

**GENERAL NOTES:** 

- A. CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION AND QUANTITIES OF EQUIPMENT, PIPING, VALVES, DUCTWORK, ELECTRICAL AND CONTROL WIRING PRIOR TO DEMOLITION. ITEMS SHOWN ON THIS PLAN ARE APPROXIMATE.
- B. REFER TO LEGEND SHEET FOR GENERAL ABBREVIATIONS AND SYMBOLS.

## KEYNOTES:

- REMOVE AND DISPOSE OF CHILLER, CHILLER SUPPORT, STARTER, WIRING, CONDUIT, JUNCTION AND PULL BOXES DISCONNECT, AEMS SENSORS, AND CONTROLS. REMOVAL SHALL INCLUDE R-134a EVACUATION BY A CERTIFIED COMPANY. RECOVERED REFRIGERANT SHALL BE CLEANED AND THEN BE RETURNED TO WMATA PLANT MAINTENANCE IN 125 POUND CONTAINERS.
- REMOVE AND DISPOSE OF CHILLED WATER PIPING (CHWS, CHWR), INSULATION, SUPPORT, TEMPERATURE AND PRESSURE GAUGES.

  REMOVE PIPING TO AND FROM CHILLER INCLUDING ISOLATION VALVES. EXACT DEMOLITION POINT SHALL BE FIELD COORDINATED BY CONTRACTOR TO ACCOMMODATE NEW PIPING CONNECTIONS.
- REMOVE AND DISPOSE OF CONDENSER WATER PIPING (CWR, CWS), TEMPERATURE AND PRESSURE GAUGES. REMOVE CONDENSER WATER SUPPLY PIPING FROM THE CHILLER UP TO AND INCLUDING THE ISOLATION VALVE. REMOVE CONDENSER WATER RETURN PIPING FROM VERTICAL ELBOW TO CHILLER. EXACT DEMOLITION POINT SHALL BE FIELD COORDINATED BY CONTRACTOR TO ACCOMMODATE NEW PIPING CONNECTIONS.
- REMOVE EXISTING 1½" REFRIGERANT RELIEF (VENT) PIPING TO EXTENT SHOWN.
- 5 REMOVE AND DISPOSE OF CHILLER CONTROL PANEL.
- REMOVE AND DISPOSE OF CHILLED WATER PUMPS CWP-1 AND CWP-2. REMOVE PIPING AND VALVES INCLUDING THE ISOLATION VALVES, STRAINERS, CHECK VALVES AND BALANCING VALVES UP TO THE PIPE CONNECTION FLANGES. REMOVAL SHALL INCLUDE PUMP, MOTOR, AND CONTROL WIRING. EXISTING VIBRATION SUPPORT, INERTIA PAD, AND EQUIPMENT PAD TO REMAIN.
- 7 REMOVE AND DISPOSE OF CONDENSER WATER PUMPS CDWP-1
  AND CDWP-2. REMOVE PIPING AND VALVES INCLUDING THE
  ISOLATION VALVES, STRAINERS, CHECK VALVES AND BALANCING
  VALVES UP TO THE PIPE CONNECTION FLANGES. REMOVAL SHALL
  INCLUDE PUMP, MOTOR, AND CONTROL WIRING. EXISTING VIBRATION
  SUPPORT, INERTIA PAD, AND EQUIPMENT PAD TO REMAIN.
- 8 REMOVE AND DISPOSE OF CHEMICAL POT FEEDER & ACCESSORIES FOR CHILLED WATER AND CONDENSER WATER SYSTEM.
- PREMOVE AND DISPOSE OF EXISTING CONDENSER WATER TREATMENT SYSTEM INCLUDING VALVES, PIPING, SUPPORTS, CHEMICAL DRUMS, METERING PUMPS, AND RELATED ELECTRICAL/CONTROL ACCESSORIES.
- REMOVE AND DISPOSE OF EYEWASH STATION. CAP DOMESTIC WATER PIPING. COORDINATE WITH NEW WORK PLAN.
- EXISTING REFRIGERANT MONITORING PANEL SHOWN HERE FOR REFERENCE. COORDINATE WITH WMATA CONTRACT FQ14114.
- 12 REMOVE EXISTING UNIT HEATER AND ASSOCIATED CONTROLS.

  HANGERS CAN REMAIN AND BE RE-USED. SEE NEW WORK PLAN.

A Gannett Fleming/Parsons
JOINT VENTURE



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DATE						
CHECKED D. GHOSAL 03/23/18						
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## WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF DESIGN AND CONSTRUCTION SERVICES OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM GROUP

APPROVED Mark H. Magnusse 03/2018

MARK MAGNUSSEN DATE GRAHAM SPILLER
MANAGER, ENV. PLANNING AND COMP GFP DEPUTY PROGRAM

APPROVED

GRAHAM SPILLER

GFP DEPUTY PROGRAM MANAGER

GRAHAM SPILLER

GFP DEPUTY PROGRAM MANAGER

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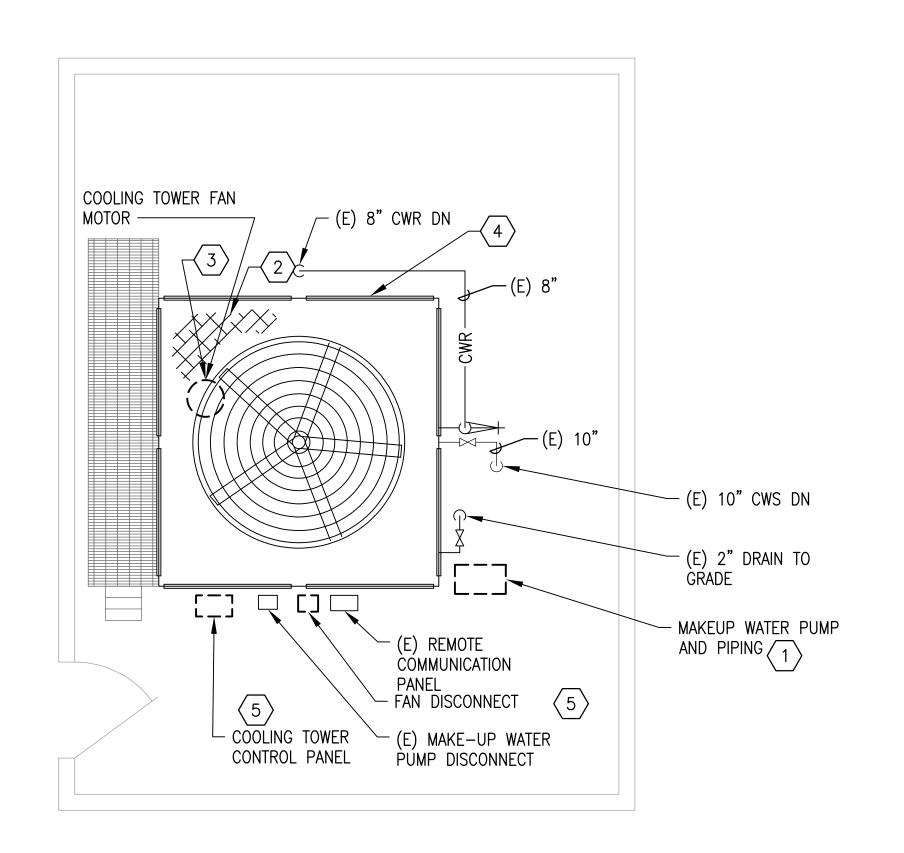
M1:

REPLACEMENT OF CHILLERS
AND COOLING TOWER ACCESSORIES AT EIGHT METRO-RAIL STATIONS
CWPA6 - MEDICAL CENTER (A10)
MECHANICAL PLAN - DEMOLITION

 MECHANICAL PLAN - DEMOLITION

 M NO.
 CONTRACT NO.
 SCALE
 DRAWING NO.
 SHEET NO.

 M1304
 FQ-18102
 1/4" = 1'-0"
 CWPA6-M-100
 55 of 173



1 MECHANICAL PLAN - DEMOLITION CWPA6-M-101

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

#### GENERAL NOTES:

- A. CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION AND QUANTITIES OF EQUIPMENT, PIPING, VALVES, DUCTWORK, ELECTRICAL AND CONTROL WIRING PRIOR TO DEMOLITION. ITEMS SHOWN ON THIS PLAN ARE APPROXIMATE.
- B. REFER TO LEGEND SHEET FOR GENERAL ABBREVIATIONS AND SYMBOLS
- C. COOLING TOWER LOCATED AT GRADE ACROSS THE ENTRANCE ROAD TO NIH. ACCESS IS THROUGH NIH SECURITY.
- D. ALL COOLING TOWER COMPONENTS THAT ARE REMOVED ARE TO BE REPLACED IN KIND. INSTALLING CONTRACTOR SHALL COORDINATE WITH COOLING TOWER MANUFACTURER PRIOR TO REMOVAL.

#### KEYNOTES:

- 1 REMOVE AND DISPOSE OF ABANDONED MAKE—UP WATER SYSTEM. REMOVAL SHALL INCLUDE PUMP, MOTOR, ASSOCIATED PIPING, CONTROLS, AND PIPING SUPPORT.
- 2 REMOVE AND DISPOSE OF EXISTING COOLING TOWER FILL.
- 3 REMOVE EXISTING FAN MOTOR, BELT DRIVEN FAN DRIVE ASSEMBLY, BELTS, SHEAVES AND MOUNTING HARDWARE.
- 4 REMOVE AND DISPOSE OF EXISTING LOUVER.
- 5 REMOVE COOLING TOWER FAN CONTROLLER, STARTER, AND DISCONNECT.





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	REVISIONS		REFERENCE DRAWINGS			
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## WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF DESIGN AND CONSTRUCTION SERVICES OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM GROUP

APPROVED Mark W. Magnussu 03/2018

MARK MAGNUSSEN DATE

MANAGER, ENV. PLANNING AND COMP

APPROVED

GRAHAM SPILLER

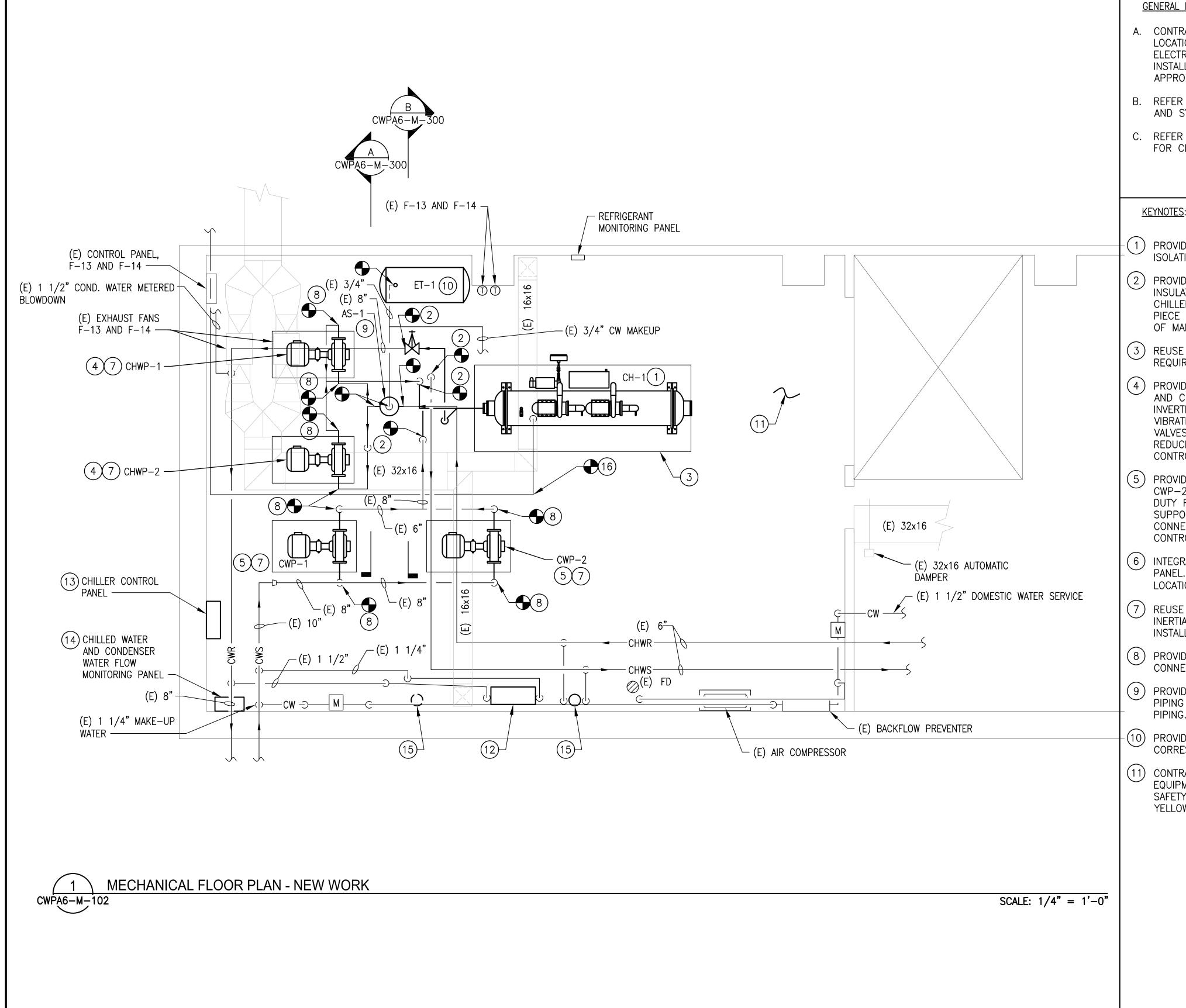
GFP DEPUTY PROGRAM MANAGER

GRAHAM SPILLER

GFP DEPUTY PROGRAM MANAGER

REPLACEMENT OF CHILLERS
AND COOLING TOWER ACCESSORIES AT EIGHT METRO-RAIL STATIONS
CWPA6 - MEDICAL CENTER (A10)
MECHANICAL PLAN - DEMOLÎTION

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M NO.	CONTRACT NO.	SCALE	DRAWING NO.	SHEET NO.
M1304	FQ-18102	1/4" = 1'-0"	CWPA6-M-101	56 of 173



#### **GENERAL NOTES:**

- A. CONTRACTOR SHALL FIELD VERIFY AND COORDINATE LOCATION OF NEW EQUIPMENT, PIPING, VALVES, DUCTWORK, ELECTRICAL AND CONTROL WIRING WITH EXISTING PRIOR TO INSTALLATION. ITEMS SHOWN ON THIS PLAN ARE APPROXIMATE.
- B. REFER TO LEGEND SHEET FOR GENERAL ABBREVIATIONS AND SYMBOLS.
- C. REFER TO CHILLER PIPING SCHEMATIC FOR ALL VALVES. FOR CLARITY, ALL VALVES ARE NOT SHOWN ON THIS PLAN.
- D. INSTALL ALL EQUIPMENT AND COMPONENTS PER MANUFACTURER'S RECOMMENDATION WITH CLEARANCE FOR MAINTENANCE AND OPERATION OF EQUIPMENT. PROVIDE ACCESS CLEARANCE AT LOCATIONS OF VALVES, STRAINERS, INSTRUMENTATION, AND EQUIPMENT AS REQUIRED BY MANUFACTURER FOR EASE OF MAINTENANCE.

- (1) PROVIDE AND INSTALL CHILLER, CORRESPONDING VIBRATION ISOLATION, ANCHOR AND SUPPORT.
- (2) PROVIDE AND INSTALL ALL PIPING, FITTINGS, VALVES, PIPING INSULATION AND INSTRUMENTATION FOR CONNECTION TO CHILLER. PROVIDE A VICTAULIC COUPLING CONNECTION PIECE AT EACH PIPE CONNECTION TO CHILLER FOR EASE OF MAINTENANCE.
- (3) REUSE EXISTING EQUIPMENT PAD. REPAIR AND MODIFY AS REQUIRED TO FIT NEW INSTALLATION.
- (4) PROVIDE AND INSTALL CHILLED WATER PUMPS, CHWP-1 AND CHWP-2. INSTALLATION SHALL INCLUDE PUMP, INVERTER DUTY RATED MOTOR FOR VFD APPLICATION VIBRATION SUPPORT, PIPING, ISOLATION VALVES, CHECK VALVES, STRAINER, FLEXIBLE CONNECTORS ECCENTRIC REDUCER AND CORRESPONDING INSTRUMENTATION & CONTROLS. INSULATE PUMPS AND PIPING.
- (5) PROVIDE AND INSTALL CONDENSER WATER PUMPS, CWP-1, CWP-2. INSTALLATION SHALL INCLUDE PUMP, INVERTER DUTY RATED MOTOR FOR VFD APPLICATION, VIBRATION SUPPORT, PIPING, FLEXIBLE ECCENTRIC REDUCER CONNECTORS AND CORRESPONDING INSTRUMENTATION & CONTROLS. INSULATE PUMPS AND PIPING.
- (6) INTEGRATE PUMP VFD DRIVES WITH CHILLER CONTROL PANEL. REFER TO ELECTRICAL DRAWINGS FOR EXACT LOCATION OF VFD's.
- (7) REUSE EXISTING EQUIPMENT PAD, SPRING ISOLATOR AND INERTIA PAD. REPAIR AND MODIFY AS REQUIRED TO FIT NEW INSTALLATION.
- 8 PROVIDE AND INSTALL ALL APPROPRIATE PIPE FITTINGS FOR CONNECTION TO PUMPS.
- (9) PROVIDE AND INSTALL AIR SEPARATOR, CORRESPONDING PIPING AND SUPPORTS. INSULATE AIR SEPARATOR AND
- (10) PROVIDE AND INSTALL EXPANSION TANK AND CORRESPONDING PIPING. REUSE EXISTING SUPPORT.
- (11) CONTRACTOR SHALL PAINT CHILLER PLANT FLOORS AND EQUIPMENT PADS WITH BATTLE SHIP GREY OR EQUAL. THE SAFETY LINES AND TRIPPING HAZARD SHALL BE PAINTED YELLOW OR RED.

- (12) A. COORDINATE WITH OTHER WMATA CONTRACT INSTALLING WATER TREATMENT SYSTEM.
  - B. PROVIDE AND INSTALL A NEW WMATA CHILLED WATER SYSTEM LOOP. THE LOOP SHALL INCLUDE PIPING, VALVES, HACH INDUCTIVE CONDUCTIVITY SENSOR -3725E2T, FLOW SWITCH GEM SENSORS FS-500 170231 AND CONVERTIBLE DIGITAL PH SENSOR HACH DPC1R2A. REFER TO REFERENCE DRAWING DD-ME-HVAC-007.
  - C. PROVIDE AND INSTALL A NEW WMATA CONDENSER WATER SYSTEM LOOP. THE LOOP SHALL INCLUDE PIPING, VALVES, HACH INDUCTIVE CONDUCTIVITY SENSOR -3725E2T, FLOW SWITCH GEM SENSORS FS-500 170231 REFER TO REFERENCE DRAWING DD-ME-HVAC-008.
- (13) PROVIDE AND INSTALL ONE CHILLER PLANT CONTROL PANEL (CPCP). REFER TO REFERENCE DRAWINGS DD-ME-HVAC-009 FOR CPCP DETAILS. PANEL SHALL BE INSTALLED 48" ABOVE FINISHED FLOOR.
- (14) PROVIDE AND INSTALL CHILLED WATER AND CONDENSER WATER FLOW MONITORING SYSTEM. PROVIDE AND INSTALI COMMUNICATIONS WIRING IN RIGID CONDUIT FROM FLOW MONITORING PANEL TO CHILLER PLANT CONTROL PANEL, UTILIZING BELDEN 89842 MULTI-CONDUCTOR; LOW CAPACITANCE COMPUTER TO COMPUTER POINT OF SERVICE (POS) CABLE OR EQUIVALENT. INSTALL 48" ABOVE FINISHED FLOOR. FLOW METER SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDED INSTALLATION PROCEDURES. FLOW METERS AND SENSOR CABLES SHOULD BE INSTALLED WITHIN EIGHT FEET OF VFDs OR FLUORESCENT LIGHT FIXTURES.
- 15) PROVIDE AND INSTALL CHEMICAL POT FEEDING FOR CHILLED WATER SYSTEM. FEEDING POT SHALL BE NEPTUNE VTF-5HF.
- (16) PROVIDE AND INSTALL REFRIGERANT VENT/REFIEF PIPING FROM CHILLER (AS PER CHILLER MANUFACTURER). FIELD VERIFY AND CONNECT NEW 2" REFRIGERANT RELIEF PIPING FROM CHILLER TO EXISTING REFRIGERANT RELIEF MAIN.

JOINT VENTURE State of Maryland 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. 030749, Expiration Date: 06/27/2018

A Gannett Fleming/Parsons

		REFERENCE DRAWINGS			REVISIONS	
DESIGNED M. MCDONNELL 01/26/1	NUMBER	TITLE	DATE	NUM	DESCRIPTION	]
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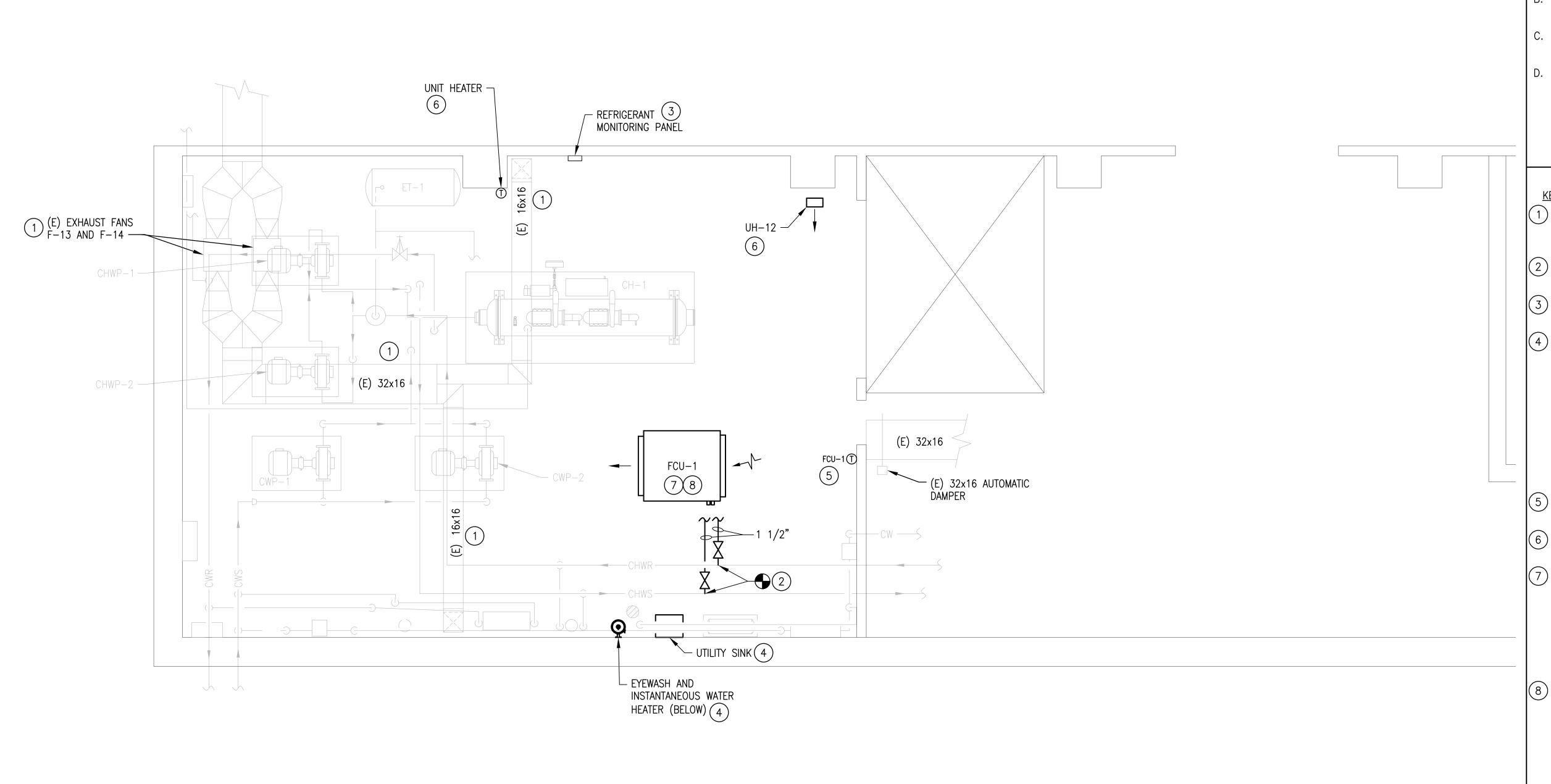
## WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF DESIGN AND CONSTRUCTION SERVICES OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM GROUP

03/2018 DATE MARK MAGNUSSEN GRAHAM SPILLER GFP DEPUTY PROGRAM MANAGER MANAGER, ENV. PLANNING AND COMP

REPLACEMENT OF CHILLERS AND COOLING TOWER ACCESSORIES AT EIGHT METRO-RAIL STATIONS CWPA6 - MEDICAL CENTER (A10) **MECHANICAL PLAN - NEW WORK** 

M NO. CONTRACT NO. SCALE DRAWING NO. SHEET NO. M1304 1/4" = 1'-0" FQ-18102 CWPA6-M-102 57 of 173



- A. CONTRACTOR SHALL FIELD VERIFY AND COORDINATE LOCATION OF NEW EQUIPMENT, PIPING, VALVES, DUCTWORK, ELECTRICAL AND CONTROL WIRING WITH EXISTING PRIOR TO INSTALLATION. ITEMS SHOWN ON THIS PLAN ARE APPROXIMATE.
- B. REFER TO LEGEND SHEET FOR GENERAL ABBREVIATIONS AND SYMBOLS.
- C. REFER TO CHILLER PIPING SCHEMATIC FOR ALL VALVES. FOR CLARITY, ALL VALVES ARE NOT SHOWN ON THIS PLAN.
- D. INSTALL ALL EQUIPMENT AND COMPONENTS PER MANUFACTURER'S RECOMMENDATION WITH CLEARANCE FOR MAINTENANCE AND OPERATION OF EQUIPMENT. PROVIDE ACCESS CLEARANCE AT LOCATIONS OF VALVES, STRAINERS, INSTRUMENTATION, AND EQUIPMENT AS REQUIRED BY MANUFACTURER FOR EASE OF MAINTENANCE.

#### KEYNOTES:

**GENERAL NOTES:** 

- 1 VENTILATION SYSTEM TO BE PROVIDED UNDER SEPARATE WMATA CONTRACT. FANS AND DUCTWORK SHOWN FOR REFERENCE ONLY. REFER TO WMATA CONTRACT FQ14114.
- PROVIDE 1½" CWHS AND CHWR BRANCH TO FCU-1. WET TAP INTO EXISTING 8" CHWS AND CHWR PIPING.
- 3 EXISTING REFRIGERANT MONITORING PANEL. SHOWN HERE FOR REFERENCE.
- 4 PROVIDE AND INSTALL NEW EYEWASH, UTILITY SINK, FAUCET, AND INSTANTANEOUS WATER HEATER, INCLUDING PIPING, WIRING, AND SUPPORTS. WATER SUPPLY SHALL BE FIELD ROUTED TO CONNECT UPSTREAM OF THE EXISTING MAKE—UP WATER BACKFLOW PREVENTERS. PROVIDE INLINE ISOLATION VALVE, STRAINER, AND REDUCED PRESSURE TYPE BACKFLOW PREVENTER AT AN ACCESSIBLE LOCATION. FIELD ROUTE UTILITY SINK DRAINAGE PIPING ALONG FLOOR SLAB TO NEARBY FLOOR DRAIN. PROVIDE PIPING ALONG FLOOR SLAB WITH NON—SLIP PIPE COVER WHERE THERE IS A TRIP HAZARD. EYEWASH DRAINAGE SHALL BE STRAIGHT TO FLOOR. REFER TO DETAIL 1 ON DRAWING M—502.
- 5 PROVIDE AND INSTALL NEW SPACE THERMOSTAT AND INTEGRATE WITH NEW FCU-1.
- 6 PROVIDE AND INSTALL NEW UNIT HEATER INCLUDING WIRING, RE-USE EXISTING SUPPORT, AND WALL-MOUNTED THERMOSTAT.
- 7 PROVIDE AND INSTALL NEW THERMOSTATICALLY CONTROLLED FAN COIL UNIT (FCU-1) INCLUDING PIPING, VALVES, WIRING, AND SUPPORTS. CHWS TO THE UNIT SHALL BE TAPPED FROM THE CHWS MAIN AS INDICATED; CHWR SHALL BE TAPPED INTO THE CHWR MAIN AS INDICATED. CHWS AND CHWR PIPING SHALL BE FIELD ROUTED. UNIT SHALL BE MOUNTED AT A MINIMUM 8'-0" AFF. FIELD COORDINATE FINAL MOUNTING ELEVATION WITH OTHER TRADES
- 8 PRIMARY CONDENSATE DRAINAGE FROM FCU-1 SHALL BE FIELD ROUTED DOWN TO AND ALONG FLOOR SLAB TO A NEARBY FLOOR DRAIN. OVERFLOW CONDENSATE DRAINAGE FROM FCU-1 SHALL BE FIELD ROUTED TO DISCHARGE AT VISIBLE LOCATION. DRAINAGE RISERS DOWN TO FLOOR SHALL BE MOUNTED FLUSH WITH STRUCTURAL COLUMN(S). PROVIDE PIPING ALONG FLOOR SLAB WITH NON-SLIP PIPE COVER WHERE THERE IS A TRIP HAZARD.





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REFERENCE DRAWINGS			REVISIONS	
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MECHANICAL FLOOR PLAN - NEW WORK

CWPA6-M-103

DESIGNED M. MCDONNELL 01/26/18

CHECKED D. GHOSAL 03/23/18
DATE

M. MCDONNELL 01/26/18

## M WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF DESIGN AND CONSTRUCTION SERVICES OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM GROUP

APPROVED Mark W. Magnusse 03/2018

MARK MAGNUSSEN DATE

MANAGER, ENV. PLANNING AND COMP

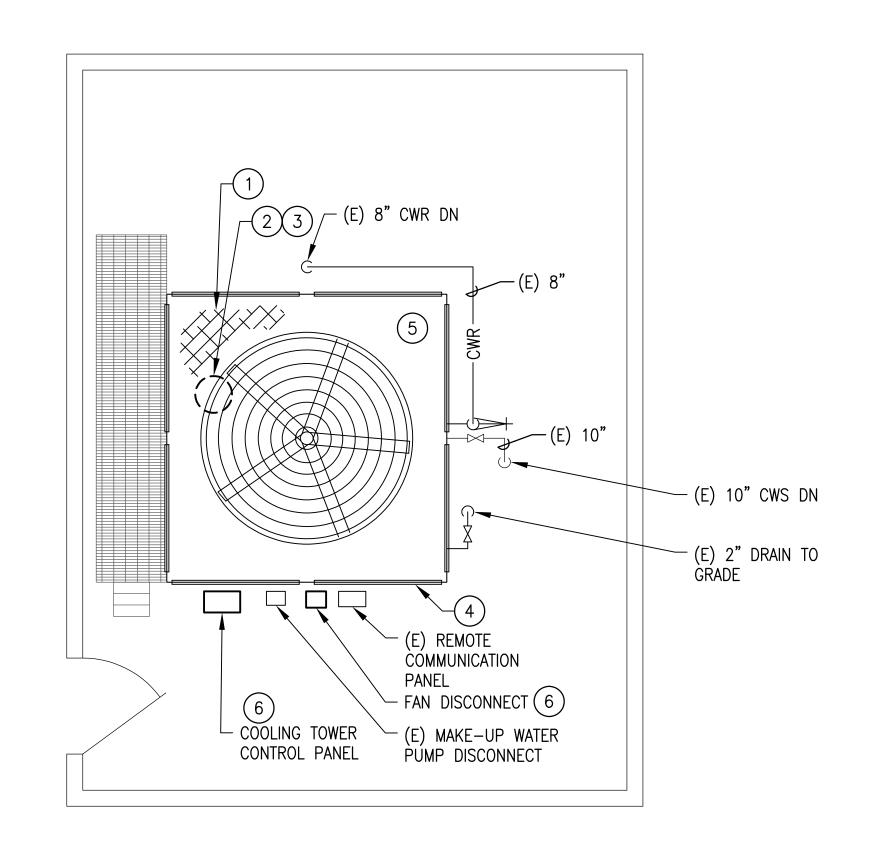
APPROVED 03/2018 M N
GRAHAM SPILLER
GFP DEPUTY PROGRAM MANAGER

M1

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

REPLACEMENT OF CHILLERS
AND COOLING TOWER ACCESSORIES AT EIGHT METRO-RAIL STATIONS
CWPA6 - MEDICAL CENTER (A10)
MECHANICAL PLAN - NEW WORK

	[\	MECHANICAL PL	AN - NEW WORK	
M NO.	CONTRACT NO.	SCALE	DRAWING NO.	SHEET NO.
M1304	FQ-18102	1/4" = 1'-0"	CWPA6-M-103	58 of 173



1 MECHANICAL PLAN - NEW WORK
CWPA6-M-104

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

## GENERAL NOTES:

- A. CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION AND QUANTITIES OF EQUIPMENT, PIPING, VALVES, DUCTWORK, ELECTRICAL AND CONTROL WIRING PRIOR TO DEMOLITION. ITEMS SHOWN ON THIS PLAN ARE APPROXIMATE.
- B. REFER TO LEGEND SHEET FOR GENERAL ABBREVIATIONS AND SYMBOLS.
- C. COOLING TOWER FAN MODULATION SHALL BE INTEGRATED WITH THE CHILLER CONTROL PANEL.

## KEYNOTES:

- 1 PROVIDE AND INSTALL NEW PLASTIC FILL IN THE COOLING TOWER. COORDINATE WITH COOLING TOWER MANUFACTURER FOR EXACT PART. THE NEW FILL DIMENSION AND TYPE SHALL MATCH EXISTING.
- 2 PROVIDE AND INSTALL NEW DIRECT DRIVE FAN MOTOR, DRIVE ASSEMBLY, AND MOUNTING HARDWARE. FAN MOTOR SHALL BE INVERTER DUTY RATED. COORDINATE WITH COOLING TOWER MANUFACTURER FOR EXACT PARTS.
- 3 PROVIDE AND INSTALL NEW VARIABLE FREQUENCY DRIVE CONTROLLER FOR COOLING TOWER FAN. VFD SHALL BE LOCATED INSIDE A NEMA 4X ENCLOSURE.
- 4 PROVIDE AND INSTALL NEW LOUVER GRILLES ON COOLING TOWER. COORDINATE WITH COOLING TOWER MANUFACTURER FOR EXACT PART. THE LOUVER DIMENSION SHALL MATCH EXISTING.
- 5 PROVIDE SUMP PUMP. FIELD COORDINATE EXACT LOCATION OF SUMP PUMP.
- 6 PROVIDE AND INSTALL NEW DISCONNECT AND CONTROLS.





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DEPARTMENT OF DESIGN AND CONSTRUCTION SERVICES OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM GROUP

APPROVED Mark H. Magnusser

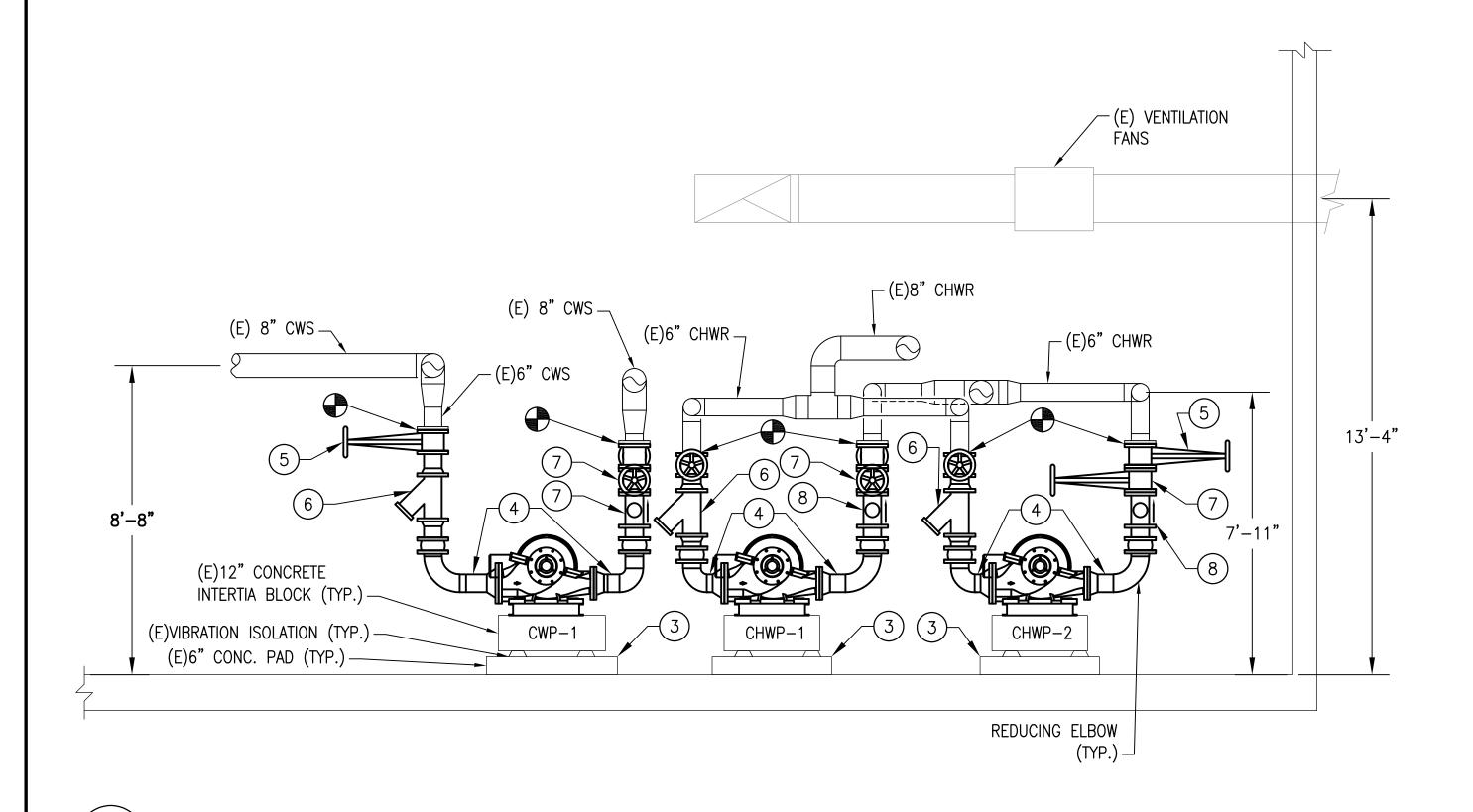
MARK MAGNUSSEN

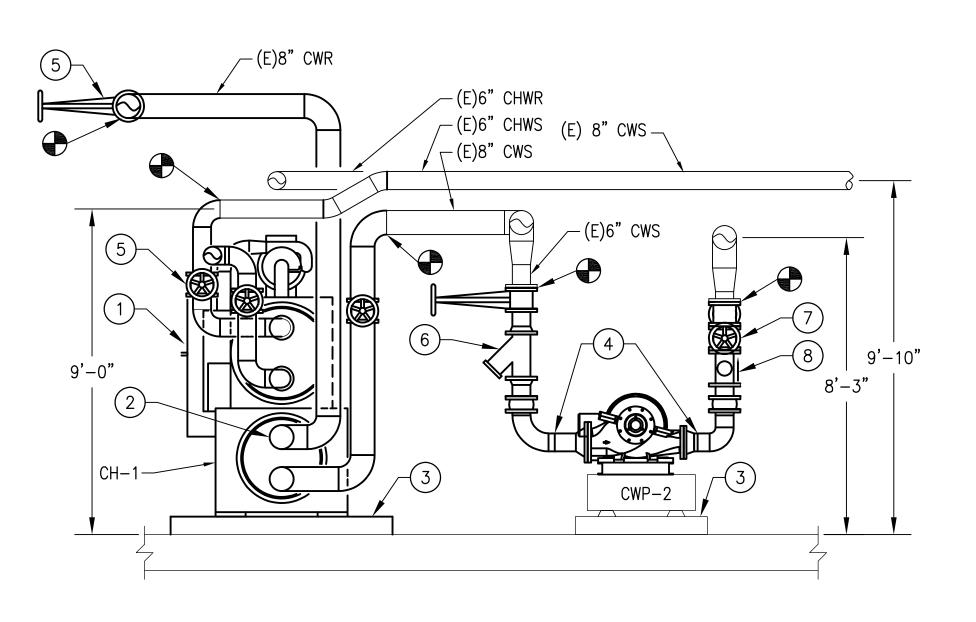
MANAGER, ENV. PLANNING AND COMP

APPROVED 03/2018 M N GRAHAM SPILLER DATE GFP DEPUTY PROGRAM MANAGER	E RENEWAL PROGRAM GROUP		
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# REPLACEMENT OF CHILLERS AND COOLING TOWER ACCESSORIES AT EIGHT METRO-RAIL STATIONS CWPA6 - MEDICAL CENTER (A10) MECHANICAL PLAN - NEW WORK

	MECHANICAL PLAN - NEW WORK								
8	M NO.	CONTRACT NO.	SCALE	DRAWING NO.	SHEET NO.				
E	M1304	FQ-18102	1/4" = 1'-0"	CWPA6-M-104	59 of 173				





B SECTION - NEW WORK

SCALE: 3/8" = 1'-0"

#### GENERAL NOTES:

- A. CONTRACTOR SHALL FIELD VERIFY AND COORDINATE LOCATION OF NEW EQUIPMENT, PIPING, VALVES, DUCTWORK, ELECTRICAL AND CONTROL WIRING WITH EXISTING PRIOR TO INSTALLATION. ITEMS SHOWN ON THIS PLAN ARE APPROXIMATE.
- B. REFER TO LEGEND SHEET FOR GENERAL ABBREVIATIONS AND SYMBOLS.
- C. REFER TO CHILLER PIPING SCHEMATIC FOR ALL VALVES. FOR CLARITY, ALL VALVES ARE NOT SHOWN ON THIS PLAN.
- D. INSTALL ALL EQUIPMENT AND COMPONENTS PER
  MANUFACTURER'S RECOMMENDATION WITH CLEARANCE FOR
  MAINTENANCE AND OPERATION OF EQUIPMENT.
- E. PROVIDE PRESSURE GAUGES AT INTAKE AND DISCHARGE PIPING OF OF EACH PUMP PUMP.

## KEYNOTES:

- (1) PROVIDE AND INSTALL CHILLER, ANCHOR AND SUPPORT.
- 2 PROVIDE AND INSTALL ALL PIPING, FITTINGS, VALVES, PIPING INSULATION AND INSTRUMENTATION FOR CONNECTION TO CHILLER. PROVIDE A VICTAULIC COUPLING CONNECTION PIECE AT EACH PIPE CONNECTION TO CHILLER FOR EASE OF MAINTENANCE.
- 3 REUSE EXISTING EQUIPMENT PAD, SPRING ISOLATOR AND INERTIA PAD. REPAIR AND MODIFY AS REQUIRED TO FIT NEW INSTALLATION.
- 4 PROVIDE AND INSTALL ALL APPROPRIATE PIPE FITTINGS FOR CONNECTION TO PUMPS.
- (5) PROVIDE GATE VALVE FOR SHUTOFF (TYP).
- 6 PROVIDE STRAINER AT PUMP INTAKE (TYP).
- (7) PROVIDE BALANCING VALVE AT DISCHARGE OF PUMP (TYP).
- (8) PROVIDE CHECK VALVE AT DISCHARGE OF PUMP (TYP).

A Gannett Fleming/Parsons
JOINT VENTURE



				REFERENCE DRAWINGS			REVISIONS	
	M. MCDONNELL	01/26/18	NUMBER	TITLE	DATE	NUM	DESCRIPTION	met:
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MARK MAGNUSSEN DATE GRAHAM SPILLER

MANAGER, ENV. PLANNING AND COMP GFP DEPUTY PROGRAM MAI

APPROVED

GRAHAM SPILLER

GFP DEPUTY PROGRAM MANAGER

O3/2018

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M1:

REPLACEMENT OF CHILLERS
AND COOLING TOWER ACCESSORIES AT EIGHT METRO-RAIL STATIONS
CWPA6 - MEDICAL CENTER (A10)
MECHANICAL SECTIONS

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NO.	CONTRACT NO.	SCALE	DRAWING NO.	SHEET NO.						
11304	FQ-18102	3/8" = 1'-0"	CWPA6-M-300	60 of 173						

