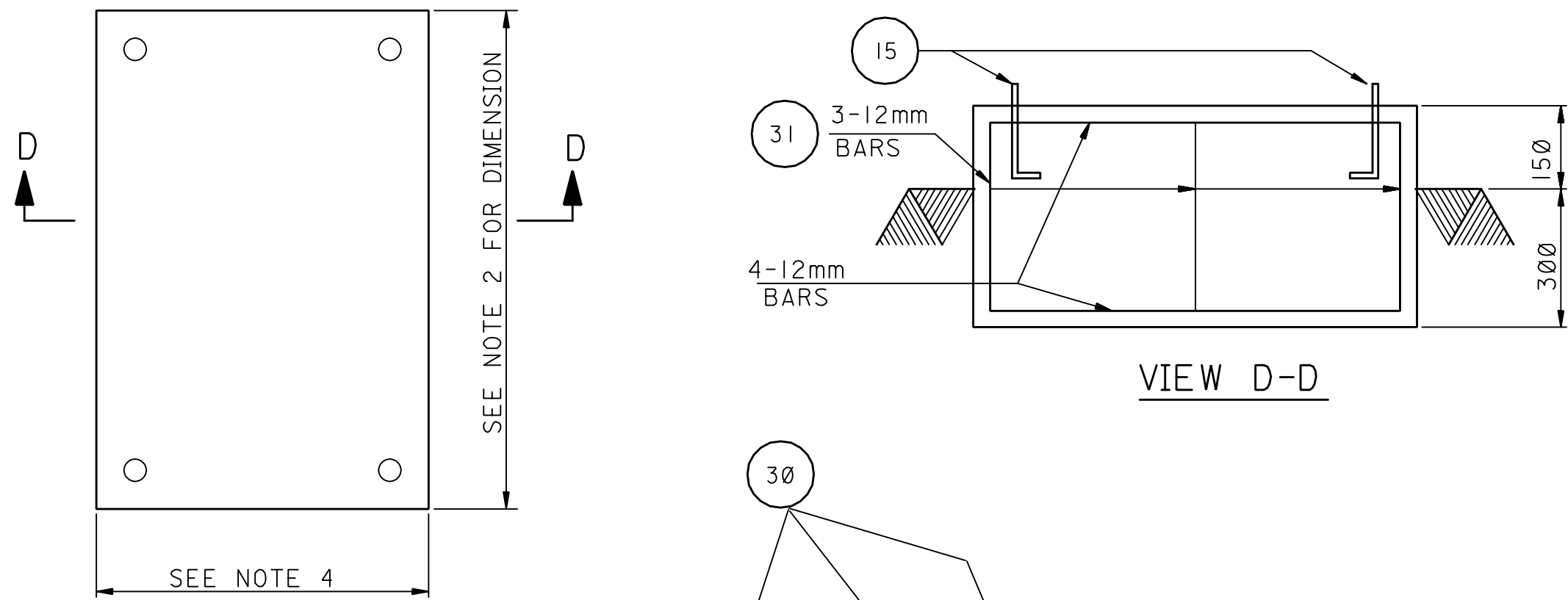
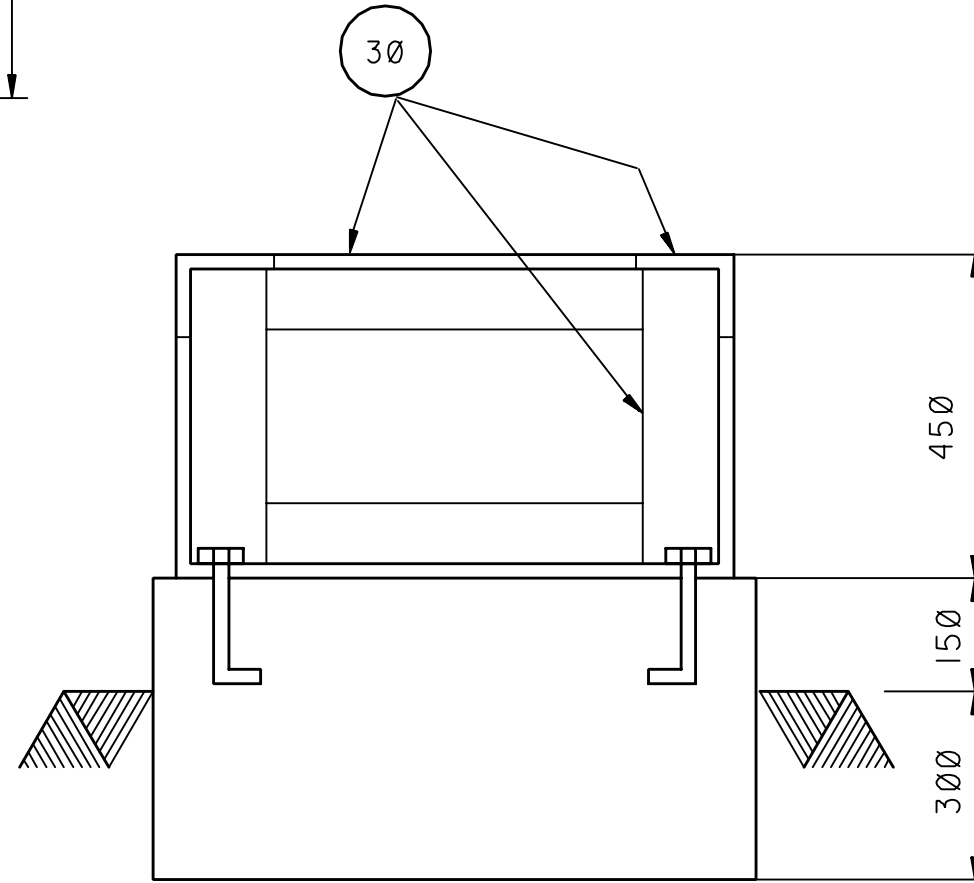




TOP VIEW

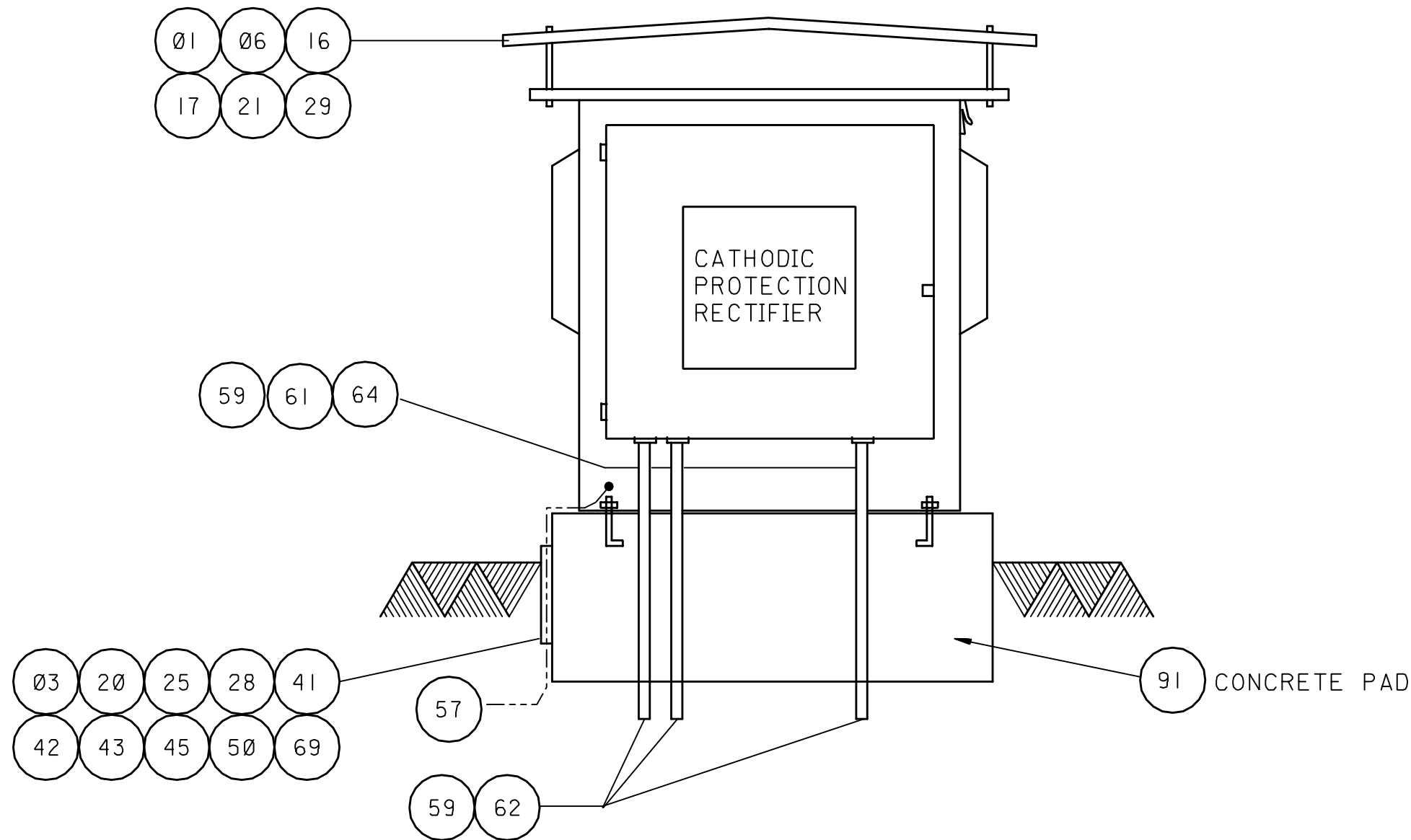
VIEW D-D



PAD WITH ELEVATED
STEEL FRAME

(SEE NOTE 5)

DETAIL 1
PAD FOUNDATION DETAILS



DETAIL 2
INSTALLATION DETAILS
PAD MOUNTED RECTIFIER

NO.	SAMS NO.	SAP NO.	DESCRIPTION	ISSUE UNIT
1	01-110-015	1000000618	PIPE, STEEL, GALV. 1/2" NOM. DIA. T&C	JT
2	01-514-601	1000001711	PIPE, PLASTIC SEWER, 1/2" DIA.	JT
3	01-515-441	1000001728	PIPE, PVC, 1 1/2" DIA. 6M. LONG	JT
4				
5				
6	06-386-098	1000100210	RUBBER SHEET, BLACK 1/8" THK.	SH
7	08-515-850	1000168177	DYMO TAPE	RO
8	09-240-316	D/C	CEMENT	SK
9	09-246-427	1000187728	AGGREGATE	CM
10	09-539-224	1000192534	LUMBER, REDWOOD, 4"x4" SZ. S4S	PC
11	09-630-785	1000195650	ENAMEL, HIGH GLOSS, WHITE 1 GAL/CAN	CN
12	09-749-847	1000198774	VARNISH-SPAR, CLEAR 1 GAL/CAN	CN
13				
14				
15	10-004-163	D/C	BOLTS, ANCHOR 1/2" DIA. TYPE 2	EA
16	10-077-330	1000209748	BOLT, ROUND HEAD, GALV. 3/8"x6" LONG WITH NUT	EA
17	10-829-411	1000228863	LOCK WASHER, 3/8" DIA. BOLT SIZE	EA
18	10-887-832	1000231808	WASHER, FLAT ROUND FOR 1/4" DIA. BOLT	EA
19	10-887-856	1000231862	WASHER, 3/8" DIA. BOLT	LB
20	10-887-864	1000231866	WASHER, 7/4" DIA. BOLT SIZE	LB
21	10-888-355	1000231876	WASHER, FLAT, FOR 3/8" DIA. BOLT SIZE	EA
22	10-891-216	1000233194	WASHER, SPRING FOR 3/4" DIA. BOLT	EA
23				
24				
25	11-268-095	1000256136	SCREW LAG 1/4"x1 1/2"	EA
26	11-268-131	1000256270	LAG, SCREW, 3/8" DIA. x 3" LONG	PK
27	11-566-449	1000261970	WOOD, SCREW NO. 8 x 1: LONG	PK
28	11-805-514	1000268875	ANCHOR, MASONRY, 1/4" DIA. x 1" LONG	EA
29	12-159-426	D/C	SHEET, STEEL, GA. 16, GAKV.	SH
30	12-413-043	1000279965	ANGLE, 3x3"x3/8"	FT
31	12-720-715	1000283737	BAR, CONC. REINF. 12mm DIA.	MT
32				
33				
34				
35	14-103-480	1000364911	CLAMP, GROUND FOR 3/4" DIA. ROD #2/0 AWG	EA
36	14-116-256	1000367198	FLEXIBLE COPPER BRAID, 24" LONG	EA
37	14-118-420	1000367503	CONNECTOR, GROUND, FOR 2" DIA. PIPE	EA
38	14-118-430	1000367505	CONNECTOR, GROUND, FOR 3" DIA. PIPE	EA
39	14-118-435	1000367509	CONNECTOR, GROUND, FOR 4" DIA. PIPE	EA
40	14-132-938		CONNECTOR, GROUND, FOR 4" DIA. PIPE	EA
41	14-188-844	1000374486	LOCK WASHER 1/2" DIA. SIL. BRONZE	LB
42	14-198-120	1000374504	GROUNDING LUG, ONE HOLE, NEMA PAD FOR 25mm ² WIRE	EA
43	14-218-184	1000376394	NUT, SILICON BRONZE, 1/2" -13	EA
44	14-246-542	1000379015	ROD, GROUN, 3/8" DIA. x 8FT. LONG	EA
45	14-256-445	1000379241	CAP, SCREW, SILICON BRONZE 1/2" -13x1 1/1" LONG	ES
46	14-489-379	1000390140	BOLT, MACHINE 3/4"x24" LONG	EA
47	14-576-400	1000392427	MOLDING GROUND WIRE 8FT LONG	EA
48	14-584-165	1000392491	NUT, LOCK FOR 3/8" DIA. BOLT	EA
49	14-631-510	1000393579	STAPLE, MOLDING, COPPER COATED	EA
50	14-872-276	1000405805	DUXSEAL SEALING COPOUND	PK
51	14-909-975	1000408271	TAPE, ELECTRICAL INS.	RO
52				
53				
54	15-008-872	1000412342	GROUND WIRE, COPPER, BARE, 70 mm ²	MT
55	15-044-438	1000413991	GROUND WIRE, COPPER, WELD, 3/6" DIA.	FT
56	15-119-105	1000417767	CABLE, DIRECT BURIAL, 3/C-16mm ²	MT
57	15-195-390	1000419988	WIRE, BLDG, TYPE NYA, 25mm ² GREEN INSULATION	MT
58	15-288-050	1000421428	BUSHING, CONDUIT, 1" SIZE	EA
59	15-288-065	1000421442	BUSHING, CONDUIT, 2" SIZE	EA
60	15-314-914	1000422512	CONDUIT, STEEL, 1" NOM. SIZE PVC COATED	PC
61	15-314-918	1000422518	CONDUIT, STEEL, 2" NOM. SIZE PVC COATED	PC
62	15-368-111	1000425177	ELBOW, CONDUIT, 2" DIA. 90" PVC COATED	EA
63	15-421-316	1000426123	LOCK NUT, 1" DIA. COND. SIZE	EA
64	15-421-330	1000426141	LOCK NUT, 2" DIA. COND. SIZE	EA
65	15-429-730	1000426576	LOCKNUT WITH SPRING 1/4" -20	EA
66	15-429-884	1000426753	CAP SCREW, STEEL 1/4" x 1" LONG	EA
67	15-430-040	1000427057	CHANNEL UNISTRUT-P-1000, 1-5/8: x 1-5/8"	PC
68	15-444-336	1000427879	NIPPLE, CONDUIT, 1" x 2" LONG	EA
69	15-510-825		STRAP, CONDUIT, 1 1/2" DIA., ONE HOLE	EA
70	15-511-223	D/C	STRAP, CONDUIT, FOR 1" SIZE 2-HOLE	EA
71	15-511-239	1000429321	STRAP, CONDUIT, 2" DIA., ONE HOLE	EA
72	15-537-262	1000430203	UNION, CONDUIT, 1" SIZE	EA
73	15-368-105	1000425159	ELBOW, CONDUIT, 1" DIA 90" PVC COATED	EA
74				
75	16-XXX-XXX	1000000618	CIRCUIT BREAKER PER DESIGN	EA
76	17-858-7XX	1000000618	CABLE, CP, HMWPE, BLACK, STRANDED	MT
77	17-884-XXX	1000000618	RECTIFIER	EA
78	20-476-818	1000112752	CARTRIDGE, FOR THERMIT WELD, CADWELD #90	BX
79	20-476-820	1000112852	POWER THERMIT WELD #115	BX
80	20-477-060	1000113141	VAMP L-160 FOR CADWELD	EA
81	20-494-345	1000115070	MOLD, THERMIT WELD, TYPE HDTAC 2GIL	EA
82	20-495-421	1000115788	MOLD, CABLE TO CABLE 2/0-2/0 CADWELD NO-SSC-Y4	EA
83				
84				
85	21-565-054	1000131755	WARNING SING, SINGLE POINTED ARROW	EA
86	21-565-135	1000131800	WARNING SING, DOUBLE POINTED ARROW	EA
87	21-565-483	1000131961	SING, DANGER HIGH VOLTAGE	ES
88	21-565-890	1000132031	WARNING SING	EA
89	21-568-222	1000132098	TAPE, WARNING, TERRATAPE BURIED CABLE WARNING	RO
90	26-006-140	1000173668	INSULATING OIL FOR X FMR. RECT. ISO 15 VISCOSITY	DM
91	CONST. SUPP.		CONCRETE, READY MIXED	CM
92	CONST. SUPP.		WOOD POLE	EA

- NOTES:**
(CONTINUED FROM SHEET 001)
- POLE HARDWARE, RECTIFIER AND A/C SERVICE COMPONENTS SHALL BE COMMONLY GROUNDED.
 - A.C. CIRCUIT BREAKER OR FUSED DISCONNECT SHALL BE INSTALLED WITHIN THREE (3) METERS OF RECTIFIER AND 1.7 METERS FROM GRADE LEVEL.
 - RECTIFIERS SHALL BE LOCATED WITH SUFFICIENT OVERHEAD CLEARANCE TO FACILITATE CRANE REMOVAL OF INTERNAL COMPONENTS WITHOUT OBSTRUCTION. LOCATIONS WITHIN PLANTS SHALL ALLOW FOR ACCESS TO RECTIFIER WITH CRANE EQUIPMENT.
 - IF GUARD POSTS ARE USED, MINIMUM OF FOUR POSTS SHALL BE INSTALLED. THE SPACING BETWEEN THE POSTS AND RECTIFIER SHALL BE AT LEAST 1 METER.
 - JUNCTION BOXES SHALL BE INSTALLED IN ACCORDANCE WITH STD. DWG. AB-036450.
 - INSTALLATION OF DIRECT BURIED CATHODIC PROTECTION CABLES SHALL BE DONE IN ACCORDANCE WITH STD. DWG. AB-036351.
 - STRUCTURAL STEEL AND GUARD POST TO BE PAINTED PER APCS-6.
 - DEEP ANODE BED CAN BE EITHER INSTALLED INSIDE OR OUTSIDE OF THE FENCE.

REFERENCE DRAWINGS

DWG. CONTROL FOR J.O.	

SCALE: NONE

REVISION VALIDATION

THIS REVISION NO. IS COVERED FOR ALL APPROVAL AND CERTIFICATION REQUIREMENTS, PER SAEP-334, UNDER DRAWING COMPLETION CERTIFICATE NO: 714120-0104-02

DESIGN CERTIFICATION (DESIGN AGENCY)	REVIEW FOR KEY DRAWINGS (SAUDI ARAMCO)	OTHER
ENGG./DATE MAA/AAU APR04	CERTIFIED BY/DATE JHZ/APR04	CONST. AGENCY/DATE OPERATIONS/DATE BY/DATE
REV. NO./DATE 03 JAN04	REVISION DESCRIPTION REDRAWN AND REVISED	
JOB ORDER/EWO NO.	THIS REVISION IS NOT TO BE USED FOR CONSTRUCTION UNTIL CERTIFIED AND DATED	

SAUDI ARABIAN OIL COMPANY

CATHODIC PROTECTION

ONSHORE RECTIFIER INSTALLATION
DETAILS

STD. DWG.			SAUDI ARABIA	
PLANT NO.	INDEX	DRAWING NUMBER	SHT. NO.	REV. NO.
990	X	AB-036378	002	03