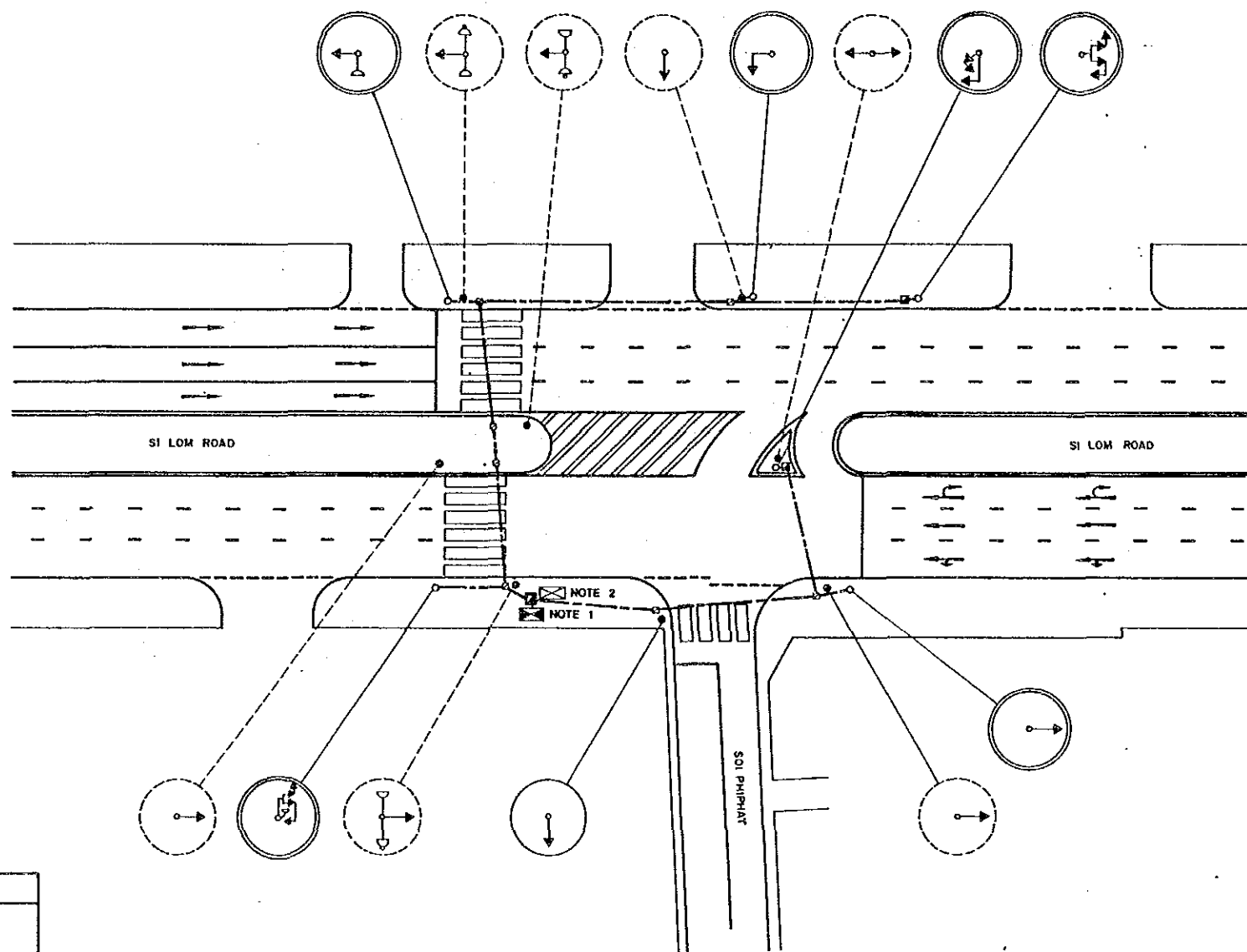
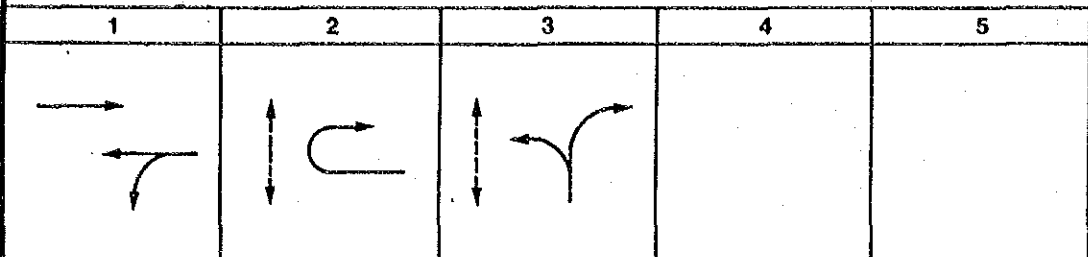
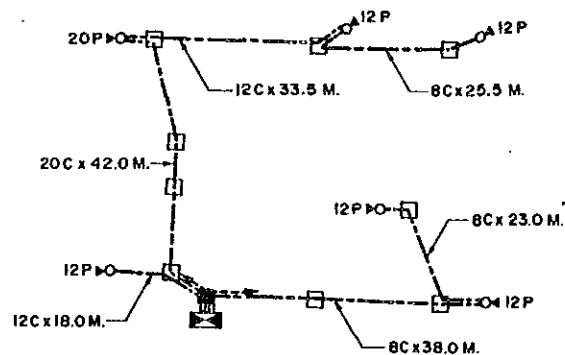


PHASE PLAN FOR AUTOMATIC SEQUENCE



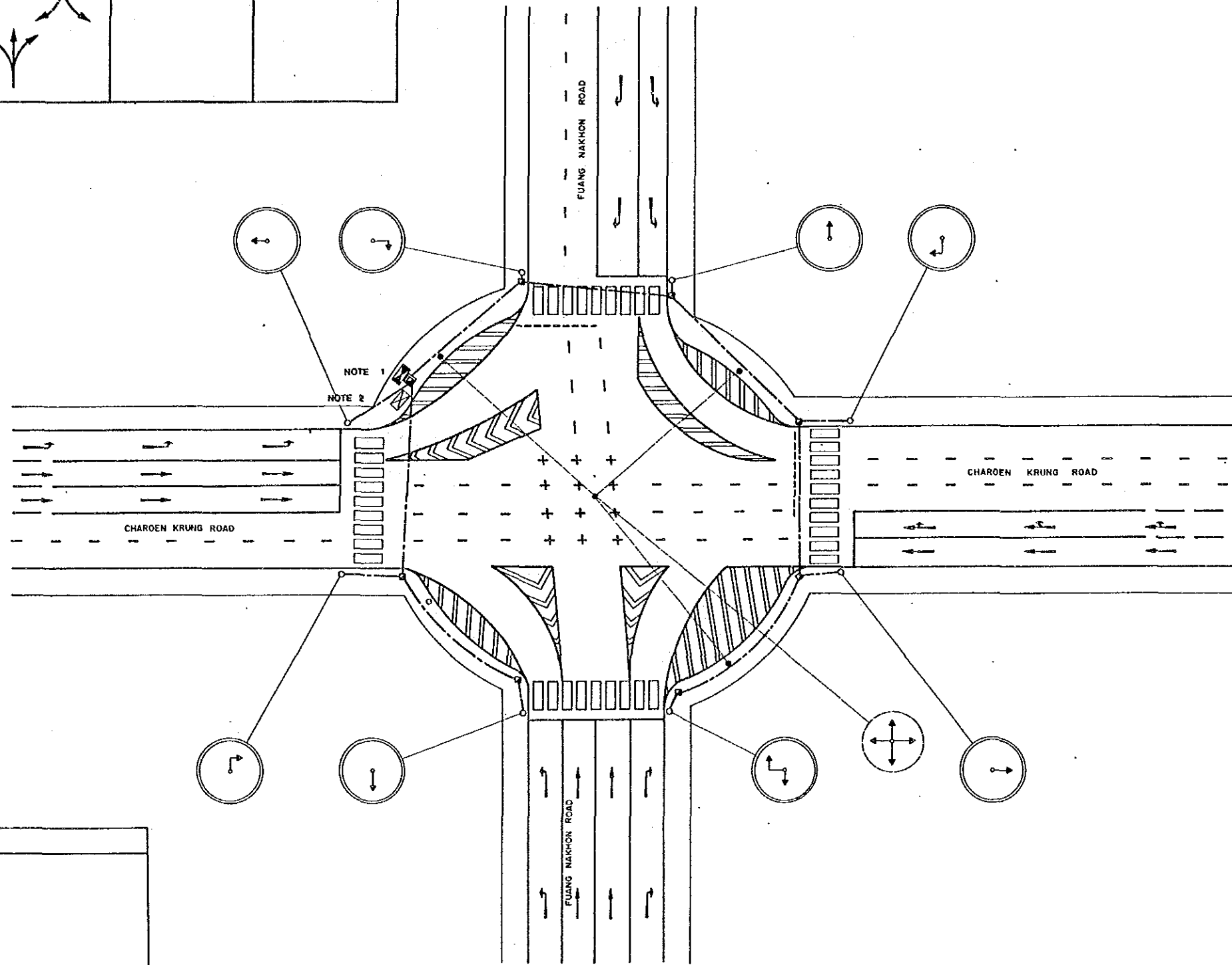
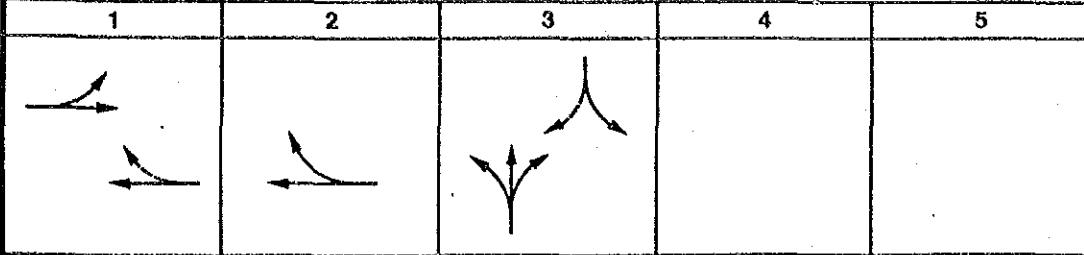
Intersection Equipments List		
Intersection No. 175		
ITEM	Name of Equipment	Qty.
1	Local Controller	1
2	Railroad Pre-emption Control Unit	-
3	Pedestrian Push Button Interface Unit	-
4	Solid State Relay Unit	3
5	Pre-Processor of Detector Pulse	-
6	Supply Power Switch Box with Power Breaker	-
7	TOT Line Box	1
8	Remove Existing Controller	1
9	Signal Pole Type A	3
10	Signal Pole Type B	3
11	Signal Pole Type C	-
12	Signal Pole Type D	-
13	Terminal 12 p	3
14	Terminal 20 p	1
15	Signal Head 3 Aspects (200mm x 3)	1
16	Signal Head 3 Aspects (200mm x 2, 300mm x 1)	1
17	Signal Head 3 Aspects (300mm x 3)	2
18	Signal Head 4 Aspects (200mm x 3, 300mm x 1)	-
19	Signal Head 4 Aspects (200mm x 2, 300mm x 2)	-
20	Signal Head 4 Aspects (300mm x 4)	-
21	Signal Head 6 Aspects (200mm x 4, 300mm x 2)	1
22	Signal Head 6 Aspects (300mm x 6)	1
23	Signal Head Pedestrian	2
24	Lantern Arrow Mask	6
25	Target Board for 3 Aspects	2
26	Target Board for 4 Aspects	-
27	Target Board for 6 Aspects	1
28	PVC Conduit 100 mm (4")	118
29	Steel Conduit 100 mm (4")	-
30	Steel Conduit 38 mm	-
31	Steel Conduit 28 mm	-
32	Install Conduit under Asphalt Pavement	-
33	Install Conduit under Concrete Pavement or Sidewalk	118
34	Install Conduit under Rail	-
35	Install Conduit on Riser Support Pole	3
36	Handhole Type C	1
37	Handhole Type D	1
38	Signal Cable 5c (2 sq. mm)	-
39	Signal Cable 8c (2 sq. mm)	855
40	Signal Cable 12c (2 sq. mm)	515
41	Signal Cable 20c (2 sq. mm)	42
42	Power Cable	5
43	Cable Splicing Kit	1
44	Remove Existing Signal Post and Aspects (Post-arm Type)	-
45	Remove Existing Signal Post and Aspects (Pedestal Type)	7
46	Remove Existing Signal Head	-
47	Remove Existing Arrow Mask	-
48	Remove Pedestrian Push Button	-
49	TOT Line (CPV, 0.65mm, 1P)	20
50	Grounding Rod	1
51	Grounding Cable (IV 5.5 sq. mm x 1c)	3

CABLE LAYOUT



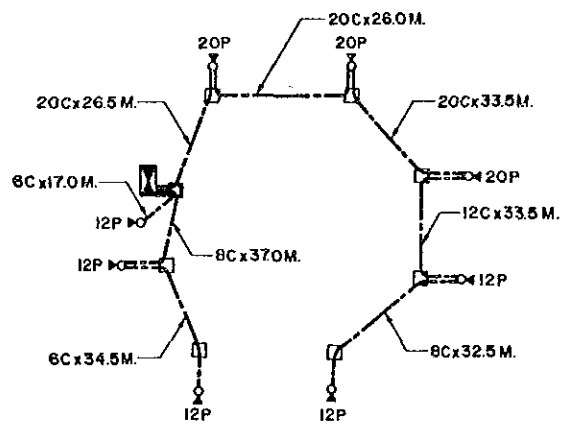
BANGKOK AREA TRAFFIC CONTROL SYSTEM PROJECT: STAGE I			
INTERSECTION TERMINAL EQUIPMENT LAYOUT PLAN		Submitted By :	Approved By :
SI LOM-SOI PHIPHAT (BANGKOK BANK)		Jun Kudo JICA Study Team Leader	Boonyawat Tiplua BMA Study Team Leader
INTERSECTION NR 175		Designed By :	Checked By :
		Yasun Nabeshima JICA Study Member	TEO, BMA
Code	Revision	Date	Initial
Associated Plan No. :	JICA	BMA	Scale 1 / 250
	Japan International Cooperation Agency	Bangkok Metropolitan Administration	Drawing NR 2175
			Date SEPTEMBER '90
			Total 102 / 139

PHASE PLAN FOR AUTOMATIC SEQUENCE

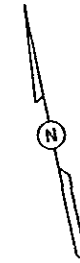


Intersection Equipments List		
Intersection No. 176		
ITEM	Name of Equipment	Qty.
1	Local Controller	1
2	Railroad Pre-emption Control Unit	-
3	Pedestrian Push Button Interface Unit	-
4	Solid State Relay Unit	8
5	PLC-Processor of Defector Pulse	1
6	Supply Power Switch Box with Power Breaker	-
7	TOT Line Box	1
8	Remove Existing Controller	1
9	Signal Pole Type A	4
10	Signal Pole Type B	4
11	Signal Pole Type C	-
12	Signal Pole Type D	-
13	Terminal 12 p	8
14	Terminal 20 p	3
15	Signal Head 3 Aspects (200mm x 3)	-
16	Signal Head 3 Aspects (200mm x 2, 300mm x 1)	5
17	Signal Head 3 Aspects (300mm x 3)	4
18	Signal Head 4 Aspects (200mm x 3, 300mm x 1)	-
19	Signal Head 4 Aspects (200mm x 2, 300mm x 2)	-
20	Signal Head 4 Aspects (300mm x 4)	-
21	Signal Head 6 Aspects (200mm x 4, 300mm x 2)	-
22	Signal Head 6 Aspects (300mm x 6)	-
23	Signal Head Pedestrian	-
24	Lensless Arrow Mark	-
25	Target Board for 3 Aspects	5
26	Target Board for 4 Aspects	-
27	Target Board for 6 Aspects	-
28	PVC Conduit 100 mm (4")	157
29	Steel Conduit 100 mm (4")	-
30	Steel Conduit 39 mm	-
31	Steel Conduit 28 mm	5
32	Install Conduit under Asphalt Pavement	47
33	Install Conduit under Concrete Pavement or Sidewalk	75
34	Install Conduit under Road	-
35	Install Conduit on Filar Support Pole	5
36	Handhole Type C	7
37	Handhole Type D	1
38	Signal Cable 6C (2 sq mm)	515
39	Signal Cable 8C (2 sq mm)	695
40	Signal Cable 12C (2 sq mm)	335
41	Signal Cable 20C (2 sq mm)	85
42	Power Cable	5
43	Cable Splicing Kit	-
44	Remove Existing Signal Pole and Heads (Max-4m Type)	3
45	Remove Existing Signal Pole and Heads (Pedestrian Type)	-
46	Remove Existing Signal Head	-
47	Remove Existing Arrow Mark	-
48	Remove Pedestrian Push Button	-
49	TOT Line (CPV, 0.65mm, 1P)	20
50	Grounding Rod	1
51	Grounding Cable (V 5.5 sq mm x 1c)	3

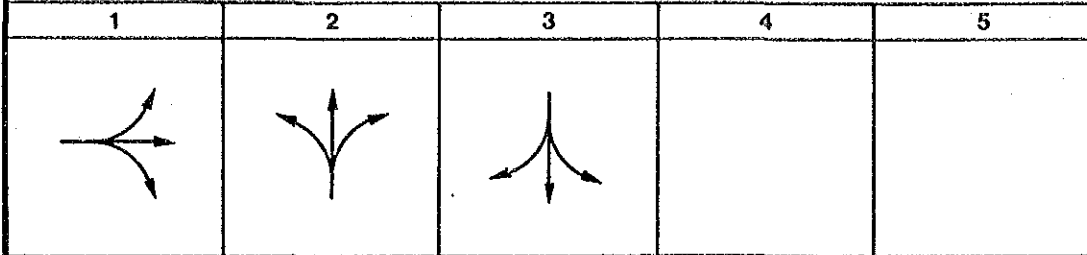
CABLE LAYOUT



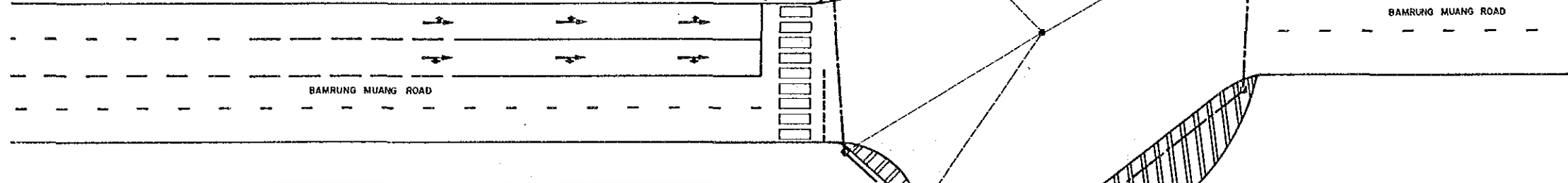
BANGKOK AREA TRAFFIC CONTROL SYSTEM PROJECT: STAGE I					
INTERSECTION TERMINAL EQUIPMENT LAYOUT PLAN			Submitted By :	Approved By :	
FUANG NAKHON - CHAROEN KRUNG			Juro Kodera JICA Study Team Leader	Boonyawat Tiptus BMA Study Team Leader	
INTERSECTION NO 176			Designed By :	Checked By :	
			Yasue Hebeshim JICA Study Member	TED, BMA	
Code	Revision	Date	Initial	JICA	BMA
Associated Plan No. :	Japan International Cooperation Agency		Bangkok Metropolitan Administration		Scale 1 / 250
			Date SEPTEMBER '90	Drawing NR 2176	
			Total 103 / 139		



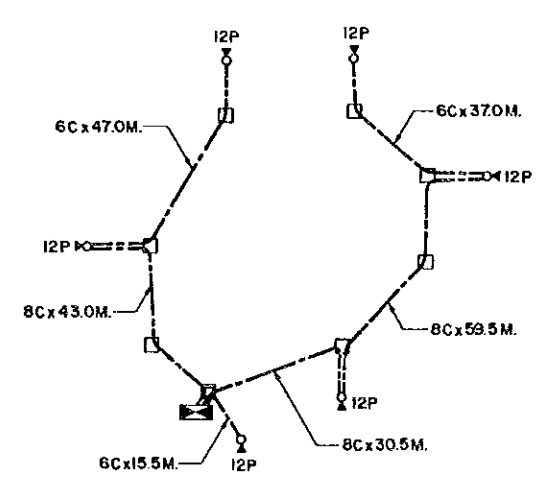
PHASE PLAN FOR AUTOMATIC SEQUENCE



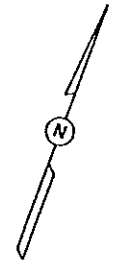
Intersection Equipments List		
Intersection No. 177		
ITEM	Name of Equipment	Qty.
1	Local Controller	1
2	Railroad Pre-emption Control Unit	-
3	Pedestrian Push Button Interface Unit	-
4	Solid State Relay Unit	2
5	Pre-Processor of Detector Pulse	-
6	Supply Power Switch Box with Power Breaker	-
7	TOT Line Box	1
8	Remove Existing Controller	1
9	Signal Pole Type A	3
10	Signal Pole Type B	3
11	Signal Pole Type C	-
12	Signal Pole Type D	-
13	Terminal 12 p.	6
14	Terminal 20 p.	-
15	Signal Head 3 Aspects (200mm x 3)	3
16	Signal Head 3 Aspects (200mm x 2, 300mm x 1)	-
17	Signal Head 3 Aspects (300mm x 3)	3
18	Signal Head 4 Aspects (200mm x 3, 300mm x 1)	-
19	Signal Head 4 Aspects (200mm x 2, 300mm x 2)	-
20	Signal Head 4 Aspects (300mm x 4)	-
21	Signal Head 6 Aspects (200mm x 4, 300mm x 2)	-
22	Signal Head 6 Aspects (300mm x 6)	-
23	Signal Head Pedestrian	-
24	Lantern Arrow Mask	-
25	Target Board for 3 Aspects	3
26	Target Board for 4 Aspects	-
27	Target Board for 6 Aspects	-
28	PVC Conduit 100 mm (4")	153.6
29	Steel Conduit 100 mm (4")	-
30	Steel Conduit 38 mm	-
31	Steel Conduit 28 mm	6
32	Install Conduit under Asphalt Pavement	102
33	Install Conduit under Concrete Pavement or Sidewalk	51.6
34	Install Conduit under Rail	-
35	Install Conduit on Riser Support Pole	6
36	Handhole Type C	6
37	Handhole Type D	1
38	Signal Cable 6c (2 sq.mm)	99.3
39	Signal Cable 8c (2 sq.mm)	133
40	Signal Cable 12c (2 sq.mm)	-
41	Signal Cable 20c (2 sq.mm)	-
42	Power Cable	5
43	Cable Splicing Kit	-
44	Remove Existing Signal Post and Heads (Max-arm Type)	3
45	Remove Existing Signal Post and Heads (Pedestal Type)	-
46	Remove Existing Signal Head	-
47	Remove Existing Arrow Mask	-
48	Remove Pedestrian Push Button	-
49	TOT Line (CPV, 0.65mm, 1P)	20
50	Grounding Rod	1
51	Grounding Cable (RV 5.5 sq.mm x 1c)	5



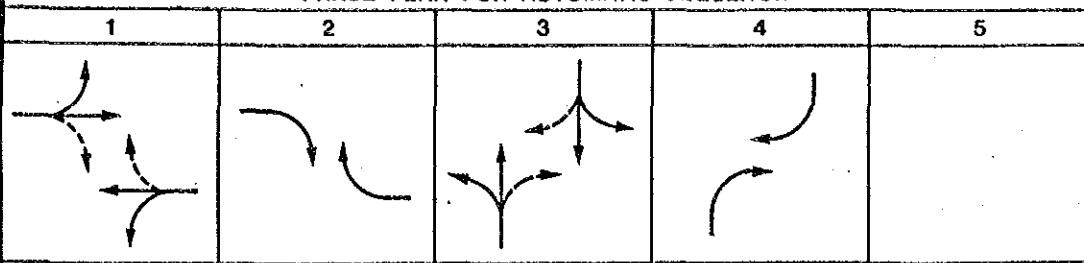
CABLE LAYOUT



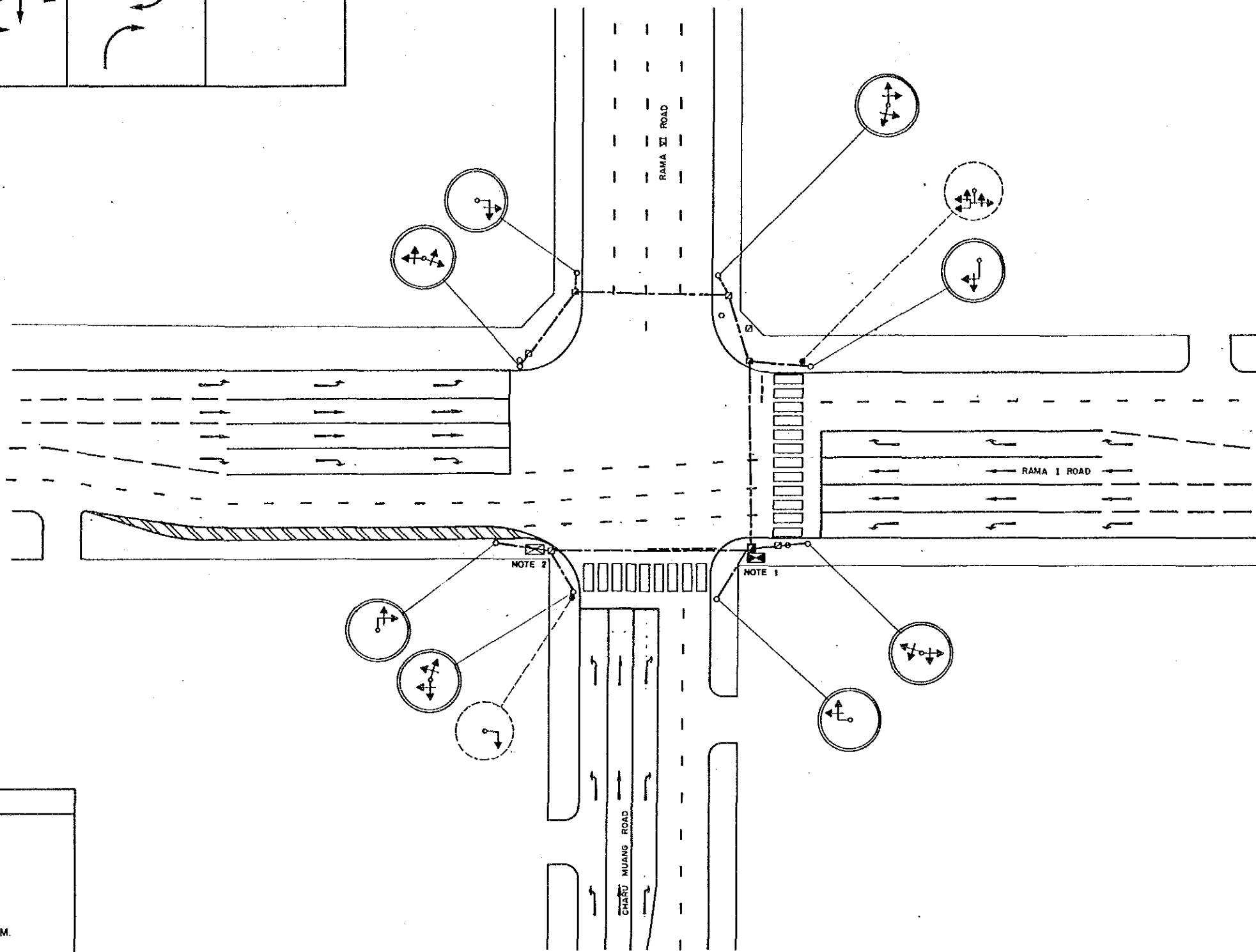
				<b>BANGKOK AREA TRAFFIC CONTROL SYSTEM PROJECT : STAGE I</b>							
				<b>INTERSECTION TERMINAL EQUIPMENT LAYOUT PLAN</b>				Submitted By : Jiro Kodera JICA Study Team Leader		Approved By : Nonyawat Titluw BMA Study Team Leader	
				<b>TANAO-BAMRUNG MUANG-FUANG NAKHON</b>				Designed By : Yasuo Matsushima JICA Study Member		Checked By : TED.BMA	
				<b>INTERSECTION NO 177</b>				Scale 1 / 250		Drawing No. 2177	
Code				Revision		Date		Initial		Date	
Associated Plan No. :				JICA Japan International Cooperation Agency		BMA Bangkok Metropolitan Administration		Date SEPTEMBER '90		Total 104 / 139	



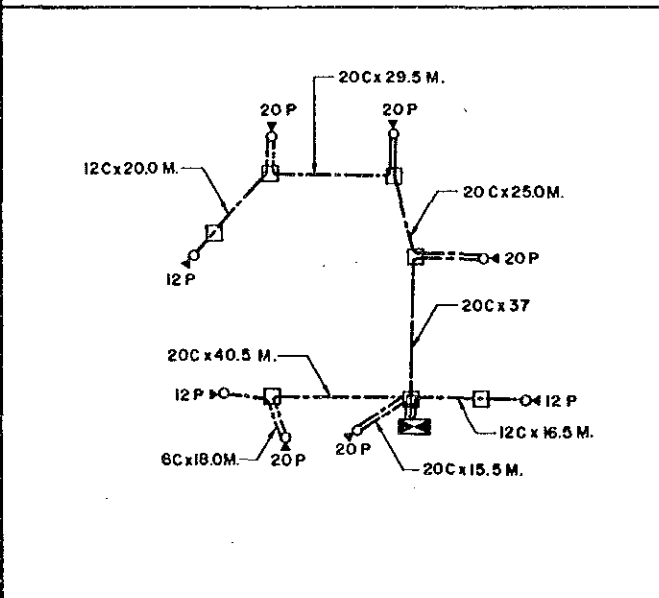
PHASE PLAN FOR AUTOMATIC SEQUENCE



Intersection Equipments List		
Intersection No. 184		
ITEM	Name of Equipment	Qty.
1	Local Controller	1
2	Roadway Pre-emption Control Unit	-
3	Pedestrian Push Button Interface Unit	-
4	Solid State Relay Unit	3
5	Pre-Processor of Detector Pulse	1
6	Supply Power Switch Box with Power Breaker	1
7	TOT Line Box	1
8	Remove Existing Controller	-
9	Signal Pole Type A	4
10	Signal Pole Type B	4
11	Signal Pole Type C	-
12	Signal Pole Type D	-
13	Terminal 12 p	3
14	Terminal 20 p	5
15	Signal Head 3 Aspects (200mm x 3)	-
16	Signal Head 3 Aspects (200mm x 2, 300mm x 1)	-
17	Signal Head 3 Aspects (300mm x 3)	-
18	Signal Head 4 Aspects (200mm x 3, 300mm x 1)	8
19	Signal Head 4 Aspects (200mm x 2, 300mm x 2)	-
20	Signal Head 4 Aspects (300mm x 4)	4
21	Signal Head 6 Aspects (200mm x 4, 300mm x 2)	-
22	Signal Head 6 Aspects (300mm x 6)	-
23	Signal Head Pedestrian	-
24	Lantern Arrow Mask	12
25	Target Board for 3 Aspects	-
26	Target Board for 4 Aspects	8
27	Target Board for 6 Aspects	-
28	PVC Conduit 100 mm (4")	115
29	Steel Conduit 130 mm (4 1/4")	-
30	Steel Conduit 39 mm	5
31	Steel Conduit 28 mm	5
32	Install Conduit under Asphalt Pavement	-
33	Install Conduit under Concrete Pavement or Sidewalk	115
34	Install Conduit under Rail	-
35	Install Conduit on Riser Support Pole	10
36	Handhole Type C	2
37	Handhole Type D	1
38	Signal Cable Ec (2 sq. mm)	18
39	Signal Cable Bc (2 sq. mm)	-
40	Signal Cable 18c (2 sq. mm)	36.5
41	Signal Cable 20c (2 sq. mm)	147.5
42	Power Cable	20
43	Cable Splicing Kit	-
44	Remove Existing Signal Post and Heads (BMA-arm Type)	2
45	Remove Existing Signal Post and Heads (Pedestrian Type)	-
46	Remove Existing Signal Head	-
47	Remove Existing Arrow Mask	-
48	Remove Pedestrian Push Button	-
49	TOT Line (CPV, 0.65mm, 1P)	20
50	Grounding Rod	1
51	Grounding Cable (IV 5.5 sq. mm x 1c)	5

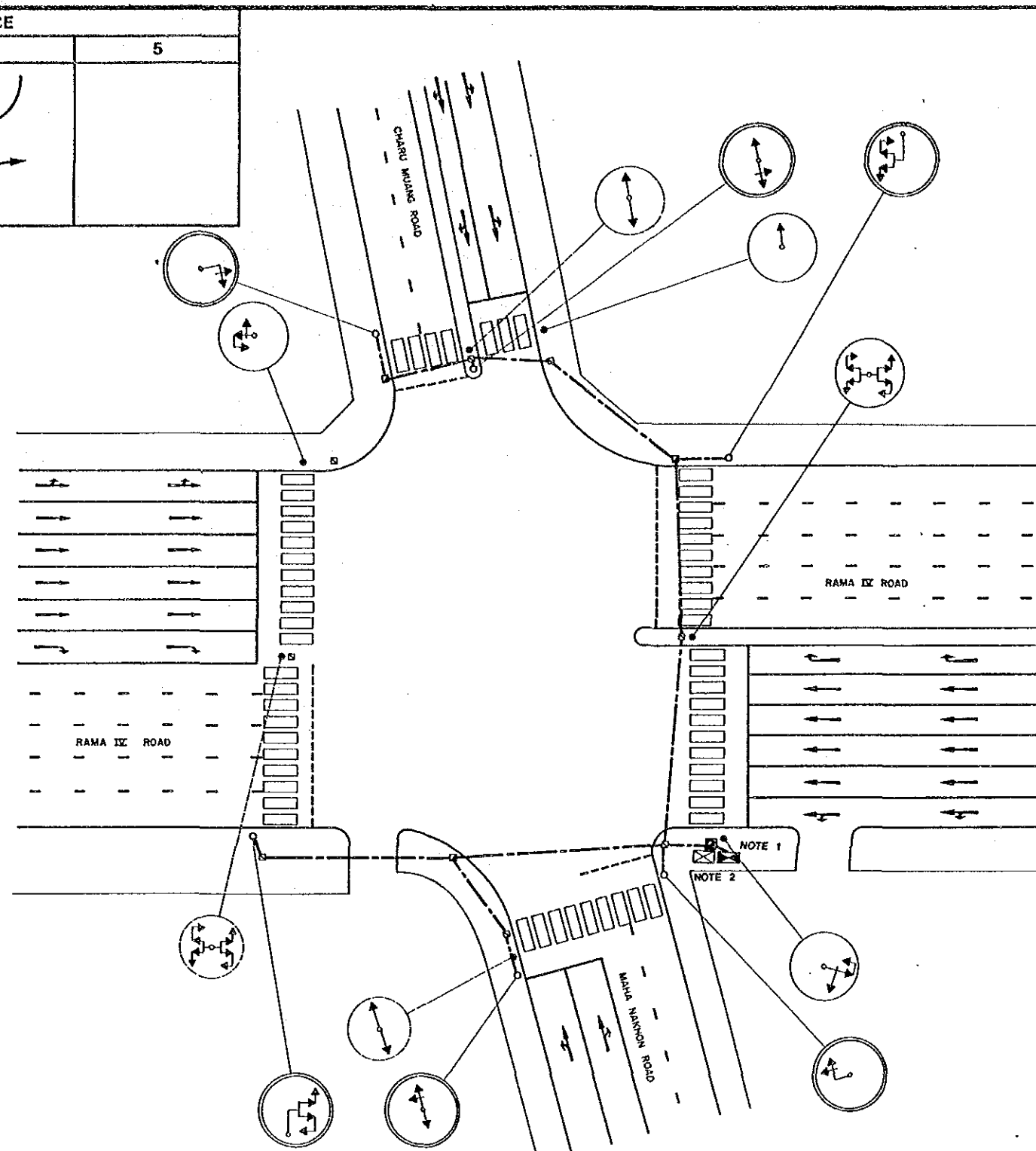


CABLE LAYOUT

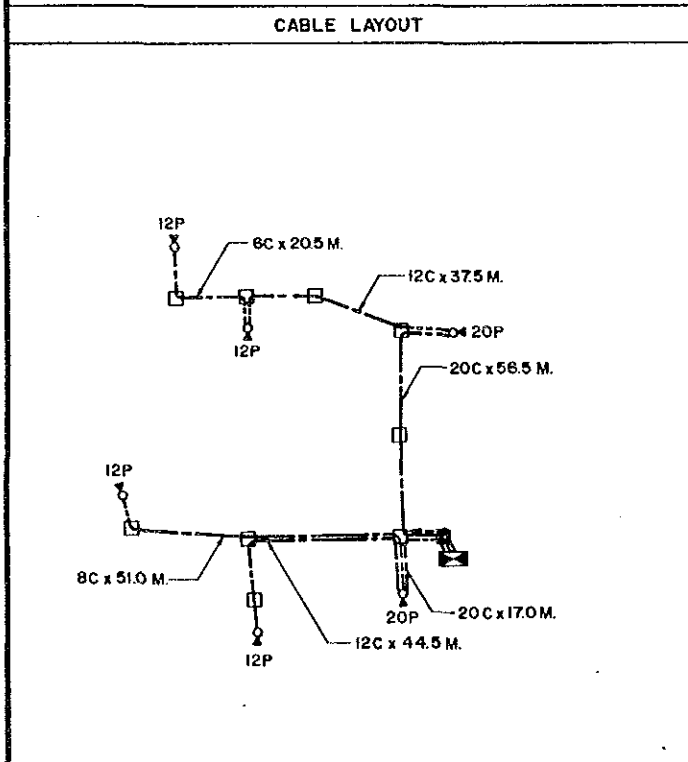


BANGKOK AREA TRAFFIC CONTROL SYSTEM PROJECT : STAGE I			
INTERSECTION TERMINAL EQUIPMENT LAYOUT PLAN		Submitted By :	Approved By :
RAMA I - RAMA VI - CHARU MUANG		Jiro Kodera JICA Study Team Leader	Boonsawat Titipus BMA Study Team Leader
INTERSECTION NO 184		Designed By : Yasuo Nabeshima JICA Study Member	Checked By : TED, BMA
Code	Revision	Date	Initial
Associated Plan No. :	JICA Japan International Cooperation Agency	BMA Bangkok Metropolitan Administration	Scale 1 / 250 Date SEPTEMBER '90
		Drawing No 2184	Total 105 / 139

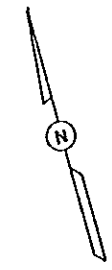
PHASE PLAN FOR AUTOMATIC SEQUENCE				
1	2	3	4	5



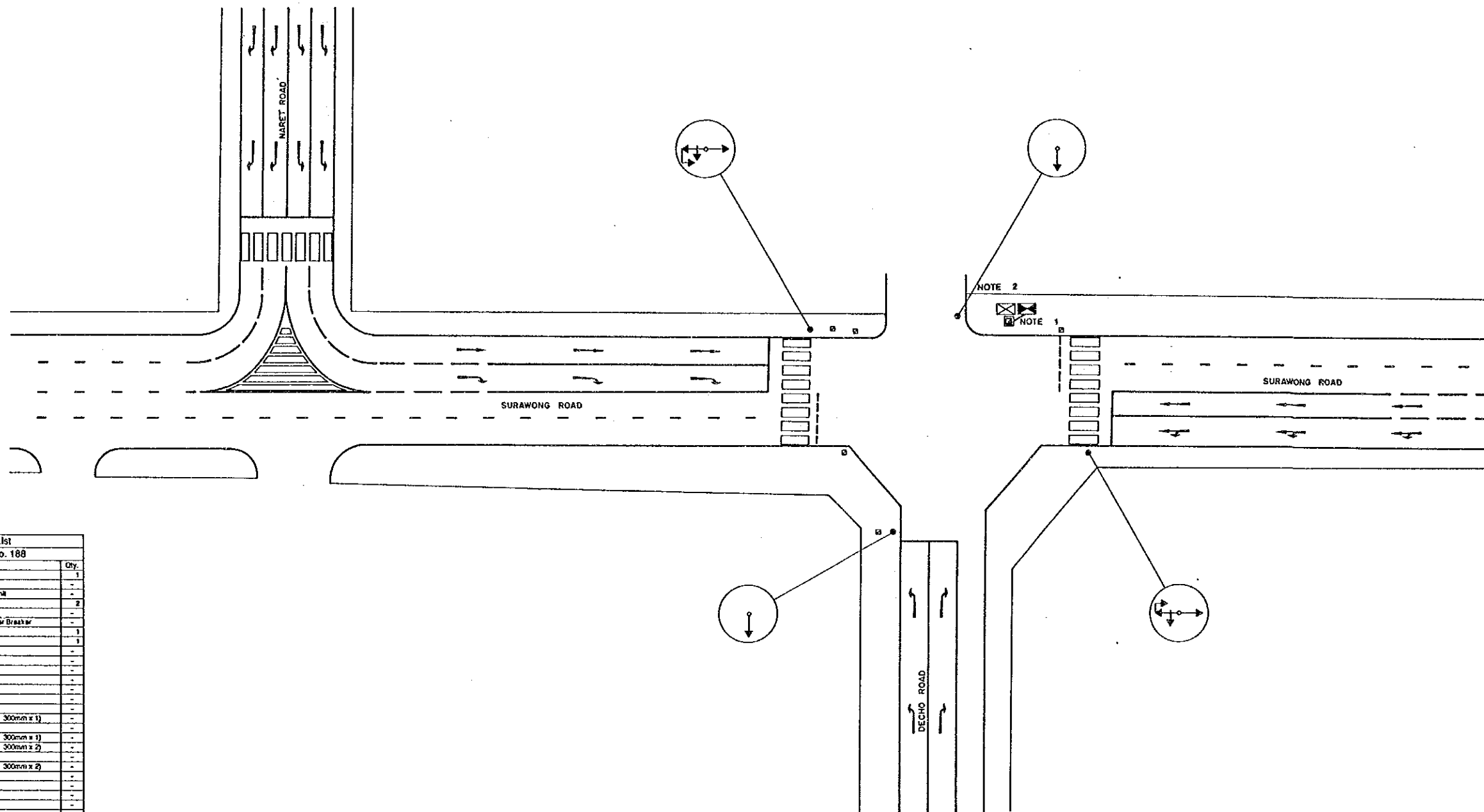
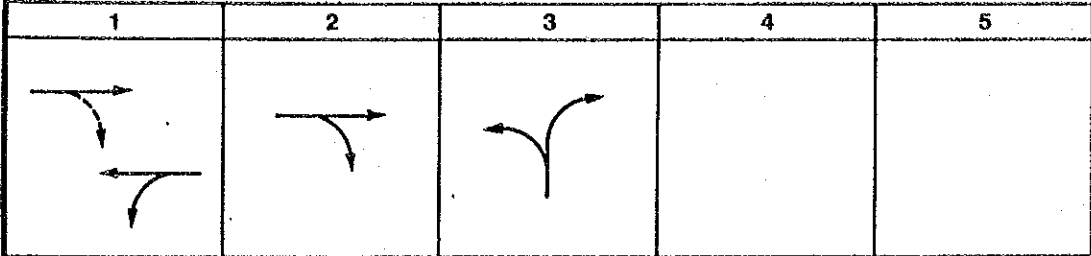
Intersection Equipments List		
Intersection No. 185		
ITEM	Name of Equipment	Qty.
1	Local Controller	1
2	Roadway Pre-emption Control Unit	-
3	Pedestrian Push Button Interface Unit	-
4	Soft Start Relay Unit	4
5	Pre-Processor of Detector Pulse	1
6	Supply Power Switch Box with Power Breaker	-
7	TOT Line Box	1
8	Remove Existing Controller	1
9	Signal Pole Type A	4
10	Signal Pole Type B	3
11	Signal Pole Type C	-
12	Signal Pole Type D	-
13	Terminal 12 p	4
14	Terminal 20 p	2
15	Signal Head 3 Aspects (200mm x 3)	2
16	Signal Head 3 Aspects (200mm x 2, 300mm x 1)	-
17	Signal Head 3 Aspects (300mm x 3)	-
18	Signal Head 4 Aspects (200mm x 3, 300mm x 1)	2
19	Signal Head 4 Aspects (200mm x 2, 300mm x 2)	-
20	Signal Head 4 Aspects (300mm x 4)	2
21	Signal Head 6 Aspects (200mm x 4, 300mm x 2)	-
22	Signal Head 6 Aspects (300mm x 6)	2
23	Signal Head Pedestrian	-
24	Lantern Arrow Mask	8
25	Target Board for 3 Aspects	2
26	Target Board for 4 Aspects	2
27	Target Board for 6 Aspects	-
28	PVC Conduit 100 mm (4")	139.9
29	Steel Conduit 100 mm (4")	-
30	Steel Conduit 39 mm	-
31	Steel Conduit 25 mm	8
32	Install Conduit under Asphalt Pavement	-
33	Install Conduit under Concrete Pavement or Sidewalk	139.5
34	Install Conduit under Rail	-
35	Install Conduit on Riser Support Pole	3
36	Handhole Type C	3
37	Handhole Type D	1
38	Signal Cable 6c (2 sq mm)	20.5
39	Signal Cable 8c (2 sq mm)	31
40	Signal Cable 12c (2 sq mm)	52
41	Signal Cable 20c (2 sq mm)	61.5
42	Power Cable	5
43	Cable Splicing Kit	1
44	Remove Existing Signal Post and Heads (3-4 arm Type)	-
45	Remove Existing Signal Post and Heads (Pedestrian Type)	2
46	Remove Existing Signal Head	-
47	Remove Existing Arrow Mask	-
48	Remove Pedestrian Push Button	-
49	TOT Line (CPV, Ø 65mm, 1P)	20
50	Grounding Rod	1
51	Grounding Cable (IV 5.5 sq mm x 1c)	5



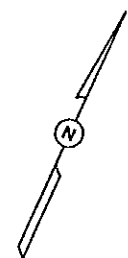
BANGKOK AREA TRAFFIC CONTROL SYSTEM PROJECT : STAGE I			
INTERSECTION TERMINAL EQUIPMENT LAYOUT PLAN		Submitted By :	Approved By :
RAMA IV - CHARU MUANG - MAHA NAKHON		Jiro Kodera JICA Study Team Leader	Boonyawat Titus BMA Study Team Leader
INTERSECTION NO 185		Designed By :	Checked By :
		Yasuo Nishishima JICA Study Member	TED.BMA
Code	Revision	Date	Initial
Associated Plan No. :			
JICA Japan International Cooperation Agency	BMA Bangkok Metropolitan Administration	Scale 1 / 250	Drawing No 2185
		Date SEPTEMBER '90	Total 106 / 139



PHASE PLAN FOR AUTOMATIC SEQUENCE

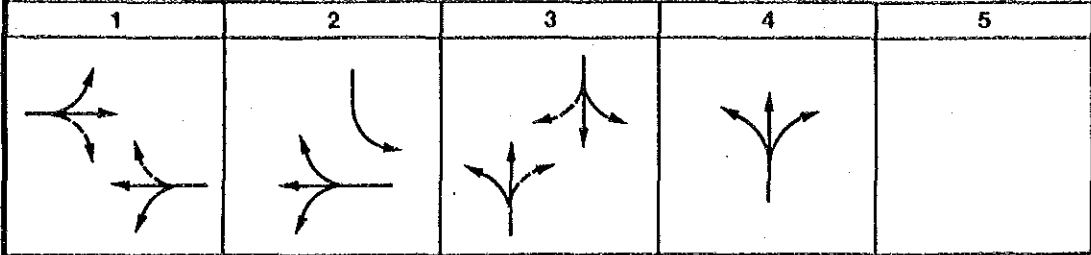


Intersection Equipments List		
Intersection No. 188		
ITEM	Name of Equipment	Qty.
1	Local Controller	1
2	Railroad Pre-emption Control Unit	-
3	Pedestrian Push Button Interface Unit	-
4	Solid State Relay Unit	2
5	Pre-Processor of Detector Pulse	-
6	Supply Power Switch Box with Power Breaker	-
7	TOT Line Box	1
8	Remove Existing Controller	1
9	Signal Pole Type A	-
10	Signal Pole Type B	-
11	Signal Pole Type C	-
12	Signal Pole Type D	-
13	Terminal 12 p	-
14	Terminal 20 p	-
15	Signal Head 3 Aspects (200mm x 3)	-
16	Signal Head 3 Aspects (200mm x 2, 300mm x 1)	-
17	Signal Head 3 Aspects (300mm x 3)	-
18	Signal Head 4 Aspects (200mm x 3, 300mm x 1)	-
19	Signal Head 4 Aspects (200mm x 2, 300mm x 2)	-
20	Signal Head 4 Aspects (300mm x 4)	-
21	Signal Head 6 Aspects (200mm x 4, 300mm x 2)	-
22	Signal Head 6 Aspects (300mm x 6)	-
23	Signal Head Pedestrian	-
24	Lantern Arrow Mask	-
25	Target Board for 3 Aspects	-
26	Target Board for 4 Aspects	-
27	Target Board for 6 Aspects	-
28	PVC Conduit 100 mm (4")	6
29	Steel Conduit 100 mm (4")	-
30	Steel Conduit 50 mm	-
31	Steel Conduit 28 mm	5
32	Install Conduit under Asphalt Pavement	-
33	Install Conduit under Concrete Pavement or Sidewalk	6
34	Install Conduit under Rail	-
35	Install Conduit on Riser Support Pole	5
36	Handhole Type C	-
37	Handhole Type D	1
38	Signal Cable 6c (2 sq. mm)	-
39	Signal Cable 8c (2 sq. mm)	-
40	Signal Cable 12c (2 sq. mm)	8
41	Signal Cable 20c (2 sq. mm)	-
42	Power Cable	5
43	Cable Splicing Kit	1
44	Remove Existing Signal Post and Heads (Main-arm Type)	-
45	Remove Existing Signal Post and Heads (Pedestrian Type)	-
46	Remove Existing Signal Head	-
47	Remove Existing Arrow Mask	-
48	Remove Pedestrian Push Button	-
49	TOT Line (CPV, 0.65mm, 1P)	20
50	Grounding Rod	1
51	Grounding Cable (IVS 5 sq. mm x 1c)	5



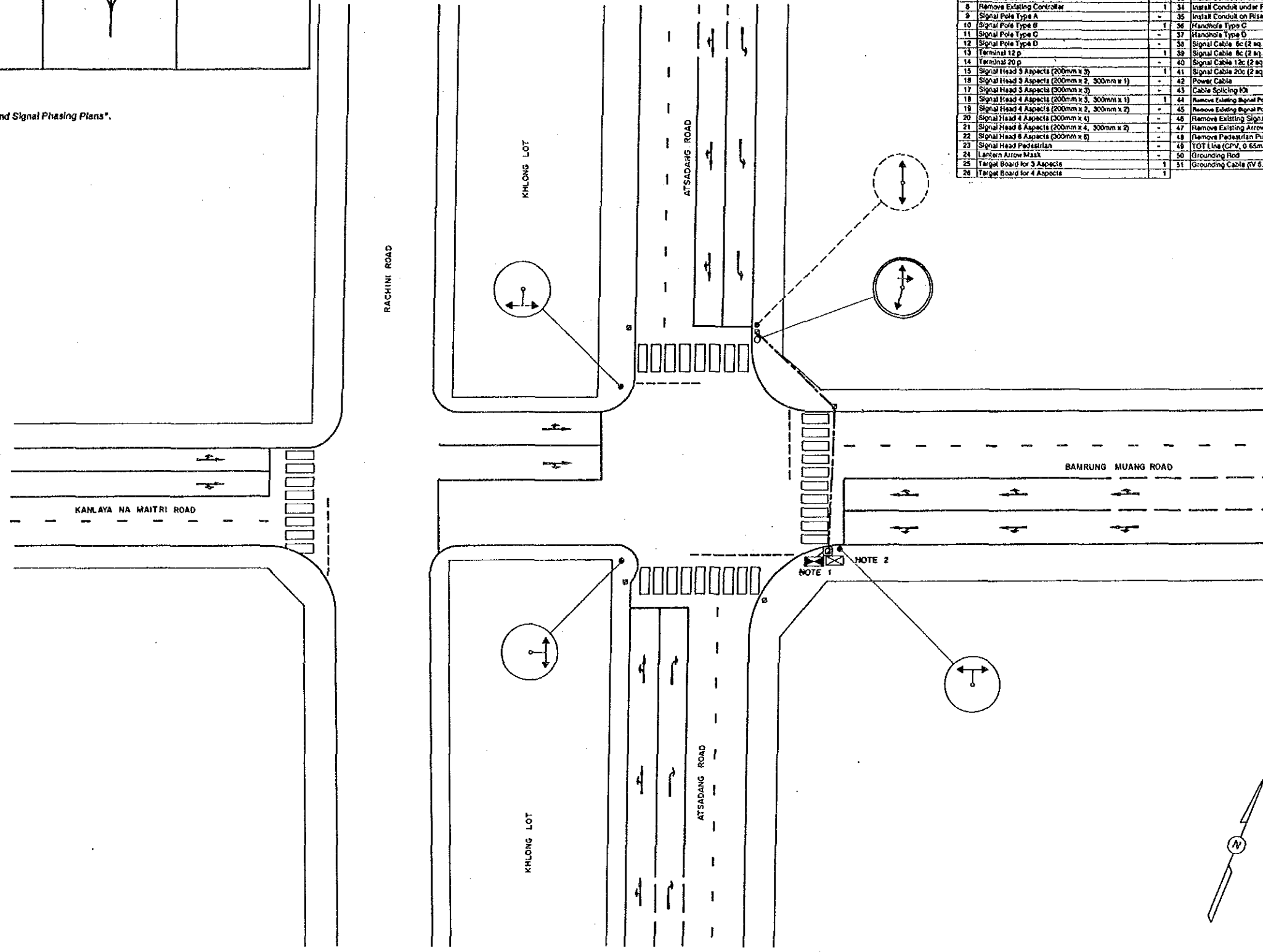
BANGKOK AREA TRAFFIC CONTROL SYSTEM PROJECT : STAGE I			
INTERSECTION TERMINAL EQUIPMENT LAYOUT PLAN		Submitted By :	Approved By :
SURAWONG - DECHO		Juro Kodera JICA Study Team Leader	Boonyasat Tiptua BMA Study Team Leader
		Designed By : Yasuo Nakashima JICA Study Member	Checked By : TED, BMA
INTERSECTION N <sup>o</sup> 188		Scale 1 / 250	Drawing N <sup>o</sup> 2188
Associated Plan No. :		Date SEPTEMBER '90	Total 107 / 139
JICA Japan International Cooperation Agency		BMA Bangkok Metropolitan Administration	

PHASE PLAN FOR AUTOMATIC SEQUENCE

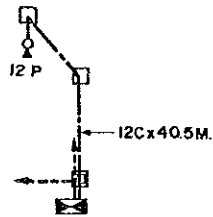


NOTE: Signal Phasing shown here is for the Morning Peak only.  
For evening peak and off-peak, please refer to "Design Volume and Signal Phasing Plans".

Intersection Equipments List				
Intersection No. 189				
ITEM	Name of Equipment	Qty.	UNIT	Name of Equipment
1	Local Controller	1	27	Target Board for 8 Aspects
2	Railroad Pre-emption Control Unit	-	28	PVC Conduit 100 mm (4")
3	Pedestrian Push Button Interface Unit	-	29	Steel Conduit 100 mm (4")
4	Solid State Relay Unit	3	30	Steel Conduit 38 mm
5	Pre-Processor of Detector Pulse	-	31	Steel Conduit 28 mm
6	Supply Power Switch Box with Power Breaker	-	32	Install Conduit under Asphalt Pavement
7	TOT Line Box	1	33	Install Conduit under Concrete Pavement or Sidewalk
8	Remove Existing Controller	1	34	Install Conduit under Rail
9	Signal Pole Type A	-	35	Install Conduit on Pylon Support Pole
10	Signal Pole Type B	-	36	Handhole Type C
11	Signal Pole Type C	-	37	Handhole Type D
12	Signal Pole Type D	-	38	Signal Cable 6c (2 sq mm)
13	Terminal 12 p	1	39	Signal Cable 6c (2 sq mm)
14	Terminal 20 p	-	40	Signal Cable 7c (2 sq mm)
15	Signal Head 3 Aspects (200mm x 3)	-	41	Signal Cable 20c (2 sq mm)
16	Signal Head 3 Aspects (200mm x 2, 300mm x 1)	-	42	Power Cable
17	Signal Head 3 Aspects (300mm x 3)	-	43	Cable Splicing Kit
18	Signal Head 4 Aspects (200mm x 3, 300mm x 1)	1	44	Remove Existing Signal Pole and Heads (4-4-4-4 Type)
19	Signal Head 4 Aspects (200mm x 2, 300mm x 2)	-	45	Remove Existing Signal Pole and Heads (Posterial Type)
20	Signal Head 4 Aspects (300mm x 4)	-	46	Remove Existing Signal Head
21	Signal Head 4 Aspects (200mm x 4, 300mm x 2)	-	47	Remove Existing Arrow Mask
22	Signal Head 6 Aspects (300mm x 6)	-	48	Remove Pedestrian Push Button
23	Signal Head Pedestrian	-	49	TOT Line (CP7, 0.65mm, 17)
24	Lantern Arrow Mask	-	50	Grounding Rod
25	Target Board for 3 Aspects	1	51	Grounding Cable (IV 6.5 sq mm x 1c)
26	Target Board for 4 Aspects	1		

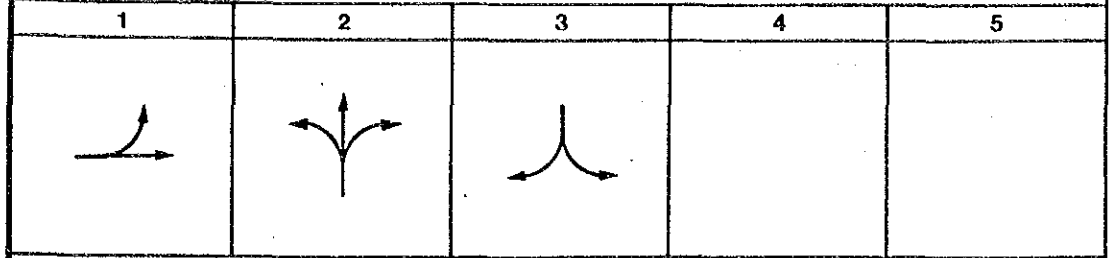


CABLE LAYOUT

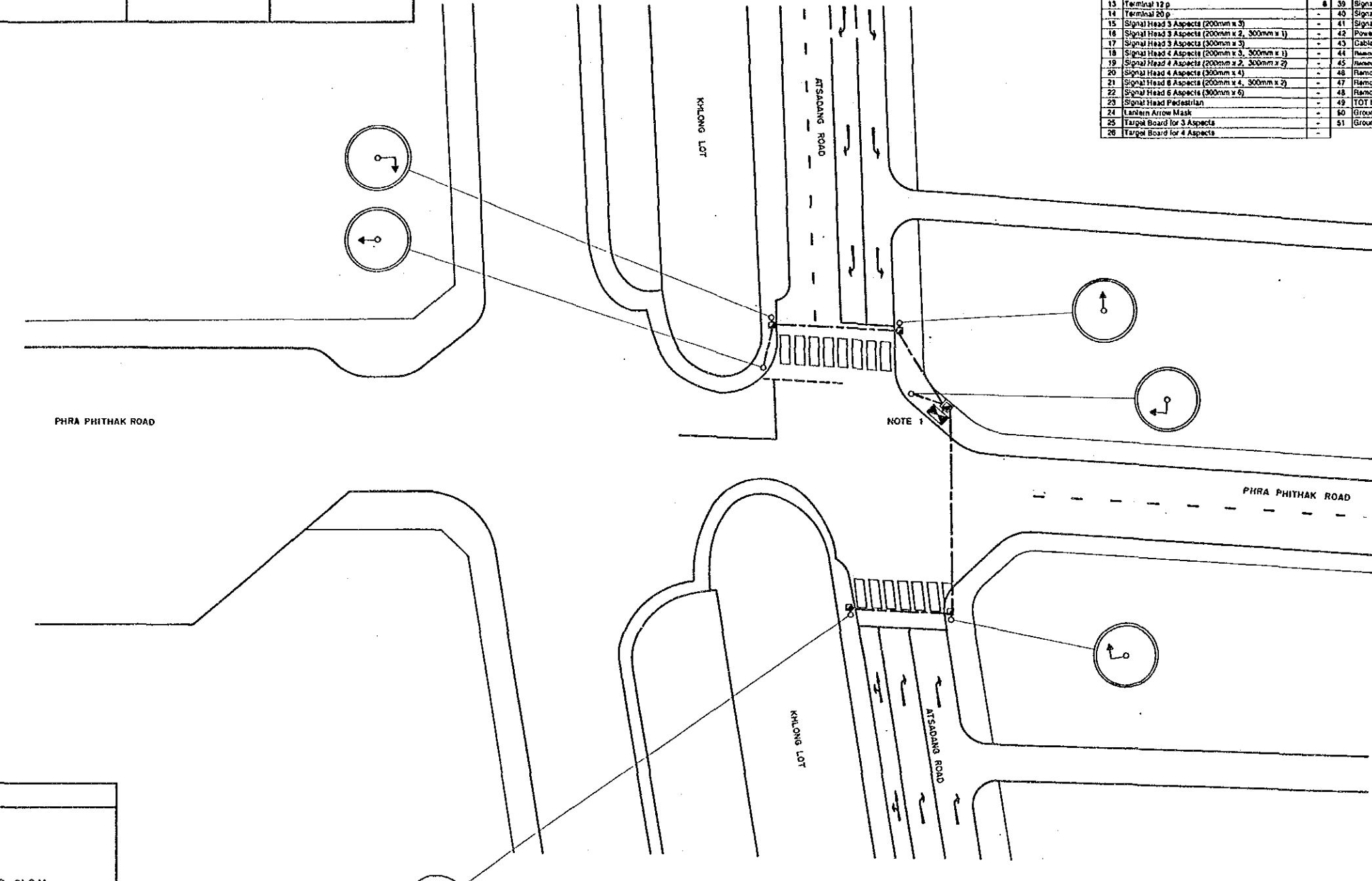


BANGKOK AREA TRAFFIC CONTROL SYSTEM PROJECT: STAGE I							
INTERSECTION TERMINAL EQUIPMENT LAYOUT PLAN				Submitted By :		Approved By :	
ATSADANG -- BAMRUNG MUANG				Juro Kodera JICA Study Team Leader		Boonyarat Titus BMA Study Team Leader	
INTERSECTION NO 189				Designed By :		Checked By :	
				Yasue Nabeshima JICA Study Member		TED.BMA	
Code	Revision	Date	Initial	JICA	BMA	Scale	1 / 250
Associated Plan No. :	Japan International Cooperation Agency		Bangkok Metropolitan Administration		Date	SEPTEMBER '90	Drawing No 2189
						Total	108 / 139

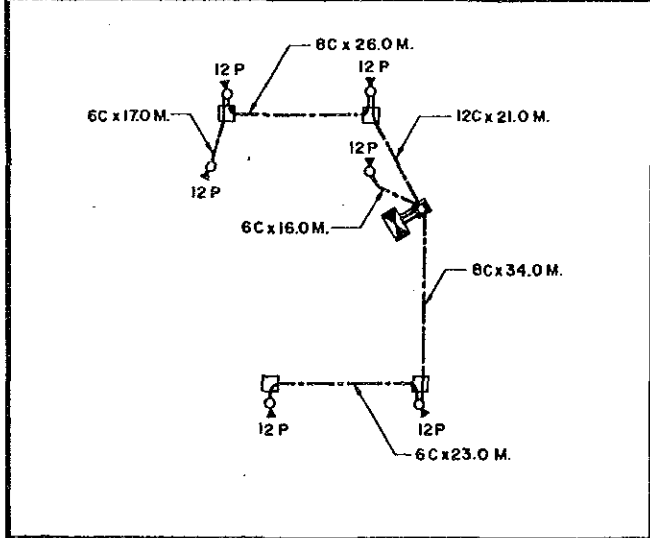
PHASE PLAN FOR AUTOMATIC SEQUENCE



Intersection Equipments List					
Intersection No. 191					
ITEM	Name of Equipment	Qty.	ITEM	Name of Equipment	Qty.
1	Local Controller	1	27	Target Board for 6 Aspects	-
2	Railroad Pre-emption Control Unit	-	28	PVC Conduit 100 mm (4")	77
3	Pedestrian Push Button Interface Unit	-	29	Steel Conduit 100 mm (4")	-
4	Soft Start Relay Unit	1	30	Steel Conduit 38 mm	8
5	Pre-Processor of Detector Pulse	-	31	Steel Conduit 28 mm	8
6	Supply Power Switch Box with Power Breaker	1	32	Install Conduit under Asphalt Pavement	36
7	TOT Line Box	1	33	Install Conduit under Concrete Pavement or Sidewalk	42
8	Remove Existing Controller	-	34	Install Conduit under Rail	-
9	Signal Pole Type A	3	35	Install Conduit on Pylon Support Pole	10
10	Signal Pole Type B	3	36	Handhole Type C	4
11	Signal Pole Type C	-	37	Handhole Type D	1
12	Signal Pole Type D	-	38	Signal Cable 6C (2 sq mm)	58
13	Terminal 12 p	6	39	Signal Cable 8C (2 sq mm)	60
14	Terminal 20 p	-	40	Signal Cable 12C (2 sq mm)	21
15	Signal Head 3 Aspects (200mm x 3)	-	41	Signal Cable 20C (2 sq mm)	-
16	Signal Head 3 Aspects (200mm x 2, 300mm x 1)	-	42	Power Cable	20
17	Signal Head 3 Aspects (300mm x 3)	-	43	Cable Splicing Box	-
18	Signal Head 4 Aspects (200mm x 3, 300mm x 1)	-	44	Remove Existing Signal Post and Heads (Metal Type)	-
19	Signal Head 4 Aspects (200mm x 2, 300mm x 2)	-	45	Remove Existing Signal Post and Heads (Pole-top Type)	-
20	Signal Head 4 Aspects (300mm x 4)	-	46	Remove Existing Signal Head	-
21	Signal Head 6 Aspects (200mm x 4, 300mm x 2)	-	47	Remove Existing Arrow Mask	-
22	Signal Head 6 Aspects (300mm x 6)	-	48	Remove Pedestrian Push Button	-
23	Signal Head Pedestrian	-	49	TOT Line (CPW, 0.65mm, 1P)	20
24	Lantern Arrow Mask	-	50	Grounding Rod	1
25	Target Board for 3 Aspects	-	51	Grounding Cable (IV S 5 sq mm x 1c)	6
26	Target Board for 4 Aspects	-	-	-	-



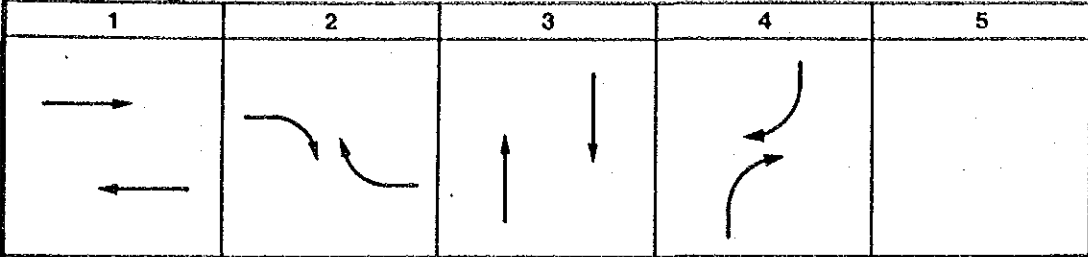
CABLE LAYOUT



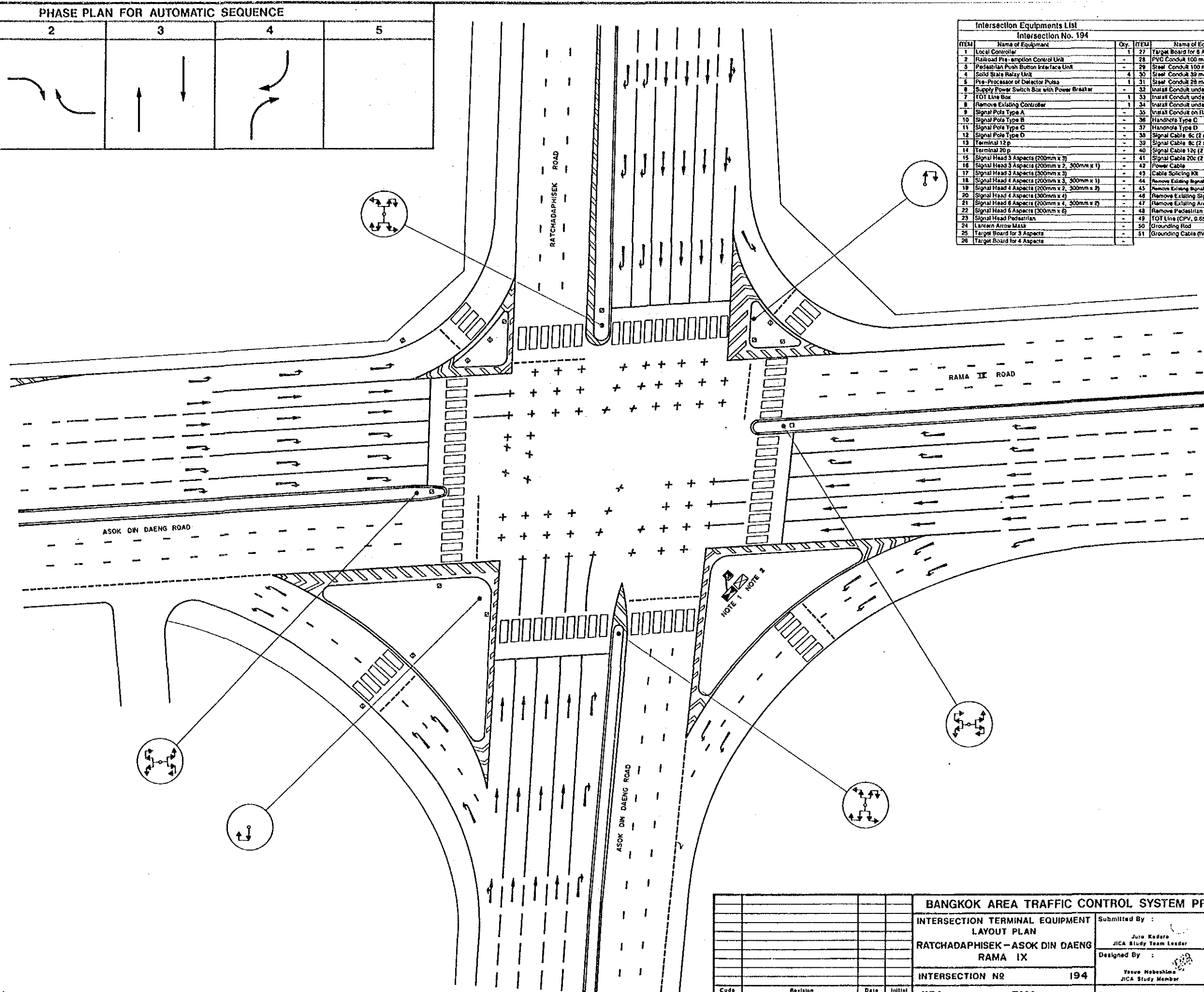
BANGKOK AREA TRAFFIC CONTROL SYSTEM PROJECT : STAGE I									
INTERSECTION TERMINAL EQUIPMENT LAYOUT PLAN					Submitted By :		Approved By :		
					Juro Kodera JICA Study Team Leader		Boonyawat Tiptua BMA Study Team Leader		
ATSADANG - PHRA PHITHAK					Designed By :		Checked By :		
					Yasuo Nishikawa JICA Study Member		TED, BMA		
INTERSECTION NO 191					Scale 1 / 250		Drawing NR 2191		
Associated Plan No. :					Date SEPTEMBER '90		Total 109 / 139		
JICA Japan International Cooperation Agency		BMA Bangkok Metropolitan Administration							



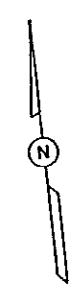
PHASE PLAN FOR AUTOMATIC SEQUENCE



Intersection Equipments List				
Intersection No. 194				
ITEM	Name of Equipment	Qty.	ITEM	Name of Equipment
1	Local Controller	1	27	Target Board for 6 Aspects
2	Railroad Pre-emption Control Unit	-	28	PVC Conduit 100 mm (4")
3	Pedestrian Push Button Interface Unit	-	29	Steel Conduit 100 mm (4")
4	Solid State Relay Unit	4	30	Steel Conduit 38 mm
5	Pre-Processor of Detector Pulse	1	31	Steel Conduit 28 mm
6	Supply Power Switch Box with Power Breaker	-	32	Install Conduit under Asphalt Pavement
7	TOT Line Box	1	33	Install Conduit under Concrete Pavement or Sidewalk
8	Remove Existing Controller	1	34	Install Conduit under Rail
9	Signal Pole Type A	-	35	Install Conduit on Tular Support Pole
10	Signal Pole Type B	-	36	Handhole Type C
11	Signal Pole Type C	-	37	Handhole Type D
12	Signal Pole Type D	-	38	Signal Cable 6c (2 sq. mm)
13	Terminal 12p	-	39	Signal Cable 12c (2 sq. mm)
14	Terminal 20p	-	40	Signal Cable 20c (2 sq. mm)
15	Signal Head 3 Aspects (200mm x 3)	-	41	Signal Cable 20c (2 sq. mm)
16	Signal Head 3 Aspects (200mm x 2, 300mm x 1)	-	42	Power Cable
17	Signal Head 3 Aspects (300mm x 3)	-	43	Cable Splicing Kit
18	Signal Head 4 Aspects (200mm x 3, 300mm x 1)	-	44	Remove Existing Signal Post and Heads (Main-arm Type)
19	Signal Head 4 Aspects (200mm x 2, 300mm x 2)	-	45	Remove Existing Signal Post and Heads (Pedestal Type)
20	Signal Head 4 Aspects (300mm x 4)	-	46	Remove Existing Signal Head
21	Signal Head 6 Aspects (200mm x 4, 300mm x 2)	-	47	Remove Existing Arrow Mask
22	Signal Head 6 Aspects (300mm x 6)	-	48	Remove Pedestrian Push Button
23	Signal Head Pedestrian	-	49	TOT Line (CPV, 0.65mm, 1P)
24	Lantern Arrow Mask	-	50	Grounding Rod
25	Target Board for 3 Aspects	-	51	Grounding Cable (RV 5.5 sq. mm x 1c)
26	Target Board for 4 Aspects	-		

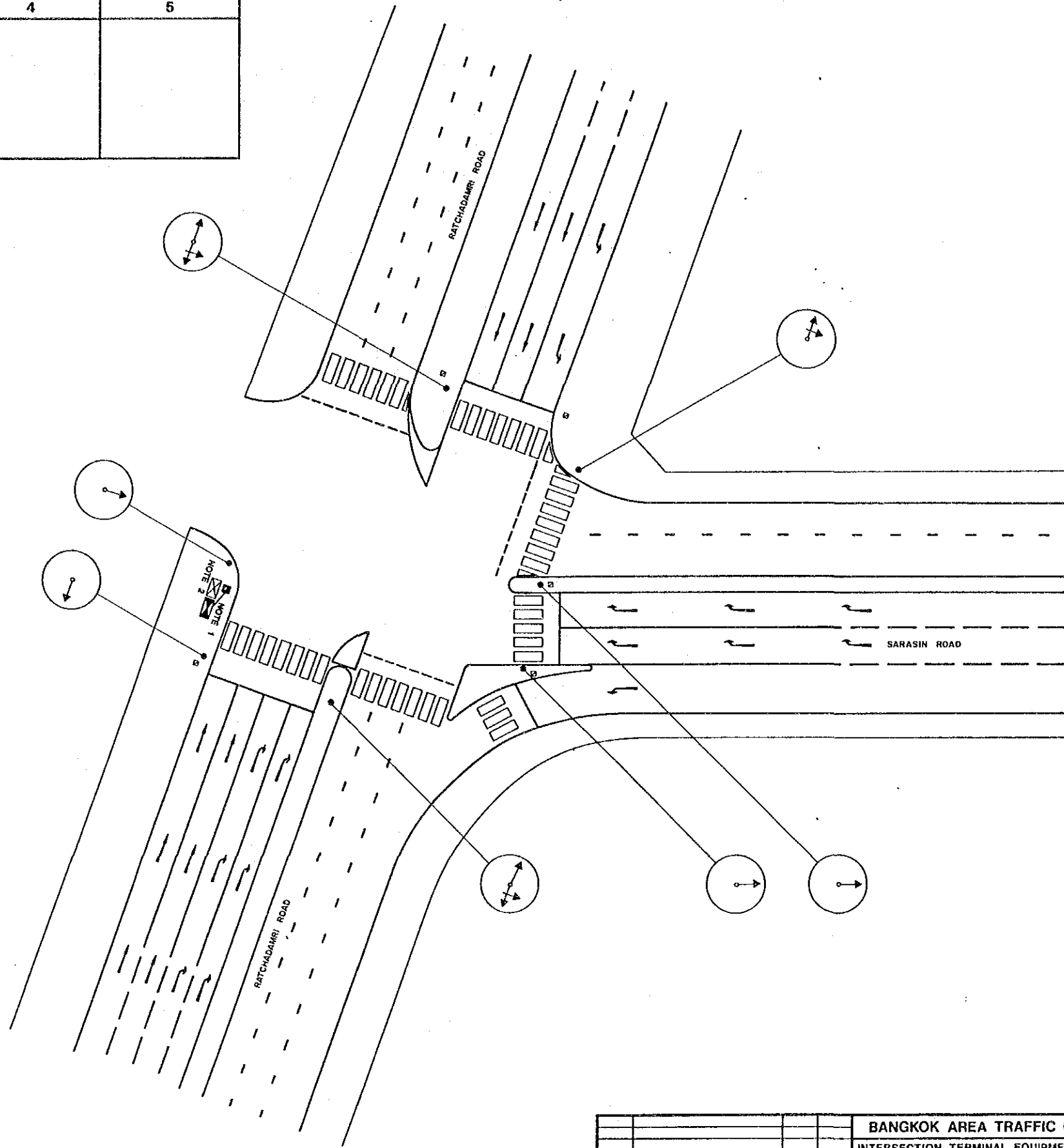


NOTE 1, NOTE 2



BANGKOK AREA TRAFFIC CONTROL SYSTEM PROJECT : STAGE I			
INTERSECTION TERMINAL EQUIPMENT LAYOUT PLAN		Submitted By :	Approved By :
RATCHADAPHISEK - ASOK DIN DAENG RAMA IX		Juro Kadara JICA Study Team Leader	Boonyawat Tiptus BMA Study Team Leader
INTERSECTION NO 194		Designed By :	Checked By :
		Yosue Maheshima JICA Study Member	YED, BMA
Associated Plan No. :	JICA Japan International Cooperation Agency	BMA Bangkok Metropolitan Administration	Scale 1 / 250 Date SEPTEMBER '90
			Drawing NO 2194 Total 110 / 139

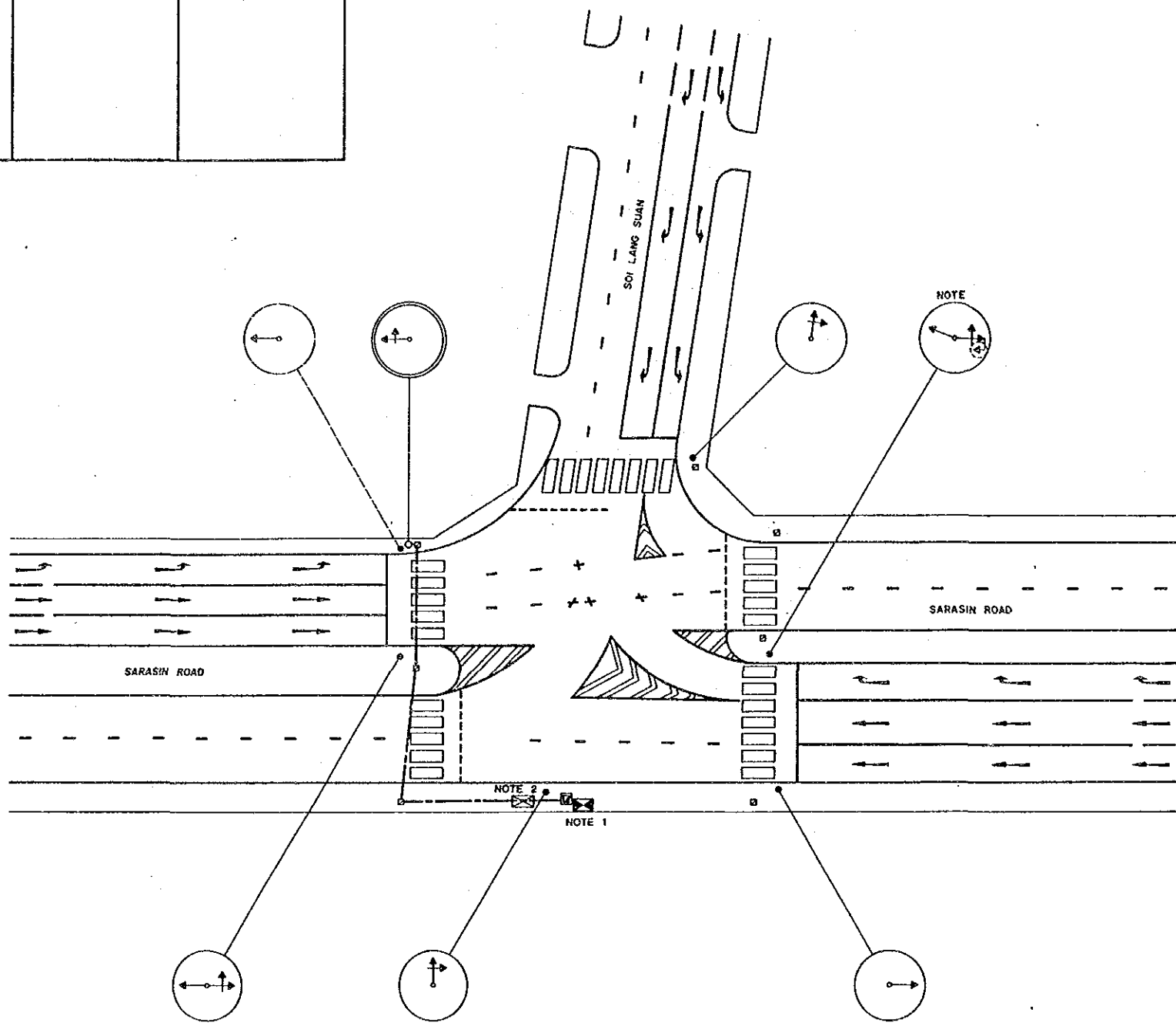
PHASE PLAN FOR AUTOMATIC SEQUENCE				
1	2	3	4	5



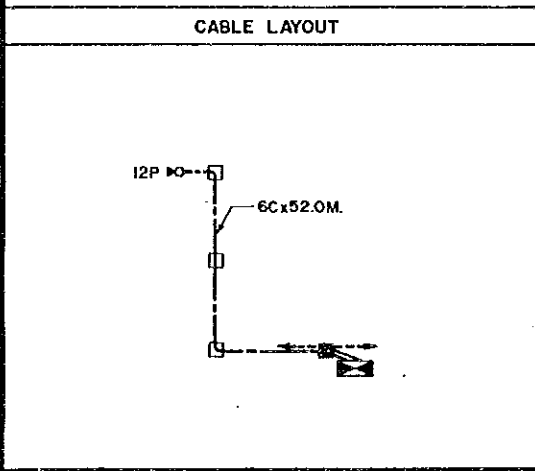
Intersection Equipments List		
Intersection No. 196		
ITEM	Name of Equipment	Qty.
1	Local Controller	1
2	Railroad Pre-emption Control Unit	-
3	Pedestrian Push Button Interface Unit	-
4	Solid State Relay Unit	2
5	Pre-Processor of Detector Pulse	1
6	Supply Power Switch Box with Power Breaker	-
7	TOT Line Box	1
8	Remove Existing Controller	1
9	Signal Pole Type A	-
10	Signal Pole Type B	-
11	Signal Pole Type C	-
12	Signal Pole Type D	-
13	Terminal 12 p	-
14	Terminal 20 p	-
15	Signal Head 3 Aspects (200mm x 3)	-
16	Signal Head 3 Aspects (200mm x 2, 300mm x 1)	-
17	Signal Head 3 Aspects (300mm x 3)	-
18	Signal Head 4 Aspects (200mm x 3, 300mm x 1)	-
19	Signal Head 4 Aspects (200mm x 2, 300mm x 2)	-
20	Signal Head 4 Aspects (300mm x 4)	-
21	Signal Head 6 Aspects (200mm x 4, 300mm x 2)	-
22	Signal Head 8 Aspects (300mm x 6)	-
23	Signal Head Pedestrian	-
24	Lantern Arrow Mask	-
25	Target Board for 3 Aspects	-
26	Target Board for 4 Aspects	-
27	Target Board for 6 Aspects	-
28	PVC Conduit 100 mm (4")	8
29	Steel Conduit 100 mm (4")	-
30	Steel Conduit 39 mm	-
31	Steel Conduit 28 mm	5
32	Install Conduit under Asphalt Pavement	-
33	Install Conduit under Concrete Pavement or Sidewalk	8
34	Install Conduit under Flat	-
35	Install Conduit on Fluser Support Pole	5
36	Handhole Type C	-
37	Handhole Type D	1
38	Signal Cable 6C (2 sq.mm)	-
39	Signal Cable 8C (2 sq.mm)	-
40	Signal Cable 12C (2 sq.mm)	-
41	Signal Cable 20C (2 sq.mm)	8
42	Power Cable	5
43	Cable Splicing Kit	1
44	Remove Existing Signal Post and Heads (Blat-arm Type)	-
45	Remove Existing Signal Post and Heads (Pedestal Type)	-
46	Remove Existing Signal Head	-
47	Remove Existing Arrow Mask	-
48	Remove Pedestrian Push Button	-
49	TOT Line (CPV, 0.65mm, 1P)	20
50	Grounding Rod	1
51	Grounding Cable (RV 5.5 sq.mm x 1c)	6

BANGKOK AREA TRAFFIC CONTROL SYSTEM PROJECT : STAGE I			
INTERSECTION TERMINAL EQUIPMENT LAYOUT PLAN		Submitted By : Juro Kodera JICA Study Team Leader	Approved By : Boonswat Tiplua BMA Study Team Leader
SARASIN - RATCHADAMRI		Designed By : Yano Kobashima JICA Study Member	Checked By : TED, BMA
INTERSECTION NO 196		Scale 1 / 250	Drawing No 2196
Code	Revision	Date	Initial
Associated Plan No. :		JICA Japan International Cooperation Agency	BMA Bangkok Metropolitan Administration
		Date SEPTEMBER '90	Total III / 139

PHASE PLAN FOR AUTOMATIC SEQUENCE				
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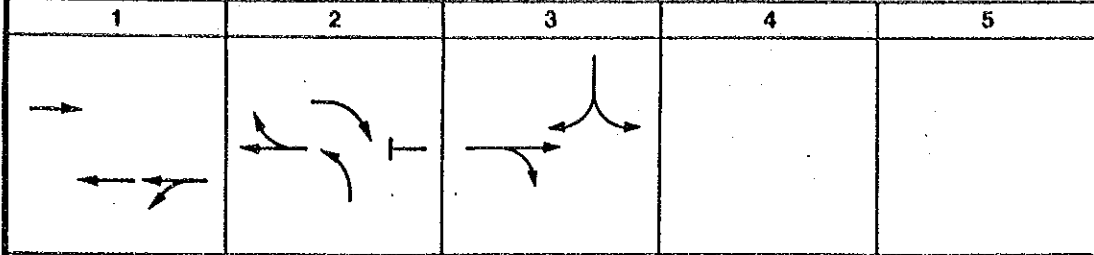


Intersection Equipments List		
Intersection No. 197		
ITEM	Name of Equipment	Qty.
1	Local Controller	-
2	Railroad Pre-emption Control Unit	-
3	Pedestrian Push Button Interface Unit	-
4	Solid State Relay Unit	2
5	Pri-Processor of Detector Pulse	-
6	Supply Power Switch Box with Power Breaker	-
7	TOT Line Box	1
8	Remove Existing Controller	-
9	Signal Pole Type A	-
10	Signal Pole Type B	-
11	Signal Pole Type C	1
12	Signal Pole Type D	-
13	Terminal 12 p	1
14	Terminal 20 p	-
15	Signal Head 3 Aspects (200mm x 3)	-
16	Signal Head 3 Aspects (200mm x 2, 300mm x 1)	-
17	Signal Head 3 Aspects (300mm x 3)	-
18	Signal Head 4 Aspects (200mm x 3, 300mm x 1)	1
19	Signal Head 4 Aspects (200mm x 2, 300mm x 2)	-
20	Signal Head 4 Aspects (300mm x 4)	-
21	Signal Head 6 Aspects (200mm x 4, 300mm x 2)	-
22	Signal Head 6 Aspects (300mm x 6)	-
23	Signal Head Pedestrian	-
24	Lantern Arrow Mast	1
25	Target Board for 3 Aspects	-
26	Target Board for 4 Aspects	1
27	Target Board for 6 Aspects	-
28	PVC Conduit 100 mm (4")	44
29	Steel Conduit 100 mm (4")	-
30	Steel Conduit 39 mm	-
31	Steel Conduit 28 mm	6
32	Install Conduit under Asphalt Pavement	-
33	Install Conduit under Concrete Pavement or Sidewalk	44
34	Install Conduit under R/L	-
35	Install Conduit on Riser Support Pole	6
36	Handhole Type C	-
37	Handhole Type D	1
38	Signal Cable 6c (2 sq. mm)	52
39	Signal Cable 8c (2 sq. mm)	-
40	Signal Cable 12c (2 sq. mm)	-
41	Signal Cable 20c (2 sq. mm)	3
42	Power Cable	5
43	Cable Splicing Kit	1
44	Remove Existing Signal Post and Heads (Lantern Type)	-
45	Remove Existing Signal Post and Heads (Pedestal Type)	1
46	Remove Existing Signal Head	-
47	Remove Existing Arrow Mast	-
48	Remove Pedestrian Push Button	-
49	TOT Line (CPV, 0.65mm, 1P)	20
50	Grounding Rod	1
51	Grounding Cable (V 5.5 sq. mm x 1c)	5

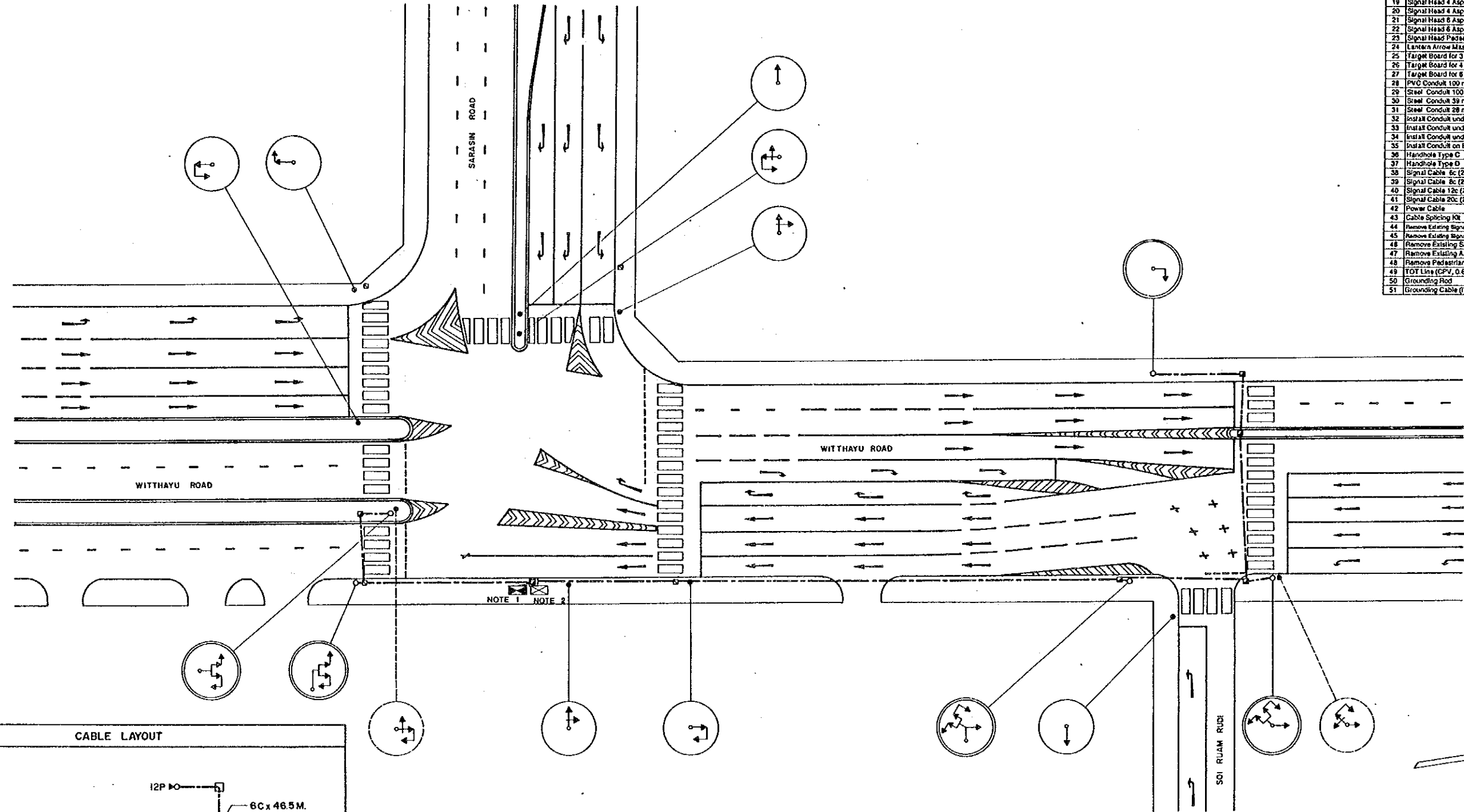


BANGKOK AREA TRAFFIC CONTROL SYSTEM PROJECT : STAGE I			
INTERSECTION TERMINAL EQUIPMENT LAYOUT PLAN		Submitted By :	Approved By :
SARASIN - SOI LANG SUAN		Juro Kedara JICA Study Team Leader	Boonyawal Tiplue BMA Study Team Leader
INTERSECTION NO 197		Designed By :	Checked By :
		Yusoo Neeakham JICA Study Member	TED, BMA
Code	Revision	Date	Initial
Associated Plan No. :		JICA	BMA
		Japan International Cooperation Agency	Bangkok Metropolitan Administration
		Scale	Drawing NO
		1 / 250	2197
		Date	Total
		SEPTEMBER '90	112 / 139

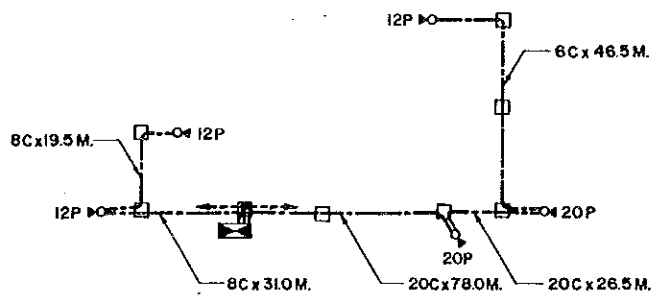
PHASE PLAN FOR AUTOMATIC SEQUENCE



Intersection Equipments List		
Intersection No. 198		
ITEM	Name of Equipment	Qty.
1	Local Controller	1
2	Railroad Pre-emption Control Unit	-
3	Pedestrian Push Button Interface Unit	-
4	Solid State Relay Unit	3
5	Pre-Processor of Detector Pulse	1
6	Supply Power Switch Box with Power Breaker	-
7	TOT Line Box	1
8	Remove Existing Controller	1
9	Signal Pole Type A	3
10	Signal Pole Type B	2
11	Signal Pole Type C	-
12	Signal Pole Type D	-
13	Terminal 12 p	3
14	Terminal 20 p	2
15	Signal Head 3 Aspects (200mm x 3)	2
16	Signal Head 3 Aspects (200mm x 2, 300mm x 1)	-
17	Signal Head 3 Aspects (300mm x 3)	1
18	Signal Head 4 Aspects (200mm x 3, 300mm x 1)	-
19	Signal Head 4 Aspects (200mm x 2, 300mm x 2)	-
20	Signal Head 4 Aspects (300mm x 4)	-
21	Signal Head 6 Aspects (200mm x 4, 300mm x 2)	2
22	Signal Head 6 Aspects (300mm x 6)	2
23	Signal Head Pedestrian	-
24	Lantern Arrow Mask	-
25	Target Board for 3 Aspects	2
26	Target Board for 4 Aspects	-
27	Target Board for 6 Aspects	2
28	PVC Conduit 100 mm (4")	153.6
29	Steel Conduit 100 mm (4")	-
30	Steel Conduit 39 mm	-
31	Steel Conduit 28 mm	5
32	Install Conduit under Asphalt Pavement	-
33	Install Conduit under Concrete Pavement or Sidewalk	153.6
34	Install Conduit under Rail	-
35	Install Conduit on Pylon Support Pole	5
36	Handhole Type C	5
37	Handhole Type D	1
38	Signal Cable 8c (2 sq. mm)	48.5
39	Signal Cable 8c (2 sq. mm)	50.5
40	Signal Cable 12c (2 sq. mm)	-
41	Signal Cable 20c (2 sq. mm)	104.5
42	Power Cable	5
43	Cable Splicing Kit	1
44	Remove Existing Signal Post and Heads (Max-arm Type)	-
45	Remove Existing Signal Post and Heads (Pedestrian Type)	2
46	Remove Existing Signal Head	-
47	Remove Existing Arrow Mask	-
48	Remove Pedestrian Push Button	-
49	TOT Line (CPV, 0.65mm, 1P)	20
50	Grounding Rod	1
51	Grounding Cable (IV 5.5 sq. mm x 1c)	5

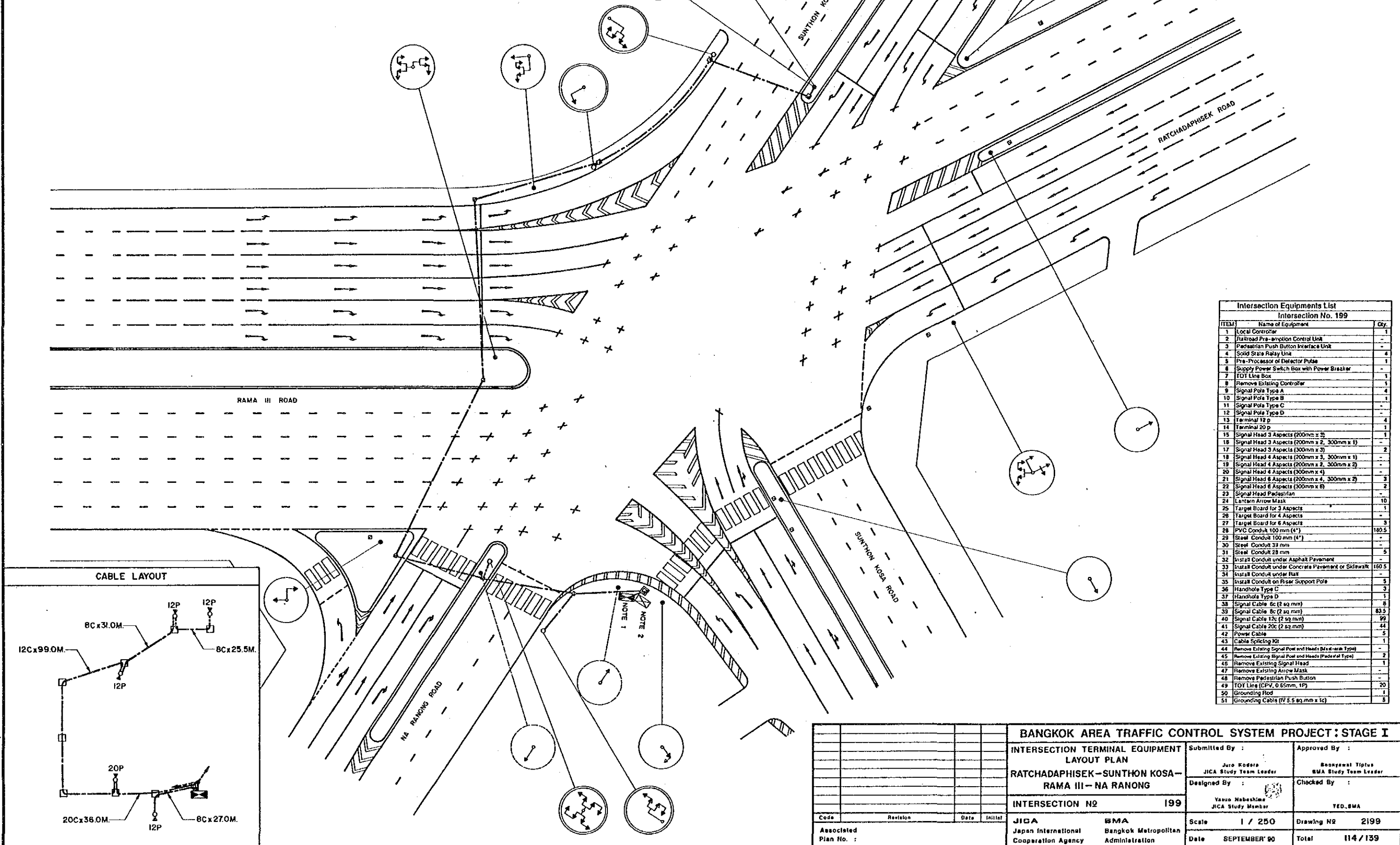
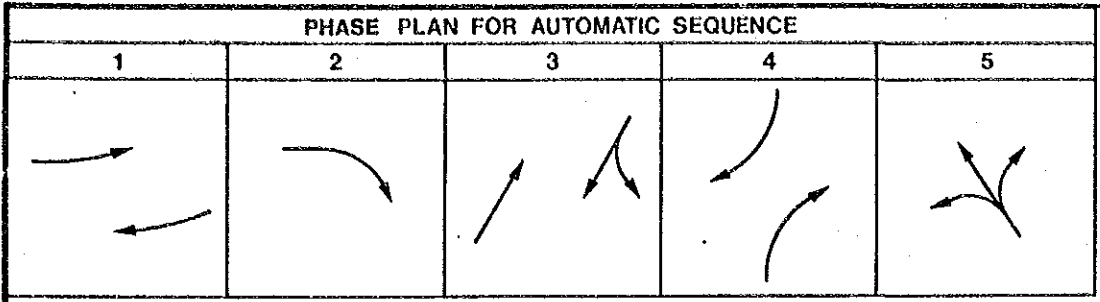


CABLE LAYOUT



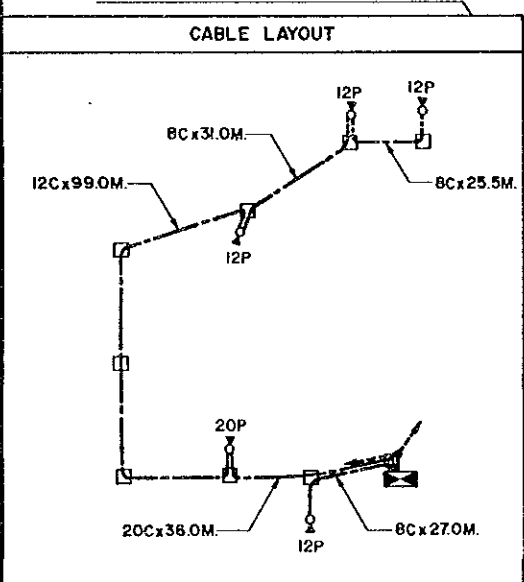
NOTE 1  
NOTE 2

BANGKOK AREA TRAFFIC CONTROL SYSTEM PROJECT : STAGE I			
INTERSECTION TERMINAL EQUIPMENT LAYOUT PLAN		Submitted By :	Approved By :
SARASIN - WITTHAYU - SOI RUAM RUDI		Juro Kodera JICA Study Team Leader	Boonyarat Tiptus BMA Study Team Leader
INTERSECTION NO 198		Designed By :	Checked By :
		Yasuo Mubashimi JICA Study Member	TED, BMA
Code	Revision	Date	Initial
Associated Plan No. :	JICA	BMA	Scale 1 / 250
	Japan International Cooperation Agency	Bangkok Metropolitan Administration	Drawing NO 2198
			Date SEPTEMBER '90
			Total 113 / 139



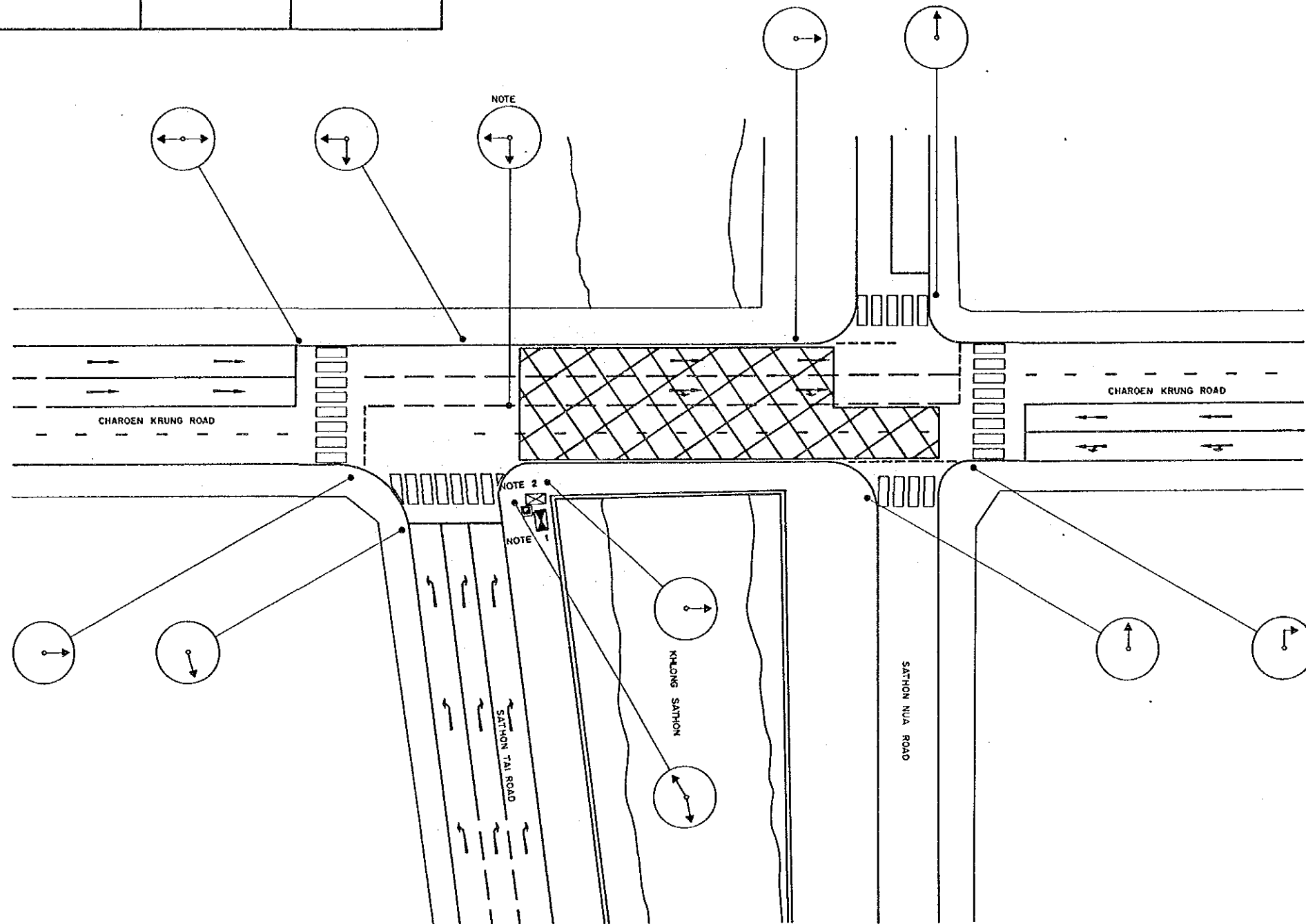
**Intersection Equipments List**  
Intersection No. 199

ITEM	Name of Equipment	Qty.
1	Local Controller	1
2	Railroad Pre-emption Control Unit	-
3	Pedestrian Push Button Interface Unit	-
4	Solid State Relay Unit	4
5	Pre-Processor of Detector Pulse	1
6	Supply Power Switch Box with Power Breaker	-
7	TOT Line Box	1
8	Remove Existing Controller	1
9	Signal Pole Type A	4
10	Signal Pole Type B	1
11	Signal Pole Type C	-
12	Signal Pole Type D	-
13	Terminal 32 p	4
14	Terminal 20 p	1
15	Signal Head 3 Aspects (200mm x 2)	1
16	Signal Head 3 Aspects (200mm x 2, 300mm x 1)	-
17	Signal Head 3 Aspects (300mm x 3)	2
18	Signal Head 4 Aspects (200mm x 3, 300mm x 1)	-
19	Signal Head 4 Aspects (200mm x 2, 300mm x 2)	-
20	Signal Head 4 Aspects (300mm x 4)	-
21	Signal Head 6 Aspects (200mm x 4, 300mm x 2)	3
22	Signal Head 6 Aspects (300mm x 6)	2
23	Signal Head Pedestrian	-
24	Lantern Arrow Mask	10
25	Target Board for 3 Aspects	1
26	Target Board for 4 Aspects	-
27	Target Board for 6 Aspects	3
28	PVC Conduit 100 mm (4")	180.5
29	Steel Conduit 100 mm (4")	-
30	Steel Conduit 33 mm	-
31	Steel Conduit 28 mm	5
32	Install Conduit under Asphalt Pavement	-
33	Install Conduit under Concrete Pavement or Sidewalk	160.5
34	Install Conduit under Rail	-
35	Install Conduit on Piler Support Pole	5
36	Handhole Type C	3
37	Handhole Type D	1
38	Signal Cable 6c (2 sq mm)	8
39	Signal Cable 8c (2 sq mm)	83.5
40	Signal Cable 12c (2 sq mm)	99
41	Signal Cable 20c (2 sq mm)	44
42	Power Cable	5
43	Cable Splicing Kit	1
44	Remove Existing Signal Pole and Head (Steel-arm Type)	-
45	Remove Existing Signal Pole and Head (Pederal Type)	2
46	Remove Existing Signal Head	1
47	Remove Existing Arrow Mask	-
48	Remove Existing Pedestrian Push Button	-
49	TOT Line (CPV, 0.65mm, 1P)	20
50	Grounding Rod	1
51	Grounding Cable (IV 5.5 sq mm x 1c)	8

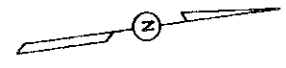


BANGKOK AREA TRAFFIC CONTROL SYSTEM PROJECT : STAGE I			
INTERSECTION TERMINAL EQUIPMENT LAYOUT PLAN			
RATCHADAPHISEK-SUNTHON KOSA-RAMA III-NA RANONG			
INTERSECTION N2		199	
Code	Revision	Date	Initial
Associated Plan No. :		JICA	BMA
		Japan International	Bangkok Metropolitan
		Cooperation Agency	Administration
Submitted By :		Juro Kodera	Boonyawat Tiptus
		JICA Study Team Leader	BMA Study Team Leader
Designed By :		Yasuo Nabeshima	Checked By :
		JICA Study Member	TED, BMA
Scale		1 / 250	Drawing No
Date		SEPTEMBER '90	Total
			114 / 139

PHASE PLAN FOR AUTOMATIC SEQUENCE				
1	2	3	4	5



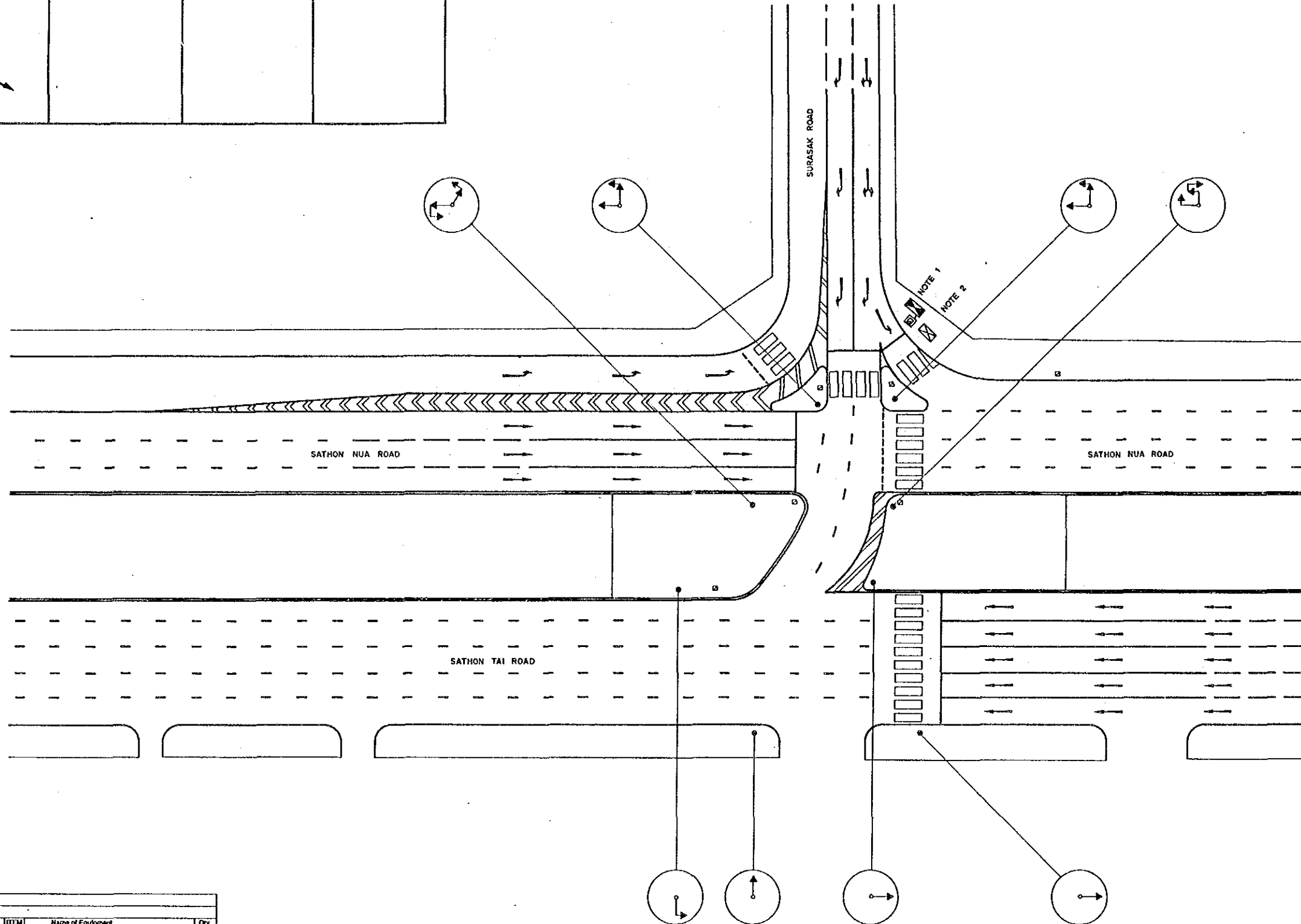
Intersection Equipments List		
Intersection No. 214		
ITEM	Name of Equipment	Qty.
1	Local Controller	1
2	Railroad Pre-emption Control Unit	-
3	Pedestrian Push Button Interface Unit	-
4	Solid State Relay Unit	2
5	Pre-Processor of Detector Pulse	1
6	Supply Power Switch Box with Power Breaker	-
7	TOT Line Box	1
8	Remove Existing Controller	1
9	Signal Pole Type A	-
10	Signal Pole Type B	-
11	Signal Pole Type C	-
12	Signal Pole Type D	-
13	Terminal 12 p	-
14	Terminal 23 p	-
15	Signal Head 3 Aspects (200mm x 3)	-
16	Signal Head 3 Aspects (200mm x 2, 300mm x 1)	-
17	Signal Head 3 Aspects (300mm x 3)	-
18	Signal Head 4 Aspects (200mm x 3, 300mm x 1)	-
19	Signal Head 4 Aspects (200mm x 2, 300mm x 2)	-
20	Signal Head 4 Aspects (300mm x 4)	-
21	Signal Head 6 Aspects (200mm x 4, 300mm x 2)	-
22	Signal Head 6 Aspects (300mm x 6)	-
23	Signal Head Pedestrian	-
24	Lantern Arrow Mask	-
25	Target Board for 3 Aspects	-
26	Target Board for 4 Aspects	-
27	Target Board for 6 Aspects	-
28	PVC Conduit 100 mm (4")	6
29	Steel Conduit 100 mm (4")	-
30	Steel Conduit 38 mm	-
31	Steel Conduit 25 mm	-
32	Install Conduit under Asphalt Pavement	-
33	Install Conduit under Concrete Pavement or Sidewalk	8
34	Install Conduit under Rail	-
35	Install Conduit on Riser Support Pole	5
36	Handhole Type C	-
37	Handhole Type D	1
38	Signal Cable 6c (2 sq mm)	-
39	Signal Cable 8c (2 sq mm)	-
40	Signal Cable 12c (2 sq mm)	-
41	Signal Cable 20c (2 sq mm)	8
42	Power Cable	5
43	Cable Splicing Kit	1
44	Remove Existing Signal Post and Heads (4-arm Type)	-
45	Remove Existing Signal Post and Heads (Pedestrian Type)	-
46	Remove Existing Signal Head	-
47	Remove Existing Arrow Mask	-
48	Remove Pedestrian Push Button	-
49	TOT Line (C/PV, 0.65mm, 1P)	20
50	Grounding Rod	1
51	Grounding Cable (TV 5.5 sq mm x 1c)	5



BANGKOK AREA TRAFFIC CONTROL SYSTEM PROJECT : STAGE I			
INTERSECTION TERMINAL EQUIPMENT LAYOUT PLAN		Submitted By : Jiro Kodera JICA Study Team Leader	Approved By : Boonyawat Tiptua BMA Study Team Leader
SATHON-CHAROEN KRUNG		Designed By : Yasuo Nabeshima JICA Study Member	Checked By : TED, BMA
INTERSECTION NO 214		Scale 1 / 250	Drawing NO 2214
Code	Revision	Date	Initial
Associated Plan No. :		JICA Japan International Cooperation Agency	BMA Bangkok Metropolitan Administration
		Date SEPTEMBER '80	Total 115 / 139

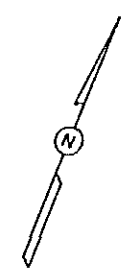
PHASE PLAN FOR AUTOMATIC SEQUENCE

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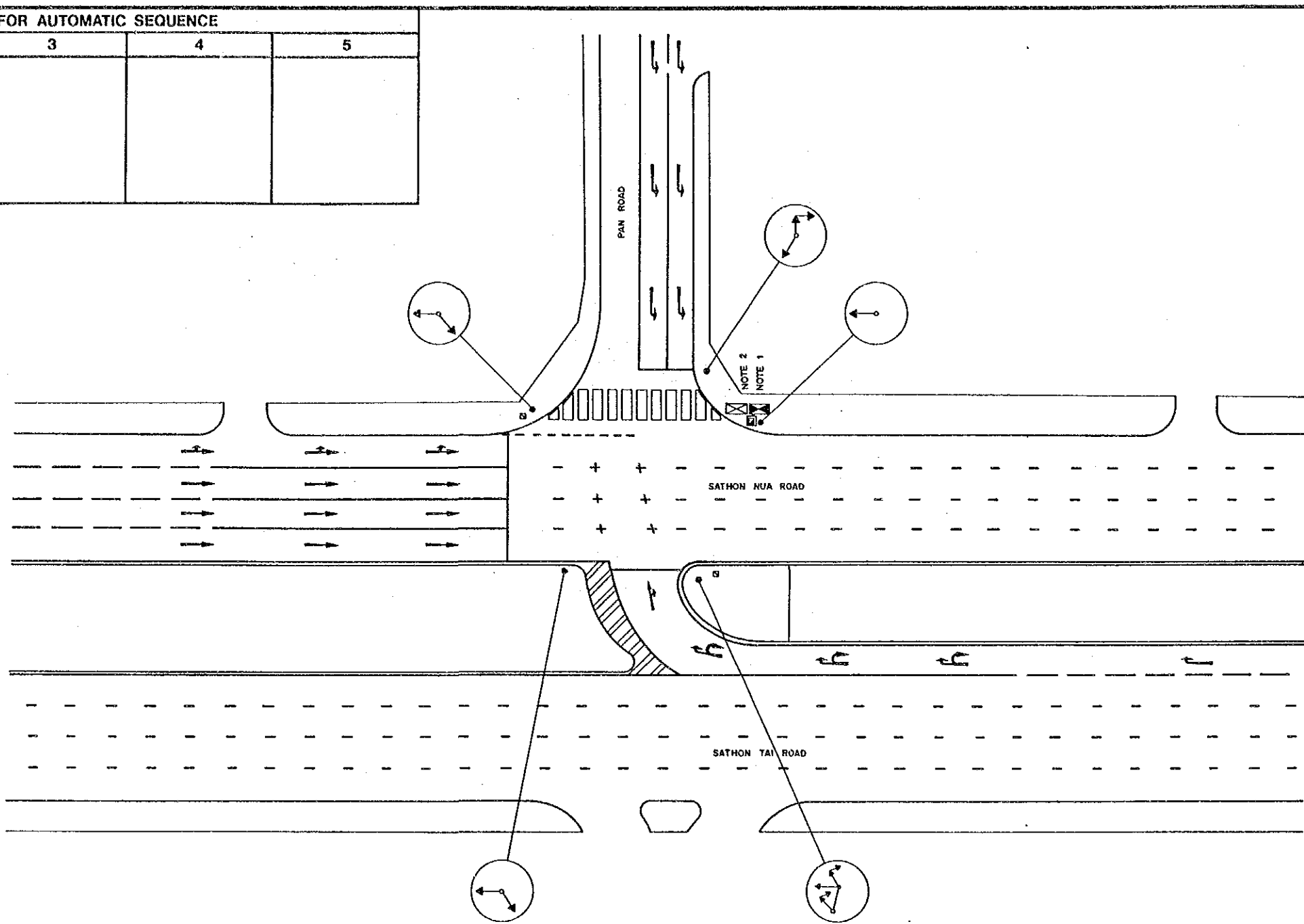


Intersection Equipments List					
Intersection No. 215					
ITEM	Name of Equipment	Qty	ITEM	Name of Equipment	Qty
1	Local Controller	1	27	Target Board for 6 Aspects	-
2	Railroad Pre-emption Control Unit	-	28	PVC Conduit 100 mm (4")	8
3	Pedestrian Push Button Interface Unit	-	29	Steel Conduit 100 mm (4")	-
4	Solid State Relay Unit	2	30	Steel Conduit 39 mm	-
5	Pre-Processor of Detector Pulse	-	31	Steel Conduit 28 mm	5
6	Supply Power Switch Box with Power Breaker	-	32	Install Conduit under Asphalt Pavement	-
7	TOT Line Box	1	33	Install Conduit under Concrete Pavement or Sidewalk	8
8	Remove Existing Controller	-	34	Install Conduit under Road	-
9	Signal Pole Type A	-	35	Install Conduit on Riser Support Pole	5
10	Signal Pole Type B	-	36	Handhole Type C	-
11	Signal Pole Type C	-	37	Handhole Type D	-
12	Signal Pole Type D	-	38	Signal Cable 6c (2 sq.mm)	-
13	Terminal 12 p	-	39	Signal Cable 6c (2 sq.mm)	-
14	Terminal 20 p	-	40	Signal Cable 12c (2 sq.mm)	8
15	Signal Head 3 Aspects (200mm x 3)	-	41	Signal Cable 20c (2 sq.mm)	-
16	Signal Head 3 Aspects (200mm x 2, 300mm x 1)	-	42	Power Cable	5
17	Signal Head 3 Aspects (200mm x 3)	-	43	Cable Splicing Kit	1
18	Signal Head 4 Aspects (200mm x 3, 300mm x 1)	-	44	Remove Existing Signal Post and Heads (Mid-arm Type)	-
19	Signal Head 4 Aspects (200mm x 2, 300mm x 2)	-	45	Remove Existing Signal Post and Heads (Pedestal Type)	-
20	Signal Head 4 Aspects (300mm x 4)	-	46	Remove Existing Signal Head	-
21	Signal Head 8 Aspects (300mm x 4, 300mm x 2)	-	47	Remove Existing Arrow Mask	-
22	Signal Head 8 Aspects (200mm x 4)	-	48	Remove Pedestrian Push Button	-
23	Signal Head Pedestrian	-	49	TOT Line (CPV, 0.65mm, 1P)	20
24	Lantern Arrow Mask	-	50	Grounding Rod	1
25	Target Board for 3 Aspects	-	51	Grounding Cable (TV 5.5 sq.mm x 1c)	5
26	Target Board for 4 Aspects	-			

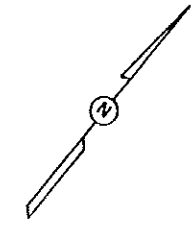
BANGKOK AREA TRAFFIC CONTROL SYSTEM PROJECT : STAGE I			
INTERSECTION TERMINAL EQUIPMENT LAYOUT PLAN			
SATHON NUA-SURASAK			
INTERSECTION NO		215	
Code	Revision	Date	Initial
Associated Plan No. :		JICA	BMA
		Japan International Cooperation Agency	Bangkok Metropolitan Administration
Submitted By :		Approved By :	
Jira Kedra JICA Study Team Leader		Boonyawat Tiplua BMA Study Team Leader	
Designed By :		Checked By :	
Yasue Hebehtina JICA Study Member		TED, BMA	
Scale		Drawing NR	
1 / 250		2215	
Date		Total	
SEPTEMBER '90		116 / 139	



PHASE PLAN FOR AUTOMATIC SEQUENCE				
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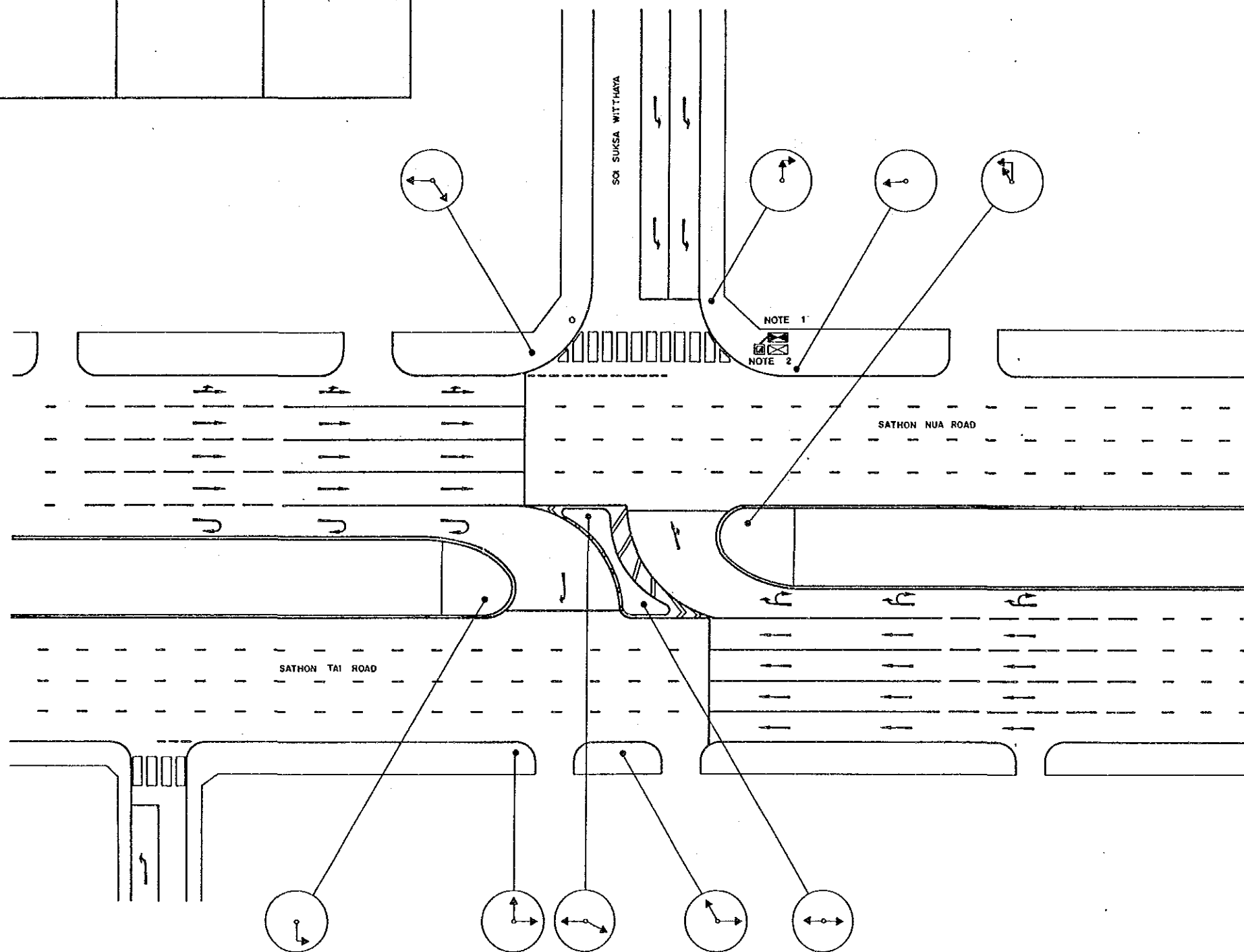
Intersection Equipments List		
Intersection No. 217		
ITEM	Name of Equipment	Qty.
1	Local Controller	1
2	Roadside Pre-emption Control Unit	-
3	Pedestrian Push Button Interface Unit	-
4	Solid State Relay Unit	2
5	Pre-Processor of Detector Pulse	1
6	Supply Power Switch Box with Power Breaker	-
7	TOT Line Box	1
8	Remove Existing Controller	1
9	Signal Pole Type A	-
10	Signal Pole Type B	-
11	Signal Pole Type C	-
12	Signal Pole Type D	-
13	Terminal 12 p	-
14	Terminal 20 p	-
15	Signal Head 3 Aspects (200mm x 3)	-
16	Signal Head 3 Aspects (200mm x 2, 300mm x 1)	-
17	Signal Head 3 Aspects (300mm x 3)	-
18	Signal Head 4 Aspects (200mm x 3, 300mm x 1)	-
19	Signal Head 4 Aspects (200mm x 2, 300mm x 2)	-
20	Signal Head 4 Aspects (300mm x 4)	-
21	Signal Head 6 Aspects (200mm x 4, 300mm x 2)	-
22	Signal Head 6 Aspects (300mm x 6)	-
23	Signal Head Pedestrian	-
24	Lantern Arrow Mast	-
25	Target Board for 3 Aspects	-
26	Target Board for 4 Aspects	-
27	Target Board for 6 Aspects	-
28	PVC Conduit 100 mm (4")	6
29	Steel Conduit 100 mm (4")	-
30	Steel Conduit 39 mm	-
31	Steel Conduit 28 mm	5
32	Install Conduit under Asphalt Pavement	-
33	Install Conduit under Concrete Pavement or Sidewalk	8
34	Install Conduit under Road	-
35	Install Conduit on Riser Support Pole	5
36	Handhole Type C	-
37	Handhole Type D	1
38	Signal Cable 6c (2 sq mm)	-
39	Signal Cable 6c (2 sq mm)	-
40	Signal Cable 12c (2 sq mm)	-
41	Signal Cable 20c (2 sq mm)	8
42	Power Cable	5
43	Cable Splicing Kit	1
44	Remove Existing Signal Post and Heads (Main-arm Type)	-
45	Remove Existing Signal Post and Heads (Pedestrian Type)	-
46	Remove Existing Signal Head	-
47	Remove Existing Arrow Mast	-
48	Remove Pedestrian Push Button	-
49	TOT Line (CPV, 0.65mm, 1P)	20
50	Grounding Rod	1
51	Grounding Cable (IV 5.5 sq mm x 1c)	5



BANGKOK AREA TRAFFIC CONTROL SYSTEM PROJECT : STAGE I							
INTERSECTION TERMINAL EQUIPMENT LAYOUT PLAN				Submitted By :	Approved By :		
SATHON NUA - PAN				Juro Nadea JICA Study Team Leader	Boonyawit Tiptua BMA Study Team Leader		
				Designed By :	Checked By :		
INTERSECTION NO 217				Yasuo Mabeshima JICA Study Member	TFD, BMA		
Code	Revision	Date	Initial	JICA	BMA	Scale	1 / 250
Associated Plan No. :				Japan International Cooperation Agency	Bangkok Metropolitan Administration	Date	SEPTEMBER '90
						Drawing NO	2217
						Total	117 / 139



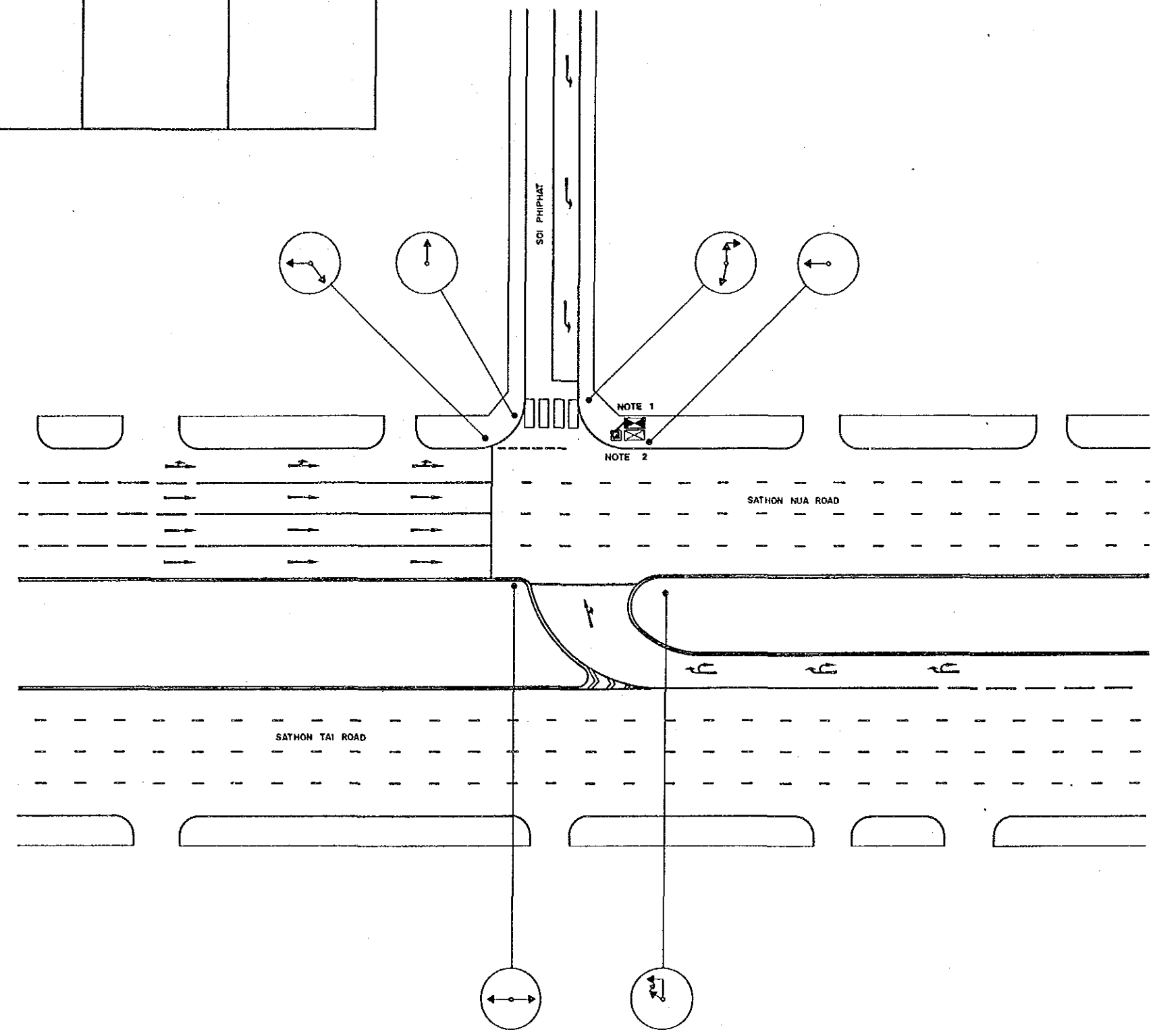
PHASE PLAN FOR AUTOMATIC SEQUENCE				
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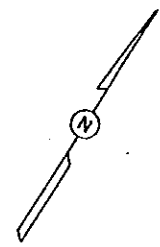
Intersection Equipments List		
Intersection No. 219		
ITEM	Name of Equipment	Qty.
1	Local Controller	1
2	Railroad Pre-emption Control Unit	-
3	Pedestrian Push Button Interface Unit	-
4	Solid State Relay Unit	-
5	Pre-Processor of Detector Pulse	3
6	Supply Power Switch Box with Power Breaker	-
7	TOT Line Box	1
8	Remove Existing Controller	1
9	Signal Pole Type A	-
10	Signal Pole Type B	-
11	Signal Pole Type C	-
12	Signal Pole Type D	-
13	Terminal 12g	-
14	Terminal 20g	-
15	Signal Head 3 Aspects (200mm x 3)	-
16	Signal Head 3 Aspects (200mm x 2, 300mm x 1)	-
17	Signal Head 3 Aspects (300mm x 3)	-
18	Signal Head 4 Aspects (200mm x 3, 300mm x 1)	-
19	Signal Head 4 Aspects (200mm x 2, 300mm x 2)	-
20	Signal Head 4 Aspects (300mm x 4)	-
21	Signal Head 6 Aspects (200mm x 4, 300mm x 2)	-
22	Signal Head 6 Aspects (300mm x 6)	-
23	Signal Head Pedestrian	-
24	Lantern Arrow Mask	-
25	Target Board for 3 Aspects	-
26	Target Board for 4 Aspects	-
27	Target Board for 6 Aspects	-
28	PVC Conduit 100 mm (4")	6
29	Steel Conduit 100 mm (4")	-
30	Steel Conduit 39 mm	-
31	Steel Conduit 28 mm	5
32	Install Conduit under Asphalt Pavement	-
33	Install Conduit under Concrete Pavement or Sidewalk	6
34	Install Conduit under Rail	-
35	Install Conduit on Riser Support Pole	5
36	Handhole Type C	-
37	Handhole Type D	1
38	Signal Cable 6c (2 sq mm)	-
39	Signal Cable 8c (2 sq mm)	-
40	Signal Cable 12c (2 sq mm)	-
41	Signal Cable 20c (2 sq mm)	8
42	Power Cable	5
43	Cable Splicing Kit	1
44	Remove Existing Signal Post and Head (Pole-arm Type)	-
45	Remove Existing Signal Post and Head (Pedestal Type)	-
46	Remove Existing Signal Head	-
47	Remove Existing Arrow Mask	-
48	Remove Pedestrian Push Button	-
49	TOT Line (CPV, 0.65mm, 1P)	20
50	Grounding Rod	1
51	Grounding Cable (V 5.5 sq mm x 1c)	5

BANGKOK AREA TRAFFIC CONTROL SYSTEM PROJECT : STAGE I			
INTERSECTION TERMINAL EQUIPMENT LAYOUT PLAN		Submitted By :	Approved By :
SATHON - SOI SUKSA WITTHAYA (BANG RAK HOSPITAL)		Jure Kudra JICA Study Team Leader	Boonyawat Tiptus BMA Study Team Leader
INTERSECTION NO 219		Designed By :	Checked By :
		Tatoo Nabeshina JICA Study Member	TED_BMA
Code	Revision	Date	Initial
Associated Plan No. :	JICA BMA Japan International Bangkok Metropolitan Cooperation Agency Administration		Scale 1 / 250 Drawing No 2219
		Date SEPTEMBER '90	Total 118 / 139

PHASE PLAN FOR AUTOMATIC SEQUENCE				
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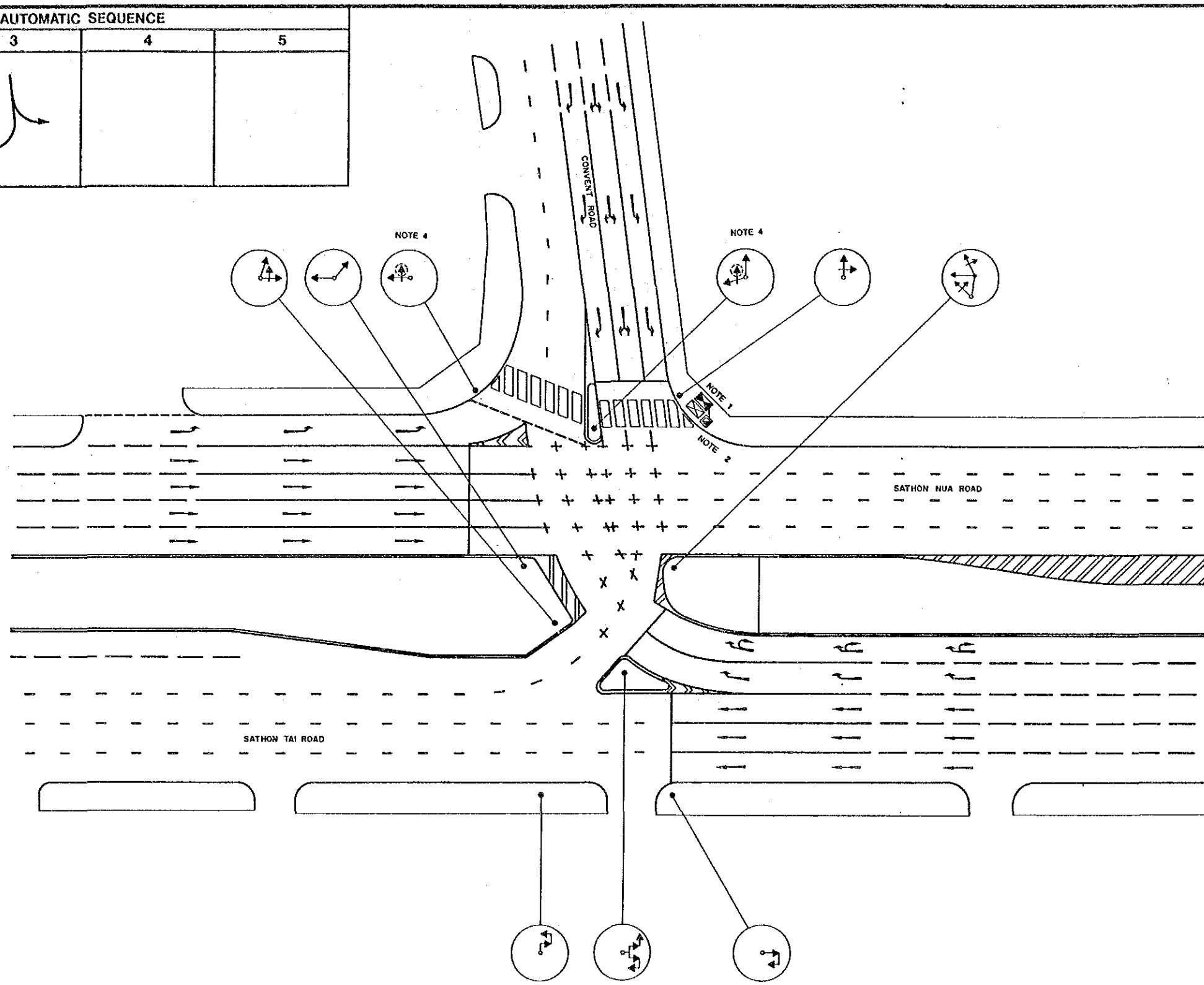


Intersection Equipments List		
Intersection No. 221		
ITEM	Name of Equipment	Qty.
1	Local Controller	1
2	Railroad Pre-emption Control Unit	-
3	Pedestrian Push Button Interface Unit	-
4	Solid State Relay Unit	2
5	Pie-Processor of Detector Pulse	-
6	Supply Power Switch Box with Power Breaker	-
7	TOT Line Box	1
8	Remove Existing Controller	1
9	Signal Pole Type A	-
10	Signal Pole Type B	-
11	Signal Pole Type C	-
12	Signal Pole Type D	-
13	Terminal 12 p	-
14	Terminal 20 p	-
15	Signal Head 3 Aspects (200mm x 3)	-
16	Signal Head 3 Aspects (200mm x 2, 300mm x 1)	-
17	Signal Head 3 Aspects (300mm x 3)	-
18	Signal Head 4 Aspects (200mm x 3, 300mm x 1)	-
19	Signal Head 4 Aspects (200mm x 2, 300mm x 2)	-
20	Signal Head 4 Aspects (300mm x 4)	-
21	Signal Head 6 Aspects (200mm x 4, 300mm x 2)	-
22	Signal Head 6 Aspects (300mm x 6)	-
23	Signal Head Pedestrian	-
24	Lantern Arrow Mask	-
25	Target Board for 3 Aspects	-
26	Target Board for 4 Aspects	-
27	Target Board for 6 Aspects	-
28	PVC Conduit 100 mm (4")	8
29	Steel Conduit 100 mm (4")	-
30	Steel Conduit 39 mm	-
31	Steel Conduit 28 mm	5
32	Install Conduit under Asphalt Pavement	-
33	Install Conduit under Concrete Pavement or Sidewalk	8
34	Install Conduit under Rail	-
35	Install Conduit on Riser Support Pole	5
36	Handhole Type C	-
37	Handhole Type D	1
38	Signal Cable 6c (2 sq.mm)	-
39	Signal Cable 8c (2 sq.mm)	-
40	Signal Cable 12c (2 sq.mm)	8
41	Signal Cable 20c (2 sq.mm)	-
42	Power Cable	5
43	Cable Splicing Kit	1
44	Remove Existing Signal Post and Heads (Metal-rod Type)	-
45	Remove Existing Signal Pole and Heads (Pedestal Type)	-
46	Remove Existing Signal Head	-
47	Remove Existing Arrow Mask	-
48	Remove Pedestrian Push Button	-
49	TOT Line (CPV, 0.65mm, 1P)	20
50	Grounding Rod	1
51	Grounding Cable (IV 5.5 sq.mm x 1c)	5



BANGKOK AREA TRAFFIC CONTROL SYSTEM PROJECT : STAGE I			
INTERSECTION TERMINAL EQUIPMENT LAYOUT PLAN		Submitted By : Juro Kozora JICA Study Team Leader	Approved By : Boonyawat Tiplus BMA Study Team Leader
SATHON NUA - SOI PHIPHAT		Designed By : Yasuo Nabeshima JICA Study Member	Checked By : TED_BMA
INTERSECTION NO 221		Scale 1 / 250	Drawing NO 2221
Code	Revision	Date	Initial
Associated Plan No. :		JICA Japan International Cooperation Agency	BMA Bangkok Metropolitan Administration
		Date SEPTEMBER '90	Total 119 / 139

PHASE PLAN FOR AUTOMATIC SEQUENCE				
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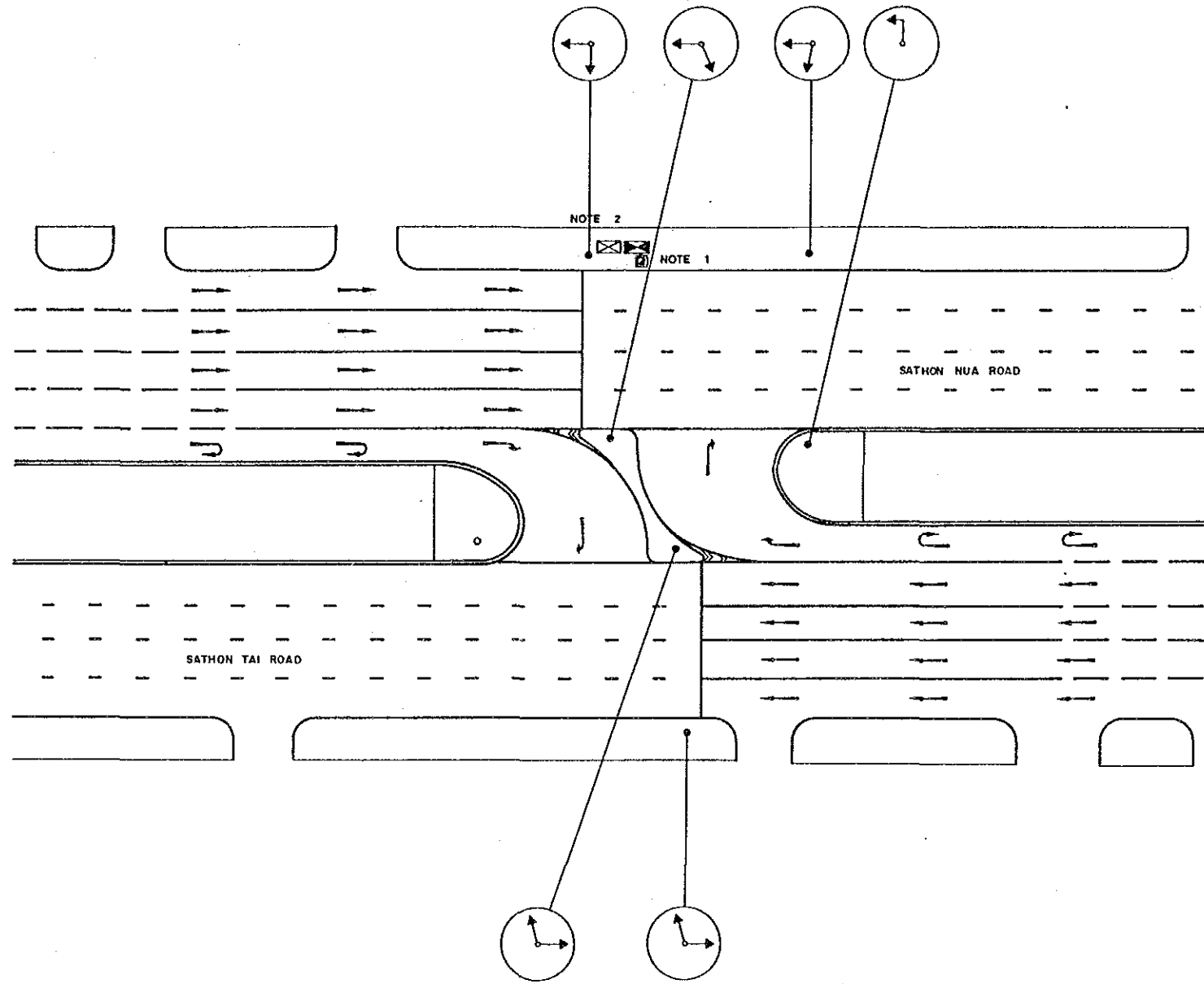


Intersection Equipments List		
Intersection No. 222		
ITEM	Name of Equipment	Qty.
1	Local Controller	1
2	Railroad Pre-emption Control Unit	-
3	Pedestrian Push Button Interface Unit	-
4	Solid State Relay Unit	3
5	Pre-Processor or Detector Pulse	-
6	Supply Power Switch Box with Power Breaker	-
7	TOT Line Box	1
8	Remove Existing Controller	1
9	Signal Pole Type A	-
10	Signal Pole Type B	-
11	Signal Pole Type C	-
12	Signal Pole Type D	-
13	Terminal 12 p	-
14	Terminal 20 p	-
15	Signal Head 3 Aspects (200mm x 3)	-
16	Signal Head 3 Aspects (200mm x 2, 300mm x 1)	-
17	Signal Head 3 Aspects (300mm x 3)	-
18	Signal Head 4 Aspects (200mm x 3, 300mm x 1)	-
19	Signal Head 4 Aspects (200mm x 2, 300mm x 2)	-
20	Signal Head 4 Aspects (300mm x 4)	-
21	Signal Head 6 Aspects (200mm x 4, 300mm x 2)	-
22	Signal Head 6 Aspects (300mm x 6)	-
23	Signal Head Pedestrian	-
24	Standard Arrow Mask	-
25	Target Board for 3 Aspects	-
26	Target Board for 4 Aspects	-
27	Target Board for 6 Aspects	-
28	PVC Conduit 100 mm (4")	6
29	Steel Conduit 100 mm (4")	-
30	Steel Conduit 39 mm	-
31	Steel Conduit 28 mm	5
32	Install Conduit under Asphalt Pavement	-
33	Install Conduit under Concrete Pavement or Sidewalk	6
34	Install Conduit under Rail	-
35	Install Conduit on Riser Support Pole	5
36	Handhole Type C	-
37	Handhole Type D	-
38	Signal Cable 6c (2 sq. mm)	-
39	Signal Cable 8c (2 sq. mm)	-
40	Signal Cable 12c (2 sq. mm)	-
41	Signal Cable 20c (2 sq. mm)	8
42	Power Cable	5
43	Cable Splicing Kit	1
44	Remove Existing Signal Post and Head (Retrol-arm Type)	-
45	Remove Existing Signal Post and Head (Pre-retal Type)	-
46	Remove Existing Signal Head	2
47	Remove Existing Arrow Mask	-
48	Remove Pedestrian Push Button	-
49	TOT Line (CPV, 0.55mm, 1P)	20
50	Grounding Rod	1
51	Grounding Cable (V 5.5 sq. mm x 1c)	5

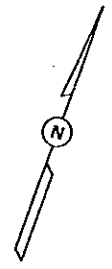
BANGKOK AREA TRAFFIC CONTROL SYSTEM PROJECT : STAGE I			
INTERSECTION TERMINAL EQUIPMENT LAYOUT PLAN		Submitted By : Jure Kodera JICA Study Team Leader	Approved By : Boonyawat Tiptua BMA Study Team Leader
SATHON NUA-CONVENT		Designed By : Yasuo Nakashima JICA Study Member	Checked By : YEO_BMA
INTERSECTION NO 222		Scale 1 / 250	Drawing NO 2222
Associated Plan No. :		Date SEPTEMBER '90	Total 120 / 139
JICA Japan International Cooperation Agency		BMA Bangkok Metropolitan Administration	

PHASE PLAN FOR AUTOMATIC SEQUENCE

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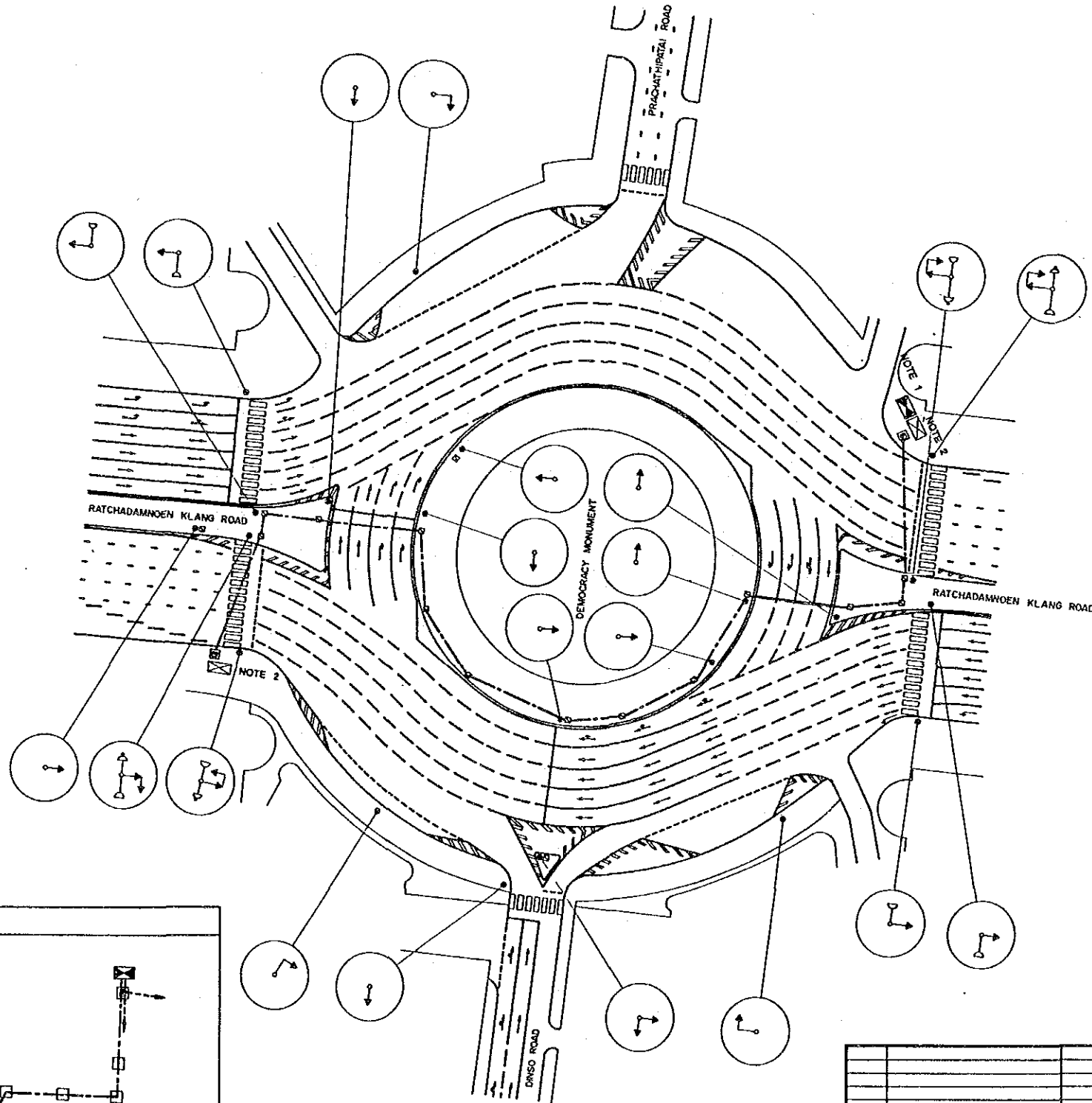
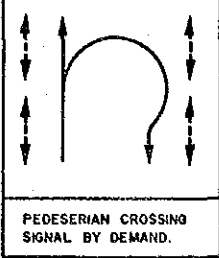
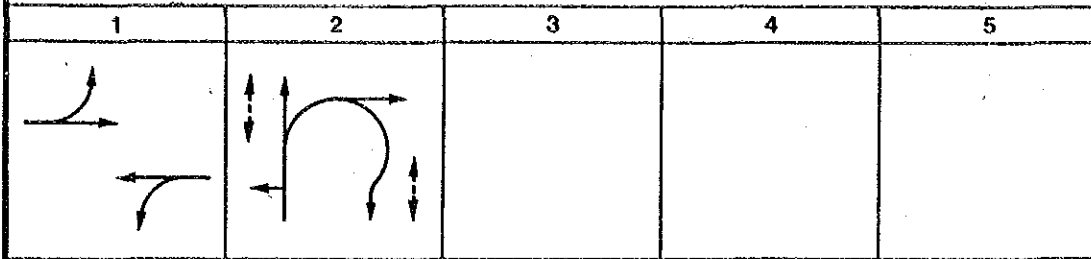


Intersection Equipments List		
Intersection No. 224		
ITEM	Name of Equipment	Qty.
1	Local Controller	1
2	Railroad Pre-emption Control Unit	-
3	Pedestrian Push Button Interface Unit	-
4	Solid State Relay Unit	4
5	Pre-Processor of Detector Pulse	-
6	Supply Power Switch Box with Power Breaker	1
7	TOT Line Box	1
8	Remove Existing Controller	1
9	Signal Pole Type A	-
10	Signal Pole Type B	-
11	Signal Pole Type C	-
12	Signal Pole Type D	-
13	Terminal 12 P	-
14	Terminal 20 P	-
15	Signal Head 3 Aspects (200mm x 3)	-
16	Signal Head 3 Aspects (200mm x 2, 300mm x 1)	-
17	Signal Head 3 Aspects (300mm x 3)	-
18	Signal Head 4 Aspects (200mm x 3, 300mm x 1)	-
19	Signal Head 4 Aspects (200mm x 2, 300mm x 2)	-
20	Signal Head 4 Aspects (300mm x 4)	-
21	Signal Head 6 Aspects (200mm x 4, 300mm x 2)	-
22	Signal Head 6 Aspects (300mm x 6)	-
23	Signal Head Pedestrian	-
24	Lantern Arrow Mast	-
25	Target Board for 3 Aspects	-
26	Target Board for 4 Aspects	-
27	Target Board for 6 Aspects	-
28	PVC Conduit 100 mm (4")	8
29	Steel Conduit 100 mm (4")	-
30	Steel Conduit 33 mm	-
31	Steel Conduit 28 mm	3
32	Install Conduit under Asphalt Pavement	-
33	Install Conduit under Concrete Pavement or Sidewalk	8
34	Install Conduit under Rail	-
35	Install Conduit on Riser Support Pole	5
36	Handhole Type C	-
37	Handhole Type D	1
38	Signal Cable 6c (2 sq.mm)	-
39	Signal Cable 8c (2 sq.mm)	-
40	Signal Cable 12c (2 sq.mm)	8
41	Signal Cable 20c (2 sq.mm)	-
42	Power Cable	5
43	Cable Splicing Kit	1
44	Remove Existing Signal Post and Heads (Post-arm Type)	-
45	Remove Existing Signal Post and Heads (Pedestal Type)	-
46	Remove Existing Signal Head	-
47	Remove Existing Arrow Mast	-
48	Remove Pedestrian Push Button	-
49	TOT Line (CPR, 0.65mm, 1P)	20
50	Grounding Rod	1
51	Grounding Cable (IV 5.5 sq. mm x 1c)	5



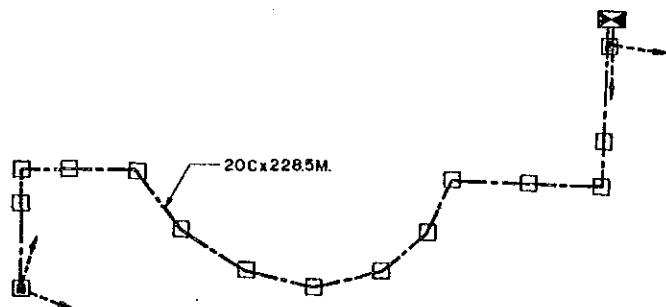
<b>BANGKOK AREA TRAFFIC CONTROL SYSTEM PROJECT : STAGE I</b>			
<b>INTERSECTION TERMINAL EQUIPMENT LAYOUT PLAN</b>		Submitted By : Jure Kodera JICA Study Team Leader	Approved By : Boonyawat Tiplus BMA Study Team Leader
<b>SATHON (U-TURN NEAR SOI ATTHAKAN PRASIT)</b>		Designed By : Yasuo Nabeakima JICA Study Member	Checked By : TED, BMA
<b>INTERSECTION NO 224</b>		Scale 1 / 250	Drawing NR 2224
Code	Revision	Date	Initial
Associated Plan No. :		JICA Japan International Cooperation Agency	BMA Bangkok Metropolitan Administration
		Date SEPTEMBER '90	Total 121 / 139

PHASE PLAN FOR AUTOMATIC SEQUENCE



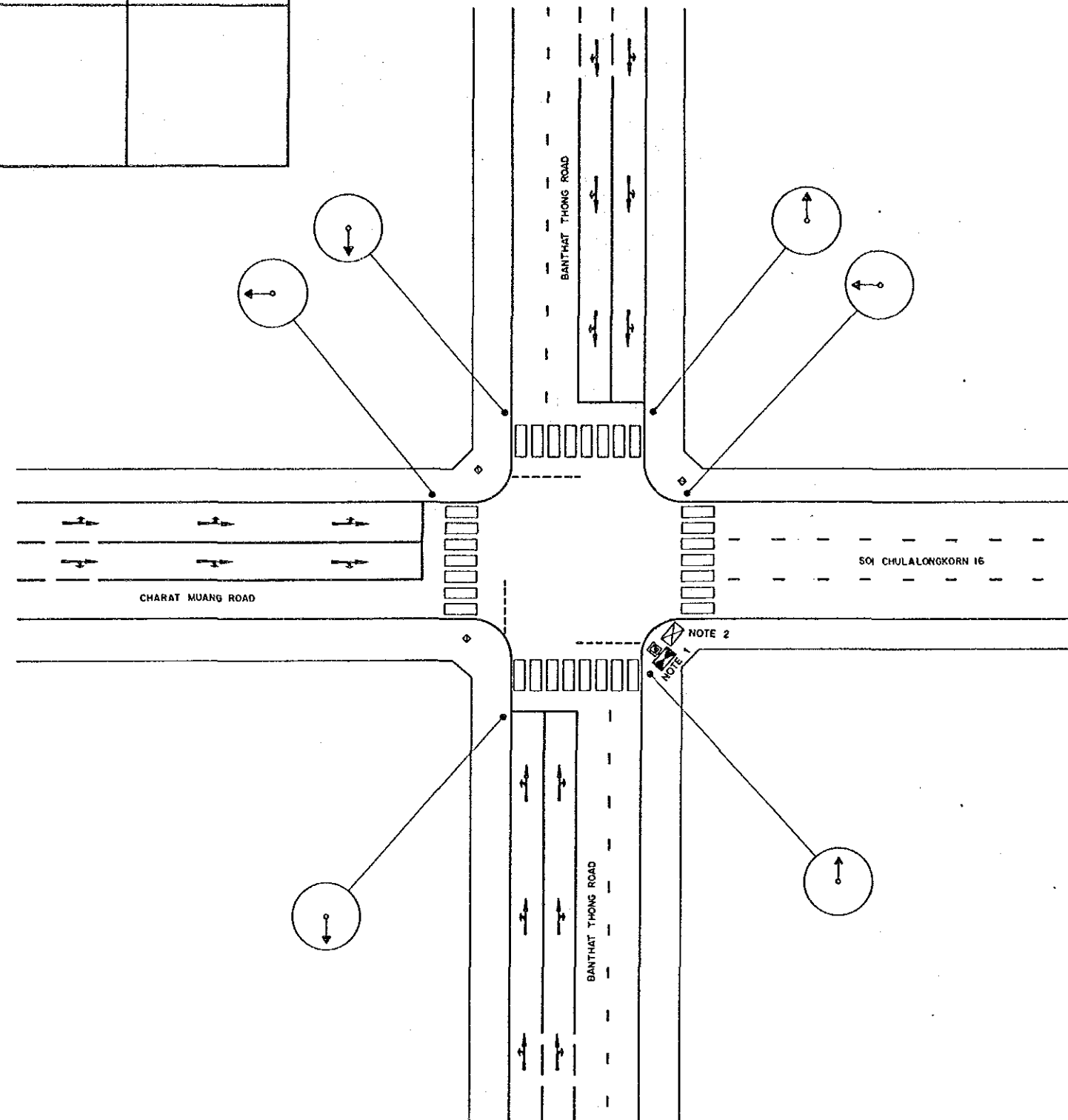
Intersection Equipments List				
Intersection No. 228				
ITEM	Name of Equipments	Qty	ITEM	Name of Equipments
1	Local Controller	1	27	Target Board for 6 Aspects
2	Railroad Pre-emption Control Unit	-	28	PVC Conduit 100 mm (4")
3	Pedestrian Push Button Interface Unit	-	29	Steel Conduit 100 mm (4")
4	Solid State Relay Unit	2	50	Steel Conduit 39 mm
5	Plc-Processor of Detector Pulse	1	31	Steel Conduit 28 mm
6	Supply Power Switch Box with Power Breaker	-	32	Install Conduit under Asphalt Pavement
7	TOT Line Box	1	33	Install Conduit under Concrete Pavement or Sidewalk
8	Remove Existing Controller	2	34	Install Conduit under Rail
9	Signal Pole Type A	-	35	Install Conduit on Blower Support Pole
10	Signal Pole Type B	-	36	Handhole Type C
11	Signal Pole Type C	-	37	Handhole Type D
12	Signal Pole Type D	-	38	Signal Cable 6c (2 sq mm)
13	Terminal 12 p	-	39	Signal Cable 8c (2 sq mm)
14	Terminal 20 p	-	40	Signal Cable 12c (2 sq mm)
15	Signal Head 3 Aspects (200mm x 3)	-	41	Signal Cable 20c (2 sq mm)
16	Signal Head 3 Aspects (200mm x 2, 300mm x 1)	-	42	Power Cable
17	Signal Head 3 Aspects (300mm x 3)	-	43	Cable Splicing Kit
18	Signal Head 4 Aspects (200mm x 2, 300mm x 1)	-	44	Remove Existing Signal Post and Heads (Blow arm Type)
19	Signal Head 4 Aspects (200mm x 2, 300mm x 2)	-	45	Remove Existing Signal Post and Heads (Pedestrian Type)
20	Signal Head 4 Aspects (300mm x 4)	-	46	Remove Existing Signal Head
21	Signal Head 6 Aspects (200mm x 4, 300mm x 2)	-	47	Remove Existing Arrow Mask
22	Signal Head 6 Aspects (300mm x 5)	-	48	Remove Pedestrian Push Button
23	Signal Head Pedestrian	-	49	TOT Line (CPV, 0.65mm, 1P)
24	Uniform Arrow Mask	-	50	Grounding Rod
25	Target Board for 3 Aspects	-	51	Grounding Cable (V 5.5 sq mm x 1c)
26	Target Board for 4 Aspects	-	-	-

CABLE LAYOUT



BANGKOK AREA TRAFFIC CONTROL SYSTEM PROJECT : STAGE I			
INTERSECTION TERMINAL EQUIPMENT LAYOUT PLAN		Submitted By :	Approved By :
DEMOCRACY MONUMENT		Juro Kodera JICA Study Team Leader	Somyawat Titipun BMA Study Team Leader
INTERSECTION NO 227, 228		Designed By :	Checked By :
		Yessu Kobashima JICA Study Member	TED.BMA
Code	Revision	Date	Initial
Associated Plan No. :		JICA Japan International Cooperation Agency	BMA Bangkok Metropolitan Administration
		Scale	Drawing No
		1 / 500	2228
		Date	Total
		SEPTEMBER '90	122 / 139

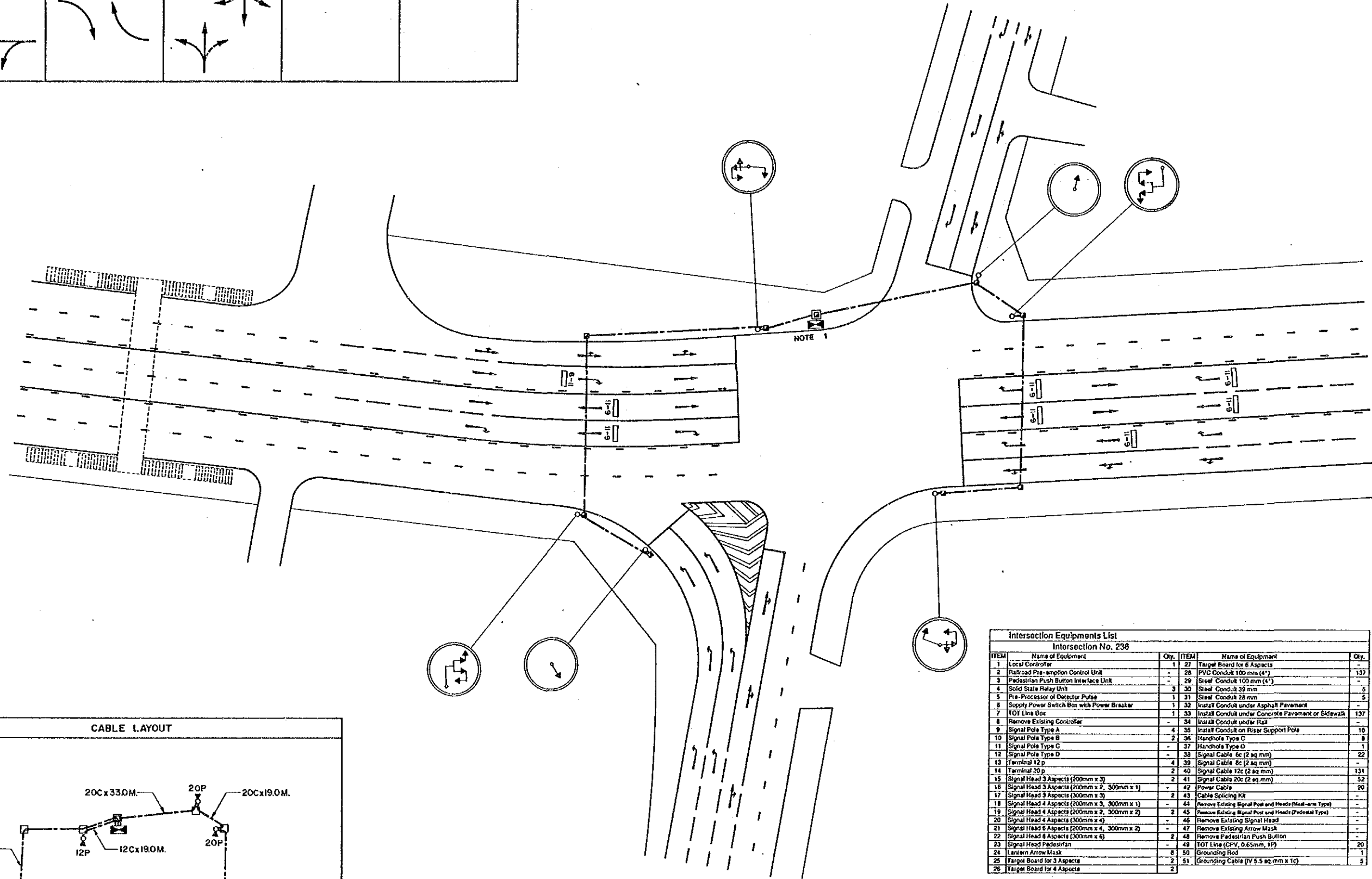
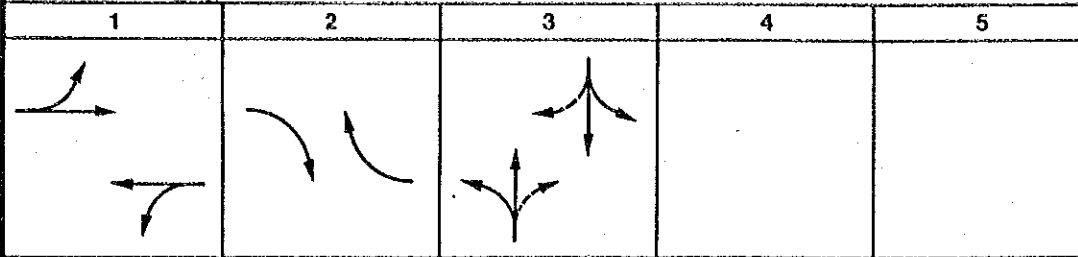
PHASE PLAN FOR AUTOMATIC SEQUENCE				
1	2	3	4	5



Intersection Equipments List		
Intersection No. 232		
ITEM	Name of Equipment	Qty.
1	Local Controller	1
2	Roadside Pre-emption Control Unit	-
3	Pedestrian Push Button Interface Unit	-
4	Solid State Relay Unit	1
5	Pre-Processor of Detector Pulse	-
6	Supply Power Switch Box with Power Breaker	-
7	TOT Line Box	1
8	Remove Existing Controller	1
9	Signal Pole Type A	-
10	Signal Pole Type B	-
11	Signal Pole Type C	-
12	Signal Pole Type D	-
13	Terminal 12 p	-
14	Terminal 20 p	-
15	Signal Head 3 Aspects (200mm x 3)	-
16	Signal Head 3 Aspects (200mm x 2, 300mm x 1)	-
17	Signal Head 3 Aspects (300mm x 3)	-
18	Signal Head 4 Aspects (200mm x 3, 300mm x 1)	-
19	Signal Head 4 Aspects (200mm x 2, 300mm x 2)	-
20	Signal Head 4 Aspects (300mm x 4)	-
21	Signal Head 6 Aspects (200mm x 4, 300mm x 2)	-
22	Signal Head 6 Aspects (300mm x 6)	-
23	Signal Head Pedestrian	-
24	Lantern Arrow Mask	-
25	Target Board for 3 Aspects	-
26	Target Board for 4 Aspects	-
27	Target Board for 6 Aspects	-
28	PVC Conduit 100 mm (4')	6
29	Steel Conduit 100 mm (4')	-
30	Steel Conduit 39 mm	-
31	Steel Conduit 28 mm	5
32	Install Conduit under Asphalt Pavement	-
33	Install Conduit under Concrete Pavement or Sidewalk	6
34	Install Conduit under Road	-
35	Install Conduit on Pole Support Pole	5
36	Handhole Type C	-
37	Handhole Type D	1
38	Signal Cable 6c (2 sq.mm)	-
39	Signal Cable 8c (2 sq.mm)	-
40	Signal Cable 12c (2 sq.mm)	8
41	Signal Cable 20c (2 sq.mm)	-
42	Power Cable	5
43	Cable Splicing Kit	1
44	Remove Existing Signal Post and Heads (Main-rod Type)	-
45	Remove Existing Signal Post and Heads (Pedestal Type)	-
46	Remove Existing Signal Head	-
47	Remove Existing Arrow Mask	-
48	Remove Pedestrian Push Button	-
49	TOT Line (CPV, 0.65mm, 1P)	20
50	Grounding Rod	1
51	Grounding Cable (RV 5.5 sq.mm x 1c)	5

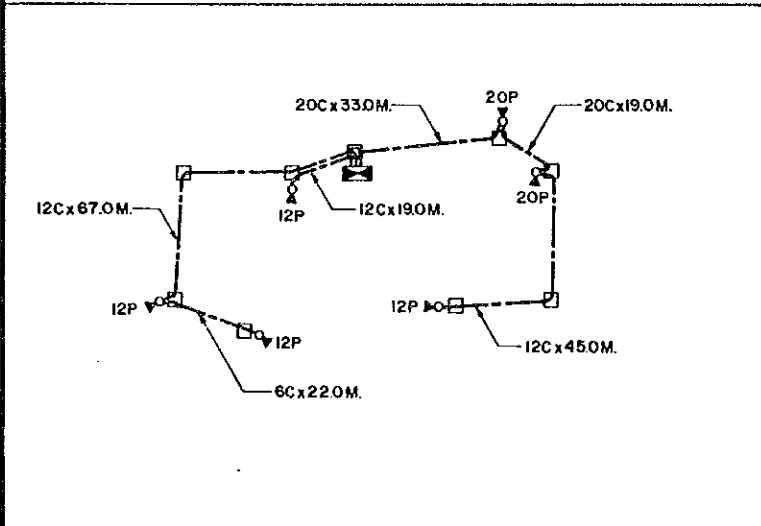
BANGKOK AREA TRAFFIC CONTROL SYSTEM PROJECT : STAGE I			
INTERSECTION TERMINAL EQUIPMENT LAYOUT PLAN		Submitted By :	Approved By :
BANTHAT THONG - SOI CHULALONGKORN 16		Juro Kodera JICA Study Team Leader	Boonyawat Tipua BMA Study Team Leader
INTERSECTION NO 232		Designed By :	Checked By :
		Yasuo Kobeshima JICA Study Member	TED, BMA
Code	Revision	Date	Initial
Associated Plan No. :		JICA Japan International Cooperation Agency	BMA Bangkok Metropolitan Administration
		Scale	Drawing No
		1 / 250	2232
		Date	Total
		SEPTEMBER '90	123 / 139

PHASE PLAN FOR AUTOMATIC SEQUENCE



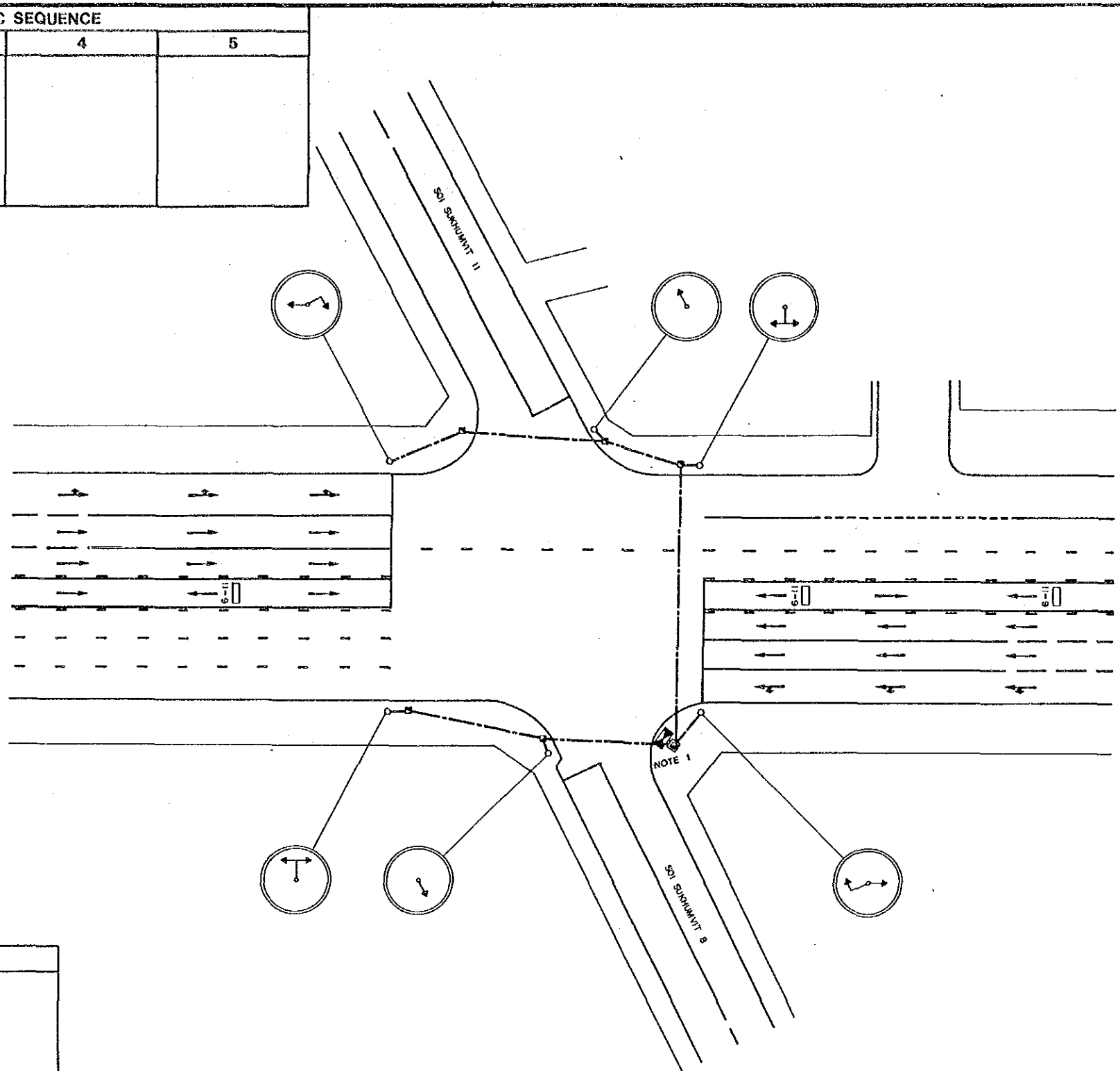
Intersection Equipments List					
Intersection No. 236					
ITEM	Name of Equipment	Qty.	ITEM	Name of Equipment	Qty.
1	Local Controller	1	27	Target Board for 6 Aspects	-
2	Railroad Pre-emption Control Unit	-	28	PVC Conduit 100 mm (4")	137
3	Pedestrian Push Button Interface Unit	-	29	Steel Conduit 100 mm (4")	-
4	Solid State Relay Unit	3	30	Steel Conduit 39 mm	5
5	Pre-Processor of Detector Pulse	1	31	Steel Conduit 28 mm	5
6	Supply Power Switch Box with Power Breaker	1	32	Install Conduit under Asphalt Pavement	-
7	TOT Line Box	1	33	Install Conduit under Concrete Pavement or Sidewalk	137
8	Remove Existing Controller	-	34	Install Conduit under Road	-
9	Signal Pole Type A	4	35	Install Conduit on Riser Support Pole	10
10	Signal Pole Type B	2	36	Handhole Type C	8
11	Signal Pole Type C	-	37	Handhole Type D	1
12	Signal Pole Type D	-	38	Signal Cable 6c (2 sq mm)	22
13	Terminal 12 p	4	39	Signal Cable 8c (2 sq mm)	-
14	Terminal 20 p	2	40	Signal Cable 12c (2 sq mm)	131
15	Signal Head 3 Aspects (200mm x 3)	2	41	Signal Cable 20c (2 sq mm)	52
16	Signal Head 3 Aspects (200mm x 2, 300mm x 1)	-	42	Power Cable	20
17	Signal Head 3 Aspects (300mm x 3)	2	43	Cable Splicing Kit	-
18	Signal Head 4 Aspects (200mm x 3, 300mm x 1)	-	44	Remove Existing Signal Post and Heads (Main-arm Type)	-
19	Signal Head 4 Aspects (200mm x 2, 300mm x 2)	2	45	Remove Existing Signal Post and Heads (Pedestal Type)	-
20	Signal Head 4 Aspects (300mm x 4)	-	46	Remove Existing Signal Head	-
21	Signal Head 6 Aspects (200mm x 4, 300mm x 2)	-	47	Remove Existing Arrow Mask	-
22	Signal Head 6 Aspects (300mm x 6)	2	48	Remove Pedestrian Push Button	-
23	Signal Head Pedestrian	-	49	TOT Line (CPV, 0.65mm, 1P)	20
24	Lensless Arrow Mask	8	50	Grounding Rod	1
25	Target Board for 3 Aspects	2	51	Grounding Cable (IV 5.5 sq mm x 1c)	3
26	Target Board for 4 Aspects	2			

CABLE LAYOUT

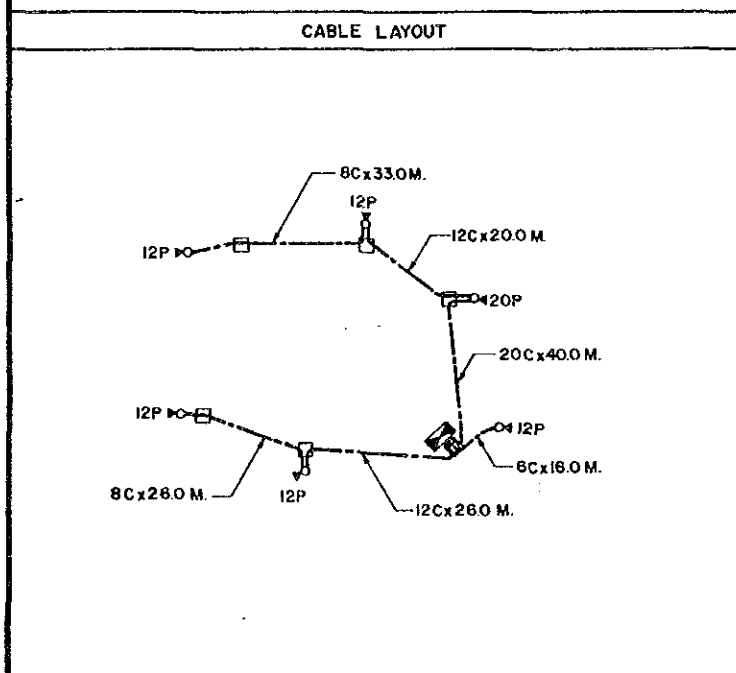


<b>BANGKOK AREA TRAFFIC CONTROL SYSTEM PROJECT : STAGE I</b> INTERSECTION TERMINAL EQUIPMENT LAYOUT PLAN PHETCHABURI - SOI CHIT LOM INTERSECTION NO 236				Submitted By :	Approved By :
				Juro Kodera JICA Study Team Leader	Boonyawat Tiptua BMA Study Team Leader
JICA      BMA Japan International      Bangkok Metropolitan Cooperation Agency      Administration				Designed By :	Checked By :
				Yasuo Nabeshima JICA Study Member	TED.BMA
Code	Revision	Date	Initial	Scale 1 / 250	Drawing No 2236
Associated Plan No. :				Date SEPTEMBER '90	Total 124 / 139

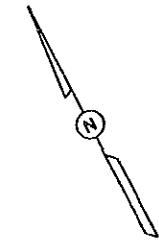
PHASE PLAN FOR AUTOMATIC SEQUENCE				
1	2	3	4	5



Intersection Equipments List		
Intersection No. 237		
ITEM	Name of Equipment	Qty
1	Local Controller	1
2	Railroad Pre-emption Control Unit	-
3	Pedestrian Push Button Interface Unit	-
4	Solid State Relay Unit	2
5	Pre-Processor of Detector Pulse	1
6	Supply Power Switch Box with Power Breaker	1
7	TOT Line Box	1
8	Remove Existing Controller	-
9	Signal Pole Type A	4
10	Signal Pole Type B	1
11	Signal Pole Type C	-
12	Signal Pole Type D	-
13	Terminal 12 p	5
14	Terminal 20 p	1
15	Signal Head 3 Aspects (200mm x 3)	4
16	Signal Head 3 Aspects (200mm x 2, 300mm x 1)	-
17	Signal Head 3 Aspects (300mm x 3)	8
18	Signal Head 4 Aspects (200mm x 3, 300mm x 1)	-
19	Signal Head 4 Aspects (200mm x 2, 300mm x 2)	-
20	Signal Head 4 Aspects (300mm x 4)	-
21	Signal Head 6 Aspects (200mm x 4, 300mm x 2)	-
22	Signal Head 6 Aspects (300mm x 6)	-
23	Signal Head Pedestrian	-
24	Lantern Arrow Mask	-
25	Target Board for 3 Aspects	4
26	Target Board for 4 Aspects	-
27	Target Board for 6 Aspects	-
28	PVC Conduit 100 mm (4")	103
29	Steel Conduit 100 mm (4")	-
30	Steel Conduit 50 mm	5
31	Steel Conduit 28 mm	5
32	Install Conduit under Asphalt Pavement	-
33	Install Conduit under Concrete Pavement or Sidewalk	103
34	Install Conduit under Road	-
35	Install Conduit on Fiber Support Pole	10
36	Handhole Type C	5
37	Handhole Type D	1
38	Signal Cable 6c (2 sq. mm)	16
39	Signal Cable 8c (2 sq. mm)	49
40	Signal Cable 12c (2 sq. mm)	48
41	Signal Cable 20c (2 sq. mm)	40
42	Power Cable	20
43	Cable Splicing Kit	-
44	Remove Existing Signal Post and Heads (Rail-rod Type)	-
45	Remove Existing Signal Post and Heads (Pole-top Type)	-
46	Remove Existing Signal Head	-
47	Remove Existing Arrow Mask	-
48	Remove Pedestrian Push Button	-
49	TOT Line (CPV, 0.65mm, 1P)	20
50	Grounding Rod	1
51	Grounding Cable (4V 5.5 sq. mm x 1c)	5

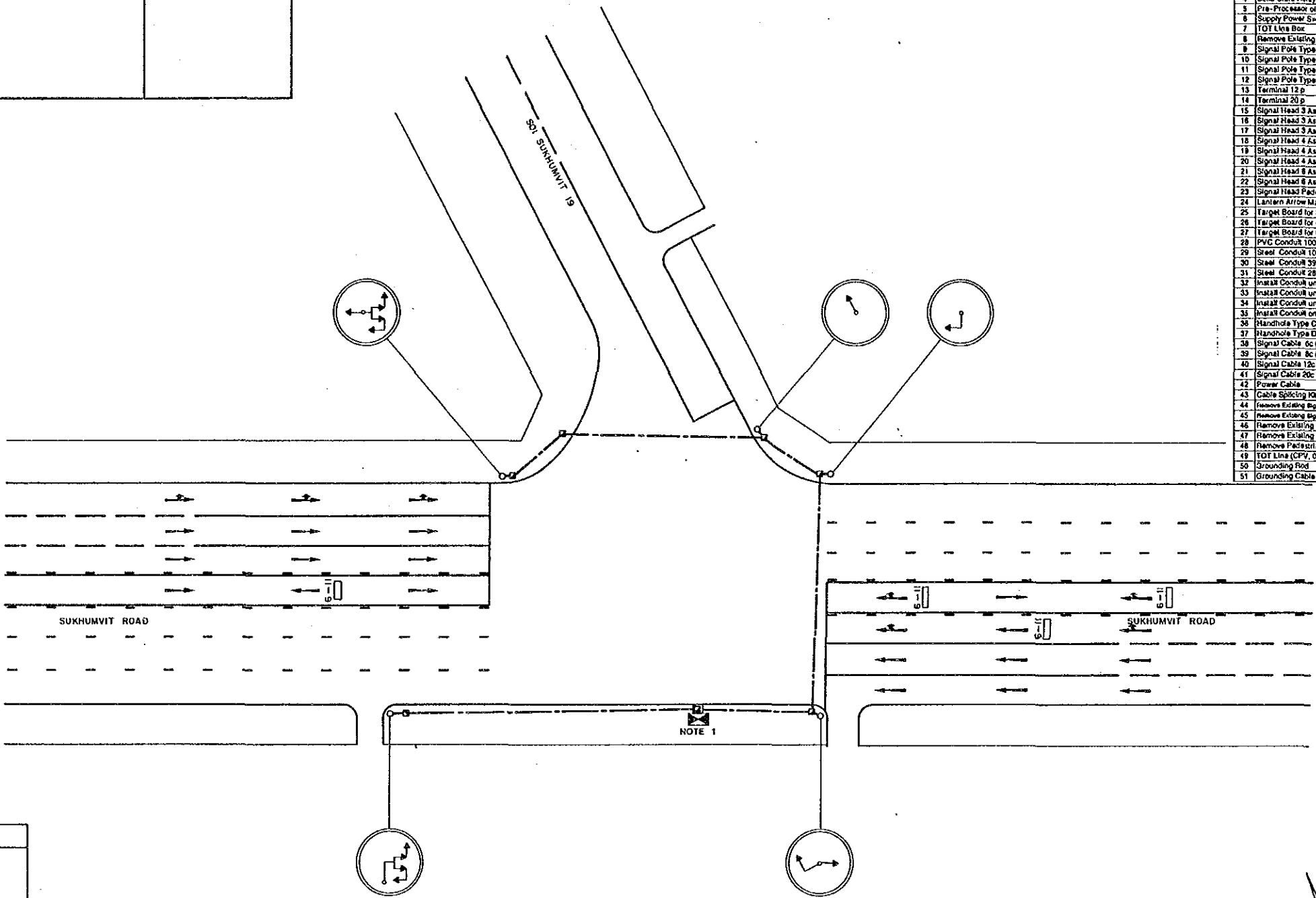


BANGKOK AREA TRAFFIC CONTROL SYSTEM PROJECT : STAGE I			
INTERSECTION TERMINAL EQUIPMENT LAYOUT PLAN		Submitted By : Juro Kodara JICA Study Team Leader	Approved By : Boonyawat Tiptuan BMA Study Team Leader
SUKHUMVIT - SOI SUKHUMVIT II		Designed By : Ysuo Kobayashi JICA Study Member	Checked By : TED-SMA
INTERSECTION NR 237		Scale 1/250	Drawing NR 2237
Associated Plan No. :		Date SEPTEMBER '90	Total 125 / 139
JICA Japan International Cooperation Agency		BMA Bangkok Metropolitan Administration	

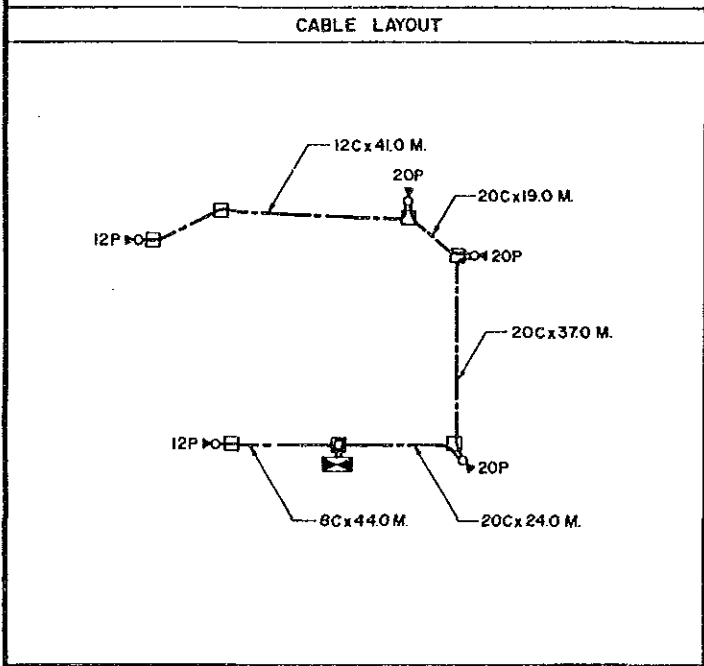




PHASE PLAN FOR AUTOMATIC SEQUENCE				
1	2	3	4	5

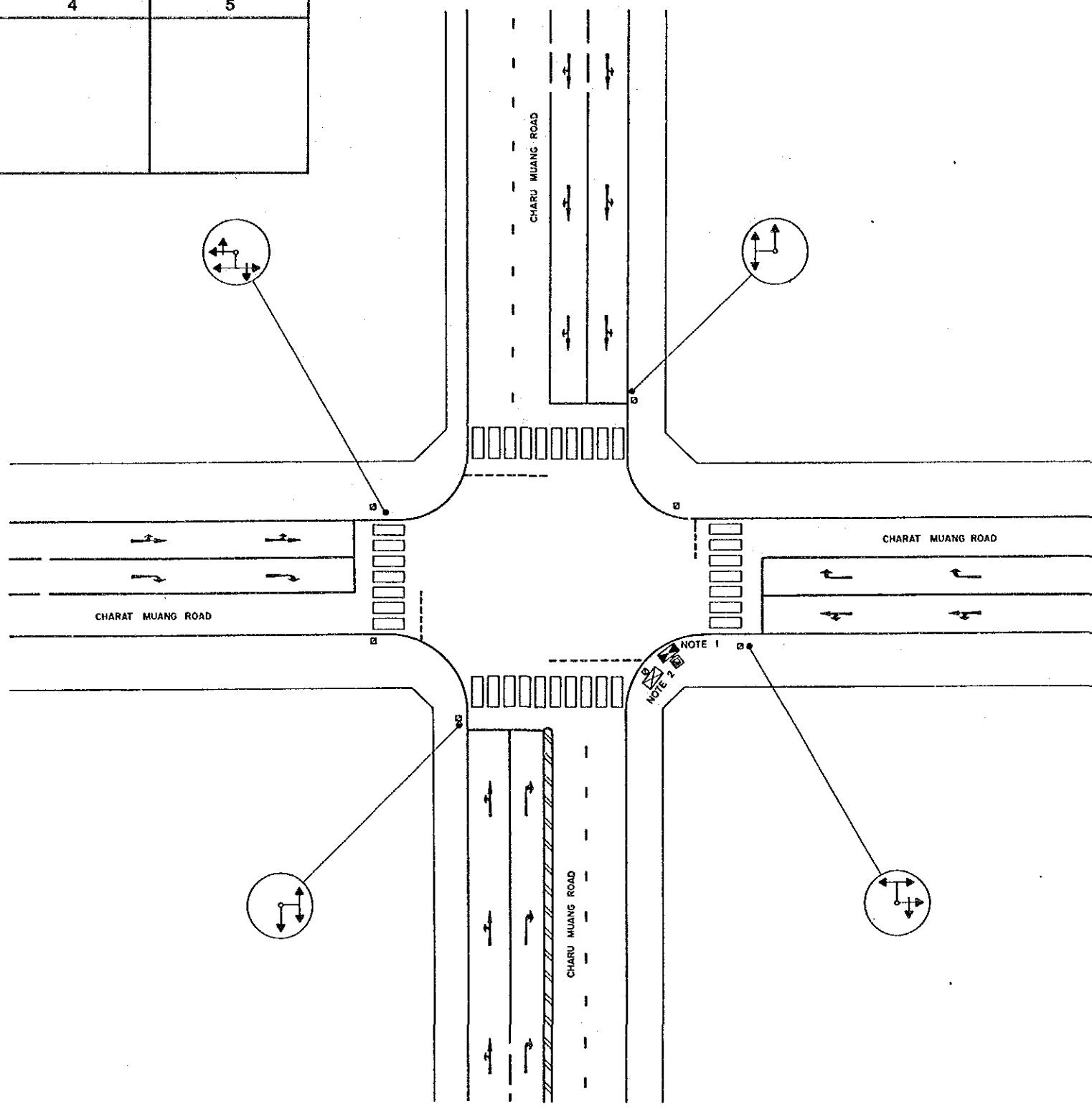


Intersection Equipments List		
Intersection No. 238		
ITEM	Name of Equipment	Qty.
1	Local Controller	1
2	Railroad Pre-emption Control Unit	-
3	Pedestrian Push Button Interface Unit	-
4	Solid State Relay Unit	8
5	Pre-Processor of Detector Pulse	1
6	Supply Power Switch Box with Power Breaker	1
7	TOT Line Box	1
8	Remove Existing Controller	-
9	Signal Pole Type A	3
10	Signal Pole Type B	2
11	Signal Pole Type C	-
12	Signal Pole Type D	-
13	Terminal 12 p	2
14	Terminal 20 p	3
15	Signal Head 3 Aspects (200mm x 3)	3
16	Signal Head 3 Aspects (200mm x 2, 300mm x 1)	-
17	Signal Head 3 Aspects (300mm x 3)	2
18	Signal Head 4 Aspects (200mm x 3, 300mm x 1)	-
19	Signal Head 4 Aspects (200mm x 2, 300mm x 2)	-
20	Signal Head 4 Aspects (300mm x 4)	-
21	Signal Head 6 Aspects (200mm x 4, 300mm x 2)	1
22	Signal Head 6 Aspects (300mm x 6)	1
23	Signal Head Pedestrian	-
24	Lantern Arrow Mask	-4
25	Target Board for 3 Aspects	3
26	Target Board for 4 Aspects	-
27	Target Board for 6 Aspects	1
28	PVC Conduit 100 mm (4")	118
29	Steel Conduit 100 mm (4")	-
30	Steel Conduit 39 mm	5
31	Steel Conduit 28 mm	5
32	Install Conduit under Asphalt Pavement	-
33	Install Conduit under Concrete Pavement or Sidewalk	118
34	Install Conduit under Road	-
35	Install Conduit on Flare Support Pole	10
36	Handhole Type C	8
37	Handhole Type D	1
38	Signal Cable 6c (2 sq. mm)	1
39	Signal Cable 8c (2 sq. mm)	44
40	Signal Cable 12c (2 sq. mm)	41
41	Signal Cable 20c (2 sq. mm)	60
42	Power Cable	20
43	Cable Splicing Kit	-
44	Remove Existing Signal Post and Head (Star-arm Type)	-
45	Remove Existing Signal Post and Head (Federal Type)	-
46	Remove Existing Signal Head	-
47	Remove Existing Arrow Mask	-
48	Remove Pedestrian Push Button	-
49	TOT Line (CPV, 0.65mm, 1F)	20
50	Grounding Rod	1
51	Grounding Cable (RV 5.5 sq. mm x 1c)	5

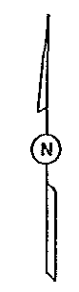


BANGKOK AREA TRAFFIC CONTROL SYSTEM PROJECT : STAGE I			
INTERSECTION TERMINAL EQUIPMENT LAYOUT PLAN		Submitted By :	Approved By :
SUKHUMVIT-SOI SUKHUMVIT 19		Juro Kodera JICA Study Team Leader	Boonyawat Tiptua BMA Study Team Leader
INTERSECTION NO 238		Designed By :	Checked By :
		Yasuo Hasehino JICA Study Member	TEO, BMA
Code	Revision	Date	Initial
Associated Plan No. :		JICA	BMA
		Japan International Cooperation Agency	Bangkok Metropolitan Administration
		Scale	1 / 250
		Date	SEPTEMBER '90
		Drawing No	2238
		Total	126 / 139

PHASE PLAN FOR AUTOMATIC SEQUENCE				
1	2	3	4	5

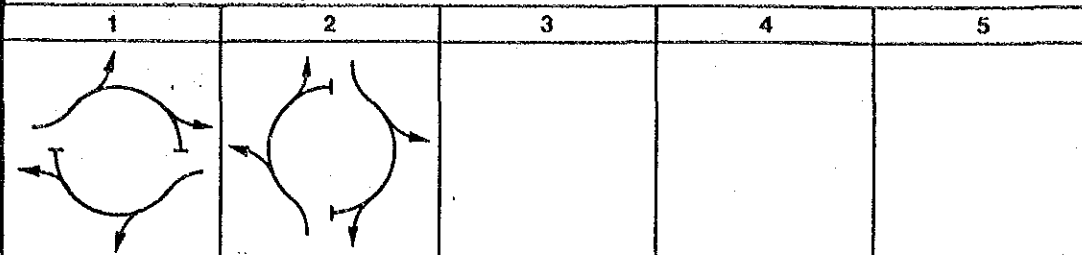


Intersection Equipments List		
Intersection No. 245		
ITEM	Name of Equipment	Qty
1	Local Controller	1
2	Railroad Pre-emption Control Unit	-
3	Pedestrian Push Button Interface Unit	-
4	Solid State Relay Unit	1
5	Pre-Processor of Detector Pulse	1
6	Supply Power Switch Box with Power Breaker	1
7	TOT Line Box	1
8	Remove Existing Controller	1
9	Signal Pole Type A	-
10	Signal Pole Type B	-
11	Signal Pole Type C	-
12	Signal Pole Type D	-
13	Terminal 12 p	-
14	Terminal 20 p	-
15	Signal Head 3 Aspects (200mm x 3)	-
16	Signal Head 3 Aspects (200mm x 2, 500mm x 1)	-
17	Signal Head 3 Aspects (300mm x 3)	-
18	Signal Head 4 Aspects (200mm x 3, 300mm x 1)	-
19	Signal Head 4 Aspects (200mm x 2, 300mm x 2)	-
20	Signal Head 4 Aspects (300mm x 4)	-
21	Signal Head 6 Aspects (200mm x 4, 300mm x 2)	-
22	Signal Head 6 Aspects (300mm x 6)	-
23	Signal Head Pedestrian	-
24	Lensless Arrow Mast	-
25	Target Board for 3 Aspects	-
26	Target Board for 4 Aspects	-
27	Target Board for 6 Aspects	-
28	PVC Conduit 100 mm (4")	6
29	Steel Conduit 100 mm (4")	-
30	Steel Conduit 39 mm	-
31	Steel Conduit 28 mm	5
32	Install Conduit under Asphalt Pavement	-
33	Install Conduit under Concrete Pavement or Sidewalk	8
34	Install Conduit under Rail	-
35	Install Conduit on Riser Support Pole	5
36	Handhole Type C	-
37	Handhole Type D	1
38	Signal Cable 6c (2 sq mm)	-
39	Signal Cable 8c (2 sq mm)	-
40	Signal Cable 12c (2 sq mm)	-
41	Signal Cable 20c (2 sq mm)	8
42	Power Cable	6
43	Cable Splicing Kit	1
44	Remove Existing Signal Post and Head (Bifurcated Type)	-
45	Remove Existing Signal Post and Head (Pedestal Type)	-
46	Remove Existing Signal Head	-
47	Remove Existing Arrow Mast	-
48	Remove Pedestrian Push Button	-
49	TOT Line (CPV, 0.65mm, 1P)	20
50	Grounding Rod	1
51	Grounding Cable (IV 5.5 sq mm x 1c)	5

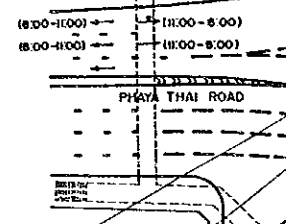
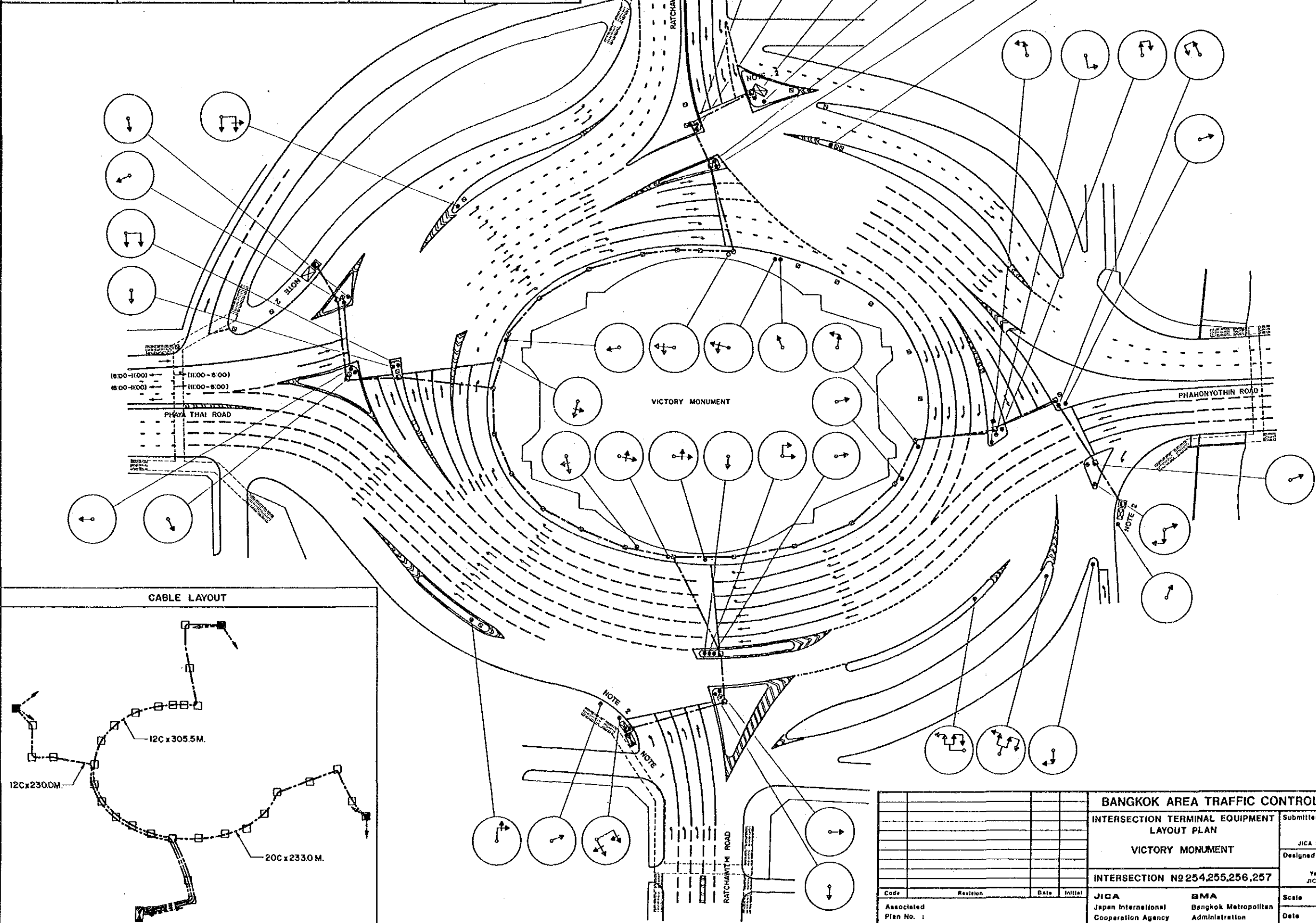


BANGKOK AREA TRAFFIC CONTROL SYSTEM PROJECT : STAGE I			
INTERSECTION TERMINAL EQUIPMENT LAYOUT PLAN		Submitted By : Juro Kodera JICA Study Team Leader	Approved By : Boonyawat Tiptua BMA Study Team Leader
CHARU MUANG - CHARAT MUANG		Designed By : Yasue Nabashima JICA Study Member	Checked By : TED.BMA
INTERSECTION NO 245		Scale 1 / 250	Drawing NO 2245
Code	Revision	Date	Initial
Associated Plan No. :		JICA Japan International Cooperation Agency	BMA Bangkok Metropolitan Administration
		Date SEPTEMBER '90	Total 127 / 139

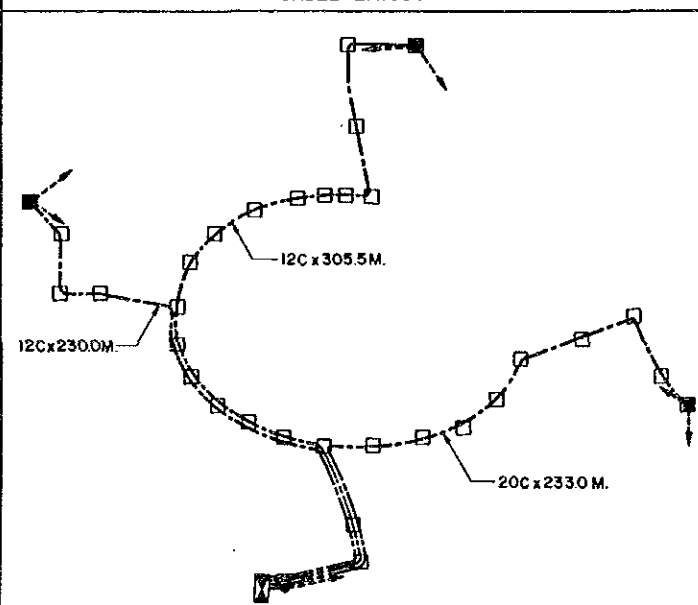
PHASE PLAN FOR AUTOMATIC SEQUENCE



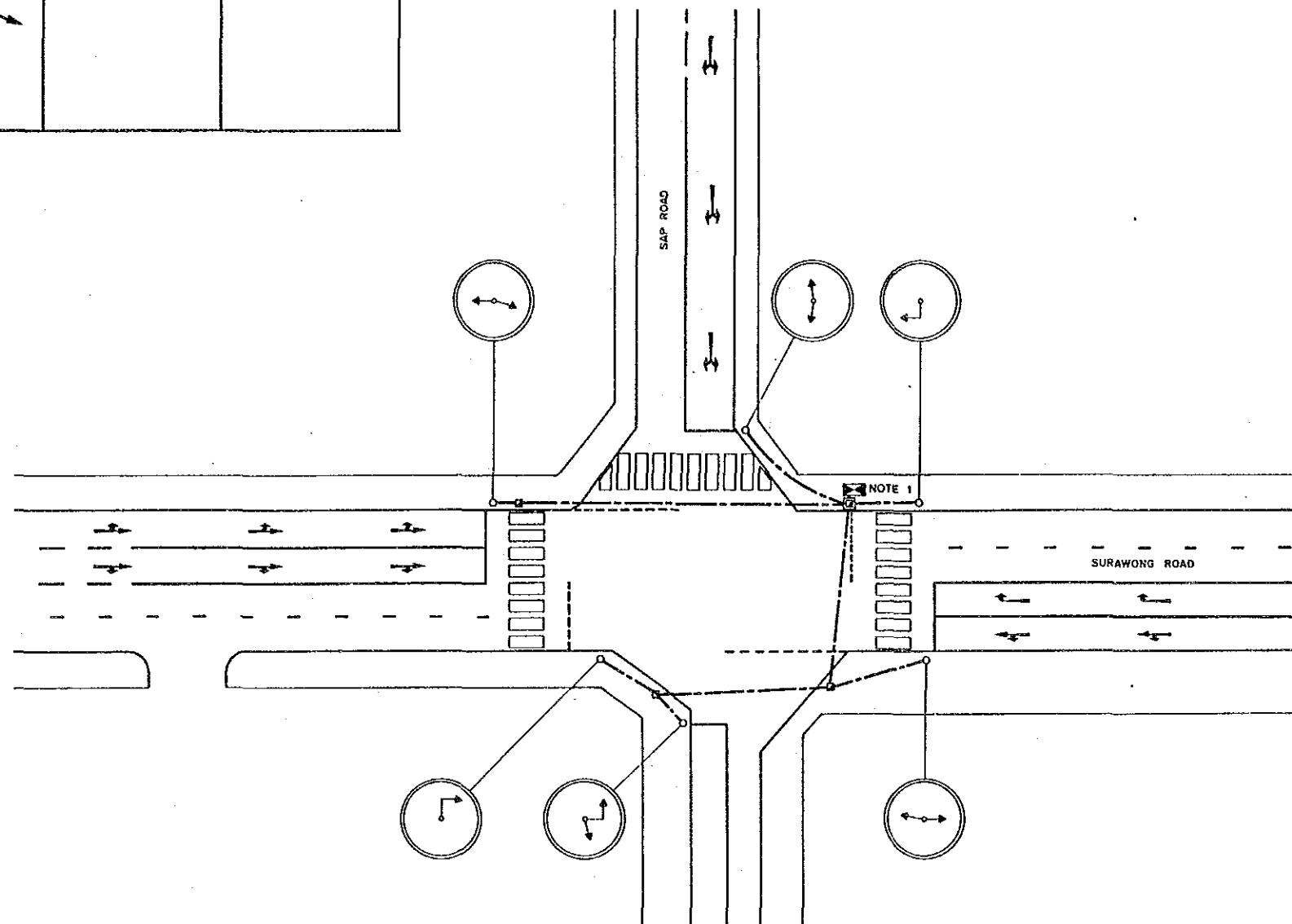
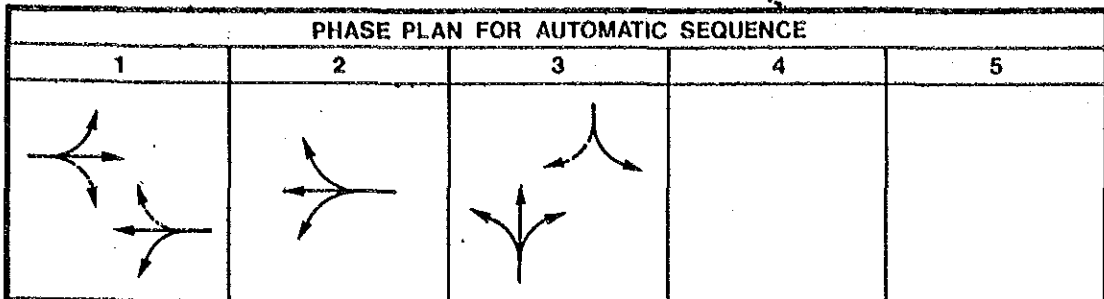
Intersection Equipments List		
Intersection No. 255		
ITEM	Name of Equipment	Qty.
1	Local Controller	1
2	Railroad Pre-emption Control Unit	-
3	Pedestrian Push Button Interface Unit	-
4	Solid State Relay Unit	8
5	Pic-Processor of Detector Pulse	-
6	Supply Power Switch Box with Power Breaker	-
7	TOT Line Box	1
8	Remove Existing Controller	4
9	Signal Pole Type A	-
10	Signal Pole Type B	-
11	Signal Pole Type C	-
12	Signal Pole Type D	-
13	Terminal 12 p	-
14	Terminal 20 p	-
15	Signal Head 3 Aspects (200mm x 3)	-
16	Signal Head 3 Aspects (200mm x 2, 300mm x 1)	-
17	Signal Head 4 Aspects (300mm x 3)	-
18	Signal Head 4 Aspects (200mm x 3, 300mm x 1)	-
19	Signal Head 4 Aspects (200mm x 2, 300mm x 2)	-
20	Signal Head 4 Aspects (300mm x 4)	-
21	Signal Head 6 Aspects (200mm x 4, 300mm x 2)	-
22	Signal Head 6 Aspects (300mm x 6)	-
23	Signal Head Pedestrian	-
24	Lantern Arrow Mask	-
25	Target Board for 3 Aspects	-
26	Target Board for 4 Aspects	-
27	Target Board for 6 Aspects	-
28	PVC Conduit 100 mm (4")	502.5
29	Steel Conduit 100 mm (4")	-
30	Steel Conduit 39 mm	-
31	Steel Conduit 28 mm	5
32	Install Conduit under Asphalt Pavement	-
33	Install Conduit under Concrete Pavement or Sidewalk	502.5
34	Install Conduit under Road	-
35	Install Conduit on Fixer Support Pole	8
36	Handhole Type C	8
37	Handhole Type D	4
38	Signal Cable 6c (2 sq.mm)	-
39	Signal Cable 8c (2 sq.mm)	-
40	Signal Cable 12c (2 sq.mm)	543.5
41	Signal Cable 20c (2 sq.mm)	233
42	Power Cable	5
43	Cable Splicing Kit	4
44	Remove Existing Signal Post and Head (Main-arm Type)	-
45	Remove Existing Signal Post and Head (Pedestrian Type)	-
46	Remove Existing Signal Head	-
47	Remove Existing Arrow Mask	-
48	Remove Pedestrian Push Button	-
49	TOT Line (CPV, 0.65mm, 1P)	20
50	Grounding Rod	1
51	Grounding Cable (IV 5.5 sq.mm x 1c)	5



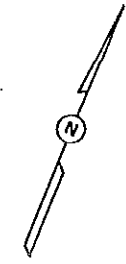
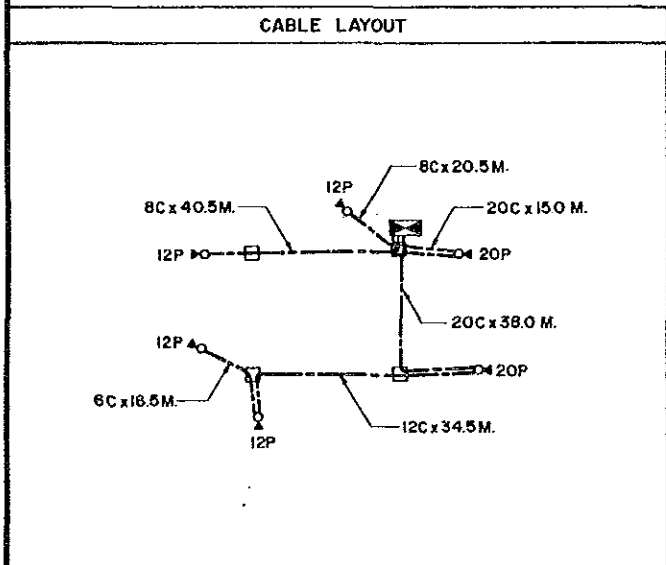
CABLE LAYOUT



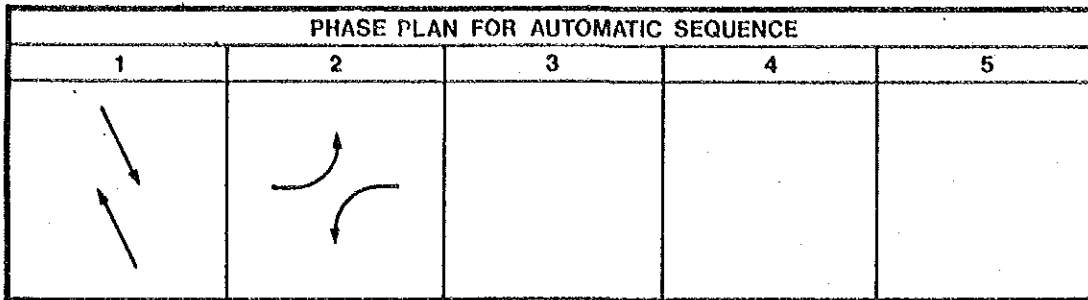
BANGKOK AREA TRAFFIC CONTROL SYSTEM PROJECT : STAGE I			
INTERSECTION TERMINAL EQUIPMENT LAYOUT PLAN			
VICTORY MONUMENT			
INTERSECTION NO 254,255,256,257			
Code	Revision	Date	Initial
Associated Plan No. :		JICA Japan International Cooperation Agency	
		BMA Bangkok Metropolitan Administration	
Submitted By :		Approved By :	
Juro Kodera JICA Study Team Leader		Boonyawat Tiptus BMA Study Team Leader	
Designed By :		Checked By :	
Yasuo Hasehime JICA Study Member		TED, BMA	
Scale		Drawing No	
1 / 500		2255	
Date		Total	
SEPTEMBER '90		128 / 139	



Intersection Equipments List		
Intersection No. 266		
ITEM	Name of Equipment	Qty.
1	Local Controller	1
2	Railroad Pre-emption Control Unit	-
3	Pedestrian Push Button Interface Unit	-
4	Solid State Relay Unit	2
5	Pre-Processor of Detector Pulse	-
6	Supply Power Switch Box with Power Breaker	1
7	TOT Line Box	1
8	Remove Existing Controller	-
9	Signal Pole Type A	3
10	Signal Pole Type B	3
11	Signal Pole Type C	3
12	Signal Pole Type D	-
13	Terminal 12 p	4
14	Terminal 20 p	2
15	Signal Head 3 Aspects (200mm x 3)	7
16	Signal Head 3 Aspects (200mm x 2, 300mm x 1)	-
17	Signal Head 3 Aspects (300mm x 3)	3
18	Signal Head 4 Aspects (200mm x 3, 300mm x 1)	-
19	Signal Head 4 Aspects (200mm x 2, 300mm x 2)	-
20	Signal Head 4 Aspects (300mm x 4)	-
21	Signal Head 6 Aspects (200mm x 4, 300mm x 2)	-
22	Signal Head 6 Aspects (300mm x 6)	-
23	Signal Head Pedestrian	-
24	Lantern Arrow Mask	-
25	Target Board for 3 Aspects	7
26	Target Board for 4 Aspects	-
27	Target Board for 6 Aspects	-
28	PVC Conduit 100 mm (4")	100
29	Steel Conduit 100 mm (4")	-
30	Steel Conduit 39 mm	5
31	Steel Conduit 28 mm	5
32	Install Conduit under Asphalt Pavement	-
33	Install Conduit under Concrete Pavement or Sidewalk	100
34	Install Conduit under Road	-
35	Install Conduit on Riser Support Pole	10
36	Handhole Type C	3
37	Handhole Type D	1
38	Signal Cable 6c (2 sq. mm)	18.5
39	Signal Cable 8c (2 sq. mm)	61
40	Signal Cable 12c (2 sq. mm)	34.5
41	Signal Cable 20c (2 sq. mm)	53
42	Power Cable	20
43	Cable Splicing Kit	-
44	Remove Existing Signal Post and Heads (4c or 4-arm Type)	-
45	Remove Existing Signal Post and Heads (Pedestrian Type)	-
46	Remove Existing Signal Head	-
47	Remove Existing Arrow Mask	-
48	Remove Pedestrian Push Button	-
49	TOT Line (CPW, 0.65mm, 1P)	20
50	Grounding Rod	1
51	Grounding Cable (IV 5.5 sq. mm x 1c)	8



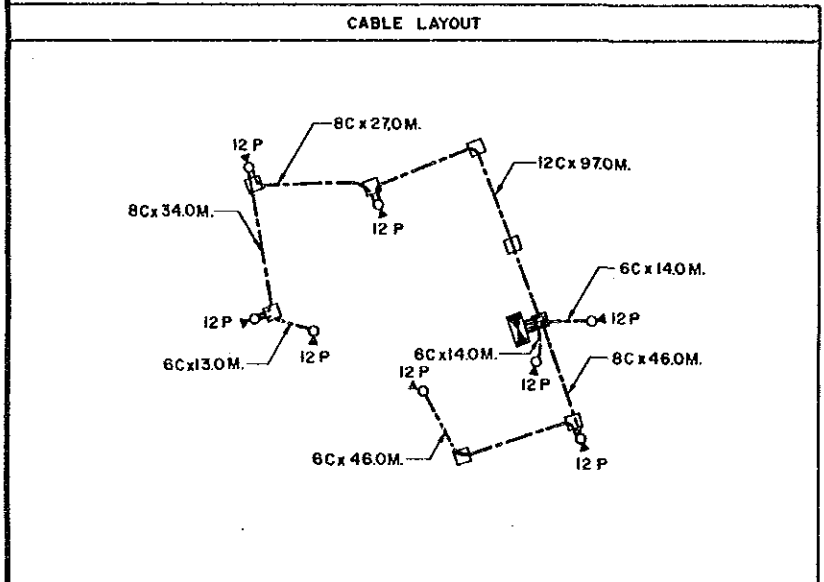
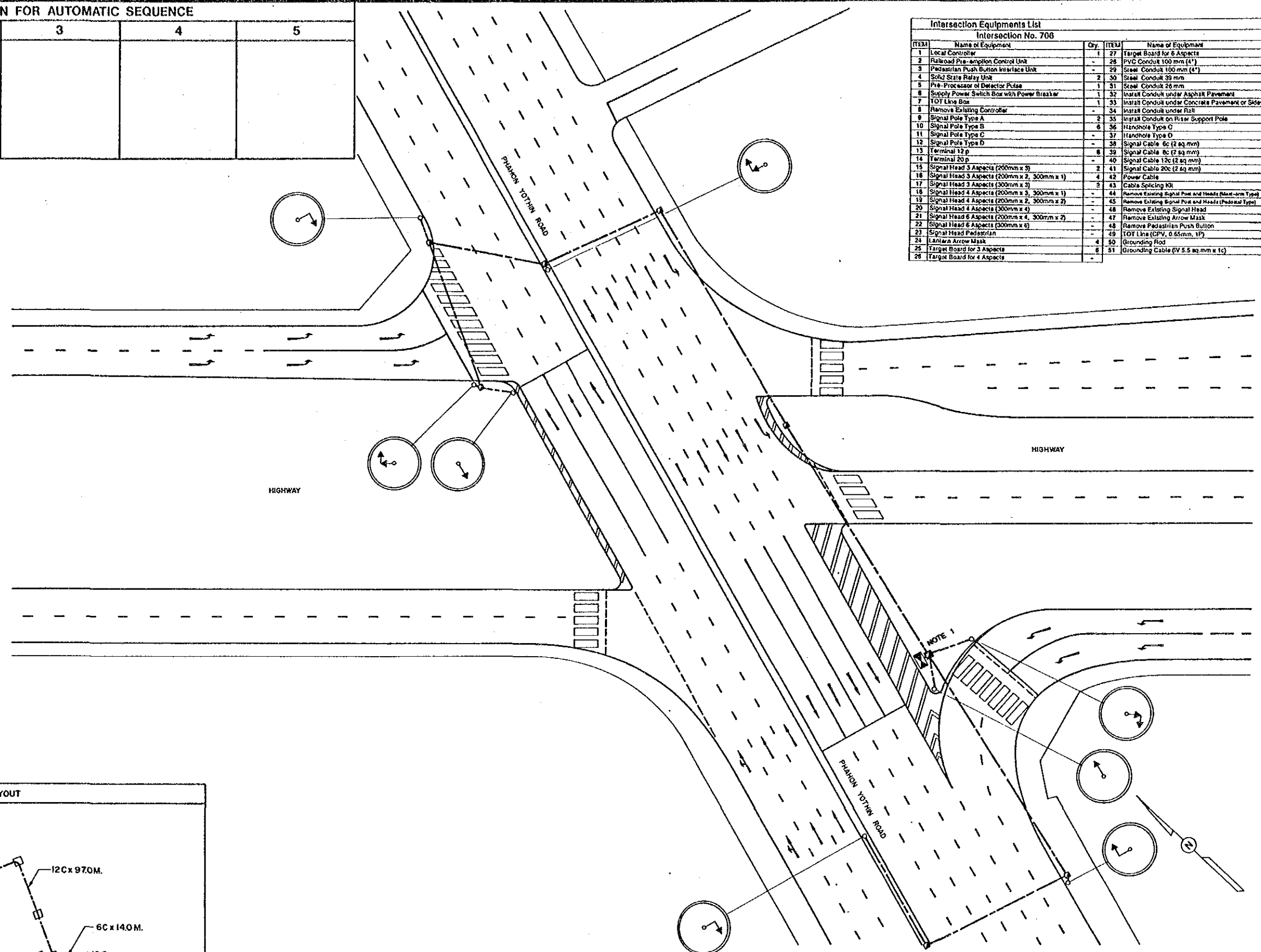
BANGKOK AREA TRAFFIC CONTROL SYSTEM PROJECT : STAGE I			
INTERSECTION TERMINAL EQUIPMENT LAYOUT PLAN		Submitted By :	Approved By :
SURAWONG - SAP		Juro Kodera JICA Study Team Leader	Boonyawat Titlus BMA Study Team Leader
INTERSECTION NO 266		Designed By :	Checked By :
		Yasun Nabeshima JICA Study Member	YED, BMA
Code	Revision	Date	Initial
Associated Plan No. :			
JICA Japan International Cooperation Agency	BMA Bangkok Metropolitan Administration	Scale 1 / 250	Drawing No 2266
		Date SEPTEMBER '90	Total 129 / 139



#### Intersection Equipments List

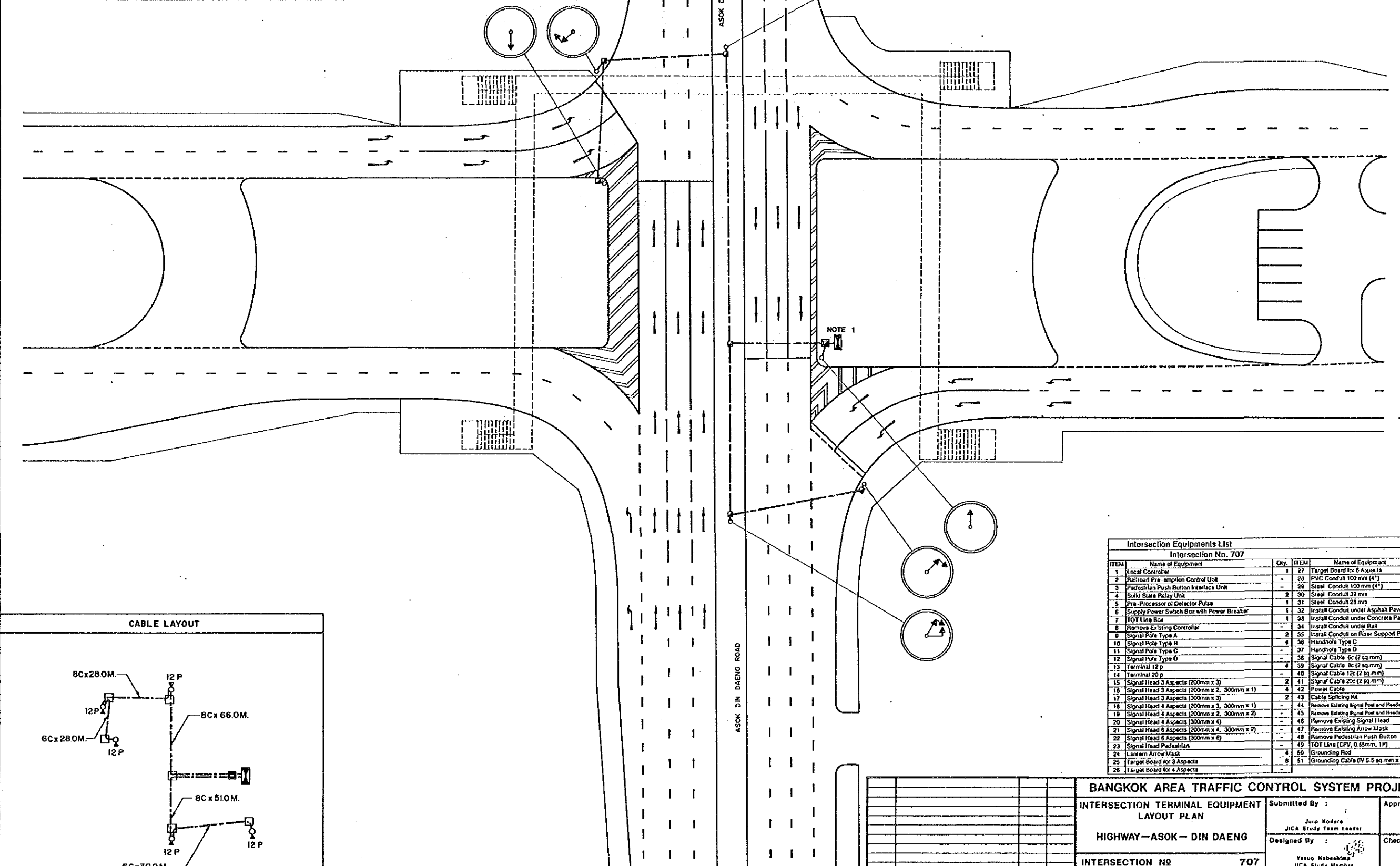
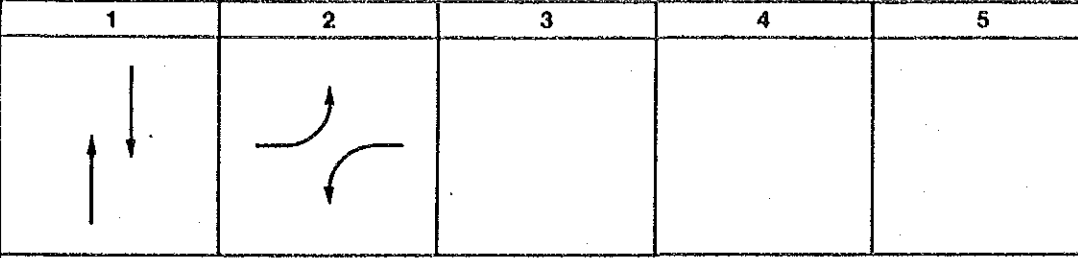
Intersection No. 706

ITEM	Name of Equipment	Qty.	ITEM	Name of Equipment	Qty.
1	Local Controller	1	27	Target Board for 6 Aspects	-
2	Railroad Pre-emption Control Unit	-	28	PVC Conduit 100 mm (4")	216
3	Pedestrian Push Button Interface Unit	-	29	Steel Conduit 100 mm (4")	-
4	Solid State Relay Unit	-	30	Steel Conduit 38 mm	8
5	Pre-Processor of Detector Pulse	1	31	Steel Conduit 26 mm	8
6	Supply Power Switch Box with Power Breaker	1	32	Install Conduit under Asphalt Pavement	-
7	TOF Line Box	1	33	Install Conduit under Concrete Pavement or Sidewalk	216
8	Remove Existing Controller	-	34	Install Conduit under Rail	-
9	Signal Pole Type A	2	35	Install Conduit on Piler Support Pole	10
10	Signal Pole Type B	6	36	Handhole Type C	7
11	Signal Pole Type C	-	37	Handhole Type D	1
12	Signal Pole Type D	-	38	Signal Cable 6C (2 sq mm)	87
13	Terminal 12 p	8	39	Signal Cable 8C (2 sq mm)	107
14	Terminal 20 p	-	40	Signal Cable 12C (2 sq mm)	97
15	Signal Head 3 Aspects (200mm x 3)	2	41	Signal Cable 20C (2 sq mm)	-
16	Signal Head 3 Aspects (200mm x 2, 300mm x 1)	4	42	Power Cable	20
17	Signal Head 3 Aspects (300mm x 3)	3	43	Cable Splicing Kit	-
18	Signal Head 4 Aspects (200mm x 3, 300mm x 1)	-	44	Remove Existing Signal Post and Heads (Main-arm Type)	-
19	Signal Head 4 Aspects (200mm x 2, 300mm x 2)	-	45	Remove Existing Signal Post and Heads (Pedestal Type)	-
20	Signal Head 7 Aspects (300mm x 4)	-	46	Remove Existing Signal Head	-
21	Signal Head 6 Aspects (200mm x 4, 300mm x 2)	-	47	Remove Existing Arrow Mask	-
22	Signal Head 6 Aspects (300mm x 6)	-	48	Remove Pedestrian Push Button	-
23	Signal Head Pedestrian	-	49	TOF Line (CPV, 0.65mm, 1P)	20
24	LANLAN Arrow Mask	4	50	Grounding Rod	1
25	Target Board for 3 Aspects	6	51	Grounding Cable (IV 5.5 sq. mm x 1c)	8
26	Target Board for 4 Aspects	-			

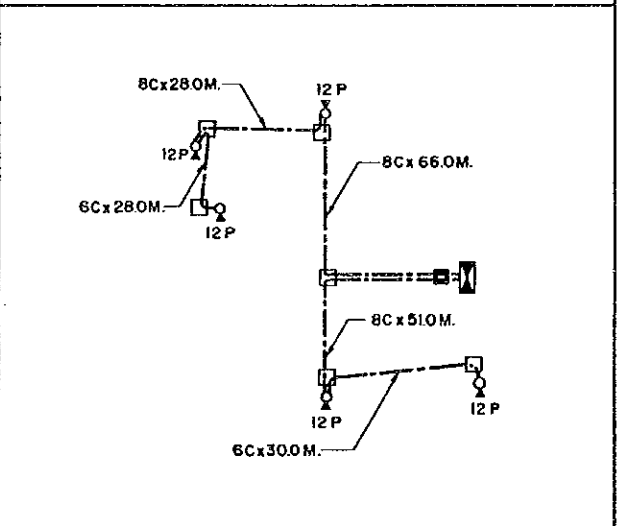


<b>BANGKOK AREA TRAFFIC CONTROL SYSTEM PROJECT : STAGE I</b>			
<b>INTERSECTION TERMINAL EQUIPMENT LAYOUT PLAN</b>		Submitted By :	Approved By :
<b>HIGHWAY - PHAHON YOTHIN</b>		Juro Kodara JICA Study Team Leader	Boonyawat Tiplua BMA Study Team Leader
<b>INTERSECTION NO 706</b>		Designed By :	Checked By :
Yasuo Hasehima JICA Study Member		Yasuo Hasehima JICA Study Member	TEO, BMA
Code	Revision	Date	Initial
Associated Plan No. :		JICA Japan International Cooperation Agency	BMA Bangkok Metropolitan Administration
Scale		1 / 250	Drawing NR 2706
Date		SEPTEMBER '90	Total 130 / 139

PHASE PLAN FOR AUTOMATIC SEQUENCE



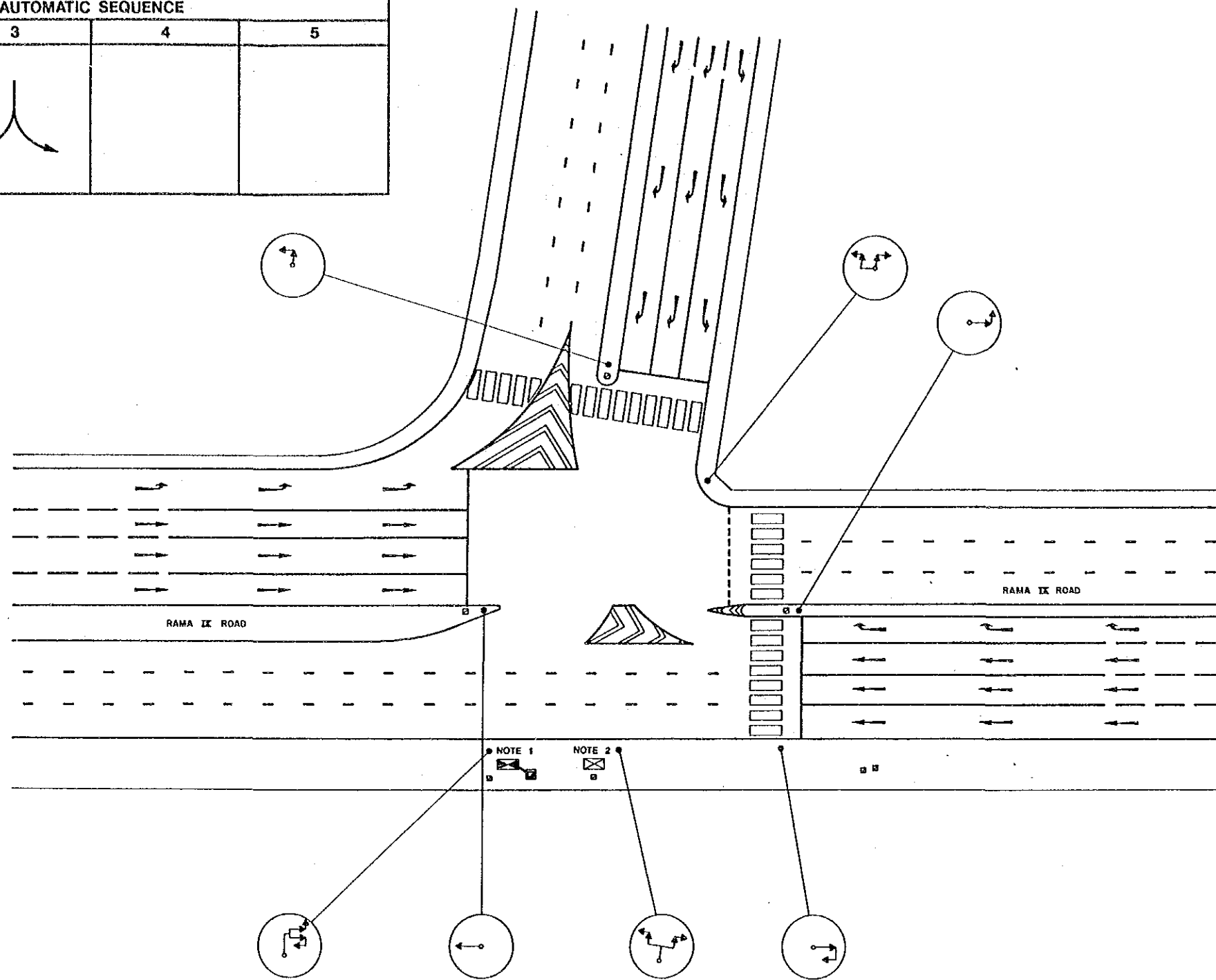
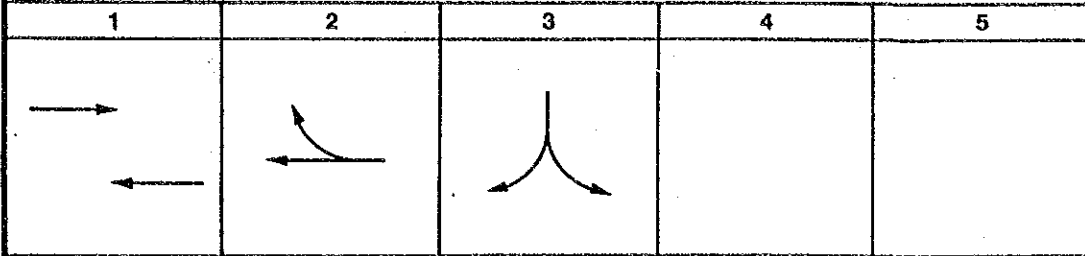
CABLE LAYOUT



Intersection Equipments List				
Intersection No. 707				
ITEM	Name of Equipment	Qty.	ITEM	Name of Equipment
1	Local Control Box	1	27	Target Board for 6 Aspects
2	Railroad Pre-emption Control Unit	-	28	PVC Conduit 100 mm (4")
3	Pedestrian Push Button Interface Unit	-	29	Steel Conduit 100 mm (4")
4	Soft State Relay Unit	2	30	Steel Conduit 33 mm
5	Pre-Processor of Detector Pulse	1	31	Steel Conduit 28 mm
6	Supply Power Switch Box with Power Breaker	1	32	Install Conduit under Asphalt Pavement
7	TOT Line Box	1	33	Install Conduit under Concrete Pavement or Sidewalk
8	Remove Existing Controller	-	34	Install Conduit under Flat
9	Signal Pole Type A	2	35	Install Conduit on Riser Support Pole
10	Signal Pole Type B	4	36	Handhole Type C
11	Signal Pole Type C	-	37	Handhole Type D
12	Signal Pole Type D	-	38	Signal Cable 6C (2 sq mm)
13	Terminal 12 p	4	39	Signal Cable 8C (2 sq mm)
14	Terminal 20 p	-	40	Signal Cable 12C (2 sq mm)
15	Signal Head 3 Aspects (200mm x 3)	2	41	Signal Cable 20C (2 sq mm)
16	Signal Head 3 Aspects (300mm x 2, 300mm x 1)	4	42	Power Cable
17	Signal Head 3 Aspects (300mm x 3)	2	43	Cable Splicing Kit
18	Signal Head 4 Aspects (200mm x 3, 300mm x 1)	-	44	Remove Existing Signal Post and Heads (Main-arr Type)
19	Signal Head 4 Aspects (200mm x 2, 300mm x 2)	-	45	Remove Existing Signal Post and Heads (Pedestrian Type)
20	Signal Head 4 Aspects (300mm x 4)	-	46	Remove Existing Signal Head
21	Signal Head 6 Aspects (200mm x 4, 300mm x 2)	-	47	Remove Existing Arrow Mask
22	Signal Head 6 Aspects (300mm x 6)	-	48	Remove Pedestrian Push Button
23	Signal Head Pedestrian	-	49	TOT Line (CPV, 0.65mm, 1P)
24	Lantern Arrow Mask	4	50	Grounding Rod
25	Target Board for 3 Aspects	6	51	Grounding Cable (IV 5.5 sq mm x 1c)
26	Target Board for 4 Aspects	-	-	-

BANGKOK AREA TRAFFIC CONTROL SYSTEM PROJECT: STAGE I			
INTERSECTION TERMINAL EQUIPMENT LAYOUT PLAN		Submitted By :	Approved By :
HIGHWAY-ASOK-DIN DAENG		Juro Kodera JICA Study Team Leader	Boonyawat Tiplux BMA Study Team Leader
INTERSECTION NO 707		Designed By :	Checked By :
		Yasuo Nishibata JICA Study Member	TED, BMA
Code	Revision	Date	Initial
Associated Plan No. :	JICA	BMA	Scale 1 / 250
	Japan International	Bangkok Metropolitan	Drawing NR 2707
	Cooperation Agency	Administration	Date SEPTEMBER '90
			Total 131 / 139

PHASE PLAN FOR AUTOMATIC SEQUENCE



Intersection Equipments List		
Intersection No. 708		
ITEM	Name of Equipment	Qty.
1	Local Controller	1
2	Railroad Pre-emption Control Unit	-
3	Pedestrian Push Button Interface Unit	-
4	Solid State Relay Unit	2
5	Pre-Processor of Detector Pulse	1
6	Supply Power Switch Box with Power Blaster	-
7	TOT Line Box	-
8	Remove Existing Controller	-
9	Signal Pole Type A	-
10	Signal Pole Type B	-
11	Signal Pole Type C	-
12	Signal Pole Type D	-
13	Terminal 12 p	-
14	Terminal 20 p	-
15	Signal Head 3 Aspects (200mm x 3)	-
16	Signal Head 3 Aspects (200mm x 2, 300mm x 1)	-
17	Signal Head 3 Aspects (300mm x 3)	-
18	Signal Head 4 Aspects (200mm x 3, 300mm x 1)	-
19	Signal Head 4 Aspects (200mm x 2, 300mm x 2)	-
20	Signal Head 4 Aspects (300mm x 4)	-
21	Signal Head 6 Aspects (200mm x 4, 300mm x 2)	-
22	Signal Head 6 Aspects (300mm x 6)	-
23	Signal Head Pedestrian	-
24	Lantern Arrow Mask	-
25	Target Board for 3 Aspects	-
26	Target Board for 4 Aspects	-
27	Target Board for 6 Aspects	-
28	PVC Conduit 100 mm (4")	8
29	Steel Conduit 100 mm (4")	-
30	Steel Conduit 39 mm	-
31	Steel Conduit 28 mm	5
32	Install Conduit under Asphalt Pavement	-
33	Install Conduit under Concrete Pavement or Sidewalk	8
34	Install Conduit under FLS	-
35	Install Conduit on Riser Support Pole	5
36	Handhole Type C	-
37	Handhole Type D	1
38	Signal Cable 6c (2 sq. mm)	-
39	Signal Cable 8c (2 sq. mm)	-
40	Signal Cable 12c (2 sq. mm)	-
41	Signal Cable 20c (2 sq. mm)	8
42	Power Cable	5
43	Cable Splicing Kit	1
44	Remove Existing Signal Post and Heads (Road-arm Type)	-
45	Remove Existing Signal Post and Heads (Pedestrian Type)	-
46	Remove Existing Signal Head	-
47	Remove Existing Arrow Mask	-
48	Remove Pedestrian Push Button	-
49	TOT Line (CPV, 0.65mm, 1P)	20
50	Grounding Rod	1
51	Grounding Cable (TV 6.5 sq. mm x 1c)	5

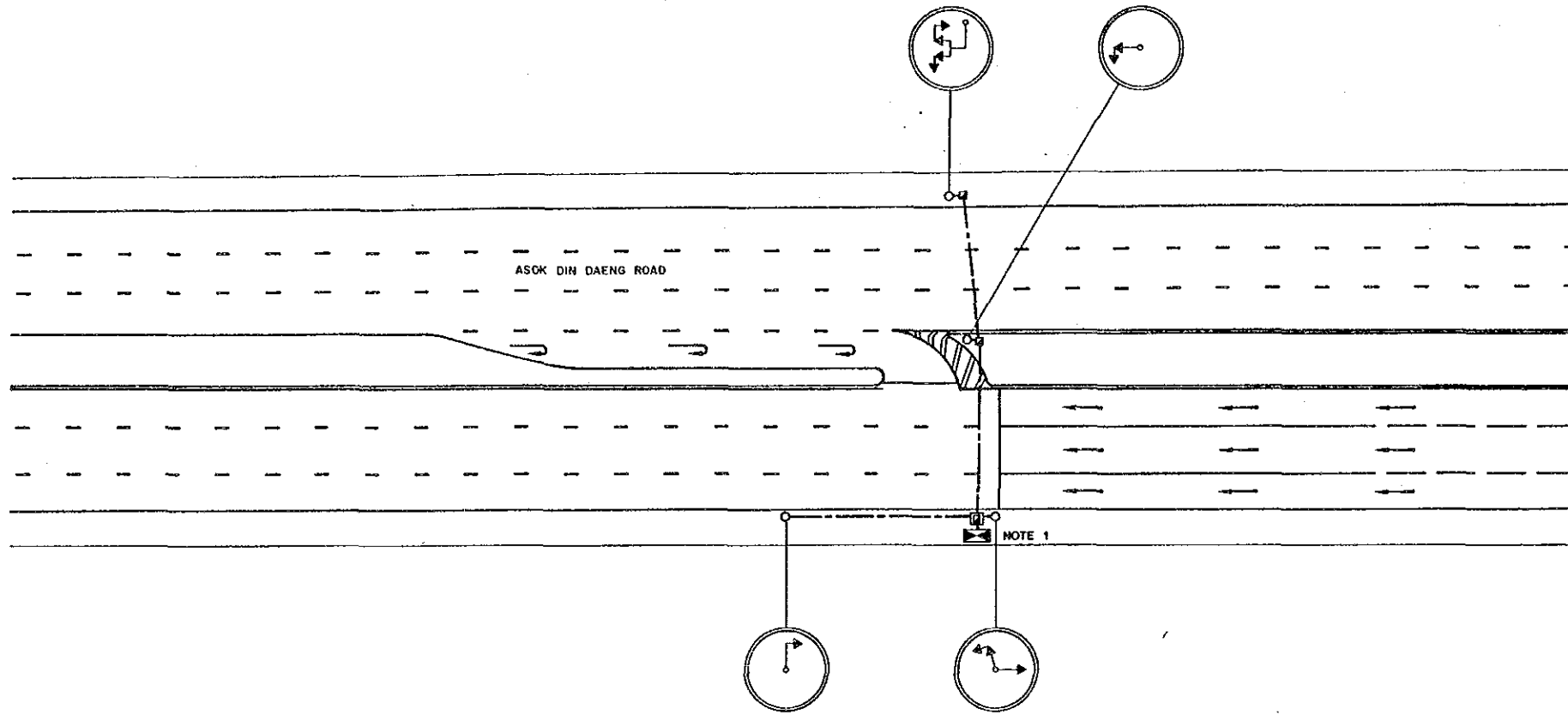
NOTE 1

NOTE 2

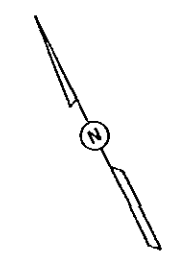
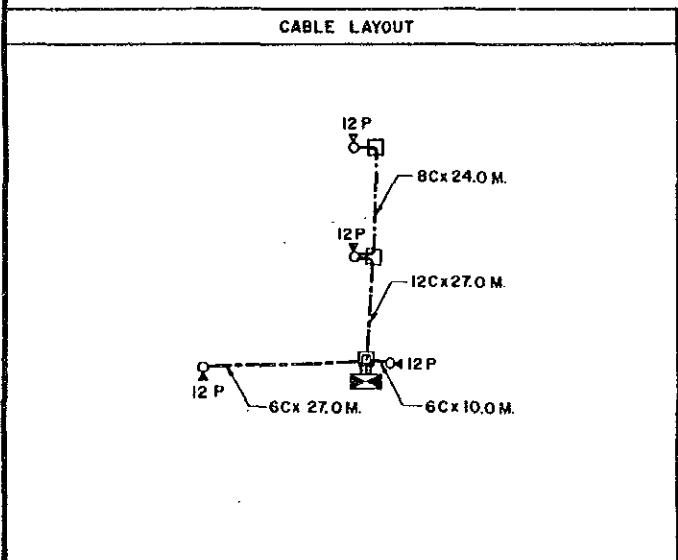


				<b>BANGKOK AREA TRAFFIC CONTROL SYSTEM PROJECT : STAGE I</b>			
				<b>INTERSECTION TERMINAL EQUIPMENT LAYOUT PLAN</b>		Submitted By :	Approved By :
				<b>HIGHWAY - RAMA IX</b>		Juta Kodera JICA Study Team Leader	Boonyawat Tiptus BMA Study Team Leader
				<b>INTERSECTION NR 708</b>		Designed By :	Checked By :
				<b>JICA</b>		Yasuo Mubeshim JICA Study Member	TED, BMA
				<b>BMA</b>		Scale	Drawing NR
				Japan International Cooperation Agency		1 / 250	2708
				Bangkok Metropolitan Administration		Date	Total
				Associated Plan No. :		SEPTEMBER '90	132 / 139
				Code			
Revision		Date		Initial			

PHASE PLAN FOR AUTOMATIC SEQUENCE				
1	2	3	4	5
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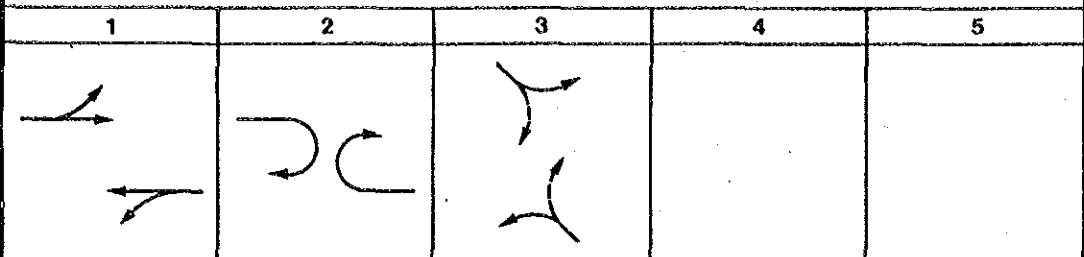
Intersection Equipments List		
Intersection No. 801		
ITEM	Name of Equipment	Qty.
1	Local Controller	1
2	Railroad Pre-emption Control Unit	-
3	Pedestrian Push Button Interface Unit	-
4	Solid State Relay Unit	1
5	Pre-Processor of Data for Pulse	-
6	Supply Power Switch Box with Power Breaker	1
7	TOT Line Box	1
8	Remove Existing Controller	-
9	Signal Pole Type A	2
10	Signal Pole Type B	1
11	Signal Pole Type C	-
12	Signal Pole Type D	-
13	Terminal 12 p.	4
14	Terminal 20 p.	-
15	Signal Head 3 Aspects (300mm x 3)	1
16	Signal Head 3 Aspects (300mm x 2, 300mm x 1)	2
17	Signal Head 3 Aspects (300mm x 3)	1
18	Signal Head 4 Aspects (300mm x 3, 300mm x 1)	-
19	Signal Head 4 Aspects (300mm x 2, 300mm x 2)	-
20	Signal Head 4 Aspects (300mm x 4)	-
21	Signal Head 6 Aspects (300mm x 4, 300mm x 2)	-
22	Signal Head 6 Aspects (300mm x 6)	1
23	Signal Head Pedestrian	-
24	Lighted Arrow Mast	4
25	Target Board for 3 Aspects	-
26	Target Board for 4 Aspects	-
27	Target Board for 6 Aspects	-
28	PVC Conduit 100 mm (4")	52
29	Steel Conduit 100 mm (4")	-
30	Steel Conduit 38 mm	5
31	Steel Conduit 28 mm	5
32	Install Conduit under Asphalt Pavement	-
33	Install Conduit under Concrete Pavement or Sidewalk	52
34	Install Conduit under Rail	-
35	Install Conduit on Riser Support Pole	10
36	Handhole Type C	2
37	Handhole Type D	1
38	Signal Cable 6C (2 sq. mm)	37
39	Signal Cable 8C (2 sq. mm)	24
40	Signal Cable 12C (2 sq. mm)	27
41	Signal Cable 20C (2 sq. mm)	-
42	Power Cable	20
43	Cable Splicing Kit	-
44	Remove Existing Signal Pole and Head (dual-arm Type)	-
45	Remove Existing Signal Pole and Head (Pedestrian Type)	-
46	Remove Existing Signal Head	-
47	Remove Existing Arrow Mast	-
48	Remove Pedestrian Push Button	-
49	TOT Line (CPV, 0.65mm, 1P)	20
50	Grounding Rod	1
51	Grounding Cable (IV 5.5 sq. mm x 1c)	5



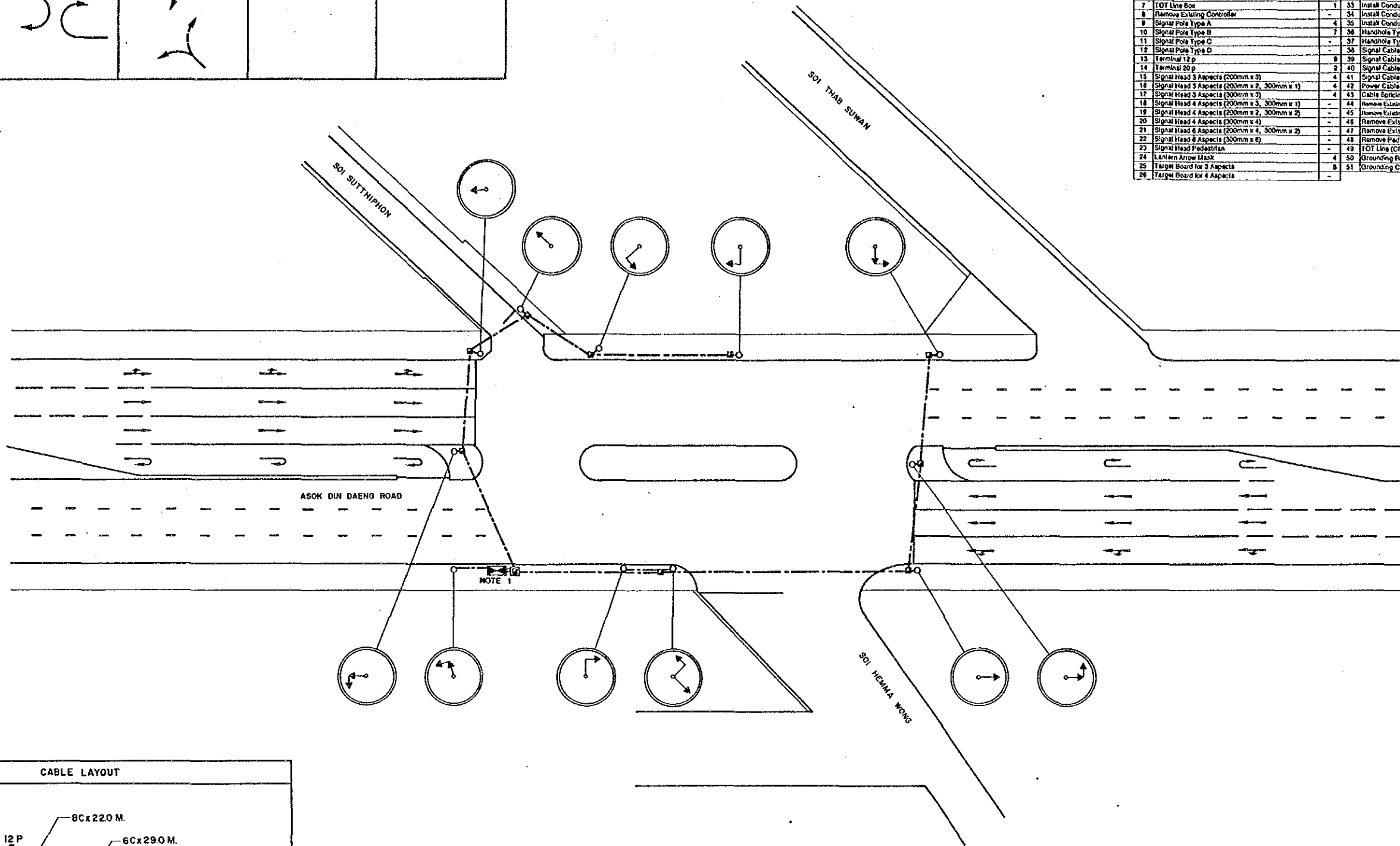
BANGKOK AREA TRAFFIC CONTROL SYSTEM PROJECT : STAGE I			
INTERSECTION TERMINAL EQUIPMENT LAYOUT PLAN		Submitted By :	Approved By :
U--TURN AT ASOK DIN DAENG (WEST)		Juro Kodera JICA Study Team Leader	Boonyawat Tiplus BMA Study Team Leader
INTERSECTION NO 801		Designed By :	Checked By :
		Yasuo Mabeshima JICA Study Member	YED, BMA
Code	Revision	Date	Initial
Associated Plan No. :	JICA	BMA	Scale 1 / 250
	Japan International Cooperation Agency	Bangkok Metropolitan Administration	Drawing No 2801
			Date SEPTEMBER '90
			Total 133 / 139



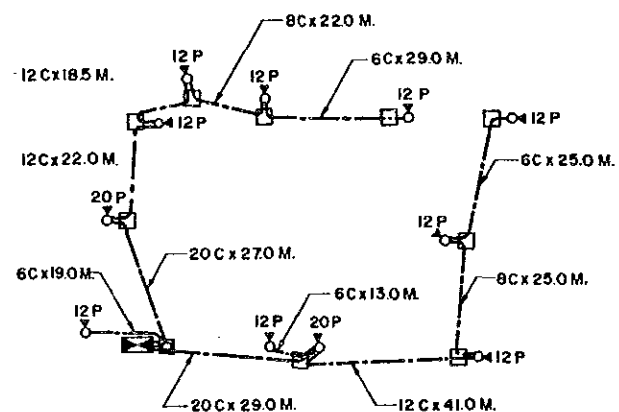
PHASE PLAN FOR AUTOMATIC SEQUENCE



Intersection Equipments List					
Intersection No. 802					
ITEM	Name of Equipment	Qty.	ITEM	Name of Equipment	Qty.
1	Local Controller	1	27	Target Board for 8 Aspects	-
2	Railroad Pre-emption Control Unit	-	28	PVC Conduit 100 mm (4")	183.5
3	Pedestrian Push Button Interface Unit	-	29	Steel Conduit 100 mm (4")	-
4	Solid State Relay Unit	3	30	Steel Conduit 39 mm	5
5	Pre-Processor of Detector Pulse	-	31	Steel Conduit 28 mm	5
6	Supply Power Switch Box with Power Breaker	1	32	Install Conduit under Asphalt Pavement	-
7	TOT Line Box	1	33	Install Conduit under Concrete Pavement of Sidewalk	183.5
8	Remove Existing Controller	-	34	Install Conduit under Road	-
9	Signal Pole Type A	4	35	Install Conduit on Riser Support Pole	10
10	Signal Pole Type B	7	36	Handhole Type C	9
11	Signal Pole Type C	-	37	Handhole Type D	1
12	Signal Pole Type D	-	38	Signal Cable 6c (2 sq. mm)	86
13	Terminal 12 p	9	39	Signal Cable 8c (2 sq. mm)	47
14	Terminal 20 p	2	40	Signal Cable 12c (2 sq. mm)	82
15	Signal Head 3 Aspects (200mm x 3)	4	41	Signal Cable 30c (2 sq. mm)	58
16	Signal Head 3 Aspects (200mm x 2, 300mm x 1)	4	42	Power Cable	20
17	Signal Head 3 Aspects (300mm x 3)	4	43	Cable Splicing Kit	-
18	Signal Head 4 Aspects (200mm x 3, 300mm x 1)	-	44	Remove Existing Signal Post and Heads (Rail-arm Type)	-
19	Signal Head 4 Aspects (200mm x 2, 300mm x 2)	-	45	Remove Existing Signal Post and Heads (Pedestal Type)	-
20	Signal Head 4 Aspects (300mm x 4)	-	46	Remove Existing Signal Head	-
21	Signal Head 6 Aspects (200mm x 4, 300mm x 2)	-	47	Remove Existing Arrow Mast	-
22	Signal Head 8 Aspects (300mm x 8)	-	48	Remove Pedestrian Push Button	-
23	Signal Head Pedestrian	-	49	TOT Line CPV, 6.65mm, 1P	20
24	Lantern Arrow Mast	4	50	Grounding Rod	1
25	Target Board for 3 Aspects	8	51	Grounding Cable (V 5.5 sq. mm x 1c)	5
26	Target Board for 4 Aspects	-	-	-	-

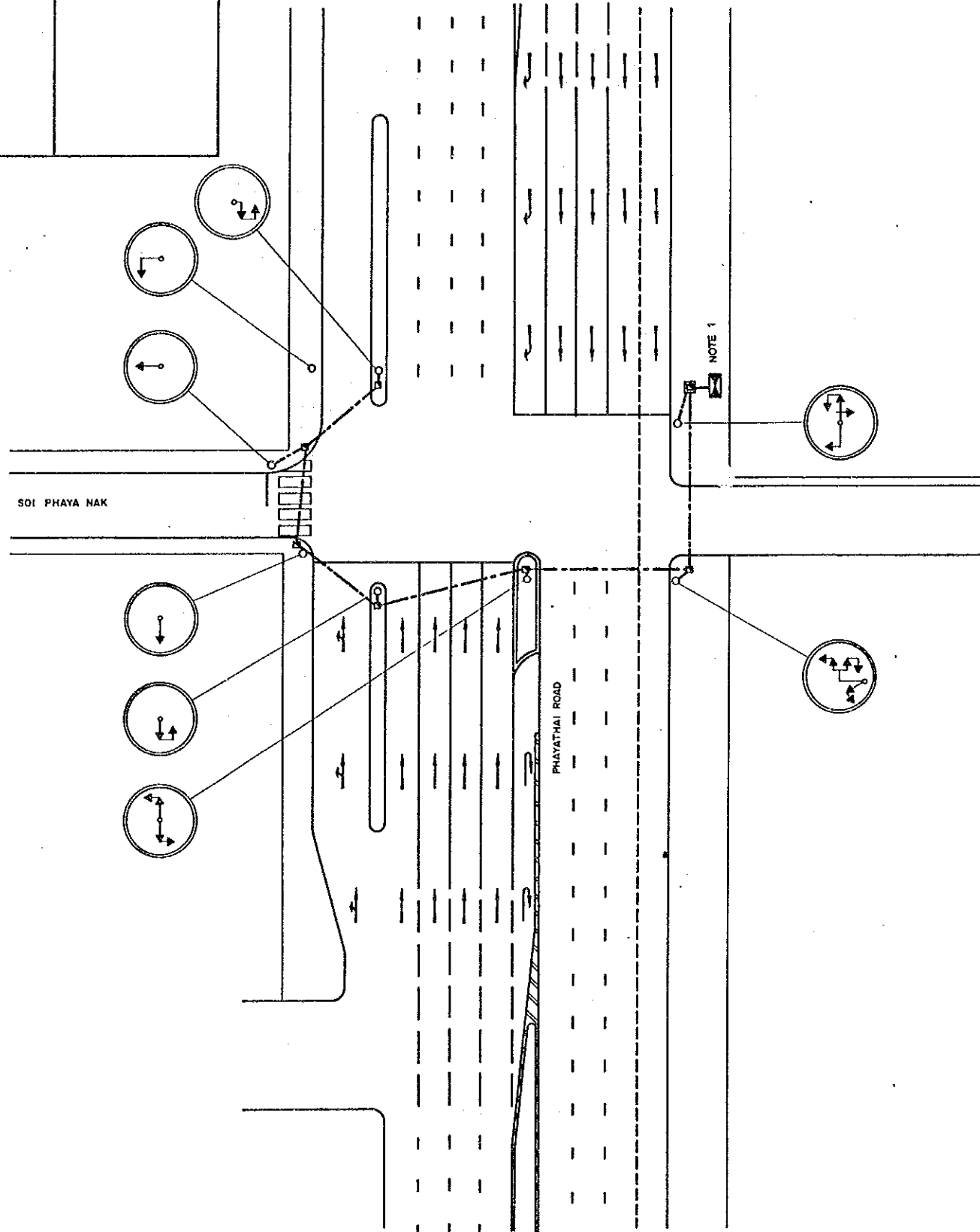


CABLE LAYOUT

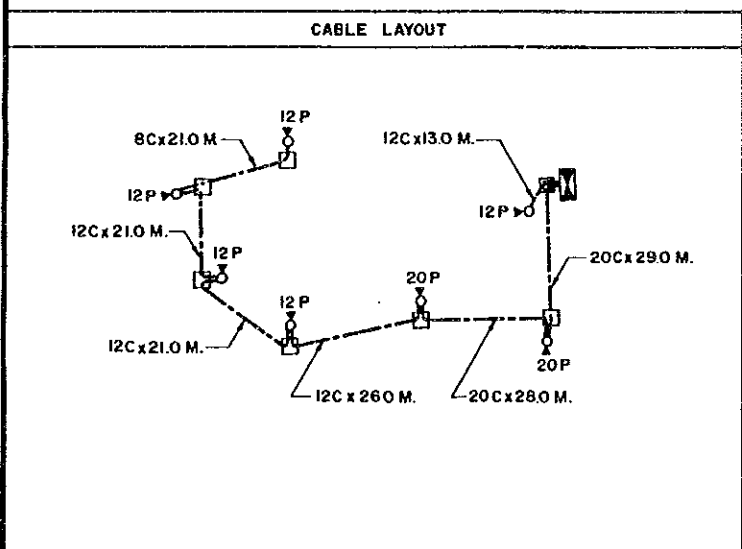


BANGKOK AREA TRAFFIC CONTROL SYSTEM PROJECT : STAGE I			
INTERSECTION TERMINAL EQUIPMENT LAYOUT PLAN		Submitted By :	Approved By :
U-TURN AT ASOK DIN DAENG (EAST)		Jure Kodera JICA Study Team Leader	Boonyawat Tiptus BMA Study Team Leader
INTERSECTION NO 802		Designed By :	Checked By :
		Yeeva Nabeshima JICA Study Member	YEO, BMA
Code	Revision	Date	Initial
Associated Plan No. :	JICA	BMA	Scale 1 / 250
	Japan International Cooperation Agency	Bangkok Metropolitan Administration	Drawing NR 2802
			Date SEPTEMBER '90
			Total 134 / 159

PHASE PLAN FOR AUTOMATIC SEQUENCE				
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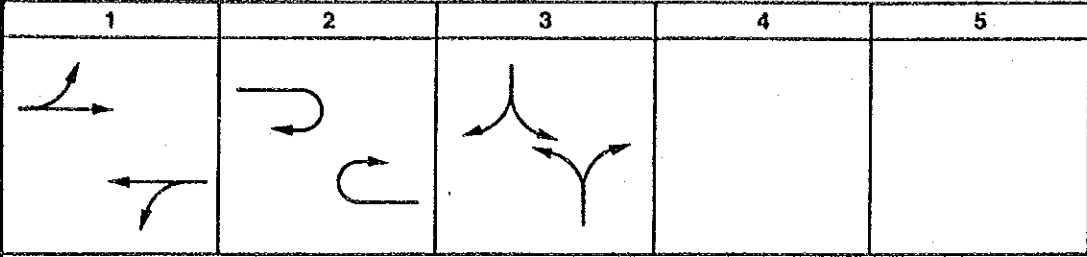


Intersection Equipments List		
Intersection No. 803		
ITEM	Name of Equipment	Qty.
1	Local Controller	1
2	Raised Pre-emption Control Unit	-
3	Pedestrian Push Button Interface Unit	-
4	Scale State Relay Unit	3
5	Pre-Processor of Detector Pulse	1
6	Supply Power Switch Box with Power Breaker	1
7	TOT Line Box	1
8	Remove Existing Controller	-
9	Signal Pole Type A	2
10	Signal Pole Type B	4
11	Signal Pole Type C	-
12	Signal Pole Type D	-
13	Terminal 12 p	5
14	Terminal 20 p	2
15	Signal Head 3 Aspects (200mm x 3)	2
16	Signal Head 3 Aspects (200mm x 2, 200mm x 1)	4
17	Signal Head 3 Aspects (300mm x 3)	3
18	Signal Head 4 Aspects (200mm x 3, 200mm x 1)	-
19	Signal Head 4 Aspects (200mm x 2, 200mm x 2)	1
20	Signal Head 4 Aspects (300mm x 4)	-
21	Signal Head 6 Aspects (200mm x 4, 200mm x 2)	-
22	Signal Head 8 Aspects (200mm x 8)	1
23	Signal Head Pedestrian	-
24	Lantern Arrow Mask	9
25	Target Board for 3 Aspects	6
26	Target Board for 4 Aspects	1
27	Target Board for 6 Aspects	-
28	PVC Conduit 100 mm (4")	96
29	Steel Conduit 100 mm (4")	-
30	Steel Conduit 50 mm	5
31	Steel Conduit 28 mm	5
32	Install Conduit under Asphalt Pavement	-
33	Install Conduit under Concrete Pavement or Sidewalk	96
34	Install Conduit under Rail	-
35	Install Conduit on Riser Support Pole	10
36	Handhole Type C	6
37	Handhole Type D	1
38	Signal Cable 6c (2 sq mm)	-
39	Signal Cable 6c (2 sq mm)	21
40	Signal Cable 12c (2 sq mm)	81
41	Signal Cable 20c (2 sq mm)	57
42	Power Cable	20
43	Cable Splicing Kit	-
44	Remove Existing Signal Post and Heads (Mast-arm Type)	-
45	Remove Existing Signal Post and Heads (Pedestal Type)	-
46	Remove Existing Signal Head	-
47	Remove Existing Arrow Mask	-
48	Remove Pedestrian Push Button	-
49	TOT Line (CPW, 0.65mm, 1P)	20
50	Grounding Rod	1
51	Grounding Cable (IV 5.5 sq mm x 1c)	5

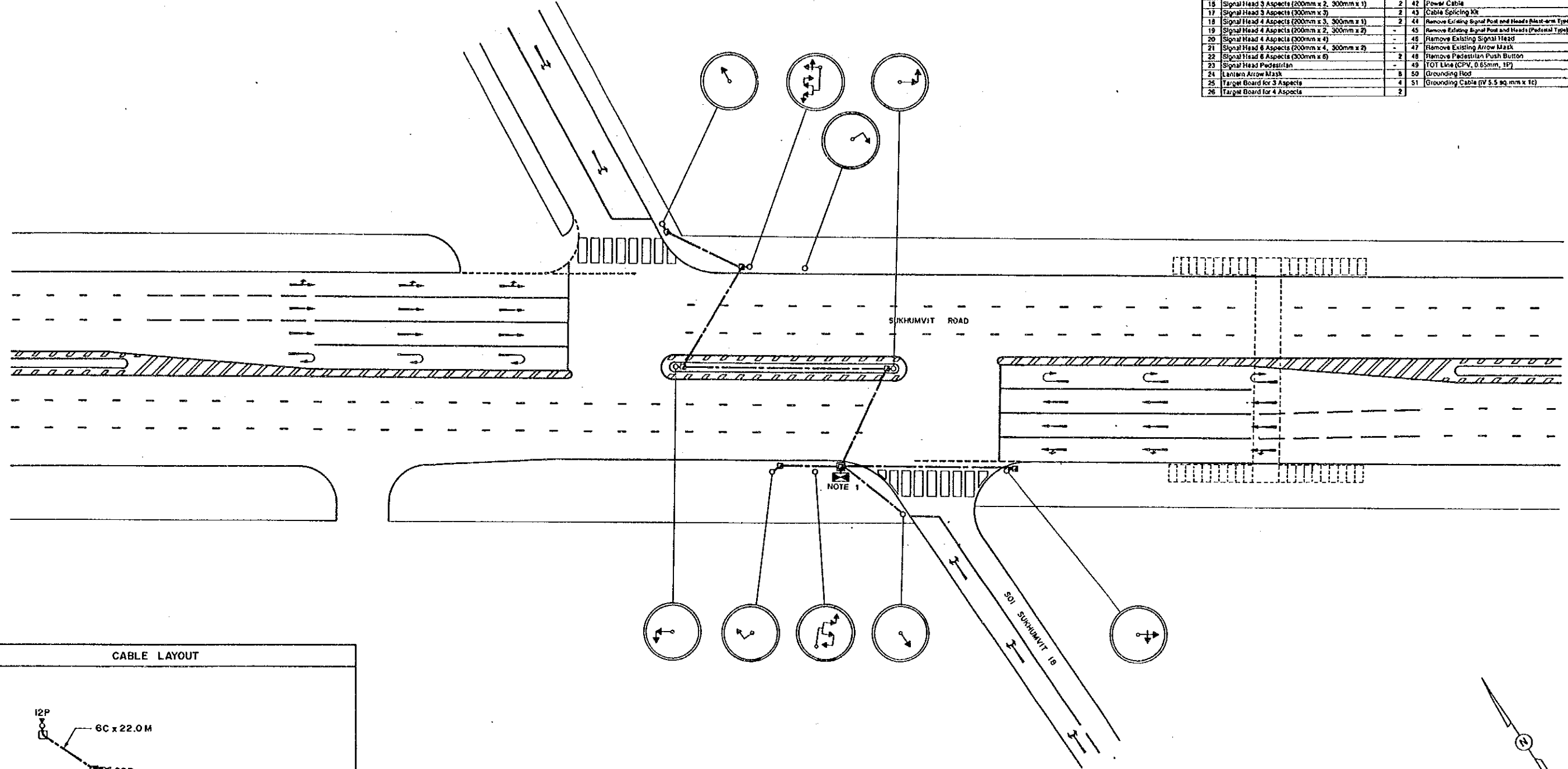


BANGKOK AREA TRAFFIC CONTROL SYSTEM PROJECT: STAGE I			
INTERSECTION TERMINAL EQUIPMENT LAYOUT PLAN		Submitted By : Jira Keeree JICA Study Team Leader	Approved By : Boonyawat Tistee BMA Study Team Leader
U-TURN AT PHAYA THAI (ASIA HOTEL)		Designed By : Yasue Nobuhisa JICA Study Member	Checked By : TED, BMA
INTERSECTION N <sup>o</sup> 803		Scale 1 / 250	Drawing N <sup>o</sup> 2803
Code	Revision	Date	Initial
Associated Plan No. :		JICA Japan International Cooperation Agency	BMA Bangkok Metropolitan Administration
		Date SEPTEMBER '90	Total 135 / 139

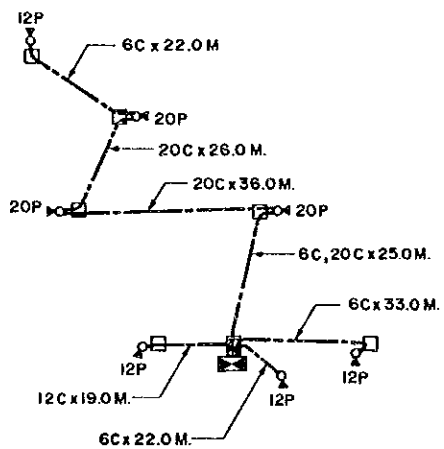
PHASE PLAN FOR AUTOMATIC SEQUENCE



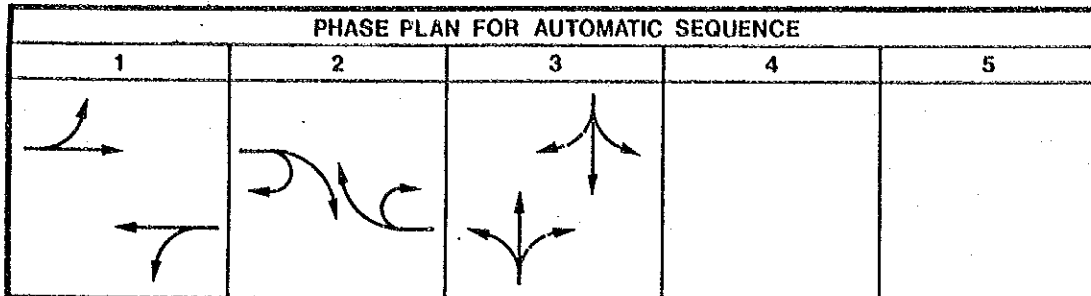
Intersection Equipments List				
Intersection No. 804				
ITEM	Name of Equipment	Qty.	ITEM	Name of Equipment
1	Local Controller	1	27	Target Board for 6 Aspects
2	Railroad Pre-emption Control Unit	-	28	PVC Conduit 100 mm (4")
3	Pedestrian Push Button Interface Unit	-	29	Steel Conduit 100 mm (4")
4	Solid State Relay Unit	3	30	Steel Conduit 39 mm
5	Pra-Processor of Detector Pulse	1	31	Steel Conduit 28 mm
6	Supply Power Switch Box with Power Breaker	1	32	Install Conduit under Asphalt Pavement
7	TOT Line Box	1	33	Install Conduit under Concrete Pavement or Sidewalk
8	Remove Existing Controller	-	34	Install Conduit under Road
9	Signal Pole Type A	-	35	Install Conduit on Riser Support Pole
10	Signal Pole Type B	5	36	Manhole Type C
11	Signal Pole Type C	-	37	Manhole Type D
12	Signal Pole Type D	-	38	Signal Cable 6c (2 sq. mm)
13	Terminal 12 p.	4	39	Signal Cable 8c (2 sq. mm)
14	Terminal 20 p.	3	40	Signal Cable 12c (2 sq. mm)
15	Signal Head 3 Aspects (200mm x 3)	2	41	Signal Cable 20c (2 sq. mm)
16	Signal Head 3 Aspects (200mm x 2, 300mm x 1)	2	42	Power Cable
17	Signal Head 3 Aspects (300mm x 3)	2	43	Cable Splicing Kit
18	Signal Head 4 Aspects (200mm x 3, 300mm x 1)	2	44	Remove Existing Signal Post and Heads (Base-arm Type)
19	Signal Head 4 Aspects (200mm x 2, 300mm x 2)	-	45	Remove Existing Signal Post and Heads (Pedestal Type)
20	Signal Head 4 Aspects (300mm x 4)	-	46	Remove Existing Signal Head
21	Signal Head 6 Aspects (200mm x 4, 300mm x 2)	-	47	Remove Existing Arrow Mask
22	Signal Head 6 Aspects (300mm x 6)	2	48	Remove Pedestrian Push Button
23	Signal Head Pedestrian	-	49	TOT Line (CPV, 0.65mm, 1P)
24	Lantern Arrow Mask	6	50	Grounding Rod
25	Target Board for 3 Aspects	4	51	Grounding Cable (IV 5.5 sq. mm x 1c)
26	Target Board for 4 Aspects	2		



CABLE LAYOUT

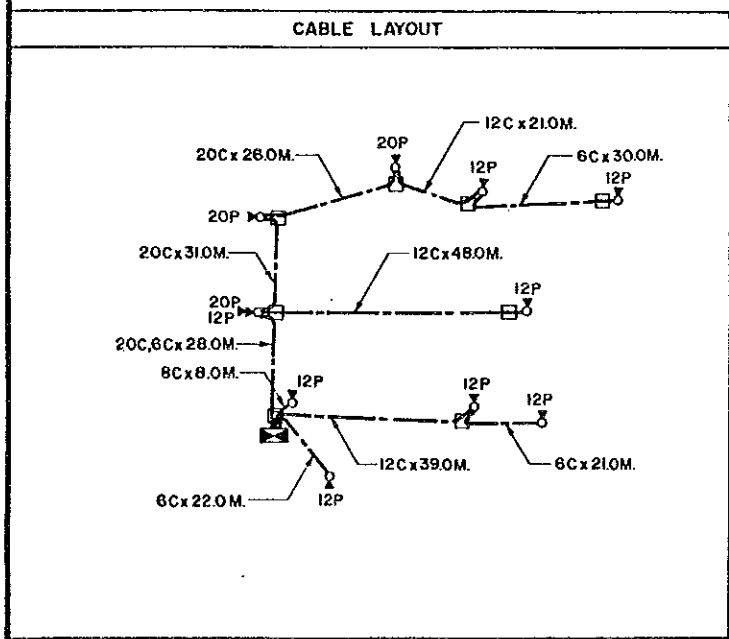
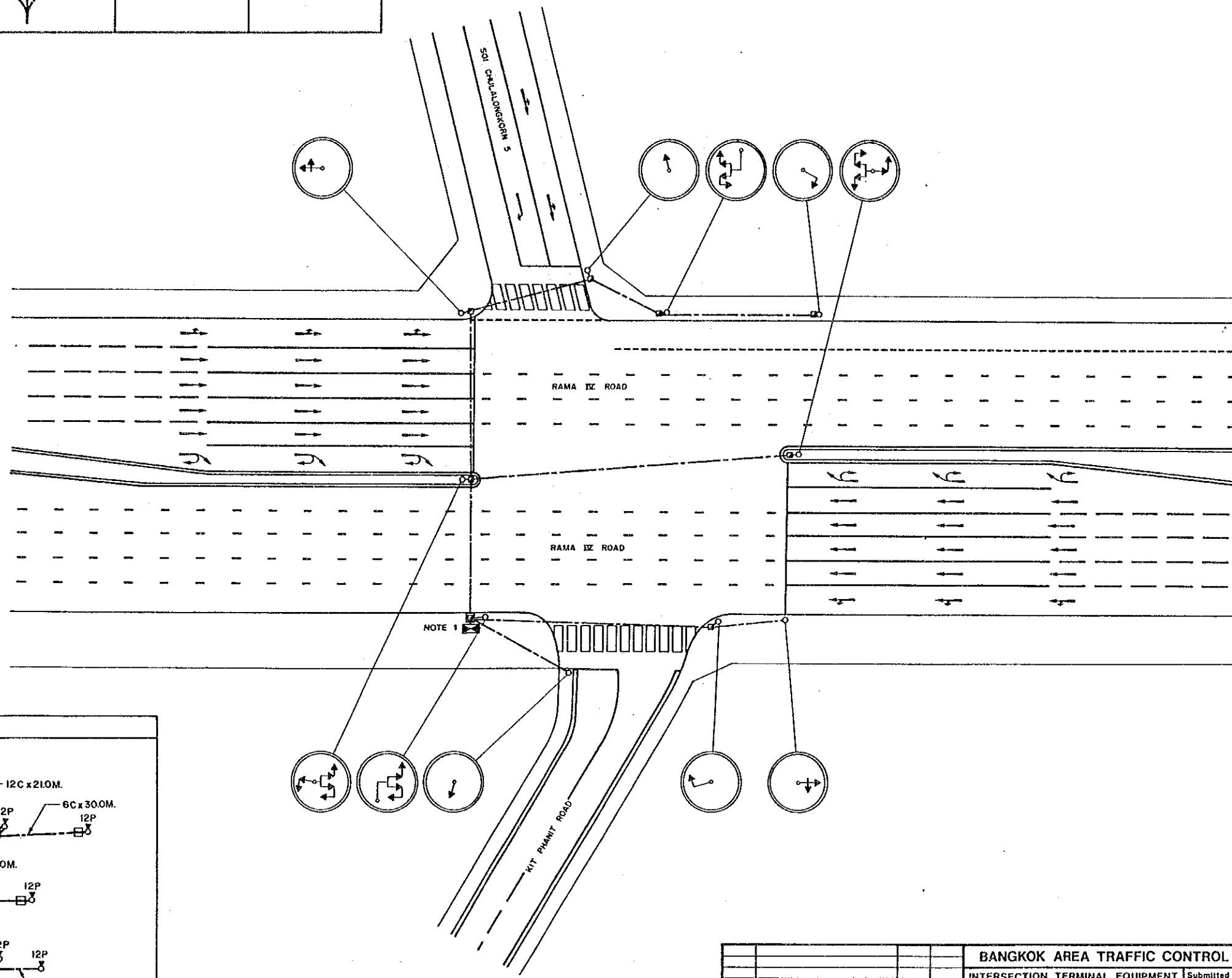


BANGKOK AREA TRAFFIC CONTROL SYSTEM PROJECT: STAGE I				
INTERSECTION TERMINAL EQUIPMENT LAYOUT PLAN			Submitted By :	Approved By :
U-TURN AT SUKHUMVIT (NEAR SOI SUKHUMVIT 18)			Juta Kudara JICA Study Team Leader	Roonyawat Tiptua BMA Study Team Leader
INTERSECTION NO 804			Designed By :	Checked By :
			Yasuo Hasebina JICA Study Member	TEO, BMA
Code	Revision	Date	Initial	
Associated Plan No. :		JICA	BMA	Scale 1 / 250
		Japan International Cooperation Agency	Bangkok Metropolitan Administration	Drawing No 2804
				Date SEPTEMBER '90
				Total 136 / 139



**Intersection Equipments List**  
Intersection No. 805

ITEM	Name of Equipment	Qty.
1	Local Controller	1
2	Roadside Pre-emption Control Unit	-
3	Pedestrian Push Button Interface Unit	-
4	Solid State Relay Unit	3
5	Pre-Processor of Detector Pulse	-
6	Supply Power Switch Box with Power Breaker	1
7	TOT Line Box	1
8	Remove Existing Controller	-
9	Signal Pole Type A	4
10	Signal Pole Type B	8
11	Signal Pole Type C	-
12	Signal Pole Type D	-
13	Terminal 12C	8
14	Terminal 20D	3
15	Signal Head 3 Aspects (200mm x 3)	2
16	Signal Head 3 Aspects (200mm x 2, 300mm x 1)	2
17	Signal Head 3 Aspects (200mm x 3)	2
18	Signal Head 4 Aspects (200mm x 2, 300mm x 1)	2
19	Signal Head 4 Aspects (200mm x 2, 300mm x 2)	-
20	Signal Head 4 Aspects (300mm x 4)	-
21	Signal Head 6 Aspects (200mm x 4, 300mm x 2)	3
22	Signal Head 6 Aspects (300mm x 6)	2
23	Signal Head Pedestrian	-
24	Lantern Arrow Mast	12
25	Target Board for 3 Aspects	4
26	Target Board for 4 Aspects	2
27	Target Board for 6 Aspects	2
28	PVC Conduit 100 mm (4")	179
29	Steel Conduit 100 mm (4")	-
30	Steel Conduit 25 mm	5
31	Steel Conduit 28 mm	5
32	Install Conduit under Asphalt Pavement	-
33	Install Conduit under Concrete Pavement or Sidewalk	179
34	Install Conduit under Rail	-
35	Install Conduit on Riser Support Pole	10
36	Handhole Type C	7
37	Handhole Type D	1
38	Signal Cable 6C (2 sq. mm)	101
39	Signal Cable 8C (2 sq. mm)	9
40	Signal Cable 12C (8 sq. mm)	108
41	Signal Cable 20C (2 sq. mm)	85
42	Power Cable	20
43	Cable Splicing Box	-
44	Remove Existing Signal Post and Heads (Main-stem Type)	-
45	Remove Existing Signal Post and Heads (Pedestrian Type)	-
46	Remove Existing Signal Head	-
47	Remove Existing Arrow Mast	-
48	Remove Pedestrian Push Button	-
49	TOT Live (CPV, 0.63mm, 1P)	20
50	Grounding Rod	1
51	Grounding Cable (IV 5.5 sq. mm x 1c)	5

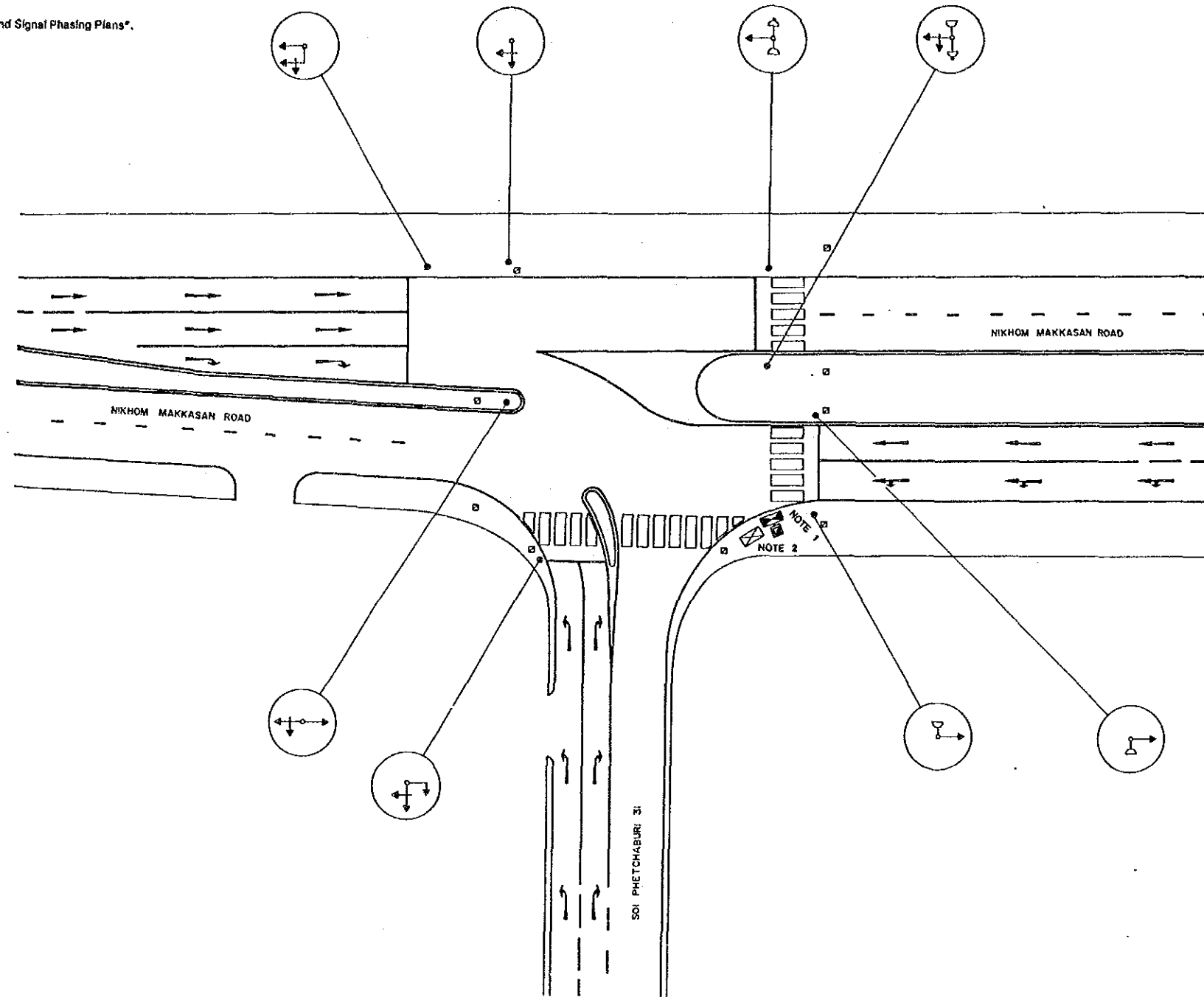


**BANGKOK AREA TRAFFIC CONTROL SYSTEM PROJECT: STAGE I**

<b>INTERSECTION TERMINAL EQUIPMENT LAYOUT PLAN</b>		Submitted By : Juro Kefera JICA Study Team Leader	Approved By : Boonyawat Tiptua BMA Study Team Leader
<b>U-TURN AT RAMA IV</b>		Designed By : Yasuo Hasehima JICA Study Member	Checked By : TED, BMA
<b>INTERSECTION NO 805</b>		Scale 1 / 250	Drawing No 2805
Associated Plan No. :	JICA Japan International Cooperation Agency	BMA Bangkok Metropolitan Administration	Date SEPTEMBER '90 Total 137 / 139

PHASE PLAN FOR AUTOMATIC SEQUENCE				
1	2	3	4	5

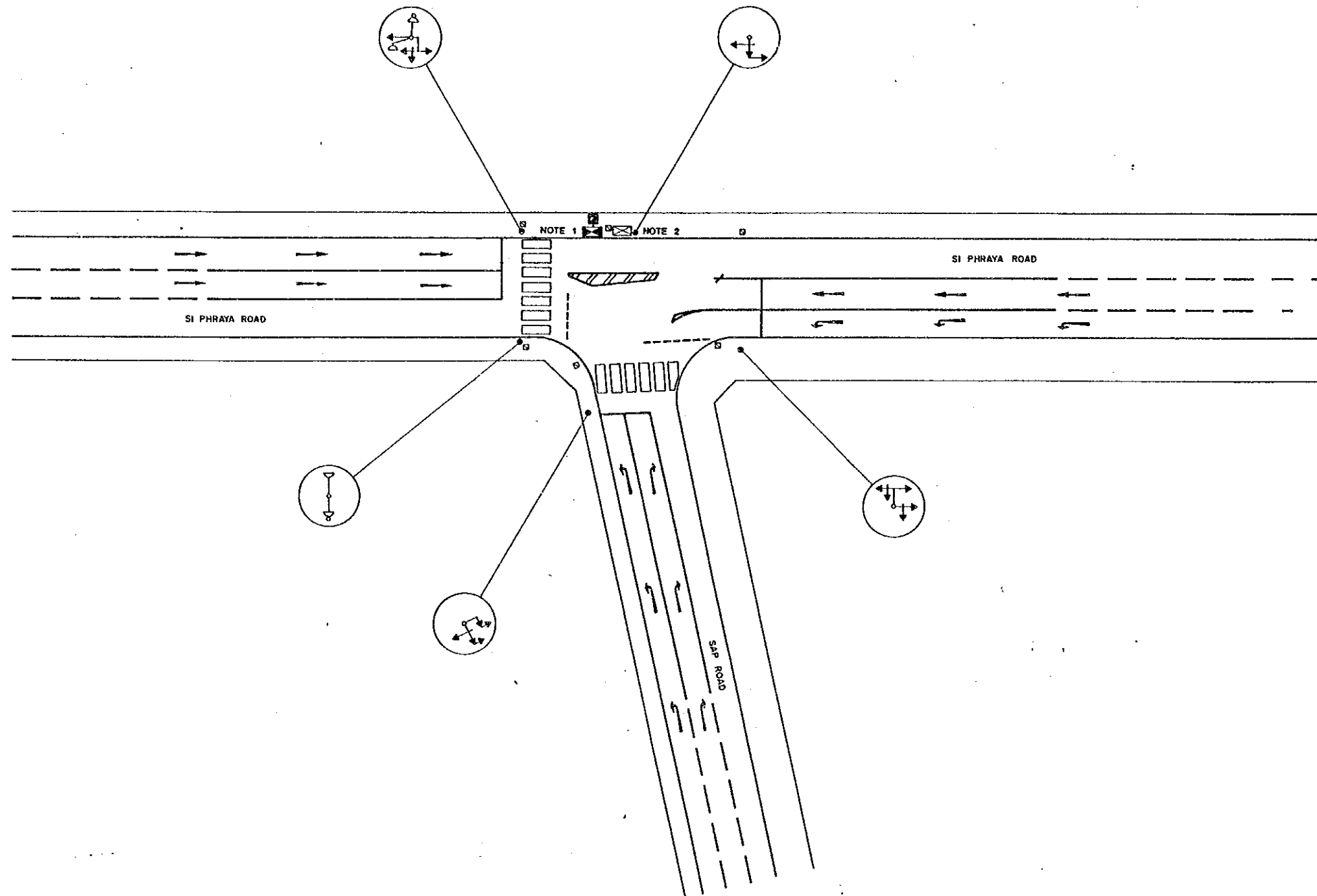
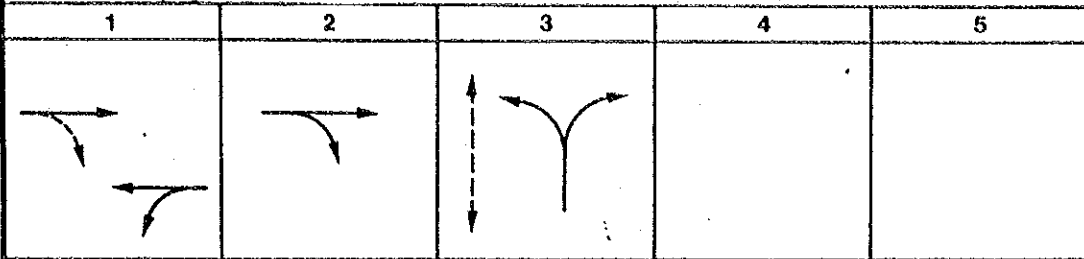
NOTE: Signal Phasing shown here is for the Morning Peak only.  
For evening peak and off-peak, please refer to "Design Volume and Signal Phasing Plans".



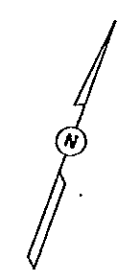
Intersection Equipments List		
Intersection No. 904		
ITEM	Name of Equipment	Qty.
1	Local Controller	1
2	Railroad Pre-emption Control Unit	-
3	Pedestrian Push Button Interface Unit	-
4	Solid State Relay Unit	2
5	Pre-Processor of Detector Pulse	1
6	Supply Power Switch Box with Power Breaker	-
7	TOI Line Box	1
8	Remove Existing Controller	1
9	Signal Pole Type A	-
10	Signal Pole Type B	-
11	Signal Pole Type C	-
12	Signal Pole Type D	-
13	Terminal 12 p.	-
14	Terminal 20 p.	-
15	Signal Head 3 Aspects (200mm x 3)	-
16	Signal Head 3 Aspects (200mm x 2, 300mm x 1)	-
17	Signal Head 4 Aspects (200mm x 3)	-
18	Signal Head 4 Aspects (200mm x 2, 300mm x 2)	-
19	Signal Head 4 Aspects (300mm x 4)	-
20	Signal Head 6 Aspects (200mm x 4, 300mm x 2)	-
21	Signal Head 6 Aspects (300mm x 6)	-
22	Signal Head Pedestrian	-
23	Signal Head Pedestrian	-
24	Lantern Arrow Mast	-
25	Target Board for 3 Aspects	-
26	Target Board for 4 Aspects	-
27	Target Board for 6 Aspects	-
28	PVC Conduit 100 mm (4')	8
29	Steel Conduit 100 mm (4')	-
30	Steel Conduit 39 mm	-
31	Steel Conduit 28 mm	5
32	Install Conduit under Asphalt Pavement	-
33	Install Conduit under Concrete Pavement or Sidewalk	8
34	Install Conduit under Rail	-
35	Install Conduit on Riser Support Pole	5
36	Handhole Type C	-
37	Handhole Type D	1
38	Signal Cable 8c (2 sq. mm)	-
39	Signal Cable 8c (2 sq. mm)	-
40	Signal Cable 12c (2 sq. mm)	-
41	Signal Cable 20c (2 sq. mm)	8
42	Power Cable	5
43	Cable Splicing Kit	1
44	Remove Existing Signal Post and Heads (Mast-arm Type)	-
45	Remove Existing Signal Post and Heads (Pedestal Type)	-
46	Remove Existing Signal Head	-
47	Remove Existing Arrow Mast	-
48	Remove Pedestrian Push Button	-
49	TOI Line (CPV, 0.65mm, 1P)	20
50	Grounding Rod	1
51	Grounding Cable (IV 5.6 sq. mm x 1c)	5

BANGKOK AREA TRAFFIC CONTROL SYSTEM PROJECT : STAGE I			
INTERSECTION TERMINAL EQUIPMENT LAYOUT PLAN		Submitted By :	Approved By :
NIKHOM MAKKASAN - SOI PHETCHABURI 31		Juro Kedera JICA Study Team Leader	Boonyarat Titus BMA Study Team Leader
INTERSECTION NO 904		Designed By :	Checked By :
		Yasuo Kobayashi JICA Study Member	TEO, BMA
Code	Revision	Date	Initial
Associated Plan No. :	JICA	BMA	Scale 1 / 250
	Japan International Cooperation Agency	Bangkok Metropolitan Administration	Date SEPTEMBER '90
			Drawing NO 2904
			Total 138 / 139

PHASE PLAN FOR AUTOMATIC SEQUENCE



Intersection Equipments List		
Intersection No. 905		
ITEM	Name of Equipment	Qty.
1	Local Controller	1
2	Railroad Pre-emption Control Unit	-
3	Pedestrian Push Button Interface Unit	-
4	Solid State Relay Unit	2
5	Pre-Processor of Detector Pulse	1
6	Supply Power Switch Box with Power Breaker	-
7	TOT Line Box	1
8	Remove Existing Controller	1
9	Signal Pole Type A	-
10	Signal Pole Type B	-
11	Signal Pole Type C	-
12	Signal Pole Type D	-
13	Terminal 12 p	-
14	Terminal 20 p	-
15	Signal Head 3 Aspects (200mm x 3)	-
16	Signal Head 3 Aspects (200mm x 2, 300mm x 1)	-
17	Signal Head 3 Aspects (300mm x 3)	-
18	Signal Head 4 Aspects (200mm x 3, 300mm x 1)	-
19	Signal Head 4 Aspects (200mm x 2, 300mm x 2)	-
20	Signal Head 4 Aspects (300mm x 4)	-
21	Signal Head 6 Aspects (200mm x 4, 300mm x 2)	-
22	Signal Head 6 Aspects (300mm x 6)	-
23	Signal Head Pedestrian	-
24	Lantern Arrow Mask	-
25	Target Board for 3 Aspects	-
26	Target Board for 4 Aspects	-
27	Target Board for 6 Aspects	-
28	PVC Conduit 100 mm (4")	6
29	Steel Conduit 100 mm (4")	-
30	Steel Conduit 38 mm	-
31	Steel Conduit 28 mm	5
32	Install Conduit under Asphalt Pavement	-
33	Install Conduit under Concrete Pavement or Sidewalk	6
34	Install Conduit under Rail	-
35	Install Conduit on Pylon Support Pole	5
36	Handhole Type C	-
37	Handhole Type D	1
38	Signal Cable 6C (2 sq. mm)	-
39	Signal Cable 8C (2 sq. mm)	-
40	Signal Cable 12C (2 sq. mm)	-
41	Signal Cable 20C (2 sq. mm)	6
42	Power Cable	6
43	Cable Splicing Kit	1
44	Remove Existing Signal Post and Heads (Main-rod Type)	-
45	Remove Existing Signal Post and Heads (Pedestal Type)	-
46	Remove Existing Signal Head	-
47	Remove Existing Arrow Mask	-
48	Remove Pedestrian Push Button	-
49	TOT Line (CPV, 0.65mm, 1P)	20
50	Grounding Rod	1
51	Grounding Cable (V 5.5 sq. mm x 1c)	5



BANGKOK AREA TRAFFIC CONTROL SYSTEM PROJECT : STAGE I									
INTERSECTION TERMINAL EQUIPMENT LAYOUT PLAN					Submitted By :		Approved By :		
					Jura Kodera JICA Study Team Leader		Boonyawat Tiptus BMA Study Team Leader		
SI PHRAYA - SAP					Designed By :		Checked By :		
					Yasuo Nabeshima JICA Study Member		TED, BMA		
INTERSECTION NO 905					Scale 1 / 250		Drawing No 2905		
Associated Plan No. :					Date SEPTEMBER '90		Total 139 / 139		
JICA Japan International Cooperation Agency		BMA Bangkok Metropolitan Administration							

