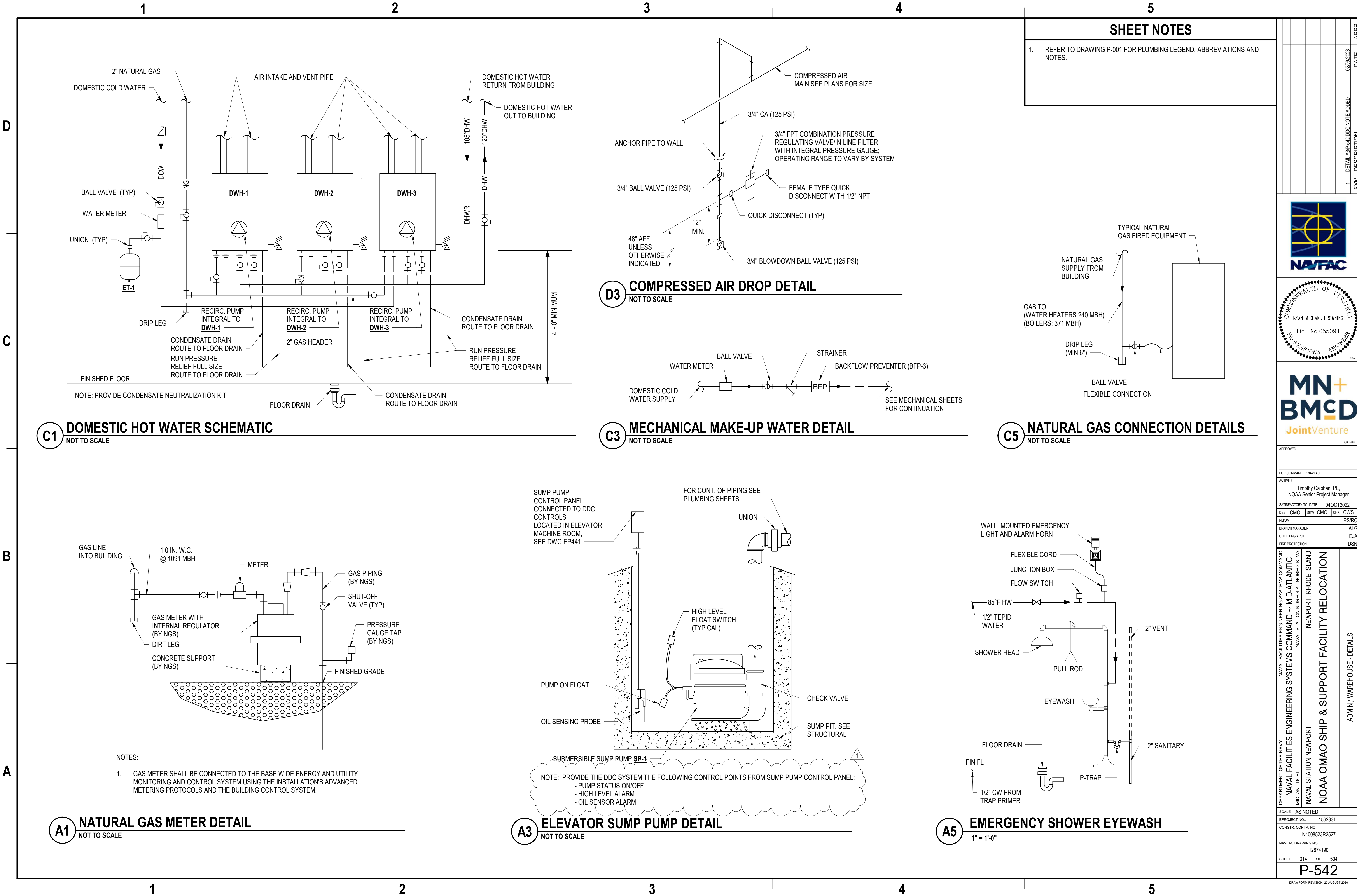


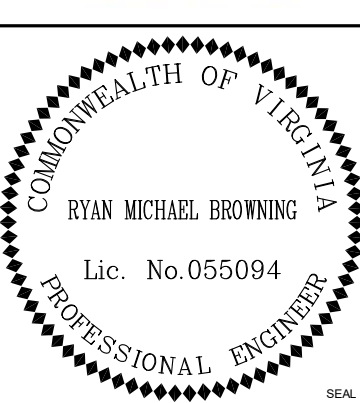
1	2	3	4	5	
PLUMBING LEGEND	GENERAL PROJECT SYMBOLS	PLUMBING ABBREVIATIONS	GENERAL PLUMBING NOTES		
<div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></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SHEET NOTES

1. REFER TO DRAWING P-001 FOR PLUMBING LEGEND, ABBREVIATIONS AND NOTES.

DATE	APPR
02/08/2023	
SYM	DESCRIPTION
1	DETAIL A3B-6/2 DDC NOTE ADDED



APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

Timothy Calohan, PE,
NOAA Senior Project Manager

SATISFACTORY TO DATE 04OCT2022

DES CMO DRW CMO CHK CWS

PMOM RS/RC

BRANCH MANAGER ALG

CHIEF ENGINEER EJA

FIRE PROTECTION DSN

NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND

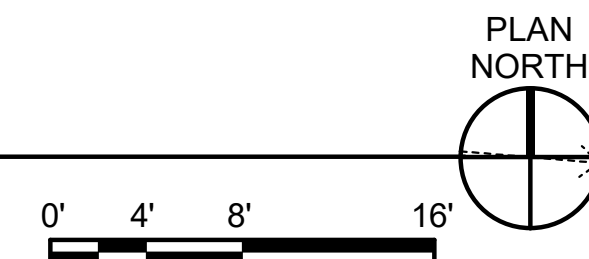
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND - MID-ATLANTIC

NAVAL STATION NORFOLK - NORFOLK, VA

NAVAL STATION NEWPORT

NOAA OMAO SHIP & SUPPORT FACILITY RELOCATION

ADMIN / WAREHOUSE - DETAILS

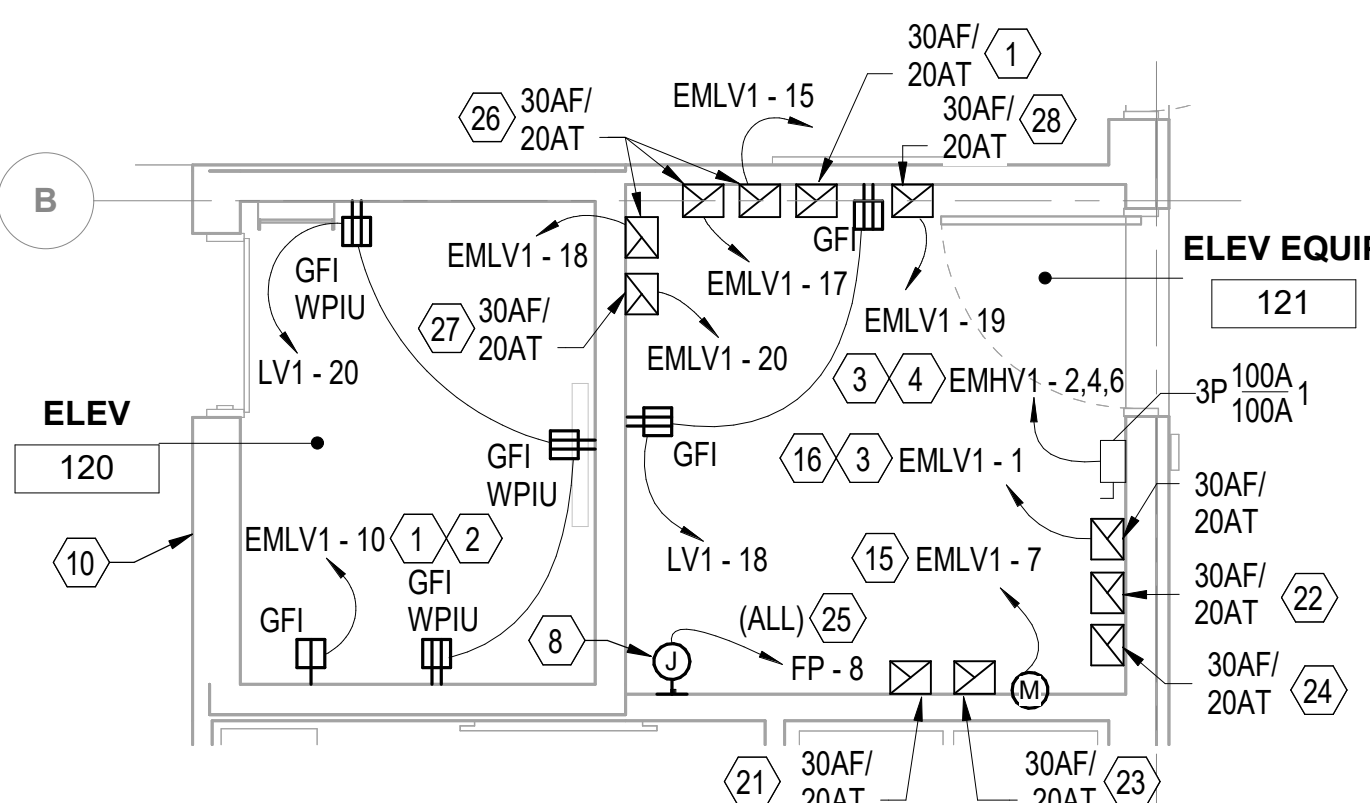


SCALE: AS NOTED
PROJECT NO.: 1562331
CONSTR. CONTR. NO.
N4008523R2527
NAVFAC DRAWING NO.
12874272
SHEET 396 OF 504
EP141
DRAWFORM REVISION: 25 AUGUST 2020

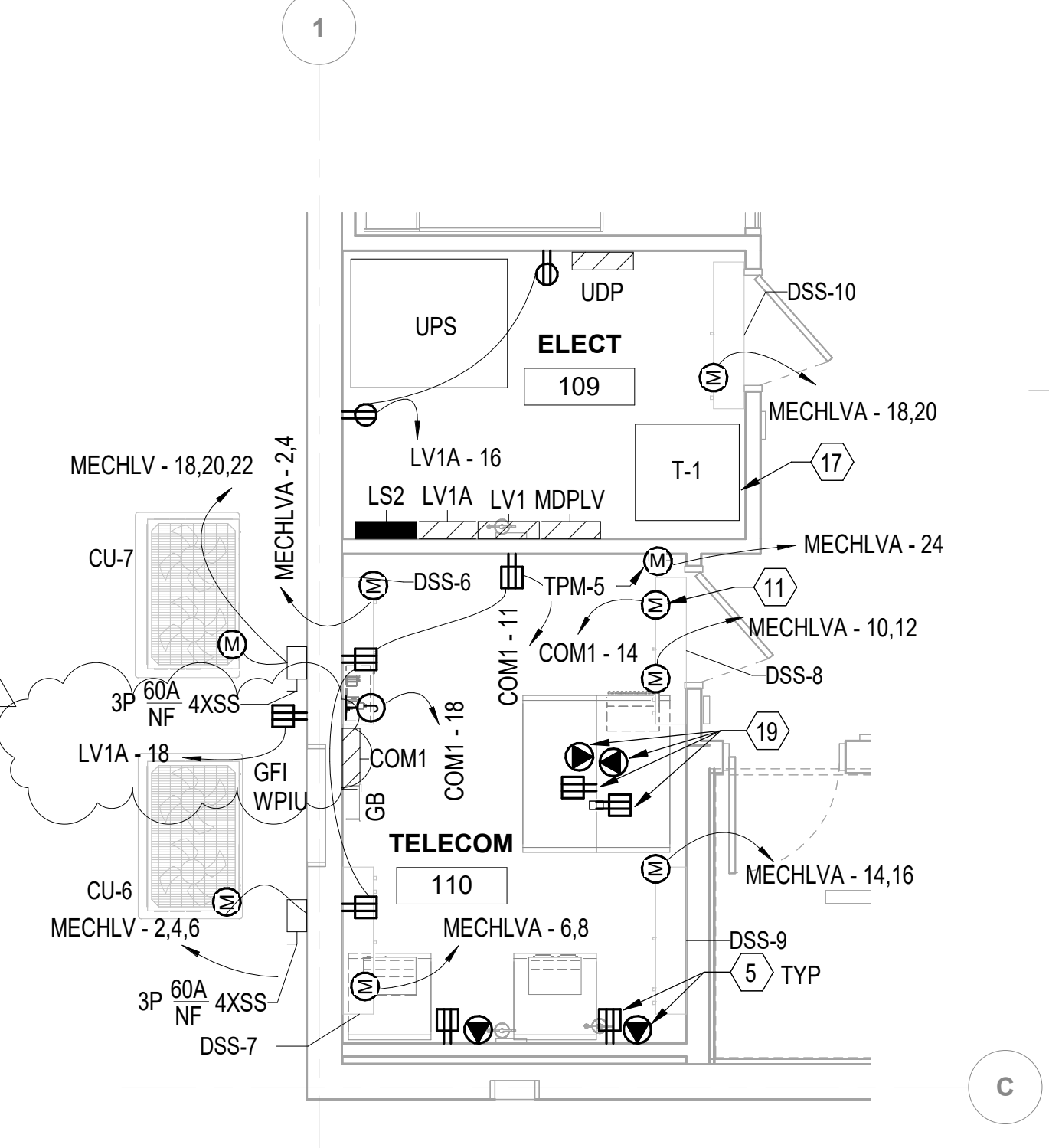
The diagram shows a gray L-shaped region labeled 'A' on the left and a white region labeled 'B' on the right. A vertical line separates the two regions. Region A is an L-shape with a horizontal top bar and a vertical stem. Region B is the area to the right of the vertical line.



- ELEVATOR. CONNECT SHUNT TRIP TO FIRE ALARM PANEL. REFER TO SHEET FA601 FOR INFORMATION. COORDINATE EXACT RATINGS WITH THE ELEVATOR SUBMITTAL.
5. PROVIDE NEMA 15-20R AND 6-20R TYPE RECEPTACLES ABOVE RACK, MOUNTED TO TELECOMMUNICATIONS CABLE TRAY. REFER TO PANEL COM1'S SCHEDULE FOR BRANCH CIRCUIT INFORMATION.
6. PROVIDE NEMA 15-20R AND 6-20R TYPE RECEPTACLES ABOVE RACK, MOUNTED TO TELECOMMUNICATIONS CABLE TRAY. REFER TO PANEL COM2'S SCHEDULE FOR BRANCH CIRCUIT INFORMATION.
7. PROVIDE CONNECTION TO VFD PROVIDED BY DIVISION 23.
8. PROVIDE CONNECTION TO ELEVATOR SYSTEM RECALL PANEL PROVIDED BY DIVISION 14.
9. REFER TO THE SINGLE LINE ON SHEET E-641 FOR FIRE PUMP CONTROLLER CONNECTION. PROVIDE CONNECTION FROM THE CONTROLLER TO THE PUMP PER MANUFACTURER'S INSTRUCTIONS.
10. PROVIDE MANUAL SELECTOR SWITCH TO ALLOW EMERGENCY PERSONNEL TO OVERRIDE THE AUTOMATIC EMERGENCY POWER SELECTION.
11. PROVIDE CONNECTION TO SECURITY ACCESS CONTROL UNIT (ACU).
12. PROVIDE CONNECTION TO COMBINATION FIRE ALARM CONTROL UNIT, AUTONOMOUS CONTROL UNIT PANEL, AND OTHER PANELS IN THIS AREA.
13. PROVIDE CONNECTION TO FIRE ALARM COMMUNICATOR PANEL.
14. PROVIDE WALL MOUNT TRANSFORMER.
15. PROVIDE 120V CONNECTION FOR FUTURE ELEVATOR MONITORING.
16. PROVIDE A 1-POLE ENCLOSED CIRCUIT BREAKER FOR ELEVATOR CAB LIGHTS AND RECEPTACLES.
17. PROVIDE LABEL ON TRANSFORMER INDICATING THE LOCATION OF THE PRIMARY DISCONNECTING MEANS IN ACCORDANCE WITH NEC ARTICLE 450. LABEL MUST SAY "PRIMARY DISCONNECTING MEANS LOCATED IN ELECTRICAL ROOM 136."
18. PROVIDE CONNECTION TO DDC CONTROL CABINET.
19. PROVIDE NEMA 121-30R AND 5-20R TYPE RECEPTACLES ABOVE RACK, MOUNTED TO TELECOMMUNICATIONS CABLE TRAY. REFER TO PANEL COM1'S SCHEDULE FOR BRANCH CIRCUIT INFORMATION.
20. PROVIDE NEMA 121-30R AND 5-20R TYPE RECEPTACLES ABOVE RACK, MOUNTED TO TELECOMMUNICATIONS CABLE TRAY. REFER TO PANEL COM2'S SCHEDULE FOR BRANCH CIRCUIT INFORMATION.
21. PROVIDE A 1-POLE ENCLOSED CIRCUIT BREAKER FOR ELEVATOR PIT AND HOISTWAY LIGHTING.
22. PROVIDE A 1-POLE ENCLOSED CIRCUIT BREAKER FOR ELEVATOR EQUIPMENT ROOM LIGHTING.
23. PROVIDE A 1-POLE ENCLOSED CIRCUIT BREAKER FOR ELEVATOR PIT RECEPTACLES.
24. PROVIDE A 1-POLE ENCLOSED CIRCUIT BREAKER FOR ELEVATOR EQUIPMENT ROOM RECEPTACLES.
25. ENCLOSED CIRCUIT BREAKERS THIS ROOM MUST BE LOCKABLE IN THE OPEN POSITION ONLY.
26. PROVIDE 1-POLE ENCLOSED CIRCUIT BREAKERS FOR EBH-1, 2, 3 LOCATED IN ELEVATOR PIT.
27. PROVIDE A 1-POLE ENCLOSED CIRCUIT BREAKER FOR ELEVATOR HYDRAULIC TANK HEATER.
28. PROVIDE A 1-POLE ENCLOSED CIRCUIT BREAKER FOR ELEVATOR HYDRAULIC COOLER.




C3 **ELEC 215 AND TELECOM 216**
1/4" = 1'-0" 0' 2' 4' 8'

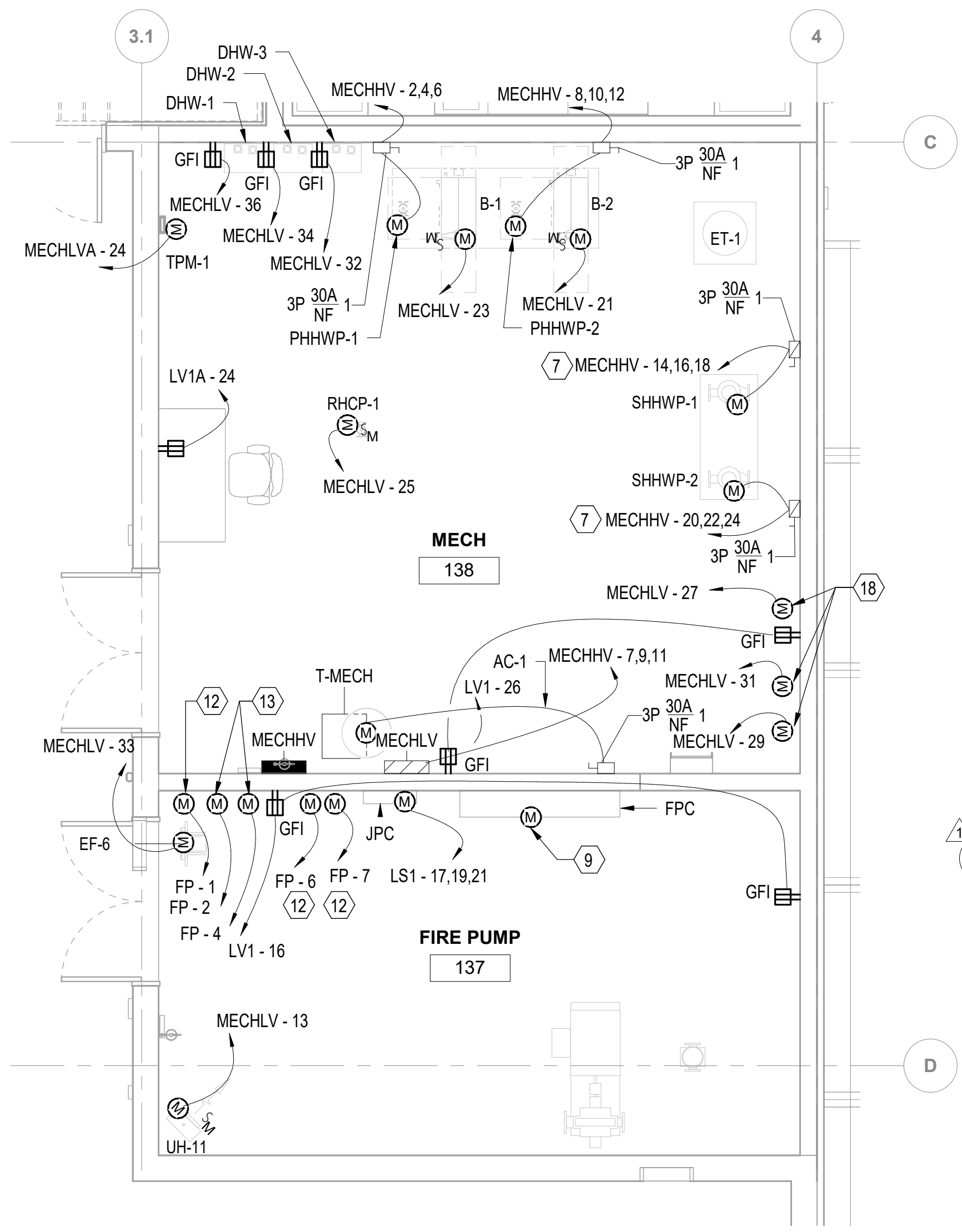


A2 **ELEC 109 AND TELECOM 110**
1/4" = 1'-0"
0' 2' 4' 8'

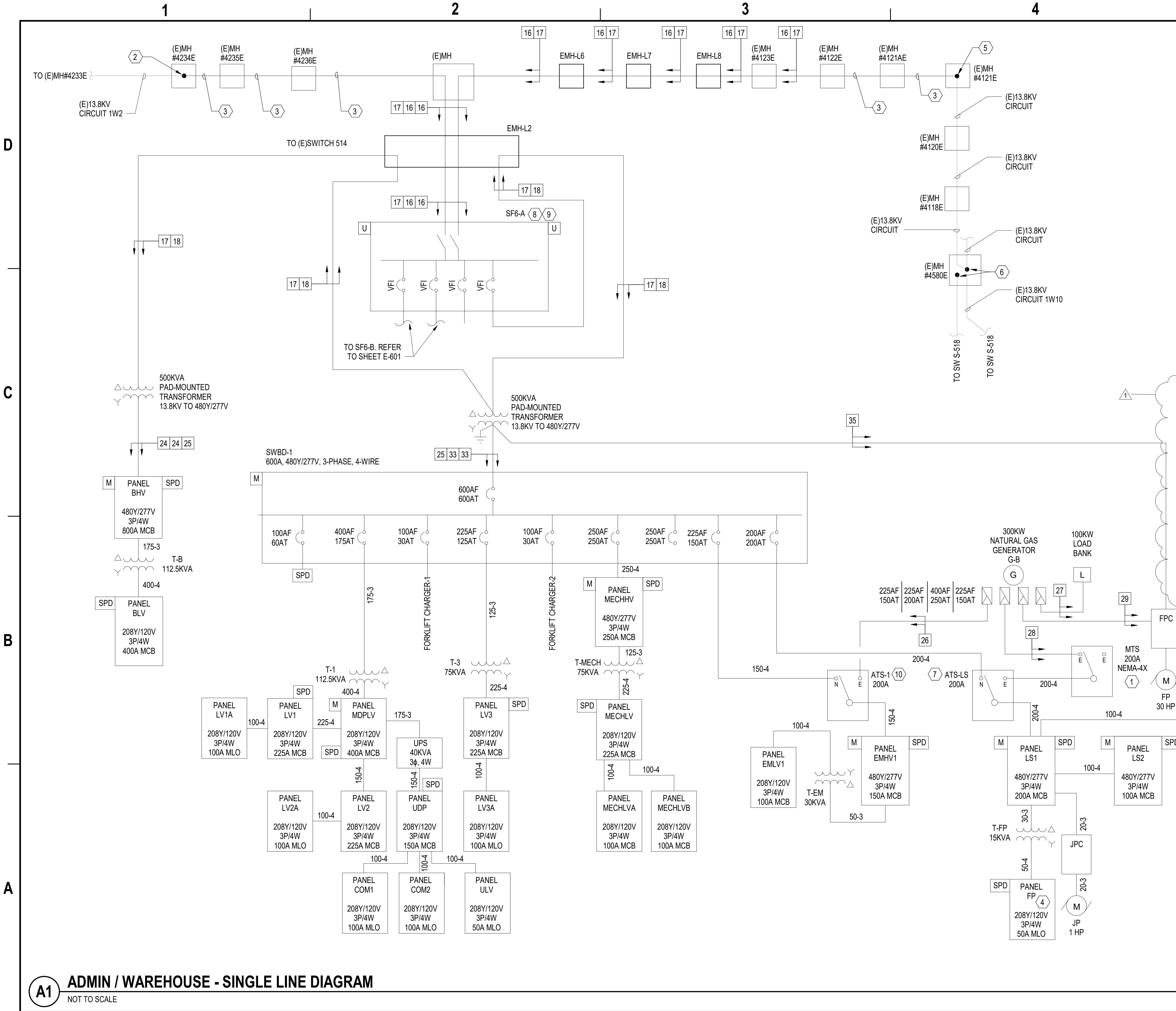
A3 **ELEC 136**
1/4" = 1'-0"



0' 2' 4' 8'



A1 FIRE PUMP 137 AND MECH 138



SHEET NOTES

- REFER TO SHEET E-642 BRANCH CIRCUIT SCHEDULE AND TRANSFORMER SCHEDULE.
- REFER TO SHEET ES101 FOR ELECTRICAL MEDIUM VOLTAGE AND SITE FEEDER SCHEDULE.
- COORDINATE ENTERING 15KV MANHOLES AND ANY CORRESPONDING WORK ON EXISTING 15KV CIRCUITS WITH BASE UTILITIES. REMOTE CUTTING MACHINES MUST BE USED WHEN CUTTING EXISTING CIRCUITS.

SHEET KEYNOTES

- CODE REQUIRED TEMPORARY GENERATOR CONNECTION.
- PROVIDE WATER-TIGHT TAPE T-SPLICE(S) ONTO EXISTING 13.8KV CIRCUIT.
- PROVIDE CONDUCTORS IN EXISTING DUCTBANK, 3-350KCMIL, 15KV, MV-105, 133% EPR, #4/0 G.
- PROVIDE LABEL "FIRE PROTECTION/LIFE SAFETY EQUIPMENT" IN ADDITION TO THE PANEL NAMEPLATE.
- PROVIDE WATER-TIGHT TAPE T-SPLICE(S) ONTO EXISTING 13.8KV CIRCUIT.
- CUT EXISTING 15KV (350KCMIL) CIRCUIT IN MANHOLE AND PROVIDE WATER-TIGHT TAPE T-SPLICE(S) ONTO EXISTING 13.8KV CIRCUIT 1W10. PROVIDE LIVE END CAPS ON THE SECTION OF CONDUCTORS THAT ARE LEFT UNTERMINATED.
- PROVIDE 1/2" CONDUIT AND CONTROL CABLING BETWEEN THE LIFE SAFETY GENERATOR AND ELEVATOR CONTROLLER.
- PROVIDE TWO (2) 1" CONDUITS STUBBED OUT TO 5'-0" PAST THE SWITCH'S PAD FOR FUTURE CONTROLLING OF SWITCHED WAYS.
- CONNECT AMI METERS TO EACH OF THE INCOMING CIRCUITS.
- COORDINATE DESIGN OF THE AUTOMATIC TRANSFER SWITCH (ATS) ELECTRICAL CONTROL CIRCUIT WITH THE ELEVATOR CONTROLLER MANUFACTURER'S REQUIREMENTS. PROVIDE FORM C CONTACT FOR INDICATING GENERATOR START. COORDINATE WITH ELEVATOR SUBMITTAL.

GENERATOR SEQUENCE OF OPERATIONS

LOSS OF UTILITY:

- ATS SENSE UTILITY FAILURE.
- ATS SENDS A TWO WIRE START SIGNAL TO GENERATOR.
- GENERATOR STARTS.
- TRANSFER SWITCHES CHANGE POWER SOURCE TO GENERATOR WITHIN 10 SECONDS.

UTILITY RETURNS:

- ATS SENSE UTILITY AND SWITCHES POWER SOURCES BACK (5 TO 10 MIN.).
- GENERATOR CONTINUES TO RUN IN COOL DOWN MODE (5 TO 10 MIN.).
- GENERATOR SHUTS DOWNS.

FAILURE TO TRANSFER:

- ATS TRANSFER FAILS.
- ATS CLOSSES TO NORMAL.
- SENDS ALARM VIA BACNET TO BAS.
- AUDIBLE ALARM SOUNDS AT ATS UNIT.

APPROVED	DATE	02/09/2023
SYMBOL	DESCRIPTION	1 GENERATOR SEQUENCE OF OPERATIONS

COMMONWEALTH OF VIRGINIA
BORIS KONAN GOLLI
Lic. No.060543
02/09/2023
PROFESSIONAL ENGINEER

MN+ BMCD
JointVenture

FOR COMMANDER NAVFAC	ACTIVITY	Timothy Calohan, PE, NOAA Senior Project Manager			
SATISFACTORY TO DATE	DATE	04OCT2022			
DES	JR	BRW	BG	CHK	JC
BRANCH MANAGER	JAS	RS/RC			
CHIEF ENGINEER	EJA				
FIRE PROTECTION	DSN				

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND
NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND - MID-ATLANTIC
NAVAL STATION NORFOLK - NORFOLK, VA
NOAA OMAO SHIP & SUPPORT FACILITY RELOCATION

ADMIN / WAREHOUSE - SINGLE LINE DIAGRAM

SCALE	AS NOTED
PROJECT NO.	1562331
CONSTR. CONTR. NO.	N4008523R2527
NAVFAC DRAWING NO.	12874299
SHEET	423 OF 504
E-641	

DRAWING REVISION: 25 AUGUST 2020

A1 ADMIN / WAREHOUSE - SINGLE LINE DIAGRAM
NOT TO SCALE

D

C

B

A

PANELBOARD: MDPLV															
LOCATION: ELECT 109					VOLTAGE: 208/120 Wye					A.I.C. RATING: 35,000					
SUPPLY FROM: T-1					PHASE: 3					MAINS TYPE: MCB					
MOUNTING: SURFACE					WIRES: 4					MAINS RATING: 400 A					
ENCLOSURE: NEMA 1										MCB RATING: 400 A					
NOTES:															
#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1					12220	12560									2
3	225	3	PANEL LV1	REFER TO SHEET E-641 FOR SINGLE LINE			11600	14200			REFER TO SHEET E-641 FOR SINGLE LINE	PANEL LV2	3	225	4
5									12520	8540					6
7					640	640									8
9	20	3	SYST FURN: 102	3#12, #8N, #12G IN 1/2" C			640	640			3#12, #8N, #12G IN 1/2" C	SYST FURN: 102	3	20	10
11									640	640					12
13					640	21679									14
15	20	3	SYST FURN: 102	3#12, #8N, #12G IN 1/2" C			640	26099			REFER TO SHEET E-641 FOR SINGLE LINE	UPS	3	175	16
17									640	20259					18
19	--	1	SPACE		--	0						SPARE	1	20	20
21	--	1	SPACE				--	0				SPARE	1	20	22
23	--	1	SPACE						--	--		SPACE	1	--	24
25	--	1	SPACE		--	--						SPACE	1	--	26
27	--	1	SPACE				--	--				SPACE	1	--	28
29	--	1	SPACE						--	--		SPACE	1	--	30
31	--	1	SPACE		--	--						SPACE	1	--	32
33	20	1	SPACE				0	--				SPACE	1	--	34
35	20	1	SPACE						0	--		SPACE	1	--	36
37					0	--						SPACE	1	--	38
39	30	3	SPD	PER MANUFACTURER'S INSTRUCTIONS			0	--				SPACE	1	--	40
41									0	--		SPACE	1	--	42
					TOTAL LOAD:		48379 VA		53819 VA		43239 VA				
					TOTAL AMPS:		410 A		455 A		360 A				
												PANEL TOTALS			
												TOTAL CONNECTED LOAD: 145436 VA			
												TOTAL ESTIMATED DEMAND LOAD: 87067 VA			
												TOTAL CONNECTED CURRENT: 404 A			
												TOTAL ESTIMATED DEMAND... 242 A			
												DEMAND WITH EXPANSION: 290 A			

PANELBOARD: EMLV1															
LOCATION: ELECT 136					VOLTAGE: 208/120 Wye					A.I.C. RATING: 10,000					
SUPPLY FROM: T-EM					PHASE: 3					MAINS TYPE: MCB					
MOUNTING: SURFACE					WIRES: 4					MAINS RATING: 100 A					
ENCLOSURE: NEMA 1										MCB RATING: 100 A					
NOTES:															
1 - BID OPTION - PIER AND TRESTLE															
#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	20	1	ELEVATOR CAB LIGHTING: 121	2#8, #10G, IN 3/4" C	100	200					2#6, #10G, IN 1" C	SECURITY ACU - EXTERIOR EAST	1	20	2
3	20	1	EYEWASH STATION 123	2#12, #12G, IN 1/2" C			180	100			2#6, #10G, IN 1" C	PIER GATE ACU	1	20	4
5	20	1	PIER CAMERAS	2#6, #10G, IN 1" C					600	100	2#6, #10G, IN 1" C	PIER LCP	1	20	6
7	20	1	POWER ELEV EQUIP 121	2#8, #10G IN 3/4" C	180	1800					2#6, #10G, IN 1" C	PIER SANITARY HEAT TRACE	1	20	8
9	20	1	TELECOM SHIPPING/ RECEIVING 135	2#12, #12G, IN 1/2" C			300	200			2#8, #10G, IN 3/4" C	ELEVATOR SUMP PUMP REC: 120	1	20	10
11	20	1	MAIN ENTRANCE GATE OPERATOR	2#6, #10G, IN 1" C					1200	60	2#8, #10G IN 3/4" C	AOR PHONE: 102A	1	20	12
13	20	1	LCP-1	2#12, #12G, IN 1/2" C	150	1082					2#8, #10G IN 3/4" C	CU-1	2	40	14
15	20	1	EBH-1	2#12, #12G, IN 3/4" C			750	1082							16
17	20	1	EBH-2	2#12, #12G, IN 3/4" C					750	750	2#12, #12G, IN 3/4" C	EBH-3	1	20	18
19	20	1	ELEVATOR COOLER	2#10, #10G IN 1/2" C	700	500					2#12, #12G, IN 3/4" C	ELEVATOR OIL HEATER	1	20	20
21	--	1	SPACE				--	--				SPACE	1	--	22
23	--	1	SPACE						--	--		SPACE	1	--	24
25					0	--						SPACE	1	--	26
27	30	3	SPD	PER MANUFACTURER'S INSTRUCTIONS			0	--				SPACE	1	--	28
29									0	--		SPACE	1	--	30
					TOTAL LOAD:	4712 VA	2612 VA	3460 VA							
				TOTAL AMPS:	40 A	22 A	30 A								
												PANEL TOTALS			
												TOTAL CONNECTED LOAD: 10783 VA			
												TOTAL ESTIMATED DEMAND LOAD: 10279 VA			
												TOTAL CONNECTED CURRENT: 30 A			
												TOTAL ESTIMATED DEMAND... 29 A			
												DEMAND WITH EXPANSION: 34 A			

SWITCHBOARD: SWBD-1

LOCATION: ELECT 136

SUPPLY FROM: 500 KVA TRANSFORMER

MOUNTING: FLOOR

ENCLOSURE: NEMA 1

VOLTAGE: 480/277 Wye

PHASES: 3

WIRES: 4

A.I.C. RATING: 65,000

MAINS TYPE: MCB

MAINS RATING: 600 A

MCB RATING: 600 A

NOTES:

CKT	LOAD NAME	DESIGN WIRE AND CONDUIT	POLES	TRIP RATING	FRAME SIZE	Load	COMMENTS
1	TRANSFORMER T-1	REFER TO SHEET E-641 FOR SINGLE LINE	3	175 A	225 A	145436 VA	PROVIDE LOCKABLE CIRCUIT BREAKER
2	TRANSFORMER T-3	REFER TO SHEET E-641 FOR SINGLE LINE	3	125 A	225 A	50137 VA	
3	ATS-1	REFER TO SHEET E-641 FOR SINGLE LINE	3	200 A	200 A	0 VA	
4	ATS-LS	REFER TO SHEET E-641 FOR SINGLE LINE	3	200 A	200 A	0 VA	
5	PANEL MECHHV	REFER TO SHEET E-641 FOR SINGLE LINE	3	250 A	250 A	170509 VA	
6	FORKLIFT CHARGER-1	3#10, #10G., IN 1/2" C	3	30 A	100 A	18000 VA	
7	FORKLIFT CHARGER-2	3#10, #10G., IN 1/2" C	3	30 A	100 A	18000 VA	
8	SPARE		1	20 A	100 A	0 VA	
9	SPARE		1	20 A	20 A	0 VA	
10	SPARE		1	20 A	20 A	0 VA	
11	SPACE		1	--	--	--	--
12	SPACE		1	--	--	--	--
13	SPACE		1	--	--	--	--
14	SPACE		1	--	--	--	--
15	SPACE		1	--	--	--	--
16	SPD	PER MANUFACTURER'S INSTRUCTIONS	3	60 A	100 A	0 VA	

SWITCHBOARD TOTALS

TOTAL CONNECTED LOAD:

402082 VA

TOTAL ESTIMATED DEMAND LOAD:

316144 VA

TOTAL CONNECTED CURRENT:

484 A

TOTAL ESTIMATED DEMAND CURRENT:

380 A

DEMAND WITH EXPANSION:

456 A

PANELBOARD: EMHV1															
LOCATION: ELECT 136					VOLTAGE: 480/277 Wye					<div><div>1</div><div>A.I.C. RATING: 35,000 MAINS TYPE: MCB MAINS RATING: 250 A MCB RATING: 150 A</div></div>					
SUPPLY FROM: ATS-1					PHASE: 3										
MOUNTING: SURFACE					WIRES: 4										
ENCLOSURE: NEMA 1															
NOTES: PROVIDE SHUNT TRIP CIRCUIT BREAKER FOR ELEVATOR AND CONNECT TO THE BUILDING FIRE ALARM SYSTEM. PROVIDE 100% RATED MAIN BREAKER.															
#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1					4712	18013									2
3	50	3	TRANSFORMER T-EM	REFER TO SHEET E-641 FOR SINGLE LINE			2612	18013			3#1, #6 G IN 1-1/2" C	ELEVATOR			4
5									3460	18013					
7					8868	3714					REFER TO ES101 FEEDER #22	SSWR LIFT STATION 2			8
9	50	3	SSWR LIFT STATION 1	REFER TO ES101 FEEDER #22			8868	3714							
11									8868	3714					12
13															14
15															16
17															18
19															20
21															22
23															24
25															26
27															28
29															30
31															32
33															34
35															36
37					0										38
39	60	3	SPD	PER MANUFACTURER'S INSTRUCTIONS			0								40
41									0						42
					TOTAL LOAD:	35307 VA		33207 VA		34055 VA					
					TOTAL AMPS:	128 A		120 A		123 A					
												PANEL TOTALS			
												TOTAL CONNECTED LOAD: 102588 VA			
												TOTAL ESTIMATED DEMAND LOAD: 102064 VA			
												TOTAL CONNECTED CURRENT: 123 A			
												TOTAL ESTIMATED DEMAND... 123 A			
												DEMAND WITH EXPANSION: 147 A			

D

D

PANELBOARD: LV2A

LOCATION: ELECT 215

SUPPLY FROM: LV2

MOUNTING: SURFACE

ENCLOSURE: NEMA 1

VOLTAGE: 208/120 Wye

PHASE: 3

WIRES: 4

A.I.C. RATING: 10,000

MAINS TYPE: MLO

MAINS RATING: 100 A

NOTES:

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	20	1	SYST FURN: 210	2#10, #10G, IN 1/2" C	1920	360					2#10, #10G, IN 1/2" C	REC: 223	1	20	2
3	20	1	SYST FURN: 210	2#10, #10G, IN 1/2" C			1920	1200			2#8, #10G, IN 3/4" C	GARBAGE DISPOSAL REC: 204	1	20	4
5	20	1	REC: 218	2#12, #12G IN 1/2" C					360	1000	2#8, #10G, IN 3/4" C	REFRIGERATOR: 204	1	20	6
7	20	1	SYST FURN: 219	2#12, #12G IN 1/2" C	180	1200					2#8, #10G, IN 3/4" C	MICROWAVE: 204	1	20	8
9	20	1	SYST FURN: 219	2#10, #10G, IN 1/2" C			180	1500			2#8, #10G, IN 3/4" C	COFFEE MAKER: 204	1	20	10
11	20	1	COUNTER REC: 220	2#12, #12G IN 1/2" C					180	360	2#8, #10G, IN 3/4" C	RECS: 204	1	20	12
13	20	1	RECS: 220	2#12, #12G IN 1/2" C	1260	360					2#10, #10G, IN 1/2" C	RECS: 210A	1	20	14
15	20	1	PRINTER: 219	2#10, #10G, IN 1/2" C			360	1000			2#10, #10G, IN 1/2" C	WATER FOUNTAIN: 210A	1	20	16
17	20	1	RECS: 219	2#10, #10G, IN 1/2" C					720	540	2#12, #12G IN 1/2" C	RECS: 215	1	20	18
19	20	1	RECS: 222	2#10, #10G, IN 1/2" C	900	1200					2#12, #12G IN 1/2" C	MICROWAVE: 218	1	20	20
21	20	1	RECS: 202	2#8, #10G, IN 3/4" C			900	1000			2#12, #12G IN 1/2" C	REFRIGERATOR: 218	1	20	22
23	20	1	RECS: 202	2#8, #10G, IN 3/4" C					900	180	2#12, #12G IN 1/2" C	COUNTER REC: 218	1	20	24
25	20	1	FLUSH VALVE: 224, 225	2#10, #10G, IN 1/2" C	180	180					2#8, #10G, IN 3/4" C	SIGNAGE TYPE Q	1	20	26
27	20	1	COUNTER REC: 224, 225	2#10, #10G, IN 1/2" C			360	600			2#10, #10G, IN 1/2" C	VMF-3: 209	1	20	28
29	20	1	SPARE						0	0		SPARE	1	20	30
31	20	1	SPARE		0	0						SPARE	1	20	32
33	--	1	SPACE				--	--				SPACE	1	--	34
35	--	1	SPACE						--	--		SPACE	1	--	36
37	--	1	SPACE		--	--						SPACE	1	--	38
39	--	1	SPACE				--	--				SPACE	1	--	40
41	--	1	SPACE						--	--		SPACE	1	--	42
TOTAL LOAD:					7740 VA		9020 VA		4240 VA						
TOTAL AMPS:					69 A		80 A		35 A						
											PANEL TOTALS				
											TOTAL CONNECTED LOAD: 21000 VA				
											TOTAL ESTIMATED DEMAND LOAD: 16980 VA				
											TOTAL CONNECTED CURRENT: 58 A				
											TOTAL ESTIMATED DEMAND... 47 A				
											DEMAND WITH EXPANSION: 57 A				

PANELBOARD: LV2															
LOCATION: ELECT 215					VOLTAGE: 208/120 Wye					A.I.C. RATING: 10,000					
SUPPLY FROM: T-2					PHASE: 3					MAINS TYPE: MCB					
MOUNTING: SURFACE					WIRES: 4					MAINS RATING: 225 A					
ENCLOSURE: NEMA 1					MCB RATING: 225 A										
NOTES:															
#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1					7740	640									2
3	150	3	PANEL LV2A	REFER TO SHEET E-641 FOR SINGLE LINE			9020	640			3#12, #8N, #12G IN 1/2" C	SYST FURN: 210	3	20	4
5									4240	640					6
7	20	1	RECS: 207	2#8, #10G, IN 3/4" C	900	640									8
9	20	1	RECS: 206	2#10, #10G, IN 1/2" C			900	640			3#12, #8N, #12G IN 1/2" C	SYST FURN: 210	3	20	10
11	20	1	DOOR HARDWARE: 224, 225	2#10, #10G, IN 1/2" C					200	640					12
13	20	1	RECS: 205	2#8, #10G, IN 3/4" C	540	60									14
15	20	1	PRINTER: 205	2#8, #10G, IN 3/4" C			360	60			3#12, #8N, #12G IN 1/2" C	SYST FURN: 219	3	20	16
17	20	1	RECS: 208	2#8, #10G, IN 3/4" C					900	60					18
19	20	1	RECS: 209	2#8, #10G, IN 3/4" C	900	60									20
21	20	1	RECS: 210	2#8, #10G, IN 3/4" C			540	60							22
23	20	1	RECS: 211	2#12, #12G IN 1/2" C					1440	60	3#12, #8N, #12G IN 1/2" C	SYST FURN: 219	3	20	24
25	20	1	RECS: 213	2#12, #12G IN 1/2" C	720	360					2#10, #10G, IN 1/2" C	TV REC: 202	1	20	26
27	20	1	HEARING BOOTH: 220	2#12, #12G IN 1/2" C			1800	180			2#10, #10G, IN 1/2" C	PRINTER: 210	1	20	28
29	20	1	TV REC: 209	2#10, #10G, IN 1/2" C					180	180	2#12, #12G IN 1/2" C	EXAM TABLE REC: 220	1	20	30
31	20	1	SPARE		0	0						SPARE	1	20	32
33	20	1	SPARE				0	0				SPARE	1	20	34
35	20	1	SPARE						0	0		SPARE	1	20	36
37	--	1	SPACE		--	--						SPACE	1	--	38
39	--	1	SPACE				--	--				SPACE	1	--	40
41	--	1	SPACE						--	--		SPACE	1	--	42
TOTAL LOAD:					12560 VA		14200 VA		8540 VA						
TOTAL AMPS:					110 A		123 A		71 A						
											PANEL TOTALS				
											TOTAL CONNECTED LOAD: 35300 VA				
											TOTAL ESTIMATED DEMAND LOAD: 24230 VA				
											TOTAL CONNECTED CURRENT: 98 A				
											TOTAL ESTIMATED DEMAND... 67 A				
											DEMAND WITH EXPANSION: 81 A				

PANELBOARD: LV1A

LOCATION: ELECT 109					VOLTAGE: 208/120 Wye					A.I.C. RATING: 10,000											
SUPPLY FROM: LV1					PHASE: 3					MAINS TYPE: MCB											
MOUNTING: SURFACE					WIRES: 4					MAINS RATING: 100 A											
ENCLOSURE: NEMA 1					MCB RATING: 100 A																
NOTES:																					
#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#						
1	20	1	RECS: 101, 100	2#8, #10G, IN 3/4" C	360	540					2#8, #10G, IN 3/4" C	RECS: 102A	1	20	2						
3	20	1	RECS: 102	2#8, #10G, IN 3/4" C			720	180			2#10, #10G, IN 1/2" C	WATER FOUNTAIN REC: 102A	1	20	4						
5	20	1	RECS: 103	2#8, #10G, IN 3/4" C						360	2#10, #10G, IN 1/2" C	RECS: 114	1	20	6						
7	20	1	RECS:104	2#8, #10G, IN 3/4" C	720	180					2#10, #10G, IN 1/2" C	PLOTTER REC: 114	1	20	8						
9	20	1	RECS: 105	2#12, #12G IN 1/2" C			720	180			2#10, #10G, IN 1/2" C	PRINTER: 114	1	20	10						
11	20	1	RECS: 106	2#12, #12G IN 1/2" C					720	180	2#10, #10G, IN 1/2" C	PRINTER: 114	1	20	12						
13	20	1	RECS: 107	2#12, #12G IN 1/2" C	720	360					2#8, #10G, IN 3/4" C	SIGNAGE TYPE,P: 102A	1	20	14						
15	20	1	COUNTER RECS: 112	2#12, #12G IN 1/2" C			360	360			2#12, #12G IN 1/2" C	RECS: 109	1	20	16						
17	20	1	RECS: 112	2#12, #12G IN 1/2" C					900	720	2#8, #10G, IN 3/4" C	SOUTH EXTERIOR REC	1	20	18						
19	20	1	RECEPT TECH LIB / HUDDLE 112	2#12, #12G IN 1/2" C	360	180					2#10, #10G, IN 1/2" C	SHREDDER REC: 114	1	20	20						
21	20	1	TV REC: 113	2#10, #10G, IN 1/2" C			360	180			2#10, #10G, IN 1/2" C	COUNTER REC: 113	1	20	22						
23	20	1	FLOORBOX: 113	2#10, #10G, IN 1/2" C					720	180	2#8, #10G, IN 3/4" C	COMPUTER: MECH 138	1	20	24						
25	20	1	QUAD RECS: 113	2#10, #10G, IN 1/2" C	1080	1200					2#6, #10G, IN 1" C	GATE OPERATOR - SOUTH	1	20	26						
27	20	1	QUAD RECS: 113	2#10, #10G, IN 1/2" C			720	1080			2#12, #12G IN 1/2" C	QUAD RECS: 113	1	20	28						
29	20	1	COUNTER RECS: 113	2#10, #10G, IN 1/2" C					180	0		SPARE	1	20	30						
31	20	1	SPARE		0	--						SPACE	1	--	32						
33	20	1	SPARE				0	--				SPACE	1	--	34						
35	20	1	SPARE						0	--		SPACE	1	--	36						
37	--	1	SPACE		--	--						SPACE	1	--	38						
39	--	1	SPACE				--	--				SPACE	1	--	40						
41	--	1	SPACE						--	--		SPACE	1	--	42						
												TOTAL LOAD:				5700 VA		4860 VA		4680 VA	
												TOTAL AMPS:				48 A		41 A		39 A	
																PANEL TOTALS					
																TOTAL CONNECTED LOAD: 15240 VA					
																TOTAL ESTIMATED DEMAND LOAD: 13400 VA					
																TOTAL CONNECTED CURRENT: 42 A					
																TOTAL ESTIMATED DEMAND... 37 A					
																DEMAND WITH EXPANSION: 45 A					

D

C

B

A

D

C

B

A

PANELBOARD: UL14

LOCATION: ET TECH SHOP / MOCK-UP 124

SUPPLY FROM: UDP

MOUNTING: SURFACE

ENCLOSURE: NEMA 1

VOLTAGE: 208/120 Wye

PHASE: 3

WIRES: 4

A.I.C. RATING: 10,000

MAINS TYPE: MCB

MAINS RATING: 100 A

NOTES:

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	20	1	WORKBENCH RECS: 124	2#8, #10G, IN 3/4" C	720	1080					2#10, #10G, IN 1/2" C	QUAD RECS: 124	1	20	2
3	50	2	WORKBENCH NEMA REC: 124	2#6, #10G, IN 1" C			4800	720			2#10, #10G, IN 1/2" C	QUAD RECS: 124	1	20	4
5									4800	150	2#10, #10G, IN 1/2" C	SECURITY ACU: 129, 132, 135, AND 136	1	20	6
7	20	1	SECURITY ACU: 124, 129,AND 132	2#10, #10G, IN 1/2" C	150	0						SPARE	1	20	8
9	20	1	SPARE				0	0				SPARE	1	20	10
11	20	1	SPARE						0	0		SPARE	1	20	12
13	20	1	SPARE		0	0						SPARE	1	20	14
15	20	1	SPARE				0	0				SPARE	1	20	16
17	20	1	SPARE						0	0		SPARE	1	20	18
19	20	1	SPARE		0	0						SPARE	1	20	20
21	20	1	SPARE				0	0				SPARE	1	20	22
23	--	1	SPACE						--	--		SPACE	1	--	24
25	--	1	SPACE		--	--						SPACE	1	--	26
27	--	1	SPACE				--	--				SPACE	1	--	28
29	--	1	SPACE						--	--		SPACE	1	--	30
TOTAL LOAD:					1950 VA		5520 VA		4950 VA						
TOTAL AMPS:					16 A		50 A		45 A						

PANEL TOTALS

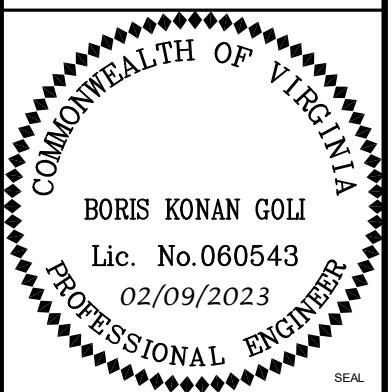
TOTAL CONNECTED LOAD: 12420 VA

TOTAL ESTIMATED DEMAND LOAD: 11240 VA

TOTAL CONNECTED CURRENT: 34 A

TOTAL ESTIMATED DEMAND... 31 A

DEMAND WITH EXPANSION: 37 A

[illegible]

APPROVED						
FOR COMMANDER NAVFAC						
ACTIVITY						
Timothy Calohan, PE, NOAA Senior Project Manager						
SATISFACTORY TO DATE				04OCT2022		
DES	JR	DRW	BG	CHK	JC	
PM/DM					RS/RC	
BRANCH MANAGER					JAS	
CHIEF ENGIARCH					EJA	
FIRE PROTECTION					DSN	

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND MIDLANT DGBL	NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND ~ MID-ATLANTIC NAVAL STATION NORFOLK - NORFOLK, VA
NAVAL STATION NEWPORT	NEWPORT, RHODE ISLAND
NOAA OMAO SHIP & SUPPORT FACILITY RELOCATION	
ADMIN / WAREHOUSE - PANELBOARD SCHEDULES	

SCALE: AS NOTED			
EPROJECT NO.:		1562331	
CONSTR. CONTR. NO.			
N4008523R2527			
NAVFAC DRAWING NO.			
12874308			
SHEET	432	OF	504