

REPUBLIC OF INDONESIA
MINISTRY OF COMMUNICATIONS
DIRECTORATE GENERAL OF LAND TRANSPORT
AND INLAND WATERWAYS

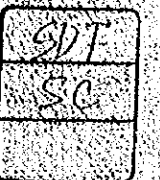
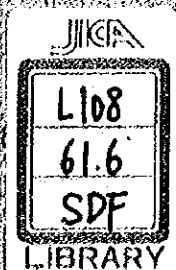
**TENDER DOCUMENTS
FOR
NEW RAILWAY LINE FOR CENGKARENG AIRPORT
CONSTRUCTION PROJECT**

PACKAGE III ELECTRICAL WORK

PART F DRAWINGS

AUGUST 1984

**JAPAN INTERNATIONAL COOPERATION AGENCY
(JICA)**



REPUBLIC OF INDONESIA
MINISTRY OF COMMUNICATIONS
DIRECTORATE GENERAL OF LAND TRANSPORT
AND INLAND WATERWAYS

**TENDER DOCUMENTS
FOR
NEW RAILWAY LINE FOR CENGKARENG AIRPORT
CONSTRUCTION PROJECT**

PACKAGE III ELECTRICAL WORK

PART F DRAWINGS



**JAPAN INTERNATIONAL COOPERATION AGENCY
(JICA)**

国際協力事業団	
受入 月日 '84.11.19	L108
登録No. 10871	61.6
	SDF

ライオン製

INDEX OF DRAWING

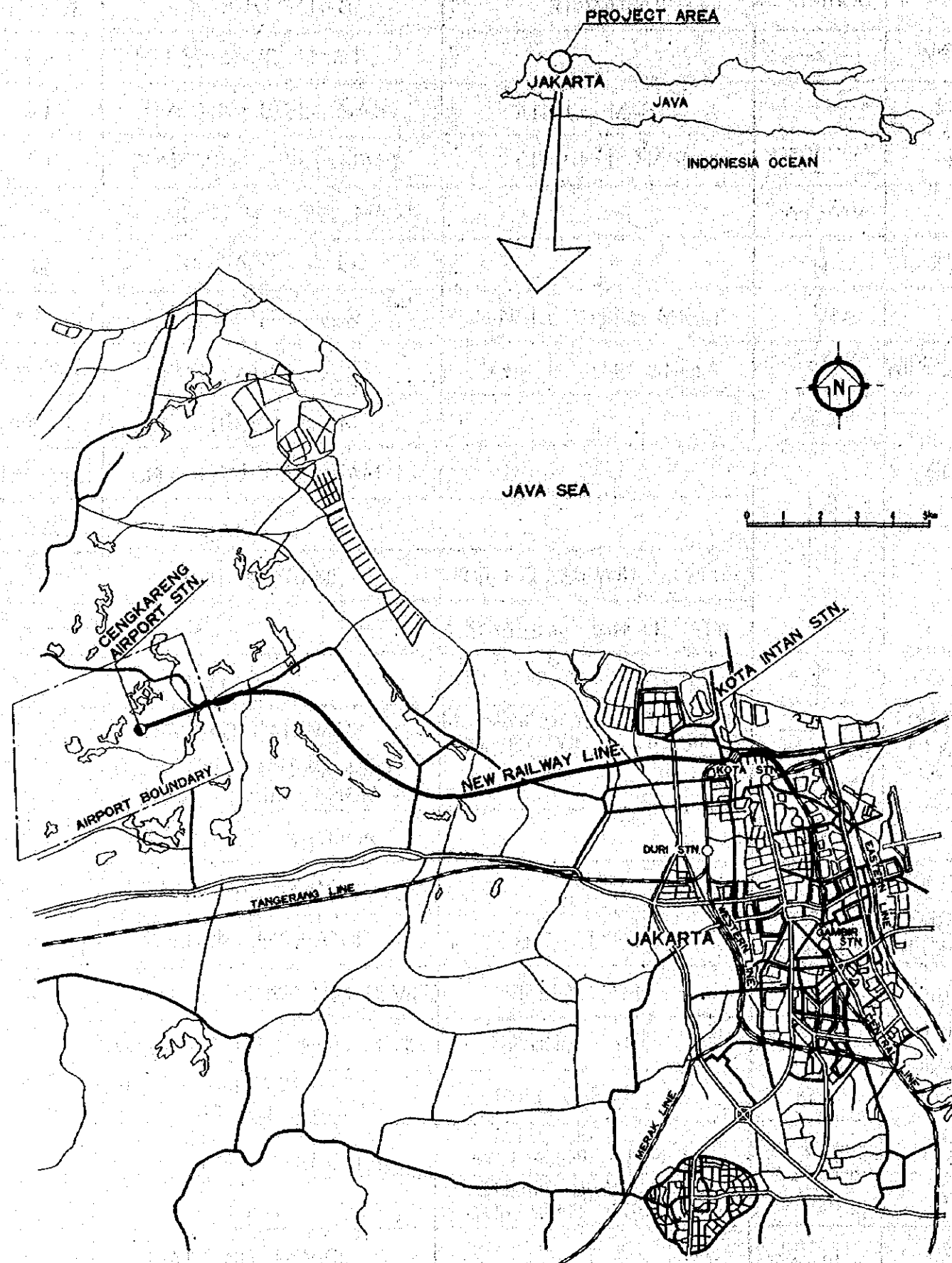
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009	— DO — EQUIPMENT LAYOUT	019	DETAILS OF OVERLAP AND SECTION INSULATOR
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011	— DO — GROUND WIRE PLAN	021	DETAILS OF PULL-OFF AND STEADY BRACE
012	JAKARTA KOTA SUBSTATION SITE PLAN	022	STANDARD ASSEMBLIES OF FEEDER WIRE AND BRANCH
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014	— DO — No.11 AND No.12	011	— DO — (SHEET 9 OF 14)
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026	— DO — (SHEET 9 OF 15)		
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GENERAL ABBREVIATIONS

- A.T.S. AUTOMATIC TRAIN STOP
- B BRIDGE
- Bo BOX CULVERT
- EL. ELEVATION
- FL. FORMATION LEVEL
- J.I.A.C. JAKARTA INTERNATIONAL AIRPORT CENKARENG
- L.C. LEVEL CROSSING
- Mri. MANGGARAI
- R.L. RAIL LEVEL
- R.O.W. RIGHT-OF-WAY
- SS SUBSTATION
- S.STN. SIGNAL STATION
- STN. STATION
- T. TIMUR (EAST)
- T.B. TERMINAL BOX
- U. UTARA (NORTH)

REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENKARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
B	1 Aug '89	M.S.	M.S.	K.H.	K.H.	M.K.
A	15 Feb '89	M.S.	M.S.	K.H.	K.H.	M.K.
REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	SUBMITTED
GENERAL LOCATION MAP AND ABBREVIATIONS						
PACKAGE: II ELECTRICAL WORK						
SCALE: 1:70,000		DRAWING NO: EG-001				

SYMBOLS FOR TRACTION AND UTILITY POWER DISTRIBUTION SYSTEMS

SYMBOL	DESCRIPTION	REMARKS	SYMBOL	DESCRIPTION	REMARKS
	STEEL PIPE MAST			INSULATOR INSERTION	MESSENGER AND TROLLEY WIRE
	COMPOUND STEEL MAST	ANGLE MAST		FEEDER WIRE	Cu 300mm ²
	COMPOUND STEEL MAST	CHANNEL MAST		FEEDING BRANCH	
	H-SECTION STEEL MAST			CABLE	
	CONCRETE POLE			LIGHTNING ARRESTER	FOR FEEDER
	RIGID CANTILEVER	SINGLE STEEL ANGLE		DO	FOR DISTRIBUTION LINE
	RIGID CANTILEVER	DOUBLE STEEL ANGLE		WIRE CAUTION MARKER DEVICE	
	V-TRUSS BEAM			SIGNAL	
	CROSS CATENAY BEAM			OBSTRUCTIONS	LC : LEVEL CROSSING
	ARM				B : BRIDGE
	ANGLE FRAME	FOR FEEDER WIRE SUPPORT			BO : OVER-BRIDGE
	GUY	St 135mm ² SINGLE TYPE			Bc : BOX CULVERT
	GUY	St 90mm ² V-TYPE		GROUNDING DEVICE	
	OVERHEAD CATENARY	MESSENGER WIRE : St 90mm ² TROLLEY WIRE : Cu 110mm ²		DISTRIBUTION LINE 6KV OE 38mm ² X3	
	OUT OF SCOPE OF OVERHEAD CATENARY INSTALLATION			OVERHEAD GROUND WIRE St 55mm ²	
	OVERLAP AIR SECTION			7.2KV AIR LOAD BREAK SWITCH	
	OVERLAP AIR JOINT			CABLE GROUND FAULT DETECTOR	
	SECTION INSULATOR	FRP-TYPE		TRANSFORMER 6KV/220V (LIGHTING) 5KVA (20KVA)	
	AUTOMATIC TENSIONING DEVICE	PULLEY TYPE		DO (SIGNALLING) 3KVA, 10KVA	
	AUTOMATIC TENSIONING DEVICE	SPRING TYPE		ANCHORAGE OF DISTRIBUTION LINE	
	TROLLEY STEADYING (CURVED SECTION)	PULL OFF		DEAD END OF DISTRIBUTION LINE	
	DO (STRAIGHT SECTION)	PULL OFF (FOR MOVABLE PIPE)		INSULATOR WITH HORN (180mm C TYPE)	FOR OVERHEAD GROUND WIRE
	DO (DO)	STEADY BRACE (FOR SPAN WIRE)		WATCHMAN'S SHED	
	CROSSING DEVICE			SIGNAL CABIN	
	INSULATOR INSERTION	MESSENGER WIRE		CONCRETE POLE	FOR DISTRIBUTION LINE 12m

NOTE :
SYMBOLS SHALL BE APPLIED TO ALL OVERHEAD CATENARY SYSTEM AND POWER DISTRIBUTION LINES DWGS. UNLESS OTHERWISE INDICATED.

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NEW RAILWAY LINE FOR CENGLARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
B	1 AUG 74	SH	SH	KH	KM	KK
A	15 FEB 74	SH	SH	KH	KM	KK
REVISION	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	APPROVED
SYMBOLS FOR TRACTION AND UTILITY POWER DISTRIBUTION SYSTEMS						
PACKAGE : ELECTRICAL WORK						
SCALE : NON SCALE		SHEET NO : EG-002				

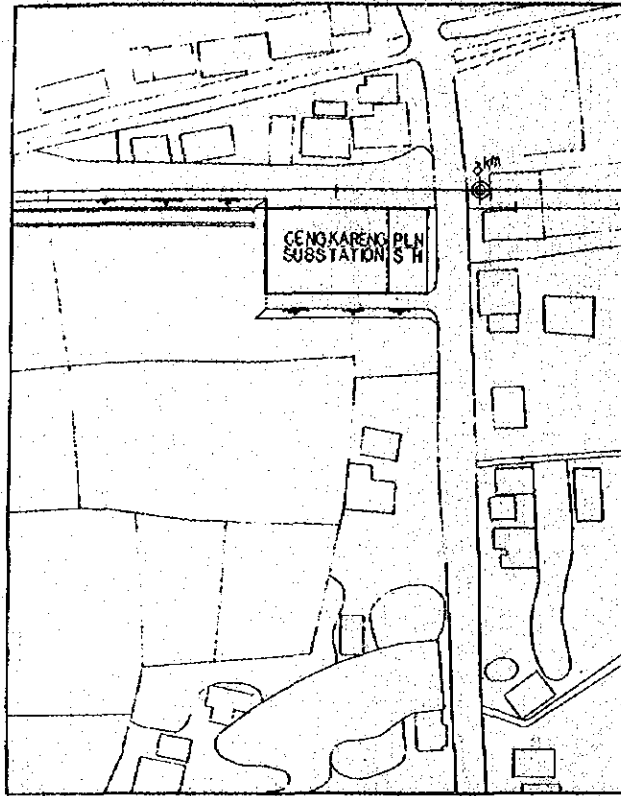
SYMBOLS FOR SIGNAL EQUIPMENT

SYMBOLS	REMARKS	SYMBOLS	REMARKS
	RUNNING SIGNAL		WATCHMAN'S SHED
	RED ASPECT		LEVEL CROSSING SIGNAL
	YELLOW ASPECT		LEVEL CROSSING BARRIER
	GREEN ASPECT		X-MARK INDICATOR
	EMERGENCY SIGNAL		CONTROL DEVICE
	DISTANT SIGNAL MARKER		CONTROL PANEL
	REPEATING SIGNAL MARKER		TRAIN DETECTOR (CLOSED CIRCUIT TYPE)
	RESTRICTED SPEED RELEASE MARKER		DO (OPEN CIRCUIT TYPE)
	SHUNTING LIMIT MARKER		SIGNAL TRANSFORMER (INSTALLED BY POWER DISTRIBUTION LINE SECTION)
	CAR STOP MARKER		APPARATUS CASE
	SHUNTING SIGNAL (TYPE A)		JOINT BOX
	DO (TYPE B)		SIGNAL CABLE (CROSS SECTION 1.25mm ² NO.OF CONDUCTORS 2 ~ 80)
	NAME OF TRACK CIRCUIT		CORRUGATED TYPE SIGNAL CABLE (DITTO)
	ATS WAYSIDE DEVICE		SIGNAL CABLE (CROSS SECTION 10mm ² NO.OF CONDUCTORS 2)
	SIGNAL CABIN		SIGNAL CABLE UNDERGROUND INSTALLATION
	INSULATED RAIL JOINT		SIGNAL CABLE GROUND SURFACE INSTALLATION WITHIN TROUGH
	ELECTRIC SWITCH MACHINE		SIGNAL CABLE INSTALLATION WITHIN DUCT
	IMPEDANCE BOND		UNDERGROUND DUCT
	MATCHING TRANSFORMER		HANDHOLE
	SEMAPHORE SIGNAL		

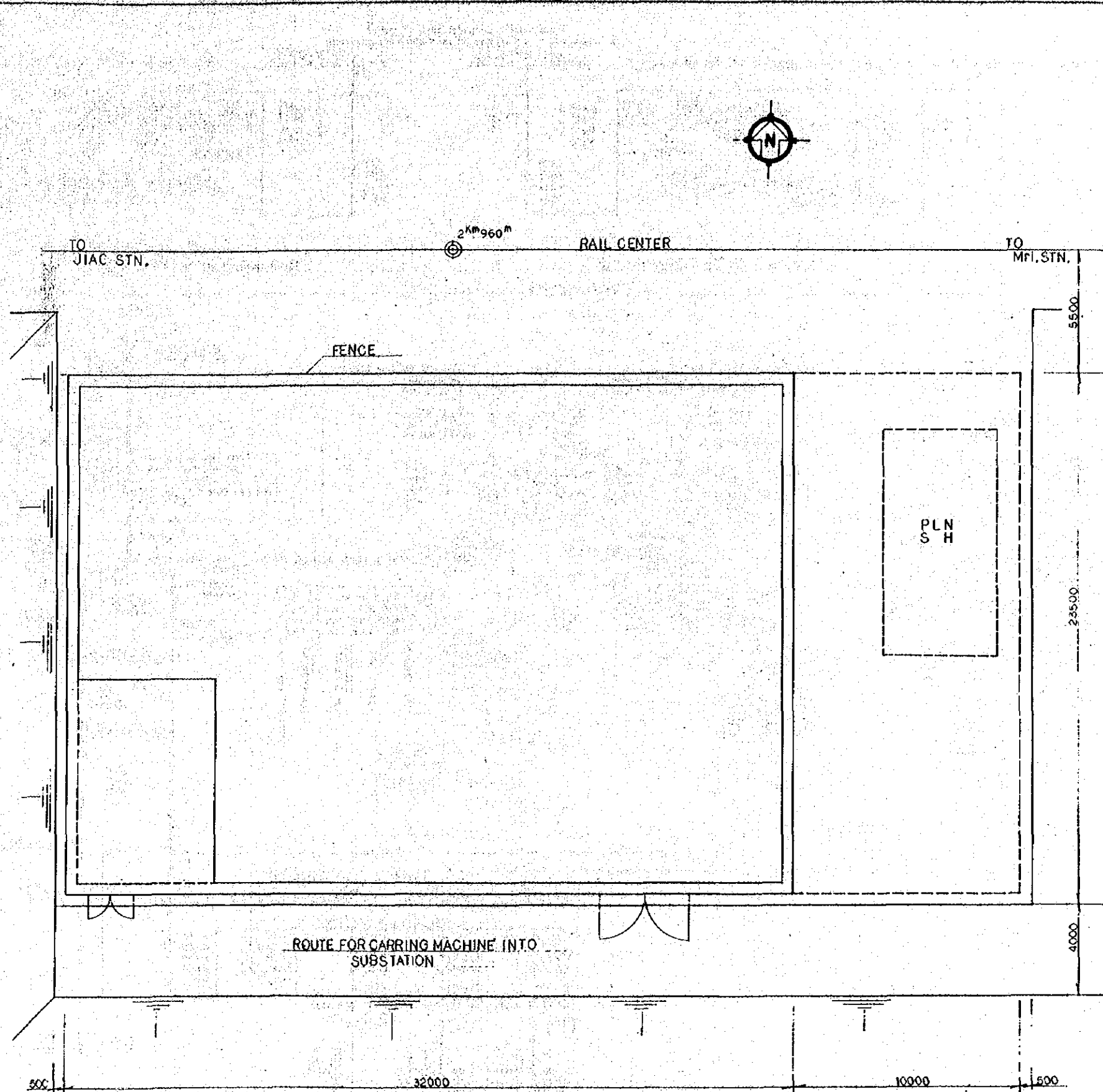
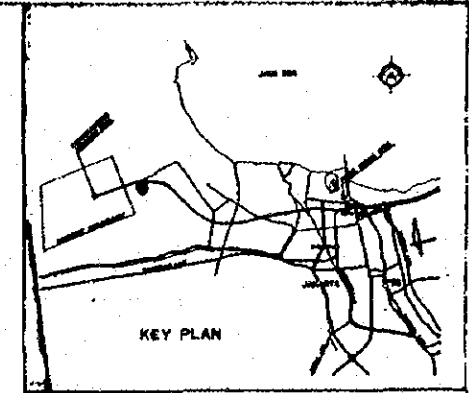
NOTE :

SYMBOLS SHALL APPLY TO ALL SIGNAL DWGS.UNLESS OTHERWISE INDICATED

REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS					
NEW RAILWAY LINE FOR CEMOKARENS AIRPORT CONSTRUCTION PROJECT					
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)					
B	1 Aug '84	1/2	276	KM	2
A	15 Feb '84	1/2	276	KM	2
REVISION	DATE	BY	CHECKED	REVIEWED	APPROVED
SYMBOLS FOR SIGNAL EQUIPMENT					
PROJECT: ELECTRICAL WORK					
SCALE: NON SCALE		DRAWING NO: EG-003			

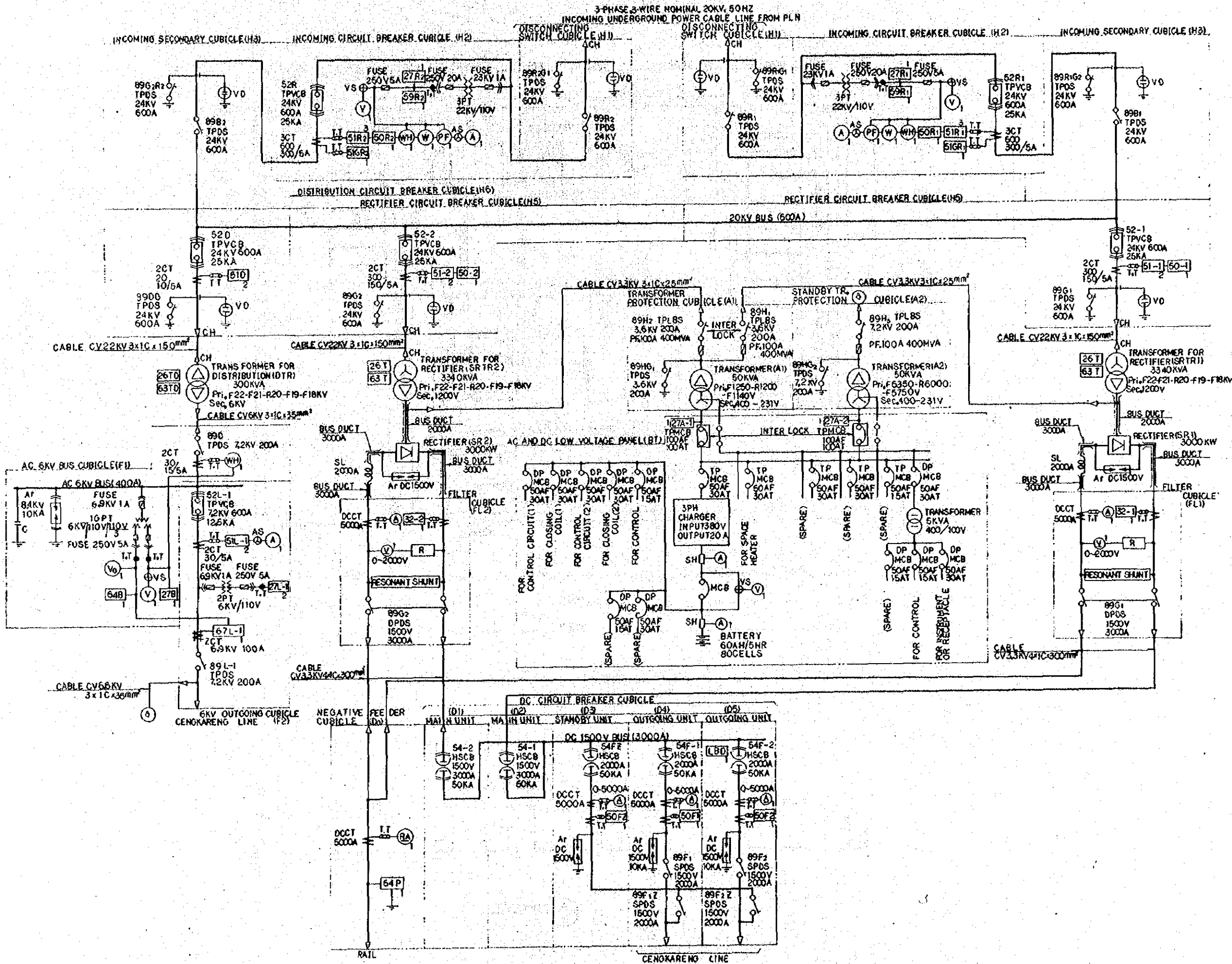


KEY MAP SCALE: 1:1000



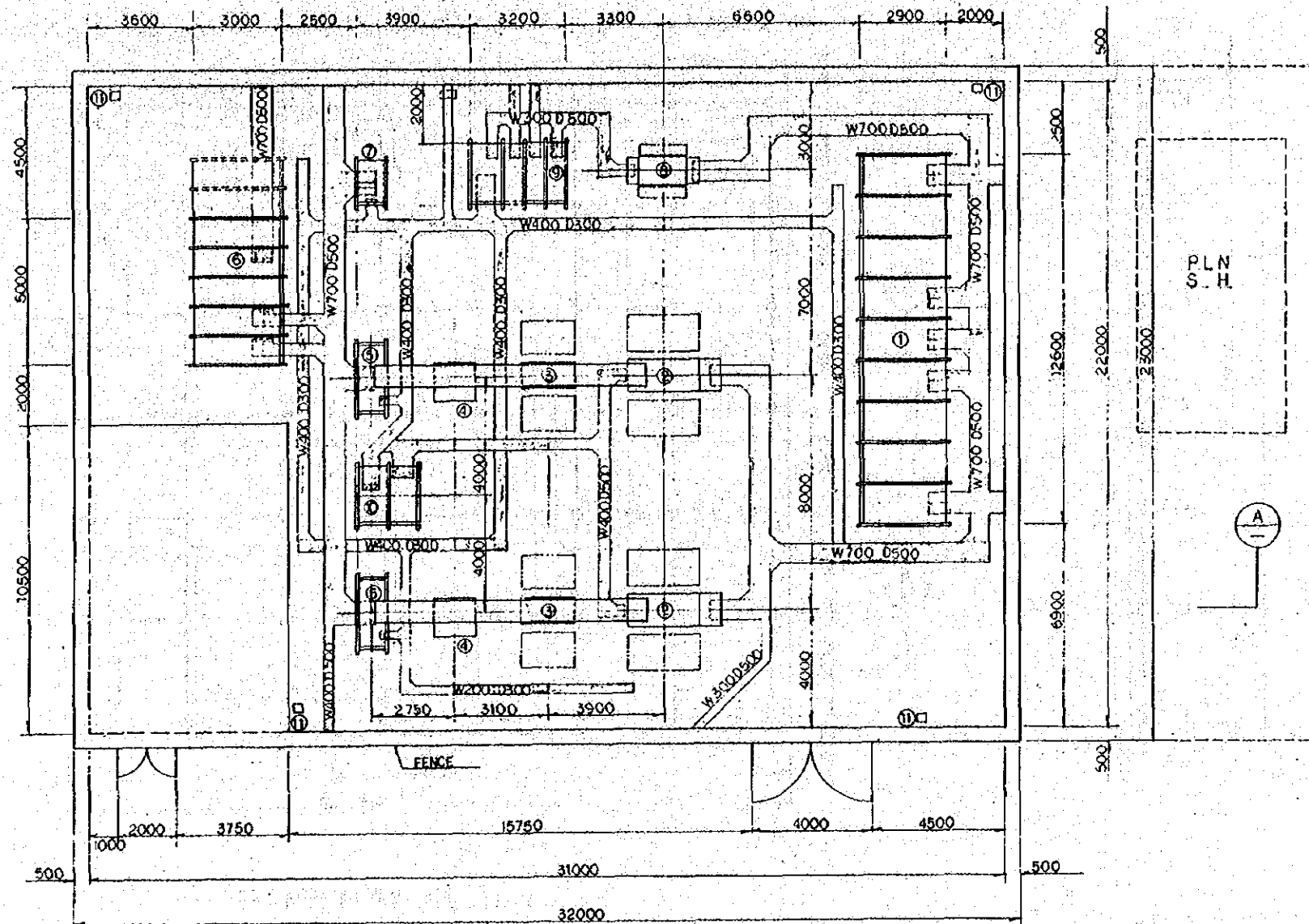
SITE PLAN SCALE 1:100

REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS					
NEW RAILWAY LINE FOR CENKARENG AIRPORT CONSTRUCTION PROJECT					
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)					
B	1	2	3	4	5
A	1	2	3	4	5
REVISION	DATE	DESIGNED	CHECKED	APPROVED	SUBMITTED
CENKARENG SUBSTATION SITE PLAN.					
PACKAGE: II ELECTRICAL WORK					
SCALE: AS NOTED		DRAWING NO: EP-001			



NOTE:
 DEVICE FUNCTION NUMBERS ON THE DIAGRAM ARE CONFORMED WITH ANSI/JEM STANDARD.

REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENGLARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
B	12/05/03	N.T	N.T	S.H	H.M	M.L
A	12/05/03	N.T	N.T	S.H	H.M	M.L
REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	APPROVED
CENGLARENG SUBSTATION SINGLE LINE DIAGRAM						
PACKAGE: II ELECTRICAL WORK						
SCALE: NON SCALE	DRAWING NO: EP-002					

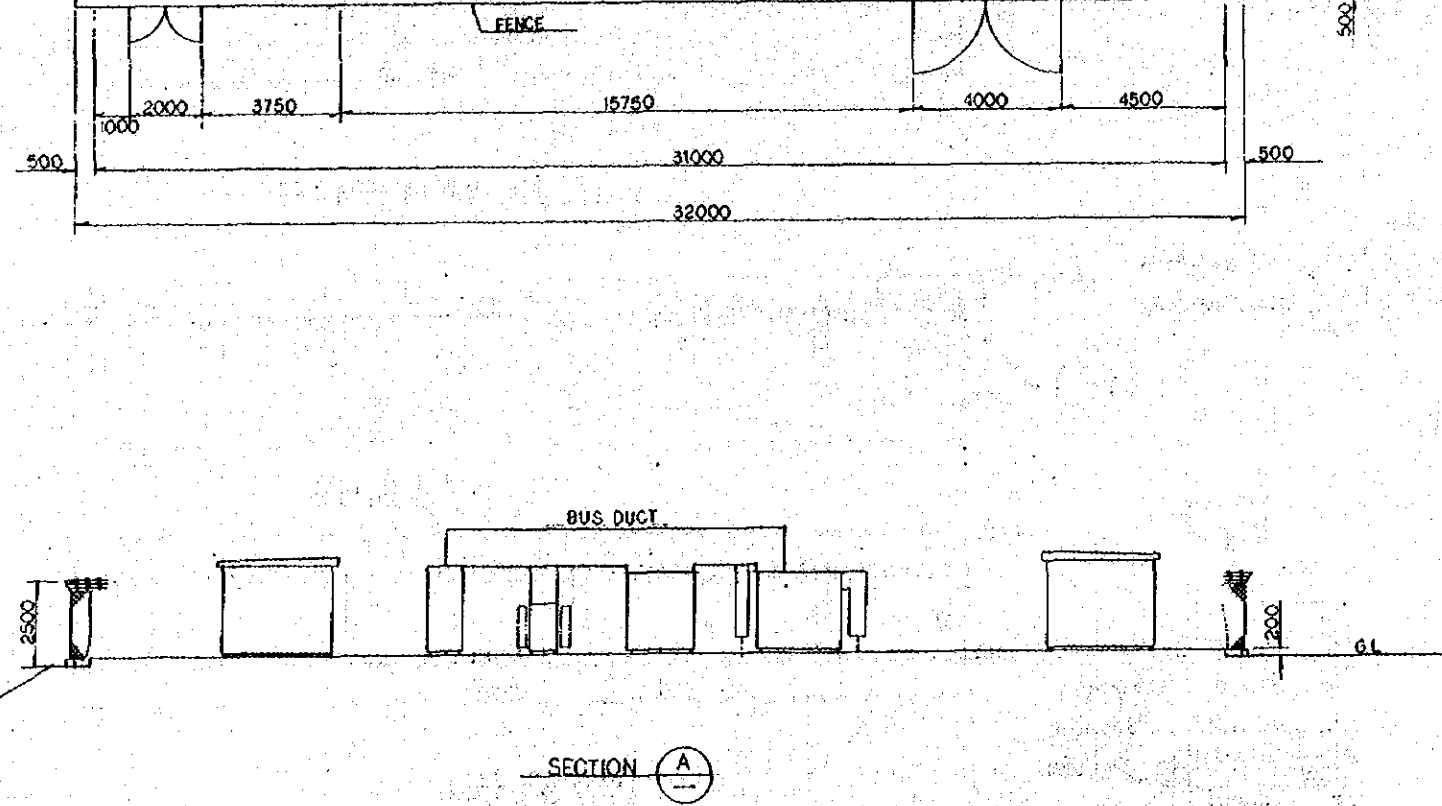


DEVICE TABLE

NO	NAME
①	20KV CUBICLE
②	TRANSFORMER 3340KVA
③	SILICON RECTIFIER 3000KW
④	DC SERIES REACTOR 2000A
⑤	FILTER CUBICLE
⑥	DC CIRCUIT BREAKER CUBICLE
⑦	NEGATIVE FEEDER CUBICLE AND REMOTE CONTROL PANEL
⑧	TRANSFORMER 300KVA
⑨	AC 6KV CUBICLE
⑩	AC AND DC LOW VOLTAGE FEEDER PANEL
⑪	LAMP POSTS

LEGENDS:

--- : FUTURE PLAN



REPUBLIC OF INDONESIA
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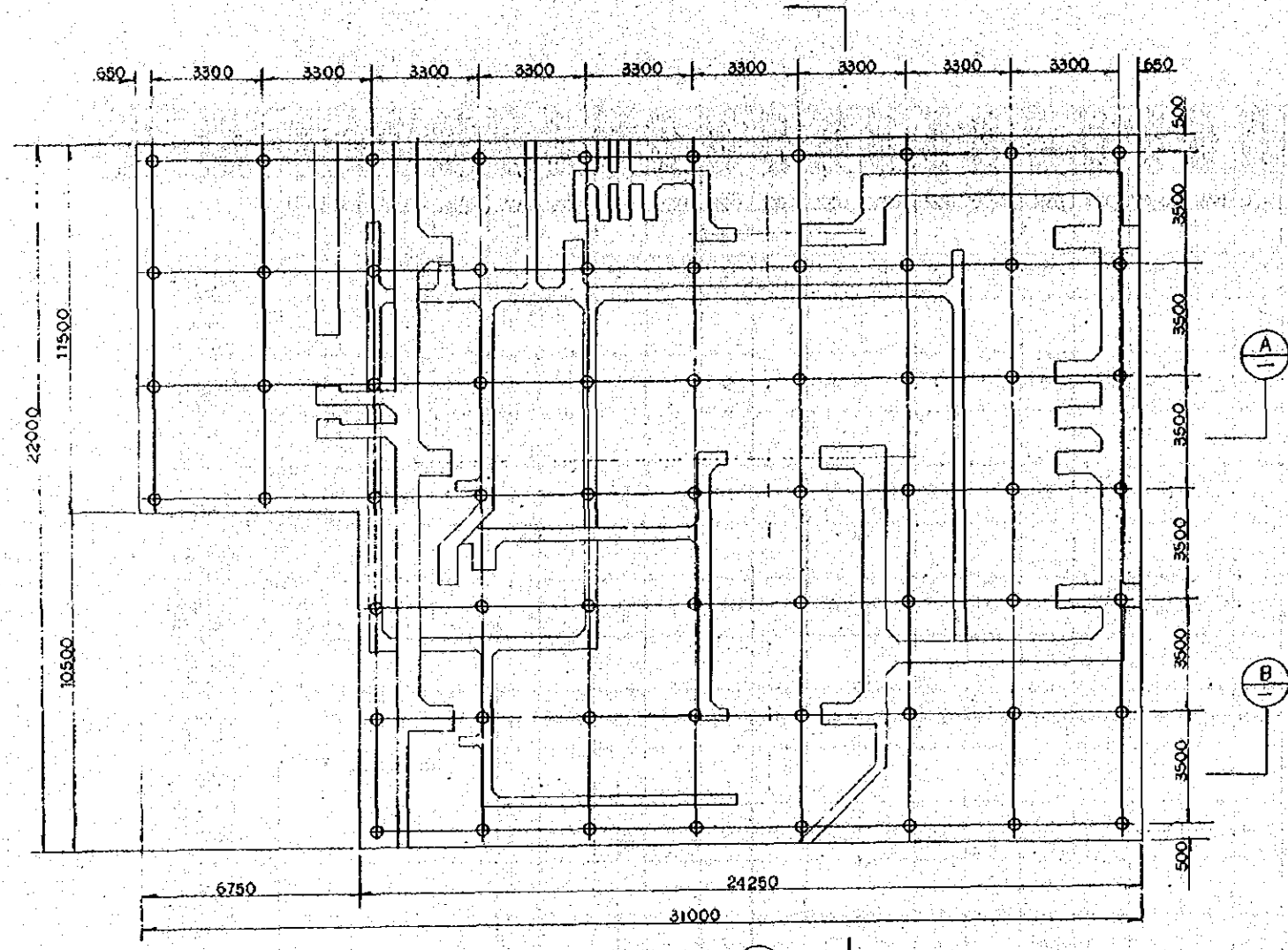
NEW RAILWAY LINE FOR CENKARENG AIRPORT
 CONSTRUCTION PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY
 (JICA)

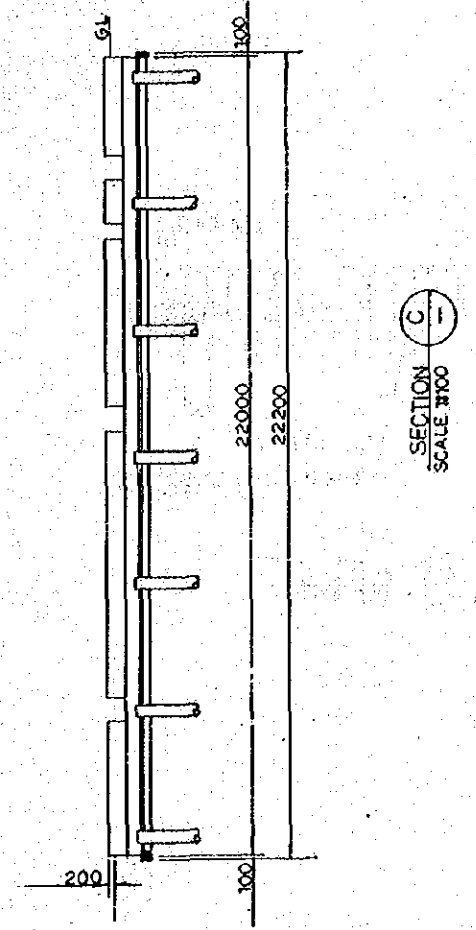
REVISION	DATE	DESIGNED	CHECKED	APPROVED	REVIEWED	SUBMITTED
B	1 Aug 84	HT	HT	AK	K.M	M.K
A	15 Feb 84	HT	HT	K.K	K.M	M.K

**CENKARENG
 SUBSTATION
 EQUIPMENT LAYOUT**

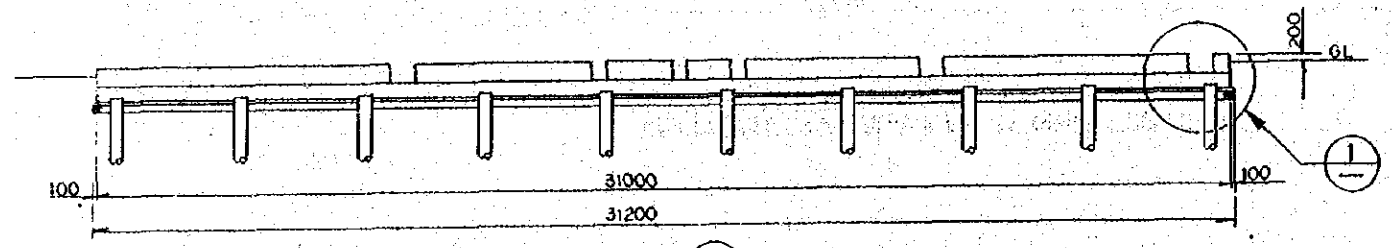
PACKAGE: **II ELECTRICAL WORK**
 SCALE: **1:100** DRAWING NO: **EP-003**



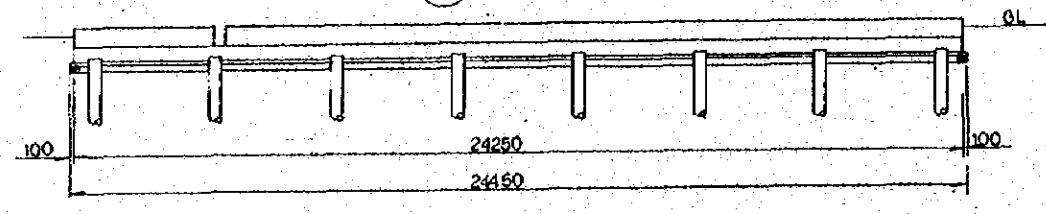
PILE ARRANGEMENT SCALE 1:100



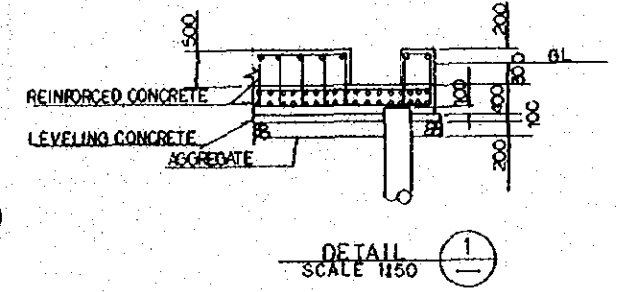
- NOTES:
1. THE TYPE OF PILES ARE AS FOLLOWS:
 PC 350mm CLASS B 7m TOP PILE
 PC 350mm CLASS A 12m BOTTOM PILE
 2. THE LONG TERM BEARING STRENGTH OF PILES SHALL BE 25T/Piece OR MORE.
 3. CONCRETE CLASS SHALL BE AS FOLLOWS:
 REINFORCED : CLASS D
 LEVELING : CLASS F



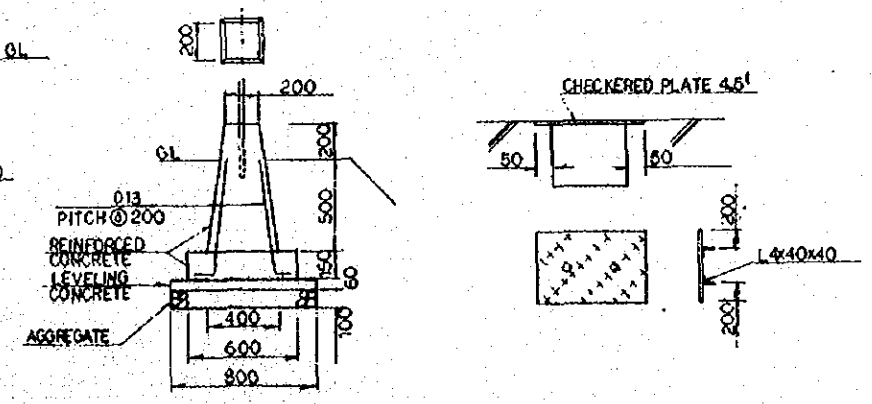
SECTION A SCALE 1/100



SECTION B SCALE 1/100



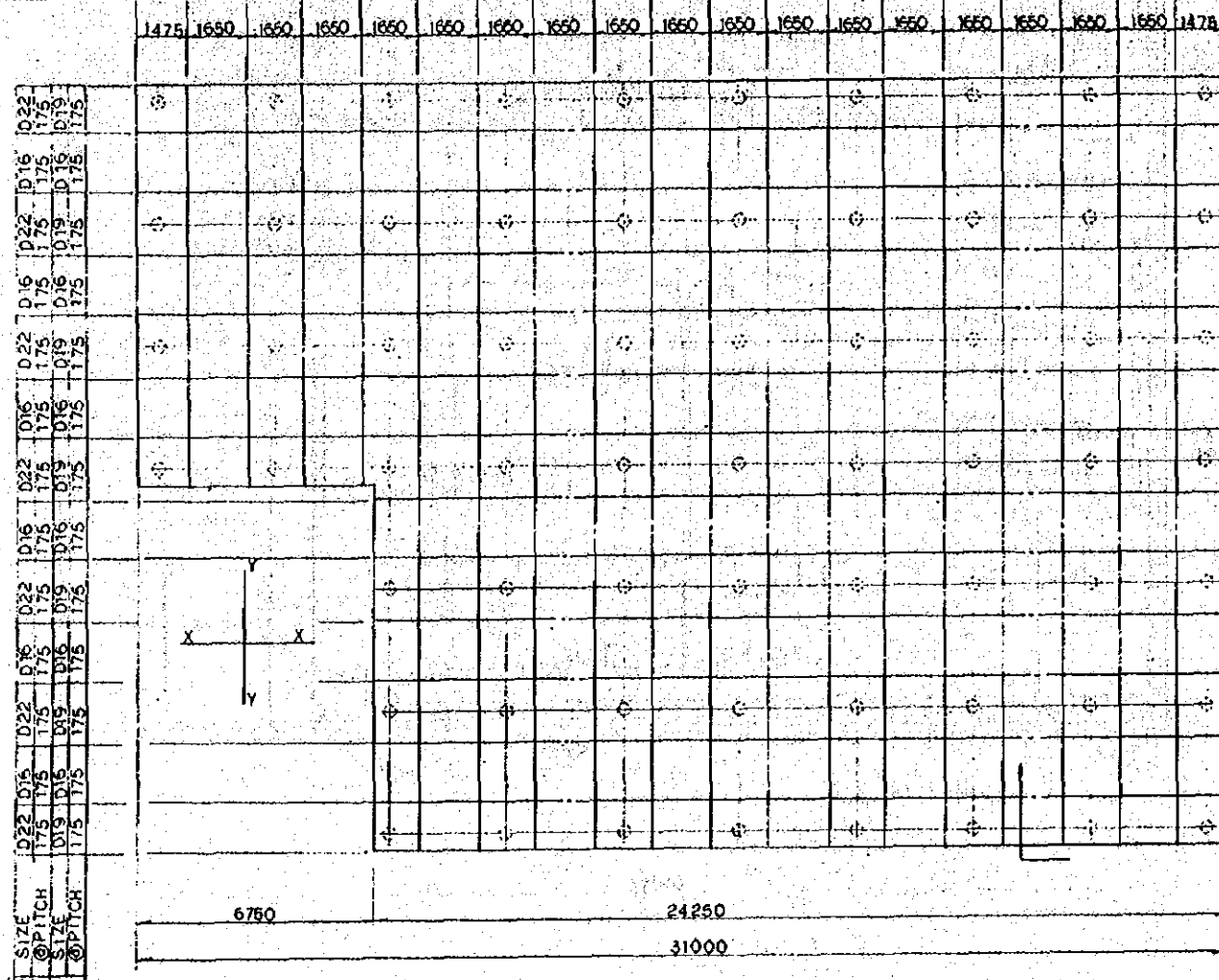
DETAIL SCALE 1/50



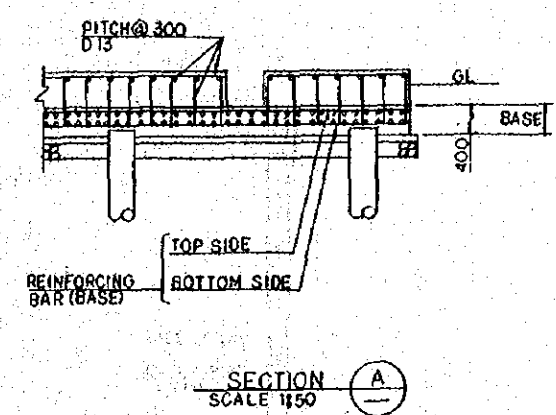
FOUNDATION OF FENCE SCALE 1:20 DETAIL OF CABLE TRENCH NON SCALE

REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
B	1.00	0.50	N/T	N/T	EM	K.M
A	1.00	0.50	N/T	N/T	EM	K.M
REVISION	NO.	DATE	BY	CHECKED	REVIEWED	APPROVED
CENGKARENG SUBSTATION FOUNDATION DETAILS (SHEET 1 OF 2)						
PACKAGE: ELECTRICAL WORK						
SCALE: AS NOTED DRAWING NO: EP-004						

TOP SIDE	SIZE	D22	D16	D22	D16	D22	D16	D22	D16	D22	D16	D22	D16	D22	D16	D22	D16	D22	D16	D22
BOTTOM SIDE	SIZE	D19	D16	D19	D16	D19	D16	D19	D16	D19	D16	D19	D16	D19	D16	D19	D16	D19	D16	D19
	@ PITCH	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165



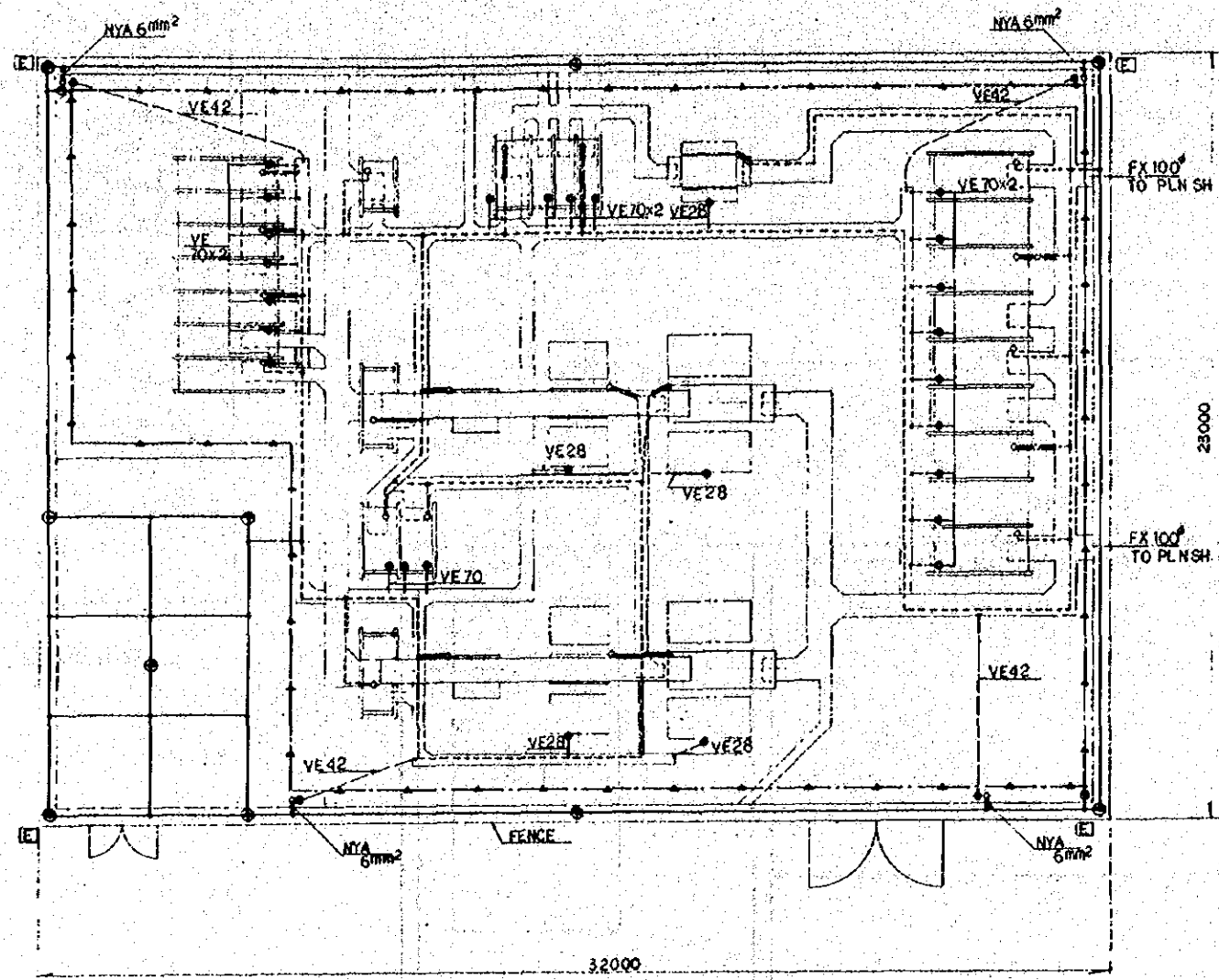
REINFORCING BAR ARRANGEMENT (BASE) SCALE 1:100



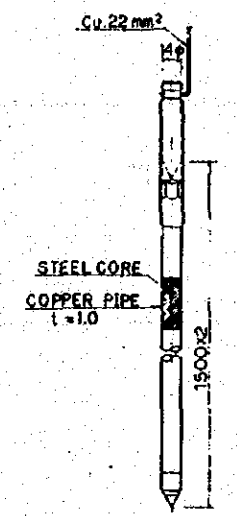
SECTION A-A
SCALE 1:50

NOTE:
THE TYPE OF REINFORCEMENTS
SHALL BE SD30.

REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
B	12/20/00	N.T	N.T	N.H	K.M	M.K
A	11/24/00	N.T	N.T	N.H	K.M	M.K
REVISION	DATE	DESIGNED	CHECKED	REVIEWED	SUBMITTED	
CENGKARENG SUBSTATION FOUNDATION DETAILS (SHEET 2 OF 2)						
PACKAGE: II ELECTRICAL WORK						
SCALE: AS NOTED		DRAWING NO: EP-005				



GROUND WIRE PLAN SCALE 1:100

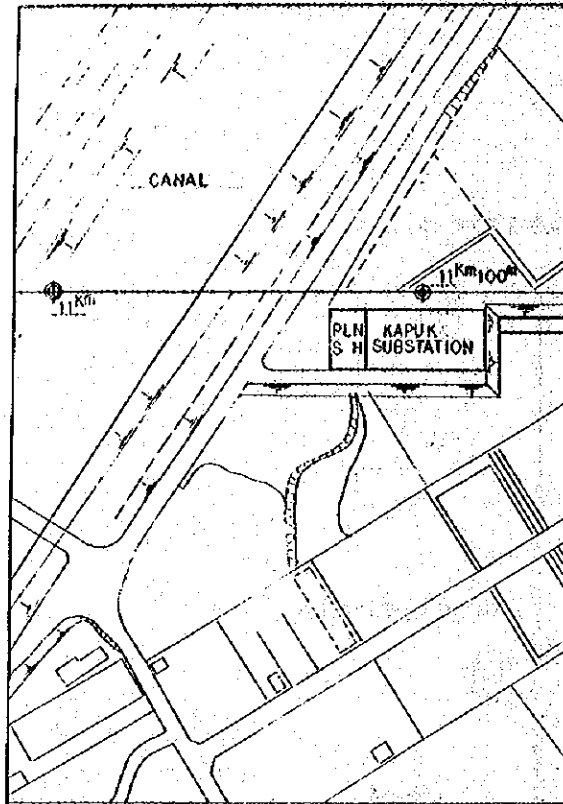


GROUND ROD NON SCALE

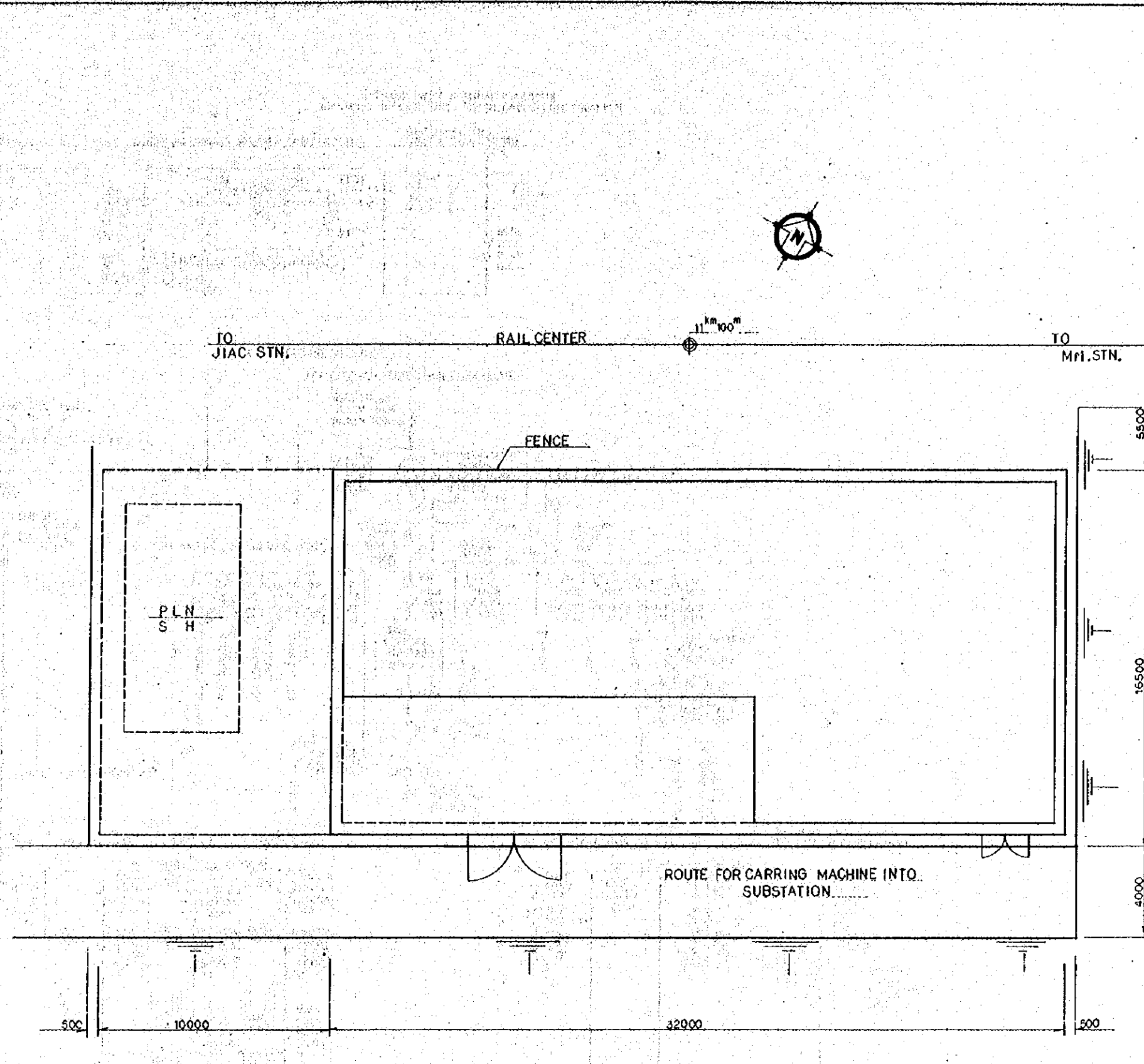
LEGEND:

- : GROUND ROD
- : Cu. 60mm² (ANNEALED COPPER STRANDED CONDUCTOR) BURIED CABLE 750mm UNDER GROUND LEVEL
- - - : NYA 70mm² (600V P.V.C (INSULATED WIRE) INSTALLED IN THE TRENCH
- : VE 28 (28mm HARD P.V.C CONDUIT)
- : VE CONDUITS FOR CONTROL CABLE
- : FX FLEXIBLE TUBE
- ◊ : FASTENING TERMINAL
- : SOLDER
- : COMPRESSION SLEEVE FOR CONNECTING GROUND WIRE
- △ : BINDING POINT TO REINFORCEMENT
- [E] : MARKER OF GROUND ROD

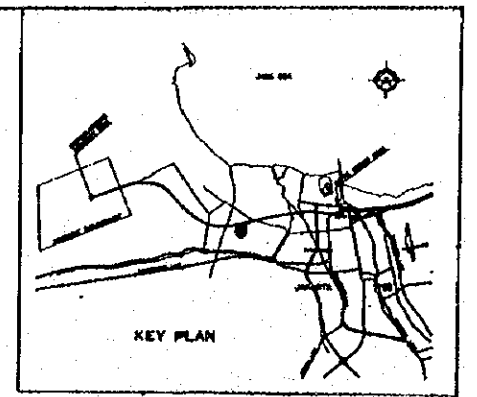
REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENKARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
B	1. Aug. 88	N.T	N.T	K.H	K.M	M.R
A	15 Feb. 88	N.T	N.T	K.H	K.M	M.R
REVISION	DATE	DESIGNED	DRAWN	CHECKED	EXTENDED	APPROVED
CENKARENG SUBSTATION GROUND WIRE PLAN						
PACKAGE: III ELECTRICAL WORK						
SCALE	DRAWING NO.					
AS NOTED	EP-006					



KEY MAP SCALE 1:1000



SITE PLAN SCALE 1:100



REPUBLIC OF INDONESIA
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 DIRECTORATE GENERAL OF LAND TRANSPORT
 AND INLAND WATERWAYS

NEW RAILWAY LINE FOR CENKASARI AIRPORT
 CONSTRUCTION PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY
 (JICA)

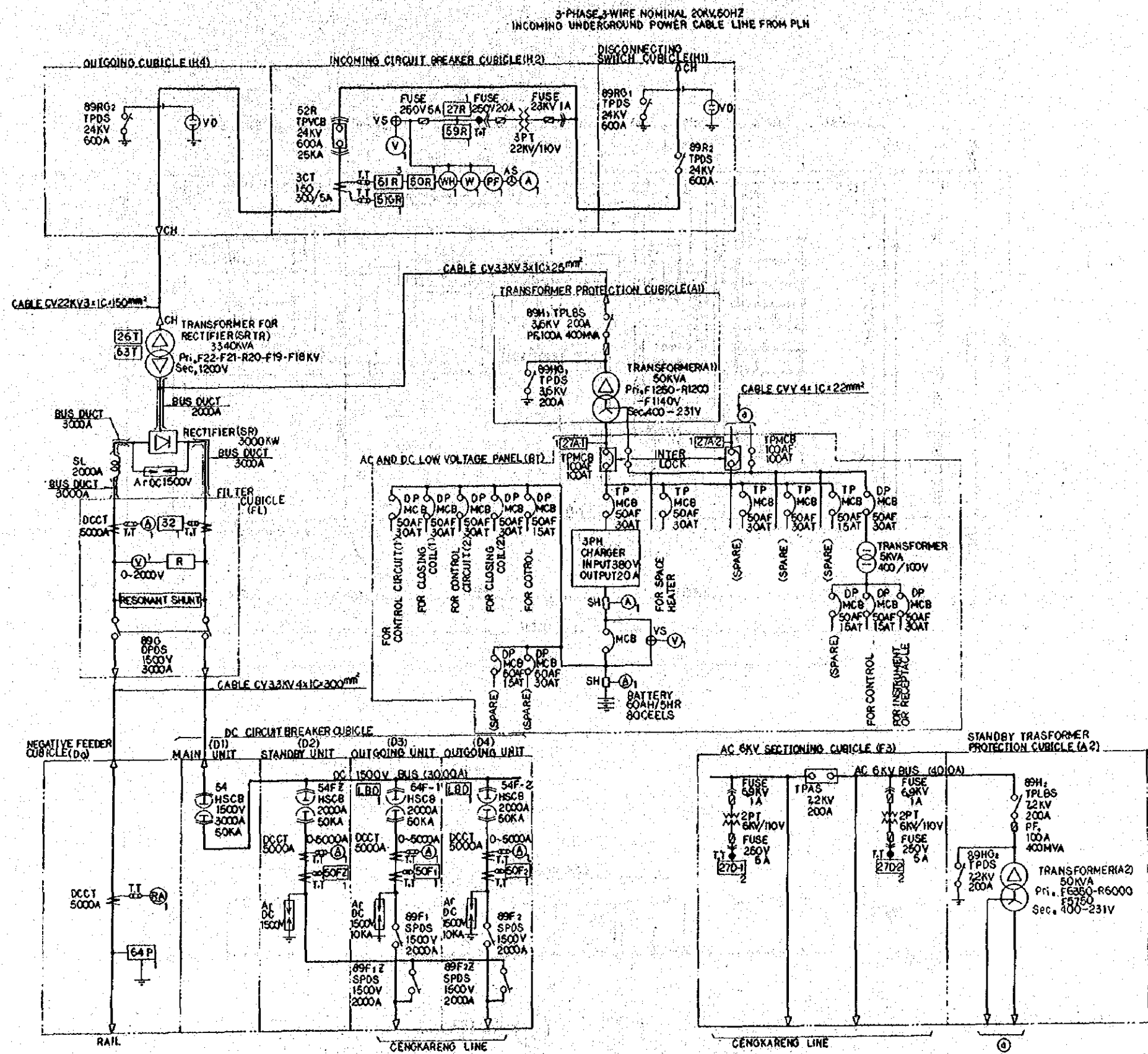
B	1. Aug. '84	MT	MT	RM	HM	MK
A	15 Aug. '84	MT	MT	RM	HM	MK

REVISED	DATE	DESIGNED	DRAWN	CHECKED	APPROVED	DATE
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KAPUK
 SUBSTATION
 SITE PLAN

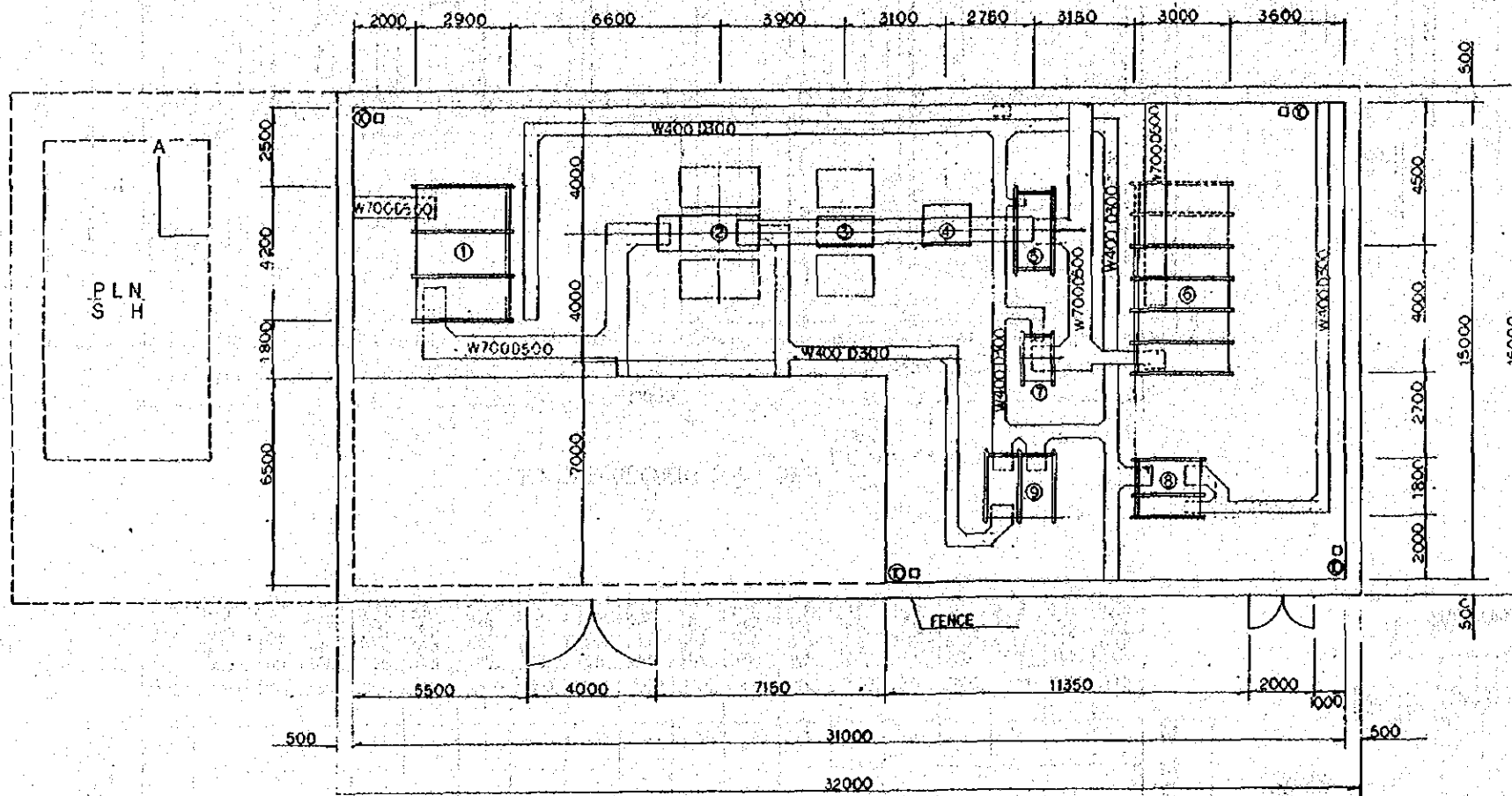
PACKAGE: II ELECTRICAL WORK

SCALE AS NOTED DRAWING NO. EP-007



NOTE:
DEVICE FUNCTION NUMBERS ON THE DIAGRAM ARE CONFORMED WITH ANSI/JEM STANDARD.

REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS					
NEW RAILWAY LINE FOR CENKARENG AIRPORT CONSTRUCTION PROJECT					
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)					
B	1 Aug '88	N.T	KT	K.M	M.K
A	15 Oct '88	N.T	N.T	K.M	M.K
REVISIONS	DATE	REASON	BY	CHECKED	REVIEWED
KAPUK SUBSTATION SINGLE LINE DIAGRAM					
PACKAGE: ELECTRICAL WORK					
SCALE	DRAWING NO. EP-008				
NON SCALE					

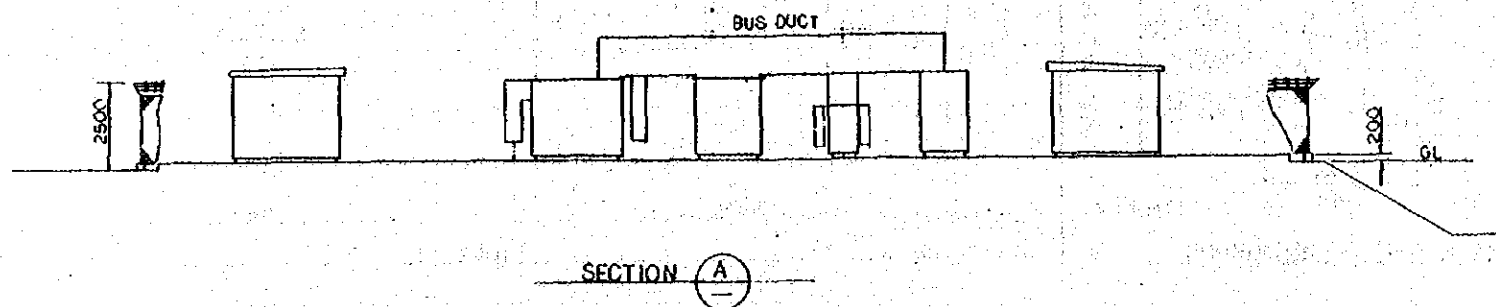


DEVICE TABLE

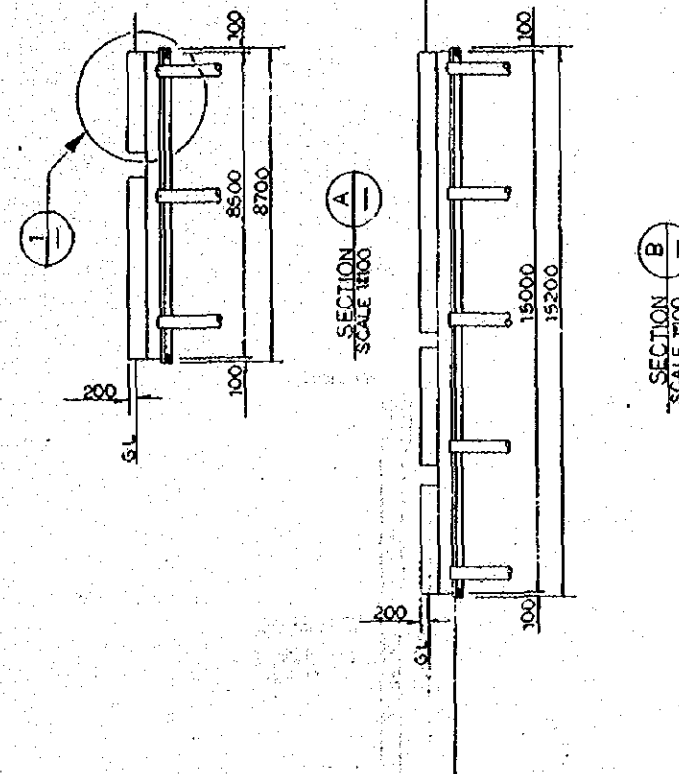
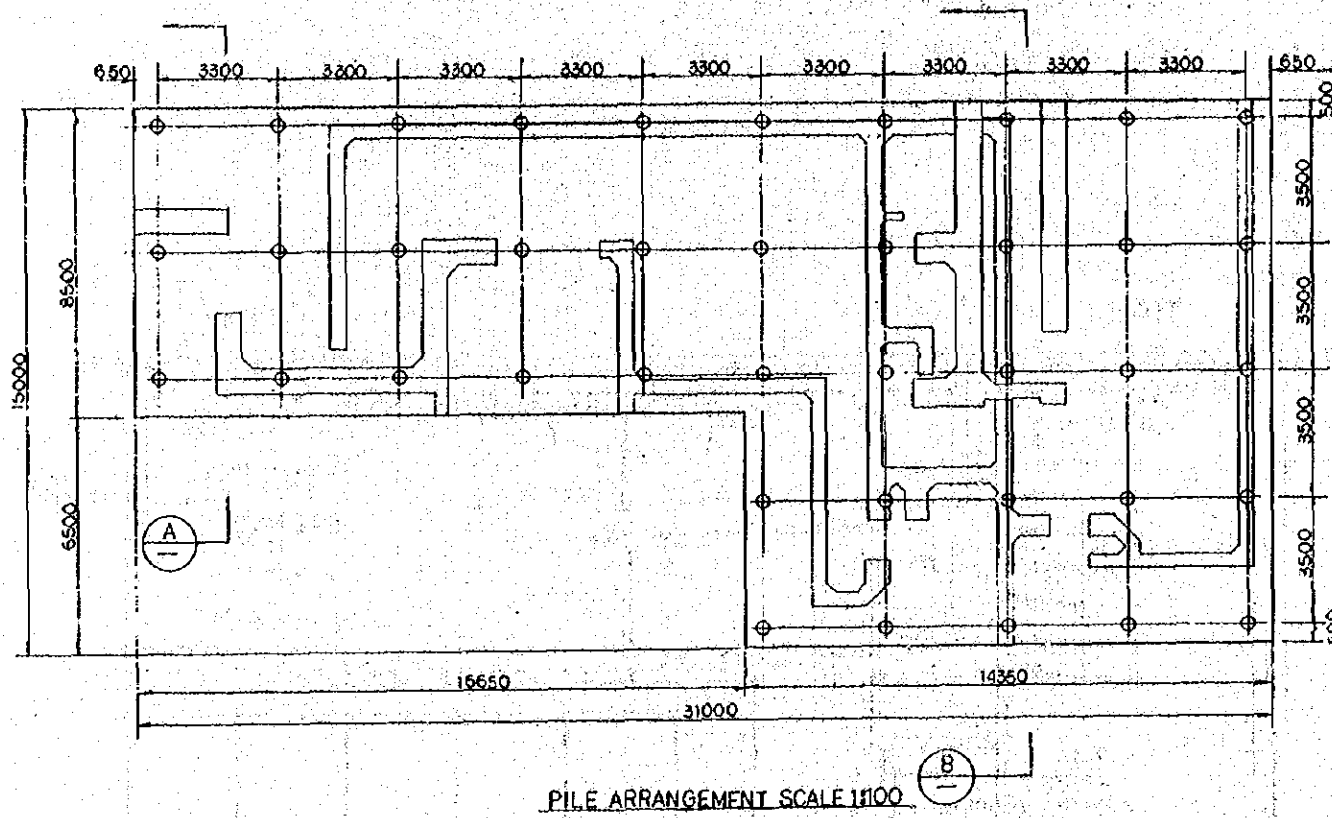
NO	NAME
①	20KV CUBICLE
②	TRANSFORMER 3340 KVA
③	SILICON RECTIFIER 3000KW
④	DC SERIES REACTOR 2000A
⑤	FILTER CUBICLE
⑥	DC CIRCUIT BREAKER CUBICLE
⑦	NEGATIVE FEEDER CUBICLE AND REMOTE CONTROL PANEL
⑧	AC 6KV CUBICLE
⑨	AC AND DC LOW VOLTAGE FEEDER PANEL
⑩	LAMP POST

LEGEND:

--- : FUTURE PLAN

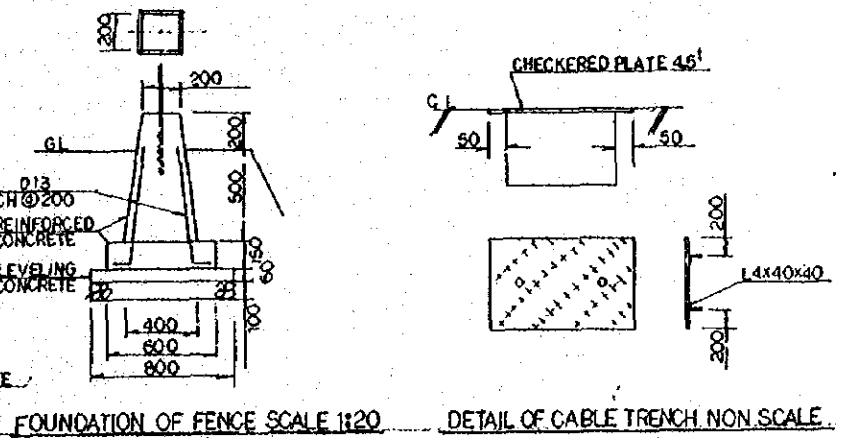
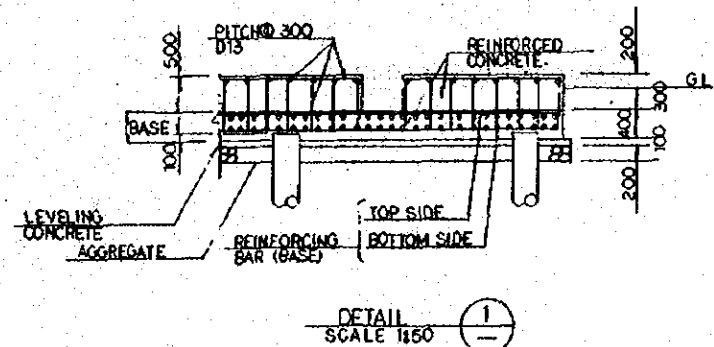
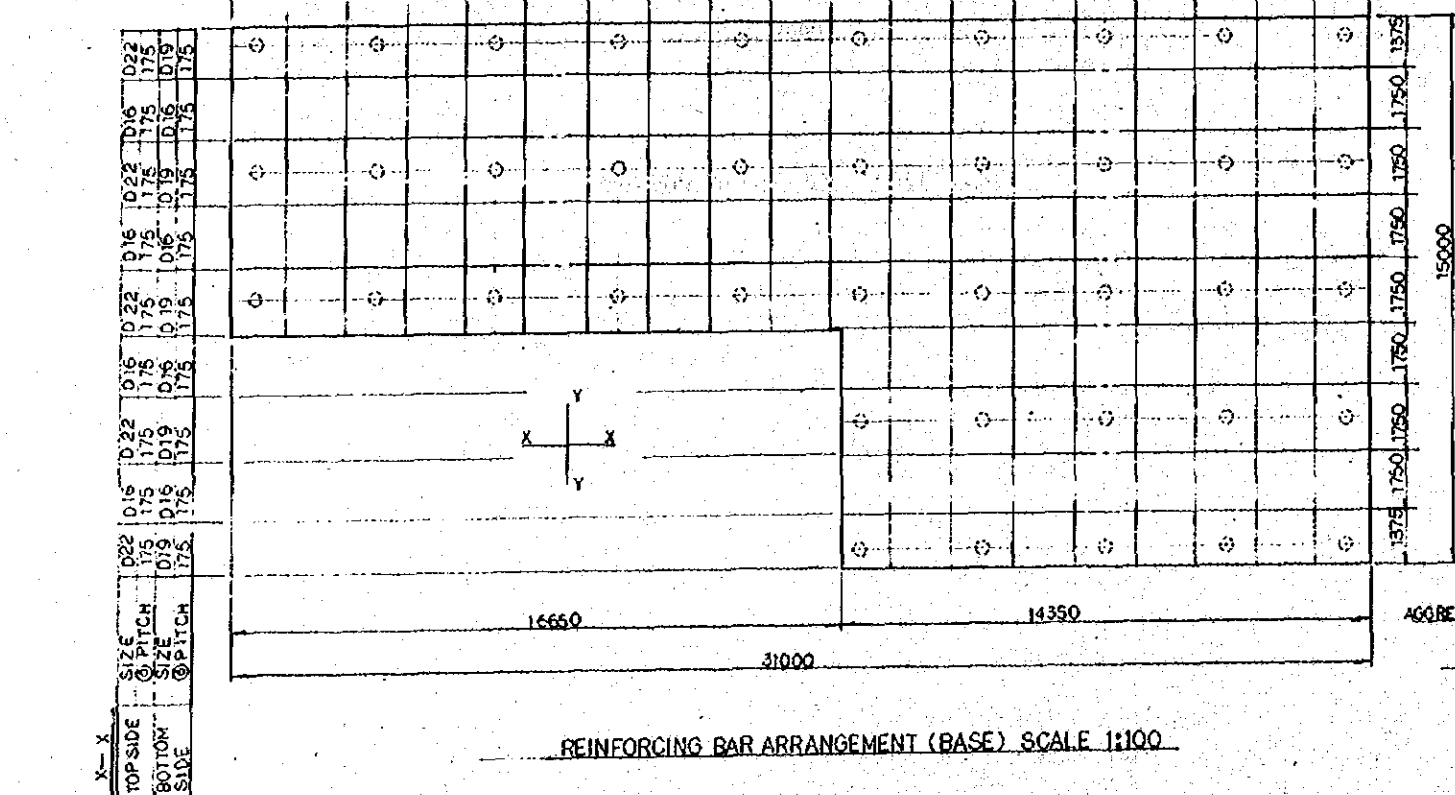


REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS							
NEW RAILWAY LINE FOR CENKARENG AIRPORT CONSTRUCTION PROJECT							
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)							
B	1 Aug 84	N.T	N.T	N.M	U.M	A.K	
A	15 Feb 84	N.T	N.T	N.M	K.M	A.K	
REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	APPROVED	SUBMITTED	
KAPUK SUBSTATION EQUIPMENT LAYOUT							
PACKAGE: ELECTRICAL WORK							
SCALE: 1:100				DRAWING NO: EP-009			



- NOTES**
1. THE TYPE OF PILES ARE AS FOLLOWS:
PC350mm CLASS B 7m TOP PILE
PC350mm CLASS A 8m BOTTOM PILE
 2. THE LONG TERM BEARING STRENGTH OF PILES SHALL BE 25T/Piece OR MORE.
 3. THE TYPE OF REINFORCEMENTS SHALL BE SD30.
 4. CONCRETE CLASS SHALL BE AS FOLLOWS:
REINFORCED : CLASS D
LEVELING : CLASS F

TOP SIDE	SIZE	0.25	0.19	0.25	0.19	0.25	0.19	0.25	0.19	0.25	0.19	0.25	0.19	0.25	0.19	0.25	0.19	0.25	0.19	0.25	0.19	0.25	0.19
	PITCH	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165
BOTTOM SIDE	SIZE	0.22	0.19	0.22	0.19	0.22	0.19	0.22	0.19	0.22	0.19	0.22	0.19	0.22	0.19	0.22	0.19	0.22	0.19	0.22	0.19	0.22	0.19
	PITCH	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165
		1475	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1650	1475



REPUBLIC OF INDONESIA
MINISTRY OF COMMUNICATIONS
DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS

NEW RAILWAY LINE FOR CENKARENG AIRPORT
CONSTRUCTION PROJECT

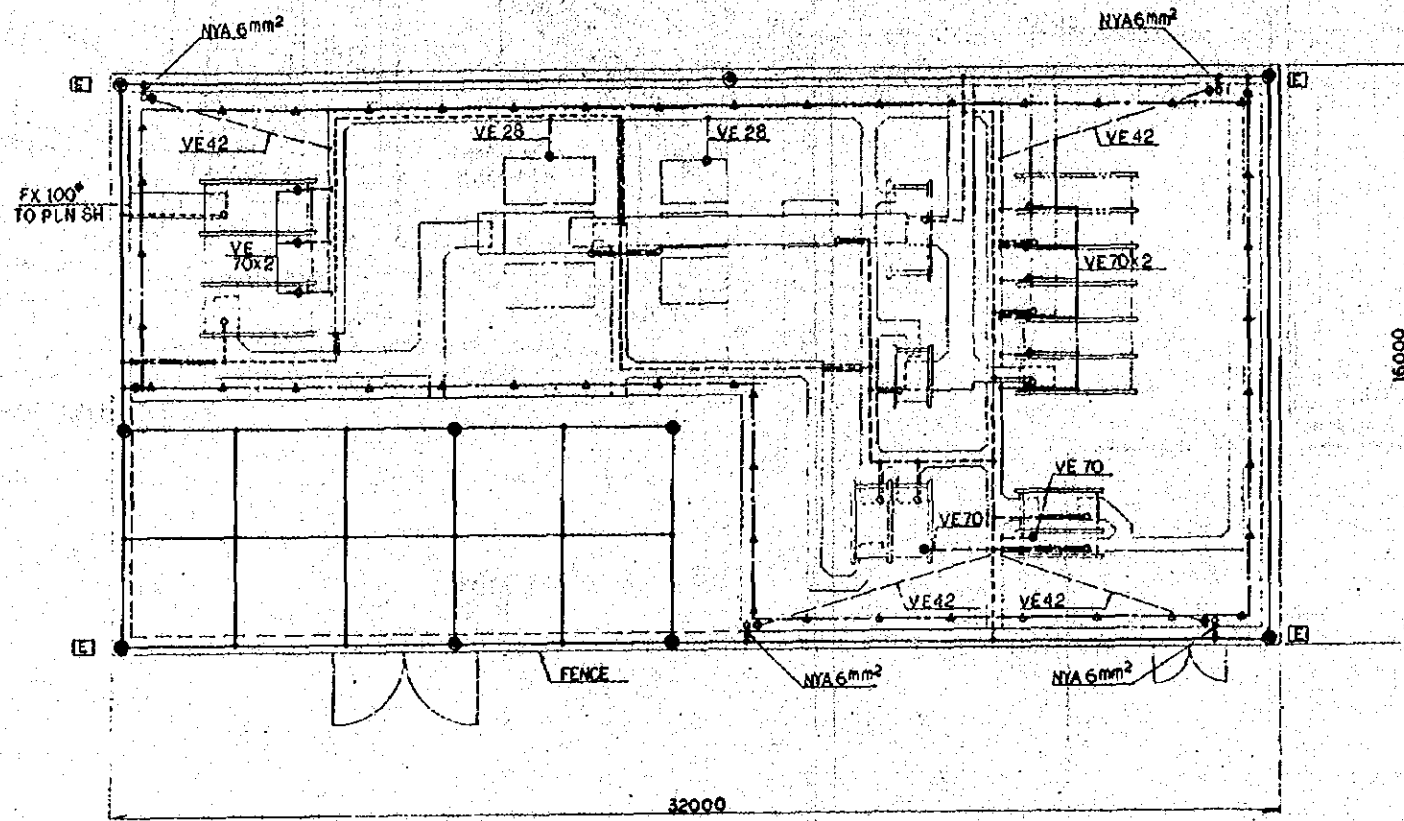
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

B	1/20/24	N.T	MT	SH	K.M	M.K
A	1/20/24	N.T	MT	SH	K.M	M.K

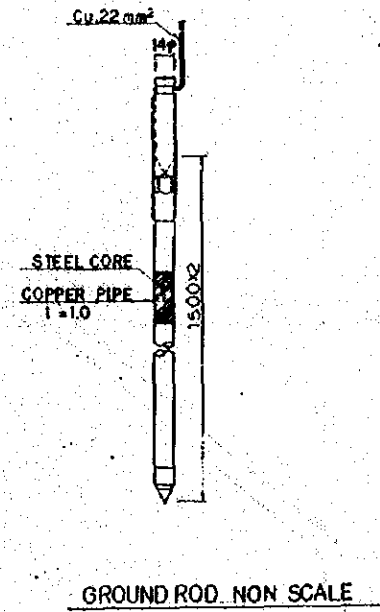
REVISIONS: DATE, CHECKED, DESIGNED, REVISION, SUBMITTED

KAPUK
SUBSTATION
FOUNDATION DETAILS

PACKAGE: ELECTRICAL WORK
SCALE: AS NOTED
DRAWING NO: EP-010



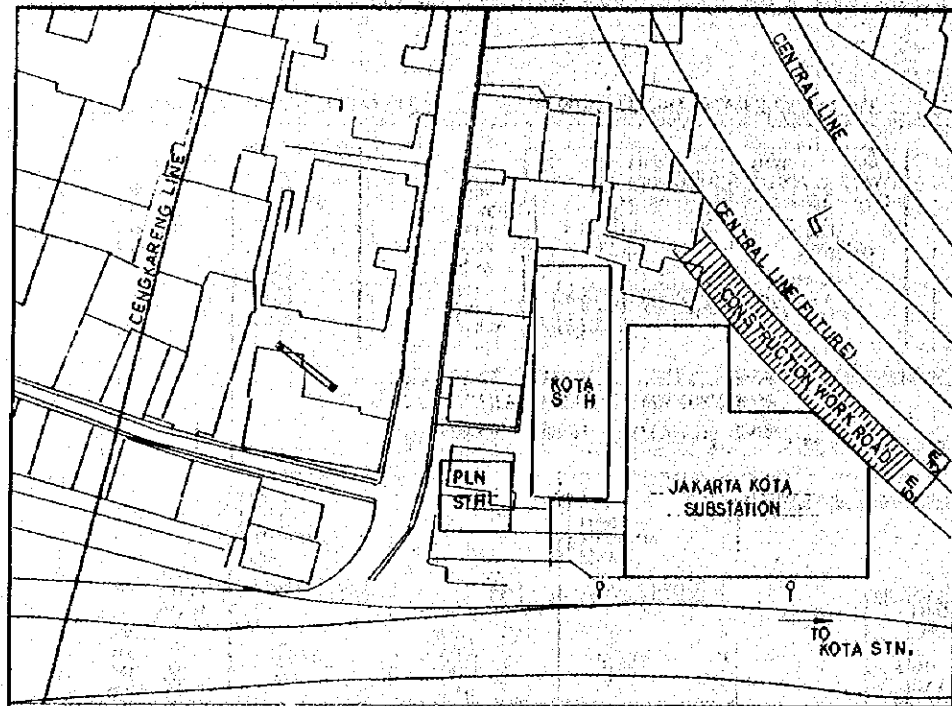
GROUND WIRE PLAN SCALE 1:100



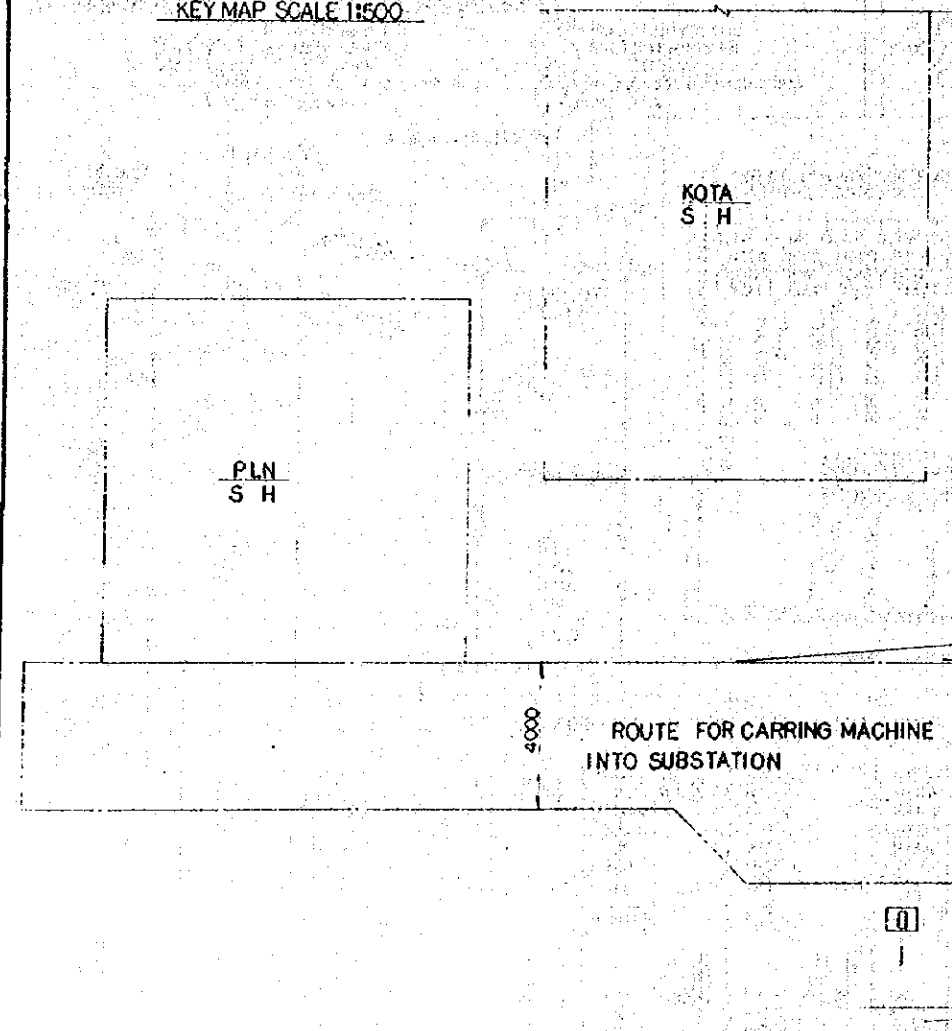
LEGEND:

- : GROUND ROD
- : Cu. 60mm² (ANNEALED COPPER STRANDED CONDUCTOR) BURIED CABLE 750mm UNDER GROUND LEVEL
- : NYA 70mm² (600V P.V.C INSULATED WIRE) INSTALLED IN THE TRENCH
- : VE 28 (28mm HARD PVC CONDUIT)
- : VE CONDUITS FOR CONTROL CABLE
- : FX FLEXIBLE TUBE
- : FASTENING TERMINAL
- : SOLDER
- : COMPRESSION SLEEVE FOR CONNECTING GROUND WIRE
- △ : BINDING POINT TO REINFORCEMENT
- : MARKER OF GROUND ROD

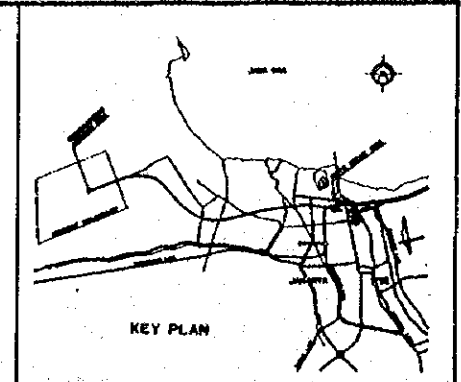
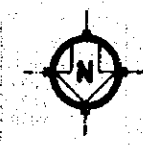
REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENKARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
B	IA	PK	NT	NT	EN	K.M
A	IA	PK	NT	NT	EN	K.M
REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	APPROVED	SUBMITTED
KAPUK SUBSTATION GROUND WIRE PLAN						
PACKAGE: III ELECTRICAL WORK						
SCALE: AS NOTED			DRAWING NO: EP-011			



KEY MAP SCALE 1:500



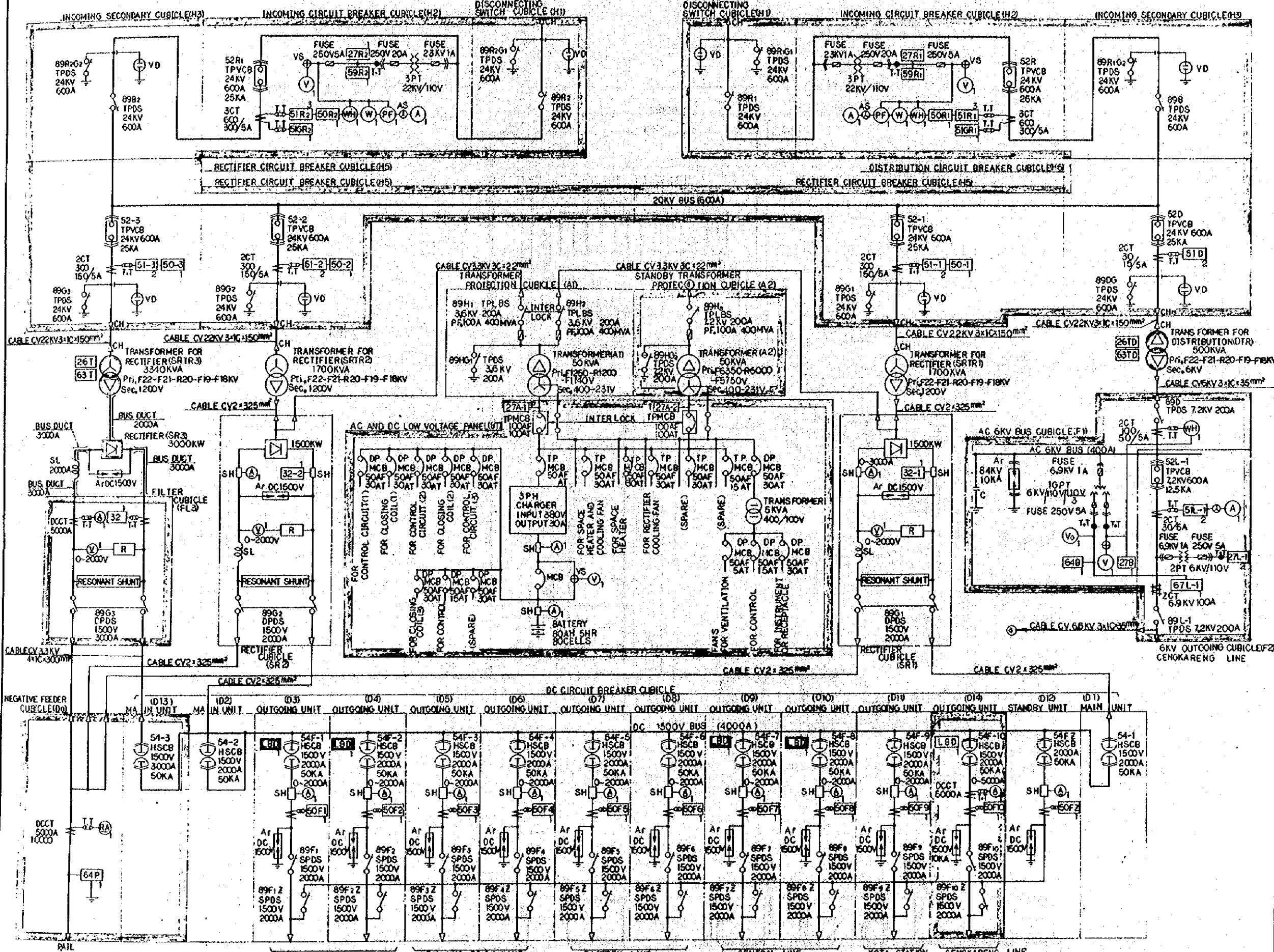
SITE PLAN SCALE 1:100



KEY PLAN

REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
B	1 Aug 82	U.T	U.T	U.M	K.M	M.R
A	4 Feb 82	U.T	U.T	K.M	U.S	M.R
REVISION	DATE	DESIGNED	CHECKED	APPROVED	REVIEWED	SUBMITTED
JAKARTA KOTA SUBSTATION SITE PLAN						
PACKAGE: II ELECTRICAL WORK						
SCALE AS NOTED		DRAWING NO. EP-012				

3-PHASE 3-WIRE NOMINAL 20KV/50HZ
INCOMING UNDERGROUND POWER CABLE LINE FROM PLN



- NOTES:
1. DEVICE FUNCTION NUMBERS ON THE DIAGRAM ARE CONFORMED WITH ANSI/JEM STANDARD.
 2. [Symbol] INDICATES THE EQUIPMENT TO BE INSTALLED IN THIS CONTRACT.

REPUBLIC OF INDONESIA
MINISTRY OF COMMUNICATIONS
DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS

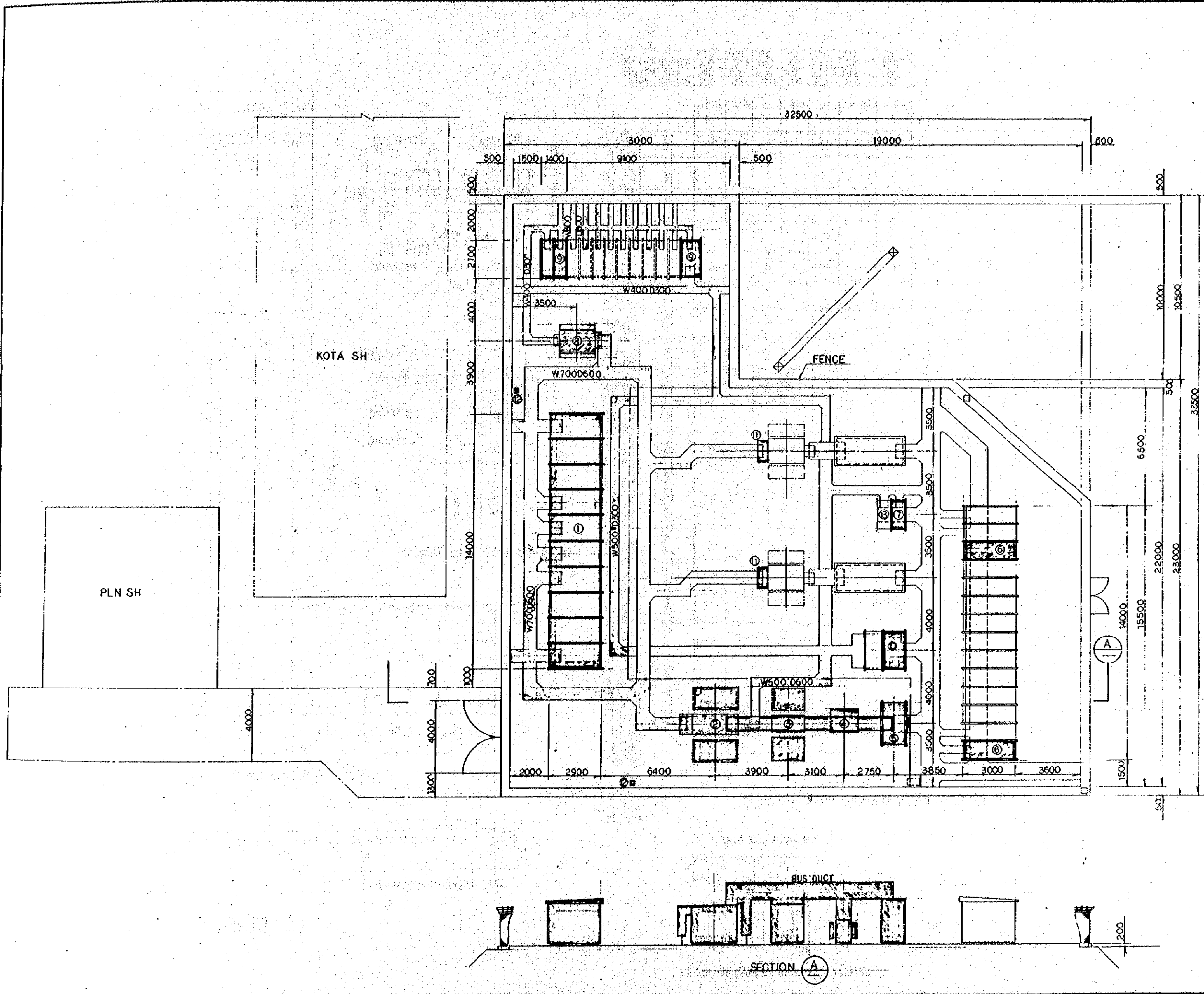
NEW RAILWAY LINE FOR CENKARENG AIRPORT
CONSTRUCTION PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

B	1/10/84	N.T	N.T	R.M	K.M	K.K
A	15/10/84	N.T	N.T	R.M	K.M	K.K
REVISION	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	APPROVED

JAKARTA KOTA
SUBSTATION
SINGLE LINE DIAGRAM

PACKAGE: ELECTRICAL WORK
SCALE: NON SCALE
DRAWING NO: EP-013



DEVICE TABLE

NO	NAME
①	20KV CUBICLE
②	TRANSFORMER 3340 KVA
③	SILICON RECTIFIER 3000KW
④	DC SERIES REACTOR 2000 A
⑤	FILTER CUBICLE
⑥	DC CIRCUIT BREAKER CUBICLE
⑦	NEGATIVE FEEDER CUBICLE
⑧	TRANSFORMER 500KVA
⑨	AC 6KV CUBICLE
⑩	AC AND DC LOW VOLTAGE FEEDER PANEL
⑪	CABLE DUCT
⑫	LAMP POSTS
⑬	REMOTE CONTROL PANEL

NOTES:
 INDICATES THE EQUIPMENT TO BE INSTALLED IN THIS CONTRACT.

LEGEND:
 FUTURE PLAN

REPUBLIC OF INDONESIA
 MINISTRY OF COMMUNICATIONS
 DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS

NEW RAILWAY LINE FOR CENGLARENG AIRPORT
 CONSTRUCTION PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

8	1 Aug '74	N.T	N.T	R.W	K.M	M.K
A	15 Feb '75	N.T	N.T	R.W	K.M	M.K

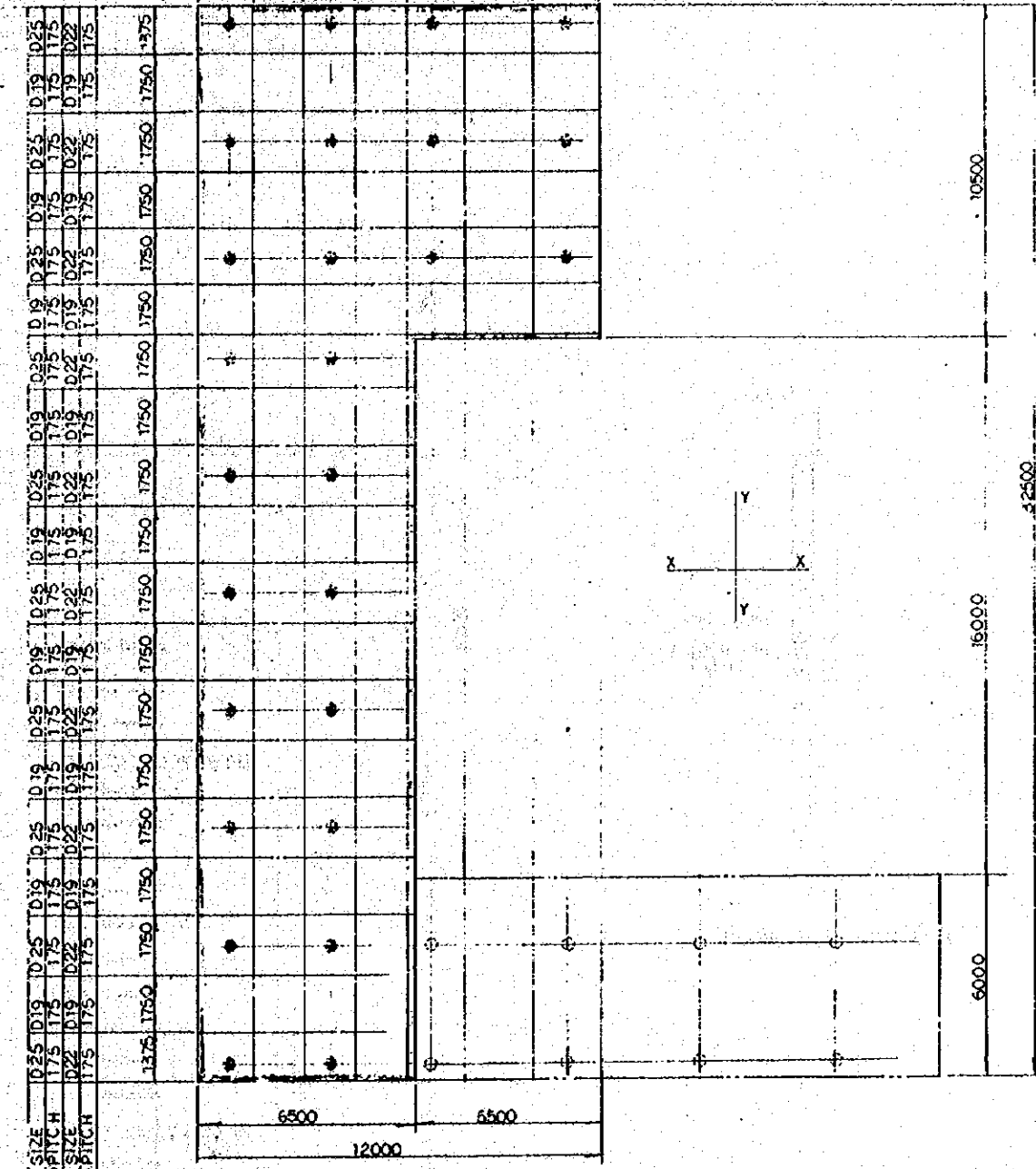
REVISIONS DATE DESIGNED DRAWN CHECKED REVIEWED SUBMITTED

**JAKARTA KOTA
 SUBSTATION
 EQUIPMENT LAYOUT**

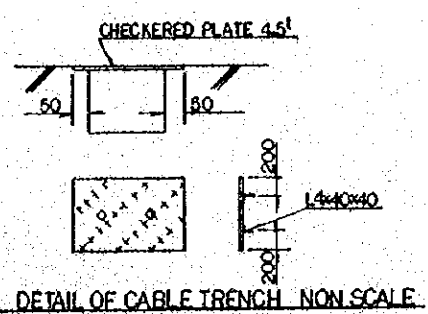
PACKAGE: II ELECTRICAL WORK
 SCALE: 1:100 DRAWING NO: EP-014

TOP SIDE	SIZE	D25	D19	D25	D19	D25	D19	D25
@PITCH		200	200	200	200	200	200	200
BOTTOM	SIZE	D22	D19	D22	D19	D22	D19	D22
SIDE	@PITCH	200	200	200	200	200	200	200

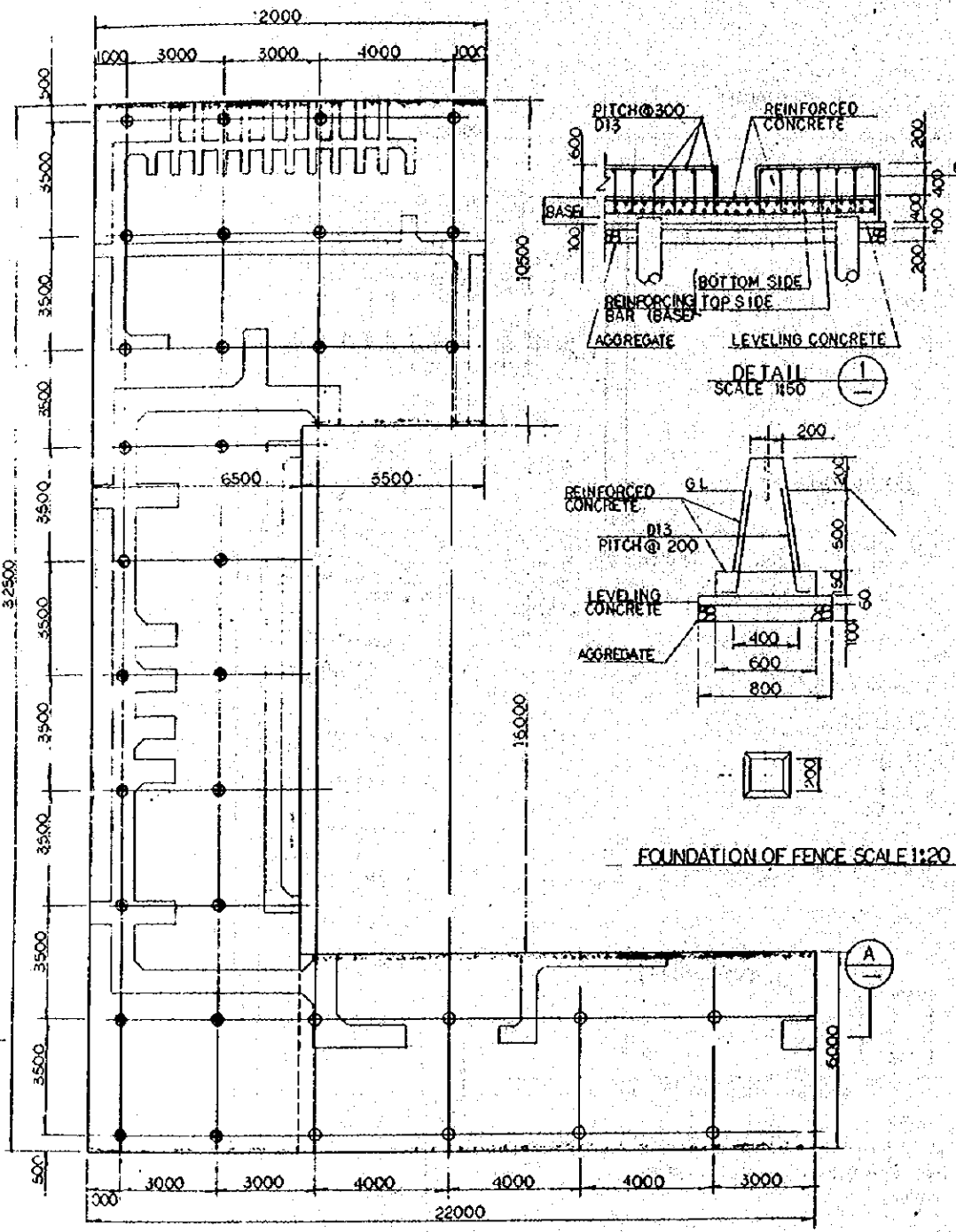
	1750	1500	1500	1750	2000	2000
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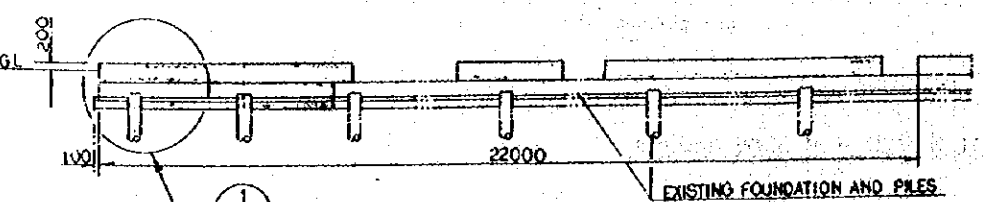
REINFORCING BAR ARRANGEMENT (BASE) SCALE 1:100



DETAIL OF CABLE TRENCH NON SCALE

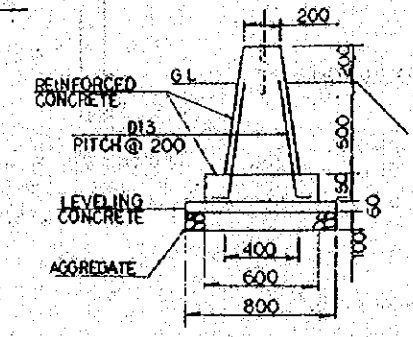
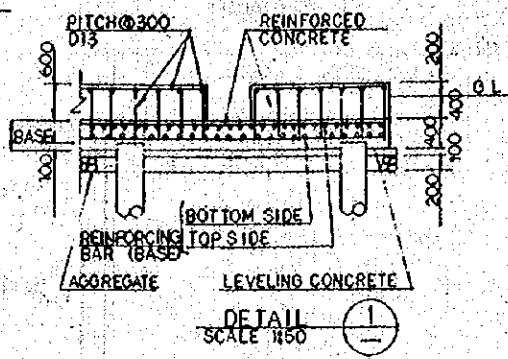


FOUNDATION OF FENCE SCALE 1:20



SECTION A-A SCALE 1:100

PILE ARRANGEMENT SCALE 1:100



- NOTES:
1. THE TYPE OF PILES ARE AS FOLLOWS:
PC 350mm CLASS B 7m TOP PILE
PC 350mm CLASS A 8m BOTTOM PILE
 2. THE LONG TERM BEARING STRENGTH OF PILES SHALL BE 33T/PIECE OR MORE.
 3. THE TYPE OF REINFORCEMENTS SHALL BE SD30.
 4. CONCRETE CLASS SHALL BE AS FOLLOWS:
REINFORCED : CLASS D
LEVELING : CLASS F
 5. [Symbol] INDICATES THE FOUNDATION AND PILES TO BE INSTALLED IN THIS CONTRACT.

REPUBLIC OF INDONESIA
MINISTRY OF COMMUNICATIONS
DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS

NEW RAILWAY LINE FOR CENKARENG AIRPORT CONSTRUCTION PROJECT

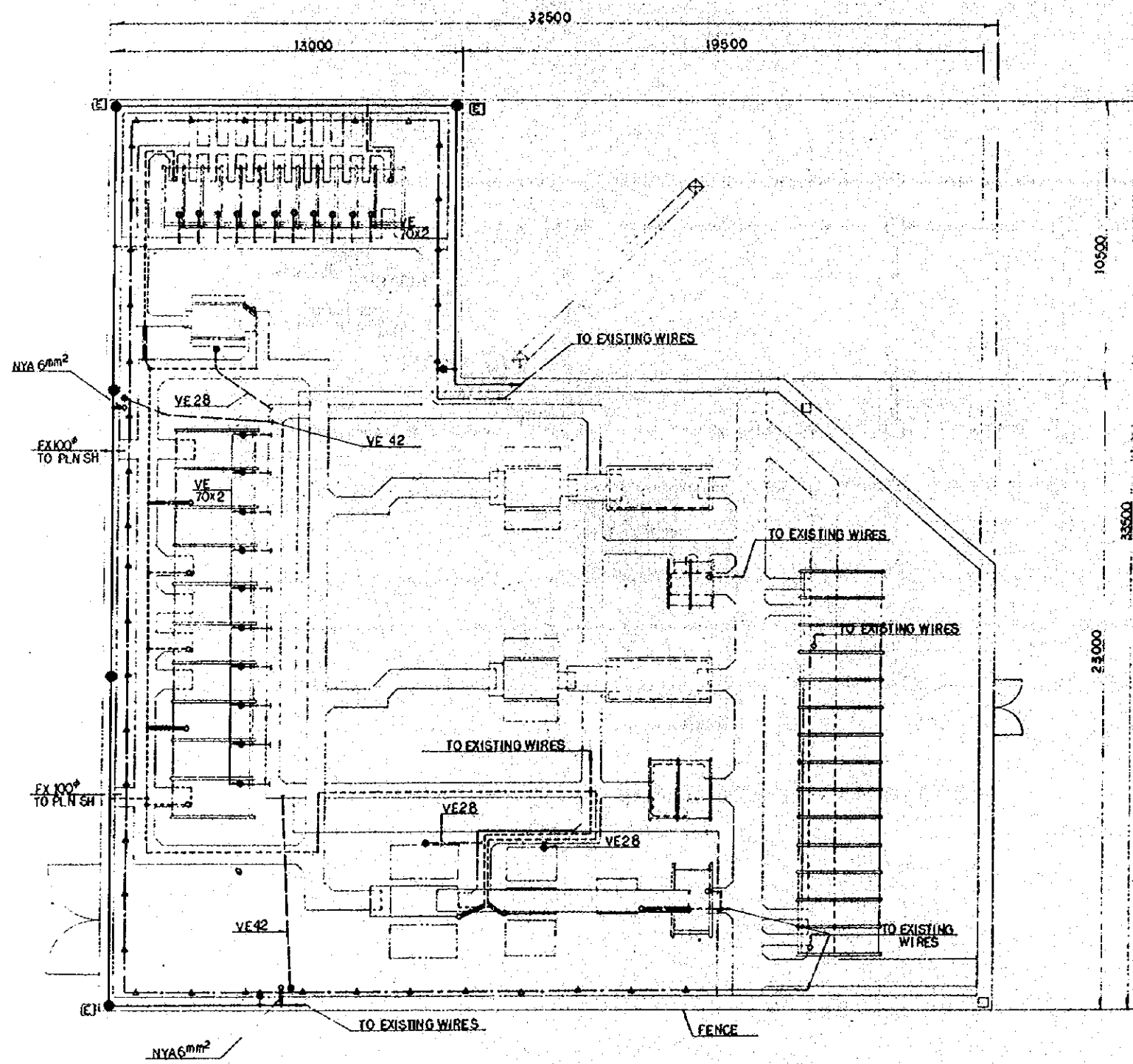
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

B	1.9.2017	MT	MT	SK	UM	AK
A	15.08.2017	MT	MT	SK	UM	AK

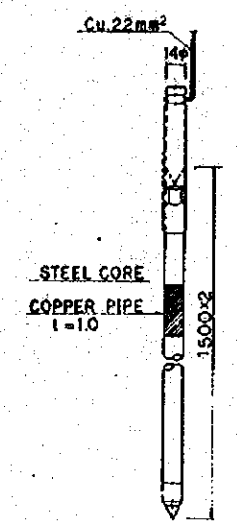
REVISIONS DATE REVISIONS DRAWN CHECKED REVIEWED SUBMITTED

JAKARTA KOTA
SUBSTATION
FOUNDATION DETAILS

PACKAGE: ELECTRICAL WORK
SCALE: AS NOTED DRAWING NO: EP-015



GROUND WIRE PLAN SCALE 1:100



GROUND ROD NON SCALE

LEGEND:

- : GROUND ROD
- : Cu. 60mm² (ANNEALED COPPER STRANDED CONDUCTOR) BURIED CABLE 750mm UNDER GROUND LEVEL.
- : NYA 70mm² (600° P.V.C INSULATED WIRE) INSTALLED IN THE TRENCH
- : VE 28 (28mm HARO P.V.C CONDUIT)
- : VE CONDUITS FOR CONTROL CABLE
- : FX FLEXIBLE TUBE
- : FASTENING TERMINAL
- : SOLDER
- : COMPRESSION SLEEVE FOR CONNECTING GROUND WIRE
- △ : BINDING POINT TO REINFORCEMENT
- ⊠ : MARKER OF GROUND ROD

NOTE:
GROUND WIRES INSTALLED IN THIS CONTRACT SHALL BE CONNECTED WITH EXISTING GROUND WIRES.

REPUBLIC OF INDONESIA
MINISTRY OF COMMUNICATIONS
DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS

NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

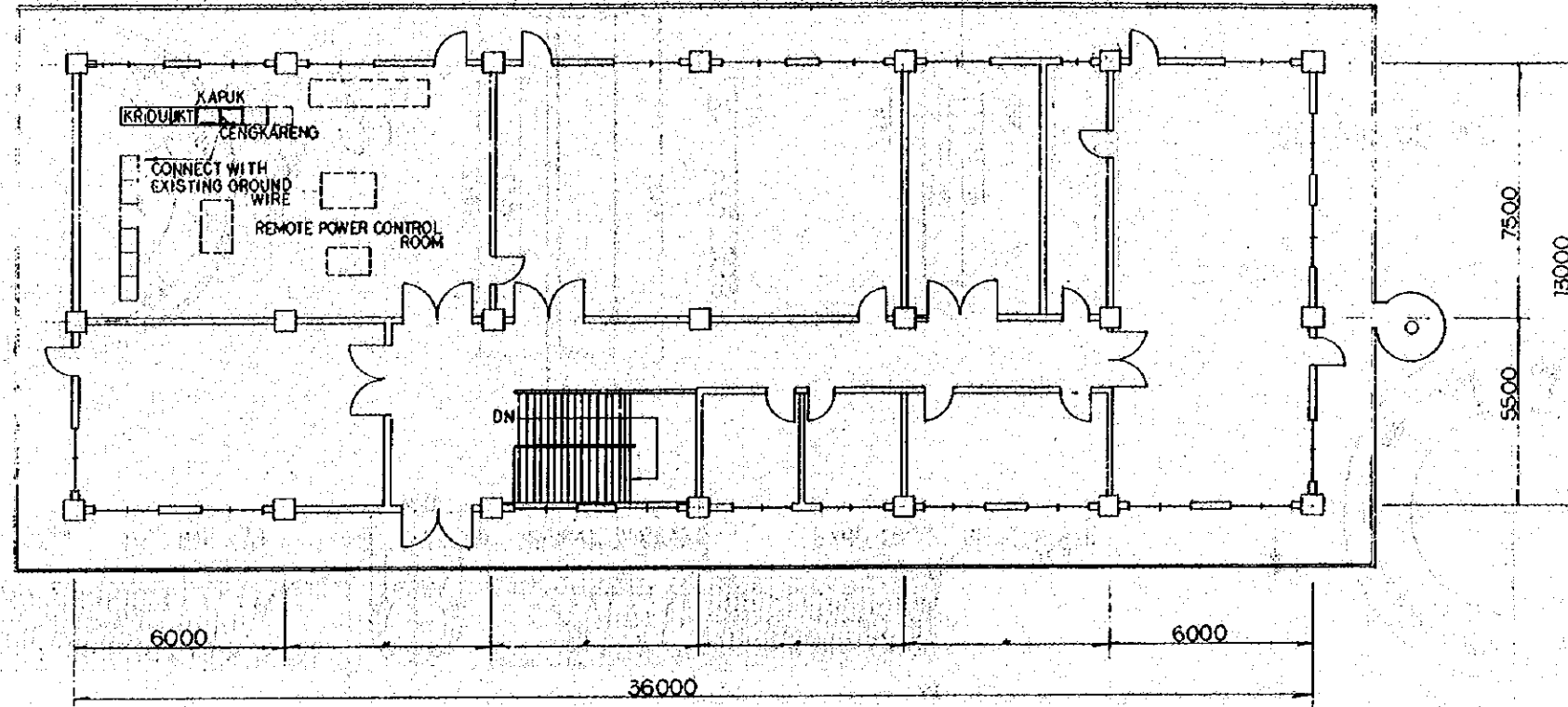
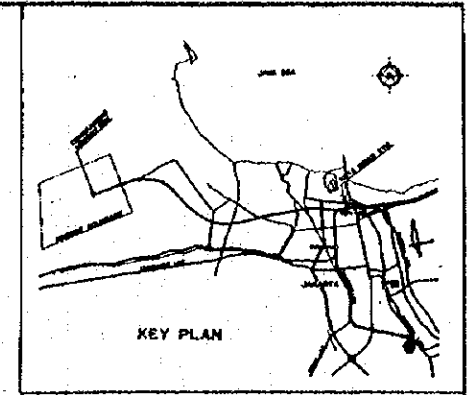
B	1. Aug '88	N-7	N-7	Ka	K.M	M.K
A	15. Jul '88	N-7	N-7	M.K	K.M	M.K
REVISIONS	DATE	DESIGNED	CHECKED	APPROVED	REVIEWED	SUBMITTED

JAKARTA KOTA
SUBSTATION
GROUND WIRE PLAN

PACKAGE: ELECTRICAL WORK

SCALE: AS NOTED

DRAWING NO: EP-016

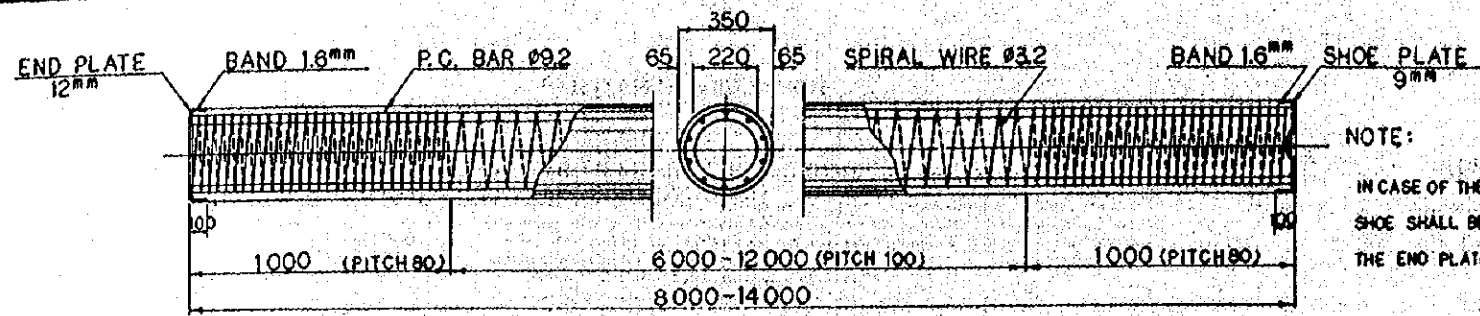


MANGGARAI OPERATION CENTER 3RD FLOOR

NOTE:

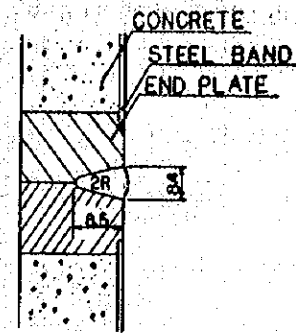
- 1. [Symbol] INDICATES THE EQUIPMENT TO BE INSTALLED IN THIS CONTRACT.
- 2. ARCHITECTURAL WORK IS NOT IN THIS CONTRACT.

REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENKARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
B	1. Aug '84	N.T	N.T	FOR	U.M.	M.K.
A	15 Feb '84	N.T	N.T	K.H.	K.H.	M.K.
REVISION	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	SUBMITTED
MANGGARAI CONTROL CENTER EQUIPMENT LAYOUT						
PACKAGE: <input checked="" type="checkbox"/> ELECTRICAL WORK						
SCALE: 1:100		DRAWING NO.: EP-017				

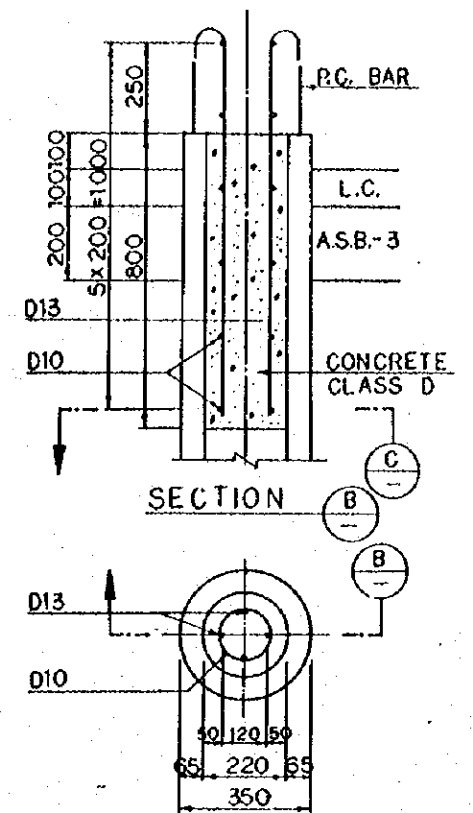
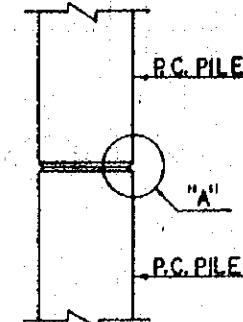


P.C. PILE CLASS B

NOTE:
IN CASE OF THE UPPER PILE, THIS SHOE SHALL BE REPLACED TO THE END PLATE.



DETAIL OF "A"

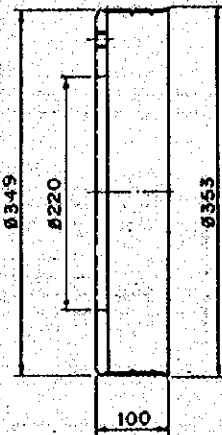
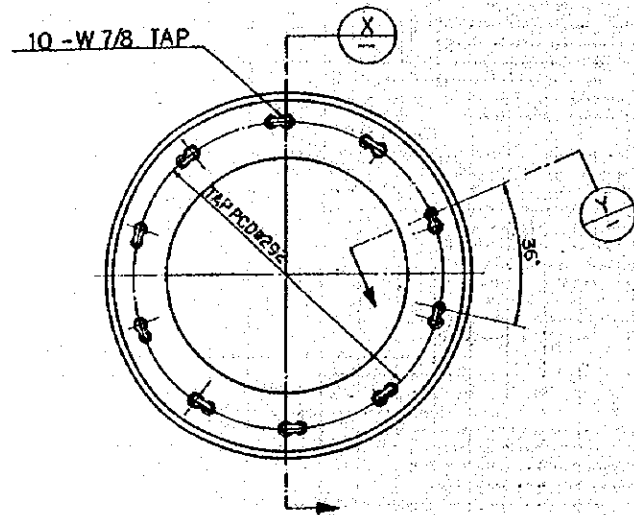


SECTION C

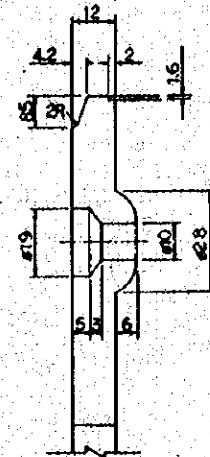
PILE HEAD

NOTE:
ALL DIMENSIONS ARE SHOWN IN MILLIMETERS UNLESS OTHERWISE INDICATED.

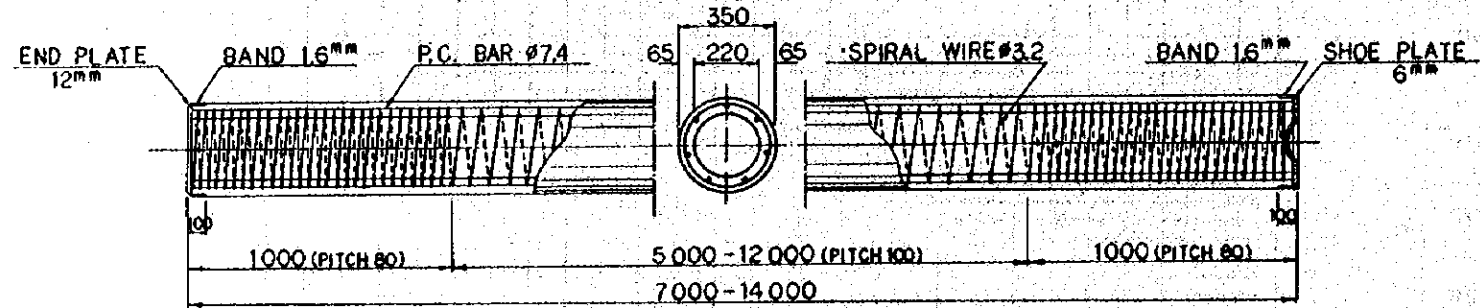
REPUBLIC OF INDONESIA						
MINISTRY OF COMMUNICATIONS						
DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	APPROVED
B	Aug '84	NT	NT	K.K.	K.M.	K.K.
DETAILS OF PRESTRESSED CONCRETE PILES						
PACKAGE: ■ ELECTRICAL WORK						
SCALE: NON SCALE		DRAWING NO: EP-018				



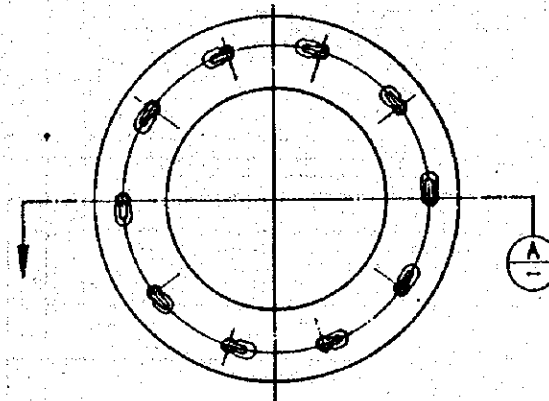
SECTION X-X



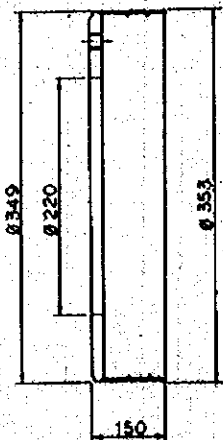
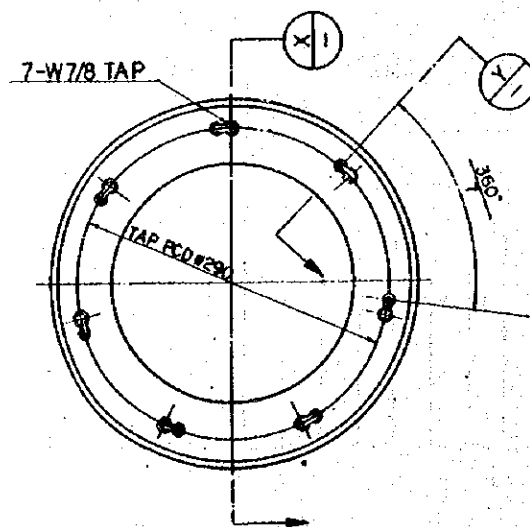
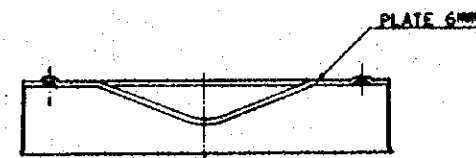
SECTION Y-Y



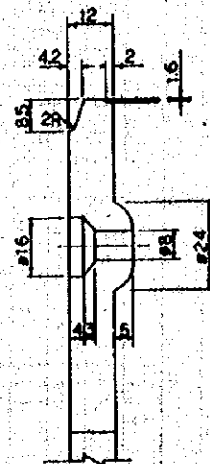
P.C. PILE CLASS A



SECTION A SHOE

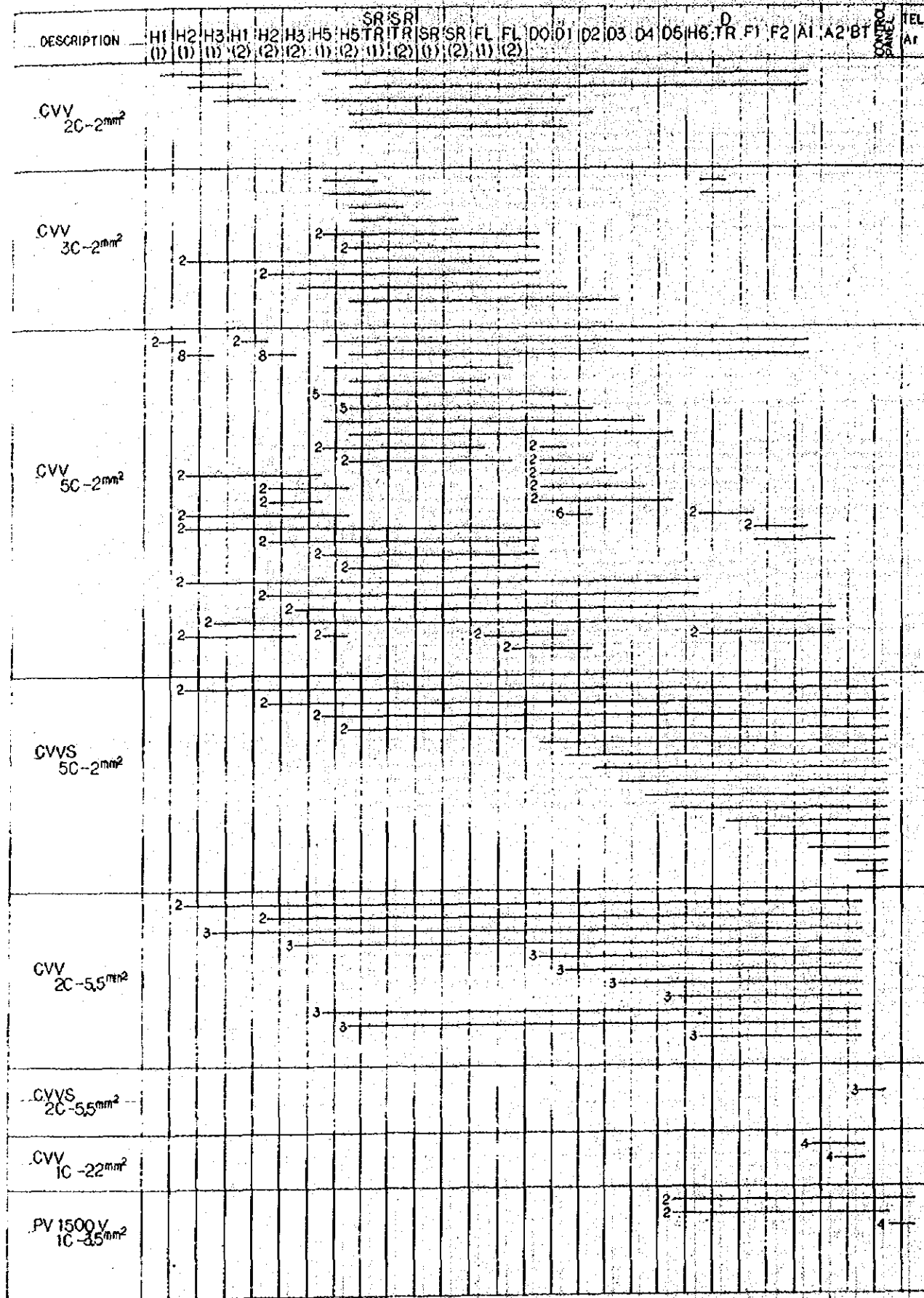


SECTION X-X

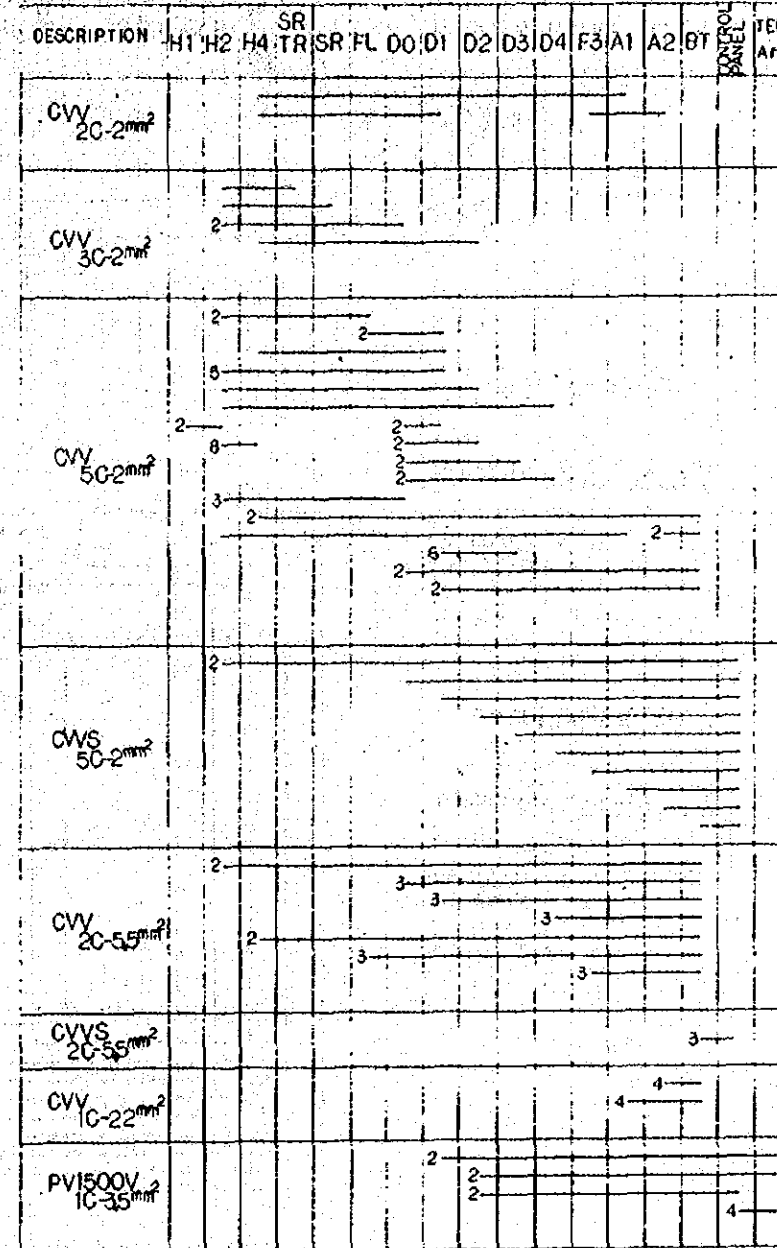


SECTION Y-Y

CENKARENG SUBSTATION



KAPUK SUBSTATION



REPUBLIC OF INDONESIA
MINISTRY OF COMMUNICATIONS
DIRECTORATE GENERAL OF LAND TRANSPORT
AND INLAND WATERWAYS

NEW RAILWAY LINE FOR CENKARENG AIRPORT
CONSTRUCTION PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY
(JICA)

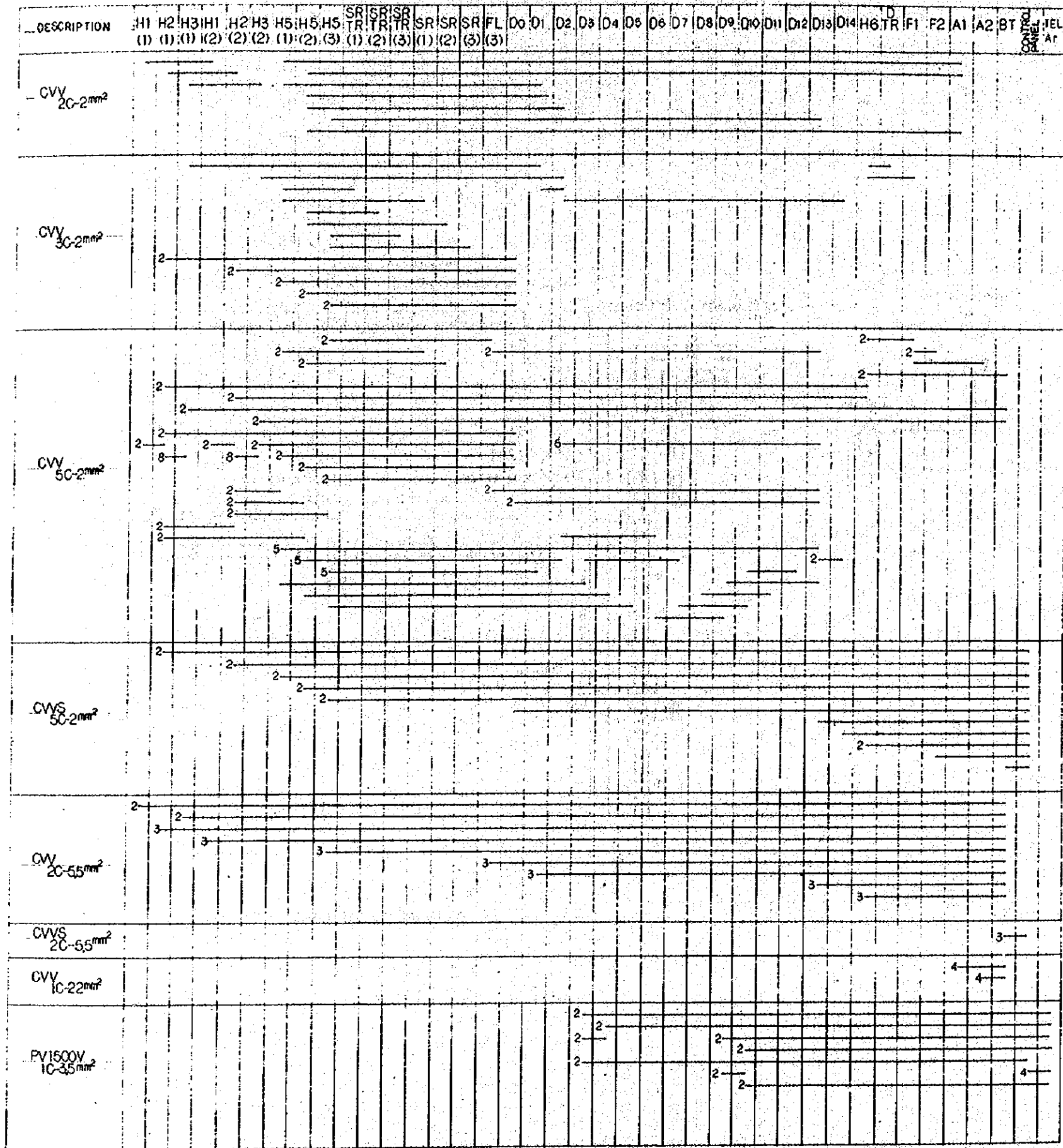
REVISED	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	SUBMITTED
B	18.08.84	NT	NT	KH	K.M	AK
A	15.04.84	NT	NT	KH	K.M	AK

CONTROL CABLE
CONNECTION DIAGRAM
(SHEET 1 OF 2)

PACKAGE: II ELECTRICAL WORK

SCALE: NON SCALE DRAWING NO: EP-019

JAKARTA KOTA SUBSTATION



MANGGARAI REMOTE CONTROL ROOM

DESCRIPTION	CONTROL PANEL	CHARGER PANEL	TELECOMMUNICATION TERMINAL BOX
CVVS 5C-2mm²	2		
CVVS 2C-55mm²	2		

DURI SUBSTATION

DESCRIPTION	DC CIRCUIT BREAKER CUBICLE	TEL. Ar
PV1500V 1C-35mm²	4	

GMBIR SUBSTATION

DESCRIPTION	DC CIRCUIT BREAKER CUBICLE	TEL. Ar
PV1500V 1C-35mm²	4	

REPUBLIC OF INDONESIA
 MINISTRY OF COMMUNICATIONS
 DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS

NEW RAILWAY LINE FOR CENKARENG AIRPORT
 CONSTRUCTION PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

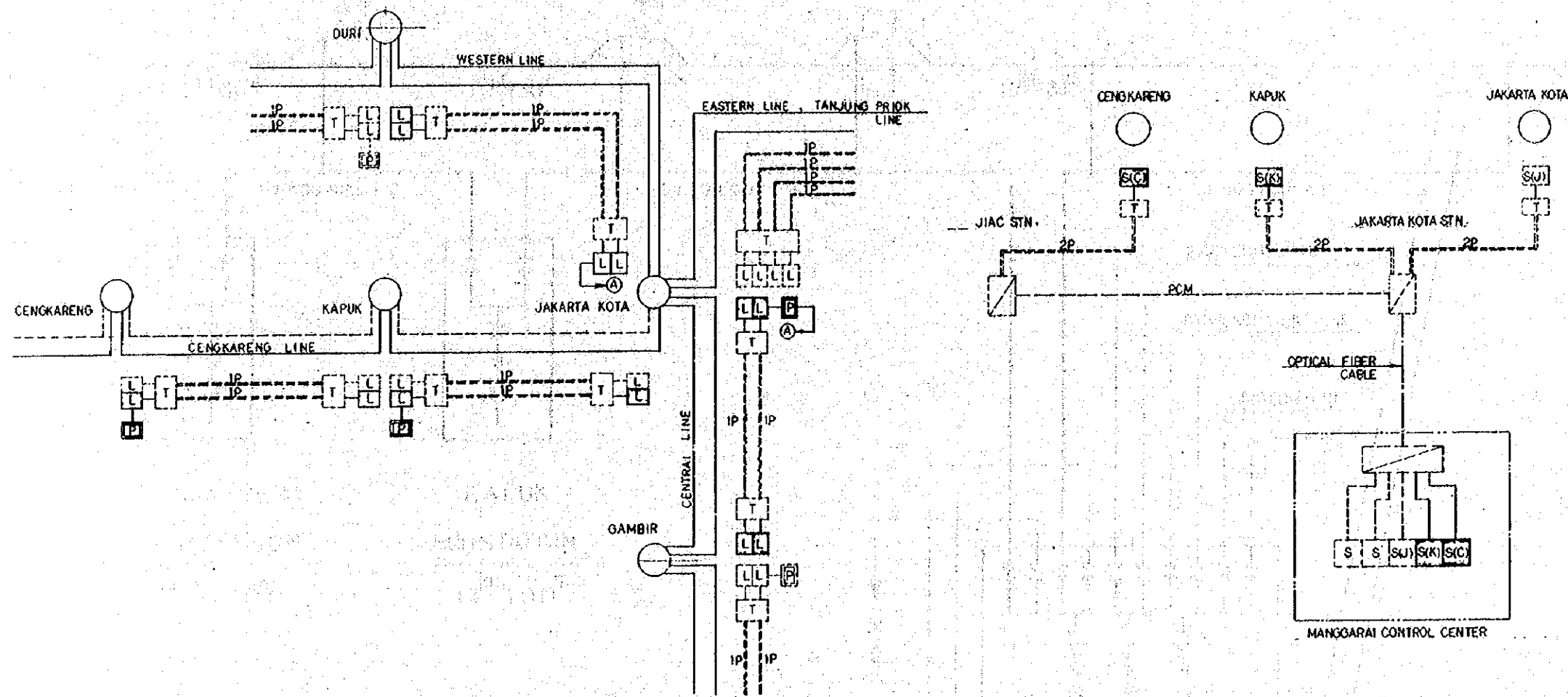
B	1 Aug 87	N.T	N.T	K.M	K.M	K.M
A	15 Feb 87	N.T	N.T	K.M	K.M	K.M

REVISIONS DATE DESIGNED DRAWN CHECKED APPROVED SUBMITTED

CONTROL CABLE CONNECTION DIAGRAM (SHEET 2 OF 2)

PACKAGE: III ELECTRICAL WORK

SCALE: NON SCALE DRAWING NO: EP-020



LINKED BREAKING SYSTEM

REMOTE CONTROL SYSTEM

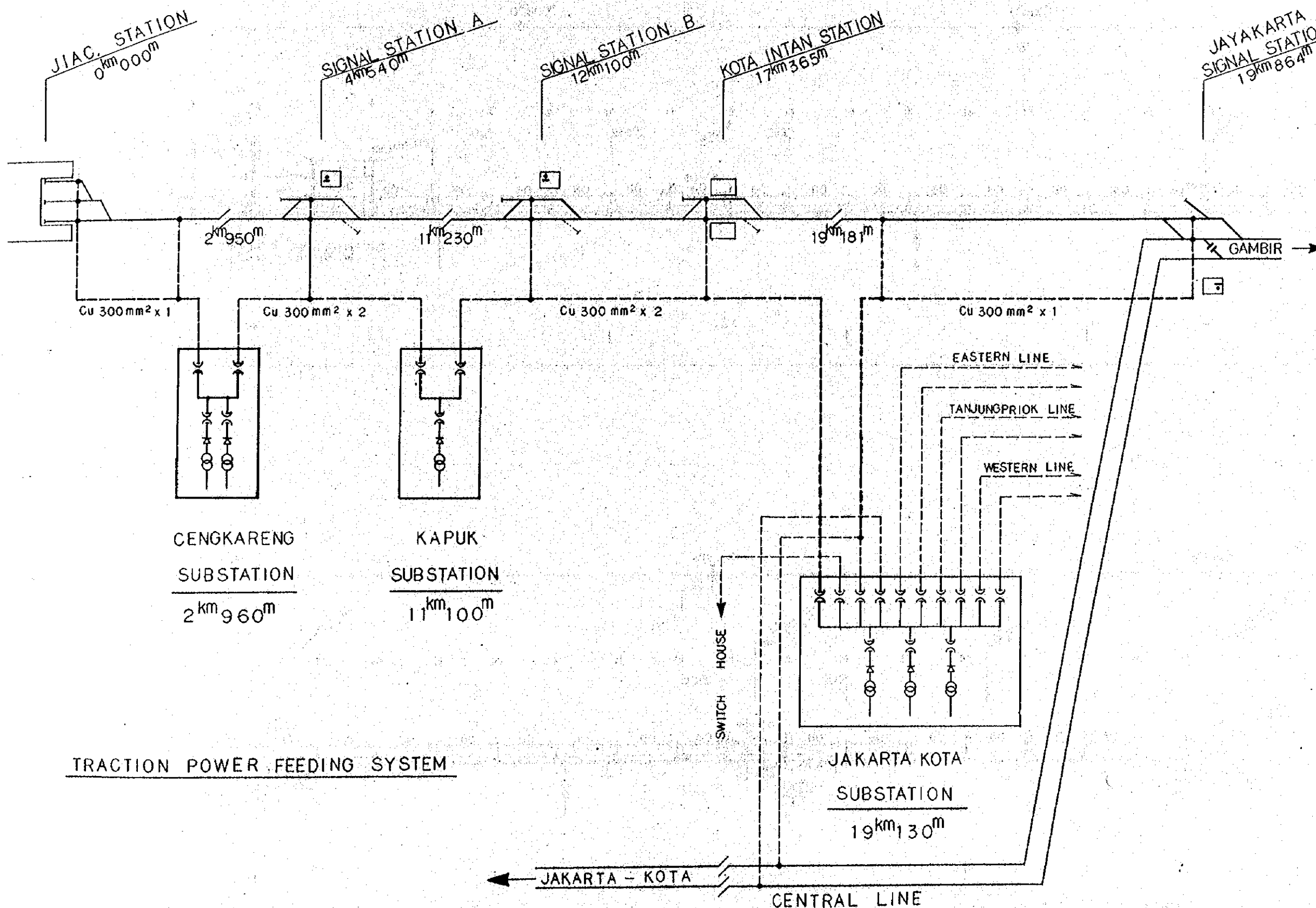
LEGEND:

- : SUBSTATION
- : LINKED BREAKING DEVICE (LBD)
- T : TELECOMMUNICATION ARRESTER
- Ⓜ : POWER SOURCE FOR LBD
- Ⓜ : REMOTE CONTROL PANEL
- : TELECOMMUNICATION CABLE

NOTE:

□ INDICATES THE DEVICE TO BE INSTALLED IN THIS CONTRACT.

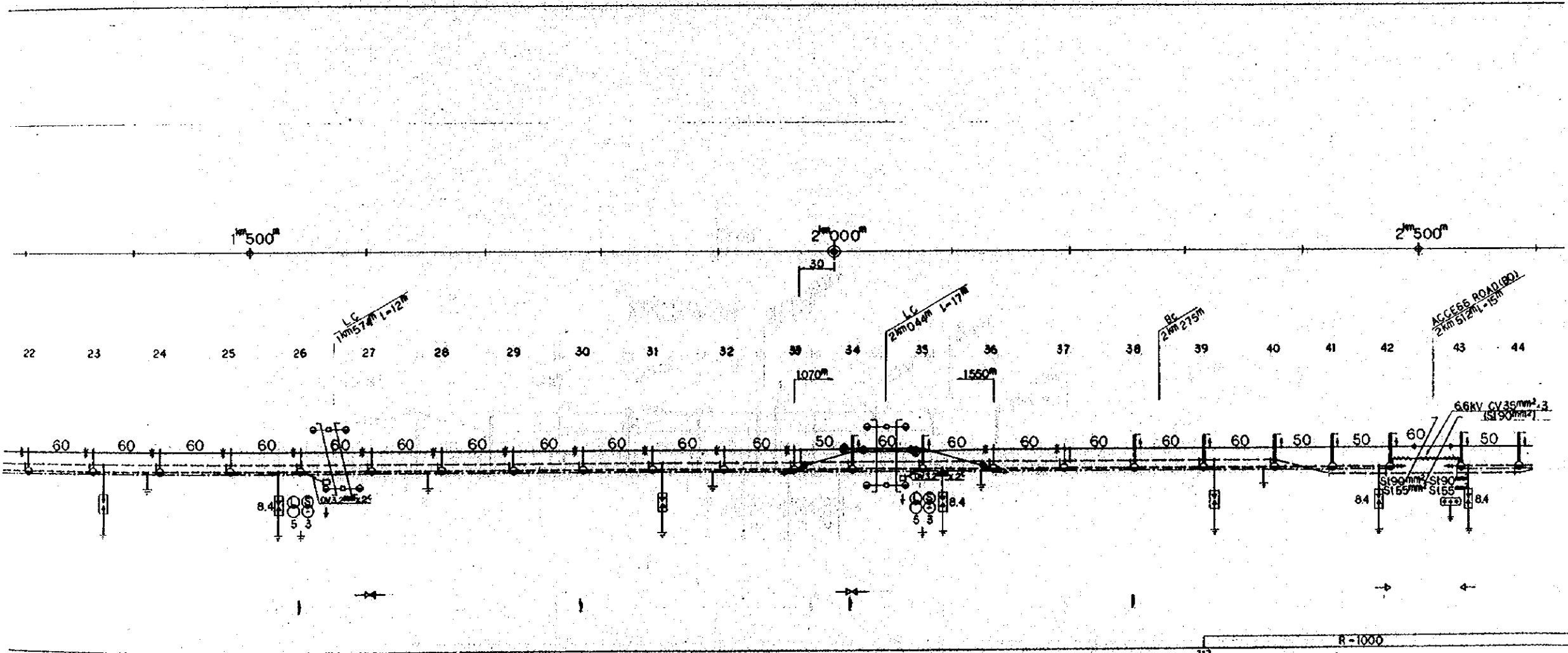
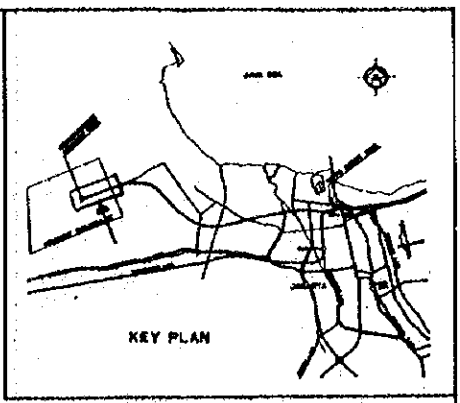
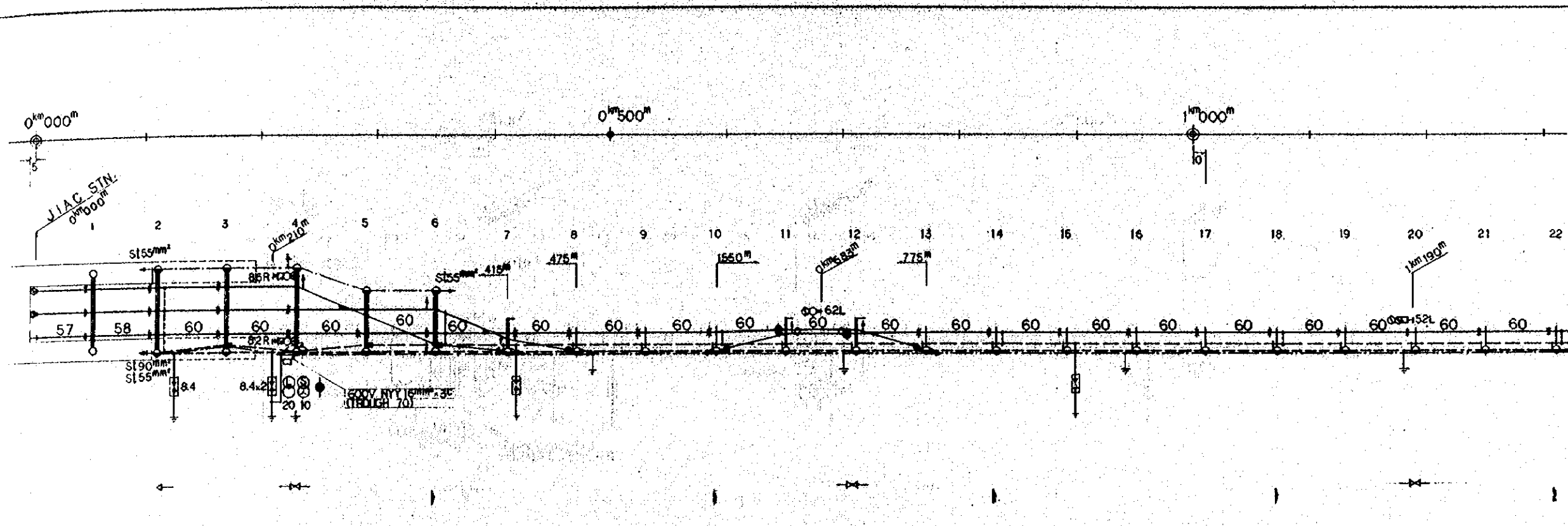
REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS					
NEW RAILWAY LINE FOR CENKARENG AIRPORT CONSTRUCTION PROJECT					
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)					
B	Aug '84	N.T	N.T	K.U	K.M
REVISION	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED
LINKED BREAKING SYSTEM AND REMOTE CONTROL SYSTEM					
PACKAGE: ■ ELECTRICAL WORK					
SCALE: NON SCALE		DRAWING NO: EP-21			



- LEGEND:
- : FEEDER
 - : TROLLEY
 - : FEEDER (EXISTING LINE)
 - : TROLLEY (EXISTING LINE)

TRACTION POWER FEEDING SYSTEM

REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
B	1 Aug '88	S.H.	S.H.	R.H.	V.M.	M.K.
A	15 Feb '88	S.H.	S.H.	R.H.	V.M.	M.K.
REVISION	DATE	DRAWN	CHECKED	REVIEWED	SUBMITTED	
TRACTION POWER FEEDING SYSTEM						
PACKAGE: III ELECTRICAL WORK						
SCALE: NON SCALE		DRAWING NO: EC-001				



REPUBLIC OF INDONESIA
 MINISTRY OF COMMUNICATIONS
 DIRECTORATE GENERAL OF LAND TRANSPORT
 AND INLAND WATERWAYS

NEW RAILWAY LINE FOR GEMBOKING AIRPORT
 CONSTRUCTION PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY
 (JICA)

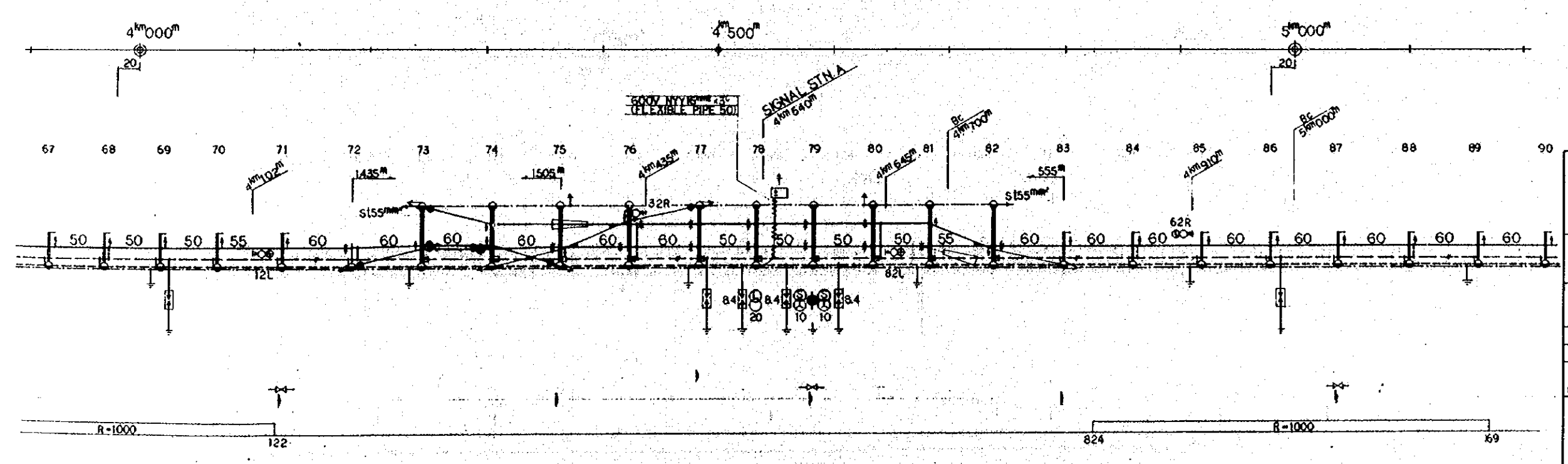
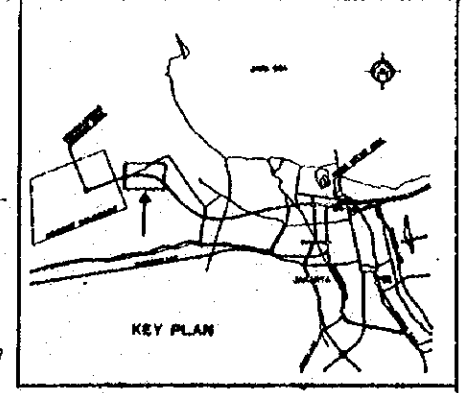
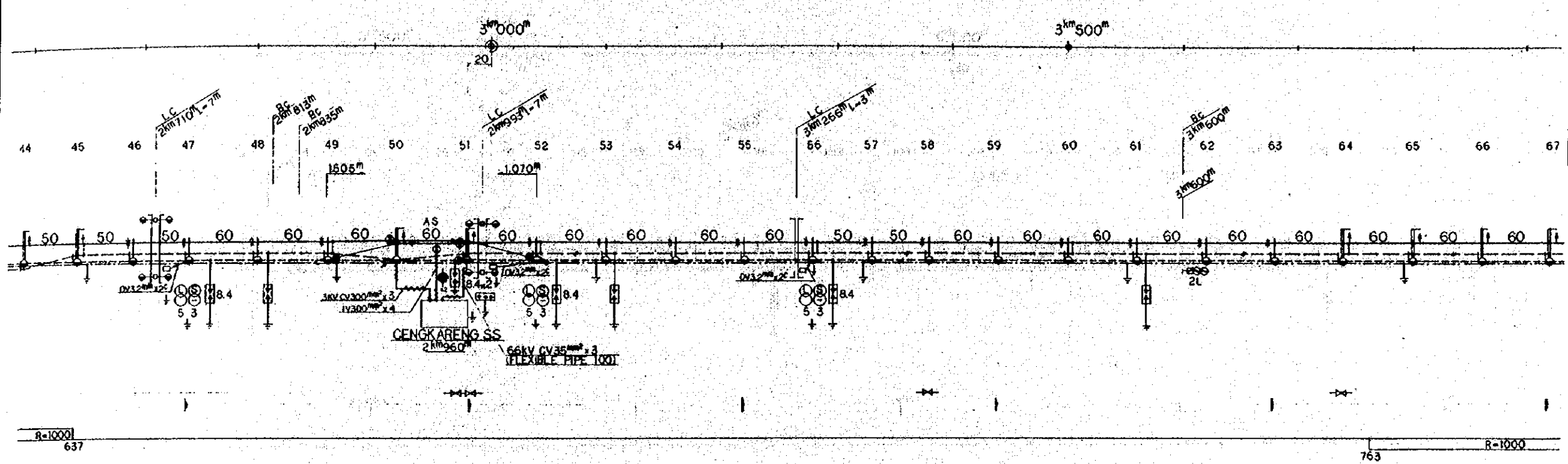
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A	15 Feb 88	S.H	S.H	K.K	K.M	M.K

REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	EXTEND	SUBMITTED
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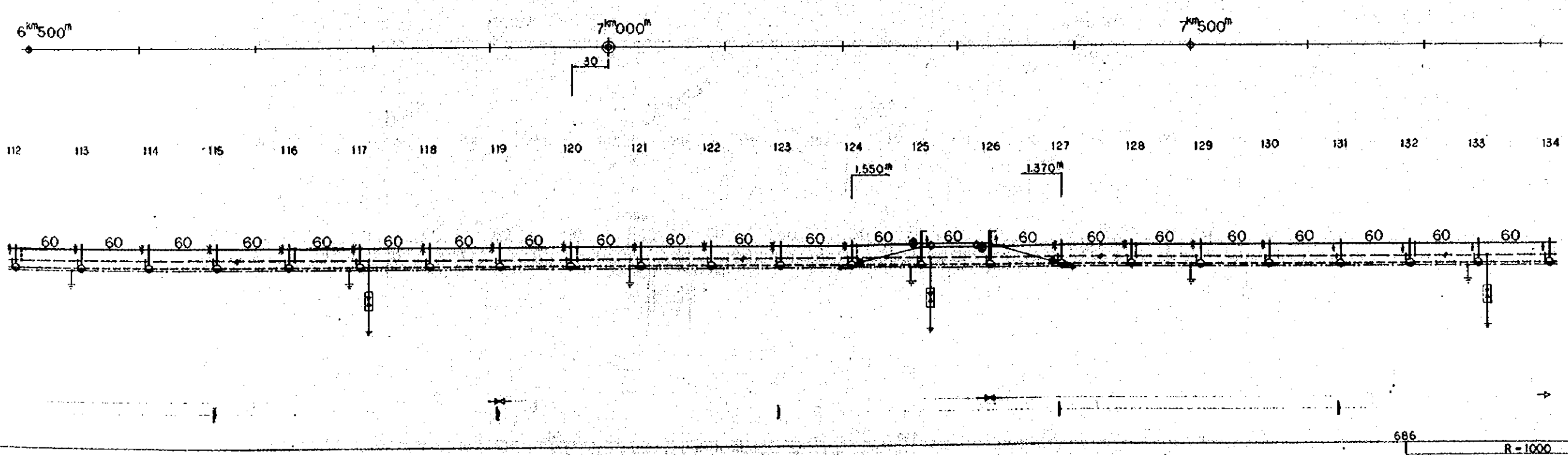
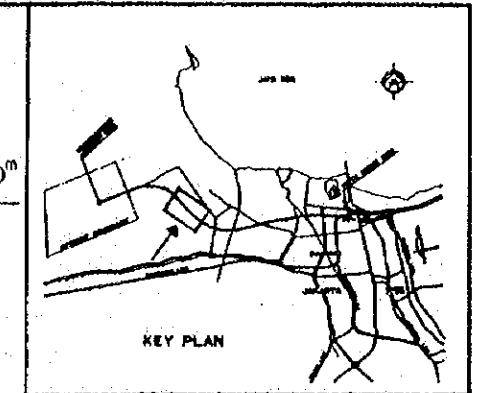
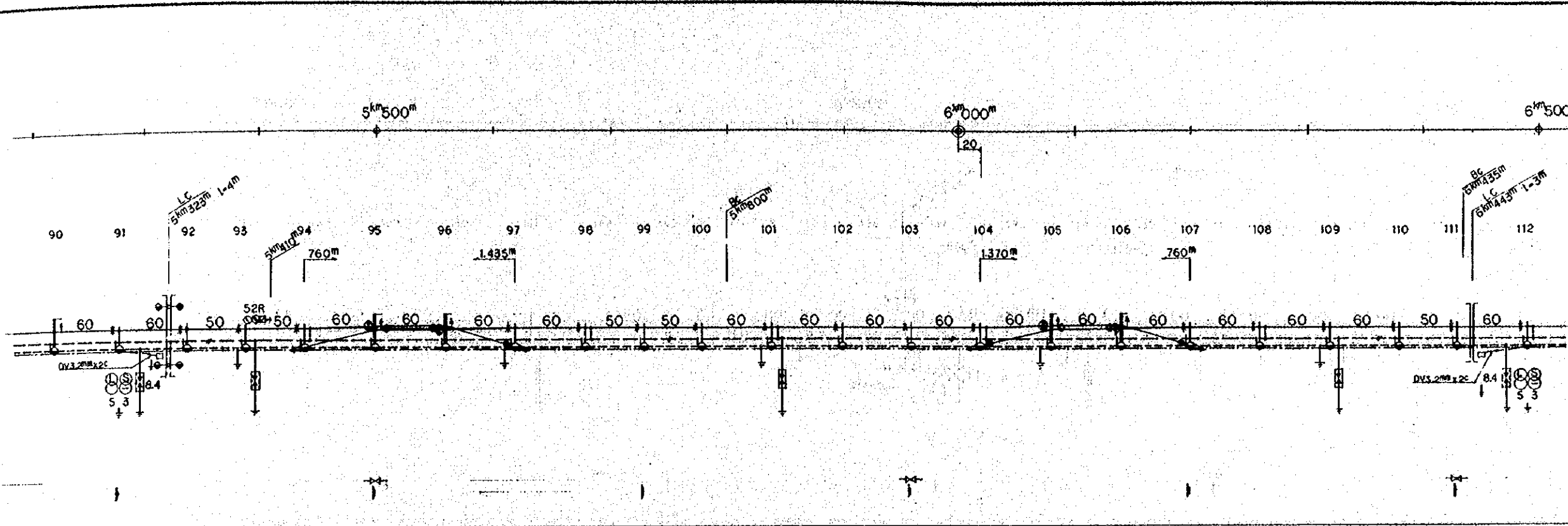
DIAGRAMMATIC PLAN OF
 TRACTION
 AND
 UTILITY POWER DISTRIBUTION LINES
 (SHEET 1 OF 8)

PACKAGE: III ELECTRICAL WORK

SCALE: NON SCALE
 DRAWING NO: EC-002



REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENKARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
B	1 APR '80	S.H	S.H	K.H	K.M	A.K
A	12 APR '80	S.H	S.H	K.H	K.M	A.K
REVISION	DATE	DESIGNED	CHECKED	REVISED	SUBMITTED	
DIAGRAMMATIC PLAN OF TRACTION AND UTILITY POWER DISTRIBUTION LINES (SHEET 2 OF 8)						
PACKAGE: <input checked="" type="checkbox"/> ELECTRICAL WORK						
SCALE		DRAWING NO.				
NON SCALE		EC - 003				



REPUBLIC OF INDONESIA
 MINISTRY OF COMMUNICATIONS
 DIRECTORATE GENERAL OF LAND TRANSPORT
 AND INLAND WATERWAYS

NEW RAILWAY LINE FOR CENGKARENG AIRPORT
 CONSTRUCTION PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY
 (JICA)

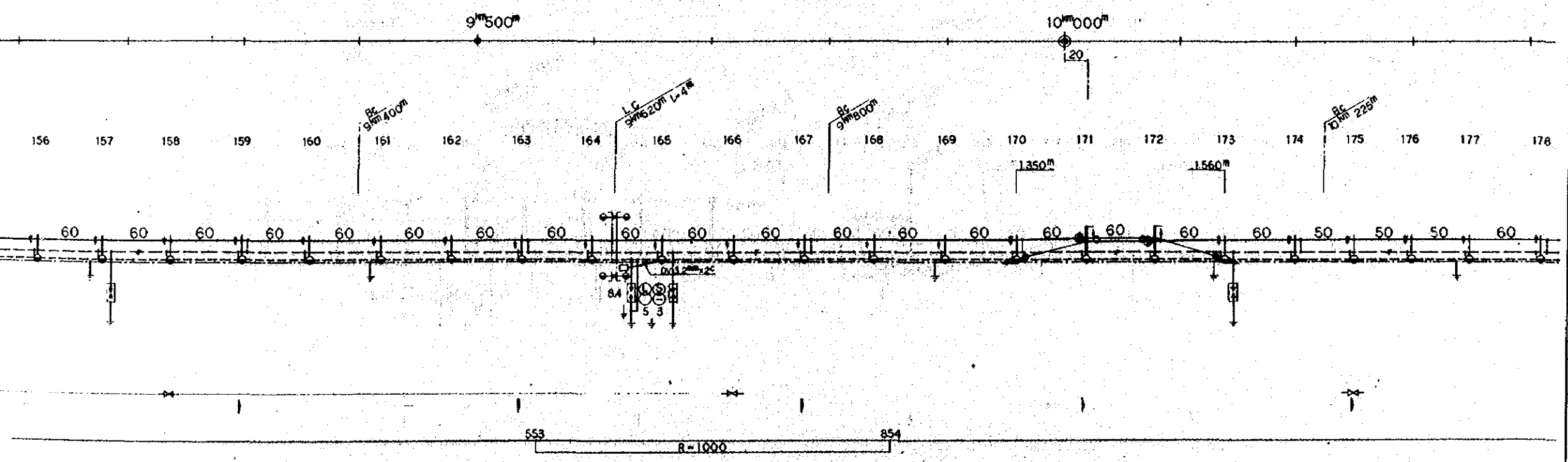
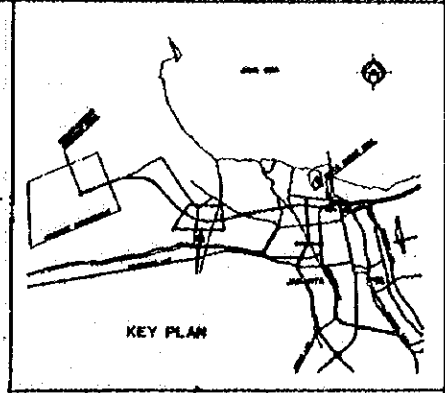
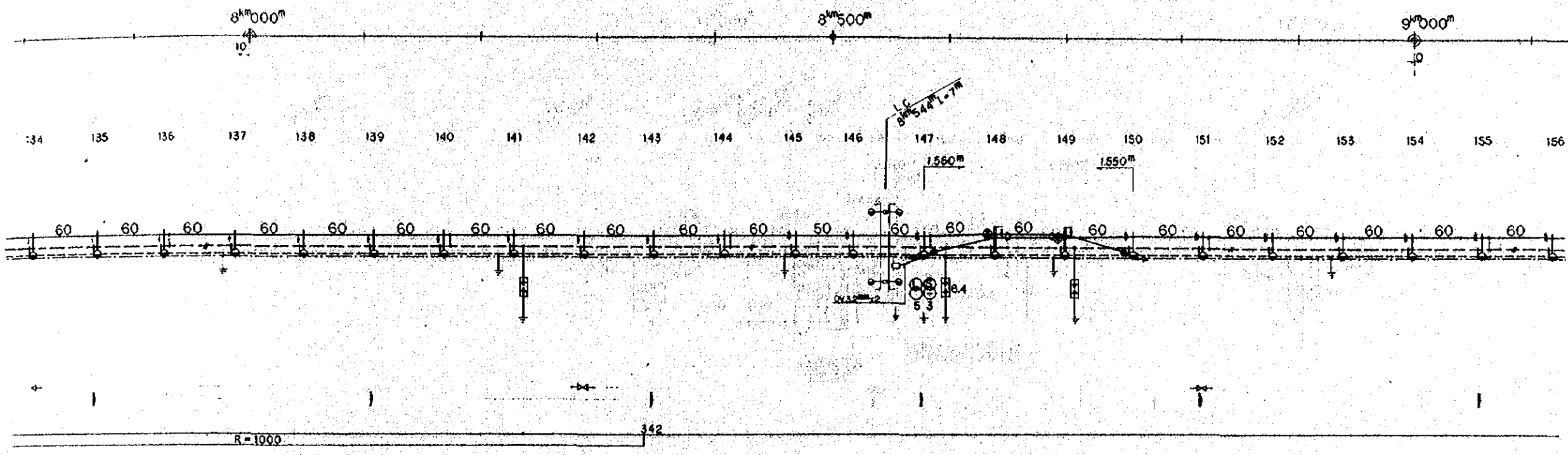
B	1 Aug. 82	S.H	S.H	K.H	K.M	K
A	15 Feb. 79	S.H	S.H	K.H	K.M	M.K

REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	APPROVED	SUBMITTED

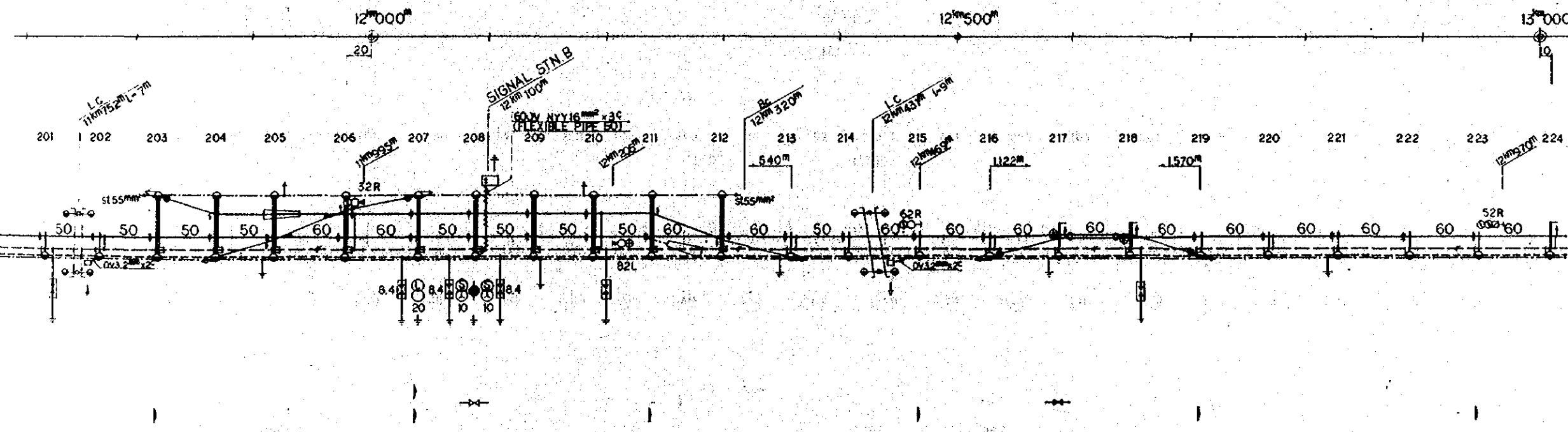
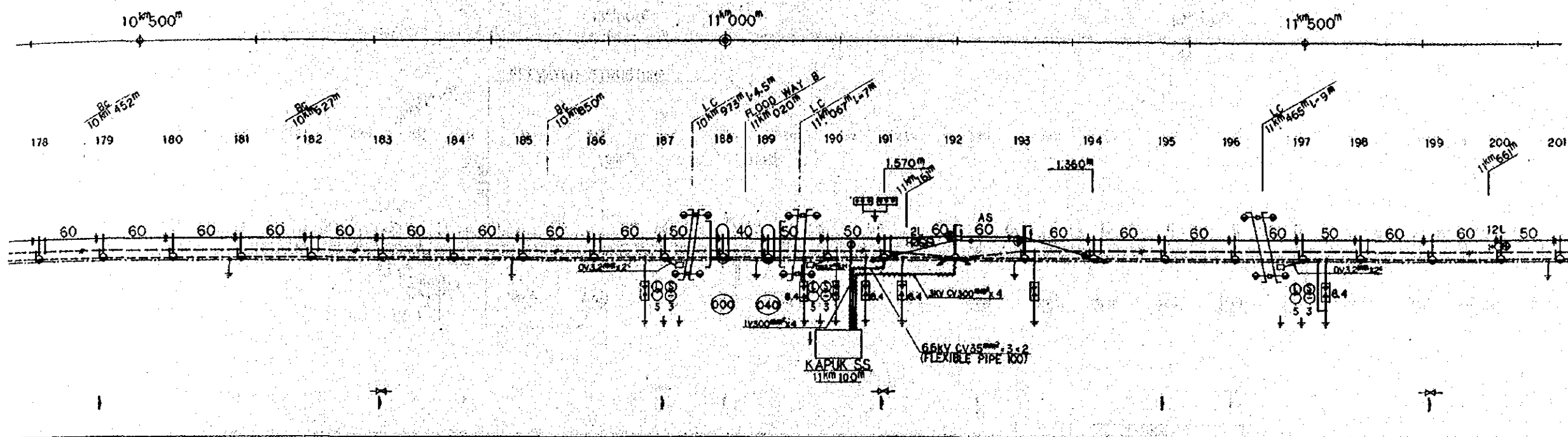
DIAGRAMMATIC PLAN OF
 TRACTION
 AND
 UTILITY POWER DISTRIBUTION LINES
 (SHEET 3 OF 8)

PACKAGE: ■ ELECTRICAL WORK

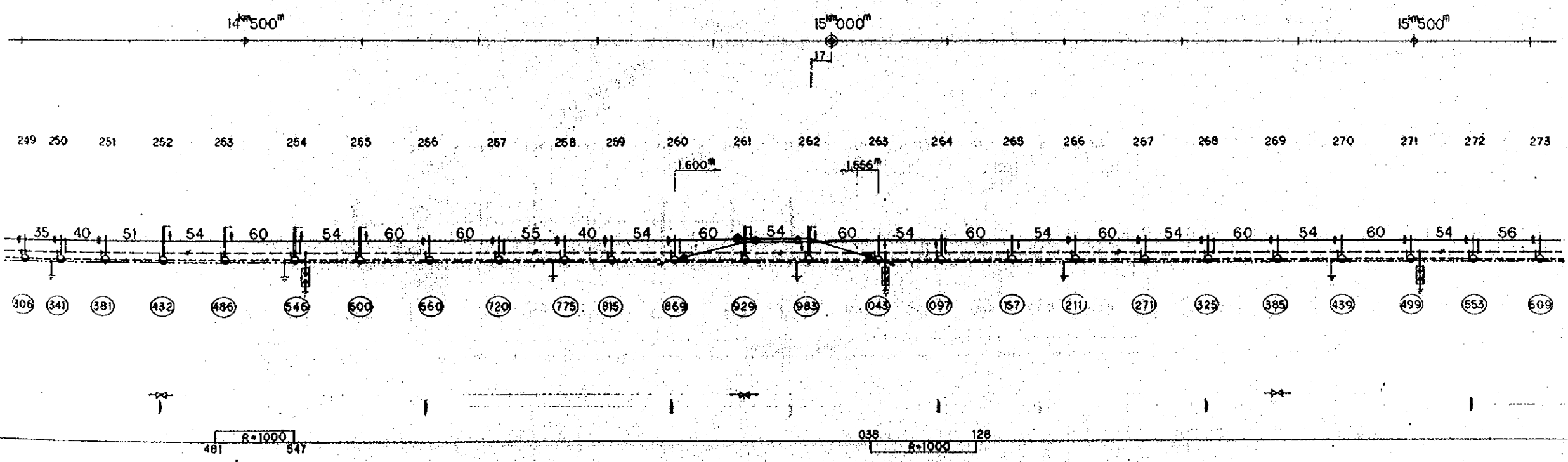
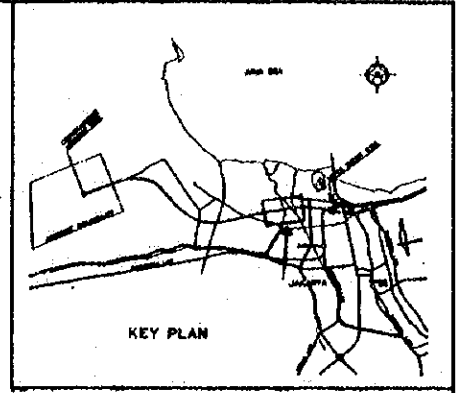
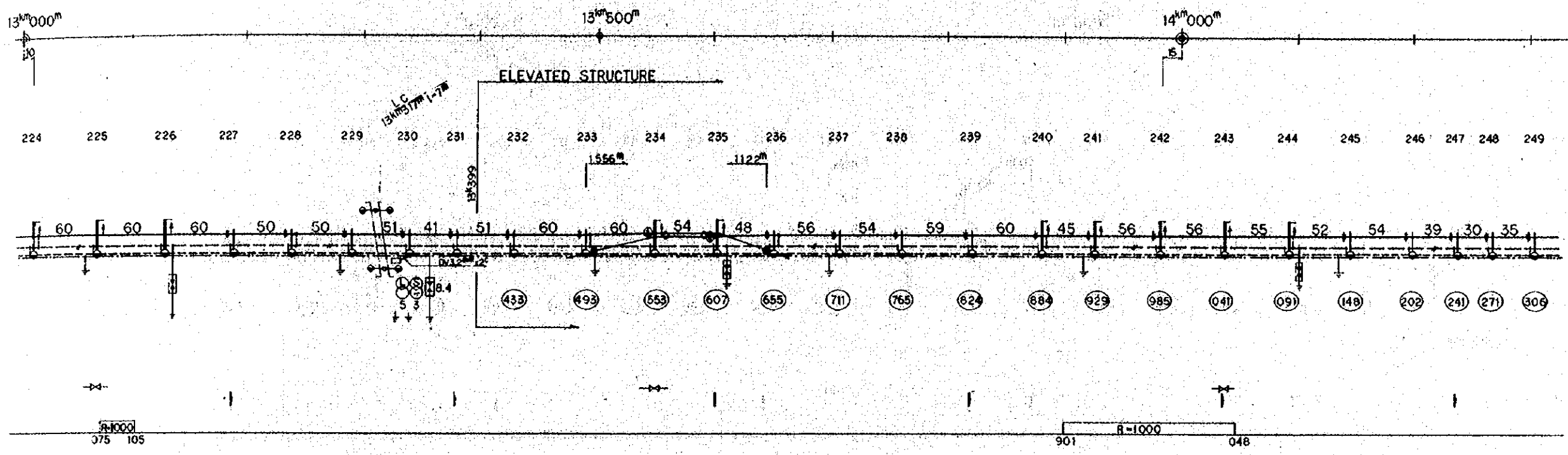
SCALE: NON SCALE DRAWING NO: EC-004



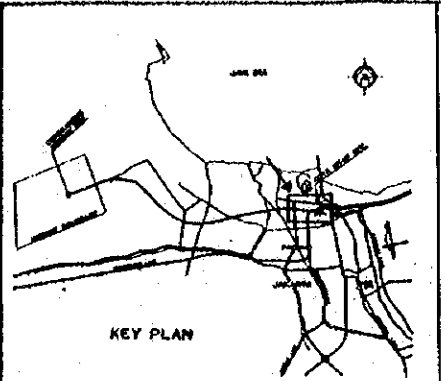
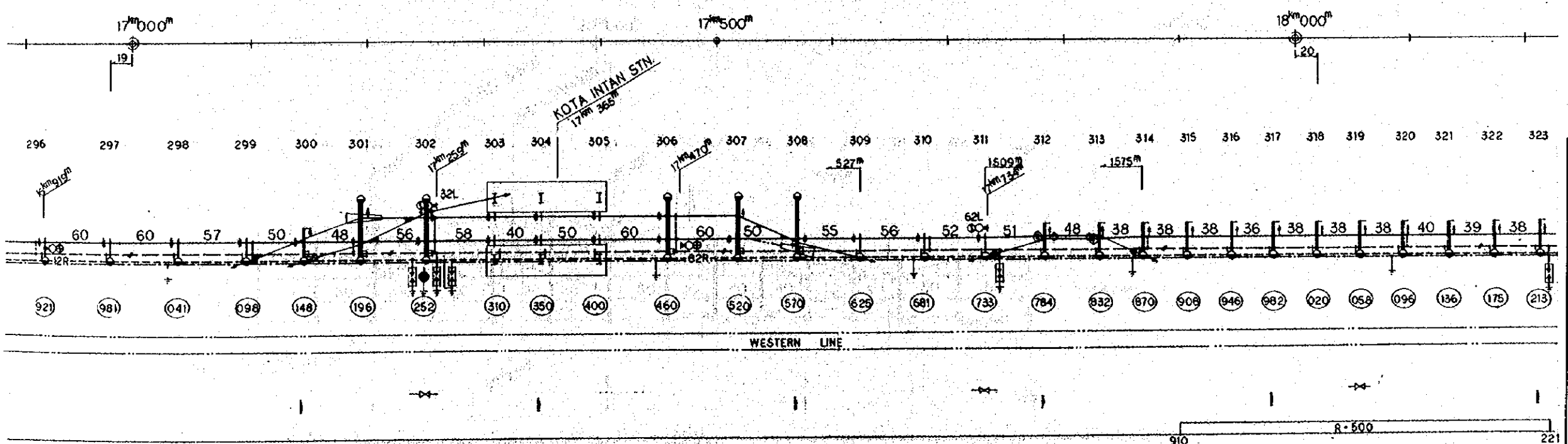
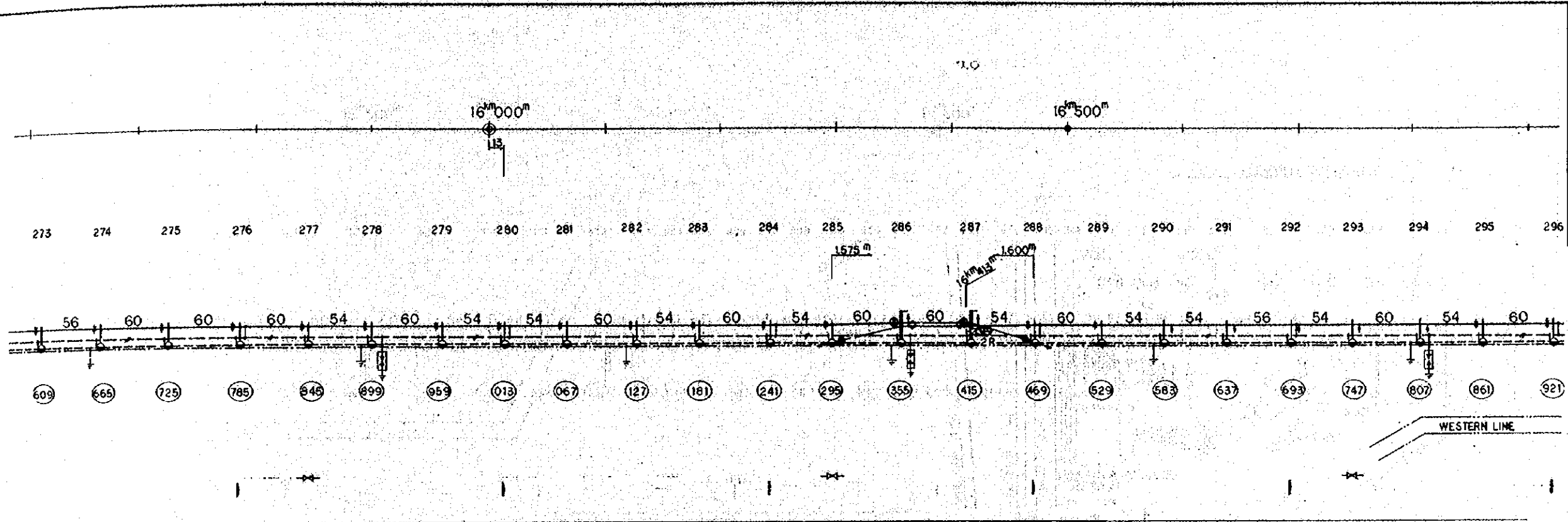
REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENKARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
B	1 Aug '94	S.H	S.H	K.M	K.M	r.k
A	18 Jul '94	S.H	S.H	K.M	K.M	r.k
REVISION	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	SUBMITTED
DIAGRAMMATIC PLAN OF TRACTION AND UTILITY POWER DISTRIBUTION LINES (SHEET 4 OF 8)						
PACKAGE: ELECTRICAL WORK						
SCALE		DRAWING NO.				
NON SCALE		EC - 005				



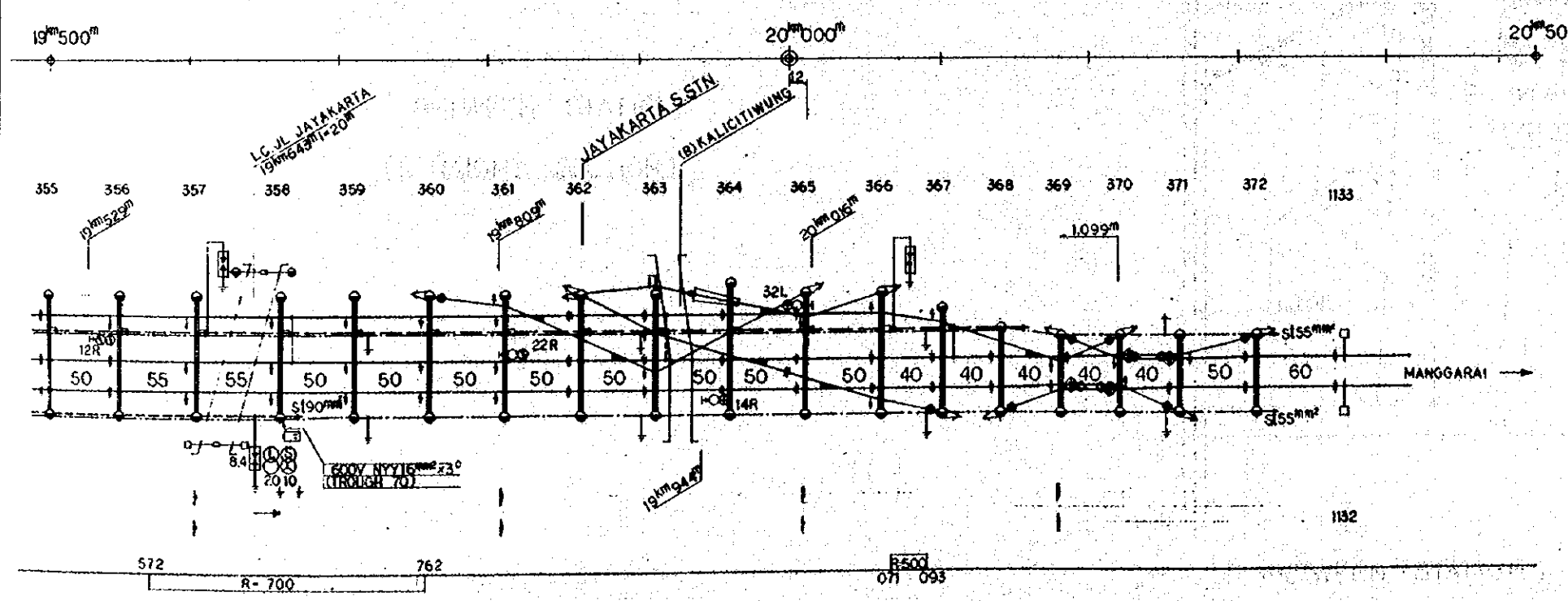
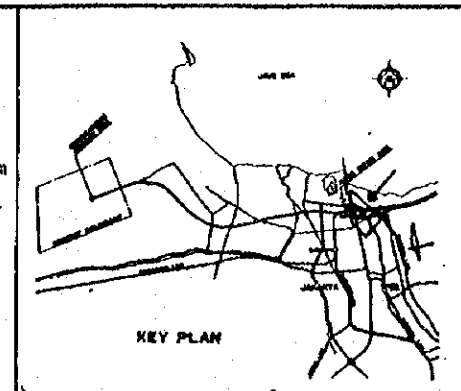
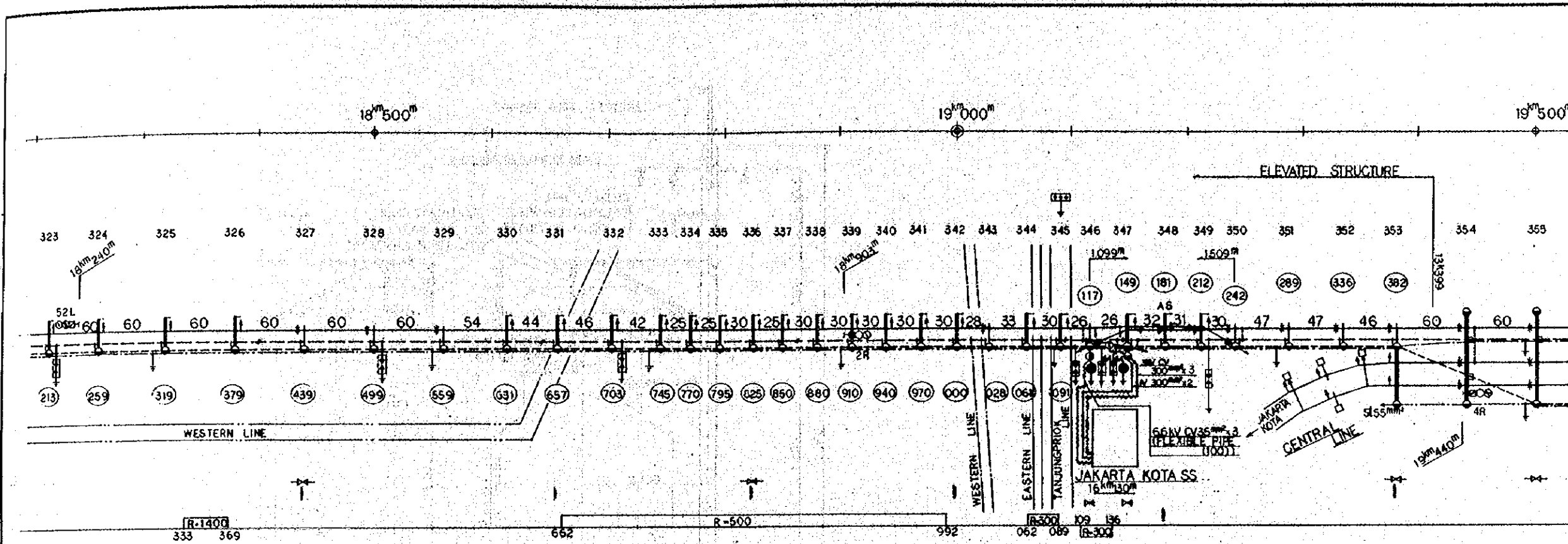
REPUBLIC OF INDONESIA						
MINISTRY OF COMMUNICATIONS						
DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
B	1 Aug 88	S.H	S.H	K.H	K.M	K.K
A	18 Feb 88	S.H	S.H	K.H	K.M	K.K
REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	SUBMITTED
DIAGRAMMATIC PLAN OF TRACTION AND UTILITY POWER DISTRIBUTION LINES (SHEET 5 OF 8)						
PACKAGE: ELECTRICAL WORK						
SCALE	DRAWING NO:					
NON SCALE	EC-006					



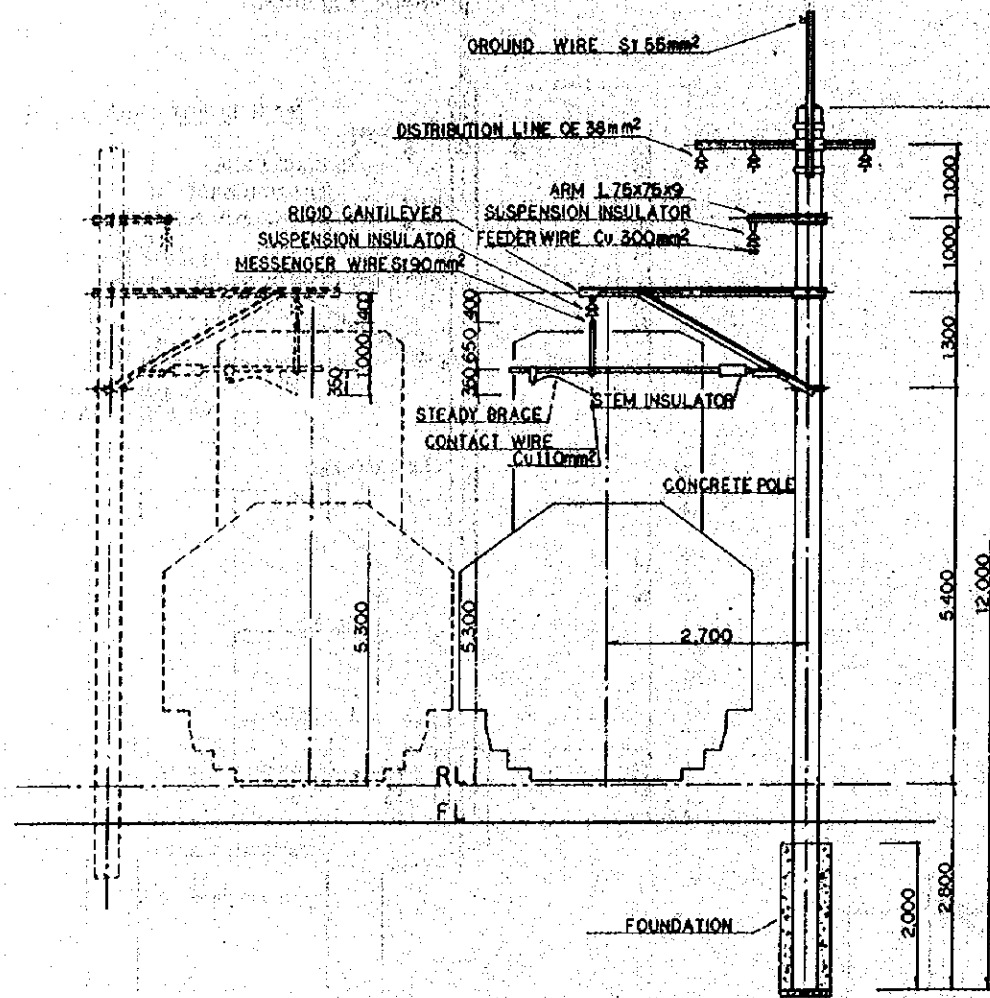
REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENKARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
B	1 Aug 89	S.H	S.H	R.K	K.M	M.K
A	15 Feb 89	S.H	S.H	R.K	K.M	M.K
REVISION	DATE	DESIGNED	CHECKED	APPROVED	REVIEWED	SUBMITTED
DIAGRAMMATIC PLAN OF TRACTION AND UTILITY POWER DISTRIBUTION LINES (SHEET 6 OF 8)						
DRAWING NO. III ELECTRICAL WORK						
SCALE NON SCALE		DRAWING NO. EC-007				



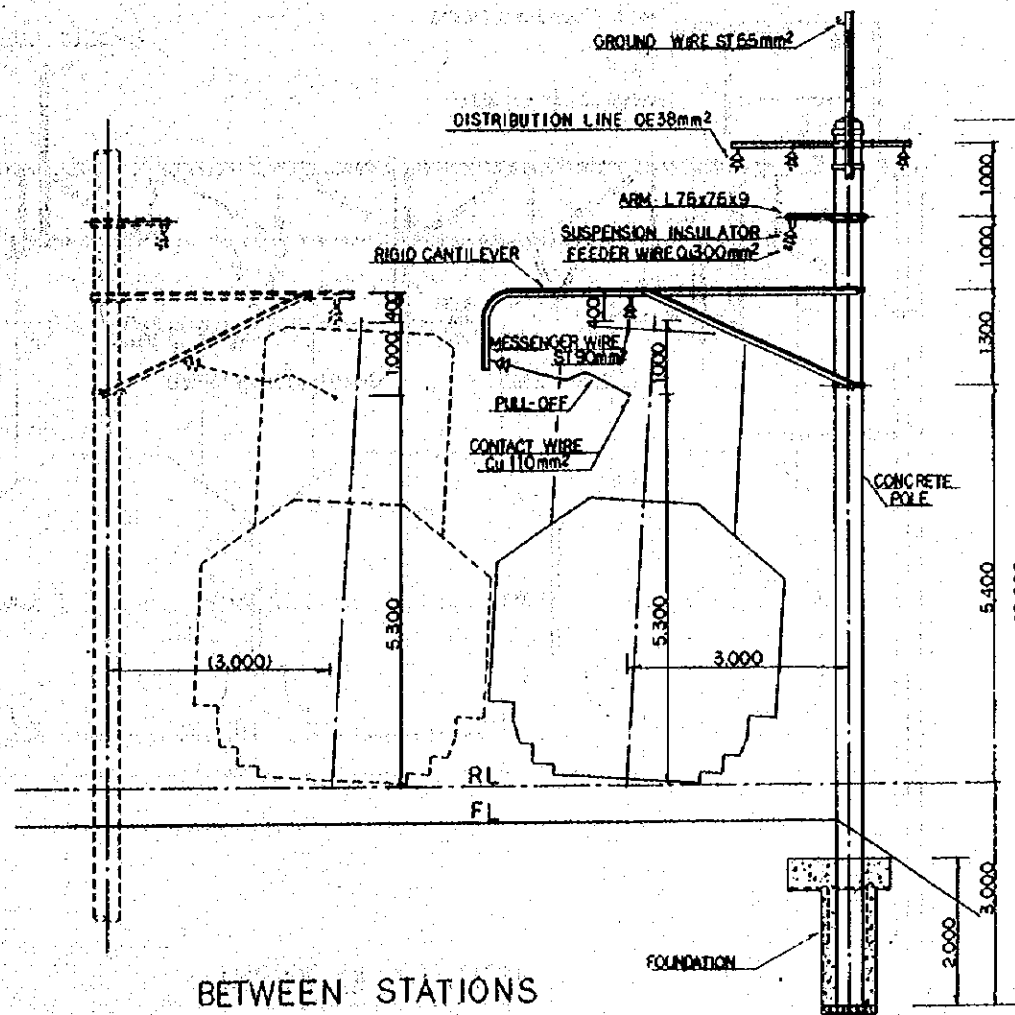
REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
B	1 Aug '88	S.H	S.H	K.H	K.H	K.K
A	15 Feb '88	S.H	S.H	K.H	K.H	K.K
REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	SUBMITTED
DIAGRAMMATIC PLAN OF TRACTION AND UTILITY POWER DISTRIBUTION LINES (SHEET 7 OF 8)						
PACKAGE: ELECTRICAL WORK						
SCALE		DRAWING NO.				
NON SCALE		EC - 008				



REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CEIKHARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
B	1 Aug 80	S.H	S.H	R.W	K.M	M.K
A	15 Feb 79	S.H	S.H	R.W	K.M	M.K
REVISION	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	APPROVED
DIAGRAMMATIC PLAN OF TRACTION AND UTILITY POWER DISTRIBUTION LINES (SHEET 8 OF 8)						
PROJECT: ■ ELECTRICAL WORK						
SCALE: DRAWING NO. EC-009						

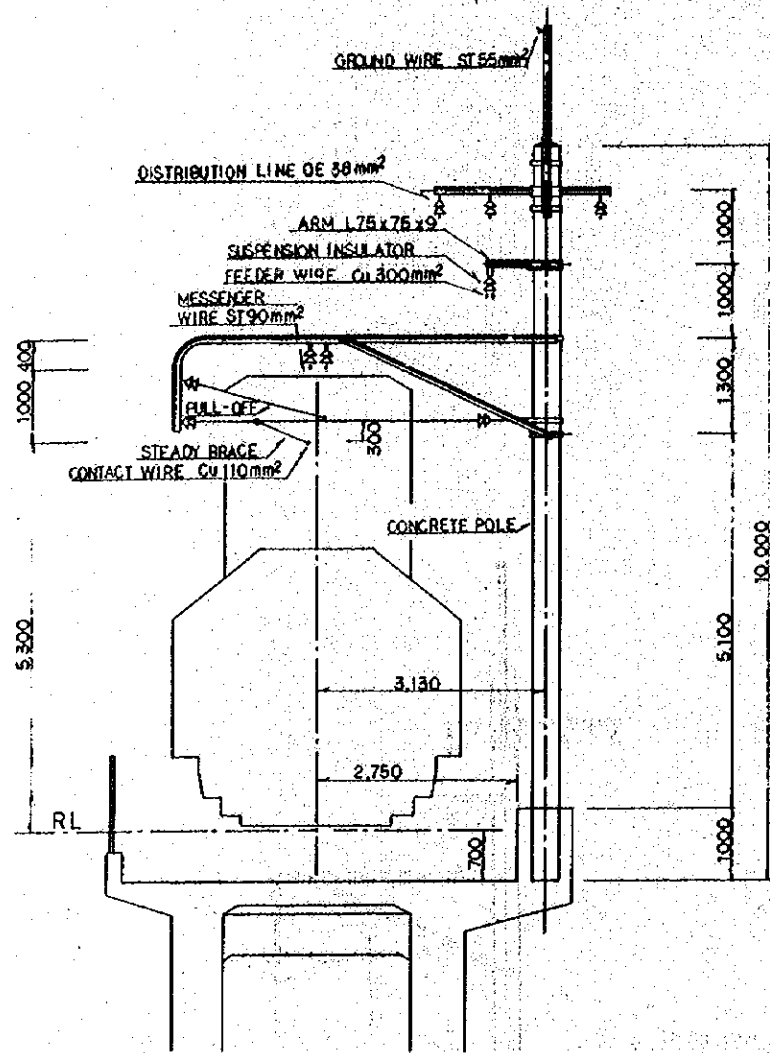


BETWEEN STATIONS
(STRAIGHT SECTION)

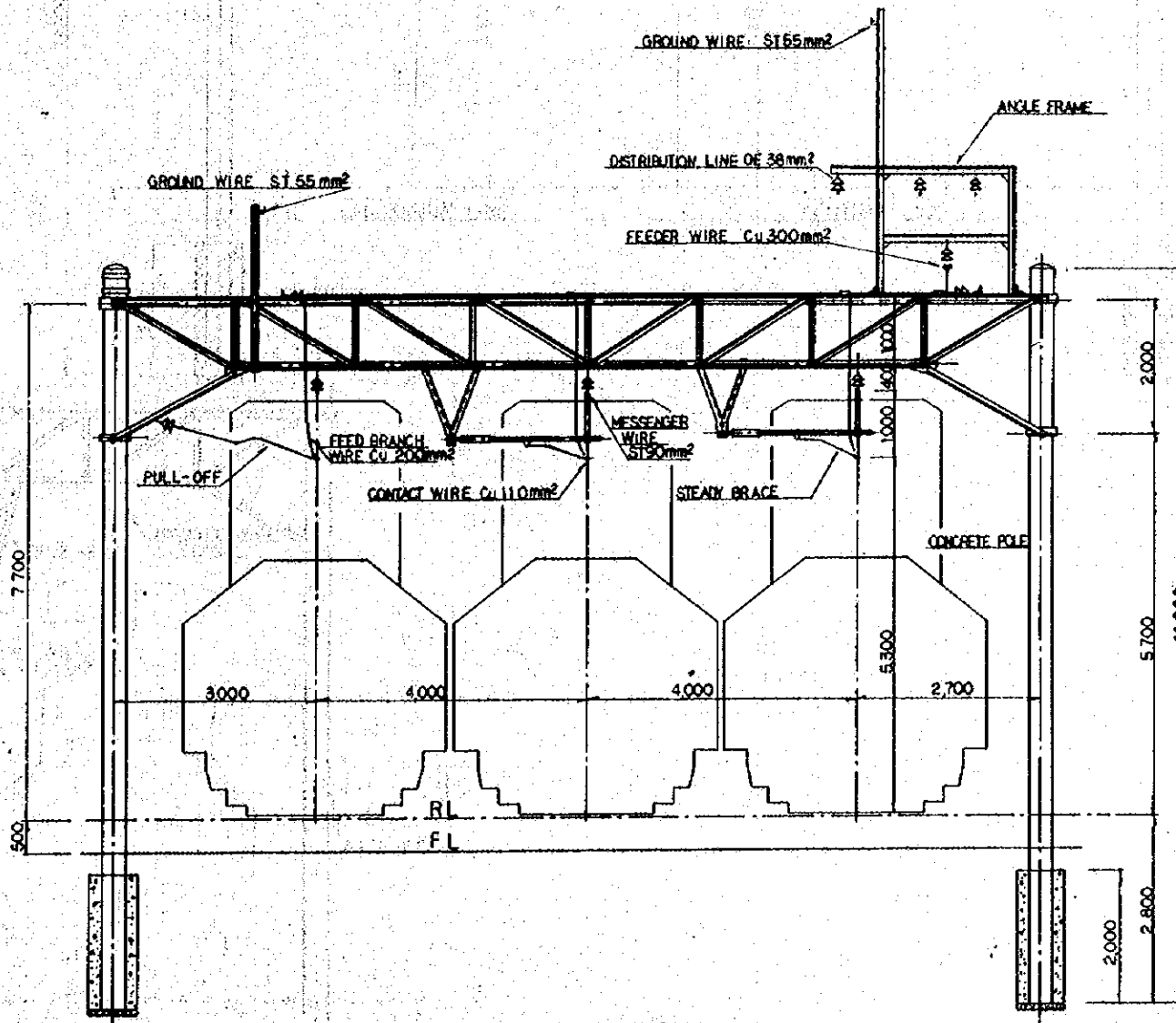


BETWEEN STATIONS
(CURVED SECTION)

REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENKARENS AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
B	1 Aug '84	S.H	S.H	K.H	K.M	A.K
A	15 Feb '84	S.H	S.H	K.H	K.M	A.K
REVISION	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	APPROVED
STANDARD SUPPORTING STRUCTURE (SHEET 1 OF 3)						
PACKAGE: II ELECTRICAL WORK						
SCALE	DRAWING NO.					
1:50	EC-010					

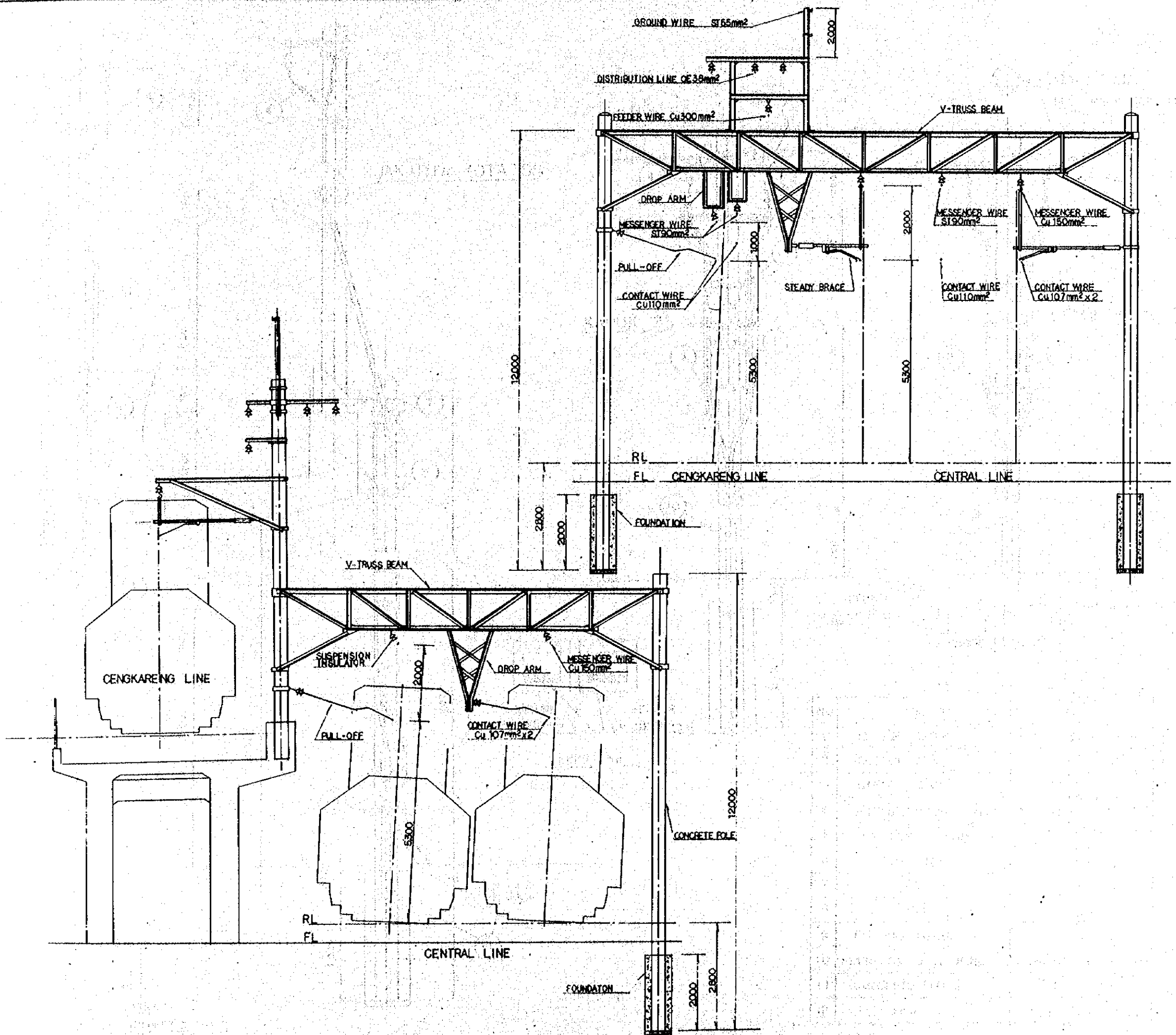


ELEVATED STRUCTURE

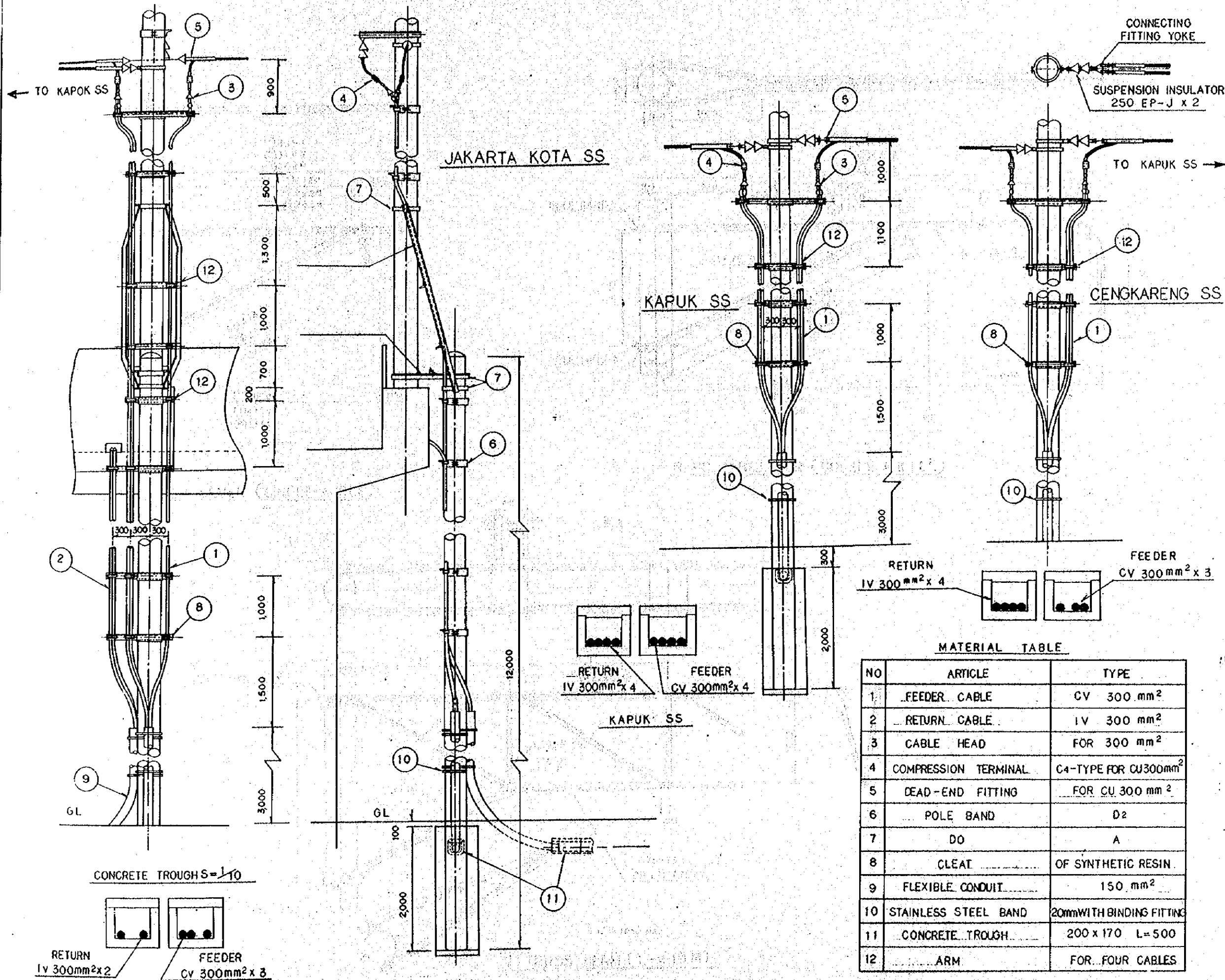


INSIDE OF STATION

REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENKARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
B	1. Aug. 98	SH	SH	GM	K.M	u.K
A	18 Feb. 98	SH	SH	K.U	K.M	u.K
REVISION	DATE	DESIGNED	CHECKED	APPROVED	EXTEND	SUBMITTED
STANDARD SUPPORTING STRUCTURE (SHEET 2 OF 3)						
PACKAGE: II ELECTRICAL WORK						
SCALE: 1:50		DRAWING NO: EC-011				



REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
B	1 Aug '80	S.H	S.H	K.H	K.M	M.K
A	15 Feb '80	S.H	S.H	K.H	K.M	M.K
REVISION	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	SUBMITTED
STANDARD SUPPORTING STRUCTURE (SHEET 3 OF 3)						
PACKAGE: II ELECTRICAL WORK						
SCALE: 1:50		DRAWING NO: EC-012				



MATERIAL TABLE

NO	ARTICLE	TYPE
1	FEEDER CABLE	CV 300 mm ²
2	RETURN CABLE	IV 300 mm ²
3	CABLE HEAD	FOR 300 mm ²
4	COMPRESSION TERMINAL	C4-TYPE FOR CU300mm ²
5	DEAD-END FITTING	FOR CU 300 mm ²
6	POLE BAND	D2
7	DO	A
8	CLEAT	OF SYNTHETIC RESIN
9	FLEXIBLE CONDUIT	150 mm ²
10	STAINLESS STEEL BAND	20mm WITH BINDING FITTING
11	CONCRETE TROUGH	200 x 170 L= 500
12	ARM	FOR FOUR CABLES

REPUBLIC OF INDONESIA
 MINISTRY OF COMMUNICATIONS
 DIRECTORATE GENERAL OF LAND TRANSPORT
 AND INLAND WATERWAYS

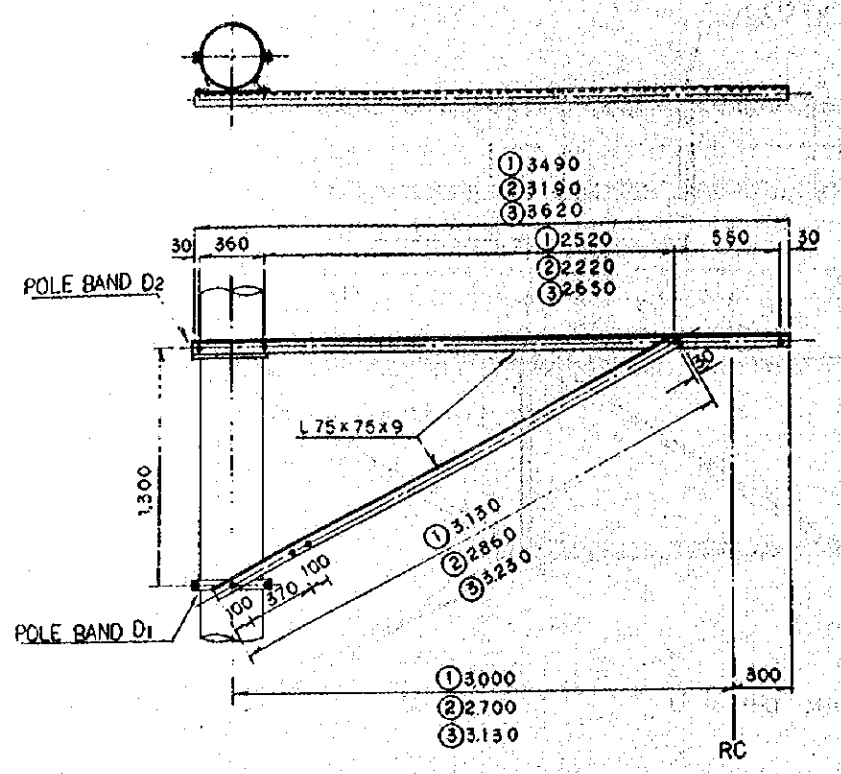
NEW RAILWAY LINE FOR CENKARENG AIRPORT
 CONSTRUCTION PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY
 (JICA)

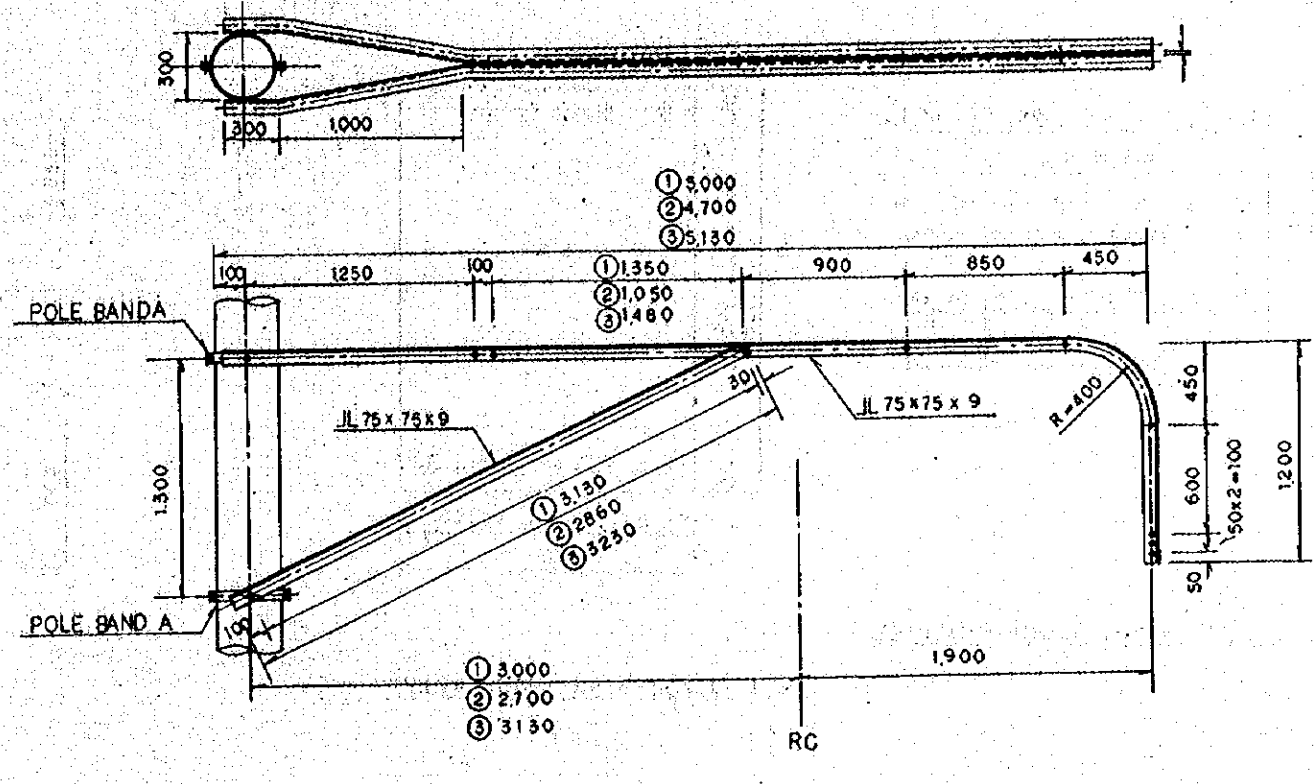
B	1 Aug 84	S.H	S.H	K.K	U.V	M.K
A	15 Feb 84	S.H	S.H	K.K	U.V	M.K
REVISION	DATE	DESIGNED	CHECKED	APPROVED	REVISION	REVISION

STANDARD DRAW-OUT
 ASSEMBLIES AT SUBSTATION

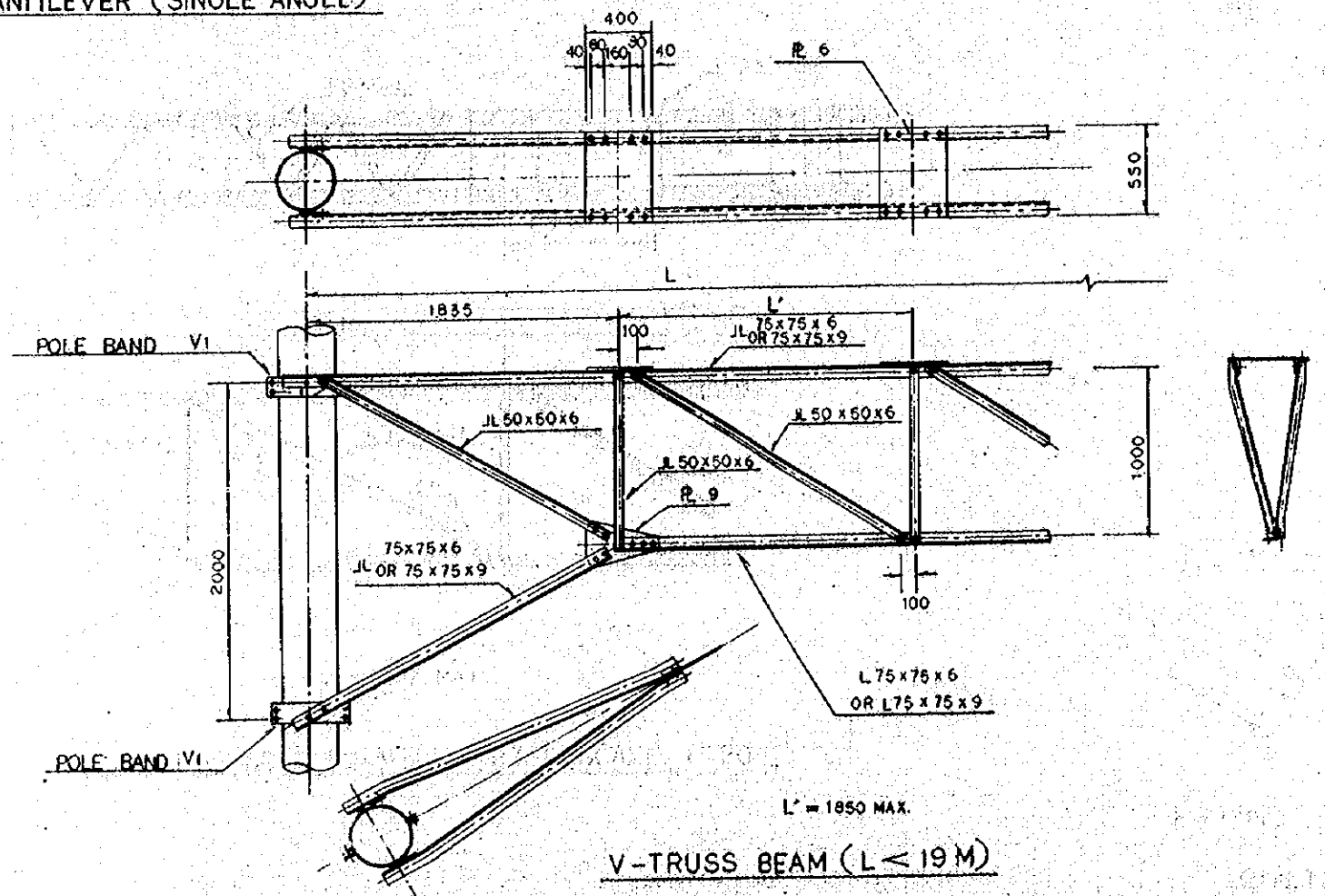
PROJECT: III ELECTRICAL WORK
 SCALE: 1:30 DRAWING NO: EC-013



RIGID CANTILEVER (SINGLE ANGLE)



RIGID CANTILEVER (DOUBLE ANGLES)



V-TRUSS BEAM (L < 19 M)

- NOTES:
- EACH DIMENSION OF RIGID CANTILEVER IS ADOPTED FOR THE FOLLOWING CONDITION:
 - ① CURVED SECTION
 - ② STRAIGHT SECTION
 - ③ ELEVATED SECTION
 - SIZE OF MAIN BAR FOR V-TRUSS BEAM IS GIVEN BY LENGTH OF "L" AS FOLLOWS:
 - 15m OR LESS: L75x75x6
 - MORE THAN 15m: L75x75x9

REPUBLIC OF INDONESIA
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 DIRECTORATE GENERAL OF LAND TRANSPORT
 AND INLAND WATERWAYS

NEW RAILWAY LINE FOR CENDEKARANG AIRPORT
 CONSTRUCTION PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY
 (JICA)

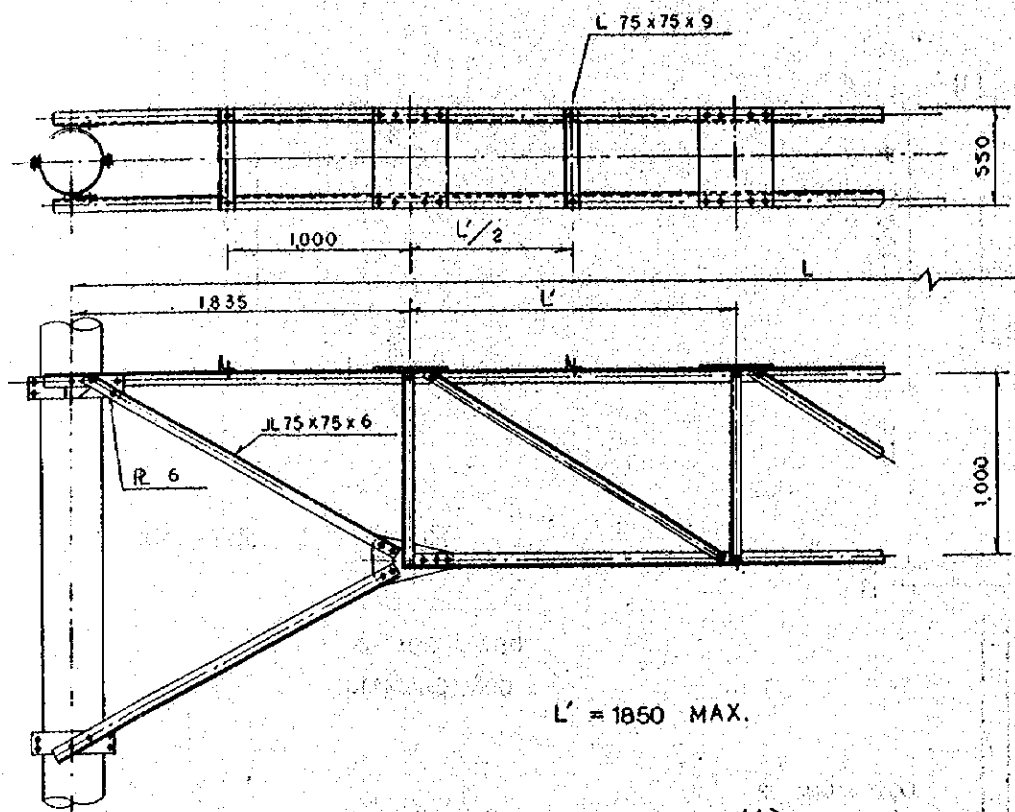
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A	13 Feb. 84	S.H.	S.H.	K.U.	K.M.	M.K.

REVISIONS DATE DESIGNED CHECKED APPROVED AUTHORIZED

DETAILS OF RIGID
 CANTILEVER ARM
 V-TRUSS BEAM (1)

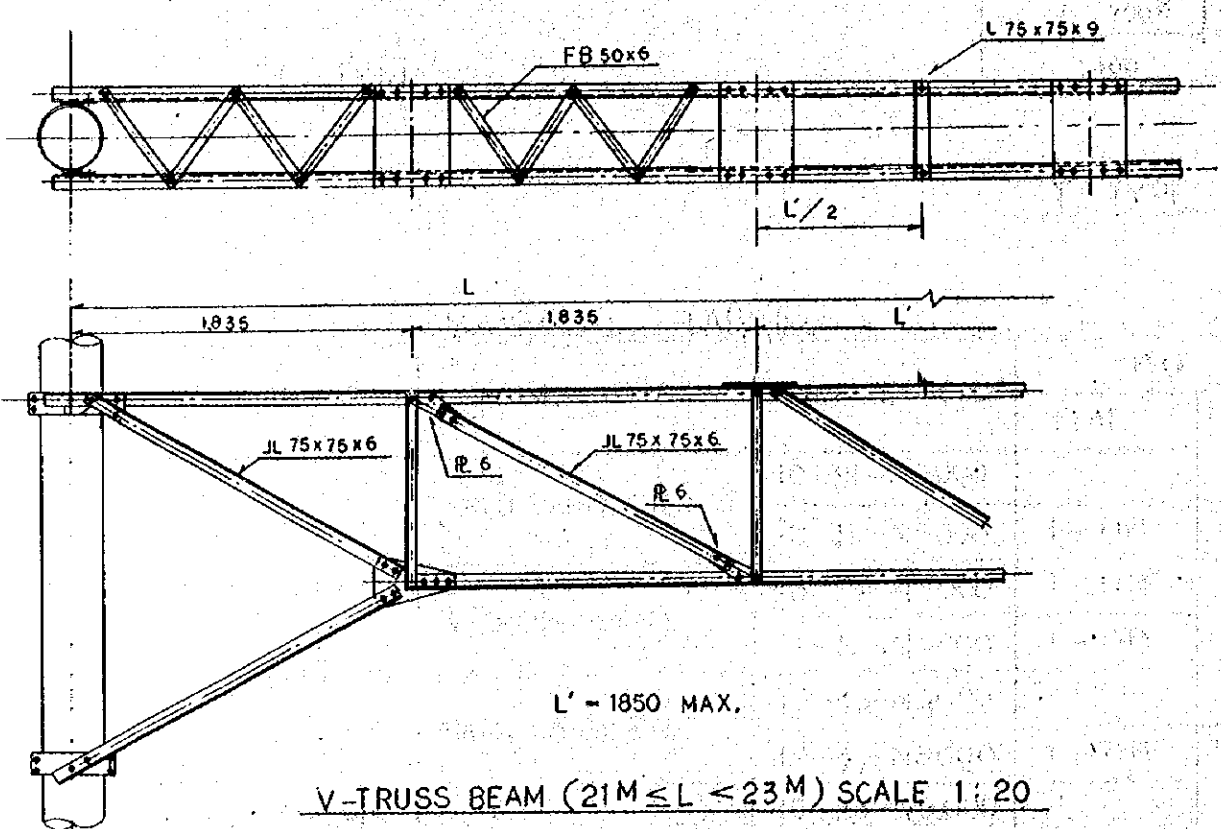
PACKAGE: II ELECTRICAL WORK

SCALE: 1:20 DRAWING NO: EC-014



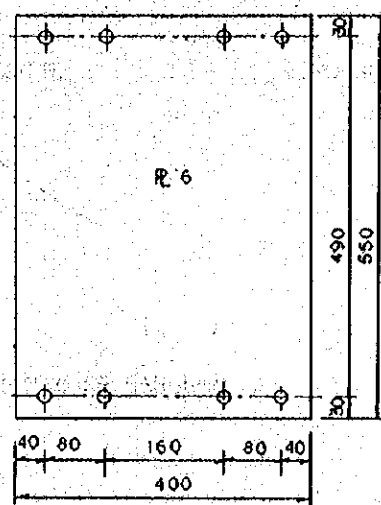
V-TRUSS BEAM (19M ≤ L < 21M) SCALE 1:20

L' = 1850 MAX.

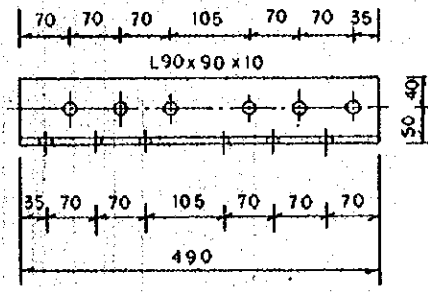


V-TRUSS BEAM (21M ≤ L < 23M) SCALE 1:20

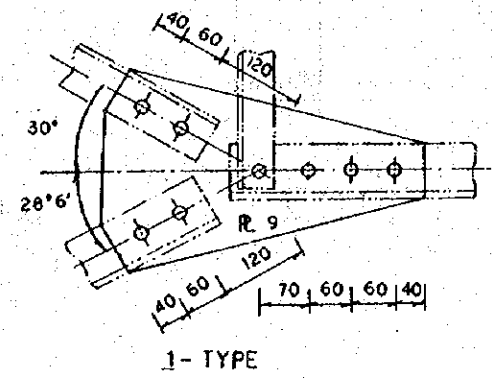
L' = 1850 MAX.



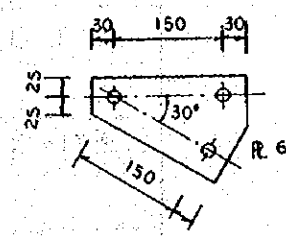
TRUSS BEAM PLATE SCALE 1:5



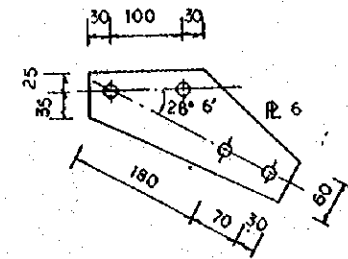
JOINTING ANGLE SCALE 1:5



1-TYPE



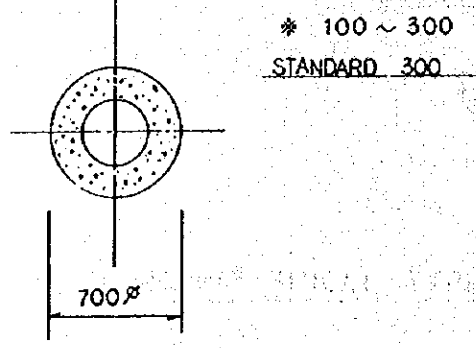
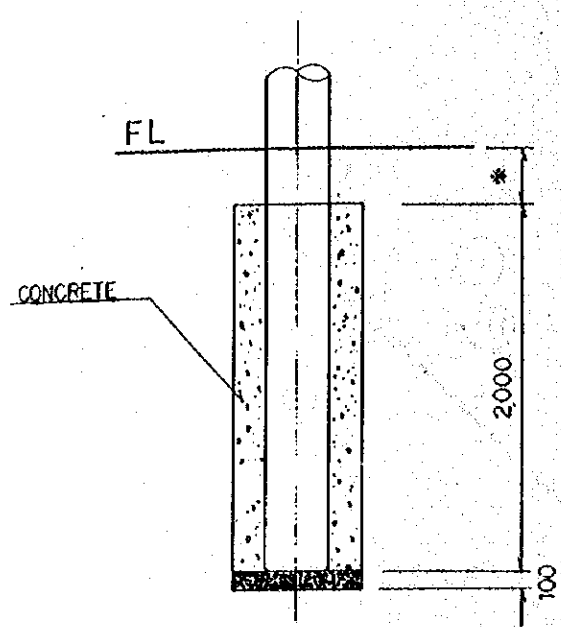
2-TYPE



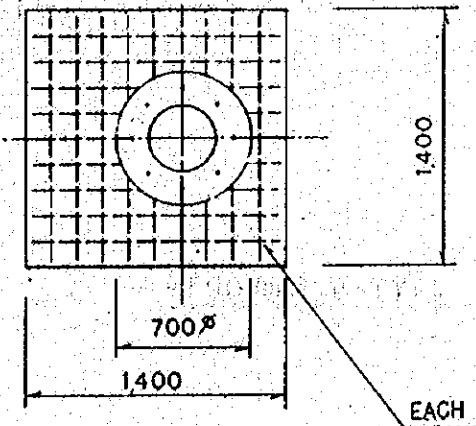
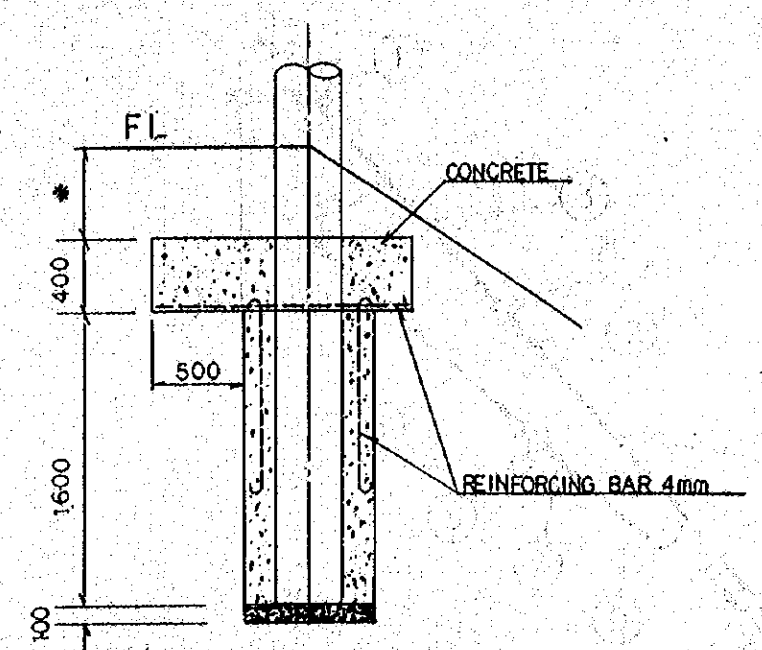
3-TYPE

GUSSET PLATES SCALE 1:5

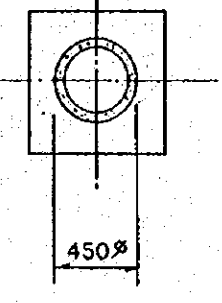
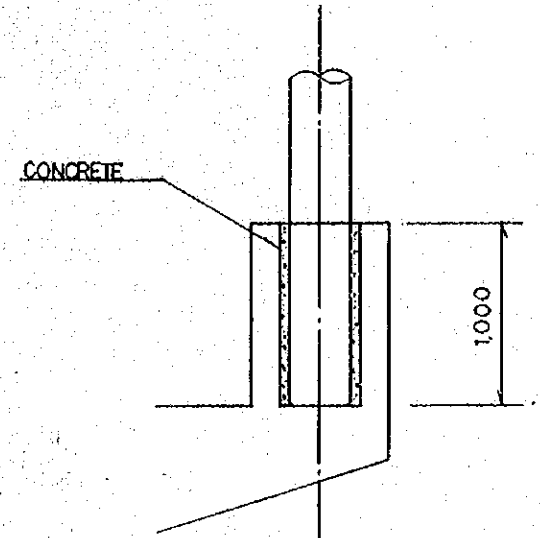
REPUBLIC OF INDONESIA						
MINISTRY OF COMMUNICATIONS						
DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENKARENB AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
B	1 Aug. '84	S.H	S.H	F.H	U.M.	U.K.
A	15 Jul. '84	S.H	S.H	K.H	K.M.	U.K.
REVISION	DATE	DESIGNED	CHECKED	APPROVED	REVIEWED	SUBMITTED
DETAILS OF V-TRUSS BEAM (2)						
ELECTRICAL WORK						
SCALE	DRAWING NO.					
AS NOTED	EC-015					



I - TYPE



T - TYPE



E - TYPE

NOTE:
CONCRETE CLASS SHALL BE CLASS F

EACH JOINT SHALL BE
BONDED OR WELDED

MATERIAL TABLE

SECTION	BEAM TYPE	CONCRETE POLE	POLE FOUNDATION		
			FLAT	EMBANKMENT BANK	ELEVATED STRUCTURE
INSIDE OF STATION	RIGID CANTILEVER	10-35-N5000			E - TYPE
		12-35-N5000	I - TYPE	T - TYPE	
	V-TRUSS BEAM	10-35-N5000	I - TYPE		E - TYPE
		11-35-N5000	I - TYPE		
BETWEEN STATIONS	RIGID CANTILEVER	10-35-N5000			E - TYPE
		12-35-N5000	I - TYPE	T - TYPE	
	V-TRUSS BEAM	10-35-N5000			E - TYPE
		11-35-N5000	I - TYPE		
		12-35-N5000	I - TYPE		
			I - TYPE		

REPUBLIC OF INDONESIA
MINISTRY OF COMMUNICATIONS
DIRECTORATE GENERAL OF LAND TRANSPORT
AND INLAND WATERWAYS

NEW RAILWAY LINE FOR CENKARENG AIRPORT
CONSTRUCTION PROJECT

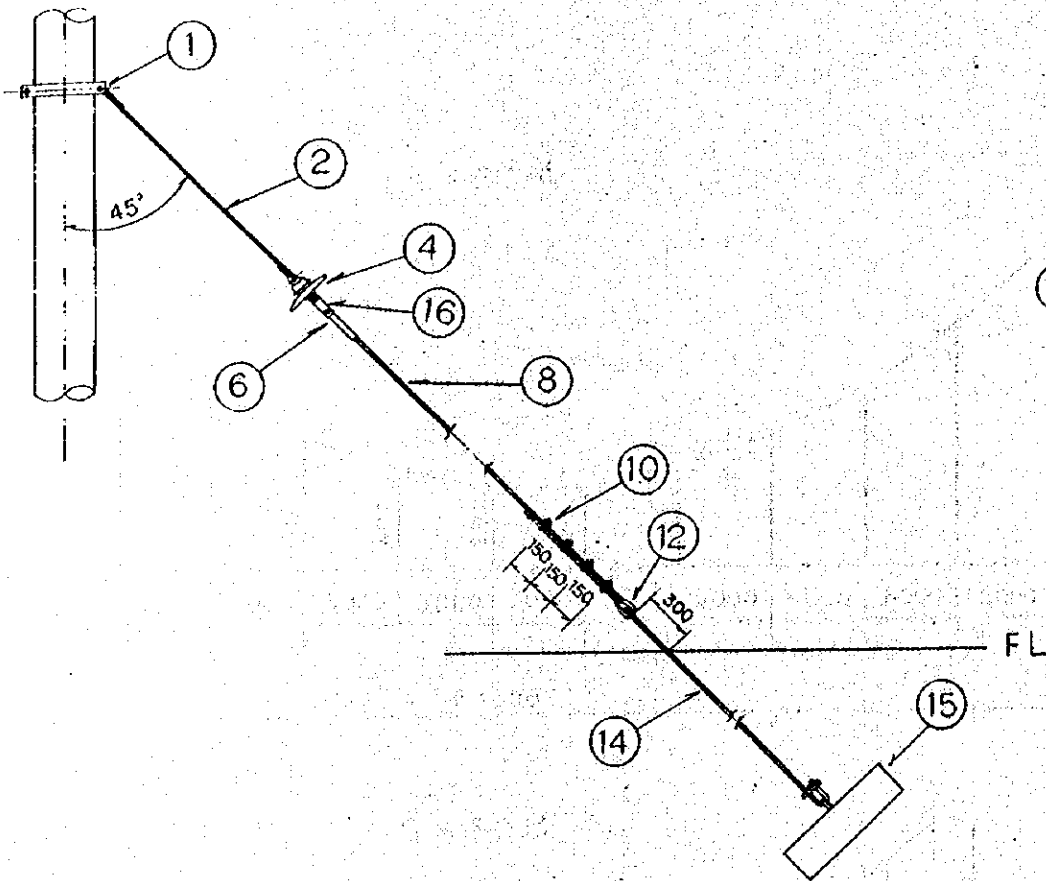
JAPAN INTERNATIONAL COOPERATION AGENCY
(JICA)

B	1 Aug '84	S.H	S.H	K.K	U.M	U.K
A	15 Feb '84	S.H	S.H	K.K	U.M	U.K
REVISION	DATE	DESIGNED	CHECKED	APPROVED	REVIEWED	SUBMITTED

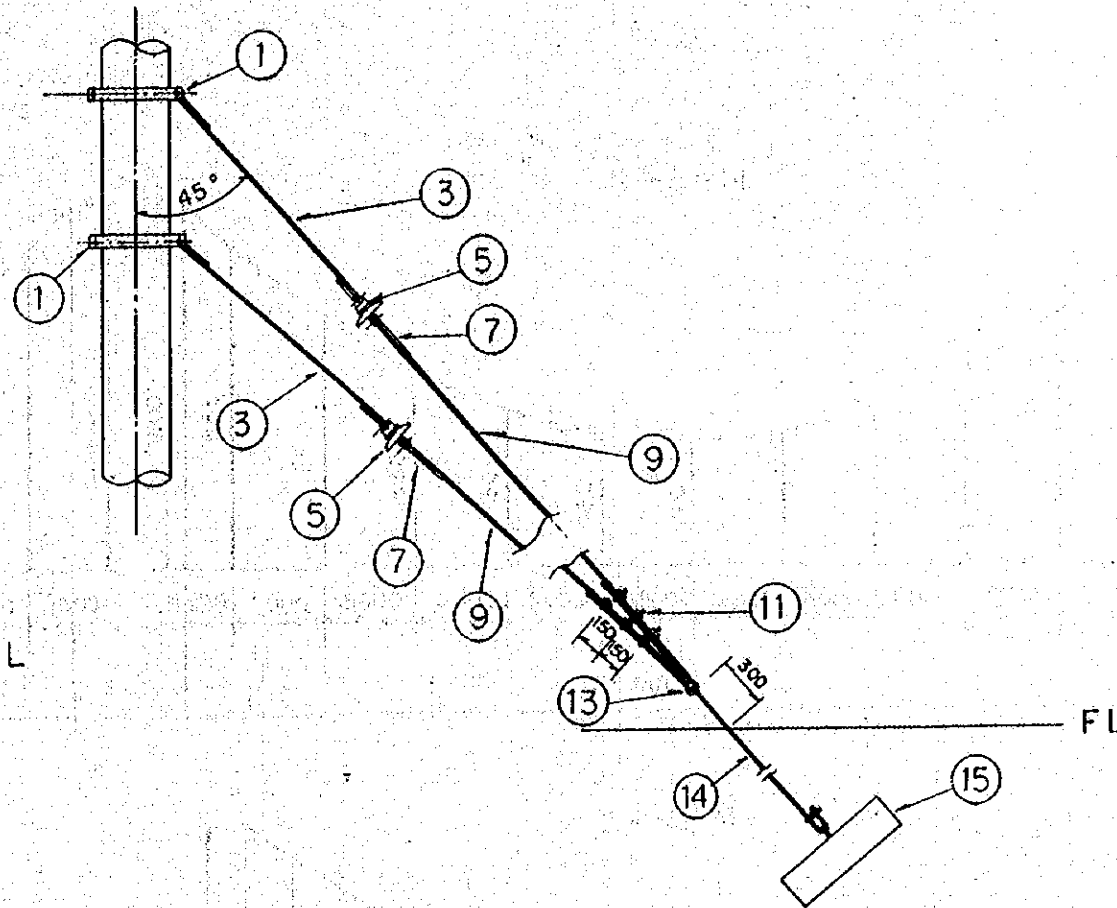
DETAILS OF CONCRETE
POLE FOUNDATION

PACKAGE: II ELECTRICAL WORK

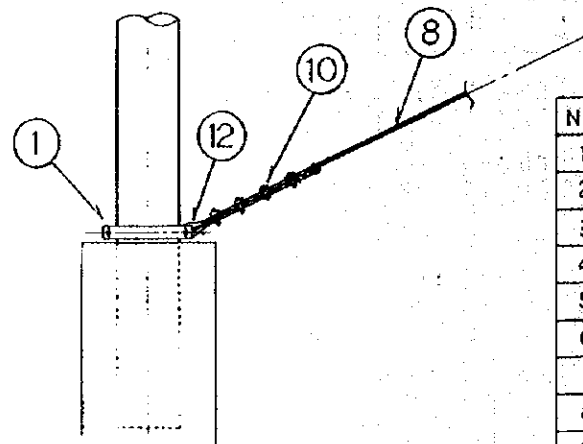
SCALE: 1:20 DRAWING NO: EC-016



ST 135 mm² SINGLE TYPE SCALE 1:20



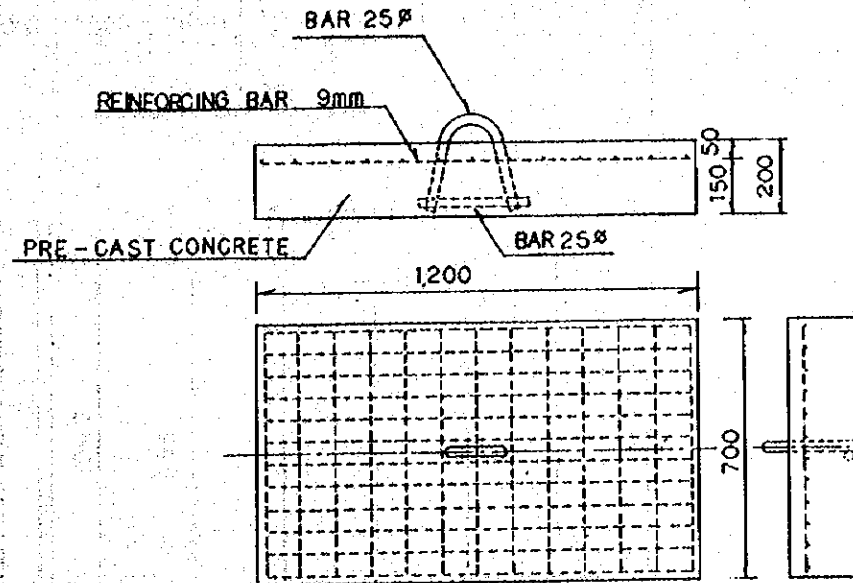
ST 90 mm² V-TYPE SCALE 1:20



ELEVATED STRUCTURE SCALE 1:20

MATERIAL TABLE

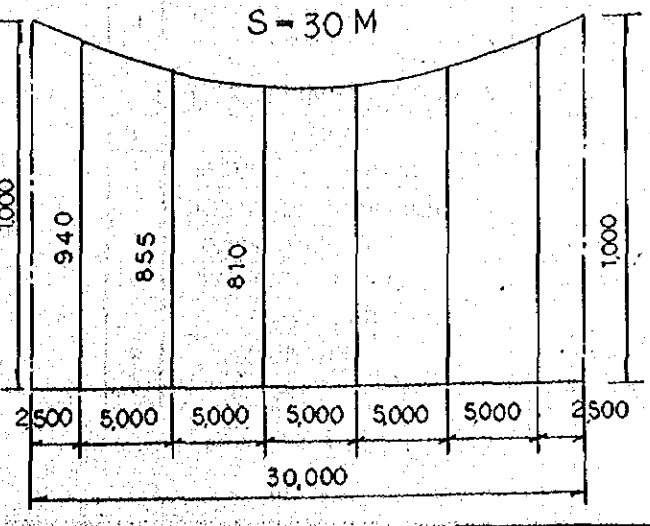
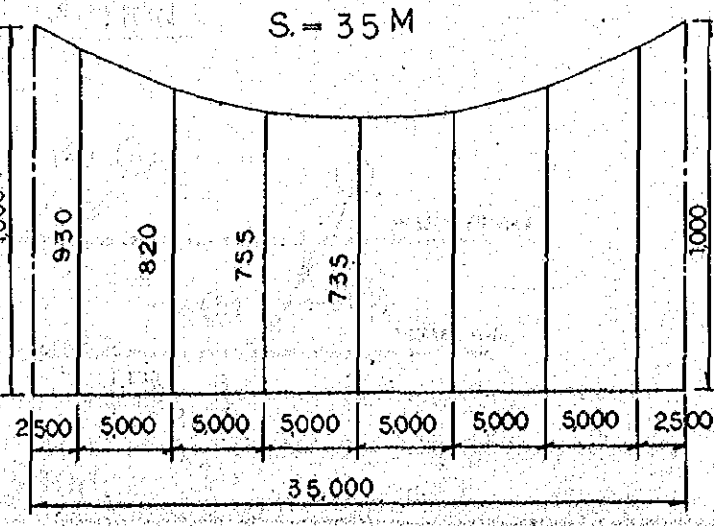
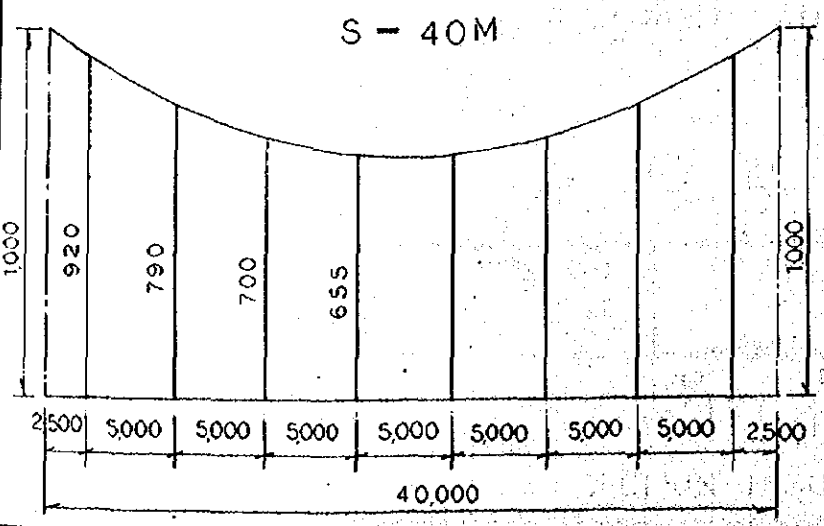
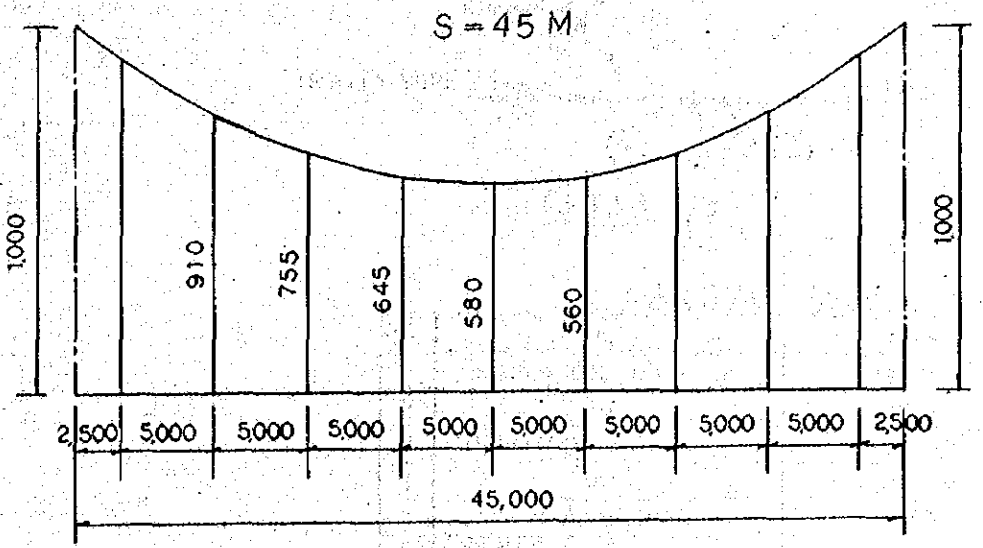
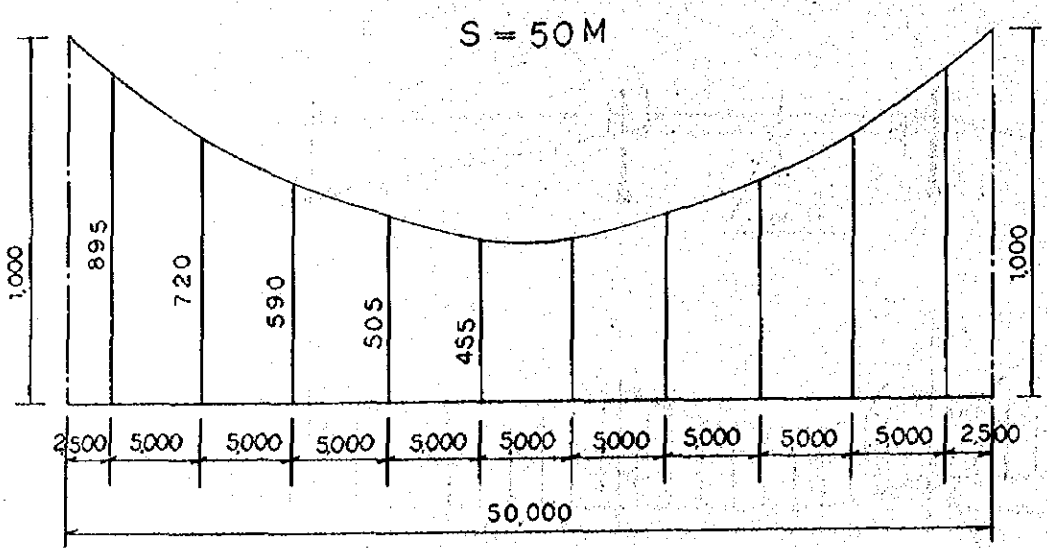
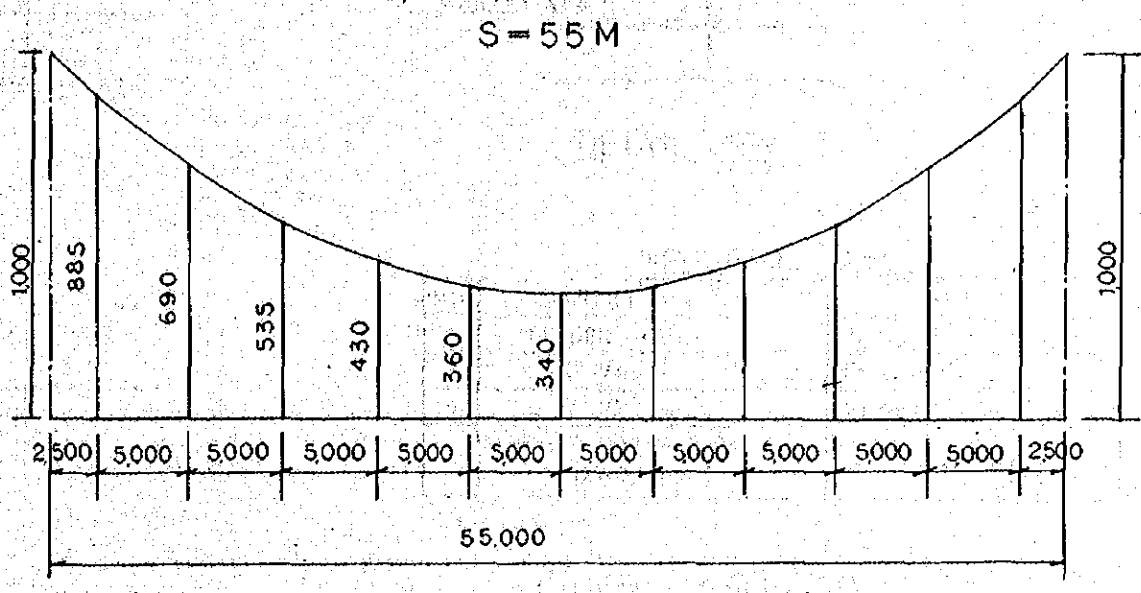
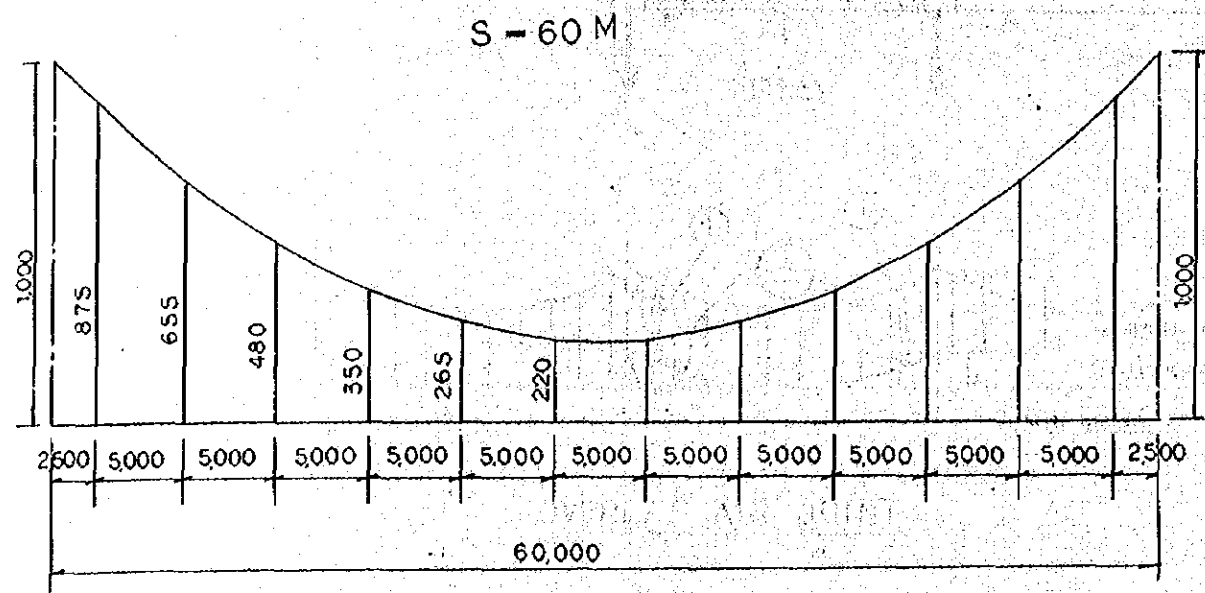
No	ARTICLE	TYPE
1	POLE BAND	B 2
2	CONNECTING ROD	19 [#] x 1500
3	DO	16 [#] x 1500
4	SUSPENSION INSULATOR	250 EP-J
5	DO	180 C
6	COMPRESSION DEAD-END FITTING	FOR 135 mm ²
7	DO	FOR 90 mm ²
8	GALVANIZED STEEL WIRE STRANDS	135 mm ²
9	DO	90 mm ²
10	WIRE CLIP	FOR 135 mm ² x 2
11	DO	FOR 90 mm ² x 2
12	GUY THIMBLE	FOR 135 mm ² x 1
13	DO	FOR 90 mm ² x 2
14	GUY ROD	25 [#] x 3000
15	GUY ANCHOR	CONCRETE TYPE
16	CONNECTING FITTING	H TYPE



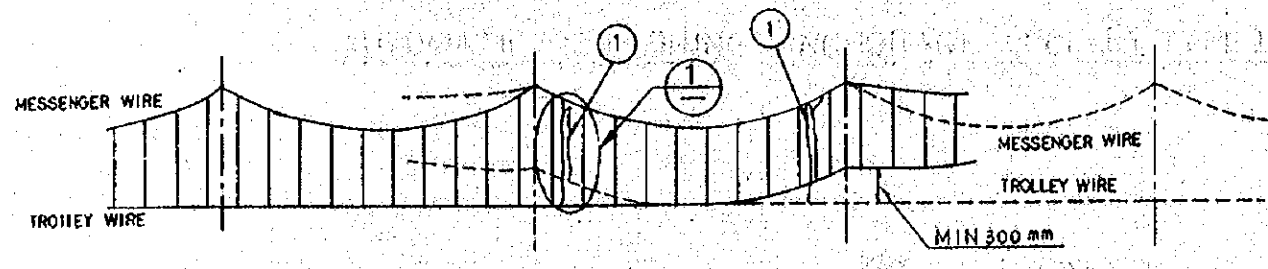
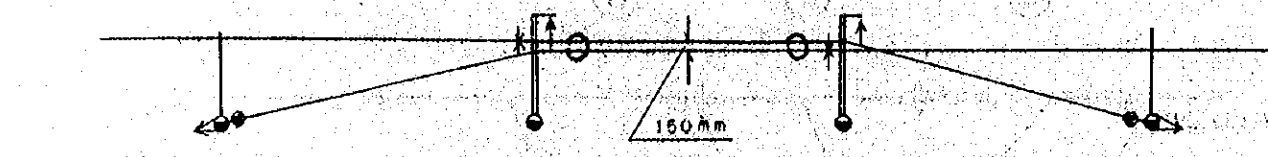
GUY ANCHOR SCALE 1:10

REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENKARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
B	1 Aug '84	S.H	S.H	K.H	K.M	M.K
A	15 Feb '84	S.H	S.H	K.H	K.M	M.K
REVISION	DATE	DESIGNED	CHECKED	APPROVED	REVIEWED	SUBMITTED
DETAILS OF GUY						
PACKAGE: II ELECTRICAL WORK						
SCALE AS NOTED		DRAWING NO. EC-017				

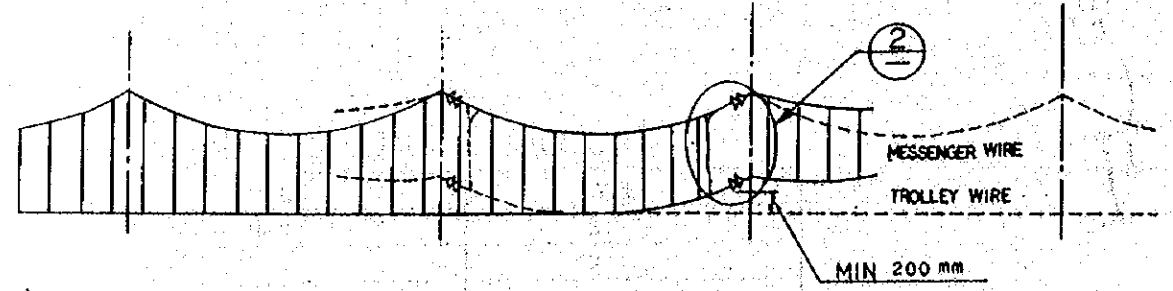
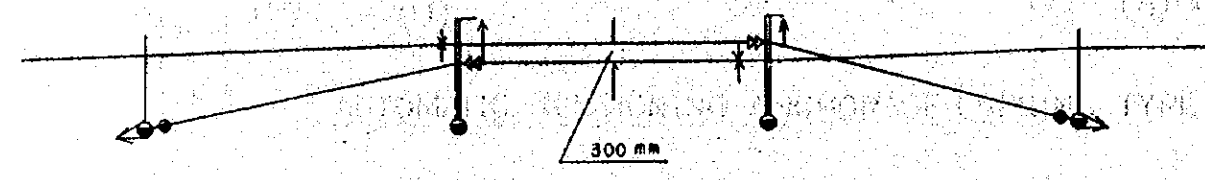
ABBREVIATION:
 S: SPAN
 (H): HORIZONTAL
 (V): VERTICAL



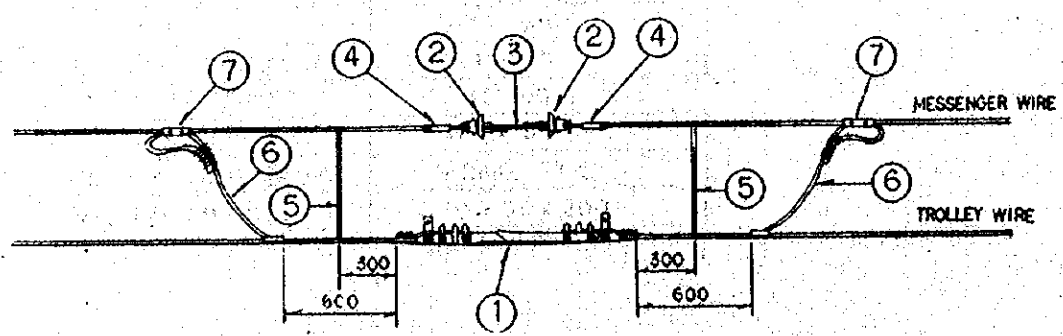
REPUBLIC OF INDONESIA						
MINISTRY OF COMMUNICATIONS						
DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENDOKRENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
B	1 Aug '86	S.H.	S.H.	A.H.	K.M.	M.K.
A	15 Feb '86	S.H.	S.H.	K.U.	K.M.	M.K.
REVISION	DATE	DESIGNED	CHECKED	APPROVED	REVIEWED	SUBMITTED
DETAILS OF CATENARIES						
FIGURE: III ELECTRICAL WORK						
SCALE (H): 1:200			DRAWING NO: EC-018			
(V): 1:110						



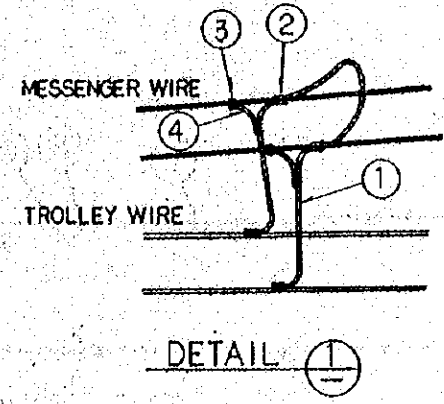
OVERLAP AIR JOINT



OVERLAP AIR SECTION



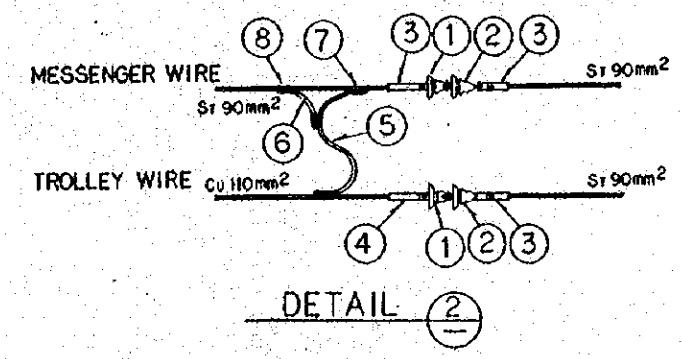
SECTION INSULATOR



DETAIL ①

MATERIAL TABLE

NO	ARTICLE	TYPE
1	FEEDER EAR	Cu 100 mm ² L = 3200
2	CLAMP	St 90 mm ² : Cu 100 mm ²
3	DO	St 90 mm ² : Cu 40 mm ²
4	ANNEALED COPPER STRANDED CONDUCTOR	Cu 40 mm ²



DETAIL ②

MATERIAL TABLE

No	ARTICLE	TYPE
1	SUSPENSION INSULATOR	180 C
2	DO	180 E.P
3	DEAD-END FITTING	BS 90
4	DO	WTS 90
5	CONNECTOR	Cu 100 mm ²
6	ANNEALED COPPER STRANDED CONDUCTOR	Cu 40 mm ²
7	CLAMP	St 90 mm ² : Cu 100 mm ²
8	DO	St 90 mm ² : Cu 100 mm ²

SECTION INSULATOR MATERIAL TABLE

No	ARTICLE	TYPE
1	SECTION INSULATOR	FRP
2	SUSPENSION INSULATOR	180 C
3	CONNECTING ROD	16 ϕ x 300
4	DEAD-END FITTING	BS 90
5	HANGER EAR	
6	CONNECTOR	Cu 40 mm ²
7	CLAMP	St 90 mm ² : Cu 40 mm ²

REPUBLIC OF INDONESIA
 MINISTRY OF COMMUNICATIONS
 DIRECTORATE GENERAL OF LAND TRANSPORT
 AND INLAND WATERWAYS

NEW RAILWAY LINE FOR CENDEKARANG AIRPORT
 CONSTRUCTION PROJECT

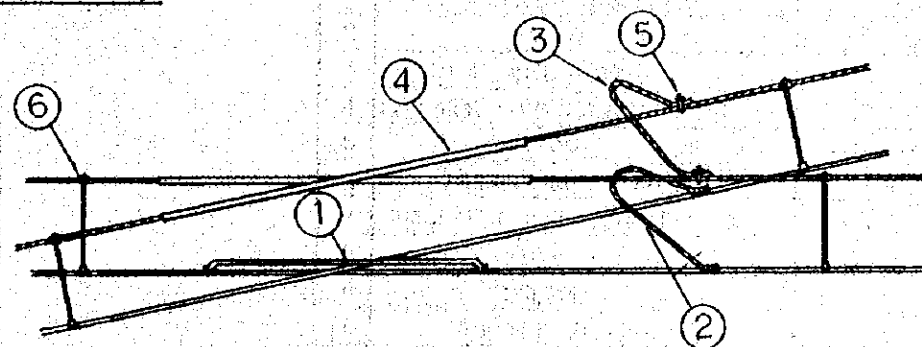
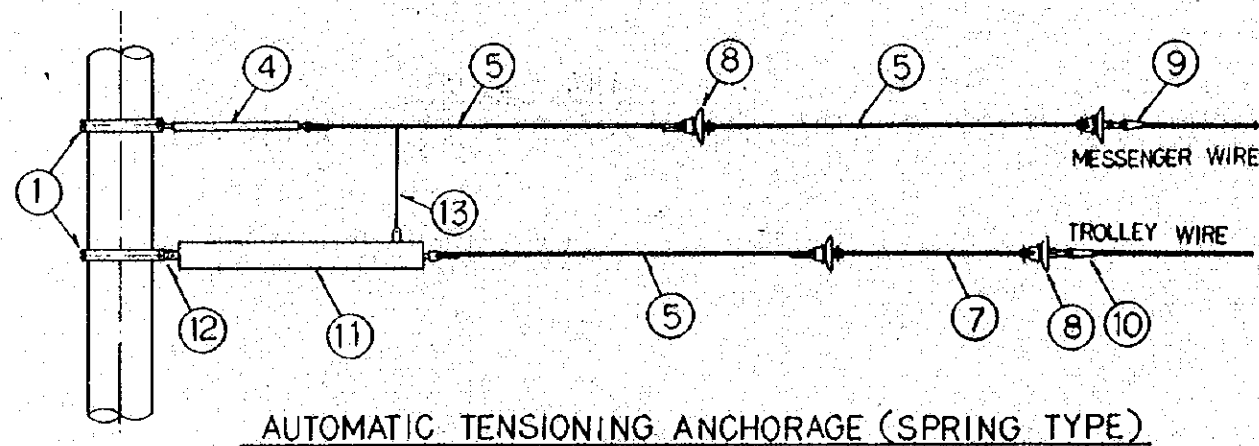
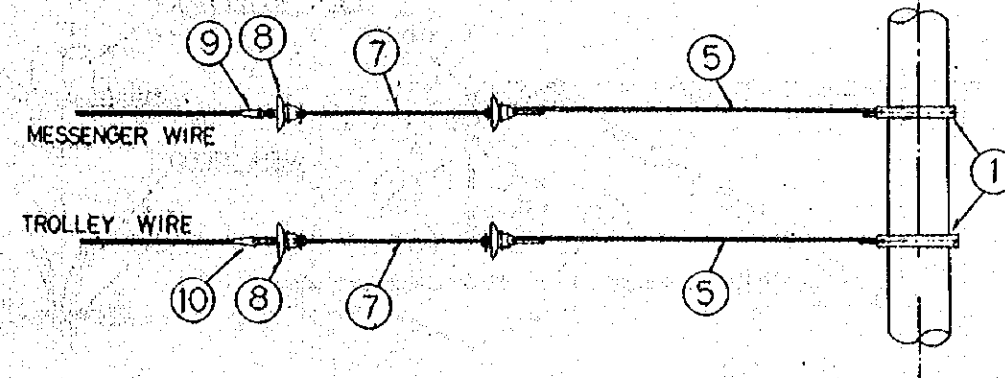
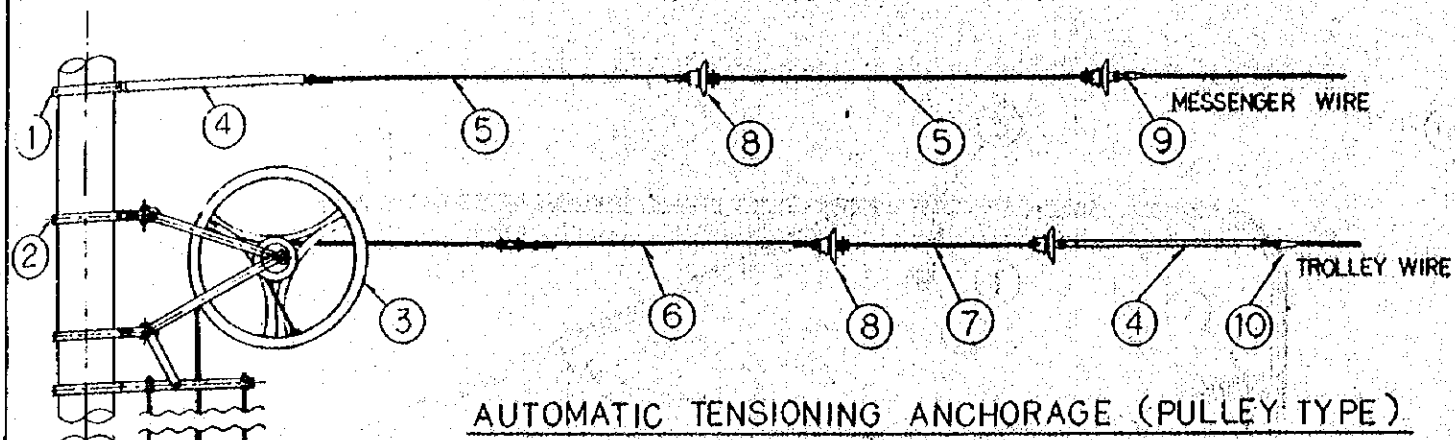
JAPAN INTERNATIONAL COOPERATION AGENCY
 (JICA)

REVISION	DATE	DESIGNED	CHECKED	APPROVED	REVIEWED	SUBMITTED
B	1 AUG 84	S.H	S.H	K.K	K.M	M.K
A	15 FEB 84	S.H	S.H	K.U	K.M	M.K

DETAILS OF OVERLAP
 AND
 SECTION INSULATOR

PROGRAM: II ELECTRICAL WORK

SCALE: NON SCALE DRAWING NO: EC - 019



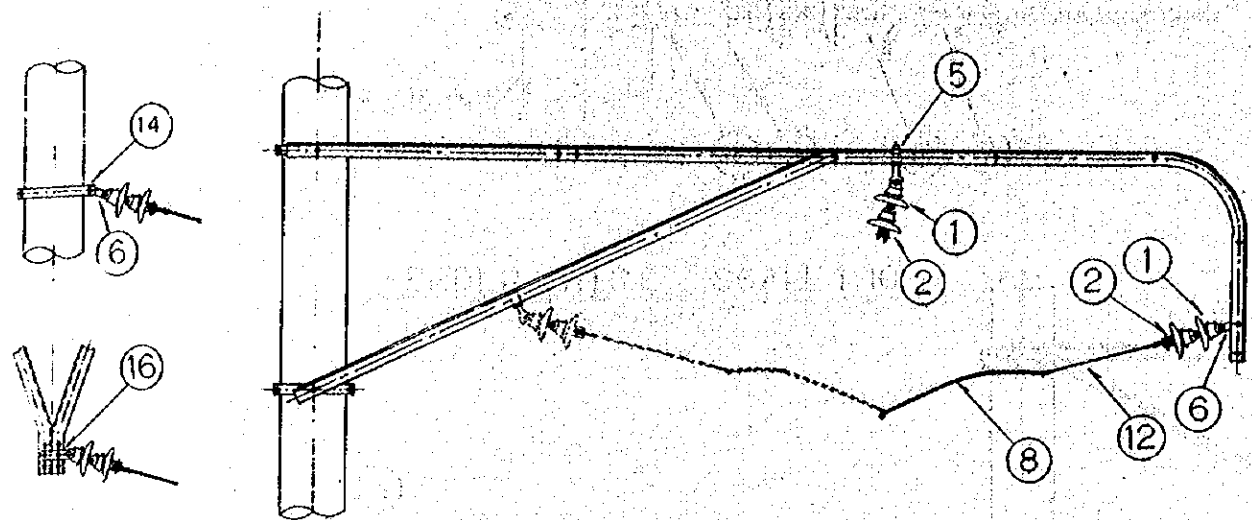
ANCHORAGE MATERIAL TABLE

NO	ARTICLE	TYPE
1	POLE BAND	B2
2	DO	TK 1
3	AUTOMATIC TENSIONING DEVICE	PULLEY TYPE
4	TURNBUCKLE	L = 600 mm
5	CONNECTING ROD	16 ^ø x 2000
6	DO	16 ^ø x 1500
7	DO	16 ^ø x 1000
8	SUSPENSION TYPE INSULATOR	180 C
9	DEAD-END FITTING	BS 90
10	DO	WTS 90
11	AUTOMATIC TENSIONING DEVICE	SPRING TYPE
12	CONNECTING FITTING	9 x 50 x 200

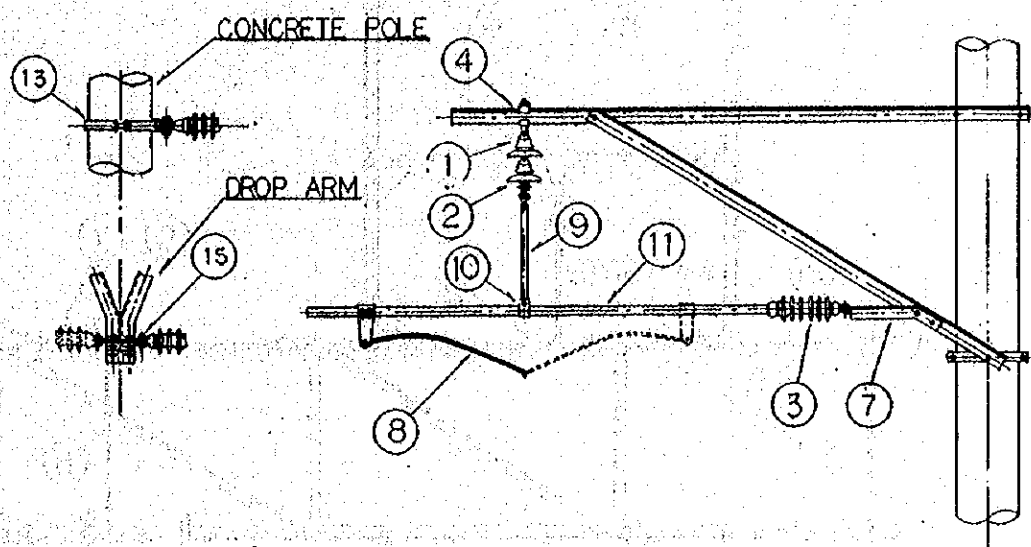
MATERIAL TABLE

NO	ARTICLE	TYPE
1	CROSS CLAMP	
2	FEEDER EAR	Cu 100 mm ² L=800
3	CONNECTOR	St 90 mm ²
4	LINE GUARD	St 90 mm ² L=2000
5	WIRE CLIP	St 90 mm ² x 2
6	MESSENGER WIRE PROTECTOR	

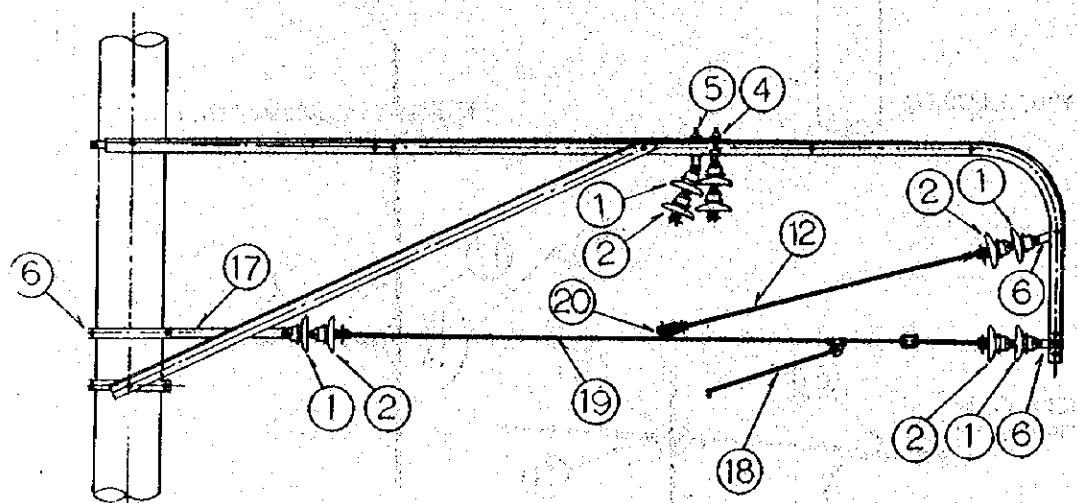
REPUBLIC OF INDONESIA					
MINISTRY OF COMMUNICATIONS					
DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS					
NEW RAILWAY LINE FOR CENKARENG AIRPORT CONSTRUCTION PROJECT					
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)					
B	1 Aug. 80	S.H	S.H	K.K	K.M
A	15 Aug. 80	S.H	S.H	K.K	K.M
REVISION	DATE	DESIGNED	CHECKED	APPROVED	INITIALS
DETAILS OF AUTOMATIC TENSIONING EQUIPMENT					
PARTIAL: ELECTRICAL WORK					
SCALE		DRAWING NO.			
NON SCALE		EC-020			



PULL - OFF



STEADY BRACE (FOR MOVABLE PIPE)



STEADY BRACE (FOR SPAN WIRE)

MATERIAL TABLE

No	ARTICLE	TYPE
1	SUSPENSION INSULATOR	180 EP
2	DO	180 C
3	STEM INSULATOR	DC
4	INSULATOR SUSPENSION FITTING	FOR STRAIGHT SECTION
5	DO	FOR CURVED SECTION
6	CONNECTING FITTING	6 x 50 x 100
7	INSULATOR INSTALLING FITTING	FOR RIGID CANTILEVER
8	PULL-OFF	BOWED-TYPE L=900
9	DROPPER	6 x 38 x 565
10	DROPPER FITTING	48.6φ
11	PIPE	48.6φ
12	HARD DRAWN COPPER WIRE	CU 35mm ²
13	POLE BAND	F1
14	DO	B1
15	INSULATOR INSTALLING FITTING	FOR DROP ARM
16	CONNECTING FITTING	6 x 50 x 150
17	DO	6 x 50 x 150
18	STEADY BRACE	
19	ROD FOR SPAN WIRE	13φ
20	PULLEY FOR PULL-OFF	

REPUBLIC OF INDONESIA
MINISTRY OF COMMUNICATIONS
DIRECTORATE GENERAL OF LAND TRANSPORT
AND INLAND WATERWAYS

NEW RAILWAY LINE FOR CENKARENG AIRPORT
CONSTRUCTION PROJECT

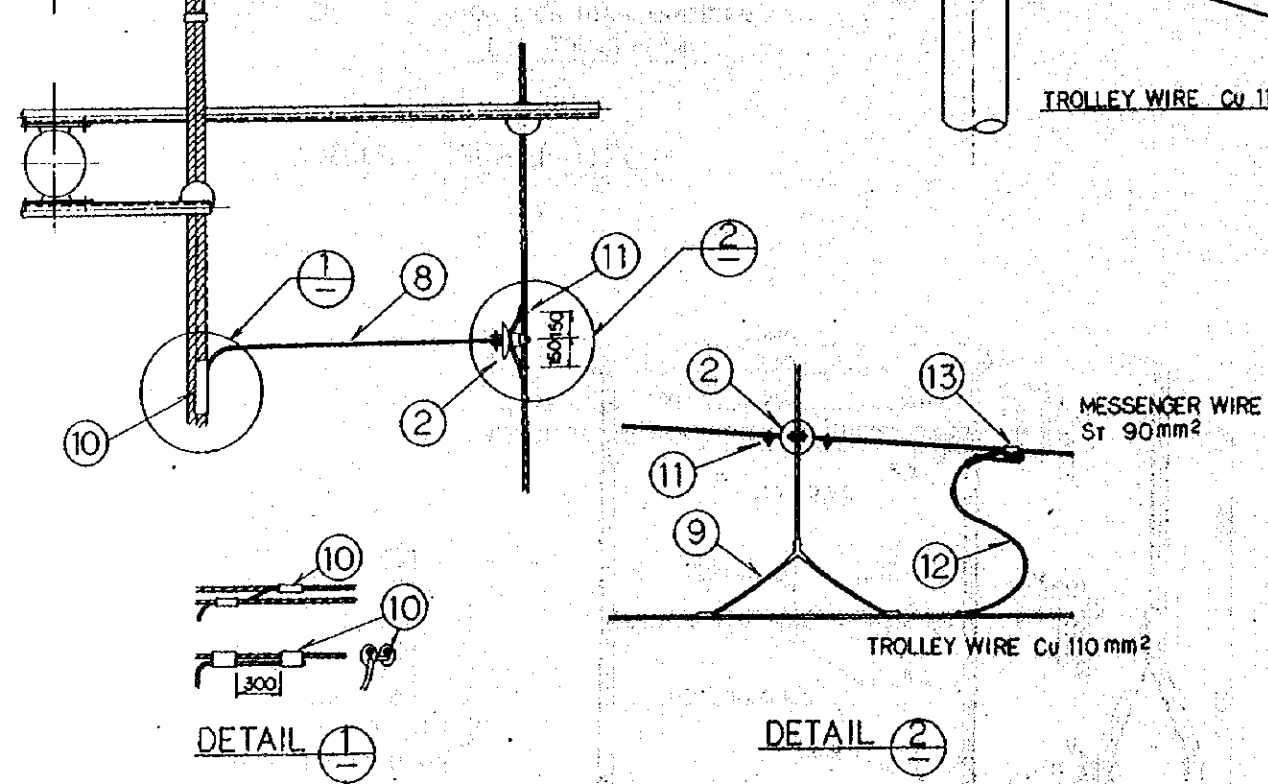
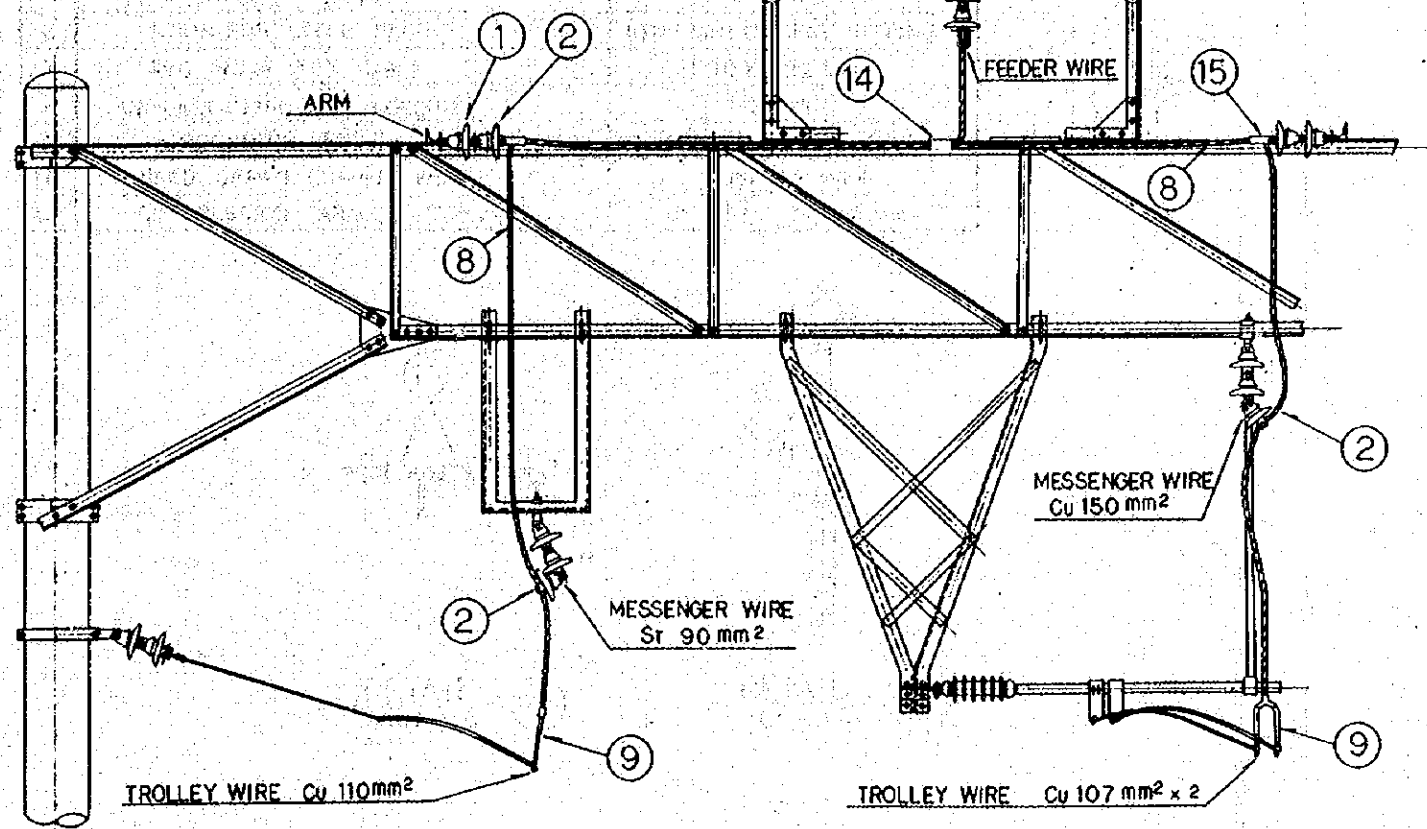
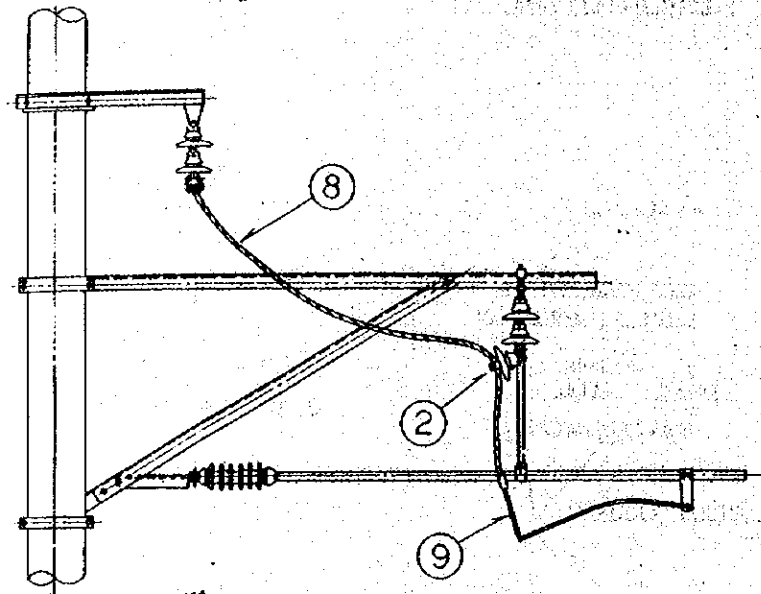
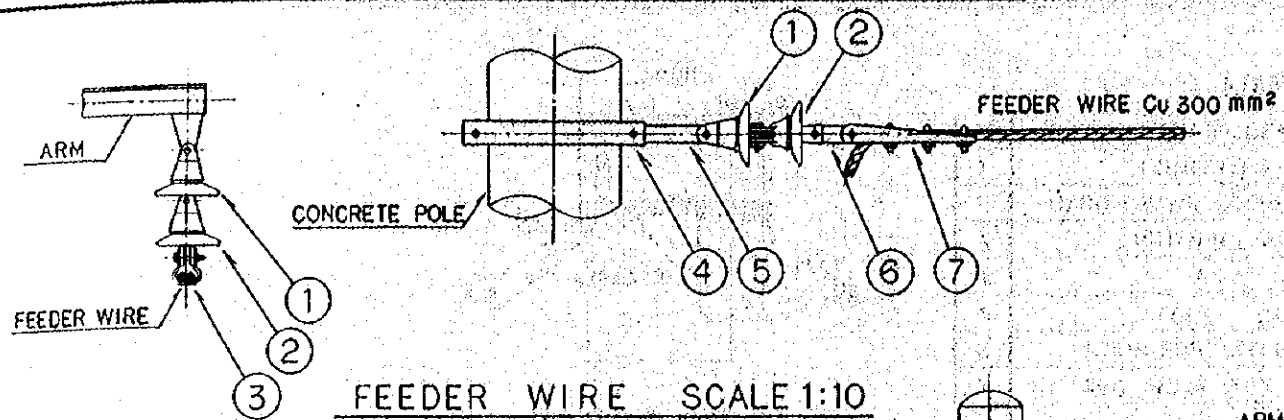
JAPAN INTERNATIONAL COOPERATION AGENCY
(JICA)

REVISED	DATE	DESIGNED	DRAWN	CHECKED	APPROVED	DATE	DATE	DATE	DATE	DATE

DETAILS OF PULL-OFF
AND
STEADY BRACE

PACKAGE: III ELECTRICAL WORK

SCALE: 1 : 20 DRAWING NO: EC-021



MATERIAL TABLE

ARTICLE	TYPE
1 SUSPENSION INSULATOR	180 EP
2 DO	180 C
3 FEEDER WIRE SUSPENSION FITTING	U-TYPE FOR Cu 300 mm ²
4 POLE BAND	B 2
5 CONNECTING FITTING	9 x 50 x 200
6 DO	9 x 50 x 100
7 DEAD-END FITTING	FOR Cu 300 mm ²
8 HARD DRAWN COPPER WIRE	Cu 200 mm ²
9 FEEDER EAR	FOR FEEDING BRANCH Cu 200 mm ²
10 COMPRESSION PARALLEL SLEEVE	Cu 300 mm ² ; Cu 200 mm ²
11 WIRE CLIP	St 90 mm ² x 1
12 CONNECTER	Cu 40 mm ² L = 1400
13 CLAMP	St 90 mm ² ; Cu 40 mm ²
14 COMPRESSION PARALLEL SLEEVE	Cu 200 mm ² ; Cu 200 mm ²
15 DEAD-END FITTING	FOR Cu 200 mm ²

REPUBLIC OF INDONESIA
 MINISTRY OF COMMUNICATIONS
 DIRECTORATE GENERAL OF LAND TRANSPORT
 AND INLAND WATERWAYS

NEW RAILWAY LINE FOR CENGLARENS AIRPORT
 CONSTRUCTION PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY
 (JICA)

B	1 Aug 84	S.H	S.H	K.A	K.A	K.K
A	14 Feb 84	S.H	S.H	K.A	K.A	K.K

REVISIONS: DATE, REVISION, DRAWN, CHECKED, APPROVED, REVISION

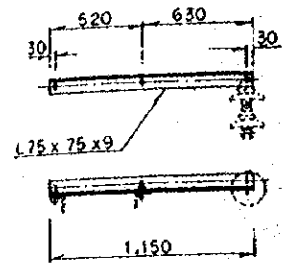
STANDARD ASSEMBLIES OF
 FEEDER WIRE AND BRANCH

PACKAGE: III ELECTRICAL WORK

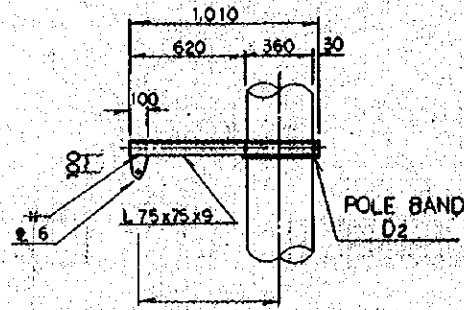
SCALE: AS NOTED DRAWING NO: EC-022

MATERIAL TABLE

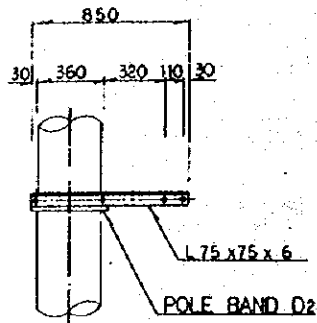
NO	ARTICEL	TYPE
1	CONNECTING FITTING	FOR LIGHTNING ARRESTER
2	HARD DRAWN COPPER WIRE	Cu 38 mm ²
3	LIGHTNING ARRESTER	DC 1500 V
4	ARM	FOR LIGHTNING ARRESTER
5	POLE BAND	D2
6	STAINLESS STEEL BAND	10mm WITH BINDING FITTING
7	PVC INSULATED CABLE	600 V 22 mm ²
8	UNPLASTICIZED PVC CONDUIT	22 mm ²
9	GROUNDING ROD	O-TYPE 14" x 1,500
10	HARD DRAWN COPPER WIRE	Cu 22 mm ²
11	COMPRESSTON PARALLEL SLFEVE	C-TYPE Cu 22 mm ²



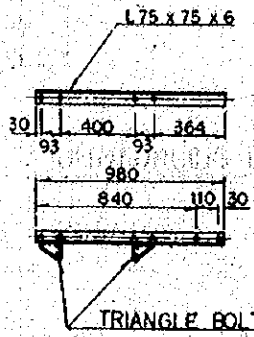
FOR FEEDING BRANCH (V-TRUSS BEAM)



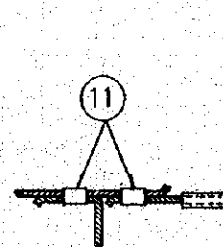
FOR FEEDER WIRE



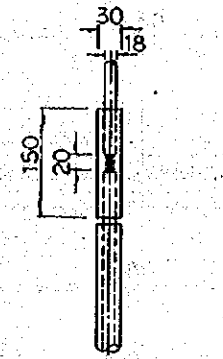
FOR LIGHTNING ARRESTER



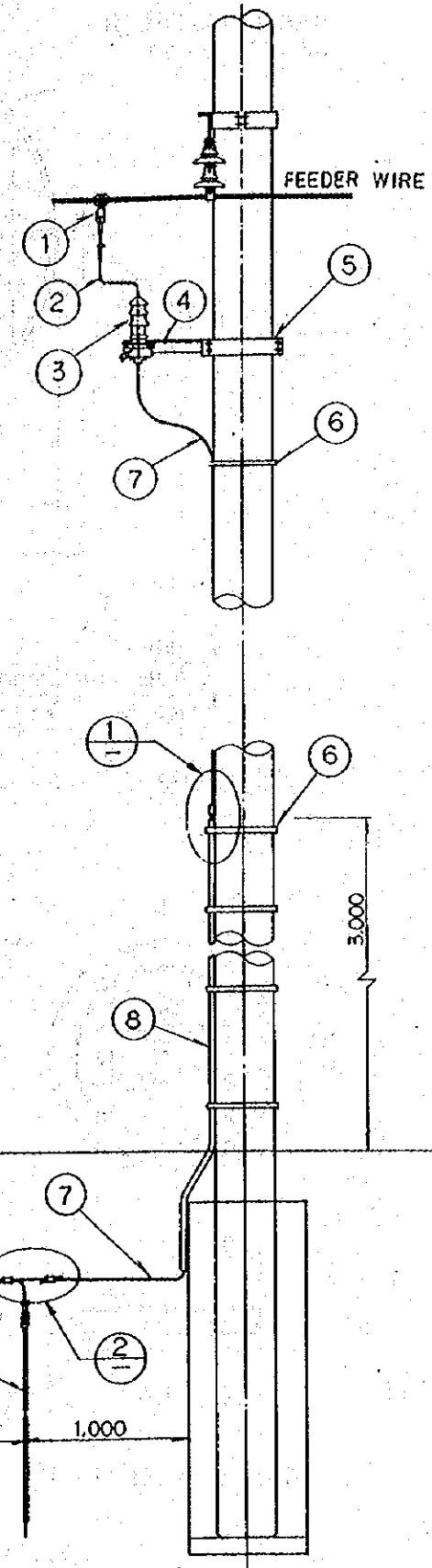
FOR LIGHTNING ARRESTER (V-TRUSS BEAM)



DETAIL SCALE 1:5 (11)

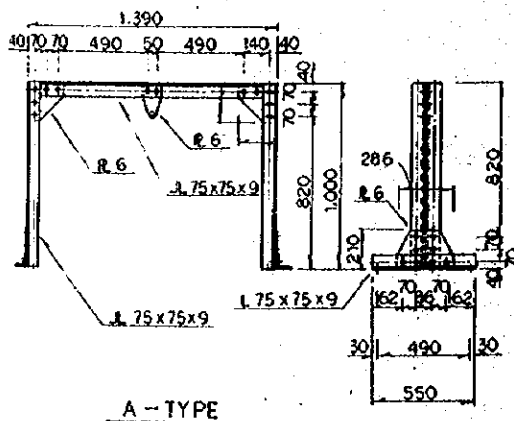


DETAIL SCALE 1:5 (1)

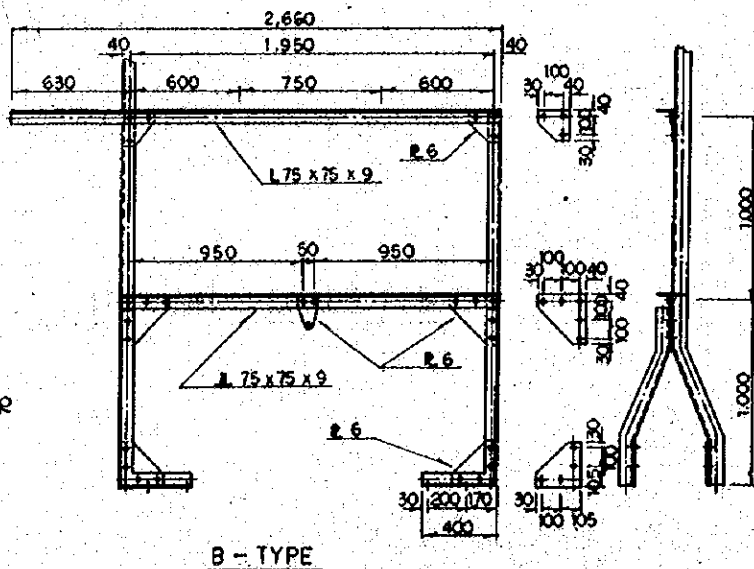


LIGHTNING ARRESTER AND GROUNDING DEVICE SCALE 1:20

POLE ARMS SCALE 1:20



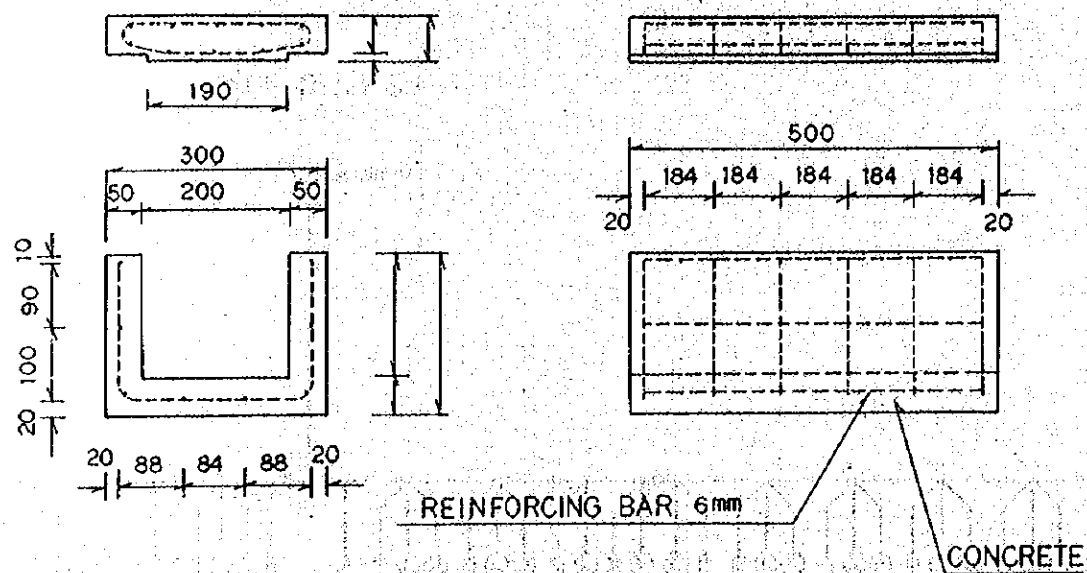
A - TYPE



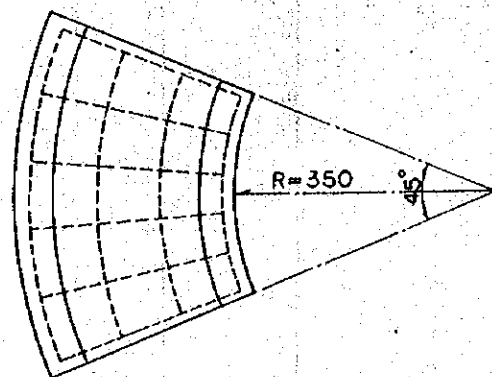
B - TYPE

ANGLE FRAME FOR FEEDER WIRES SCALE 1:20

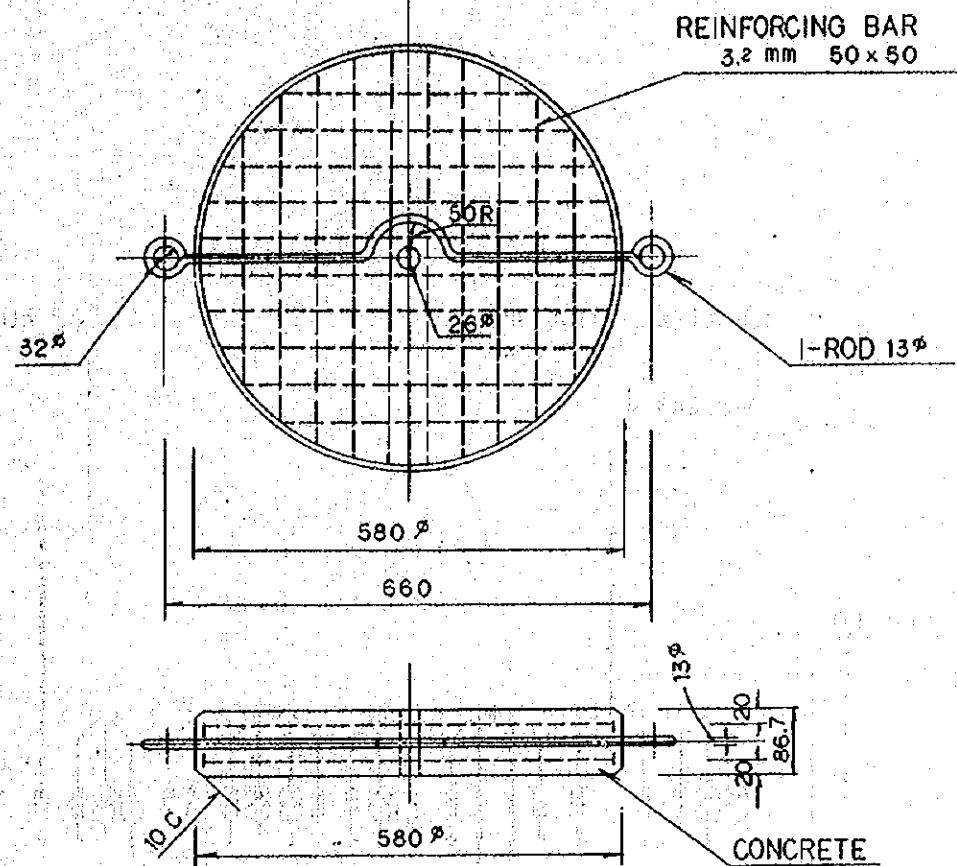
REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS							
NEW RAILWAY LINE FOR CENKARENG AIRPORT CONSTRUCTION PROJECT							
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)							
B	1 Aug. 80	S.H.	S.H.	A.M.	V.M.	M.K.	
A	15 Feb. 80	S.H.	S.H.	A.M.	U.P.	M.K.	
REVISION	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	APPROVED	
STANDARD ASSEMBLIES OF ARM ANGLE FRAMES LIGHTNING ARRESTERS AND GROUNDING							
PACKAGE: II ELECTRICAL WORK							
SCALE: AS NOTED		DRAWING NO: EC-023					



FOR CURVED SECTION

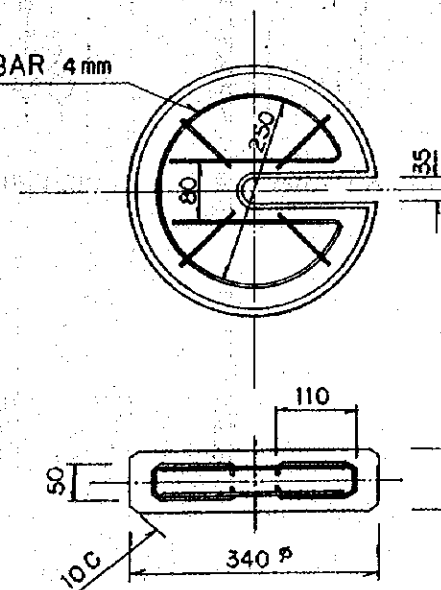


CONCRETE TROUGH SCALE 1:5



① STANDARD WEIGHT

REINFORCING BAR 4mm



② AUXILIARY WEIGHT

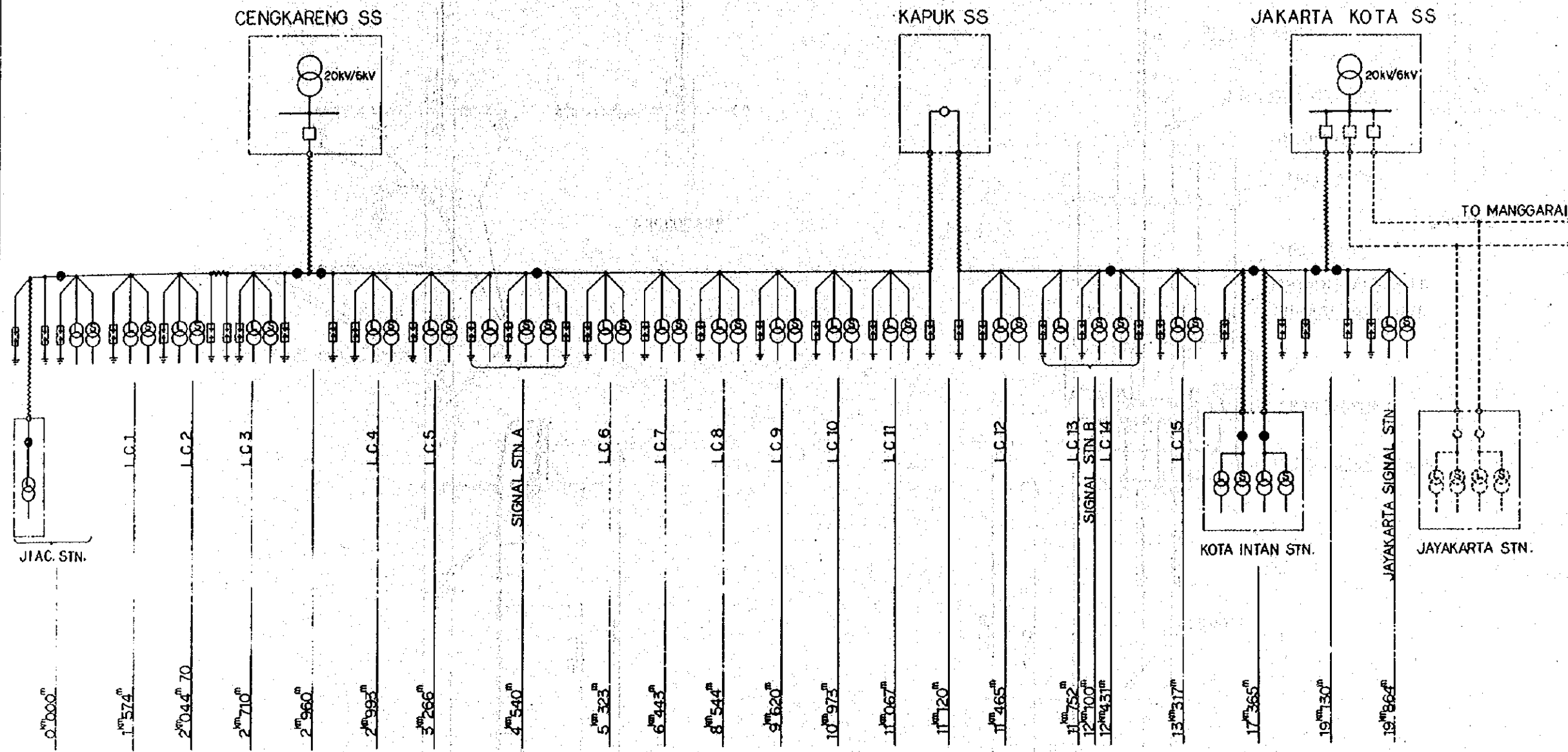
CONCRETE WEIGHT

WEIGHT FOR AUTOMATIC TENSIONING EQUIPMENT SCALE 1:5

NOTES:

1. WEIGHT
STANDARD -- 45 kg
AUXILIARY -- 15 kg
2. EACH JOINT OF REINFORCING BAR SHALL BE BINDED/WELDED
3. CONCRETE CLASS SHALL BE CLASS F

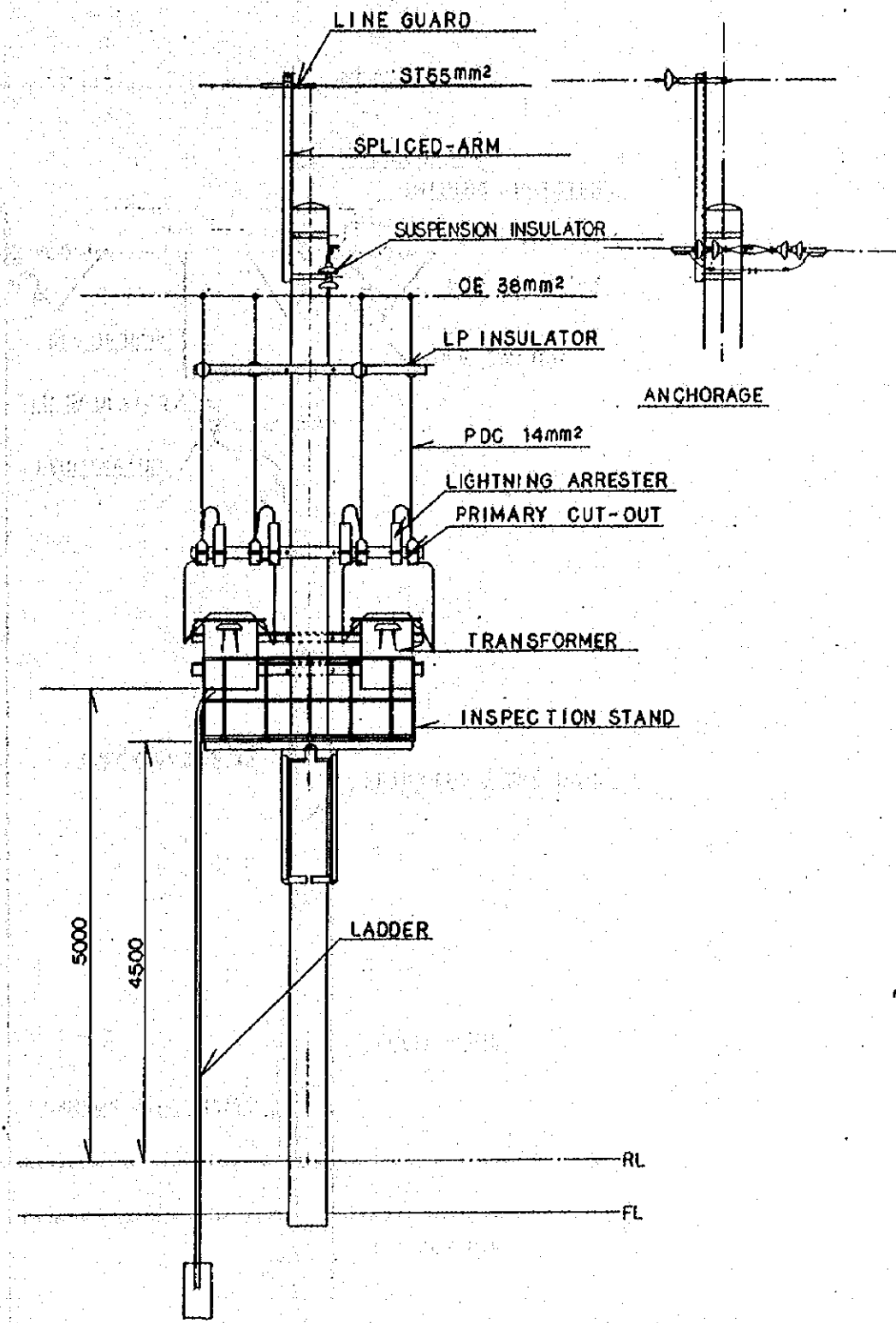
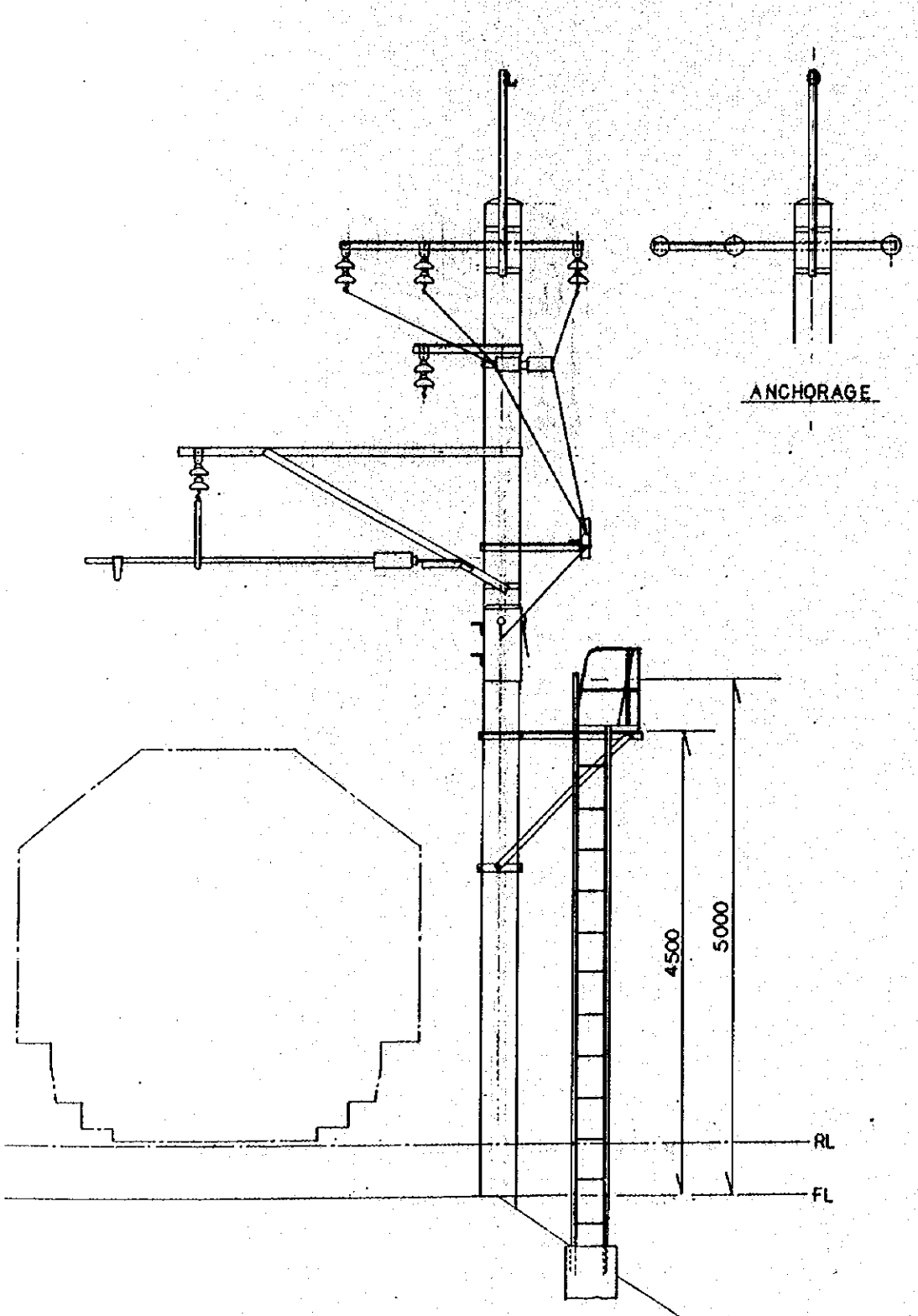
REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENKARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
B	1A/10/00	SH	S.H	K.K	K.M	M.K
A	13/04/00	SH	S.H	K.K	K.M	M.K
REVISION	DATE	DESIGNED	CHECKED	APPROVED	REVIEWED	SUBMITTED
DETAILS OF CONCRETE TROUGH AND WEIGHT FOR AUTOMATIC TENSIONING EQUIPMENT						
PACKAGE: II ELECTRICAL WORK						
SCALE: 1:5		DRAWING NO: EC-024				



- LEGEND :
- : 72kV VACUUM CIRCUIT BREAKER
 - : 72kV AIR LOAD BREAK SWITCH (NORMALLY OPEN)
 - : DO (NORMALLY CLOSED)
 - : LIGHTNING ARRESTER WITH GROUNDING DEVICE
 - : TRANSFORMER 6kV/220V (LIGHTING)
 - : DO (SIGNALLING)

UTILITY POWER DISTRIBUTION NETWORK DIAGRAM

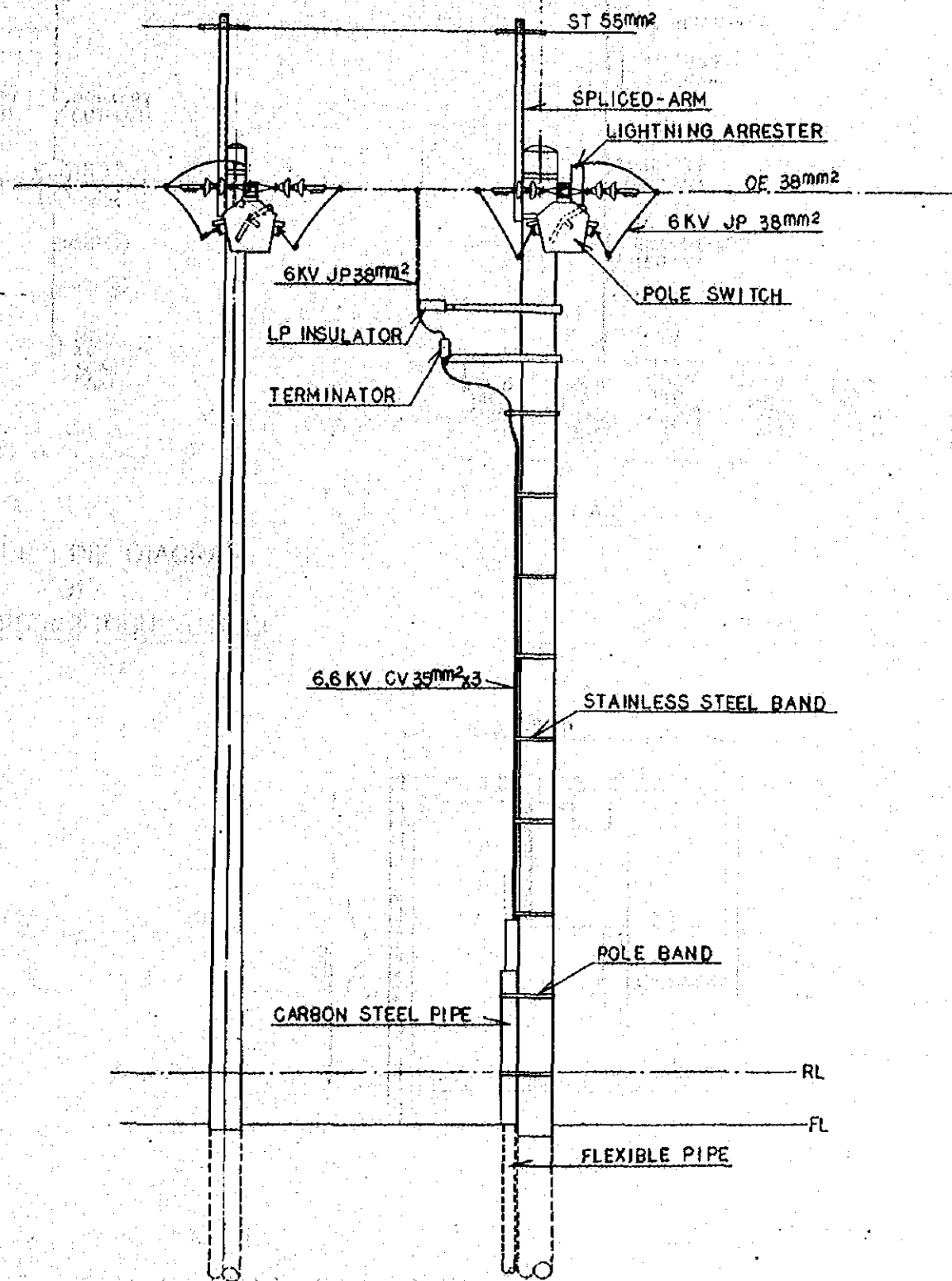
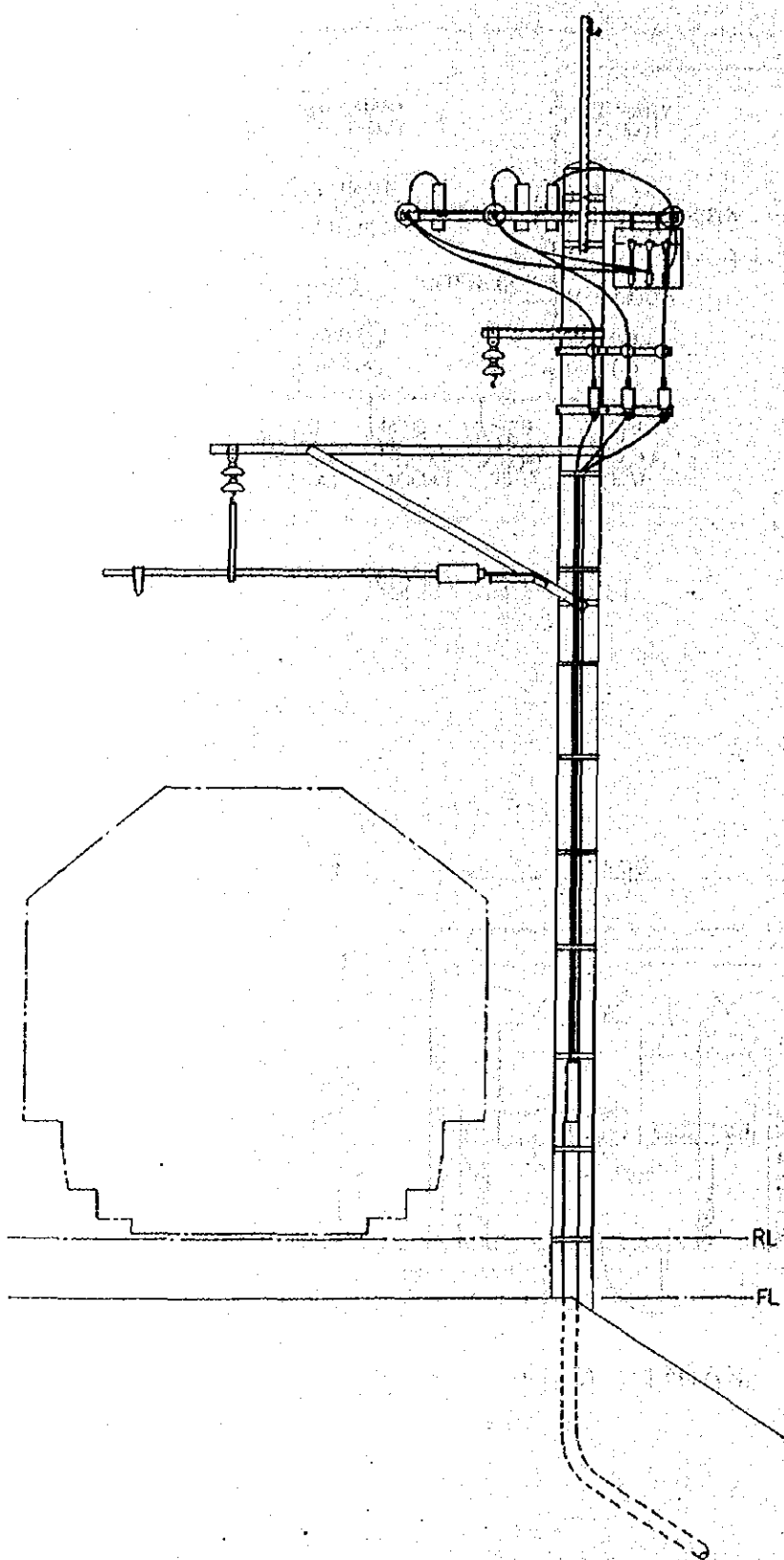
REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS					
NEW RAILWAY LINE FOR CENGKARENG AIRPORT CONSTRUCTION PROJECT					
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)					
0	1 Aug 80	T. K.	M.C.	K.M.	M.K.
A	1 SEP 80	T. K.	K.A.	K.M.	M.K.
REVISION	DATE	DESIGNED	CHECKED	APPROVED	REVISION
UTILITY POWER DISTRIBUTION NETWORK DIAGRAM					
PROGRAM : ELECTRICAL WORK					
SCALE	DRAWING NO.				
NON SCALE	ED - 001				



NOTE:
ALL DIMENSIONS ARE SHOWN IN
MILLIMETRES UNLESS OTHERWISE
INDICATED

STANDARD ASSEMBLIES OF POLE TRANSFORMER | SCALE 1:30

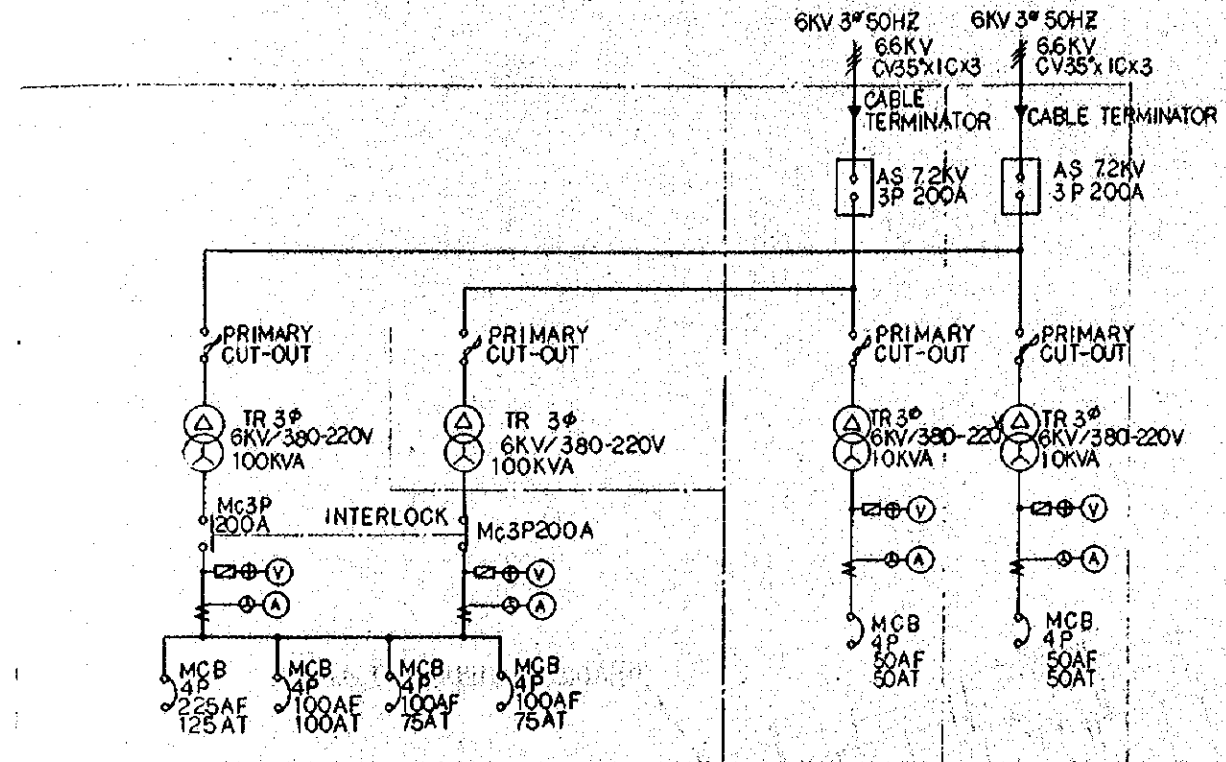
REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS					
NEW RAILWAY LINE FOR CENKARENG AIRPORT CONSTRUCTION PROJECT					
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)					
B	1 Aug 2001	1.0	RK	UM	AK
A	15 Feb 2001	1.0	RK	UM	AK
REVISION	DATE	DESIGNED	CHECKED	APPROVED	REVISION
STANDARD ASSEMBLIES OF POLE TRANSFORMER					
PACKAGE: III ELECTRICAL WORK					
SCALE 1:30	DRAWING NO. ED-002				



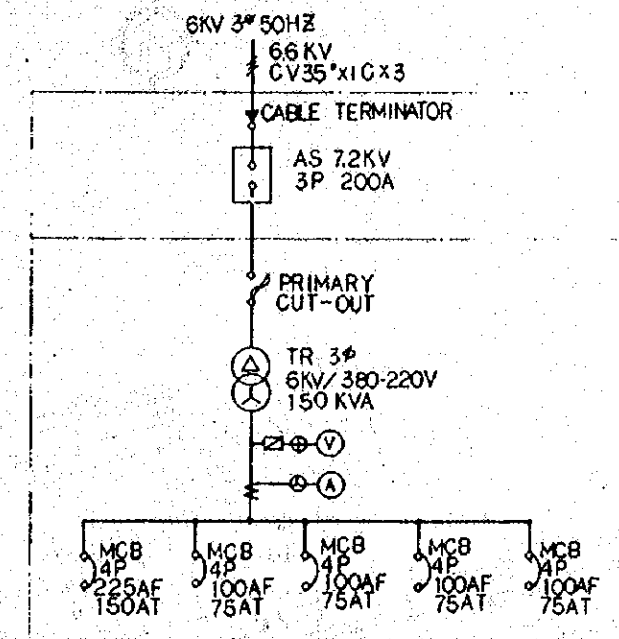
STANDARD ASSEMBLIES OF POLE SWITCH SCALE 1:30

REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CEMBARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
B	1 Aug 2001	✓	✓	✓	✓	✓
A	15 Feb 2001	✓	✓	✓	✓	✓
REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	SUBMITTED
STANDARD ASSEMBLIES OF POLE SWITCH						
PACKAGE: III ELECTRICAL WORK						
SCALE 1:30		DRAWING NO. ED-003				

ABBREVIATIONS:
 AS: AIR LOAD BREAK SWITCH
 TR: TRANSFORMER
 MCB: MOLDED CASE CIRCUIT BREAKER
 MC: ELECTROMAGNETIC CONTACTOR



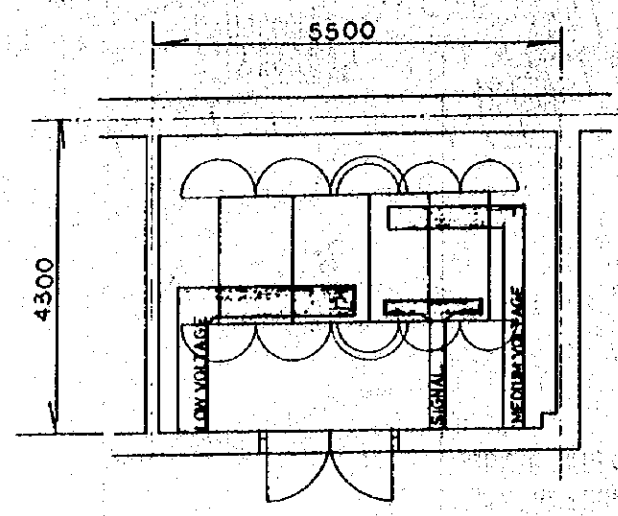
KOTA INTAN



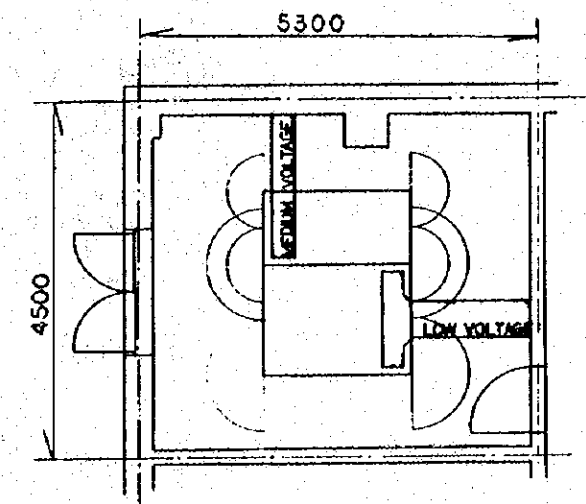
JIAC.

SINGLE LINE DIAGRAM
 OF
 POWER DISTRIBUTION CUBICLE

NOTE:
 ALL DIMENSIONS ARE SHOWN IN
 MILLIMETRES UNLESS OTHERWISE
 INDICATED.



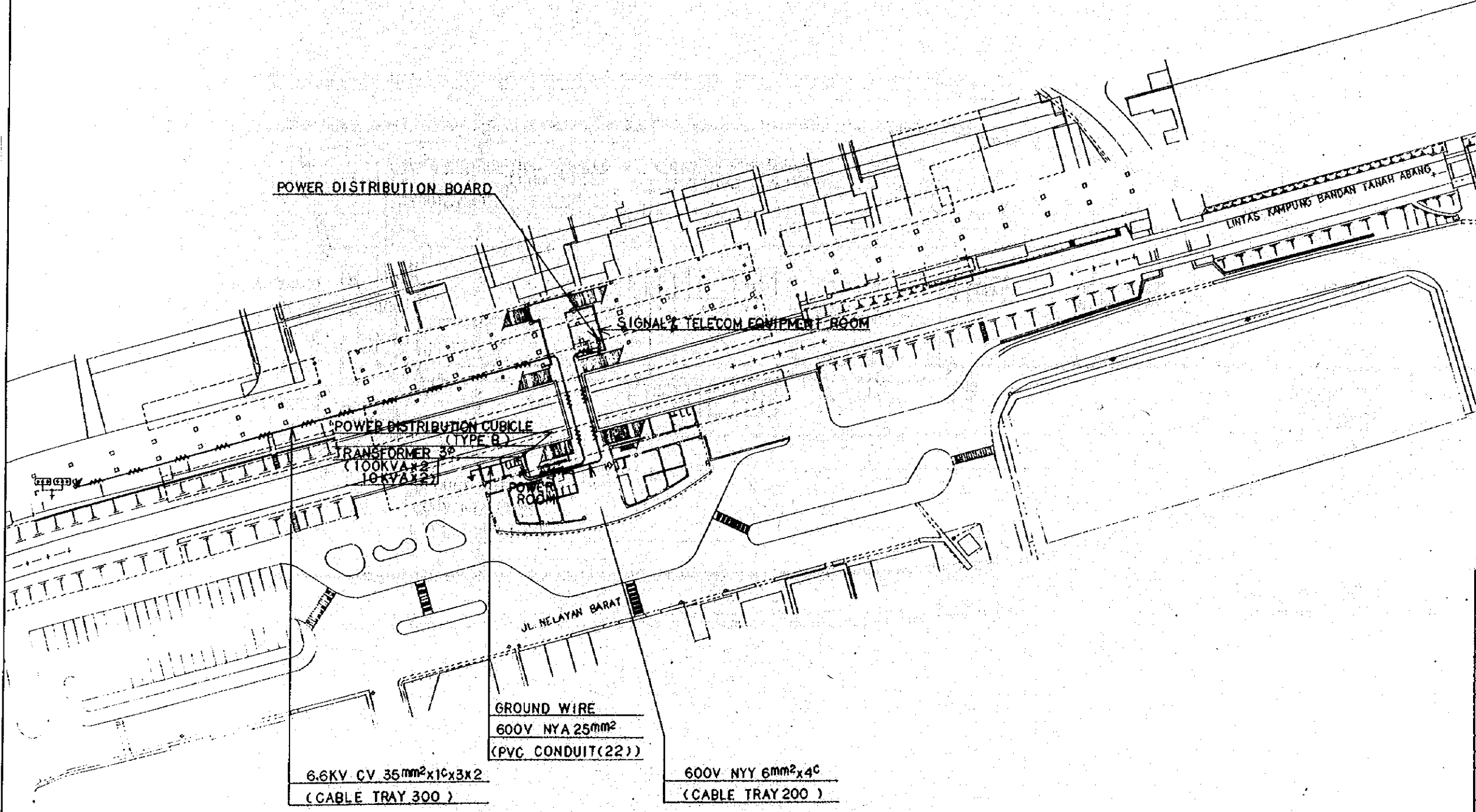
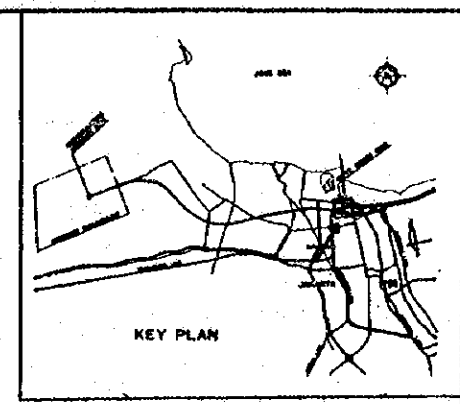
KOTA INTAN



JIAC.

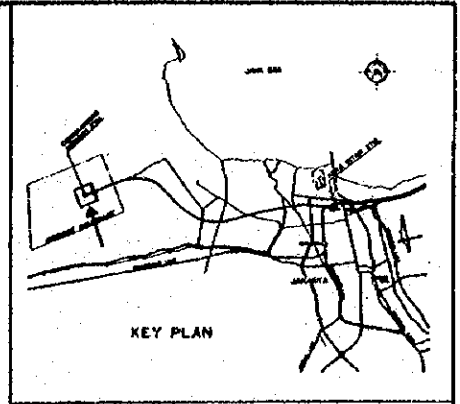
POWER ROOM LAYOUT SCALE 1:50

REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS					
NEW RAILWAY LINE FOR CENGKARENB AIRPORT CONSTRUCTION PROJECT					
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)					
B	1 Aug 24	Y. Y. Y.	K. K. K.	H. H. H.	M. M. M.
A	1 FEB 23	Y. Y. Y.	X. X. X.	K. K. K.	M. M. M.
REVISIONS	DATE	DESIGNED	CHECKED	APPROVED	LIMITED
POWER ROOM LAYOUT					
PACKAGE: II ELECTRICAL WORK					
SCALE: AS NOTED		DRAWING NO: ED-004			

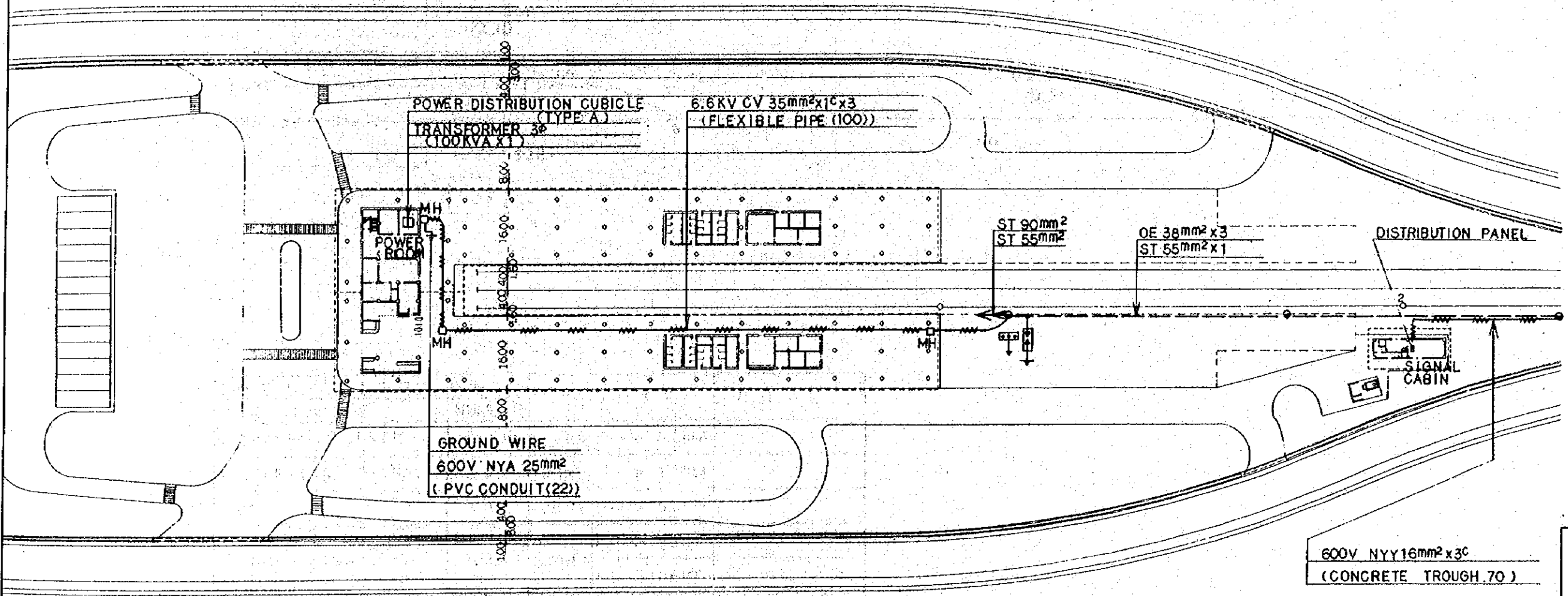


KOTA INTAN STATION PLAN FOR UTILITY POWER DISTRIBUTION SCALE 1:500

REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS					
NEW RAILWAY LINE FOR CENKARENG AIRPORT CONSTRUCTION PROJECT					
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)					
B	1 Aug 2011	<input checked="" type="checkbox"/>	T. Kurniawan	K. H. U. M.	<input checked="" type="checkbox"/>
A	15 FEB 2011	<input checked="" type="checkbox"/>	T. Kurniawan	K. H. U. M.	<input checked="" type="checkbox"/>
REVISION	DATE	DESIGNED	DRAWN	CHECKED	SUBMITTED
KOTA INTAN STATION PLAN FOR UTILITY POWER DISTRIBUTION					
PACKAGE: <input checked="" type="checkbox"/> ELECTRICAL WORK					
SCALE 1:500		DRAWING NO. ED-005			

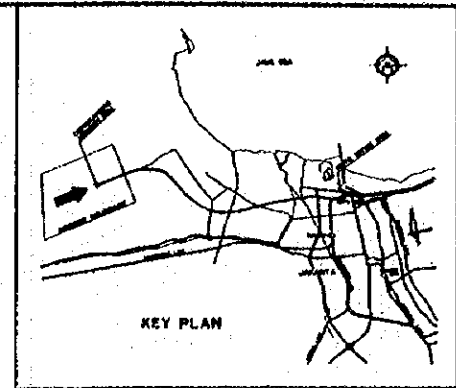


ABBREVIATION:
MH: MANHOLE



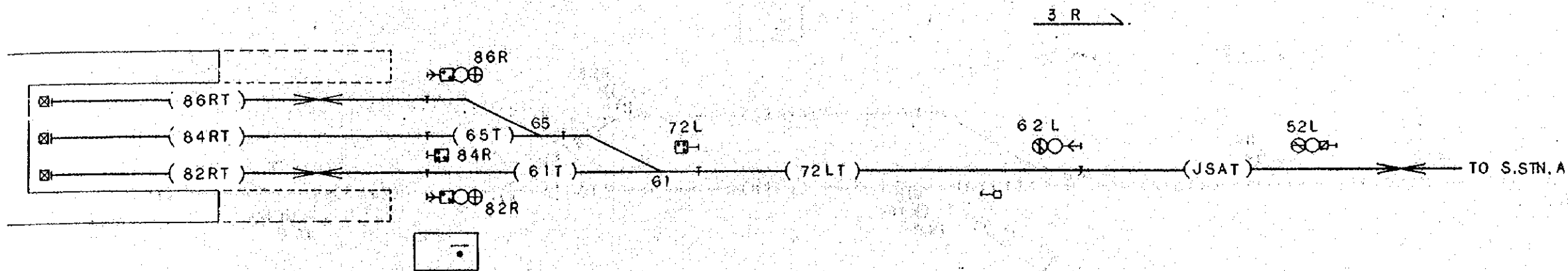
JIAC STATION PLAN FOR UTILITY POWER DISTRIBUTION SCALE 1:500

REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS					
NEW RAILWAY LINE FOR CENKARENG AIRPORT CONSTRUCTION PROJECT					
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)					
B	1 Aug '04	1.000	KM	KM	KR
A	1 FEB '04	1.000	KM	KM	KR
REVISION	DATE	ISSUED	BY	REVIEW	SUBMITTED
JIAC STATION PLAN FOR UTILITY POWER DISTRIBUTION					
PACKAGE: III ELECTRICAL WORK					
SCALE	DRAWING NO.				
1:500	ED-006				



NOTE:

FOR SYMBOLS SEE DWG. NO. EG - 003



DESCRIPTION		ROUTE	NOTE
NAME	NUMBER		
TRAFFIC LEVER	3 R	JIAC → S.STNA	
STARTING SIGNAL	8 2 R	82RT → S.STNA	
DO	8 6 R	86RT → S.STNA	
HOME SIGNAL	6 2 L	S.STNA → 82RT	
		S.STNA → 86RT	
SHUNTING SIGNAL	8 2 R	82RT → 72LT	
DO	8 4 R	84RT → 72LT	
DO	8 6 R	86RT → 72LT	
DO	7 2 L	72LT → 82RT	
		72LT → 84RT	
		72LT → 86RT	

REPUBLIC OF INDONESIA
 MINISTRY OF COMMUNICATIONS
 DIRECTORATE GENERAL OF LAND TRANSPORT
 AND INLAND WATERWAYS

NEW RAILWAY LINE FOR CENKARENG AIRPORT
 CONSTRUCTION PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY
 (JICA)

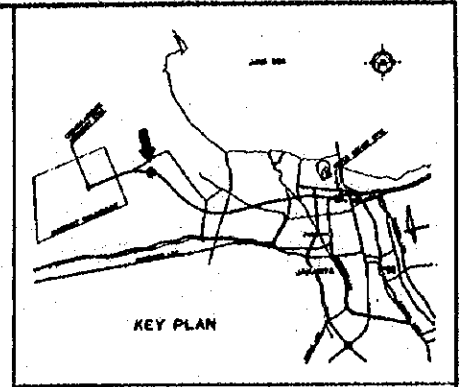
B	1 Aug '86	TRACED	37.0	K.M	K.M	M.K
A	15 Feb '86	TRACED	37.0	K.M	K.M	M.K

REVISIONS DATE CHECKED DRAWN CHECKED REVIEWED SUBMITTED

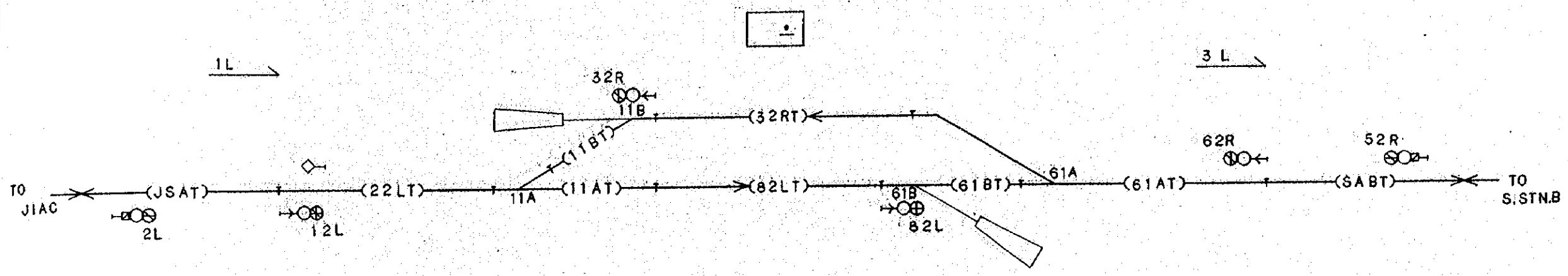
ROUTE DIAGRAMS
 FOR
 JIAC STATION

PACKAGE: ELECTRICAL WORK

SCALE: NON SCALE Drawing No: ES-001

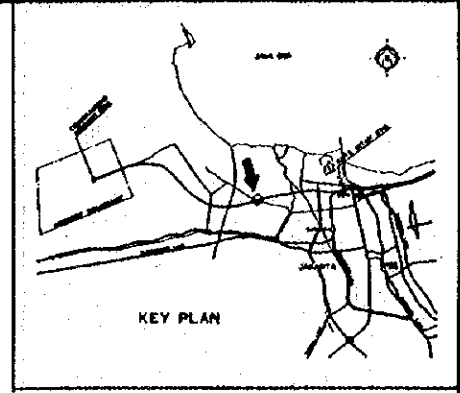


NOTE:
FOR SYMBOLS SEE DWG. NO. EG-003

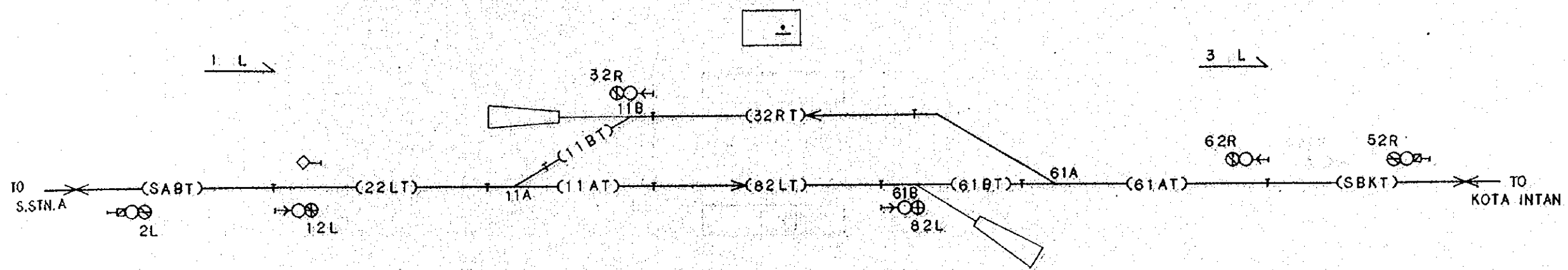


DESCRIPTION		ROUTE	NOTE
NAME	NUMBER		
TRAFFIC LEVER	1 L	JIAC → S.STN.A	
HOME SIGNAL	12 L	JIAC → 82LT	
STARTING SIGNAL	32 R	32RT → JIAC	
STARTING SIGNAL	82 L	82LT → S.STN.B	
HOME SIGNAL	62 R	S.STN.B → 32RT	
TRAFFIC LEVER	3 L	S.STN.A → S.STN.B	

REPUBLIC OF INDONESIA MINISTRY OF COMMUNICATIONS DIRECTORATE GENERAL OF LAND TRANSPORT AND INLAND WATERWAYS						
NEW RAILWAY LINE FOR CENKARENG AIRPORT CONSTRUCTION PROJECT						
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)						
B	1.10.76	Tajima	3.2.76	2.16	11.17	mark
A	1.10.76	Tajima	3.2.76	2.16	11.17	mark
REVISION	DATE	DESIGNED	DRAWN	CHECKED	REVIEWED	SUBMITTED
ROUTE DIAGRAMS FOR SIGNAL STATION A						
PACKAGE: II ELECTRICAL WORK						
SCALE NON SCALE		DRAWING NO. ES-002				



NOTE:
FOR SYMBOLS SEE DWG. NO.
EG -003



DESCRIPTION		ROUTE		NOTE
NAME	NUMBER			
TRAFFIC LEVER	1 L	S.STN.A	→ S.STN.B	
HOME SIGNAL	1 2 L	S.STN.A	→ 82 LT	
STARTING SIGNAL	3 2 R	32 RT	→ S.STN.A	
STARTING SIGNAL	8 2 L	82 LT	→ KOTA INTAN	
HOME SIGNAL	6 2 R	KOTA INTAN	→ 32 RT	
TRAFFIC LEVER	3 L	S.STN.B	→ KOTA INTAN	

REPUBLIC OF INDONESIA
MINISTRY OF COMMUNICATIONS
DIRECTORATE GENERAL OF LAND TRANSPORT
AND INLAND WATERWAYS

NEW RAILWAY LINE FOR CENGKAREMB AIRPORT
CONSTRUCTION PROJECT

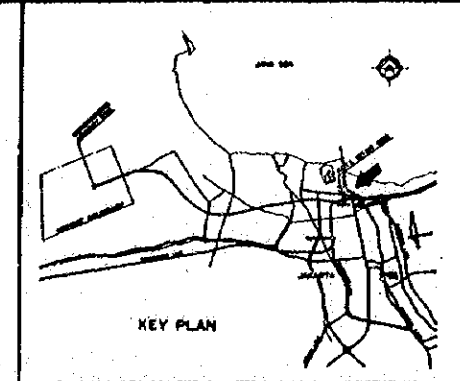
JAPAN INTERNATIONAL COOPERATION AGENCY
(JICA)

B	1 Aug. 74	220	Kd	K.M.	m.K
A	15 Feb. 74	220	Kd	K.M.	m.K

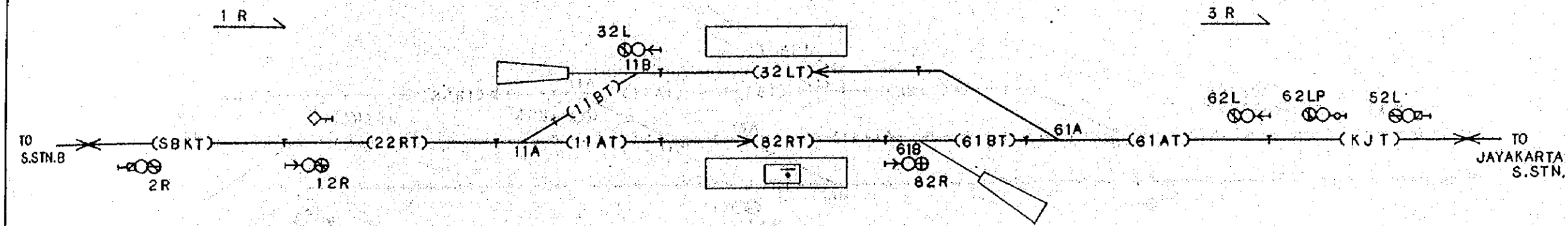
REVISIONS DATE DESIGNED DRAWN CHECKED REVIEWED SUBMITTED

ROUTE DIAGRAMS
FOR
SIGNAL STATION B

PACKAGE: ELECTRICAL WORK
SCALE: NON SCALE DRAWING NO. ES-003



NOTE:
FOR SYMBOLS SEE DWG. NO.
EG - 003



DESCRIPTION		ROUTE	NOTE
NAME	NUMBER		
TRAFFIC LEVER	1 R	S.STN.B → KOTA INTAN	
HOME SIGNAL	1 2 R	S.STN.B → 8 2 RT	
STARTING SIGNAL	3 2 L	3 2 LT → S.STN.B	
STARTING SIGNAL	8 2 R	8 2 RT → JAYAKARTA S.STN	
HOME SIGNAL	6 2 L	JAYAKARTA S.STN → 3 2 LT	
TRAFFIC LEVER	3 R	KOTA INTAN → JAYAKARTA S.STN	

REPUBLIC OF INDONESIA
MINISTRY OF COMMUNICATIONS
DIRECTORATE GENERAL OF LAND TRANSPORT
AND INLAND WATERWAYS

NEW RAILWAY LINE FOR CENGGAKARENG AIRPORT
CONSTRUCTION PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY
(JICA)

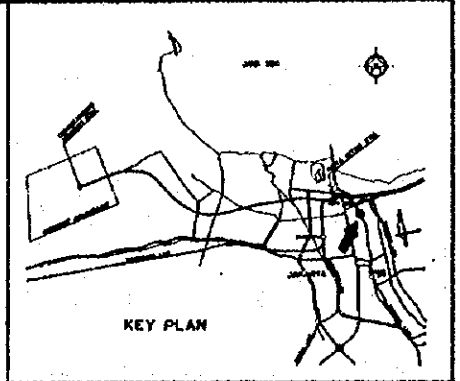
B	1 Aug '86	Japan	JTB	KM	KM	KM
A	16 Feb '86	Japan	JTB	KM	KM	KM

REVISIONS: ONE

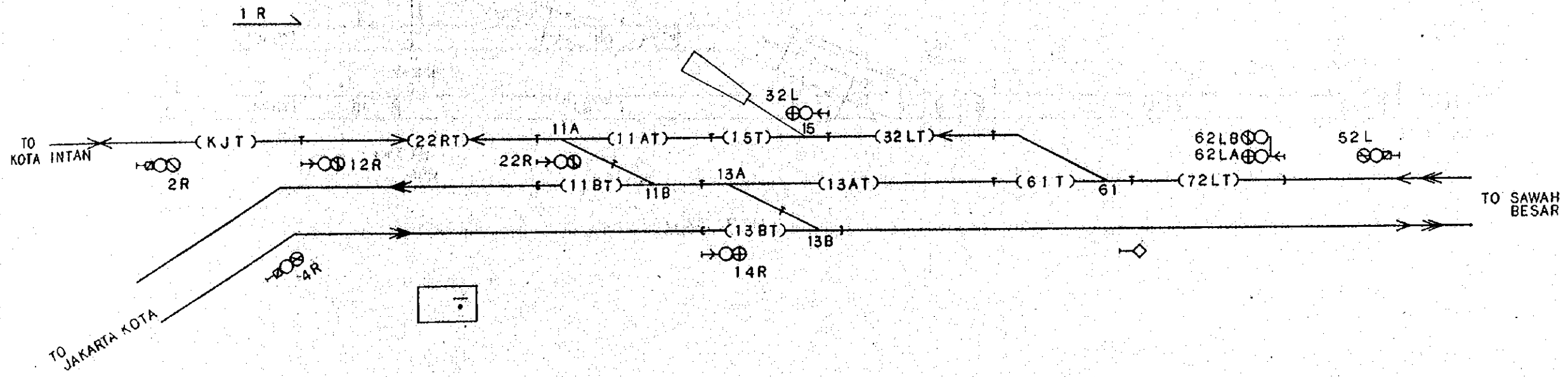
ROUTE DIAGRAMS
FOR
KOTA INTAN STATION

PROGRAM: II ELECTRICAL WORK

SCALE: NON SCALE DRAWING NO: ES-004



NOTE:
FOR SYMBOLS SEE DWG. NO.
EG - 003



DESCRIPTION		ROUTE	NOTE
NAME	NUMBER		
TRAFFIC LEVER	1 R	KOTA INTAN → JAYAKARTA S. STN.	
HOME SIGNAL	1 2 R	KOTA INTAN → 2 2 RT	
DO	1 4 R	JAKARTA KOTA → SAWAH BESAR	
STARTING SIGNAL	2 2 R	2 2 RT → SAWAH BESAR	
DO	3 2 L	3 2 LT → KOTA INTAN	
HOME SIGNAL	6 2 LB	SAWAH BESAR → 3 2 LT	
	6 2 LA	SAWAH BESAR → JAKARTA KOTA	

REPUBLIC OF INDONESIA
MINISTRY OF COMMUNICATIONS
DIRECTORATE GENERAL OF LAND TRANSPORT
AND INLAND WATERWAYS

NEW RAILWAY LINE FOR CENGLARENG AIRPORT
CONSTRUCTION PROJECT

JAPAN INTERNATIONAL COOPERATION AGENCY
(JICA)

B	1 Aug '86	7/20	3/20	K.H.	K.H.	K.H.
A	15 Feb '86	7/20	3/20	K.H.	K.H.	K.H.

REVISIONS DATE DESIGNED CHECKED REVIEWED APPROVED

ROUTE DIAGRAMS
FOR
JAYAKARTA SIGNAL STATION

PACKAGE: II ELECTRICAL WORK

SCALE: NON SCALE DRAWING NO: ES-005