LOADCENTER A — 4000A, 480/277 V, 3Ø, 4 W

NO	EQUIPMENT	HP	KVA	VOLT	AMP LOAD	Ø	(C.B.) SIZE (FRAME)	(C.B.) (TRIP)	MCP C.B.	MCP STARTER
1	MCC1			480	1572	3	2000	2000		
2	MCC2			480	1604	3	2000	2000		
3	DP1			480/277	355	3	800	600		
4	SPARE						800	-		

TOTAL CONNECTED LOAD = 3531A

DISTRIBUTION PANEL DP1 — 600A, 480/277V, 3Ø, 4 W

NO	EQUIPMENT	HP	KVA	VOLT	AMP LOAD	Ø	C.B. FRAME SIZE	C.B. TRIP SETTING	MCP C.B.	MCP STARTER
1	PANEL LP1			480/277	201	3	225	225		
2	XFMR T-1 (PNL PP1)		150	480	54	3	225	200		
3	ROBOTIC PAINT SYS			480		3	100	30		
4	ROBOTIC PAINT SYS			480		3	100	30		
5	ROBOTIC PAINT SYS			480		3	100	30		
6	ROBOTIC PAINT SYS			480		3	100	30		
7	HANGAR DOORS	2		480	3.4	3	100	20		
8	HANGAR DOORS	2		480	3.4	3	100	20		
9	HANGAR DOORS	2		480	3.4	3	100	20		
10	HANGAR DOORS	2		480	3.4	3	100	20		
11	HANGAR DOORS	2		480	3.4	3	100	20		
12	HANGAR DOORS	2		480	3.4	3	100	20		
13	HANGAR DOORS	2		480	3.4	3	100	20		
14	HANGAR DOORS	2		480	3.4	3	100	20		
15	ROBOTIC PAINT SYS			480		3	100	30		
16	ROBOTIC PAINT SYS			480		3	100	30		
17	ROBOTIC PAINT SYS			480		3	100	30		
18	ROBOTIC PAINT SYS			480		3	100	30		
19	ROLL-UP DOOR#140	1/2		480	1	3	100	20		
20	ROLL-UP DOOR#142	1/2		480	1	3	100	20		
21	SPARE	5		480	7.6	3	100	20		
22	SPARE	5		480	7.6	3	100	20		
23	IW LIFT STATION	2×1/2		480	2	3	100	20		
24	WATER HEATER T-5		45	480	54	3	100	70		
25										
26										
27										
28										

TOTAL LOAD = 355A

PANEL LP1

BUS 225A — BREAKER MLO — 480/277 V — 3Ø — 4 W

LOCATION	CKT NO	WATTAGE A	WATTAGE B	WATTAGE C	LTG	REC	OTHER	BKR	A B C	BKR	OTHER	REC	LTG	WATTAGE A	WATTAGE B	WATTAGE C	CKT NO	LOCATION
ROOM #101	1	5325			5			30		30			5	5325			2	ROOM #101
ROOM #101	3		5325		5			30		30			5		5325		4	ROOM #101
ROOM #101	5			3195	3			30		30			3			3195	6	ROOM #101
ROOM #101	7	5325			5			30		30			5	5325			8	ROOM #101
ROOM #101	9		5325		5			30		30			5		5325		10	ROOM #101
ROOM #101	11			5325	5			30		30			5			5325	12	ROOM #101
ROOM #101	13	5325			5			30		30			5	5325			14	ROOM #101
ROOM #101	15		3195		3			30		30			3		3195		16	ROOM #101
ROOM #101 (FACP RPT PNL BELOW)	17			5325	5			30		30			5			5325	18	ROOM #101
ROOM #101	19	5325			5			30		30			5	5325			20	ROOM #101
• ROOM #101 NL	21		4260		4			30		30			4		4260		22	ROOM #101 NL
TS EXTERIOR (SEE RPT PNL BELOW)	23			1960	7			20		20			26			2540	24	RMS #112, #114, #120
TS EXTERIOR	25	1960			7			20		20			28	2980			26	RMS #121, #123, #124, #126
TS EXTERIOR	27		1395		7			20		20			23		1446		28	RMS #123, #126, #130
TS EXTERIOR	29			1688	20			20		20			26			2540	30	RMS #102, #108, #110
MECH. EQUIP SPACE	31	2600			34			20		30	1			1800			32	CSERS
SPARE	33							20		20							34	SPARE
TIMECLOCK/CONTACTOR	35							20		20							36	SPARE
SPACE	37																38	SPACE
SPACE	39																40	SPACE
SPACE	41																42	SPACE
		25860	19500	17493					SUB-TOTAL					26080	19551	18925		

PH A = 51940W PH B = 39051W PH C = 36418W

AVAILABLE FAULT CURRENT = 24KA, RMS SYM.

TOTAL = 127409W
LCL x 0.25 = 31852W
TOTAL = 159261W = 192A

MOTOR CONTROL CENTER MCC1 — 2000A, 480V, 3Ø, 3 W

NO	EQUIPMENT	HP	KVA	VOLT	AMP LOAD	Ø	BREAKER FRAME SIZE	BREAKER TRIP SETTING	MCP C.B.	MCP STARTER
1	EXHAUST FAN EF1A	150		480	180	3			250	5
2	EXHAUST FAN EF1B	150		480	180	3			250	5
3	EXHAUST FAN EF1C	150		480	180	3			250	5
4	EXHAUST FAN EF1D	150		480	180	3			250	5
5	EXHAUST FAN EF1E	150		480	180	3			250	5
6	EXHAUST FAN EF1F	150		480	180	3			250	5
7	EXHAUST FAN EF1G	150		480	180	3			250	5
8	EXHAUST FAN EF1H	150		480	180	3			250	5
9	PUMP P1A	20		480	27	3			50	2
10	PUMP P1B	20		480	27	3			50	2
11	PUMP P2	3		480	4.8	3			15	1
12	EVAP. COOLER EC1A	1		480	1.8	3			15	1
13	EVAP. COOLER EC1A	1		480	1.8	3			15	1
14	EVAP. COOLER EC1A	1		480	1.8	3			15	1
15	EVAP. COOLER EC1A	1		480	1.8	3			15	1
16	EVAP. COOLER EC1B	1		480	1.8	3			15	1
17	EVAP. COOLER EC1B	1		480	1.8	3			15	1
18	EVAP. COOLER EC1B	1		480	1.8	3			15	1
19	EVAP. COOLER EC1B	1		480	1.8	3			15	1
20	SPARE			480		3			15	1
21	10KVA XFMR		10	480	13	1	150A	30A		

TOTAL CONNECTED LOAD = 1527A
25% LARGEST MOTOR = 45A
TOTAL LOAD = 1572A

MOTOR CONTROL CENTER MCC2 — 2000A, 480V, 3Ø, 3 W

NO	EQUIPMENT	HP	KVA	VOLT	AMP LOAD	Ø	C.B. FRAME SIZE	C.B. TRIP SETTING	MCP C.B.	MCP STARTER
1	SUPPLY FAN SF3A	125		480	156	3			250	5
2	SUPPLY FAN SF3B	125		480	156	3			250	5
3	SUPPLY FAN SF3C	125		480	156	3			250	5
4	SUPPLY FAN SF1A	125		480	156	3			250	5
5	SUPPLY FAN SF3B	125		480	156	3			250	5
6	SUPPLY FAN SF3D	125		480	156	3			250	5
7	SUPPLY FAN SF3E	125		480	156	3			250	5
8	SUPPLY FAN SF3F	125		480	156	3			250	5
9	SUPPLY FAN SF2A	125		480	156	3			250	5
10	SUPPLY FAN SF2B	125		480	156	3			250	5
11	EXHAUST FAN EF7	5		480	7.6	3			15	1
12	EXHAUST FAN EF8	5		480	7.6	3			15	1
13	EVAP. COOLER EC2A	1		480	1.8	3			15	1
14	EVAP. COOLER EC2A	1		480	1.8	3			15	1
15	EVAP. COOLER EC2A	1		480	1.8	3			15	1
16	EVAP. COOLER EC2A	1		480	1.8	3			15	1
17	EVAP. COOLER EC2B	1		480	1.8	3			15	1
18	EVAP. COOLER EC2B	1		480	1.8	3			15	1
19	EVAP. COOLER EC2B	1		480	1.8	3			15	1
20	EVAP. COOLER EC2B	1		480	1.8	3			15	1
21	EXHAUST FAN EF5	3/4		480	1.4	3			15	1
22	MAKE-UP-AIR UNIT MU-1	3/4		480	1.4	3			15	1
23	EVAP. COOLING UNIT ECU-1	1		480	1.8	3			15	1
24	SPARE			480		3			15	1
25	10KVA XFMR		10	480	14	1	150A	30A		

TOTAL CONNECTED LOAD = 1565A
25% LARGEST MOTOR = 39A
TOTAL LOAD = 1604A

PANEL PP1

BUS 400A — BREAKER 400A — 208/120 V — 3Ø — 4 W

LOCATION	CKT NO	WATTAGE A	WATTAGE B	WATTAGE C	LTG	REC	OTHER	BKR	A B C	BKR	OTHER	REC	LTG	WATTAGE A	WATTAGE B	WATTAGE C	CKT NO	LOCATION
HPU-1	1	2160					1	30		20		1		200			2	FIRE XMTR
-	3		2160				-	-		20		6			1080		4	RMS #101, #102
HPU-2	5			2664			1	30		20		5				900	6	RMS #101, #104
-	7	2664					-	-		20		6		1080			8	RMS #101, #110
FCU-1, (SEE RPT PNL BELOW)	9		960				2	45		20		6			1080		10	RMS #105, #106
-	11			960			-	-		20		6				1080	12	RMS #111, #112
• FACP (ALARM)	13	200					1	20		20		6		1080			14	RMS #111, #116
• FACP (TROUBLE)	15		200				1	20		20		6			1080		16	RMS #111, #120
BAU-1	17			3735			1	40		20		5				900	18	RMS #111, #118
-	19	3735					-	-		20		7		1260			20	RMS #121, #122
UH-7, AD-1, IAU-1	21		920				4	20		20		7			1260		22	RMS #122, #124, #130
EF-2, EF-3	23			1560			2	20		20		5				900	24	RMS #125, #130
EF-4	25	528					1	20		20		6		1080			26	RMS #126, #127, #130
EF-6, ECU-1	27		1560				2	20		20		5			900		28	RMS #128, #129
• LEAK DETECTION MODULES	29			1200			2	20		20		6				1620	30	MECH. EQUIP. SPACE
HEAT TRACE & WTS-1	31	600					2	20		20		6		1620			32	MECH. EQUIP. SPACE
IRRIGATION SYSTEM	33		400				1	20		20		1			200		34	EMCS DTC
• IDS	35			200	1			20		20		2				360	36	RM #125
• AIR SHOWER	37							60		20			6	360			38	RM #125
-	39						-	-		20							40	BALLAST CAB. FANS
-	41						-	-		20							42	CATHODIC PROTECTION
		10167	5600	9639					225a - PP2 FEED					5940	5760	5220		

PH A = 16107W PH B = 11360W PH C = 14859W

AVAILABLE FAULT CURRENT = 6600A, RMS SYM.

TOTAL = 42326W
LCL x 0.25 = 2892W
TOTAL = 45218W = 126A

• - PROVIDE LOCK-ON DEVICE

TS - INDICATES TIME SWITCH CONTROLLED VIA 4P, 20A LIGHTING CONTACTOR.

Both circuits for units FCU-1 and FCU-2 should be fed from the one (1) 20A/2P circuit breaker in panel PP1, circuits 9 and 11 shown on Sheet E-15. The two circuits should be spliced together in panel PP1 and then 2-#8 AWG from the splice should be run to the 20A/2P circuit breaker. RFI #23

Circuits 23, 25, 27, & 29 should be controlled via a time switch as noted in the panel schedule on Sheet E-15. The lighting contactor and time switch is located adjacent to Panel LP1, shown on Sheet E-18. Provide 24 hr time switch with override switch. Provide power to time switch from Panel LP1. RFI #24

SIGNED ON BEHALF OF NORMAN ENGINEERING CO.

COLLINS ELECTRICAL CO., INC.
4107 Northgate Blvd.
Sacramento, CA 95834
Phone: (916) 567-1100

REVISION	DATE	DESCRIPTION	BY
1			
2			

NORMAN ENGINEERING CO.
CONSULTING ENGINEERS — LOS ANGELES, CALIFORNIA

DEPARTMENT OF THE ARMY
SACRAMENTO DISTRICT, CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

DESIGNED: R. SHEPARD
DRAWN: R. TAGAYUN
CHECKED: L. MYERS

MCCLELLAN AIR FORCE BASE — CALIFORNIA
ADAL DEPOT CORROSION CONTROL FACILITY
NEW AIRCRAFT PAINT FACILITY
PANEL SCHEDULES - #1

SUBMITTED: DATE APPROVED: 9/30/92
SCALE: NONE
SHEET E-19 OF 100 SHEETS
DRAWING NO. 05-2051

ENVIRONMENTAL ENHANCEMENT THRU ENGINEERING

PANEL MCC1

BUS 100A — BREAKER 50A — 120/240 V — 1Ø — 3 W

LOCATION	CKT NO	WATTAGE A	WATTAGE B	LTG	REC	OTHER	BKR	A B	BKR	OTHER	REC	LTG	WATTAGE A	WATTAGE B	CKT NO	LOCATION
RM#102 INSTRUMENTATION	1	1050				21	20								2	SPACE
RM#104 INSTRUMENTATION	3		600			13	20								4	SPACE
RM#106 INSTRUMENTATION	5	550				11	20								6	SPACE
RM#110 INSTRUMENTATION	7		1000			20	20								8	SPACE
SPARE	9						20								10	SPACE
SPARE	11						20								12	SPACE
		1600	1600					SUB-TOTAL								

PH A = 1600W PH B = 1600W

TOTAL = 3200W=13A

PANEL MCC2

BUS 100A — BREAKER 50A — 120/240 V — 1Ø — 3 W

LOCATION	CKT NO	WATTAGE A	WATTAGE B	LTG	REC	OTHER	BKR	A B	BKR	OTHER	REC	LTG	WATTAGE A	WATTAGE B	CKT NO	LOCATION
RM#112 INSTRUMENTATION	1	1050				21	20								2	SPACE
RM#116 INSTRUMENTATION	3		550			11	20								4	SPACE
RM#118 INSTRUMENTATION	5	650				13	20								6	SPACE
RM#120 INSTRUMENTATION	7		950			19	20								8	SPACE
SUPPORT BUILDING INSTRUMENTATION	9	300				6	20								10	SPACE
SPARE	11						20								12	SPACE
		1900	1500					SUB-TOTAL								

PH A = 2000W PH B = 1500W

TOTAL = 3500W=15A

PANEL EB

120 VDC 1Ø

LOCATION	CKT NO	WATTAGE	LTG	REC	OTHER	BKR
RM#101	1	1800	6			20
RM#101	2	1800	6			20
SPARE	3					20
RM#111	4	1800	6			20
RM#111	5	1800	6			20

TOTAL = 7200W

PANEL PP2

BUS 225A — BREAKER MLO — 208/120 V — 3Ø — 4 W

LOCATION	CKT NO	WATTAGE A	WATTAGE B	WATTAGE C	LTG	REC	OTHER	BKR	A B C	BKR	OTHER	REC	LTG	WATTAGE A	WATTAGE B	WATTAGE C	CKT NO	LOCATION
CELL#1 ROBOT (FUTURE)	1							100		100							2	CELL#2 ROBOT (FUTURE)
-	3							-		-							4	-
CELL#1 ROBOT (FUTURE)	5							30		30							6	CELL#2 ROBOT (FUTURE)
CELL#1 ROBOT (FUTURE)	7							30		30							8	CELL#2 ROBOT (FUTURE)
CELL#1 ROBOT (FUTURE)	9							20		20							10	CELL#2 ROBOT (FUTURE)
CELL#1 ROBOT (FUTURE)	11							20		20							12	CELL#2 ROBOT (FUTURE)
CELL#1 ROBOT (FUTURE)	13							100		100							14	CELL#2 ROBOT (FUTURE)
-	15							-		-							16	-
CELL#1 ROBOT (FUTURE)	17							30		30							18	CELL#2 ROBOT (FUTURE)
CELL#1 ROBOT (FUTURE)	19							30		30							20	CELL#2 ROBOT (FUTURE)
CELL#1 ROBOT (FUTURE)	21							20		20							22	CELL#2 ROBOT (FUTURE)
CELL#1 ROBOT (FUTURE)	23							20		20							24	CELL#2 ROBOT (FUTURE)
SPACE	25									20							26	SPARE
SPACE	27									20							28	SPARE
SPACE	29									20							30	SPARE
								SUB-TOTAL										

PH A = PH B = PH C =

TOTAL =
LCL x 0.25 =
TOTAL =

ENVIRONMENTAL ENHANCEMENT THRU ENGINEERING

REGISTERED PROFESSIONAL ENGINEER No. E 10290 ELECTRICAL STATE OF CALIFORNIA

SIGNED ON BEHALF OF NORMAN ENGINEERING CO.

REVISION	DATE	DESCRIPTION	BY

NORMAN ENGINEERING CO. CONSULTING ENGINEERS LOS ANGELES, CALIFORNIA

DEPARTMENT OF THE ARMY
SACRAMENTO DISTRICT, CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

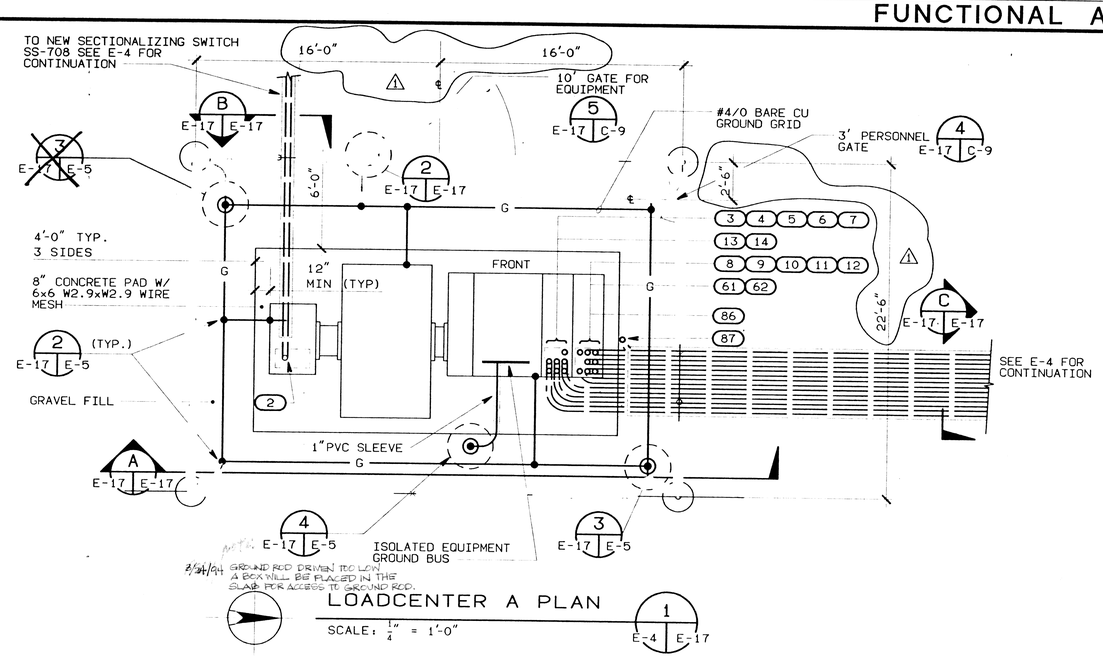
DESIGNED: R. SHEPARD
DRAWN: R. TAGAYUN
CHECKED: L. MYERS

MCCLELLAN AIR FORCE BASE CALIFORNIA
ADAL DEPOT CORROSION CONTROL FACILITY
NEW AIRCRAFT PAINT FACILITY
PANEL SCHEDULES - 2

SUBMITTED: DATE APPROVED: 9/30/92

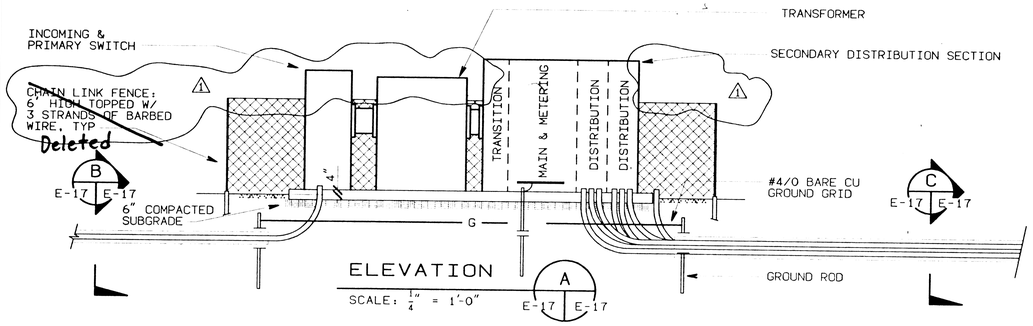
SCALE: NONE SPEC No.: 8529

SHEET: E-16 88 OF 95 FILE No.: 100-25-2051



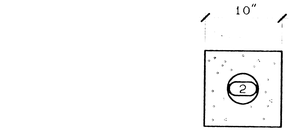
LOADCENTER A PLAN

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



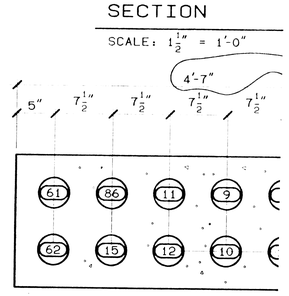
ELEVATION

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



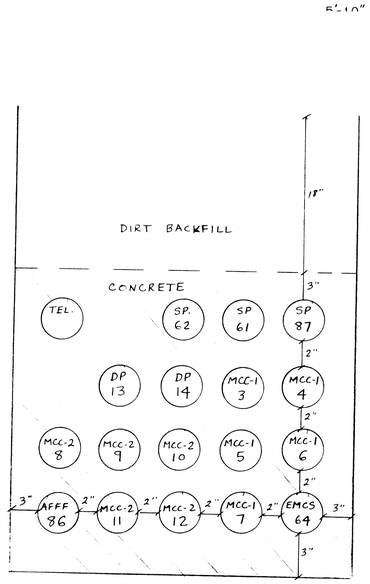
SECTION

SCALE: 1 1/2" = 1'-0"

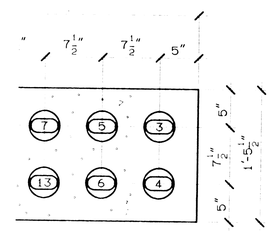


SECTION

SCALE: 1 1/2" = 1'-0" E-4,E

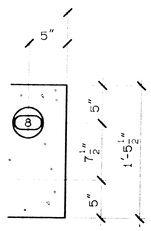


LOOKING NORTH



C

E-4,E-8,E-17,E-18 E-17

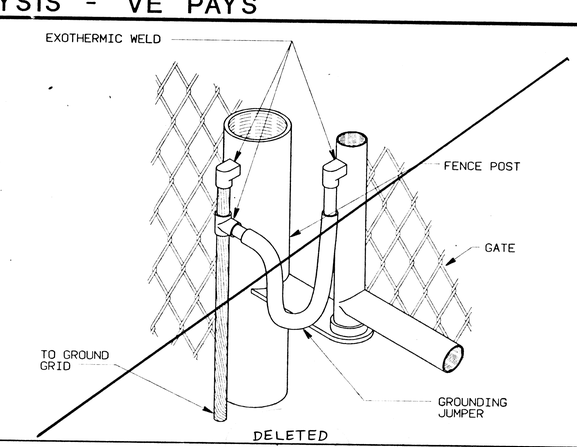


E

E-18 E-17

NOTES:

1. DIMENSIONS SHOWN ARE MINIMUM REQUIREMENTS.
2. SEE DWG E-14 FOR CONDUIT & CABLE SCHEDULE.

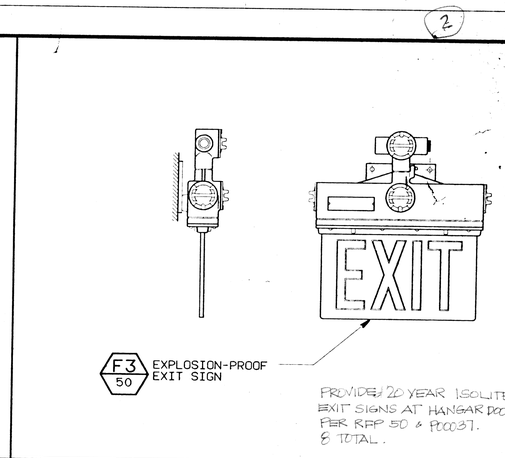


DELETED

GATE GROUNDING JUMPER

NO SCALE

2 E-17 E-17

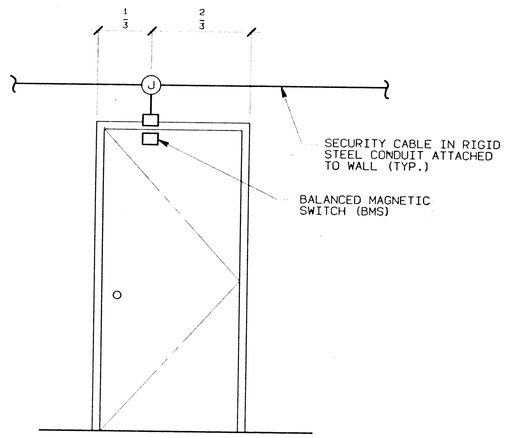


PROVIDE 20 YEAR ISOLITE EXIT SIGNS AT HANGAR DOORS PER REF 50 & PC0037. 8 TOTAL.

HAZARDOUS AREA EXIT SIGN

NO SCALE

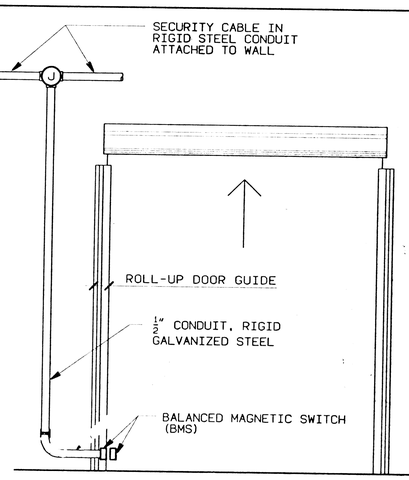
3 E-6,E-7 E-17



BMS @ PERSONNEL DOOR

NO SCALE

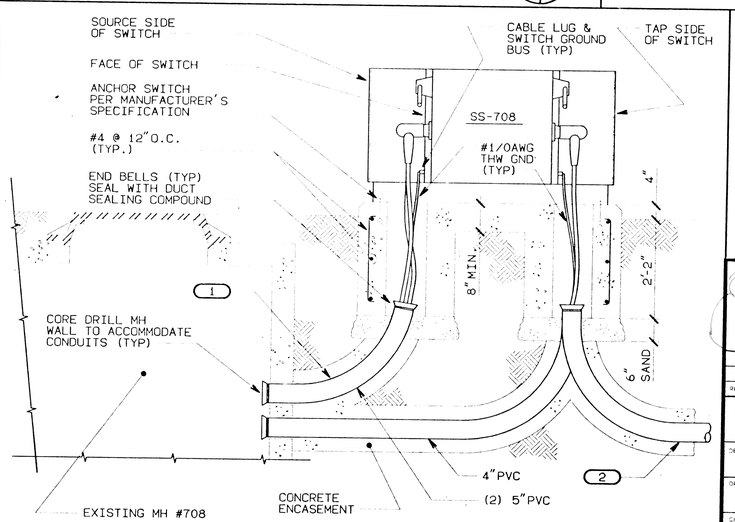
4 E-11,E-12 E-17



BMS @ ROLL-UP DOOR

NO SCALE

5 E-11,E-12 E-17



SECTION

NO SCALE

F E-4 E-17

1/4" = 1'-0" 4' 0 4' 8'

1 1/2" = 1'-0" 1' 0 1'

COLLINS ELECTRICAL CO., INC.
4107 Northgate Blvd.
Sacramento, CA 95834
Phone: (916) 567-1100

Record Drawing

REVISION	DATE	DESCRIPTION	BY	CK'D BY
1	11/25/92	MISCELLANEOUS REVISIONS	RT	

NORMAN ENGINEERING CO.
CONSULTING ENGINEERS LOS ANGELES, CALIFORNIA

DEPARTMENT OF THE ARMY
SACRAMENTO DISTRICT, CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

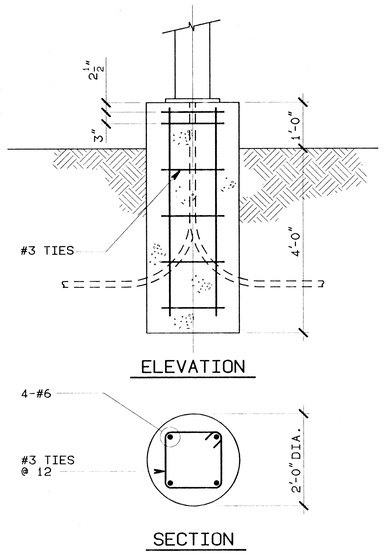
DESIGNED: R. SHEPARD
DRAWN: R. TAGAYUN
CHECKED: L. MYERS
SUBMITTED:

MCCLELLAN AIR FORCE BASE CALIFORNIA
ADAL DEPOT CORROSION CONTROL FACILITY
NEW AIRCRAFT PAINT FACILITY
ELECTRICAL DETAILS - 1

DATE APPROVED: 9/30/92
SCALE: AS NOTED
SPEC. No. 8528
SHEET E-17 89 OF 95
FILE No. 100-25-2051

ENVIRONMENTAL ENHANCEMENT THRU ENGINEERING

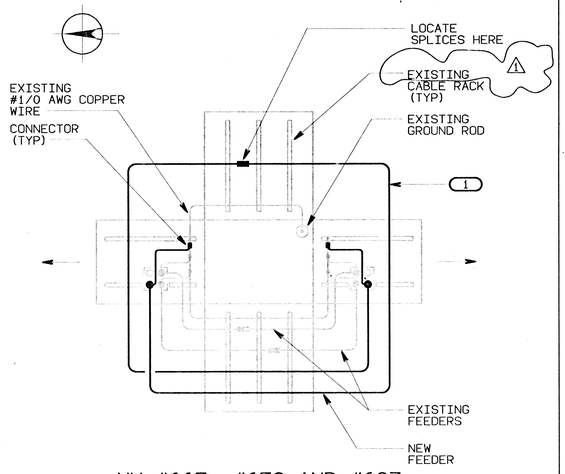
Am-2



LIGHTING POLE BASE DETAIL

SCALE: NONE

2 | E-1 | E-18

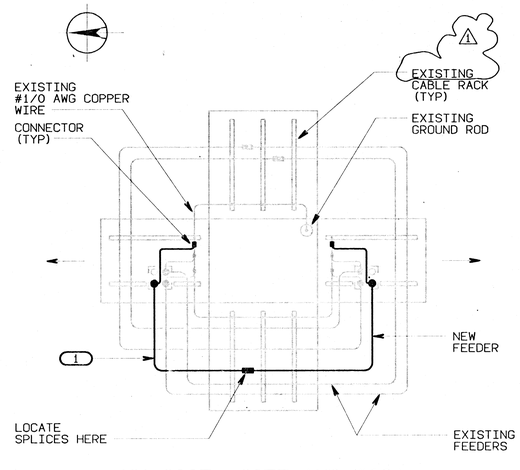


MH #667, #679 AND #683

DETAIL - EXISTING MANHOLES

SCALE: NONE

3 | E-4 | E-18



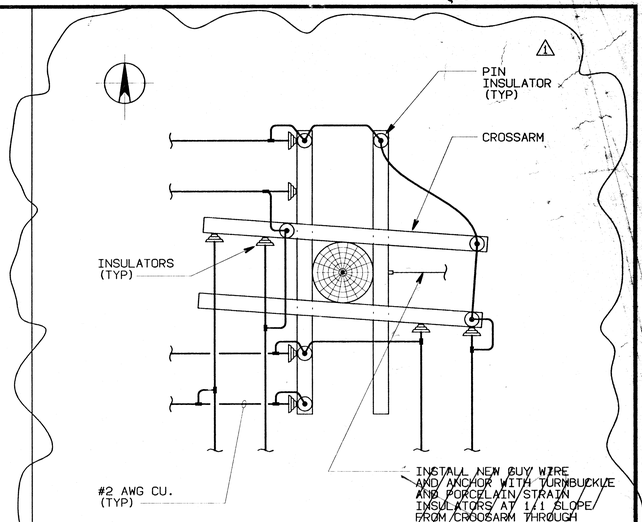
MH #663, #677 AND #681

(MH #708 SIMILAR, EXCEPT NEW FEEDER EXITS TO SS-708)

DETAIL - EXISTING MANHOLES

SCALE: NONE

4 | E-4 | E-18

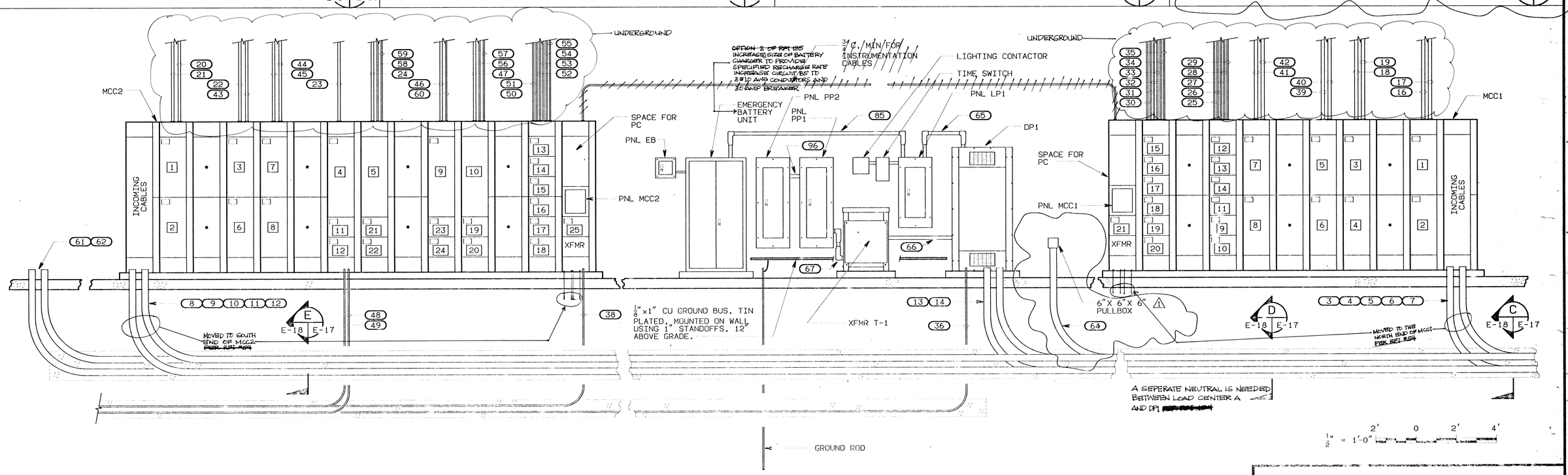


PLAN VIEW

RISER ASSEMBLY FOR POLE #618

SCALE: NONE

5 | E-4 | E-18



½" = 1'-0"

NOTES:

1. OUTDOOR ENCLOSURES OF MOTOR CONTROL CENTERS OMITTED FOR CLARITY.
2. [X] INDICATES CIRCUIT NUMBER. SEE SINGLE-LINE DIAGRAM DWG E-3.
0. • INDICATES SPACE FOR CAPACITORS AND PPCS EQUIPMENT.
4. ALL EQUIPMENT SHOWN SHALL HAVE NEMA 3R OR OTHER SUITABLE OUTDOOR ENCLOSURES.

Reference your RFI-149, dated September 28, 1994, regarding ground bus at service building.

Specification Section 16415, Paragraph 3.1.2, states in part "... noncurrent-carrying metal parts of electrical equipment shall be effectively grounded by bonding to the bus. The ground bus shall be bonded to both the entrance ground, and to a ground rod or rods..."

Therefore all the electrical equipment enclosures in this equipment area shall be bonded to the ground bus. Some of the electrical equipment in this area are MCC1, MCC2, DP1, LP1, PP1, PP2, ED, Emergency Battery Unit, etc. Additionally, bonding of the neutral point of the secondary side of Transformer T1 to the presently required adjacent ground rod is acceptable, provided the grounding electrode conductor is buried and fusion welded to the ground rod. Also, please note that other connections to this ground bus are shown on the contract drawings.

SWITCHGEAR ELEVATION

SCALE: ½" = 1'-0"

1 | E-5, E-8, E-9 | E-18

REVISION	DATE	DESCRIPTION	BY	BY
1	11/25/92	MISCELLANEOUS REVISIONS	RT	

NORMAN ENGINEERING CO.
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DEPARTMENT OF THE ARMY
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SUBMITTED:
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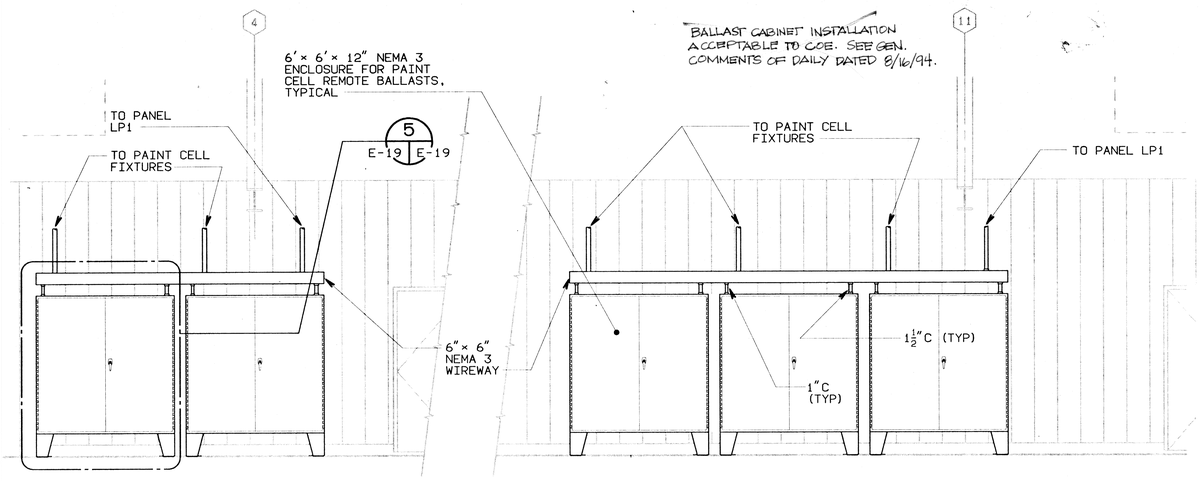
MCCLELLAN AIR FORCE BASE CALIFORNIA
ADAL DEPOT CORROSION CONTROL FACILITY
NEW AIRCRAFT PAINT FACILITY
ELECTRICAL DETAILS - 2

SCALE: AS NOTED | SPEC No: 8529
SHEET: E-18 90 OF 95 | FILE No: 100-25-2051

Am-2 BF

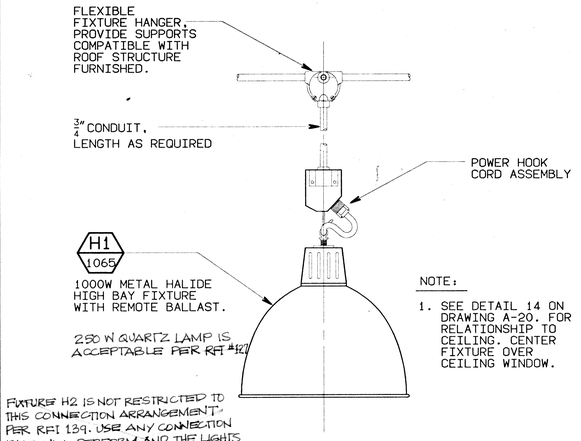
7



PAINT CELL REMOTE BALLAST ENCLOSURES - SOUTH HALF (NORTH HALF OPPOSITE)

SCALE: ⅜" = 1'-0"

1 | E-6,E-7 | E-19

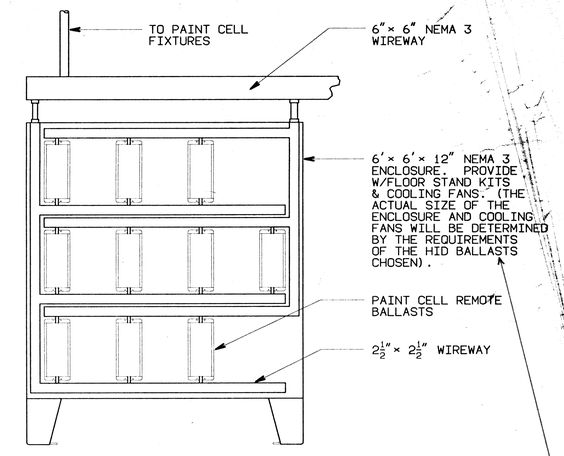


FIXTURE H2 IS NOT RESTRICTED TO THIS CONNECTION ARRANGEMENT PER RFI 139. USE ANY CONNECTION THAT WILL PERFORM AND THE LIGHTS FUNCTION AS SPECIFIED.

PAINT CELL LIGHTING FIXTURE

SCALE: NONE

2 | E-6,E-7 | E-19

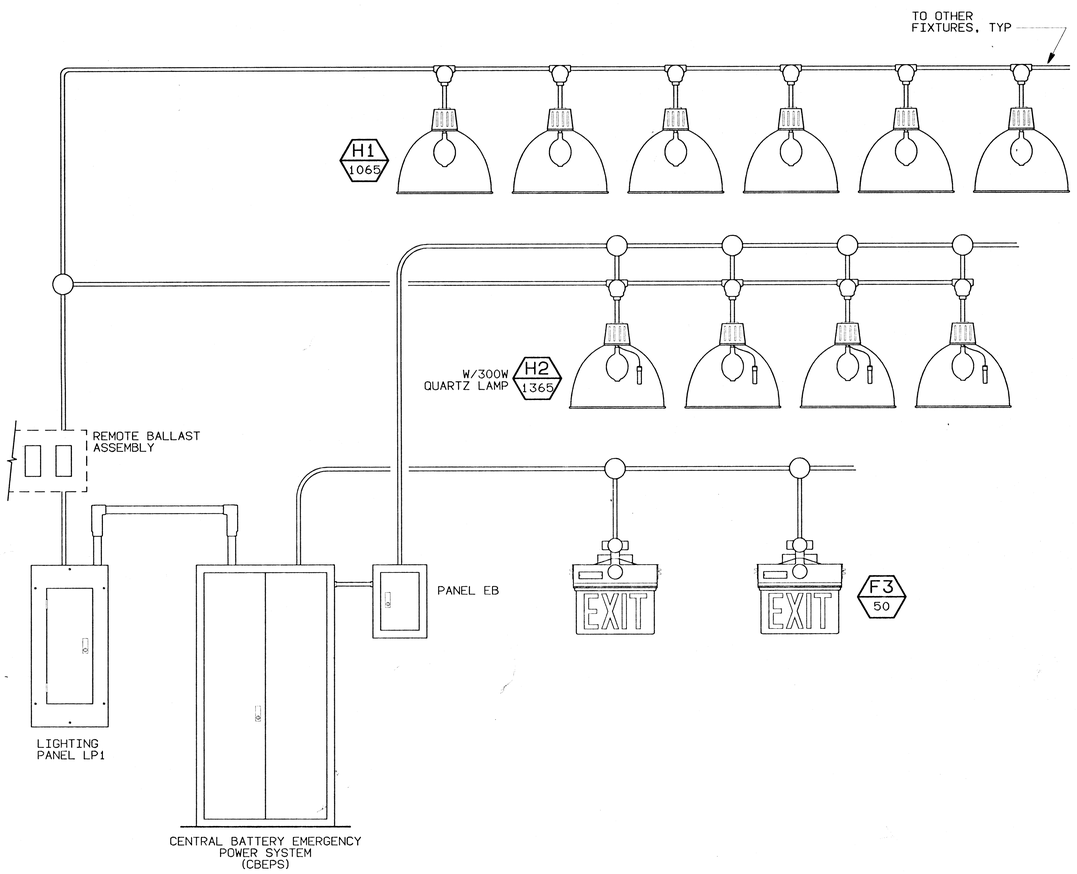


NOTE: DOORS OMITTED FOR CLARITY.

REMOTE BALLAST ENCLOSURE

SCALE: ¾" = 1'-0"

5 | E-19 | E-19

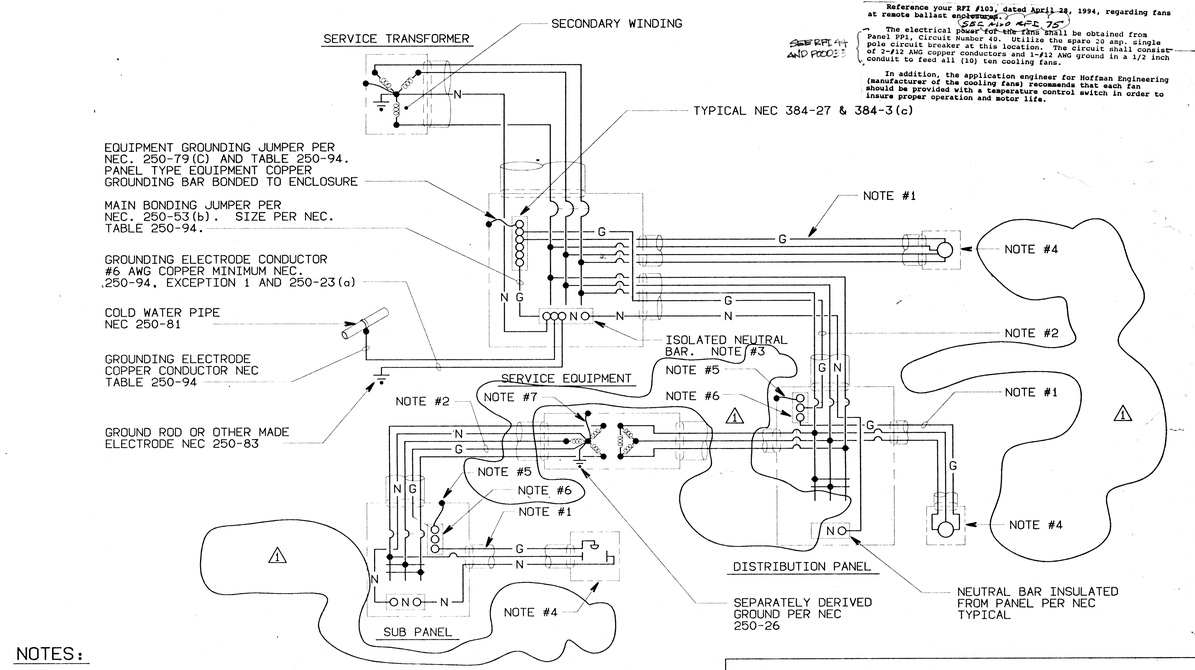


- LIGHT FIXTURE L-1 DOES NOT CONNECT TO THE EMERGENCY LIGHTING CIRCUIT PER RFI #51.
- FIXTURE H2 IS NOT RESTRICTED TO THE CONNECTION ARRANGEMENT SHOWN IN 2/E19 USE ANY CONNECTION DESIRED THAT WILL PERFORM AND THE LIGHTS FUNCTION AS SPECIFIED

EMERGENCY LIGHTING SCHEMATIC DIAGRAM

SCALE: NONE

3 | E-6,E-7 | E-19



NOTES:

1. ALL EQUIPMENT GROUNDING CONDUCTORS FOR RECEPTACLE BRANCH CIRCUITS SHALL BE SIZED PER NEC TABLE 250-95. MULTIPLE BRANCH CIRCUIT HOMERUNS SHALL USE ONLY ONE EQUIPMENT GROUNDING CONDUCTOR.
2. SIZE EQUIPMENT GROUNDING CONDUCTORS FOR FEEDER CIRCUITS PER NEC TABLE 250-95.
3. SERVICE CONDUCTOR GROUNDING IS SHOWN IN ACCORDANCE WITH NEC 250-23(a). WHEN GROUND FAULT PROTECTION IS REQUIRED, THE ARRANGEMENT SHOWN IS SUITABLE FOR ZERO SEQUENCE SENSING. FOR GROUNDING CONDUCTOR SENSING, THE GROUNDING ARRANGEMENT MUST BE REVISED PER EXCEPTION NO. 5 OF NEC 250-23(a) AND THE MAIN BONDING JUMPER AS SHOWN MUST BE REMOVED AND THE EQUIPMENT GROUNDING JUMPER BECOMES THE MAIN BONDING JUMPER.
4. TYPICAL RECEPTACLE WITH EQUIPMENT GROUDING CONDUCTOR. GROUND PER NEC 250-74.
5. EQUIPMENT BONDING JUMPER PER NEC 250-79(d) AND TABLE 250-95.
6. TERMINAL BAR NEC 384-27.
7. SIZE PER NEC 250-26 (a) AND TABLE 250-94.

TYPICAL RECEPTACLE GROUNDING SYSTEM

SCALE: NONE

4 | - | E-19

⅜" = 1'-0" 2' 0 2' 4' 6'

¾" = 1'-0" 1' 0 1' 2' 3'

REVISION	DATE	DESCRIPTION	BY	BY
1	11/25/92	MISCELLANEOUS REVISIONS	RT	.

NORMAN ENGINEERING CO.
CONSULTING ENGINEERS LOS ANGELES, CALIFORNIA

DEPARTMENT OF THE ARMY
SACRAMENTO DISTRICT, CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

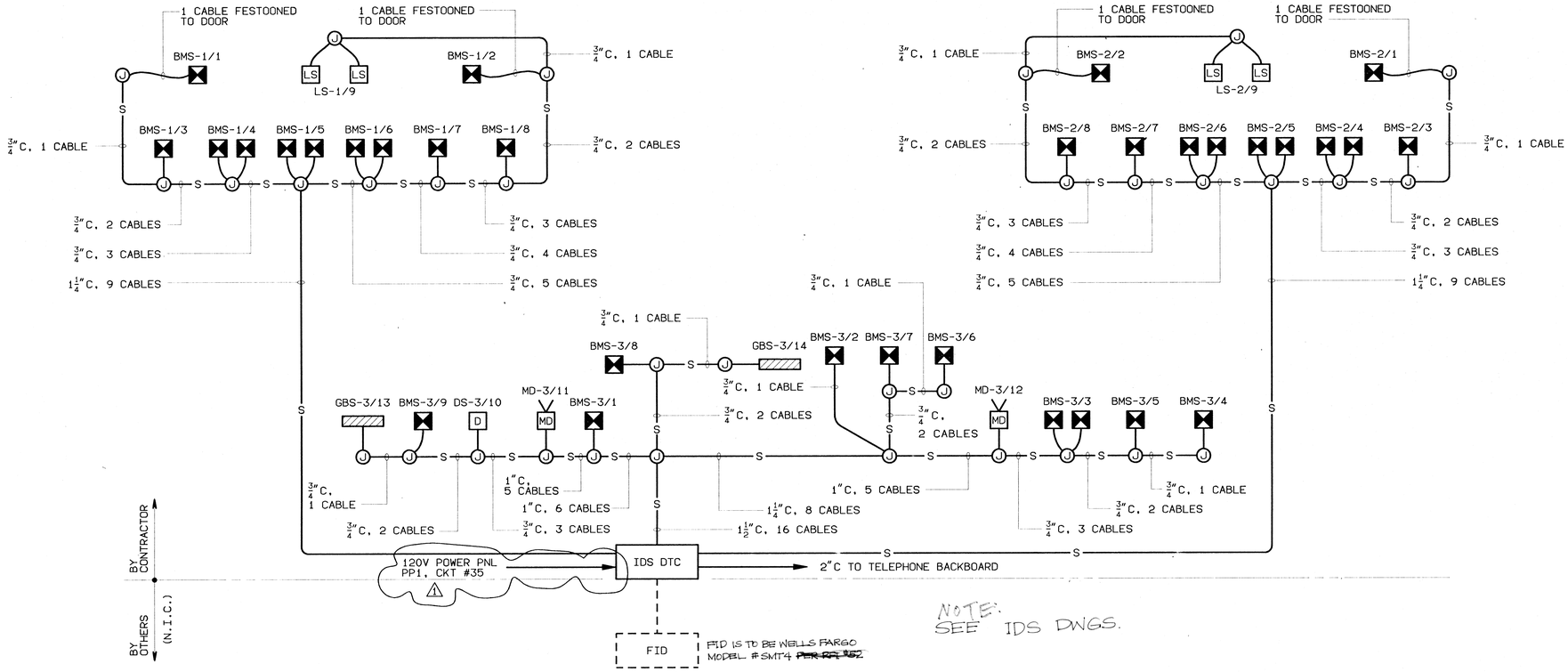
DESIGNED: R. SHEPARD
DRAWN: R. TAGAYUN
CHECKED: L. MYERS

MCCLELLAN AIR FORCE BASE CALIFORNIA
ADAL DEPOT CORROSION CONTROL FACILITY
NEW AIRCRAFT PAINT FACILITY
ELECTRICAL DETAILS - 3

SUBMITTED:
DATE APPROVED: 9/30/92
SCALE: AS NOTED SPEC No: 8529
SHEET E-19 91 OF 95
FILE No: 100-25-2051

ENVIRONMENTAL ENHANCEMENT THRU ENGINEERING

Am-2 BE



NOTES:

1. SEE DWGS. E-11 AND E-12 FOR LOCATION OF EQUIPMENT & DEVICES.
2. ALL CABLES SHALL BE TWISTED PAIR SHIELDED #18, UNO.

SECURITY BLOCK DIAGRAM

SCALE: NONE

ENVIRONMENTAL ENHANCEMENT THRU ENGINEERING

REVISION	DATE	DESCRIPTION	BY	BY
1	11/25/92	MISCELLANEOUS REVISIONS	RT	

NORMAN ENGINEERING CO.
CONSULTING ENGINEERS LOS ANGELES, CALIFORNIA

DEPARTMENT OF THE ARMY
SACRAMENTO DISTRICT, CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

DESIGNED: R. SHEPARD
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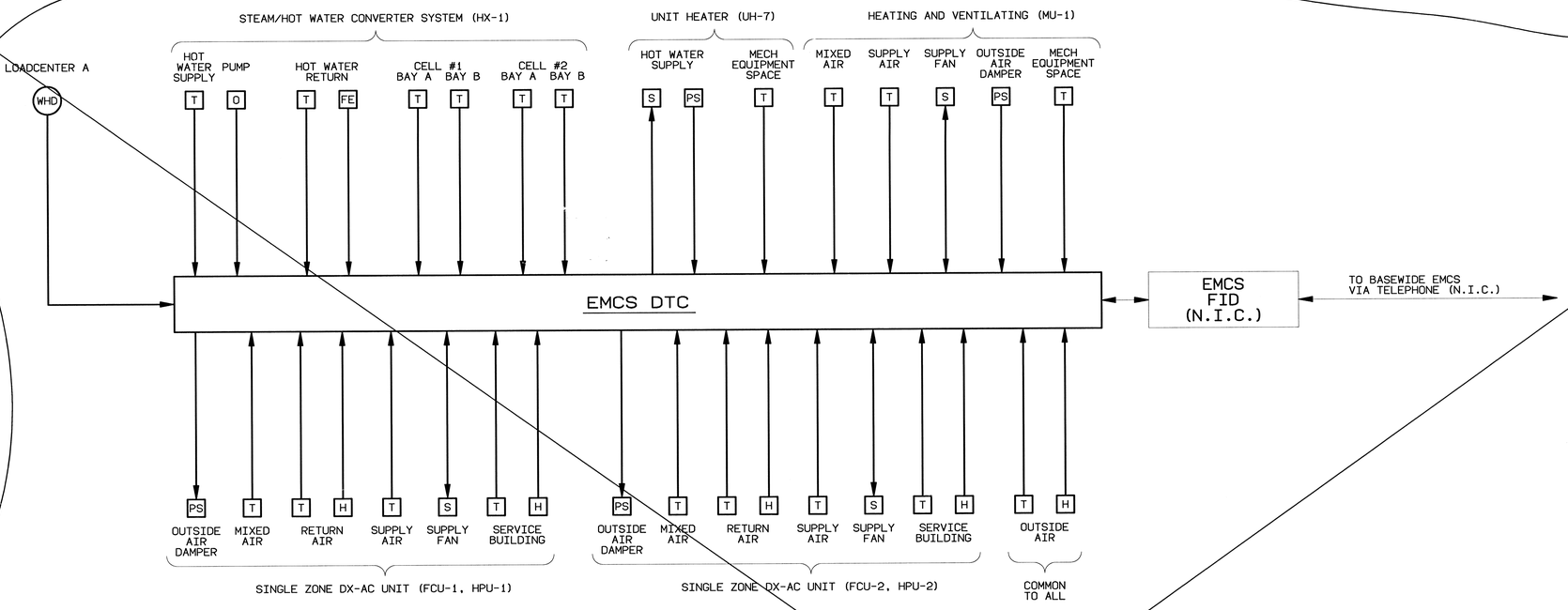
MCCLELLAN AIR FORCE BASE CALIFORNIA
ADAL DEPOT CORROSION CONTROL FACILITY
NEW AIRCRAFT PAINT FACILITY
SECURITY BLOCK DIAGRAM

SUBMITTED:
DATE APPROVED: 9/30/92
SCALE: NONE
SPEC No. 8529
SHEET E-20 92 OF 95
FILE No. 100-25-2051

Am-2 DF



NOTES:

1. SEE DWG'S M-13 AND M-14 FOR EMCS SCHEMATICS AND SCHEDULES.

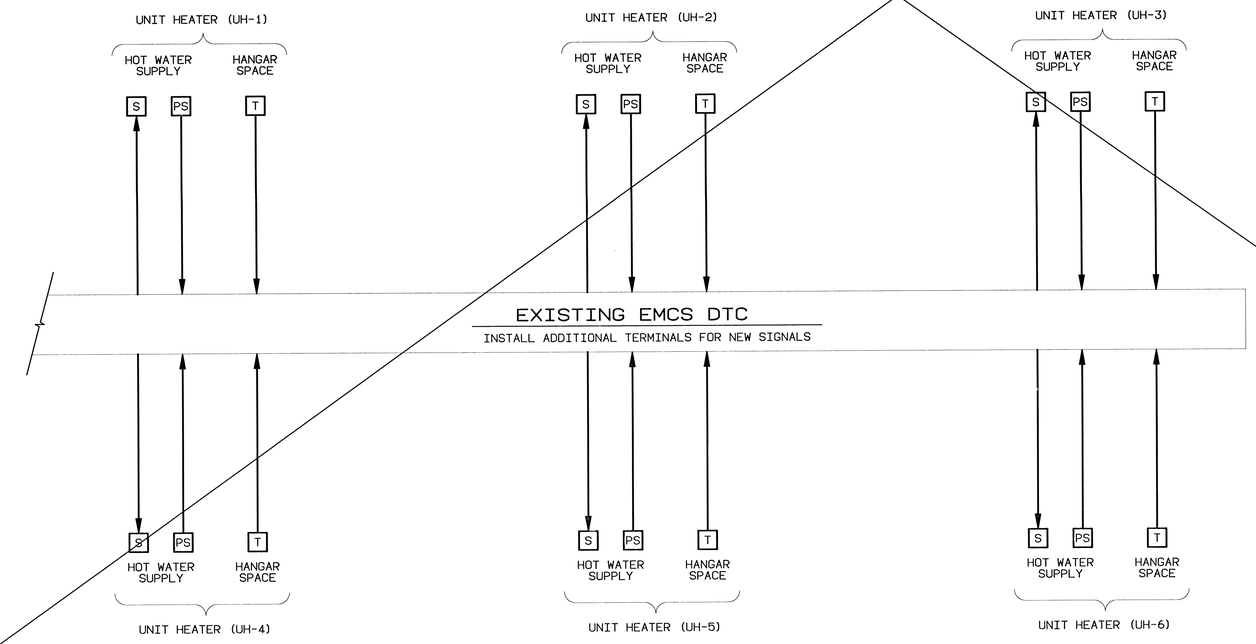
LEGEND:

WHD	WATT-HOUR DEMAND METER
T	TEMPERATURE INDICATOR
O	ON-OFF STATUS SIGNAL
FE	FLOW ELEMENT
S	START-STOP INTERFACE
PS	POSITION
H	HUMIDITY INDICATION

ENERGY MONITORING & CONTROL SYSTEM BLOCK DIAGRAM

SCALE: NONE

1 / E-21



BUILDING 692 EMCS BLOCK DIAGRAM

SCALE: NONE

2 / E-21

REVISION	DATE	DESCRIPTION	BY	BY
1				
1	11/25/92	DELETED	RT	.

NORMAN ENGINEERING CO.
CONSULTING ENGINEERS LOS ANGELES, CALIFORNIA

DEPARTMENT OF THE ARMY
SACRAMENTO DISTRICT, CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

DESIGNED: R. SHEPARD
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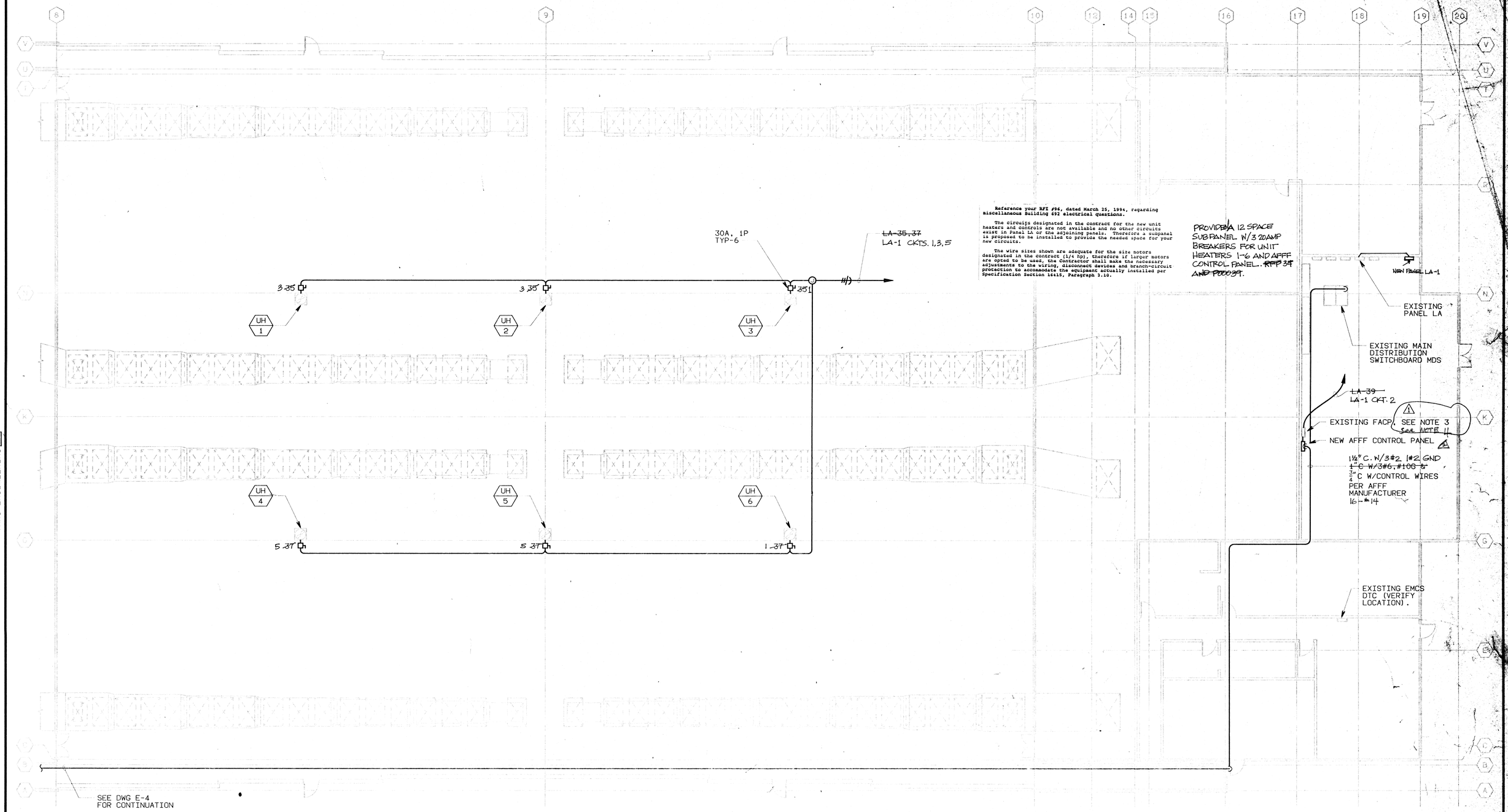
MCCLELLAN AIR FORCE BASE CALIFORNIA
ADAL DEPOT CORROSION CONTROL FACILITY
NEW AIRCRAFT PAINT FACILITY
EMCS BLOCK DIAGRAM

SUBMITTED:
DATE APPROVED: 9/30/92
SCALE: NONE
SPEC No: 8529
SHEET E-21 93 OF 95
FILE No: 100-25-2051

Am-2

ENVIRONMENTAL ENHANCEMENT THRU ENGINEERING

8



ENVIRONMENTAL ENHANCEMENT THRU ENGINEERING

POWER PLAN

SCALE: $\frac{1}{8}$" = 1'-0"

NOTES:

1. THE AREA BOUNDED BY COLUMNS 8, 10, A AND V, INCLUDING ALL AREAS WITHIN 3 FEET OF DOORS ADJOINING THIS AREA IS CLASSIFIED AS CLASS I, DIVISION 1, GROUP D. ALL NEW WIRING AND EQUIPMENT WITHIN THESE AREAS TO BE PER NEC ART.501.
2. RUN CONDUIT ON EXTERIOR OF BUILDING ABOVE DOORS.
3. EXISTING FACP IS FCI MODEL FC 72 SERIES, 20 ZONES WITH SWITCH CONTROL AND RELAY CARD. CONNECT ALARM OUTPUT CONTACT FROM NEW AFFF CONTROL PANEL TO SPARE INPUT ZONE IN EXISTING FACP.
4. ~~COE AGREED THAT EXISTING PANEL IS INSUFFICIENT AND/OR NEW PANEL NEEDS TO BE PROVIDED PER RFI 692. PROVIDE NEW 6-ZONE FA SUBPANEL IN 692 PER RFP 10 AND P00032~~

8' 0 8' 16'
$\frac{1}{8}$" = 1'-0"

REVISION	DATE	DESCRIPTION	BY	BY
1	11/25/92	ADDED NOTE #3	RT	

NORMAN ENGINEERING CO.
CONSULTING ENGINEERS LOS ANGELES, CALIFORNIA

DEPARTMENT OF THE ARMY
SACRAMENTO DISTRICT, CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

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MCCLELLAN AIR FORCE BASE CALIFORNIA
ADAL DEPOT CORROSION CONTROL FACILITY
EXISTING BUILDING 692
POWER PLAN

SUBMITTED: DATE APPROVED: 9/30/92
SCALE: $\frac{1}{8}$" = 1'-0" SHEET NO. 8529
SHEET E-22 94 OF 95
FILE NO. 100-25-205

Amr2

EXISTING PANEL LA

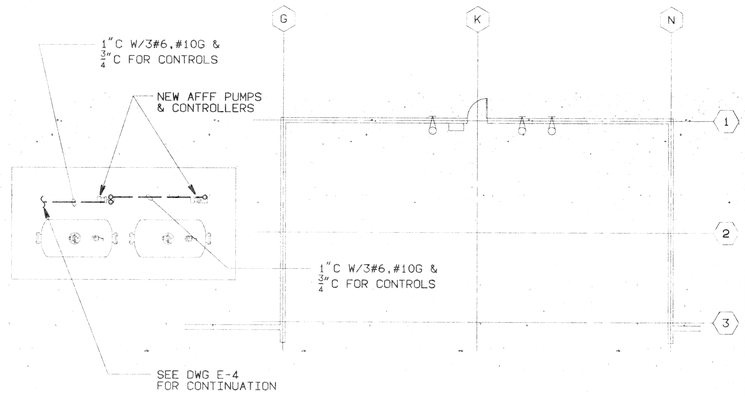
BUS 200A — BREAKER A — 208/120 V — 3Ø — 4 W

LOCATION	CKT NO	WATTAGE A	WATTAGE B	WATTAGE C	LTG	REC	OTHER	BKR	A B C	BKR	OTHER	REC	LTG	WATTAGE A	WATTAGE B	WATTAGE C	CKT NO	LOCATION
EXISTING	1	900						20		20				1000			2	EXISTING
	3		900					20		20					1000		4	
	5			1200				20		20						800	6	
	7	1500						20		20				1000			8	
	9		1300					20		20					800		10	
	11			100				20		20						1000	12	
	13	800						20		20				800			14	
	15		1000					20		20					1200		16	
	17			1200				20		20						1200	18	
	19	1200						20		20				1200			20	
	21		1200					20		20					1200		22	
	23			1200				20		20						1200	24	
SPARE	25							20		20				1200			26	
EXISTING	27		1200					20		20					1200		28	
	29			1200				20		20						1200	30	
	31	1200						20		20							32	SPARE
	33		1200					20		20							34	
* UH-1,UH-2,UH-3	35			1116			3	20		20							36	
* UH-4,UH-5,UH-6	37	1116					3	20		20							38	
** AFFF CONTROL PNL	39		500				1	20		20							40	
SPARE	41							20		20							42	
		6716	7300	6016					SUB-TOTAL					5200	5400	5400		

PH A = 11916 PH B = 12700 PH C = 11416

TOTAL = 36,032
LCL x 0.25 =
TOTAL = 100.1A

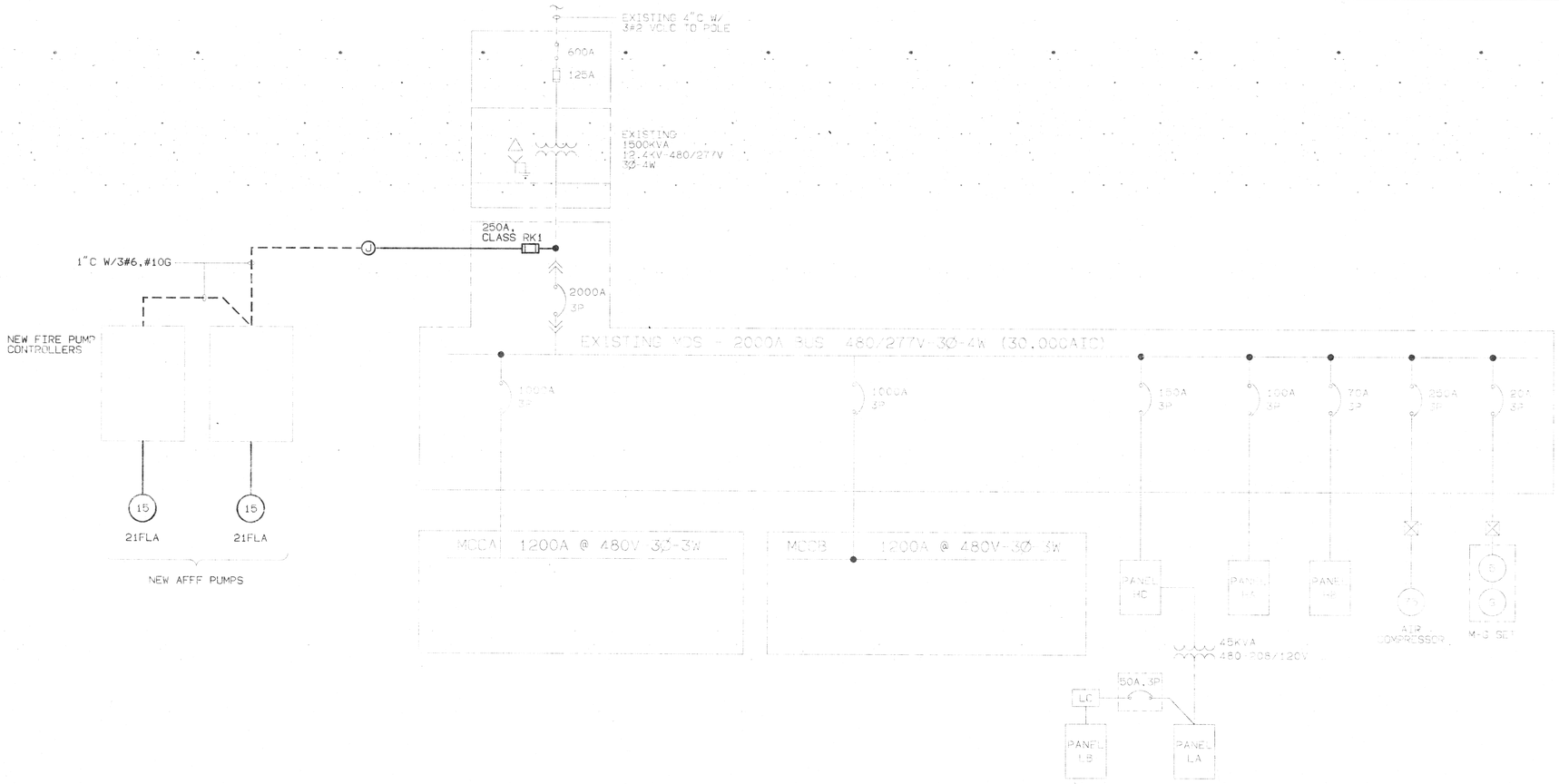
* USE EXISTING 20A SPARE BREAKERS
** PROVIDE LOCK-ON DEVICE



BUILDING 692 NEW AFFF PUMPS

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

1 | E-4 | E-23



BUILDING 692 SINGLE-LINE DIAGRAM

SCALE: NONE

2 | E-23 | E-23

ENVIRONMENTAL ENHANCEMENT THRU ENGINEERING

REGISTERED PROFESSIONAL ENGINEER PETER T. KITZ No. E 10290 ELECTRICAL STATE OF CALIFORNIA

SIGNED ON BEHALF OF NORMAN ENGINEERING CO.

1/8" = 1'-0" 8' 0 8'

REVISION	DATE	DESCRIPTION	BY

NORMAN ENGINEERING CO. — CONSULTING ENGINEERS — LOS ANGELES, CALIFORNIA

DEPARTMENT OF THE ARMY
SACRAMENTO DISTRICT, CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

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CHECKED: L. MYERS

MCCLELLAN AIR FORCE BASE CALIFORNIA
ADAL DEPOT CORROSION CONTROL FACILITY
EXISTING BUILDING 692
PANEL SCHEDULE, SINGLE LINE DIAGRAM & DETAILS

SUBMITTED: [signature] DATE APPROVED: 9/30/92

SCALE: AS NOTED SPEC No: 8529
SHEET: E-23 65 OF 95 FILE No: 100-25-2051