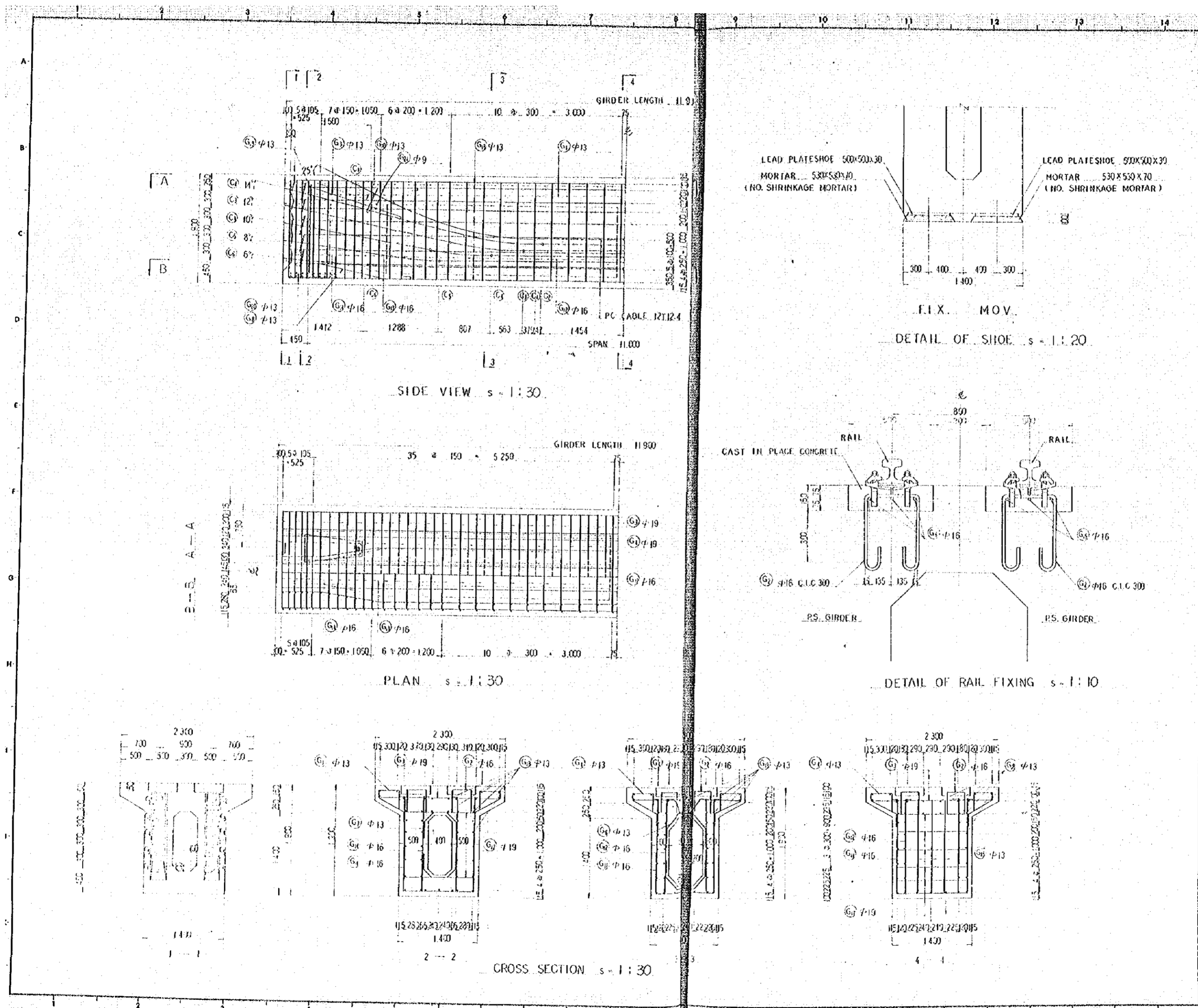


GENERAL NOTES

1. SHOE FOR THE P.S. CRANE RAIL GIRDER SHALL BE LEAD PLATE OR APPROVED MATERIAL. CONTRACTOR SHALL OBTAIN ENGINEER'S APPROVAL PRIOR TO PROCUREMENT OF SHOE MATERIALS.
2. ALL CONCRETE FOR CRANE RAIL GIRDER SHALL BE CLASS "A" OF 350 KG/CM² COMPRESSIVE STRENGTH AT 28 DAYS.
3. SHOE FOR THE P.S. GIRDERS SHALL BE SYNTHETIC RUBBER CONFORMING TO THE CHARACTERISTIC SPECIFIED HERE IN UNDER:
STRAIN SHALL BE APPROXIMATELY 15% WHEN SUBJECTED TO 100T LOAD.

NO.	DATE	DESCRIPTION	APPROVED
REVISION			
PORT MUHAMMAD-BIN-QASIM PROJECT PAKISTAN			
IRON ORE & COAL BERTH GENERAL PLAN OF P.S. CRANE RAIL GIRDER			
JAPAN INTERNATIONAL COOPERATION AGENCY			
CONSULTANTS			
APPROVED	CHECKED	DESIGNED	DRAWING
		J. Shin	M. Saitoh
SCALE		REV. 1/26	
SHOWN ON FIGURE			
DATE DEC 1975		DWG. NO. B-15	

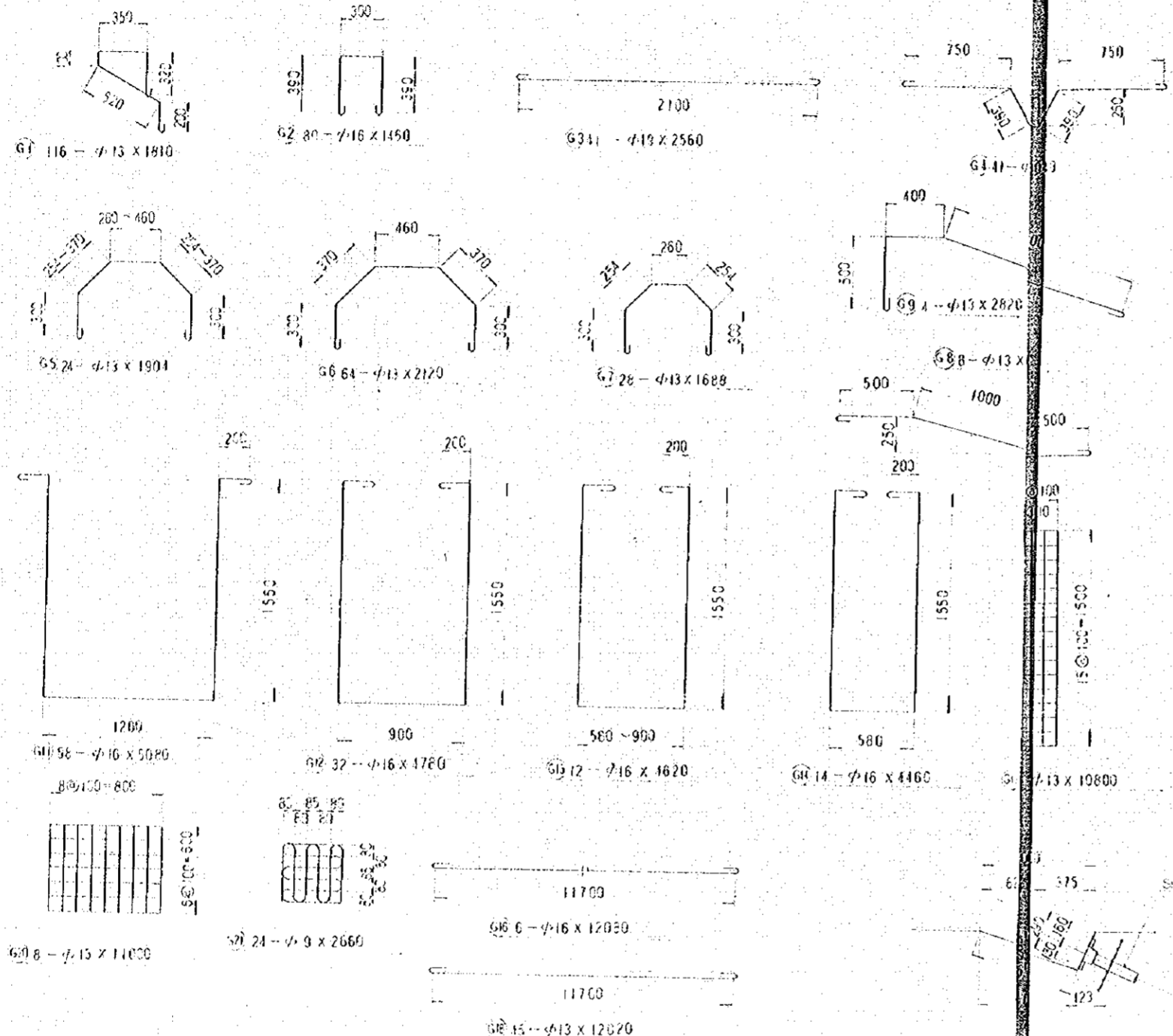


GENERAL NOTES

NO.	DATE	DESCRIPTION	APPROVED
REVISION			
PORT MUHAMMAD-BIN-QASIM PROJECT PAKISTAN			
IRON ORE & COAL BERTH			
DETAILS OF PS CRANE RAIL GIRDER (1)			
JAPAN INTERNATIONAL COOPERATION AGENCY			
CONSULTANTS			
APPROVED	CHECKED	DESIGNED	DRAWING
SCALE		<i>J.S.A.</i>	REV. No.
SHOWN ON FIGURE			
DATE DEC 1975		OWG. NO. B-46	

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

A
B
C
D
E
F
G
H
I
J
K



LIST OF REINFORCEMENT

MARK	SECTION	LENGTH (m)	WEIGHT (kg)	WEIGHT (kg)	NO.	WEIGHT (kg)
G 1	φ 13	1.810	1.04	1.882	116	218.3
2	φ 16	1.460	1.58	2.306	80	184.5
3	φ 19	2.560	2.23	5.709	41	234.1
4	φ 19	3.040	2.23	6.779	41	277.9
5	φ 13	1.904	1.04	1.981	24	47.5
6	φ 13	2.120	1.04	2.205	64	144.1
7	φ 13	1.688	1.04	1.755	28	49.1
8	φ 13	2.320	1.04	2.413	8	19.3
9	φ 13	2.870	1.04	2.933	1	11.7
10	φ 13	1.520	1.04	1.572	4	5.5
11	φ 16	5.080	1.58	8.026	58	465.5
12	φ 16	4.780	1.58	7.552	32	241.7
13	φ 16	4.620	1.58	7.300	12	87.6
14	φ 16	4.460	1.58	7.046	14	98.6
15	φ 13	1.840	1.04	1.914	6	11.5
16	φ 16	12.080	1.58	19.086	6	114.5
17	φ 13	1.660	2.23	3.702	62	229.5
18	φ 13	12.020	1.04	12.509	45	362.5
19	φ 13	10.800	1.04	11.232	4	44.9
20	φ 13	11.000	1.04	11.440	8	91.5
21	φ 9	2.660	0.495	1.327	24	31.8
		φ 9	31.8	kg		
		φ 13	1202.9	kg		
		φ 16	1192.4	kg		
		φ 19	634.5	kg		
TOTAL						3061.6 kg

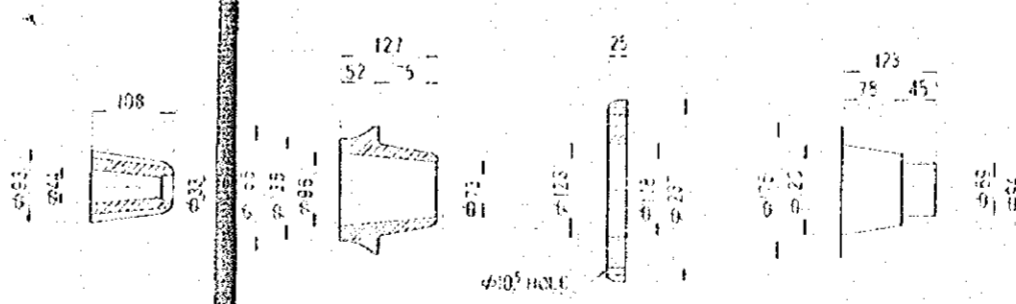
GENERAL NOTES

α	L1	L2	L3	ΣL	L4	Σ(L1+L4)	
C.1	25°	1504	2678	456	4575	650	10450
C.2	14°	1454	1166	2984	5904	650	13108
C.3	12°	1876	1257	2736	5869	650	13039
C.4	10°	2439	1047	2254	5840	650	12900
C.5	6°	3246	638	1736	5829	650	12910
C.6	6°	4534	628	612	5801	650	12900

ΣL = 28L = 15748
ΣL = 75124

DETAIL OF PRESTRESSING STEEL FREYSSINET CABLE 12T12.1

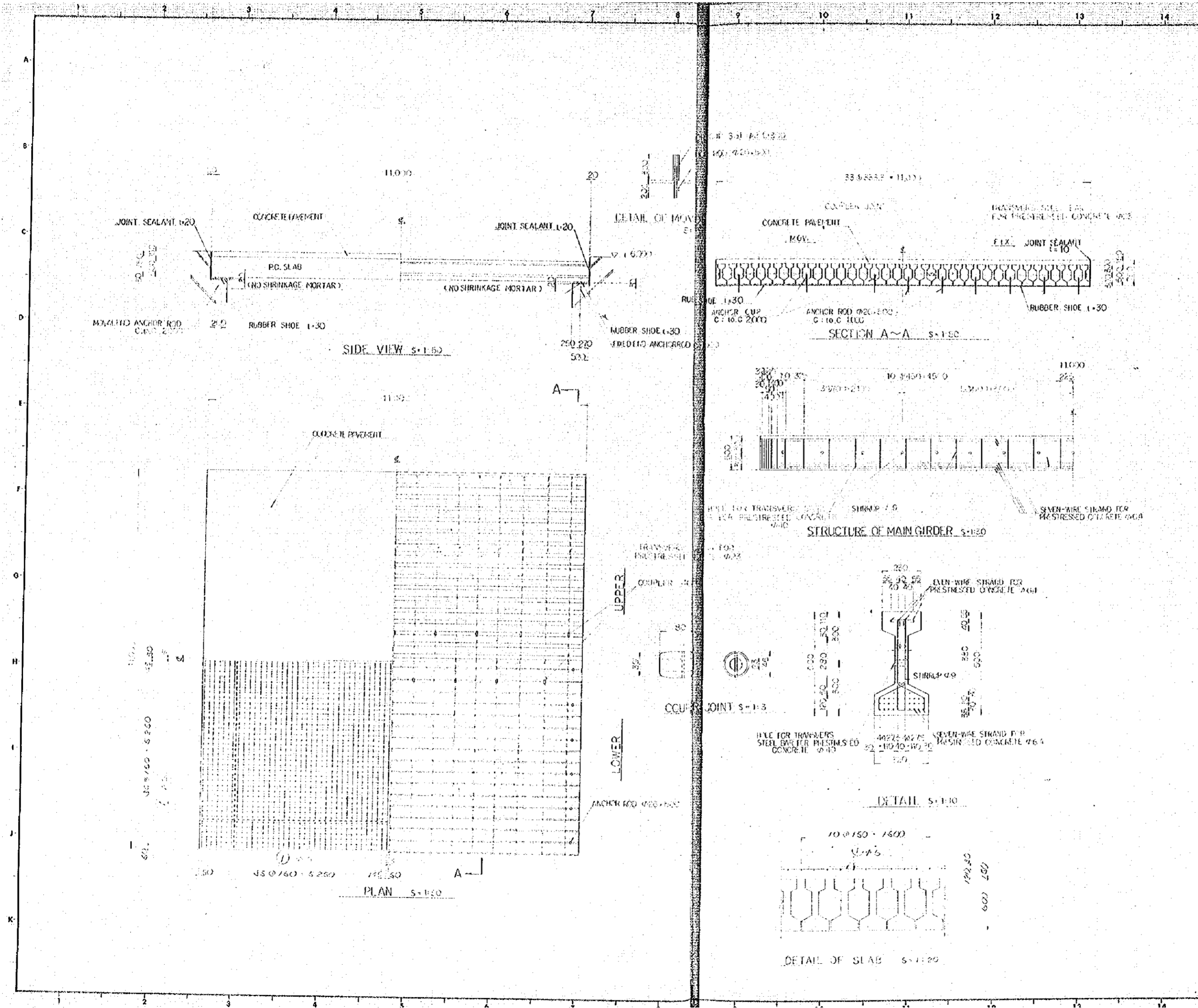
DETAIL OF ANCHORAGE s=1:200



DETAIL OF FREYSSINET CABLE FOR 12T12.1 s=1:5

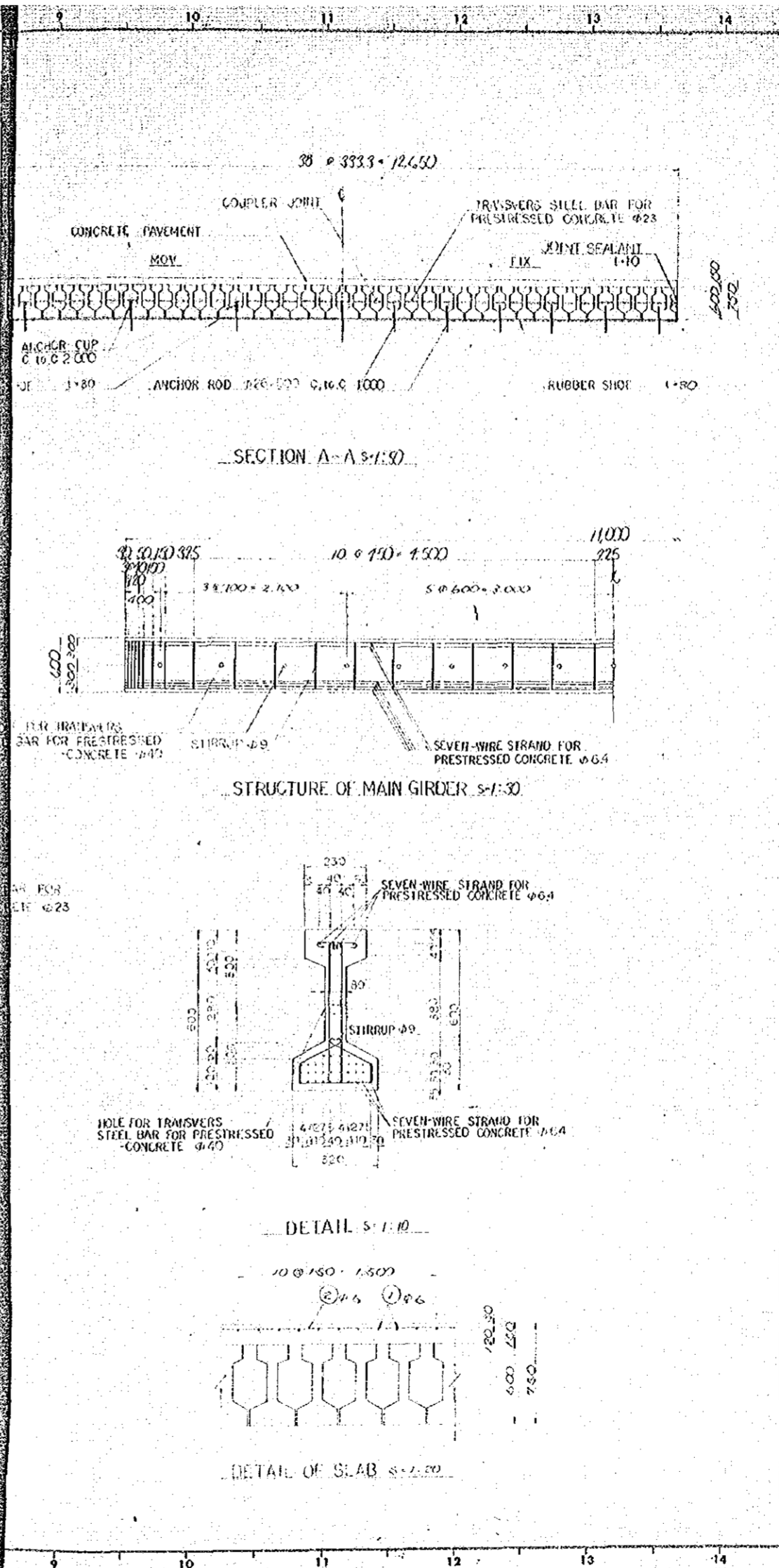
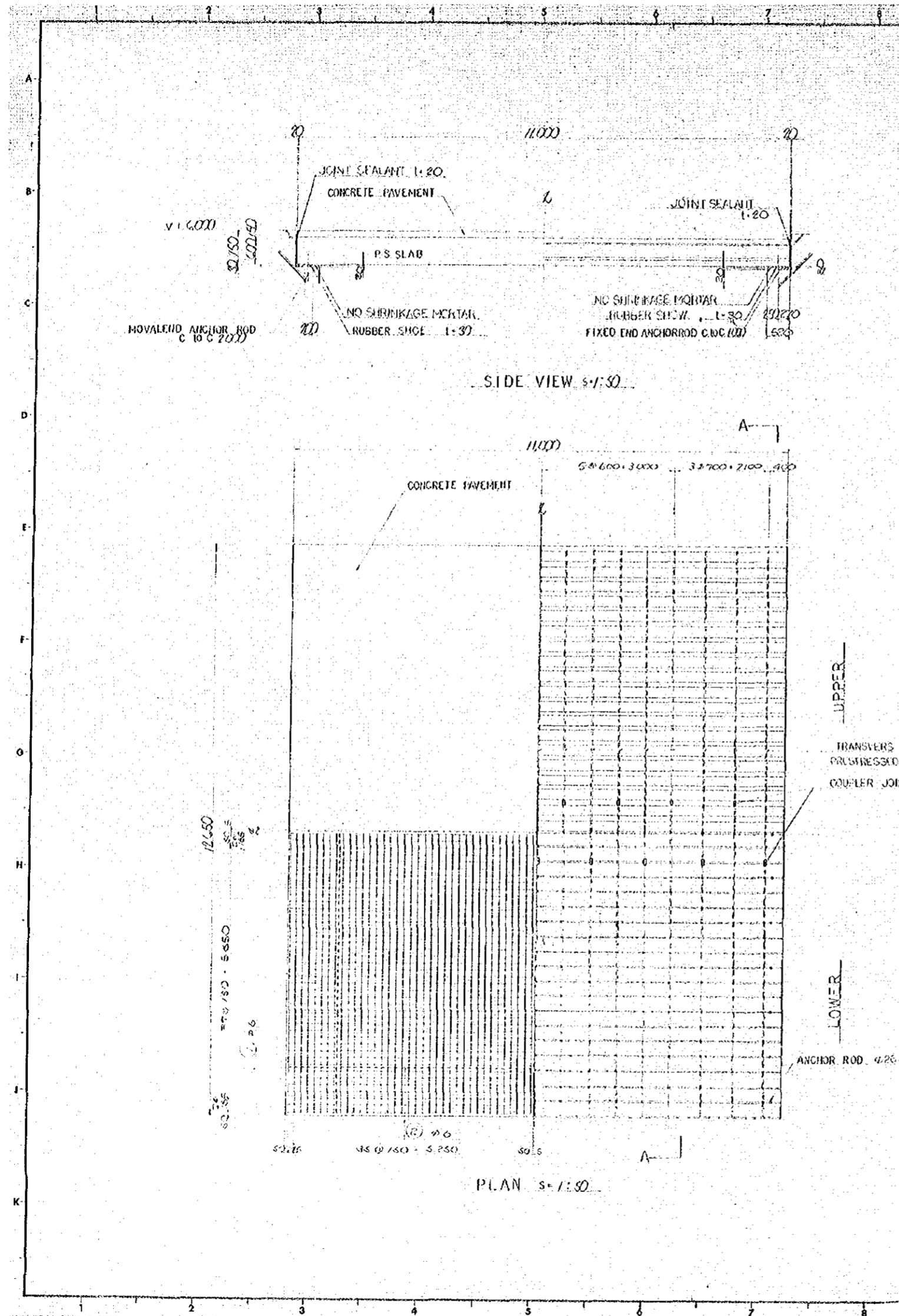
NO.	DATE	DESCRIPTION	APPROVED
REVISION			
PORT MUHAMMAD-BIN-QASIM PROJECT PAKISTAN			
IRON ORE & COAL BERTH			
DETAILS OF P.S. CRANE RAIL GIRDER (2)			
JAPAN INTERNATIONAL COOPERATION AGENCY			
CONSULTANTS			
APPROVED	CHECKED	DESIGNED	DRAWING
		S. Shin	REV. No.
SCALE			
SHOWN ON FIGURE			
DATE DEC 1975		DWG. NO. B-47	

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16



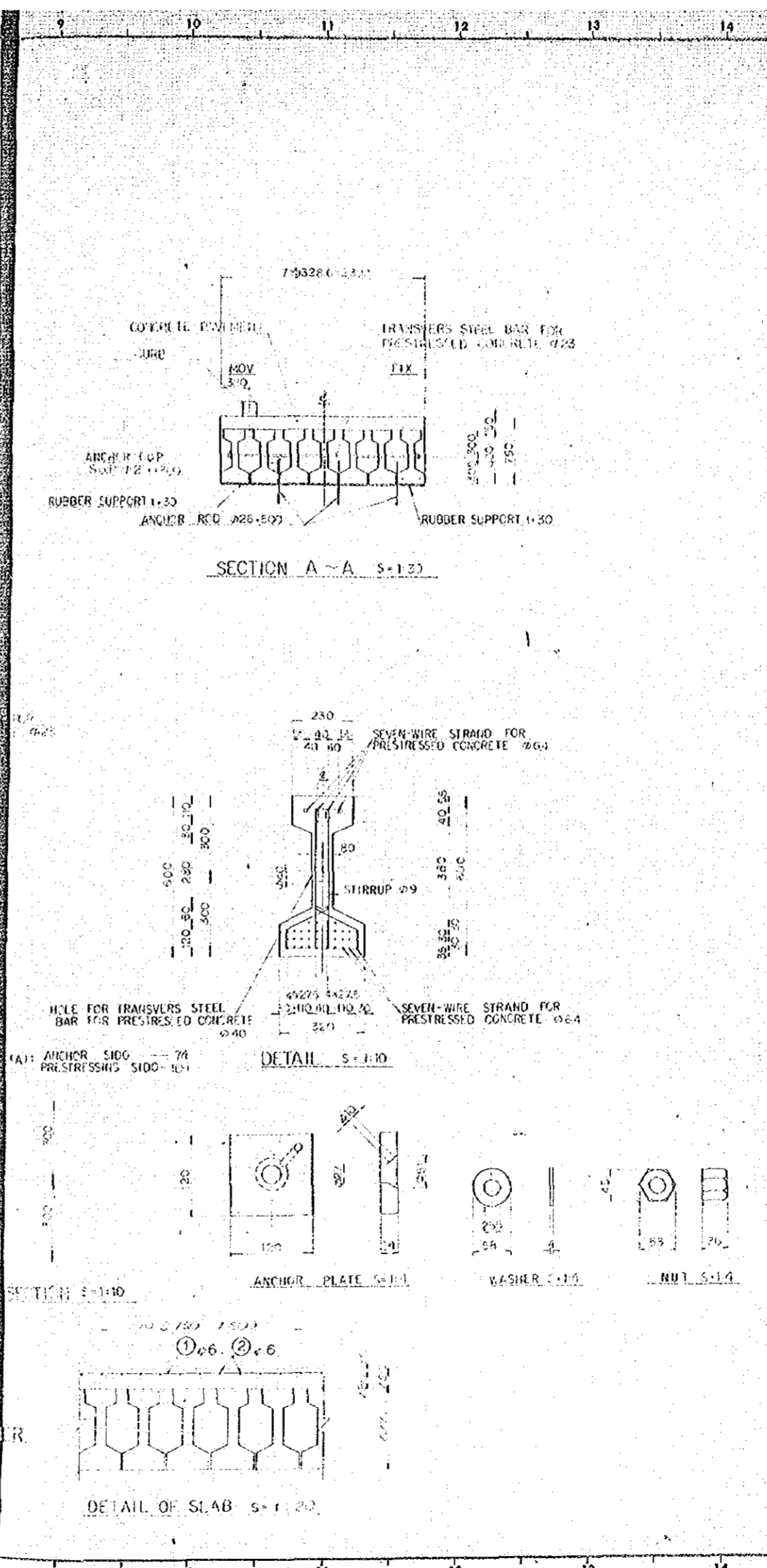
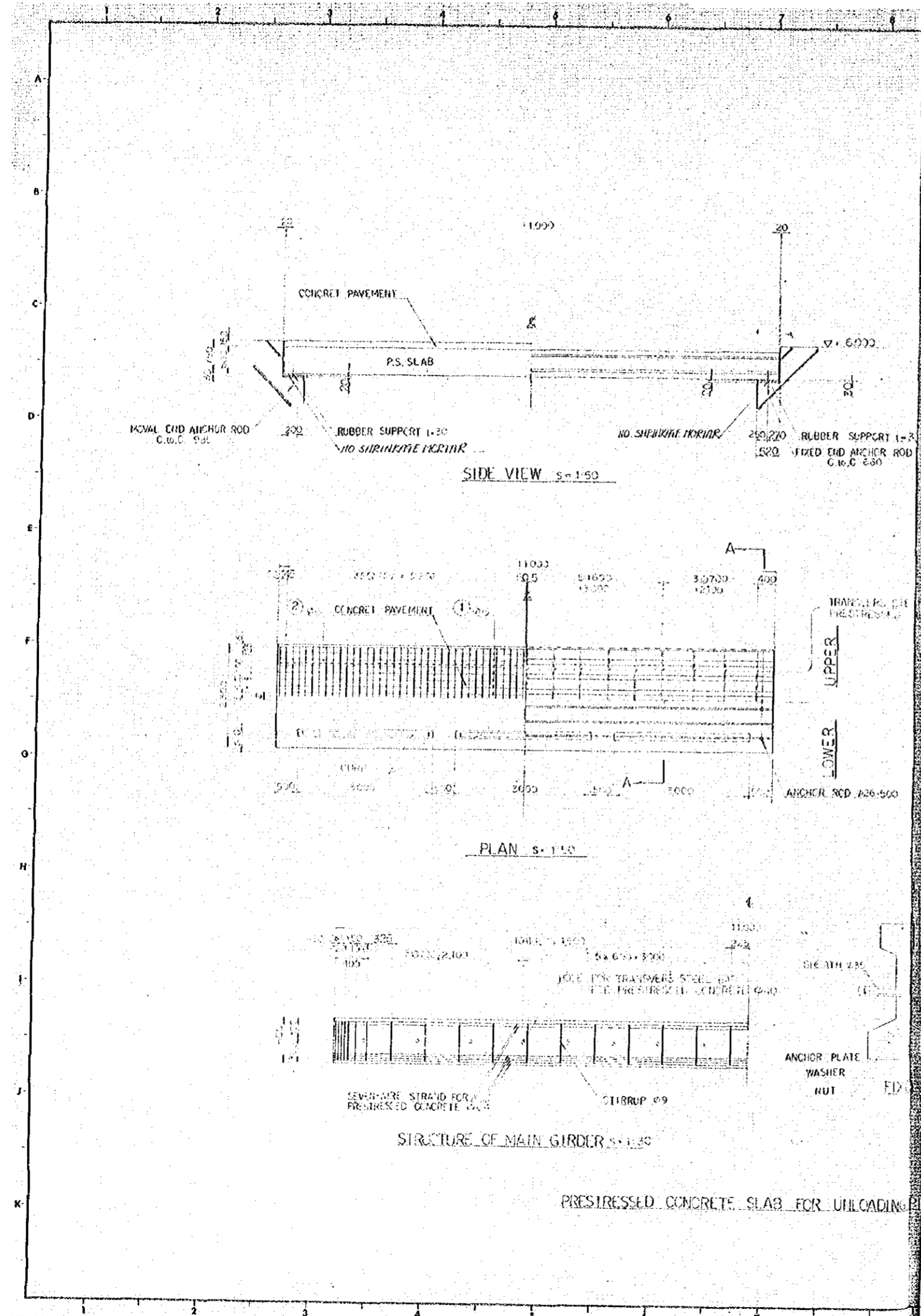
- GENERAL NOTES**
1. ALL P.S. BEAMS SHALL NOT BE SUBJECT TO LOADS UNLESS SPECIFICALLY PERMITTED BY THE ENGINEER. THE P.S. BEAMS, AFTER POST TENSIONING PRESTRESSING HAS BEEN COMPLETED, MAY BE SUBJECT TO A MAXIMUM OF 2 TON/M² UNIFORM LOAD OR 7.5 TON CONCENTRATED LOAD OR AS OTHERWISE DIRECTED BY THE ENGINEER.
 2. ALL CONCRETE FOR P.S. BEAM SHALL BE CLASS "M" OF 350 KG/CM² COMPRESSIVE STRENGTH AT 28 DAYS.
 3. FOR ARRANGEMENT OF DECK SLAB, SEE FIG. NO. B-3.

NO.	DATE	DESCRIPTION	APPROVED
REVISION			
PORT MUHAMMAD-BIN-QASIM PROJECT PAKISTAN			
IRON ORE & COAL BERTH MAIN BERTH PLAN AND DETAILS OF TYPE A DECK SLAB			
JAPAN INTERNATIONAL COOPERATION AGENCY			
CONSULTANTS			
APPROVED	CHECKED	DESIGNED	DRAWING
		<i>S. S. Khan</i>	<i>A. Anwar</i>
SCALE		REV. NO.	
SHOWN ON FIGURE			
DATE DEC 1975		DWG. NO. B-48	



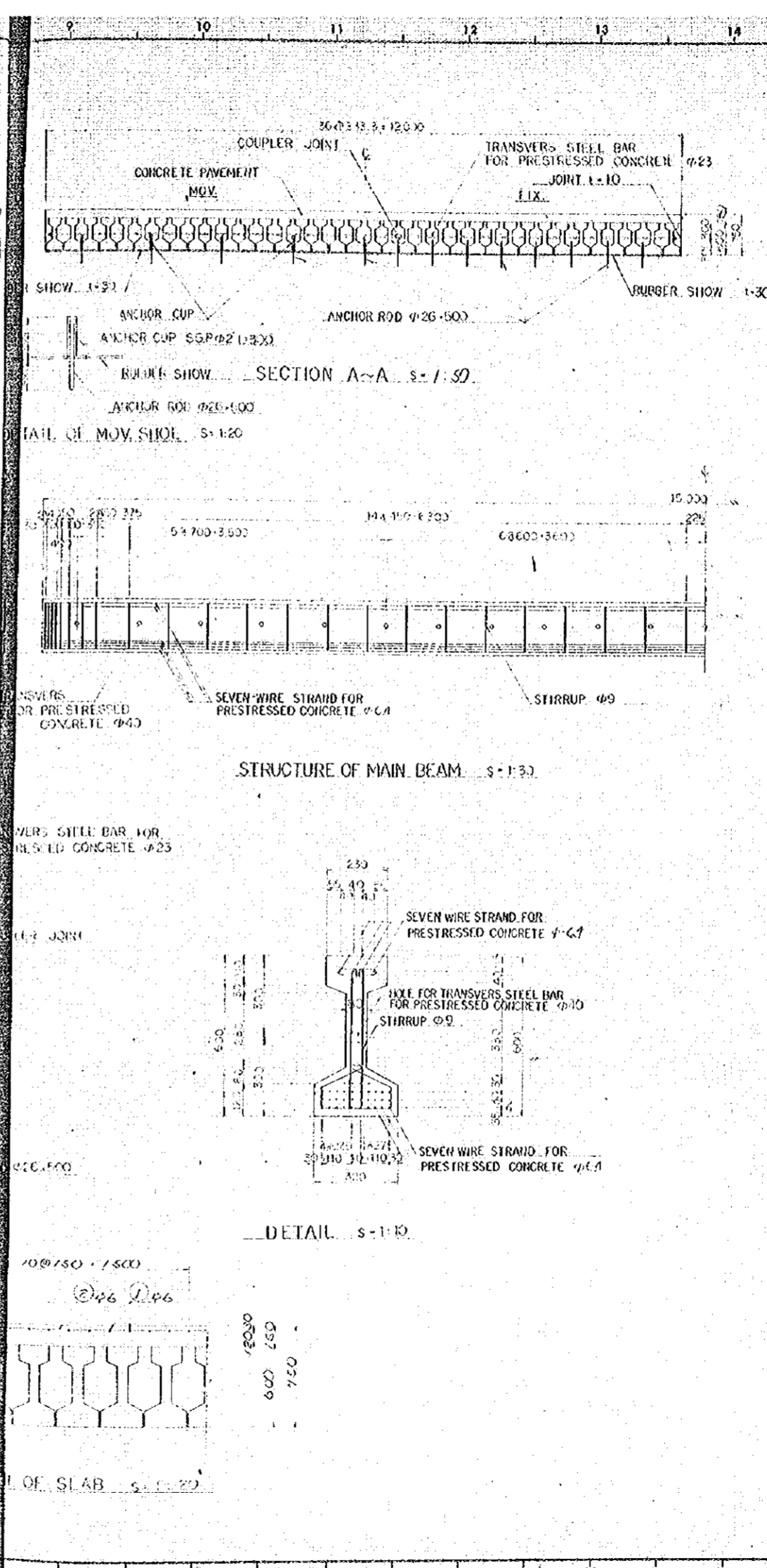
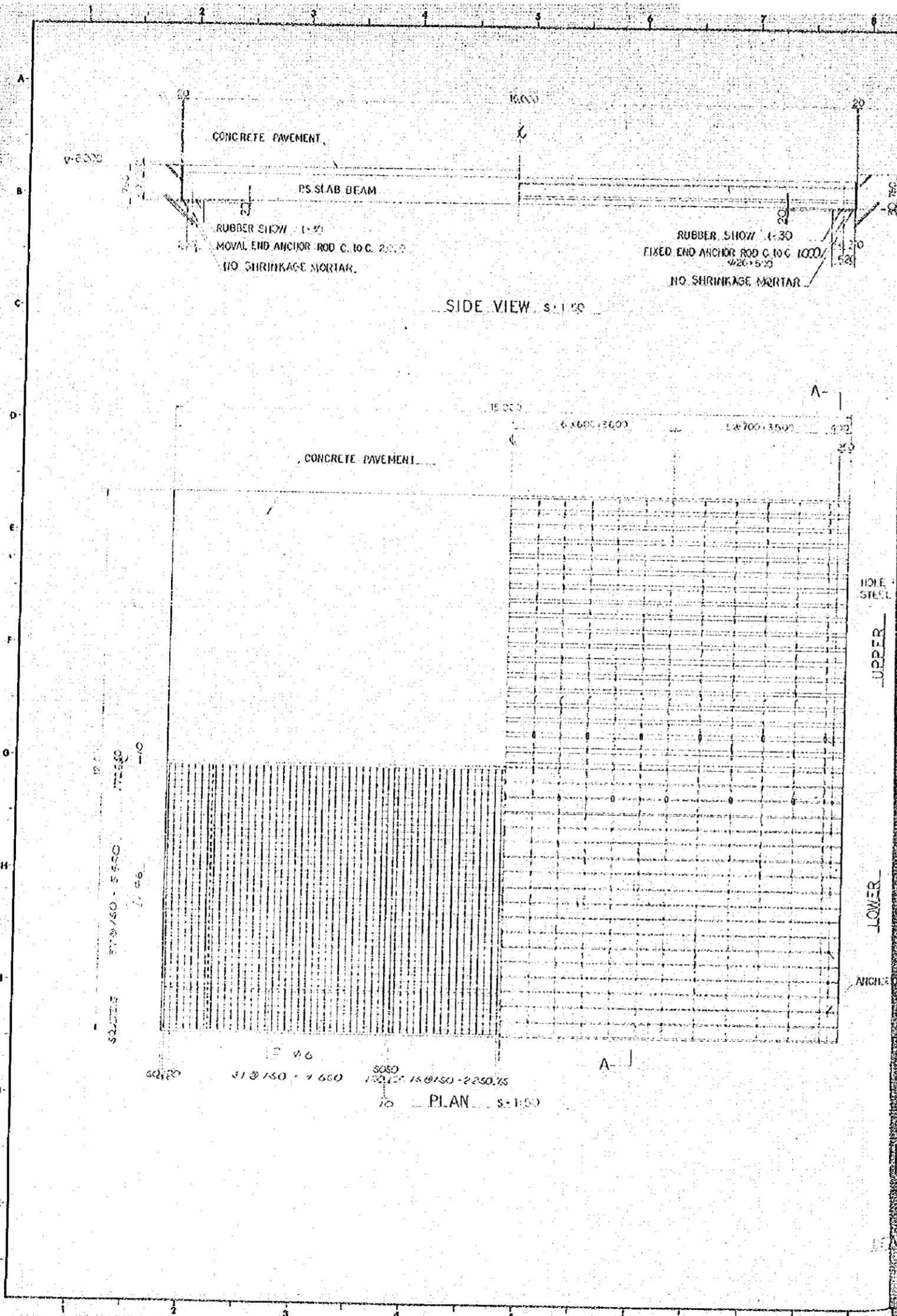
GENERAL NOTES

NO.	DATE	DESCRIPTION	APPROVED
REVISION			
PORT MUHAMMAD-BIN-QASIM PROJECT PAKISTAN			
IRON ORE & COAL BERTH MAIN BERTH PLAN & DETAILS OF TYPE-B DECK SLAB			
JAPAN INTERNATIONAL COOPERATION AGENCY			
CONSULTANTS			
APPROVED	CHECKED	DESIGNED	DRAWING
		J. S. S.	A. M. M.
SCALE			
SHOWN ON FIGURE			
DATE DEC 1975		DWG. NO. B-49	



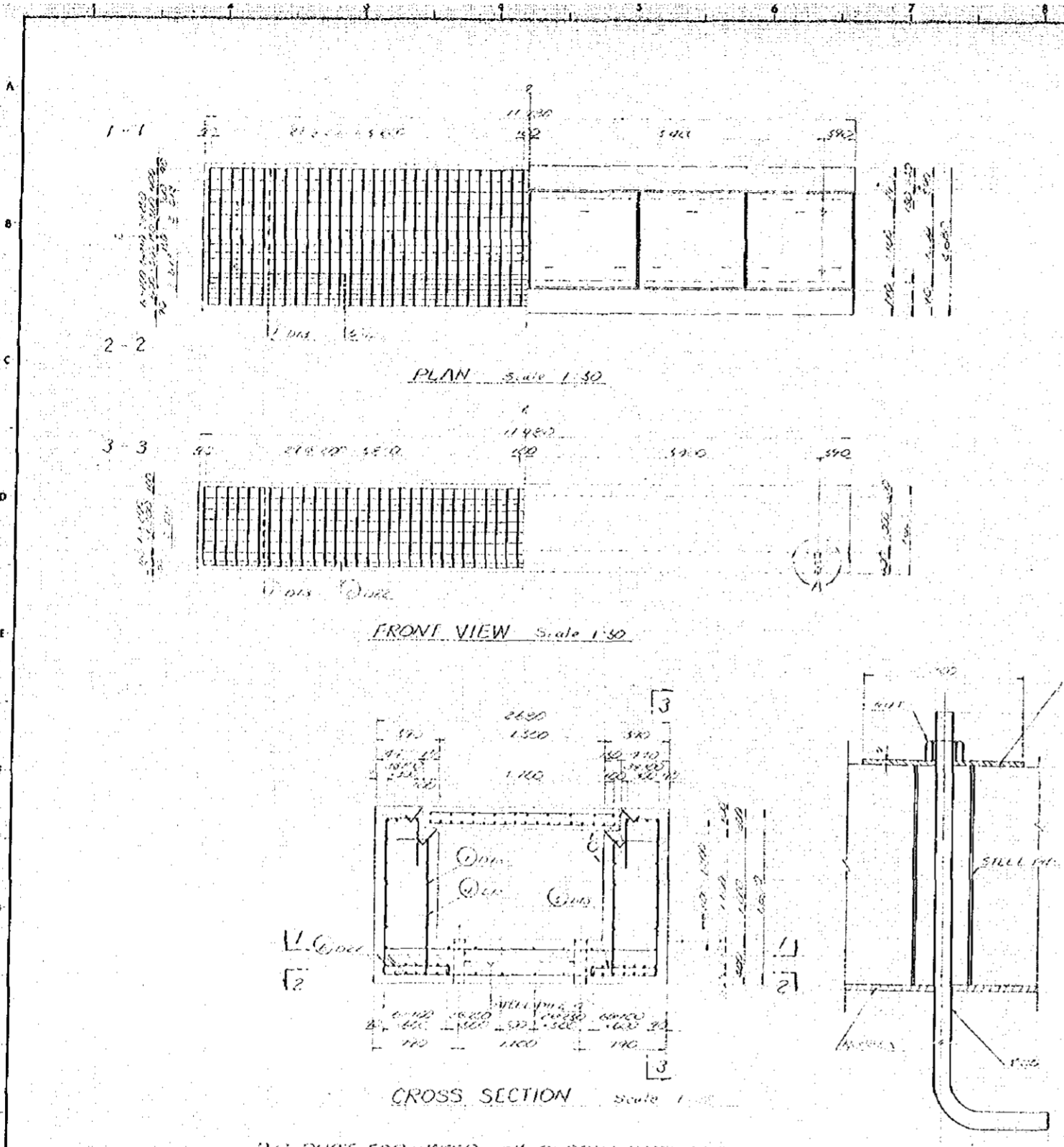
GENERAL NOTES

NO.	DATE	DESCRIPTION	APPROVED
REVISION			
PORT MUHAMMAD-BIH-QASIM PROJECT PAKISTAN			
IRON ORE & COAL BERTH MAIN BERTH PLAN AND DETAILS OF TYPE-C DECK SLAB			
JAPAN INTERNATIONAL COOPERATION AGENCY			
CONSULTANTS			
APPROVED	CHECKED	DESIGNED	DRAWING
		<i>J. S. M. Hashmi</i>	
SCALE		REV. No.	
SHOWN ON FIGURE		DATE DEC 1975	
DATE DEC 1975		DWG. NO. B-50	



GENERAL NOTES

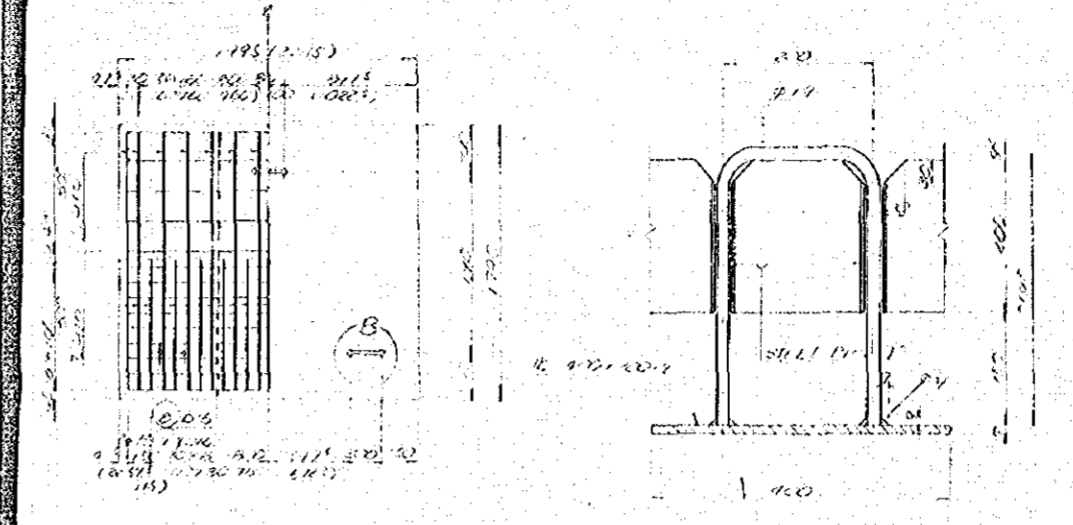
NO.	DATE	DESCRIPTION	APPROVED
REVISION			
PORT MUHAMMAD-BIN-QASIM PROJECT PAKISTAN			
IRON ORE & COAL BERTH MAIN BERTH PLAN & DETAILS OF TYPE-D DECK SLAB			
JAPAN INTERNATIONAL COOPERATION AGENCY			
CONSULTANTS			
APPROVED	CHECKED	DESIGNED	DRAWING
		J.S.P.	M. Anwar
SCALE		REV. No.	
SHOWN ON FIGURE		DWG. NO. B-51	
DATE DEC. 1975			



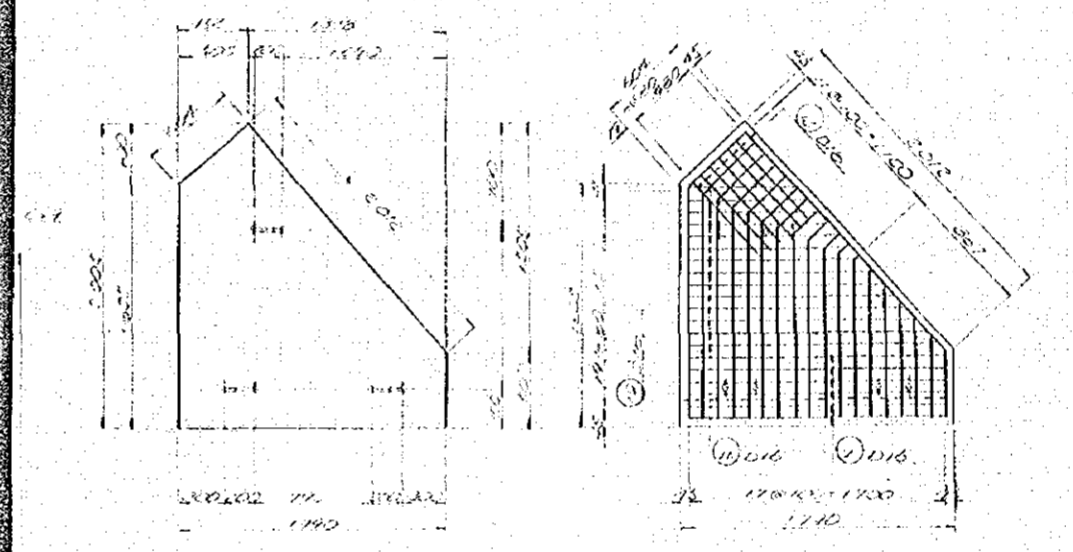
MATERIAL QUANTITIES / DUCT TYPE A

BAR NUMBER	DIA	LENGTH	UNIT	WEIGHT	QUANTITY	TOTAL
BAR 1	11.5	11.5	M	1.1	42	45.72
BAR 2	8	11.5	M	0.6	60	36.00
BAR 3	8	11.5	M	0.6	60	36.00
BAR 4	8	11.5	M	0.6	60	36.00
BAR 5	8	11.5	M	0.6	60	36.00
BAR 6	8	11.5	M	0.6	60	36.00
BAR 7	8	11.5	M	0.6	60	36.00
BAR 8	8	11.5	M	0.6	60	36.00
BAR 9	8	11.5	M	0.6	60	36.00
BAR 10	8	11.5	M	0.6	60	36.00
BAR 11	8	11.5	M	0.6	60	36.00
BAR 12	8	11.5	M	0.6	60	36.00
BAR 13	8	11.5	M	0.6	60	36.00
BAR 14	8	11.5	M	0.6	60	36.00
BAR 15	8	11.5	M	0.6	60	36.00
BAR 16	8	11.5	M	0.6	60	36.00
BAR 17	8	11.5	M	0.6	60	36.00
BAR 18	8	11.5	M	0.6	60	36.00
BAR 19	8	11.5	M	0.6	60	36.00
BAR 20	8	11.5	M	0.6	60	36.00
BAR 21	8	11.5	M	0.6	60	36.00
BAR 22	8	11.5	M	0.6	60	36.00
BAR 23	8	11.5	M	0.6	60	36.00
BAR 24	8	11.5	M	0.6	60	36.00
BAR 25	8	11.5	M	0.6	60	36.00
BAR 26	8	11.5	M	0.6	60	36.00
BAR 27	8	11.5	M	0.6	60	36.00
BAR 28	8	11.5	M	0.6	60	36.00
BAR 29	8	11.5	M	0.6	60	36.00
BAR 30	8	11.5	M	0.6	60	36.00

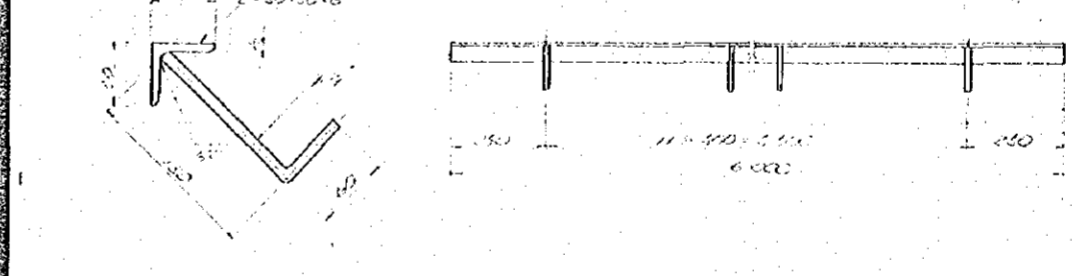
BAR NUMBER	DIA	LENGTH	UNIT	WEIGHT	QUANTITY	TOTAL
BAR 1	11.5	11.5	M	1.1	42	45.72
BAR 2	8	11.5	M	0.6	60	36.00
BAR 3	8	11.5	M	0.6	60	36.00
BAR 4	8	11.5	M	0.6	60	36.00
BAR 5	8	11.5	M	0.6	60	36.00
BAR 6	8	11.5	M	0.6	60	36.00
BAR 7	8	11.5	M	0.6	60	36.00
BAR 8	8	11.5	M	0.6	60	36.00
BAR 9	8	11.5	M	0.6	60	36.00
BAR 10	8	11.5	M	0.6	60	36.00
BAR 11	8	11.5	M	0.6	60	36.00
BAR 12	8	11.5	M	0.6	60	36.00
BAR 13	8	11.5	M	0.6	60	36.00
BAR 14	8	11.5	M	0.6	60	36.00
BAR 15	8	11.5	M	0.6	60	36.00
BAR 16	8	11.5	M	0.6	60	36.00
BAR 17	8	11.5	M	0.6	60	36.00
BAR 18	8	11.5	M	0.6	60	36.00
BAR 19	8	11.5	M	0.6	60	36.00
BAR 20	8	11.5	M	0.6	60	36.00
BAR 21	8	11.5	M	0.6	60	36.00
BAR 22	8	11.5	M	0.6	60	36.00
BAR 23	8	11.5	M	0.6	60	36.00
BAR 24	8	11.5	M	0.6	60	36.00
BAR 25	8	11.5	M	0.6	60	36.00
BAR 26	8	11.5	M	0.6	60	36.00
BAR 27	8	11.5	M	0.6	60	36.00
BAR 28	8	11.5	M	0.6	60	36.00
BAR 29	8	11.5	M	0.6	60	36.00
BAR 30	8	11.5	M	0.6	60	36.00



DETAIL B Scale 1:5



DETAIL C Scale 1:25



DETAIL C Scale 1:10

MATERIAL QUANTITIES / DUCT COVER

BAR NUMBER	DIA	LENGTH	UNIT	WEIGHT	QUANTITY	TOTAL
BAR 1	11.5	11.5	M	1.1	42	45.72
BAR 2	8	11.5	M	0.6	60	36.00
BAR 3	8	11.5	M	0.6	60	36.00
BAR 4	8	11.5	M	0.6	60	36.00
BAR 5	8	11.5	M	0.6	60	36.00
BAR 6	8	11.5	M	0.6	60	36.00
BAR 7	8	11.5	M	0.6	60	36.00
BAR 8	8	11.5	M	0.6	60	36.00
BAR 9	8	11.5	M	0.6	60	36.00
BAR 10	8	11.5	M	0.6	60	36.00
BAR 11	8	11.5	M	0.6	60	36.00
BAR 12	8	11.5	M	0.6	60	36.00
BAR 13	8	11.5	M	0.6	60	36.00
BAR 14	8	11.5	M	0.6	60	36.00
BAR 15	8	11.5	M	0.6	60	36.00
BAR 16	8	11.5	M	0.6	60	36.00
BAR 17	8	11.5	M	0.6	60	36.00
BAR 18	8	11.5	M	0.6	60	36.00
BAR 19	8	11.5	M	0.6	60	36.00
BAR 20	8	11.5	M	0.6	60	36.00
BAR 21	8	11.5	M	0.6	60	36.00
BAR 22	8	11.5	M	0.6	60	36.00
BAR 23	8	11.5	M	0.6	60	36.00
BAR 24	8	11.5	M	0.6	60	36.00
BAR 25	8	11.5	M	0.6	60	36.00
BAR 26	8	11.5	M	0.6	60	36.00
BAR 27	8	11.5	M	0.6	60	36.00
BAR 28	8	11.5	M	0.6	60	36.00
BAR 29	8	11.5	M	0.6	60	36.00
BAR 30	8	11.5	M	0.6	60	36.00

BAR NUMBER	DIA	LENGTH	UNIT	WEIGHT	QUANTITY	TOTAL
BAR 1	11.5	11.5	M	1.1	42	45.72
BAR 2	8	11.5	M	0.6	60	36.00
BAR 3	8	11.5	M	0.6	60	36.00
BAR 4	8	11.5	M	0.6	60	36.00
BAR 5	8	11.5	M	0.6	60	36.00
BAR 6	8	11.5	M	0.6	60	36.00
BAR 7	8	11.5	M	0.6	60	36.00
BAR 8	8	11.5	M	0.6	60	36.00
BAR 9	8	11.5	M	0.6	60	36.00
BAR 10	8	11.5	M	0.6	60	36.00
BAR 11	8	11.5	M	0.6	60	36.00
BAR 12	8	11.5	M	0.6	60	36.00
BAR 13	8	11.5	M	0.6	60	36.00
BAR 14	8	11.5	M	0.6	60	36.00
BAR 15	8	11.5	M	0.6	60	36.00
BAR 16	8	11.5	M	0.6	60	36.00
BAR 17	8	11.5	M	0.6	60	36.00
BAR 18	8	11.5	M	0.6	60	36.00
BAR 19	8	11.5	M	0.6	60	36.00
BAR 20	8	11.5	M	0.6	60	36.00
BAR 21	8	11.5	M	0.6	60	36.00
BAR 22	8	11.5	M	0.6	60	36.00
BAR 23	8	11.5	M	0.6	60	36.00
BAR 24	8	11.5	M	0.6	60	36.00
BAR 25	8	11.5	M	0.6	60	36.00
BAR 26	8	11.5	M	0.6	60	36.00
BAR 27	8	11.5	M	0.6	60	36.00
BAR 28	8	11.5	M	0.6	60	36.00
BAR 29	8	11.5	M	0.6	60	36.00
BAR 30	8	11.5	M	0.6	60	36.00

GENERAL NOTES

1. HOISTING ATTACHMENT OF P.C. DUCT FOR HANDLING SHALL BE PROVIDED IF NECESSARY.
2. ALL CONCRETE PRECAST DUCTS SHALL BE CLASS "B" OF 300 kg/cm² COMPRESSIVE STRENGTH AT 28 DAYS.
3. FOR ARRANGEMENT OF DUCTS AND COVERS, SEE DMG. NO. B-3.

NO.	DATE	DESCRIPTION	APPROVED
		REVISION	

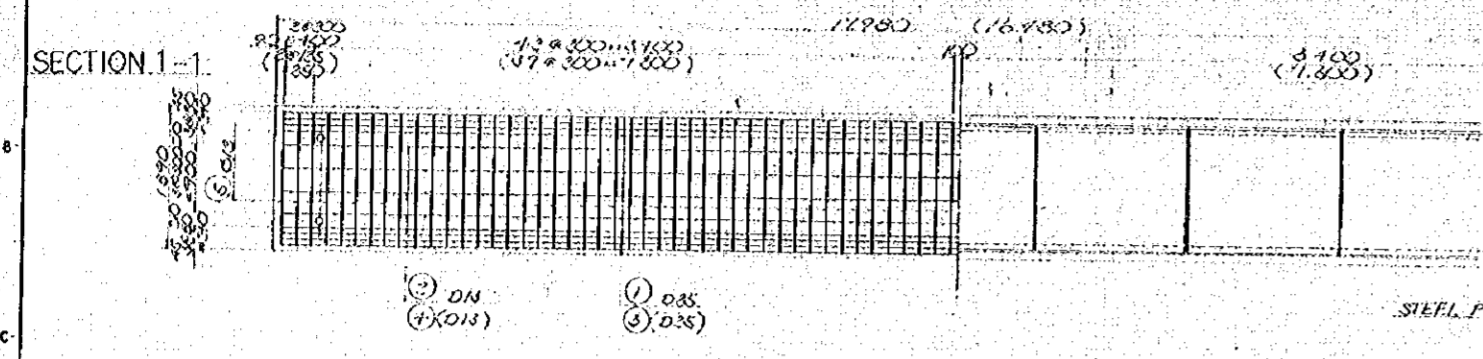
PORT MUHAMMAD-BIN-QASIM PROJECT
PAKISTAN

IRON ORE & COAL BERTH
MAH BERTH
DETAILS OF P.C. DUCTS & COVERS
FOR WATER & OIL SUPPLY
FITTINGS (I)

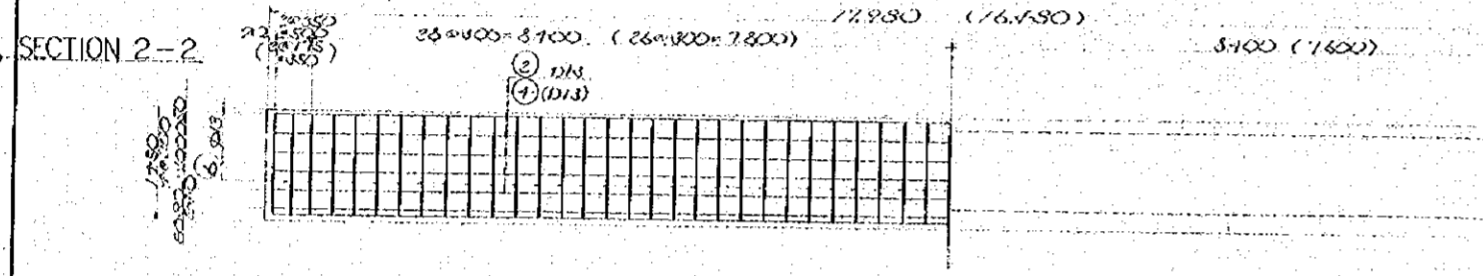
JAPAN INTERNATIONAL COOPERATION AGENCY

APPROVED	CHECKED	DESIGNED	DATE
		S.P.T.	

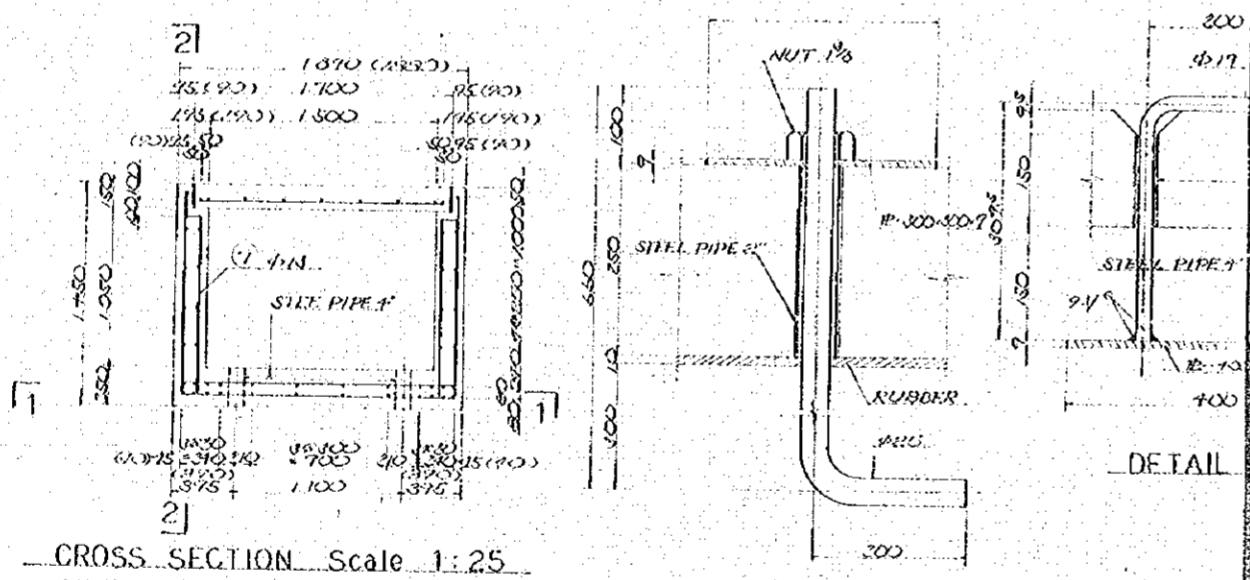
DUCT FOR WATER & OIL SUPPLY PIPING TYPE C & D
REMARK: NUMERALS IN PARENTHESIS ARE FOR TYPE D.



PLAN Scale 1:50



FRONT VIEW Scale 1:50



CROSS SECTION Scale 1:25

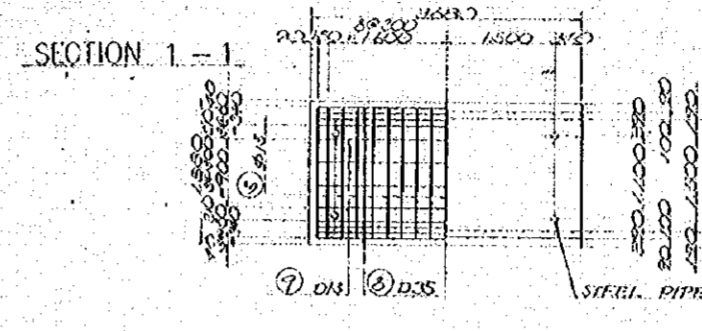
DETAIL A

MATERIAL QUANTITIES/DUCT

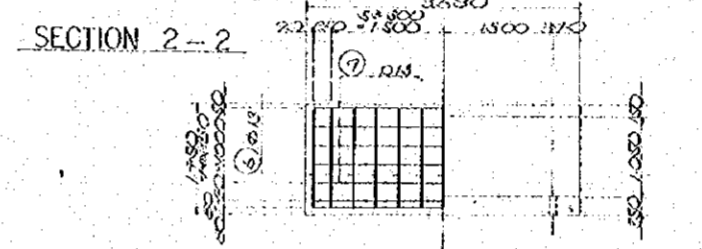
BAR	SIZE	LENGTH	UNIT	MEMBERS	TOTAL
BAR 1	Ø 35	17.000	0.230	16	110.800
2	Ø 13	17.000	0.975	26	460.150
5	Ø 13	1.800	1.010	180	332.760
6	1.070	1.070	1.22	122	157.150
7	1.270	1.270	1.22	122	166.130
ANCHOR	Ø 25	113.500	0.350	4	154.000
NUT	W 1 1/2	0.872	0.872	4	1.438
WASHER	Ø 20	0.182	0.182	4	28.434
STEEL PIPE	Ø 110	0.250	0.250	4	6.300
CONCRETE					15.511

BAR	SIZE	LENGTH	UNIT	MEMBERS	TOTAL
BAR 4	Ø 35	16.000	0.230	16	107.780
7	Ø 13	16.000	0.975	26	421.651
5	Ø 13	1.300	1.010	163	314.476
6	1.070	1.070	1.22	111	156.787
7	1.270	1.270	1.22	111	159.572
ANCHOR	Ø 25	103.784	0.350	4	121.605
NUT	W 1 1/2	0.872	0.872	4	1.488
WASHER	Ø 20	0.182	0.182	4	28.434
STEEL PIPE	Ø 110	0.250	0.250	4	6.300
CONCRETE					15.555

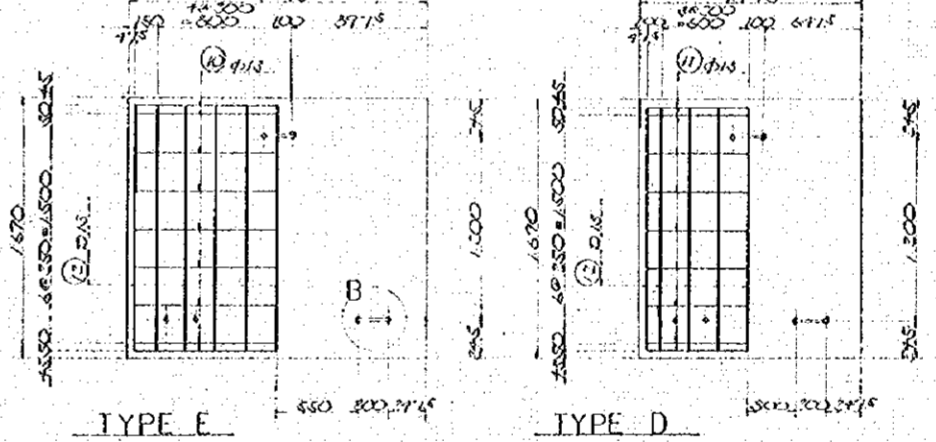
DUCT FOR WATER & OIL SUPPLY PIPING TYPE B



PLAN



FRONT VIEW



TYPE E

TYPE D

DUCT COVER Scale 1:25

MATERIAL QUANTITIES/ DUCT COVER

COVER TYPE	BAR	SIZE	LENGTH	UNIT	MEMBERS	TOTAL
COVER TYPE 1	BAR 10	Ø 13	1.700	1.010	7	17.131
	12	Ø 13	1.600	0.975	11	17.518
HANDLE	Ø 17	1.512	0.871	2.30	8	5.477
	Ø 17	1.512	0.871	2.30	8	5.477
STEEL PIPE	Ø 110	1.000	0.182	6	2.104	
	Ø 110	1.000	0.182	6	2.104	
CONCRETE						0.508

COVER TYPE	BAR	SIZE	LENGTH	UNIT	MEMBERS	TOTAL
COVER TYPE 2	BAR 11	Ø 13	1.300	1.010	7	12.717
	12	Ø 13	1.600	0.975	9	14.452
HANDLE	Ø 17	0.871	2.30	8	5.477	
	Ø 17	0.871	2.30	8	5.477	
STEEL PIPE	Ø 110	1.000	0.182	6	2.104	
	Ø 110	1.000	0.182	6	2.104	
CONCRETE						0.311

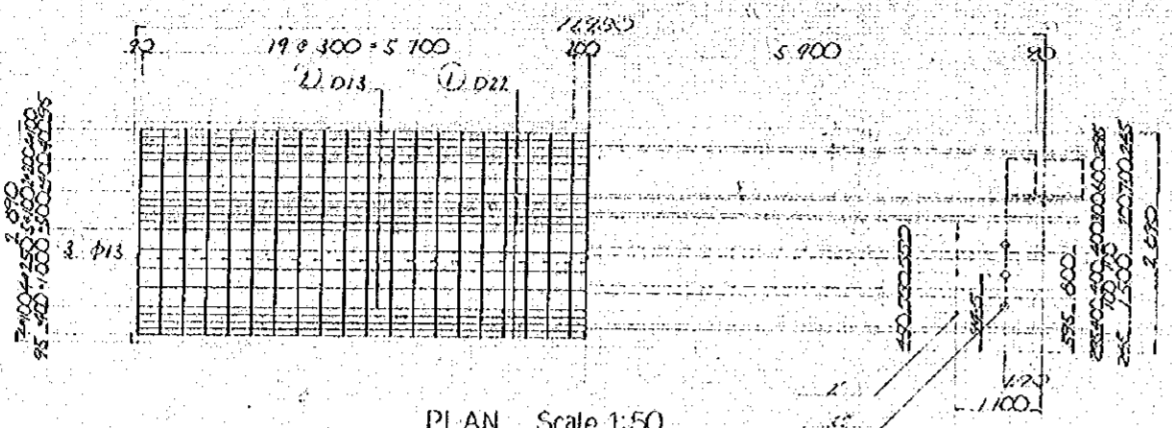
GENERAL NOTES

NO.	DATE	DESCRIPTION	APPROVED
REVISION			
PORT MUHAMMAD-BIN-QASIM PROJECT PAKISTAN			
IRON ORE & COAL BERTH APPROACH TRESTLE DETAILS OF P.C. DUCTS AND COVERS FOR WATER AND OIL SUPPLY PIPINGS (2)			
JAPAN INTERNATIONAL COOPERATION AGENCY CONSULTANTS			
APPROVED	CHECKED	DESIGNED	DRAWING
		S. S. K.	M. M. K.
SCALE		REV. NO.	
SHOWN ON FIGURE			
DATE DEC 1975		DWG. NO. B-53	

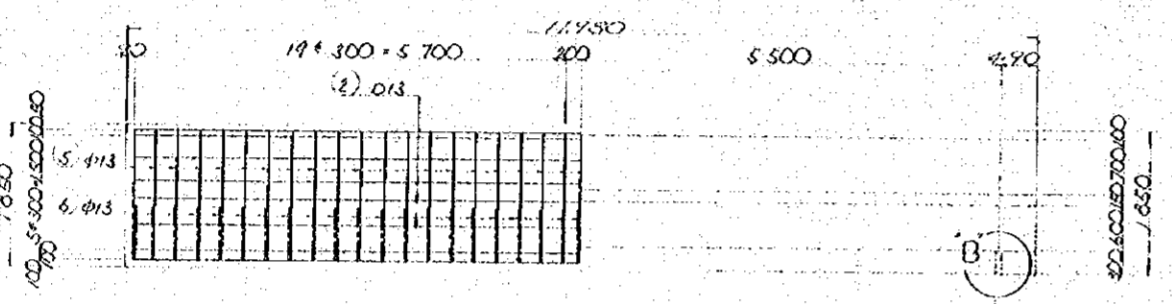
1 2 3 4 5 6 7 8

A
B
C
D
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F
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H
I
J
K

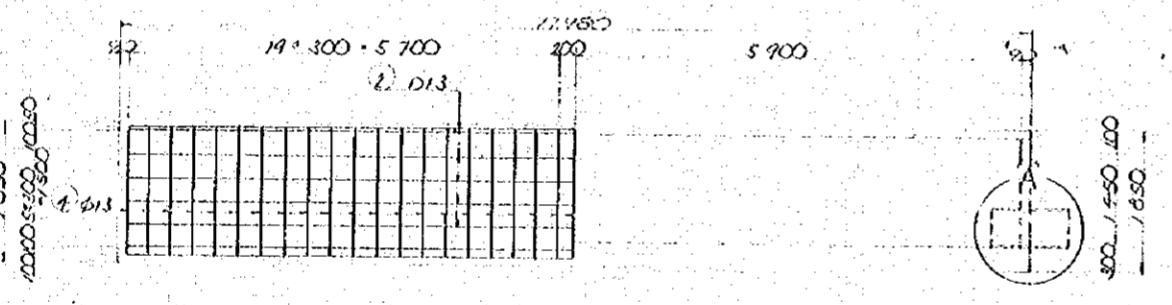
P.C. DUCT FOR ELECTRIC CABLES, WATER TYPE A



PLAN Scale 1:50

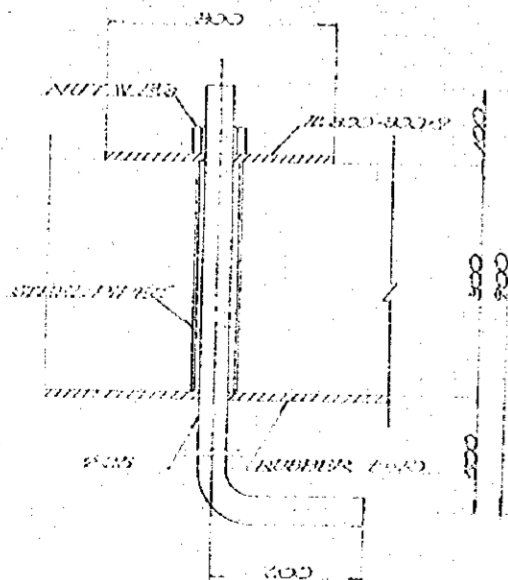


FRONT VIEW Scale 1:50



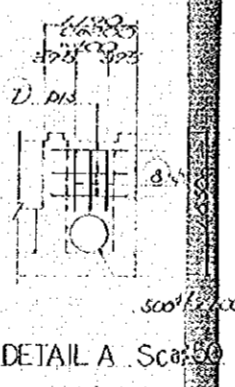
FRONT VIEW Scale 1:50

DETAIL B Scale 1:5



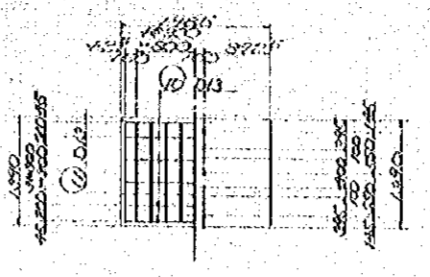
MATERIAL QUANTITIES / DUCT TYPE A

BAR	Ø	LENGTH	UNIT HEIGHT	MEMBERS	TOTAL
1	Ø22	11 800	3.04	16	932.672
2	Ø13	11 800	0.995	52	610.532
3	Ø13	2 700	1.040	82	230.856
4	Ø13	1 700		82	144.976
5	Ø13	1 700		184	257.752
6	Ø13	0 950		82	81.016
7	Ø13	1 000	0.975	6	5.970
8	Ø13	0 800	1.040	6	4.972
9	Ø13	1 000	0.975	2	194.800
10	Ø13	0 300	1.040	2	122.176
WELDER					
11	Ø13	1 100	0.975	4	16.740
12	Ø13	0 372		4	1.465
13	Ø13	0 785		4	25.432
CONCRETE					
					28 530

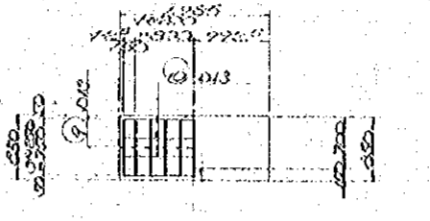


DETAIL A Scale 1:50

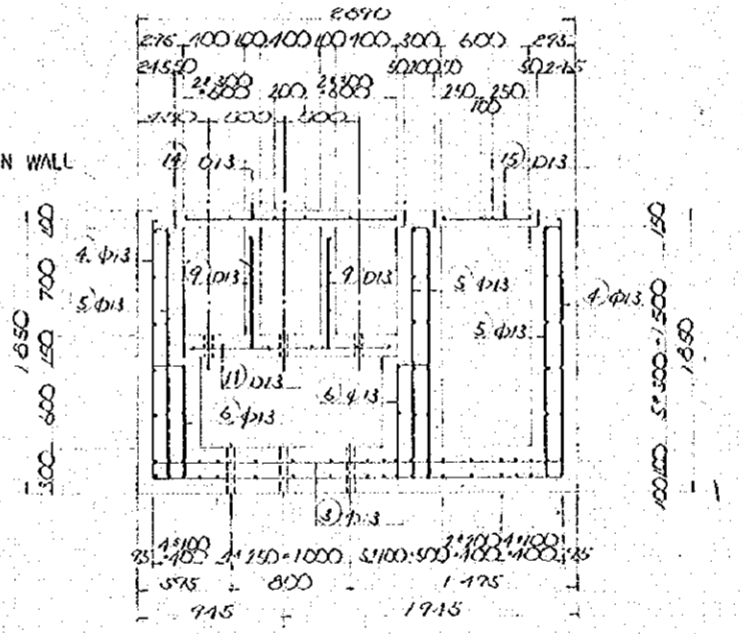
SCREEN WALL



PLAN Scale 1:50



FRONT VIEW Scale 1:50



CROSS SECTION Scale 1:25

MATERIAL QUANTITIES / SCREEN WALL

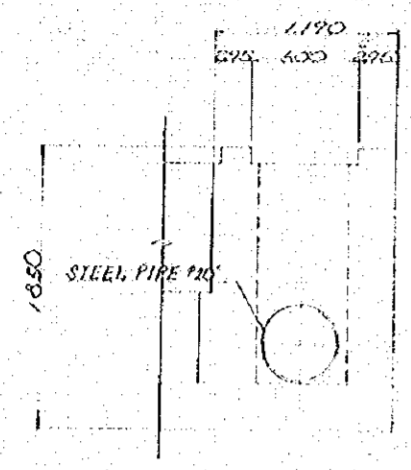
BAR	Ø	LENGTH	UNIT HEIGHT	MEMBERS	TOTAL
9	Ø13	0 780	0.975	11	8.205
10	Ø13	1 700		9	110.15
11	Ø13	1 300		11	14.229
STEEL PIPE					
		Ø13 = 32.453		3	2.570
		Ø150	5.31	3	1.815
					4.197
CONCRETE					
					28 530

GENERAL NOTES

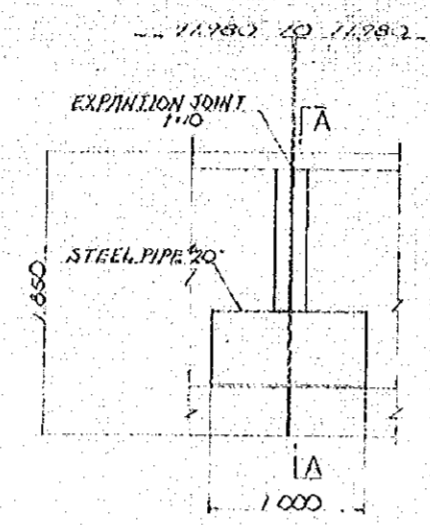
NO.	DATE	DESCRIPTION	APPROVED
REVISION			
PORT MUHAMMAD-BIN-QASIM PROJECT PAKISTAN			
IRON ORE & COAL BERTH MAH BERTH DETAILS OF P.C DUCTS AND COVERS FOR ELECTRIC CABLES AND WATER (11)			
JAPAN INTERNATIONAL COOPERATION AGENCY			
CONTRACT NO. JICA/PAK/10/1975			
SCALE: 1:50			
DRAWN BY: J. S. K.			
CHECKED BY: M. S. K.			
DESIGNED BY: M. S. K.			
APPROVED BY: M. S. K.			
DATE: DEC 1975			
DWG. NO. B-54			

9 10 11 12 13 14 15 16

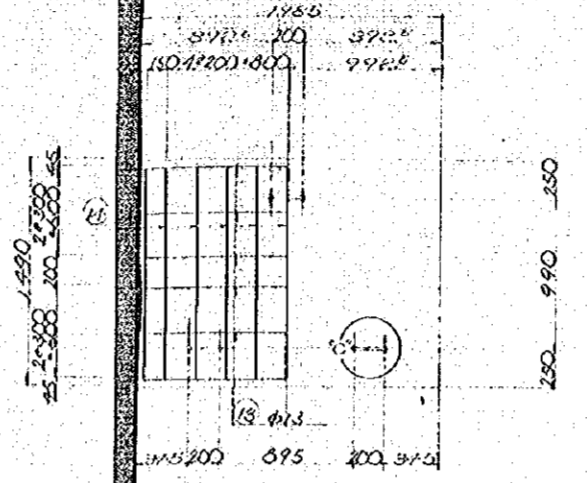
GENERAL NOTES



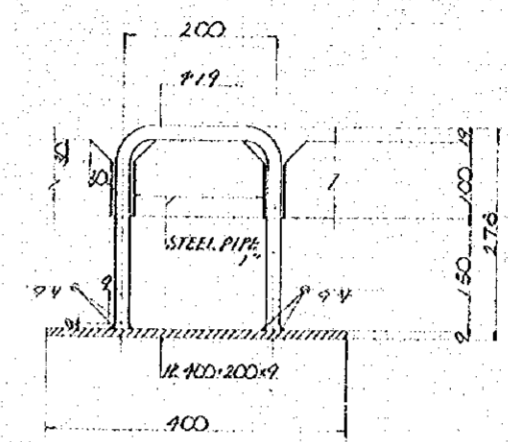
SECTION A-A



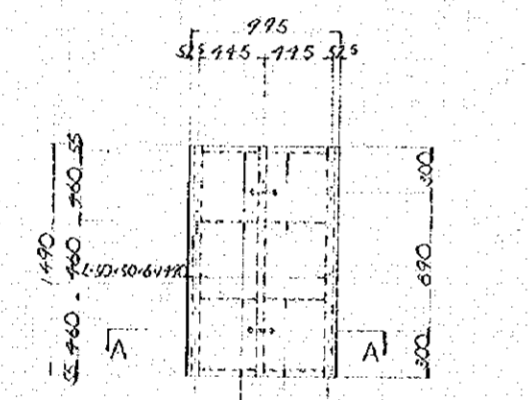
DETAIL A Scale 1:25



DUCT COVER TYPE E Scale 1:25



DETAIL C Scale 1:5



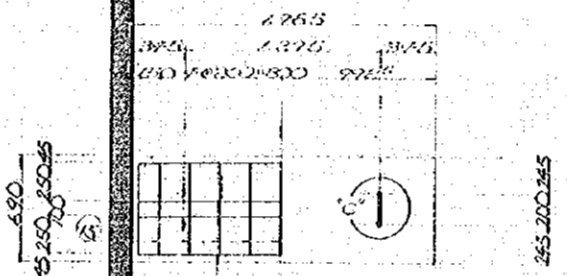
PLAN

SECTION A-A Scale 1:25

METAL COVER FOR CONNECTION BOX

MATERIAL QUANTITIES / DUCT COVER

(TYPE F)					(TYPE G)				
BAR NUMBER	DIA	LENGTH	WEIGHT	TOTAL	BAR NUMBER	DIA	LENGTH	WEIGHT	TOTAL
BAR 13	13	1900	1.010	11.36	BAR 13	13	1900	1.010	7.90
14	13	1400	0.975	15.323	15	13	660	0.975	6.567
		15323	4.13	11.056			6567	4.13	7.90
STEEL PIPE	1"	0.100	2.430	6	1.972				
HANDLE	19	0.719	2.230	3	3.207				
		11400	0.785	16.955					
CONCRETE				0.197	CONCRETE				0.138



DUCT COVER TYPE G Scale 1:25

MATERIAL QUANTITIES / METAL COVER FOR CONNECTION BOX

BAR NUMBER	DIA	LENGTH	WEIGHT	TOTAL
BAR 13	13	1900	1.010	7.90
14	13	1400	0.975	6.567
		15323	4.13	7.90
STEEL PIPE	1"	0.100	2.430	0.972
HANDLE	19	0.719	2.230	3.207
		11400	0.785	11.307
CONCRETE				0.138

NO.	DATE	DESCRIPTION	APPROVED
REVISION			

PORT MUHAMMAD-BIN-QASIM PROJECT
PAKISTAN

IRON ORE & COAL BERTH
DETAILS
OF
PC DUCTS & COVERS FOR
ELECTRIC CABLES & WATER (2)

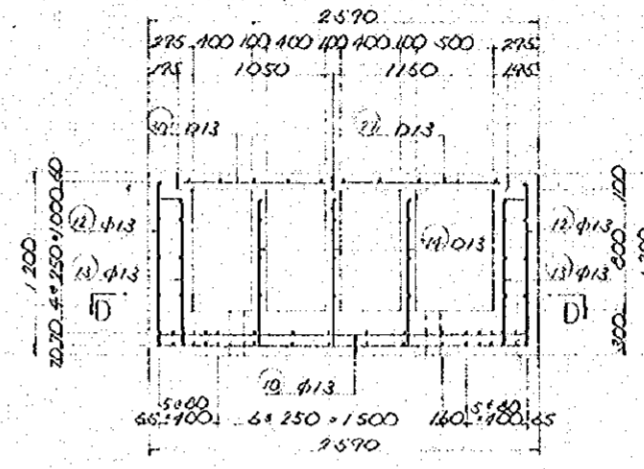
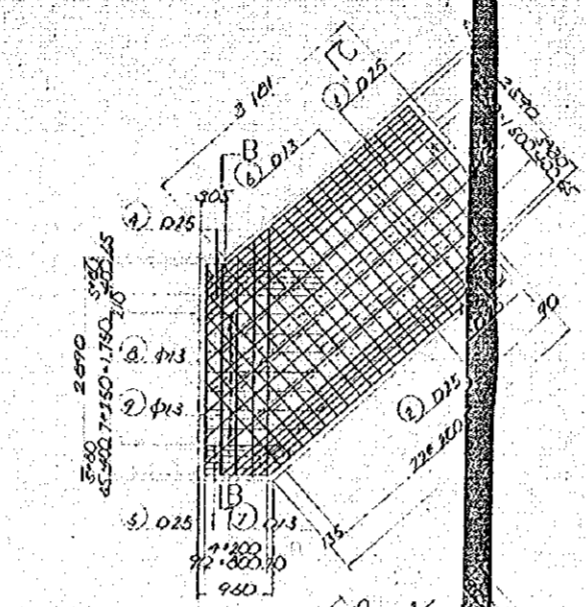
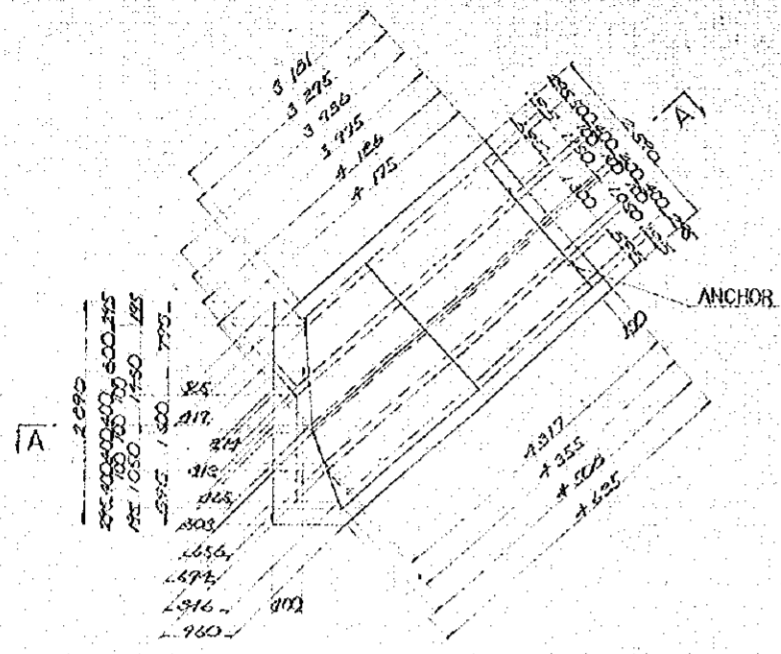
JAPAN INTERNATIONAL COOPERATION AGENCY
CONSULTANTS

APPROVED: [Signature]
CHECKED: [Signature]
DESIGNED: [Signature]
DRAWING: [Signature]

SCALE: [Blank]
DRAWING NUMBER: [Blank]
DATE: DEC 1975
DWG. NO. B-55

PC DUCT FOR ELECTRIC CABLES & WATER TYPE B

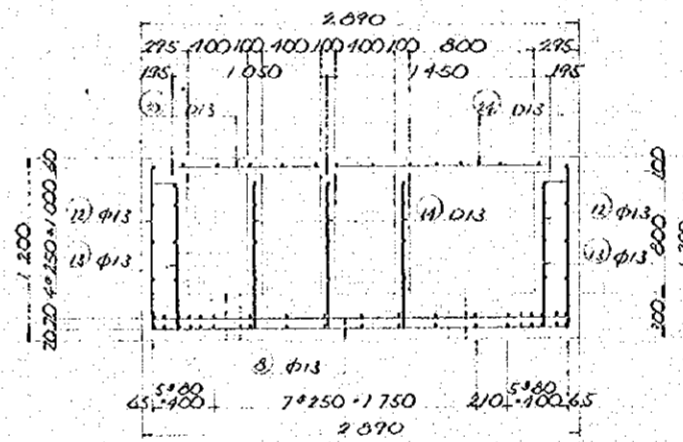
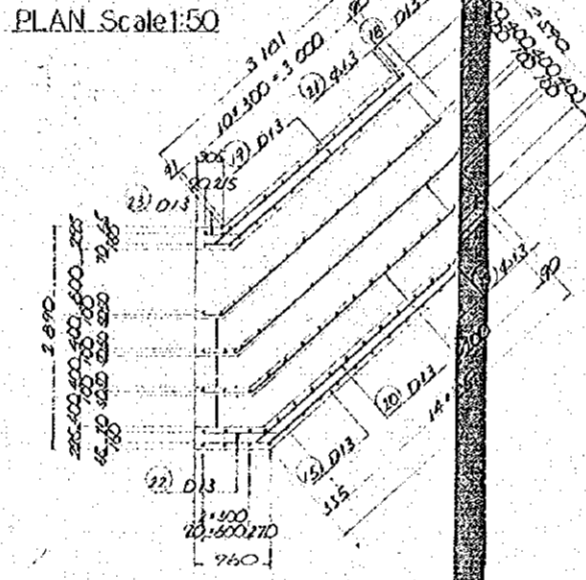
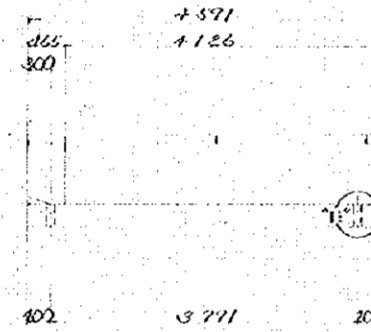
GENERAL NOTES



PLAN Scale:1:50

PLAN Scale:1:50

CROSS SECTION C-C Scale:1:25



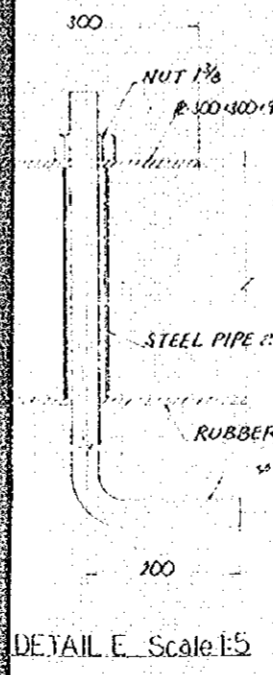
SECTION A-A Scale:1:50

SECTION D-D Scale:1:50

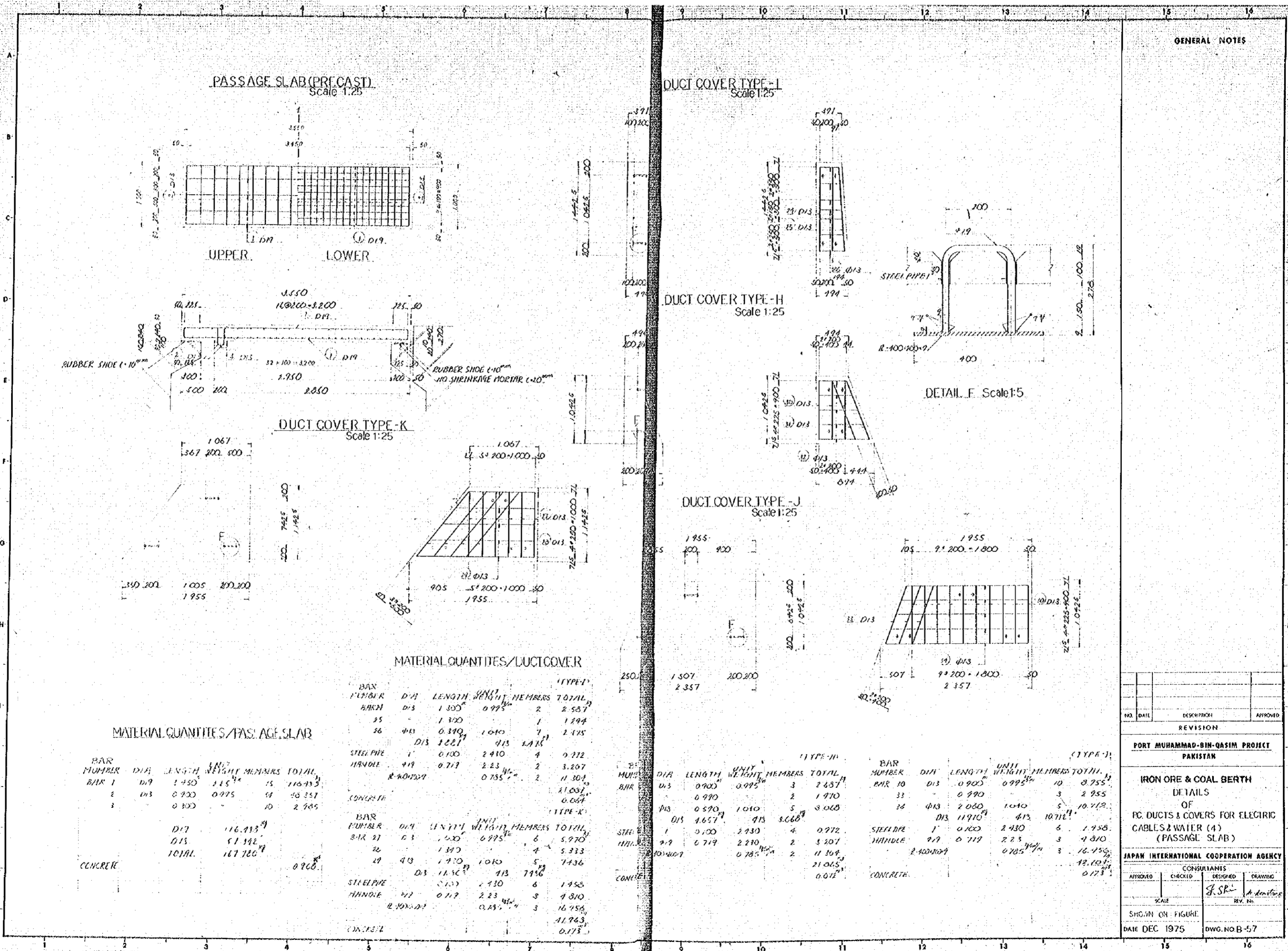
CROSS SECTION B-B Scale:1:25

MATERIAL QUANTITIES/DUCT TYPE B

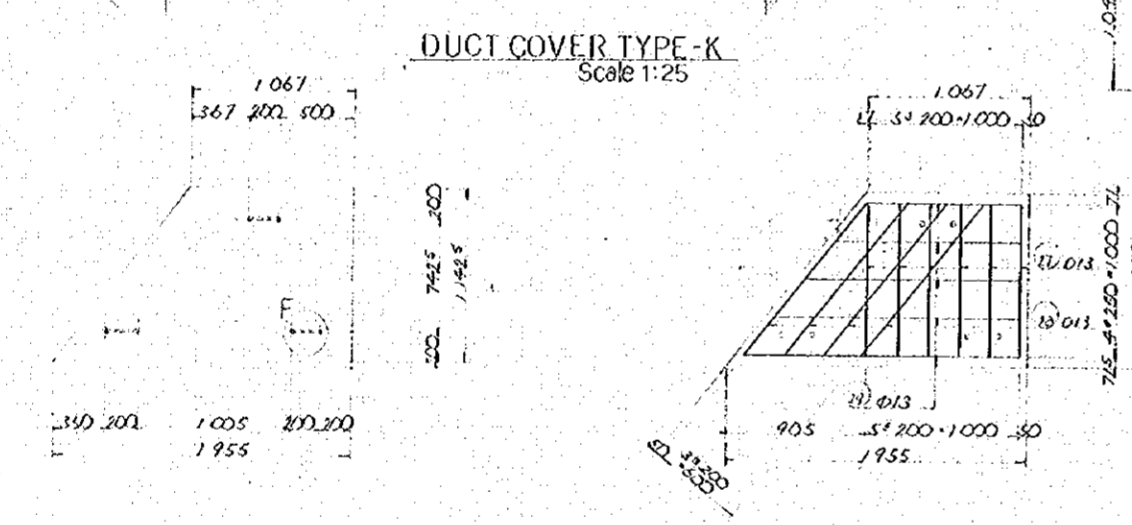
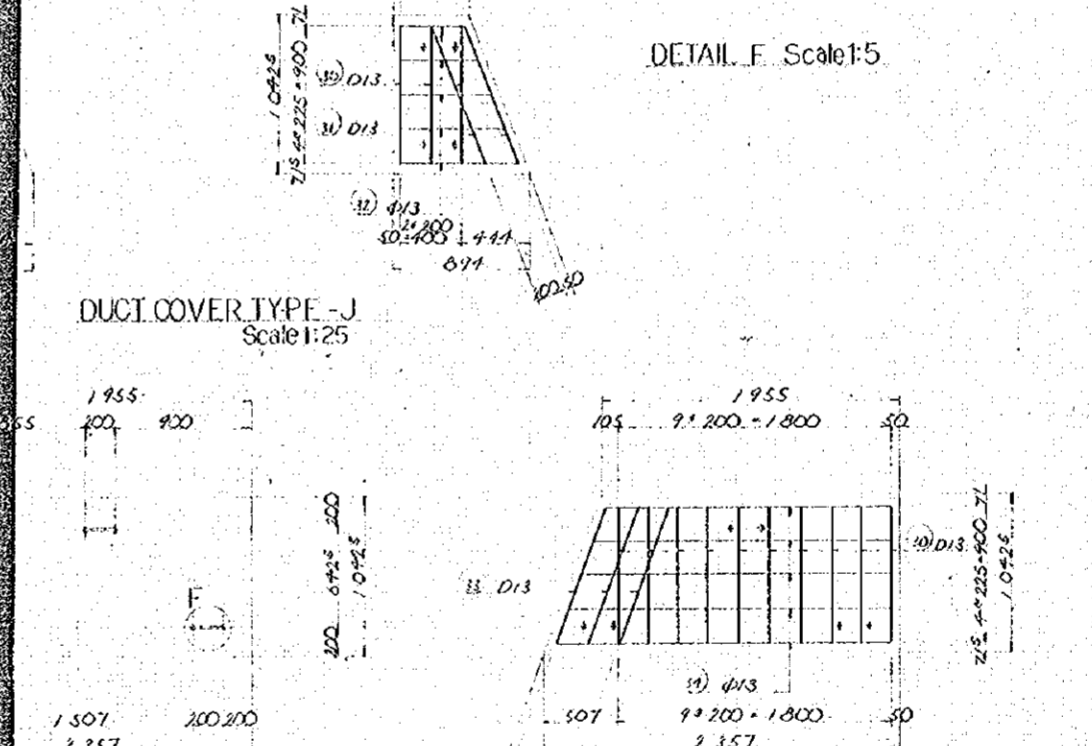
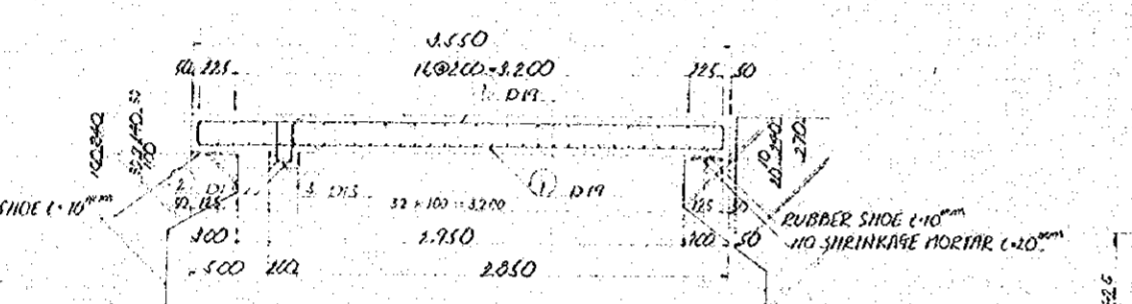
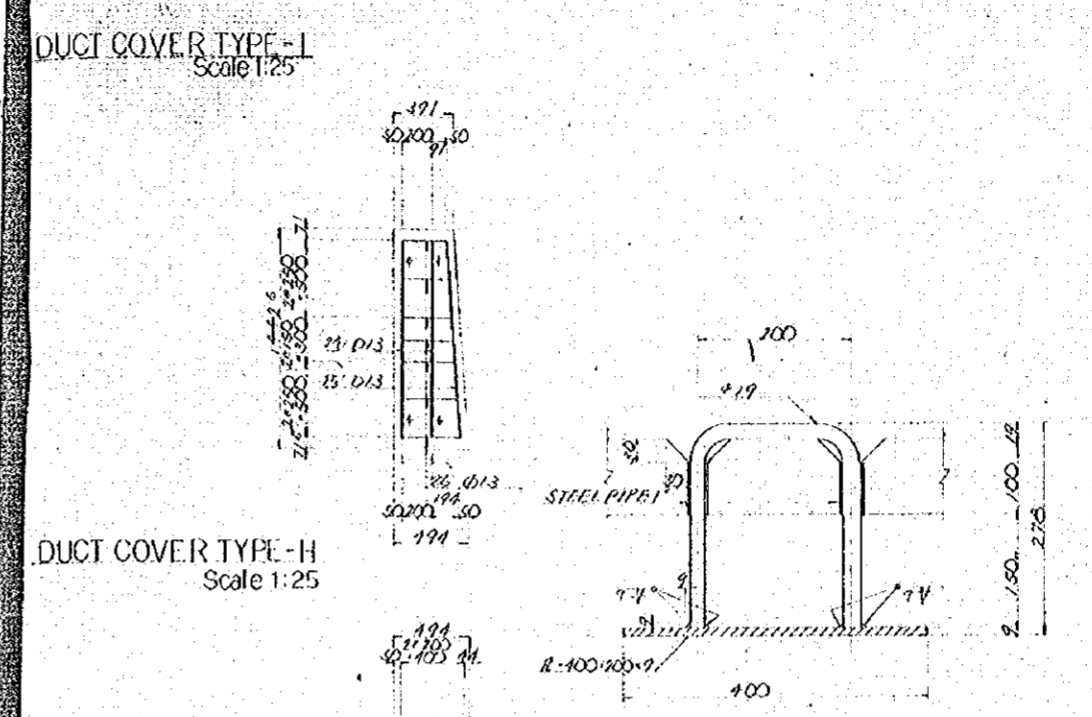
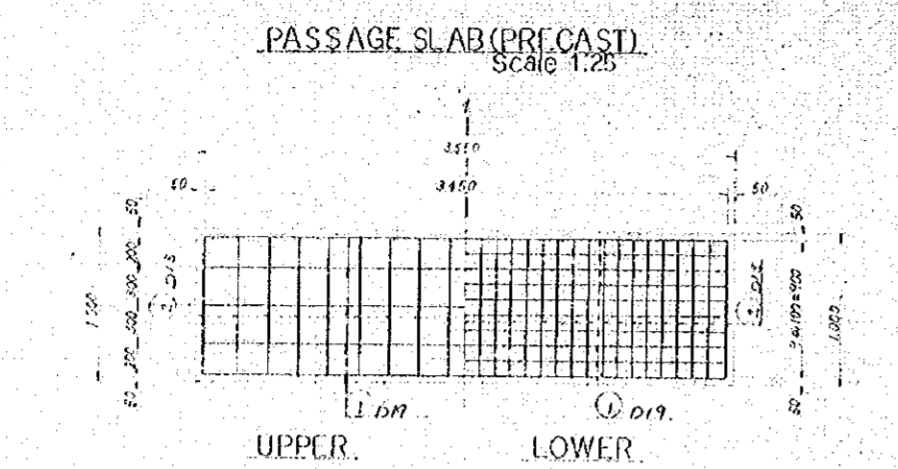
BAR NUMBER	DIA	LENGTH	UNITS WEIGHT	MEMBERS	TOTAL	BAR NUMBER	DIA	LENGTH	UNITS WEIGHT	MEMBERS	TOTAL
BAR 1	Ø25	5.100	3.780	2	12.960	STEEL PIPE	Ø2"	0.300	6.840	1	6.840
2	Ø25	1.360	3.780	10	13.173	ANCHOR	Ø13	1.110	0.812	1	1.110
3	Ø25	3.550	3.780	12	17.430	WASHER	Ø13	0.735	0.812	1	0.735
4	Ø25	1.500	3.780	12	11.410	CONCRETE					5.812
5	Ø25	1.110	3.780	10	11.178						
6	Ø13	4.160	0.995	12	54.148						
7	Ø13	1.500	0.995	14	19.935						
8	Ø13	3.070	1.040	6	11.167						
9	Ø13	2.750	1.040	4	11.402						
10	Ø13	2.460	1.040	10	26.706						
11	Ø13	2.070	1.040	12	25.085						
12	Ø13	1.070	1.040	32	35.610						
13	Ø13	1.330	1.040	32	37.696						
14	Ø13	1.270	1.040	11	17.431						
15	Ø13	5.400	0.948	1	11.112						
16	Ø13	4.850	1.040	4	20.013						
17	Ø13	4.450	1.040	3	18.512						
18	Ø13	4.570	1.040	4	16.999						
19	Ø13	3.540	1.040	4	14.081						
20	Ø13	4.650	1.040	1	18.991						
21	Ø13	3.300	1.040	4	11.154						
22	Ø13	1.070	1.040	1	3.980						
23	Ø13	0.500	1.040	4	1.979						



NO.	DATE	DESCRIPTION	APPROVED
REVISION			
PORT MUHAMMAD-BIN-QASIM PROJECT PAKISTAN			
IRON ORE & COAL BERTH APPROACH TRESTLE DETAILS OF P.C. DUCTS AND COVERS FOR ELECTRIC CABLES AND WATER (3)			
JAPAN INTERNATIONAL COOPERATION AGENCY			
CONSULTANTS			
APPROVED	CHECKED	DESIGNED	DRAWING
SCALE		REV. No.	
SHOWN ON FIGURE		DWG. NO. B-56	
DATE DEC. 1975			



GENERAL NOTES



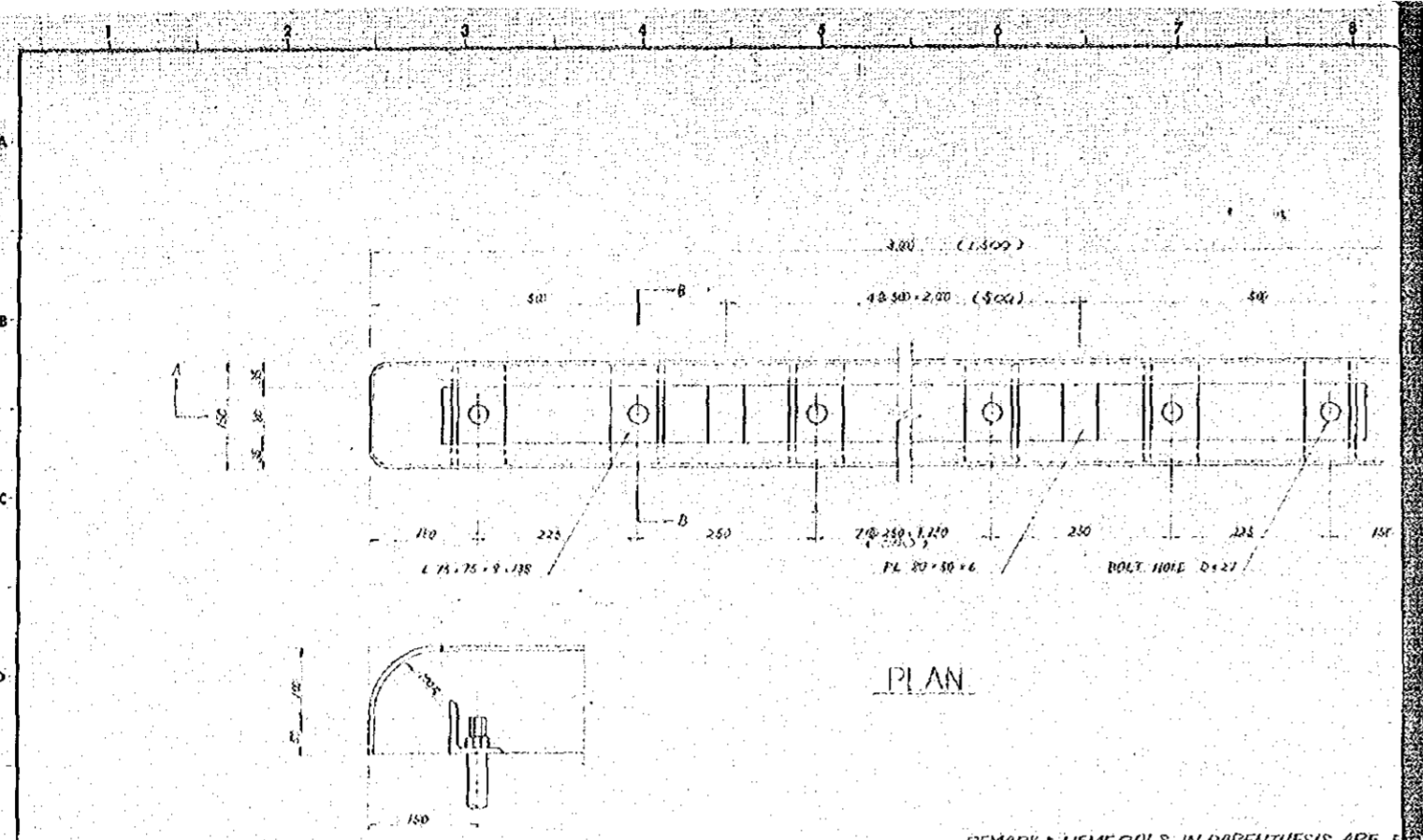
MATERIAL QUANTITIES / DUCT COVER

TYPE-I					
BAR NUMBER	DIA	LENGTH	WEIGHT	MEMBERS	TOTAL
25	D13	1.300	0.975 ^{kg}	2	2.587 ^{kg}
26	D13	1.320	1.010 ^{kg}	1	1.294 ^{kg}
27	D13	0.390	0.413 ^{kg}	7	2.895 ^{kg}
STEEL PIPE HANDLE					
1	1"	0.100	2.410 ^{kg}	4	9.772 ^{kg}
2	R-400/209	0.717	2.23 ^{kg}	2	3.207 ^{kg}
CONCRETE					0.664 ^{m³}
TYPE-K					
BAR NUMBER	DIA	LENGTH	WEIGHT	MEMBERS	TOTAL
27	D13	1.400	0.975 ^{kg}	6	5.970 ^{kg}
28	D13	1.370	1.010 ^{kg}	4	5.333 ^{kg}
29	D13	1.270	1.010 ^{kg}	5	7.436 ^{kg}
STEEL PIPE HANDLE					
1	1"	0.100	2.430 ^{kg}	6	14.58 ^{kg}
2	R-400/209	0.717	2.23 ^{kg}	3	9.810 ^{kg}
CONCRETE					11.763 ^{m³}

TYPE-II					
BAR NUMBER	DIA	LENGTH	WEIGHT	MEMBERS	TOTAL
30	D13	0.900	0.975 ^{kg}	3	2.857 ^{kg}
31	D13	0.990	1.010 ^{kg}	2	1.970 ^{kg}
32	D13	0.570	0.608 ^{kg}	5	3.068 ^{kg}
STEEL PIPE HANDLE					
1	1"	0.100	2.430 ^{kg}	4	9.772 ^{kg}
2	R-400/209	0.717	2.23 ^{kg}	2	3.207 ^{kg}
CONCRETE					0.012 ^{m³}

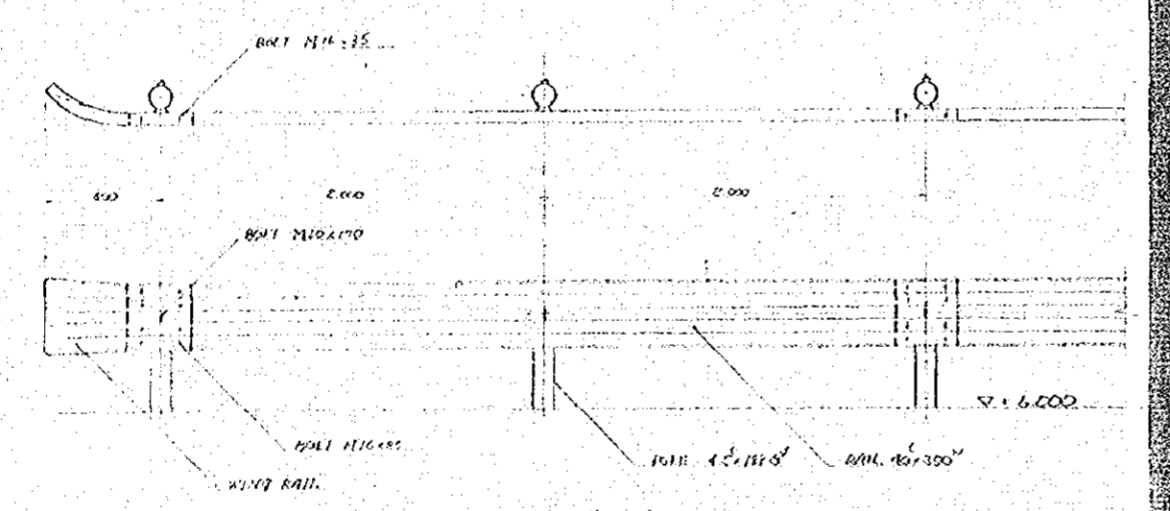
TYPE-III					
BAR NUMBER	DIA	LENGTH	WEIGHT	MEMBERS	TOTAL
30	D13	0.900	0.975 ^{kg}	10	8.755 ^{kg}
31	D13	0.990	1.010 ^{kg}	3	2.955 ^{kg}
32	D13	2.060	2.140 ^{kg}	5	10.712 ^{kg}
STEEL PIPE HANDLE					
1	1"	0.100	2.430 ^{kg}	6	14.58 ^{kg}
2	R-400/209	0.717	2.23 ^{kg}	3	9.810 ^{kg}
CONCRETE					12.103 ^{m³}

NO.	DATE	DESCRIPTION	APPROVED
REVISION			
PORT MUHAMMAD-BIN-QASIM PROJECT PAKISTAN			
IRON ORE & COAL BERTH DETAILS OF P.C. DUCTS & COVERS FOR ELECTRIC CABLES & WATER (4) (PASSAGE SLAB)			
JAPAN INTERNATIONAL COOPERATION AGENCY			
CONSULTANTS		DRAWING	
APPROVED	CHECKED	DESIGNED	DRAWING
		S.P.	A. denton
SCALE			
SHOWN ON FIGURE		REV. No.	
DATE DEC. 1975		DWG. NO B-57	



PLAN

SECTION A-A WHEEL GUARD A & B Scale 1:5



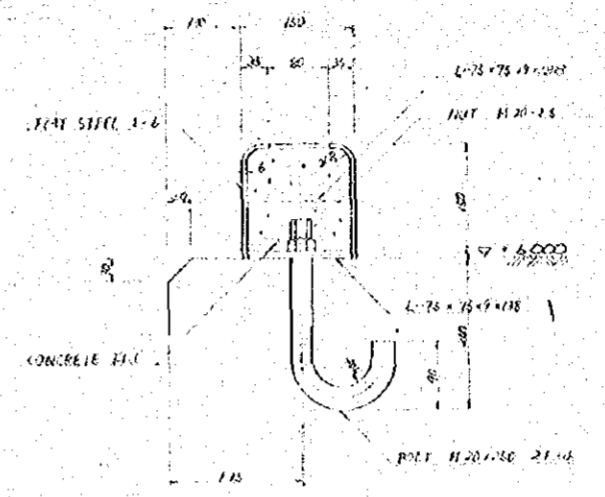
GUARD RAIL Scale 1:20

MATERIAL QUANTITIES / WHEEL GUARD

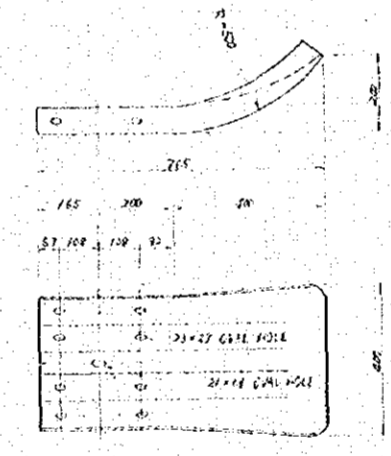
SIZE	LENGTH	UNIT	WEIGHT	MEMBERS	TOTAL
BODY R-30x193x6	0.205	m ²	59.977	1	59.977
R-30x50x6	0.120	m ²	7.120	5	35.600
BASE L-75x75x7	0.133	m ²	7.621	7	53.347
ANCHOR BOLT M20x850	0.230	m ²	6.510	7	45.570
WATT (Check by Bolt)			12.257	1	12.257
CONCRETE			0.530		0.530

MATERIAL QUANTITIES / GUARD RAIL

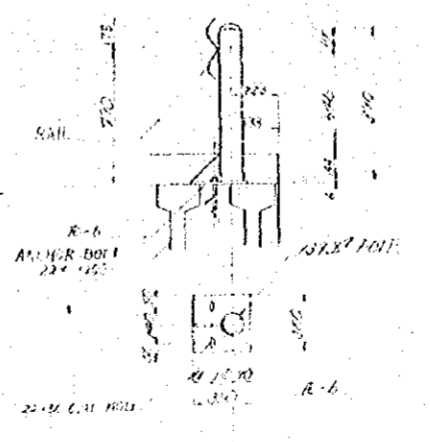
SIZE	LENGTH	UNIT	WEIGHT	MEMBERS	TOTAL
BODY R-170x135x6	0.205	m ²	30.050	1	30.050
R-30x50x6	0.120	m ²	7.120	2	14.240
BASE L-75x75x7	0.133	m ²	7.621	7	53.347
ANCHOR BOLT M20x850	0.230	m ²	6.510	7	45.570
WATT (Check by Bolt)			12.257	1	12.257
CONCRETE			0.530		0.530



SECTION B-B



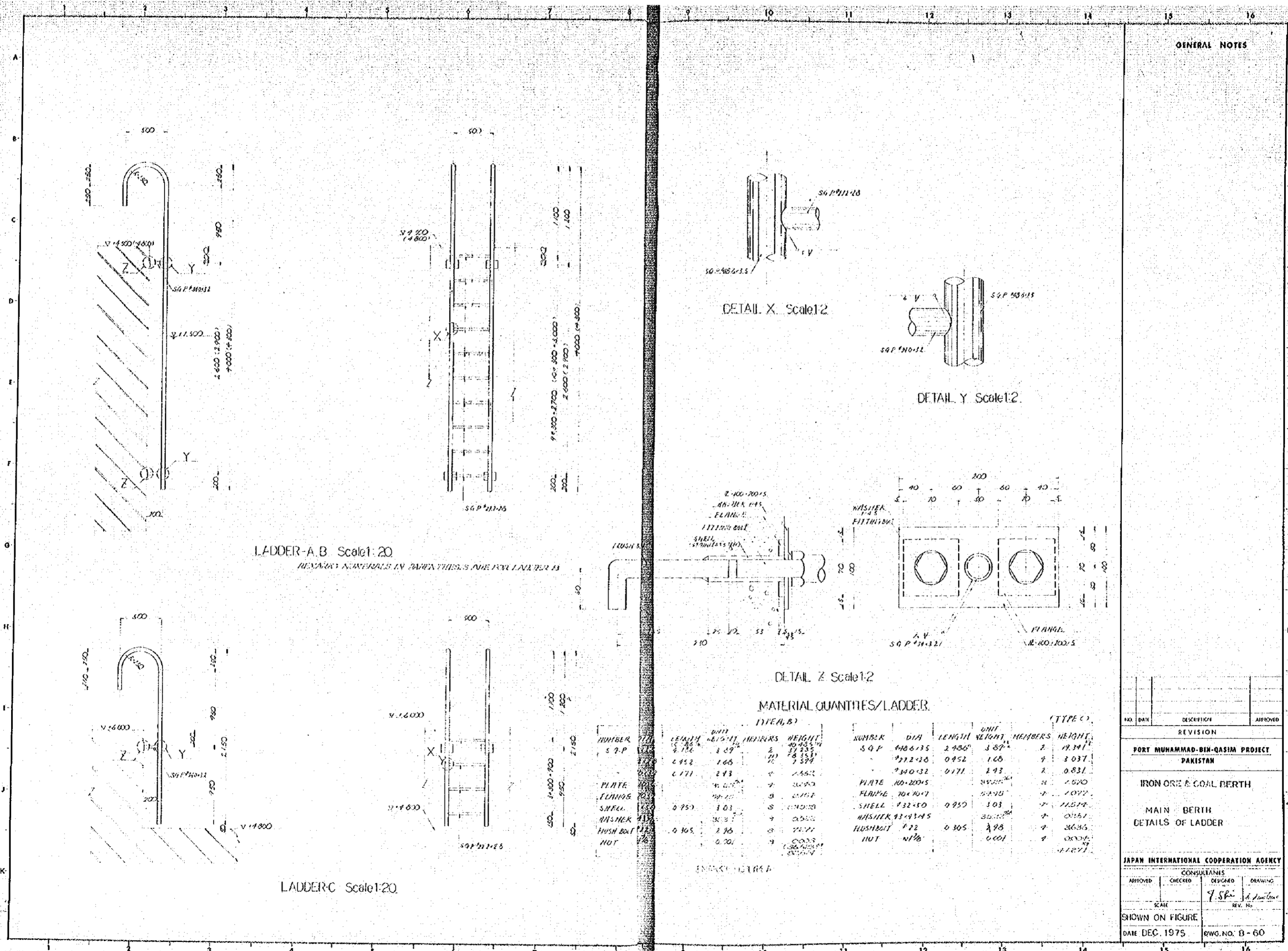
WING RAIL Scale 1:5



POLE Scale 1:20

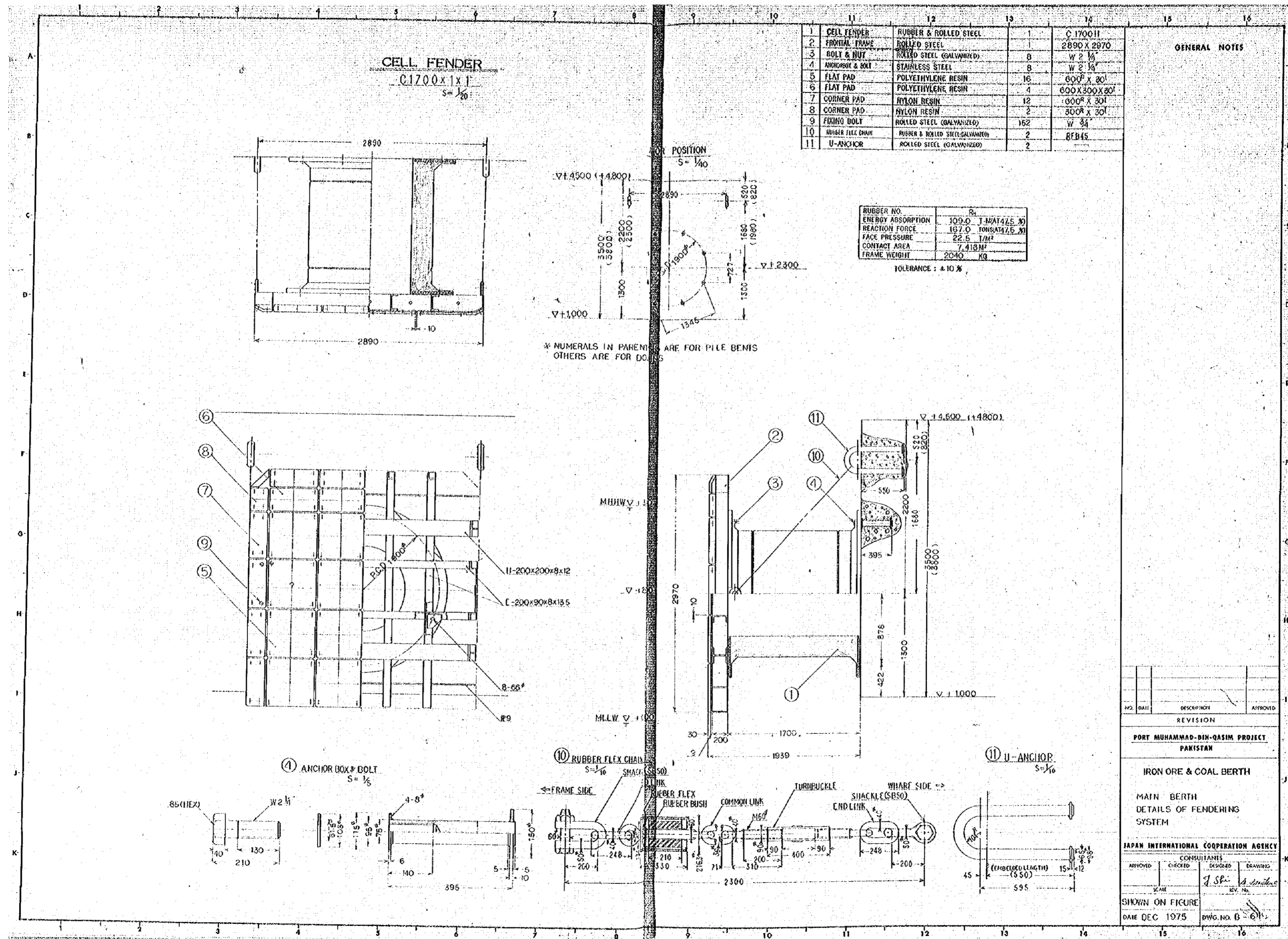
GENERAL NOTES

NO.	DATE	DESCRIPTION	APPROVED
REVISION			
PORT MUHAMMAD-BIN-QASIM PROJECT PAKISTAN			
IRON ORE & COAL BERTH DETAILS OF WHEEL GUARD AND GUARD RAIL			
JAPAN INTERNATIONAL COOPERATION AGENCY			
CONSULTANTS			
APPROVED	CHECKED	DESIGNED	DRAWING
		<i>[Signature]</i>	<i>[Signature]</i>
SCALE		REV. NO.	
SHOWN ON FIGURE		REV. NO.	
DATE DEC 1975		DWG. NO. B-50	



GENERAL NOTES

NO.	DATE	DESCRIPTION	APPROVED
REVISION			
PORT MUHAMMAD-BIN-QASIM PROJECT			
PAKISTAN			
IRON ORE & COAL BERTH			
MAIN BERTH			
DETAILS OF LADDER			
JAPAN INTERNATIONAL COOPERATION AGENCY			
CONSULTANTS			
APPROVED	CHECKED	DESIGNED	DRAWING
		Y. S. P.	A. J. Khan
SCALE		REV. NO.	
SHOWN ON FIGURE			
DATE DEC. 1975	DWG. NO. B-60		



NO.	DESCRIPTION	MATERIAL	QUANTITY	REMARKS
1	CELL FENDER	RUBBER & ROLLED STEEL	1	C 170011
2	FRONTAL FRAME	ROLLED STEEL	1	2890 X 2970
3	BOLT & NUT	ROLLED STEEL (GALVANIZED)	8	W 2 1/4"
4	ANCHOR BOX & BOLT	STAINLESS STEEL	8	W 2 1/4"
5	FLAT PAD	POLYETHYLENE RESIN	16	600 ² X 30"
6	FLAT PAD	POLYETHYLENE RESIN	4	600 X 300 X 30"
7	CORNER PAD	NYLON RESIN	12	600 ² X 30"
8	CORNER PAD	NYLON RESIN	2	300 ² X 30"
9	FIXING BOLT	ROLLED STEEL (GALVANIZED)	162	W 3/4"
10	RUBBER FLEX CHAIN	RUBBER & ROLLED STEEL (GALVANIZED)	2	REB45
11	U-ANCHOR	ROLLED STEEL (GALVANIZED)	2	

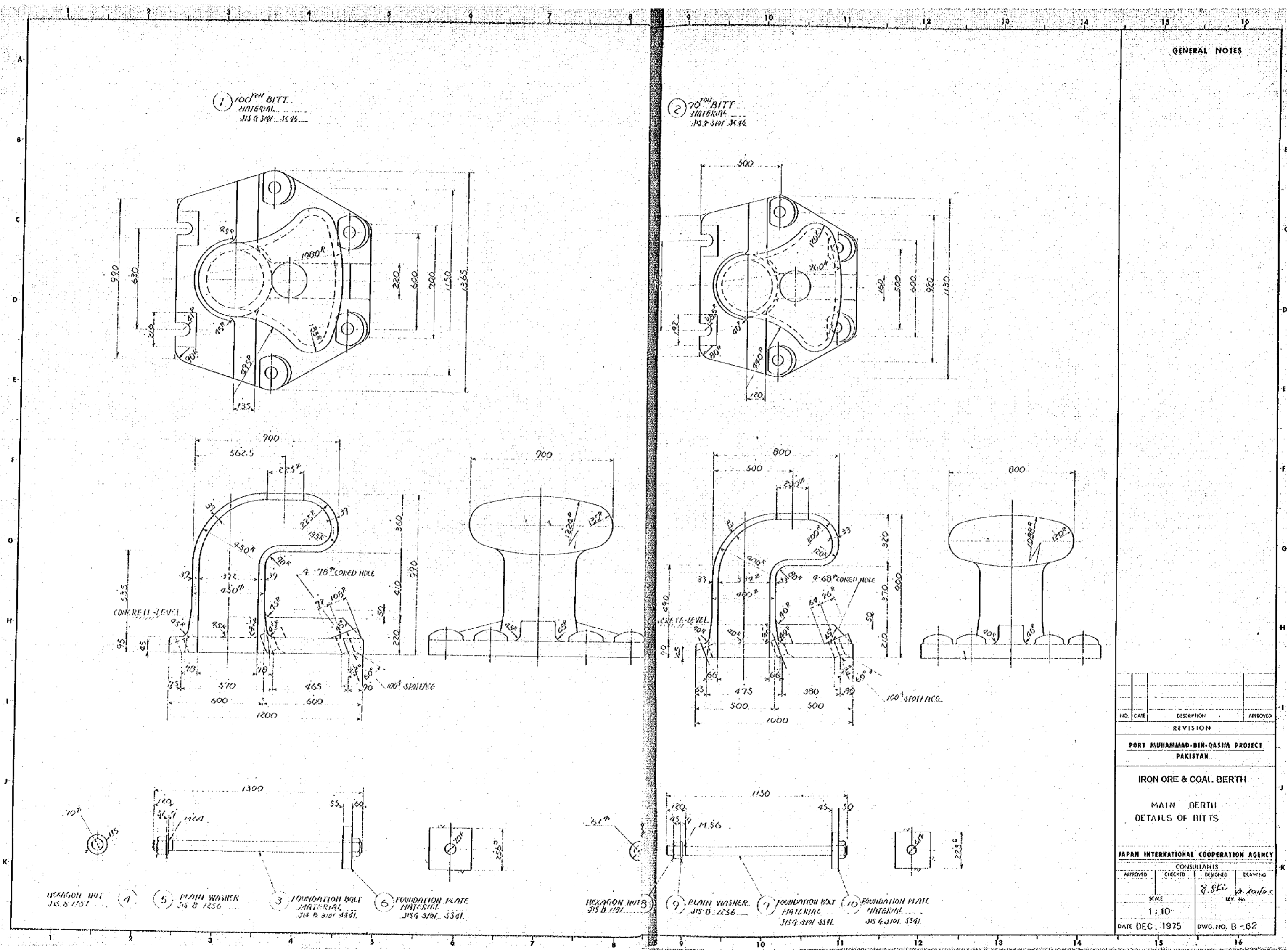
GENERAL NOTES

RUBBER NO.	R ₁
ENERGY ABSORPTION	109.0 J/MAT475.30
REACTION FORCE	197.0 TONS/MAT475.30
FACE PRESSURE	22.5 T/M ²
CONTACT AREA	7.413M ²
FRAME WEIGHT	2040 KG

TOLERANCE : ± 10 %

* NUMERALS IN PARENTH ARE FOR PILE BEAMS
OTHERS ARE FOR BOLTS

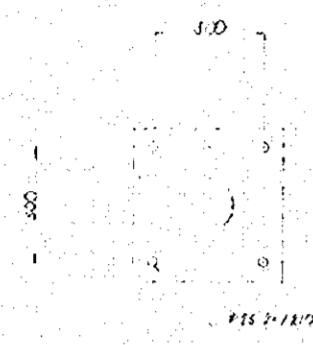
NO.	DATE	DESCRIPTION	APPROVED
REVISION			
PORT MUHAMMAD-BEN-QASIM PROJECT PAKISTAN			
IRON ORE & COAL BERTH			
MAIN BERTH DETAILS OF FENDERING SYSTEM			
JAPAN INTERNATIONAL COOPERATION AGENCY			
CONSULTANTS			
APPROVED	CHECKED	DESIGNED	DRAWING
		J.S.R.	A. Sultana
SCALE			
SHOWN ON FIGURE			
DATE DEC 1975		DWG. NO. B-61	



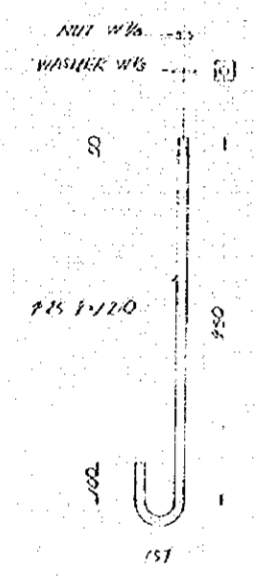
GENERAL NOTES

NO.	DATE	DESCRIPTION	APPROVED
REVISION			
PORT MUHAMMAD-BIN-QASIM PROJECT PAKISTAN			
IRON ORE & COAL BERTH			
MAIN BERTH DETAILS OF BITTS			
JAPAN INTERNATIONAL COOPERATION AGENCY			
CONSULTANTS			
APPROVED	CHECKED	DESIGNED	DRAWING
		<i>G. Shi</i>	<i>A. Kudo</i>
SCALE			
1:10			
DATE DEC. 1975		DWG. NO. B-62	

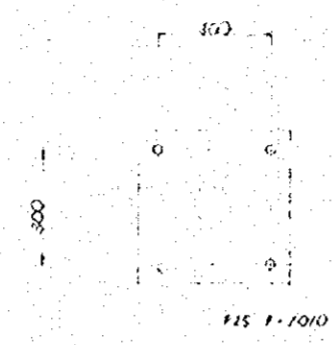
GENERAL NOTES



PLAN



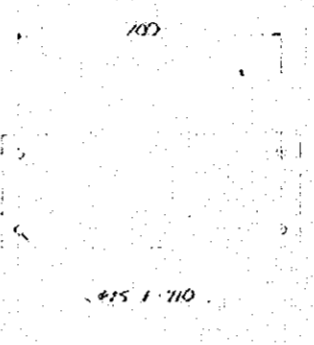
ANCHOR BOLT FOR BERTH LIGHT
APPROACH, FRESH LIGHT
& FLOOD LIGHT



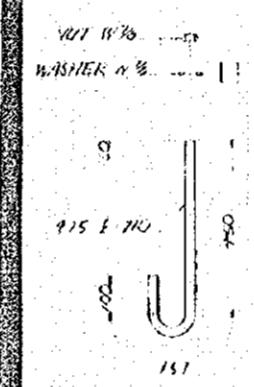
PLAN



ANCHOR BOLT FOR TELEPHONE
STAND BOX



PLAN

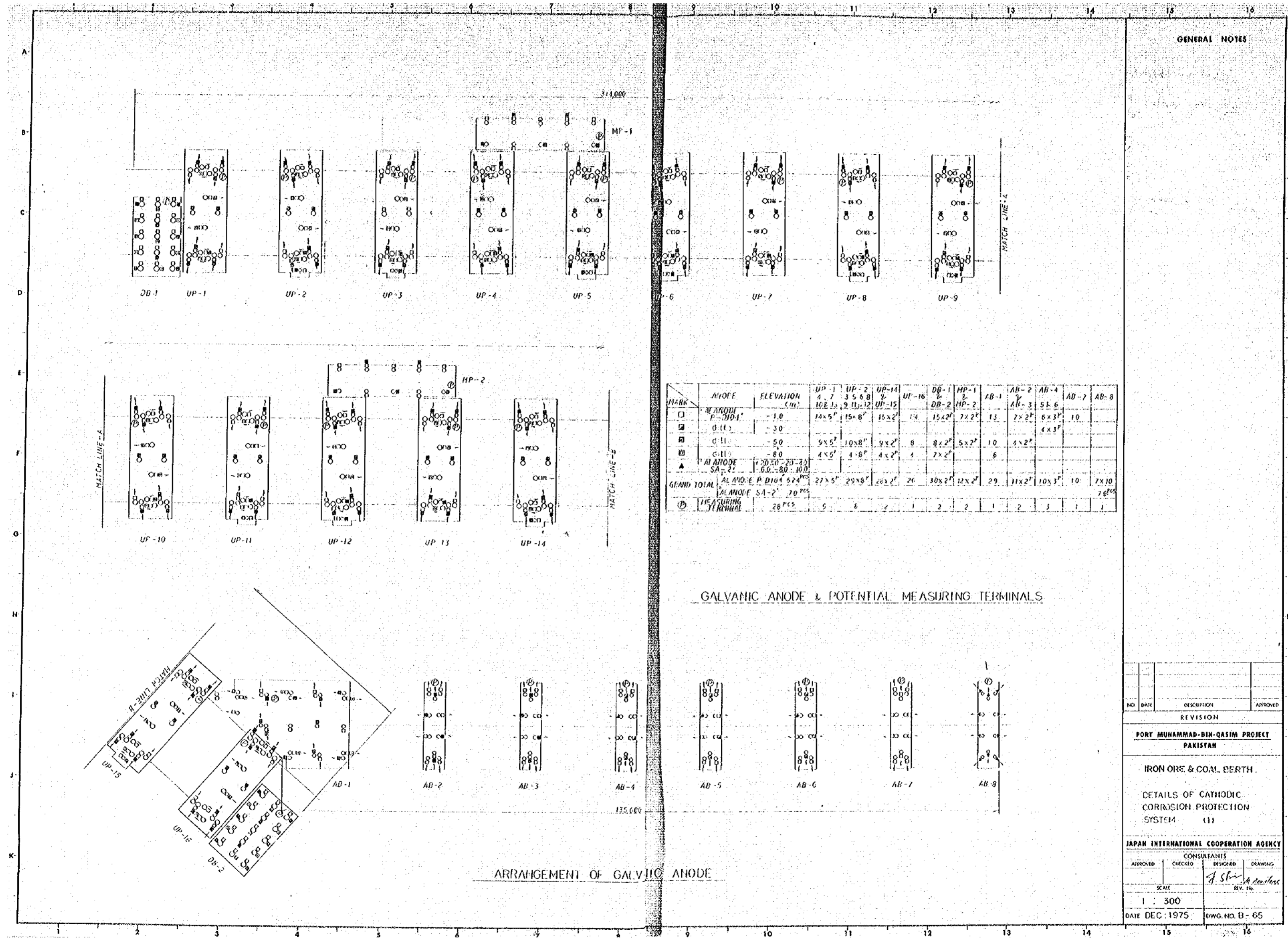


ANCHOR BOLT FOR CAPSTAN BOARD
& OIL PIPE HEATING BOARD

MATERIAL QUANTITIES / ANCHOR BOLT

			LENGTH	UNIT WEIGHT	MEMBERS	TOTAL
FOR BERTH LIGHT & FLOOD LIGHT	BOLT	Ø 25	1.210"	3.55 ^{kg}	4	13.634
	NUT	W 3/8		0.102	4	0.408
	WASHER	W 3/8		0.036	4	0.144
						14.186
FOR TELEPHONE STAND BOX	BOLT	Ø 25	1.310"	3.55 ^{kg}	4	13.554
	NUT	W 3/8		0.102	4	0.408
	WASHER	W 3/8		0.036	4	0.144
						14.106
FOR CAPSTAN BOARD & OIL PIPE HEATING BOARD	BOLT	Ø 25	0.710"	3.55 ^{kg}	4	10.934
	NUT	W 3/8		0.102	4	0.408
	WASHER	W 3/8		0.036	4	0.144
						11.486

NO.	DATE	DESCRIPTION	APPROVED
REVISION			
PORT MUHAMMAD-BIN-QASIM PROJECT PAKISTAN			
IRON ORE & COAL BERTH			
DETAILS OF ANCHOR BOLTS FOR APPURTENANCE WORKS			
JAPAN INTERNATIONAL COOPERATION AGENCY			
CONSULTANTS			
APPROVED	CHECKED	DESIGNED	DRAWING
		J. S. K.	
SCALE		REV. NO.	
1:10			
DATE DEC 1975		DWG NO. B-44	



GENERAL NOTES

MARK	ANODE	ELEVATION (m)	UP-1	UP-2	UP-11	UP-12	UP-13	UP-14	UP-15	UP-16	DB-1	DB-2	MP-1	MP-2	AB-1	AB-2	AB-3	AB-4	AB-5	AB-6	AB-7	AB-8	
□	AL ANODE	-1.0	14x5"	15x8"	15x2"	14	15x2"	7x2"	13	7x2"	6x3"	10	4x3"										
□	C-11	-3.0																					
□	C-11	-5.0	5x5"	10x8"	9x2"	8	8x2"	5x2"	10	4x2"													
□	C-11	-8.0	4x5"	4x8"	4x2"	4	7x2"		6														
▲	AL ANODE	-20.00 - 23.25																					
▲	SA-2	-6.0 - 8.0 - 10.0																					
●	POTENTIAL MEASURING TERMINAL		27x5"	29x8"	26x2"	26	30x2"	12x2"	29	11x2"	10x3"	10	7x10	7.6"									

GALVANIC ANODE & POTENTIAL MEASURING TERMINALS

ARRANGEMENT OF GALVANIC ANODE

NO	DATE	DESCRIPTION	APPROVED
REVISION			
PORT MUHAMMAD-BIN-QASIM PROJECT PAKISTAN			
IRON ORE & COAL BERTH			
DETAILS OF CATHODIC CORROSION PROTECTION SYSTEM (1)			
JAPAN INTERNATIONAL COOPERATION AGENCY			
CONSULTANTS			
APPROVED	CHECKED	DESIGNED	DRAWING
		<i>A. Shaukat</i>	<i>A. Shaukat</i>
SCALE 1 : 300			
DATE DEC : 1975 DWG. NO. B - 65			

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

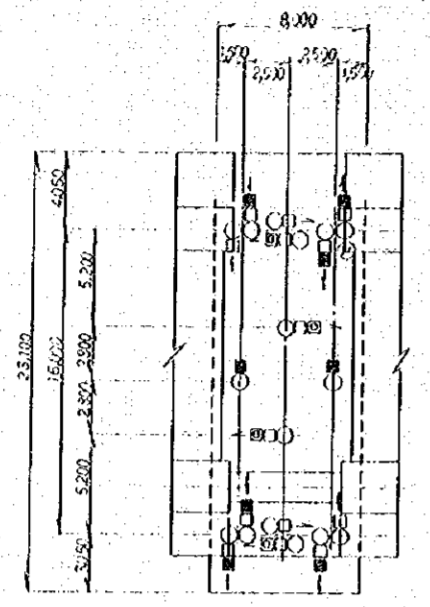
A
B
C
D
E
F
G
H
I
J
K

GENERAL NOTES

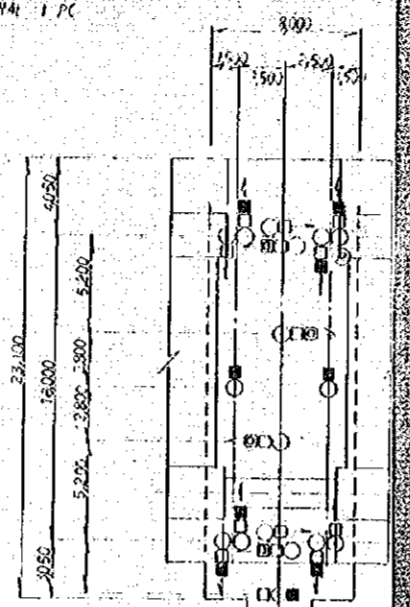
- : EL - 1 m 14 PCS
- : EL - 5 m 8 PCS
- ⊙ : EL - 8 m 4 PCS
- ⊙ : POTENSIAL MEASURING TERMINAL 1 PC

- : EL - 1 m 15 PCS x 2 PIER
- : EL - 5 m 8 PCS x 2 PIER
- ⊙ : EL - 8 m 7 PCS x 2 PIER
- ⊙ : POTENSIAL MEASURING TERMINAL 1 PC x 2 PIER

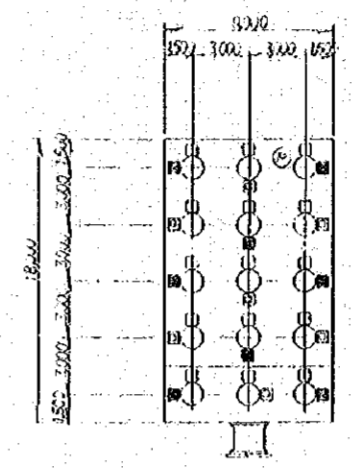
- : EL - 1 m 15 PCS x 2 PIER
- : EL - 5 m 8 PCS x 2 PIER
- ⊙ : EL - 8 m 7 PCS x 2 PIER
- ⊙ : POTENSIAL MEASURING TERMINAL 1 PC x 2 PIER



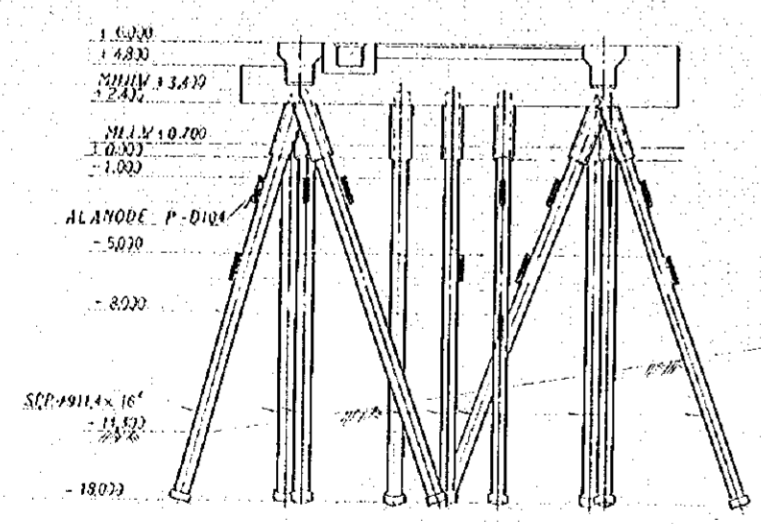
PLAN



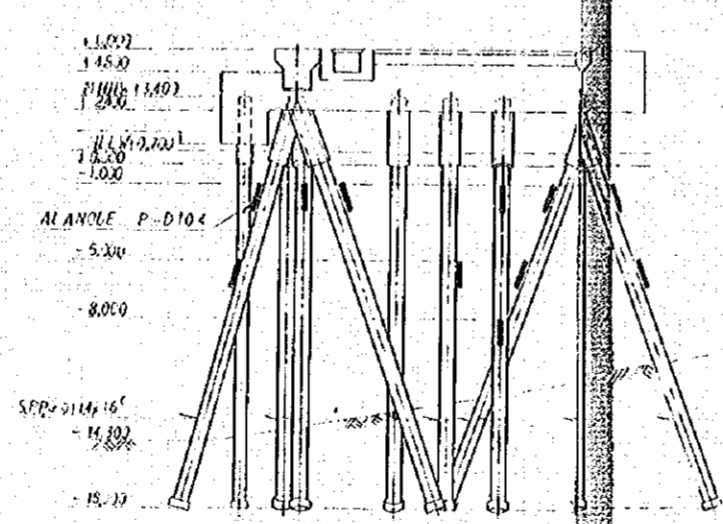
PLAN



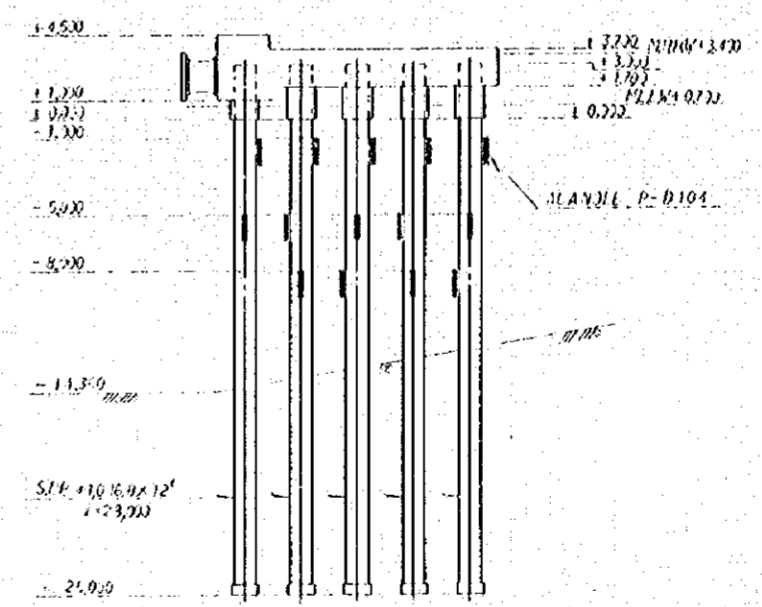
PLAN



FRONT VIEW
PILE BENT
UP - 16



FRONT VIEW
PILE BENT
UP - 14, 15



FRONT VIEW
MOORING DOLPHIN
DB - 1, 2

NO	DATE	DESCRIPTION	APPROVED
REVISION			

PORT MUHAMMAD-BIN-QASIM PROJECT
PAKISTAN
IRON ORE & COAL BERTH
DETAILS
OF
CATHODIC CORROSION PROTECTION
SYSTEM (2)

JAPAN INTERNATIONAL COOPERATION AGENCY			
CONSULTANTS			
APPROVED	CHECKED	DESIGNED	DRAWING
		<i>[Signature]</i>	<i>[Signature]</i>
SCALE			
1 : 200			
DATE DEC. 1975			
DWG. NO. 15-6F			

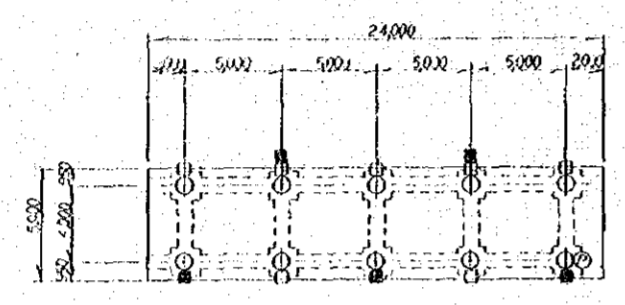
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

GENERAL NOTES

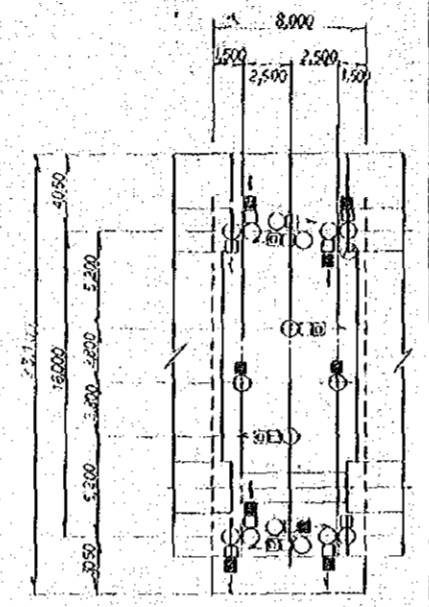
- : EL - 1 m 14 PCS x 5 P
- : EL - 5 m 9 PCS x 5 P
- ⊙ : EL - 8 m 4 PCS x 5 P
- ⊕ : POTENTIAL MEASURING TERMINAL 1 PC x 5 PIER

- : EL - 1 m 15 PCS x 8 PIER
- : EL - 5 m 10 PCS x 8 PIER
- ⊙ : EL - 8 m 4 PCS x 8 PIER
- ⊕ : POTENTIAL MEASURING TERMINAL 1 PC x 8 PIER

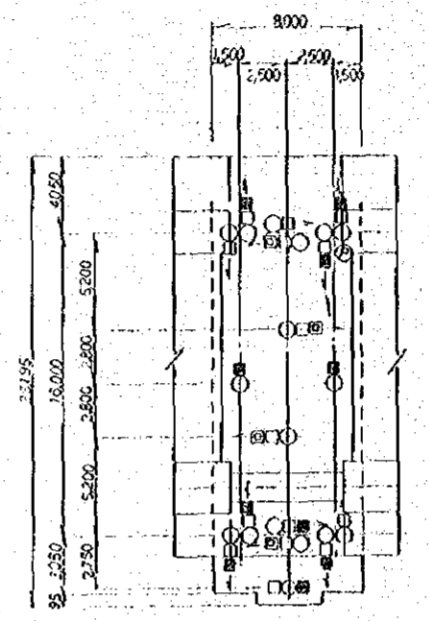
- : EL - 1 m 7 PCS x 2 PIER
- : EL - 5 m 5 PCS x 2 PIER
- ⊕ : POTENTIAL MEASURING TERMINAL 1 PC x 2 PIER



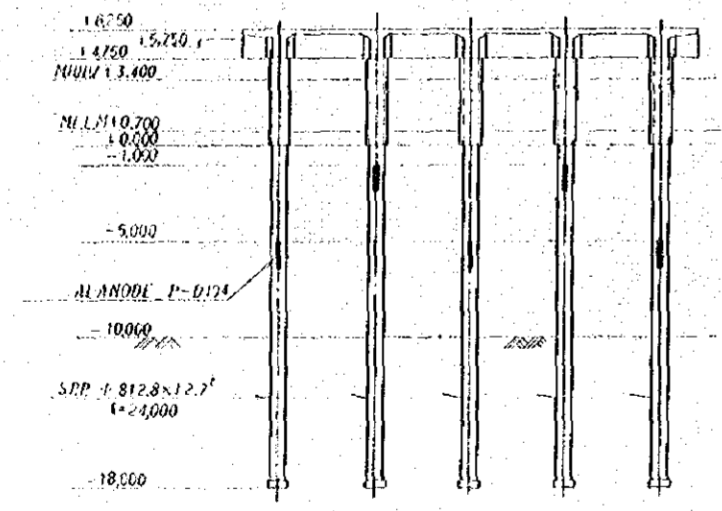
PLAN



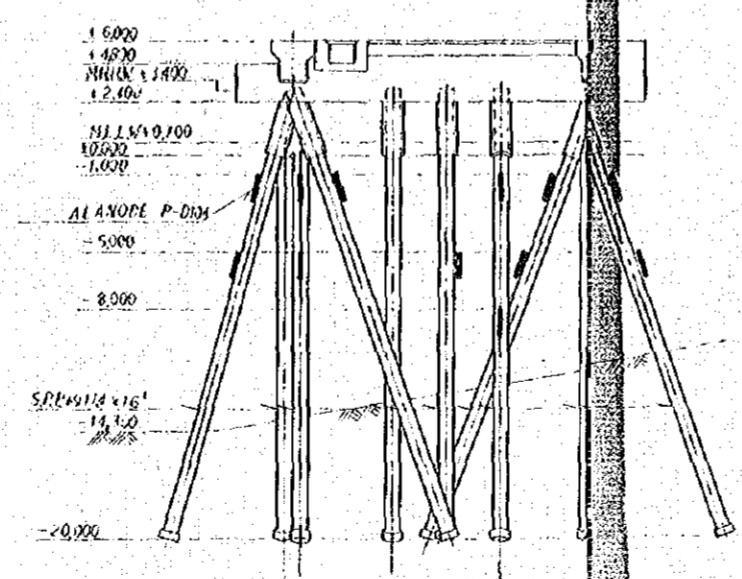
PLAN



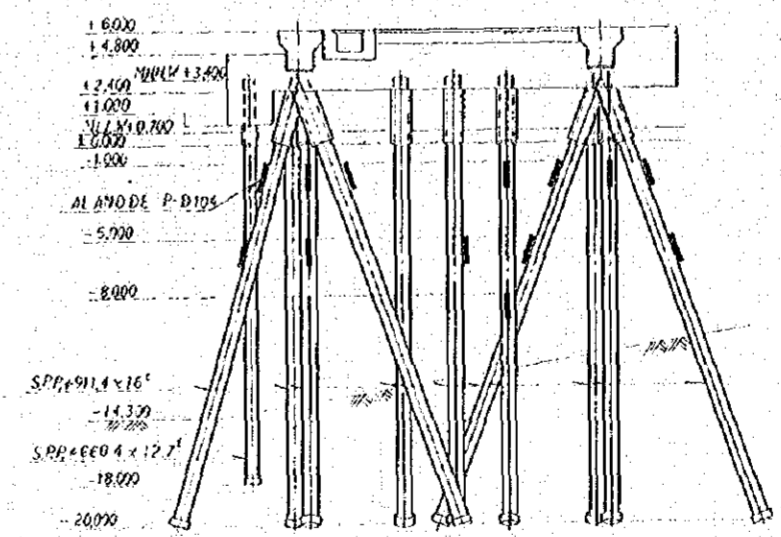
PLAN



FRONT VIEW
MAINTENANCE PLATFORM
MP - 1, 2



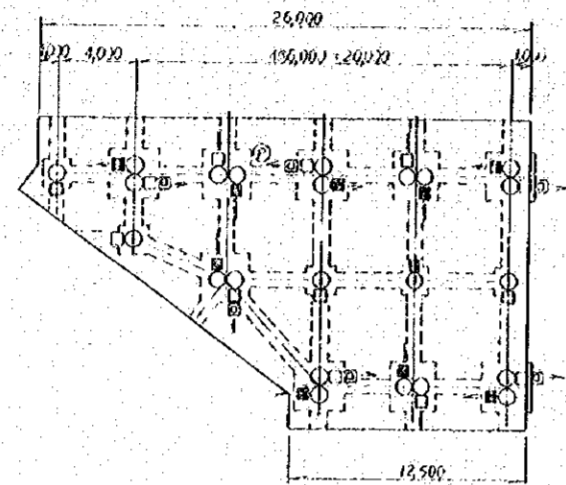
FRONT VIEW
PILE BENT
UP - 1, 4, 7, 10



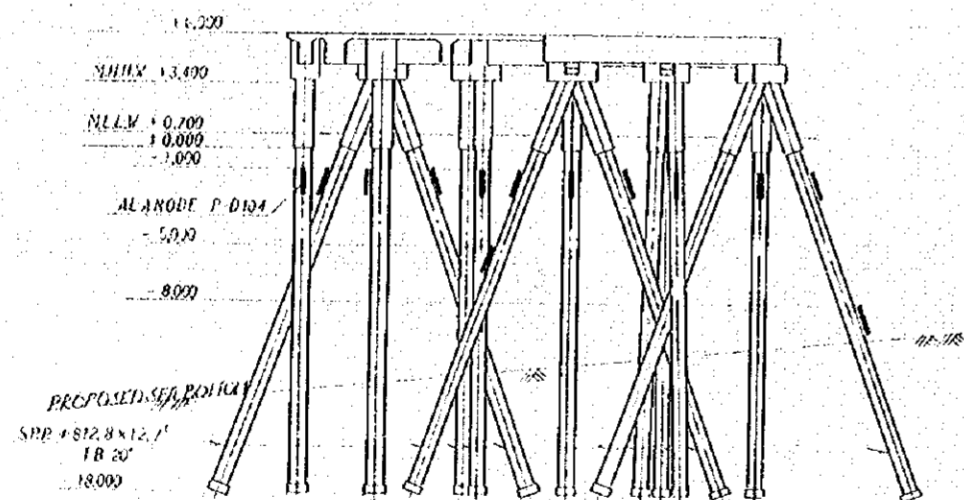
FRONT VIEW
PILE BENT
UP - 2, 3, 5, 6, 8, 9, 11, 12

NO.	DATE	DESCRIPTION	APPROVED
REVISION			
PORT MUHAMMAD-BIN-QASIM PROJECT PAKISTAN			
IRON ORE & COAL BERTH			
DETAILS OF CATHODIC CORROSION PROTECTION SYSTEM (31)			
JAPAN INTERNATIONAL COOPERATION AGENCY			
CONSULTANTS			
APPROVED	CHECKED	DESIGNED	DRAWING
		<i>J. S. Khan</i>	<i>M. A. Khan</i>
SCALE			
1 : 200			
DATE DEC. 1975			
DWG. NO. B-61			

- : EL - 1 m 13 PCS
- : EL - 5 m 10 PCS
- ⊙ : EL - 8 m 6 PCS
- ⊕ : POTENTIAL MEASURING TERMINAL 1 PC



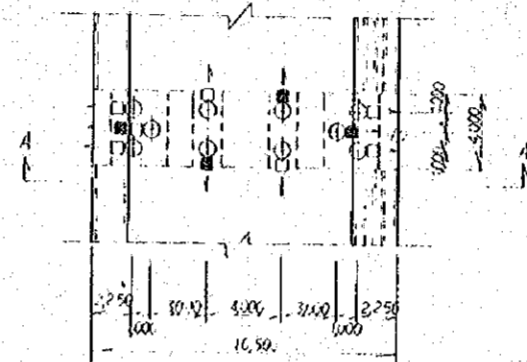
PLAN



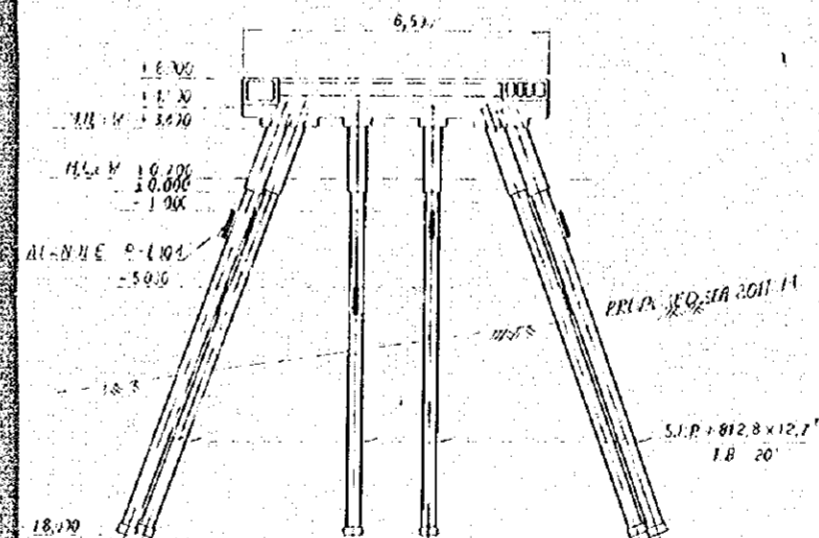
FRONT VIEW

APPROACH TRUSS TYPE PILE BENT
AB - 1.

- : EL - 1 m 7 PCS x 2 P/ER
- : EL - 5 m 4 PCS x 2 P/ER
- ⊕ : POTENTIAL MEASURING TERMINAL 1 PC x 2 P/ER



PLAN



SECTION A - A

APPROACH TRUSS TYPE PILE BENT
AB - 2, 3

GENERAL NOTES

NO.	DATE	DESCRIPTION	APPROVED
REVISION			
PORT MUHAMMAD-BIN-QASIM PROJECT PAKISTAN			
IRON ORE & COAL BERTH DETAILS (C) CAPACITY ENHANCEMENT SYSTEM (4)			
JAPAN INTERNATIONAL COOPERATION AGENCY CONSULTANTS			
APPROVED	CHECKED	DESIGNED	DRAWING
		J. Shiro	M. Amal
SCALE		REV. 15	
1 : 200			
DATE (DEC 1975)		DWG. NO. B-60	

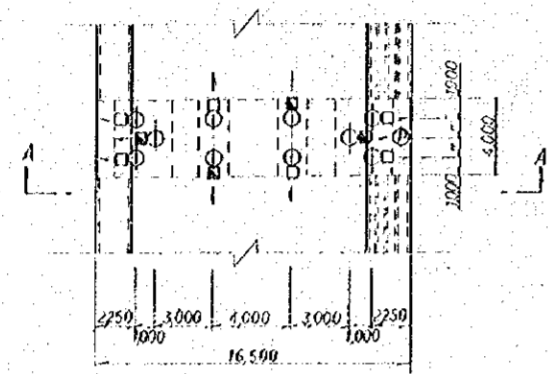
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

GENERAL NOTES

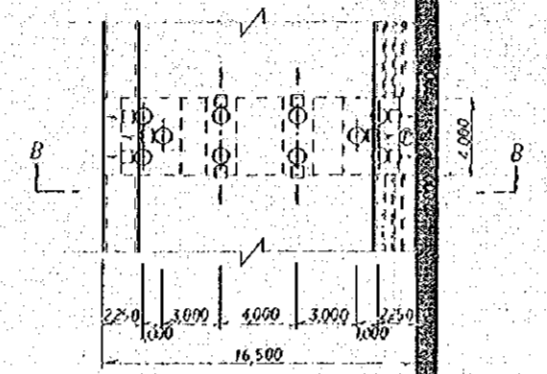
- : EL - 1 m 6 PCS X 3 PIER
- ⊠ : EL - 3 m 4 PCS X 3 PIER
- ⊙ : POTENTIAL MEASURING TERMINAL 1 PC X 3 PIER

- : EL - 1 m 10 PCS
- ⊙ : POTENTIAL MEASURING TERMINAL 1 PC

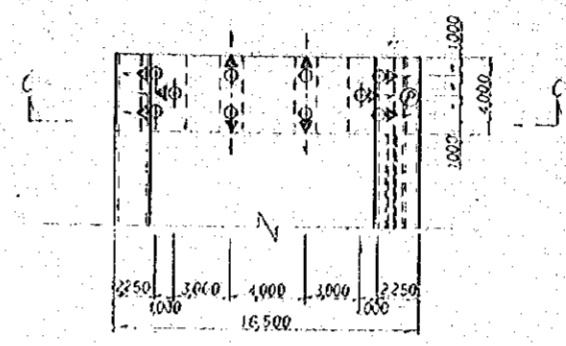
- △ : EL + 2 m 3.0 - 2 m - 4 m - 6 m - 8 m - 10 m 7 PCS X 10
- ⊙ : POTENTIAL MEASURING TERMINAL 1 PC



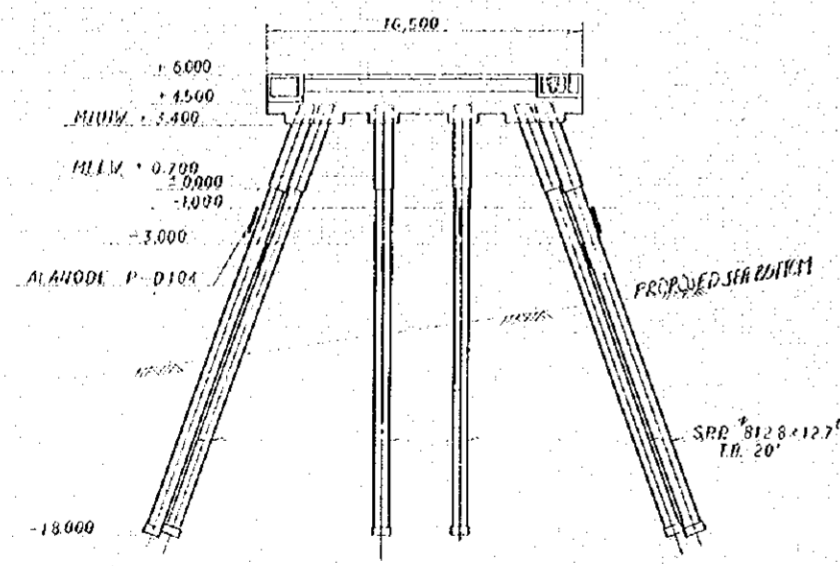
PLAN



PLAN



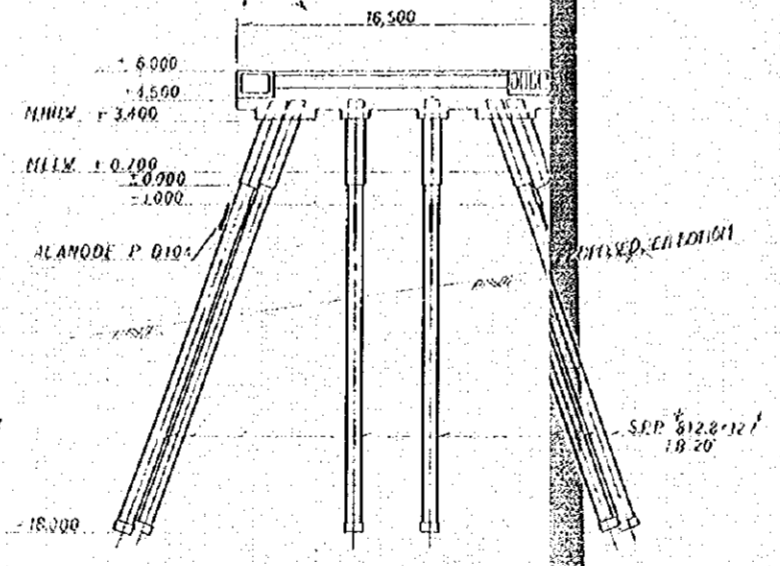
PLAN



SECTION A - A

AB - 4.5.6

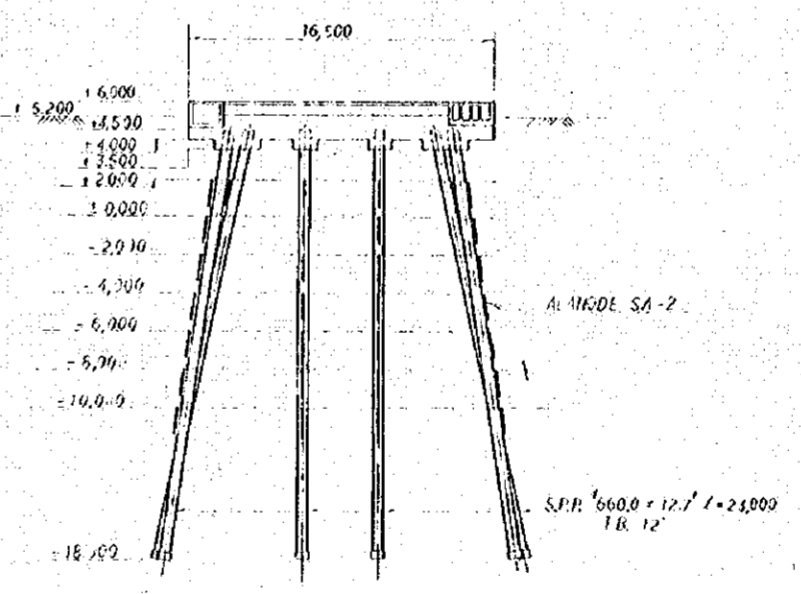
APPROACH TRESTLE TYPE II PILE BENT



SECTION B - B

AB - 7

APPROACH TRESTLE TYPE II PILE BENT



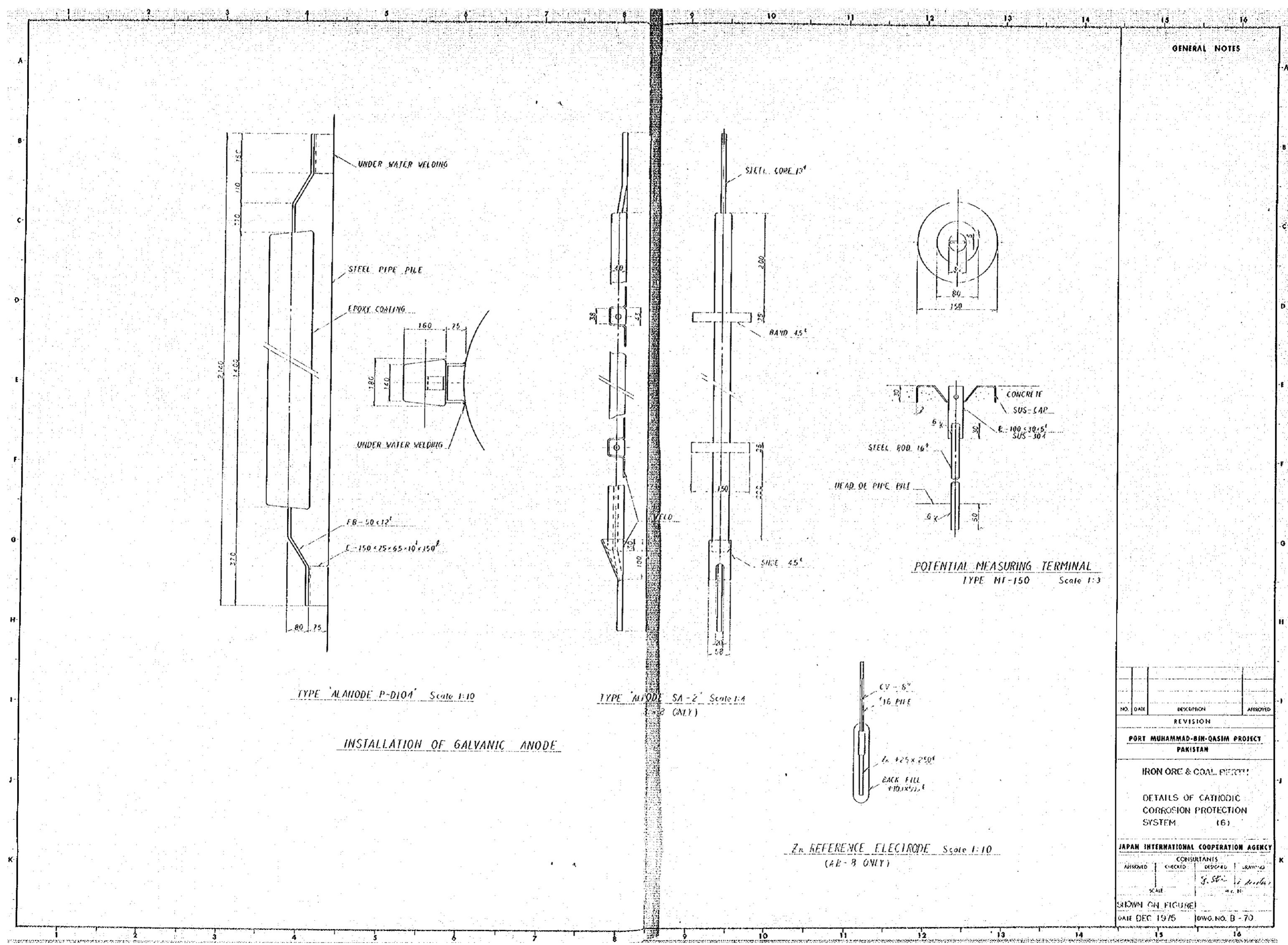
SECTION C - C

AB - 8

APPROACH TRESTLE TYPE III PILE BENT

NO.	DATE	DESCRIPTION	APPROVED
REVISION			
PORT MUHAMMAD-BIN-QASIM PROJECT PAKISTAN			
IRON ORE & COAL BERTH DETAILS OF CATHODIC CORROSION PROTECTION SYSTEM (5)			
JAPAN INTERNATIONAL COOPERATION AGENCY			
APPROVED	CHECKED	DESIGNED	DRAWING
		<i>F. S. M.</i>	<i>A. A. A.</i>
SCALE		REV. NO.	
1 : 200			
DATE DEC 1975		DWG NO. B - 69	

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16



GENERAL NOTES

TYPE ALANO P-D104 Scale 1:10

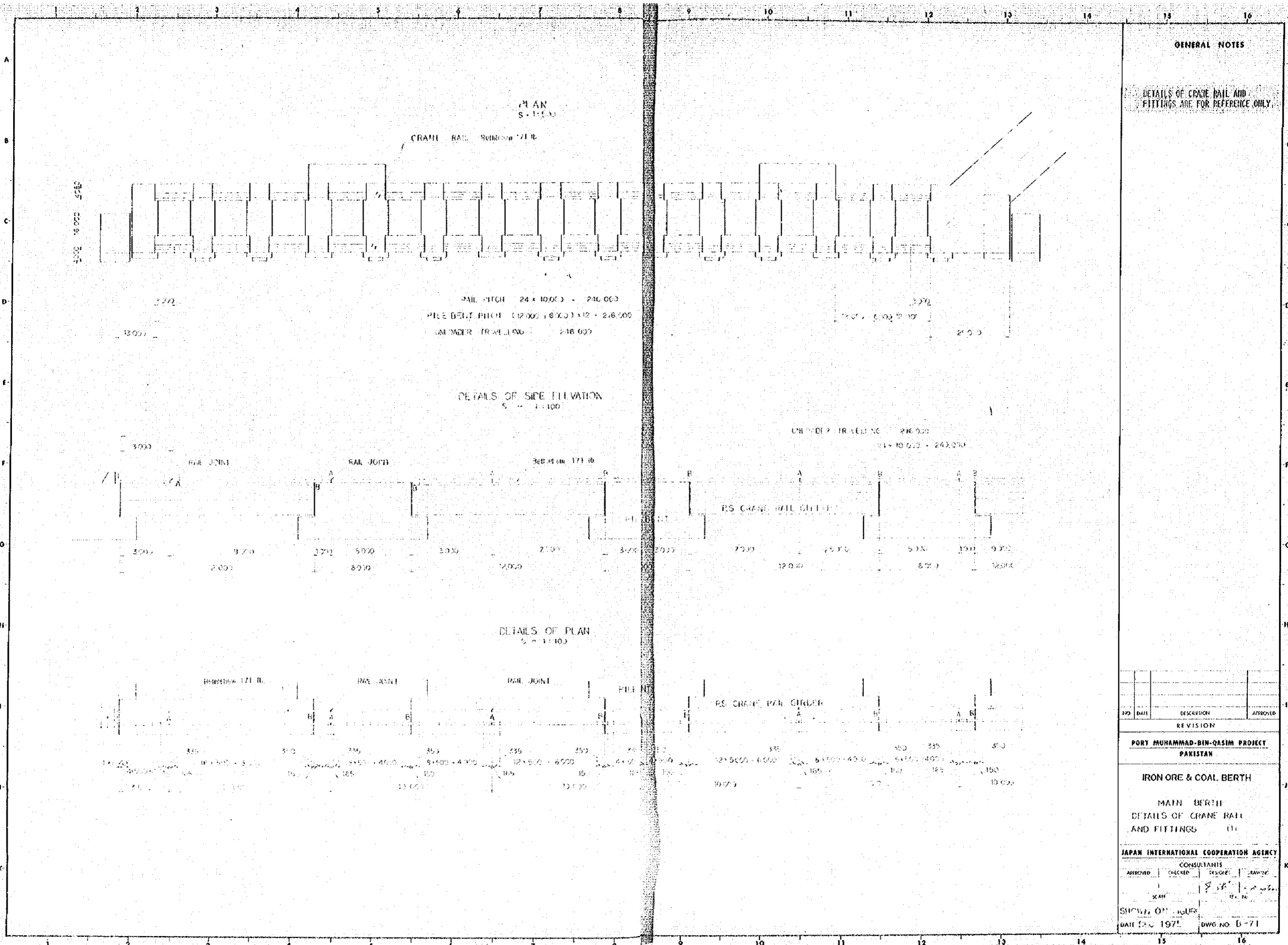
TYPE ALANO SA-2 Scale 1:4
(AB-8 ONLY)

POTENTIAL MEASURING TERMINAL
TYPE MT-150 Scale 1:3

Zn REFERENCE ELECTRODE Scale 1:10
(AB-8 ONLY)

INSTALLATION OF GALVANIC ANODE

NO.	DATE	DESCRIPTION	APPROVED
REVISION			
PORT MUHAMMAD-BIN-QASIM PROJECT PAKISTAN			
IRON ORE & COAL PROJECT			
DETAILS OF CATHODIC CORROSION PROTECTION SYSTEM (6)			
JAPAN INTERNATIONAL COOPERATION AGENCY			
CONSULTANTS			
APPROVED	CHECKED	DESIGNED	DRAWN
		<i>J. S. ...</i>	<i>...</i>
SCALE 1:10			
SHOWN ON FIGURE			
DATE DEC 19/75		DWG. NO. B-70	



GENERAL NOTES

DETAILS OF CRANE RAIL AND FITTINGS ARE FOR REFERENCE ONLY.

PLAN
S = 1:100

CRANE RAIL Between 171 B

RAIL PITCH 24 x 1000 = 240,000
 RAIL BENT PITCH (12,000 x 6,000) x 12 = 240,000
 UNDER TRAVELING 240,000

DETAILS OF SIDE ELEVATION
 S = 1:100

DETAILS OF PLAN
 S = 1:100

NO	DATE	DESCRIPTION	APPROVED
REVISION			

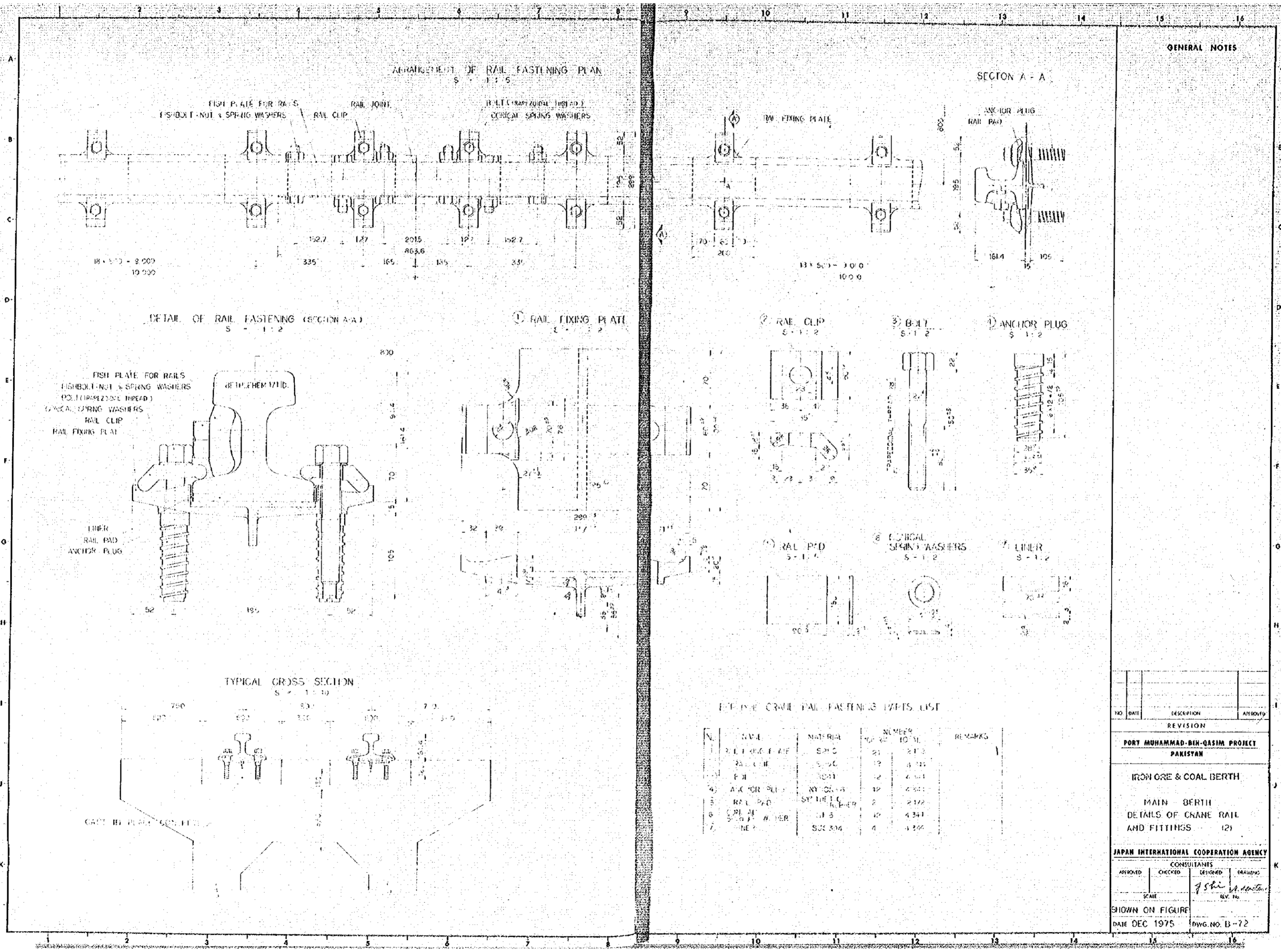
PORT MUHAMMAD-BIN-QASIM PROJECT
 PAKISTAN

IRON ORE & COAL BERTH
 MAIN BERTH
 DETAILS OF CRANE RAIL
 AND FITTINGS (1)

JAPAN INTERNATIONAL COOPERATION AGENCY
 CONSULTANTS

APPROVED: [Signature] CHECKED: [Signature] DRAWING: [Signature]
 SCALE: 1:100

DATE: DEC 1971 DWG. NO: B-71



GENERAL NOTES

NO.	DATE	DESCRIPTION	APPROVED
REVISION			

PORT MUHAMMAD-BIN-QASIM PROJECT
PAKISTAN

IRON ORE & COAL BERTH
MAIN BERTH
DETAILS OF CRANE RAIL AND FITTINGS (2)

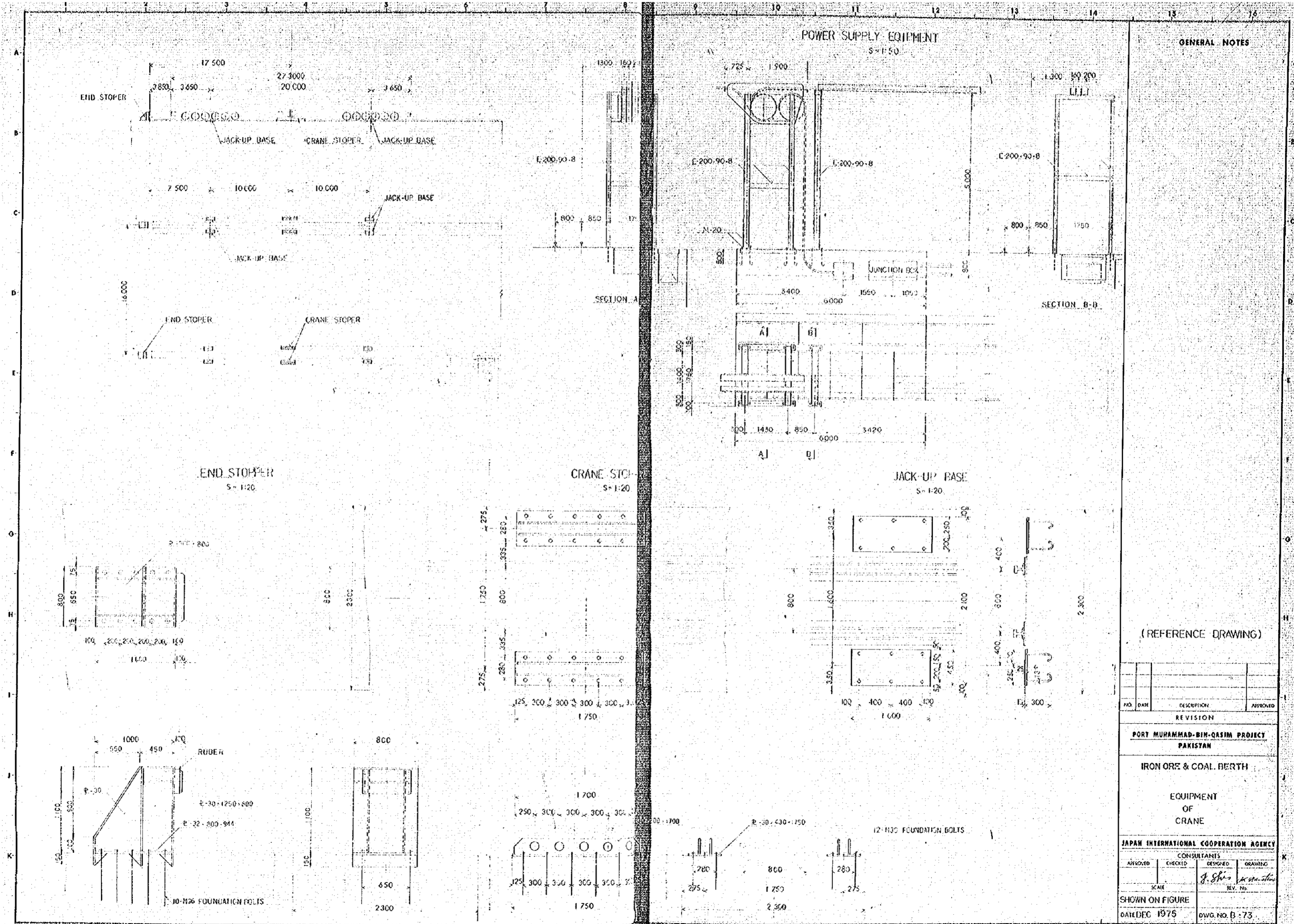
JAPAN INTERNATIONAL COOPERATION AGENCY

CONSULTANTS			
APPROVED	CHECKED	DESIGNED	DRAWN
		<i>J. Shi</i>	<i>M. Hattori</i>
SCALE		REV. NO.	

SHOWN ON FIGURE
DATE DEC 1975 DWG. NO. B-72

ITEMS CRANE RAIL FASTENING PARTS LIST

N.	NAME	MATERIAL	NO.	UNIT	REMARKS
1	FISH PLATE	SP-10	21	1/2	
2	FISHBOLT	SP-10	12	1/2	
3	SPRING WASHER	SP-10	12	1/2	
4	ANCHOR BOLT	NY-CAL-8	12	1/2	
5	RAIL PAD	STEEL	2	1/2	
6	CONICAL SPRING WASHER	SP-10	12	1/2	
7	LINER	SUS 304	4	1/2	



GENERAL NOTES

(REFERENCE DRAWING)

NO.	DATE	DESCRIPTION	APPROVED
REVISION			
PORT MUHAMMAD-BIN-QASIM PROJECT PAKISTAN			
IRON ORE & COAL BERTH			
EQUIPMENT OF CRANE			
JAPAN INTERNATIONAL COOPERATION AGENCY			
CONSULTANTS			
APPROVED	CHECKED	DESIGNED	DRAWING
		<i>J. Shio</i>	<i>Y. Saito</i>
SCALE		REV. NO.	
SHOWN ON FIGURE			
DATE DEC 1975		DWG. NO. B-73	

