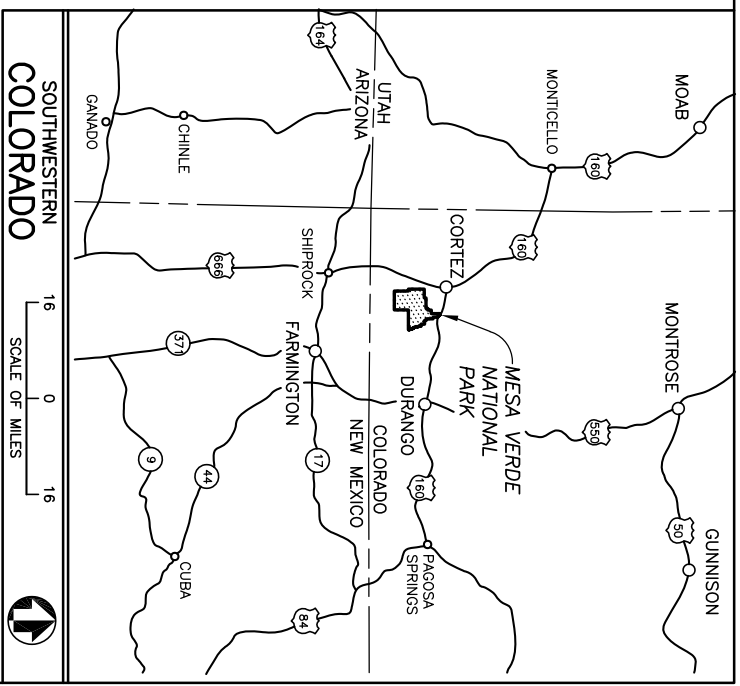
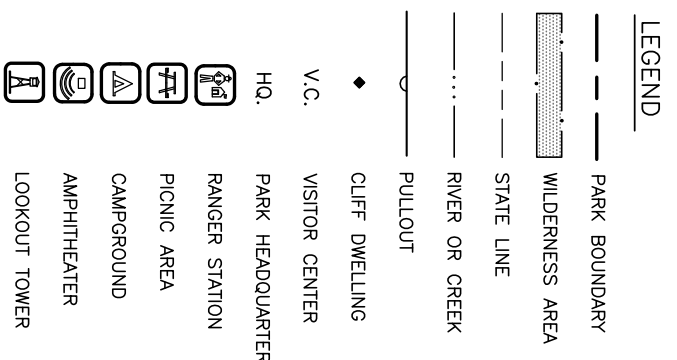


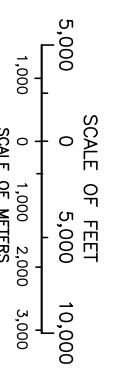
MESA VERDE NATIONAL PARK
WORLD HERITAGE SITE

BASIC DATA: USGS TOPO MAP 1967; 307/20,007A 7/77; PARK MINI FOLDER 1991; REVISED & REDRANN 5/95; UPDATED 11/98; SGS.



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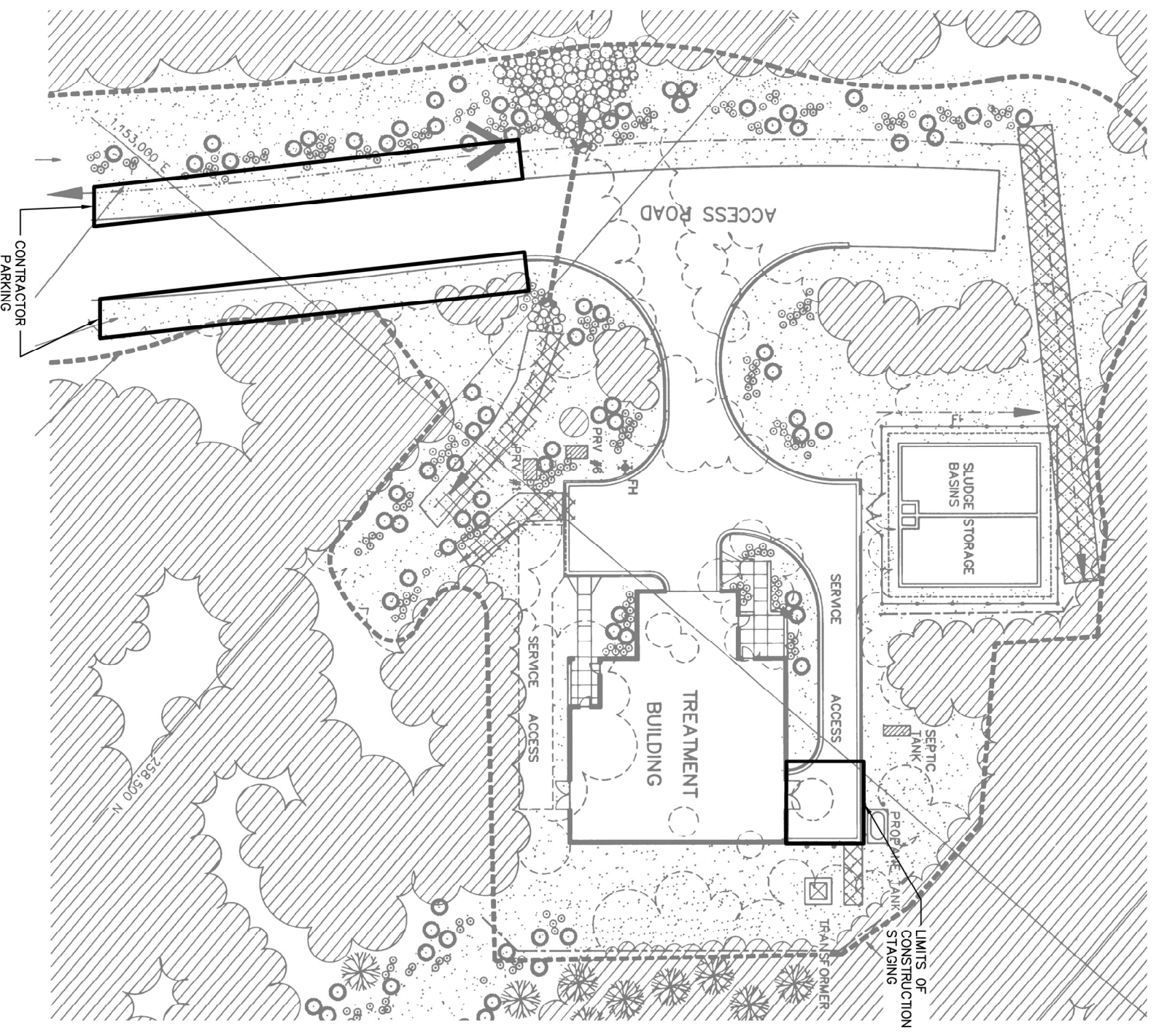
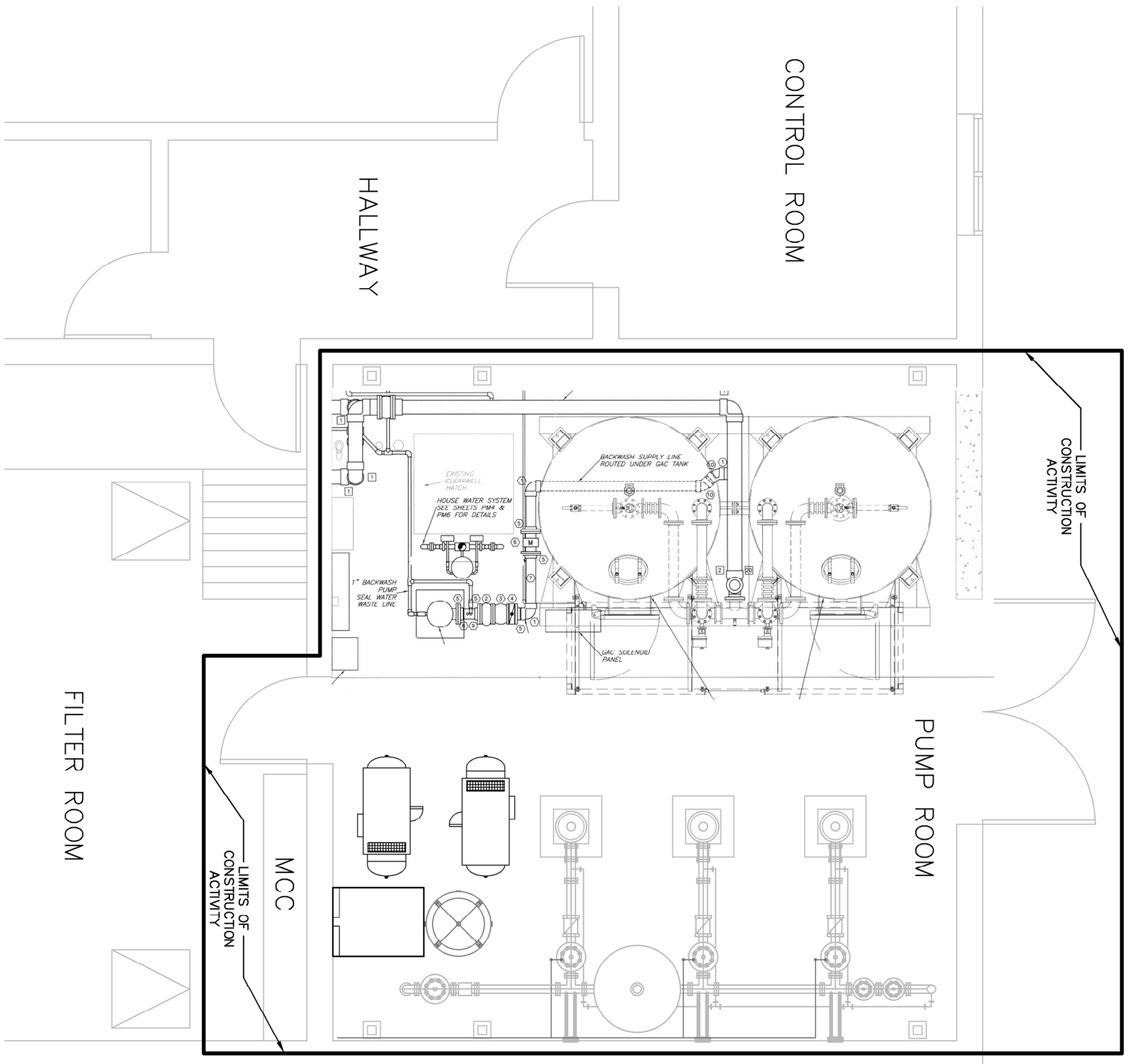
RECOMMENDED: ANTHONY BEESON
 Project Manager
 APPROVED: X
 Superintendent
 3/22
 Date
 X/22
 Date



CONSTRUCTION DRAWINGS
 UNITED STATES
 DEPARTMENT OF THE INTERIOR
 NATIONAL PARK SERVICE
 INTERMOUNTAIN REGION

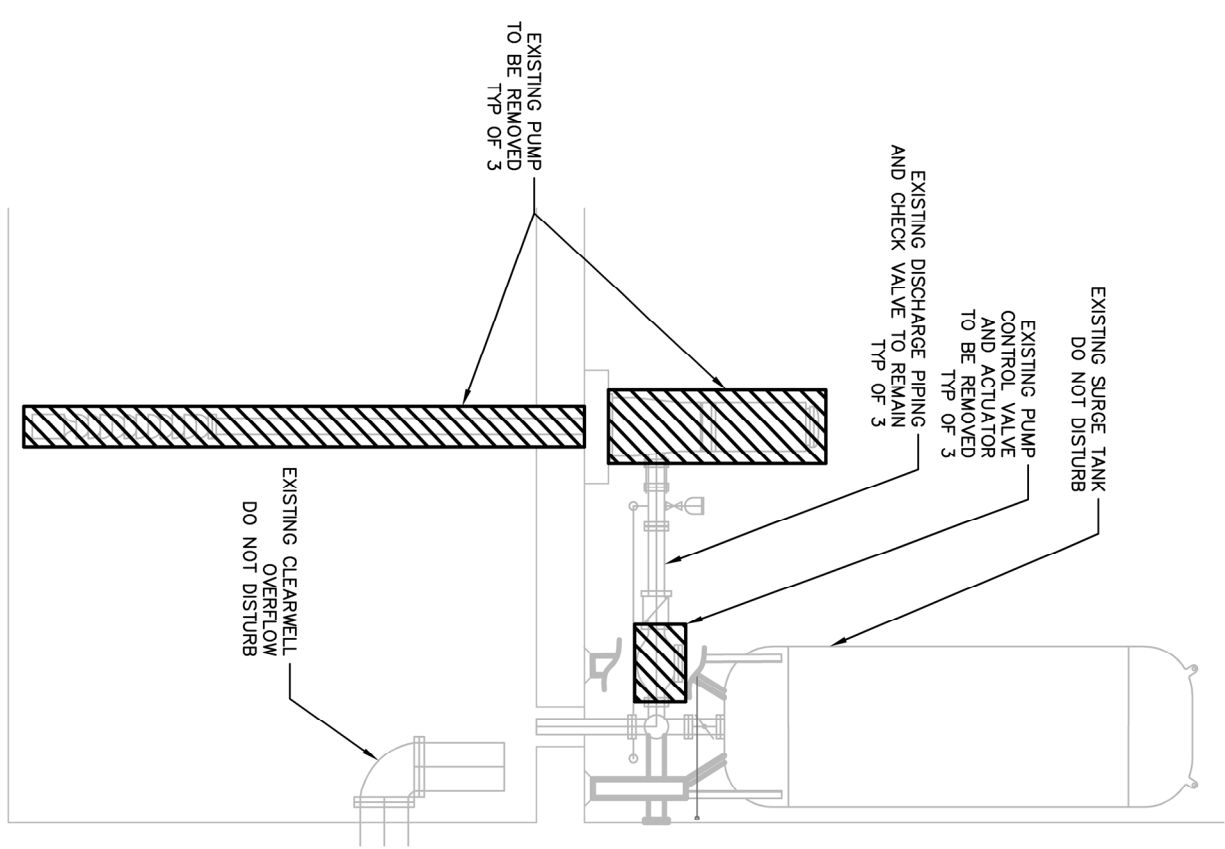
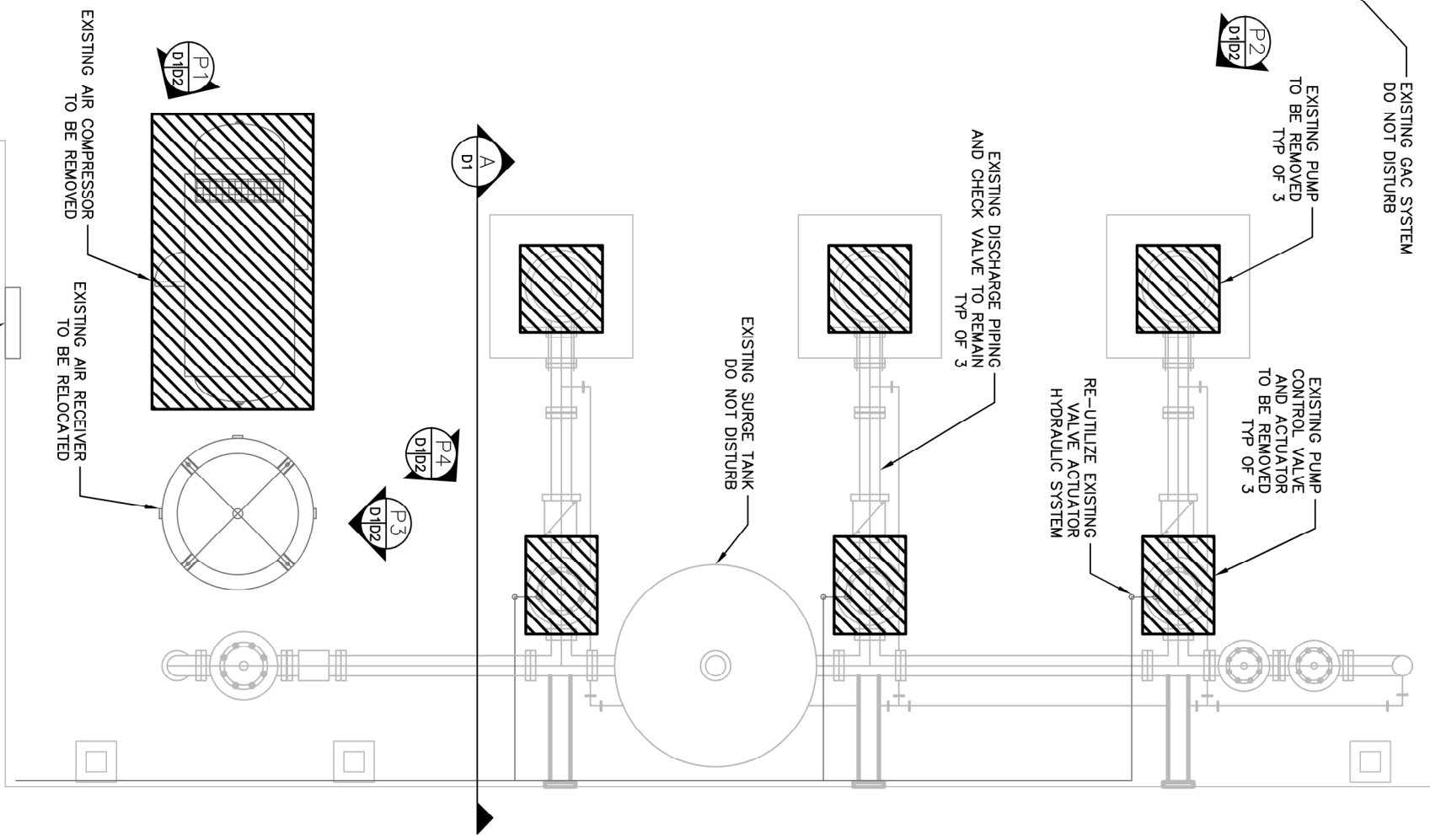
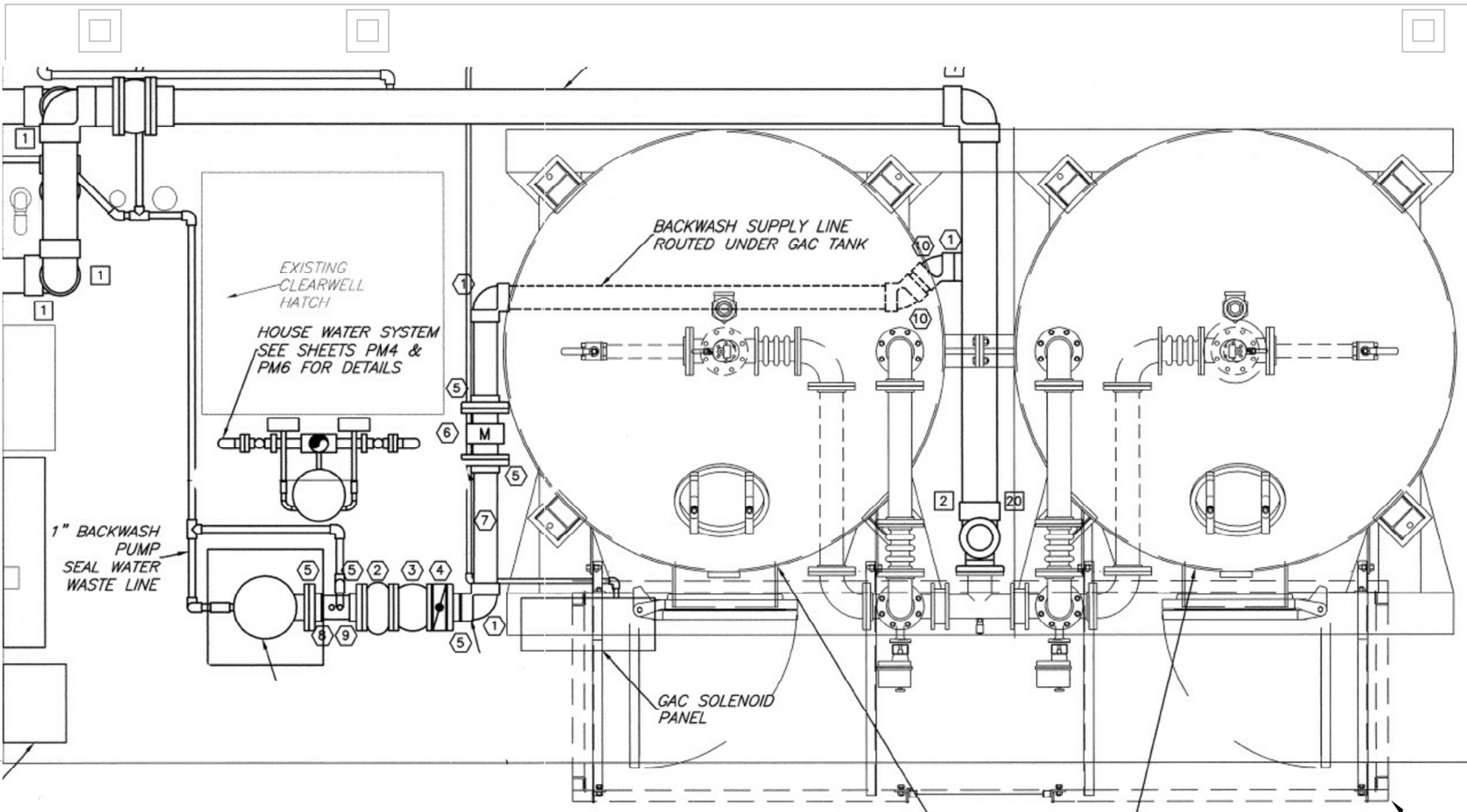
PUMP & COMPRESSOR REPLACEMENT
 TITLE OF PROJECT
 LOCATION WITHIN PARK
 NAME OF PARK
 MESA VERDE NATIONAL PARK
 REGION
 INTERMOUNTAIN
 COUNTY
 MONTEZUMA
 STATE
 COLORADO

DRAWING NO.
307
177638
 PWS/PKG NO.
 305703/259082
 SHEET
1 OF **9**



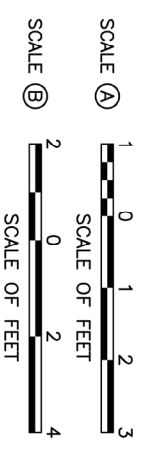
DESIGNED: A. BEESON @AEB	SUB SHEET NO. G1	TITLE OF SHEET CONSTRUCTION LIMITS	DRAWING NO. 307
TECH. REVIEW: M. HIRSCHBECK	DATE: 03/2022	WATER TREATMENT PLANT MESA VERDE NATIONAL PARK	PMIS/PKG NO. 305703/259082
		SHEET 2 OF 9	





PUMP ROOM DEMO PLAN

SCALE (A)

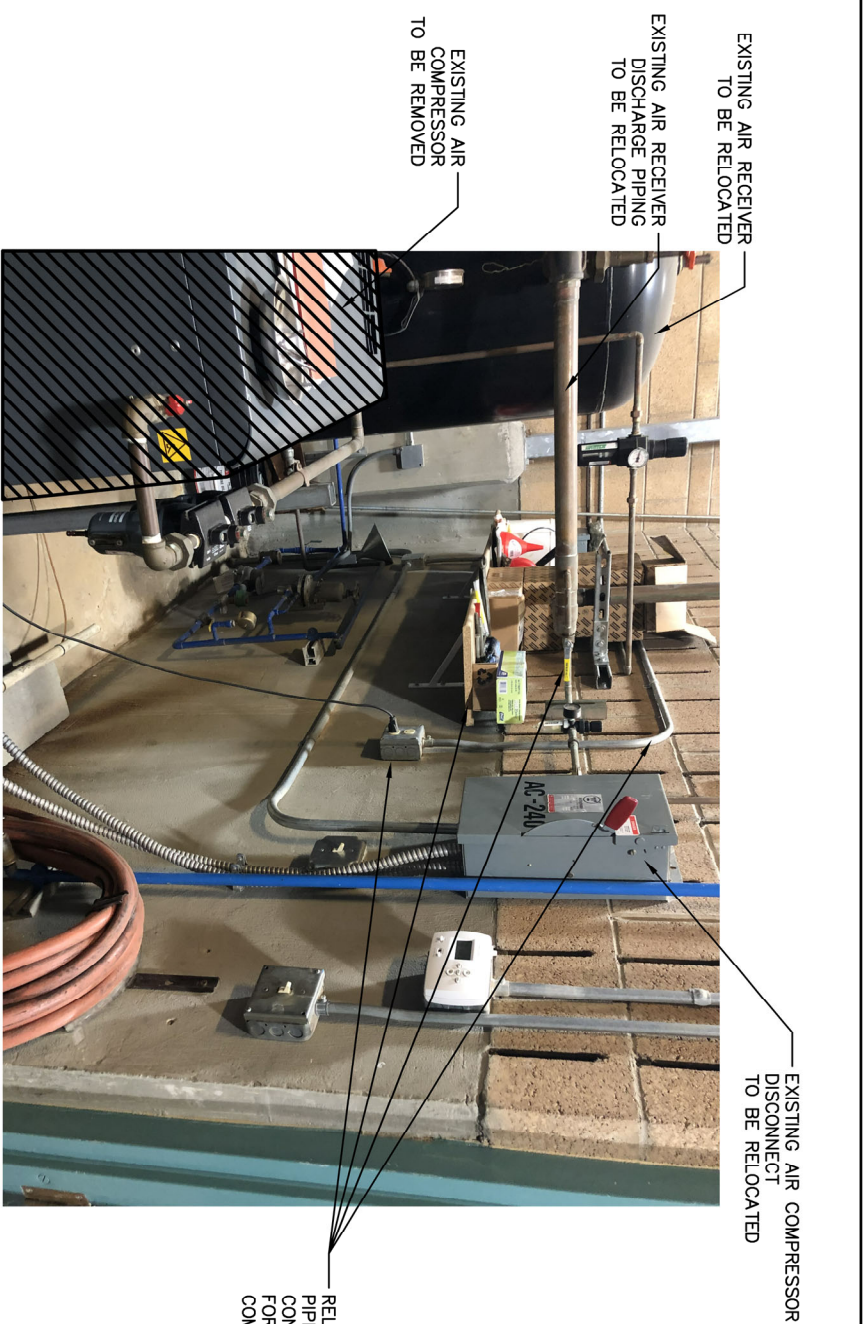


PUMP ROOM DEMO SECTION

SCALE (B)



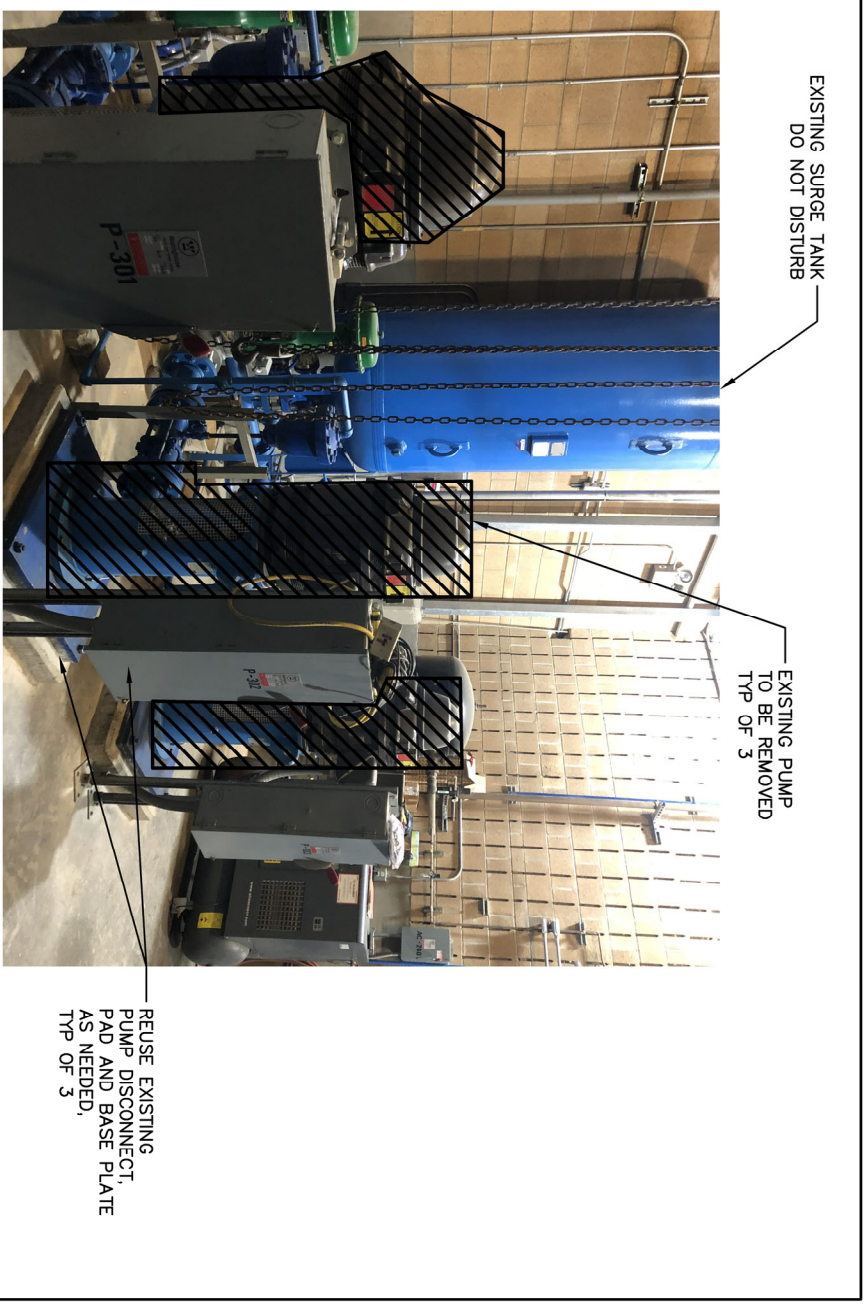
DESIGNED: A. BEISSON	SUB SHEET NO. D1	TITLE OF SHEET DEMOLITION PLAN & SECTION	DRAWING NO. 307
DATE: 03/2022		WATER TREATMENT PLANT MESA VERDE NATIONAL PARK	PMIS/PKG NO. 177638
TECH. REVIEW: M. HIRSCHBECK			SHEET 3 OF 9



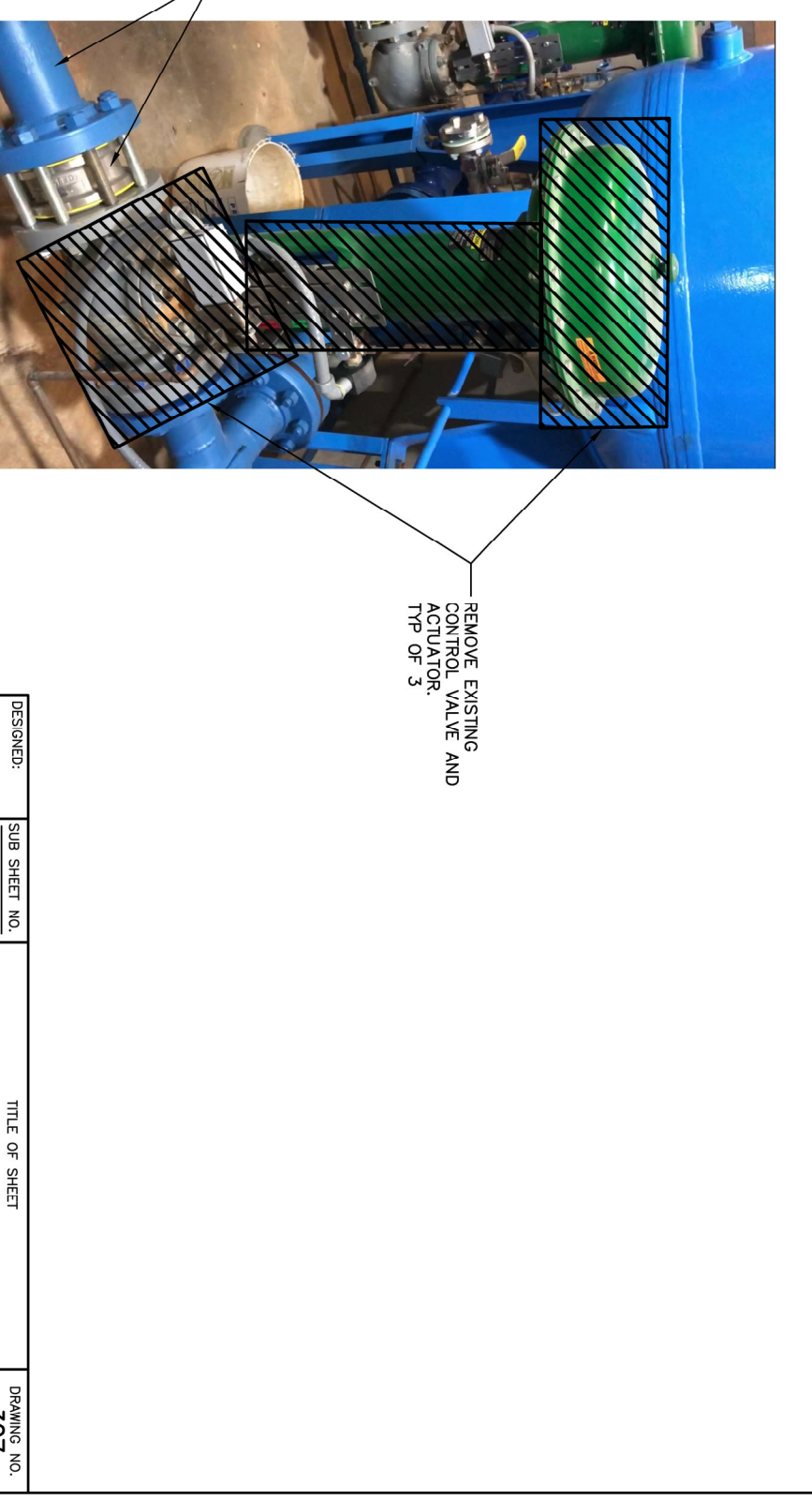
P1 PHOTO 1 - SOUTH WALL RELOCATIONS
d1p2



P3 PHOTO 3 - COMPRESSOR & RECEIVER
d1p2

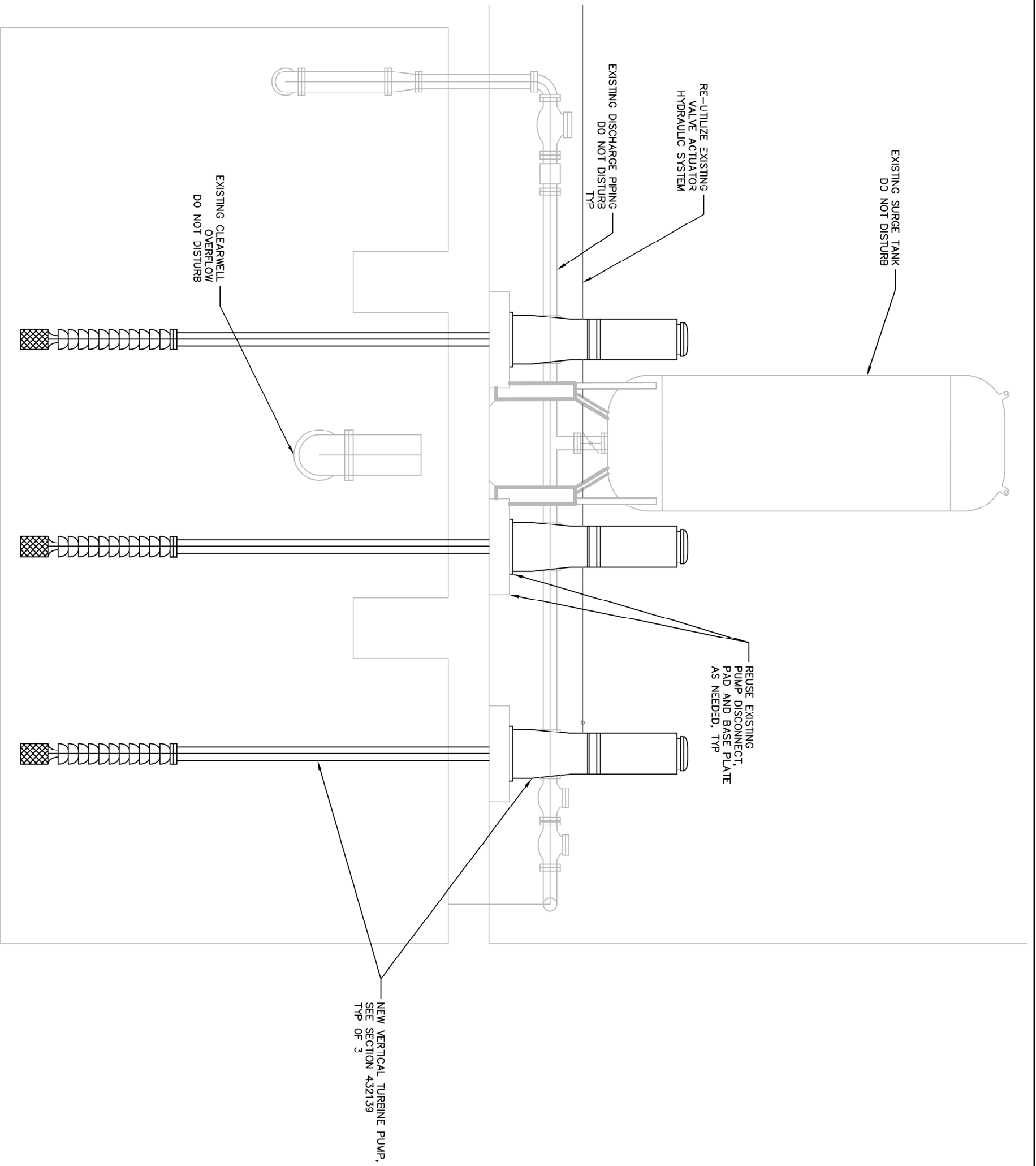


P2 PHOTO 2 - PUMP DEMO
d1p2



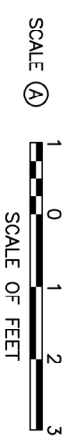
P4 PHOTO 4 - VALVE & ACTUATOR DEMO
d1p2

DESIGNED: A. BEESON @AEB	SUB SHEET NO. D2	TITLE OF SHEET DEMOLITION PHOTOS	DRAWING NO. 177638
TECH. REVIEW: M. HIRSCHBECK		WATER TREATMENT PLANT MESA VERDE NATIONAL PARK	PMS/PKG NO. 305703/259082
DATE: 03/2022			SHEET 4 OF 9



PUMP ROOM SECTION 2

SCALE (A)



DESIGNED: A. BEESON @AEB	SUB SHEET NO. P2	TITLE OF SHEET IMPROVEMENTS SECTIONS	DRAWING NO. 307
TECH. REVIEW: M. HIRSCHBECK		WATER TREATMENT PLANT MESA VERDE NATIONAL PARK	FMS/PKG NO. 305703/259082
DATE: 03/2022			SHEET 6 OF 9

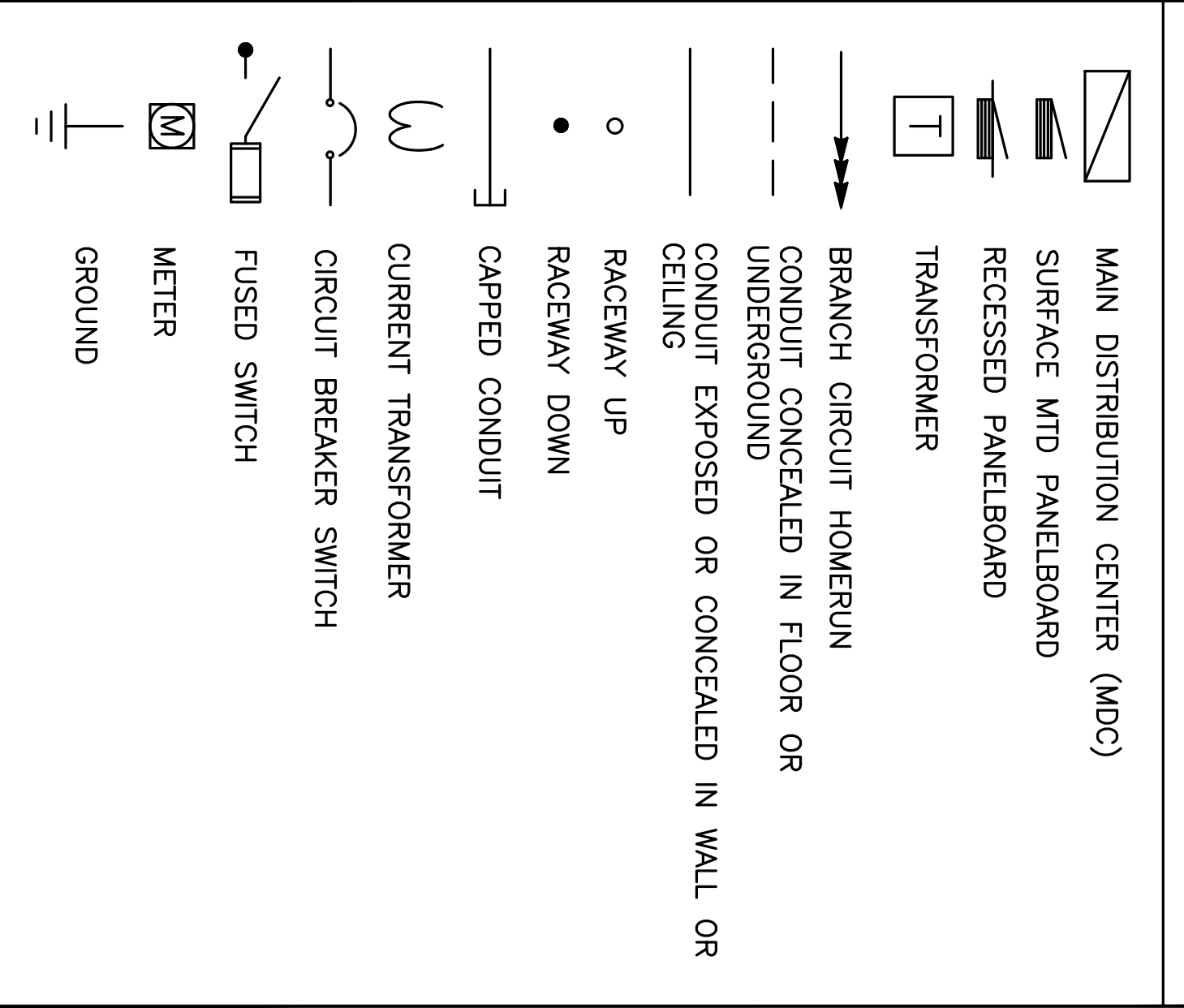
ELECTRICAL GENERAL NOTES

1. THE CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIAL NECESSARY FOR A COMPLETE AND FUNCTIONING ELECTRICAL SYSTEM.
2. MATERIALS AND INSTALLATION SHALL COMPLY WITH CODES, LAWS AND ORDINANCES OF FEDERAL, STATE AND LOCAL GOVERNING BODIES HAVING JURISDICTION. CODES FOR THIS SCOPE OF WORK INCLUDE THE 2020 NEC
3. MATERIALS AND EQUIPMENT SHALL BE LISTED AND/OR LABELED BY U.L., ETL, CSA OR ANOTHER RECOGNIZED TESTING LAB.
4. ALL WORK REQUIRED FOR THE INSTALLATION AS SHOWN ON DRAWINGS INCLUDING LABOR, EQUIPMENT AND MATERIALS SHALL BE IN STRICT COMPLIANCE WITH THE BUILDING STANDARDS, EXCEPT AS NOTED OTHERWISE.
5. THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, GOVERNMENTAL FEES, TAXES AND LICENSES NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE ELECTRICAL WORK.
6. THE CONTRACTOR SHALL PREPARE AND SUBMIT TO GOVERNMENTAL AGENCIES AND UTILITY COMPANIES SHOP DRAWINGS, WHICH ARE REQUIRED BY THESE AGENCIES, FOR THEIR APPROVAL.
7. FOR ALL JOBS THAT INCLUDE DEMOLITION WORK BY THE ELECTRICAL CONTRACTOR, DURING AND AFTER DEMOLITION, EC SHALL MAINTAIN CIRCUIT CONTINUITY TO ALL EXISTING DEVICES THAT ARE TO REMAIN. EC SHALL REMOVE, RELOCATE, AND/OR REWORK ANY CONDUIT AND WIRING TO FACILITATE THE NEW CONSTRUCTION SCOPE OF WORK.
8. ALL MATERIALS, AND EQUIPMENT SHALL BE ERECTED, INSTALLED, CONNECTED, CLEANED, ADJUSTED, TESTED, CONDITIONED, AND PLACED IN SERVICE IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS AND RECOMMENDATIONS.
9. ALL CUTTING, DRILLING AND PATCHING OF MASONRY, STEEL OR IRON WORK BELONGING TO THE BUILDING MUST BE DONE BY THIS CONTRACTOR IN ORDER THAT HIS WORK MAY BE PROPERLY INSTALLED, BUT UNDER NO CONDITIONS MAY STRUCTURAL MEMBERS BE CUT, EXCEPT AT THE DIRECTION OF THE CONTRACTING OFFICER.
10. ALL MATERIAL, EQUIPMENT, WIRING DEVICES, ETC. SHALL BE NEW, UNLESS SPECIFICALLY INDICATED AS EXISTING TO BE REUSED.
11. DO NOT SHARE NEUTRAL CONDUCTORS FOR MULTIWIRE BRANCH CIRCUITS. WHERE THE E.C. PROPOSES THE USE OF SHARED NEUTRAL CONDUCTORS OR SHARED NEUTRAL CONDUCTORS ARE REQUIRED (SUCH AS POWERED FURNITURE SYSTEMS), HANDLE TIES SHALL BE PROVIDED ON THE CIRCUIT BREAKERS, WITH SHARED NEUTRALS, SUCH THAT IT WILL SIMULTANEOUSLY DISCONNECT ALL UNGROUNDED CONDUCTORS. ALL HANDLE TIES ARE REQUIRED TO BE INDICATED ON THE PANELBOARD SHOP DRAWINGS.
12. SHOULD ACTUAL FIELD CONDITIONS REQUIRE INDICATED CIRCUIT DESIGNATIONS TO VARY, INDICATE THE CIRCUIT NUMBER USED ON THE "AS-BUILT" DRAWINGS.
22. ALL NEW CIRCUITS SHALL HAVE A GROUND WIRE INSTALLED.
23. PER NPS REQUIREMENTS, ALL WIRING MUST BE INSTALLED IN CONDUIT (MINIMUM SIZE 3/4").
24. ALL EXPOSED CONDUIT SHALL BE CONCEALED TO THE GREATEST EXTENT POSSIBLE AND SHALL BE INSTALLED PARALLEL AND CLOSE TO STRUCTURAL MEMBERS. GENERAL CONTRACTOR SHALL PAINT CONDUIT TO MATCH ADJACENT FINISHES.
25. ROUGH-IN FOR MECHANICAL EQUIPMENT SHALL ONLY OCCUR AFTER MECHANICAL EQUIPMENT SUBMITTALS ARE THOROUGHLY REVIEWED FOR CHANGES. NOTIFY CONTRACTING OFFICER OF ANY DISCREPANCIES.
26. THE POWER AND CONTROL REQUIREMENTS FOR ALL EQUIPMENT CONNECTIONS SHALL BE CONFIRMED WITH APPROVED SHOP DRAWINGS PRIOR TO ELECTRICAL ROUGH-IN. FINAL POWER REQUIREMENTS, DIMENSIONED ROUGH-IN LOCATIONS, LOW VOLTAGE SYSTEM CONNECTIONS, ETC. SHALL BE CONFIRMED AND MODIFIED AS REQUIRED.
27. ALL EXISTING ELECTRICAL SERVICES NOT SPECIFICALLY INDICATED TO BE REMOVED OR ALTERED SHALL REMAIN AS THEY PRESENTLY EXIST.
28. G.C. SHALL INCLUDE IN HIS COST THE REMOVAL OF ALL EXISTING ELECTRICAL DEVICES, CONDUITS, FIXTURES AND EQUIPMENT. TURN EQUIPMENT OVER TO CONTRACTING OFFICER AS INDICATED OR RECYCLE/DISCARD ALL EQUIPMENT AS REQUIRED. E.C. SHALL BE RESPONSIBLE FOR DISCONNECTING PRIMARY SERVICE AND TEMPORARY POWER.
29. ALL CIRCUIT BREAKERS IN NEW ELECTRICAL PANELS TO BE BOLT ON TYPE WITH TRIP INDICATOR.

ELECTRICAL DEMOLITION REQUIREMENTS

1. THE BASIS OF THESE DRAWINGS WERE SITE OBSERVATIONS, ORIGINAL BUILDING DRAWINGS AND VARIOUS OTHER SOURCES. EVERY ATTEMPT HAS BEEN MADE TO DOCUMENT THE ACTUAL CONDITIONS. HOWEVER, THE CONTRACTOR SHALL CAREFULLY EXAMINE THE CONTRACT DOCUMENTS AND THOROUGHLY BECOME FAMILIAR WITH THE BUILDING/NPS STANDARDS RELATING TO THE WORK. FAILURE TO DO SO WILL NOT RELIEVE THE CONTRACTOR OF THE OBLIGATIONS OF THE CONTRACT.
2. THE ELECTRICAL CONTRACTOR SHALL NOTIFY THE CONTRACTING OFFICER OF ANY MATERIALS OR APPARATUS BELIEVED TO BE INADEQUATE, UNSUITABLE IN VIOLATION OF LAWS, ORDINANCES, RULES OR REGULATIONS OF AUTHORITIES HAVING JURISDICTION.
3. THE ELECTRICAL CONTRACTOR SHALL INCLUDE IN HIS COST THE REMOVAL OF EXISTING ELECTRICAL DEVICES, CONDUITS, FIXTURES AND EQUIPMENT AS REQUIRED, DISCARD ALL EQUIPMENT AS REQUIRED, UNLESS NOTED OTHERWISE. EC SHALL TAKE EXTRA CARE WHEN REMOVING MATERIAL TO MINIMIZE DAMAGE TO EXISTING FINISHES AND FEATURES TO REMAIN. REFER TO ARCHITECTURAL DRAWINGS AND DIVISION 1 SPECS FOR MORE INFORMATION.
4. EXISTING DEVICES NOT NOTED AS EXISTING (E) OR INDICATED ON PLANS SHALL REMAIN, AS THEY PRESENTLY EXIST. FOR DEMOLISHED DEVICES IN WALLS WHICH ARE TO REMAIN, THE ELECTRICAL CONTRACTOR SHALL INSTALL A BLANK FACE PLATE ON THE BACKBOX. FOR DEMOLISHED DEVICES INSTALLED IN THE FLOOR, THE ELECTRICAL CONTRACTOR SHALL CUT THE FLOOR BOX FLUSH WITH THE FLOOR AND FILL WITH CONCRETE; COORDINATE WITH THE GENERAL CONTRACTOR.
5. THE DEMOLITION OF SOME DEVICES MAY INTERRUPT POWER TO DEVICES DOWN STREAM. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR REMARKING THESE CIRCUITS TO MAINTAIN POWER TO THE DOWN STREAM DEVICES WHICH WILL REMAIN.
6. ALL UNENERGIZED/DEMOLISHED CIRCUITRY SHALL HAVE THE CONDUITS REMOVED FROM THE CONDUIT AND THE CONDUIT SHALL BE MARKED "EMPTY" WITH INDELEIBLE MARKER.

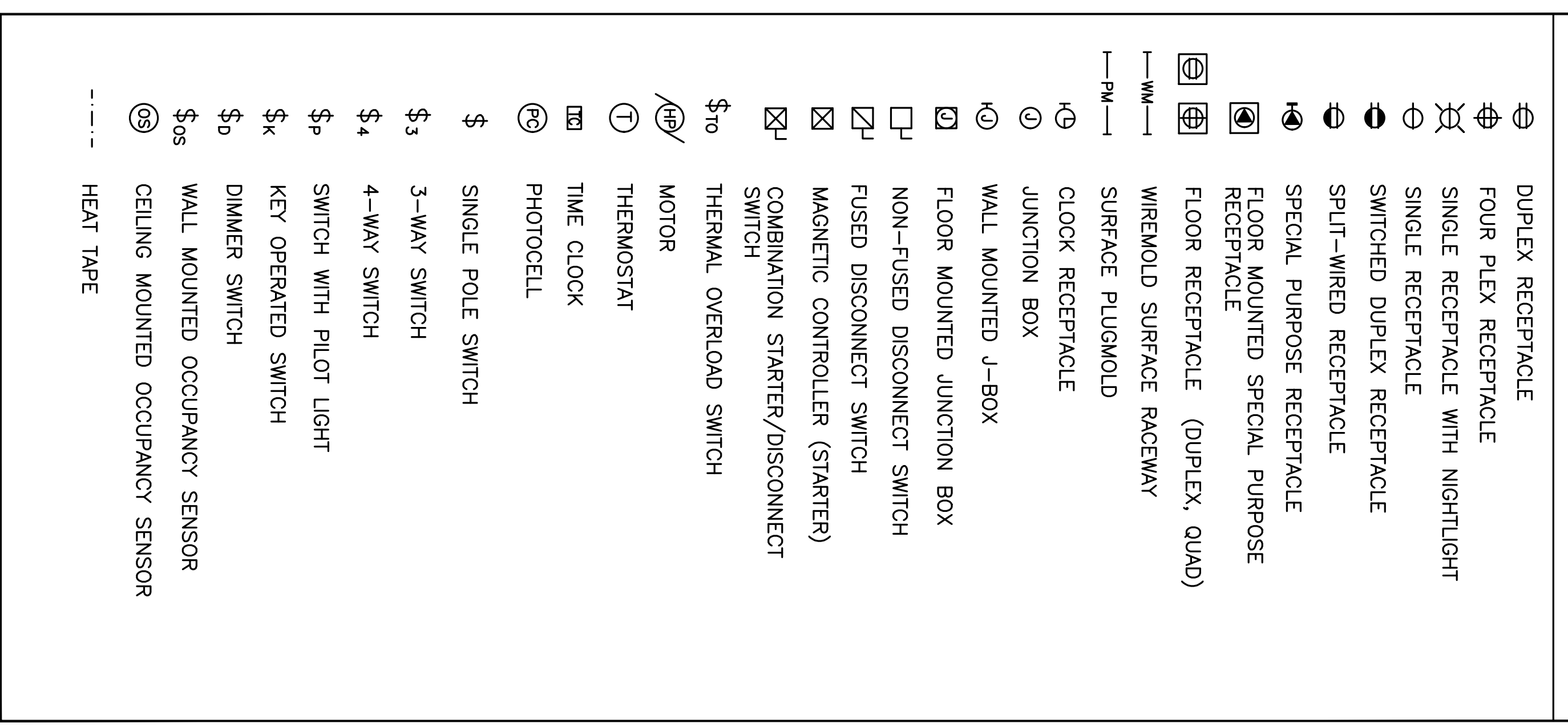
DISTRIBUTION AND RACEWAY



ABBREVIATIONS AND SYMBOLS

EC	ELECTRICAL CONTRACTOR
CCT	CIRCUIT
N	NEUTRAL
G	GROUND
IG	ISOLATED GROUND
GFI	GROUND FAULT INTERRUPTOR
WP	WEATHER PROOF
AC	ABOVE COUNTER – VERIFY HEIGHT
AFF	ABOVE FINISH FLOOR
UN	UNLESS OTHERWISE NOTED
EM	EMERGENCY
CP	CHILDPROOF
EMC	ELECTRICAL WATER COOLER
EF	EXHAUST FAN
(E)	EXISTING TO REMAIN
(EL)	EXISTING LOCATION TO REMAIN
(ER)	EXISTING TO BE RELOCATED
(R)	EXISTING TO BE REMOVED
(RL)	RELOCATED LOCATION
(N)	NEW DEVICE
CT	CURRENT TRANSFORMER
IDF	INTERMEDIATE DISTRIBUTION FACILITY
MDF	MAIN DISTRIBUTION FACILITY
TTB	TELEPHONE TERMINAL BOARD
(1)	POOL EQUIPMENT SCHEDULE NOTATION
(1)	KITCHEN EQUIPMENT SCHEDULE NOTATION
(1)	MECHANICAL EQUIPMENT SCHEDULE NOTATION
(1)	DETAIL NOTE
(1)	DELTA REVISION NOTE
(1)	ELECTRICAL WIRE SIZE

WIRING DEVICES

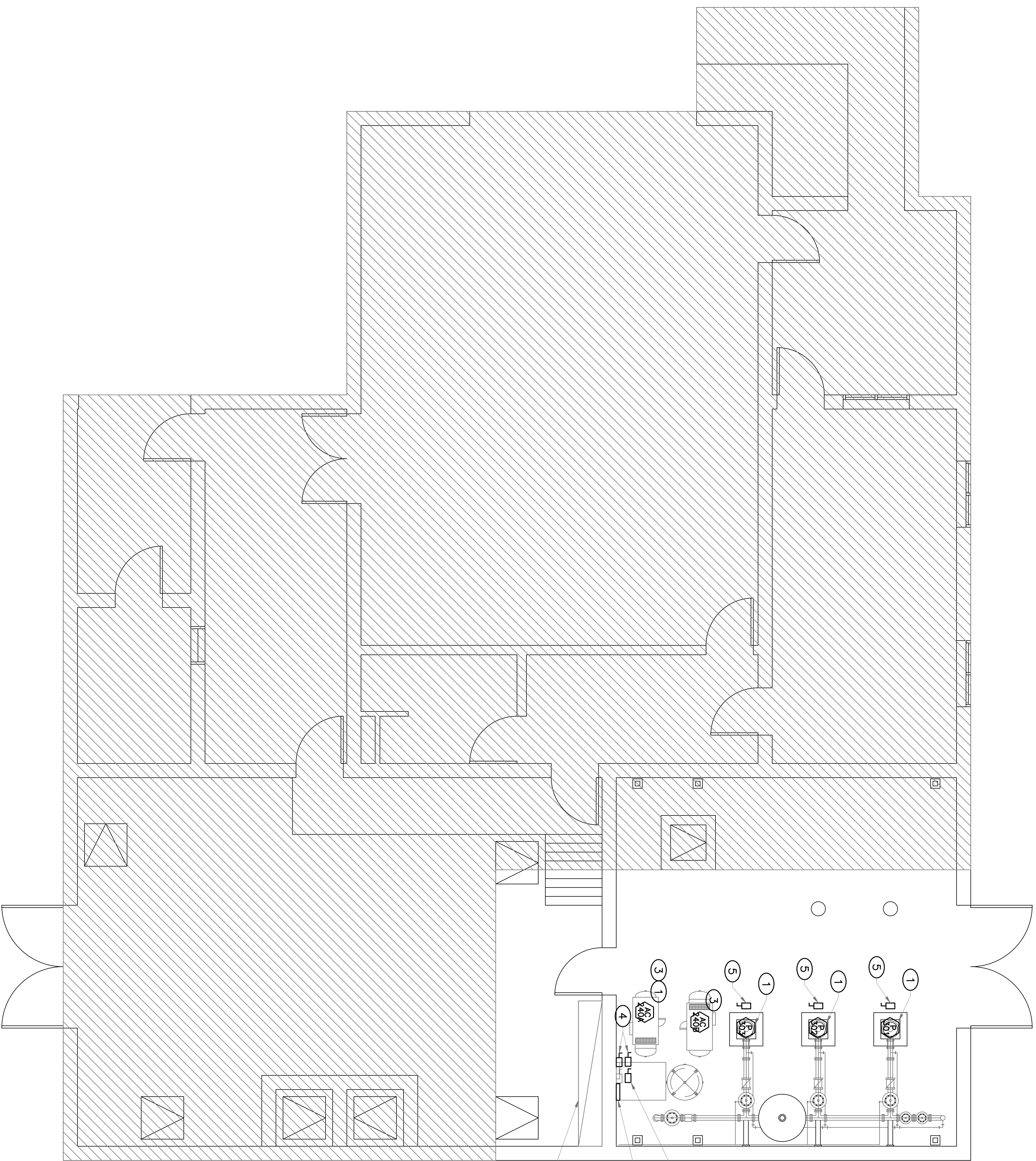


DESIGNED: AE DESIGN	SUB SHEET NO. 307	DRAWING NO. 177638
ZTC		PMS/PKG NO. 305703/259082
TECH. REVIEW: KMD		SHEET 7 OF 9
DATE: 03/29/2021		

E0.0

TITLE OF SHEET
ELECTRICAL COVER SHEET

WATER TREATMENT PLANT
MESA VERDE NATIONAL PARK



GENERAL NOTES

1. ALL CONDUITS SHALL BE SURFACE MOUNTED INSIDE THE BUILDING.

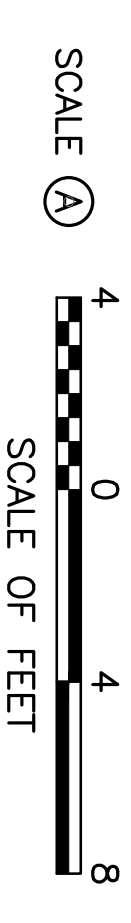
DETAIL NOTES

1. EXISTING EQUIPMENT TO BE REMOVED AND REPLACED WITH NEW.
2. INSTALL NEW ALTERNATING AIR COMPRESSOR CONTROLLER EQUIVALENT TO COMPRESSED AIR SYSTEMS RECIPROCATING COMPRESSOR ALTERNATING CONTROL PANEL WITH (2) MOTOR CONTACTORS, SMART RELAY FOR ALTERNATING CONTROL, BUILT IN RUN-TIME TIMER, AND START DELAY TIMER. INTENT IS FOR CONTROLLER TO ALTERNATE USE OF AC-240A AND AC-24B.
3. ROUTE BRANCH CIRCUIT WIRING FOR AIR COMPRESSORS FROM 'MCC-1' TO THE ALTERNATING CONTROL PANEL THEN TO THE EQUIPMENT DISCONNECTS, SEE ONE-LINE DIAGRAM ON SHEET E2.0 FOR MORE INFORMATION.
4. DERIVE BRANCH CIRCUIT FOR AIR COMPRESSOR DRYER FROM A BRANCH CIRCUIT TAP ON THE AC COMPRESSOR CIRCUIT. INSTALL 20AMP DISCONNECT SURFACE MOUNTED ON WALL 48" AFF. COORDINATE INSTALLATION REQUIREMENTS WITH APPROVED SHOP DRAWINGS.
5. INSTALL NEW WATER PUMP SOFT START CONTROLLER ON EXISTING UNISTRUT FRAMING TO CONTROL NEW WATER PUMPS. EC SHALL PROVIDE SOFT START CONTROLLER WITH INTEGRAL OVERCURRENT PROTECTION IN NEMA 1 ENCLOSURE, EQUIVALENT TO EATON EQUIPMENT ENCLOSED S611 SOLID-STATE SOFT STARTER, #ECS98T2CAG-C1P7S3.

AIR COMPRESSOR (3) (4)
DISCONNECTS

ALTERNATING CONTROL (2) (3)
PANEL

(E) 'MCC'



1
E1.0
SCALE (A)

ELECTRICAL POWER PLAN

DESIGNED: AE DESIGN ZTC	SUB SHEET NO. E1.0
TECH. REVIEW: KMD	
DATE: 03/29/2021	

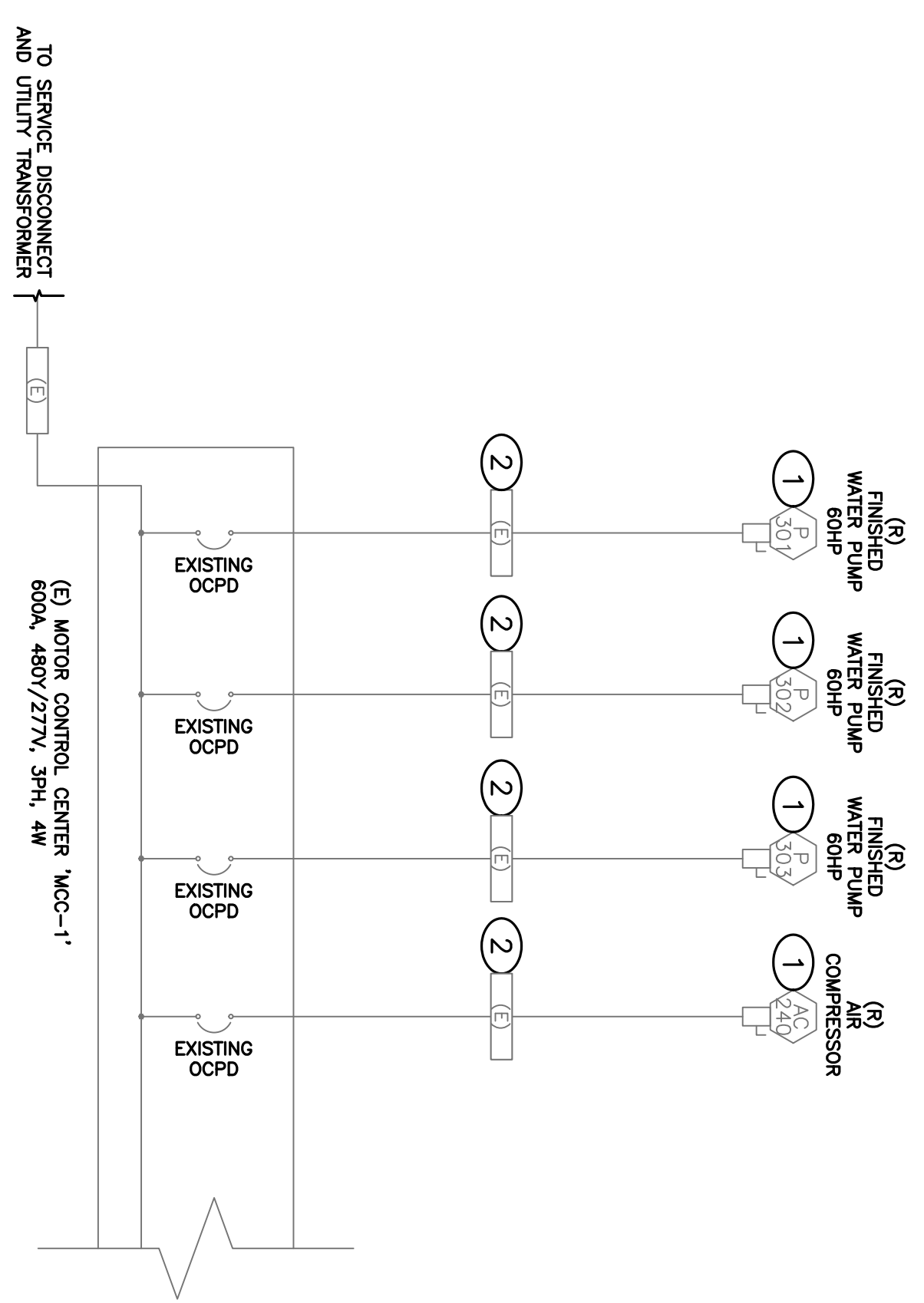
TITLE OF SHEET
ELECTRICAL PLANS

WATER TREATMENT PLANT
MESA VERDE NATIONAL PARK

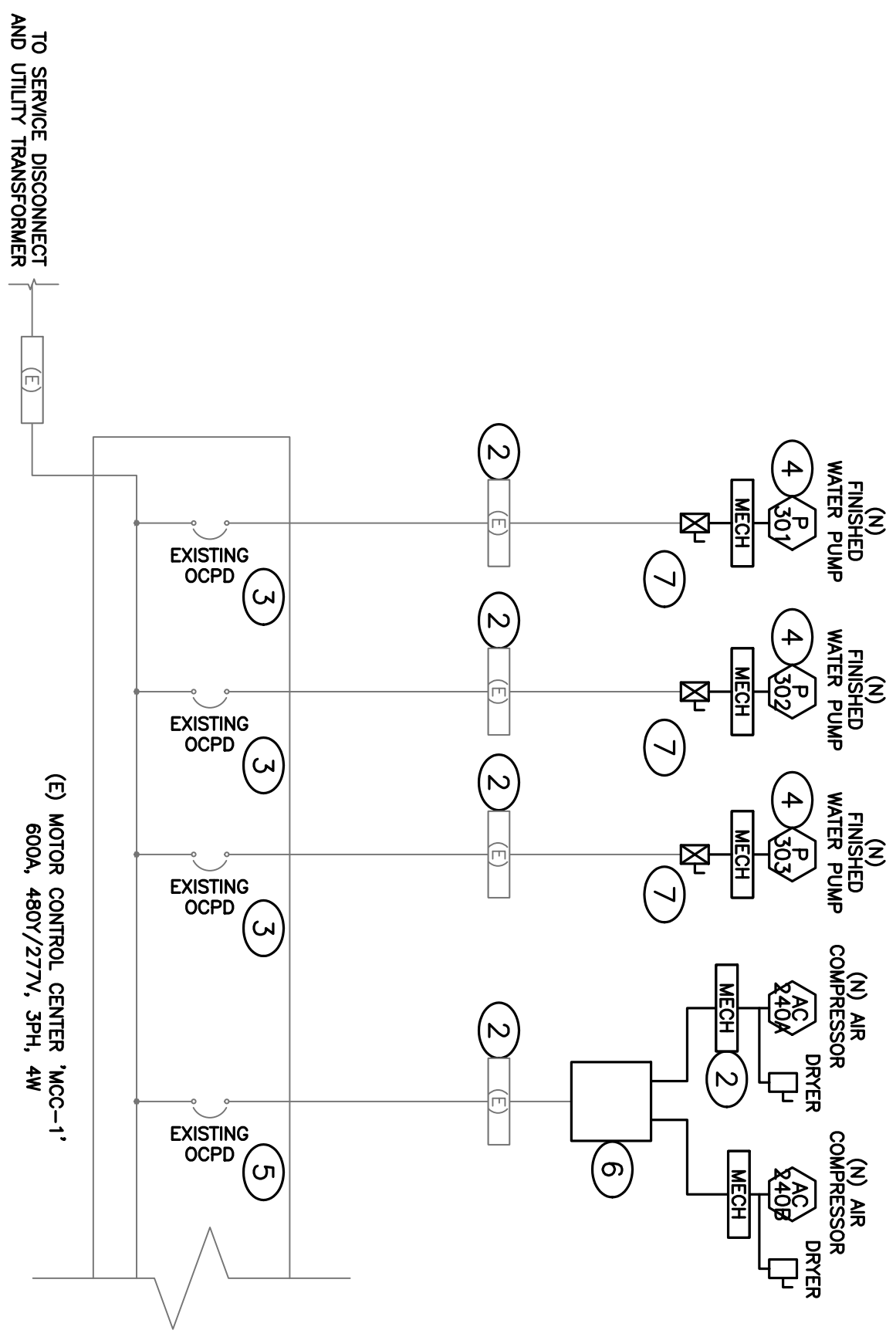
DRAWING NO. 307	SHEET 8 OF 9
PMS/PKG NO. 305703/259082	

KEY	MECHANICAL EQUIPMENT SCHEDULE	VOLTS	PH	LOAD	MCCP / WFS	BRANCH CIRCUIT (WIRE AND CONDUIT)	DISCONNECT	CIRCUIT NUMBER	NOTES
P	FINISHED WATER PUMP	480	3	60 HP	125A	3/1/0, 1#66, 1 1/2" C	200A/3P	MCC-1 (EXISTING)	1
P	FINISHED WATER PUMP	480	3	70 HP	125A	3/1/0, 1#66, 1 1/2" C	200A/3P	MCC-1 (EXISTING)	1
P	FINISHED WATER PUMP	480	3	60 HP	125A	3/1/0, 1#66, 1 1/2" C	200A/3P	MCC-1 (EXISTING)	1
P	FINISHED WATER PUMP	480	3	77 HP	125A	3/1/0, 1#66, 1 1/2" C	200A/3P	MCC-1 (EXISTING)	1
P	FINISHED WATER PUMP	480	3	77 HP	125A	3/1/0, 1#66, 1 1/2" C	200A/3P	MCC-1 (EXISTING)	1
AC	AIR COMPRESSOR A	480	3	4.8 FEA	20A	3/12, 1#126, 3/4" C	20A/3P	MCC-1 (EXISTING)	2
AC	AIR COMPRESSOR B	480	3	4.8 FEA	20A	3/12, 1#126, 3/4" C	20A/3P	MCC-1 (EXISTING)	2

GENERAL NOTES:
 A. ALL CONDUITORS ARE COPPER UNLESS OTHERWISE NOTED.
 B. PRIOR TO RIGUP-IN, COORDINATE ALL MECHANICAL EQUIPMENT POWER AND CONNECTION REQUIREMENTS WITH MECHANICAL CONTRACTOR'S FINAL SHOP DRAWINGS.
 C. PROVIDE ALL 120V CONTROL WIRING. REFER TO SPECIFICATIONS FOR FURTHER CONTROL WIRING CLARIFICATION.
 D. EXTERIOR DISCONNECT DEVICES SHALL BE PROVIDED AS PER THE NATIONAL ELECTRICAL CODE. THE MECHANICAL CONTRACTOR SHALL PROVIDE THE SIZE OF THE DISCONNECT TO BE BASED UPON THE SIZE OF MOTOR HORSEPOWER INDICATED TO EACH NEW AIR COMPRESSOR.
SPECIFIC NOTES: P-302, P-303 TO REUSE/SHARE EXISTING CIRCUIT BREAKER IN MCC-1. (LOADS ARE NONCONCURRENT). EXISTING CONTROLLERS SERVING DEMOLISHED WATER PUMPS SHALL BE INTERCEPTED AND REUSED TO FEED NEW WATER PUMP. 2. AC-2044 AND AC-2048 TO REUSE/SHARE EXISTING CIRCUIT BREAKER IN MCC-1. (LOADS ARE NONCONCURRENT). EXISTING CONDUITORS SERVING DEMOLISHED AIR COMPRESSOR SHALL BE INTERCEPTED AND REUSED TO FEED NEW ALTERNATING TO EACH NEW AIR COMPRESSOR.



1 DEMO ELECTRICAL ONE LINE DIAGRAM
NOT TO SCALE



2 ELECTRICAL ONE LINE DIAGRAM
NOT TO SCALE

GENERAL NOTES

- EQUIPMENT SHOWN IN LIGHT PEN WEIGHT IS EXISTING TO REMAIN, ALL EQUIPMENT SHOWN IN HEAVY PEN WEIGHT IS NEW.
- EC SHALL FIELD COORDINATE ALL CONTROL WIRING TYPES AND REQUIREMENTS WITH NEW EQUIPMENT.

DETAIL NOTES

- EXISTING EQUIPMENT AND DISCONNECT TO BE REMOVED AND REPLACED WITH NEW.
- EXISTING ELECTRICAL CONDUIT AND CONDUCTORS TO REMAIN.
- EC TO VERIFY EXISTING OCPD AMPERAGE RATING IS GREATER THAN 100AMPS AND DOES NOT EXCEED 200AMPS PER NEC 430.52. IN THE EVENT THE CONDITIONS ARE NOT MET, EC TO REPLACE OVERCURRENT DEVICE WITH NEW 125A/3P CIRCUIT BREAKER OF SAME MANUFACTURER AND AIC RATING.
- EC TO RECONNECT EXISTING BRANCH CIRCUIT CONDUCTORS TO NEW EQUIPMENT DISCONNECT AND EQUIPMENT, MAINTAIN CONTINUITY ALONG BRANCH CIRCUIT.
- EC TO VERIFY EXISTING OVERCURRENT PROTECTION DEVICE (OCPD) RATING DOES NOT EXCEED 20AMPS.
- INTERCEPT AND SPLICE EXISTING BRANCH CIRCUIT WIRING SERVING DEMOLISHED AIR COMPRESSOR WITH NEW ALTERNATING AIR COMPRESSOR CONTROLLER. EXTEND BRANCH CIRCUIT WIRING TO EACH AIR COMPRESSOR. REFER TO MECHANICAL EQUIPMENT SCHEDULE FOR MORE INFORMATION.
- INTERCEPT AND SPLICE EXISTING BRANCH CIRCUIT WIRING SERVING DEMOLISHED WATER PUMP WITH NEW WATER PUMP SOFT START CONTROLLER. EXTEND BRANCH CIRCUIT WIRING FROM SOFT START CONTROLLER TO NEW WATER PUMP. REFER TO SHEET E1.0 AND MECHANICAL EQUIPMENT SCHEDULE FOR MORE INFORMATION.

DESIGNED:	AE DESIGN	SUB SHEET NO.	E2.0	TITLE OF SHEET	ELECTRICAL ONE LINE DIAGRAM	DRAWING NO.	307
TECH. REVIEW:	ZZC					PMS/PKG NO.	177638
DATE:	03/29/2021					SHEET	9 OF 9

WATER TREATMENT PLANT
MESA VERDE NATIONAL PARK