

**TAKOMA
AQUATIC
CENTER
Phase 1**

300 VAN BUREN ST NW,
WASHINGTON, DC 20012

QEA # 31508100
OWNER # 000000000

**MECHANICAL
COVER SHEET**



PERMIT SET
12/09/2015

REVISIONS

NO.	DESCRIPTION	DATE

M001

MECHANICAL GENERAL NOTES

GENERAL

- THE INTENT OF THESE DRAWINGS IS TO PROVIDE COMPLETE AND PROPERLY FUNCTIONING HVAC SYSTEMS. PROVIDE ALL LABOR AND MATERIAL NECESSARY TO ACHIEVE SUCH ENDS. CONTRACTOR IS OBLIGATED TO EXAMINE PLANS, ANY OBSERVED FAULTS OR AMBIGUITY IN THESE PLANS SHALL BE CALLED TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE IMMEDIATELY, SO THAT THE MATTER MAY BE RESOLVED PRIOR TO SUBMISSION OF BIDS. BY SUBMISSION OF BID, THE CONTRACTOR SHALL ACKNOWLEDGE ACCEPTANCE OF THESE PLANS AS AN ADEQUATE DEFINITION OF THE SCOPE OF WORK AND EXTRA COST CLAIMS BASED ON INADEQUACY OF PLANS WILL NOT BE CONSIDERED.
- ALL WORK ON THIS PROJECT SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST APPLICABLE CODES AND REGULATIONS.
- THESE DRAWINGS ARE DIAGNOSTIC AND INTENDED TO DEFINE THE GENERAL LOCATION OF HVAC SYSTEM COMPONENTS. CONSULT THE ARCHITECTURAL PLANS FOR PROPER DIMENSIONS AND LOCATION OF EQUIPMENT.
- THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF HVAC WORK WITH EXISTING CONDITIONS AND THE WORK OF OTHER TRADES. MINOR DEVIATIONS FROM THE PLANS MAY BE MADE TO AVOID WORK CONFLICTS. WHEN MAJOR CONFLICTS ARE APPARENT, THE ARCHITECT SHALL BE ADVISED IMMEDIATELY, AND AFFECTED WORK SHALL NOT BE INSTALLED UNTIL THE CONFLICT HAS BEEN RESOLVED.
- THE CONTRACTOR SHALL OBTAIN AND PAY FOR PERMITS AND ARRANGE FOR INSPECTIONS BY LOCAL AUTHORITIES HAVING JURISDICTION.
- PROVIDE OPENINGS IN BUILDING CONSTRUCTION FOR PASSAGE OF PIPING AND DUCTWORK. DO NOT PENETRATE STRUCTURAL MEMBERS WITHOUT PRIOR APPROVAL OF ARCHITECT AND STRUCTURAL ENGINEER. VERIFY SLAB PENETRATION LOCATIONS PRIOR TO PROCEEDING WITH WORK IN ORDER TO LOCATE OBSTRUCTIONS EMBEDDED IN SLAB. SUBMIT DRAWING OF ALL SLAB PENETRATIONS FOR LANDLORD/ARCHITECT/ENGINEER APPROVAL PRIOR TO PROCEEDING WITH WORK.
- PROVIDE FIRE DAMPERS AT ALL PENETRATIONS INTO FIRE RATED STRUCTURE, SUCH AS FIRE RATED PARTITIONS, ETC. ALL FIRE DAMPERS SHALL BEAR THE U.L. LABEL.
- ALL NECESSARY ALLOWANCES AND PROVISIONS SHALL BE MADE BY THIS CONTRACTOR FOR BEAMS, COLUMNS OR OTHER OBSTRUCTIONS OF THE BUILDING OR THE WORK OF OTHER CONTRACTORS. THE CONTRACTOR SHALL VERIFY ALL VOLTAGE AND POWER TO AVOID OBSTRUCTIONS THE DUCTS SHALL BE TRANSFORMED, DIVIDED, OFFSET, RAISED OR LOWERED WITH THE REQUIRED FREE AREA BEING MAINTAINED WHILE MAINTAINING DESIRED CEILING HEIGHTS.
- PROVIDE FLEXIBLE DUCT CONNECTIONS WHEREVER DUCTWORK CONNECTS TO VIBRATING EQUIPMENT. CONSTRUCT FLEXIBLE CONNECTIONS OF NEOPRENE-COATED FLAMEPROOF FABRIC CEMTER INTO DUCT FLANGES FOR ATTACHMENT TO DUCT AND EQUIPMENT. MAKE AIRTIGHT JOINT. PROVIDE ADEQUATE JOINT FLEXIBILITY TO ALLOW FOR THERMAL, AXIAL, TRANSVERSE, AND TORSIONAL MOVEMENT, AND ALSO CAPABLE OF ABSORBING VIBRATIONS OF CONNECTED EQUIPMENT.
- PROVIDE FLEXIBLE CONNECTORS AT THE INLET AND OUTLET CONNECTION FOR EACH FAN AND AIR HANDLING UNIT.
- EACH FLEXIBLE CONNECTOR SHALL ALLOW 1" OF FREE MOVEMENT AND SHALL BE COMPLETELY AIR TIGHT.
- PROVIDE NEOPRENE COATED GLASS FIBER MATERIAL, MINIMUM 30 OZ. PER SQUARE YARD.
- CONTRACTOR SHALL BRACE DUCTWORK (AS REQUIRED) AT ALL FLEXIBLE CONNECTORS TO ENSURE THAT DUCTWORK IS KEPT IN ALIGNMENT.
- INSTALL ALL EQUIPMENT IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- CONTROLS: THE CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY WIRING, TRANSFORMERS, CONTROLS, HANGERS, FITTINGS, PARTS AND ACCESSORIES INCLUDING ALL SAFETY DEVICES REQUIRED FOR PROPER INSTALLATION AND OPERATION OF SYSTEM IN ACCORDANCE WITH ALL LOCAL CODE REQUIREMENTS. THE CONTRACTOR SHALL PROVIDE ELECTRICAL POWER TO ALL CONTROL DEVICES AND EQUIPMENT FROM THE NEAREST POWER SOURCE INDICATED FOR CONTROLS POWER AND IDENTIFIED ON ELECTRICAL DRAWINGS. THE CONTRACTOR SHALL VERIFY ALL VOLTAGE AND POWER REQUIREMENTS AND COORDINATE WITH ALL TRADES AS REQUIRED. CONTROLS SUCH AS THERMOSTATS, SENSORS OF AIR FLOW, TEMPERATURE, HUMIDITY, WEIGHT, WEIGHT, WEIGHT, COILS, ETC., SHALL BE PROVIDED BY THE UNIT MANUFACTURER AND INSTALLED/WIRED BY THIS CONTRACTOR UNLESS OTHERWISE INDICATED. FOR DDC APPLICATION THESE DEVICES SHALL BE DDC READY, INTERLOCK AND CONTINUAL OPERATION OF SYSTEMS (FANS, MOTORS, ETC.), SHALL BE PROVIDED/INSTALLED BY THE CONTRACTOR VIA CURRENT RELAYS ON THE MOTOR STARTER AND LOW VOLTAGE CONTROL WIRING, PROVIDE 24VOLT TRANSFORMER, SWITCHES, THERMOSTATS (IF THERMOSTATIC CONTROL IS REQUIRED) AND WIRING FOR A COMPLETE INSTALLATION THAT MEETS THE DESIGN INTENT OF THE SYSTEM OPERATION.
- PROVIDE MOTOR STARTERS, ELECTRICAL DISCONNECTS, TRANSFORMERS, CONTROL WIRING AND ALL OTHER REQUIRED ACCESSORIES NECESSARY FOR AUTOMATIC OPERATION OF MECHANICAL EQUIPMENT.
- THERMOSTAT SHALL BE INSTALLED ON THE WALL 48" ABOVE FINISHED FLOOR WHERE SHOWN ON THE FLOOR PLANS, COORDINATE W/ ARCHITECT.
- MECHANICAL CONTRACTOR SHALL THOROUGHLY CLEAN HIS WORK AREA DAILY. MECHANICAL CONTRACTOR SHALL ALSO REMOVE ALL TRASH AFTER WORK COMPLETION.
- WHERE EXISTING FIELD CONDITIONS ARE DIFFERENT THAN SHOWN, THE CONTRACTOR SHALL ADVISE THE ENGINEER OF DISCREPANCIES WHICH WILL AFFECT THE PROPOSED WORK PRIOR TO BEGINNING WORK.
- SYMBOLS SHOWN ON SCHEDULES DEFINE TYPE OF EQUIPMENT ONLY. CONTRACTOR IS RESPONSIBLE FOR RESEARCHING DRAWINGS FOR EXACT QUANTITIES REQUIRED OF EACH TYPE.
- PRIOR TO INSTALLATION OF NEW WORK, CONTRACTOR SHALL VERIFY THAT ALL DUCTWORK, EQUIPMENT, PIPING, ETC., SHALL BE FREE FROM INTERFERENCE WITH EXISTING CONDITIONS WHERE CONFLICTS OCCUR. CONTRACTOR SHALL IMMEDIATELY CONTACT THE OWNER WHERE THE WORK OF VARIOUS TRADES WILL BE INSTALLED IN CLOSE PROXIMITY TO ONE ANOTHER, OR WHERE THERE IS EVIDENCE THAT THE WORK OF ONE TRADE WILL INTERFERE WITH WORK OF OTHER TRADES, THE CONTRACTOR SHALL ASSIST IN WORKING OUT SPACE CONDITIONS TO MAKE A SATISFACTORY ADJUSTMENT. IF THE CONTRACTOR ALLOWS ONE TRADE TO INSTALL HIS WORK BEFORE COORDINATING WITH WORK OF OTHER TRADES, THE CONTRACTOR SHALL MAKE NECESSARY CHANGES TO CORRECT THE CONDITION WITHOUT EXTRA CHARGE.
- THE CONTRACTOR SHALL LOCATE ALL EQUIPMENT WHICH MUST BE SERVICED, OPERATED, MAINTAINED IN FULLY ACCESSIBLE POSITION. EQUIPMENT SHALL INCLUDE, BUT NOT BE LIMITED TO, VALVES, TRAPS, CLEANOUTS, MOTORS, CONTROLLERS, DRAIN POINTS, ETC. IF REQUIRED FOR ACCESSIBILITY, FURNISH ACCESS DOORS FOR THIS PURPOSE. MINOR DEVIATIONS FROM DRAWINGS MAY BE MADE TO ALLOW FOR BETTER ACCESSIBILITY.
- ALL EQUIPMENT WHICH REQUIRES INTERFACE WITH THE ELECTRICAL TRADE, SUCH AS CONTROLLING DEVICES, DISCONNECT SWITCHES, MOTORS, ETC., SHALL BE FULLY COORDINATED BETWEEN ALL TRADES.
- LOCATION OF SWITCHES FOR EXHAUST FANS SHALL BE COORDINATED WITH LIGHT SWITCHES AND THERMOSTATS AND ALL LOCATIONS SHALL BE APPROVED BY THE ARCHITECT. BATHROOM EXHAUST FAN SWITCHES SHALL BE INTERLOCKED WITH BATHROOM LIGHT SWITCHES.
- ALL WORK TO BE GUARANTEED FOR TWO YEAR AGAINST LABOR AND MATERIALS. ANY DEFECTIVE MATERIALS OR WORKMANSHIP, AS WELL AS DAMAGE TO THE WORK OF ALL

SYMBOLS

EXISTING/NEW WORK

EXISTING TO REMAIN

EXISTING TO BE REMOVED

LIMIT OF DEMOLITION

NEW WORK

POINT OF CONNECTION NEW TO EXISTING

EQUIPMENT

PUMP

RETURN/EXHAUST GRILLE

DIFFUSER

VAV TERMINAL UNIT - COOLING ONLY

VAV TERMINAL UNIT WITH REHEAT

VAV TERMINAL UNIT WITH REHEAT COIL

GENERAL DUCTWORK

DIAMETER OF ROUND DUCT

RECTANGULAR DUCT BREAK (DOUBLE LINE)

RECTANGULAR DUCT BREAK (SINGLE LINE)

RECTANGULAR EXHAUST DOWN

RECTANGULAR EXHAUST UP

RECTANGULAR RETURN DOWN

RECTANGULAR RETURN UP

RECTANGULAR SUPPLY DOWN

RECTANGULAR SUPPLY UP

ROUND DUCT BREAK (DOUBLE LINE)

ROUND EXHAUST/RETURN/SUPPLY DOWN

ROUND EXHAUST/RETURN/SUPPLY UP

DUCTWORK ACCESSORIES

BACKDRIFT DAMPER

FIRE DAMPER

FIRE/SMOKE DAMPER

MOTORIZED DAMPER

SMOKE DAMPER

VOLUME DAMPER

GENERAL PIPING

AUTOMATIC AIR VENT

DIRECTION OF PIPE PITCH

FLOOR DRAIN

FLOW DIRECTION

MANUAL AIR VENT

PIPE CONTINUES

BOILER FEEDWATER

COMPRESSED AIR

CONDENSATE DRAN

CHILLED WATER RETURN

CHILLED WATER SUPPLY

CONDENSER WATER RETURN

CONDENSER WATER SUPPLY

CITY WATER

DRAIN

DUAL TEMPERATURE RETURN

DUAL TEMPERATURE SUPPLY

FUEL OIL RETURN

FOS FUEL OIL SUPPLY

FOV FUEL OIL VENT

HPR HIGH PRESSURE CONDENSATE RETURN

HPS HIGH PRESSURE STEAM SUPPLY

HWR HOT WATER RETURN

HWS HOT WATER SUPPLY

LPR LOW PRESSURE CONDENSATE RETURN

LPS LOW PRESSURE STEAM SUPPLY

MPR MEDIUM PRESSURE CONDENSATE RETURN

MPS MEDIUM PRESSURE STEAM SUPPLY

PCR PUMPED CONDENSATE RETURN

RL REFRIGERANT LIQUID

RS REFRIGERANT SUCTON

PIPE FITTINGS/CONNECTIONS

FLANGE CONNECTION

FLEXIBLE CONNECTOR

PIPE CONNECTION - BOTTOM

PIPE CONNECTION - TOP

PIPE DOWN

PIPE END CAP

PIPE REDUCER - CONCENTRIC

PIPE REDUCER - ECCENTRIC

PIPE UP

UNION CONNECTION

PIPING VALVES

BALL VALVE

BUTTERFLY VALVE

CHECK VALVE

GLOBE VALVE

SHUT-OFF VALVE

PRESSURE REDUCING VALVE

RELIEF VALVE

SOLENOID VALVE

VALVE IN RISER

Y STRAINER

Y STRAINER (WITH VALVE)

2-WAY AUTOMATIC CONTROL VALVE

3-WAY AUTOMATIC CONTROL VALVE

PIPING INSTRUMENTATION

PRESSURE GAUGE WITH GAUGE COOK

THERMOMETER

STEAM PIPING

MOISTURE SEPARATOR

PRESSURE GAUGE WITH SIPHON

STEAM TRAP ASSEMBLY

CONTROLS

CARBON DIOXIDE SENSOR (MOUNT 48" AFF)

CARBON MONOXIDE SENSOR

HUMIDISTAT (MOUNT 48" AFF)

THERMOSTAT (MOUNT 48" AFF)

SMOKE DETECTOR

REFERENCE

DETAIL

RISER

SECTION

ABBREVIATIONS

ABC	ASSOCIATED AIR BALANCE COUNCIL	LB/HR	POUNDS PER HOUR
AV	AUTOMATIC AIR VENT	LRA	LOCKED ROTOR AMP
AVV	ABOVE	LSR	LEAVING WATER TEMPERATURE
AC	AIR CONDITIONING UNIT	M	MOTORIZED DAMPER
AD	ACOUSTICAL CEILING TILE	MA	MIXED AIR
ADT	ACCESS DOOR	MAX	MIXED AIR TEMPERATURE
ADOTL	ADDITIONAL	MC	MECHANICAL CONTRACTOR
ADJ	ADJUST	MCH	ONE THOUSAND EIGHTH
AFC	ABOVE FINISHED CEILING	MCC	MECHANICAL CONTRACTOR MOTOR CONTROL CENTER
AFCP	AIR FLOW CONTROL PANEL	MD	MANUAL DAMPER
AFM	AIR FLOW MEASURING STATION	MER	MECHANICAL EQUIPMENT ROOM MANUFACTURER
AHU	AIR HANDLING UNIT	MFR	MECHANICAL EQUIPMENT ROOM MANUFACTURER
AMB	AMBIENT	MIN	MINIMUM
AMT	AIR MEASUREMENT	MUA	MAKE-UP AIR
APD	AIR PRESSURE DROP	MUAU	MAKE-UP AIR UNIT
ARCH	ARCHITECT	N/A	NOT APPLICABLE
ARI	AMERICAN REFRIGERATION INSTITUTE	NC	NORMALLY CLOSED/NOISE CRITERIA
AS	AIR SEPARATOR	NEC	NATIONAL ELECTRICAL CODE
ASHRAE	AMERICAN SOCIETY OF REFRIGERATION AND AIR CONDITIONING ENGINEERS	NG	NATURAL GAS
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	NO	NUMBER/NORMALLY OPEN
ATU	AIR TERMINAL UNIT	NTS	NOT TO SCALE
AUTO	AUTOMATIC	OA	OUTSIDE AIR
B	BOILER	CAF	OUTSIDE AIR FAN
BA	BALANCE/RIG	CAL	OUTSIDE AIR LOWER
BBC	BUILDING CONTROL UNIT	ODD	OPPOSITE BLADE DAMPER
BCH	BRIETHY HIGH-POWER/BRAKE	OC	ON CENTER
BOU	BUSHING	OF	OVERFLOW
BHP	HORSEPOWER	OPP	OPPOSITE
BOF	BOTTOM OF PIPE	ORIG	ORIGINAL
BLDG	BUILDING	O&M	OPERATION AND MAINTENANCE
BLW	BOTTOM OF STEEL	P	PUMP
BP	BACK PRESSURE DAMPER	PC	PLUMBING CONTRACTOR
BS	BRASS SELECTOR	PD	PRESSURE DROP
BTUH	BRITISH THERMAL UNIT PER HOUR	PDIFF	PRESSURE DIFFERENTIAL CONTROL
CA	COMBUSTION AIR	PH	PHASE
CAD	CEILING AIR DIFFUSER	PHH	PRESSURE REDUCING VALVE
CAE	CEILING AIR LOWER	PHS	PRESSURE PER HOUR
CAV	CAPACITY	PSI	POUNDS PER SQUARE INCH
CAP	CONSTANT AIR VOLUME	PSIG	POUNDS PER SQUARE INCH GAUGE
CFM	CUBIC FEET PER MINUTE	PSI	POLYETHYLENE GLYCOLIDE
CF	CENTRIFUGAL FAN	QTY	QUANTITY
CFM	CUBIC FEET PER MINUTE	RA	RETURN AIR
CLD	CLEAN OUT	RAG	RETURN AIR GRILLE
CO	CONCRETE	RAR	RETURN AIR REGISTER
COND	CONDITIONING	RAF	RETURN AIR REGISTER
CONN	CONNECT/CONNECTION	REG	REGISTER
CONT	CONTINUATION	REG	REGISTER
CSR	CIRCULATING PUMP	REG	REGISTER
CSU	CEILING SUPPLY REGISTER	RLA	RETURN LINEAR AIR DIFFUSER
CW	CONDENSING UNIT CONTROL VALVE	RM	REVOLUTIONS PER MINUTE
CU	COLD WATER	SA	SUPPLY AIR
DB	DRY BULB	SAG	SUPPLY AIR GRILLE
DB	DEBUIE	SAN	SANITARIAN
DDC	DIRECT DIGITAL CONTROL	SAR	SUPPLY AIR REGISTER
DE	PRESSURE DROP	SB	SCREENED OPENING
DE	DIFFERENCE	SC	STARTING PRESSURE
DE	DIRECT SWITCH	SD	SPECIFICATION
DF	DOWN	SF	SQUARE FEET
DEW SW	DEW POINT	SI	SQUARE INCHES
DP	DOWN	SRV	STEAM RELIEF VENT
DN	DOWN	SS	STAINLESS STEEL
DRW	DRAWING	STL	STEEL
DWG	DIRECT EXPANSION	SUSP	SUSPENSION
EA	EXHAUST AIR/EACH	SWR	SIDE WALL REGISTER
EAL	EXHAUST AIR LOWER	SYM	SYMBOL
EAU	EXHAUST AIR UPPER	T	THERMISTAT
EC	ENTERING AIR TEMPERATURE	TCC	TEMPERATURE CONTROL
EC	ELECTRICAL CONTRACTOR	TD	TEMPERATURE DIFFERENCE
ECON	ECONOMIZER	TD	TEMPERATURE DIFFERENCE
EER	ENERGY EFFICIENCY RATIO	TD	TEMPERATURE DIFFERENCE
EFT	EXHAUST FAN	TD	TEMPERATURE DIFFERENCE
ELEV	ELEVATION	TD	TEMPERATURE DIFFERENCE
ELB	ELBOW	TD	TEMPERATURE DIFFERENCE
ENT	ENTERING	TD	TEMPERATURE DIFFERENCE
EQU	EQUIPMENT	TD	TEMPERATURE DIFFERENCE
ESP	EXTERNAL STATIC PRESSURE	TD	TEMPERATURE DIFFERENCE
EST	ESTIMATED	TD	TEMPERATURE DIFFERENCE
EW	ELECTRIC WALL HEATER	TD	TEMPERATURE DIFFERENCE
EXT	ENTERING WATER	TD	TEMPERATURE DIFFERENCE
EXH	EXHAUST	TD	TEMPERATURE DIFFERENCE
EXIST	EXISTING	TD	TEMPERATURE DIFFERENCE
F	DEGREES FAHRENHEIT	TD	TEMPERATURE DIFFERENCE
FC	FLEXIBLE CONNECTION	TD	TEMPERATURE DIFFERENCE
FD	FIRE DAMPER	TD	TEMPERATURE DIFFERENCE
FEE	FISHED FLOOR ELEVATION	TD	TEMPERATURE DIFFERENCE
FLL	FULL LOAD AMP	TD	TEMPERATURE DIFFERENCE
FLEX	FLEXIBLE	TD	TEMPERATURE DIFFERENCE
FLG	FLANGE	TD	TEMPERATURE DIFFERENCE
FMR	FLOOR	TD	TEMPERATURE DIFFERENCE
FM	FACTORY MUTUAL	TD	TEMPERATURE DIFFERENCE
FT	FEET PER MINUTE	TD	TEMPERATURE DIFFERENCE
FT	FEET	TD	TEMPERATURE DIFFERENCE
FT	FEET OF WATER GAUGE	TD	TEMPERATURE DIFFERENCE
GAGAUZE	GALLONS	TD	TEMPERATURE DIFFERENCE
GAL	GALLONS	TD	TEMPERATURE DIFFERENCE
GC	GENERAL CONTRACTOR	TD	TEMPERATURE DIFFERENCE
GPM	GALLONS PER MINUTE	TD	TEMPERATURE DIFFERENCE
H	HEIGHT	TD	TEMPERATURE DIFFERENCE
HD	HEAD	TD	TEMPERATURE DIFFERENCE
HP	HORSEPOWER	TD	TEMPERATURE DIFFERENCE
HVC	HEATING, VENTILATION & AIR CONDITIONING	TD	TEMPERATURE DIFFERENCE
HZ	HERTZ	TD	TEMPERATURE DIFFERENCE
IN	INCHES	TD	TEMPERATURE DIFFERENCE
INSUL	INSULATE/INSULATION	TD	TEMPERATURE DIFFERENCE
INS	INCHES WATER GAUGE	TD	TEMPERATURE DIFFERENCE
KW	KILOWATT	TD	TEMPERATURE DIFFERENCE
LAB	LEAVING AIR TEMPERATURE	TD	TEMPERATURE DIFFERENCE
LAT	LINEAR BAR GRILLE	TD	TEMPERATURE DIFFERENCE
LBG	LINEAR BAR GRILLE	TD	TEMPERATURE DIFFERENCE

SHEET NUMBERING LEGEND

DISCIPLINE: M-111A - SECTOR

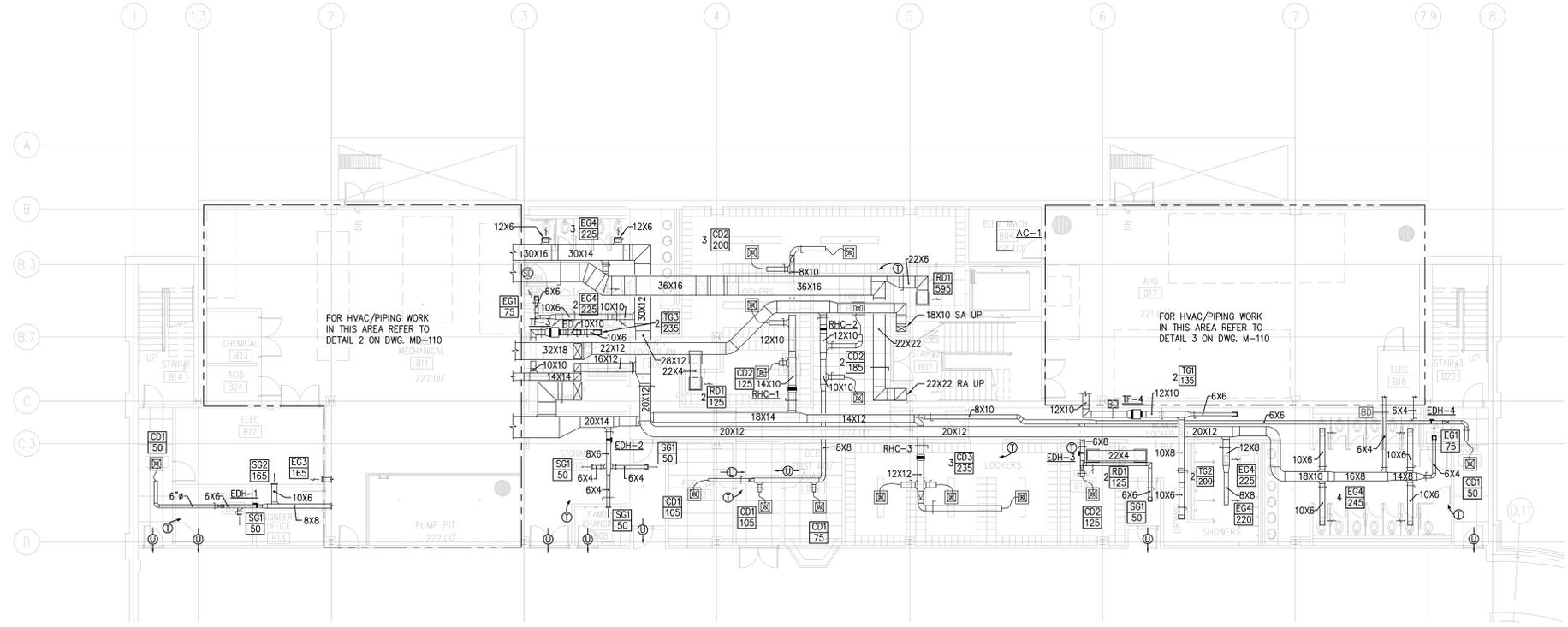
PLAN TYPE: FLOOR PLAN

SYSTEM TYPE: FLOOR LEVEL

FOR QUANTITY TAKEOFF: FLOOR LEVEL

FOR QUANTITY TAKEOFF: FLOOR LEVEL

1 2 3 4 5 6 7 8 9 10 11 12 13 14



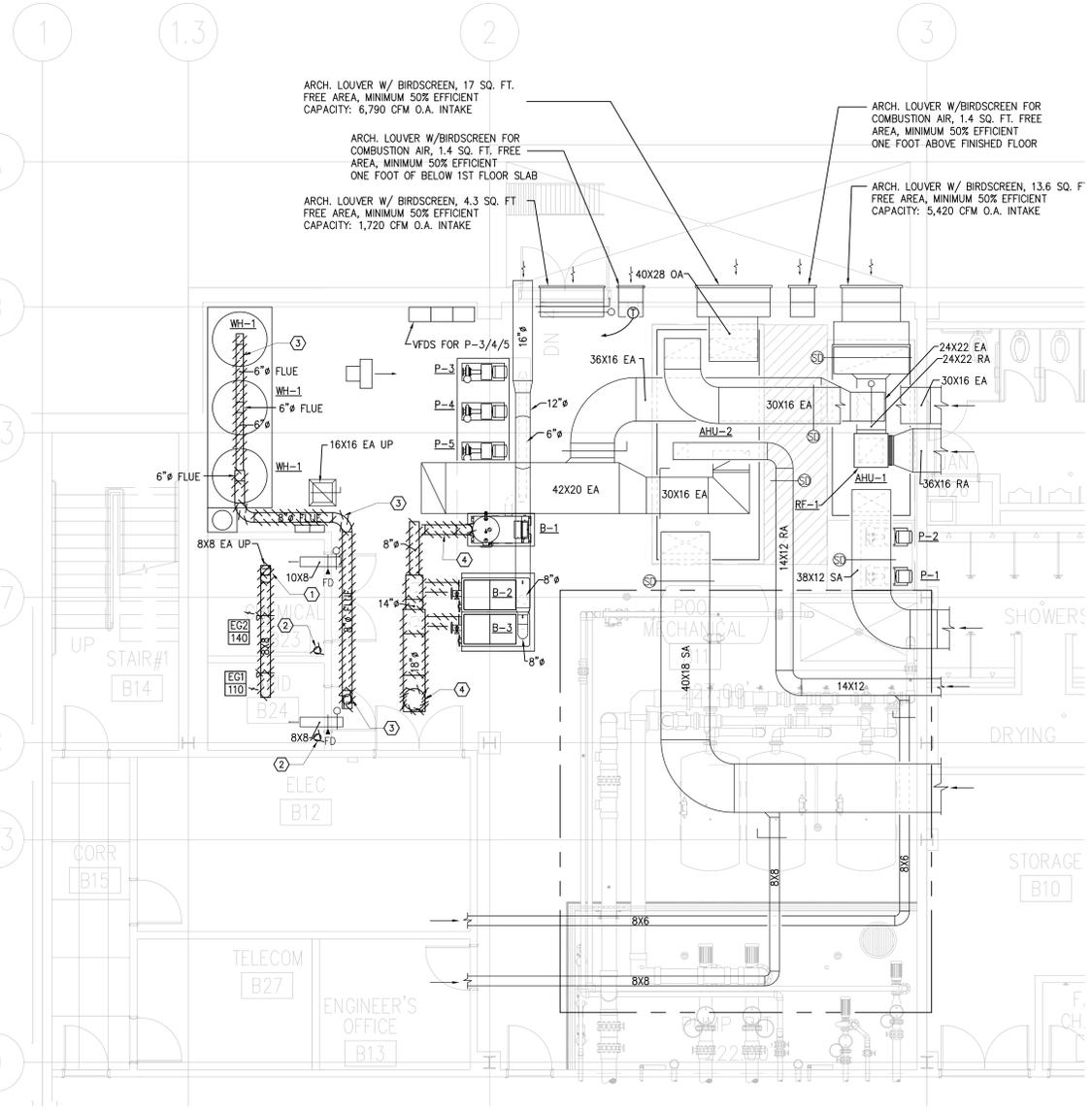
GENERAL NOTES

- REFER TO M-001 FOR GENERAL NOTES, SYMBOL, LEGEND AND LIST OF ABBREVIATIONS.
- REFER TO TYPICAL DETAILS FOR DUCTWORK, PIPING AND EQUIPMENT INSTALLATION.
- ALL EQUIPMENT SHALL BE INSTALLED AT MINIMUM 10'-0" FROM ROOF EDGES.

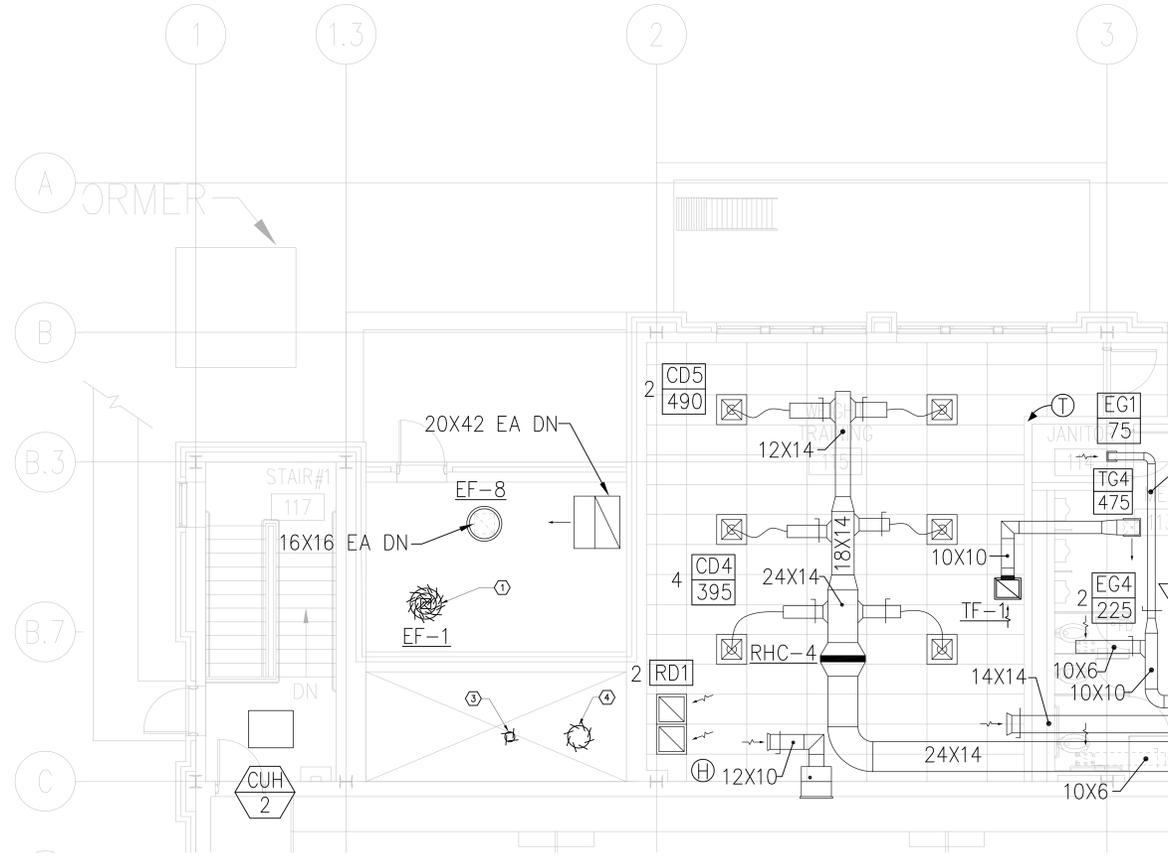
SPECIFIC NOTES

- DISCONNECT AND REMOVE EXHAUST FAN EF-1 AND ALL ASSOCIATED DUCTWORK, DAMPERS, GRILLES, AND SUPPORTS.
- DISCONNECT AND REMOVE EXISTING FLOOR MOUNTED EXHAUST FANS AND ALL ASSOCIATED DUCTWORK, GRILLES, AND PVC PIPING. FANS ARE FLOOR MOUNTED.
- DISCONNECT AND REMOVE EXISTING BOILER FLUE DUCTING. DISCONNECT EXISTING EXHAUST FAN ON TOP OF THE BOILER STACK. REPAIR FAN FOR REINSTALLATION UNDER THE NEW WORK PLAN. BOILER FLUE DUCTING IS TO BE REPLACED IN KIND. VERIFY BOILER FLUE DUCT SIZES IN FIELD PRIOR TO DEMOLITION.
- DISCONNECT AND REMOVE EXISTING BOILER FLUE DUCTING. BOILER FLUE DUCTING IS TO BE REPLACED IN KIND. VERIFY BOILER FLUE DUCT SIZES IN FIELD PRIOR TO DEMOLITION.

1 MECHANICAL - BASEMENT - DUCTWORK - DEMO
SCALE: 1/8"=1'-0"



2 MECHANICAL - BASEMENT - DUCTWORK - DEMO
SCALE: 1/8"=1'-0"



3 MECHANICAL - GROUND FLOOR - DUCTWORK - DEMO
SCALE: 1/4"=1'-0"

TAKOMA AQUATIC CENTER Phase 1

300 VAN BUREN ST NW,
WASHINGTON, DC 20012

QEA # 31508100
OWNER # 0000000000

MECHANICAL - DUCTWORK - DEMO



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1 2 3 4 5 6 7 8 9 10 11 12 13 14

- GENERAL NOTES**
- REFER TO M-001 FOR GENERAL NOTES, SYMBOL, LEGEND AND LIST OF ABBREVIATIONS.
 - REFER TO TYPICAL DETAILS FOR DUCTWORK, PIPING AND EQUIPMENT INSTALLATION.
 - ALL EQUIPMENT SHALL BE INSTALLED AT MINIMUM 10'-0" FROM ROOF EDGES.
 - AIRFLOWS ARE BASED ON EXISTING DRAWINGS. BALANCE AIRFLOWS ACCORDINGLY.
- SPECIFIC NOTES**
- 8" CHEMICAL ROOM EXHAUST UP THROUGH ROOF. PROVIDE MOTORIZED DAMPER JUST BELOW ROOF PENETRATION. DAMPER TO BE ENERGIZED.
 - TERMINATE DUCT 12" AFF (MAXIMUM). INSTALL EXHAUST GRILLE ON END OF DUCT.
 - PROVIDE NEW BOILER FLUE FROM BOILER THROUGH ROOF. BOILER FLUE IS TO BE REPLACE-N-KND. SEAL ROOF PENETRATION OF NEW FLUE.
 - PROVIDE NEW BOILER FLUE FROM BOILER THROUGH ROOF. BOILER FLUE IS TO BE REPLACE-N-KND. REINSTALL EXISTING EXHAUST FAN AT TOP OF VENT STACK. SEAL ROOF PENETRATION OF NEW FLUE.
 - TEST, ADJUST, AND BALANCE EXISTING POOL DEHUMIDIFICATION UNIT.
 - INTERLOCK DAMPER WITH EXHAUST FAN EX-1. DAMPER TO BE CLOSED WHEN EX-1 IS DE-ENERGIZED. DAMPER TO OPEN PRIOR TO EX-1 BEING ENERGIZED.

QUINN EVANS ARCHITECTS

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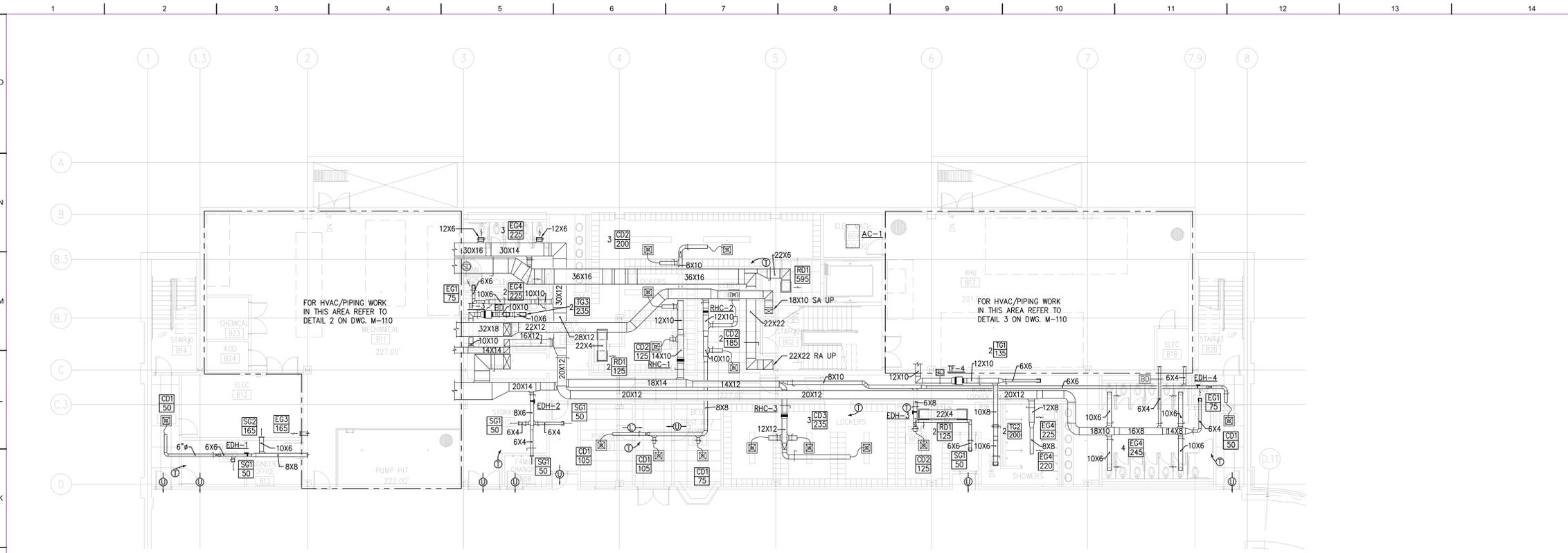
**MECHANICAL -
BASEMENT -
DUCTWORK -
NEW WORK**



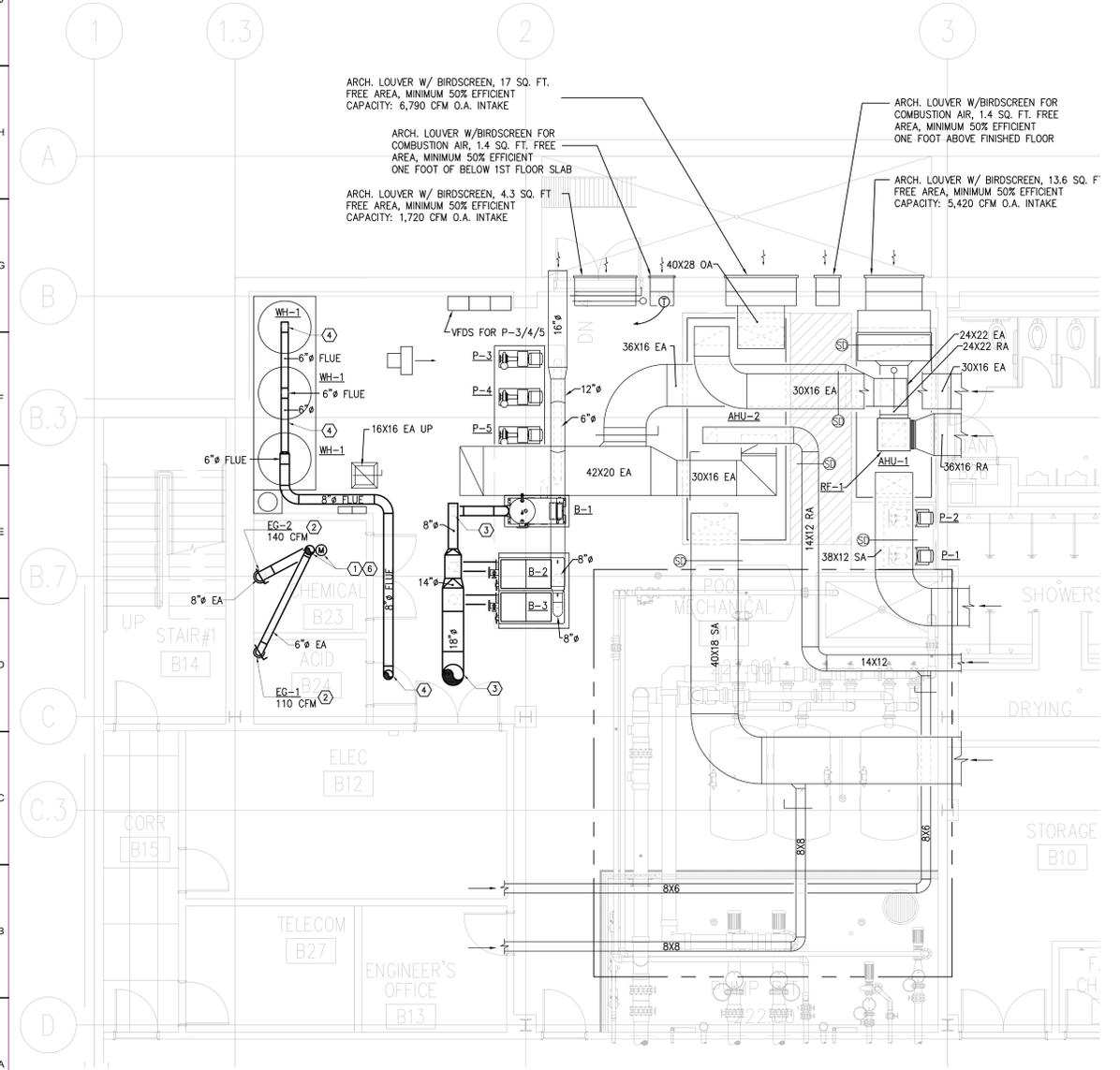
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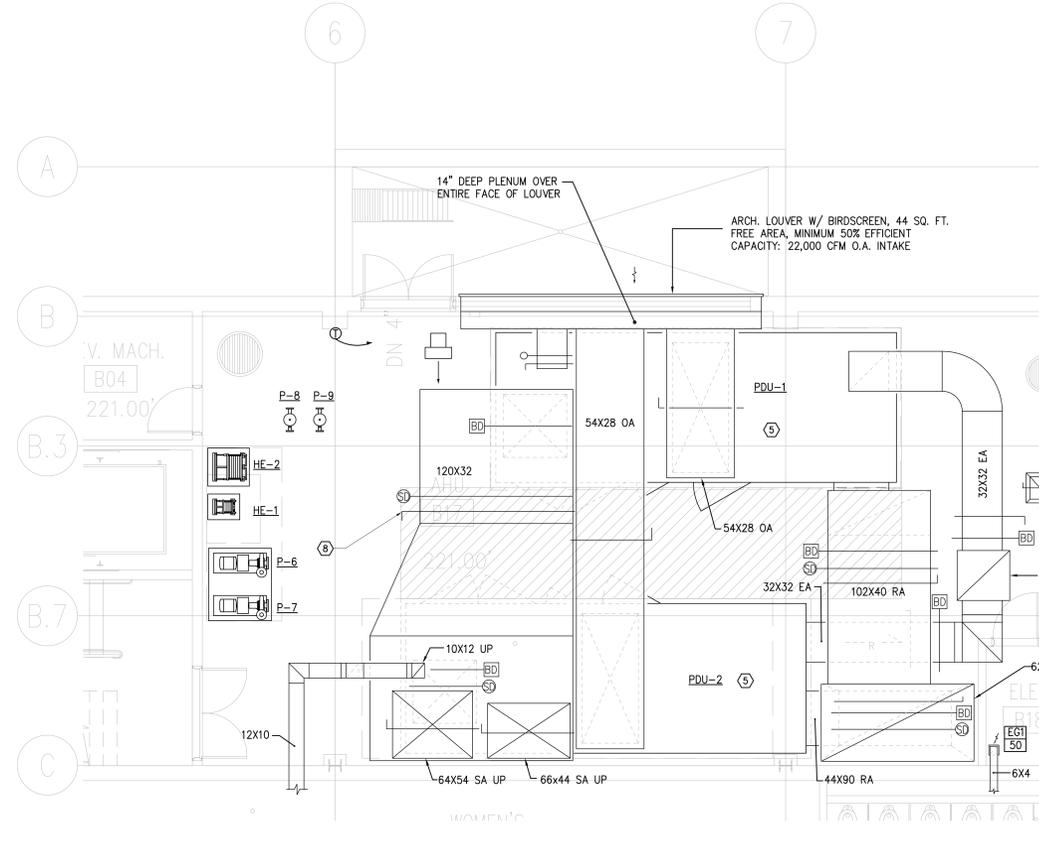
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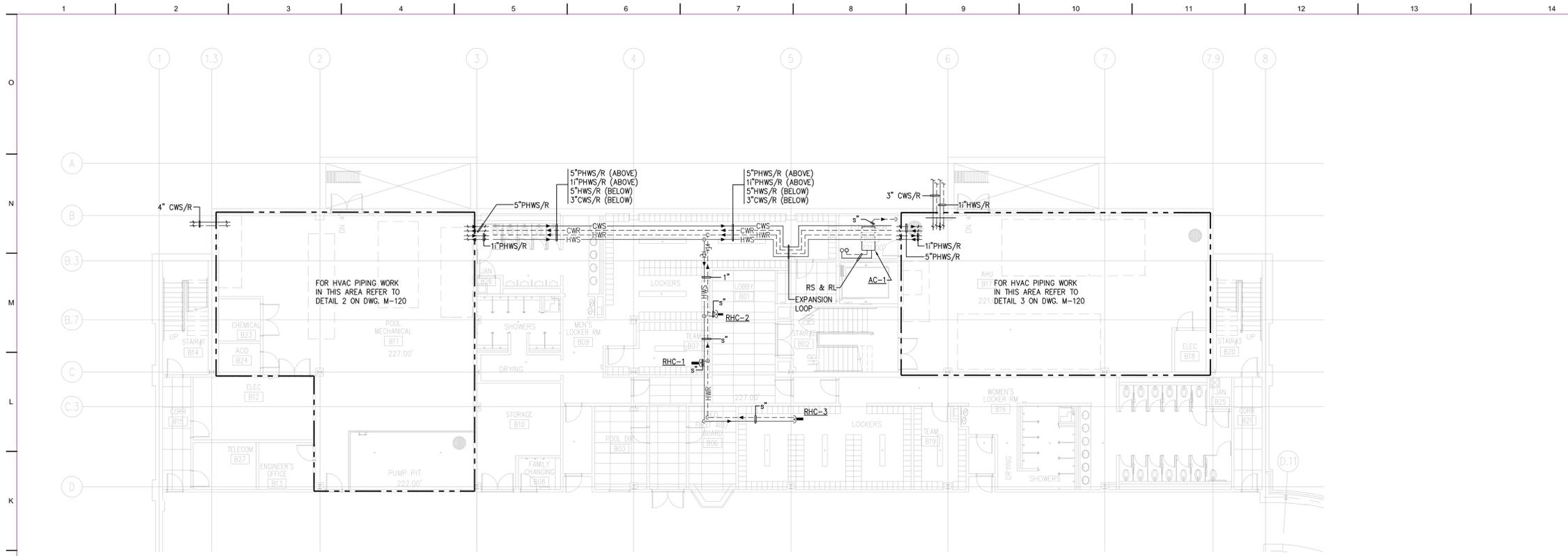
1 MECHANICAL - BASEMENT - DUCTWORK - NEW WORK
SCALE: 1/8"=1'-0"



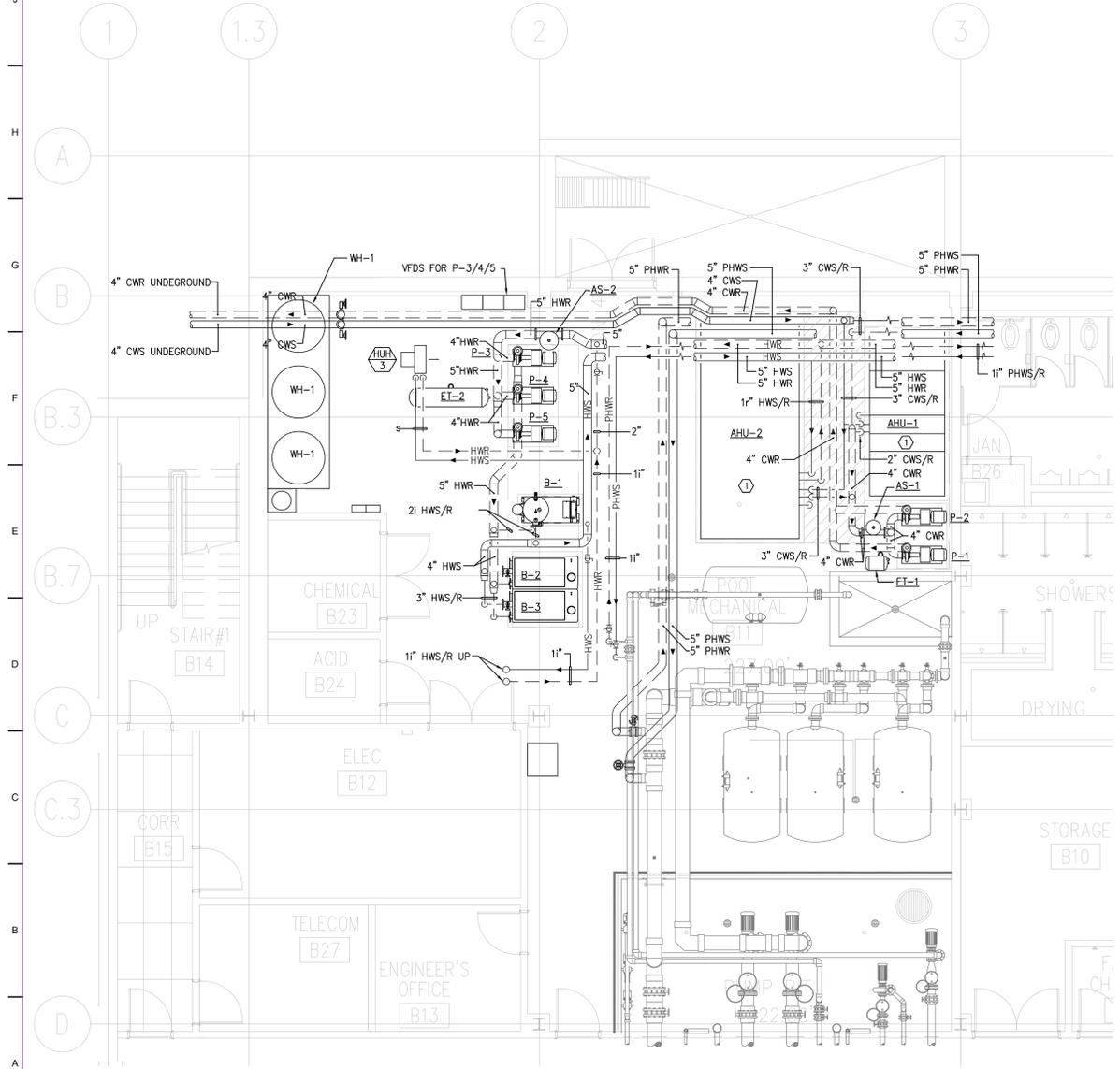
2 MECHANICAL - BASEMENT - DUCTWORK - NEW WORK
SCALE: 1/4"=1'-0"



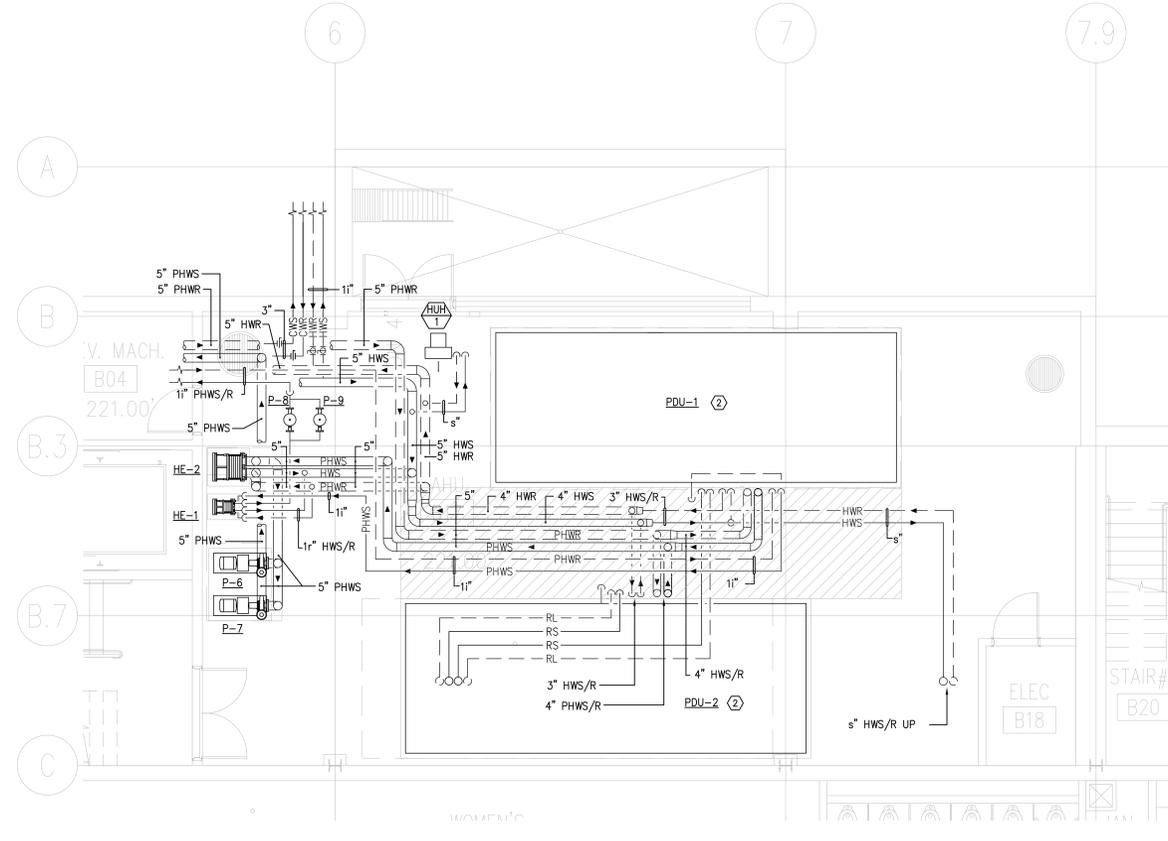
3 MECHANICAL - BASEMENT - DUCTWORK - NEW WORK
SCALE: 1/4"=1'-0"



1 MECHANICAL - BASEMENT - PIPING - NEW WORK
SCALE: 1/8"=1'-0"



2 MECHANICAL - BASEMENT - PIPING - NEW WORK
SCALE: 1/8"=1'-0"



3 MECHANICAL - BASEMENT - PIPING - NEW WORK
SCALE: 1/8"=1'-0"

GENERAL NOTES

- REFER TO M-001 FOR GENERAL NOTES, SYMBOL, LEGEND AND LIST OF ABBREVIATIONS.
- REFER TO TYPICAL DETAILS FOR DUCTWORK, PIPING AND EQUIPMENT INSTALLATION.
- ALL EQUIPMENT SHALL BE INSTALLED AT MINIMUM 10'-0" FROM ROOF EDGES.

SPECIFIC NOTES

- REPLACE EXISTING VALVE ACTUATORS FOR AHU-1 AND AHU-2 IN KIND. VALVE ACTUATORS TO BE REPLACED INCLUDE CHILLED WATER VALVES FOR AHU-1 AND CHILLED AND HOT WATER VALVES FOR AHU-2. REPLACE WITH SAME MAKE AND MODEL NUMBER AS VALVE ACTUATOR BEING DEMOLISHED. TEST, ADJUST AND BALANCE THE EXISTING POOL DEHUMIDIFICATION UNITS.

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**MECHANICAL -
BASEMENT -
PIPING -
NEW WORK**



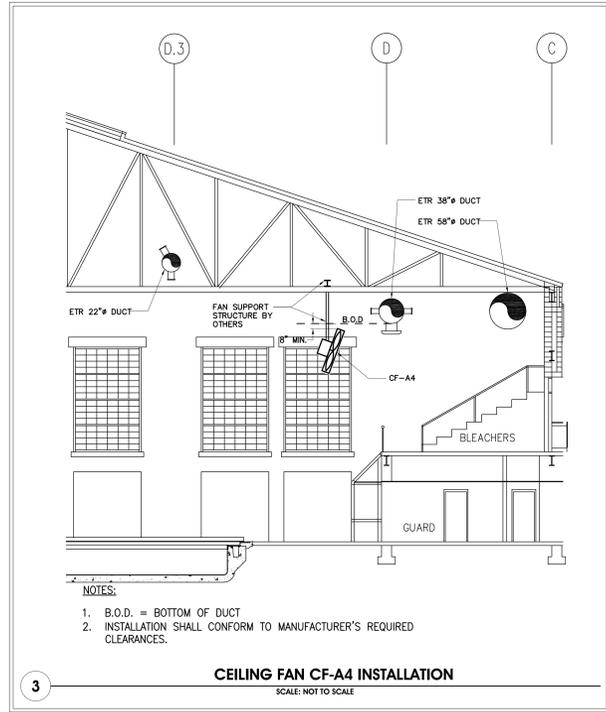
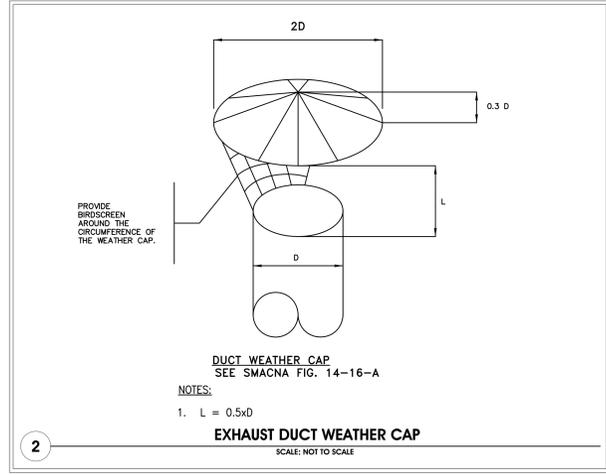
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REVISIONS		
NO.	DESCRIPTION	DATE

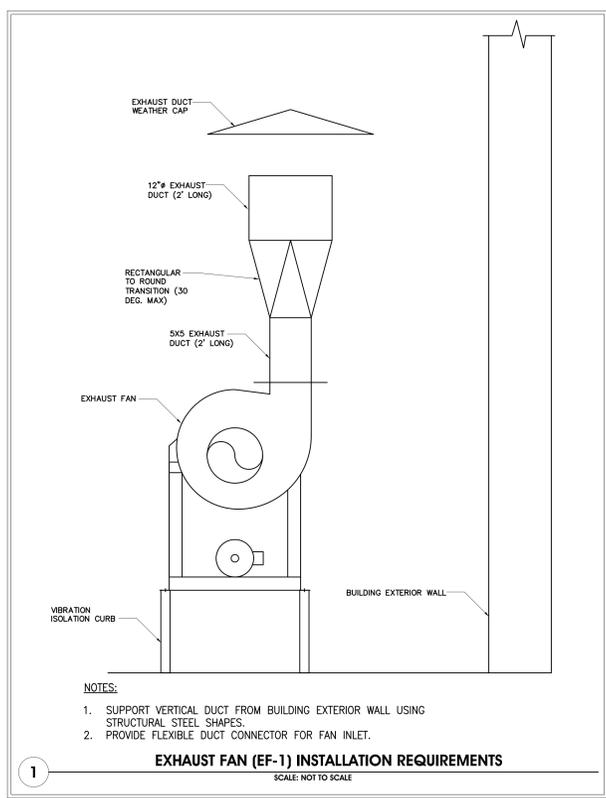
M120

EXISTING POOL DEHUMIDIFICATION UNIT																																														
ID NO.	LOCATION	AREA SERVED	AF FLOW (CFM)			SUPPLY FAN DATA										RUN AROUND HEAT RECOVERY COIL										DX COOLING/DEHUMIDIFICATION EVAPORATOR COIL										HOT GAS REHEAT COIL										
			SUPPLY AIR	RETURN AIR	MINIMUM OUTSIDE AIR	ESP (INWG)	TYPE	RPM	ELECTRICAL DATA				OUTSIDE AIR SIDE				EXHAUST SIDE				AIR SIDE				SENS. HEAT (MBH)	TOTAL HEAT (MBH)	MINIMUM MOISTURE REMOVAL RATE (LBS/HR)	MAXIMUM ADP PRESS. DROP (INWG)	ROWS	MAX. FACE VEL. FPM	AIR SIDE				SENS. HEAT (MBH)	MAXIMUM ADP PRESS. DROP (INWG)	ROWS	MAX. FACE VEL. (FPM)								
									HP	V	PH	HZ	AIR FLOW CFM	A.P.D. (INWG)	COOLING		HEATING		AIRFLOW CFM	A.P.D. (INWG)	COOLING		HEATING								AIRFLOW CFM	E.A.T. (°F)		L.A.T. (°F)					E.A.T. (°F)		L.A.T. (°F)					
POU-1	AHU ROOM B17	POOL	45000	35000	10000	2.3	FC	950	50	460	3	60	10000	.5	91	77	97.5	76.1			10	47	4	11000	.6	84	88	84	54	6		28000	84	70	50.8	49.6	1004	1740.1	535	.6	8	500	45000	63.4	100	1778.8
POU-2	AHU ROOM B17	POOL	45000	35000	10000	2.3	FC	950	50	460	3	60	10000	.5	91	77	97.5	76.1	10	47	4	11000	.6	84	88	84	54	6	28000	84	70	50.8	49.6	1004	1740.1	535	.6	8	500	45000	63.4	100	1778.8	.6	4	650

NOTES:
1.



EXISTING POOL DEHUMIDIFICATION UNITS (CONTINUED)																																
HOT WATER HEATING COIL										COAXIAL HOT GAS POOL WATER HEATERS										COMPRESSOR DATA					ELECTRICAL CONNECTION DATA							
AIR SIDE		WATER SIDE		TOTAL HEAT (MBH)	FLOW (GPM)	MAXIMUM PRESSURE DROP (IN. W.G.)	WPD (FT.)	ROWS	MAX. FACE VELOCITY (FPM)	COMPETITION POOL		LEISURE POOL		NUMBER OF COMPRESSORS	INPUT HP	LRA	FLA	MCA	MP	TOTAL INPUT (KW)	VOLTS	PHASE	CYCLE (HZ)	BASIS OF DESIGN								
EAT (°F)	LAT (°F)	EWT (°F)	LWT (°F)							FLUID	TOTAL HEAT TRANSFER (MBH)	FLUID	TOTAL HEAT TRANSFER (MBH)												GPM	EWT (°F)	L.W.T (°F)	MAX PD (FT.)	GPM	EWT (°F)	L.W.T (°F)	MAX PD (FT.)
75.8	97.0	180	150	1034.8	69.0	0.3	8.0	1	650	COMPETITION POOL WATER	1024.0	160	82	84.8	15.0	LEISURE POOL WATER	96.0	20	84	93.6	15.0	2	70.0	290/290	120.0	340	450	165.0	460	3	60	"DECTRON", DS-562
75.8	97.0	180	150	1034.8	69.0	0.3	8.0	1	650	-	-	-	-	-	-	-	-	-	-	-	-	2	70.0	290/290	120.0	340	450	165.0	460	3	60	"DECTRON", DS-562



CEILING FAN SCHEDULE														
ID NO.	SERVICE	CONSTRUCTION DATA				MOTOR DATA					MANUFACTURER MODEL	REMARKS		
		(MAX. O.I.) F.P.M.	RPM	TYPE	DRIVE	FAN WHEEL DIA. (FT.)	HP	VOLT	PH	MOCP			FULL LOAD CURRENT (AMPS)	
CF-A1	SPECTATOR AREA	389	210	PROPELLER	-	6	1.0	120	1	20	11	BIG ASS FANS: PIVOT 180	1,2	
CF-A2	SPECTATOR AREA	389	210	PROPELLER	-	6	1.0	120	1	20	11	BIG ASS FANS: PIVOT 180	1,2	
CF-A3	SPECTATOR AREA	389	210	PROPELLER	-	6	1.0	120	1	20	11	BIG ASS FANS: PIVOT 180	1,2	
CF-A4	SPECTATOR AREA	389	210	PROPELLER	-	6	1.0	120	1	20	11	BIG ASS FANS: PIVOT 180	1,2	
CF-A5	SPECTATOR AREA	389	210	PROPELLER	-	6	1.0	120	1	20	11	BIG ASS FANS: PIVOT 180	1,2	
CF-A6	SPECTATOR AREA	389	210	PROPELLER	-	6	1.0	120	1	20	11	BIG ASS FANS: PIVOT 180	1,2	

NOTES:
1. PROVIDE WITH WALL MOUNTED FAN SPEED CONTROLLER AND ON/OFF SWITCH FOR FAN OSCILLATION FUNCTION. SET FAN OSCILLATION TO 30 DEGREE ANGLE.
2. PROVIDE WITH "HARSH ENVIRONMENT PACKAGE" FOR ALL FANS LOCATED IN THE POOL AREA.

DIFFUSER, REGISTER AND GRILLE SCHEDULE									
ID NO.	TYPE	NECK SIZE (INCH)	OVERALL SIZE L x W (INCH)	MAXIMUM FLOW (CFM)	PRESSURE DROP AT DESIGN FLOW (IN. W.G.)	MAXIMUM NOISE CRITERIA	FRAME/MOUNTING	BASIS OF DESIGN MANUFACT./MODEL	REMARKS
EG-1	SINGLE DIFFLECTION	6"	9.25"	110	0.05	-	DUCT	TITUS/R-301	1,2
EG-2	SINGLE DIFFLECTION	8"	11.25"	140	0.03	-	DUCT	TITUS/R-301	1,2

NOTES:
1. MATERIAL SHALL BE ALUMINUM WITH 1/2" BLADE SPACING.
2. PROVIDE WITH ML FINISH.

EXHAUST FAN SCHEDULE											
ID NO.	LOCATION	AREA SERVED	TYPE	FLOW (CFM)	ESP (INWG)	MOTOR DATA		SONES	BASIS OF DESIGN	REMARKS	
						HP	RPM				
EF-1	OUTSIDE ON GRADE	POOL CHEMICAL STORAGE	CENTRIFUGAL UPBLAST	250	0.5	0.25	1750	120/1/60	-	GREENHECK BC5W-FRP-6	1

NOTES:
1. PROVIDE SUPPORT CURB WITH INTEGRAL VIBRATION ISOLATION SPRINGS. SPRINGS SHALL BE RATED FOR 3/4" DEFLECTION AT THE DESIGN LOAD.

MECHANICAL SPECIFICATIONS

HANGERS AND SUPPORTS FOR DUCTWORK
FACTORY FABRICATED HANGERS AND SUPPORTS. HANGERS AND SUPPORTS SHALL BE HOT-DIPPED GALVANIZED WITH ELECTRO-GALVANIZED FASTENERS AND RODS. FINISH PAINT HANGERS AND SUPPORTS LOCATED IN THE CHEMICAL STORAGE ROOMS WITH A ZINC-CHROMATE PRIMER.

HORIZONTAL DUCT SHALL BE SUPPORTED WITH STEEL CLEVIS TYPE HANGERS, OR TRAPEZE TYPE HANGERS CONSTRUCTED OF PRE-MANUFACTURED STRUCTURAL STEEL SHAPES. ROUND DUCT SHALL BE INSTALLED WITH 180 DEGREE STAINLESS STEEL SADDLE LINED WITH EPDM OR SIMILAR COMPRESSIBLE RUBBER AT ALL HANGER SUPPORTS. SADDLE LENGTH SHALL BE 18" MINIMUM. SUPPORT SPACING SHALL BE IN ACCORDANCE WITH SMACNA'S "FIBROUS GLASS DUCT CONSTRUCTION STANDARDS".

VERTICAL DUCT LOCATED IN CHEMICAL STORAGE ROOMS SHALL BE SUPPORTED BY RISER SUPPORT CLAMPS (TWO CLAMPS MINIMUM PER VERTICAL DUCT). CLAMPS SHALL BE OVERSIZED, AND EXCESS SPACE SHALL BE FILLED BY EPDM OR SIMILAR RUBBER SHEET. CLAMPS SHALL BE TIGHTENED UNTIL THE DUCT AND RUBBER LINER ENGAGE. IT IS NOT THE INTENT THAT THE VERTICAL SUPPORTS ACCOMMODATE THE WEIGHT OF THE DUCTWORK. THE VERTICAL SUPPORTS ARE INTENDED TO PREVENT DAMAGE FROM OCCASIONAL IMPACTS DURING NORMAL USE OF THE SPACE.

EXPANSION BOLTS/SHEILDS: RED HEAD, HILTI OR WEJ-IT SELF DRILLING OR STEEL SHIELD, LOAD RATED. DO NOT USE DRILLED ANCHORS IN POST TENSION SLABS WITHOUT APPROVAL OF OWNER. DO NOT CUT REINFORCING STEEL WITH DRILLED INSERTS.

VIBRATION ISOLATION:
(SEE ROOF MOUNTED EQUIPMENT AND DUCTWORK).

ROUND DUCTWORK PENETRATIONS THROUGH ROOF
PROVIDE FACTORY FABRICATED, THYCURB TYPE TCC-1/TP-S CURBS AND PIPE SLEEVES. SUBMIT INSTALLATION AND FLASHING DETAILS TO ARCHITECT FOR APPROVAL.

ROOF MOUNTED EQUIPMENT AND DUCTWORK
FACTORY FABRICATED, THYCURB TYPE TEMS SUPPORT CURBS. CURBS SUPPORTING ROOF MOUNTED EQUIPMENT SHALL BE PROVIDED WITH INTEGRAL SPRING ISOLATORS. MINIMUM EQUIPMENT CURB HEIGHT TO BE 18". PROVIDE SADDLE SUPPORTS FOR ROOF-MOUNTED DUCTWORK IN ACCORDANCE WITH THE "HANGERS AND SUPPORTS FOR DUCTWORK" PARAGRAPH ABOVE. SUBMIT INSTALLATION AND FLASHING DETAILS TO ARCHITECT FOR APPROVAL.

CHEMICAL EXHAUST DUCTWORK
DUCTWORK AND FITTINGS SHALL BE FIBERGLASS FILAMENT REINFORCED PLASTIC (FRP) SIMILAR TO PERRY FIBERGLASS PRODUCTS, INC. MODEL 205. FRP DUCTWORK SHALL BE COMPRISED OF AN INNER LINER AND CORROSION BARRIER RESIN FOLLOWED BY A STRUCTURAL RESIN. FRP MATERIALS SHALL BE RATED FOR A FLAME SPREAD/SMOKE DEVELOPED INDEX OF 25/50 IN ACCORDANCE WITH ASTM E84. MATERIAL THICKNESS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF SMACNA'S "FIBROUS GLASS DUCT CONSTRUCTION STANDARDS". DUCTWORK SHALL BE RATED FOR AN OPERATING TEMPERATURE OF 120 DEG. F. (MIN.).

90 DEG. ROUND ELBOWS: PROVIDE 5-CORE LONG-RADIUS ELBOWS (CENTERLINE BEND RADIUS: R/D = 1.5).

AIR DUCT ACCESSORIES:
BALANCING DAMPERS

INSTALL MANUAL BALANCING DAMPER WITH LOCKING QUADRANT AT RUNOUT TAP OF MAIN DUCT FOR EACH EXHAUST GRILLE. DAMPER BODY AND BLADE SHALL BE FIBERGLASS WITH A VINYL ESTER RESIN. DAMPER AXLE SHALL BE PULTRUDED FIBERGLASS IN A VINYL ESTER RESIN. DAMPER SHAFT, BEARINGS AND LOCKING HAND QUADRANT SHALL BE FRP.

FIRE DAMPERS
PROVIDE UL 555 LISTED, 1-1/2 OR 3 HOUR LOUVER BLADE OR CURTAIN TYPE, CLASSIFIED AND CONSTRUCTED FOR DYNAMIC CLOSURE AT 2000 FPM AND 4" W.G. SYSTEM OPERATION IN HORIZONTAL OR VERTICAL APPLICATIONS.
USE CURTAIN TYPE (OUT OF AIR STREAM) FOR VAV MEDIUM PRESSURE DUCTS. PROVIDE UL APPROVED BREAK AWAY CONNECTIONS. PROVIDE ACCESS PANELS FOR ALL FIRE DAMPERS.

FLEXIBLE CONNECTIONS
GLASS FABRIC WITH CHEMICAL-RESISTANT COATING. MINIMUM WEIGHT 14 OZ./SQ. YARD, TENSILE STRENGTH 450 LB./IN. FLEXIBLE CONNECTOR SHALL BE RATED FOR A SERVICE TEMPERATURE OF MINUS 20 DEG. F. TO 120 DEG. F. PROVIDE WITH STAINLESS STEEL END CONNECTORS. ATTACHMENT METHODS TO BE COMPATIBLE WITH FAN AND DUCTWORK.

FANS
CENTRIFUGAL UPBLAST

FAN HOUSING: FIBERGLASS REINFORCED PLASTIC (FRP) CONFORMING TO PS 15-96 FRP CONSTRUCTION STANDARDS. EXTERIOR SURFACES SHALL BE CONSTRUCTED OF RESIN RICH PARAFFINATED RESIN STABILIZED AGAINST ULTRAVIOLET DEGRADATION. THE HOUSING AND BEARING SUPPORTS SHALL BE CONSTRUCTED OF WELDED STRUCTURAL STEEL MEMBERS. PROVIDE OSHA COMPLIANT BELT AND SHAFT GUARD.

FAN WHEEL: BACKWARD INCLINED NON-OVERLOADING CENTRIFUGAL TYPE. FRP ENCAPSULATED STEEL HUB AND BACKPLATE WITH FRP BLADES. FAN SHAFT-TO-IMPELLER CONNECTION SHALL BE LOCATED OUTSIDE OF THE AIRSTREAM. FAN WHEEL SHALL BE STATICALLY AND DYNAMICALLY BALANCED AT THE FACTORY.

FAN MOTOR: HIGH EFFICIENCY TEFC WITH SERVICE FACTOR OF 1.15.

TESTING, ADJUSTING, AND BALANCING
ALL SYSTEMS WITHIN SCOPE OF WORK TO BE BALANCED IN THEIR ENTIRETY. TESTING, ADJUSTING, AND BALANCING SHALL INCLUDE BUT NOT BE LIMITED TO AIR SYSTEMS, HYDRONIC SYSTEMS, EXISTING SYSTEMS. TESTING, ADJUSTING AND BALANCING AGENT SHALL BE AABC, NEBB, OR TABB CERTIFIED. AARP SHALL GIVE PRIOR APPROVAL TO SELECTION OF TESTING AND BALANCE CONTRACTOR.
TOLERANCES: PLUS OR MINUS 10 PERCENT OF DESIGN VALUES.
INSPECTIONS: RANDOM CHECKS BY OWNER TO VERIFY FINAL TESTING, ADJUSTING, AND BALANCING REPORT.
ADDITIONAL TESTS: RANDOM TESTS WITHIN 90 DAYS OF COMPLETING TAB TO VERIFY BALANCE CONDITIONS AND SEASONAL TESTS.
CONTRACTOR SHALL PROVIDE COPIES OF THE TAB REPORT TO OWNER AND ENGINEER FOR REVIEW AND APPROVAL.



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12/09/2015		
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ELECTRICAL NOTES

SPECIFICATION

- A. CODE:
- a. ELECTRICAL INSTALLATION SHALL ADHERE TO NEC REQUIREMENTS, PARTICULARLY SECTION 860.
- B. DEFINITIONS
- a. "PROVIDE" UNDER THIS CONTRACT IS DEFINED AS FURNISH AND INSTALL.
 - b. "CONCEALED" UNDER THIS CONTRACT IS DEFINED AS HIDDEN BY ARCHITECTURAL WALLS AND CEILINGS.
 - c. "EXPOSED" UNDER THIS CONTRACT IS DEFINED AS VISIBLE TO VIEW.
 - d. "INDICATED" UNDER THIS CONTRACT IS DEFINED AS SHOWN IN THE CONTRACT DOCUMENTS.

C. SECTION 260533: RACEWAYS, BOXES AND CONDUITS FOR ELECTRICAL SYSTEMS

1. OUTDOORS WIRING METHODS: USE THE FOLLOWING WIRING METHODS:
- a. EXPOSED: CONDUCTORS IN RIGID OR INTERMEDIATE METAL CONDUIT.
 - b. CONCEALED: CONDUCTORS IN RIGID OR INTERMEDIATE METAL CONDUIT.
 - c. UNDERGROUND: CONDUCTORS IN PLASTIC CONDUIT, UNLESS OTHERWISE NOTED.
 - d. CONNECTION TO VIBRATING EQUIPMENT: LIQUDTIGHT FLEXIBLE METAL CONDUIT.
 - e. BOXES AND ENCLOSURES: NEMA TYPE 3R OR TYPE 4.
2. INDOORS WIRING METHODS: USE THE FOLLOWING METHODS:
- a. CONNECTION TO VIBRATING EQUIPMENT: FLEXIBLE METAL CONDUIT, EXCEPT IN WET OR DAMP LOCATIONS USE LIQUDTIGHT FLEXIBLE METAL CONDUIT.
 - b. DAMP OR WET LOCATIONS: CONDUCTORS IN RIGID STEEL CONDUIT.
 - c. EXPOSED: CONDUCTORS IN ELECTRICAL METALLIC TUBING.
 - d. CONCEALED: CONDUCTORS IN ELECTRICAL METALLIC TUBING.
 - e. BOXES AND ENCLOSURES: NEMA TYPE 1, EXCEPT IN DAMP OR WET LOCATIONS USE NEMA TYPE 4, STAINLESS STEEL.
3. ALL WIRING IN FINISHED AREAS SHALL BE RUN CONCEALED. MINIMUM SIZE CONDUIT SHALL BE 3/4".
4. CONDUITORS SHALL BE THERMOPLASTIC TYPE THIN/THIN WITH 90 DEGREE CELSIUS INSULATION RATING (CURRENT CARRYING CAPACITY BASED ON 75 DEGREE CELSIUS INSULATION RATING).
5. EMT CONNECTORS AND COUPLINGS SHALL BE OF THE ALL-STEEL, COMPRESSION TYPE.
6. EXPOSED AND CONCEALED WIRING (WHETHER CONDUIT AND WIRE OR CABLE) SHALL BE RUN TIGHT TO CEILING SLAB (AS HIGH AS POSSIBLE TO MAXIMIZE HEADROOM) IN A NEAT, WORKMANLIKE MANNER. ALL RUNS SHALL BE PARALLEL OR PERPENDICULAR TO BUILDING WALLS.
7. ALL WIRING RUNS INDICATED ARE DIAGRAMMATIC. THE CONTRACTOR SHALL DETERMINE IN THE FIELD THE MOST SUITABLE ROUTES.
8. ALL RACEWAYS SHALL BE CONCEALED WHERE POSSIBLE. WHERE RACEWAYS CANNOT BE CONCEALED, IT SHALL BE INSTALLED IN ARCHITECT'S DIRECTION.
9. EXPOSED LOW VOLTAGE WIRING SHALL BE INSTALLED IN A RACEWAY, UNLESS OTHERWISE NOTED.
10. OUTLET BOXES SHALL BE A MINIMUM OF 4" SQUARE WITH THE APPROPRIATE PLASTER RING OR TILE COVER.
11. WHERE EXISTING WALLS ARE FURRED OUT AND DEVICES ARE NOT NOTED TO BE REMOVED, PROVIDE EXTENSION BOXES TO BRING FACE OF DEVICES FLUSH WITH NEW FINISH SURFACE AND CONTINUE IN SERVICE.
12. CONTRACTOR SHALL PROVIDE NEW TYPED PANEL DIRECTORIES PLACED BEHIND A RIGID SLEEVE FOR ALL PANELS AFFECTED BY THIS WORK.
13. CONTRACTOR SHALL DERATE CONDUCTORS PER NATIONAL ELECTRIC CODE AND PROVIDE ONE NEUTRAL CONDUCTOR FOR EACH THREE PHASE CONDUCTOR IF MORE THAN THREE PHASE CONDUCTORS ARE INSTALLED IN A SINGLE PIPE.

D. SECTION 260519: WIRE AND CABLE

1. ALL CONDUCTORS SHALL BE COPPER, MINIMUM #12 (EXCEPT CONTROL CONDUCTORS) CONDUCTORS FOR SWITCHING LIGHTS SHALL NOT BE CONSIDERED CONTROL CONDUCTORS), WITH 600 VOLT TYPE "THIN-THIN" INSULATION. CONDUCTORS #6 AND LARGER SHALL BE STRANDED.
2. ALL 120 VOLT CIRCUIT HOMERUNS WHICH ARE OVER 75 LINEAR FEET SHALL BE #10 CONDUCTORS MINIMUM.
3. RUN MULTIPLE HOMERUNS TO ALTERNATELY NUMBERED PANELBOARD CIRCUITS (I.E., 1, 3, 5).

E. SECTION 262726: WIRING DEVICES

1. THE LOCATION OF ALL WIRING DEVICES SHALL BE VERIFIED BEFORE INSTALLATION WITH THE OWNER.
2. ALL OUTLETS SHOWN ON A WALL BACK TO BACK SHALL BE OFFSET A MINIMUM OF 6" HORIZONTALLY.
3. WALL MOUNTED WIRING DEVICES SHALL BE IVORY COLOR, OR AS SELECTED BY THE ARCHITECT AND EQUAL TO THE FOLLOWING:
- a. SINGLE POLE SWITCH LEVITON 1221-2
 - b. KEY OPERATED SWITCH LEVITON 1221-2
 - c. WALL SWITCH SWITCHES WITT STOPPER WS-200
4. OUTLET BOXED FOR WIRING DEVICES IN FINISHED WALLS SHALL BE ONE PICE STANDARD GANG TYPE OF SIZE TO ACCOMMODATE NUMBER OF DEVICES NOTED. BOXES SHALL HAVE PLASTIC COVERS TO BRING BOX OPENING FLUSH WITH FINISHED WALL OR NOT MORE THAN 1/4" IN BACK OF SAME.

F. SECTION 260526: SUPPORTING DEVICES

1. INSTALL SUPPORTING DEVICES TO FASTEN ELECTRICAL COMPONENTS SECURELY AND PERMANENTLY IN ACCORDANCE WITH NEC REQUIREMENTS AND ANY ADDITIONAL LOCAL CODES.
2. COORDINATE WITH THE BUILDING STRUCTURAL SYSTEM AND WITH OTHER ELECTRICAL INSTALLATIONS.

G. SECTION 260553: ELECTRICAL IDENTIFICATION

1. CONDUCTOR COLOR CODING: PROVIDE COLOR CODING FOR FEEDERS AND BRANCH CIRCUIT CONDUCTORS AS FOLLOWS:
- 208/120 VOLTS PHASE
- | | |
|-------|---------|
| BLACK | A |
| RED | B |
| BLUE | C |
| WHITE | NEUTRAL |
| GREEN | GROUND |
- 480/277 VOLTS PHASE
- | | |
|--------|---------|
| BROWN | A |
| ORANGE | B |
| YELLOW | C |
| WHITE | NEUTRAL |
| GREEN | GROUND |
2. APPLY EQUIPMENT IDENTIFICATION LABELS (MINIMUM 1" HIGH LETTERS) OF ENGRAVED PLASTIC-LAMINATE ON EACH MAJOR UNIT OF ELECTRICAL EQUIPMENT. APPLY LABELS FOR EACH UNIT OF THE FOLLOWING CATEGORIES OF ELECTRICAL EQUIPMENT:
- a. PANELBOARDS.
 - b. ELECTRICAL CABINETS.
 - c. ENCLOSURES.
 - d. PUSHBUTTON STATIONS.
3. APPLY CIRCUIT/CONTROL/ITEM DESIGNATION LABELS OF ENGRAVED PLASTIC LAMINATE FOR DISCONNECT SWITCHES, BREAKERS, PUSHBUTTONS, PILOT LIGHTS, AND SIMILAR ITEMS FOR POWER DISTRIBUTION AND CONTROL COMPONENTS ABOVE.
4. FOR PANELBOARDS: PROVIDE FRAMED, TYPED CIRCUIT SCHEDULES WITH EXPLICIT DESCRIPTION AND IDENTIFICATION OF ITEMS CONTROLLED BY EACH INDIVIDUAL BREAKER.

H. SECTION 260526: GROUNDING

1. GROUND ELECTRICAL SYSTEMS AND EQUIPMENT IN ACCORDANCE WITH NEC EXCEPT WHERE GROUNDING IN EXCESS OF NEC REQUIREMENTS IS INDICATED.
2. ALL CIRCUITS SHALL CONTAIN AN INSULATED GROUNDING CONDUCTORS. ALL NEW RECEPTACLE CIRCUITS SHALL CONTAIN A #12 INSULATED GROUNDING CONDUCTOR.

ELECTRICAL LEGEND

GENERAL NOTES

1. THE WORK TO BE DONE SHALL INCLUDE THE FURNISHING OF ALL LABOR, MATERIALS, APPLIANCES, EQUIPMENT, TOOLS, TRANSPORTATION, SUPERINTENDENTS AND SERVICES REQUIRED TO CONSTRUCT, INSTALL AND TO MODIFY THE ELECTRICAL SYSTEMS AS HEREBY SPECIFIED AND SHOWN ON THESE DRAWINGS FOR A COMPLETE OPERATIONAL SYSTEM. COORDINATE WORK TO BE PERFORMED OR INSTALLED BY OTHERS AFFECTING THE ELECTRICAL WORK AND PROVIDE AND INSTALL ALL NECESSARY ANCHORS, SLEEVES, HANGERS, ETC. FOR ATTACHING OR CONNECTING ELECTRICAL WORK TO RELATED WORK OF OTHER TRADES.
2. ALL ELECTRICAL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE LATEST ADOPTED NATIONAL ELECTRICAL CODE AND ALL OTHER LOCAL CODES AND AUTHORITIES HAVING JURISDICTION.
3. THE DRAWINGS, WHICH CONSTITUTE A PART OF THIS CONTRACT, INDICATE THE GENERAL ARRANGEMENT OF CIRCUITS AND LOCATIONS OF OUTLETS, SWITCHES, PANELBOARDS, CONDUIT AND OTHER WORK. ALL ITEMS NOT SPECIFICALLY MENTIONED HEREIN, WHICH ARE ACCESSORY TO MAKE A COMPLETE WORKING INSTALLATION, SHALL BE INCLUDED AT NO EXTRA COST.
4. IT SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR TO EXAMINE AND TO COORDINATE WITH THE ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING AND FIRE PROTECTION DRAWINGS AND THE DRAWINGS OF ALL OTHER TRADES IN ORDER TO BECOME FAMILIAR WITH ALL ASPECTS OF THE DESIGN AFFECTING THE ELECTRICAL WORK.
5. CONTRACTOR SHALL COORDINATE MOUNTING HEIGHTS AND LOCATIONS OF ALL NEW ELECTRICAL DEVICES WITH ARCHITECTURAL ELEVATIONS AND DRAWINGS PRIOR TO COMMENCEMENT OF WORK. DEVICES INCLUDE BUT ARE NOT LIMITED TO RECEPTACLES, SWITCHES, FIXTURES AND TELE/DATA OUTLETS.
6. ALL ELECTRICAL MATERIALS SHALL BE NEW EXCEPT WHERE SPECIFICALLY NOTED AS EXISTING TO BE REUSED. ALL MATERIAL SHALL BE LISTED BY THE UNDERWRITERS LABORATORIES, INC. (UL), DEFECTIVE EQUIPMENT AND/OR EQUIPMENT DAMAGED DURING INSTALLATION AND/OR TESTING SHALL BE REPLACED OR REPAIRED IN A MANNER MEETING THE APPROVAL OF THE ARCHITECT AND THE ENGINEER. WHERE APPLICABLE, ALL EQUIPMENT SHALL BE IN ACCORDANCE WITH NEMA STANDARDS.
7. ALL WORK SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER OR OWNER'S AUTHORIZED REPRESENTATIVE.
8. ALL WORK SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER.
9. INSTALL A UL LISTED FIRE STOP TO PROVIDE AN EFFECTIVE BARRIER AGAINST THE SPREAD OF FIRE AND SMOKE WHERE CONDUITS, WIRWAYS, AND OTHER ELECTRICAL RACEWAYS PASS THROUGH FIRE RATED PARTITIONS AND/OR SLABS.
10. ALL CERTIFICATES OF APPROVAL SHALL BE IN TRIPPLICATE, DELIVERED TO THE ENGINEER, AND BECOME THE PROPERTY OF THE OWNER.
11. CONTRACTOR SHALL VERIFY ALL EQUIPMENT REQUIREMENTS BEFORE INSTALLING CONDUIT OR CONDUCTORS FROM POWER SOURCE TO EQUIPMENT TERMINATION.
12. THE CONTRACTOR SHALL X-RAY SLAB IN AREA OF PENETRATION PRIOR TO CORE DRILLING AND COORDINATE WITH EQUIPMENT IN CEILING SPACE BELOW TO CHECK FOR OBSTRUCTIONS.
13. CONDUCTOR INSTALLATION: HOMERUNS TO THE PANELBOARD MAY BE RUN TOGETHER IN ONE CONDUIT.
14. PROVIDED ALL CONNECTIONS ARE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND LOCAL ELECTRICAL CODE REQUIREMENTS, AND THE MAXIMUM UNBALANCED CURRENT IN NEUTRAL DOES NOT EXCEED THE CAPACITY OF THE WIRE, NO MORE THAN 3 SINGLE PHASE CIRCUIT SHALL BE INSTALLED IN ONE RACEWAY. ELIMINATE SPICES WHEREVER POSSIBLE, AND WHERE NECESSARY, SPLICE IN READILY ACCESSIBLE PULL, JUNCTION OR OUTLET BOX.
15. MODIFICATIONS TO EXISTING PANELBOARDS: THE ELECTRICAL CONTRACTOR SHALL PROVIDE NEW CIRCUIT BREAKERS AND/OR FUSED SWITCHES AS REQUIRED. NEW EQUIPMENT SHALL MATCH EXISTING INSTALLED EQUIPMENT AND SHALL BE OF THE SAME MANUFACTURER AND TYPE AS SIMILAR EXISTING EQUIPMENT. INTERRUPT RATING OF EQUIPMENT SHALL BE THE SAME AS OF THE EXISTING EQUIPMENT.
16. INTERRUPTION OF ELECTRICAL POWER: THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL WORK REQUIRING INTERRUPTION OF ELECTRICAL POWER WITH THE BUILDING OWNER AND SHALL OBTAIN WRITTEN PERMISSION FROM THE BUILDING OWNER PRIOR TO SHUTTING DOWN POWER TO ANY SWITCHBOARD. THE CONTRACTOR SHALL ALSO PROVIDE NOTICE TO ALL OTHER TRADES OF ALL SCHEDULED INTERRUPTIONS OF POWER.
17. SITE VISIT: PRIOR TO SUBMITTING HIS BID, THE ELECTRICAL CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS. THE ELECTRICAL CONTRACTOR SHALL NOTIFY THE ARCHITECT AND/OR ENGINEER IN ADVANCE OF ANY CONDITIONS THAT EXIST THAT WOULD PREVENT THE WORK HEREBY SPECIFIED OR SHOWN ON THE DRAWINGS FROM BEING PERFORMED. FAILURE TO SURVEY THE SITE PRIOR TO BID AND START OF CONSTRUCTION WILL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO INSTALL DESIGN WITHIN THE CONFINES OF THE EXISTING CONDITIONS.
18. GUARANTEE: THE ELECTRICAL CONTRACTOR SHALL LEAVE THE ENTIRE ELECTRICAL SYSTEM INSTALLED UNDER THIS CONTRACT IN PROPER WORKING ORDER AND SHALL, WITHOUT CHARGE, REPLACE ANY WORK OR MATERIALS WHICH DEVELOP DEFECTS, EXCEPT FROM ORDINARY WEAR AND TEAR, WITHIN ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE. BENEFICIAL USE SHALL NOT BE CONSIDERED AS FINAL ACCEPTANCE. THE ELECTRICAL CONTRACTOR SHALL, DURING THE ONE YEAR GUARANTEE PERIOD, BE RESPONSIBLE FOR THE PROPER REPAIR AND ADJUSTMENTS OF ALL ELECTRICAL SYSTEMS AND EQUIPMENT, APPARATUS, DEVICES, ETC. INSTALLED BY HIM, AND DO ALL WORK NECESSARY TO ENSURE EFFICIENT AND PROPER FUNCTIONING. PRIOR TO THE EXPIRATION OF THE GUARANTEE PERIOD, APPROXIMATELY 11 MONTHS AFTER FINAL ACCEPTANCE OF THIS PROJECT, A POST CONSTRUCTION REVIEW OF THE PROJECT WILL BE MADE.
19. THE CONTRACTOR SHALL FURNISH PERSONNEL TO ASSIST THE OWNER IN THIS REVIEW. ANY ADJUSTMENTS, REPAIRS OR REPLACEMENTS FOUND NECESSARY DURING REVIEW SHALL BE DONE BY THE CONTRACTOR, AT NO ADDITIONAL COST TO THE OWNER.
20. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR, AND SHALL INCUR FINANCIAL RESPONSIBILITY FOR ANY DAMAGES CAUSED BY, OR RESULTING FROM, DEFECTS IN HIS WORK.
21. THE ELECTRICAL CONTRACTOR SHALL MAINTAIN AT THE SITE, FOR THE OWNER, ONE COPY OF ALL DRAWINGS, ADDENDA, APPROVED SHOP DRAWINGS, REVISIONS AND OTHER MODIFICATIONS, IN GOOD ORDER AND MARKED TO RECORD ALL CHANGES MADE DURING CONSTRUCTION. THE SET OF DRAWINGS AND OTHER INFORMATION SHALL BE DELIVERED TO THE OWNER AND ONE COPY GIVEN TO THE ENGINEER UPON COMPLETION OF WORK.
22. ALL CONDUCTORS SHALL BE COPPER, CONFORMING TO THE LATEST REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE, STRANDED FOR NO. 8 AWG AND LARGER, SOLID FOR NO. 10 AWG AND SMALLER.
23. ALL WIRING SHALL BE INSTALLED IN CONDUIT (EMT WITH STEEL COMPRESSION FITTINGS OR TYPE MC CABLE WHERE ALLOWED BY CODE). MINIMUM CONDUIT SIZE SHALL BE 3/4". ALL CONDUIT AND WIRING SHALL BE CONCEALED IN CEILING AND/OR WALLS UNLESS SPECIFICALLY NOTED OTHERWISE. CHANNEL EXISTING WALLS WHERE REQUIRED. WHERE WIRING RUNS ARE EXPOSED DUE TO THE LACK OF A NEW FINISHED CEILING, EMT SHALL BE USED. INSTALL ALL CONDUITS IN RUNS WHICH ARE PARALLEL AND PERPENDICULAR WITH BUILDING LINES.

MAXIMUM BRANCH CIRCUIT LENGTH TO FARTHEST OUTLET, ONE WAY

AWG	120V, 1PH	277V, 1PH
#12	65'	150'
#10	125'	275'
#8	200'	-

ELECTRICAL LEGEND

GENERAL

- Ⓢ INDICATES PLAN NOTE.
- Ⓡ INDICATES REVISION. CLOUDED AREA CONTAINS THE REVISION.
- Ⓡ INDICATES ROOM NUMBER.
- Ⓡ BRANCH CIRCUIT HOMERUN
- CONDUIT UP
- CONDUIT DOWN
- GROUND
- Ⓡ EXISTING TO REMAIN.
- Ⓡ LIGHT LINES INDICATE EXISTING TO REMAIN.

ABBREVIATIONS

A, AMP AMPERES	G, GND GROUND
AB ABOVE	GC GENERAL CONTRACTOR
AC ALTERNATE CURRENT	GF1 GROUND FAULT INTERRUPTER
AF1 ABOVE FINISHED FLOOR	IG ISOLATED GROUND
ARCH ARCHITECTURAL, ARCHITECT	INCAND INCANDESCENT
BEL BELOW	KAC KILOVOLT INTERRUPTING CURRENT
BKR BREAKER	KVA KILOVOLT AMPERES
C CONDUIT	KW KILOWATTS
CEL CEILING	LT(S) LIGHT(S)
CKT CIRCUIT	M METER
CM CENTIMETER	MECH MECHANICAL
DC DIRECT CURRENT	MH MOUNTING HEIGHT
D/S DISCONNECT SWITCH	MLO MAIN LUGS ONLY
DISC DISCONNECT SWITCH	MM MILLIMETER
DWG DRAWING	MTD MOUNTED
EC ELECTRICAL CONTRACTOR	NEC NATIONAL ELECTRICAL CODE
EF EXHAUST FAN	NO.# NUMBER
ELEC ELECTRICAL	NTS NOT TO SCALE
EM EMERGENCY	P POLE
EQUIP EQUIPMENT	PH.# PHASE
EXIST EXISTING	PHL PANEL
FA FIRE ALARM	RECEP RECEPTACLE
FACP FIRE ALARM CONTROL PANEL	RM ROOM
FAP FIRE ALARM ANNUNCIATOR PANEL	TELE TELEPHONE
FIXT FIXTURE	TFP TYPICAL
FLA FULL LOAD AMPERES	UON UNLESS OTHERWISE NOTED
FLUOR FLUORESCENT	V VOLTS
	W WAITS
	WP WITH
	WP WEATHERPROOF

POWER

NOTES: REFER TO ARCHITECTURAL DRAWINGS AND ELEVATIONS FOR EXACT LOCATION AND MOUNTING HEIGHTS

- WP: WEATHER PROOF (NEMA 3R)
- IG: ISOLATED GROUND.
- GF1: GROUND FAULT INTERRUPTER.
- Ⓢ WALL MOUNTED 20A SIMPLEX RECEPTACLE (18" AFF UON).
- Ⓢ WALL MOUNTED 20A DUPLEX RECEPTACLE (18" AFF UON).
- Ⓢ WALL MOUNTED 20A DUPLEX RECEPTACLE (ABOVE COUNTER UON).
- Ⓢ WALL 20A QUADRUPLX RECEPTACLE (18" AFF UON).
- Ⓢ WALL MTD. SPECIAL RECEPTACLE, NEMA TYPE PER PLANS.
- Ⓢ FLOOR MOUNTED 20A SIMPLEX RECEPTACLE.
- Ⓢ FLOOR MOUNTED 20A DUPLEX RECEPTACLE.
- Ⓢ FLOOR MOUNTED 20A QUADRUPLX RECEPTACLE.
- Ⓢ FLOOR MTD. SPECIAL RECEPTACLE, NEMA TYPE PER PLANS.
- Ⓢ FLOOR MTD. BOX FOR POWER AND DATA. (2) QUAD RECEPTACLES & (4) DATA OUTLETS, U.O.N.
- Ⓢ CEILING MOUNTED JUNCTION BOX.
- Ⓢ JUNCTION BOX CEILING/WALL MOUNTED FOR HVAC VAV BOX CONTROL 14, 115V.
- Ⓢ JUNCTION BOX CEILING/WALL MOUNTED FOR HVAC MOTORIZED DAMPER 14, 115V.
- Ⓢ WALL MOUNTED JUNCTION BOX.
- Ⓢ DISCONNECT SWITCH - NON-FUSED.
- Ⓢ FUSED DISCONNECT SWITCH. FUSE SIZE PER PLANS.
- Ⓢ COMBINATION STARTER/DISCONNECT SWITCH.
- Ⓢ VARIABLE FREQUENCY DRIVE.
- Ⓢ VARIABLE FREQUENCY DRIVE WITH INTEGRAL DISCONNECT.
- Ⓢ MOTOR. REFER TO MECHANICAL PLANS FOR HORSEPOWER.
- Ⓢ MULTI-OUTLET SURFACE MOUNTED POWER RACEWAY.
- Ⓢ MULTI-OUTLET SURFACE MOUNTED POWER & DATA RACEWAY.
- Ⓢ SURFACE MOUNTED PANEL.
- Ⓢ RECESSED PANEL.
- Ⓢ EMERGENCY POWER OFF.
- Ⓢ ENCLOSED CIRCUIT BREAKER.
- Ⓢ PULL BOX.
- Ⓢ POWER POLE.
- Ⓢ POWER/DATA POKE-THRU WIREMOLD EVOLUTION 8AT SERIES OR EQUAL.

SPECIAL SYSTEMS

NOTE: UNLESS OTHERWISE NOTED, FOR ALL DEVICES IN THIS COLUMN PROVIDE BACK BOX AND 1" EMPTY CONDUIT STUBBED 6" INTO ACCESSIBLE CEILING SPACE. FOR FLOOR MOUNTED BOXES, PROVIDE CONDUIT EITHER IN SLAB OR VIA FLOOR BELOW TO ACCESSIBLE CEILING SPACE OF DEVICE LOCATION.

- ▽ DATA OUTLET.
- ▽ TELEPHONE OUTLET.
- ▽ COMBINATION DATA/TELEPHONE OUTLET.
- ▽ FLOOR MOUNTED DATA/TELEPHONE OUTLET.
- ▽ CEILING MOUNTED TELEPHONE/DATA OUTLET.
- ▽ WALL MOUNTED AUDIO/VISUAL OUTLET.
- ▽ CEILING MOUNTED AUDIO/VISUAL OUTLET.
- ▽ CEILING MOUNTED INTERCOM OR MUSIC SPEAKER.
- ▽ CARD READER.
- ▽ KEY PAD.
- ▽ SECURITY SYSTEM CAMERA.
- ▽ MOTION DETECTOR.
- ▽ PUSH BUTTON.
- ▽ FLOOR OR WALL MOUNTED TV OUTLET.
- ▽ CEILING MOUNTED TV OUTLET.



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TAKOMA AQUATIC CENTER Phase 1

300 VAN BUREN ST NW,
WASHINGTON, DC 20012

QEA # 31508100
OWNER # 000000000

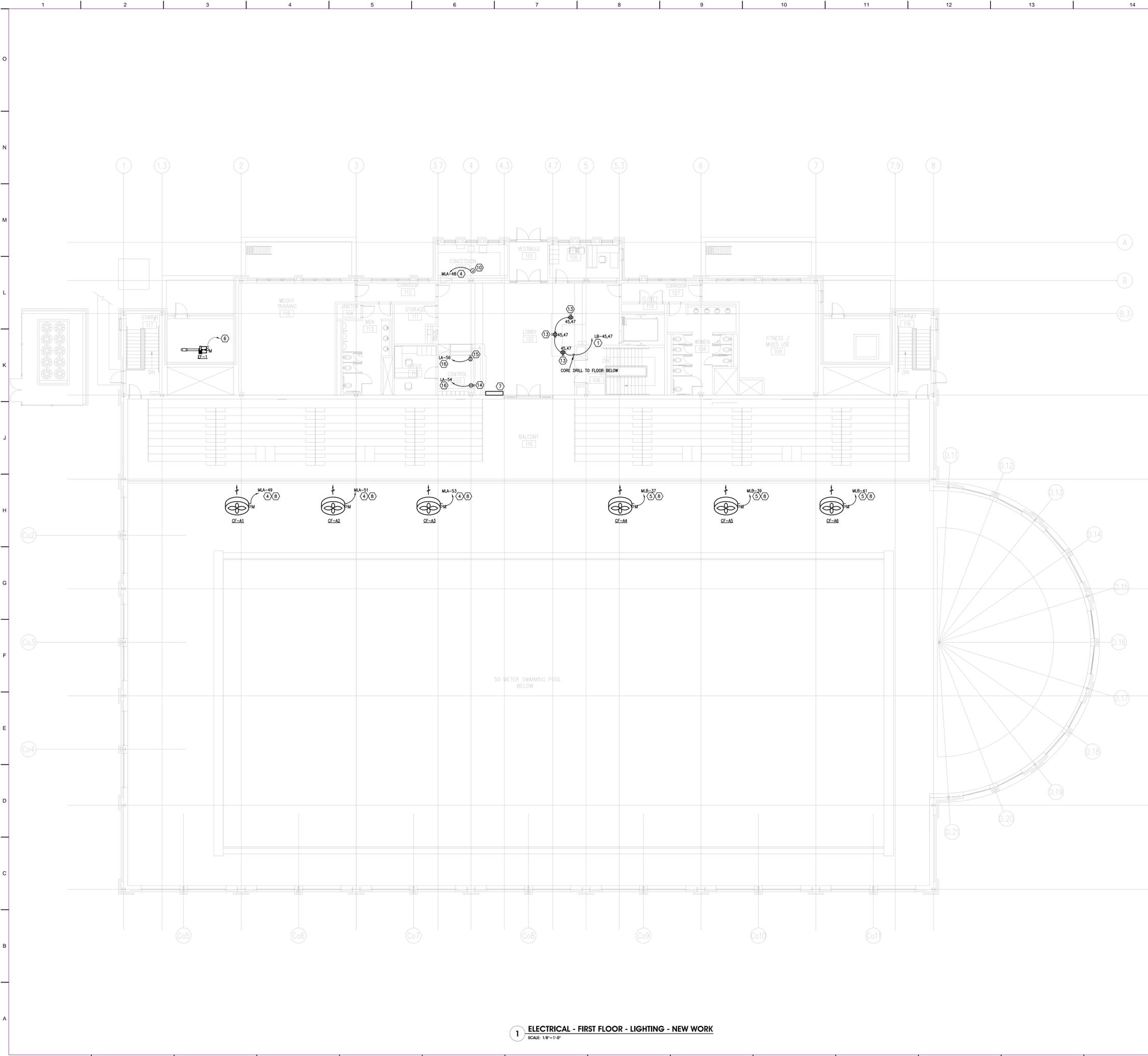
ELECTRICAL COVER SHEET



PERMIT SET
12/09/2015

REVISIONS		
NO.	DESCRIPTION	DATE

E001



- GENERAL NOTES**
- REFER TO E001 FOR GENERAL NOTES, SYMBOL LEGEND AND LIST OF ABBREVIATIONS.
 - ALL ELECTRICAL EQUIPMENT INSTALLED IN THE POOL AREA SHALL BE OF CORROSION RESISTANT MATERIAL.
- SPECIFIC NOTES**
- PROVIDE NEW 1P/20A CIRCUIT BREAKERS FOR CIRCUIT #45 / IN EXISTING PANEL. LB. NEW BREAKERS SHALL MATCH EXISTING.
 - NOT USED.
 - PROVIDE NEW 3P/20A CIRCUIT BREAKER IN EXISTING PANEL MJB. NEW BREAKER SHALL MATCH EXISTING.
 - PROVIDE NEW 1P/20A CIRCUIT BREAKERS IN EXISTING PANEL MJA. NEW BREAKERS SHALL MATCH EXISTING.
 - PROVIDE NEW 1P/20A CIRCUIT BREAKERS IN EXISTING PANEL MJB. NEW BREAKERS SHALL MATCH WITH EXISTING.
 - EXISTING EF-1 BRANCH CIRCUITING TO REMAIN. EXTEND AND RECONNECT TO RELOCATED EF-1. SEE MECHANICAL DRAWING M0110 FOR ADDITIONAL INFORMATION.
 - FAN(CF-A1 THRU CF-A6) CONTROLLERS. COORDINATE FINAL LOCATION WITH OWNER.
 - VIA FAN CONTROLLER. SEE NOTE 7, COORDINATE WITH MECHANICAL.
 - NOT USED.
 - FOR DDC CONTROLLER FOR THERMOSTATIC CONTROL. SEE KEYNOTE #3 ON M111. PROVIDE JUNCTION BOX IN CEILING.
 - NOT USED.
 - NOT USED.
 - RECEPTACLES SHALL BE MOUNTED BELOW COUNTER TOP ON BACK WALL OF DESK AND CONDUIT SHALL BE CONCEALED INSIDE THE CAVITY OF DESK. COORDINATE EXACT MOUNTING DETAIL WITH ARCHITECT.
 - FOR POPCORN POPPER. COORDINATE EXACT MOUNTING LOCATION WITH OWNER PRIOR TO ROUGH-IN AND INSTALLATION.
 - FOR UNDER COUNTER REFRIGERATOR. COORDINATE EXACT MOUNTING LOCATION WITH OWNER PRIOR TO ROUGH-IN AND INSTALLATION.
 - PROVIDE NEW 1P/20A CIRCUIT BREAKERS IN EXISTING PANEL LA. NEW BREAKERS SHALL MATCH EXISTING.



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TAKOMA AQUATIC CENTER Phase 1

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ELECTRICAL FIRST FLOOR POWER PLAN

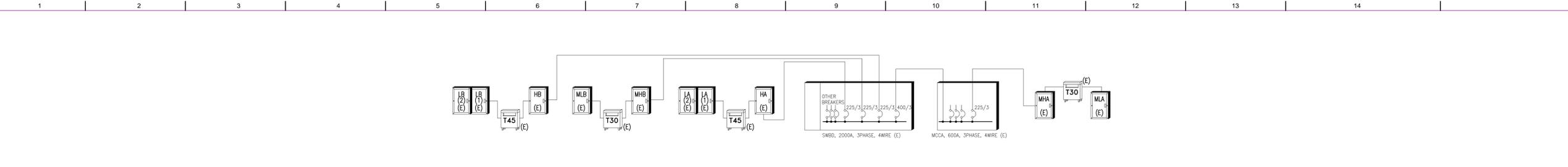


PERMIT SET
12/09/2015

NO.	DESCRIPTION	DATE

E111

1 ELECTRICAL - FIRST FLOOR - LIGHTING - NEW WORK
SCALE: 1/8" = 1'-0"



1 ELECTRICAL EXISTING PARTIAL RISER DIAGRAM
SCALE: NOT TO SCALE

PANELBOARD NAME: LA (EXISTING) SECTION 1														
VOLTAGE: 208Y120V BUS RATING: 225A POLES: 42 MINIMUM A.I.C. RATING (A): EXISTING														
PHASEWIRE: 3 PHASE, 4 WIRE + GROUND MOUNTING: SURFACE SERVICE: NORMAL														
CKT NO.	LOAD TYPE	LOAD DESCRIPTION	BKR	LOAD (VA)	PHASE LOAD (VA)	LOAD (VA)	BKR	LOAD DESCRIPTION	LOAD TYPE	CKT NO.	LOAD TYPE	LOAD DESCRIPTION	LOAD TYPE	CKT NO.
1	C	POOL LIGHTS	1	20	1000	2000	1	20	POOL LIGHTS	C	2	1	C	UNDERWATER LIGHTING
3	C	POOL LIGHTS	1	20	1000	2000	1	20	POOL LIGHTS	C	4	3	C	UNDERWATER LIGHTING
5	C	POOL LIGHTS	1	20	1000	2000	1	20	POOL LIGHTS	C	6	5	C	UNDERWATER LIGHTING
7	C	POOL LIGHTS	1	20	1000	2000	1	20	POOL LIGHTS	C	8	7	M	HAND DRYER
9	R	RECEPT	1	20	400	1900	1	20	MICROWAVE	R	10	9	M	HAND DRYER
11	R	RECEPT	1	20	600	1900	1	20	RECEPT	R	12	11	M	HAND DRYER
13	R	RECEPT	1	40	1200	2200	1	20	RECEPT	R	14	13	M	HAND DRYER
15	R	RECEPT	1	20	700	1300	1	20	RECEPT	R	16	15	M	HAND DRYER
17	R	RECEPT	1	20	800	1100	1	20	RECEPT	R	18	17	R	GFCS RECEPT
19	M	HEAT TRACE	1	20	800	1300	1	20	RECEPT	R	20	19	R	GFCS RECEPT
21	R	RECEPT	1	20	800	1600	1	20	RECEPT	R	22	21	R	GFCS RECEPT
23	M	WATER LEVEL	1	20	400	1900	1	20	DRIVER	K	24	23	R	RECEPT
25	R	RECEPTS/NOV LIGHTS	1	20	700	2200	1	20	DRIVER	K	26	25	R	RECEPT
27	R	RECEPT	1	20	600	2100	1	20	DRIVER	K	28	27	N	ACCESS CONTROL
29	R	RECEPT	1	20	700	2200	1	20	DRIVER	K	30	29	R	GFCS RECEPT
31	R	RECEPT	1	20	600	2100	1	20	DRIVER	K	32	31	N	ACCESS CONTROL
33	R	RECEPT	1	20	600	1900	1	20	EWIC	M	34	33	N	ACCESS CONTROL
35	R	RECEPT	1	20	700	1700	1	20	RECEPT	R	36	35	N	ACCESS CONTROL
37	R	RECEPT	1	20	800	1300	1	20	RECEPT	R	38	37	M	WOMEN'S DRYER
39	R	RECEPT	1	20	800	1300	1	20	RECEPT	R	40	39	M	MEN'S DRYER
41	R	RECEPT	1	20	1500	1500	1	20	SPARE	R	42	41	R	GFCS MENS

PANELBOARD NAME: LB (EXISTING) SECTION 1														
VOLTAGE: 208Y120V BUS RATING: 225A POLES: 42 MINIMUM A.I.C. RATING (A): EXISTING														
PHASEWIRE: 3 PHASE, 4 WIRE + GROUND MOUNTING: SURFACE SERVICE: NORMAL														
1	C	UNDERWATER LIGHTING	1	20	1000	2000	1	20	UNDERWATER LIGHTING	C	2	1	C	UNDERWATER LIGHTING
3	C	UNDERWATER LIGHTING	1	20	1000	2000	1	20	UNDERWATER LIGHTING	C	4	3	C	UNDERWATER LIGHTING
5	C	UNDERWATER LIGHTING	1	20	1000	2000	1	20	UNDERWATER LIGHTING	C	6	5	C	UNDERWATER LIGHTING
7	M	HAND DRYER	1	20	1500	2300	1	20	RECEPT	R	8	7	M	HAND DRYER
9	M	HAND DRYER	1	20	1500	2300	1	20	RECEPT	R	10	9	M	HAND DRYER
11	M	HAND DRYER	1	20	1500	2300	1	20	RECEPT	R	12	11	M	HAND DRYER
13	M	HAND DRYER	1	20	1500	2500	1	20	RECEPT	R	14	13	M	HAND DRYER
15	M	HAND DRYER	1	20	1500	2400	1	20	RECEPT	R	16	15	M	HAND DRYER
17	M	HWH	1	20	450	2000	1	20	RECEPT	R	18	17	R	GFCS RECEPT
19	M	HWH	1	20	450	2000	1	20	RECEPT	R	20	19	R	GFCS RECEPT
21	R	RECEPT	1	20	1000	1400	1	20	RECEPT	R	22	21	R	GFCS RECEPT
23	M	BOOSTER PUMP	1	20	1200	1800	1	20	RECEPT	R	24	23	R	RECEPT
25	M	BOOSTER PUMP	1	20	1200	3450	1	20	RECEPT	R	26	25	R	RECEPT
27	N	ACCESS CONTROL	1	20	500	2000	1	20	SCORE BOARD	N	28	27	N	ACCESS CONTROL
29	R	GFCS RECEPT	1	20	800	2850	1	20	SCORE BOARD	N	30	29	R	GFCS RECEPT
31	N	ACCESS CONTROL	1	20	500	1000	1	20	SCORE BOARD	N	32	31	N	ACCESS CONTROL
33	N	ACCESS CONTROL	1	20	500	1300	1	20	SCORE BOARD	N	34	33	N	ACCESS CONTROL
35	N	ACCESS CONTROL	1	20	500	1500	1	20	SCORE BOARD	N	36	35	N	ACCESS CONTROL
37	M	WOMEN'S DRYER	1	20	1500	2000	1	20	RECEPT	R	38	37	M	WOMEN'S DRYER
39	M	MEN'S DRYER	1	20	1500	2300	1	20	RECEPT	R	40	39	M	MEN'S DRYER
41	R	GFCS MENS	1	20	1000	1800	1	20	RECEPT	R	42	41	R	GFCS MENS

PANELBOARD NAME: MLA (EXISTING) SECTION 1														
VOLTAGE: 208Y120V BUS RATING: 100A POLES: 42 MINIMUM A.I.C. RATING (A): EXISTING														
PHASEWIRE: 3 PHASE, 4 WIRE + GROUND MOUNTING: SURFACE SERVICE: NORMAL														
1					500	500	2	20	BOILER 1	M	2			
3					500	500	2	20	BOILER 1	M	4			
5					600	600	1	20	EF-1	M	6			
7	M	RECEPT CP MOTOR BOOSTER	1	20	800	800	1	20	SPARE	M	8			
9	M	BOOSTER PUMP	1	20	1200	1200	1	20	SPARE	M	10			
11	M	COMPRESSOR MOTOR	1	20	1000	1200	1	20	RECEPT	M	12			
13	M	COMPETITION MOTOR	1	40	1000	1700	1	20	TR-2	M	14			
15	M	HWH	1	20	450	1950	1	20	EDH-2	M	16			
17	M	HWH	1	20	450	950	1	20	FAUCET SENSOR	M	18			
19	M	HWH	1	20	240	840	1	20	EF-8	M	20			
21	M	RECEPT	1	20	100	1100	1	20	LP MOTOR STARTER	M	22			
23	M	BOOSTER PUMP	1	20	1200	2200	1	20	BASEDCC PANEL	M	24			
25	M	SHUNT TRIP	1	20	600	600	1	20	BASEDCC PANEL	M	26			
27	M	SP-2	1	20	500	1500	1	20	CHEMICAL FEED RELAYS	M	28			
29	M	BACK FLUSH	1	20	450	1450	1	20	LP MOTOR CONTROLLER	M	30			
31	M	BACK FLUSH	1	20	450	1650	1	20	LP MOTOR CONTROLLER	M	32			
33	M	BACK FLUSH	1	20	450	1450	1	20	LP FILTER CONTROLLER	M	34			
35			1	20		1200	1200	1	20	COMPETITION FILTER CONTR	M	36		
37	M	LEISURE BOOSTER PUMP	1	20	1000	2000	1	20	BOOSTER PUMP	M	38			
39	C	EXISTING LOAD	1	20	500	1100	600	1	20	EDH-1	M	40		
41	C	EXISTING LOAD	1	20	650	1350	700	1	20	TR-3	M	42		

PANELBOARD NAME: MLB (EXISTING) SECTION 1														
VOLTAGE: 208Y120V BUS RATING: 100A POLES: 42 MINIMUM A.I.C. RATING (A): EXISTING														
PHASEWIRE: 3 PHASE, 4 WIRE + GROUND MOUNTING: SURFACE SERVICE: NORMAL														
1	M	MAIN ELEV.	3	20	1500	1900	2000	400	1	20	ELEVATOR RECEPT	R	2	
3								500	2	15	AC-1	M	4	
5								1500	1	20	SPARE	M	6	
7	R	ROOF RECEPT	1	20	400	1600	1700	1200	2	30	ACCU-1	M	8	
9	M	RTK-2	1	20	500	1200	1400	400	1	20	ROOF RECEPT	R	12	
11	M	ELEVATOR & CAB	1	20	1000	2000	2000	500	1	20	ROOF RECEPT	R	12	
13	N	EXISTING LOAD	1	20	1500	2500	1000	1	20	BASEDCC PANEL	N	14		
15	M	SP-2	1	20	500	1300	800	1	20	EXISTING LOAD	C	16		
17	M	EF-8	1	20	900	1700	800	1	20	EXISTING LOAD	C	18		
19	M	EDH-3	1	20	1900	2700	800	1	20	EXISTING LOAD	C	20		
21	M	BEH-4	1	20	600	1400	800	1	20	EXISTING LOAD	C	22		
23	M	TR-4	1	15	250	1050	800	1	20	EXISTING LOAD	C	24		
25	M	HWH-1	1	20	350	1050	800	1	20	EXISTING LOAD	C	26		
27	C	EXISTING LOAD	1	20	800	1600	800	1	20	EXISTING LOAD	C	28		
29	C	EXISTING LOAD	1	20	800	1300	500	1	20	CONTROL PANEL	N	30		
31	C	EXISTING LOAD	1	20	800	800	800	1	20	EXISTING LOAD	C	32		
33	C	EXISTING LOAD	1	20	800	800	800	1	20	EXISTING LOAD	C	34		
35														
37	M	CF-A4	1	20	1200	1200	1200	1200	1	20	EXISTING LOAD	C	38	
39	M	CF-A5	1	20	1200	1200	1200	1200	1	20	EXISTING LOAD	C	40	
41	M	CF-A6	1	20	1200	1200	1200	1200	1	20	EXISTING LOAD	C	42	

PANELBOARD NAME: LA (EXISTING) SECTION 2														
BUS RATING: 225A POLES: +42 MIN: 150A MCB														
43	C	VIDEO SERVICE	1	20	1000	2000	1000	1	20	CONTROL RM	N	44		
45	C	SECURITY	1	20	1000	2000	1000	1	20	CONTROL RM	N	46		
47	R	EWIG	1	20	1000	1800	800	1	20	HEAT TRACE	M	48		
49	R	EWIG	1	20	1000	1500	500	1	20	EXISTING LOAD	C	50		
51		SPARE	1	20		500	500	1	20	EXISTING LOAD	C	52		