SWITCH CLOSED
ZSO	POSTION SWITCH OPEN

GENERAL ELECTRICAL NOTES OR SPECIFICATIONS

1. ALL WORK SHALL BE PROVIDED IN ACCORDANCE WITH FLORIDA BUILDING CODE AND NATIONAL ELECTRICAL CODE (NFPA-70).
2. CONDUIT OUTDOOR SHALL BE PVC COATED GRS.
3. CONDUIT EXPOSED INSIDE ELECTRICAL ROOM SHALL BE EMT WITH COMPRESSION TYPE FITTINGS.
4. CONDUIT EXPOSED IN PUMP ROOM AREA SHALL BE PVC-SCHEDULE 80.
5. POWER WIRING INSULATION SHALL BE THWN.
6. FLEXIBLE CONDUIT SHALL BE LIQUID TIGHT.
7. REMOVE EXISTING 2P-60A SPARE BREAKER AND PROVIDE NEW 30P-20A BREAKER FOR AHU-1.

PANELBOARD SCHEDULE A

WIRE SIZE	COND SIZE	BUS AMPS A	BUS AMPS B	BUS AMPS C	LOAD	POLES	AMPS	BUS A B C	AMPS	POLES	LOAD	BUS AMPS A	BUS AMPS B	BUS AMPS C	WIRE SIZE	COND SIZE
3#10	3/4	5			RTU	1	30	1–2	20	1	GEN BATT. CHARGER	10			3#12	3/4
3#12	3/4		10		PUMP ROOM LIGHTING	1	20	3–4	20	1	GEN ALT. HEATER		4		3#12	3/4
3#12	3/4			8	PUMP ROOM LIGHTING	1	20	5–6	20	1	GFI OUTLET COURTYARD			5	3#10	3/4
3#12	3/4	8			ELECTRICAL ROOM LIGHTING	1	20	7–8	20	2	GEN JKT HEATER 1	15			3#10	3/4
3#12	3/4		6		GENERATOR ROOM LIGHTING	1	20	9–10					15			
3#12	3/4			10	EXTERIOR LIGHTING	1	20	11–12	20	1	FIRE ALARM PANEL			5	3#12	3/4
3#12	3/4	7			RECEPTACLES	1	20	13–14	20	1	HOT WATER HEATER	10			3#10	3/4
3#12	3/4		6		RECEPTACLES	1	20	15–16	20	1	HOT WATER HEATER		10		3#10	3/4
3#12	3/4			7	RECEPTACLES	1	20	17–18	20	1	CHM SYSTEM			9	3#10	3/4
3#12	3/4	6			COURTYARD LIGHTING	1	20	19–20	20	1	CHM SYSTEM	9			3#10	3/4
					SPACE			21–22	20	1	GARAGE DOOR		9		3#10	1
		4						23–24	20	2	PLC PANEL POWER			5	3#12	3/4
NOTE 7 → **3#12**	**1"**		**4**		**AHU-1**	**3**	**20**	25–26	30	2	CU-2	22			3#6	1
				4				27–28					22			
3#8	3/4			10	EXHAUST FAN PUMP ROOM	2	20	29–30	30	2	CCTV VIDEO RACK			9	3#10	3/4
		10						31–32				9				
3#8	3/4		10		SUPPLY FAN PUMP ROOM	1	20	33–34	20	2	SPARE		–			
				10				35–36						–		
3#8	3/4	10			EXHAUST FAN GENERATOR AREA	1	20	37–38	30	2	GEN JKT HEATER 2	15			3#10	3/4
			10					39–40					15			
3#12	3/4			1	LIGHTING CONTRACTOR	1	20	41–42	20	1	SPARE			–		

RATED VOLTAGE: ■ 120/208 ☐ 277/480 3ø, 4 WIRE	BRANCH POLES: ☐ 12 ☐ 20 ☐ 30 ■ 42	MANUFACTURER: GE
RATED AMPS: ☐ 100 ■ 225 ☐ 400 ☐ _____	CABINET: ■ SURFACE ☐ FLUSH	NEMA ■ 1 ☐ 3R ☐ 4X
☐ MAIN LUGS ONLY / MAIN 200 AMPS ■ BREAKER ☐ FUSED SWITCH	■ HINGED DOOR	■ KEYED DOOR LATCH
☐ FUSED ■ CIRCUIT BREAKER (BOLT-IN) BRANCH DEVICES	☐ _____ TO BE GFI BREAKERS	FULL NEUTRAL BUS / GROUND BUS
ALL BREAKERS MUST BE RATED TO INTERRUPT A SHORT CIRCUIT ISC OF 22,000 AMPS SYMMETRICAL.		

NOTE:

EXISTING ELECTRICAL DRAWINGS DATA IS BASED ON RECORD DOCUMENTS FURNISHED BY OWNER.

REV	DATE	BY	DESCRIPTION

LAST SAVED BY:

DESIGNED MAG
DRAWN JB
CHECKED CA
DATE OCTOBER, 2015
PROJECT ENGINEER

Gamboa Engineers
17433 SW 65 CT
SOUTHWEST RANCHES, FL 33331
TEL. (954)-533-1121

carollo
3440 HOLLYWOOD BOULEVARD, SUITE 465
HOLLYWOOD, FLORIDA 33021
TEL: (954) 837-0030 - FAX: (954) 837-0035

pompano beach
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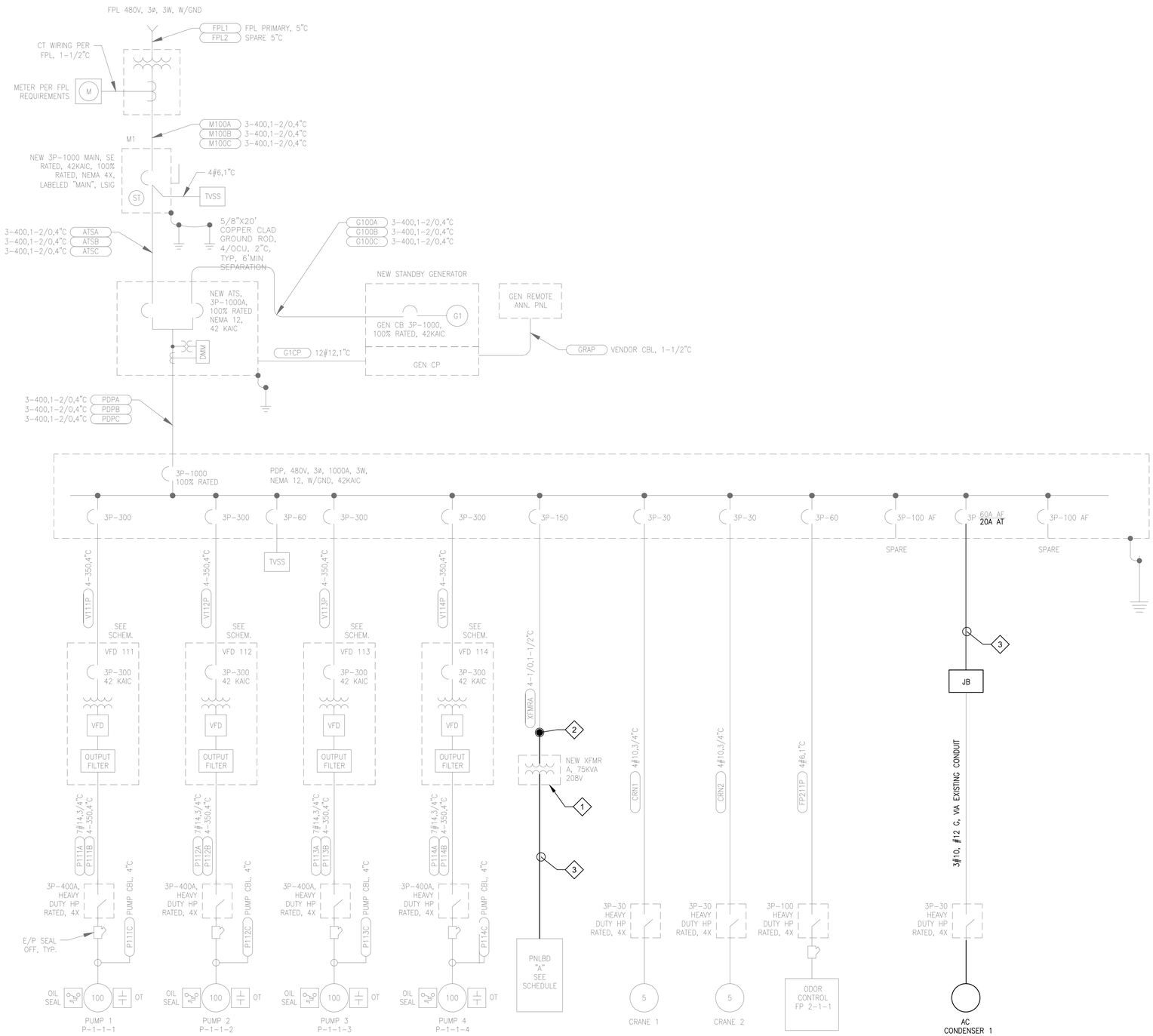
CITY OF POMPANO BEACH
LIFT STATION NO. 12
AIR CONDITIONING UNIT NO.1 REPLACEMENT
ELECTRICAL
LEGEND, ABBREVIATIONS, GENERAL NOTES SPECIFICATIONS AND PANEL SCHEDULE

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 8386M.10
DRAWING NO. E-01
SHEET NO.

PROJECT NO. 8683D10 FILE NAME: 8683D10-E-OL-01.dgn



480V, 3ø LOAD CALCULATION

REVISED 10-2015

DESCRIPTION	AMPS
PUMP 1 X 125%	130
PUMP 2	105
PUMP 3	105
PUMP 4 (BACKUP)	105
XFMR A	50
MISC	10
TOTAL	505

EXISTING SERVICE: 3C/ø, 400MCM, 1000A
SPARE CAPACITY = 50%

NOTES:

1. CALCULATED PUMPS LOAD IS BASED ON INPUT CURRENT TO PUMP'S VFD (WITH 92% MOTOR EFFICIENCY AND 95% VFD EFFICIENCY).
2. VFD SUPLIES VARS TO MOTOR.

KEY NOTES:

1. RELOCATE TRANSFORMER OUTSIDE OF ELECTRICAL ROOM.
2. INTERCEPT EXISTING FEEDER AND EXTEND TO RELOCATED TRANSFORMER.
3. 3#10, #12 G. FOR AC-1 CONDENSER, AND 3#10, #12 G. FOR FUTURE AC-2 REPLACEMENT. VIA NEW 1-1/4" CONDUIT.

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ELECTRICAL
POWER ONE LINE DIAGRAM - ADITTIONS

VERIFY SCALES
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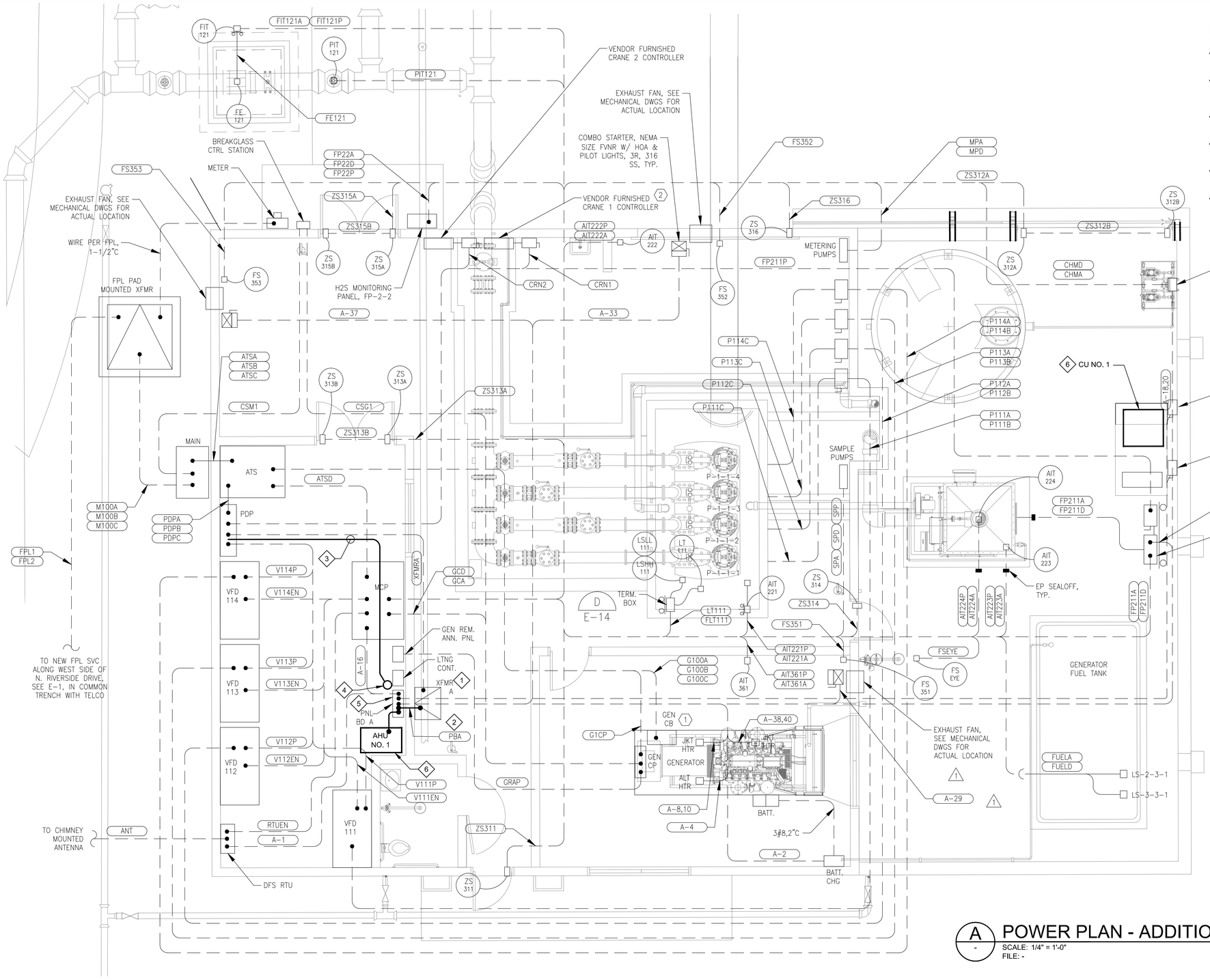
JOB NO. 8386M.10
DRAWING NO. E-02
SHEET NO.

PROJECT NO. 8683D10 FILE NAME: 8683D10-E-OL-01.dgn



KEY NOTES:

1. RELOCATE TRANSFORMER OUTSIDE OF ELECTRICAL ROOM AS SHOWN.
2. INTERCEPT EXISTING FEEDER AND EXTEND TO RELOCATED TRANSFORMER.
3. PROVIDE CONDUIT FROM NEW J-BOX TO PANELBOARD PDP, SEE ONE LINE DRAWING.
4. PROVIDE J-BOX TO INTERCEPT CONDENSER UNIT NO. 1 & NO. 2 FEEDER CONDUITS.
5. COORDINATE WITH MECHANICAL CONTRACTOR AND PROVIDE 120V CIRCUIT FOR AHU-1 DRAIN PUMP.
6. COORDINATE WITH MECHANICAL CONTRACTOR AND PROVIDE CONTROL WIRING BETWEEN AHU-1 AND CONDENSER 1 VIA EXISTING CONDUIT.

A POWER PLAN - ADDITIONS

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

REV	DATE	BY	DESCRIPTION

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LIFT STATION NO. 12
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ELECTRICAL
AHU -1 AND CONDENSER 1
POWER - ADDITIONS

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0 1"
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JOB NO. 8386M.10
DRAWING NO. E-03
SHEET NO.

PROJECT NO. 8683D10 FILE NAME: 8683D10-E-OL-01.dgn

A - TRANSFORMER "A" RELOCATION

SCALE: N.T.S.
FILE: -

NOTES:

1. PROVIDE TEMPORARY POWER TO PANEL "A" WITH MINIMUM CAPACITY OF 3 PHASE, 208V, 100 AMPS AS NECESSARY DURING RELOCATION OF TRANSFORMER.
2. RELOCATE TRANSFORMER TO OUTSIDE ELECTRICAL ROOM AND ACROSS THE BACK WALL. SEE PHOTO DETAIL "C".

B - AHU NO. 1 AREA SPACE

SCALE: N.T.S.
FILE: -

NOTES:

1. AFTER RELOCATION OF TRANSFORMER, SPACE WILL BE AVAILABLE FOR AHU.

C - TRANSFORMER "A" SPACE

SCALE: N.T.S.
FILE: -

NOTES:

1. PROVIDE 4" CONCRETE PAD FOR TRANSFORMER.

D - LIGHTING / CONTROL PANEL "A"

SCALE: N.T.S.
FILE: -

NOTES:

1. PROVIDE J-BOX TO INTERCEPT CONDENSER UNIT NO. 1 & NO. 2 FEEDER CONDUITS.
2. PROVIDE CONDUIT FROM NEW J-BOX TO PANELBOARD PDP, SEE ONE LINE DRAWING.

E - PANELBOARD PDP - ADDITIONS

SCALE: N.T.S.
FILE: -

NOTES:

1. SEE ONE LINE DIAGRAM FOR ADDITIONAL FEEDER TO AC CONDENSERS.
2. PROVIDE I.D. LABEL AND AC-1 CIRCUIT BREAKER.

F - CONDENSER UNITS

SCALE: N.T.S.
FILE: -

NOTES:

1. REMOVE EXISTING AC-1 BRANCH WIRING.
2. PROVIDE 3#10 (THWN) WITH #12 GROUND FROM PANEL "PDP" TO AC-1.
3. CONNECT NEW CONDENSER TO EXISTING DISCONNECT SWITCH.
4. PROVIDE NEW CONTROL WIRING BETWEEN AHU-1 & CONDENSER 1 VIA EXISTING CONDUIT.

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PHOTO - DETAILS

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