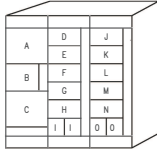


MOTOR CONTROL CENTER: CHILLER
500 AMPS, 480/277V, 3Ø, 4W, GND BUS

LOCATION: CHILLER PLANT
ENCLOSURE TYPE: NEMA 12

SEC. NO.	ITEM NO.	CIRCUIT BREAKER			MCP CONTN. RATING AMP.	STARTER NEMA SIZE	STARTER TYPE	CON-NECTED LOAD KVA	HP OR KW	DESCRIPTION	CONTROL DIAGRAM DWG. NO.	ELEVATION		
		POLES	FRAMES AMP.	TRIP AMP.								SECTION 1	SECTION 2	SECTION 3
1	A	3	400	350	-	-	-	-	-	MAN				
	B	3	100	30	-	1	FVNR	11.6	10HP	COOLING TOWER FAN				
	C	3	400	300	-	-	FVNR	180	161KW	CHILLER				
2	D	3	100	70	-	2	FVNR	16.9	15HP	CONDENSER WATER PUMP CWP-1				
	E	3	100	70	-	2	FVNR	22.6	20HP	CHILLER WATER PUMP CHWP-1				
	F	3	100	5	-	00	FVNR	-	-	F-6				
	G	3	100	5	-	00	FVNR	-	-	F-7				
	H	3	100	30	-	-	C/B	-	-	EDH-1				
	I	3	100	20	-	-	C/B	-	-	2 SPARES				
	J	3	100	70	-	2	FVNR	16.9	15HP	CWP-2				
3	K	3	100	70	-	2	FVNR	22.6	20HP	CHWP-2				
	L	3	100	30	-	-	C/B	-	-	SCAC-1				
	M	3	100	20	-	00	FVNR	1.5	1HP	FQJ-1				
	N	3	100	2	-	-	FVNR	-	-	VUJ-1				
	O	3	100	20	-	-	C/B	-	-	2 SPARES				



ESTIMATED DEMAND: KVA				
LOAD	ESTIMATED DEMAND: KVA			
	CONNECTED	DF	SUMMER	WINTER
VENTILATION				
COOLING: MOTORS				
HEATING				
TOTAL DEMAND:				

Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 24687, Expiration Date: 2018-03-15

CONTRACT NO. FQ17162

DESIGNED	C. HILL	05/17
DRAWN	C. HILL	05/17
CHECKED	B. DUB	05/17
APPROVED	D. KORN	05/17

REFERENCE DRAWINGS		REVISIONS	
NUMBER	DESCRIPTION	DATE	BY

REVISIONS	
DATE	DESCRIPTION



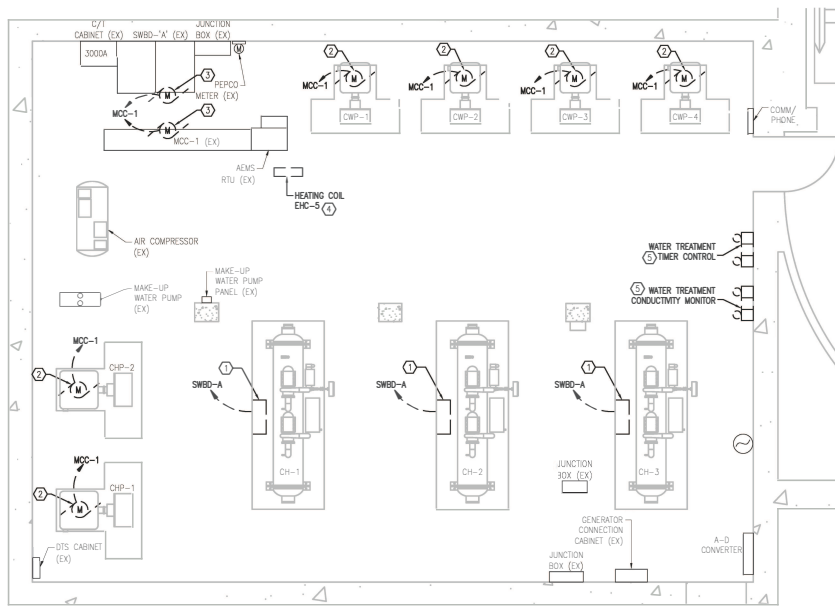
WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY
DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES
OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

APPROVED: *Derek H. Korn*

GFP A GARRETT FLEMING/PALSONS JOINT VENTURE
SUBMITTED: *[Signature]*
PROJECT MANAGER

REPLACEMENT OF CHILLERS AND COOLING TOWERS AT THREE METRO-RAIL STATIONS
CWPB11 - GLENMONT
ELECTRICAL PANEL SCHEDULE

SCALE: NONE
DRAWING NO. CWPB11-E-603
M1299-050



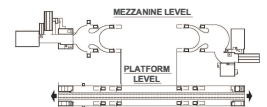
SHEET NOTES:

1. REFER TO DWG E-600 FOR SINGLE LINE DIAGRAM.
2. ALL SHOWN EQUIPMENT IS EXISTING TO REMAIN UNLESS SHOWN OTHERWISE.
3. FOR EQUIPMENT TO BE DEMOLISHED, ALL EXISTING CONDUIT AND WIRING SHALL BE REMOVED BACK TO SOURCE OR AS INDICATED.

KEYNOTES:

- ① EXISTING CHILLER CONTROLLER EQUIPMENT TO BE DEMOLISHED. DISCONNECT AND REMOVE WIRING AND CONDUIT BACK TO SWBD-A.
- ② EXISTING PUMP MOTOR TO BE DEMOLISHED BY MECHANICAL CONTRACTOR. DISCONNECT AND REMOVE WIRING AND CONDUIT BACK TO MCC-1.
- ③ EXISTING EXHAUST FAN TO BE DEMOLISHED BY MECHANICAL CONTRACTOR. DISCONNECT AND REMOVE WIRING AND CONDUIT BACK TO MCC-1.
- ④ EXISTING HEATING COIL TO BE DEMOLISHED BY MECHANICAL CONTRACTOR. DISCONNECT AND REMOVE WIRING AND CONDUIT BACK TO SOURCE.
- ⑤ WATER TREATMENT EQUIPMENT TO BE REMOVED BY MECHANICAL CONTRACTOR. DISCONNECT AND REMOVE ASSOCIATED POWER CONDUIT AND WIRING BACK TO SOURCE.

CHILLED WATER PLANT ROOM PLAN - POWER - DEMOLITION
SCALE: 1/4"=1'-0"



CONTRACT NO.
FQ17162

DESIGNED	REFERENCE DRAWINGS		REVISIONS	
	NUMBER	DESCRIPTION	DATE	BY
0.FAKEM/RLAUFER 05/17				
DRAWN				
CHECKED				
APPROVED				



WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY
DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES
OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

APPROVED: *Mark H. [Signature]*

GFP A GARRETT FERRIS/PAISON JOINT VENTURE
SUBMITTED: *[Signature]*
PROJECT MANAGER

REPLACEMENT OF CHILLERS AND COOLING TOWERS AT THREE METRO-RAIL STATIONS
CWPC03 - FARRAGUT WEST
ELECTRICAL PLAN - DEMOLITION

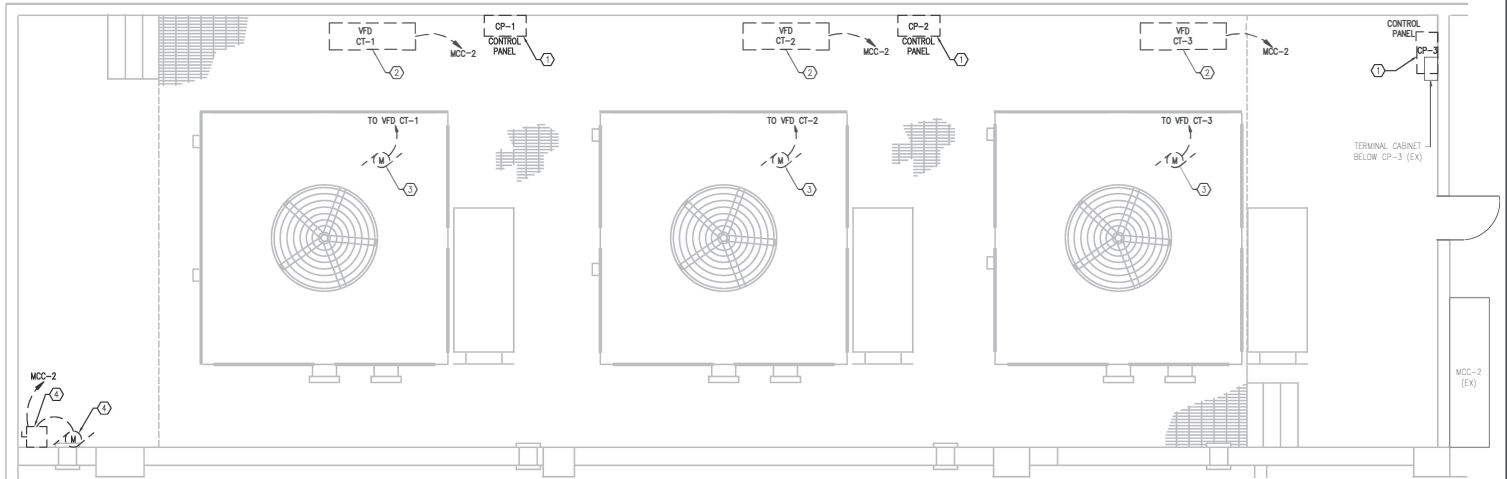
SCALE: 1/4"=1'-0" 1 0 1 2 3 4 5
DRAWING NO. CWPC03-E-100 M1299-051

SHEET NOTES:

1. ALL SHOWN EQUIPMENT IS EXISTING TO REMAIN UNLESS SHOWN OTHERWISE.
2. FOR EQUIPMENT TO BE DEMOLISHED: ALL EXISTING CONDUIT AND WIRING SHALL BE REMOVED BACK TO SOURCE OR AS INDICATED.

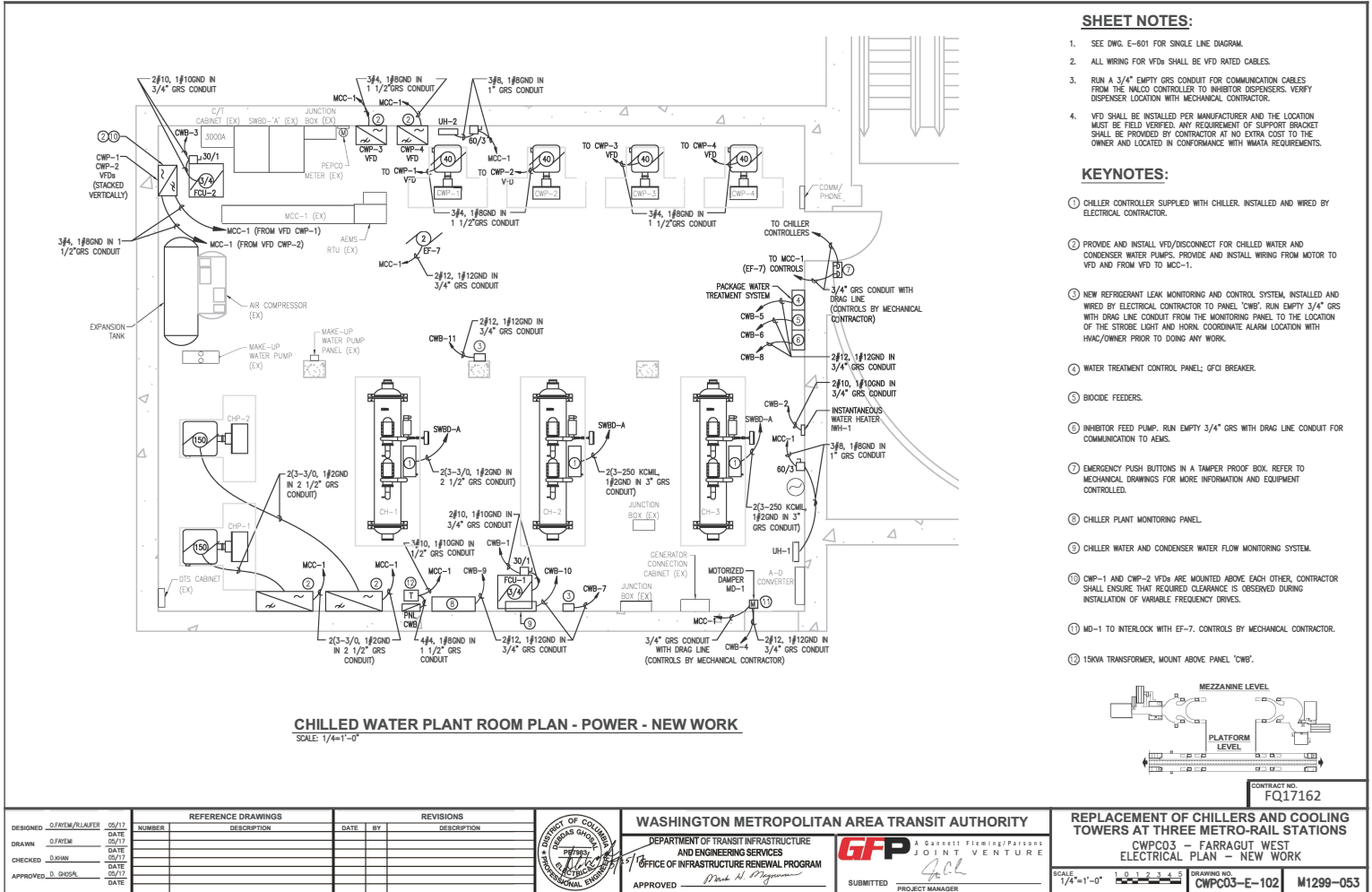
KEYNOTES:

- ① EXISTING COOLING TOWER STARTER, DISCONNECT AND CONTROLS TO BE REMOVED BY MECHANICAL CONTRACTOR. DISCONNECT AND REMOVE WIRING AND CONDUIT BACK TO MCC-2.
- ② EXISTING VARIABLE FREQUENCY DRIVE ALONG WITH ITS ENCLOSURE TO BE REMOVED BY MECHANICAL CONTRACTOR. DISCONNECT AND REMOVE WIRING AND CONDUIT BACK TO MCC-2.
- ③ FAN MOTOR TO BE REMOVED BY MECHANICAL CONTRACTOR. DISCONNECT AND REMOVE WIRING AND CONDUIT BACK TO THE ASSOCIATED VFD.
- ④ REMOVE AND DISPOSE OF ALL ELECTRICAL CONDUIT, WIRING AND EQUIPMENT ASSOCIATED WITH DECOMMISSIONED 7.5HP WATER TREATMENT PUMP.



COOLING TOWER PARTIAL ROOF PLAN - POWER - DEMOLITION
SCALE: 1/4" = 1'-0"

		CONTRACT NO. FQ17162																						
DESIGNED O. FAYEM/BLAUFER 05/17	DATE 05/17	WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM APPROVED: <i>Mark H. [Signature]</i>																						
DRAWN O. FAYEM 05/17	DATE 05/17																							
CHECKED D. BROWN 05/17	DATE 05/17																							
APPROVED D. CHOSLA 05/17	DATE 05/17																							
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">REFERENCE DRAWINGS</th> <th colspan="2">REVISIONS</th> </tr> <tr> <th>NUMBER</th> <th>DESCRIPTION</th> <th>DATE</th> <th>BY</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>		REFERENCE DRAWINGS		REVISIONS		NUMBER	DESCRIPTION	DATE	BY														GFP A GARRETT FLEMING/PARSONS JOINT VENTURE SUBMITTED: <i>[Signature]</i> PROJECT MANAGER	REPLACEMENT OF CHILLERS AND COOLING TOWERS AT THREE METRO-RAIL STATIONS CWPC03 - FARRAGUT WEST ELECTRICAL ROOF PLAN - DEMOLITION SCALE: 1/4"=1'-0"
REFERENCE DRAWINGS		REVISIONS																						
NUMBER	DESCRIPTION	DATE	BY																					
		DRAWING NO. CWPC03-E-101	M1299-052																					



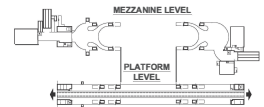
CHILLED WATER PLANT ROOM PLAN - POWER - NEW WORK
SCALE: 1/4"=1'-0"

SHEET NOTES:

- SEE DWG. E-601 FOR SINGLE LINE DIAGRAM.
- ALL WIRING FOR VFDs SHALL BE VFD RATED CABLES.
- RUN A 3/4" EMPTY GRS CONDUIT FOR COMMUNICATION CABLES FROM THE HALCO CONTROLLER TO INHIBITOR DISPENSERS. VERIFY DISPENSER LOCATION WITH MECHANICAL CONTRACTOR.
- VFD SHALL BE INSTALLED PER MANUFACTURER AND THE LOCATION MUST BE FIELD VERIFIED. ANY REQUIREMENT OF SUPPORT BRACKET SHALL BE PROVIDED BY CONTRACTOR AT NO EXTRA COST TO THE OWNER AND LOCATED IN CONFORMANCE WITH WATER REQUIREMENTS.

KEYNOTES:

- CHILLER CONTROLLER SUPPLIED WITH CHILLER. INSTALLED AND WIRED BY ELECTRICAL CONTRACTOR.
- PROVIDE AND INSTALL VFD/DISCONNECT FOR CHILLED WATER AND CONDENSER WATER PUMPS. PROVIDE AND INSTALL WIRING FROM MOTOR TO VFD AND FROM VFD TO MCC-1.
- NEW REFRIGERANT LEAK MONITORING AND CONTROL SYSTEM, INSTALLED AND WIRED BY ELECTRICAL CONTRACTOR TO PANEL 'CWB'. RUN EMPTY 3/4" GRS WITH DRAG LINE CONDUIT FROM THE MONITORING PANEL TO THE LOCATION OF THE STROBE LIGHT AND HORN. COORDINATE ALARM LOCATION WITH HVAC/OWNER PRIOR TO DOING ANY WORK.
- WATER TREATMENT CONTROL PANEL: GFCI BREAKER.
- BIODIE FEEDERS.
- INHIBITOR FEED PUMP. RUN EMPTY 3/4" GRS WITH DRAG LINE CONDUIT FOR COMMUNICATION TO AEMS.
- EMERGENCY PUSH BUTTONS IN A TAMPER PROOF BOX. REFER TO MECHANICAL DRAWINGS FOR MORE INFORMATION AND EQUIPMENT CONTROLLED.
- CHILLER PLANT MONITORING PANEL.
- CHILLER WATER AND CONDENSER WATER FLOW MONITORING SYSTEM.
- CWP-1 AND CWP-2 VFDs ARE MOUNTED ABOVE EACH OTHER. CONTRACTOR SHALL ENSURE THAT REQUIRED CLEARANCE IS OBSERVED DURING INSTALLATION OF VARIABLE FREQUENCY DRIVES.
- MD-1 TO INTERLOCK WITH EF-7. CONTROLS BY MECHANICAL CONTRACTOR.
- 15KVA TRANSFORMER, MOUNT ABOVE PANEL 'CWB'.



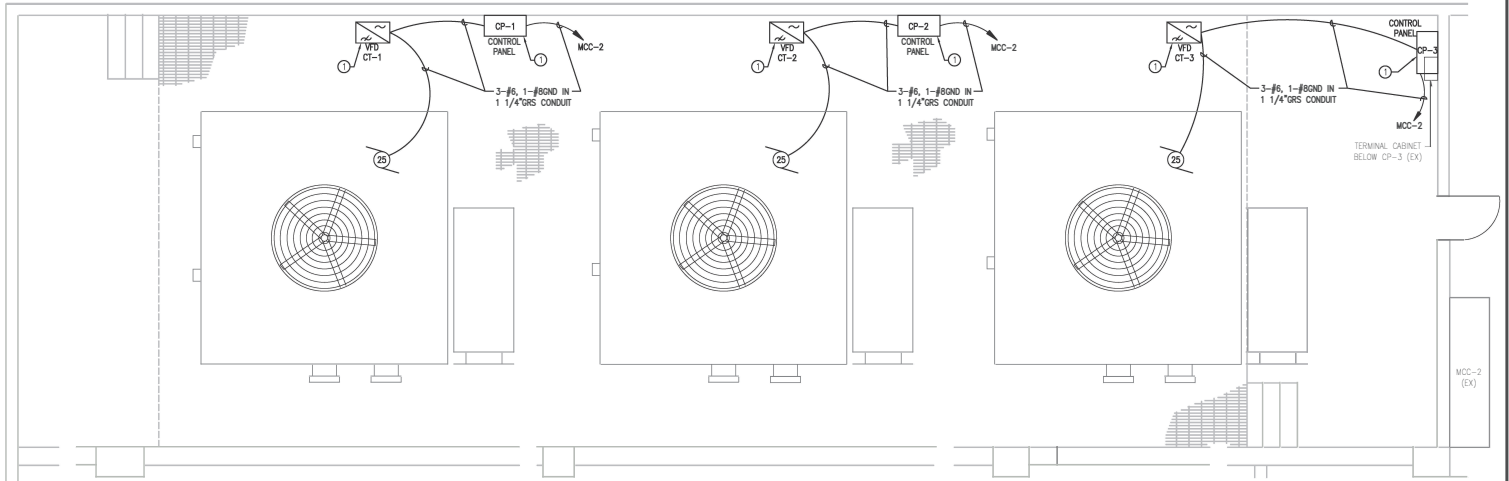
DESIGNED: O.FREM/RLAUFER 05/17		DRAWN: O.FREM 05/17		CHECKED: O.BONE 05/17		APPROVED: D.ODSA 05/17	
REFERENCE DRAWINGS		REVISIONS					
NUMBER	DESCRIPTION	DATE	BY				
				WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM			
				GFP A GARRETT FLEMING/PARSONS JOINT VENTURE SUBMITTED PROJECT MANAGER			
CONTRACT NO. FQ17162				REPLACEMENT OF CHILLERS AND COOLING TOWERS AT THREE METRO-RAIL STATIONS CWPC03 - FARRAGUT WEST ELECTRICAL PLAN - NEW WORK			
SCALE: 1/4"=1'-0"				DRAWING NO. CWPC03-E-102 M1299-053			

SHEET NOTES:

- SEE DWG. E-601 FOR SINGLE LINE DIAGRAM.
- ALL WIRING FOR VFDs SHALL BE VFD RATED CABLES.

KEYNOTES:

- PROVIDE AND INSTALL VFD AND CONTROL PANEL/DISCONNECT.



COOLING TOWER PARTIAL ROOF PLAN - POWER - NEW WORK
SCALE: 1/4" = 1'-0"

CONTRACT NO.
FQ17162

DESIGNED	O.FAKEM/BLAUFER	05/17
DRAWN	O.FAKEM	05/17
CHECKED	D.BUNK	05/17
APPROVED	D. GHOSAL	05/17

NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION

DATE	BY	DESCRIPTION



WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY
DEPARTMENT OF TRANSIT INFRASTRUCTURE
AND ENGINEERING SERVICES
OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM
APPROVED: *Mark H. [Signature]*

GFP A GARRETT FIRMING/PALSONS
JOINT VENTURE
SUBMITTED: *[Signature]*
PROJECT MANAGER

REPLACEMENT OF CHILLERS AND COOLING
TOWERS AT THREE METRO-RAIL STATIONS
CWPC03 - FARRAGUT WEST
ELECTRICAL ROOF PLAN - NEW WORK
SCALE: 1/4"=1'-0" 1 0 1 2 3 4 5
DRAWING NO. CWPC03-E-103 M1299-054