

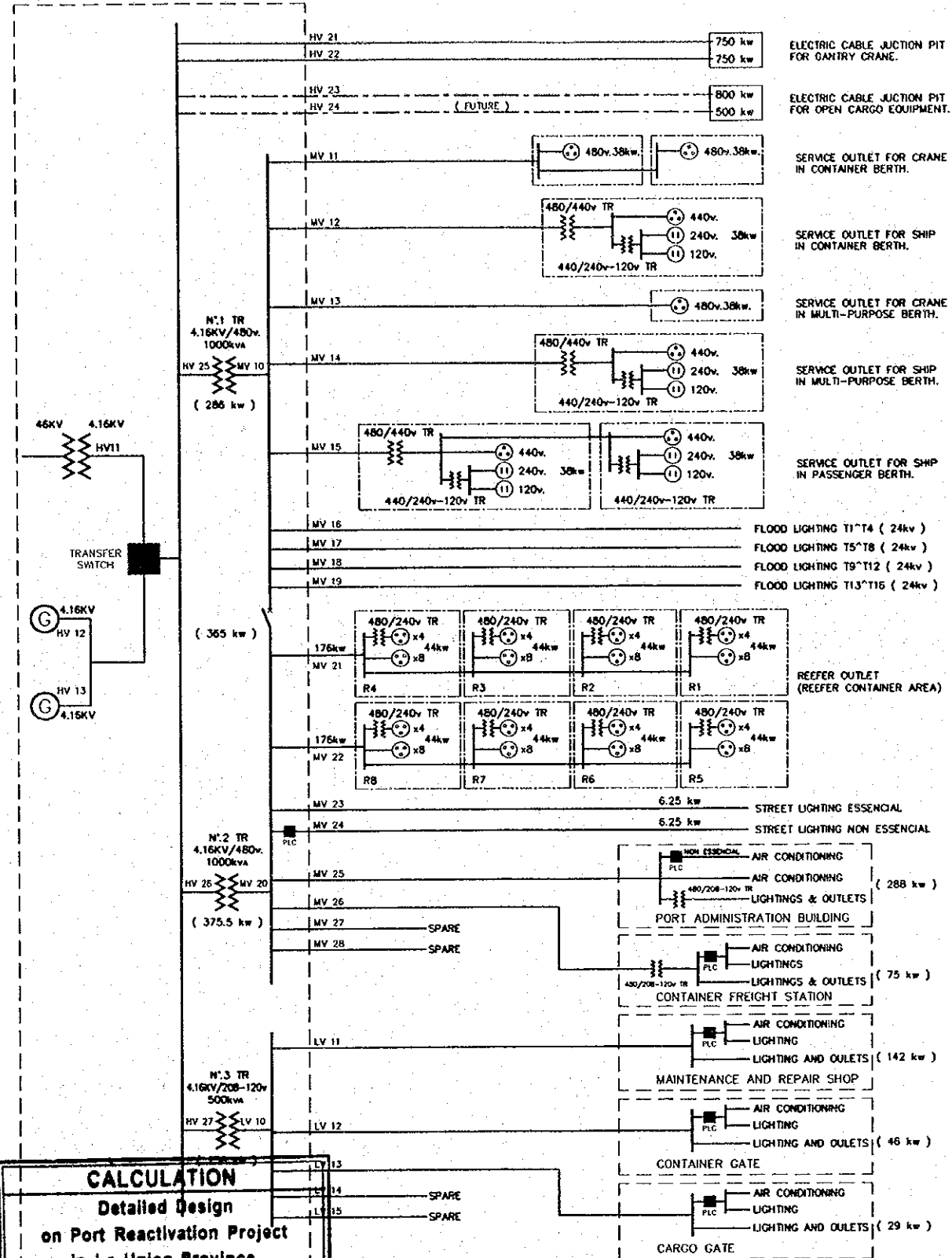
## **ELECTRICAL WORK**

QUANTITY CALCULATION COVER SHEET								
<b>Project</b>	Detailed Design on Port Reactivation Project in La Union Province			<b>Project Code</b>	JC1N004/2N001			
<b>Work Section Title</b>	<b>4I - Cabling and Piping</b>			<b>Pay Item No. (BOQ)</b>	4I0101 - 4I0209			
<b>Quantity Item</b>	<b>All Items</b>			<b>Unit</b>	set, m, L.S.			
<b>Calculation Procedure Applied</b>								
Cable length and pipe length are taked-off by hand-calculation								
<b>References, Calculation Base and Revisions</b>								
Drawings numbers:								
EL-01-004 and EL-01-005								
EL-02-001								
And Cable Schedule attached in Design Calculation Sheet								
Rev	Prepared		No. of Pages	Checked		Reviewed		Superseded by Calc No.
	by	Date		by	Date	by	Date	
0	T. Kikuchi	July/18/2002	4	T. Kikuchi	July 24 '02	TS	20 July 02	
1	T. Kikuchi							
2								
3								

File in Calc. File

Project		Detailed Design on Port Reactivation Project in La Union		Calc. File No.		
Section		4I- CABLING AND PIPING		Calc. Index No.		
Subject		CABLE AND PIPE LENGTH CALCULATION		Page No. 01		Rev.
ITEM	DESCRIPTION	QTY	References/ Notes			
CABLING		(m)				
4I0101	HV11 4.16KV XLPE/PVC Cu (1C x 400mm <sup>2</sup> )	60.00				
4I0102	HV12 4.16KV XLPE/PVC Cu (3C x 100mm <sup>2</sup> )	20.00				
4I0103	HV13 4.16KV XLPE/PVC Cu (3C x 100mm <sup>2</sup> )	25.00				
4I0104	HV21 4.16KV XLPE/PVC Cu (3C x 100mm <sup>2</sup> )	490.00				
4I0105	HV22 4.16KV XLPE/PVC Cu (3C x 100mm <sup>2</sup> )	490.00				
4I0106	HV25 4.16KV XLPE/PVC Cu (3C x 60mm <sup>2</sup> )	20.00				
4I0107	HV26 4.16KV XLPE/PVC Cu (3C x 60mm <sup>2</sup> )	20.00				
4I0108	HV27 4.16KV XLPE/PVC Cu (3C x 22mm <sup>2</sup> )	20.00				
4I0109	4.16 CABLE TERMINAL FOR ABOVE (set)	20.00				
4I0110	MV10 480V XLPE/PVC Cu (1 x 400mm <sup>2</sup> )	120.00				
4I0111	MV11 480V XLPE/PVC Cu (3C x 100mm <sup>2</sup> )	710.00				
4I0112	MV12 480V XLPE/PVC Cu (3C x 60mm <sup>2</sup> )	460.00				
4I0113	MV13 480V XLPE/PVC Cu (3C x 80mm <sup>2</sup> )	585.00				
4I0114	MV14 480V XLPE/PVC Cu (3C x 60mm <sup>2</sup> )	545.00				
4I0115	MV15 480V XLPE/PVC Cu (3C x 100mm <sup>2</sup> )	805.00				
4I0116	MV16 480V XLPE/PVC Cu (3C x 38mm <sup>2</sup> )	575.00				
4I0117	MV17 480V XLPE/PVC Cu (3C x 22mm <sup>2</sup> )	520.00				
4I0118	MV18 480V XLPE/PVC Cu (3C x 22mm <sup>2</sup> )	415.00				
4I0119	MV19 480V XLPE/PVC Cu (3C x 22mm <sup>2</sup> )	580.00				
4I0120	MV20 480V XLPE/PVC Cu (1C x 400mm <sup>2</sup> )	90.00				
4I0121	MV21 480V XLPE/PVC Cu (3C x 100mm <sup>2</sup> )	270.00				
4I0122	MV22 480V XLPE/PVC Cu (3C x 100mm <sup>2</sup> )	310.00				
4I0123	MV23 480V XLPE/PVC Cu (3C x 22mm <sup>2</sup> )	2,060.00				
4I0124	MV24 480V XLPE/PVC Cu (3C x 22mm <sup>2</sup> )	2,060.00				
4I0125	MV25 480V XLPE/PVC Cu (3C x 100mm <sup>2</sup> )	210.00				
4I0126	MV26 480V XLPE/PVC Cu (3C x 60mm <sup>2</sup> )	540.00				
4I0127	480V CABLE TERMINAL FOR ABOVE (set)	54.00				
4I0128	LV10 208-120V XLPE/PVC Cu (1C x 500mm <sup>2</sup> )	80.00				
4I0129	LV11 208-120V XLPE/PVC Cu (4C x 150mm <sup>2</sup> )	185.00				
4I0130	LV12 208-120V XLPE/PVC Cu (4C x 60mm <sup>2</sup> )	360.00				
4I0131	LV13 208-120V XLPE/PVC Cu (4C x 38mm <sup>2</sup> )	165.00				
4I0132	LV14 208-120V XLPE/PVC Cu (4C x 38mm <sup>2</sup> )	20.00				
4I0133	LV15 208-120V XLPE/PVC Cu (4C x 14mm <sup>2</sup> )	130.00				
4I0134	208-120V CABLE TERMINAL FOR ABOVE (set)	14.00				
4I0135	CONTRCL CABLE (L.S.)	1.00				
PIPING		(m)				
4I0201	PVC PIPE Dia. 150mm	2,300.00				
4I0202	PVC PIPE Dia. 100mm	400.00				
4I0203	PVC PIPE Dia. 75mm	2,400.00				
4I0204	PVC PIPE Dia. 50mm	600.00				
4I0205	STEEL PIPE Dia. 150mm	1,000.00				
4I0206	STEEL PIPE Dia. 100mm	200.00				
4I0207	STEEL PIPE Dia. 75mm	1,200.00				
4I0208	STEEL PIPE Dia. 50mm	400.00				
4I0209	CABLE SUPPORT IN TRENCH (L.S.)	1.00				
		Prepared by	T. Kikuchi		Checked by	T. Kikuchi
			July/18/2002			July 12/2002

DATE	
COMPANION	
BY	
APPROVED DATE	
<b>COMISION ELECTRICIA PORTUARIA AUTONOMA (CERPA)</b>	
<b>JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)</b>	
<b>ESTABLISHED DESIGN ON PORT REACTIVATION PROJECT IN LA UNION PROVINCE OF THE REPUBLIC OF EL SALVADOR</b>	
DESIGNED BY	
ORDERED BY	
DATE	
<b>NIPPON KOEI CO., LTD.</b>	
DATE	
SCALE	
NOT TO SCALE	
DATE	AUGUST/2002
SCALE	
DATE	
SCALE	



**CALCULATION**  
 Detailed Design  
 on Port Reactivation Project  
 in La Union Province

POWER SUPPLY STATION

CALC FILE No.:

CALC IN EXCEL

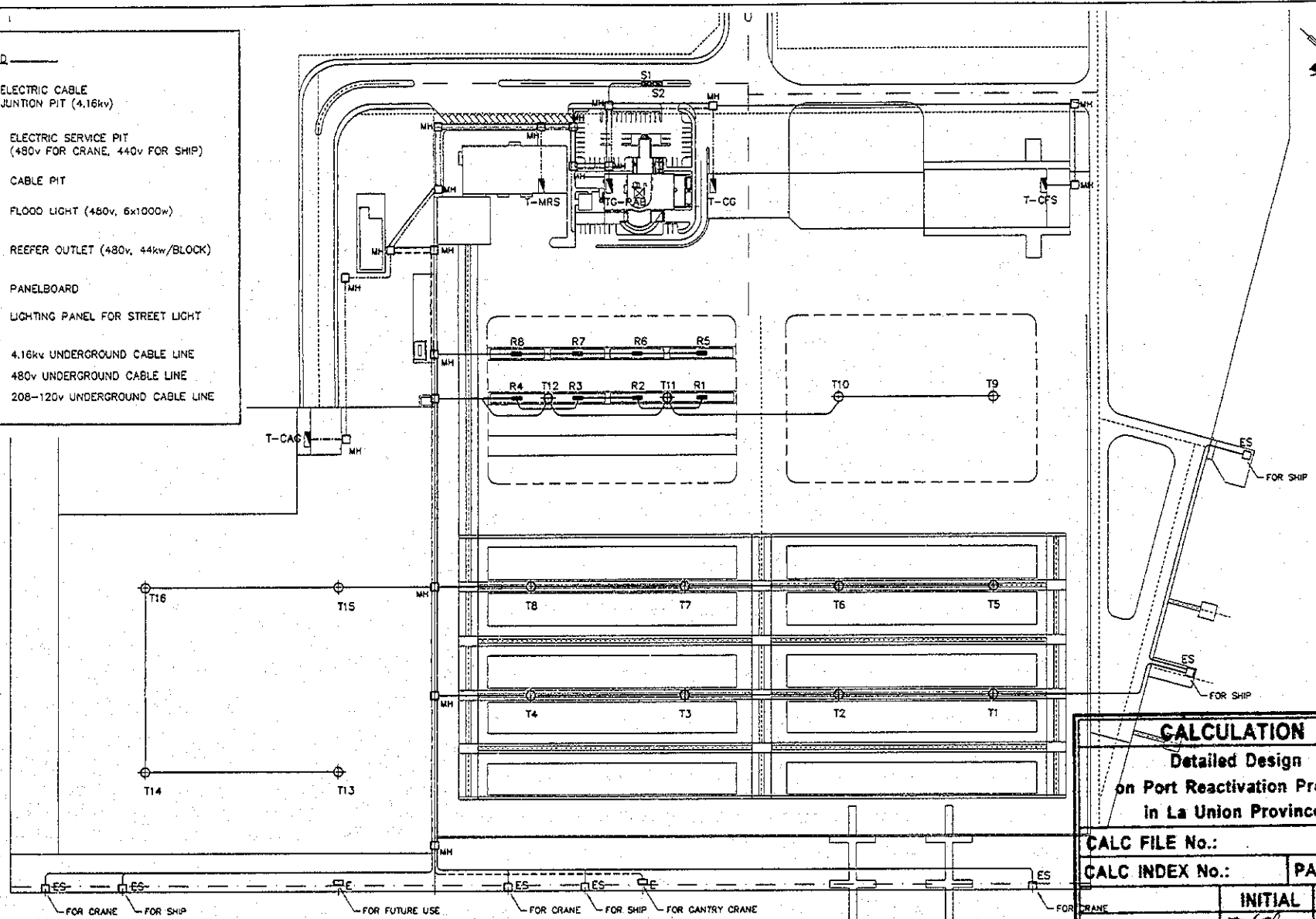
PROGRAMABLE LOGIC CONTROLLER (CONTROLLED BY TRANSFER SWITCH) PLC

PREPARED BY	<i>T.K. ...</i>	DATE	<i>July 18, 2002</i>
CHECKED BY	<i>T.K. ...</i>	DATE	<i>...</i>

DISTRIBUTION SYSTEM DIAGRAM



- LEGEND**
- ELECTRIC CABLE JUNCTION PIT (4.16kv)
  - ELECTRIC SERVICE PIT (480v FOR CRANE, 440v FOR SHIP)
  - CABLE PIT
  - FLOOD LIGHT (480v, 6x1000w)
  - REEFER OUTLET (480v, 44kw/BLOCK)
  - PANELBOARD
  - LIGHTING PANEL FOR STREET LIGHT
  - 4.16kv UNDERGROUND CABLE LINE
  - 480v UNDERGROUND CABLE LINE
  - 208-120v UNDERGROUND CABLE LINE



**MAIN UNDERGROUND CABLE LAYOUT**  
SCALE 1:2000

<b>CALCULATION</b>	
Detailed Design on Port Reactivation Project in La Union Province	
CALC FILE No.:	
CALC INDEX No.:	PAGE 3
PREPARED BY	INITIAL DATE
CHECKED BY	INITIAL DATE

REV. NO.	DATE	COORDINATE	BY	APPROVED	DATE

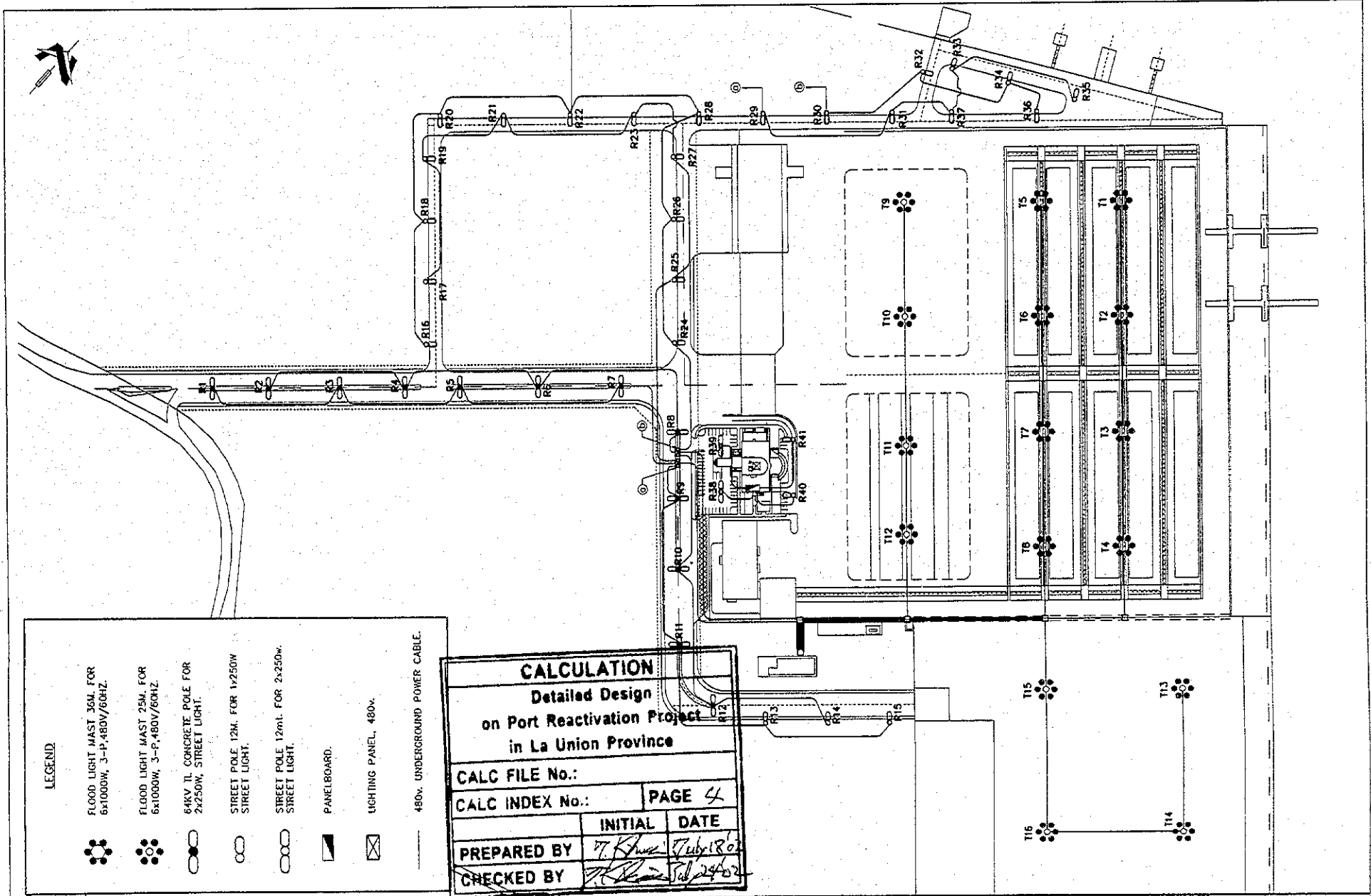
DETAILED DESIGN ON PORT REACTIVATION  
 PROJECT IN LA UNION PROVINCE  
 OF THE REPUBLIC OF EL SALVADOR  

 NIPPON KOEI CO., LTD.

DESIGNED BY :  
 CHECKED BY :  
 APPROVED BY :

SECTION : ELECTRICAL WORKS  
 SUB-SECTION : POWER SUPPLY  
 TITLE : MAIN UNDERGROUND  
 CABLE LAYOUT

DATE : AUGUST/2002  
 SCALE : 1:2000  
 DRAWING NO. : EL-01-005



**LEGEND**

- FLOOD LIGHT MAST 36M. FOR 6x1000W, 3-P, 480V/60HZ.
- FLOOD LIGHT MAST 25M. FOR 6x1000W, 3-P, 480V/60HZ.
- 64KV TL CONCRETE POLE FOR 2x250W, STREET LIGHT.
- STREET POLE 12M. FOR 1x250W STREET LIGHT.
- STREET POLE 12m. FOR 2x250w. STREET LIGHT.
- PANELBOARD.
- LIGHTING PANEL, 480v.
- 480v. UNDERGROUND POWER CABLE.

**CALCULATION**  
Detailed Design  
on Port Reactivation Project  
in La Union Province

CALC FILE No.:

CALC INDEX No.:

INITIAL	DATE
<i>T. Khun</i>	<i>July 18 2002</i>

PREPARED BY

CHECKED BY

REV. NO.	DATE	COORDINATE	BY	APPROVED	DATE

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

COMISION EJECUTIVA PORTUARIA AUTONOMA (CEPA)

DETAILED DESIGN ON PORT REACTIVATION PROJECT IN LA UNION PROVINCE OF THE REPUBLIC OF EL SALVADOR

NIPPON KOEI CO., LTD.

DESIGNED BY:

CHECKED BY:

APPROVED BY:

SECTION : ELECTRICAL WORKS

SUB-SECTION : AREA LIGHTING SYSTEM

TITLE : AREA LIGHTING LAYOUT

DATE : AUGUST/2002

SCALE : 1:2500

DRAWING NO. : EL-02-001

**QUANTITY CALCULATION COVER SHEET**

<b>Project</b>	Detailed Design on Port Reactivation Project in La Union Province	<b>Project Code</b>	JC1N004/2N001
<b>Work Section Title</b>	<b>4M - Electrical Work for Building</b>	<b>Pay Item No. (BOQ)</b>	4M0101 - 4M0619
<b>Quantity Item</b>	<b>All Items</b>	<b>Unit</b>	set, m, L.S., unit

**Calculation Procedure Applied**

All items are taked-off by hand.

**References, Calculation Base and Revisions**

Drawings numbers:

- BD-01-098 to BD-01-112
- BD-02-035 and BD-02-036
- BD-03-036 and BD-03-037
- BD-04-030 to BD-04-032
- BD-05-025 and BD-05-026
- BD-06-020

Rev	Prepared		No. of Pages	Checked		Reviewed		Superseded by Calc No.
	by	Date		by	Date	by	Date	
0	M. Garcia	July/23/2002	31	<i>P. K. K...</i>	July 24, '02	<i>PT</i>	30 July 02	
1	<i>M. Garcia</i>							
2								
3								

File in Calc. File

Project		Detailed Design on Port Reactivation Project in La Union						Calc. File No.		
Section		ELECTRICAL WORK FOR BUILDING						Calc. Index No.		
Subject		QUANTITY CALCULATION - ALL ITEMS						Page No. 01		Rev.
4M01 PORT ADMINISTRATION BUILDING									References/ Notes	
ITEM	DESCRIPTION	FLOOR							Total	
		1st	2nd	3rd	4th	5th	6th	Strs		
LIGHTING										
4M0101	TYPE A, FL 32Wx3	64	12	50	11	13	12		162	
4M0102	TYPE B, FL 22Wx2	8	4	4	4	2	2		22	
4M0103	TYPE C, FL 28Wx2	41	14	16	13	13	14		111	
4M0104	TYPE D, FL 32W+40W	14							14	
4M0105	TYPE E, IN 80W	3	2	3	2	1	2		13	
4M0106	TYPE F FL 32Wx4 INDUSTRIAL	3	3	3	1			1	11	
4M0107	TYPE G HYDREL FORWARD		12	12					24	
4M0108	TYPE G1 HYDREL HORIZONTAL				20				20	
4M0109	TYPE I, FL 32Wx2 EMERGENCY							12	12	
4M0110	TYPE T FL 32W WALL OUTDOOR	1	1	1	1	1	1		6	
4M0111	EXIT LIGHT	7	2	2	2	2	2		17	
4M0112	SINGLE SWITCH	26	14	28	11	5	5	1	91	
4M0113	DOUBLE SWITCH	8		1	1	1	2		13	
4M0114	SWITCH (PIPING ONLY)	3	12						15	
4M0115	JUNCTION BOX	3	6						9	
OUTLETS										
4M0116	DUPLEX RECEPTACLE	69	47	35	18	16	15		190	
4M0117	DUPLEX RECEPTACLE INDUSTRIAL	3	3	17				1	24	
4M0118	SINGLE RECEPTACLE FOR H.D.	5	2	2	2	1	1		13	
4M0119	SINGLE FLOOR RECEPTACLE			5					5	
4M0120	WEATHERPROOF RECEPTACLE				6				6	
4M0121	120V JUNCTION BOX IN CEILING	3	6						9	
4M0122	CONNECTION FOR F.C.U.	21	9	14	4	4	4		56	
4M0123	CONNECTION FOR EXHAUST FAN	5	3	3	2	1	1		15	
4M0124	CONNECTION FOR CHILLER	2							2	
4M0125	CONNECTION FOR PUMP	2							2	
4M0126	CONNECTION FOR A.H.U.		1	1	1				4	
4M0127	CONNECTION FOR ELEVATOR						1		1	
4M0128	CONNECTION FOR FIREFIGHTING PUMP							1	1	
CABLING/PIPING										
4M0129	CABLE PVC 2.1 MM <sup>2</sup>	1225	545	830	330	250	250		3440	
4M0130	CABLE PVC 3.3 MM <sup>2</sup>	260	860	930	200	130	130	180	3460	
4M0131	CABLE PVC 5.3 MM <sup>2</sup>	1835	1370	1380	340	210	220	30	5385	
4M0132	CABLE PVC 8.4 MM <sup>2</sup>							40	40	
4M0133	PIPE PVC DIA. 13 MM	275	455	615	375	150	155		2425	
4M0134	PIPE PVC DIA. 19 MM	215	690	690	170	105	110	90	2770	
OTHERS										
4M0135	DRY TYPE TRANSFORMER	1							1	
4M0136	PANELBOARD TG	1							1	
4M0137	PANELBOARD ST-AAH	1							1	
4M0138	PANELBOARD ST-AAE	1							1	
4M0139	PANELBOARD ST-C	1							1	
4M0140	PANELBOARD ST-A1	1							1	
4M0141	PANELBOARD ST-A2		1						1	
4M0142	PANELBOARD ST-A3			1					1	
4M0143	PANELBOARD ST-A4				1				1	
4M0144	PANELBOARD ST-A5					1			1	
4M0145	PANELBOARD ST-A6						1		1	
4M0146	PANELBOARD ST-AA1	1							1	
4M0147	PANELBOARD ST-AA2		1						1	
4M0148	PANELBOARD ST-AA3			1					1	
4M0149	PANELBOARD ST-AA4				1				1	
4M0150	ACTIVE LIGHTNING TERMINAL						1		1	
4M0151	ROUND GALVANIZED STEEL CONDUCTOR						45		45	
4M0152	CLAMPS, FITTING HARDWARE						1		1	
4M0153	GROUNDING						1		1	
Prepared by		M. Garcia				Checked by		T. Kikuchi		
		July/18/2002						July 1 24/2002		



<b>Project</b>	Detailed Design on Port Reactivation Project in La Union	Calc. File No.	
<b>Section</b>	ELECTRICAL WORK FOR BUILDING	Calc. Index No.	
<b>Subject</b>	QUANTITY CALCULATION - ALL ITEMS	Page No. 02	Rev.
			References/ Notes
4M02 CONTAINER FREIGHT STATION			
<b>ITEM</b>	<b>DESCRIPTION</b>	<b>QTY</b>	
<b>LIGHTING</b>			
4M0201	TYPE A, FL 32Wx3	18	
4M0202	TYPE F, FL 32Wx4 INDUSTRIAL	19	
4M0203	TYPE N1, HPS 150W	14	
4M0204	TYPE M, MH 400W	14	
4M0205	EXIT LIGHT	2	
4M0206	SINGLE SWITCH	4	
4M0207	SINGLE SWITCH INDUSTRIAL	7	
4M0208	2 POLE 240V SWITCH	5	
<b>OUTLETS</b>			
4M0209	DUPLEX RECEPTACLE 120V	16	
4M0210	DUPLEX RECEPTACLE INDUSTRIAL 120V	20	
4M0211	SINGLE RECEPTACLE FOR H.D.	2	
4M0212	CONNECTION FOR EXHAUST FAN	3	
4M0213	CONNECTION FOR FORK LIFT	4	
4M0214	CONNECTION FOR A/C UNIT	4	
4M0215	CONNECTION FOR WEIGH BRIDGE	1	
4M0216	CONNECTION FOR ROLL UP DOOR	16	
4M0217	CONNECTION FOR WASTE WATER T.F. 2	1	
<b>CABLING/PIPING</b>			
4M0218	CABLE PVC 2.1 MM <sup>2</sup>	750	
4M0219	CABLE PVC 3.3 MM <sup>2</sup>	2500	
4M0220	CABLE PVC 5.3 MM <sup>2</sup>	2900	
4M0221	CABLE PVC 8.4 MM <sup>2</sup>	380	
4M0222	PIPING PVC DIA. 13 MM	270	
4M0223	PIPING PVC DIA. 19 MM	300	
4M0224	EMT DIA. 13 MM	440	
4M0225	EMT DIA. 19 MM	200	
4M0226	EMT DIA. 51 MM	200	
<b>OTHERS</b>			
4M0227	DRY TYPE TRANSFORMER	1	
4M0228	PANELBOARD TG-CFS	1	
4M0229	PANELBOARD T-CFS	1	
4M0230	PANELBOARD ST-CFS	1	
4M0231	PANELBOARD ST-RD	1	
4M0232	ACTIVE LIGHTNING TERMINAL	1	
4M0233	ROUND GALVANIZED STEEL CONDUCTOR	80	
4M0234	CLAMPS, FITTING HARDWARE	1	
4M0235	GROUNDING	1	
Prepared by		Checked by	
M. Garcia		T. Kikuchi	
July/18/2002		July 12 <sup>th</sup> 2002	

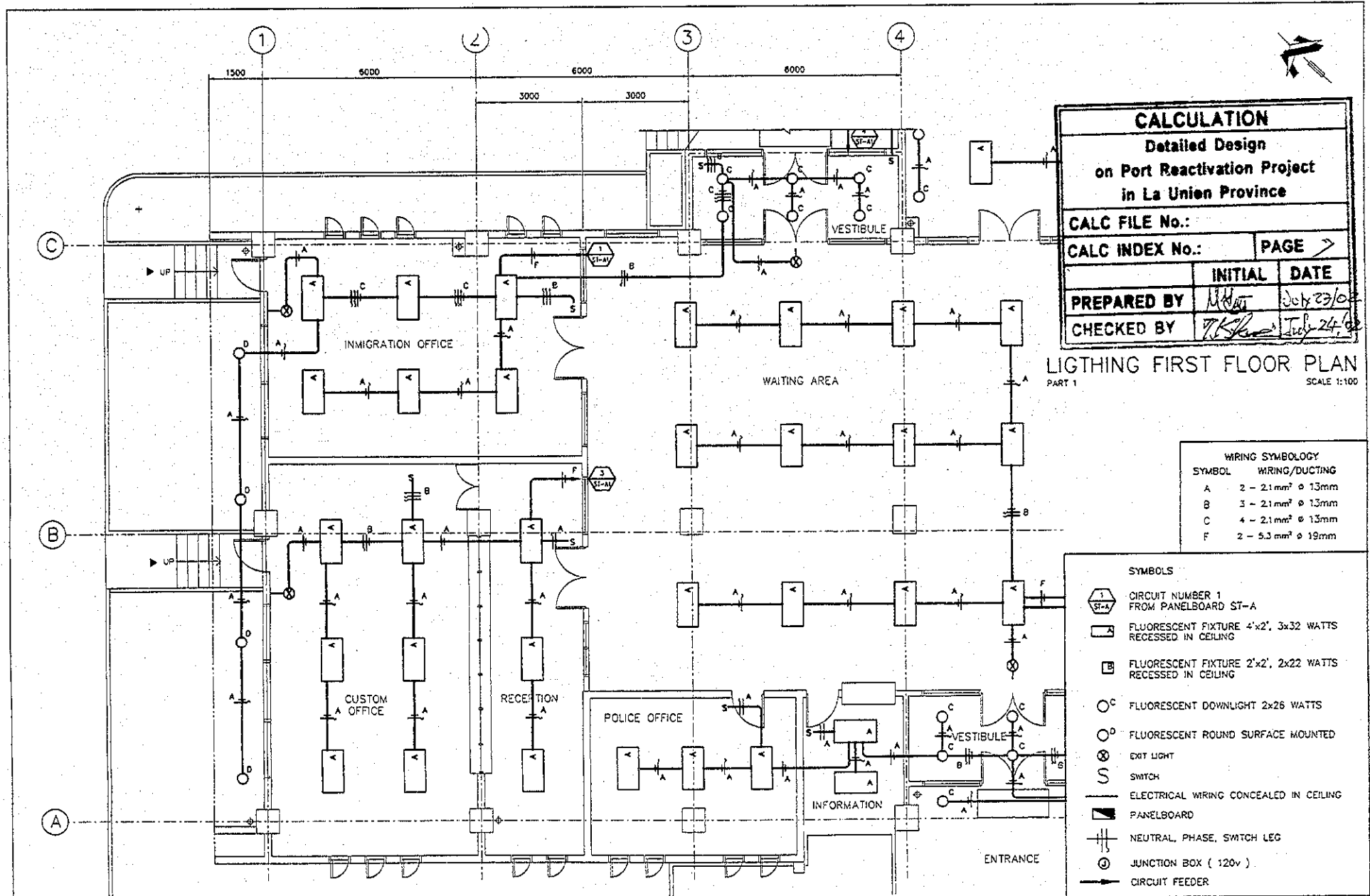
<b>Project</b>	Detailed Design on Port Reactivation Project in La Union	Calc. File No.	
<b>Section</b>	ELECTRICAL WORK FOR BUILDING	Calc. Index No.	
<b>Subject</b>	QUANTITY CALCULATION - ALL ITEMS	Page No. 03	Rev.
4M03 MAINTENANCE & REPAIR SHOP			References/ Notes
<b>ITEM</b>	<b>DESCRIPTION</b>	<b>QTY</b>	
<b>LIGHTING</b>			
4M0301	TYPE A, FL 32Wx3	18	
4M0302	TYPE F, FL 32Wx4 INDUSTRIAL	5	
4M0303	TYPE L, FL 32Wx4 WRAP-AROUND	5	
4M0304	TYPE J, FL 32Wx2	10	
4M0305	TYPE N1, HPS 150W	14	
4M0306	TYPE M, MH 400W	21	
4M0307	EXIT LIGHT	2	
4M0308	SINGLE SWITCH	4	
4M0309	SINGLE SWITCH INDUSTRIAL	7	
4M0310	2 FOLE 240V SWITCH	6	
<b>OUTLETS</b>			
4M0311	DUPLEX RECEPTACLE 120V	13	
4M0312	DUPLEX RECEPTACLE INDUSTRIAL 120V	13	
4M0313	WEATHER PROOF RECEPTACLE	4	
4M0314	SINGLE RECEPTACLE FOR H.D.	2	
4M0315	CONNECTION FOR EXHAUST FAN	2	
4M0316	CONNECTION FOR A/C UNIT	3	
4M0317	CONNECTION FOR ROLL-UP DOOR	6	
4M0318	CONNECTION FOR TRAVELLING CRANE	1	
4M0319	208V, 1 PHASE OUTLET	8	
4M0320	208V, 3 PHASE OUTLET	4	
<b>CABLING/PIPING</b>			
4M0321	CABLE PVC 2.1 MM <sup>2</sup>	685	
4M0322	CABLE PVC 3.3 MM <sup>2</sup>	2350	
4M0323	CABLE PVC 5.3 MM <sup>2</sup>	3625	
4M0324	CABLE PVC 8.4 MM <sup>2</sup>	730	
4M0325	CABLE PVC 13.3 MM <sup>2</sup>	1280	
4M0326	CABLE PVC 85 MM <sup>2</sup>	120	
4M0327	PVC DIA. 13 MM	240	
4M0328	PVC DIA. 19 MM	200	
4M0329	EMT DIA. 13 MM	230	
4M0330	EMT DIA. 19 MM	1040	
4M0331	EMT DIA. 25 MM	780	
4M0332	EMT DIA. 51 MM	30	
<b>OTHERS</b>			
4M0333	PANELBOARD TG-MRS	1	
4M0334	PANELBOARD T-MRS	1	
4M0335	PANELBOARD 9T-MRS	1	
4M0336	PANELBOARD 9T-MRS2	1	
4M0337	ACTIVE LIGHTNING TERMINAL	1	
4M0338	ROUND GALVANIZED STEEL CONDUCTOR	80	
4M0339	CLAMPS, FITTING HARDWARE	1	
4M0340	GROUNDING	1	
Prepared by		Checked by	
M. Garcia		T. Kikuchi	
July/18/2002		July/24/2002	

<b>Project</b>	Detailed Design on Port Reactivation Project in La Union	Calc. File No.	
<b>Section</b>	ELECTRICAL WORK FOR BUILDING	Calc. Index No.	
<b>Subject</b>	QUANTITY CALCULATION - ALL ITEMS	Page No. 04	Rev.
			References/ Notes
4M04 CONTAINER GATE			
<b>ITEM</b>	<b>DESCRIPTION</b>	<b>QTY</b>	
<b>LIGHTING</b>			
4M0401	TYPE L, FL 32Wx3	12	
4M0402	TYPE L1, FL 32Wx2	12	
4M0403	TYPE Q, MH 400W	18	
4M0404	SINGLE SWITCH	10	
4M0405	2 POLE 240V SWITCH	3	
4M0406	CONNECTION FOR SIGN LIGHT	12	
<b>OUTLETS</b>			
4M0407	DUPLEX RECEPTACLE 120V	26	
4M0408	JUNCTION BOX (FLOOR)	12	
4M0409	CONNECTION FOR A/C UNIT	10	
4M0410	CONNECTION FOR WEIGH BRIDGE	2	
<b>CABLING/PILING</b>			
4M0411	CABLE PVC 2.1 MM <sup>2</sup>	350	
4M0412	CABLE PVC 3.3 MM <sup>2</sup>	1020	
4M0413	CABLE PVC 5.3 MM <sup>2</sup>	910	
4M0414	CABLE PVC 8.4 MM <sup>2</sup>	520	
4M0415	PVC DIA. 13 MM	240	
4M0416	PVC DIA. 19 MM	465	
4M0417	EMT DIA. 13 MM	110	
4M0418	EMT DIA. 19 MM	280	
4M0419	EMT DIA. 25 MM	280	
<b>OTHERS</b>			
4M0420	PANELBOARD T-CG	1	
4M0421	PANELBOARD ST-CG	1	
4M0422	ACTIVE LIGHTNING TERMINAL	1	
4M0423	ROUND GALVANIZED STEEL CONDUCTOR	60	
4M0424	CLAMPS, FITTING HARDWARE	1	
4M0425	GROUNDING	1	
Prepared by		Checked by	
M. Garcia		T. Kikuchi	
July/18/2002		July 12 <sup>th</sup> 2002	

<b>Project</b>	Detailed Design on Port Reactivation Project in La Union	Calc. File No.	
<b>Section</b>	ELECTRICAL WORK FOR BUILDING	Calc. Index No.	
<b>Subject</b>	QUANTITY CALCULATION - ALL ITEMS	Page No. 05	Rev.
			References/ Notes
4M05 CARGO GATE			
ITEM	DESCRIPTION	QTY	
LIGHTING			
4M0501	TYPE L, FL 32Wx3	12	
4M0502	TYPE L1, FL 32Wx2	4	
4M0503	TYPE Q, MH 400W	9	
4M0504	SINGLE SWITCH	8	
4M0505	2 POLE 240V SWITCH	3	
4M0506	CONNECTION FOR SIGN LIGHT	8	
OUTLETS			
4M0507	DUPLEX RECEPTACLE 120V	18	
4M0508	JUNCTION BOX (FLOOR)	8	
4M0509	CONNECTION FOR A/C UNIT	6	
4M0510	CONNECTION FOR WEIGH BRIDGE	2	
CABLING/RIPING			
4M0511	CABLE PVC 2.1 MM <sup>2</sup>	205	
4M0512	CABLE PVC 3.3 MM <sup>2</sup>	515	
4M0513	CABLE PVC 5.3 MM <sup>2</sup>	510	
4M0514	CABLE PVC 8.4 MM <sup>2</sup>	260	
4M0515	PVC DIA. 13 MM	100	
4M0516	PVC DIA. 19 MM	260	
4M0517	EMT DIA. 13 MM	55	
4M0518	EMT DIA. 19 MM	200	
4M0519	EMT DIA. 25 MM	130	
OTHERS			
4M0520	PANELBOARD T-CAG	1	
4M0521	PANELBOARD ST-CAG	1	
4M0522	ACTIVE LIGHTNING TERMINAL	1	
4M0523	ROUND GALVANIZED STEEL CONDUCTOR	60	
4M0524	CLAMPS, FITTING HARDWARE	1	
4M0525	GROUNDING	1	
Prepared by		Checked by	
M. Garcia		T. Kikuchi	
July/18/2002		July 12 <sup>th</sup> 2002	

Page 5

<b>Project</b>	Detailed Design on Port Reactivation Project in La Union	Calc. File No.	
<b>Section</b>	ELECTRICAL WORK FOR BUILDING	Calc. Index No.	
<b>Subject</b>	QUANTITY CALCULATION - ALL ITEMS	Page No. 06	Rev.
			References/ Notes
4M06 POWER SUPPLY STATION			
<b>ITEM</b>	<b>DESCRIPTION</b>	<b>QTY</b>	
LIGHTING			
4M0601	TYPE L, FL 32Wx3	3	
4M0602	TYPE L1, FL 22Wx2	1	
4M0603	TYPE N1, HFS 150W	7	
4M0604	TYPE R, MH 250W	14	
4M0605	EXIT LIGHT	2	
4M0606	SINGLE SWITCH	2	
4M0607	2 FOLE 240V SWITCH	5	
OUTLETS			
4M0608	DUPLEX RECEPTACLE INDUSTRIAL 120V	6	
4M0609	CONNECTION EXHAUST FAN	5	
CABLING/PIPING			
4M0610	CABLE PVC 2.1 MM <sup>2</sup>	60	
4M0611	CABLE PVC 3.3 MM <sup>2</sup>	250	
4M0612	CABLE PVC 5.3 MM <sup>2</sup>	220	
4M0613	EMT DIA. 13 MM	40	
4M0614	EMT DIA. 19 MM	150	
OTHERS			
4M0615	PANELBOARD T-PSS	1	
4M0616	ACTIVE LIGHTNING TERMINAL	1	
4M0617	ROUND GALVANIZED STEEL CONDUCTOR	50	
4M0618	CLAMPS, FITTING HARDWARE	1	
4M0619	GROUNDING	1	
Prepared by		Checked by	
M. Garcia		T. Kikuchi	
July/18/2002		July/24/2002	



**CALCULATION**  
 Detailed Design  
 on Port Reactivation Project  
 in La Union Province

CALC FILE No.:  
 CALC INDEX No.: PAGE >

PREPARED BY: *[Signature]* July 23/02  
 CHECKED BY: *[Signature]* July 24/02

LIGHTING FIRST FLOOR PLAN  
 PART 1  
 SCALE 1:100

WIRING SYMBOLY

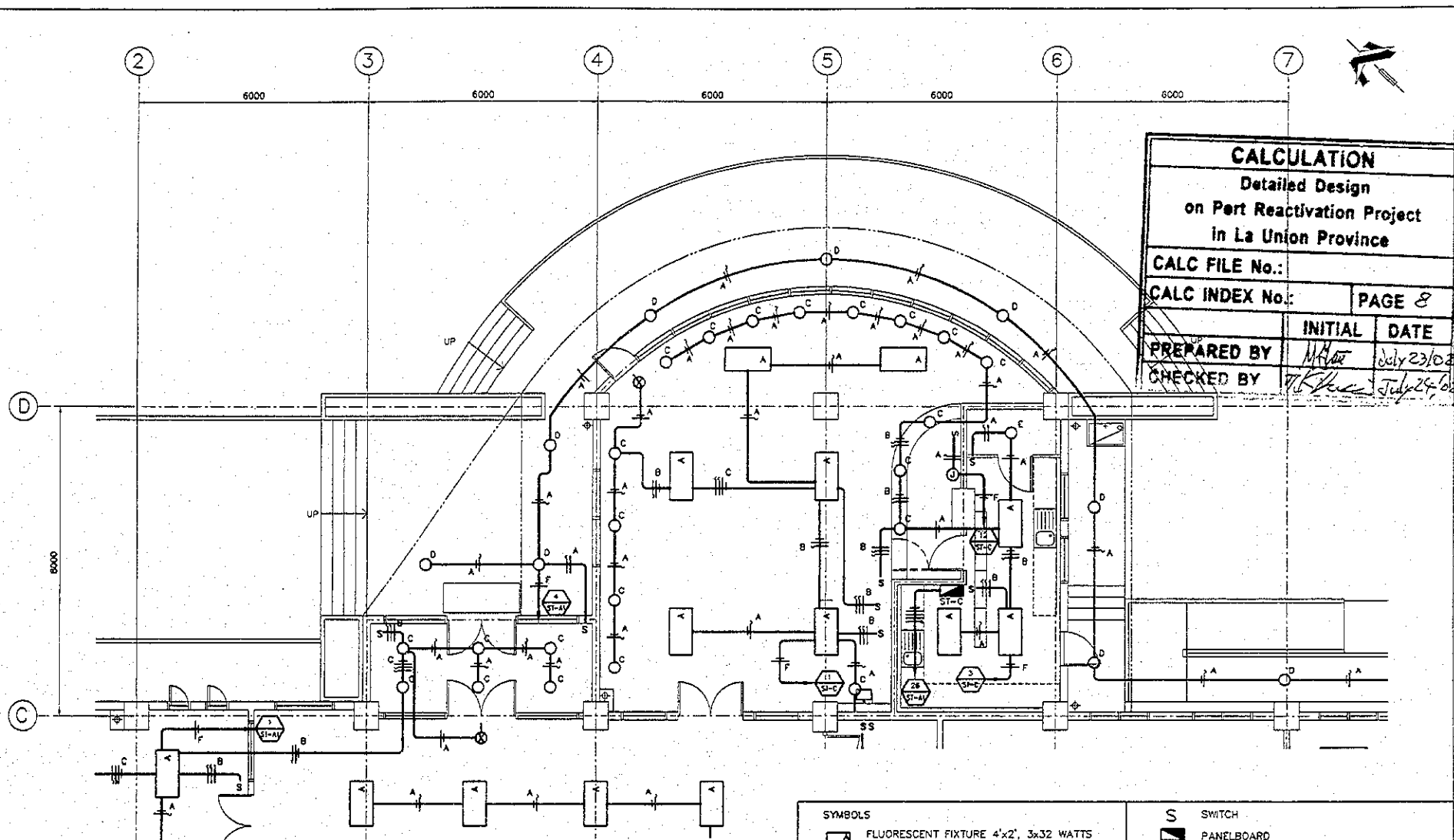
SYMBOL	WIRING/DUCTING
A	2 - 2.1mm <sup>2</sup> φ 13mm
B	3 - 2.1mm <sup>2</sup> φ 13mm
C	4 - 2.1mm <sup>2</sup> φ 13mm
F	2 - 5.3mm <sup>2</sup> φ 19mm

- SYMBOLS
- CIRCUIT NUMBER 1 FROM PANELBOARD ST-A
  - FLUORESCENT FIXTURE 4'x2', 3x32 WATTS RECESSED IN CEILING
  - FLUORESCENT FIXTURE 2'x2', 2x22 WATTS RECESSED IN CEILING
  - FLUORESCENT DOWNLIGHT 2x26 WATTS
  - FLUORESCENT ROUND SURFACE MOUNTED
  - EXIT LIGHT
  - SWITCH
  - ELECTRICAL WIRING CONCEALED IN CEILING
  - PANELBOARD
  - NEUTRAL, PHASE, SWITCH LEG
  - JUNCTION BOX ( 120v )
  - CIRCUIT FEEDER

REV. NO.	DATE	COORDINATE	BY	APPROVED	DATE	JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	DETAILED DESIGN REACTIVATION PROJECT IN LA UNION PROVINCE OF THE REPUBLIC OF EL SALVADOR	NIPPON KOEI CO., LTD	DESIGNED BY:	SECTION :	DATE :
									COMISION EJECUTIVA PORTUARIA AUTONOMA (CEPA)	CHECKED BY:	SUB-SECTION :
									TITLE :	SCALE :	
									APPROVED BY:	LIGHTING FIRST FLOOR PLAN (PART 1)	1 : 100
										DRAWING NO.:	BD-01-098



<b>CALCULATION</b>	
Detailed Design on Port Reactivation Project in La Union Province	
CALC FILE No.:	
CALC INDEX No.:	PAGE 8
PREPARED BY	INITIAL DATE
CHECKED BY	INITIAL DATE



**LIGHTING FIRST FLOOR PLAN**  
PART 2  
SCALE 1:100

WIRING SYMBOLOLOGY	
SYMBOL	WIRING/DUCTING
A	2 - 2.1mm <sup>2</sup> ∅ 13mm
B	3 - 2.1mm <sup>2</sup> ∅ 13mm
C	4 - 2.1mm <sup>2</sup> ∅ 13mm
F	2 - 5.3 mm <sup>2</sup> ∅ 19mm

SYMBOLS	
	FLUORESCENT FIXTURE 4'x2', 3x32 WATTS RECESSED IN CEILING
	FLUORESCENT FIXTURE 2'x2', 2x22 WATTS RECESSED IN CEILING
	FLUORESCENT DOWNLIGHT 2x26 WATTS
	FLUORESCENT ROUND SURFACE MOUNTED
	INCANDESCENT FIXTURE 1x60 WATTS
	EXIT LIGHT
	SWITCH
	PANELBOARD
	ELECTRICAL WIRING CONCEALED IN CEILING
	NEUTRAL, PHASE, SWITCH LEG
	CIRCUIT NUMBER 1 FROM PANELBOARD ST-A
	JUNCTION BOX ( 120v )
	CIRCUIT FEEDER

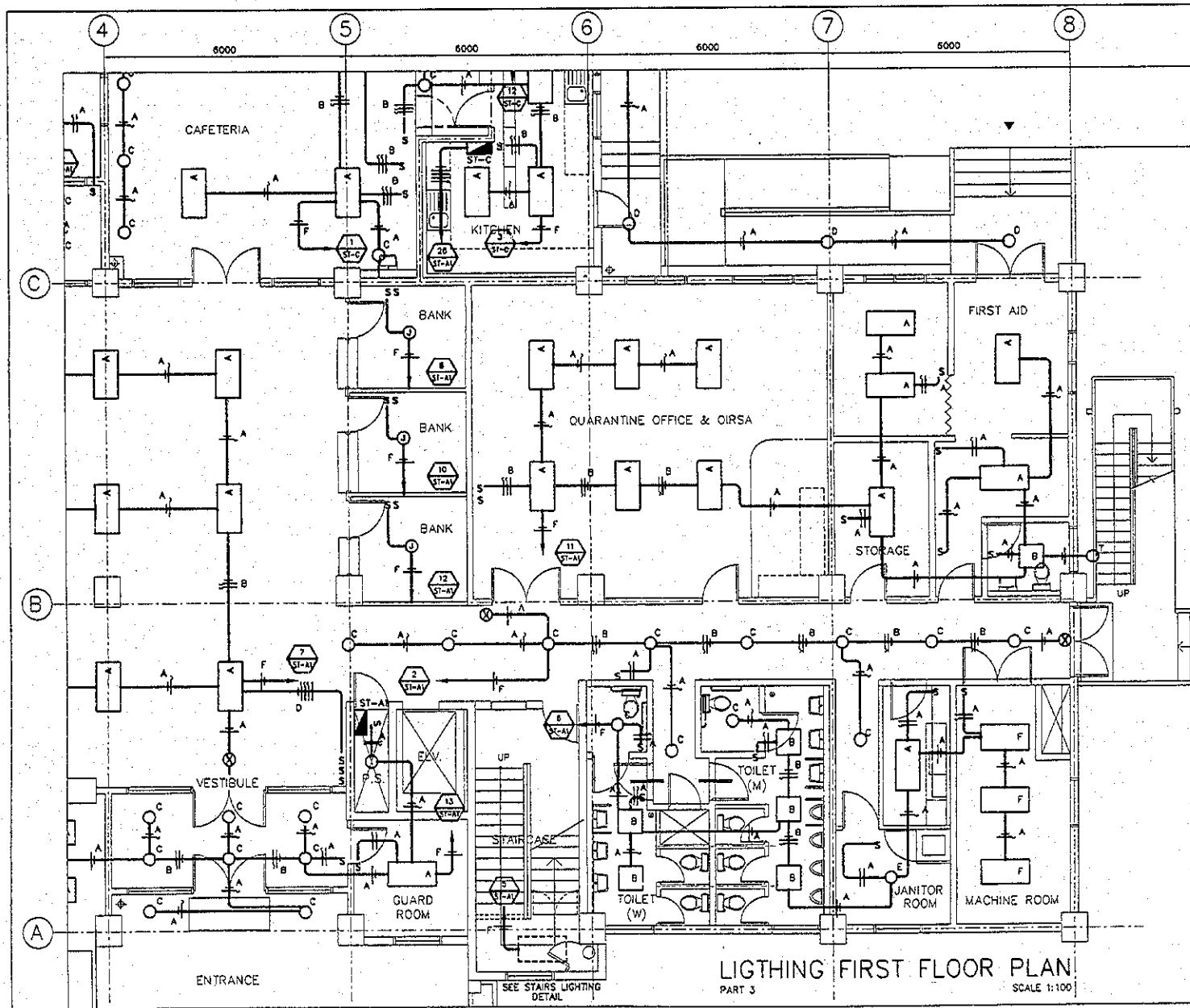
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						CHECKED BY:	SUB-SECTION:	PORT ADMINISTRATION BUILDING	AUGUST/2002
						APPROVED BY:	TITLE:	LIGHTING FIRST FLOOR PLAN (PART 2)	SCALE: 1:100
									DRAWING NO. BD-01-099

**JICA**  
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

**Cepa**  
COMISION EJECUTIVA PORTUARIA AUTONOMA (CEPA)

DETAILED DESIGN REACTIVATION PROJECT  
IN LA UNION PROVINCE  
OF THE REPUBLIC OF EL SALVADOR

**NK** NIPPON KOEI CO., LTD



CALCULATION		
Detailed Design		
on Port Reactivation Project		
in La Union Province		
CALC FILE No.:		
CALC INDEX No.:	PAGE	9
	INITIAL	DATE
PREPARED BY	<i>M. M. M.</i>	July 23/02
CHECKED BY	<i>P. K. K.</i>	July 24/02

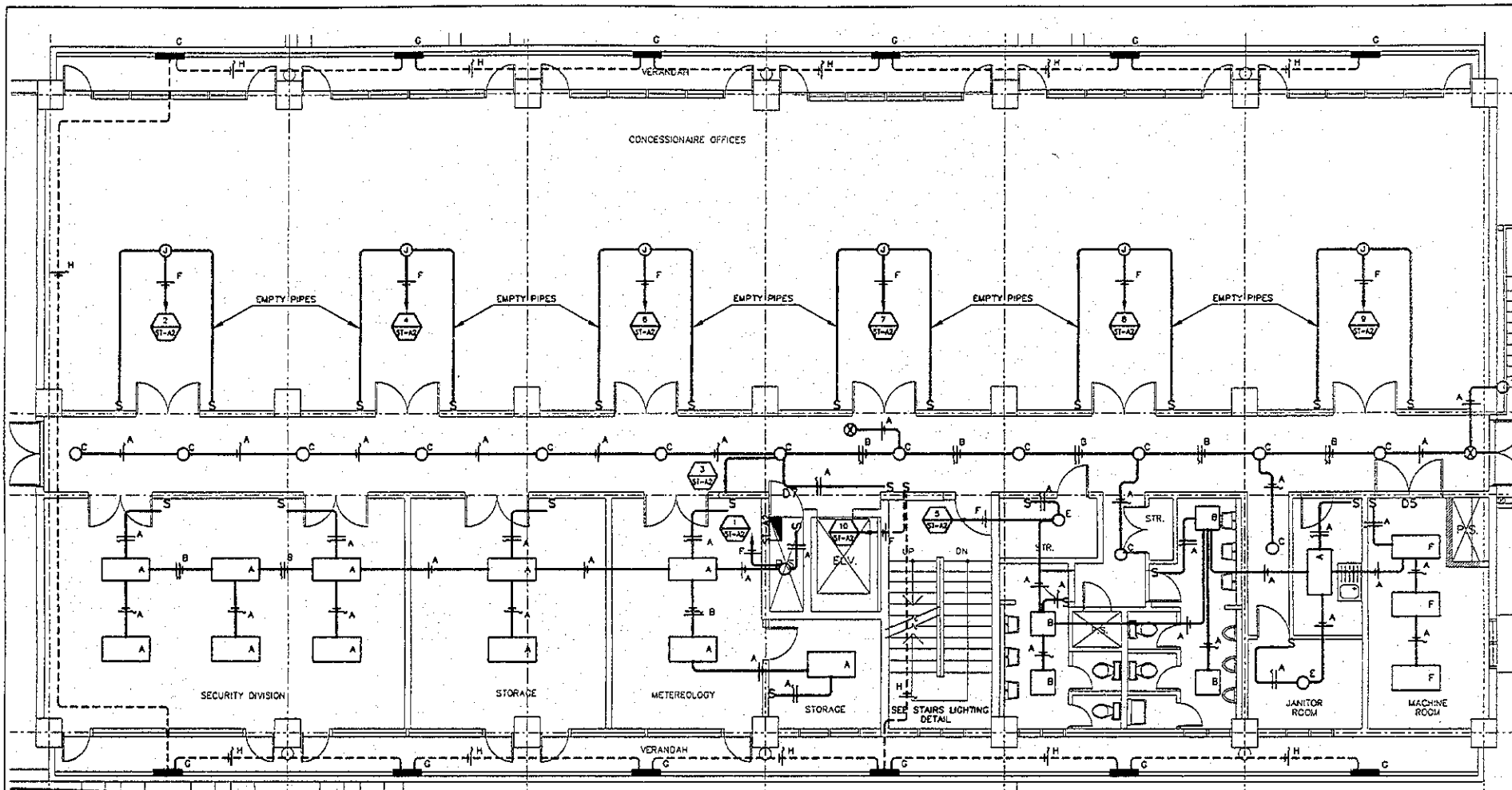
WIRING SYMBOLOLOGY	
SYMBOL	WIRING/DUCTING
A	2 - 2.1mm <sup>2</sup> ∅ 13mm
B	3 - 2.1mm <sup>2</sup> ∅ 13mm
C	4 - 2.1mm <sup>2</sup> ∅ 13mm
F	2 - 5.3mm <sup>2</sup> ∅ 19mm

- SYMBOLS**
- FLUORESCENT FIXTURE 4'x2', 3x32 WATTS RECESSED IN CEILING
  - FLUORESCENT FIXTURE 2'x2', 2x22 WATTS RECESSED IN CEILING
  - FLUORESCENT DOWNLIGHT 2x26 WATTS
  - FLUORESCENT ROUNDED SURFACE MOUNTED
  - INCANDESCENT FIXTURE 1x60 WATTS
  - WALL MOUNTED LIGHT
  - EXIT LIGHT
  - SWITCH
  - ELECTRICAL WIRING CONCEALED IN CEILING
  - CIRCUIT NUMBER 1 FROM PANELBOARD ST-A
  - NEUTRAL, PHASE, SWITCH LEG
  - PANELBOARD
  - JUNCTION BOX ( 120v )
  - CIRCUIT FEEDER

LIGHTING FIRST FLOOR PLAN  
PART 3  
SCALE 1:100

REV. NO.	DATE	COORDINATE	BY	APPROVED	DATE	JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) COMISION EJECUTIVA PORTUARIA AUTONOMA (CEPA)	DETAILED DESIGN REACTIVATION PROJECT IN LA UNION PROVINCE OF THE REPUBLIC OF EL SALVADOR NIPPON KOEI CO., LTD	DESIGNED BY:	SECTION:	BUILDING WORK	DATE:	AUGUST/2002
								CHECKED BY:	SUB-SECTION:	PORT ADMINISTRATION BUILDING	SCALE:	1 : 100
								APPROVED BY:	TITLE:	LIGHTING FIRST FLOOR PLAN (PART 3)	DRAWING NO.:	80-01-100





**CALCULATION**  
**Detailed Design**  
**on Port Reactivation Project**  
**in La Union Province**

CALC FILE No.:  
 CALC INDEX No.:      PAGE 10  
 PREPARED BY: *[Signature]*      INITIAL      DATE  
 CHECKED BY: *[Signature]*      *[Signature]*      July 24, 02

**LIGHTING SECOND FLOOR PLAN**

SCALE 1:100

**WIRING SYMBOLOLOGY**

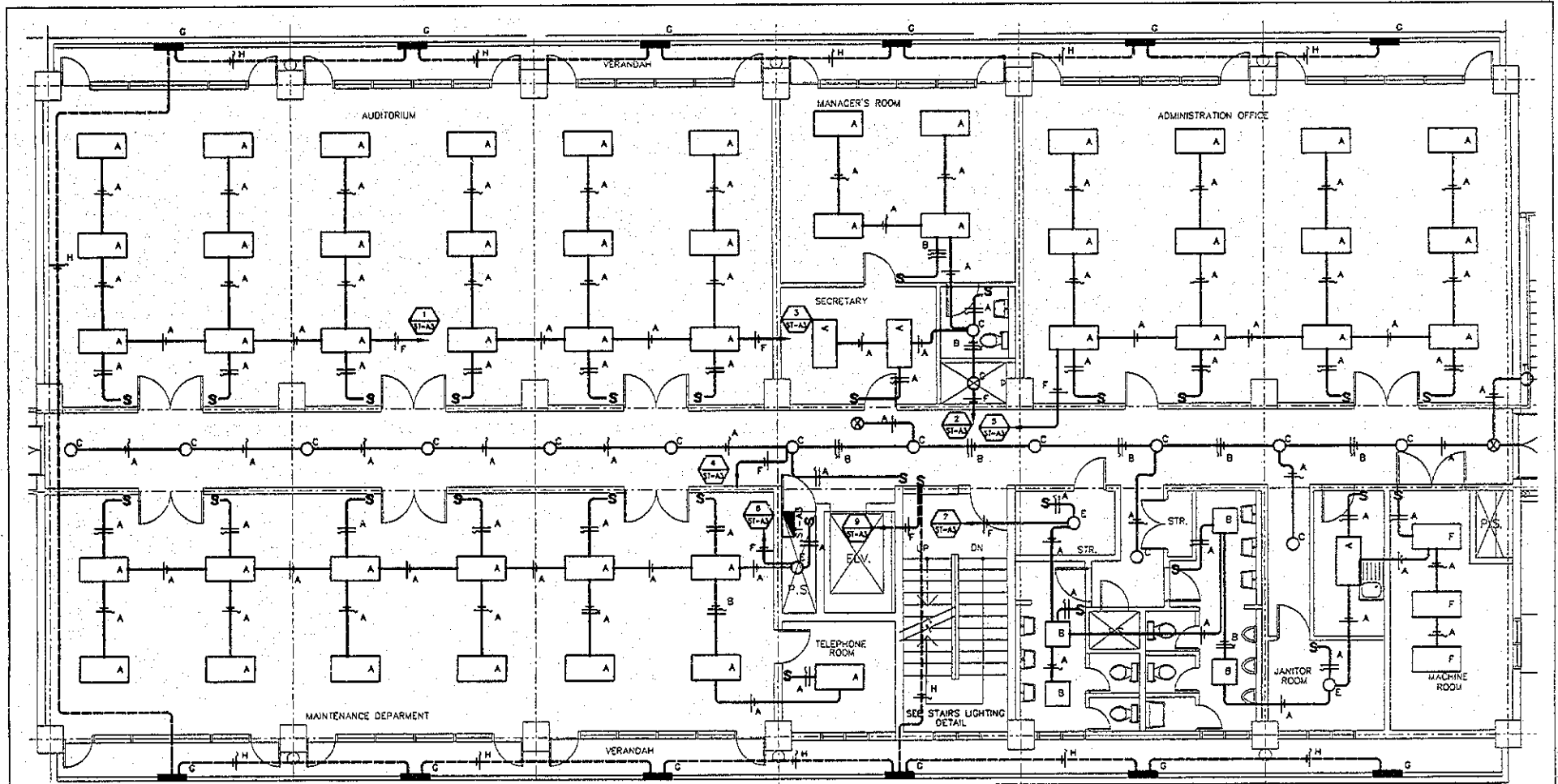
SYMBOL	WIRING/DUCTING
A	2 - 2.1mm <sup>2</sup> ϕ 13mm
B	3 - 2.1mm <sup>2</sup> ϕ 13mm
C	4 - 2.1mm <sup>2</sup> ϕ 13mm
F	2 - 5.3 mm <sup>2</sup> ϕ 19mm

**SYMBOLS**

	FLUORESCENT FIXTURE 4'x2', 3x32 WATTS RECESSED IN CEILING
	FLUORESCENT FIXTURE 2'x2', 2x22 WATTS RECESSED IN CEILING
	FLUORESCENT DOWNLIGHT 2x26 WATTS
	FLUORESCENT ROUND SURFACE MOUNTED
	INCANDESCENT FIXTURE 1x60 WATTS
	SUB-PANEL

	EXIT LIGHT
	SWITCH
	ELECTRICAL WIRING CONCEALED IN CEILING
	NEUTRAL, PHASE, SWITCH LEG
	CIRCUIT NUMBER 1 FROM PANELBOARD ST-A
	WALL RECESSED LIGHT
	JUNCTION BOX ( 120v )
	CIRCUIT FEEDER

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) COMISION EJECUTIVA PORTUARIA AUTONOMA (CEPA)	DETAILED DESIGN ON PORT REACTIVATION PROJECT IN LA UNION PROVINCE OF THE REPUBLIC OF EL SALVADOR NIPPON KOEI CO., LTD.	DESIGNED BY: CHECKED BY: APPROVED BY:	SECTION: BUILDING WORK SUB-SECTION: PORT ADMINISTRATION BUILDING TITLE: LIGHTING SECOND FLOOR PLAN	DATE: AUGUST/2002 SCALE: 1:100 DRAWING NO: BD-D1-101
		PREPARED BY: <i>[Signature]</i> CHECKED BY: <i>[Signature]</i>	APPROVED BY: <i>[Signature]</i>	DATE:



LIGHTING THIRD FLOOR PLAN  
SCALE 1:100

**CALCULATION**  
 Detailed Design  
 RECESSED WALL  
 on Port Reactivation Project  
 MOUNTAIN PROVINCE  
 NOT TO SCALE  
 CALC FILE No.:  
 CALC INDEX No.: PAGE 11  
 PREPARED BY: [Signature] DATE: July 23, 2002  
 CHECKED BY: [Signature] DATE: July 24, 2002

**WIRING SYMBOLOLOGY**

SYMBOL	WIRING/DUCTING
A	2 - 2.1mm <sup>2</sup> ∅ 13mm
B	3 - 2.1mm <sup>2</sup> ∅ 13mm
C	4 - 2.1mm <sup>2</sup> ∅ 13mm
F	2 - 5.3mm <sup>2</sup> ∅ 19mm

**SYMBOLS**

	CIRCUIT NUMBER 1 FROM PANELBOARD ST-A
	PANELBOARD
	RECESSED WALL LIGHT h=500
	FLUORESCENT FIXTURE 4'x2', 3x32 WATTS RECESSED IN CEILING

	FLUORESCENT FIXTURE 2'x2', 2x22 WATTS RECESSED IN CEILING
	FLUORESCENT DOWNLIGHT 2x26 WATTS
	INCANDESCENT FIXTURE 1x60 WATTS
	FLUORESCENT OUTDOOR 1x32 WATTS
	EXIT LIGHT

	SWITCH
	ELECTRICAL WIRING CONCEALED IN CEILING
	NEUTRAL, PHASE, SWITCH LEG
	JUNCTION BOX ( 120v )
	CIRCUIT FEEDER

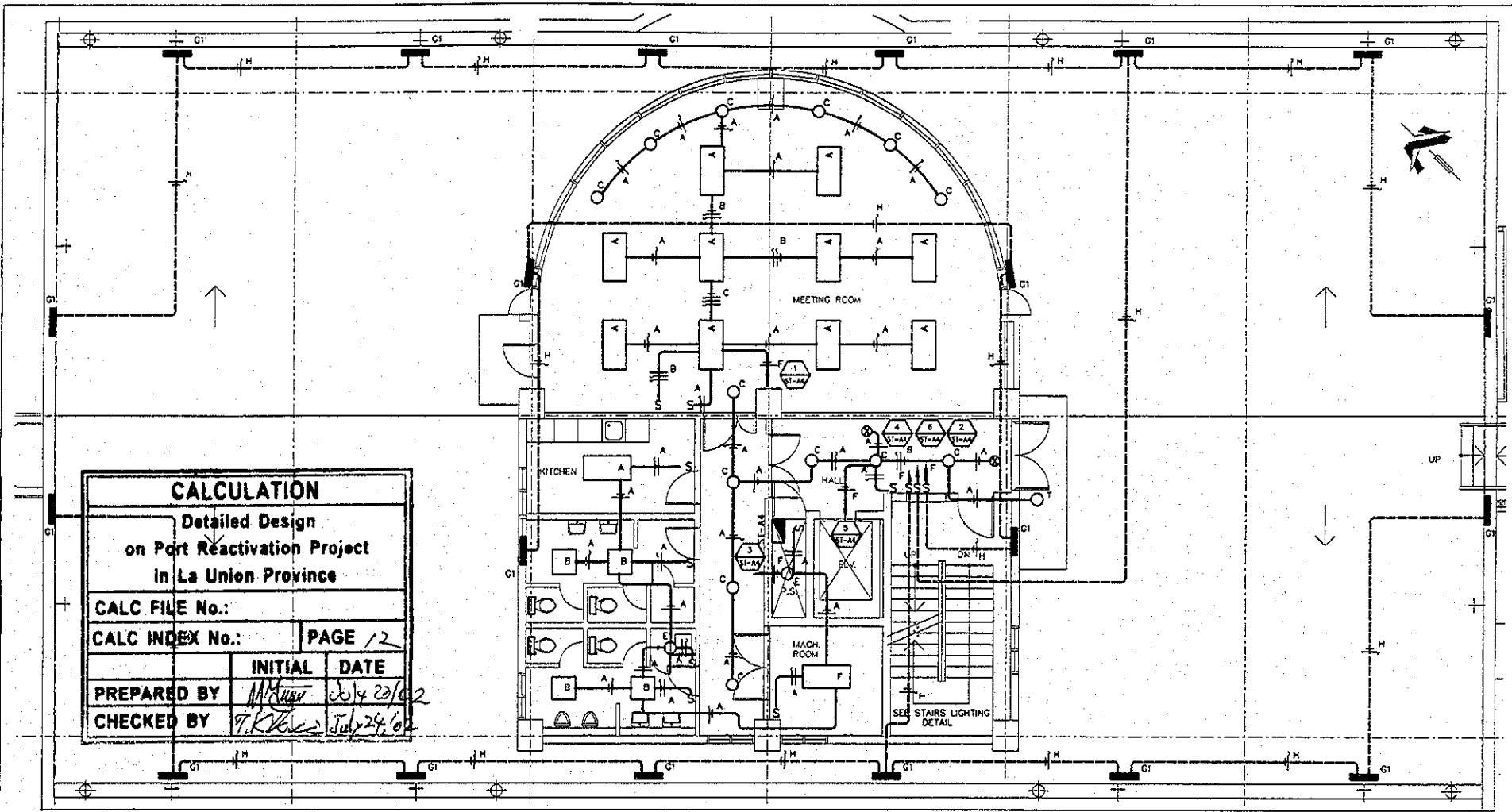
**JICA**  
 JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)  
**Gpa**  
 COMISION EJECUTIVA PORTUARIA AUTONOMA (CEPA)

DETAILED DESIGN ON PORT REACTIVATION PROJECT IN LA UNION PROVINCE OF THE REPUBLIC OF EL SALVADOR  
  
 NIPPON KOEI CO., LTD.

DESIGNED BY:  
 CHECKED BY:  
 APPROVED BY:

SECTION: BUILDING WORK  
 SUB-SECTION: PORT ADMINISTRATION BUILDING  
 TITLE: LIGHTING THIRD FLOOR PLAN

DATE: AUGUST/2002  
 SCALE: 1 : 100  
 DRAWING NO: BD-01-102

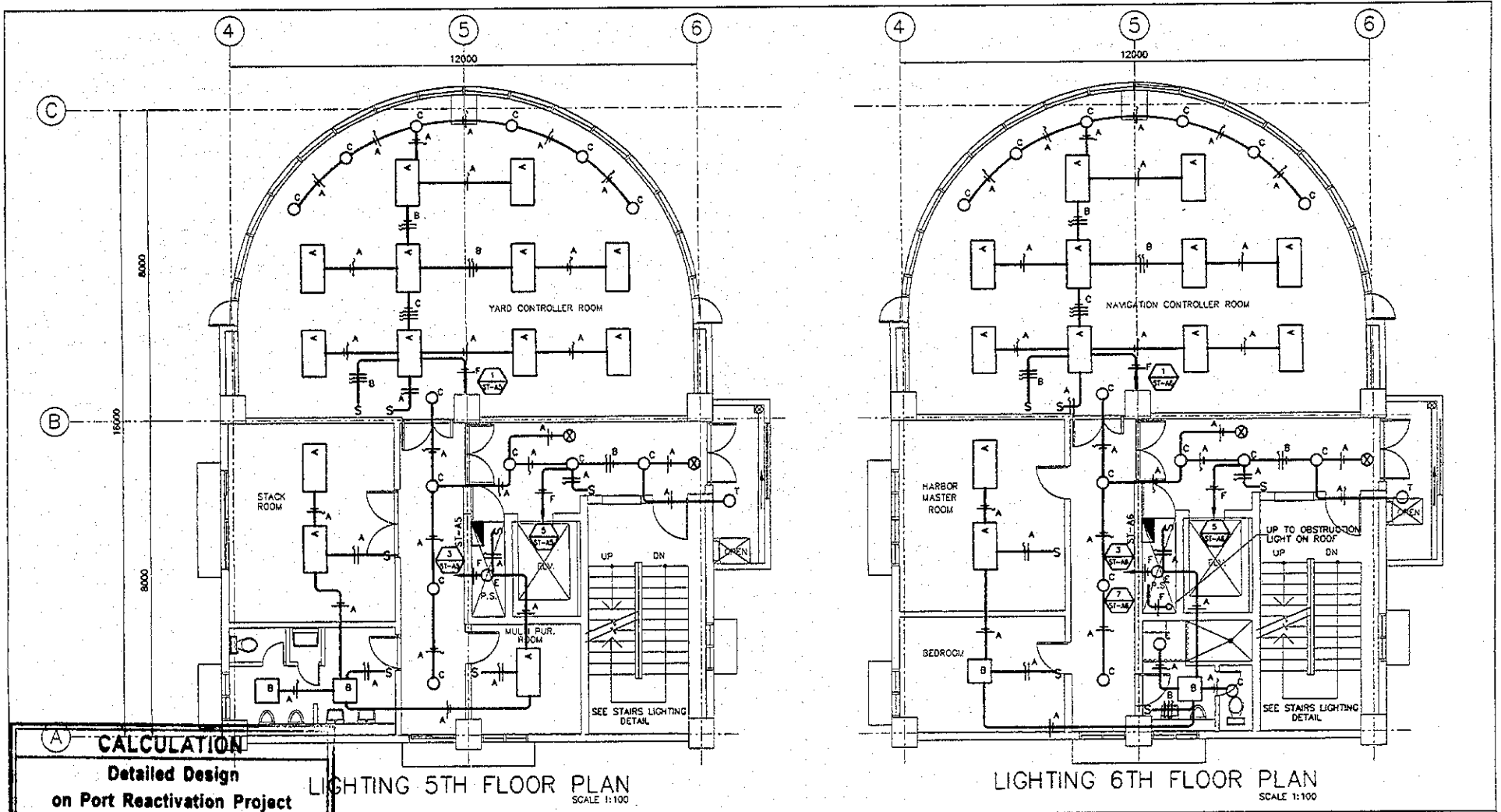


CALCULATION		
Detailed Design on Port Reactivation Project in La Union Province		
CALC FILE No.:		
CALC INDEX No.:	PAGE 12	
	INITIAL	DATE
PREPARED BY	<i>M. Kawai</i>	July 23/02
CHECKED BY	<i>T. Kawai</i>	July 24/02

**LIGHTING 4TH FLOOR PLAN**  
SCALE 1:100

<b>WIRING SYMBOLOGY</b> SYMBOL      WIRING/DUCTING  A    2 - 2.1 mm <sup>2</sup> @ 13mm B    3 - 2.1 mm <sup>2</sup> @ 13mm C    4 - 2.1 mm <sup>2</sup> @ 13mm F    2 - 5.3 mm <sup>2</sup> @ 19mm	<b>SYMBOLS</b> CIRCUIT NUMBER 1 FROM PANEL BOARD PANELBOARD RECESSED WALL LIGHT h=500 FLUORESCENT FIXTURE 4'x2', 3x32 WATTS RECESSED IN CEILING	FLUORESCENT FIXTURE 2'x2', 2x22 WATTS RECESSED IN CEILING  FLUORESCENT DOWNLIGHT 2x26 WATTS INCANDESCENT FIXTURE 1x60 WATTS  EXIT LIGHT	SWITCH ELECTRICAL WIRING CONCEALED IN CEILING NEUTRAL, PHASE, SWITCH LEG WALL MOUNTED FIXTURE 1x32W CIRCUIT FEEDER
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REV. NO.	DATE	COORDINATE	BY	APPROVED	DATE	JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)  Gpa COMISION EJECUTIVA PORTUARIA AUTONOMA (CEPA)	DETAILED DESIGN ON PORT REACTIVATION PROJECT IN LA UNION PROVINCE OF THE REPUBLIC OF EL SALVADOR  NIPPON KOEI CO., LTD.	DESIGNED BY:	SECTION: BUILDING WORK	DATE: AUGUST/2002
								SUB-SECTION: PORT ADMINISTRATION BUILDING TITLE: LIGHTING FOURTH FLOOR PLAN  CHECKED BY:  APPROVED BY:	SCALE: 1:100  DRAWING NO.: BD-07-103	



<b>(A) CALCULATION</b>		
<b>Detailed Design on Port Reactivation Project in La Union Province</b>		
<b>CALC FILE No.:</b>		
<b>CALC INDEX No.:</b>	<b>PAGE</b>	13
<b>PREPARED BY</b>	<b>INITIAL</b>	<b>DATE</b>
<b>CHECKED BY</b>		

**LIGHTING 5TH FLOOR PLAN**  
SCALE 1:100

**LIGHTING 6TH FLOOR PLAN**  
SCALE 1:100

**WIRING SYMBOLOLOGY**

SYMBOL	WIRING/DUCTING
2	2.1 mm <sup>2</sup> ∅ 13mm
3	2.1 mm <sup>2</sup> ∅ 13mm
4	2.1 mm <sup>2</sup> ∅ 13mm
2	5.3 mm <sup>2</sup> ∅ 19mm

**SYMBOLS**

	CIRCUIT NUMBER 1 FROM PANELBOARD ST-A
	PANELBOARD
	FLUORESCENT FIXTURE 4'x2', 3x32 WATTS RECESSED IN CEILING
	FLUORESCENT FIXTURE 2'x2', 2x22 WATTS RECESSED IN CEILING

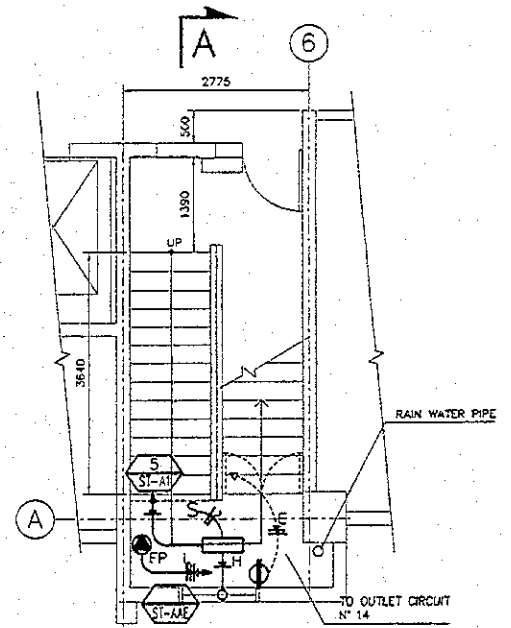
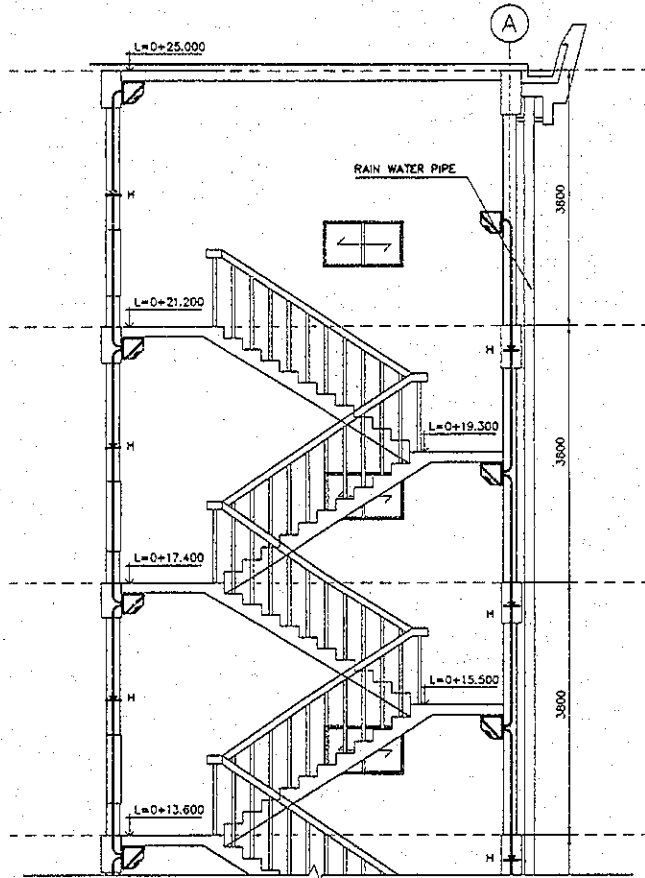
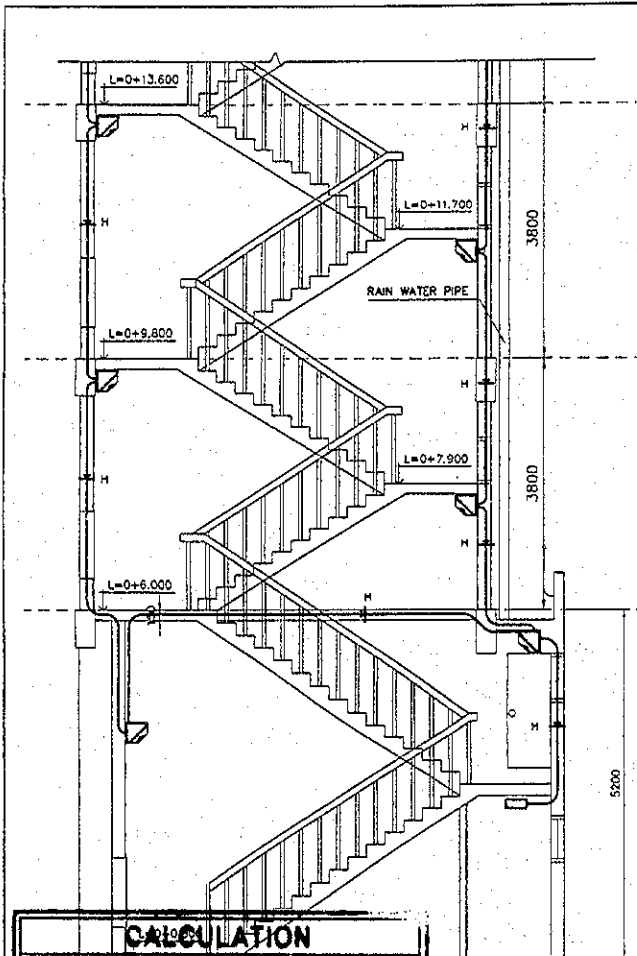
**SYMBOLS**

	FLUORESCENT DOWNLIGHT 2x26 WATTS
	INCANDESCENT FIXTURE 1x60 WATTS
	EXIT LIGHT
	WALL MOUNTED OUTDOOR FIXTURE

**SYMBOLS**

	SWITCH
	ELECTRICAL WIRING CONCEALED IN CEILING
	NEUTRAL, PHASE, SWITCH LEG
	CIRCUIT FEEDER

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	COMISION EJECUTIVA PORTUARIA AUTONOMA (CEPA)	NIPPON KOEI CO., LTD.	DESIGNED BY:	SECTION: BUILDING WORK	DATE: AUGUST/2002
			CHECKED BY:	SUB-SECTION: PORT ADMINISTRATION BUILDING	SCALE: 1:100
			APPROVED BY:	TITLE: LIGHTING 5th and 6th FLOOR PLANS	DRAWING NO.: 8D-01-104



MAIN STAIRS PLAN  
FIRST TO  
SECOND FLOOR  
SCALE 1:75

CALCULATION		
Detailed Design on Port Reactivation Project in La Union Province		
CALC FILE No.:		
CALC INDEX No.:		PAGE/AIN
	INITIAL	DATE
PREPARED BY	<i>MMA</i>	July 23, 02
CHECKED BY	<i>T. K...</i>	July 24, 02

STAIRS CASE SECTION A-A  
SCALE 1:75

WIRING SYMOLOGY	
SYMBOL	WIRING/DUCTING
E	2 - 3.3 mm <sup>2</sup> ∅ 13mm
	1 - 2.1 mm <sup>2</sup>
F	2 - 5.3 mm <sup>2</sup> ∅ 19mm
H	2 - 3.3 mm <sup>2</sup> ∅ 13mm
L	4 - 8.4 mm <sup>2</sup> ∅ 19mm

SYMBOLS	
	CONNECTION FOR FIRE PUMP 480V, 3 PHASE 10 H.P.
	ELECTRICAL WIRING CONCEALED IN CEILING OR WALL
	NEUTRAL, PHASE, GROUNDING, SWITCH LEG.
	FLUORESCENT FIXTURE 2x32 WATTS SURFACE MOUNTED
	FLUORESCENT FIXTURE 2x32 WATTS ANGLED WALL MOUNT/WITH BATTERY PACK
	SWITCH
	DUPLEX RECEPTABLE 120V

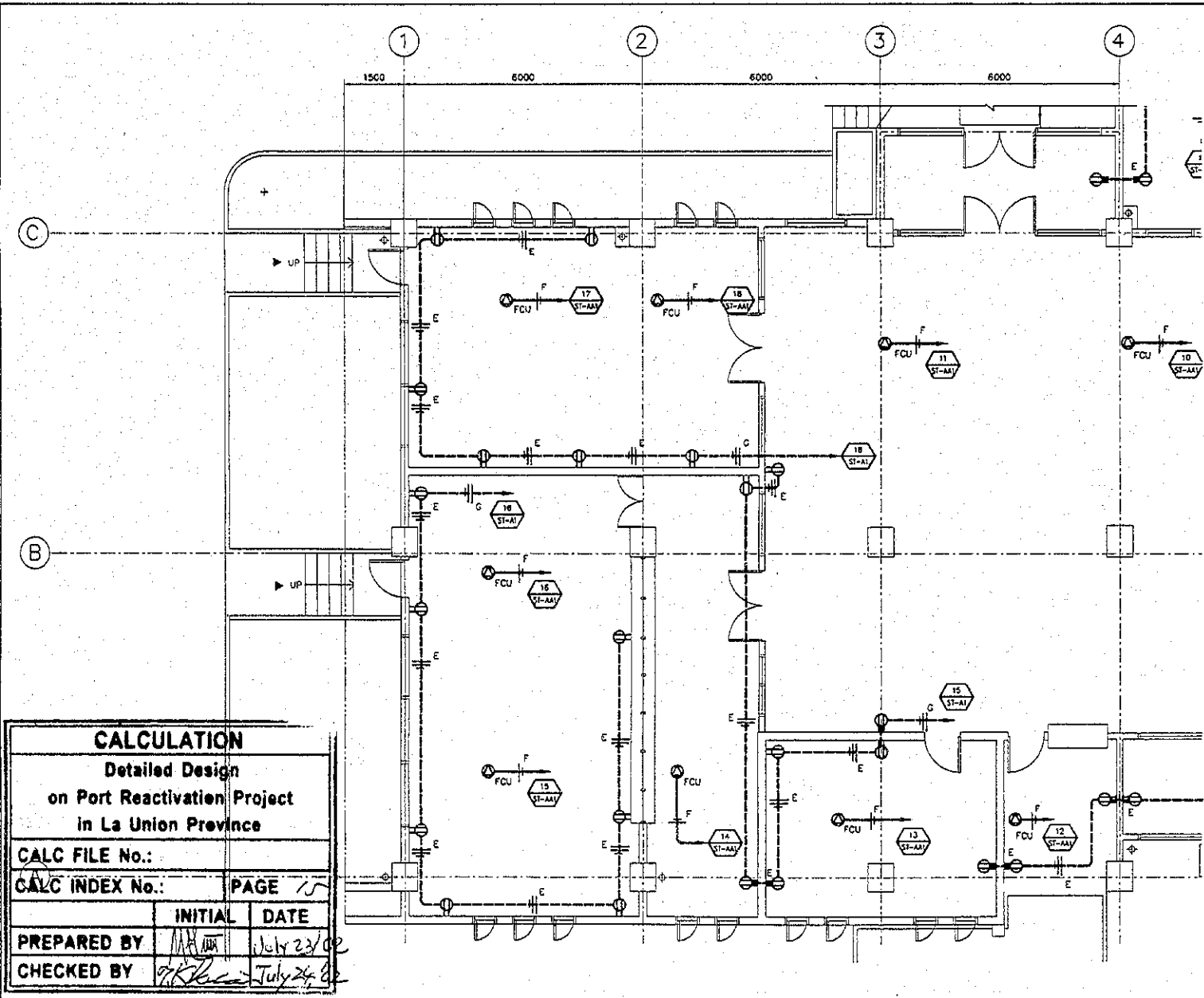
REV. NO.	DATE	COORDINATE	BY	APPROVED	DATE	JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)  COMISION EJECUTIVA PORTUARIA AUTONOMA (CEPA)	NIPPON KOEI CO., LTD	DESIGNED BY:	SECTION	BUILDING WORK	DATE:	AUGUST/2002
								CHECKED BY:	SUB-SECTION	PORT ADMINISTRATION BUILDING	SCALE:	1 : 75
								APPROVED BY:	TITLE	MAIN STAIRCASE LIGHTING AND OUTLETS	DRAWING NO.:	SD-01-105

### OUTLETS FIRST FLOOR PLAN

PART 1 SCALE 1:100

WIRING SYMBOLOLOGY	
SYMBOL	WRING/DUCTING
E	2 - 3.3 mm <sup>2</sup> ∅ 13mm 1 - 2.1mm <sup>2</sup>
F	2 - 5.3 mm <sup>2</sup> ∅ 19mm
G	2 - 5.3 mm <sup>2</sup> ∅ 19mm 1 - 3.3 mm <sup>2</sup>

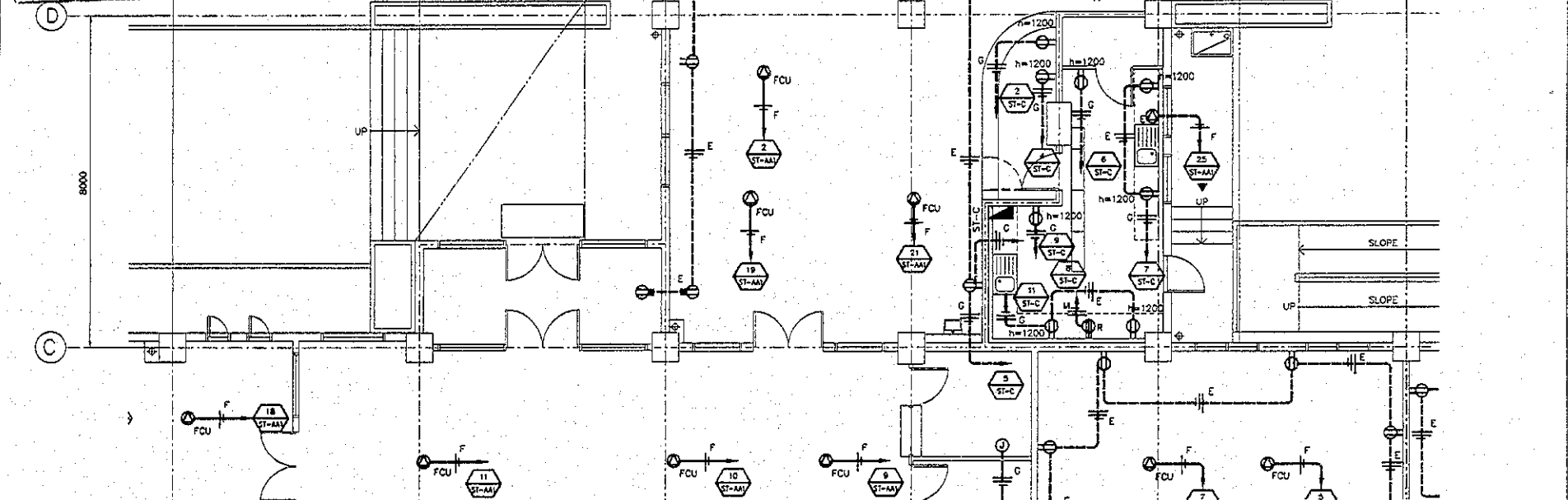
SYMBOLS	
	DUPLEX RECEPTACLE 120 V
	SINGLE RECEPTACLE 120V FOR HAND DRYER (h=1,200)
	120V JUNCTION BOX CONCEALED IN CEILING
	CONNECTION FOR CHILLER 480V, 3-PHASE
	CONNECTION FOR PUMP 480V 3-PHASE
	CONNECTION FOR AIR HANDING UNIT 480V, 3-PHASE
	CONNECTION FOR FAN COIL UNIT 120V, 1-PHASE, CONCEALED IN CEILING
	WRING CONCEALED IN FLOOR
	WRING CONCEALED IN CEILING
	NEUTRAL PHASE, GROUNDING
	CIRCUIT NUMBER : FROM PANELBOARD ST-A
	CONNECTION FOR EXHAUST FAN ON CEILING



<b>CALCULATION</b>		
Detailed Design on Port Reactivation Project in La Union Province		
CALC FILE No.:		
CALC INDEX No.:	PAGE	15
	INITIAL	DATE
PREPARED BY	<i>MM</i>	July 23/02
CHECKED BY	<i>JK</i>	July 24/02

REV. NO.	DATE	COORDINATE	BY	APPROVED	DATE	JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	DETAILED DESIGN REACTIVATION PROJECT IN LA UNION PROVINCE OF THE REPUBLIC OF EL SALVADOR	DESIGNED BY :	SECTION :	DATE :
								CHECKED BY :	SUB-SECTION :	AUGUST/2002
								APPROVED BY :	TITLE :	SCALE :
						COMISION EJECUTIVA PORTUARIA AUTONOMA (CEPA)	NIPPON KOGI CO., LTD	BUILDING WORK PORT ADMINISTRATION BUILDING OUTLETS FIRST FLOOR PLAN (PART 1)		DRAWING NO. ED-01-106

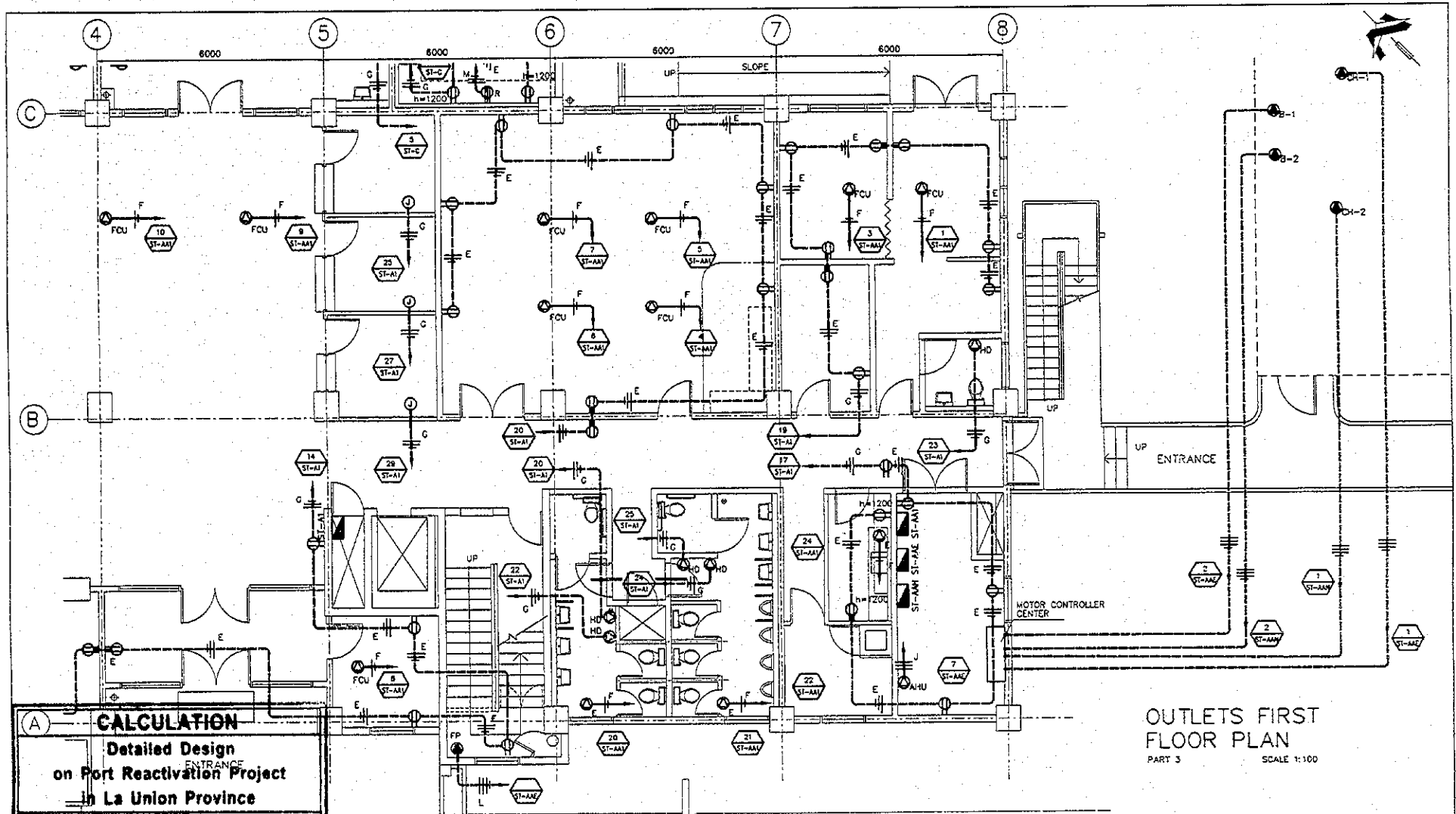
<b>CALCULATION</b>	
Detailed Design on Port Reactivation Project in La Union Province	
CALC FILE No.:	
CALC INDEX No.:	PAGE 16
INITIAL	DATE
PREPARED BY M. V. M.	July 23/02
CHECKED BY TK. K.	July 24/02



**OUTLETS FIRST FLOOR PLAN**  
PART 2  
SCALE 1:100

WIRING SYMBOLOLOGY		SYMBOLS	
<b>SYMBOL</b>	<b>WIRING/DUCTING</b>		120V DUPLEX RECEPTACLE 120 V
E	2 - 3.3 mm <sup>2</sup> φ 13mm 1 - 2.1 mm <sup>2</sup>		SINGLE RECEPTACLE 120V FOR HAND DRYER (h=1,200)
F	2 - 5.3 mm <sup>2</sup> φ 19mm 1 - 3.3 mm <sup>2</sup>		CIRCUIT NUMBER 1 FROM PANELBOARD ST-A
G	2 - 5.3 mm <sup>2</sup> φ 19mm 1 - 3.3 mm <sup>2</sup>		CONNECTION FOR EXHAUST FAN ON CEILING
M	2 - 13.3 mm <sup>2</sup> φ 25mm 1 - 8.4 mm <sup>2</sup>		120V JUNCTION BOX CONCEALED IN CEILING
			CONNECTION FOR CHILLER 480V-3 PHASE
			CONNECTION FOR PUMP 480V-3PHASE
			CONNECTION FOR AIR HANDLING UNIT 480V, 3-PHASE
			CONNECTION FOR FAN COIL UNIT 120V 1-PHASE, CONCEALED IN CEILING
			WIRING CONCEALED IN FLOOR
			WIRING CONCEALED IN CEILING
			NEUTRAL, PHASE, GROUNDING

REV. NO.	DATE	COORDINATE	BY	APPROVED	DATE		JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) COMISION EJECUTIVA PORTUARIA AUTONOMA (CEPA)	DETAILED DESIGN REACTIVATION PROJECT IN LA UNION PROVINCE OF THE REPUBLIC OF EL SALVADOR NIPPON KOEI CO., LTD	DESIGNED BY:	SECTION:	BUILDING WORK PORT ADMINISTRATION BUILDING OUTLETS FIRST FLOOR PLAN (PART 2)	DATE:
									CHECKED BY:	SUB-SECTION:		SCALE:
									APPROVED BY:	TITLE:		DRAWING NO.
												AUGUST/2002 1 : 100 BD-01-107



**OUTLETS FIRST FLOOR PLAN**  
PART 3  
SCALE 1:100

**CALCULATION**  
Detailed Design  
on Port Reactivation Project  
in La Union Province

**CALC FILE No.:**

<b>CALC INDEX No.:</b>	<b>PAGE</b> 17
<b>INITIAL</b>	<b>DATE</b>
<b>PREPARED BY</b> <i>M.H.</i>	<i>July 23/02</i>
<b>CHECKED BY</b> <i>T.K.</i>	<i>July 29/02</i>

**WIRING SYMBOLOLOGY**

SYMBOL	WIRING/DUCTING
E	2 - 3.3 mm <sup>2</sup> ∅ 13mm
F	1 - 2.1 mm <sup>2</sup>
G	2 - 5.3 mm <sup>2</sup> ∅ 19mm
H	2 - 5.3 mm <sup>2</sup> ∅ 19mm
I	1 - 3.3 mm <sup>2</sup>
J	1 - 8.4 mm <sup>2</sup> ∅ 19mm
K	2 - 13.3 mm <sup>2</sup> ∅ 25mm
L	1 - 8.4 mm <sup>2</sup>

**SYMBOLS**

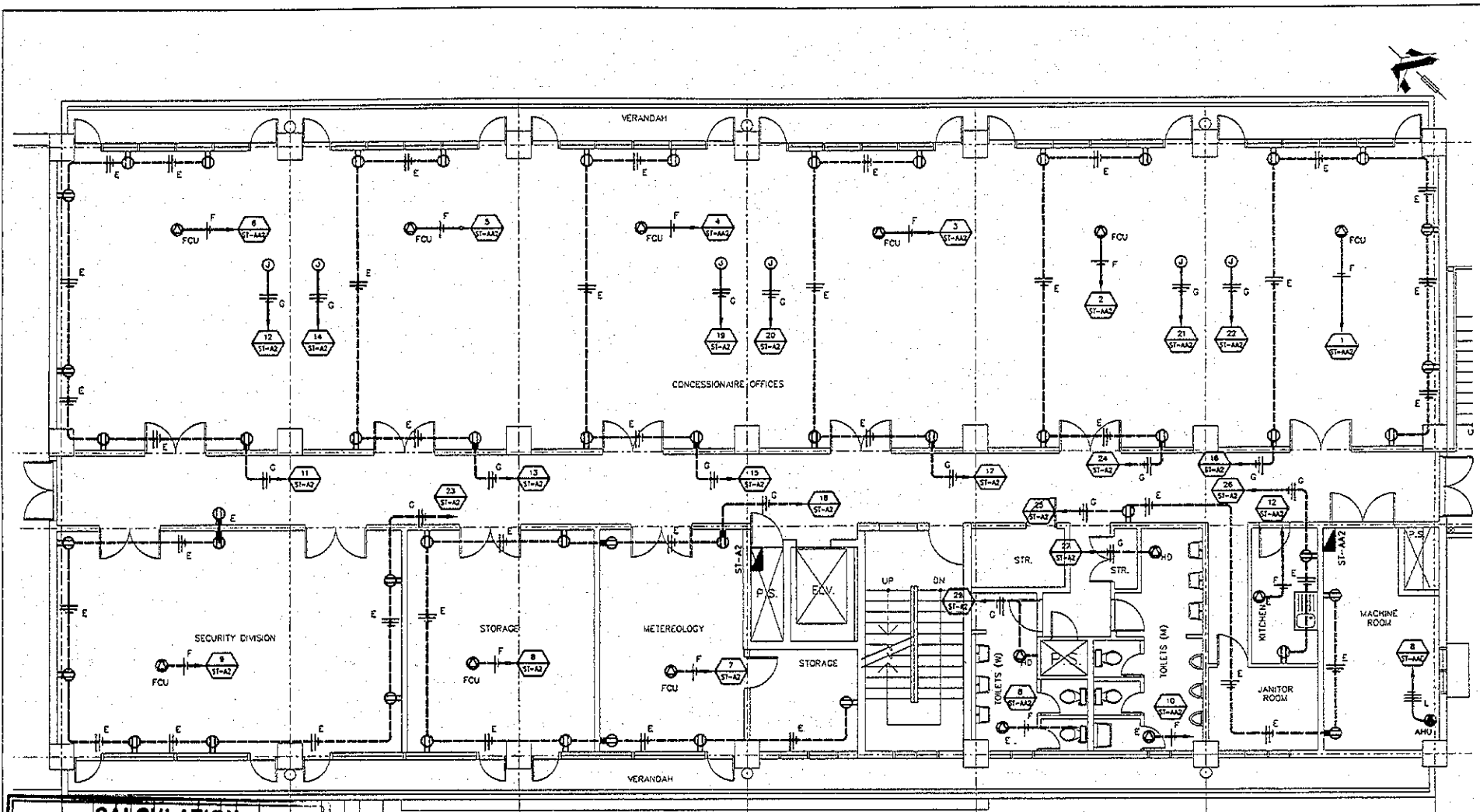
	DUPLEX RECEPTACLE 120 V
	SINGLE RECEPTACLE 120V FOR HAND DRYER (h=1,200)
	CIRCUIT NUMBER 1 FROM PANELBOARD ST-A
	CONNECTION FOR EXHAUST FAN ON CEILING

	120V JUNCTION BOX CONCEALED IN CEILING
	CONNECTION FOR CHILLER 480V, 3-PHASE
	CONNECTION FOR PUMP 480V, 3-PHASE
	CONNECTION FOR AIR HANDLING UNIT 480V, 3-PHASE

	CONNECTION FOR FIRE PUMP 480V, 3-PHASE, 10H.P.
	CONNECTION FOR FAN COIL UNIT 120V, 1-PHASE, CONCEALED IN CEILING
	WIRING CONCEALED IN FLOOR
	WIRING CONCEALED IN CEILING
	NEUTRAL PHASE, GROUNDING

JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	DETAILED DESIGN REACTIVATION PROJECT IN LA UNION PROVINCE OF THE REPUBLIC OF EL SALVADOR	DESIGNED BY:	SECTION: BUILDING WORK	DATE: AUGUST/2002
		CHECKED BY:	SUB-SECTION: PORT ADMINISTRATION BUILDING	SCALE: 1:100
COMISION EJECUTIVA PORTUARIA AUTONOMA (CEPA)	NIPPON KOEI CO., LTD.	APPROVED BY:	TITLE: OUTLETS FIRST FLOOR PLAN (PART 3)	DRAWING NO: BD-01-10B





**CALCULATION**

Detailed Design  
**OUTLETS SECOND FLOOR PLAN**  
 on Port Reactivation Project  
 in La Union Province

CALC FILE No. 09  
 CALC INDEX No.: PAGE 18

PREPARED BY	INITIAL	DATE
CHECKED BY		

**WIRING SYMBOLLOGY**

SYMBOL	WIRING/DUCTING
E	2 - 3.3 mm <sup>2</sup> @ 13mm
	1 - 2.1 mm <sup>2</sup>
F	2 - 5.3 mm <sup>2</sup> @ 19mm
G	2 - 5.3 mm <sup>2</sup> @ 19mm
	1 - 3.3 mm <sup>2</sup>
M	2 - 13.3 mm <sup>2</sup> @ 25mm
	1 - 8.4 mm <sup>2</sup>

**SYMBOLS**

	DUPLEX RECEPTACLE 120 V
	SINGLE RECEPTACLE 120V FOR HAND DRYER (h=1,200)
	120V JUNCTION BOX CONCEALED IN CEILING
	CIRCUIT NUMBER AND PANELBOARD

	CONNECTION FOR AIR HANDING UNIT 208V-3PHASE		WIRING CONCEALED IN CEILING
	CONNECTION FOR FAN COIL UNIT 120V-1 PHASE, CONCEALED IN CEILING		NEUTRAL PHASE, GROUNDING
	CONNECTION FOR EXHAUST FAN 120V		PANELBOARD
	WIRING CONCEALED IN FLOOR		

**OUTLETS SECOND FLOOR PLAN**

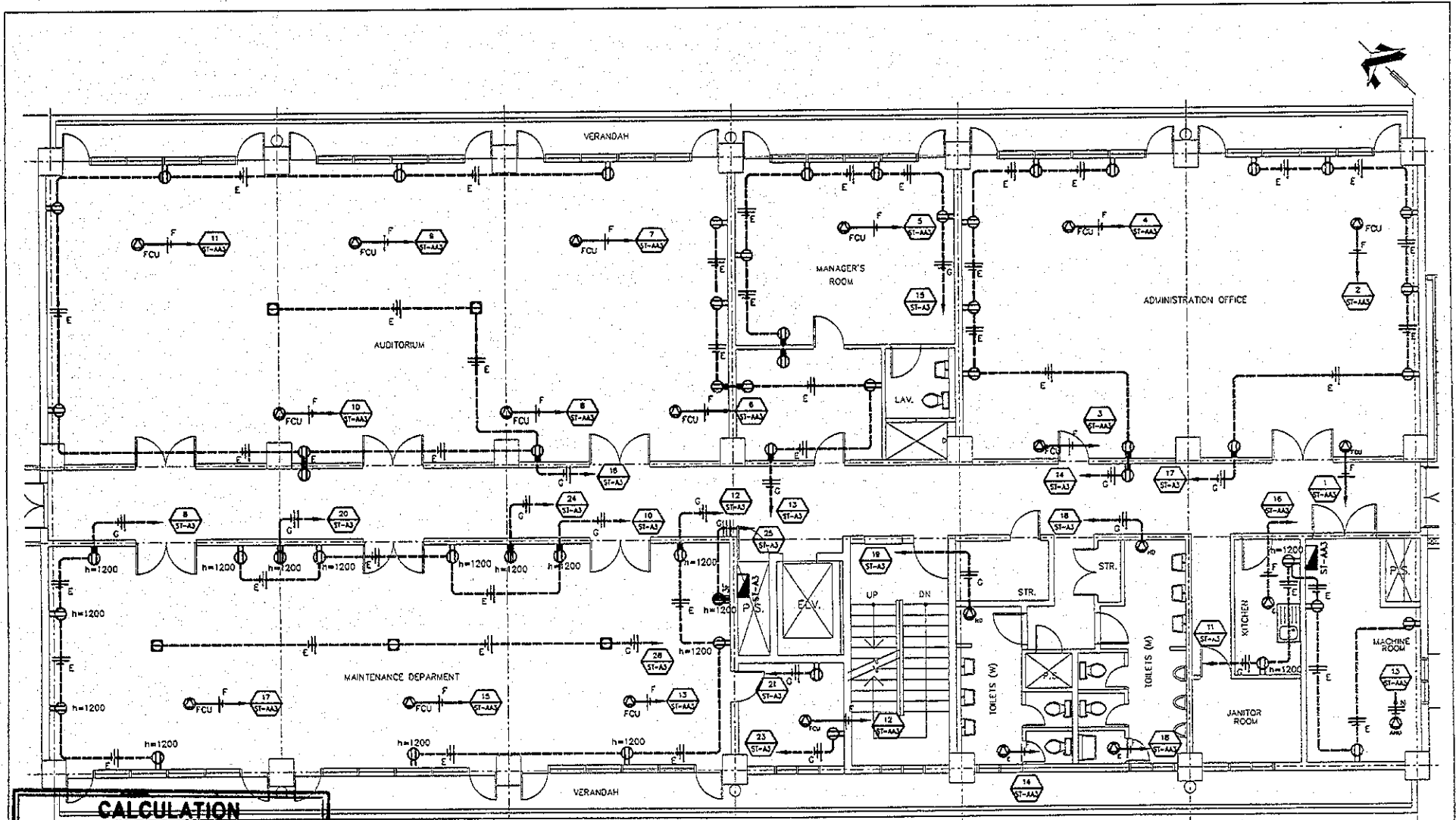
JICA  
 JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)  
 Gpa  
 COMISION EJECUTIVA PORTUARIA AUTONOMA (CEPA)

DETAILED DESIGN ON PORT REACTIVATION PROJECT IN LA UNION PROVINCE OF THE REPUBLIC OF EL SALVADOR  
 NKK  
 NIPPON KOEI CO., LTD.

DESIGNED BY:  
 CHECKED BY:  
 APPROVED BY:

SECTION: BUILDING WORK  
 SUB-SECTION: PORT ADMINISTRATION BUILDING  
 TITLE: OUTLETS SECOND FLOOR PLAN

DATE: AUGUST/2002  
 SCALE: 1 : 100  
 DRAWING NO.: BD-01-109



**CALCULATION**

Detailed Design  
**OUTLETS THIRD FLOOR PLAN**  
 on Port Reactivation Project  
 in La Union Province

CALC FILE No.: \_\_\_\_\_

CALC INDEX No.: \_\_\_\_\_ PAGE 1/1

PREPARED BY	INITIAL	DATE
CHECKED BY		

**WIRING SYMBOLOLOGY**

SYMBOL	WIRING/DUCTING
E	2 - 3.3 mm <sup>2</sup> ∅ 13mm 1 - 2.1 mm <sup>2</sup>
F	2 - 5.3 mm <sup>2</sup> ∅ 19mm
G	2 - 5.3 mm <sup>2</sup> ∅ 19mm 1 - 3.3 mm <sup>2</sup>
M	2 - 13.3 mm <sup>2</sup> ∅ 25mm 1 - 8.4 mm <sup>2</sup>

**SYMBOLS**

	DUPLEX RECEPTACLE 120 V
	208VOLT RECEPTACLE SINGLE PHASE
	SINGLE RECEPTACLE 120V FOR HAND DRYER (h=1,200)

	CIRCUIT NUMBER 1 FROM PANELBOARD ST-A
	CONNECTION FOR EXHAUST FAN ON CEILING
	CONNECTION FOR AIR HANDING UNIT 208V-3PHASE
	CONNECTION FOR FAN COIL UNIT 120V, 1-PHASE, CONCEALED IN CEILING

	SINGLE FLOOR RECEPTACLE 120V
	WIRING CONCEALED IN FLOOR
	WIRING CONCEALED IN CEILING
	NEUTRAL PHASE, GROUNDING
	PANELBOARD
	208 VOLT 3-PHASE RECEPTACLE

**JICA**  
 JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

**Cepa**  
 COMISION EJECUTIVA PORTUARIA AUTONOMA (CEPA)

DETAILED DESIGN ON PORT REACTIVATION PROJECT IN LA UNION PROVINCE OF THE REPUBLIC OF EL SALVADOR

**NK**  
 NIPPON KOEI CO., LTD.

DESIGNED BY: \_\_\_\_\_

CHECKED BY: \_\_\_\_\_

APPROVED BY: \_\_\_\_\_

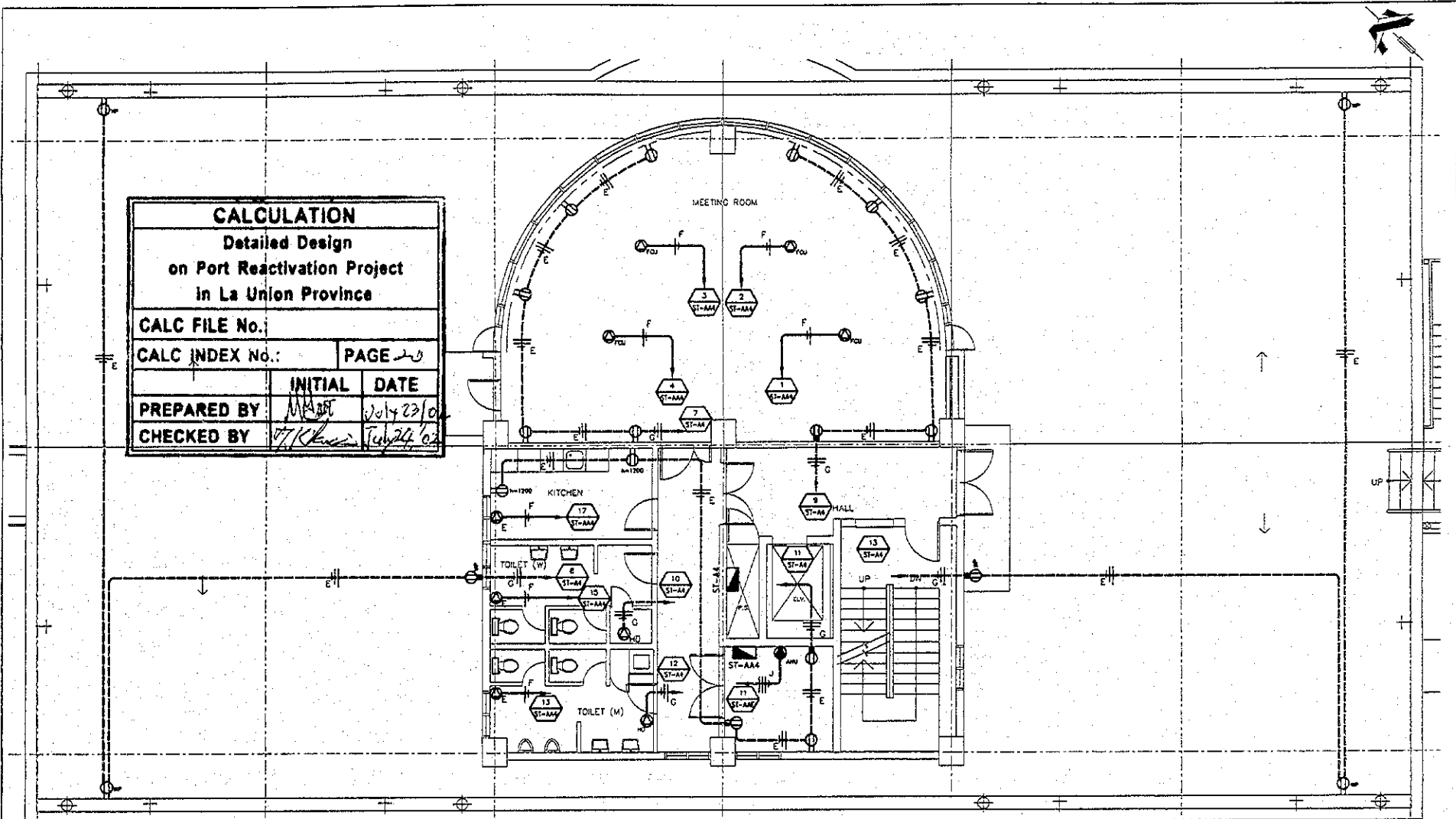
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 SUB-SECTION: PORT ADMINISTRATION BUILDING  
 TITLE: OUTLETS THIRD FLOOR PLAN

DATE: AUGUST/2002

SCALE: 1 : 100

DRAWING NO.: 80-01-110

CALCULATION		
Detailed Design on Port Reactivation Project in La Union Province		
CALC FILE No.:		
CALC INDEX No.:	PAGE 23	
	INITIAL	DATE
PREPARED BY:	MAR	July 23/02
CHECKED BY:	K. K.	July 24/02



**OUTLETS 4TH FLOOR PLAN**  
SCALE 1:100

**WIRING SYMBOLOLOGY**

SYMBOL	WIRING/DUCTING
E	2 - 3.3 mm <sup>2</sup> ∅ 13mm 1 - 2.1 mm <sup>2</sup>
F	2 - 5.3 mm <sup>2</sup> ∅ 19mm
G	2 - 5.3 mm <sup>2</sup> ∅ 19mm
I	1 - 3.3 mm <sup>2</sup>
J	3 - 5.3 mm <sup>2</sup> ∅ 25mm 1 - 3.3 mm <sup>2</sup>

**SYMBOLS**

	DUPLEX RECEPTACLE 120 V
	SINGLE RECEPTACLE 120V FOR HAND DRYER (h=1,200)
	CONNECTION FOR FAN COIL UNIT 120V, 1-PHASE, CONCEALED IN CEILING
	FCU
	CIRCUIT NUMBER 1 FROM PANELBOARD ST-A
	CONNECTION FOR EXHAUST FAN ON CEILING
	CONNECTION FOR AIR HANDLING UNIT 480V, 3-PHASE
	WIRING CONCEALED IN FLOOR

	WIRING CONCEALED IN CEILING
	NEUTRAL PHASE, GROUNDING
	WEATHER PROOF DUPLEX RECEPTACLE 120 V
	PANELBOARD

REV. NO.	DATE	COORDINATE	BY	APPROVED	DATE

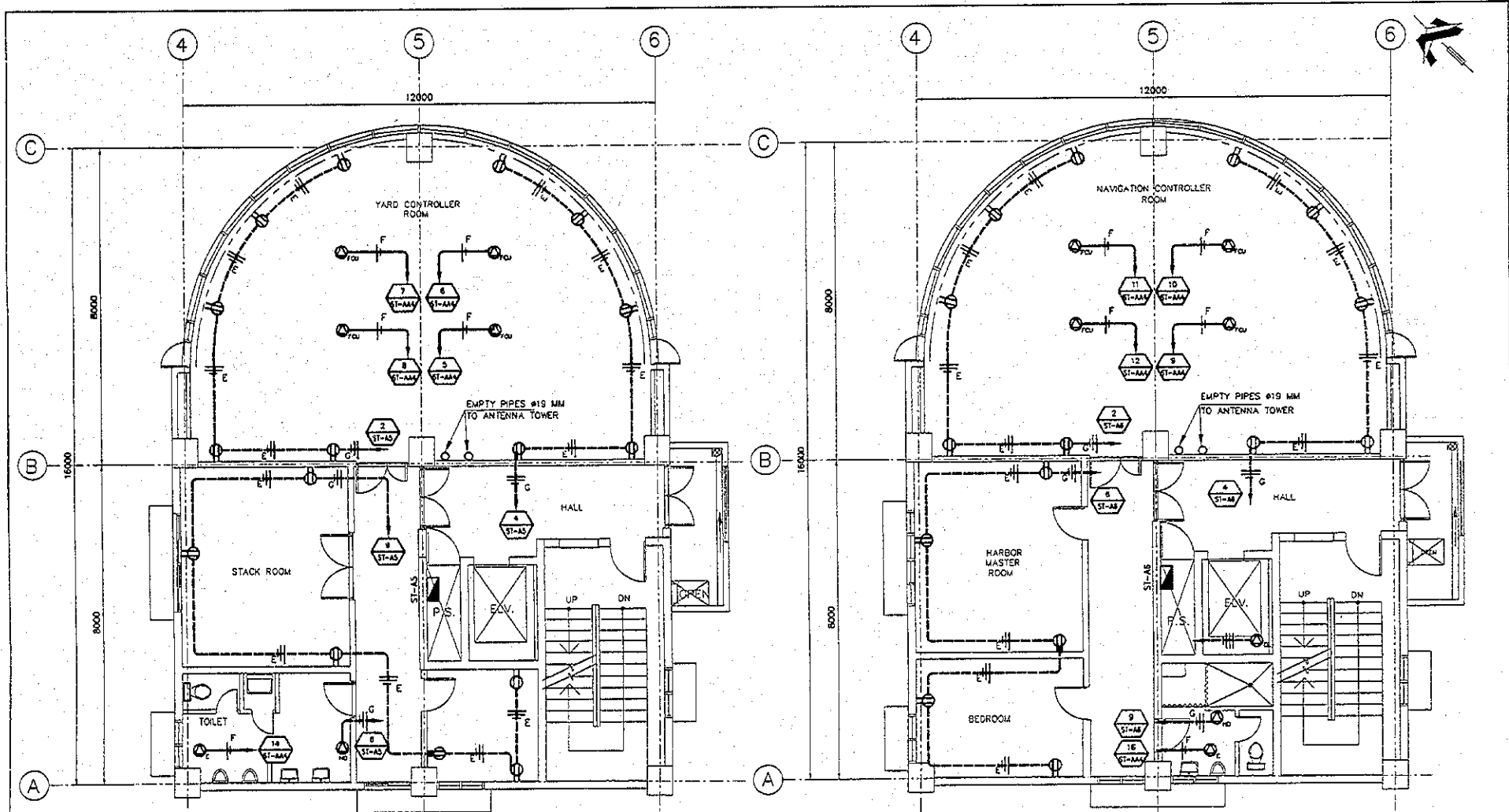
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)  
COMISION EJECUTIVA PORTUARIA AUTONOMA (CEPA)

DETAILED DESIGN ON PORT REACTIVATION PROJECT IN LA UNION PROVINCE OF THE REPUBLIC OF EL SALVADOR  
NIPPON KOEI CO., LTD.

DESIGNED BY:  
CHECKED BY:  
APPROVED BY:

SECTION: BUILDING WORK  
SUB-SECTION: PORT ADMINISTRATION BUILDING  
TITLE: OUTLETS 4th, FLOOR PLAN

DATE: AUGUST/2002  
SCALE: 1:100  
DRAWING NO. BD-01-511



**CALCULATION OUTLETS 5TH FLOOR PLAN**  
SCALE 1:100

**OUTLETS 6TH FLOOR PLAN**  
SCALE 1:200

**Detailed Design**  
**on Port Reactivation Project**  
**in La Union Province**

**CALC FILE No.:**

**CALC INDEX No.:** PAGE 2/

INITIAL	DATE
PREPARED BY	July 23/02
CHECKED BY	July 24/02

BY \_\_\_\_\_ APPROVED \_\_\_\_\_ DATE \_\_\_\_\_

**WIRING SYMBOLOLOGY**

SYMBOL	WIRING/DUCTING
E	2 - 3.3 mm <sup>2</sup> ϕ 13mm 1 - 2.1 mm <sup>2</sup>
F	2 - 5.3 mm <sup>2</sup> ϕ 19mm
G	2 - 5.3 mm <sup>2</sup> ϕ 19mm 1 - 3.3 mm <sup>2</sup>

**SYMBOLS**

	DUPLEX RECEPTACLE 120 V
	SINGLE RECEPTACLE 120V FOR HAND DRYER (h=1,200)
	CONNECTION FOR FAN COIL UNIT 120V, 1-PHASE, CONCEALED IN CEILING

	CIRCUIT NUMBER 1 FROM PANELBOARD ST-A
	CONNECTION FOR EXHAUST FAN ON CEILING
	CONNECTION FOR ELEVATOR ON ELEVATOR MACHINE CAP 208V, 3-PHASE

— WIRING CONCEALED IN CEILING  
— NEUTRAL, PHASE, GROUNDING  
— PANELBOARD  
- - - WIRING CONCEALED IN FLOOR

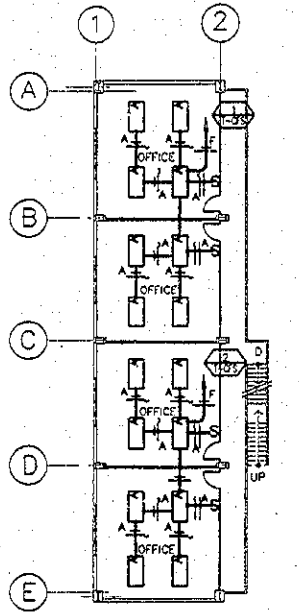
**JICA** JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)  
**Cepa** COMISION EJECUTIVA PORTUARIA AUTONOMA (CEPA)

DETAILED DESIGN ON PORT REACTIVATION PROJECT IN LA UNION PROVINCE OF THE REPUBLIC OF EL SALVADOR  
**NKK** NIPPON KOEI CO., LTD.

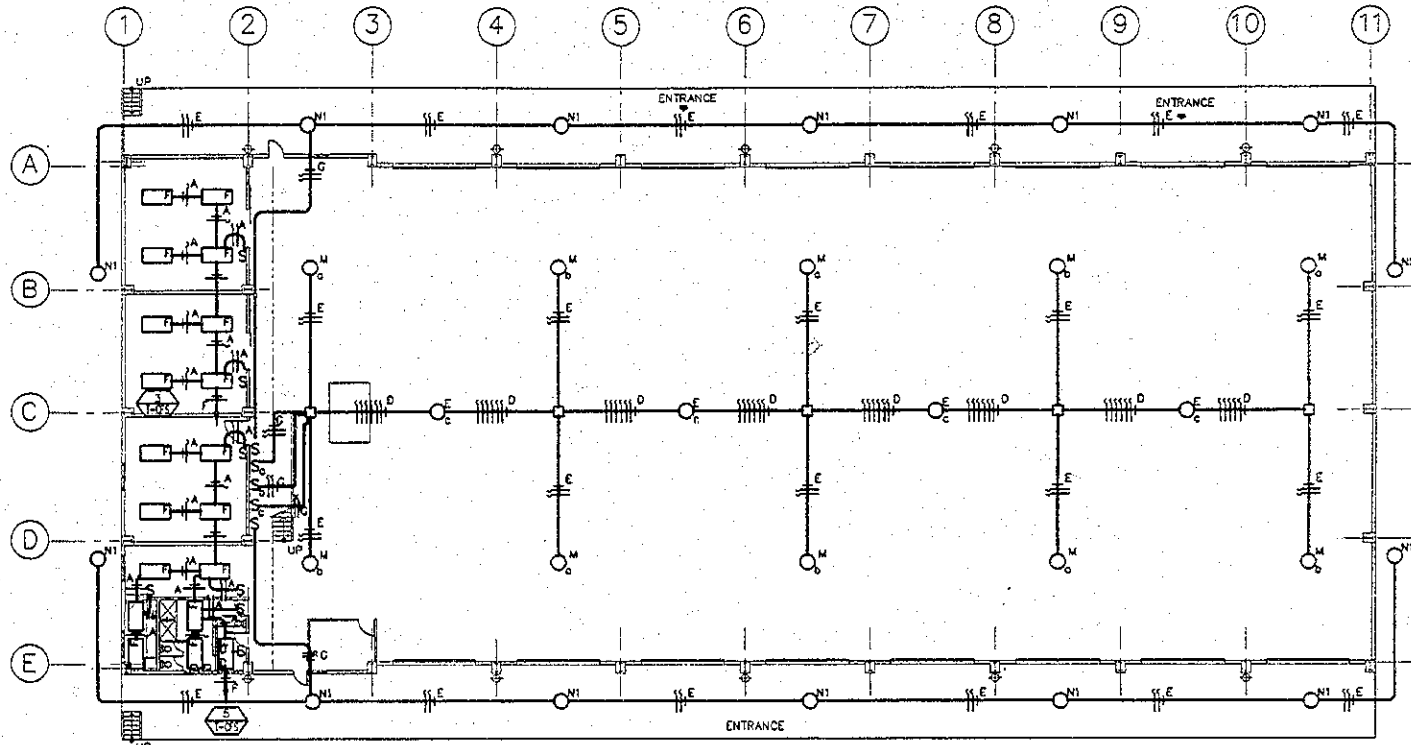
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SECTION: BUILDING WORK  
SUB-SECTION: PORT ADMINISTRATION BUILDING  
TITLE: OUTLETS 5th & 6th FLOOR PLANS

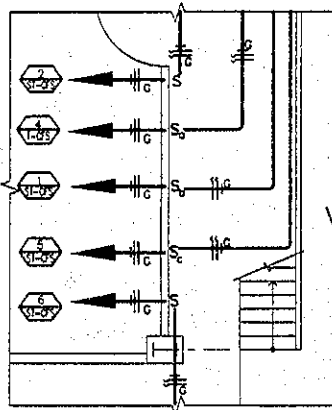
AUGUST/2002  
SCALE: 1:100  
DRAWING NO. BD-01-112



**LIGHTING SYSTEM**  
MEZZANINE FLOOR PLAN SCALE 1:300



**LIGHTING SYSTEM**  
FIRST FLOOR PLAN SCALE 1:300



**VIEW 1**  
SCALE 1:100

CALCULATION		
Detailed Design		
on Port Reactivation Project		
in La Union Province		
CALC FILE No.:		
CALC INDEX No.:	PAGE	22
	INITIAL	DATE
PREPARED BY	<i>[Signature]</i>	July 23/02
CHECKED BY	<i>[Signature]</i>	July 24/02

WIRING SYMBOLOLOGY	
SYMBOL	WIRING/DUCTING
A	2 - 2.1 mm <sup>2</sup> ϕ 13mm
D	7 - 3.3 mm <sup>2</sup> ϕ 19mm
E	2 - 3.3 mm <sup>2</sup> ϕ 13mm
	1 - 2.1 mm <sup>2</sup>
F	2 - 5.3 mm <sup>2</sup> ϕ 19mm
G	2 - 5.3 mm <sup>2</sup> ϕ 19mm
	1 - 3.3 mm <sup>2</sup>

SYMBOLS	
	FLUORESCENT 3X32W PARABOLIC TROFFER, RECESSED
	FLUORESCENT 4X32W INDUSTRIAL SURFACE MOUNTED
	400W/208V MH HIGH BAY
	150W/208V HPS BANTAM
	SWITCH
	WIRING CONCEALED IN CEILING
	SWITCH LEG, PHASE, NEUTRAL
	4"X4" JUNCTION BOX
	CIRCUIT FEEDER

REV. NO.	DATE	COORDINATE	BY	APPROVED	DATE

**JICA**  
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

**CEPA**  
COMISION EJECUTIVA PORTUARIA AUTONOMA (CEPA)

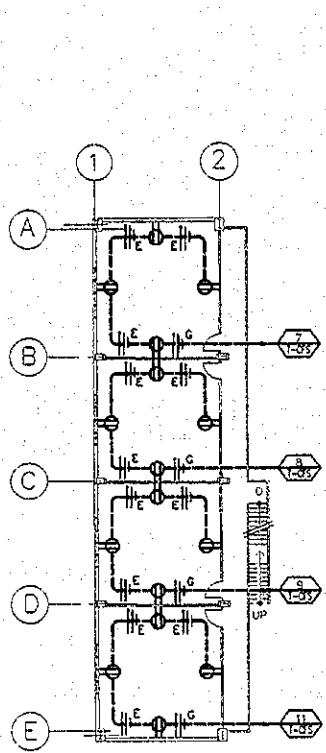
DETAILED DESIGN ON PORT REACTIVATION PROJECT IN LA UNION PROVINCE OF THE REPUBLIC OF EL SALVADOR

**NK**  
NIPPON KOEI CO., LTD.

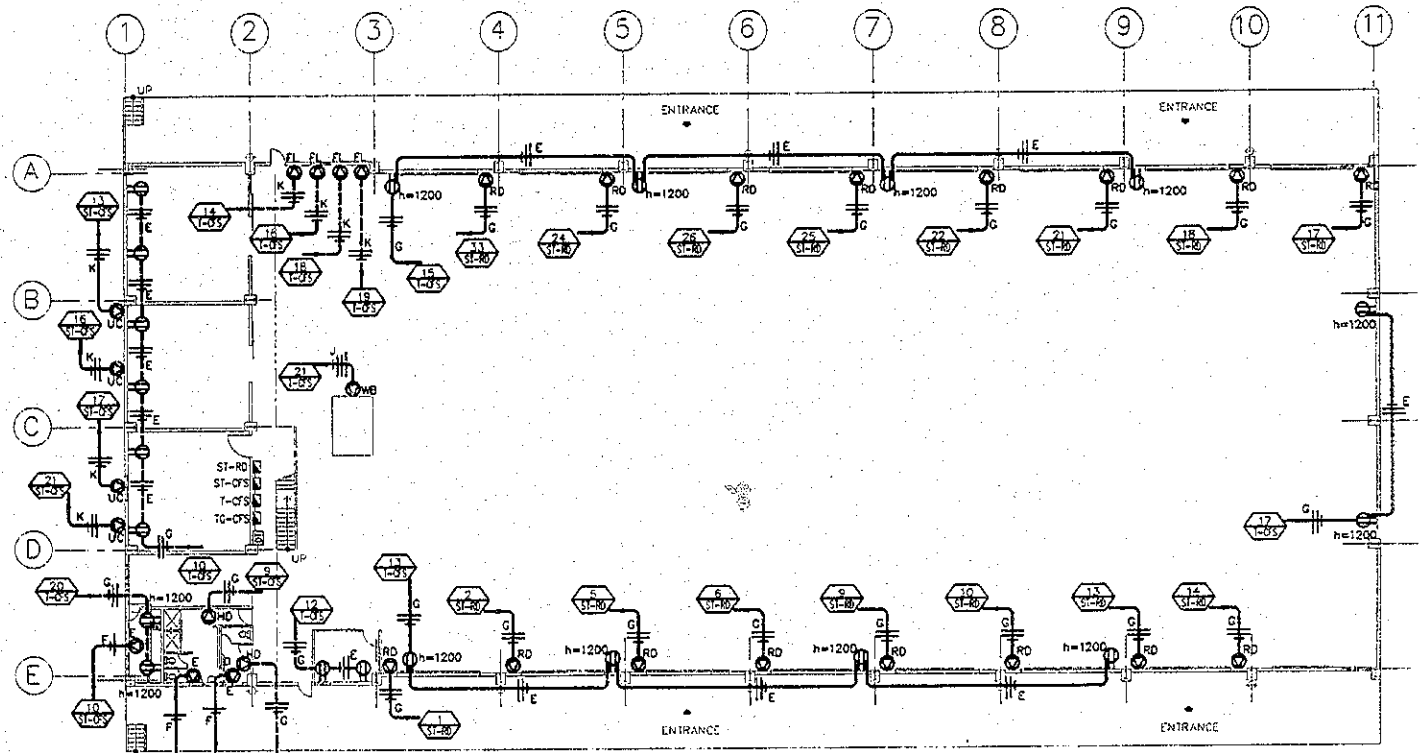
DESIGNED BY:  
CHECKED BY:  
APPROVED BY:

SECTION: BUILDING WORK  
SUB-SECTION: CONTAINER FREIGHT STATION (C.F.S.)  
TITLE: LIGHTING 1ST AND MEZZANINE FLOOR PLANS

DATE: AUGUST/2002  
SCALE: 1:300, 1:100  
DRAWING NO.: EL-02-035



MEZZANINE FLOOR PLAN



FIRST FLOOR PLAN

SCALE 1:300

**CALCULATION**

Detailed Design  
on Port Reactivation Project  
in La Union Province

CALC FILE No.:

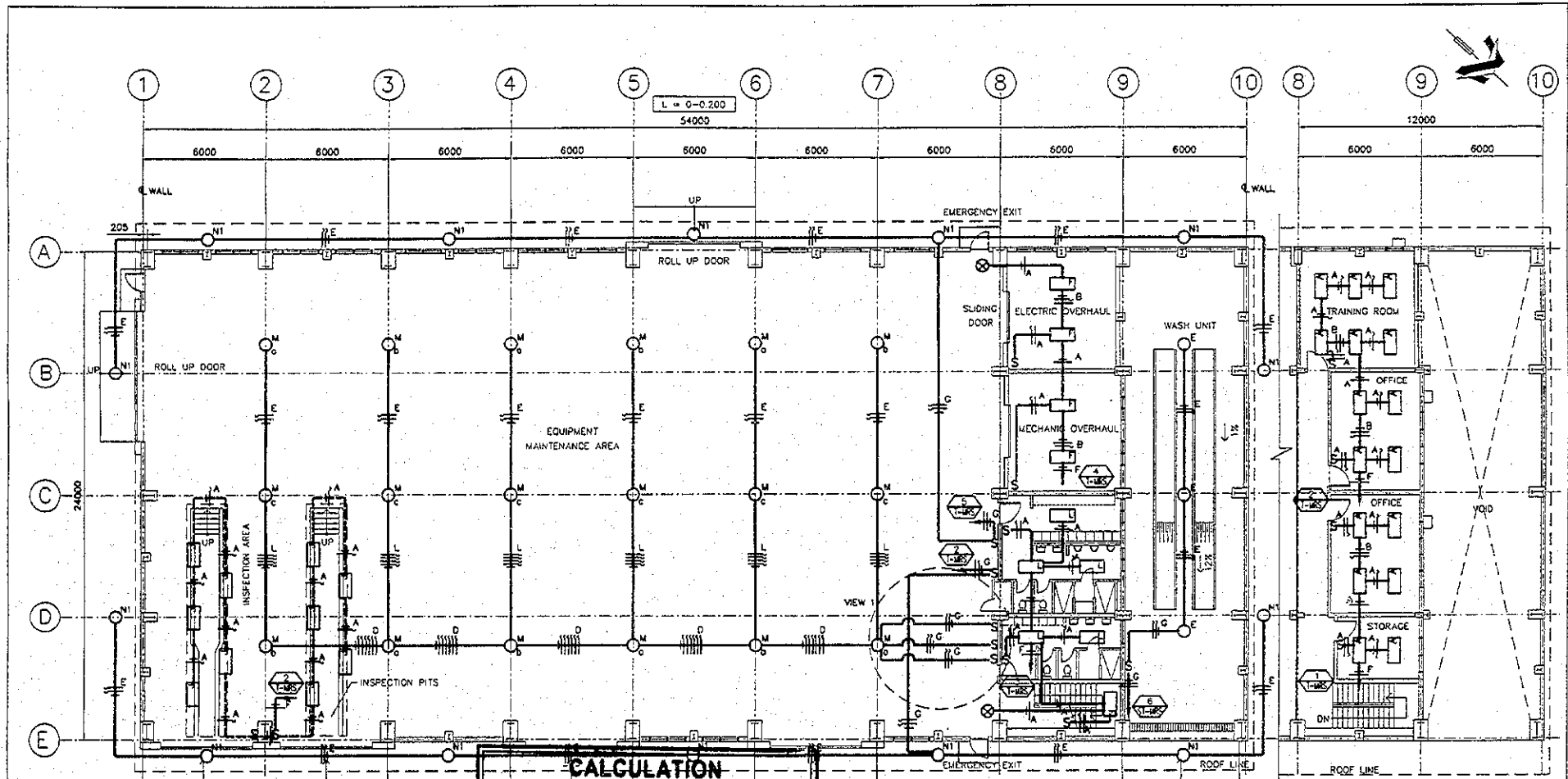
CALC INDEX No.:

PAGE 23

PREPARED BY	INITIAL	DATE
CHECKED BY		

WIRING SYMBOLGY	LEGEND
<p>SYMBOL WIRING/DUCTING</p> <p>E 2 - 3.3 mm<sup>2</sup> ∅ 13mm 1 - 2.1 mm<sup>2</sup></p> <p>F 2 - 5.3 mm<sup>2</sup> ∅ 19mm 1 - 3.3 mm<sup>2</sup></p> <p>G 2 - 5.3 mm<sup>2</sup> ∅ 19mm 1 - 3.3 mm<sup>2</sup></p> <p>K 2 - 8.4 mm<sup>2</sup> ∅ 19mm 1 - 5.3 mm<sup>2</sup></p> <p>J 3 - 5.3 mm<sup>2</sup> ∅ 19mm 1 - 3.3 mm<sup>2</sup></p>	<p>ST-GFS PANELBOARD.</p> <p>CIRCUIT NUMBER # FROM PANELBOARD ST/TG</p> <p>DT DRY TYPE TRANSFORMER 490V/208-120V</p> <p>CONNECTION FOR WEIGH WB BRIDGE 208V, 1-PHASE</p> <p>CONNECTION FOR FORK LIFT BATTERY CHARGER 120V, 1-PHASE h=1200.</p> <p>CONNECTION FOR ROLL UP DOOR MOTOR 208V, 1-PHASE h=4500.</p> <p>CONNECTION FOR AIR CONDITIONING UC CONDENSER UNIT 208V, 1-PHASE.</p> <p>CONNECTION FOR EXHAUST FAN 120V.</p> <p>DUPLEX RECEPTACLE 120V. h= 1200mm.</p> <p>SINGLE OULET FOR HAND DRYER, h=1200.</p> <p>WIRING CONCEALED IN WALL OR ROOF.</p> <p>WIRING CONCEALED IN FLOOR.</p> <p>NEUTRAL PHASE, GROUNDING.</p>

<p>JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)</p> <p>CEPA COMISION EJECUTIVA PORTUARIA AUTONOMA (CEPA)</p>	<p>DETAILED DESIGN ON PORT REACTIVATION PROJECT IN LA UNION PROVINCE OF THE REPUBLIC OF EL SALVADOR</p>	<p>DESIGNED BY:</p> <p>CHECKED BY:</p> <p>APPROVED BY:</p>	<p>SECTION: BUILDING WORK</p> <p>SUB-SECTION: CONTAINER FREIGHT STATION (C.F.S.)</p> <p>TITLE: OUTLET PLAN FIRST &amp; MEZZANINE FLOOR</p>	<p>DATE: AUGUST/2002</p> <p>SCALE: 1:300</p> <p>DRAWING NO: BD-02-035</p>
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**LIGHTING SYSTEM**  
MEZZANINE FLOOR PLAN  
SCALE 1:200

**CALCULATION**  
UP Detailed Design  
**LIGHTING SYSTEM**  
for Port Reactivation Project  
in La Union Province

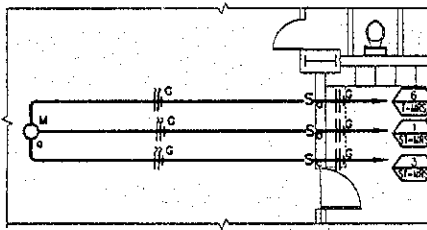
CALC FILE No.:

CALC INDEX No.:

INITIAL	DATE
<i>[Signature]</i>	30/1/23/0

PREPARED BY

CHECKED BY



VIEW I  
SCALE 1:100

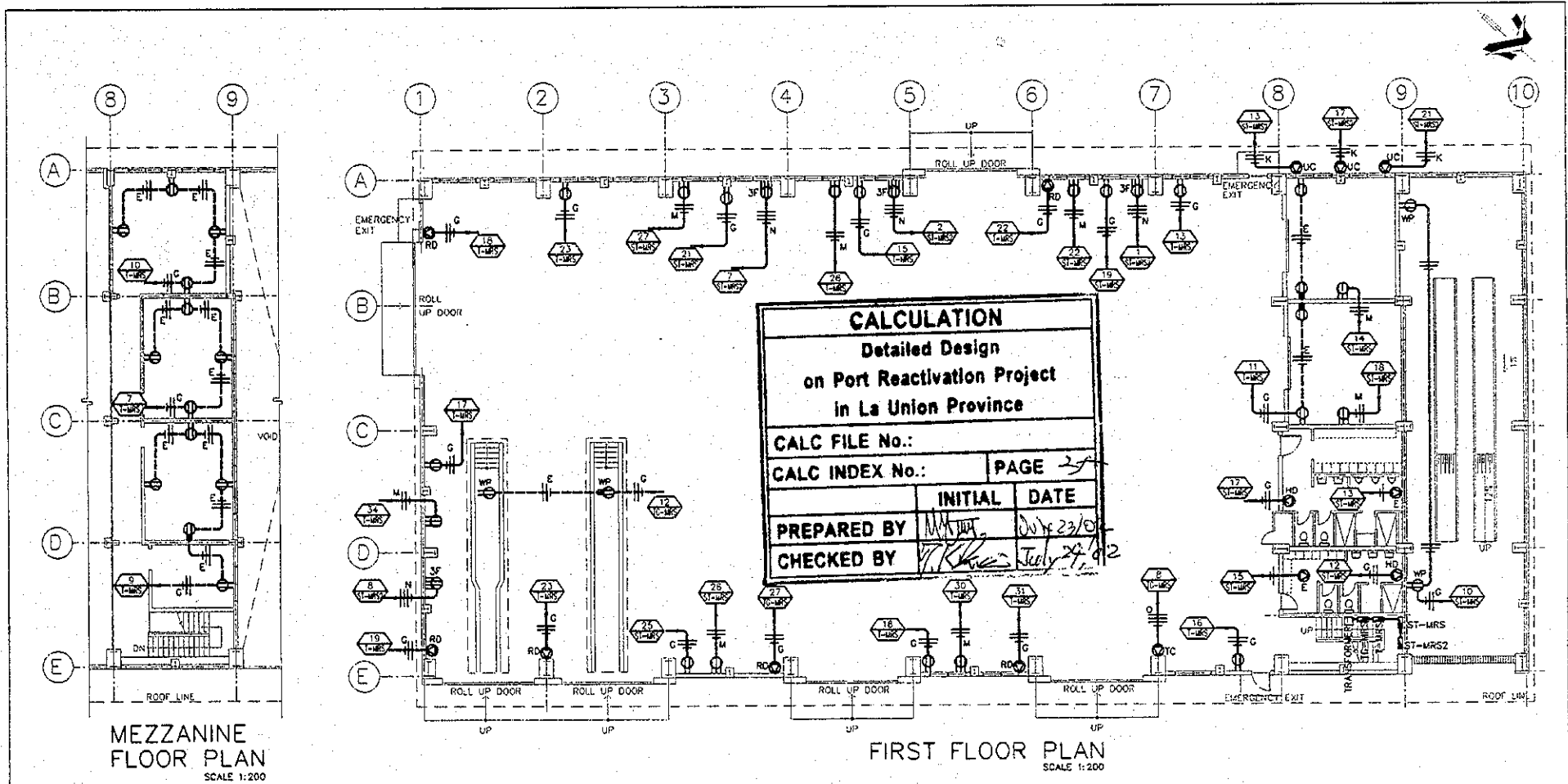
**WIRING SYMBOLY**

SYMBOL	WIRING/DUCTING
A	2 - 2.1mm <sup>2</sup> φ 13mm
B	3 - 2.1mm <sup>2</sup> φ 13mm
D	7 - 3.3mm <sup>2</sup> φ 19mm
E	2 - 3.3mm <sup>2</sup> φ 13mm
F	2 - 5.3mm <sup>2</sup> φ 19mm
G	2 - 5.3mm <sup>2</sup> φ 19mm
L	5 - 3.3mm <sup>2</sup> φ 19mm

**SYMBOLS**

	FLUORESCENT 3X32W PARABOLIC TROFFER RECESSED		400W METAL HALIDE HIGH BAY PENDANT
	FLUORESCENT 4X32W INDUSTRIAL FIXTURE SURFACE MOUNTED		NEUTRAL, PHASE, SWITCH LEG
	FLUORESCENT 2X32W HIGH ABUSE FIXTURE CORNER MOUNTED INTO INSPECTION PIT		EXIT LIGHT
	FLUORESCENT 4X32W WRAP AROUND SURFACE MOUNTED		150W HPS BANTAM
	WIRING IN ROOF OR WALL		CIRCUIT FEEDER
	WIRING CONCEALED IN FLOOR		CIRCUIT NUMBER # FROM PANELBOARD

REV. NO.	DATE	COORDINATE	BY	APPROVED	DATE	JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) COMISION EJECUTIVA PORTUARIA AUTONOMA (CEPA)	DETAILED DESIGN ON PORT REACTIVATION PROJECT IN LA UNION PROVINCE OF THE REPUBLIC OF EL SALVADOR NIPPON KOEI CO., LTD.	DESIGNED BY:	SECTION: BUILDING WORK	DATE: AUGUST/2022
								CHECKED BY:	SUB-SECTION: MAINTENANCE AND REPAIR SHOP	SCALE: 1: 200
								APPROVED BY:	TITLE: LIGHTING 1ST AND MEZZANINE FLOOR PLANS	DRAWING NO: 80-03-036



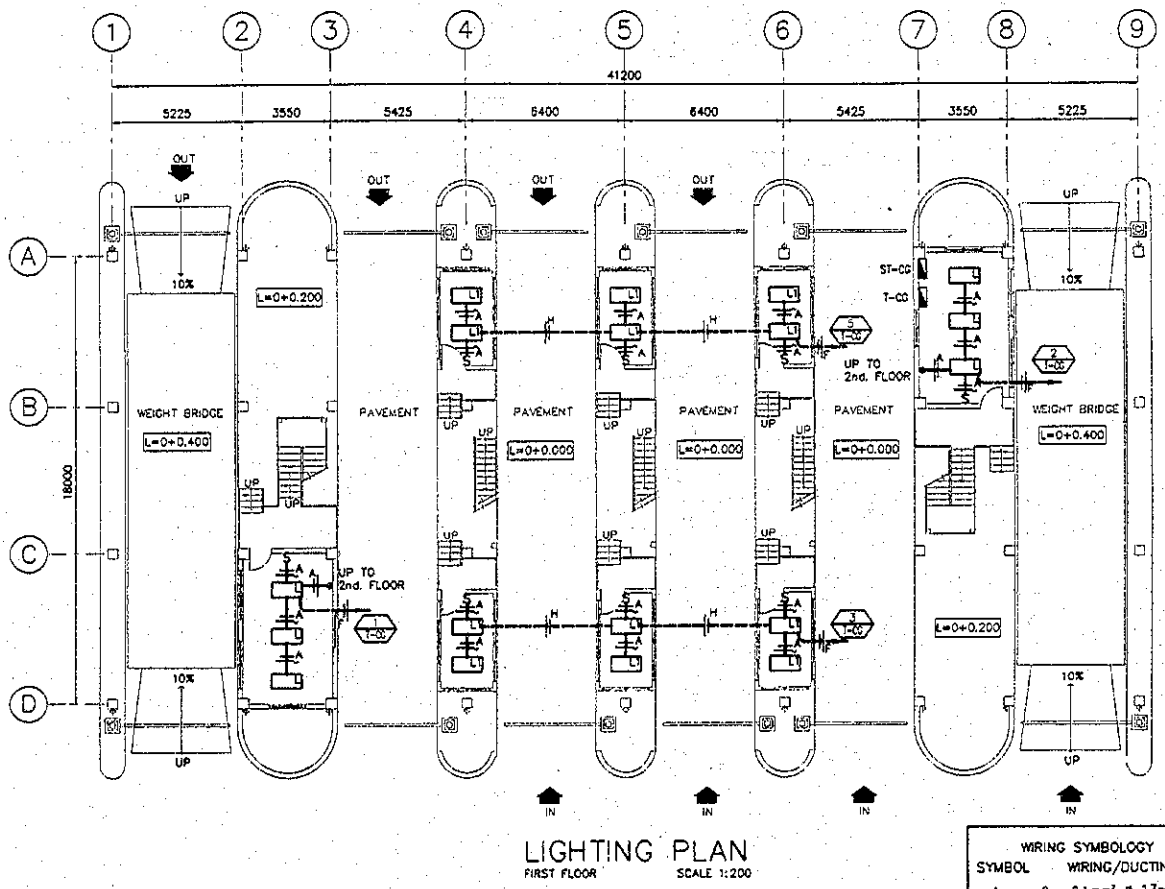
WIRING SYMBOLOLOGY	
SYMBOL	WIRING/DUCTING
D	7 - 3.3 mm <sup>2</sup> φ 19mm
E	2 - 3.3 mm <sup>2</sup> φ 13mm 1 - 2.1 mm <sup>2</sup>
F	2 - 5.3 mm <sup>2</sup> φ 19mm
G	2 - 5.3 mm <sup>2</sup> φ 19mm 1 - 3.3 mm <sup>2</sup>
K	2 - 8.4 mm <sup>2</sup> φ 19mm 1 - 5.3 mm <sup>2</sup>

WIRING SYMBOLOLOGY	
SYMBOL	WIRING/DUCTING
M	2 - 13.3 mm <sup>2</sup> φ 25mm 1 - 8.4 mm <sup>2</sup>
N	4 - 13.3 mm <sup>2</sup> φ 25mm
O	4 - 85 mm <sup>2</sup> φ 51mm

LEGEND			
	PANELBOARD.		WIRING CONCEALED IN WALL OR ROOF.
	WIRING CONCEALED IN FLOOR.		NEUTRAL PHASE GROUNDING.
	CIRCUIT NUMBER FROM PANELBOARD		DUPLEX RECEPTACLE 120V. WP WEATHER PROOF, h=400mm
	208V. 1-PHASE OUTLET H=1200mm.		208V. 3-PHASE OUTLET H=1200mm.
	CONNECTION FOR TRAVELLING CRANE 208V. 3-PHASE.		CONNECTION FOR ROLL UP DOOR MOTOR 208V. 1-PHASE H=4500.
	CONNECTION FOR AIR CONDITIONING CONDENSER UNIT 208V. 1-PHASE.		CONNECTION FOR EXHAUST FAN ON CEILING.
	SINGLE OUTLET FOR HAND DRYER, 120V. 1-PHASE h=1200mm.		DUPLEX RECEPTACLE 120V. h=1200mm.

REV. NO.	DATE	COORDINATE	BY	APPROVED	DATE	JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) COMISION EJECUTIVA PORTUARIA AUTONOMA (CEPA)	DETAILED DESIGN ON PORT REACTIVATION PROJECT IN LA UNION PROVINCE OF THE REPUBLIC OF EL SALVADOR NIPPON KOEI CO., LTD.
						DESIGNED BY : _____ CHECKED BY : _____ APPROVED BY : _____	SECTION : BUILDING WORK SUB-SECTION : MAINTENANCE AND REPAIR SHOP TITLE : OULETS FIRST & MEZZANINE FLOOR PLANS
						DATE : AUGUST/2002	SCALE : 1 : 200
						DRAWING NO. : 8D-03-037	





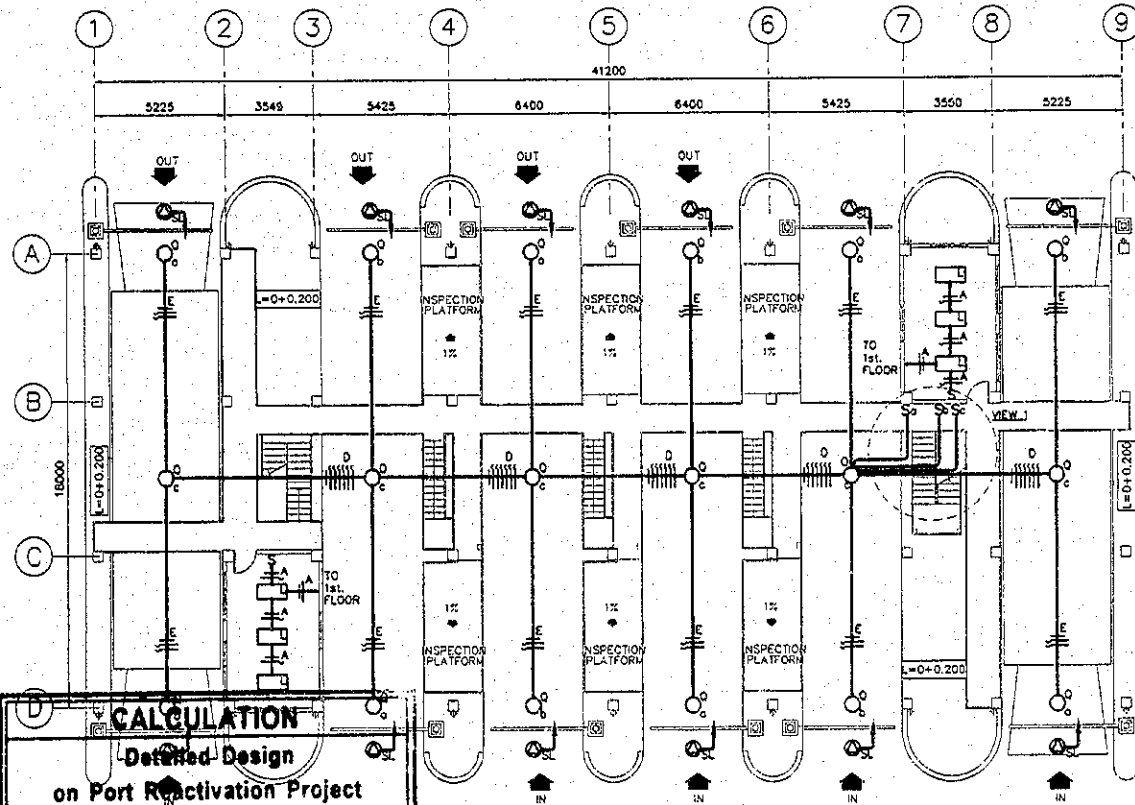
**LIGHTING PLAN**  
FIRST FLOOR  
SCALE 1:200

CALCULATION		
Detailed Design		
on Port Reactivation Project		
in La Union Province		
CALC FILE No.:		
CALC INDEX No.:	PAGE 28	
	INITIAL	DATE
PREPARED BY	<i>M. M. M.</i>	July 23/02
CHECKED BY	<i>T. K. K.</i>	July 24/02

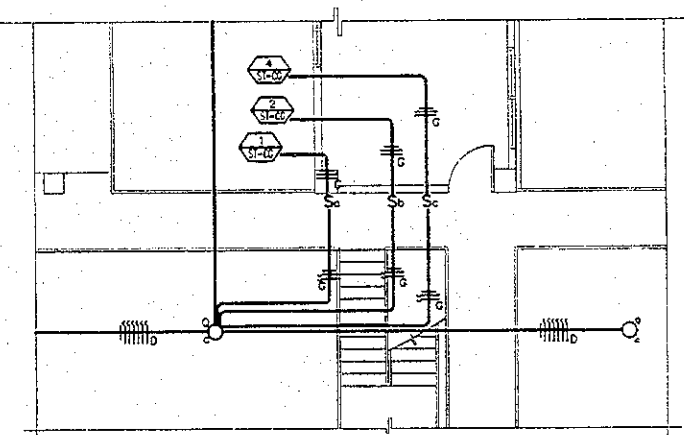
WIRING SYMBOLOLOGY	
SYMBOL	WIRING/DUCTING
A	2 - 2.1mm <sup>2</sup> ∅ 13mm
B	3 - 2.1mm <sup>2</sup> ∅ 13mm
C	4 - 2.1mm <sup>2</sup> ∅ 13mm
D	7 - 3.3mm <sup>2</sup> ∅ 19mm
E	2 - 3.3mm <sup>2</sup> ∅ 13mm
F	1 - 2.1mm <sup>2</sup>
F	2 - 5.3mm <sup>2</sup> ∅ 19mm
G	2 - 5.3mm <sup>2</sup> ∅ 19mm
	1 - 3.3mm <sup>2</sup>

SYMBOLS	
	FLUORESCENT 3X32W WRAP AROUND SURFACE MOUNTED
	FLUORESCENT 4X32W WRAP-AROUND SURFACE MOUNTED
	PANELBOARD
	SWITCH
	WIRING CONCEALED IN CEILING OR WALL
	SWITCH LEG, PHASE, NEUTRAL
	CIRCUIT FEEDER
	CIRCUIT NUMBER # FROM PANELBOARD

REV. NO.	DATE	COORDINATE	BY	APPROVED	DATE	JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) COMISION EJECUTIVA PORTUARIA AUTONOMA (CEPA)	DETAILED DESIGN ON PORT REACTIVATION PROJECT IN LA UNION PROVINCE OF THE REPUBLIC OF EL SALVADOR NIPPON KOEI CO., LTD.	DESIGNED BY:	SECTION :	BUILDING WORK	DATE :	AUGUST/2002
								CHECKED BY:	SUB-SECTION :	CONTAINER GATE	SCALE :	1 : 200
								APPROVED BY:	TITLE :	LIGHTING PLAN FIRST FLOOR		



LIGHTING PLAN  
SECOND FLOOR SCALE 1:200



VIEW 1  
SCALE 1:100

**CALCULATION**  
Detailed Design  
on Port Reactivation Project  
in La Union Province

CALC FILE No.:

CALC INDEX No.: PAGE 2

INITIAL	DATE
MAE	July 23/02
SKB	July 24/02

PREPARED BY: MAE  
CHECKED BY: SKB

WIRING SYMBOLOLOGY

SYMBOL	WIRING/DUCTING
A	2 - 2.1mm <sup>2</sup> ϕ 13mm
D	7 - 3.3mm <sup>2</sup> ϕ 19mm
E	2 - 3.3mm <sup>2</sup> ϕ 13mm 1 - 2.1mm <sup>2</sup>
G	2 - 5.3mm <sup>2</sup> ϕ 19mm 1 - 3.3mm <sup>2</sup>

SYMBOLS

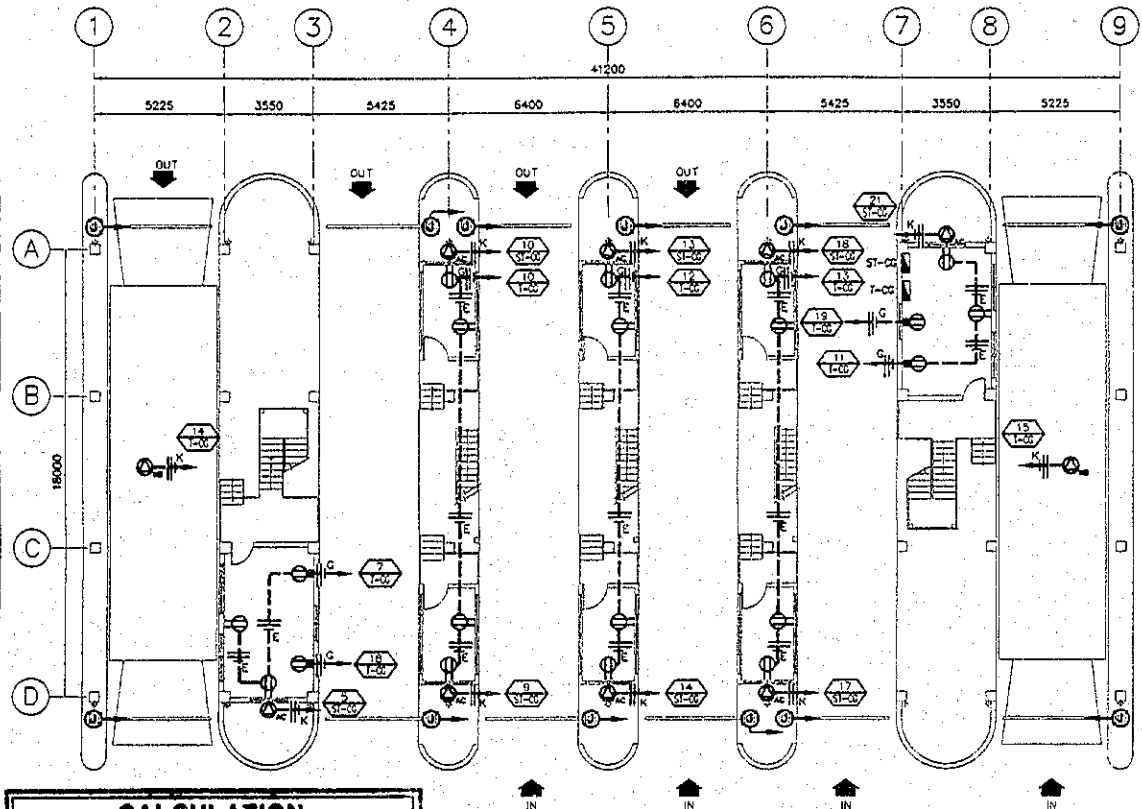
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	400W/208V MH HIGH MAST
	PANELBOARD
	SWITCH
	CONNECTION BOX FOR SIGN LIGHT TO CONTROL BOX ON GATE OFFICE
	WIRING CONCEALED IN CEILING OR WALL
	SWITCH LEG, PHASE, NEUTRAL
	CIRCUIT FEEDER
	CIRCUIT NUMBER # FROM PANELBOARD

DESIGNED BY:	SECTION: BUILDING WORK	DATE: AUGUST/2002
CHECKED BY:	SUB-SECTION: CONTAINER GATE	SCALE: 1:200
APPROVED BY:	TITLE: LIGHTING PLAN SECOND FLOOR	DRAWING NO.: 80-04-031

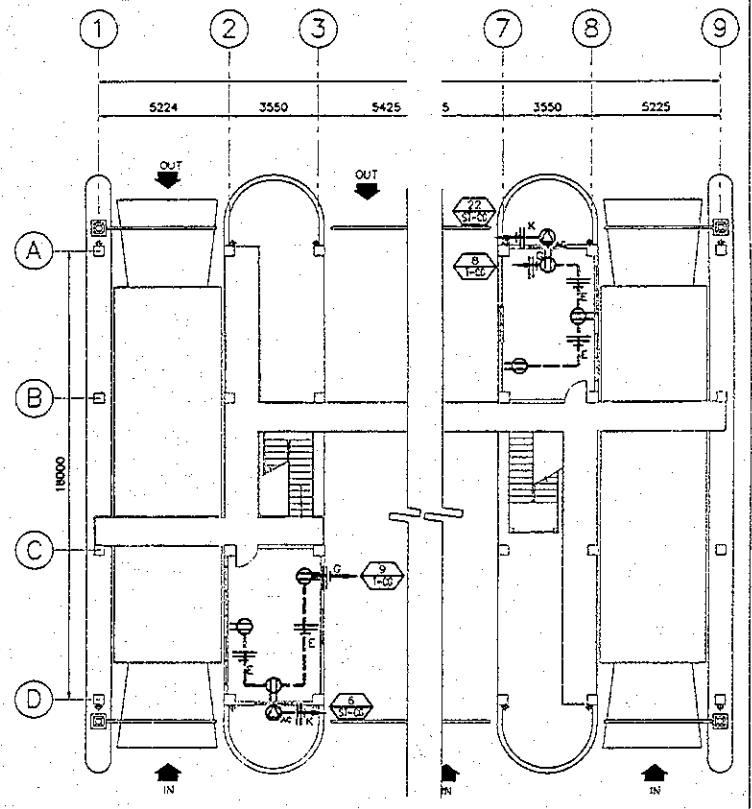
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

COMISION EJECUTIVA PORTUARIA AUTONOMA (CEPA)

NIPPON KOEI CO., LTD.



OUTLETS FIRST FLOOR PLAN  
SCALE 1:200



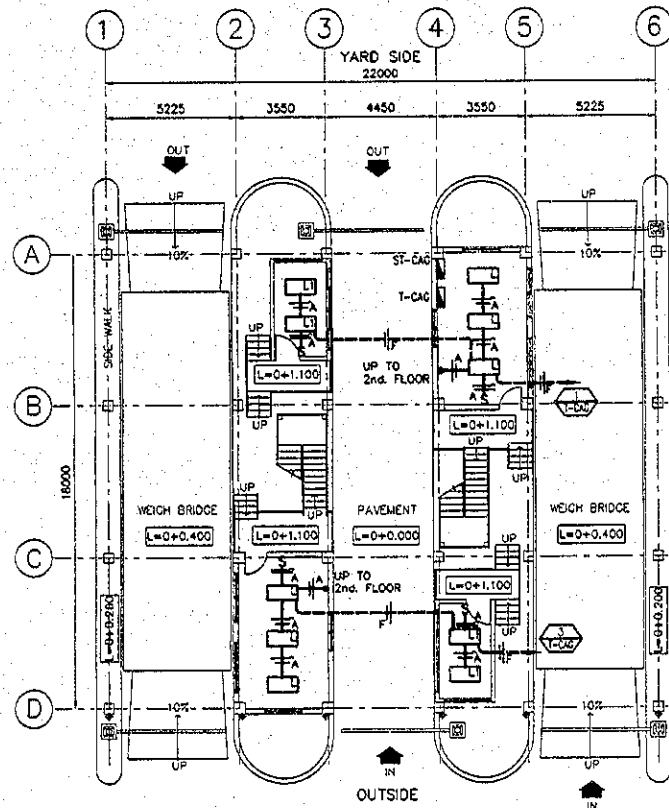
OUTLETS SECOND FLOOR PLAN  
SCALE 1:200

CALCULATION		
Detailed Design		
on Port Reactivation Project		
in La Union Province		
CALC FILE No.:		
CALC INDEX No.:	PAGE	28
	INITIAL	DATE
PREPARED BY	<i>M. H. [Signature]</i>	July 23/02
CHECKED BY	<i>T. K. [Signature]</i>	July 24/02

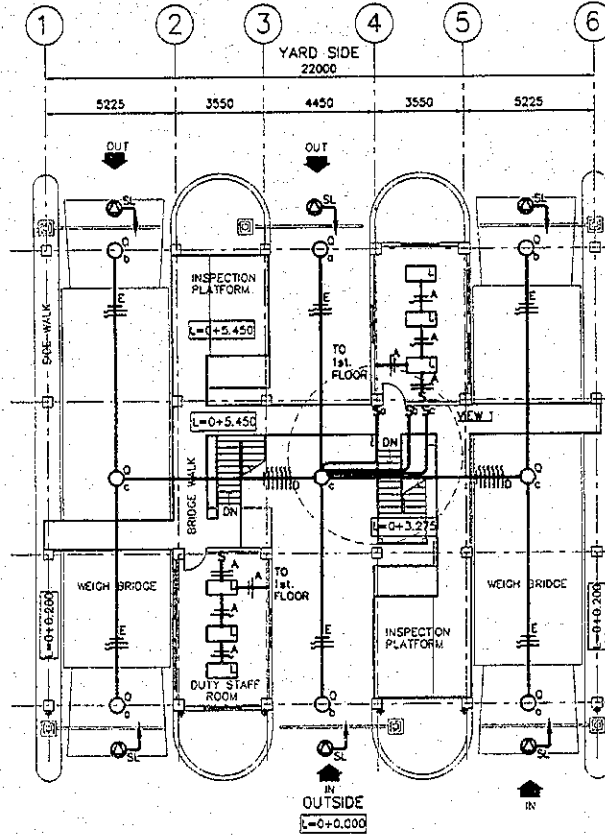
WIRING SYMBOLY	
SYMBOL	WIRING/DUCTING
E	2 - 3.3 mm <sup>2</sup> ø 13mm
	1 - 2.1 mm <sup>2</sup>
F	2 - 5.3 mm <sup>2</sup> ø 19mm
G	2 - 5.3 mm <sup>2</sup> ø 19mm
	1 - 3.3 mm <sup>2</sup>
K	2 - 8.4 mm <sup>2</sup> ø 19mm
	1 - 5.3 mm <sup>2</sup>

SYMBOLS	
	DUPLEX RECEPTACLE 120 V
	JUNCTION BOX FOR CLOSING GATE TO CONTROL BOX ON GATE OFFICE
	CONNECTION FOR AIR CONDITIONING UNIT 208V, 1-PHASE
	CONNECTION FOR WEIGH BRIDGE 208V, 1-PHASE
	WIRING CONCEALED IN FLOOR
	WIRING CONCEALED IN CEILING
	PANELBOARD
	NEUTRAL PHASE, GROUNDING
	CIRCUIT NUMBER # FROM PANELBOARD

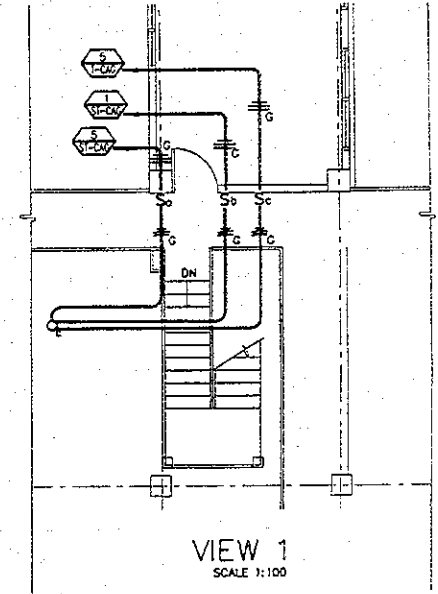
REV. NO.	DATE	COORDINATE	BY	APPROVED	DATE	 JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)  COMISION EJECUTIVA PORTUARIA AUTONOMA (CEPA)	DETAILED DESIGN ON PORT REACTIVATION PROJECT IN LA UNION PROVINCE OF THE REPUBLIC OF EL SALVADOR  NIPPON KOEI CO., LTD.	DESIGNED BY :	SECTION :	BUILDING WORK CONTAINER GATE OUTLETS FIRST AND SECOND FLOOR PLANS	DATE :
								CHECKED BY :	SUB-SECTION :		AUGUST/2002
								APPROVED BY :	TITLE :		SCALE : 1 : 200
										DRAWING NO. : BD-04-032	



LIGHTING FIRST FLOOR PLAN  
SCALE 1:200



LIGHTING SECOND FLOOR PLAN  
SCALE 1:200

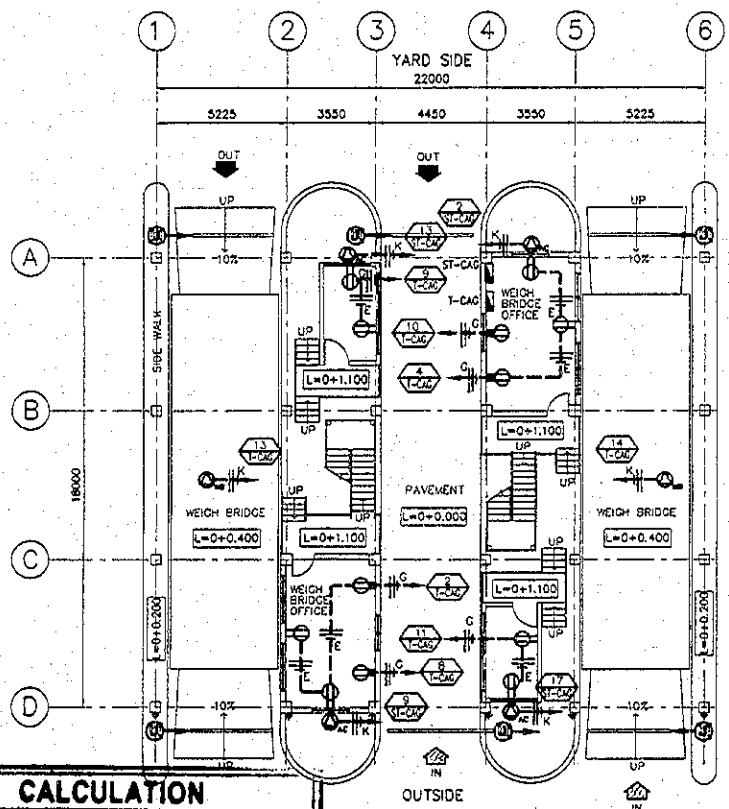


CALCULATION		
Detailed Design		
on Port Reactivation Project		
in La Union Province		
CALC FILE No.:		
CALC INDEX No.:	PAGE 23	
	INITIAL	DATE
PREPARED BY	<i>M.A. [Signature]</i>	July 23/02
CHECKED BY	<i>[Signature]</i>	July 24/02

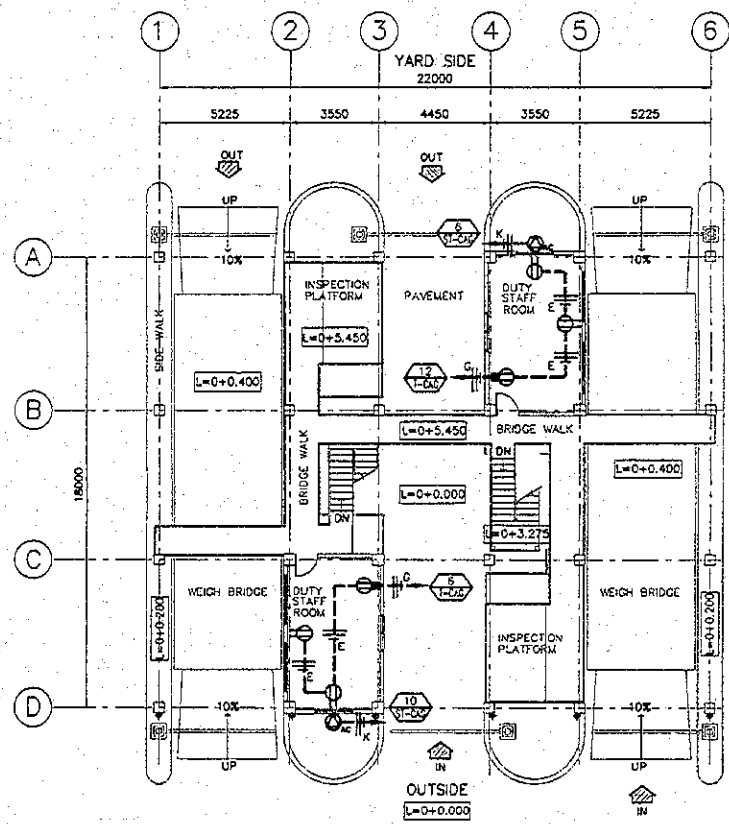
WIRING SYMBOLOLOGY	
SYMBOL	WIRING/DUCTING
A	2 - 2.1mm <sup>2</sup> ø 13mm
D	7 - 3.3mm <sup>2</sup> ø 19mm
E	2 - 3.3mm <sup>2</sup> ø 13mm 1 - 2.1mm <sup>2</sup>
F	2 - 5.3mm <sup>2</sup> ø 19mm
G	2 - 5.3mm <sup>2</sup> ø 19mm 1 - 3.3mm <sup>2</sup>

SYMBOLS	
	FLUORESCENT 3X32W WRAP AROUND SURFACE MOUNTED
	FLUORESCENT 4X32W WRAP-AROUND SURFACE MOUNTED
	400W/208V MH HIGH MAST
	PANELBOARD
	SWITCH
	CONNECTION BOX FOR SIGN LIGHT TO CONTROL BOX ON GATE OFFICE
	WIRING CONCEALED IN CEILING OR WALL
	SWITCH LEG, PHASE, NEUTRAL
	CIRCUIT FEEDER
	CIRCUIT NUMBER # FROM PANELBOARD

REV. NO.	DATE	COORDINATE	BY	APPROVED	DATE		JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) COMISION EJECUTIVA PORTUARIA AUTONOMA (CEPA)	DETAILED DESIGN ON PORT REACTIVATION PROJECT IN LA UNION PROVINCE OF THE REPUBLIC OF EL SALVADOR	DESIGNED BY :	SECTION :	BUILDING WORK CARGO GATE LIGHTING FIRST AND SECOND FLOOR PLANS	DATE :
									AUGUST/2002 SCALE : 1 : 200 DRAWING NO. : 8D-05-025			



OUTLETS FIRST FLOOR PLAN  
SCALE 1:200

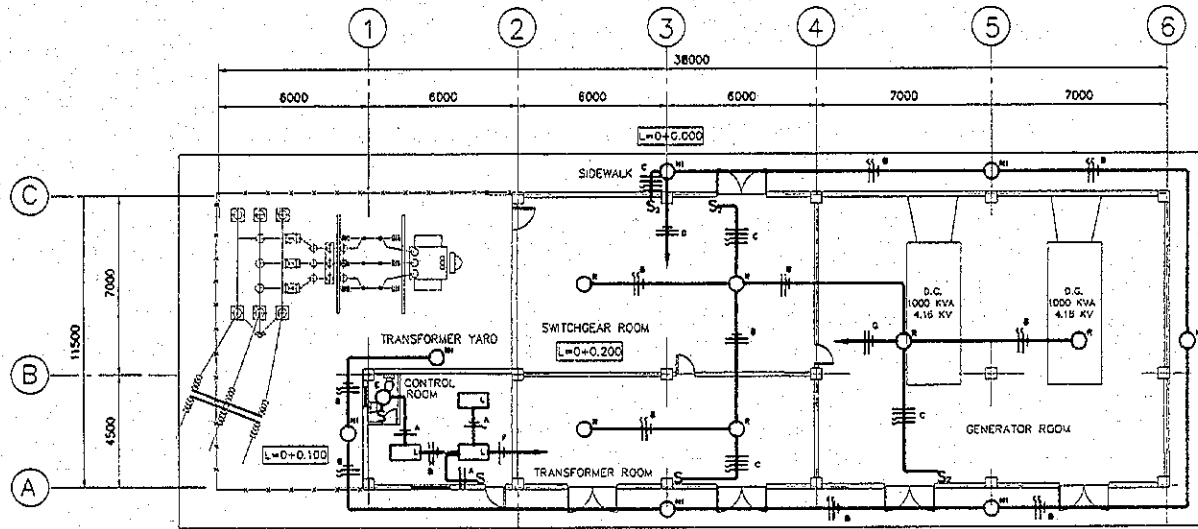


OUTLET SECOND FLOOR PLAN  
SCALE 1:200

<b>CALCULATION</b>		
Detailed Design on Port Reactivation Project in La Union Province		
CALC FILE No.:		
CALC INDEX No.:	PAGE 30	
	INITIAL	DATE
PREPARED BY	<i>M.M.</i>	July 23/02
CHECKED BY	<i>J.K.</i>	July 24/02

<p><b>WIRING SYMBOLY</b> WIRING/DUCTING</p> <p>E 2 - 3.3 mm<sup>2</sup> @ 13mm 1 - 2.1 mm<sup>2</sup></p> <p>G 2 - 5.3 mm<sup>2</sup> @ 19mm 1 - 3.3 mm<sup>2</sup></p> <p>K 2 - 8.4 mm<sup>2</sup> @ 19mm 1 - 5.3 mm<sup>2</sup></p>	<p><b>SYMBOLS</b></p> <p> DUPLEX RECEPTACLE 120 V</p> <p> JUNCTION BOX FOR CLOSING GATE TO CONTROL BOX ON GATE OFFICE</p> <p> CONNECTION FOR AIR CONDITIONING UNIT 208V, 1-PHASE</p> <p> CONNECTION FOR WEIGH BRIDGE 208V-1PHASE</p> <p> WIRING CONCEALED IN FLOOR</p> <p> WIRING CONCEALED IN CEILING</p> <p> PANELBOARD</p> <p> NEUTRAL PHASE, GROUNDING</p> <p> CIRCUIT NUMBER # FROM PANELBOARD</p>
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<p>JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)</p> <p>COMISION EJECUTIVA PORTUARIA AUTONOMA (CEPA)</p>	<p>DESIGNED BY:</p> <p>CHECKED BY:</p> <p>APPROVED BY:</p>	<p>SECTION : BUILDING WORK</p> <p>SUB-SECTION : CARGO GATE</p> <p>TITLE : OUTLETS FIRST AND SECOND FLOOR PLANS</p>	<p>DATE : AUGUST/2002</p> <p>SCALE : 1 : 200</p> <p>DRAWING NO. : BG-05-026</p>
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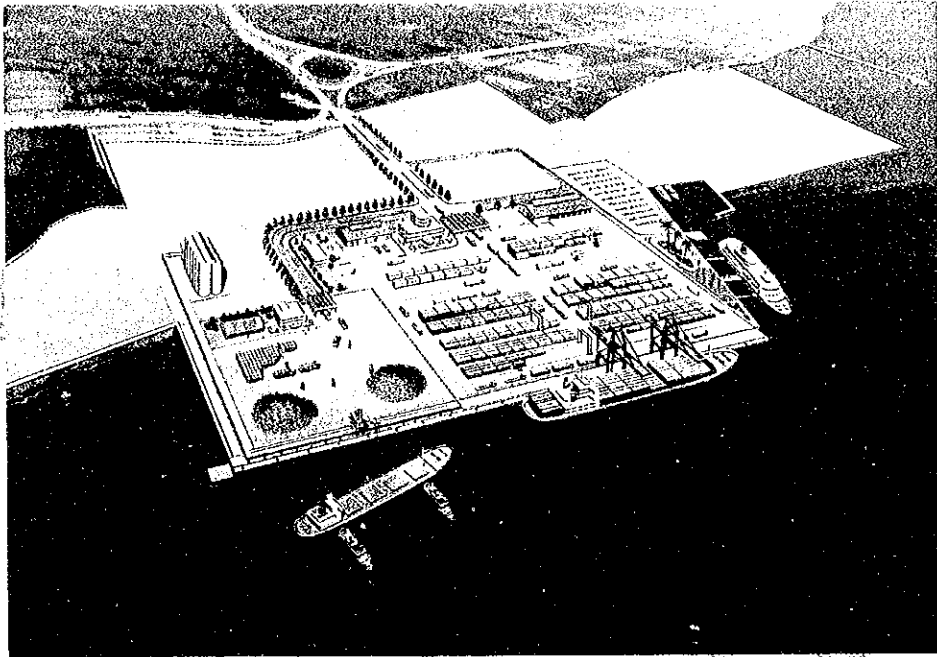


LIGHTING FLOOR PLAN  
SCALE 1:200

SYMBOLS	
	4X32 WATT FLOURESCENT FIXTURE SURFACE MOUNTED
	175 WATT/240V METAL HALIDE BANTAM 2000 FIXTURE
	150 WATT/240V HPS BANTAM 2000 FIXTURE
	60W INCANDESCENT FIXTURE SURFACE MOUNTED
	S S <sub>1</sub> SINGLE POLE SWITCH
	S <sub>2</sub> DOUBLE POLE SWITCH
	ELECTRICAL WIRING CONCEALED IN CEILING
	SWITCH LEG, PHASE, NEUTRAL
	CIRCUIT FEEDER

<b>CALCULATION</b>		
Detailed Design on Port Reactivation Project in La Union Province		
CALC FILE No.:		
CALC INDEX No.:	PAGE	3/
	INITIAL	DATE
PREPARED BY	<i>M.M.</i>	July 23/02
CHECKED BY	<i>P.K.</i>	July 24/02

REV. NO.	DATE	COORDINATE	BY	APPROVED	DATE		JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)  COMISION EJECUTIVA PORTUARIA AUTONOMA (CEPA)	DETAILED DESIGN ON PORT REACTIVATION PROJECT IN LA UNION PROVINCE OF THE REPUBLIC OF EL SALVADOR  NIPPON KOEI CO., LTD.	DESIGNED BY:	SECTION :	DATE :
									CHECKED BY:	SUB-SECTION :	AUGUST/2002
									APPROVED BY:	TITLE :	SCALE :
										BUILDING WORK	1:200
										POWER SUPPLY STATION	DRAWING NO. :
										LIGHTING PLAN	80-06-020



JICA

