

ROYAL GOVERNMENT OF LAOS

VIENTIANE AIRPORT EXTENSION PROJECT - II

CONTRACT DRAWINGS

PREPARED FOR ; OVERSEAS TECHNICAL COOPERATION AGENCY
GOVERNMENT OF JAPAN

PREPARED BY ; NIPPON KOKI CO., LTD.

CONSULTING ENGINEERS,
TOKYO, JAPAN
MAY 1971

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VIENTIANE AIRPORT EXTENSION PROJECT-II

CONTRACT DRAWINGS

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**CONSULTING ENGINEERS,
TOKYO, JAPAN
MAY 1971**

国際協力事業団	
受入 月日 '84. 7. -4	L112
登録No. 08057	75.7
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VIENTIANE AIRPORT EXTENSION PROJECT-II

VIENTIANE, ROYAL GOVERNMENT OF LAOS

CONTRACT DRAWINGS

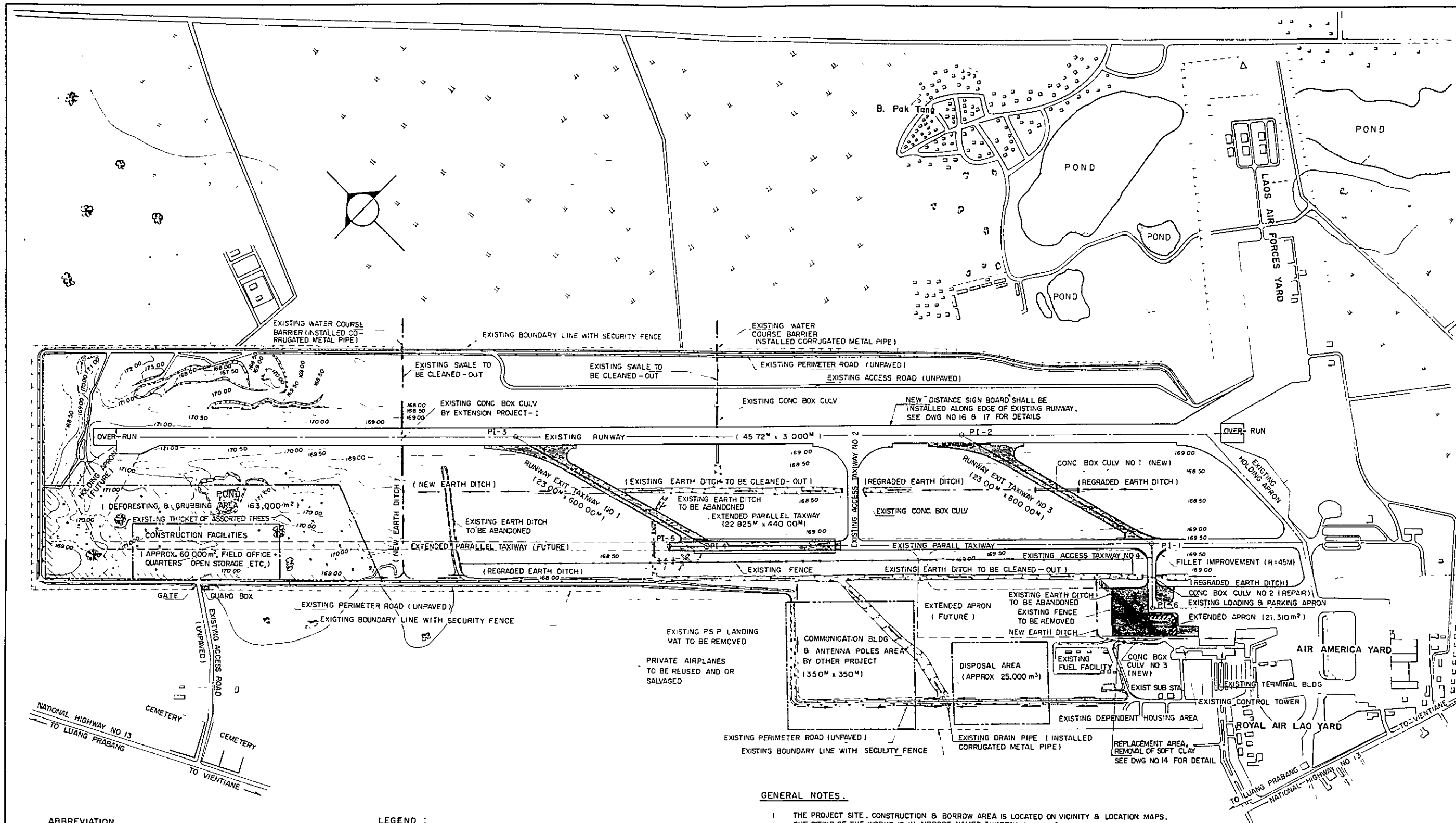
PREPARED FOR ; OVERSEAS TECHNICAL COOPERATION
AGENCY, GOVERNMENT OF JAPAN

PREPARED BY ; NIPPON KOEI CO., LTD.

CONSULTING ENGINEERS, TOKYO

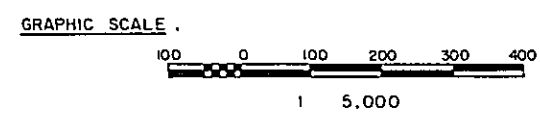
MAY 1971

DRAWING		SCHEDULE			
DWG. NO.	TITLE	DWG. NO.	TITLE	DWG. NO.	TITLE
	CIVIL WORKS :	30	CROSS SECTION, EXTENDED PARALLEL TAXIWAY (5)	58	DETAIL OF WIND CONE
1	GENERAL SITE PLAN	31	CROSS SECTION, EXTENDED PARALLEL TAXIWAY (6)	59	DETAIL OF LIGHT BASE
2	SURVEY CONTRCL LAYOUT PLAN WITH VICINITY & LOCATION MAP	32	CROSS SECTION, EXTENDED APRON (1)	60	DETAIL OF HANDHOLE AND CABLE DUCT
3	DETAIL SITE PLAN, RUNWAY EXIT TAXIWAY NO 1 (A)	33	CROSS SECTION, EXTENDED APRON (2)	61	CONSTRUCTION TIME SCHEDULE
4	DETAIL SITE PLAN, RUNWAY EXIT TAXIWAY NO 1 (B)	34	CROSS SECTION, EXTENDED APRON (3)		
5	DETAIL SITE PLAN, RUNWAY EXIT TAXIWAY NO 3	35	CROSS SECTION, FILLET IMPROVEMENT		
6	DETAIL SITE PLAN, EXTENDED PARALLEL TAXIWAY	36	DRAINAGE STRUCTURE, BOX CULVERT NO 1 (1)		
7	DETAIL SITE PLAN, EXTENDED APRON & FILLET IMPROVEMENT	37	DRAINAGE STRUCTURE, BOX CULVERT NO 1 (2)		
8	PROFILE, RUNWAY EXIT TAXIWAY NO 1	38	DRAINAGE STRUCTURE, BOX CULVERT NO 2 (1)		
9	PROFILE, RUNWAY EXIT TAXIWAY NO. 3	39	DRAINAGE STRUCTURE, BOX CULVERT NO 2 (2)		
10	PROFILE, EXTENDED PARALLEL TAXIWAY	40	DRAINAGE STRUCTURE, BOX CULVERT NO 2 (3)		
11	PROFILE, EXTENDED APRON	41	DRAINAGE STRUCTURE, BOX CULVERT NO 2 (4)		
12	TYPICAL CROSS SECTION, RUNWAY EXIT TAXIWAY	42	DRAINAGE STRUCTURE, BOX CULVERT NO 3 (1)		
13	TYPICAL CROSS SECTION, EXTENDED PARALLEL TAXIWAY	43	DRAINAGE STRUCTURE, BOX CULVERT NO 3 (2)		
14	TYPICAL CROSS SECTION, EXTENDED APRON	44	DRAINAGE STRUCTURE, BOX CULVERT NO 3 (3)		
15	TYPICAL CROSS SECTION, BORROW & DISPOSAL AREA	45	CONC PAVEMENT, JOINT PLAN, EXTENDED APRON & FILLET IMPROV'T		
16	DETAIL, DISTANCE SIGN BOARD (1)	46	CONCRETE PAVEMENT, JOINT PLAN, 2-RUNWAY EXIT TAXIWAYS		
17	DETAIL, DISTANCE SIGN BOARD (2)	47	CONCRETE PAVEMENT, JOINT PLAN, EXTENDED PARALLEL TAXIWAY		
18	CIVIL MISCELLANEOUS DETAIL	48	CONCRETE PAVEMENT, JOINT DETAILS		
19	MARKING	49	CONCRETE PAVEMENT, PARKING TIE-DOWN & GROUNDING ANCHOR		
20	CROSS SECTION, RUNWAY EXIT TAXIWAY NO 1 (1)				
21	CROSS SECTION, RUNWAY EXIT TAXIWAY NO 1 (2)		ELECTRICAL WORKS :		
22	CROSS SECTION, RUNWAY EXIT TAXIWAY NO 1 (3)	50	GENERAL ARRANGEMENT OF TAXIWAY LIGHT		
23	CROSS SECTION, RUNWAY EXIT TAXIWAY NO.3 (1)	51	DETAIL ARRANGEMENT OF TAXIWAY LIGHT (1)		
24	CROSS SECTION, RUNWAY EXIT TAXIWAY NO 3 (2)	52	DETAIL ARRANGEMENT OF TAXIWAY LIGHT (2)		
25	CROSS SECTION, RUNWAY EXIT TAXIWAY NO 3 (3)	53	DETAIL ARRANGEMENT OF TAXIWAY LIGHT (3)		
26	CROSS SECTION, EXTENDED PARALLEL TAXIWAY (1)	54	CONNECTION DIAGRAM		
27	CROSS SECTION, EXTENDED PARALLEL TAXIWAY (2)	55	SEQUENCE DIAGRAM FOR ILLUMINATION		
28	CROSS SECTION, EXTENDED PARALLEL TAXIWAY (3)	56	LAYOUT OF PANEL ARRANGEMENT		
29	CROSS SECTION, EXTENDED PARALLEL TAXIWAY (4)	57	LAYOUT OF POWER RECEIVING EQUIPMENT		



ABBREVIATION .

B M	BENCH MARK, CONCRETE MONUMENT
P I	POINT OF INTERSECTION FOR LAYOUT
S P	SURVEY POINT, IMPRESSION POINT
N O	NUMBER OF STATIONING (20M OR 100M INTERVAL)
P O T	POINT OF TURNING (ON STRAIGHT SURVEY LINE)



LEGEND :

DESCRIPTION	THIS PROJECT	EXISTING
BASIC FACILITY		
ROAD, PERIMETER OR ACCES		
BOUNDARY WITH SECURITY FENCE		
CONCRETE BOX CULVERT W/ HEADWALLS		
DIRECTION OF WATER FLOW		
EARTH OPEN DITCH		
ATTENDANT WORK AREA		
BUILDING		
CONCRETE WALL		
TREE		
CONTOUR (0.50M INTERVAL)		
POND		
BENCH MARK (GRANITE MARKER)		

GENERAL NOTES .

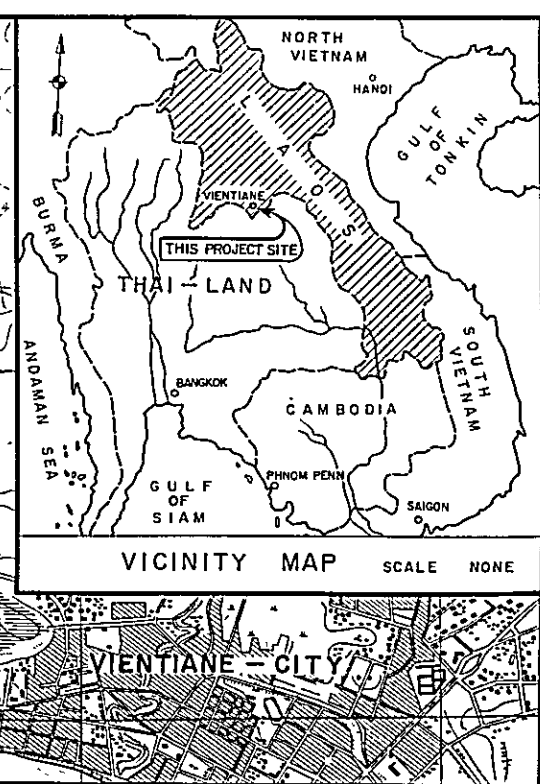
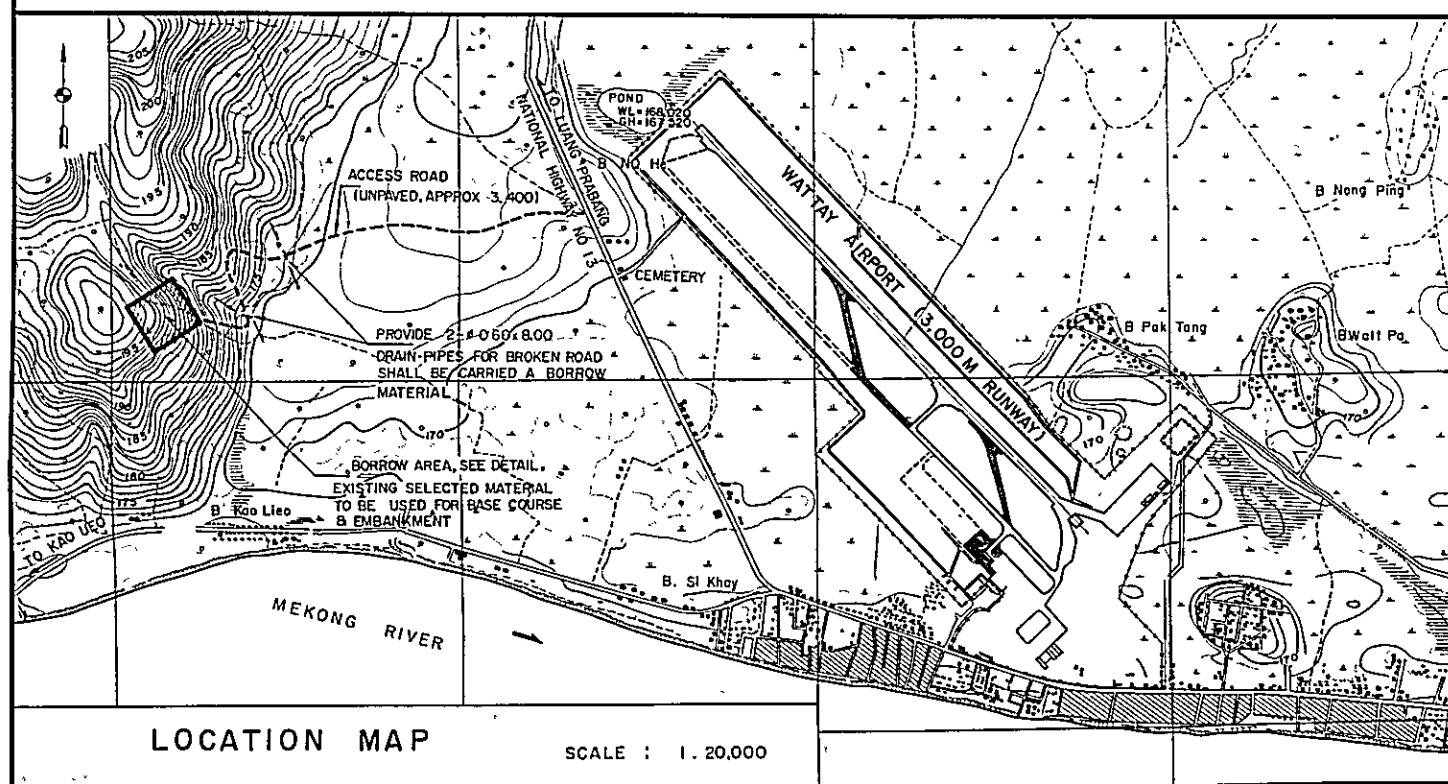
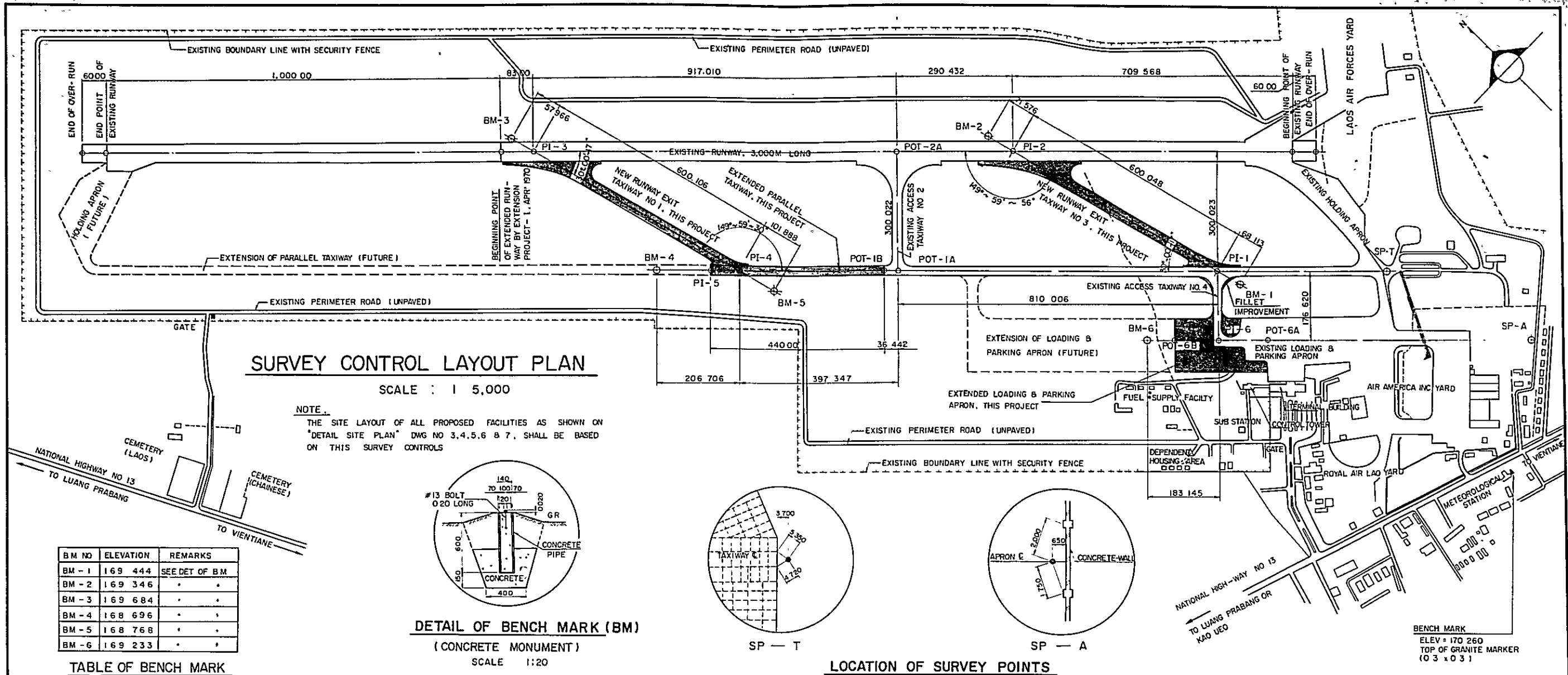
- 1 THE PROJECT SITE, CONSTRUCTION & BORROW AREA IS LOCATED ON VICINITY & LOCATION MAPS. THE SITING OF THE WORKS IS IN AIRPORT NAMED "WATTAY AIRPORT" WHICH LOCATED APPROX 3,000M NORTH - WEST FROM VIENTIANE LAOS SOUTH - EAST ASIA SEE DWG SHEET NO 2 FOR ABOVE
- 2 THE JAPANESE GOVERNMENT, THROUGH THE OVERSEAS TECHNICAL COOPERATION AGENCY (O.T.C.A., JAPAN) IN AN EFFORT TO ASSIST THE ROYAL GOVERNMENT OF LAOS IN THE CONSTRUCTION OF THESE NEW FACILITIES, AGREED ON THE SELECTION OF SITE PREPARED THE CONTRACT DRAWINGS, SPECIFICATIONS, DESIGN REPORT AND TENDER DOCUMENT FOR QUALIFIED CONTRACTOR TO PERFORM THE CONSTRUCTION OF THE PROJECT
- 3 PRINCIPAL FEATURES OF THE PROJECT AND THE STRUCTURES TO BE BUILT ARE AS SHOWN ON THIS DRAWING SHEET (SEE "DETAIL SITE PLAN" DWG NO 3, 4, 5, 6, & 7)
- 4 FOR NEW LIGHTING INSTALLATION, SEE ELECT DRAWING SHEETS
- 5 THE STORM DRAINAGE SYSTEM OF THE AIRFIELD SHALL BE DESIRED TO SOLVE AS MUCH AS PROBLEM OF CITY PLANNING AT AN EARLY STAGE
- 6 REPLACEMENT AREA, CONSTRUCTION FACILITIES AREA, DISPOSAL AREA, DEFORESTING & GRUBBING AREA IS LOCATED ON THIS PLAN
- 7 SEE NOTES ON DWG NO 1 FOR GENERAL CONDITION
- 8 THE CONTENTS OF PROPOSED DEFORESTING & GRUBBING AREA WERE 108 TREES WHICH IS #5 cm TO #30cm IN EXISTING THICKET OF ASSORTED TREE. SEE THIS PLAN

ROYAL GOVERNMENT OF LAOS
VIENTIANE AIRPORT EXTENSION PROJECT - II

GENERAL SITE PLAN

DRAWN BY <i>[Signature]</i>	SUBMITTED BY <i>[Signature]</i>
CHECKED BY <i>[Signature]</i>	APPROVED BY <i>[Signature]</i>
DATE 11/11/71	SCALE AS SHOWN DWG NO 1 OF 6

NIPPON KOEI CO., LTD.
CONSULTING ENGINEERS, TOKYO



NOTES

- ALL DIMENSIONS & ELEVATIONS ARE IN METER UNLESS OTHERWISE INDICATED
- HORIZONTAL CONTROLS BASED ON CENTER LINE OF EXISTING RUNWAY LAYOUT
- VERTICAL CONTROLS BASED ON BENCH MARK (ELEV = 170,260) WHERE LOCATED OUTSIDE THE BUILDING IN THE METEOROLOGICAL STATION ON NATIONAL HIGHWAY NO 13 TO VIENTIANE CITY
- THIS TOPOGRAPHIC MAP PREPARED BY NIPPON KOEI CO LTD SURVEYED AT MAR 1971 TO "VIENTIANE AIRPORT EXTENSION PROJECT-II"
- SEE DWG. NO 1 FOR LEGEND & ABBREVIATION

ROYAL GOVERNMENT OF LAOS
VIENTIANE AIRPORT EXTENSION PROJECT-II

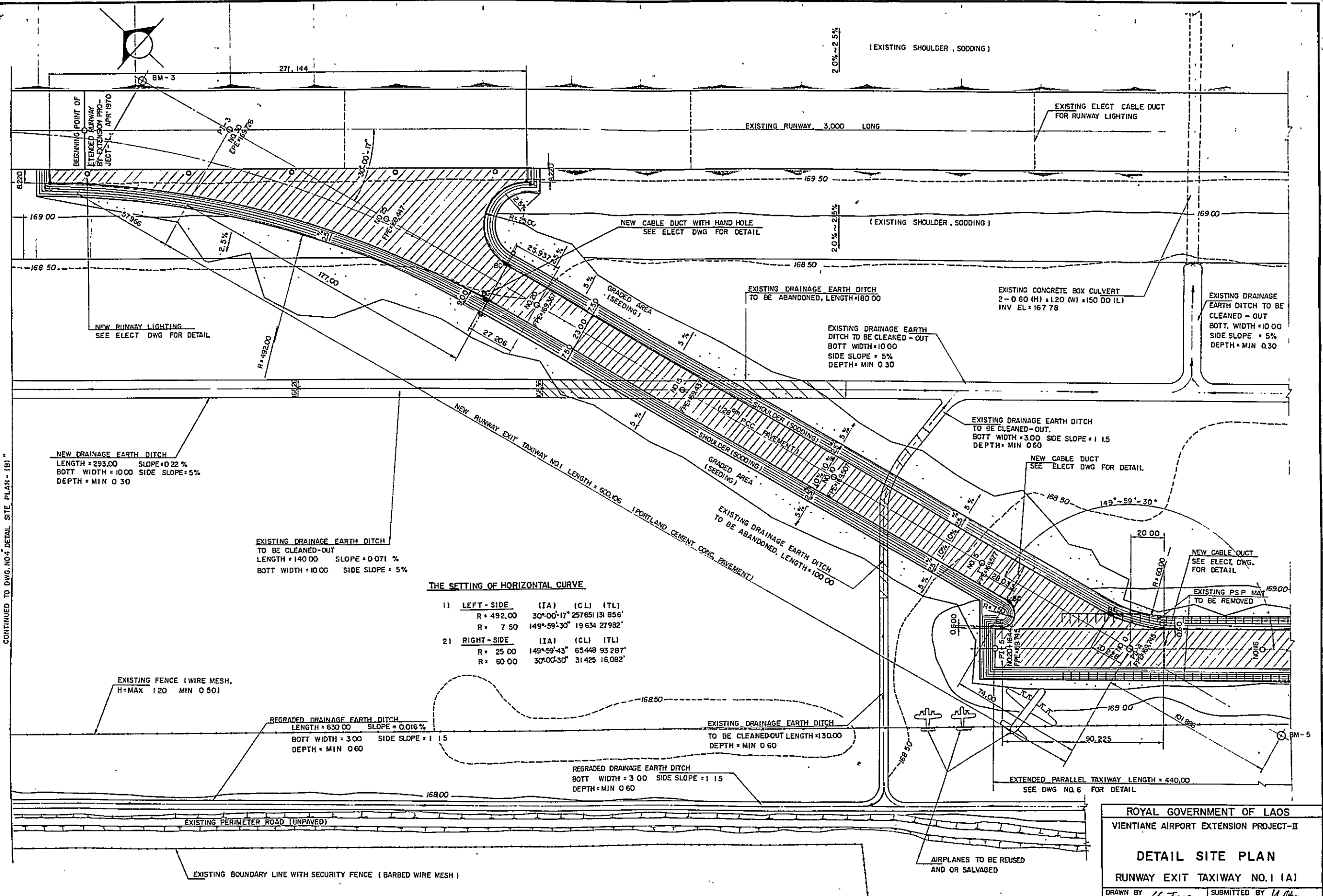
SURVEY CONTROL LAYOUT PLAN WITH VICINITY & LOCATION MAP

DRAWN BY *H. Tojima* SUBMITTED BY *Y. Shogawa*
CHECKED BY *H. Tojima* APPROVED BY _____
DATE MAY 1971 SCALE AS SHOWN DWG No 2 OF 61

NIPPON KOEI CO., LTD.
CONSULTING ENGINEERS, TOKYO

GRAPHIC SCALE
1 : 5,000
1 : 20,000

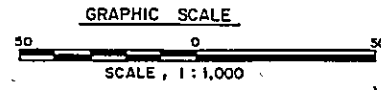
CONTINUED TO DWG. NO. 4 DETAIL SITE PLAN - (B)



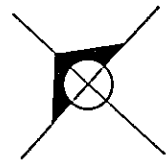
THE SETTING OF HORIZONTAL CURVE

NO.	SIDE	STA.	ANGLE	PT. (TA)	PT. (CL)	PT. (TL)
1)	LEFT - SIDE	(TA)	30°-00'-17"	257651.13	856'	
		(TL)				
		R = 492.00				
2)	RIGHT - SIDE	(TA)	149°-59'-30"	19634.27	982'	
		(TL)				
		R = 7.50				
		R = 25.00	149°-59'-43"	65448.93	287'	
		R = 60.00	30°-00'-30"	31425.16	082'	

NOTE :
 1. SEE DWG. NO. 7 FOR NOTES & LEGEND
 2. STA. 0+00 (PI-4) EQUALS STA. 19+17.353 ON EXTENDED PARALLEL TAXIWAY.



ROYAL GOVERNMENT OF LAOS	
VIENTIANE AIRPORT EXTENSION PROJECT-II	
DETAIL SITE PLAN	
RUNWAY EXIT TAXIWAY NO. 1 (A)	
DRAWN BY <i>U. Jongs</i>	SUBMITTED BY <i>U. Jongs</i>
CHECKED BY <i>U. Jongs</i>	APPROVED BY
DATE MAY 1971	SCALE: 1:1,000 DWG NO 3 OF 61
NIPPON KOEI CO., LTD. CONSULTING ENGINEERS, TOKYO	



3 CONCRETE OPEN DITCH (OUTLET)
25 (H) x 2.25 (W) x 28.60 (L)
INV. EL. = 167.389

EXISTING CONCRETE OPEN DITCH (INLET)
MAX. 1.25 (H) x 2.25 (W) x 24.50 (L)
INLET INV. EL. = 167.593

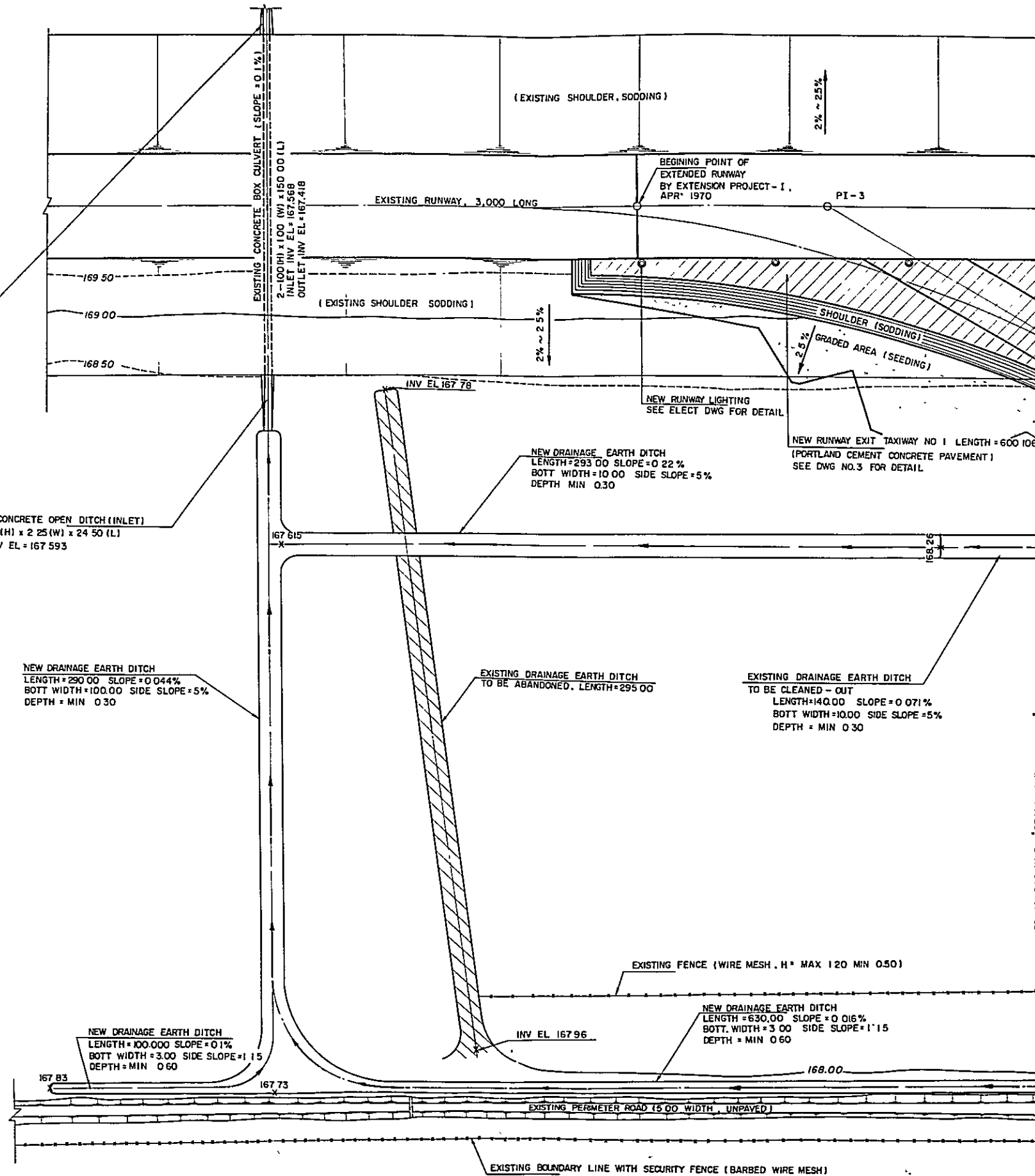
NEW DRAINAGE EARTH DITCH
LENGTH = 290.00 SLOPE = 0.044%
BOTT. WIDTH = 100.00 SIDE SLOPE = 5%
DEPTH = MIN. 0.30

EXISTING DRAINAGE EARTH DITCH
TO BE ABANDONED, LENGTH = 295.00

EXISTING DRAINAGE EARTH DITCH
TO BE CLEANED - OUT
LENGTH = 140.00 SLOPE = 0.071%
BOTT. WIDTH = 10.00 SIDE SLOPE = 5%
DEPTH = MIN. 0.30

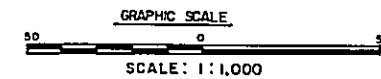
NEW DRAINAGE EARTH DITCH
LENGTH = 100.00 SLOPE = 0.1%
BOTT. WIDTH = 3.00 SIDE SLOPE = 1:1.5
DEPTH = MIN. 0.60

NEW DRAINAGE EARTH DITCH
LENGTH = 630.00 SLOPE = 0.016%
BOTT. WIDTH = 3.00 SIDE SLOPE = 1:1.5
DEPTH = MIN. 0.60



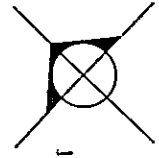
CONTINUED TO DWG NO 3, DETAIL SITE PLAN - (A)

- NOTE.**
1. ALL DIMENSIONS AND ELEVATIONS ARE IN METER UNLESS OTHERWISE INDICATED
 2. FOR LEGEND SEE DWG. NO 7



ROYAL GOVERNMENT OF LAOS	
VIENTIANE AIRPORT EXTENSION PROJECT - II	
DETAIL SITE PLAN	
RUNWAY EXIT TAXIWAY NO. 1 (B)	
DRAWN BY <i>H. Taya</i>	SUBMITTED BY <i>U. Phommavong</i>
CHECKED BY <i>J. Mait</i>	APPROVED BY
DATE: MAY 1971	SCALE: 1:1,000 DWG No 4 OF 61
NIPPON KOEI CO., LTD.	
CONSULTING ENGINEERS, TOKYO	

71.576



BM-2

271 134

(EXISTING SHOULDER, SODDING)

20% ~ 2.5%

EXISTING ELECT. CABLE DUCT

EXISTING RUNWAY, 3,000 LONG

(EXISTING SHOULDER, SODDING)

169.00

NEW RUNWAY EXIT TAXIWAY NO. 3
(PORTLAND CEMENT CONCRETE PAVEMENT)
LENGTH = 600.048

EXISTING DRAINAGE EARTH DITCH
TO BE CLEANED-OUT LENGTH = 200.00
SLOPE = 0.053 %
BOTT. WIDTH = 10.00 SIDE SLOPE = 5 %
DEPTH = MIN 0.30

NEW RUNWAY LIGHTING.
SEE ELECT DWG FOR DETAIL

R=492.00

R=25.00

20% ~ 2.5%

168.50

EXISTING DRAINAGE EARTH DITCH
TO BE REGRADED
BOTT. WIDTH = 10.00 SIDE SLOPE = 5 %
DEPTH = MIN 0.30

NEW CABLE DUCT WITH HAND HOLE.
SEE ELECT DWG FOR DETAIL

EXISTING WIND CONE
TO BE REMOVED AND RELOCATED
SEE ELECT DWG FOR DETAIL

NEW CABLE DUCT.
SEE ELECT DWG FOR DETAIL

THE SETTING OF HORIZONTAL CURVE :

- 1) LEFT-SIDE (IA) (CL) (TL)
R=492.00 30°-00'-04" 257.621 131.836
R= 7.50 149°-59'-43" 19.634 27.986
- 2) RIGHT-SIDE (IA) (CL) (TL)
R= 25.00 149°-59'-56" 65.449 93.298
R= 60.00 30°-00'-17" 31.421 16.080

NEW BOX CULV NO. 1
LENGTH = 114.00 SLOPE = 0.02 %
INV. EL = 168.337 INV. EL. = 168.365
SEE DWG NO 36, 37 FOR DETAIL



RELOCATED WIND CONE
BY THIS PROJECT.
SEE ELECT. DWG. FOR DETAIL

200.00

EXISTING SHOULDER, SODDING

EXISTING PARALLEL TAXIWAY

EXISTING SHOULDER, SODDING

NOTES :

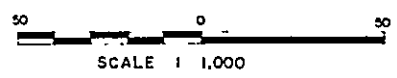
- 1 ALL DIMENSIONS AND ELEVATIONS ARE IN METER UNLESS OTHERWISE INDICATED
- 2 FOR LEGEND SEE DWG NO 7

EXISTING FENCE (WIRE MESH, H = MAX 120 MIN. 0.50)

EXISTING DRAINAGE EARTH DITCH
TO BE CLEANED - OUT
DEPTH = MIN 0.60

SEE DWG NO 7 FOR DETAIL
SITE PLAN OF THE FILLET
IMPROVEMENT.

GRAPHIC SCALE



SCALE 1 : 1,000

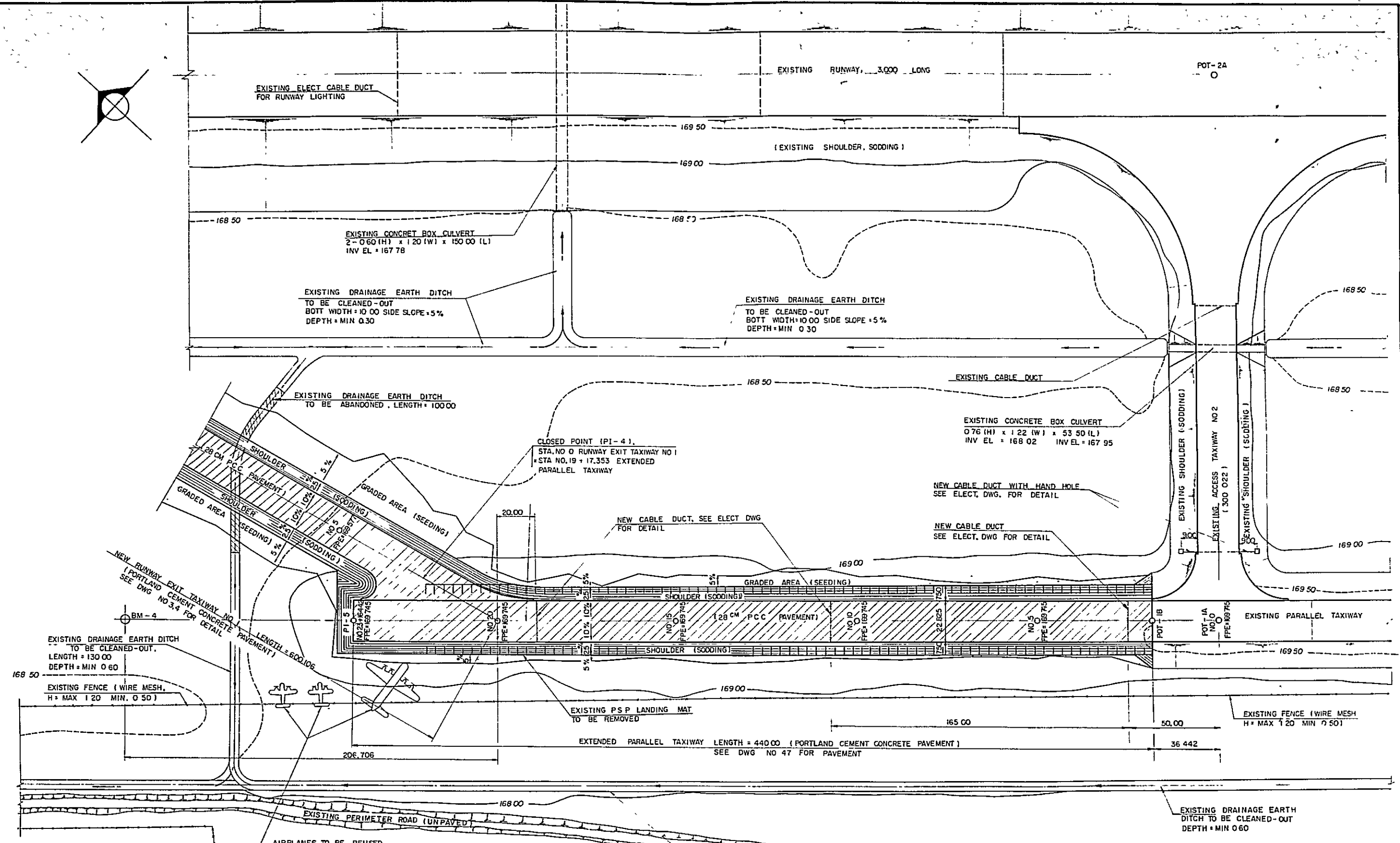
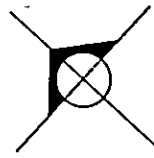
EXISTING DRAINAGE EARTH
DITCH TO BE ABANDONED

ROYAL GOVERNMENT OF LAOS
VIENTIANE AIRPORT EXTENSION PROJECT-II

DETAIL SITE PLAN
RUNWAY EXIT TAXIWAY NO. 3

DRAWN BY *N. Jafeth* SUBMITTED BY *U. Phayoum*
CHECKED BY *H. Hattori* APPROVED BY _____
DATE *MAY 1971* SCALE 1 : 1,000 DWG No 5 OF 61

NIPPON KOEI CO., LTD.
CONSULTING ENGINEERS, TOKYO



NOTES

- 1 ALL DIMENSIONS AND ELAVATIONS ARE IN METER UNLESS OTHERWISE INDICATED
- 2 FOR LEGEND, SEE DWG NO.7.
- 3 STATIONING INTERVAL ARE 100.00 METER

GRAPHIC SCALE

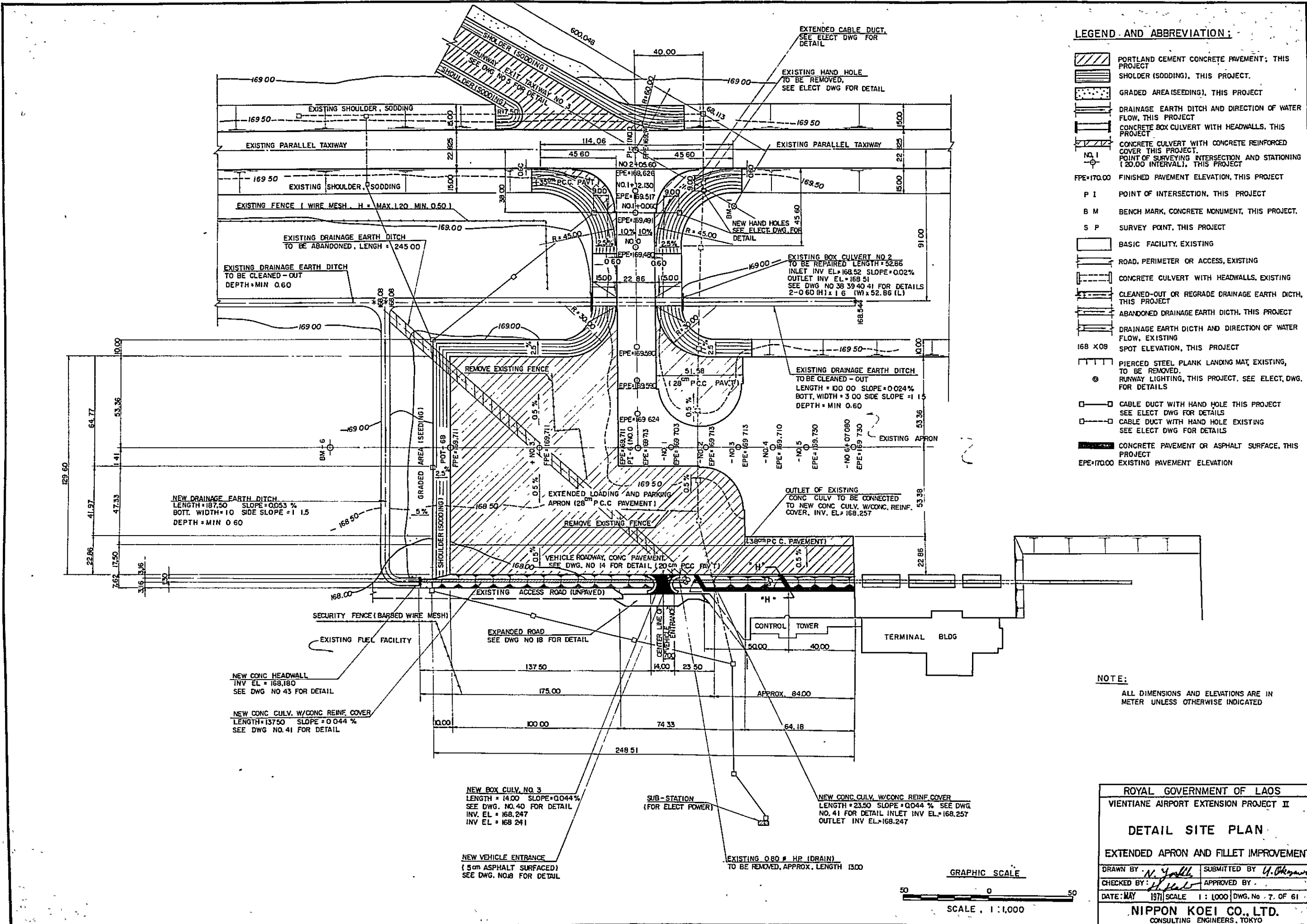
SCALE: 1:1,000

ROYAL GOVERNMENT OF LAOS
VIENTIANE AIRPORT EXTENSION PROJECT-II

DETAIL SITE PLAN
EXTENDED PARALLEL TAXIWAY

DRAWN BY *N. Yodda* SUBMITTED BY *V. Chansan*
CHECKED BY *H. Hattori* APPROVED BY *H. Hattori*
DATE 11/17/57 SCALE: 1:1,000 DWG NO. 6 OF 61

NIPPON KOEI CO., LTD
CONSULTING ENGINEERS, TOKYO



- LEGEND AND ABBREVIATION:**
- PORTLAND CEMENT CONCRETE PAVEMENT; THIS PROJECT
 - SHOULDER (SOODING), THIS PROJECT
 - GRADED AREA (SEEDING), THIS PROJECT
 - DRAINAGE EARTH DITCH AND DIRECTION OF WATER FLOW, THIS PROJECT
 - CONCRETE BOX CULVERT WITH HEADWALLS, THIS PROJECT
 - CONCRETE CULVERT WITH CONCRETE REINFORCED COVER THIS PROJECT
 - POINT OF SURVEYING INTERSECTION AND STATIONING (20.00 INTERVAL), THIS PROJECT
 - FINISHED PAVEMENT ELEVATION, THIS PROJECT
 - P I POINT OF INTERSECTION, THIS PROJECT
 - B M BENCH MARK, CONCRETE MONUMENT, THIS PROJECT.
 - S P SURVEY POINT, THIS PROJECT
 - BASIC FACILITY, EXISTING
 - ROAD, PERIMETER OR ACCESS, EXISTING
 - CONCRETE CULVERT WITH HEADWALLS, EXISTING
 - CLEANED-OUT OR REGRADE DRAINAGE EARTH DITCH, THIS PROJECT
 - ABANDONED DRAINAGE EARTH DITCH, THIS PROJECT
 - DRAINAGE EARTH DITCH AND DIRECTION OF WATER FLOW, EXISTING
 - 168 X 08 SPOT ELEVATION, THIS PROJECT
 - PIERCED STEEL PLANK LANDING MAT, EXISTING, TO BE REMOVED.
 - RUNWAY LIGHTING, THIS PROJECT. SEE ELECT. DWG. FOR DETAILS
 - CABLE DUCT WITH HAND HOLE THIS PROJECT SEE ELECT DWG FOR DETAILS
 - CABLE DUCT WITH HAND HOLE EXISTING SEE ELECT DWG FOR DETAILS
 - CONCRETE PAVEMENT OR ASPHALT SURFACE, THIS PROJECT
 - EPE=170.00 EXISTING PAVEMENT ELEVATION

NOTE:
ALL DIMENSIONS AND ELEVATIONS ARE IN METER UNLESS OTHERWISE INDICATED

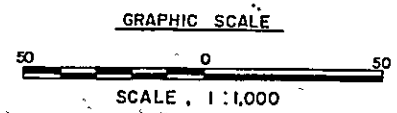
ROYAL GOVERNMENT OF LAOS
VIENTIANE AIRPORT EXTENSION PROJECT II

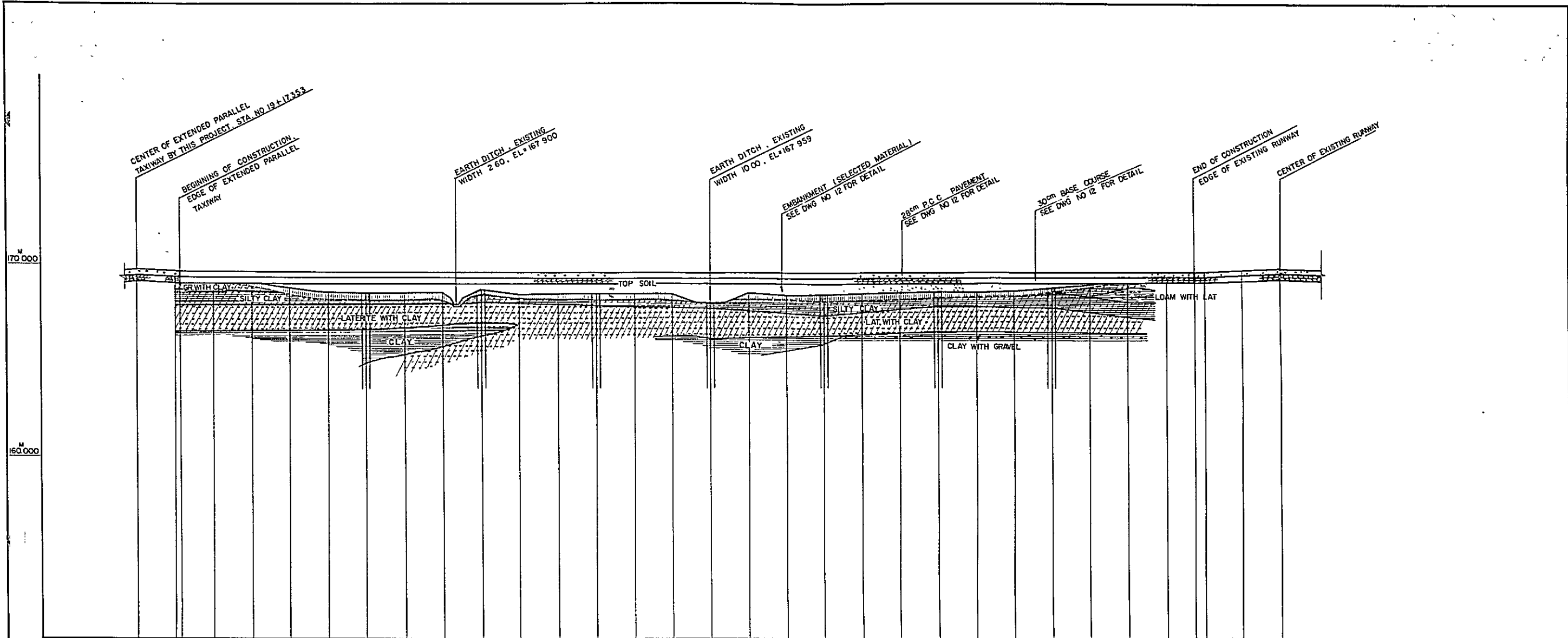
DETAIL SITE PLAN
EXTENDED APRON AND FILLET IMPROVEMENT

DRAWN BY: *N. Yallh* SUBMITTED BY: *U. Okonawa*
CHECKED BY: *H. Hala* APPROVED BY: _____

DATE: MAY 1971 SCALE 1:1000 DWG. No. 7 OF 61

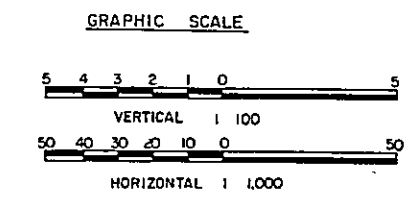
NIPPON KOEI CO., LTD.
CONSULTING ENGINEERS, TOKYO





STATION	DIST.	ADDSST.	EXISTING GR. EL.	FINISHED PAVT. EL.	CUT	FILL	SLOP.
NO. 0	0	0	169.745	169.745		0.264	0.07%
NO. 1	20.000	20.000	169.645	169.645		0.261	
NO. 2	40.000	40.000	169.619	169.619		0.314	
NO. 3	60.000	60.000	169.605	169.605		0.563	
NO. 4	80.000	80.000	169.591	169.591		0.846	
NO. 5	100.000	100.000	169.577	169.577		1.040	
NO. 6	120.000	120.000	169.563	169.563		1.084	
NO. 7	140.000	140.000	169.549	169.549		1.063	
NO. 8	160.000	160.000	169.535	169.535		1.043	
NO. 9	180.000	180.000	169.521	169.521		0.834	
NO. 10	200.000	200.000	169.507	169.507		1.096	
NO. 11	220.000	220.000	169.493	169.493		1.087	
NO. 12	240.000	240.000	169.479	169.479		1.059	
NO. 13	260.000	260.000	169.465	169.465		1.061	
NO. 14	280.000	280.000	169.451	169.451		1.047	
NO. 15	300.000	300.000	169.437	169.437		1.478	
NO. 16	320.000	320.000	169.423	169.423		1.342	
NO. 17	340.000	340.000	169.409	169.409		0.948	
NO. 18	360.000	360.000	169.395	169.395		1.077	
NO. 19	380.000	380.000	169.381	169.381		1.023	
NO. 20	400.000	400.000	169.367	169.367		0.950	
NO. 21	420.000	420.000	169.353	169.353		0.866	
NO. 22	440.000	440.000	169.339	169.339		0.833	
NO. 23	460.000	460.000	169.325	169.325		0.911	
NO. 24	480.000	480.000	169.311	169.311		0.880	
NO. 25	500.000	500.000	169.297	169.297		0.732	
NO. 26	520.000	520.000	169.283	169.283		0.549	
NO. 27	540.000	540.000	169.269	169.269		0.288	
NO. 28	560.000	560.000	169.255	169.255		0.152	
NO. 29	580.000	580.000	169.241	169.241		0.000	
NO. 30	600.000	600.000	169.227	169.227			

NOTE: ALL DIMENSIONS & ELEVATIONS ARE IN METER UNLESS OTHERWISE INDICATED



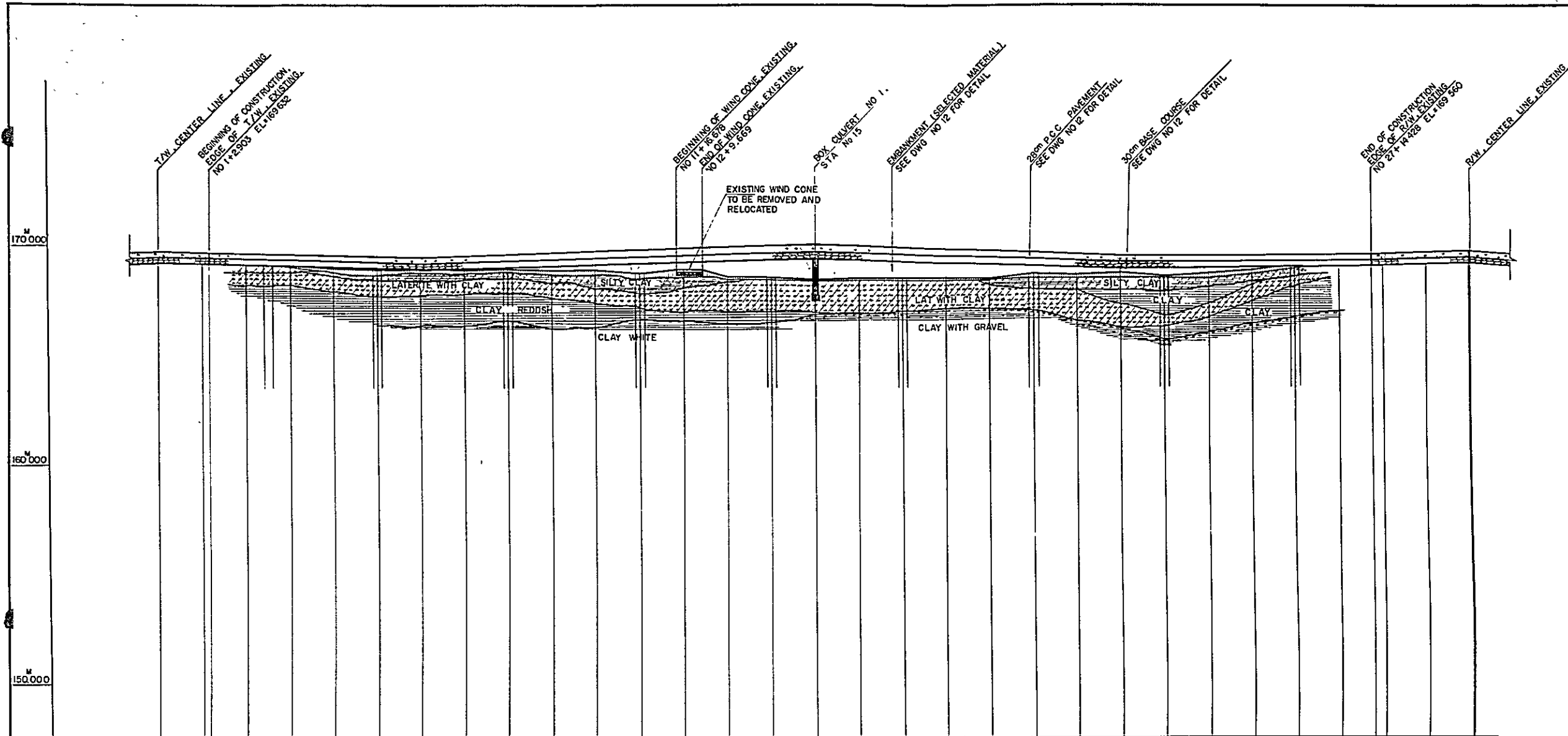
ROYAL GOVERNMENT OF LAOS
 VIENTIANE AIRPORT EXTENSION PROJECT - II

PROFILE, RUNWAY EXIT TAXIWAY NO. 1

DRAWN BY: [Signature] SUBMITTED BY: [Signature]
 CHECKED BY: [Signature] APPROVED BY: [Signature]

DATE: MAY 1971 SCALE: AS SHOWN DWG No. 8 OF 61

NIPPON KOEI CO., LTD.
 CONSULTING ENGINEERS TOKYO



CURVE	STATION	DIST	ADJUST	EXISTING GR. EL.	FINISHED PAVT. EL.	CUT	FILL	SLOPE
	NO 0	0	0	169.741			0.000	0.47% 22.903
	NO 1	20.000	20.000	169.641			0.221	0.28% 97.097
	+2.903	2.903	22.903	169.632	169.632		0.424	
	NO 2	17.097	40.000	169.566			0.553	
	NO 3	20.000	60.000	169.530			0.639	
	NO 4	20.000	80.000	169.474			0.409	
	NO 5	20.000	100.000	169.418			0.601	
	NO 6	20.000	120.000	169.362			0.671	
	NO 7	20.000	140.000	169.306			0.794	
	NO 8	20.000	160.000	169.250			0.896	
	NO 9	20.000	180.000	169.194			1.125	0.45% 180.000
	NO 10	20.000	200.000	169.138			1.056	
	NO 11	20.000	220.000	169.082			1.441	
	NO 12	20.000	240.000	169.026			1.538	
	NO 13	20.000	260.000	168.970			1.704	
	NO 14	20.000	280.000	168.914			1.584	
	NO 15	20.000	300.000	168.858			1.405	0.51% 140.000
	NO 16	20.000	320.000	168.802			1.355	
	NO 17	20.000	340.000	168.746			1.269	
	NO 18	20.000	360.000	168.690			0.970	
	NO 19	20.000	380.000	168.634			0.909	
	NO 20	20.000	400.000	168.578			0.732	0.09% 114.428
	NO 21	20.000	420.000	168.522			0.906	
	NO 22	20.000	440.000	168.466			0.779	
	NO 23	20.000	460.000	168.410			0.631	
	NO 24	20.000	480.000	168.354			0.429	
	NO 25	20.000	500.000	168.298			0.204	0.32% 45.620
	NO 26	20.000	520.000	168.242				
	NO 27	20.000	540.000	168.186				
	+14.428	14.428	554.428	168.130				
	NO 28	5.572	560.000	168.074				
	NO 29	20.000	580.000	168.018				
	NO 30	20.000	600.000	167.962				
	+0.048	0.048	600.048	167.906				

NOTE:
FOR GRAPHIC SCALE & NOTE SEE DWG No 8

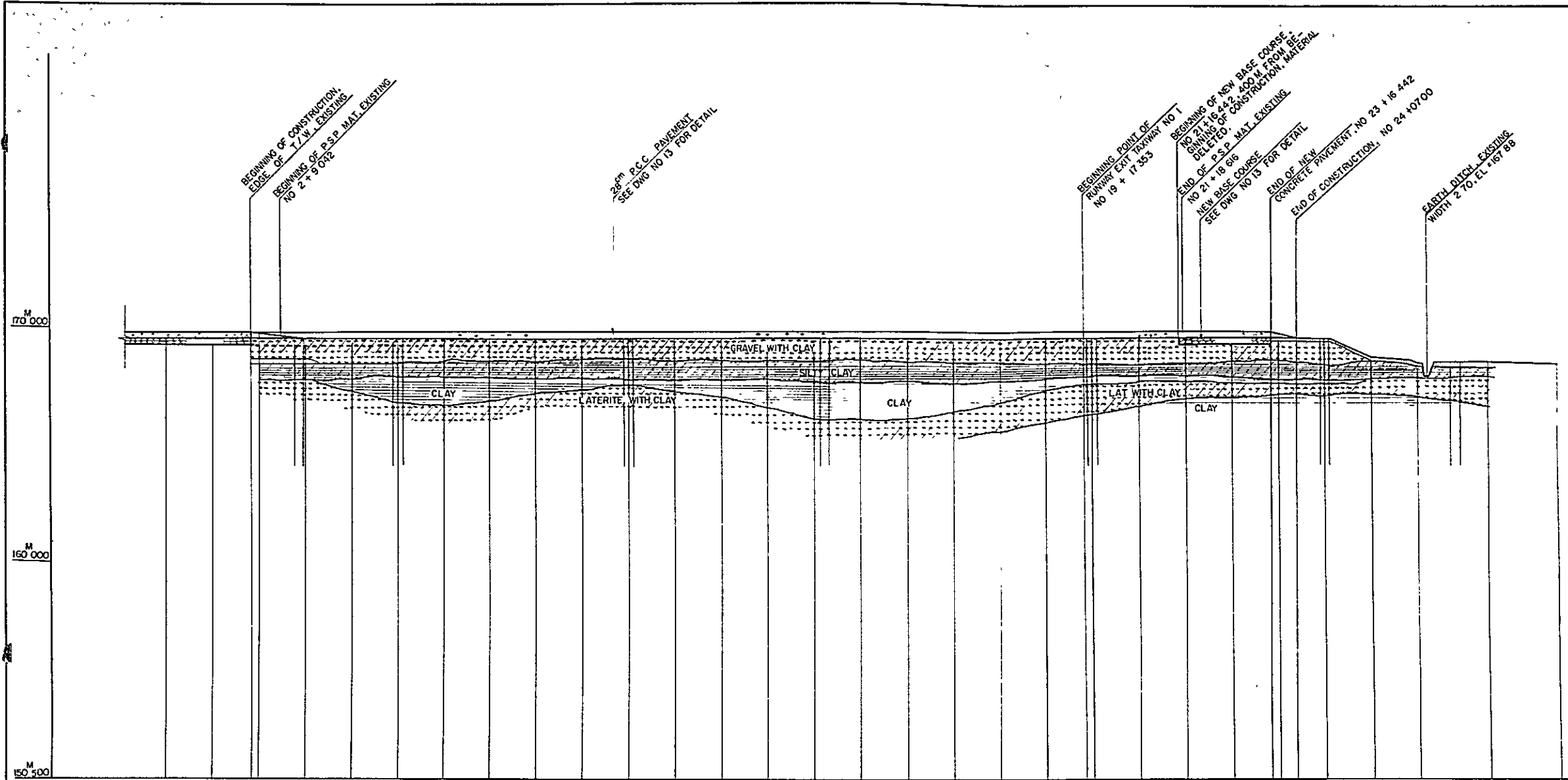
ROYAL GOVERNMENT OF LAOS
VIENTIANE AIRPORT EXTENSION PROJECT-II

PROFILE, RUNWAY EXIT
TAXIWAY NO. 3

DRAWN BY: [Signature] SUBMITTED BY: [Signature]
CHECKED BY: [Signature] APPROVED BY: [Signature]

DATE: MAY 1971 SCALE: 1:1000 DWG. No 9 OF 61

NIPPON KOEI CO., LTD.
CONSULTING ENGINEERS, TOKYO



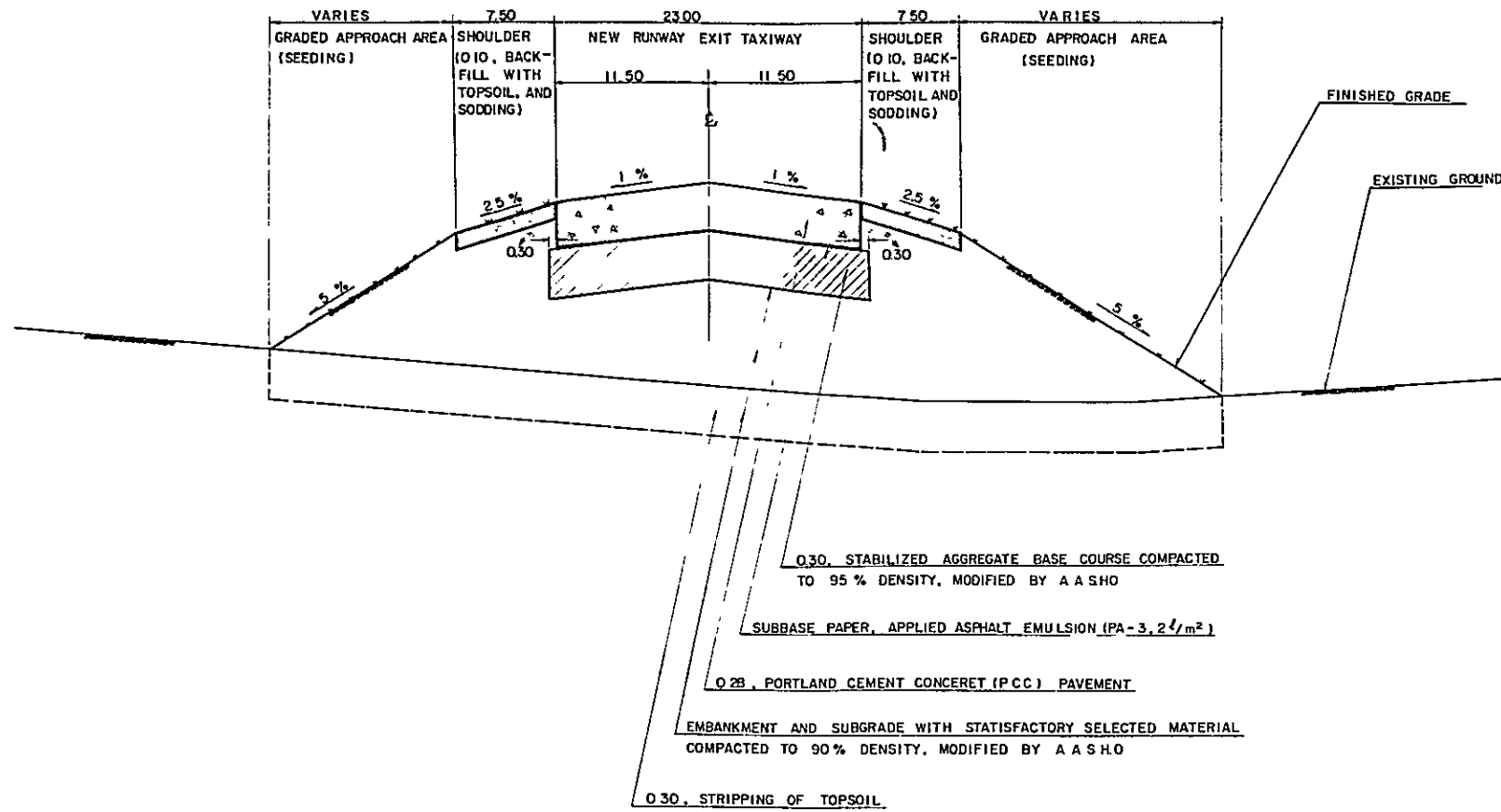
STATION	CURVE	DIST.	ADDS	EXISTING GR. EL.	FINISHED PROFILE	CUT	FILL	SLOPE
NO 0		0	0	169 745				LEVEL 169 745
NO 1		20 000	20 000	169 745			0 000	LEVEL 36 442
NO 2		16 442	36 442	169 745			0 061	LEVEL 169 745
NO 3		3 558	40 000	169 684			0 254	
NO 4		20 000	60 000	169 491			0 283	
NO 5		20 000	80 000	169 462			0 264	
NO 6		20 000	100 000	169 481			0 282	
NO 7		20 000	120 000	169 463			0 313	
NO 8		20 000	140 000	169 433			0 336	
NO 9		20 000	160 000	169 406			0 299	
NO 10		20 000	180 000	169 446			0 285	
NO 11		20 000	200 000	169 460			0 328	
NO 12		20 000	220 000	169 417			0 292	
NO 13		20 000	240 000	169 453			0 320	
NO 14		20 000	260 000	169 425			0 313	
NO 15		20 000	280 000	169 432			0 292	
NO 16		20 000	300 000	169 453			0 293	
NO 17		20 000	320 000	169 452			0 295	
NO 18		20 000	340 000	169 450			0 503	
NO 19		20 000	360 000	169 442			0 305	
NO 20		17 353	397 353	169 465			0 280	
NO 21		2 647	400 000	169 475			0 270	
NO 22		20 000	420 000	169 464			0 276	
NO 23		20 000	440 000	169 471			0 274	
NO 24		20 000	460 000	169 490			0 255	
NO 25		16 442	476 442	169 500			0 245	
NO 26		3 558	480 000	169 555			0 000	
NO 27		7 000	487 000	169 500				
NO 28		13 000	500 000	168 428				
NO 29		20 000	520 000	168 671				
NO 30		16 442	536 442	169 610				
NO 31		3 558	540 000	169 491				
NO 32		30 000	570 000	168 497				
NO 33		30 000	600 000	168 448				

NOTE.
FOR GRAPHIC SCALE & NOTE SEE DWG No 8

ROYAL GOVERNMENT OF LAOS
 VIENTIANE AIRPORT EXTENSION PROJECT-II
 PROFILE, EXTENDED PARALLEL TAXIWAY

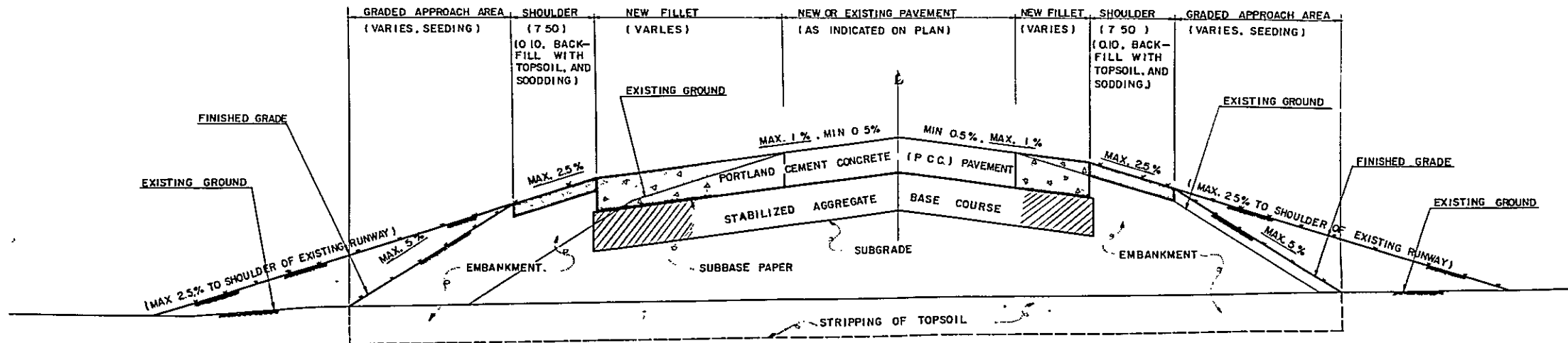
DRAWN BY *[Signature]* SUBMITTED BY *[Signature]*
 CHECKED BY *[Signature]* APPROVED BY *[Signature]*
 DATE MAY 1971 SCALE 1:1,000 DWG No 10 CF

NIPPON KOEI CO., LTD.
 CONSULTING ENGINEERS TOKYO



RUNWAY EXIT TAXIWAY NO. 1 & NO. 3

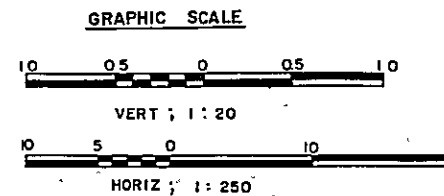
SCALE HORIZ 1 : 250, VERT 1 : 20



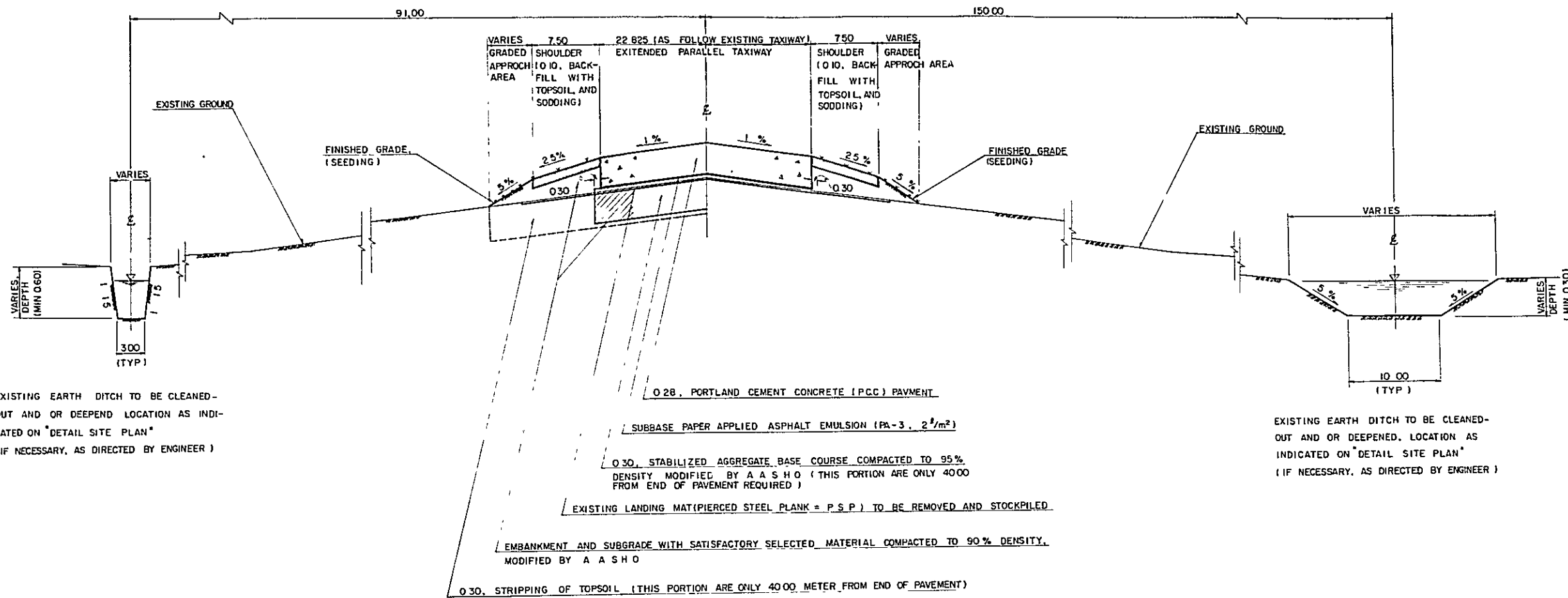
NOTE: ALL DIMENSIONS AND ELEVATIONS ARE IN METER UNLESS OTHERWISE INDICATED

- NOTE:
- SEE TYPICAL SECTION OF "RUNWAY EXIT TAXIWAY" FOR EXPLANATION ON EACH SECTION.
 - THICKNESS OF CONCRETE PAVEMENT FOR FILLET IMPROVEMENT, SHALL BE PROPOSED 0.350.
 - THICKNESS OF BASE COURSE FOR FILLET IMPROVEMENT, SHALL BE PROPOSED 0.300.

FLEXIBLE GRADING
(FOR FILLET IMPROVEMENT & TRANSITION)
SCALE HORIZ. 1:250, VERT. 1:20



ROYAL GOVERNMENT OF LAOS	
VIENTIANE AIRPORT EXTENSION PROJECT-II	
TYPICAL CROSS SECTION . RUNWAY EXIT TAXIWAY	
DRAWN BY: <i>N. Jindha</i>	SUBMITTED BY: <i>U. Chayoua</i>
CHECKED BY: <i>H. Phat</i>	APPROVED BY:
DATE MAY - 1971	SCALE: AS SHOWN DWG No. 12 OF 61
NIPPON KOEI CO., LTD. CONSULTING ENGINEERS, TOKYO	



EXISTING EARTH DITCH TO BE CLEANED-
OUT AND OR DEEPEEN LOCATION AS INDI-
CATED ON "DETAIL SITE PLAN"
(IF NECESSARY, AS DIRECTED BY ENGINEER)

EXISTING EARTH DITCH TO BE CLEANED-
OUT AND OR DEEPEEN. LOCATION AS
INDICATED ON "DETAIL SITE PLAN"
(IF NECESSARY, AS DIRECTED BY ENGINEER)

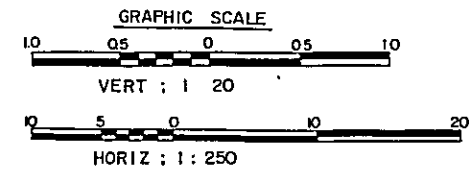
0.28, PORTLAND CEMENT CONCRETE (PCC) PAVEMENT
 SUBBASE PAPER APPLIED ASPHALT EMULSION (PA-3, 2^l/m²)
 0.30, STABILIZED AGGREGATE BASE COURSE COMPACTED TO 95%
 DENSITY MODIFIED BY A A S H O (THIS PORTION ARE ONLY 4000
 FROM END OF PAVEMENT REQUIRED)
 EXISTING LANDING MAT (PIERCED STEEL PLANK = P.S.P.) TO BE REMOVED AND STOCKPILED.
 EMBANKMENT AND SUBGRADE WITH SATISFACTORY SELECTED MATERIAL COMPACTED TO 90% DENSITY,
 MODIFIED BY A A S H O
 0.30, STRIPPING OF TOPSOIL (THIS PORTION ARE ONLY 4000 METER FROM END OF PAVEMENT)

EXTENDED PARALLEL TAXIWAY

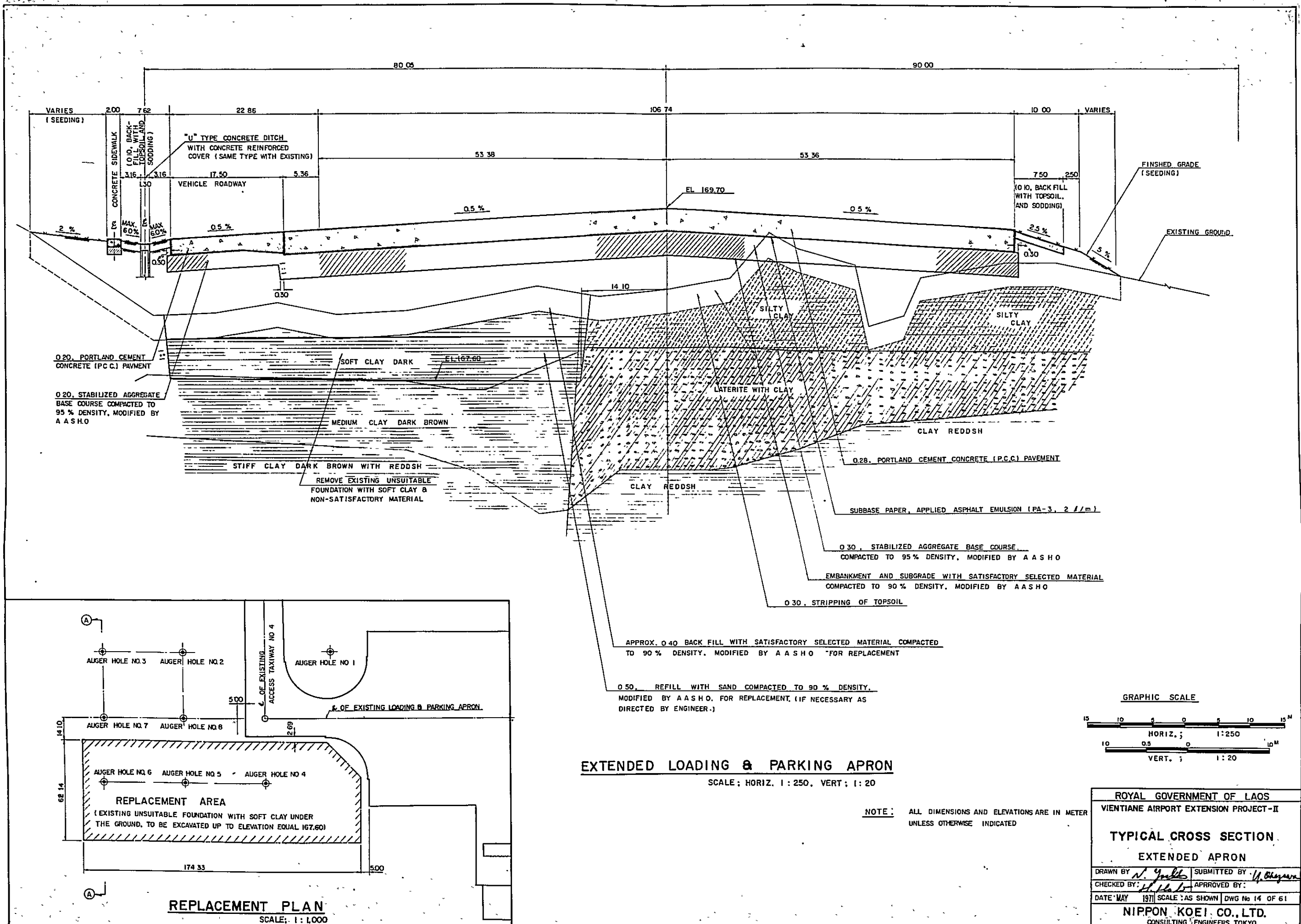
SCALE HORIZ 1 250 . VERT 1 20

- NOTE.** FOR ECONOMICAL CONSTRUCTION, SEE NOTES AS FOLLOWINGS,
- 1) BASE COURSE . 400.00 METERS FROM BEGINNING POINT OF TAXIWAY EXTENSION, ITS WILL BE DELETED BASE COURSE MATERIAL ON ALL REQUIREMENT EXCEPT COMPACTION
 - 2) STRIPPING OF TOPSOIL . 400.00 METERS AS SAME LENGTH OF SAVED BASE COURSE, ITS WILL BE DELETED

NOTE:
ALL DIMENSIONS AND ELEVATIONS ARE IN METER
UNLESS OTHERWISE INDICATED



ROYAL GOVERNMENT OF LAOS	
VIENTIANE AIRPORT EXTENSION PROJECT-II	
TYPICAL CROSS SECTION	
EXTENDED PARALLEL TAXIWAY	
DRAWN BY: <i>N. Yoshida</i>	SUBMITTED BY: <i>H. Ohgawa</i>
CHECKED BY: <i>H. Ohgawa</i>	APPROVED BY:
DATE MAY 1971	SCALE AS SHOWN DWG No 13 OF 61
NIPPON KOEI CO., LTD.	
CONSULTING ENGINEERS, TOKYO	



VARIES
(SEEDING)

CONCRETE SIDEWALK
(0.10, BACK-FILL WITH TOPSOIL AND SODDING)

"U" TYPE CONCRETE DITCH
WITH CONCRETE REINFORCED
COVER (SAME TYPE WITH EXISTING)

VEHICLE ROADWAY

FINISHED GRADE
(SEEDING)

EXISTING GROUND

0.20, PORTLAND CEMENT
CONCRETE (P.C.C.) PAVEMENT

0.20, STABILIZED AGGREGATE
BASE COURSE COMPACTED TO
95% DENSITY, MODIFIED BY
AASHO

SOFT CLAY DARK
EL 167.60

MEDIUM CLAY DARK BROWN

STIFF CLAY DARK BROWN WITH REDDISH

REMOVE EXISTING UNSUITABLE
FOUNDATION WITH SOFT CLAY &
NON-SATISFACTORY MATERIAL

SILTY CLAY

LATERITE WITH CLAY

CLAY REDDISH

0.28, PORTLAND CEMENT CONCRETE (P.C.C.) PAVEMENT

SUBBASE PAPER, APPLIED ASPHALT EMULSION (PA-3, 2 // m)

0.30, STABILIZED AGGREGATE BASE COURSE
COMPACTED TO 95% DENSITY, MODIFIED BY AASHO

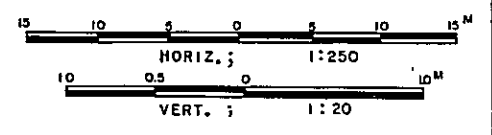
EMBANKMENT AND SUBGRADE WITH SATISFACTORY SELECTED MATERIAL
COMPACTED TO 90% DENSITY, MODIFIED BY AASHO

0.30, STRIPPING OF TOPSOIL

APPROX. 0.40 BACK FILL WITH SATISFACTORY SELECTED MATERIAL COMPACTED
TO 90% DENSITY, MODIFIED BY AASHO FOR REPLACEMENT

0.50, REFILL WITH SAND COMPACTED TO 90% DENSITY,
MODIFIED BY AASHO, FOR REPLACEMENT, (IF NECESSARY AS
DIRECTED BY ENGINEER.)

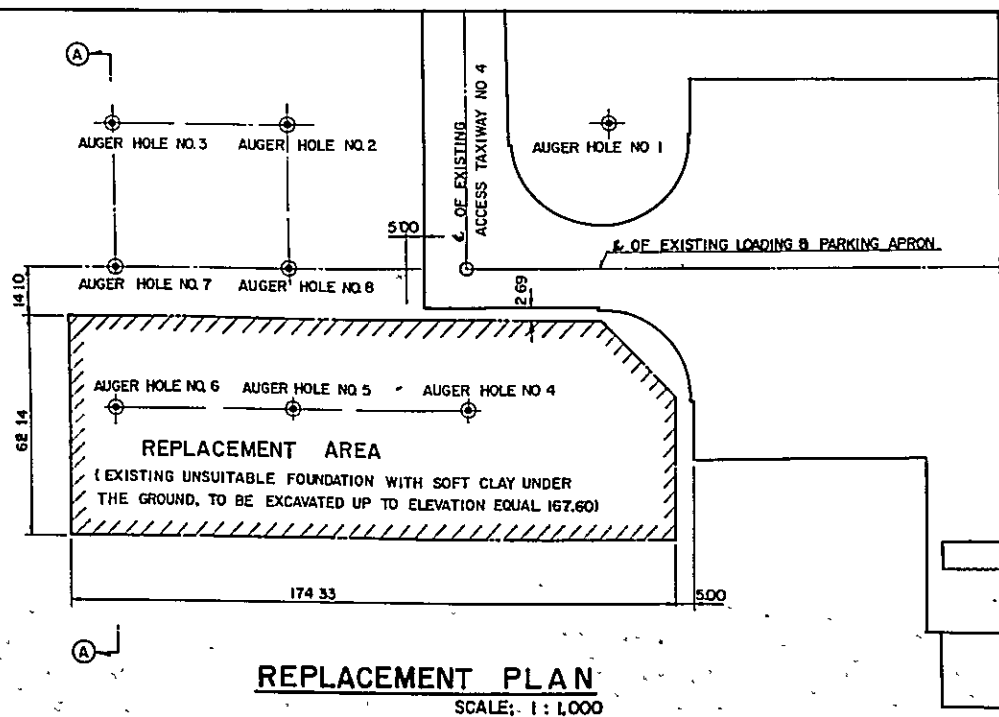
GRAPHIC SCALE



EXTENDED LOADING & PARKING APRON

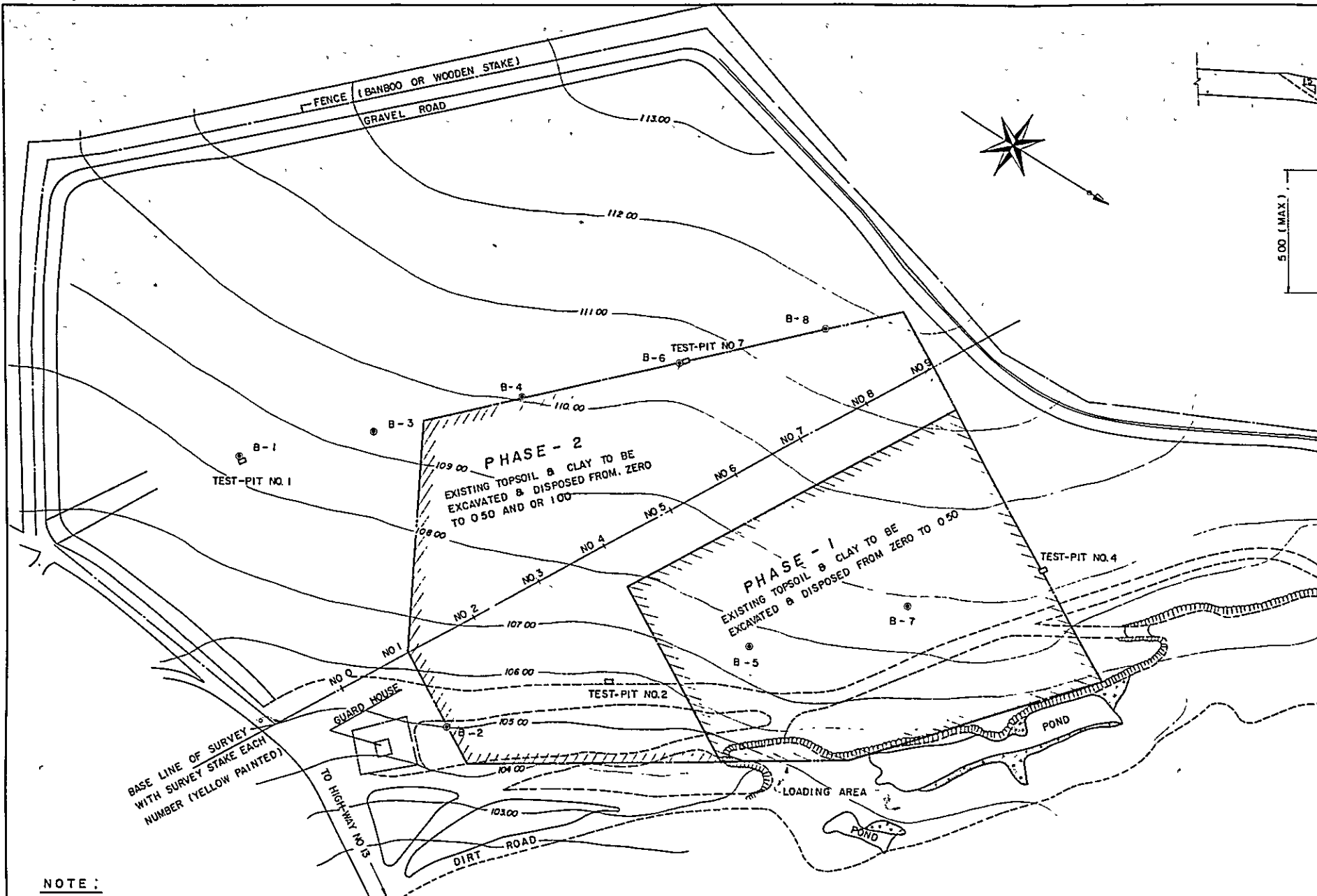
SCALE: HORIZ. 1:250, VERT. 1:20

NOTE: ALL DIMENSIONS AND ELEVATIONS ARE IN METER
UNLESS OTHERWISE INDICATED



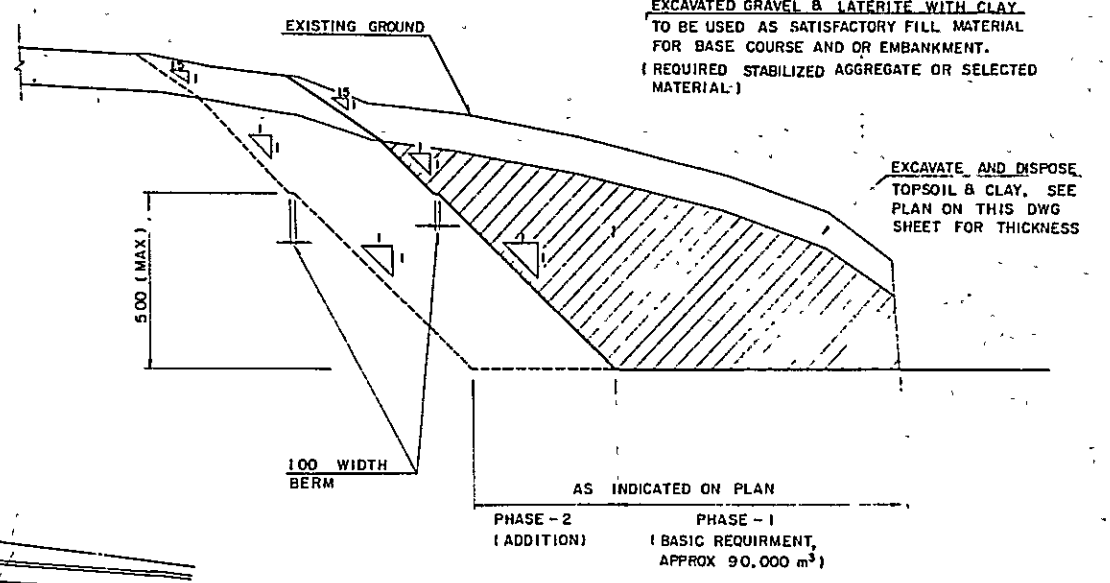
REPLACEMENT PLAN
SCALE: 1:1,000

ROYAL GOVERNMENT OF LAOS	
VIENTIANE AIRPORT EXTENSION PROJECT-II	
TYPICAL CROSS SECTION	
EXTENDED APRON	
DRAWN BY: <i>N. Yuki</i>	SUBMITTED BY: <i>U. Chigawa</i>
CHECKED BY: <i>H. H. H.</i>	APPROVED BY:
DATE: MAY 1971	SCALE: AS SHOWN DWG No 14 OF 61
NIPPON KOEI CO., LTD.	
CONSULTING ENGINEERS, TOKYO	

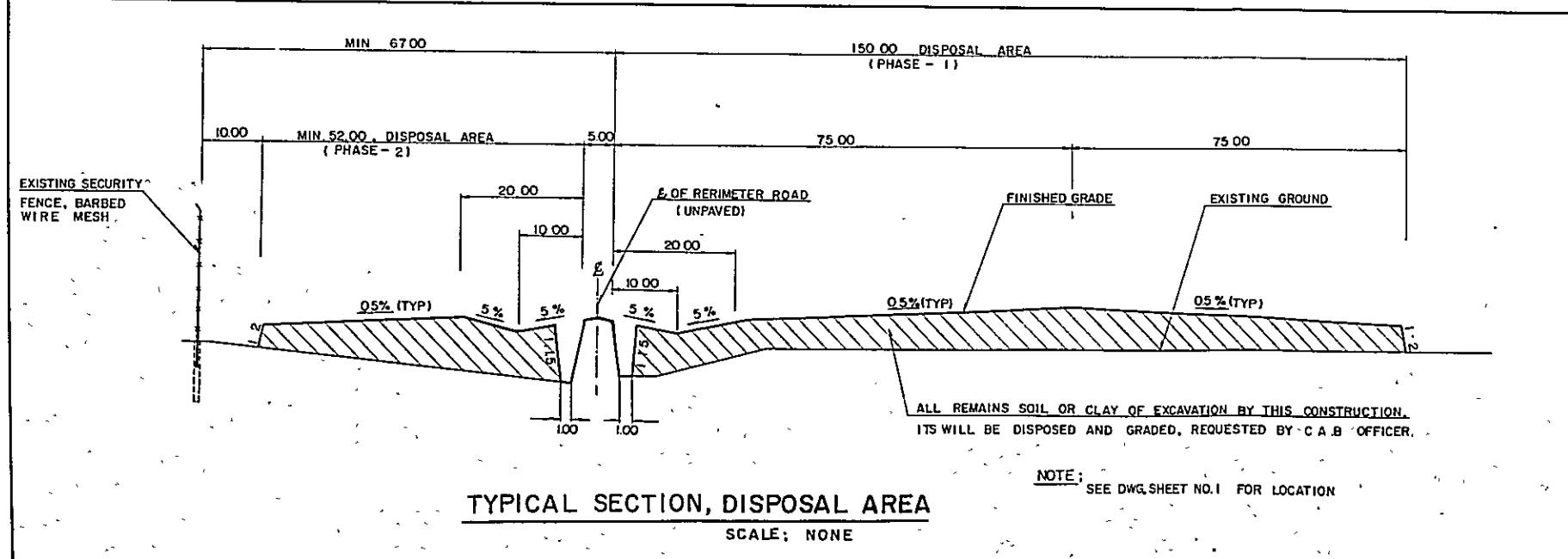


PLAN, BORROW AREA
SCALE: 1:1,000

NOTE:
SEE DWG NO 2 FOR LOCATION.

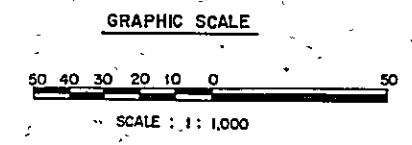


TYPICAL SECTION, BORROW AREA
SCALE: NONE

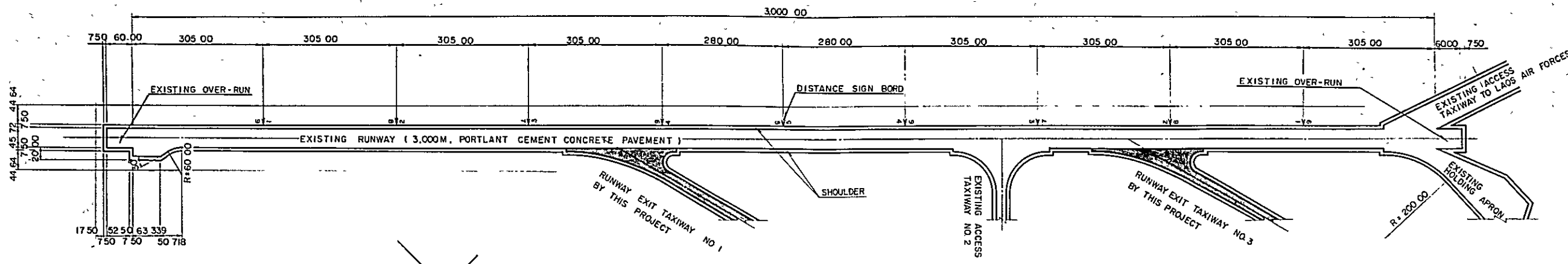


TYPICAL SECTION, DISPOSAL AREA
SCALE: NONE

NOTE:
ALL DIMENSIONS AND ELEVATIONS ARE IN METER UNLESS OTHERWISE INDICATED



ROYAL GOVERNMENT OF LAOS	
VIENTIANE AIRPORT EXTENSION PROJECT-II	
TYPICAL CROSS SECTION, BORROW AND DISPOSAL AREA	
DRAWN BY: <i>K. Togo</i>	SUBMITTED BY: <i>U. Phommavong</i>
CHECKED BY: <i>H. Kato</i>	APPROVED BY:
DATE: MAY 1977	SCALE: AS SHOWN DWG No 15 OF 61
NIPPON KOEI CO., LTD. CONSULTING ENGINEERS, TOKYO	

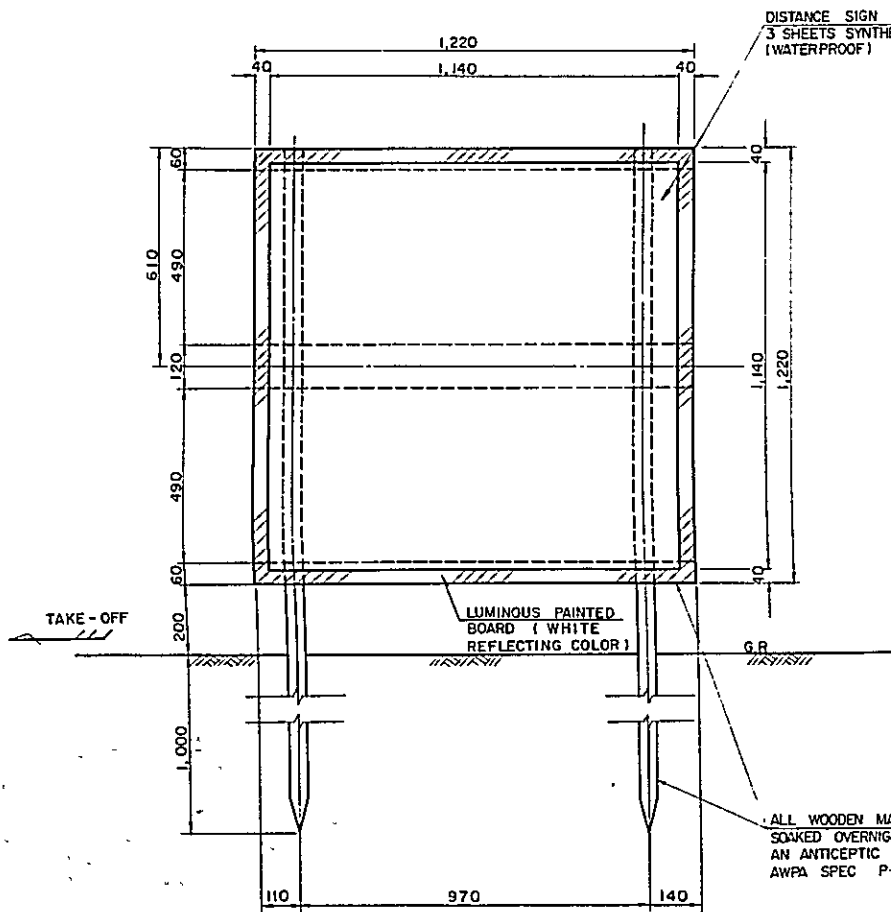


SITE LAYOUT PLAN

SCALE ; 1 : 5,000

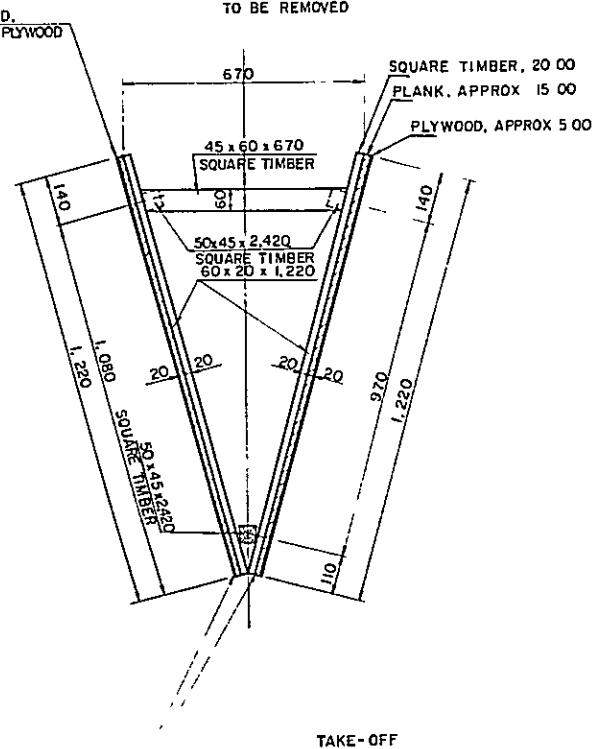
NOTES.

- 1) LAYOUT OF ALL NEW "DISTANCE SIGN BOARD" WHICH 9 SETS 2 BOARD EACH, SHALL BE CONFORMED "NAVAER 00-100-505, U S NAVY"
- 2) EXISTING DISTANCE SIGN BOARD (MARKER) TO BE REMOVED



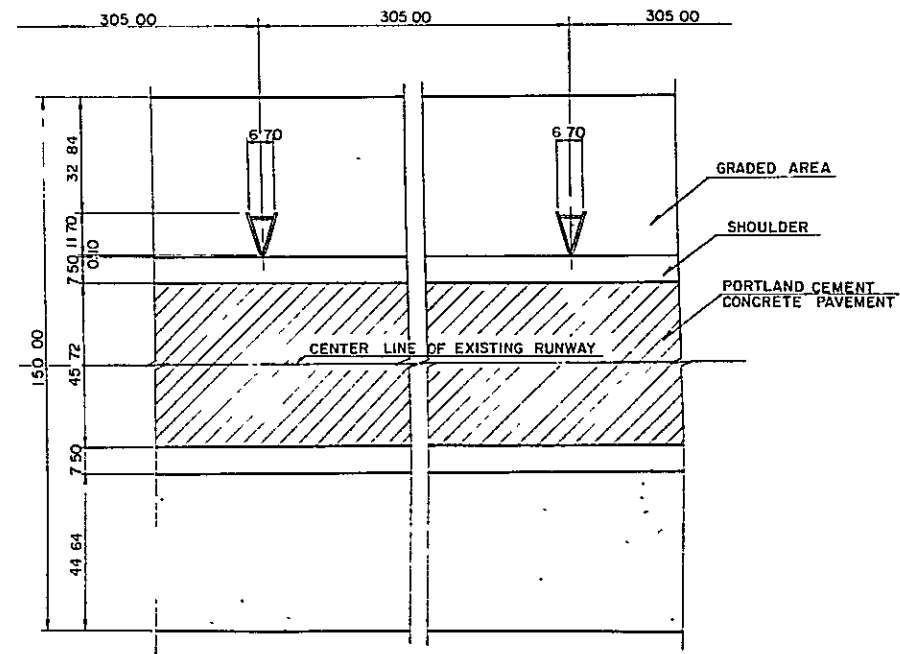
FRONT-VIEW

SCALE ; 1 : 10



PLAN

SCALE . 1 : 10



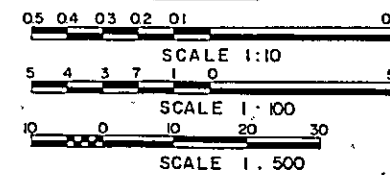
DETAILS, SITE LAYOUT

SCALE . 1 : 100

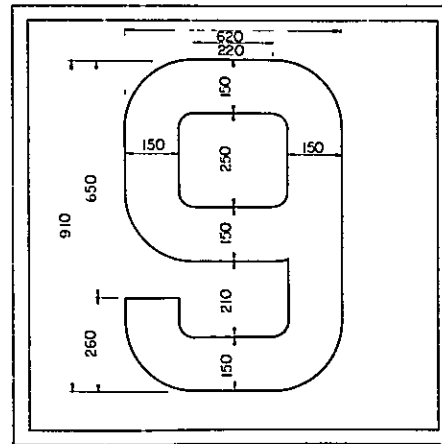
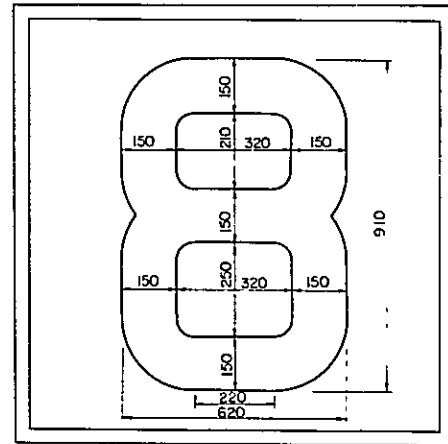
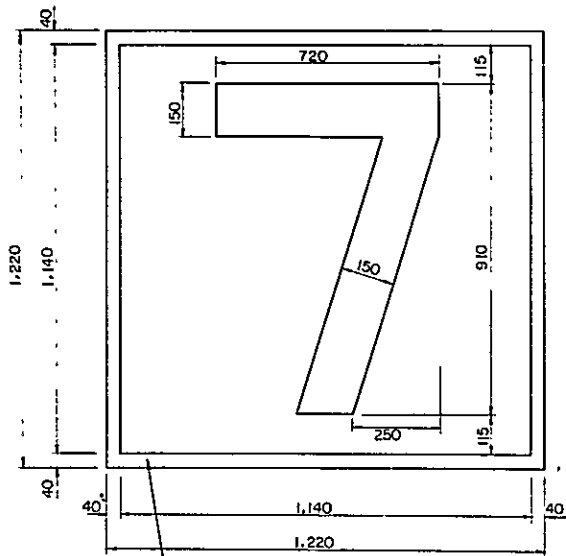
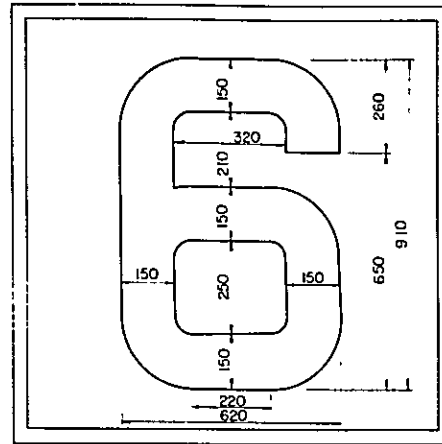
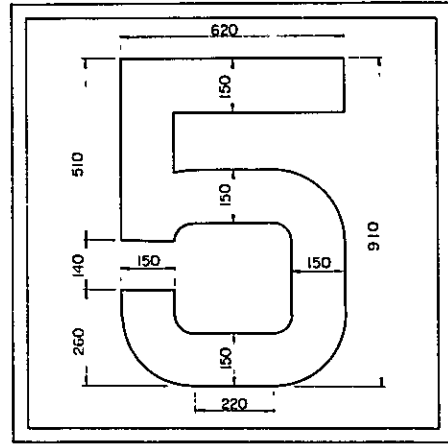
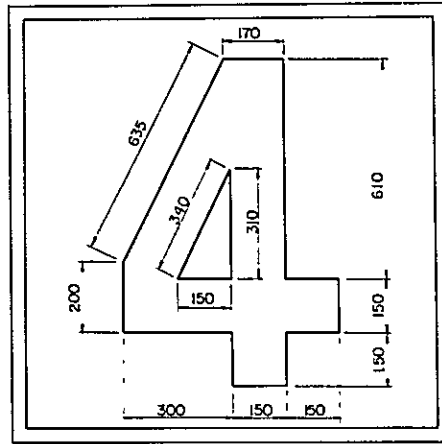
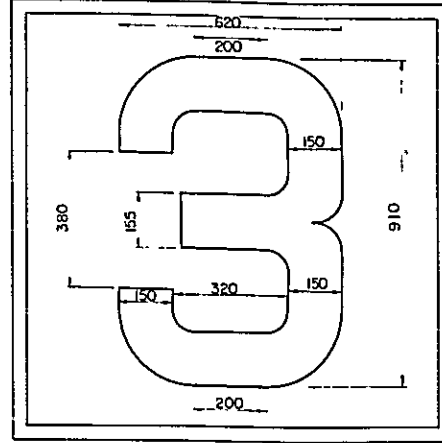
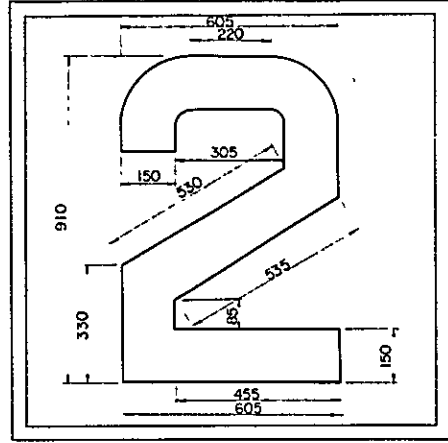
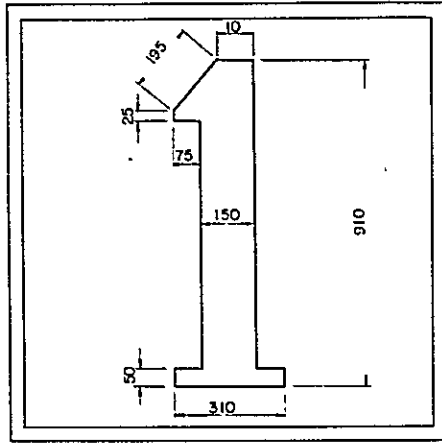
NOTE.

ALL DIMENSIONS AND ELEVATION ARE IN METER EXCEPT FRONT-VIEW (1 : 10) AND PLAN (1 : 10) ARE IN MILLIMETER

GRAPHIC SCALE



ROYAL GOVERNMENT OF LAOS	
VIENTIANE AIRPORT EXTENSION PROJECT - II	
DETAIL , DISTANCE SIGN BOARD (I)	
DRAWN BY <i>H. Taya</i>	SUBMITTED BY <i>V. Obovanna</i>
CHECKED BY <i>H. Hada</i>	APPROVED BY
DATE 15/11/57 SCALE AS SHOWN DWG No 16 OF 61	
NIPPON KOEI CO., LTD.	
CONSULTING ENGINEERS TOKYO	



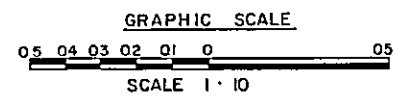
LUMINOUS PAINTED EDGE OF "DISTANCE SIGN BOARD"

DISTANCE SIGN BOARD

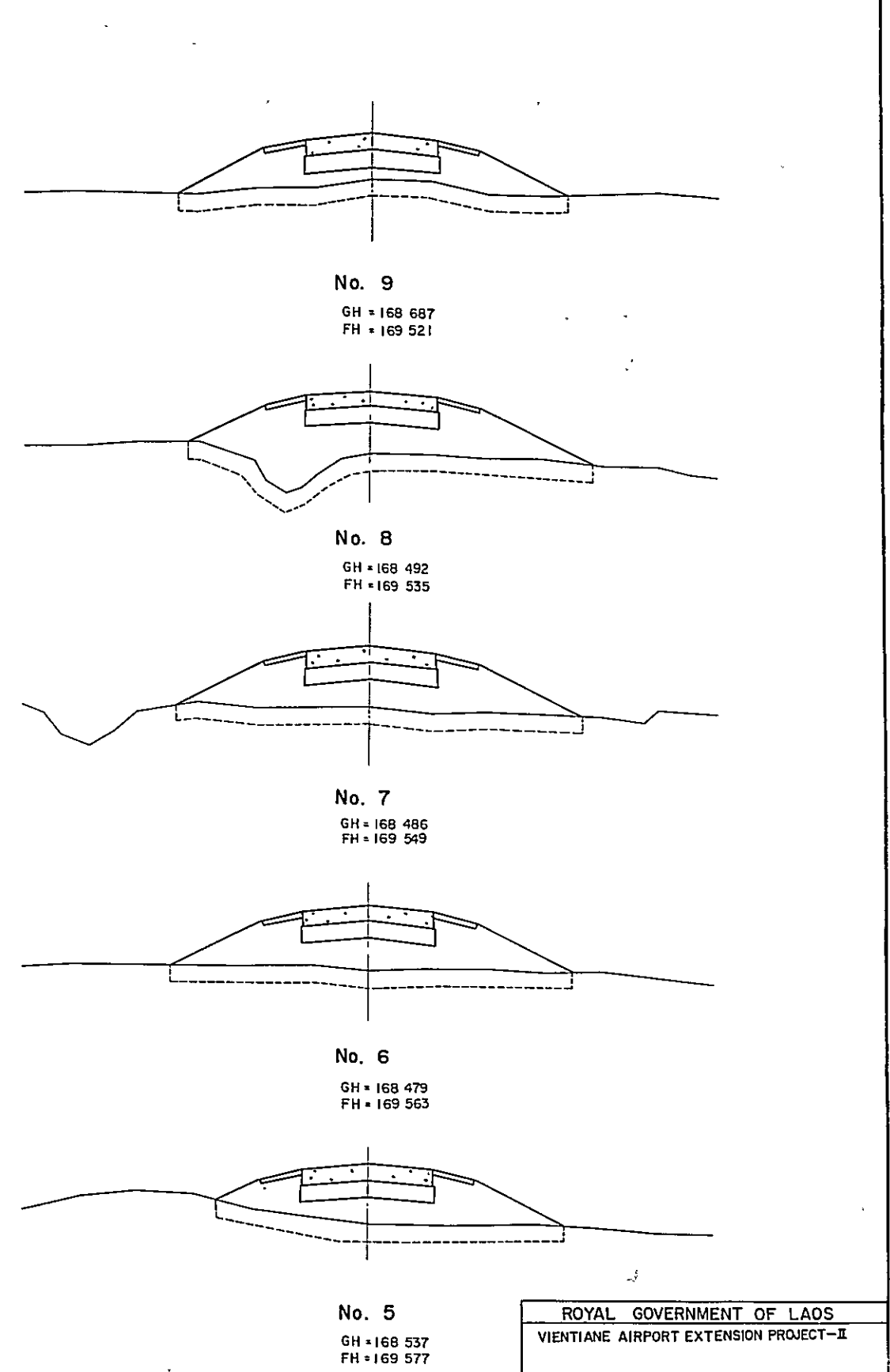
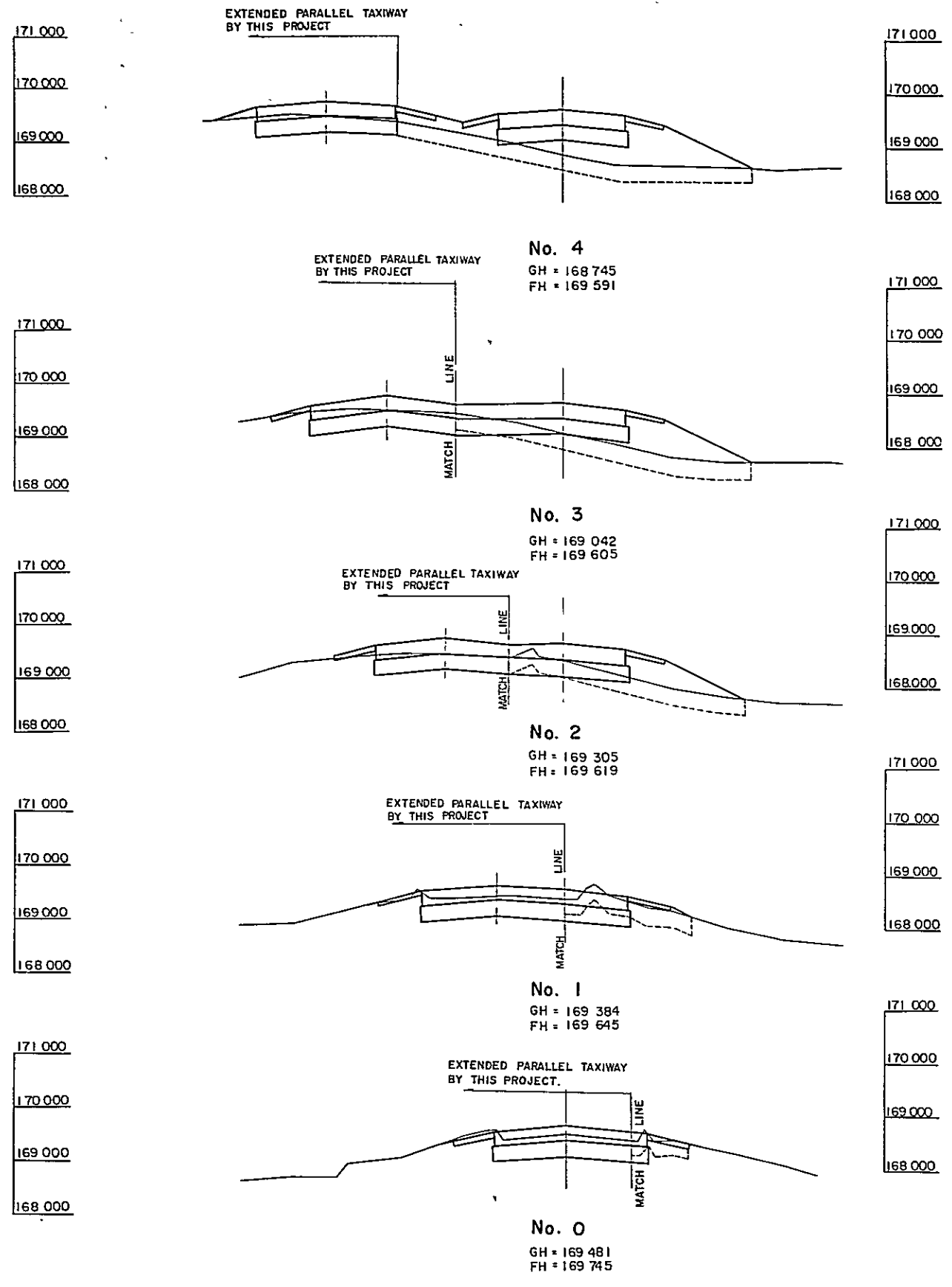
SCALE . 1 : 10

NOTE :
ALL COLOR SHALL BE USED WITH REFLECTORIZED PAINT, AND SHALL BE WHITE ON NUMBER . INTERNATIONAL ORANGE (NO 506) ON BOARD

NOTE : ALL DIMENSIONS ARE IN MILLIMETER

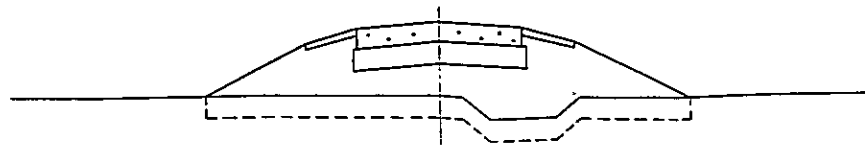


ROYAL GOVERNMENT OF LAOS	
VIENTIANE AIRPORT EXTENSION PROJECT-II	
DETAIL, DISTANCE SIGN BOARD (2)	
DRAWN BY: <i>H. Toge</i>	SUBMITTED BY: <i>Y. Okagawa</i>
CHECKED BY: <i>H. Hada</i>	APPROVED BY:
DATE MAY 1971 SCALE, AS SHOWN DWG No 17 OF 61	
NIPPON KOEI CO., LTD.	
CONSULTING ENGINEERS, TOKYO	



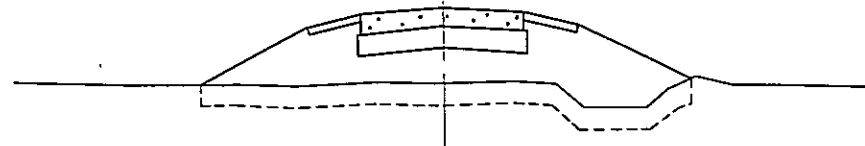
ROYAL GOVERNMENT OF LAOS	
VIENTIANE AIRPORT EXTENSION PROJECT-II	
CROSS SECTION	
RUNWAY EXIT TAXIWAY NO.1 (I)	
DRAWN BY <i>K. Toge</i>	SUBMITTED BY <i>M. Ohgawa</i>
CHECKED BY <i>M. Kato</i>	APPROVED BY
DATE MAY '73	SCALE 1:500 DWG No 20 OF 51
NIPPON KOEI CO.,LTD	
CONSULTING ENGINEERS, TOKYO	

171 000
170 000
169 000
168 000



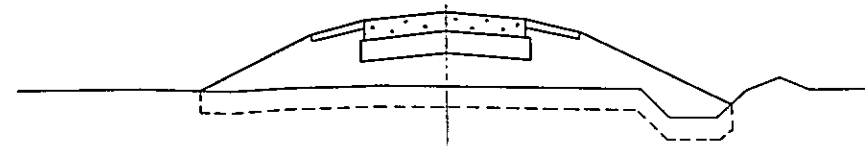
No. 14
GH = 168 404
FH = 169 451

171 000
170 000
169 000
168 000



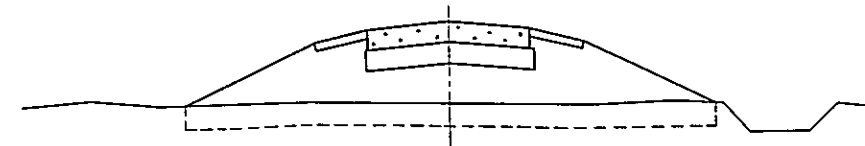
No. 13
GH = 168 404
FH = 169 465

171 000
170 000
169 000
168 000



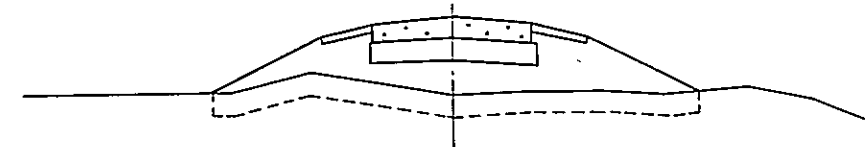
No. 12
GH = 168 420
FH = 169 479

171 000
170 000
169 000
168 000



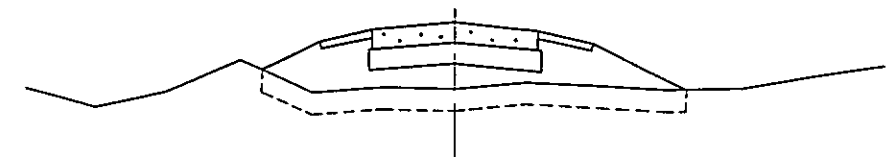
No. 11
GH = 168 406
FH = 169 493

171 000
170 000
169 000
168 000



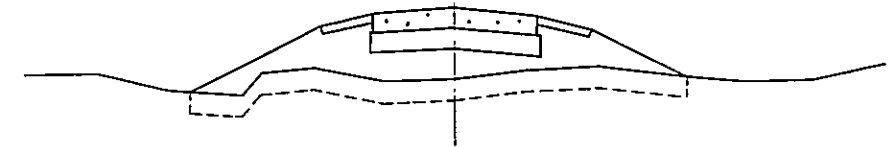
No. 10
GH = 168 411
FH = 169 507

171 000
170 000
169 000
168 000



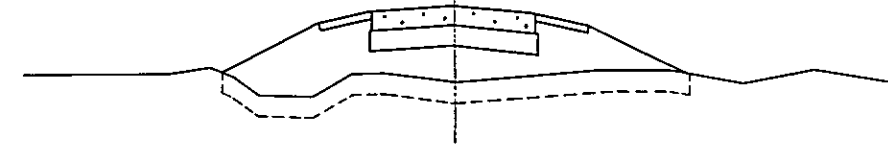
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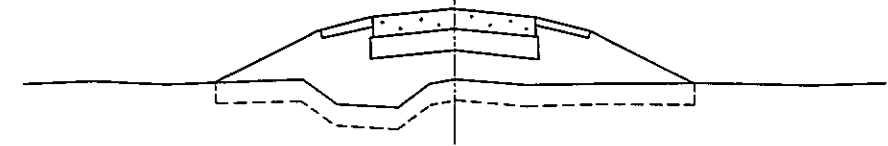
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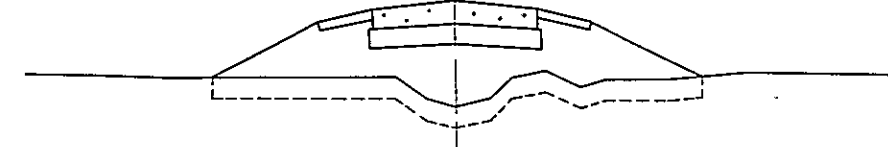
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FH = 169 405

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169 000
168 000



No. 16
GH = 168 475
FH = 169 423

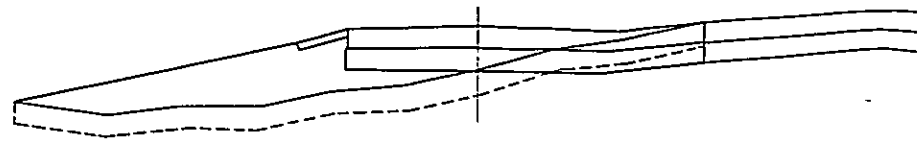
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No. 15
GH = 167 959
FH = 169 437

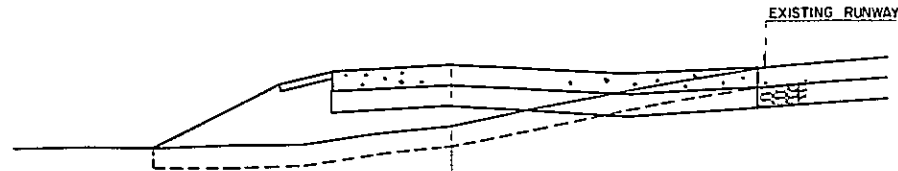
ROYAL GOVERNMENT OF LAOS	
VIENTIANE AIRPORT EXTENSION PROJECT-II	
CROSS SECTION	
RUNWAY EXIT TAXIWAY NO 1 (2)	
DRAWN BY <i>K. Tago</i>	SUBMITTED BY <i>V. Phayavong</i>
CHECKED BY <i>H. Nakai</i>	APPROVED BY
DATE <i>11/2</i>	1971 SCALE $\frac{1}{50}$ DWG No 2. CF
NIPPON KOEI CO., LTD.	
CONSULTING ENGINEERS TOKYO	

171 000
170 000
169 000
168 000



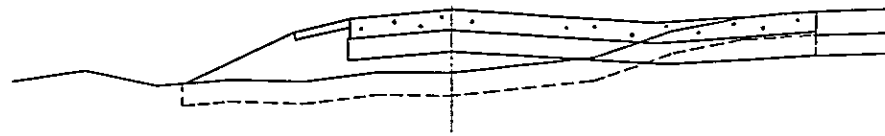
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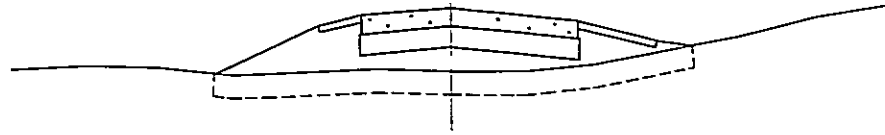
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FH = 169 455

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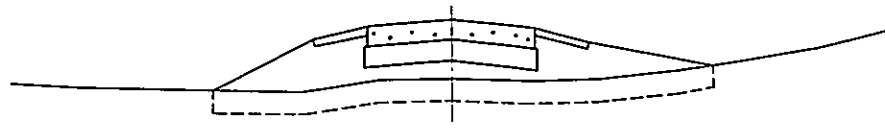
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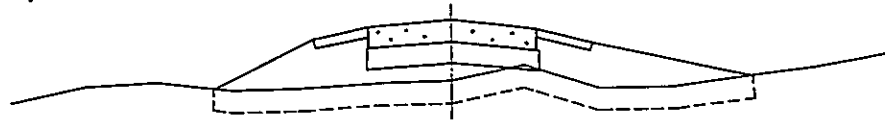
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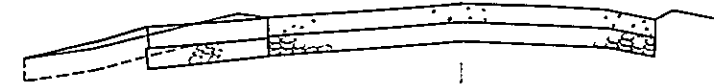
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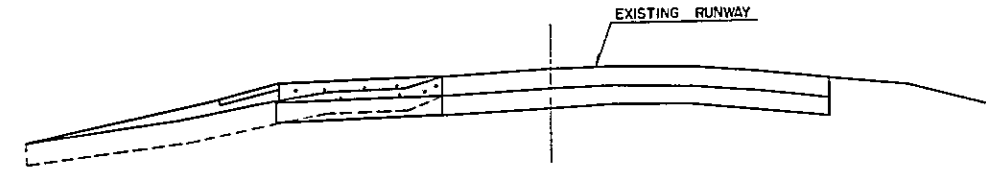
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FH = 169 367

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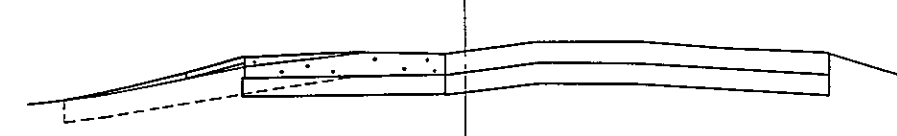
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GH = 169 726

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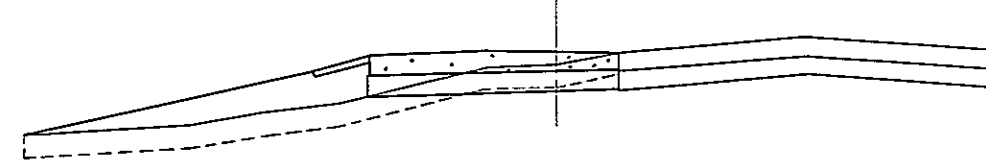
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GH = 169 673

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169 000
168 000



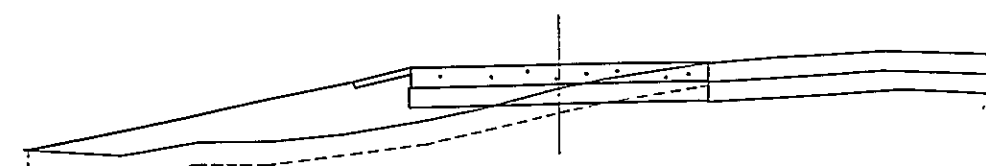
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169 000
168 000



No. 27
GH = 169 369
FH = 169 521

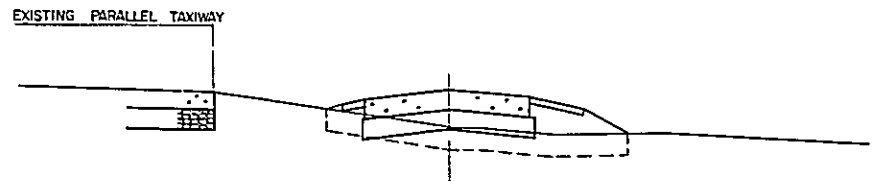
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No. 26
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FH = 169 499

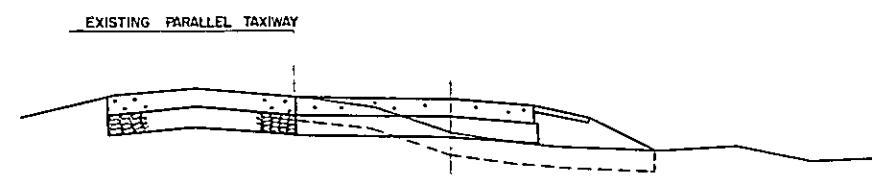
ROYAL GOVERNMENT OF LAOS	
VIENTIANE AIRPORT EXTENSION PROJECT - II	
CROSS SECTION	
RUNWAY EXIT TAXIWAY NO. 1 (3)	
DRAWN BY - <i>K. Tagon</i>	SUBMITTED BY <i>U. Okagawa</i>
CHECKED BY <i>J. H. H. H.</i>	APPROVED BY
DATE <i>MAY 1971</i>	SCALE <i>H 1 500</i>
DWG No 22 OF 2	
NIPPON KOEI CO., LTD.	
CONSULTING ENGINEERS, TOKYO	

171 000
170 000
169 000
168 000



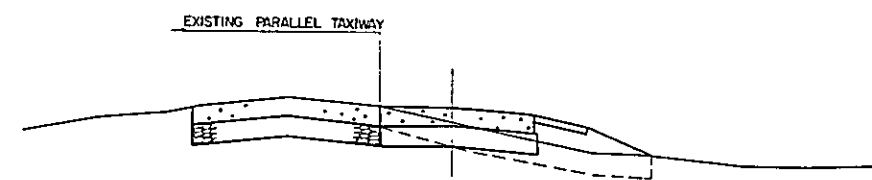
No. 4
GH = 168 921
FH = 169 474

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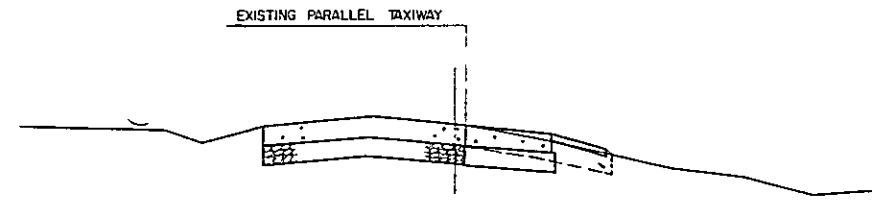
No. 3
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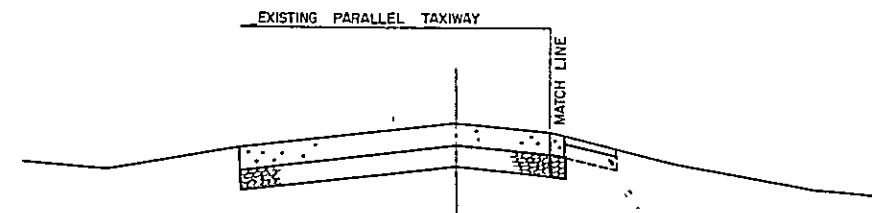
No. 2
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FH = 169 586

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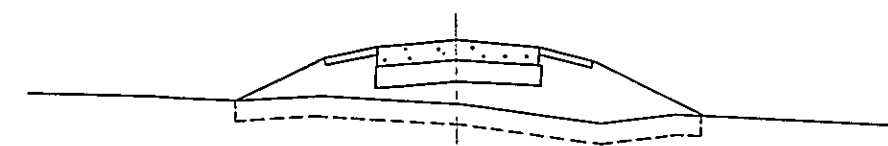
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GH = 169 641

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169 000
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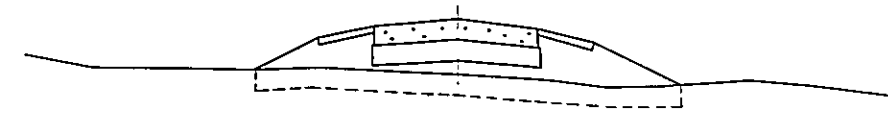
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GH = 169 741

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169 000
168 000



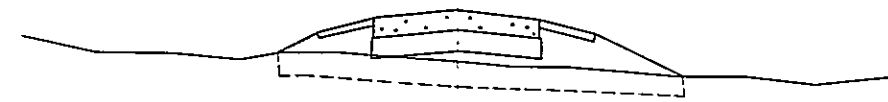
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FH = 169 722

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170 000
169 000
168 000



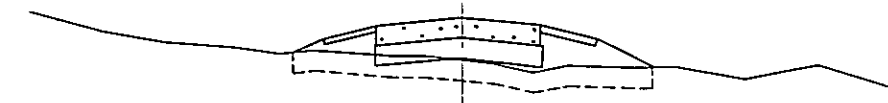
No. 9
GH = 168 838
FH = 169 632

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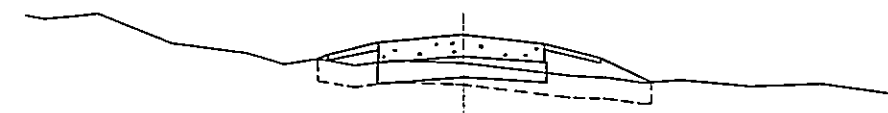
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169 000
168 000



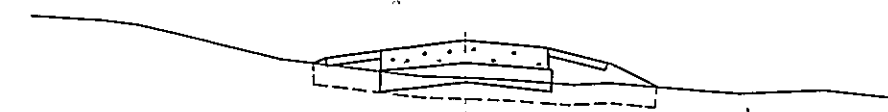
No. 7
GH = 168 851
FH = 169 452

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169 000
168 000



No. 6
GH = 168 953
FH = 169 362

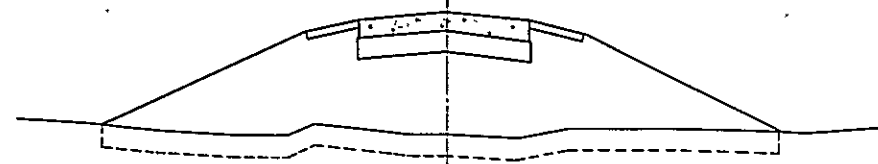
170 000
169 000
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No. 5
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FH = 169 418

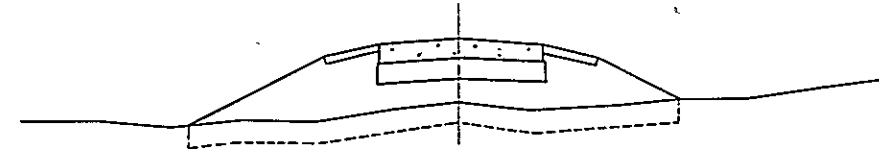
ROYAL GOVERNMENT OF LAOS	
VIENTIANE AIRPORT EXTENSION PROJECT - II	
CROSS SECTION	
RUNWAY EXIT TAXIWAY NO 3(II)	
DRAWN BY <i>H. Toge</i>	SUBMITTED BY <i>Y. Ohayama</i>
CHECKED BY <i>H. Hata</i>	APPROVED BY
DATE <i>11/21</i>	SCALE <i>H 1/500 V 1/50</i> JAG '85 23 CF
NIPPON KOEI CO., LTD.	
CONSULTING ENGINEERS TOKYO	

171 000
170 000
169 000
168 000



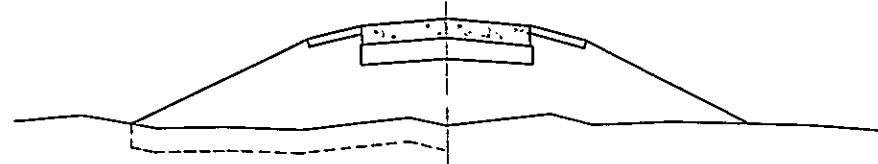
No. 15
GH = 168 468
FH = 170 172

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170 000
169 000
168 000



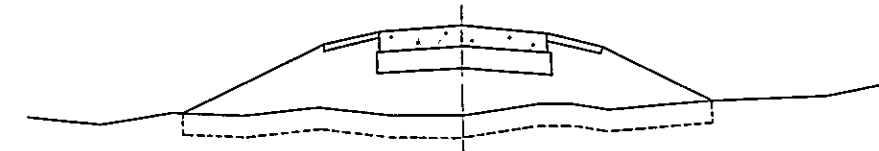
No. 20
GH = 168 692
FH = 169 662

171 000
170 000
169 000
168 000



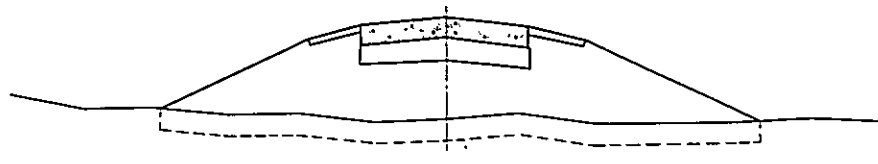
No. 14
GH = 168 544
FH = 170 082

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168 000



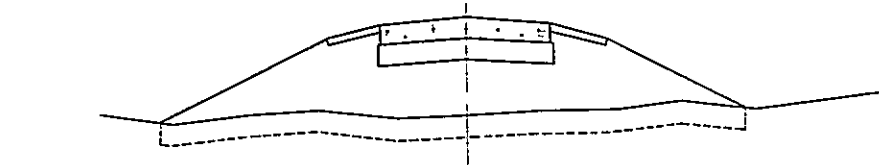
No. 19
GH = 168 495
FH = 169 764

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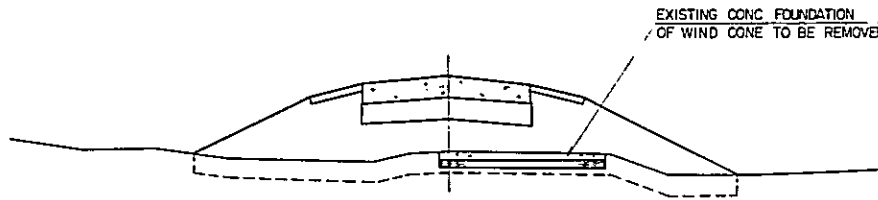
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FH = 169 992

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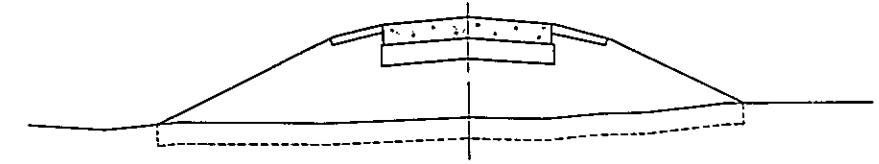
No. 18
GH = 168 511
FH = 169 866

171 000
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169 000
168 000



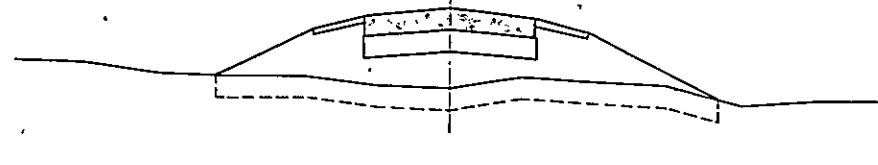
No. 12
GH = 168 846
FH = 169 902

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169 000
168 000



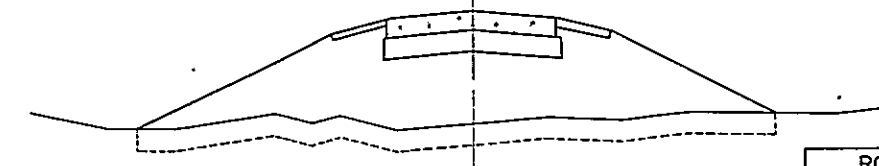
No. 17
GH = 168 563
FH = 169 968

171 000
170 000
169 000
168 000



No. 11
GH = 168 687
FH = 169 812

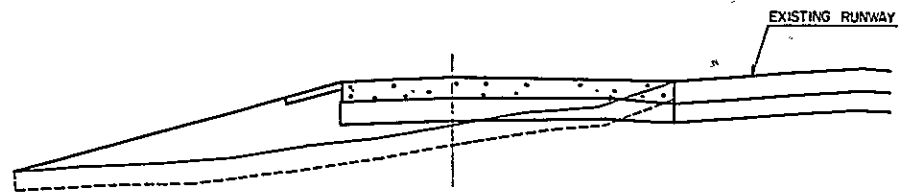
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168 000



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FH = 170 070

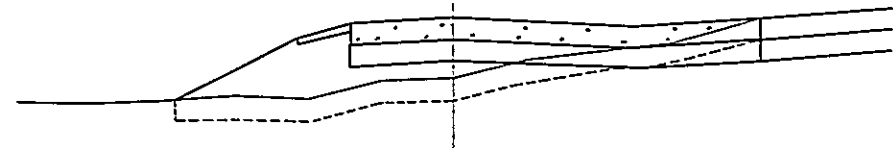
ROYAL GOVERNMENT OF LAOS	
VIENTIANE AIRPORT EXTENSION PROJECT-II	
CROSS SECTION	
RUNWAY EXIT TAXIWAY NO 3(2)	
DRAWN BY <i>K. Taya</i>	SUBMITTED BY <i>V. Phayavan</i>
CHECKED BY <i>H. Phat</i>	APPROVED BY
DATE MAY 1971	SCALE 1/500 DWG No 24 OF 11
NIPPON KOEI CO., LTD.	
CONSULTING ENGINEERS TOKYO	

171 000
170 000
169 000
168 000



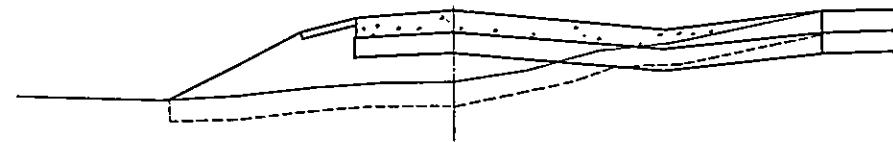
No. 25
GH = 168 881
FH = 169 512

171 000
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169 000
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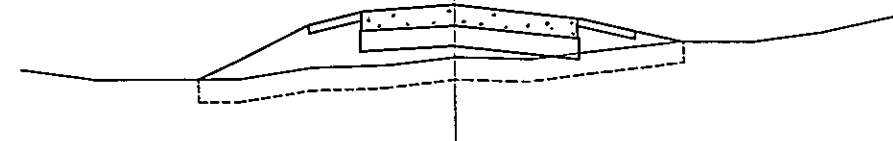
No. 24
GH = 168 715
FH = 169 494

171 000
170 000
169 000
168 000



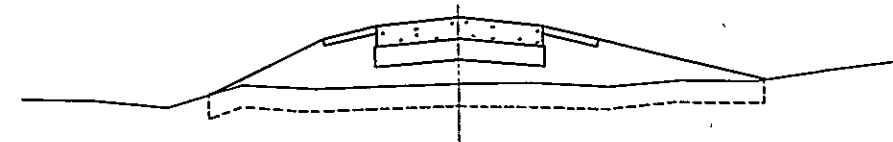
No. 23
GH = 168 570
FH = 169 476

171 000
170 000
169 000
168 000



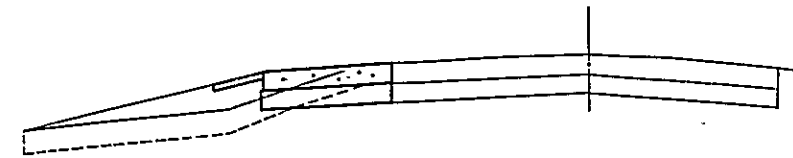
No. 22
GH = 168 726
FH = 169 458

171 000
170 000
169 000
168 000



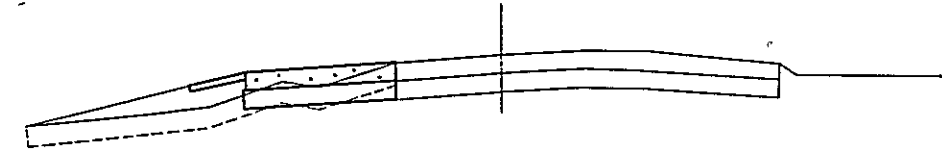
No. 21
GH = 168 651
FH = 169 560

171 000
170 000
169 000
168 000



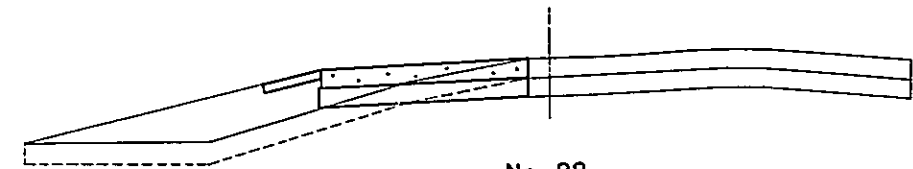
No. 30
GH = 169.736

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170 000
169 000
168 000



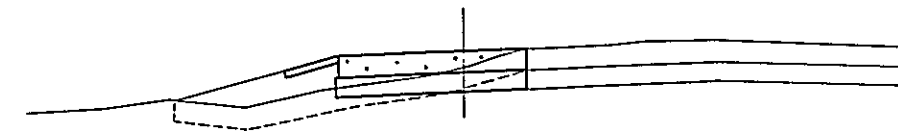
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GH = 169 677

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170 000
169 000
168 000



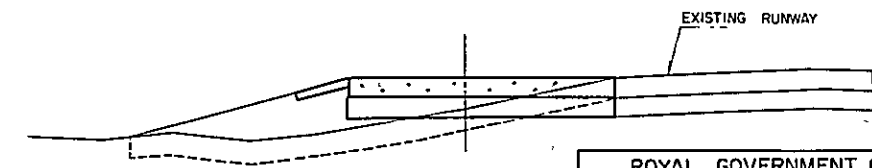
No. 28
GH = 169 578

171 000
170 000
169 000
168 000



No. 27
GH = 169 344
FH = 169 548

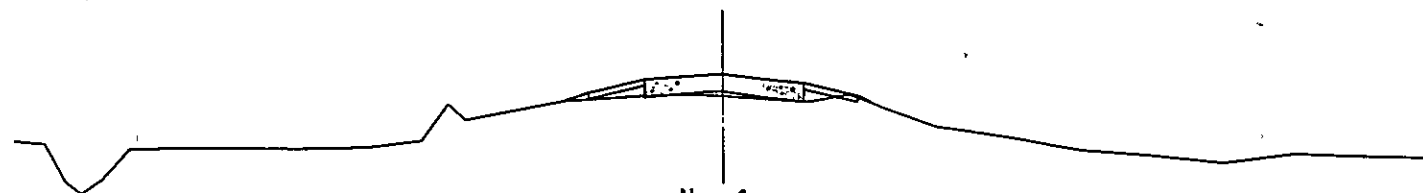
171 000
170 000
169 000
168 000



No. 26
GH = 169 101
FH = 169 530

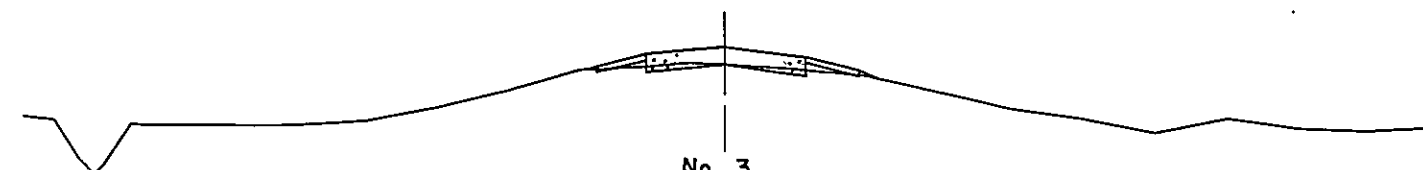
ROYAL GOVERNMENT OF LAOS	
VIENTIANE AIRPORT EXTENSION PROJECT-II	
CROSS SECTION	
RUNWAY EXIT TAXIWAY NO 3 (3)	
DRAWN BY <i>K. Terao</i>	SUBMITTED BY <i>Y. Okuyama</i>
CHECKED BY <i>H. Hata</i>	APPROVED BY
DATE MAR 1971	SCALE 1/500 DWG. No 25 OF 5.
NIPPON KOEI CO., LTD.	
CONSULTING ENGINEERS, TOKYO	

171 000
170 000
169 000
168 000



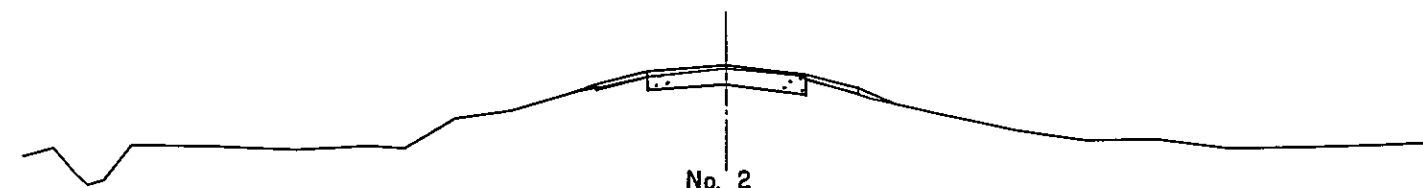
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FH = 169 745

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169 000
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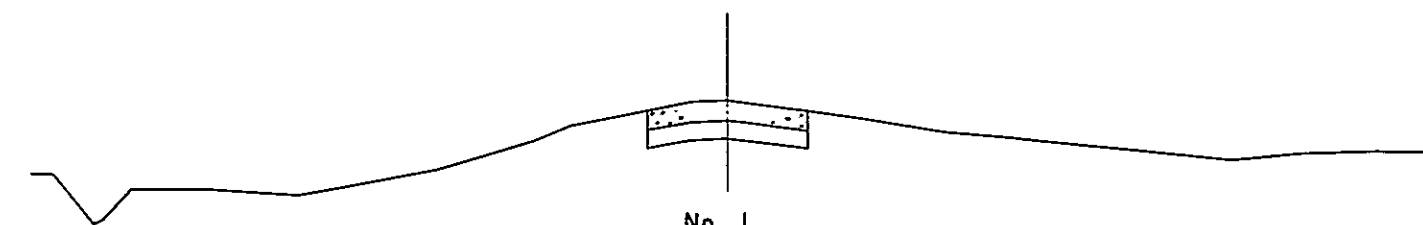
No. 3
GH = 169 491
FH = 169 745

171 000
170 000
169 000
168 000



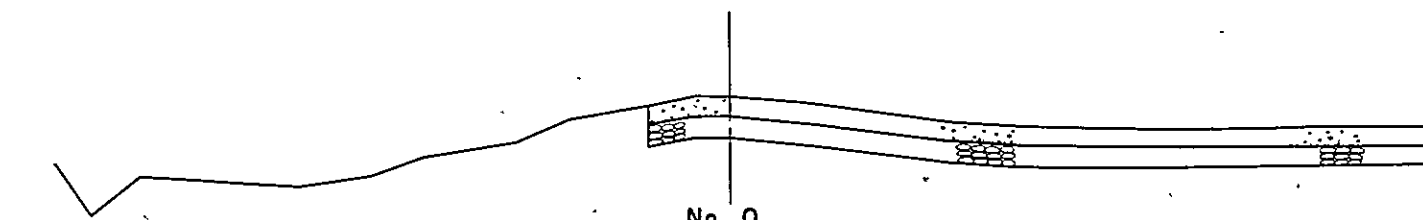
No. 2
GH = 169 684
FH = 169 745

171 000
170 000
169 000
168 000



No. 1
GH = 169 745

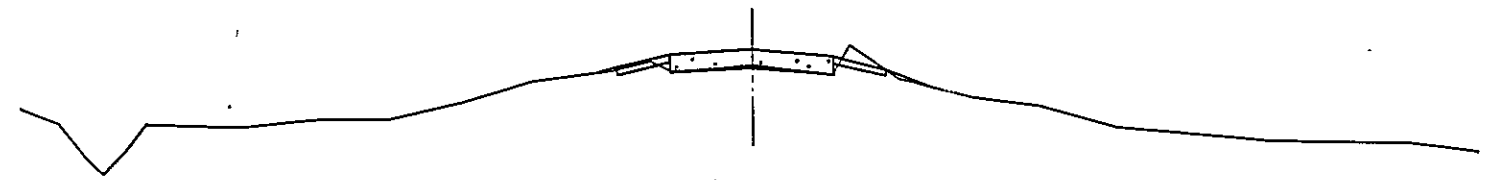
171 000
170 000
169 000
168 000



No. 0
GH = 169.745

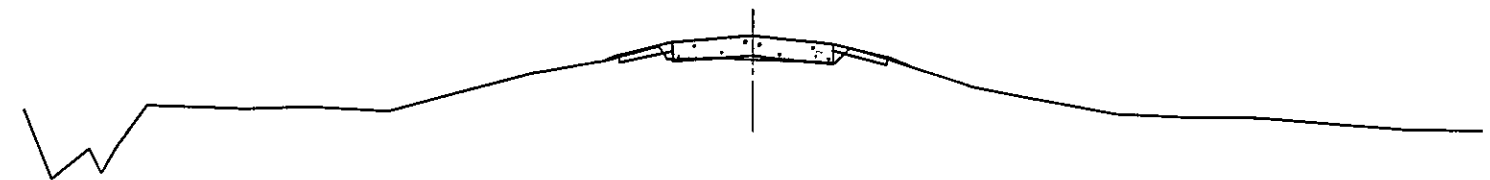
ROYAL GOVERNMENT OF LAOS	
VIENTIANE AIRPORT EXTENSION PROJECT-I	
CROSS SECTION	
EXTENDED PARALLEL TXIWAY (I)	
DRAWN BY <i>16. Tagon</i>	SUBMITTED BY <i>U. Chayansa</i>
CHECKED BY <i>H. Phak</i>	APPROVED BY
DATE MAY 1971	SCALE 1/500 DWG No 26 OF 6
NIPPON KOEI CO., LTD.	
CONSULTING ENGINEERS TOKYO	

171 000
170 000
169 000
168 000



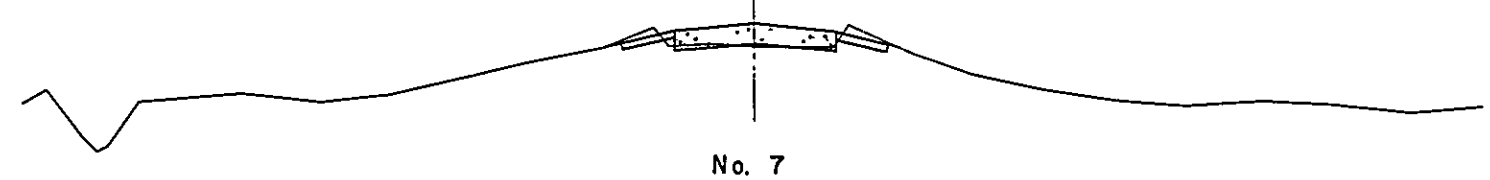
No. 9
GH = 169.406
FH = 169.745

171 000
170 000
169 000
168 000



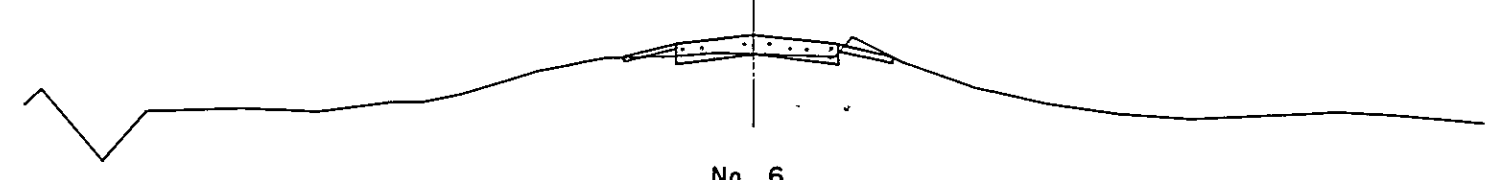
No. 8
GH = 169.409
FH = 169.745

171 000
170 000
169 000
168 000



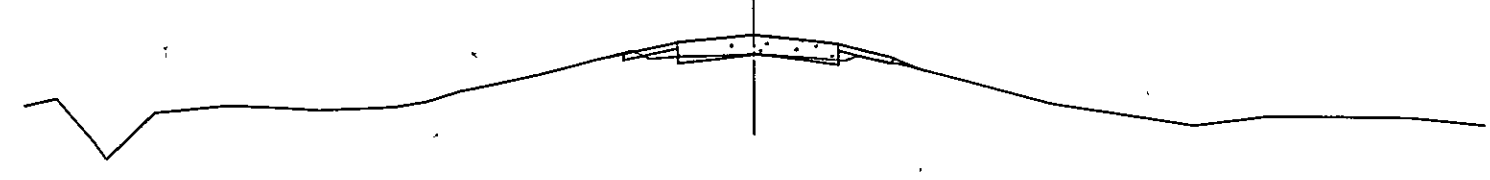
No. 7
GH = 169.433
FH = 169.745

171 000
170 000
169 000
168 000



No. 6
GH = 169.463
FH = 169.745

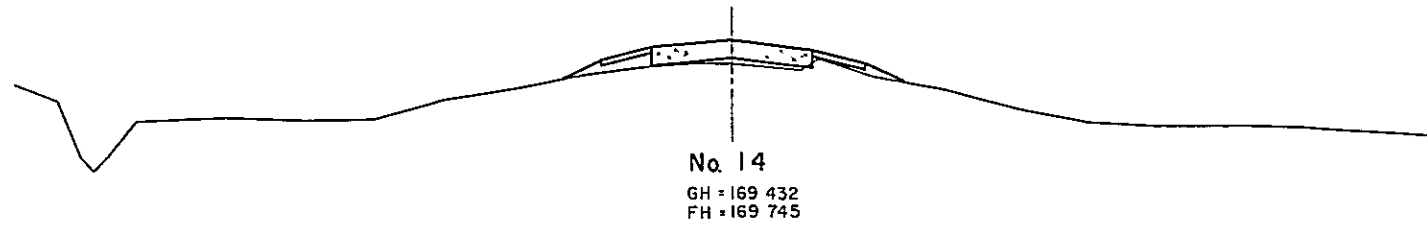
171 000
170 000
169 000
168 000



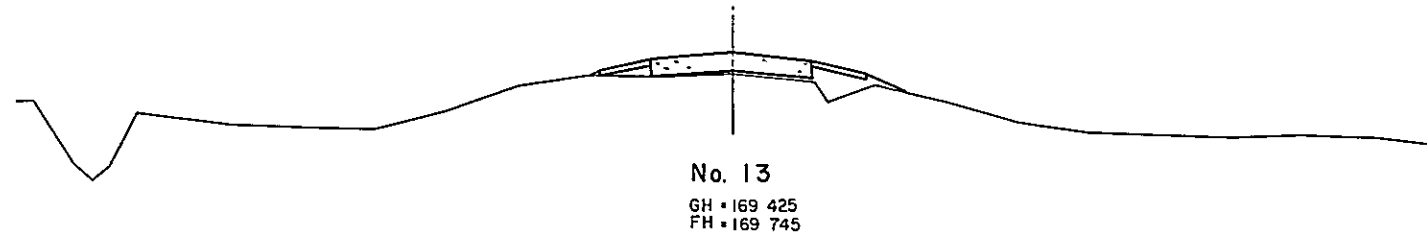
No. 5
GH = 169.481
FH = 169.745

ROYAL GOVERNMENT OF LAOS	
VIENTIANE AIRPORT EXTENSION PROJECT-I	
CROSS SECTION	
EXTENDED PARALLEL TAXIWAY(2)	
DRAWN BY: <i>H. Toga</i>	SUBMITTED BY: <i>U. Okazawa</i>
CHECKED BY: <i>H. Hata</i>	APPROVED BY:
DATE MAY 1971	SCALE 1/500 DWG No 27 OF 61
NIPPON KOEI CO., LTD.	
CONSULTING ENGINEERS, TOKYO	

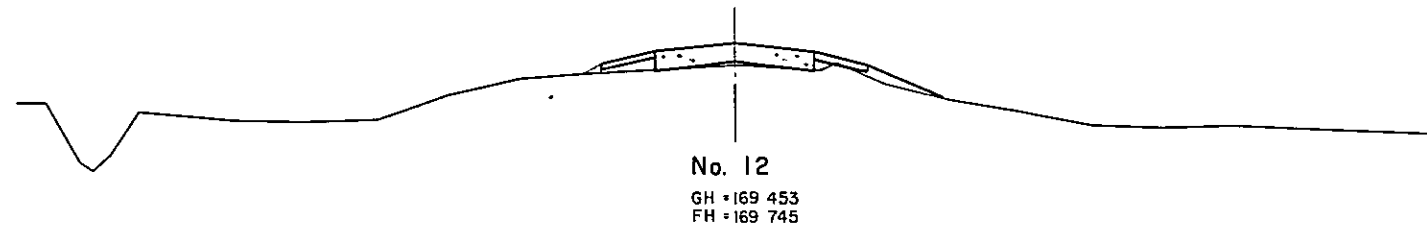
171 000
170 000
169 000
168 000



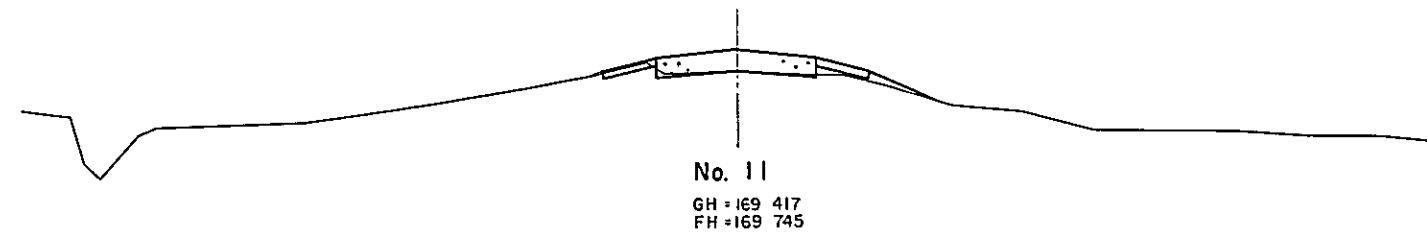
171 000
170 000
169 000
168 000



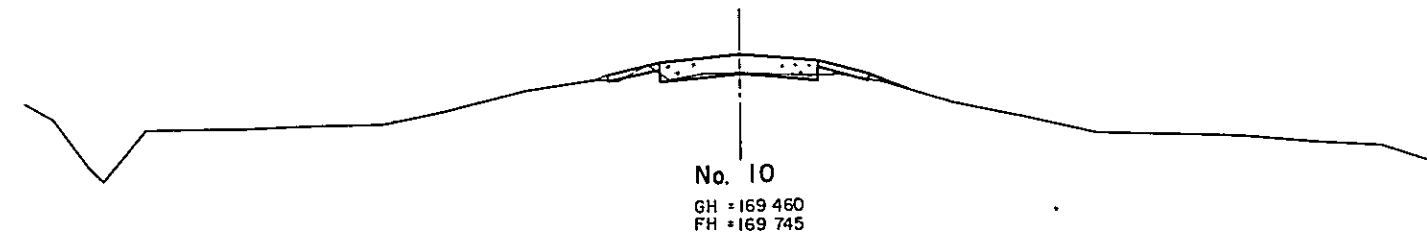
171 000
170 000
169 000
168 000



171 000
170 000
169 000
168 000

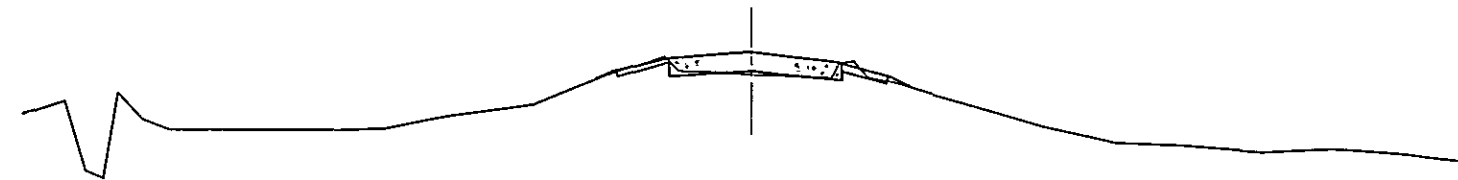


171 000
170 000
169 000
168 000



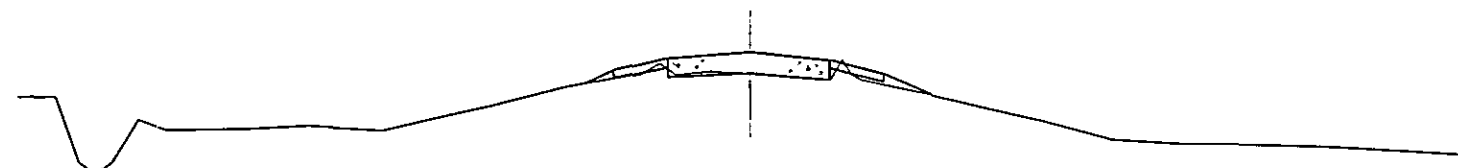
ROYAL GOVERNMENT OF LAOS	
VIENTIANE AIRPORT EXTENSION PROJECT-I	
CROSS SECTION	
EXTENDED PARALLEL TAXIWAY (3)	
DRAWN BY <i>K. Tamae</i>	SUBMITTED BY <i>U. Okuyama</i>
CHECKED BY <i>H. Kato</i>	APPROVED BY
DATE MAY 1971	SCALE 1/500 DWG NO. 22 OF 2
NIPPON KOEI CO., LTD.	
CONSULTING ENGINEERS, TOKYO	

171 000
170 000
169 000
168 000



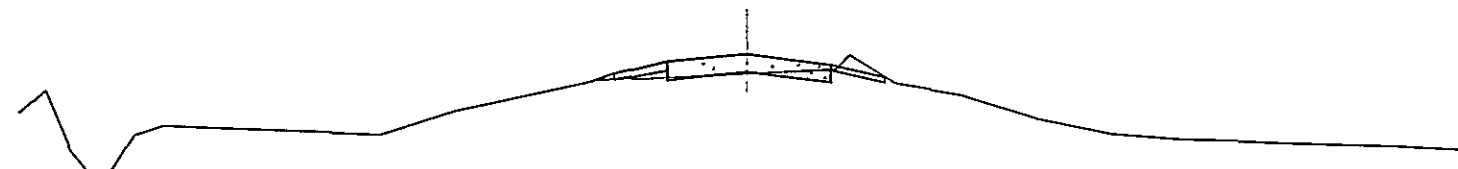
No. 19
GH = 169 440
FH = 169 745

171 000
170 000
169 000
168 000



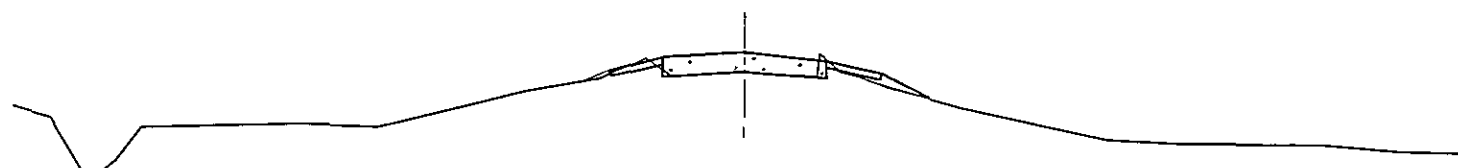
No. 18
GH = 169 442
FH = 169 745

171 000
170 000
169 000
168 000



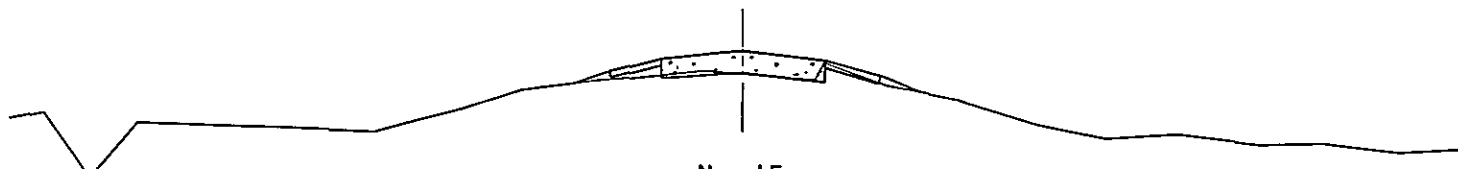
No. 17
GH = 169 450
FH = 169 745

171 000
170 000
169 000
168 000



No. 16
GH = 169 452
FH = 169 745

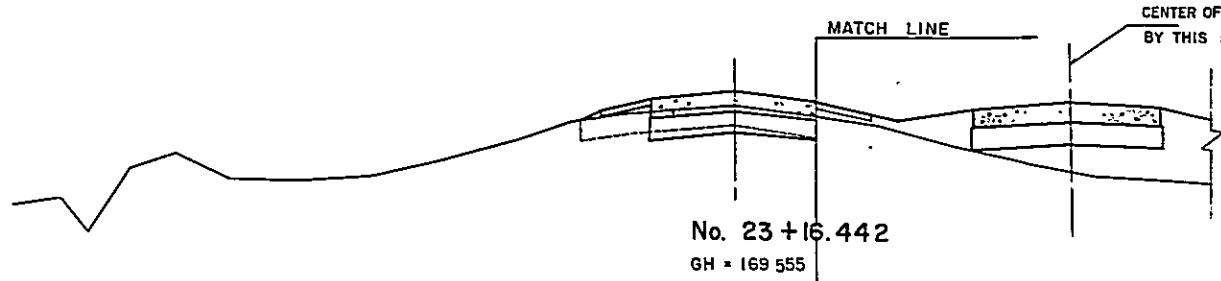
171 000
170 000
169 000
168 000



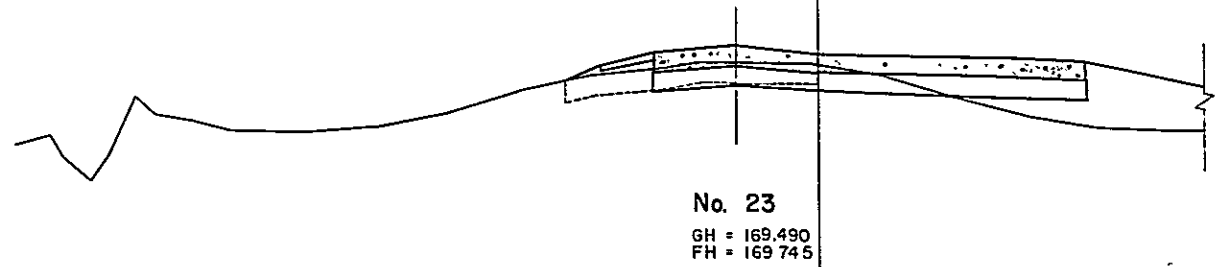
No. 15
GH = 169 453
FH = 169 745

ROYAL GOVERNMENT OF LAOS	
VIENTIANE AIRPORT EXTENSION PROJECT-II	
CROSS SECTION	
EXTENDED PARALLEL TAXIWAY (4)	
DRAWN BY <i>K. Tago</i>	SUBMITTED BY <i>M. Ohgawa</i>
CHECKED BY <i>H. Kato</i>	APPROVED BY
DATE MAY 1971	SCALE 1/500 DWG No 2- OF 6.
NIPPON KOEI CO., LTD.	
CONSULTING ENGINEERS, TOKYO	

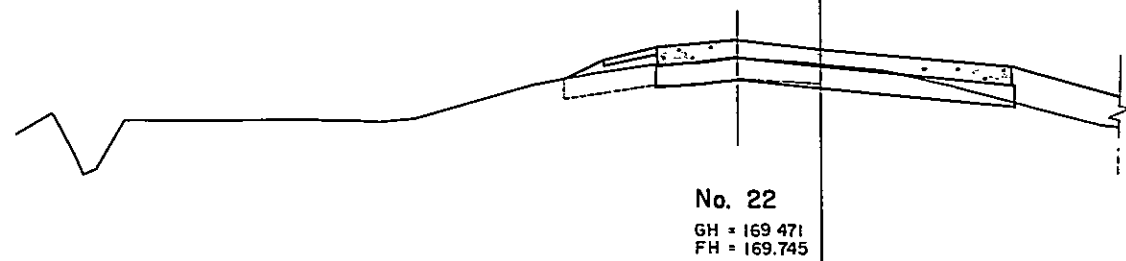
171 000
170 000
169 000
168 000



171 000
170 000
169 000
168 000



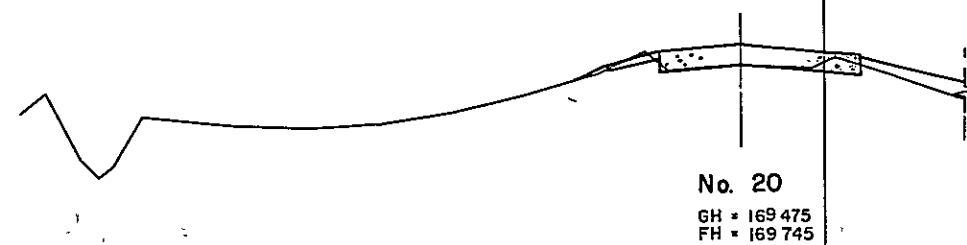
171 000
170 000
169 000
168 000



171 000
170 000
169 000
168 000



171 000
170 000
169 000
168 000



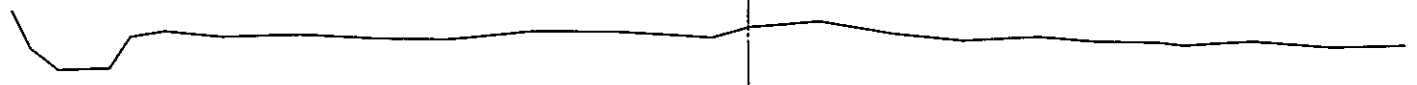
ROYAL GOVERNMENT OF LAOS	
VIENTIANE AIRPORT EXTENSION PROJECT-II	
CROSS SECTION, EXTENDED PARALLEL TAXIWAY (5)	
DRAWN BY <i>H. Tagon</i>	SUBMITTED BY <i>V. Olayavong</i>
CHECKED BY <i>H. Tagon</i>	APPROVED BY <i>V. Olayavong</i>
DATE MAY 1971	SCALE 1/500 DWG No 30 OF 6
NIPPON KOEI CO., LTD. CONSULTING ENGINEERS TOKYO	

171 000
170 000
169 000
168 000



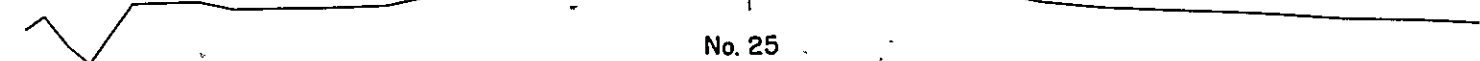
No. 27
GH = 168 447

171 000
170 000
169 000
168 000



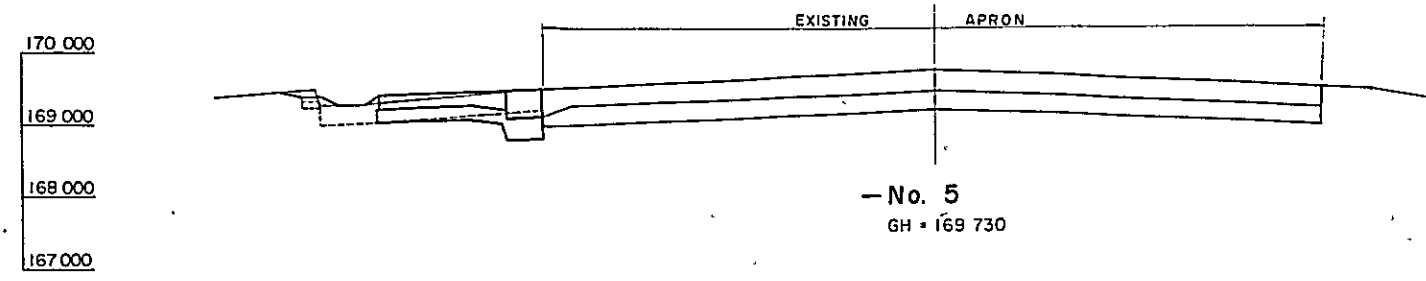
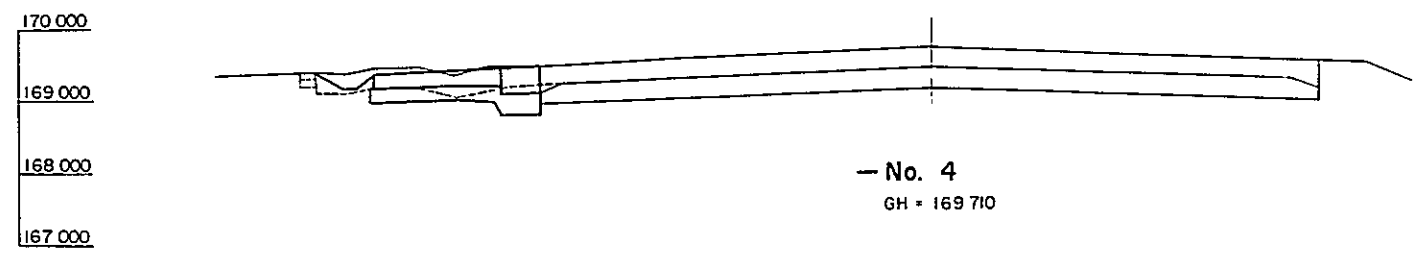
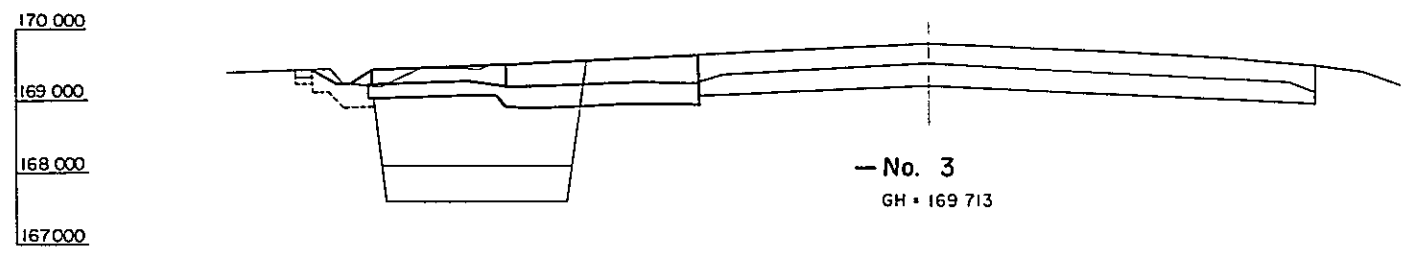
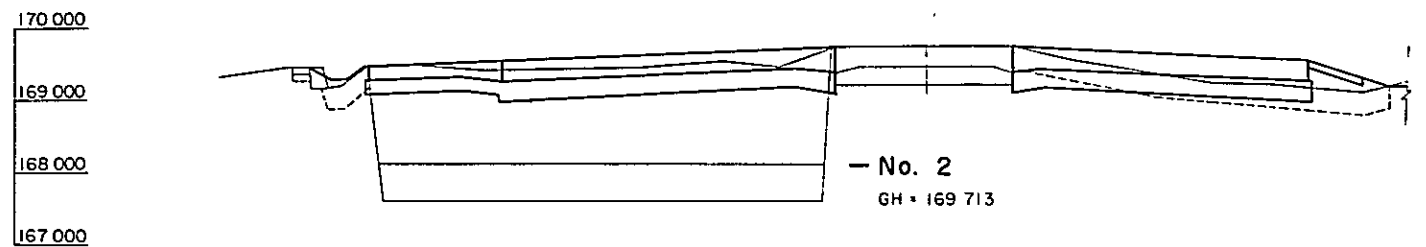
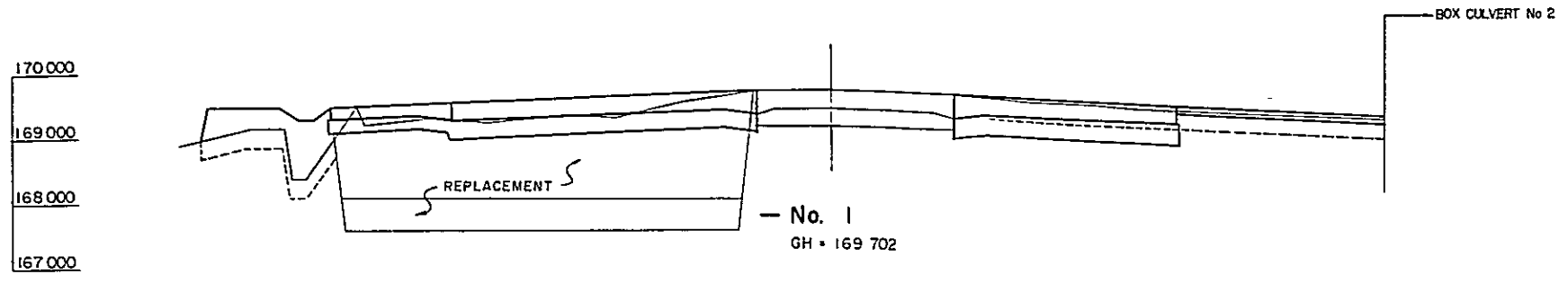
No. 26
GH = 168 671

171 000
170 000
169 000
168 000



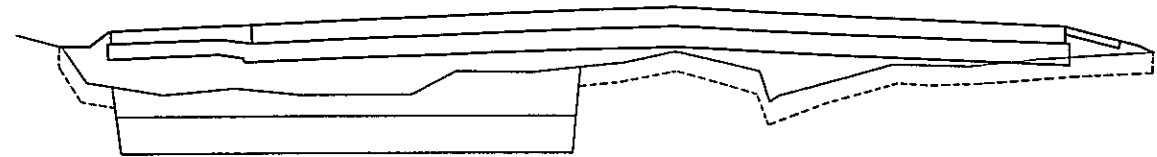
No. 25
GH = 169 428

ROYAL GOVERNMENT OF LAOS	
VIENTIANE AIRPORT EXTENSION PROJECT - II	
CROSS SECTION	
EXTENDED PARALLEL TAXIWAY (6)	
DRAWN BY <i>K. Tazuo</i>	SUBMITTED BY <i>U. Phayanna</i>
CHECKED BY <i>H. Hata</i>	APPROVED BY
DATE MAY 1971	SCALE 1:500 Dwg No 31 OF 61
NIPPON KOEI CO., LTD.	
CONSULTING ENGINEERS TOKYO	

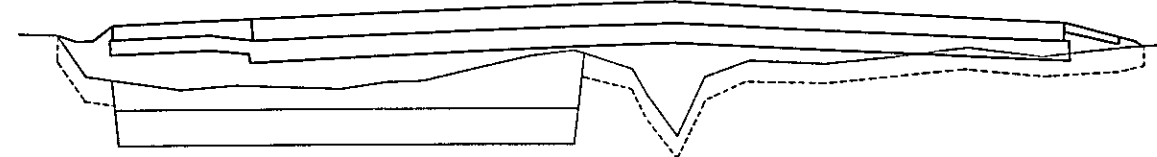


ROYAL GOVERNMENT OF LAOS	
VIENTIANE AIRPORT EXTENSION PROJECT-II	
CROSS SECTION	
EXTENDED APRON (I)	
DRAWN BY : <i>K. Tago</i>	SUBMITTED BY <i>U. Ohgawa</i>
CHECKED BY : <i>H. Kato</i>	APPROVED BY
DATE MAY 1971	SCALE 1/500 DWG No 32 OF 61
NIPPON KOEI CO., LTD.	
CONSULTING ENGINEERS, TOKYO	

170 000
169 000
168 000
167 000
170 000
169 000
168 000
167 000

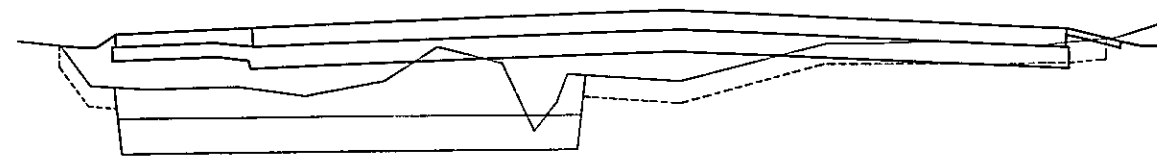


No. 4
GH = 169 000
FH = 169 713



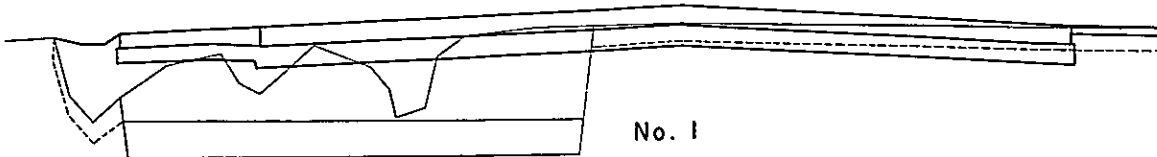
No. 3
GH = 167 750
FH = 169 713

170 000
169 000
168 000
167 000



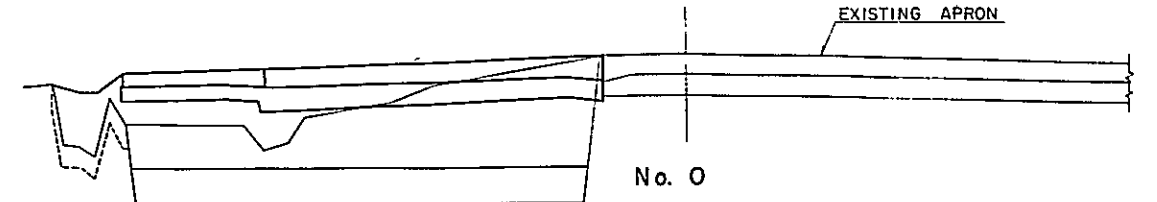
No. 2
GH = 168 600
FH = 169 713

170 000
169 000
168 000
167 000



No. 1
GH = 169 510
FH = 169 713

170 000
169 000
168 000
167 000



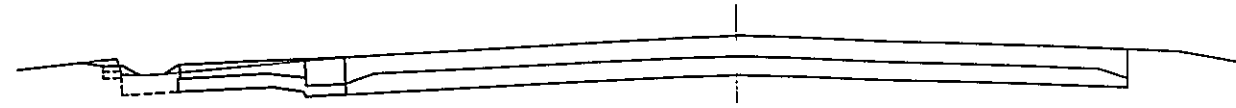
No. 0
GH = 169 713

BOX CULVERT No. 2

EXISTING APRON

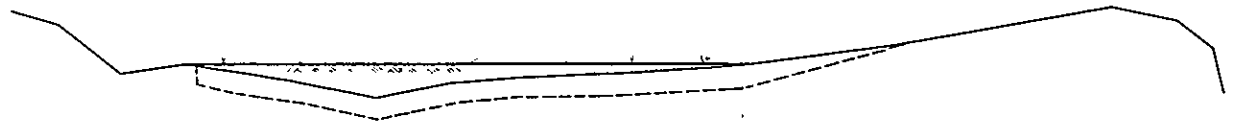
ROYAL GOVERNMENT OF LAOS	
VIENTIANE AIRPORT EXTENSION PROJECT - II	
CROSS SECTION	
EXTENDED APPON (2)	
DRAWN BY <i>K. Tago</i>	SUBMITTED BY <i>V. Ohsugawa</i>
CHECKED BY <i>H. Ishikawa</i>	APPROVED BY
DATE MAY 1971	SCALE 1/500 DWG No 33 OF 6.
NIPPON KOEI CO., LTD.	
CONSULTING ENGINEERS, TOKYO	

171 000
170 000
169 000
168 000



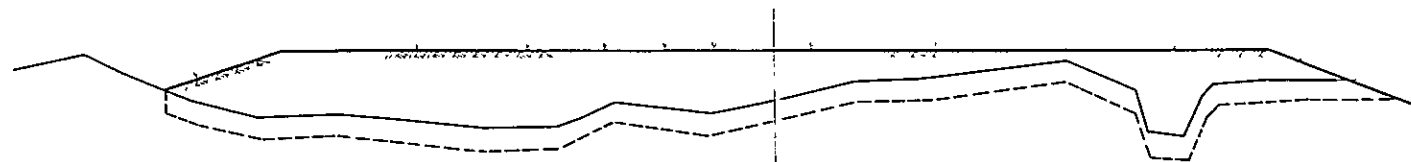
- No. 6 + 07.08
GH = 169 730

170 000
169 000
168 000
167 000



No. 6 + 16.49
GH = 168 720

170 000
169 000
168 000
167 000



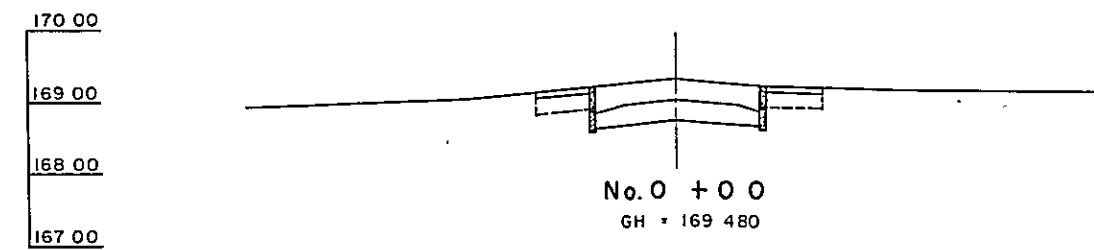
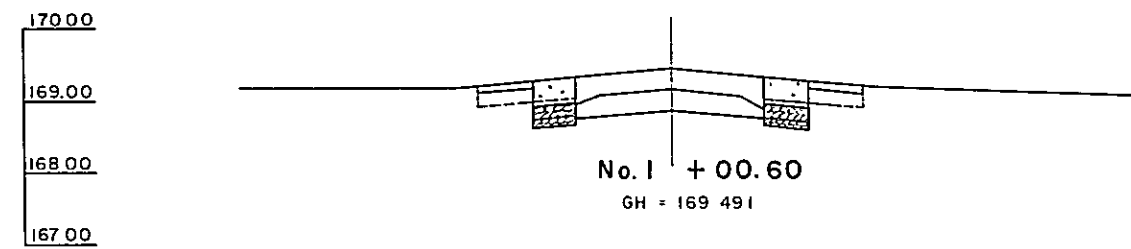
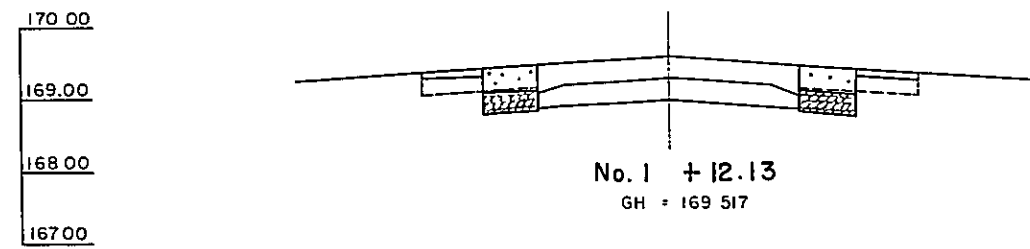
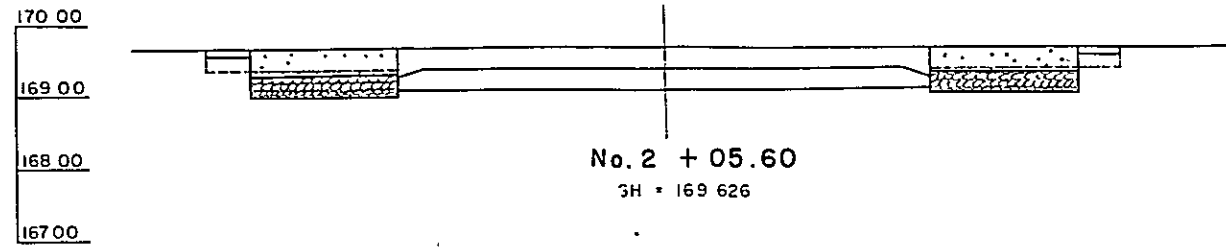
No. 6 + 01.43
GH = 168 790

170 000
169 000
168 000
167 000

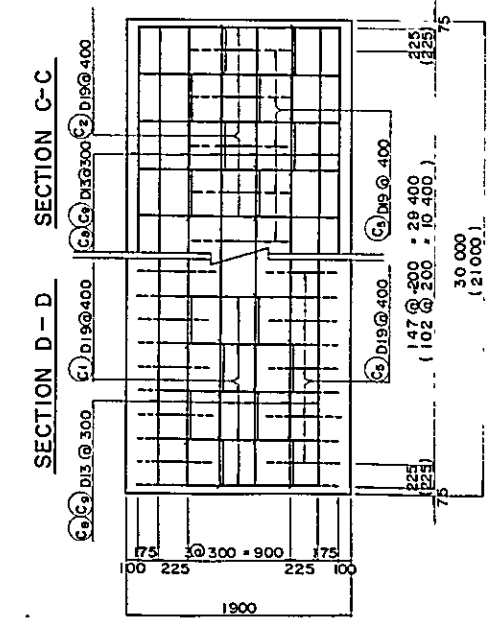
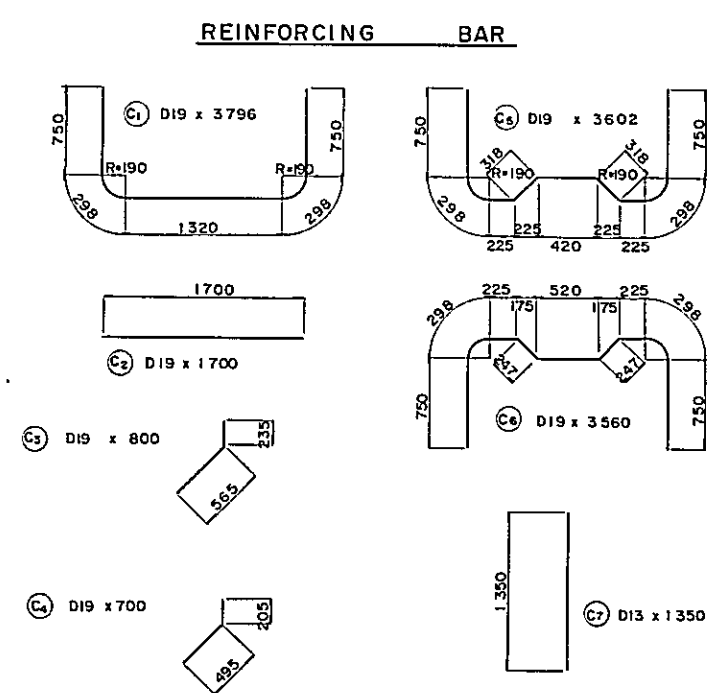
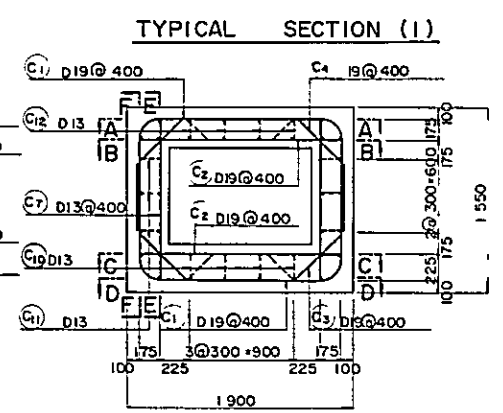
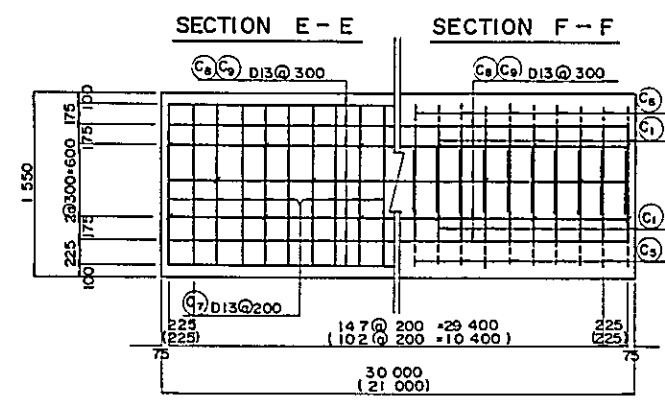
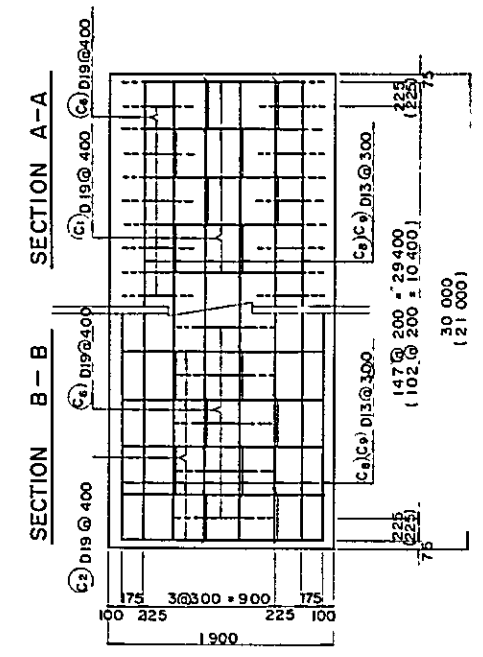
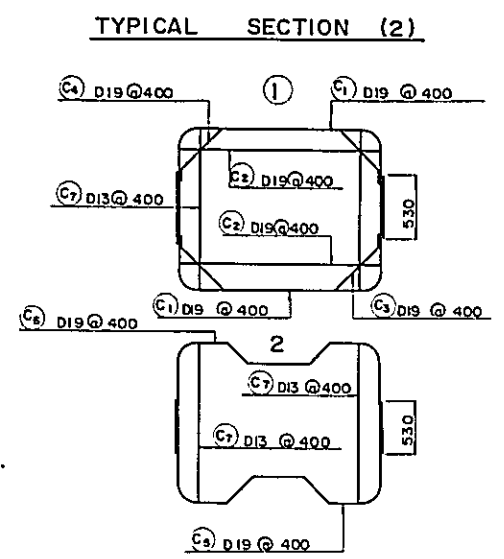


No. 5 + 11.43
GH = 168 800
FH = 169 713

ROYAL GOVERNMENT OF LAOS	
VIENTIANE AIRPORT EXTENSION PROJECT-II	
CROSS SECTION	
EXTENDED APRON (3)	
DRAWN BY: <i>K. Tapp</i>	SUBMITTED BY: <i>V. Oleguer</i>
CHECKED BY: <i>H. H. H.</i>	APPROVED BY:
DATE: MAY 1971	SCALE: 1/200, DWG No 24 OF 61
NIPPON KOEI CO., LTD.	
CONSULTING ENGINEERS TOKYO	



ROYAL GOVERNMENT OF LAOS	
VIENTIANE AIRPORT EXTENSION PROJECT - II	
CROSS SECTION FILLET IMPROVEMENT	
DRAWN BY <i>KB Tago</i>	SUBMITTED BY <i>V. Phayavong</i>
CHECKED BY <i>SP K. K.</i>	APPROVED BY
DATE MAY 10 1971	SCALE 1:500 DWG No 35 OF 6
NIPPON KOEI CO., LTD. CONSULTING ENGINEERS TOKYO	



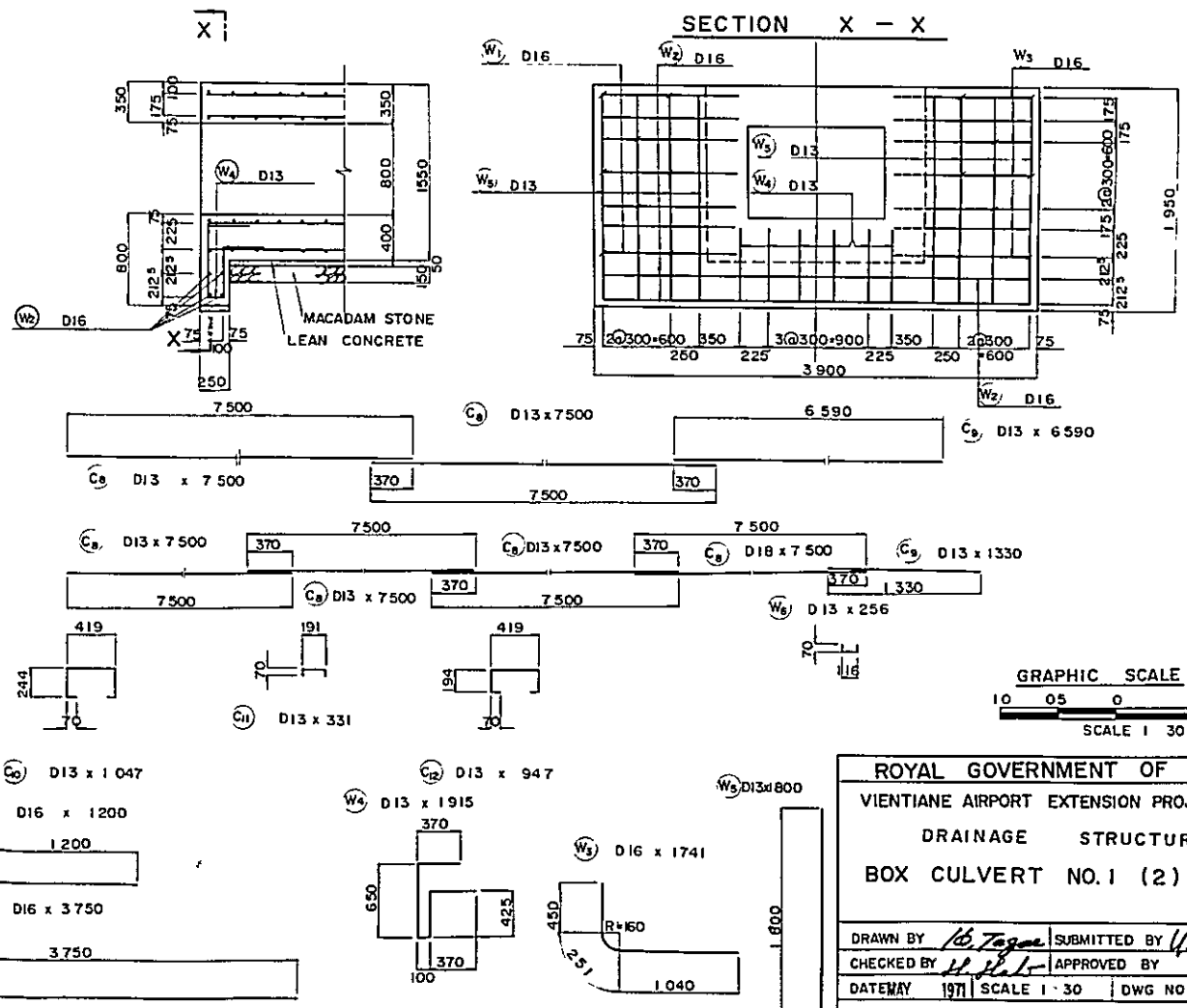
LIST OF REINFORCEMENT (PER 30,000^M)

MARK	DIA	LENGTH	EACH	WEIGHT/one	WEIGHT	REMARKS
C 1	D19	3796	152	8541	1298.2	
C 2	-	1700	152	3825	581.4	
C 3	-	800	152	1800	273.6	
C 4	-	700	152	1575	239.4	
C 5	-	3602	74	8105	599.8	
C 6	-	3560	74	8010	592.7	
C 7	D13	1350	300	1343	402.9	
C 8	-	7500	160	7463	1194.1	
C 9	-	1330	40	1323	52.9	
C 10	-	1047	148	1042	154.2	
C 11	-	331	228	0329	75.0	
C 12	-	947	148	0942	139.4	
				D 19	3585.1 kg	
				D 13	2018.5 kg	
TOTAL					5603.6 kg	

LIST OF REINFORCEMENT (PER 21,000^M)

MARK	DIA	LENGTH	EACH	WEIGHT/one	WEIGHT	REMARKS
C 1	D19	3796	106	8541	905.3	
C 2	-	1700	106	3825	405.5	
C 3	-	800	106	1800	190.8	
C 4	-	700	106	1575	167.0	
C 5	-	3602	52	8105	421.5	
C 6	-	3560	52	8010	416.5	
C 7	D13	1350	210	1343	282.0	
C 8	-	7500	80	7463	597.0	
C 9	-	6590	40	6557	262.3	
C 10	-	1047	104	1042	108.4	
C 11	-	331	160	0329	52.6	
C 12	-	947	104	0942	98.0	
				D 19	2506.6 kg	
				D 13	1400.3 kg	
SUB TOTAL					3,906 x 4 = 15,627.6 kg	
W 1	D16	1200	14	1872	26.2	
W 2	-	3750	4	5850	23.4	
W 3	-	1741	14	2716	38.0	
W 4	D13	1915	6	1905	11.4	
W 5	-	1800	16	1791	28.7	
W 6	-	256	16	0255	4.1	
				D 16	87.6 kg	
				D 13	44.2 kg	
SUB TOTAL					131.8 x 2 = 263.6 kg	
TOTAL					15891.4 kg	

REINFORCEMENT, OUTLET & INLET

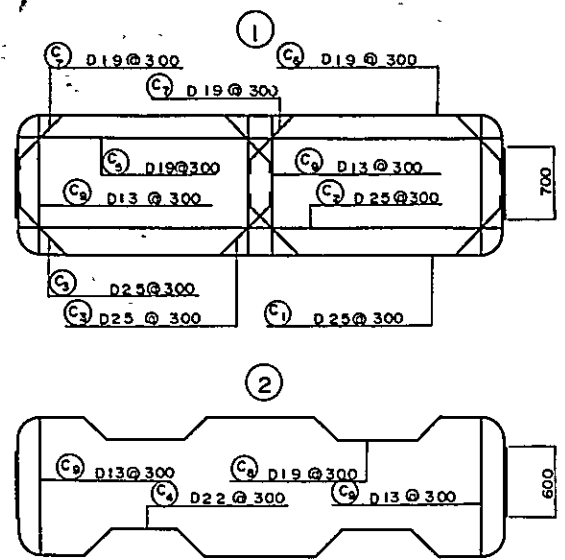


ROYAL GOVERNMENT OF LAOS
VIENTIANE AIRPORT EXTENSION PROJECT - I
DRAINAGE STRUCTURE
BOX CULVERT NO.1 (2)

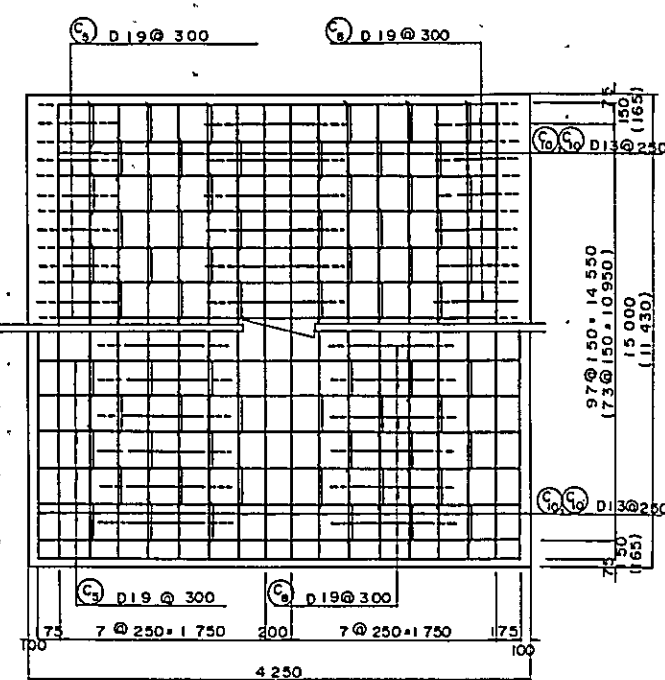
DRAWN BY *B. Tapan* SUBMITTED BY *V. Chayana*
 CHECKED BY *H. P. L.* APPROVED BY _____
 DATWAY 1971 SCALE 1:30 DWG NO 37 OF 61

NIPPON KOEI CO., LTD.
 CONSULTING ENGINEERS TOKYO

TYPICAL SECTION (2)



SECTION A-A
SECTION B-B



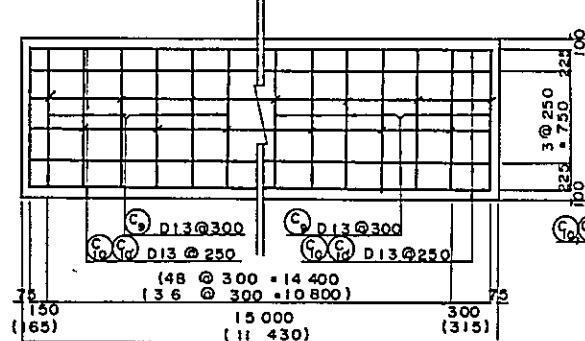
LIST OF REINFORCEMENT (PER 11.430)

MARK	DIA	LENGTH	EACH	WEIGHT/ONE	WEIGHT	REMARKS
C-1	D25	5 686	39	22.630	882.6	
2		4 050	39	16.119	628.6	
3		700	156	2.786	434.6	
4	D22	5 982	37	18.185	672.8	
5	D19	4 050	39	9.113	355.4	
6		5 706	39	12.839	500.7	
7		600	156	1.1350	210.6	
8		5 894	37	13.262	490.7	
9	D13	1 150	230	1.144	263.1	
10		7 500	80	7.463	597.0	
10'		4 150	80	4.129	330.3	
11		965	222	0.960	213.1	
12		334	76	0.332	25.2	
13		328	38	0.326	12.4	
14		847	222	0.843	188.3	
				D 25	1945.8 kg	
				D 22	672.8	
				D 19	1557.4	
				D 13	1629.4	
				TOTAL	5805.4 kg	
				5805.4 x 2 = 11 610.8 kg		

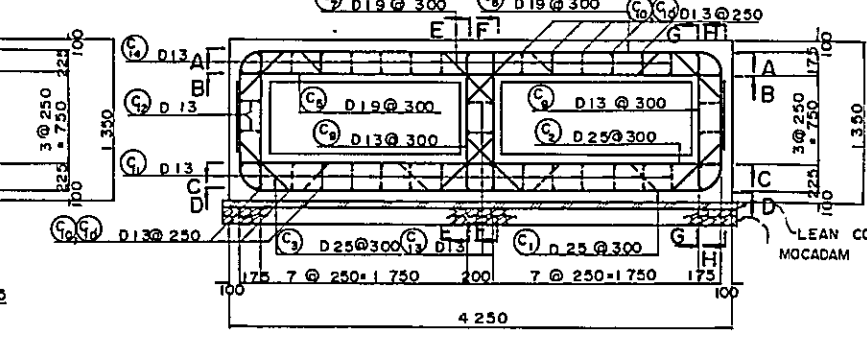
LIST OF REINFORCEMENT (PER 15 000)

MARK	DIA	LENGTH	EACH	WEIGHT/ONE	WEIGHT	REMARKS
C-1	D25	5 686	51	22.630	1 154.1	
2		4 050	51	16.119	822.1	
3		700	204	2.786	568.3	
4	D22	5 982	40	18.185	891.1	
5	D19	4 050	51	9.113	464.8	
6		5 706	51	12.839	654.8	
7		600	204	1.350	275.4	
8		5 894	99	13.262	649.8	
9	D13	1 150	302	1.144	345.5	
10		7 500	160	7.436	1 189.8	
10'		590	80	0.587	47.0	
11		965	294	0.960	282.2	
12		334	102	0.332	33.9	
13		328	51	0.326	16.6	
14		847	294	0.843	247.8	
W-1		4 050	18	4.030	72.5	
W-2		1 915	4	1.905	7.6	
				D 25	2 544.5 kg	
				D 22	891.1	
				D 19	2 044.8	
				D 13	2 242.9	
				TOTAL	7 723.3 kg	
				7 723.3 x 2 = 15 446.3 kg		

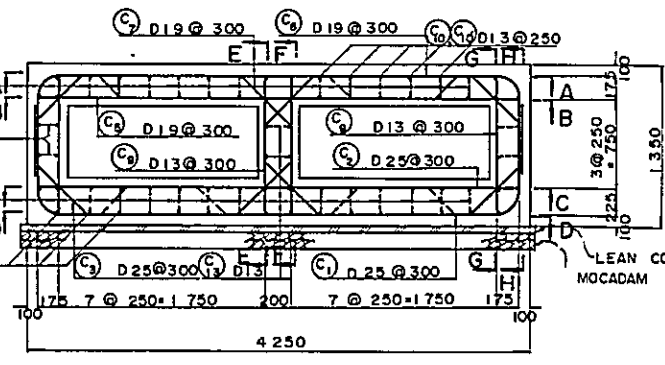
SECTION E-E



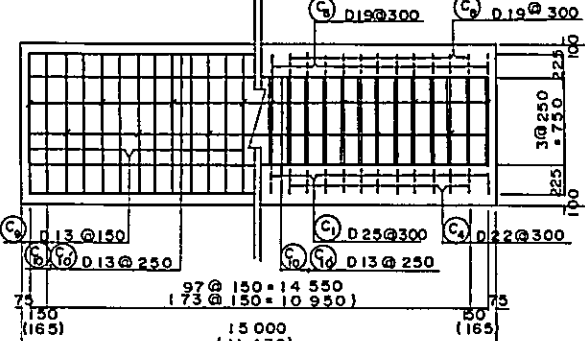
SECTION F-F



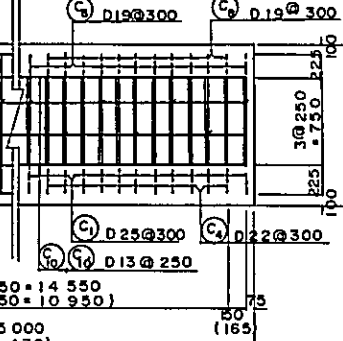
TYPICAL SECTION (1)



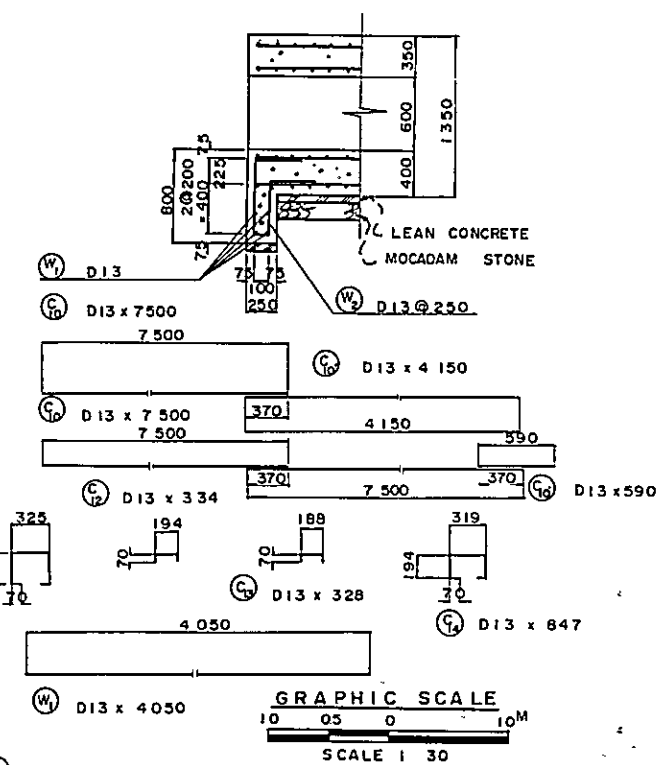
SECTION G-G



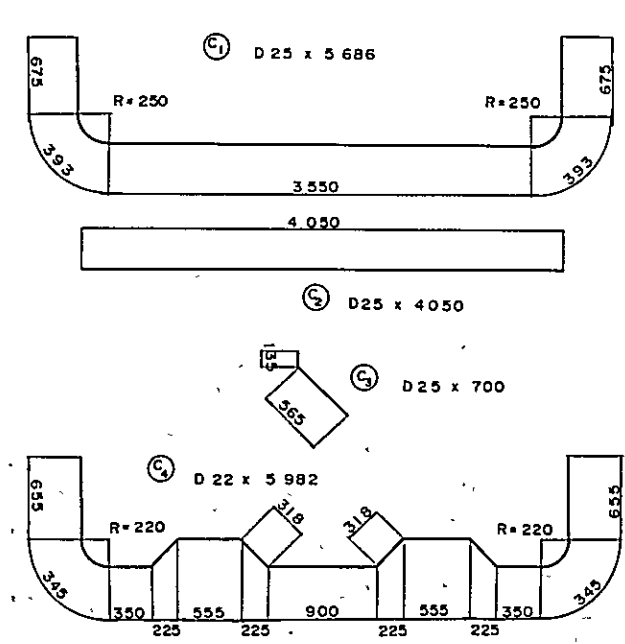
SECTION H-H



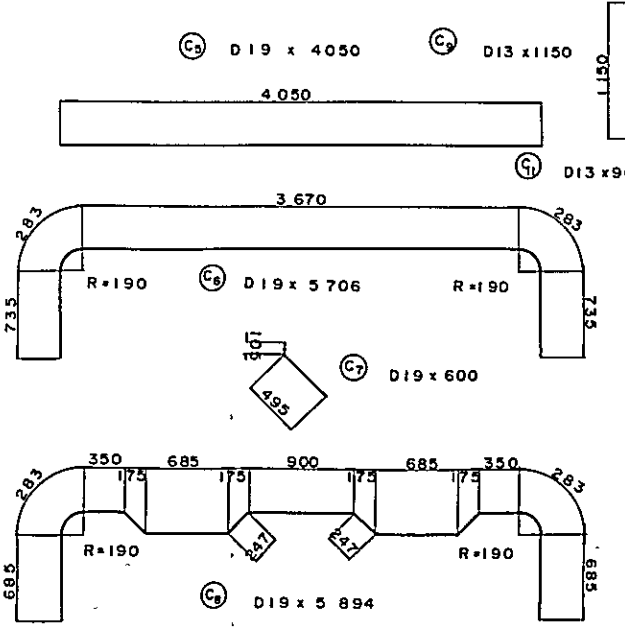
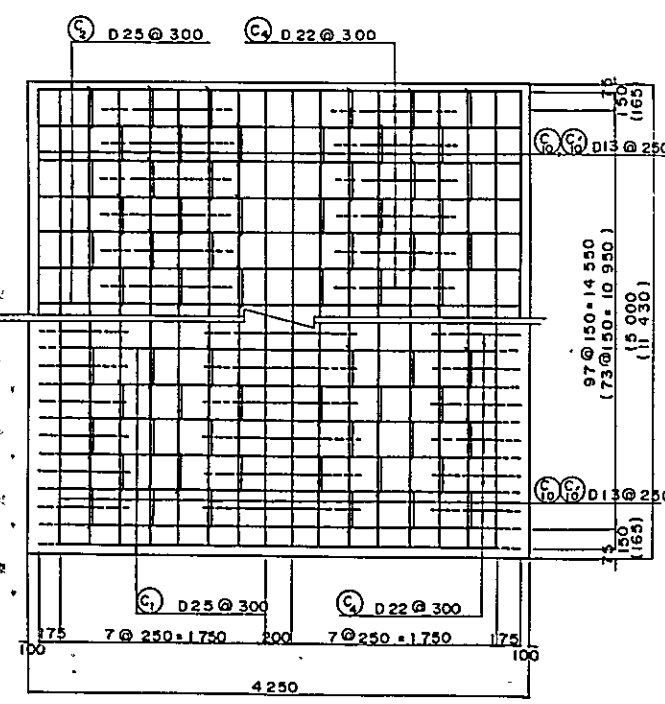
REINFORCEMENT & INLET



REINFORCING BAR



SECTION C-C
SECTION D-D



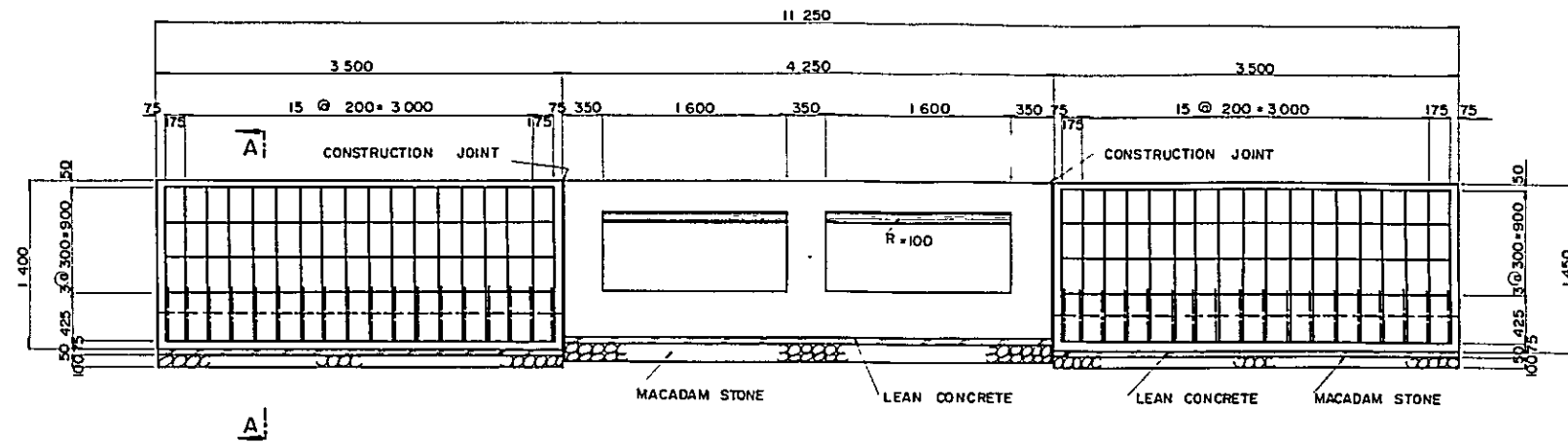
NOTE
SEE DWG NO 36 FOR NOTE

ROYAL GOVERNMENT OF LAOS
 VIENTIANE AIRPORT EXTENSION PROJECT-II
 DRAINAGE STRUCTURE
 BOX CULVERT NO.2 (2.)

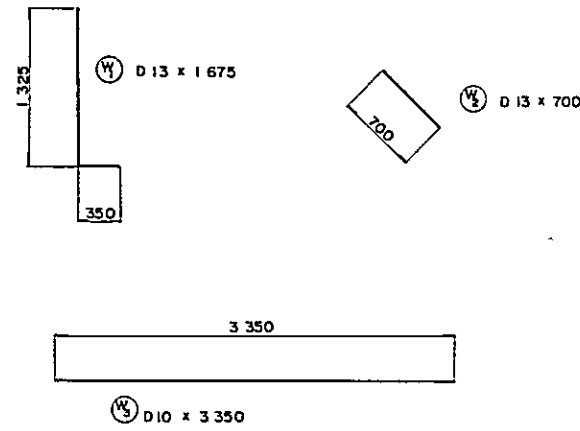
DRAWN BY *Ab. Tazawa* SUBMITTED BY *U. Okazawa*
 CHECKED BY *H. H. H.* APPROVED BY:
 DATE MAY 1971 SCALE: 1:30 DWG NO 39 OF 61

NIPPON KOEI CO., LTD.
 CONSULTING ENGINEERS TOKYO

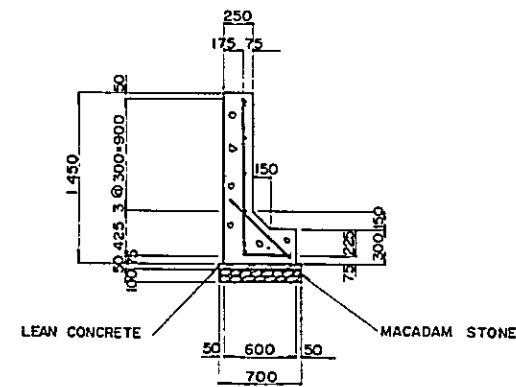
REINFORCEMENT, WINGWALL



REINFORCING BAR



SECTION A - A



LIST OF REINFORCEMENT

MARK	DIA	LENGTH	EACH	WEIGHT	ONE	WEIGHT	REMARKS
(W ₁)	D 13	1 675	36	1 667		60 0	L
(W ₂)	-	700	36	0 697		25 1	
(W ₃)	D 10	3 350	12	1 876		22 5	
				D 13		85 1	kg
				D 10		22 5	
TOTAL						107 6 x 2=214 4	kg

NOTE

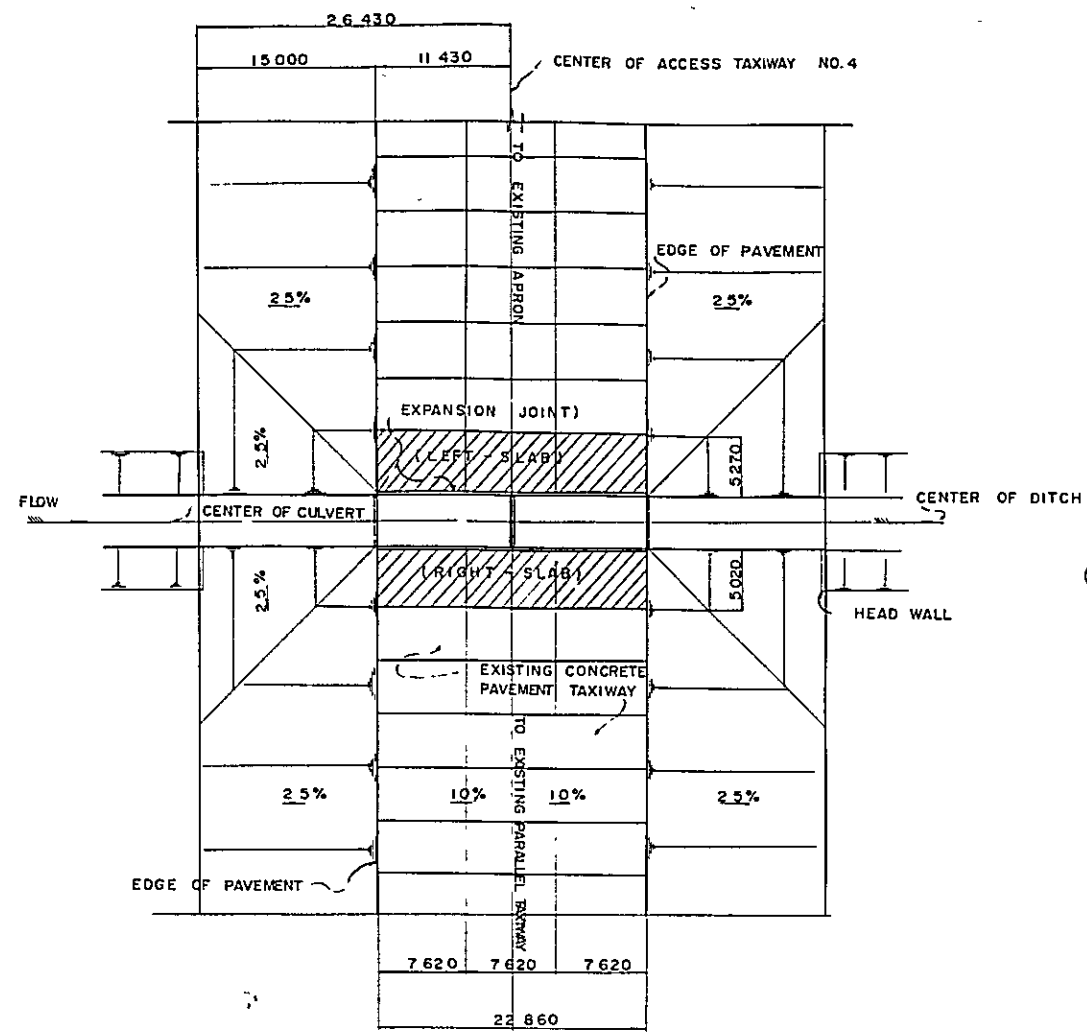
SEE DWG NO 36 FOR NOTE

GRAPHIC SCALE

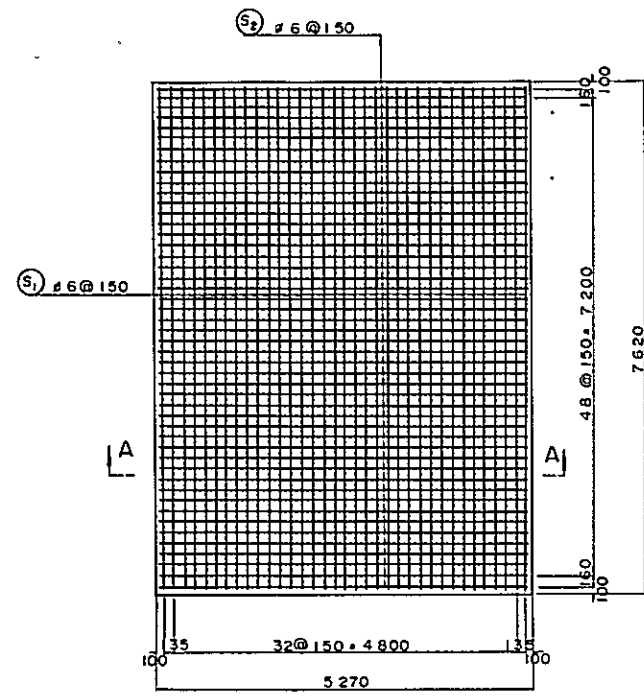


ROYAL GOVERNMENT OF LAOS	
VIENTIANE AIRPORT EXTENSION PROJECT - II	
DRAINAGE STRUCTURE	
BOX CULVERT NO.2 (3)	
DRAWN BY: <i>K. Tapan</i>	SUBMITTED BY: <i>H. Olayorn</i>
CHECKED BY: <i>P. H. J.</i>	APPROVED BY: <i>H. Olayorn</i>
DATE: <i>MAY 1971</i>	SCALE: 1:30 DWG NO 40 OF 61
NIPPON KOEI CO., LTD	
CONSULTING ENGINEERS, TOKYO	

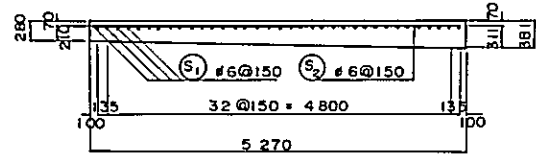
KEY PLAN SCALE 1:300



LEFT SLAB SCALE 1:50



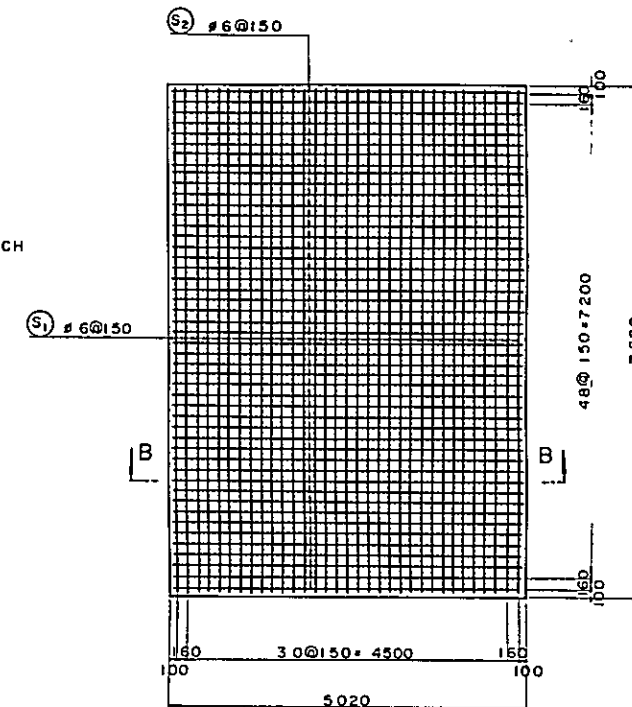
SECTION A-A



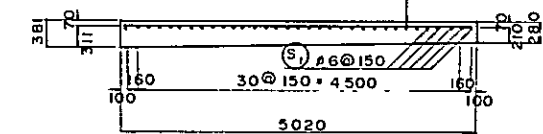
LIST OF REINFORCEMENT (LEFT)

MARK	DIA	LENGTH	EACH	WEIGHT _{one}	WEIGHT	REMARKS
S-1	#6	7 500	33	1 665	58 3	
S-2	-	5 170	51	1 148	58 5	
				116 8 kg		
TOTAL				116 8 x 3 =	350 4 kg	

RIGHT SLAB SCALE 1:50



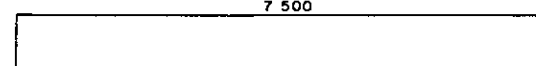
SECTION B-B



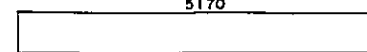
LIST OF REINFORCEMENT (RIGHT)

MARK	DIA	LENGTH	EACH	WEIGHT _{one}	WEIGHT	REMARKS
S-1	#6	7 500	33	1 665	54 9	
S-2	-	4 920	51	1 092	55 7	
				110 6 kg		
TOTAL				110 6 kg x 3 =	331 8 kg	

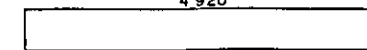
S1 #6 x 7 500



S2 #6 x 5 170

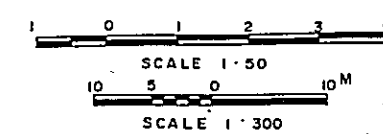


S2 #6 x 4 920



NOTE
SEE DWG NO.36 FOR NOTE

GRAPHIC SCALE

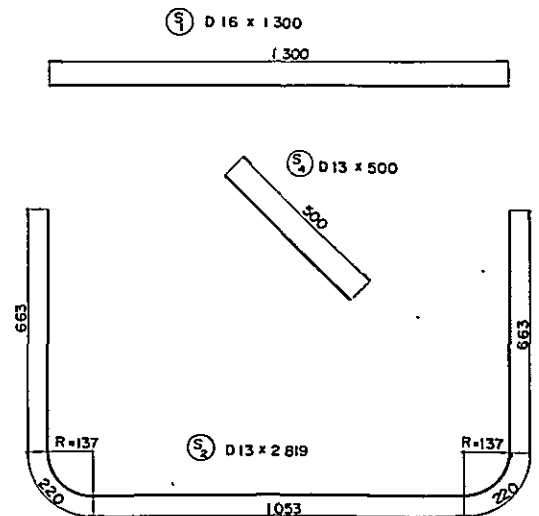
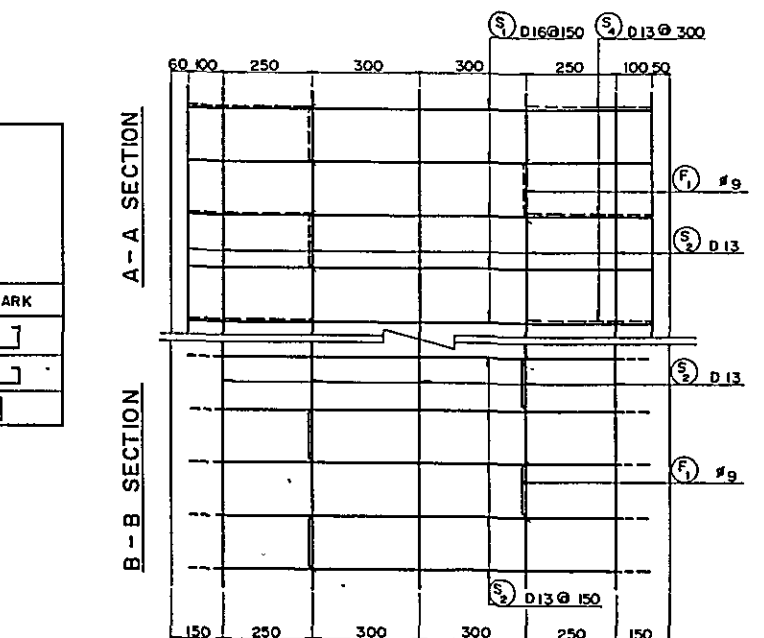
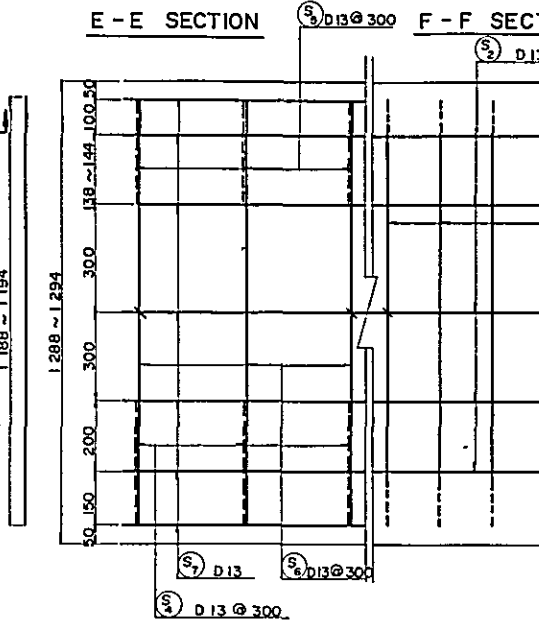
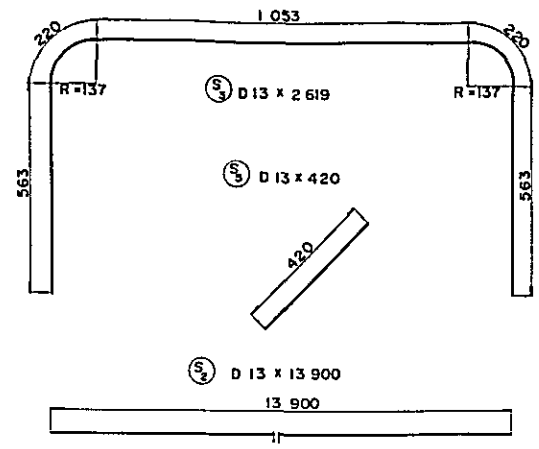
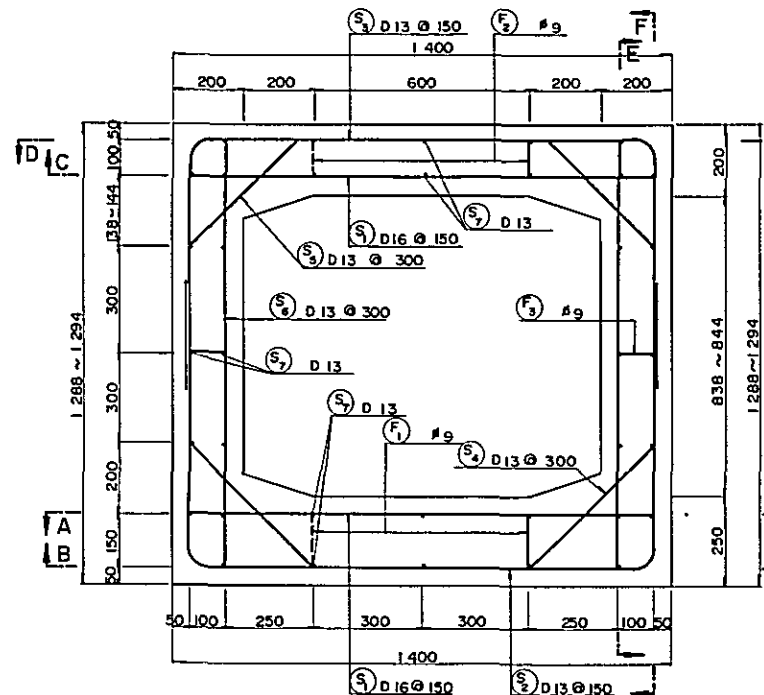
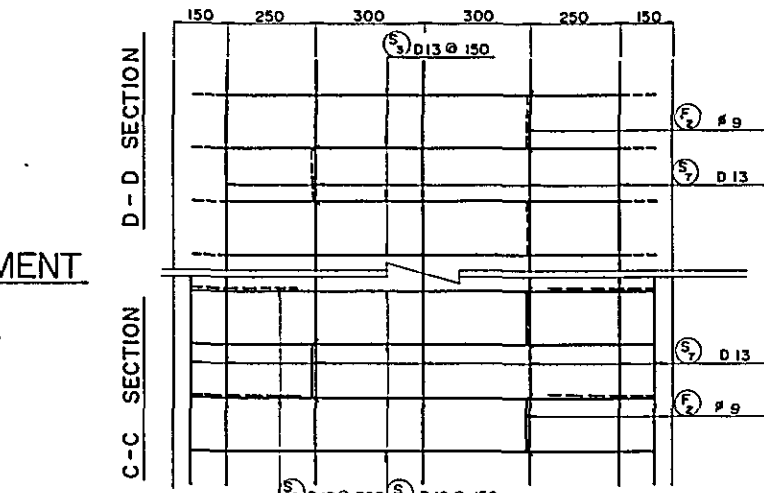
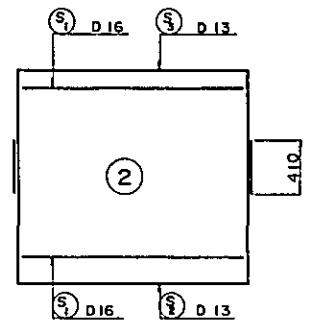
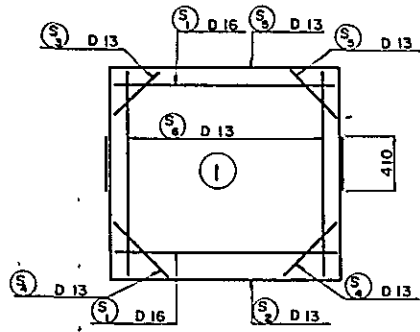


ROYAL GOVERNMENT OF LAOS
VIENTIANE AIRPORT EXTENSION PROJECT - II
DRAINAGE STRUCTURE
BOX CULVERT NO.2 (4)

DRAWN BY: *H. Tane* SUBMITTED BY: *Y. Ogasawara*
CHECKED BY: *H. Tane* APPROVED BY: _____
DATEWAY: 1971 SCALE: AS SHOWN DWG. NO 41 OF 61

NIPPON KOEI CO., LTD.
CONSULTING ENGINEERS TOKYO

COMBINATION OF REINFORCMENT



LIST OF STIRUP

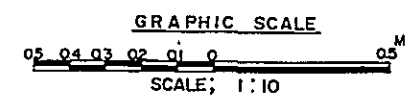
$L = a + 2b + 16d$ $L = b + 12d$

MARK	SECTION	a	b	L	REMARK
(F1)	#9	176	176	496	[]
(F2)	"	176	126	436	[]
(F3)	"	—	126	234	[]

LIST OF REINFORCEMENT (PER 14 M)

MARK	SECTION	LENGTH	EACH	WEIGHT ONE	WEIGHT	REMARKS
(S1)	D16	1300	188	2015	378.8	—
(S2)	D13	2819	94	2802	263.3	[]
(S3)	"	2619	94	2603	244.6	[]
(S4)	"	500	47	0.497	23.3	[]
(S5)	"	420	47	0.417	19.5	[]
(S6)	"	1191	47	1.183	55.6	[]
(S7)	"	13900	36	13.816	497.3	—
(F1)	#9	496	92	0.247	22.7	[]
(F2)	"	436	92	0.217	19.9	[]
(F3)	"	234	23	0.116	2.6	[]
				D16	378.8 kg	
				D13	1103.6 "	
				#9	45.2 "	
				TOTAL	1527.6 kg	

NOTE
ALL DIMENSION ARE IN MILLIMETER UNLESS OTHERWISE INDICATED

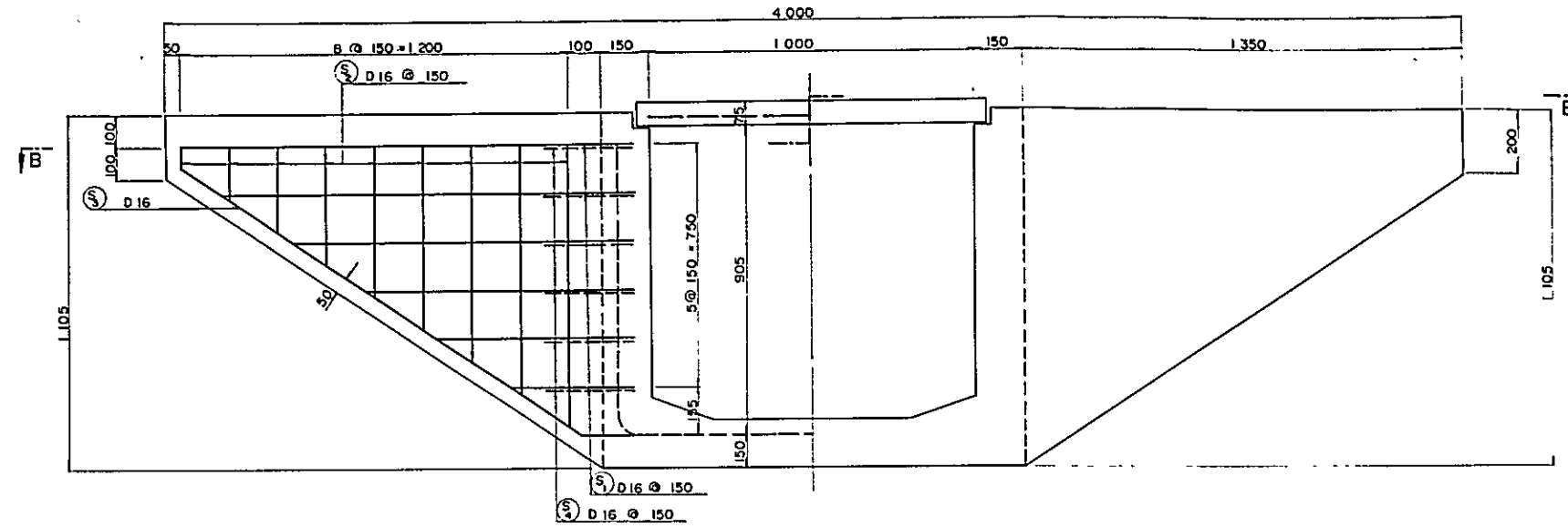


ROYAL GOVERNMENT OF LAOS
VIENTIANE AIRPORT EXTENSION PROJECT-II
DRAINAGE STRUCTURE
BOX CULVERT NO. 3 (2)
REINFORCEMENT

DRAWN BY: *N. Yubala* SUBMITTED BY: *H. Chayavong*
CHECKED BY: *H. Chayavong* APPROVED BY: _____
DATE: MAY 1971 SCALE: 1:10 DWG. NO 43 OF 61
NIPPON KOEI CO., LTD
CONSULTING ENGINEERS, TOKYO

HEAD WALL SCALE 1:10

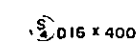
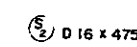
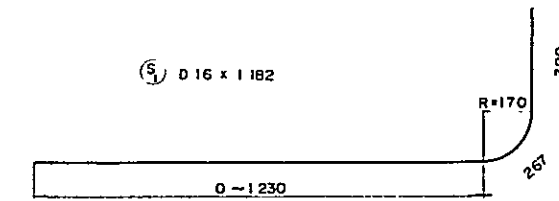
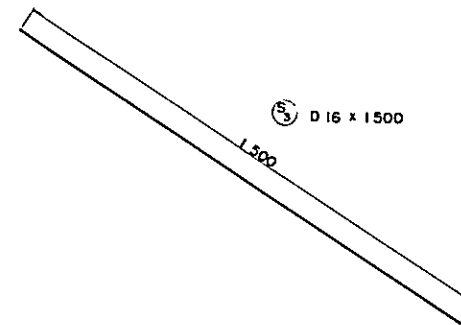
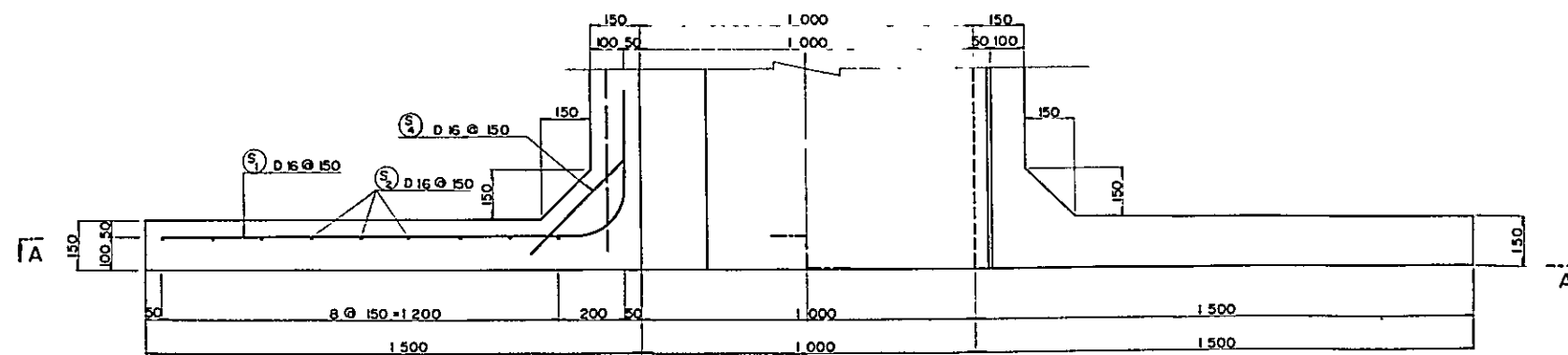
A - A SECTION



LIST OF REINFORCEMENT

MARK	SECTION	LENGTH	EACH	WEIGHT ONE	WEIGHT	REMARKS
⑤	D 16	1 182	7	1 832	12 8	/
⑤	"	475	9	0 736	6 6	
⑤	"	1 500	1	2 325	2 3	
⑤	"	400	6	0 620	3 7	
				D 16	25 4	kg
				TOTAL	25 4	kg

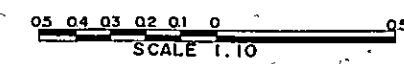
B - B SECTION



NOTE

ALL DIMENSION ARE IN MILLIMETER UNLESS OTHERWISE INDICATED

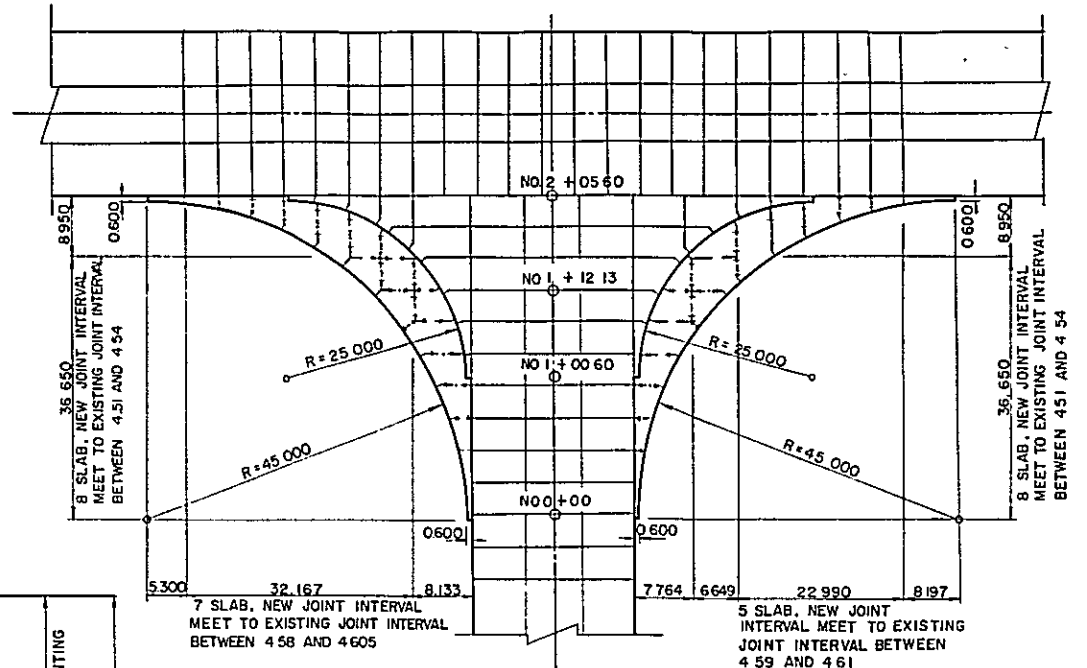
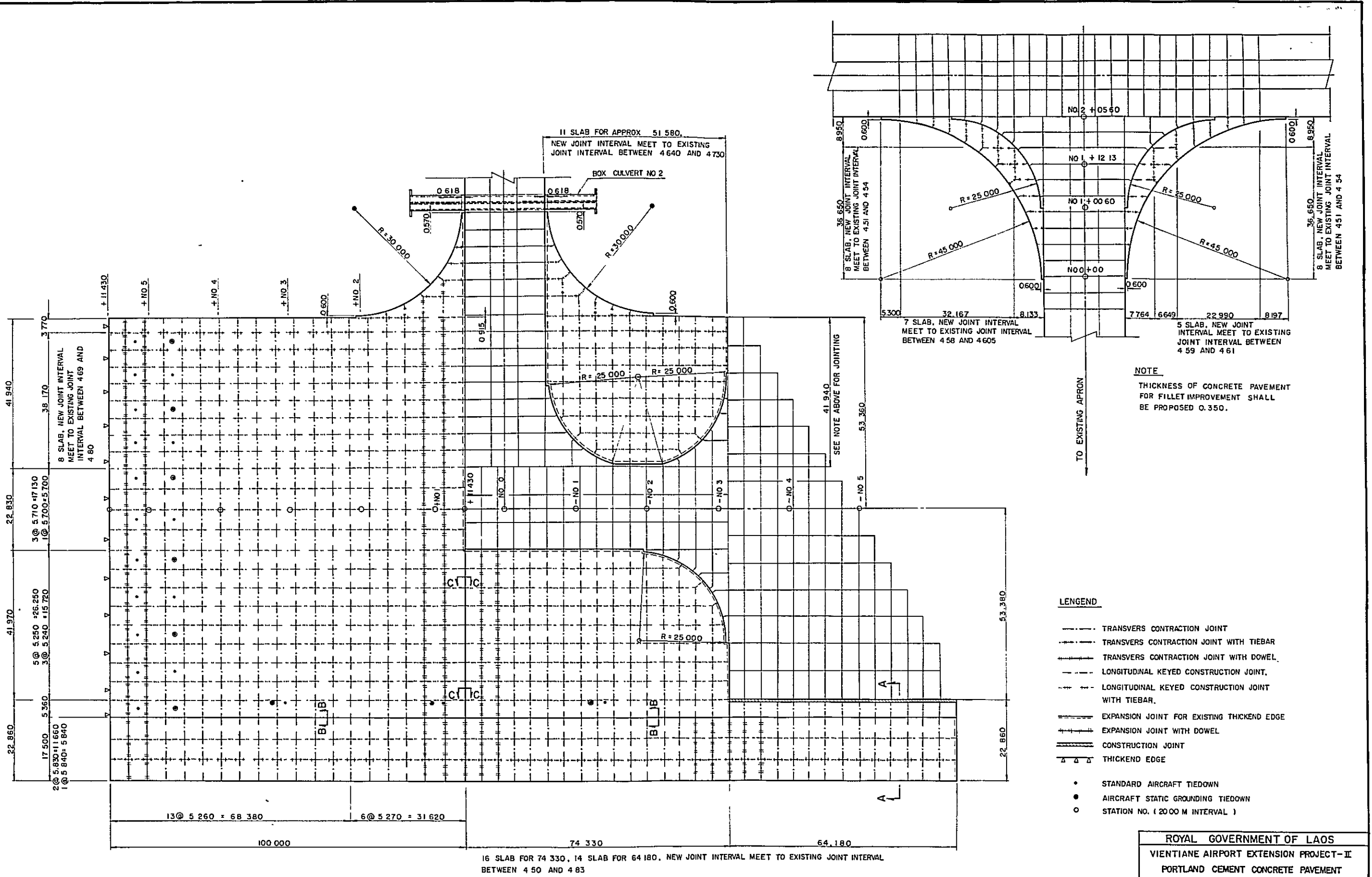
GRAPHIC SCALE



ROYAL GOVERNMENT OF LAOS
 VIENTIANE AIRPORT EXTENSION PROJECT - II
 DRAINAGE STRUCTURE (NO. 3)
 BOX CULVERT NO. 3 (3)
 DETAILS, HEAD WALL

DRAWN BY *N. Saha* SUBMITTED BY *U. Deygawa*
 CHECKED BY *N. Saha* APPROVED BY _____

DATE MAY 1971 SCALE: 1:10 DWG NO. 44 OF 61
 NIPPON KOEI CO., LTD.
 CONSULTING ENGINEERS, TOKYO.



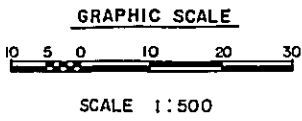
NOTE
THICKNESS OF CONCRETE PAVEMENT FOR FILLET IMPROVEMENT SHALL BE PROPOSED 0.350.

LENGEND

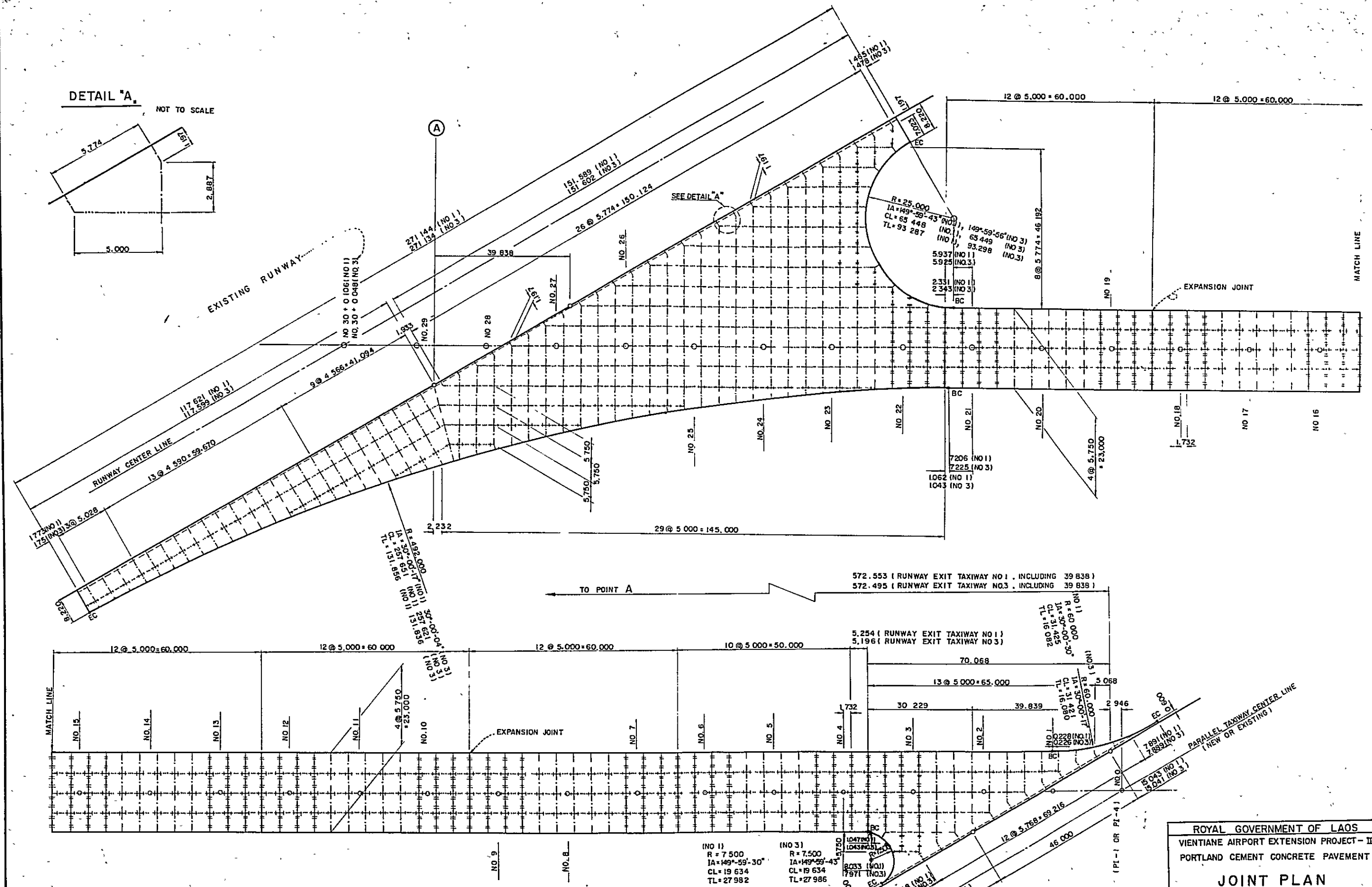
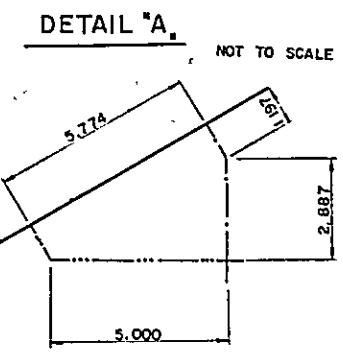
- TRANSVERS CONTRACTION JOINT
- - - TRANSVERS CONTRACTION JOINT WITH TIEBAR
- - - TRANSVERS CONTRACTION JOINT WITH DOWEL
- - - LONGITUDINAL KEYED CONSTRUCTION JOINT
- - - LONGITUDINAL KEYED CONSTRUCTION JOINT WITH TIEBAR
- EXPANSION JOINT FOR EXISTING THICKEND EDGE
- - - EXPANSION JOINT WITH DOWEL
- CONSTRUCTION JOINT
- △ △ △ THICKEND EDGE
- STANDARD AIRCRAFT TIEDOWN
- AIRCRAFT STATIC GROUNDING TIEDOWN
- STATION NO. (2000 M INTERVAL)

NOTES

- 1 ALL DIMENSIONS ARE IN METER
- 2 SECTION A-A , B-B AND C-C IS SHOWN ON "JOINT DETAILS" DWG. NO 48



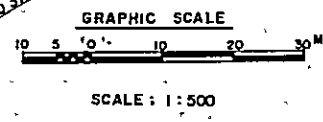
ROYAL GOVERNMENT OF LAOS
 VIENTIANE AIRPORT EXTENSION PROJECT-II
 PORTLAND CEMENT CONCRETE PAVEMENT
JOINT PLAN
 EXTENDED APRON : & FILLET IMPROVEMENT
 DRAWN BY: *N. Hori* SUBMITTED BY: *U. Phayanna*
 CHECKED BY: *H. Hori* APPROVED BY: *U. Phayanna*
 DATE: *13/11/13* SCALE: AS SHOWN DWG No 45 OF 61
NIPPON KOEI CO., LTD.
 CONSULTING ENGINEERS, TOKYO



NOTES:
1. ALL DIMENSIONS ARE IN METER.
2. SEE JOINT PLAN "EXTENDED APRON" DWG. NO. 45 FOR LEGEND

(NO. 1)
R = 7.500
IA = 149°59'30"
CL = 19.634
TL = 27.982

(NO. 3)
R = 7.500
IA = 149°59'43"
CL = 19.634
TL = 27.986

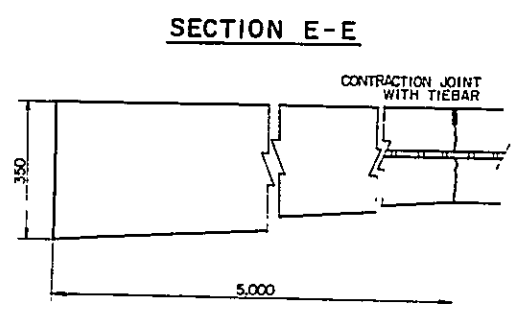
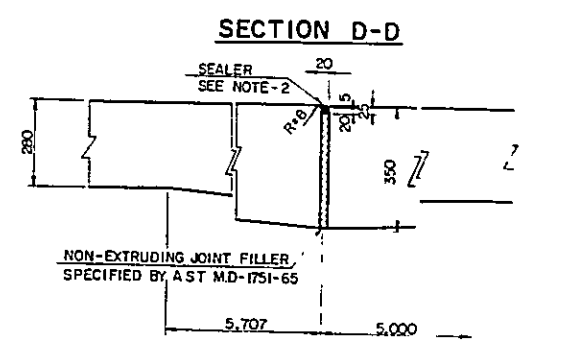
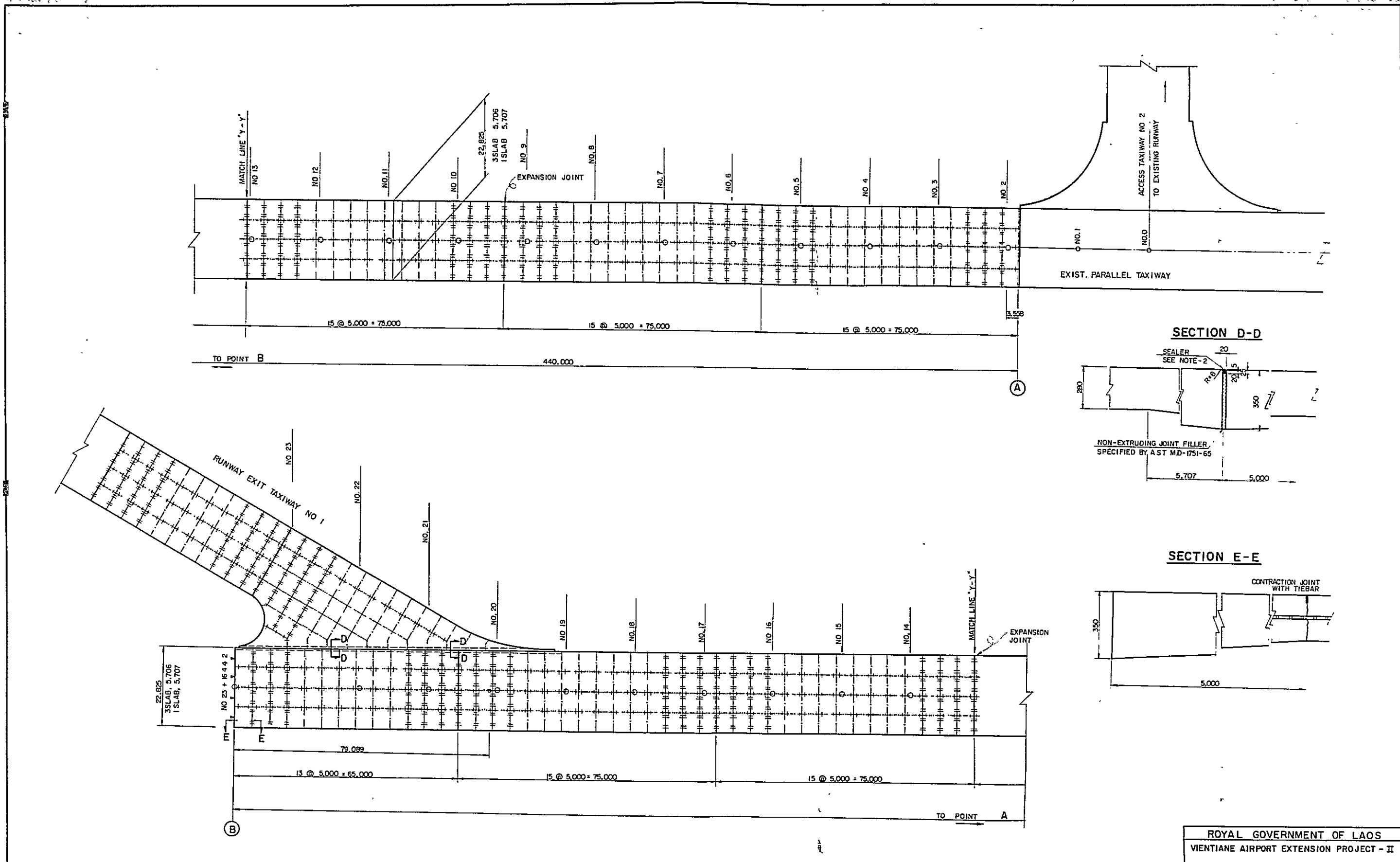


ROYAL GOVERNMENT OF LAOS
VIENTIANE AIRPORT EXTENSION PROJECT - II
PORTLAND CEMENT CONCRETE PAVEMENT

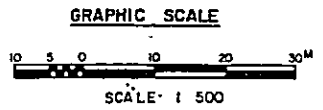
JOINT PLAN
2-RUNWAY EXIT TAXIWAY

DRAWN BY: *N. Mori* SUBMITTED BY: *U. Okazaki*
CHECKED BY: *Sh. H. H.* APPROVED BY: *U. Okazaki*
DATE: *1971* SCALE: AS SHOWN DWG. NO. 46 OF 61

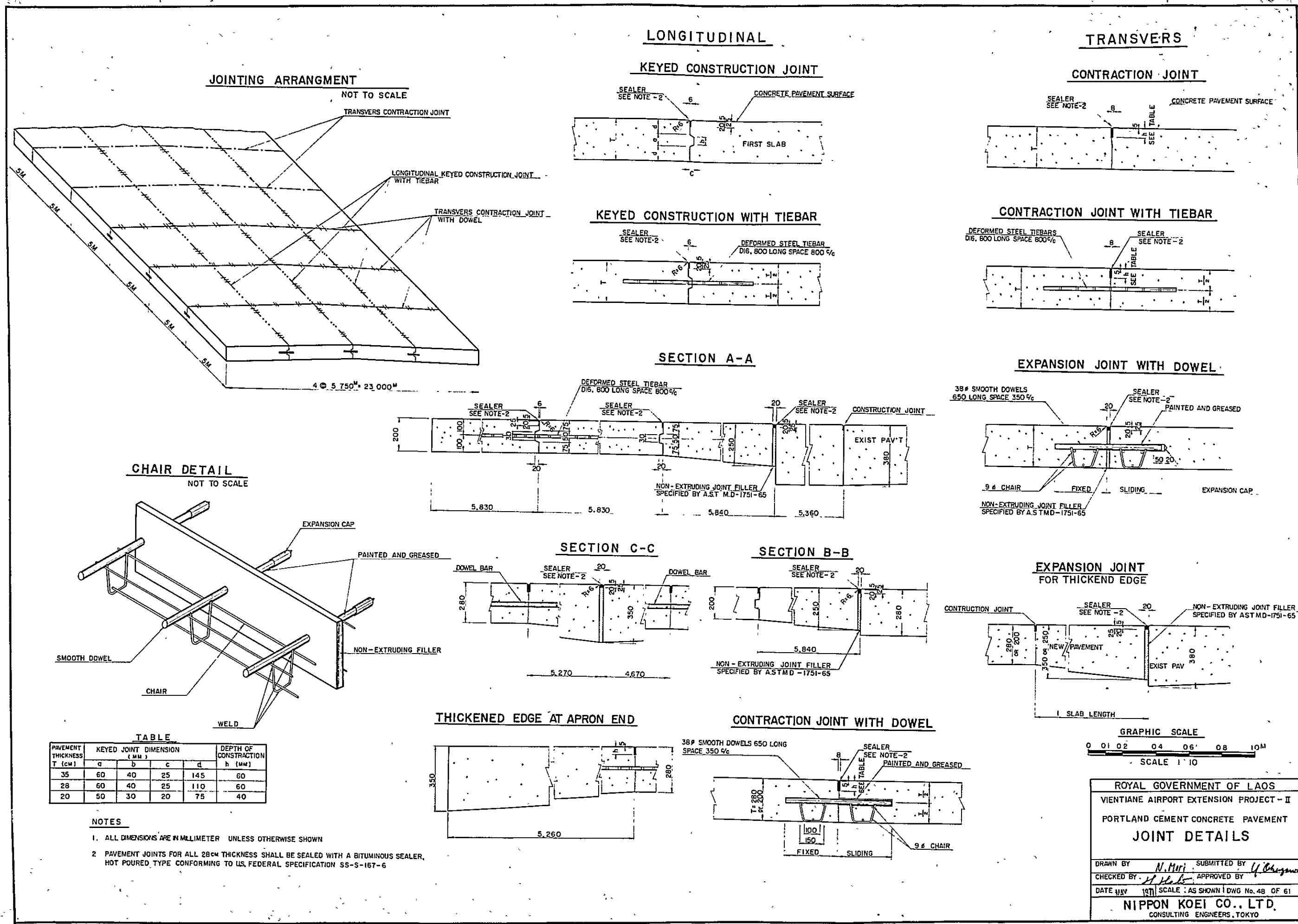
NIPPON KOEI CO., LTD.
CONSULTING ENGINEERS, TOKYO



- NOTES**
1. ALL DIMENSIONS ARE IN METER EXCEPT SECTION D-D & E-E ARE IN MILLIMETER
 2. SEE JOINT PLAN "EXTENDED APRON" DWG NO 45 FOR LEGEND

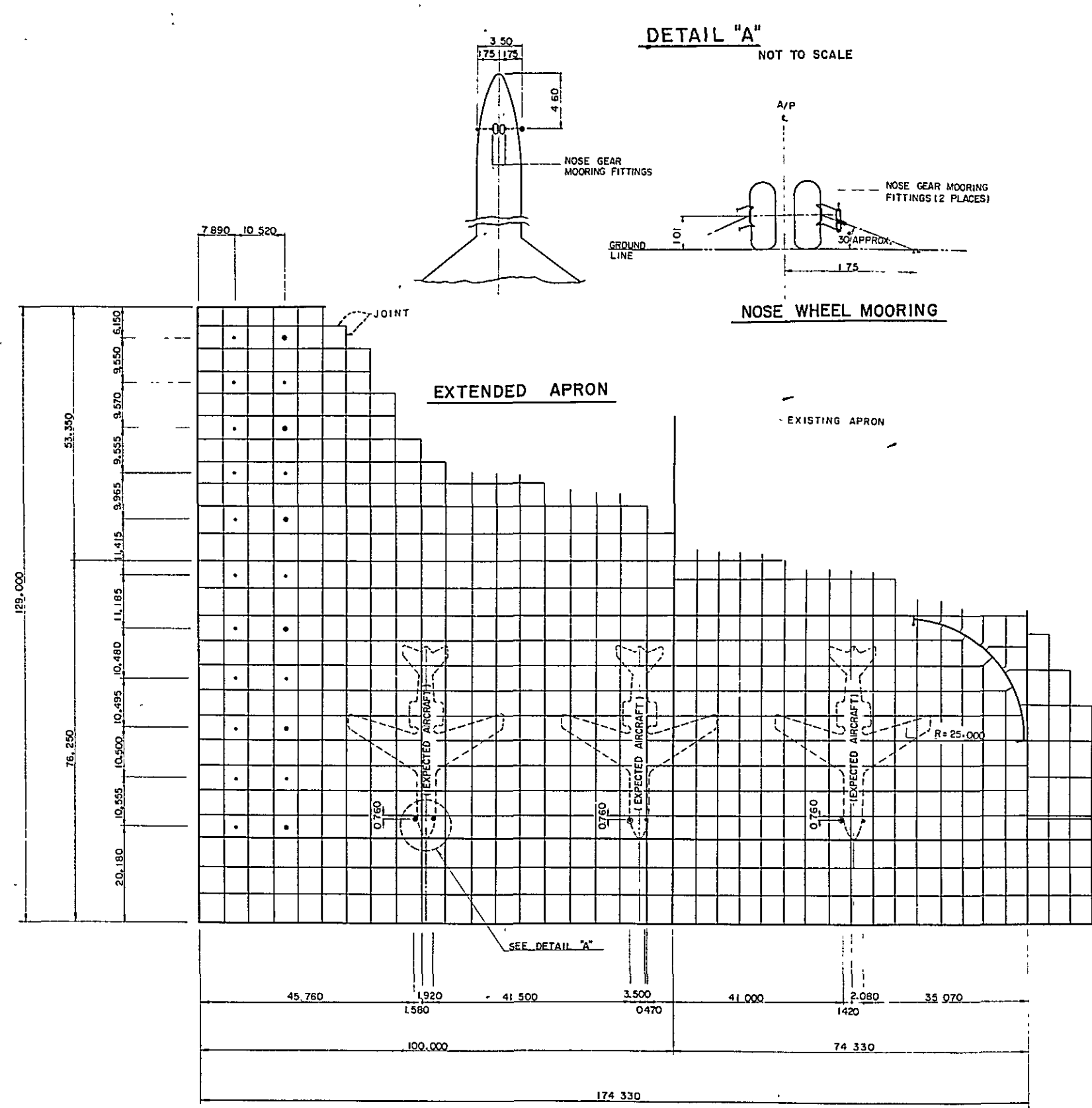


ROYAL GOVERNMENT OF LAOS	
VIENTIANE AIRPORT EXTENSION PROJECT - II	
PORTLAND CEMENT CONCRETE PAVEMENT	
JOINT PLAN	
EXTENDED PARALLEL TAXIWAY	
DRAWN BY <i>N. MORI</i>	SUBMITTED BY <i>V. Phayavong</i>
CHECKED BY: <i>S. Hatanaka</i>	APPROVED BY:
DATE: MAY 1971 SCALE: AS SHOWN DWG No 47 CF 6.	
NIPPON KOEI CO., LTD.	
CONSULTING ENGINEERS, TOKYO.	

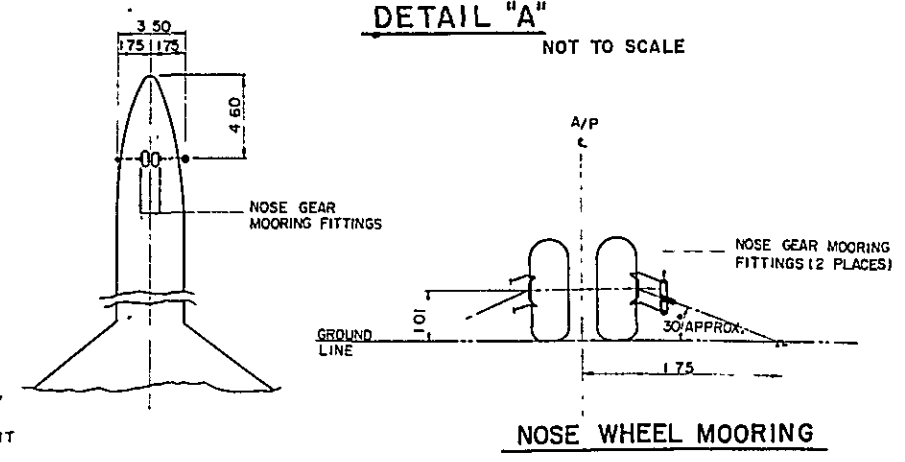


ROYAL GOVERNMENT OF LAOS
 VIENTIANE AIRPORT EXTENSION PROJECT - II
 PORTLAND CEMENT CONCRETE PAVEMENT
JOINT DETAILS

DRAWN BY *N. Huri* SUBMITTED BY *U. Chayma*
 CHECKED BY *[Signature]* APPROVED BY *[Signature]*
 DATE *11/17/77* SCALE: AS SHOWN | DWG No. 48 OF 61
NIPPON KOEI CO., LTD.
 CONSULTING ENGINEERS, TOKYO

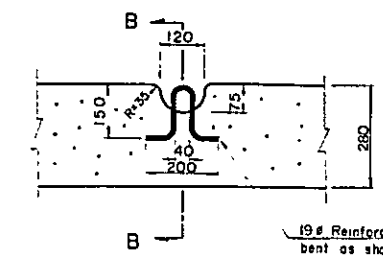


DETAIL "A"
NOT TO SCALE



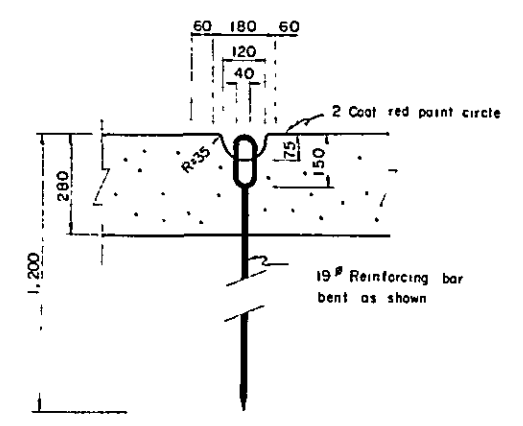
NOSE WHEEL MOORING

DETAILS OF AIRCRAFT TIEDOWN



SECTION B-B

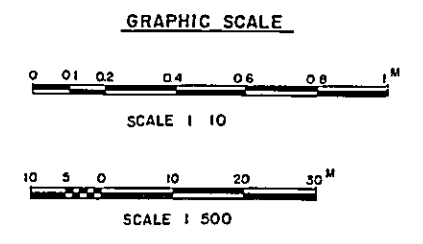
STANDARD AIRCRAFT TIEDOWN SCALE 1/10



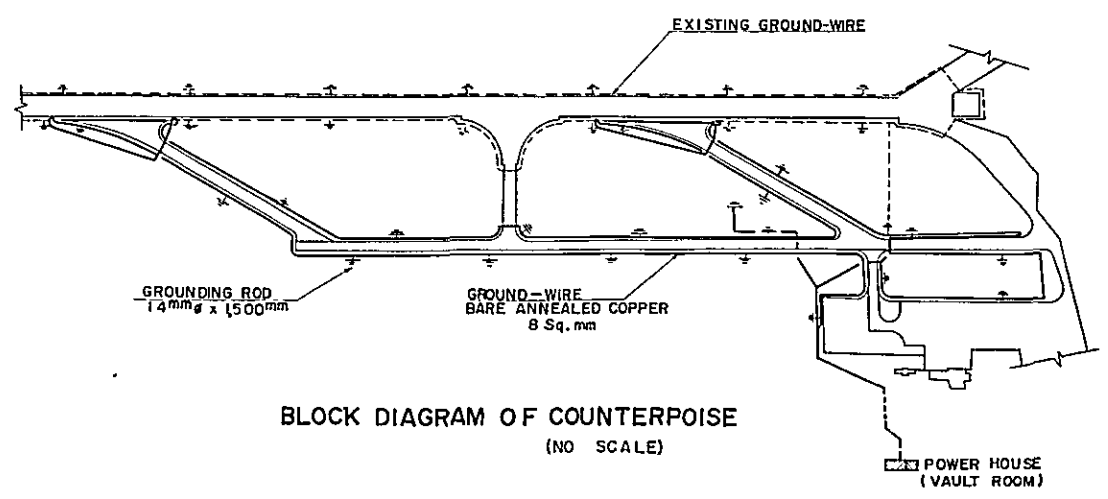
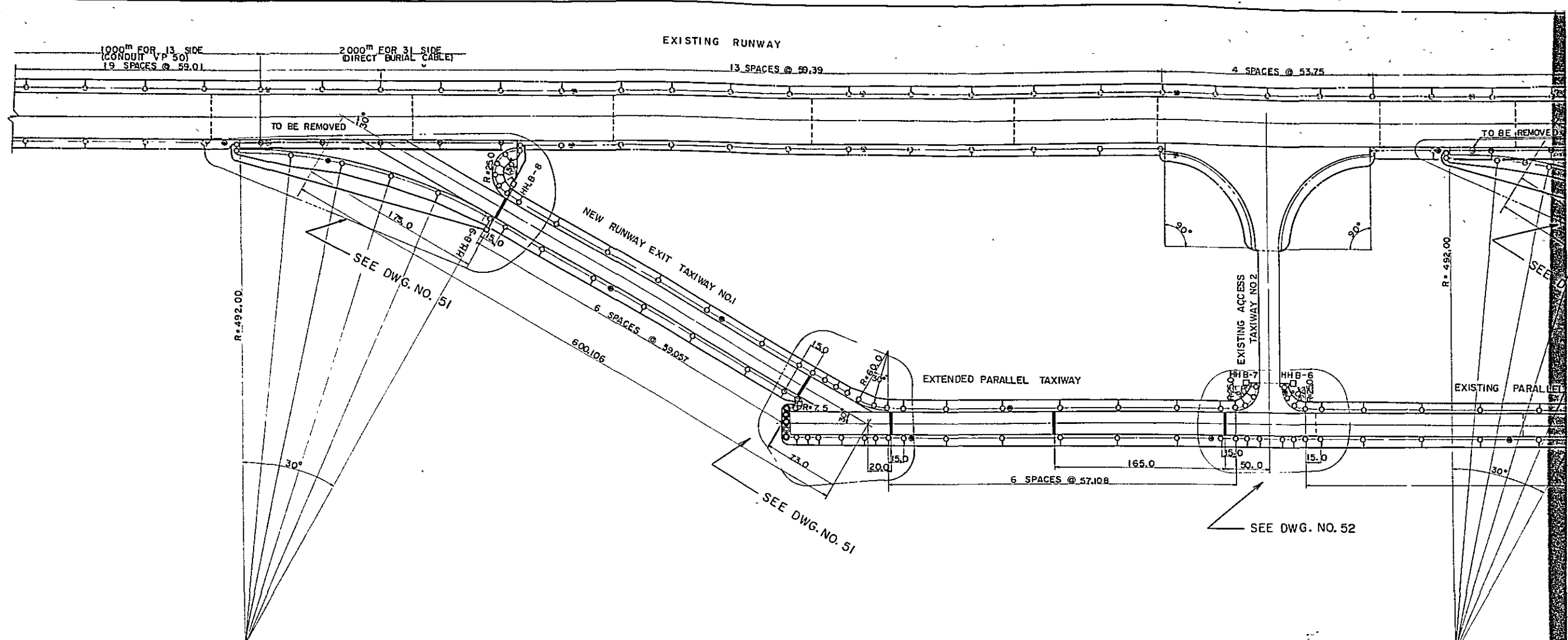
AIRCRAFT STATIC GROUNDING TIEDOWN SCALE 1/10

- STANDARD AIRCRAFT TIEDOWN
- ⊙ AIRCRAFT STATIC GROUNDING TIEDOWN

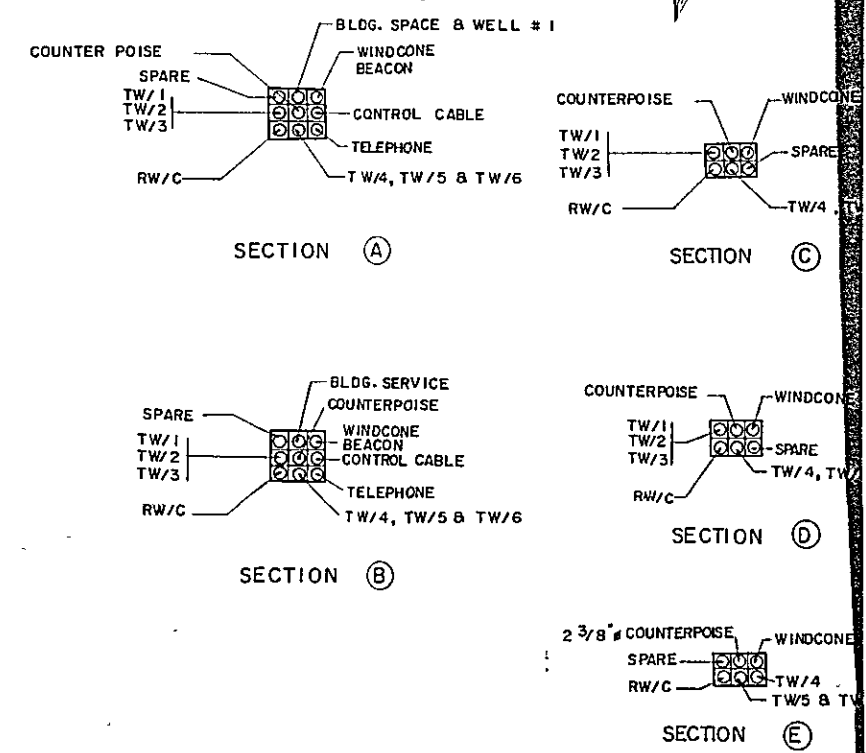
NOTE
ALL DIMENSIONS ARE IN METER EXCEPT THOSE IN DETAILS OF AIRCRAFT TIEDOWN.



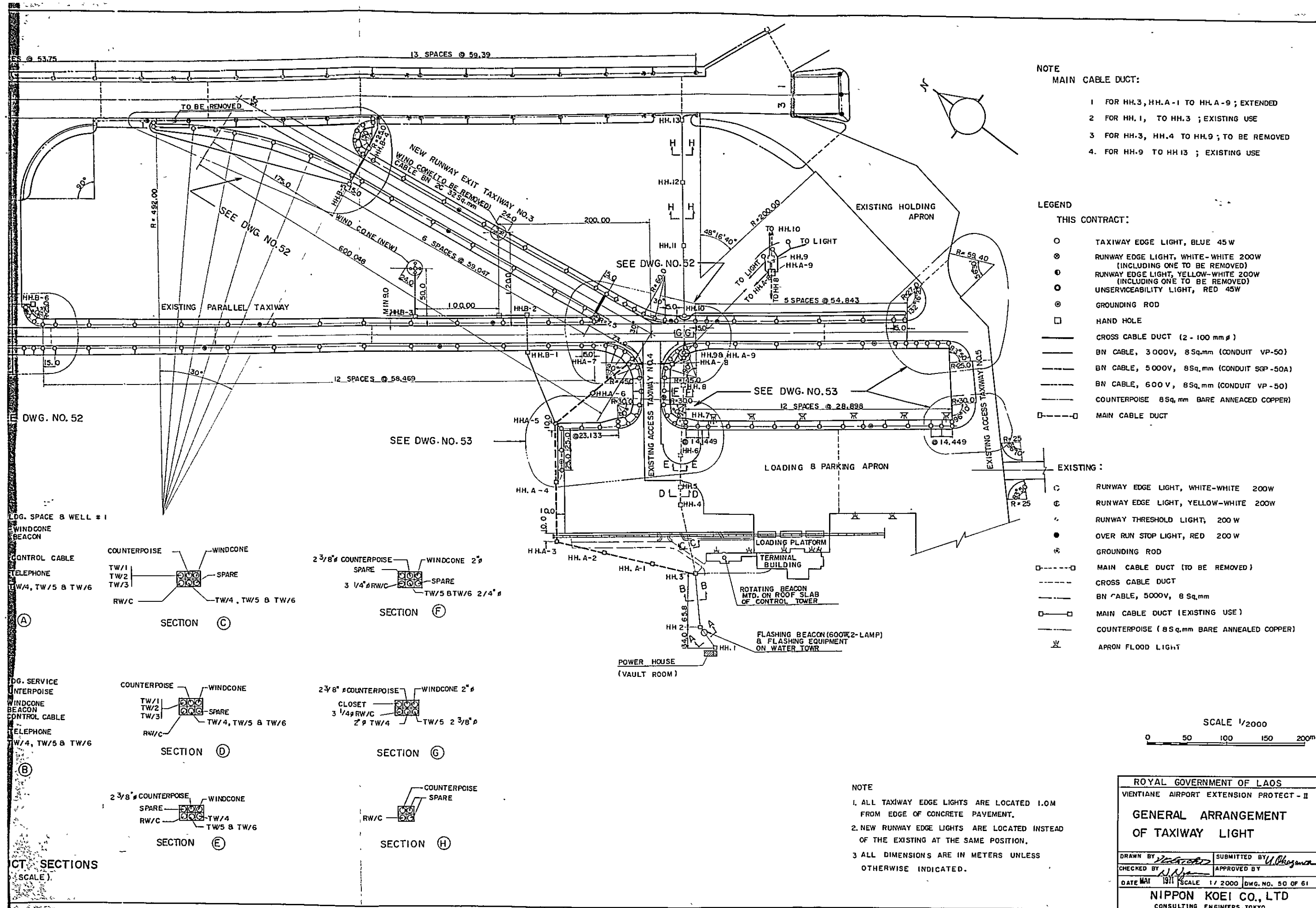
ROYAL GOVERNMENT OF LAOS	
VIENTIANE AIRPORT EXTENSION PROJECT - II	
PORTLAND CEMENT CONCRETE PAVEMENT	
PARKING TIEDOWN & GROUNDING ANCHOR	
DRAWN BY <i>N. Mori</i>	SUBMITTED BY <i>U. Pongvan</i>
CHECKED BY <i>S. Phet</i>	APPROVED BY
DATE MAY 1971	SCALE AS SHOWN DWG 116 45 OF 6
NIPPON KOEI CO., LTD. CONSULTING ENGINEERS TOKYO	



BLOCK DIAGRAM OF COUNTERPOISE
(NO SCALE)



EXISTING DUCT SECTIONS
(NO SCALE)



- NOTE**
MAIN CABLE DUCT:
- 1 FOR HH.3, HH.A-1 TO HH.A-9 ; EXTENDED
 - 2 FOR HH.1, TO HH.3 ; EXISTING USE
 - 3 FOR HH.3, HH.4 TO HH.9 ; TO BE REMOVED
 - 4 FOR HH.9 TO HH.13 ; EXISTING USE

- LEGEND**
THIS CONTRACT:
- TAXIWAY EDGE LIGHT, BLUE 45W
 - ⊙ RUNWAY EDGE LIGHT, WHITE-WHITE 200W (INCLUDING ONE TO BE REMOVED)
 - ⊙ RUNWAY EDGE LIGHT, YELLOW-WHITE 200W (INCLUDING ONE TO BE REMOVED)
 - ⊙ UNSERVICEABILITY LIGHT, RED 45W
 - ⊙ GROUNDING ROD
 - HAND HOLE
 - CROSS CABLE DUCT (2 - 100 mm ϕ)
 - BN CABLE, 3000V, 8Sq.mm (CONDUIT VP-50)
 - BN CABLE, 5000V, 8Sq.mm (CONDUIT SGP-50A)
 - BN CABLE, 600V, 8Sq.mm (CONDUIT VP-50)
 - COUNTERPOISE 85q.mm BARE ANNEALED COPPER
 - MAIN CABLE DUCT

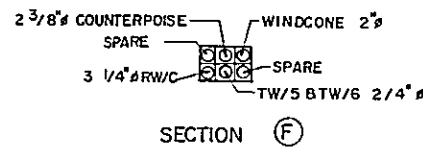
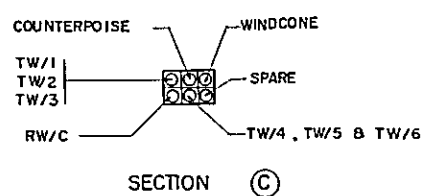
- EXISTING:**
- RUNWAY EDGE LIGHT, WHITE-WHITE 200W
 - ⊙ RUNWAY EDGE LIGHT, YELLOW-WHITE 200W
 - RUNWAY THRESHOLD LIGHT, 200W
 - OVER RUN STOP LIGHT, RED 200W
 - ⊙ GROUNDING ROD
 - MAIN CABLE DUCT (TO BE REMOVED)
 - CROSS CABLE DUCT
 - BN CABLE, 5000V, 8 Sq.mm
 - MAIN CABLE DUCT (EXISTING USE)
 - COUNTERPOISE (85q.mm BARE ANNEALED COPPER)
 - ⊙ APRON FLOOD LIGHT

DWG. NO. 52

LDG. SPACE & WELL # 1
 WINDCONE
 BEACON

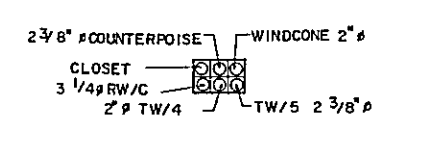
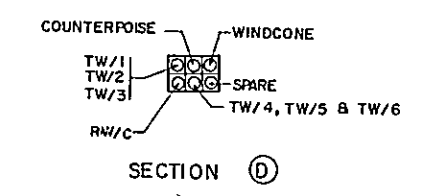
CONTROL CABLE
 TELEPHONE
 TW/4, TW/5 & TW/6

(A)

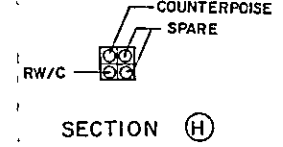
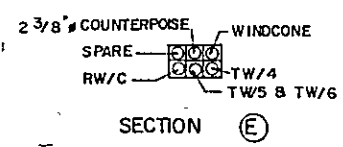


DG. SERVICE
 COUNTERPOISE
 WINDCONE
 BEACON
 CONTROL CABLE
 TELEPHONE
 TW/4, TW/5 & TW/6

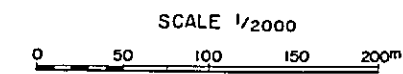
(B)



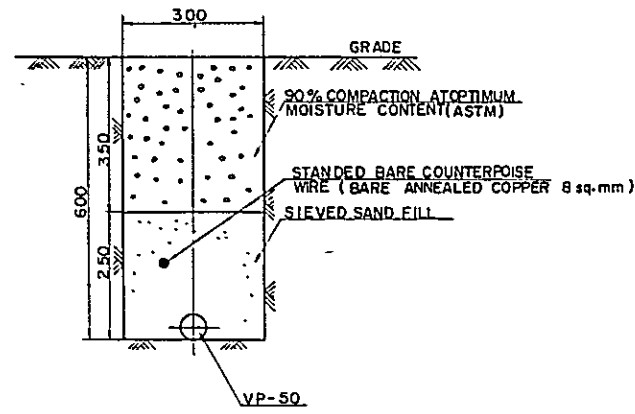
CT. SECTIONS
 (SCALE)



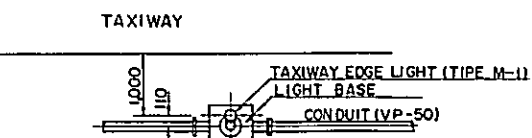
- NOTE**
1. ALL TAXIWAY EDGE LIGHTS ARE LOCATED 1.0M FROM EDGE OF CONCRETE PAVEMENT.
 2. NEW RUNWAY EDGE LIGHTS ARE LOCATED INSTEAD OF THE EXISTING AT THE SAME POSITION.
 3. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE INDICATED.



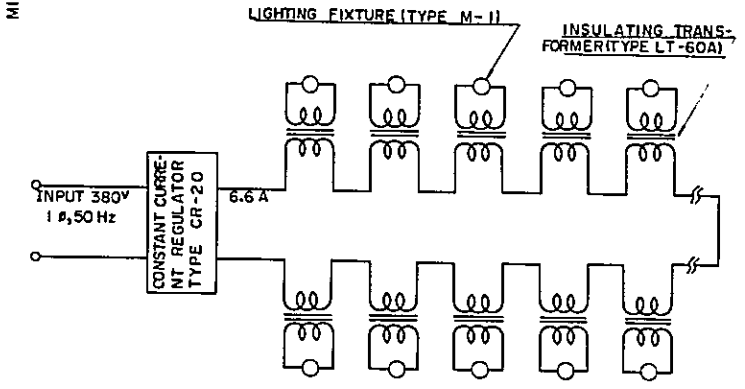
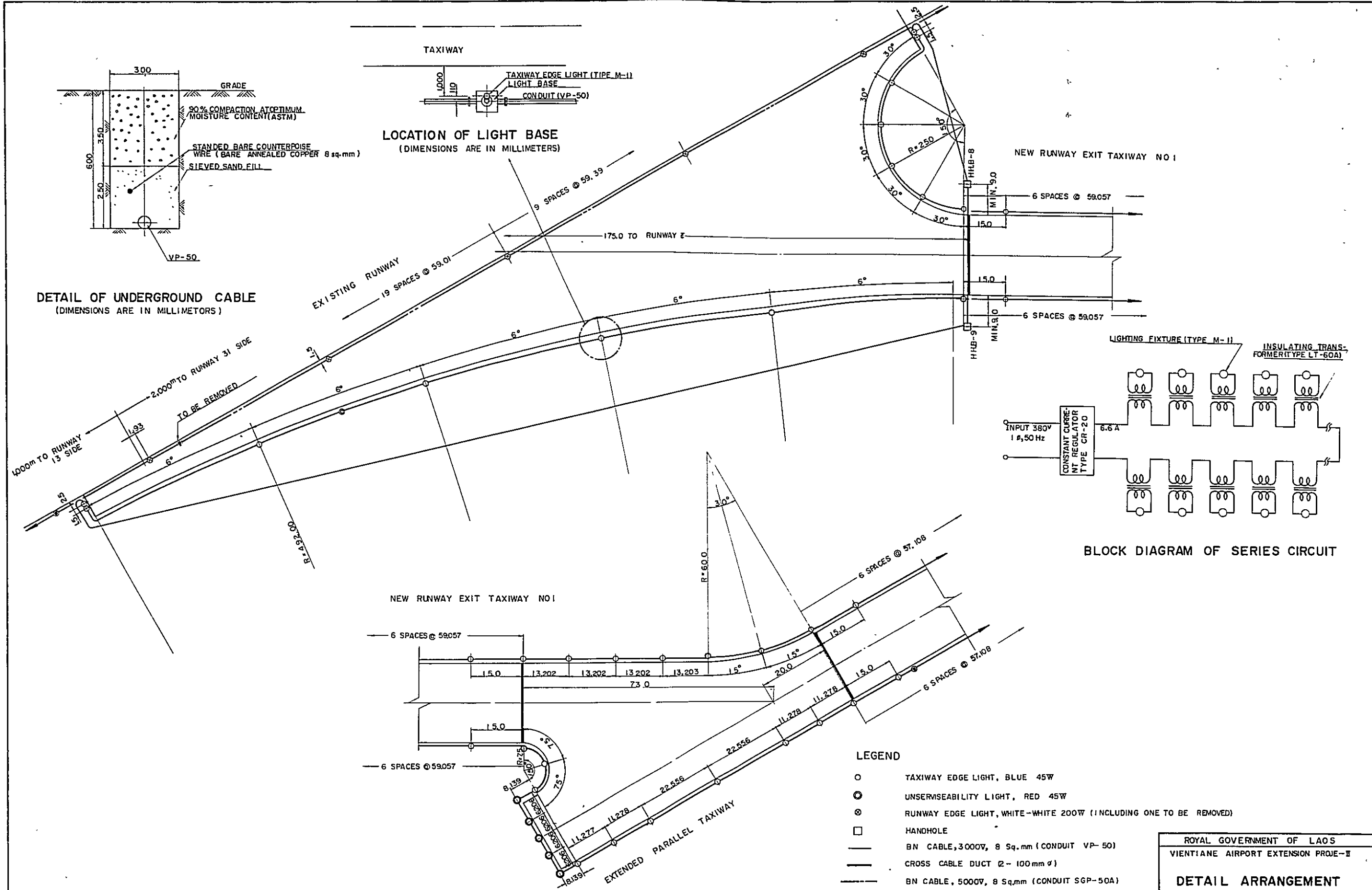
ROYAL GOVERNMENT OF LAOS	
VIENTIANE AIRPORT EXTENSION PROJECT - II	
GENERAL ARRANGEMENT OF TAXIWAY LIGHT	
DRAWN BY <i>[Signature]</i>	SUBMITTED BY <i>[Signature]</i>
CHECKED BY <i>[Signature]</i>	APPROVED BY <i>[Signature]</i>
DATE MAY 1971	SCALE 1/2000 DWG. NO. 50 OF 61
NIPPON KOEI CO., LTD	
CONSULTING ENGINEERS, TOKYO	



DETAIL OF UNDERGROUND CABLE
(DIMENSIONS ARE IN MILLIMETERS)

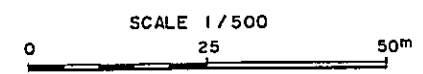


LOCATION OF LIGHT BASE
(DIMENSIONS ARE IN MILLIMETERS)

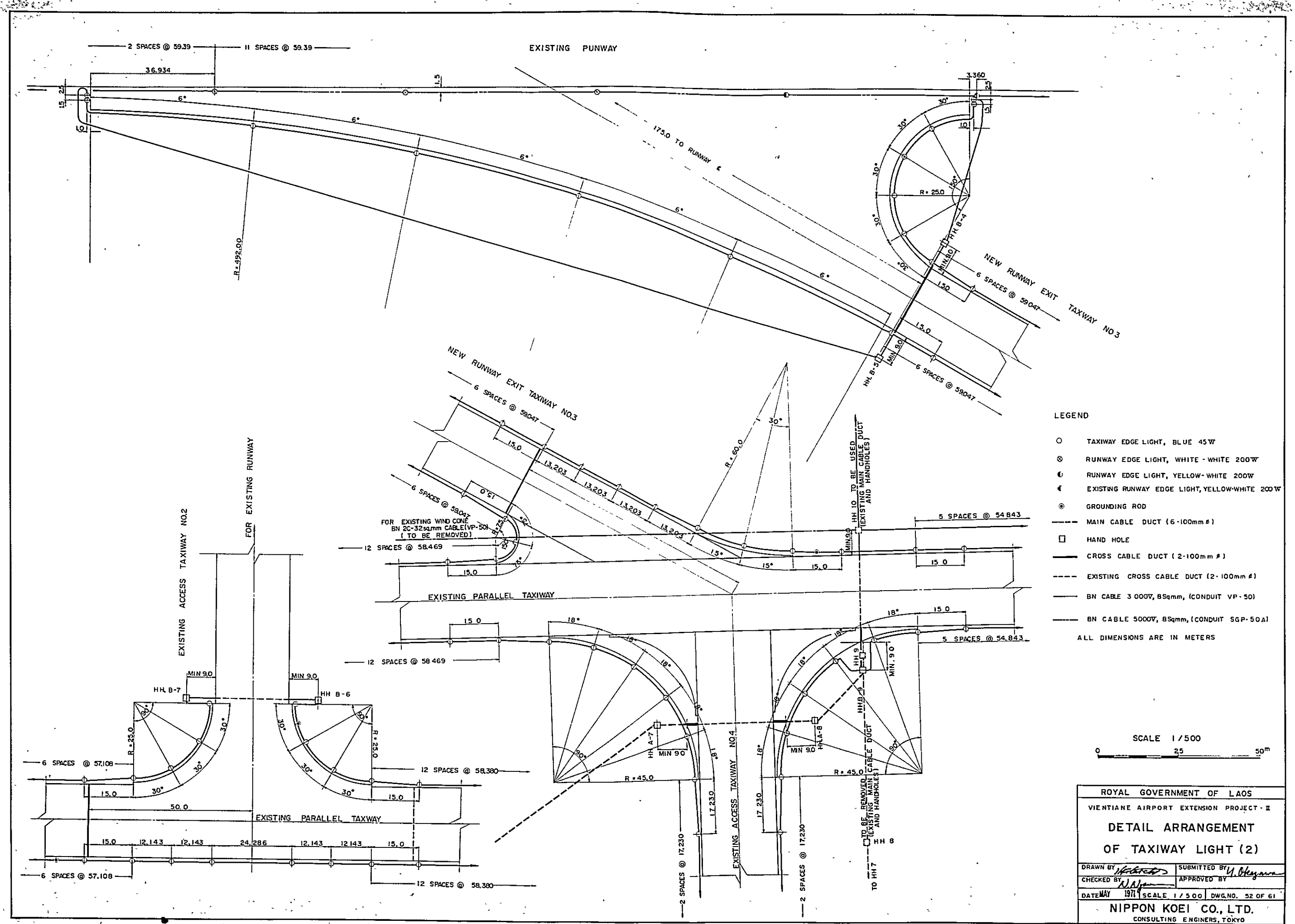


BLOCK DIAGRAM OF SERIES CIRCUIT

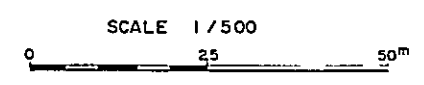
- LEGEND**
- TAXIWAY EDGE LIGHT, BLUE 45W
 - UNSEAMABILITY LIGHT, RED 45W
 - ⊙ RUNWAY EDGE LIGHT, WHITE-WHITE 200W (INCLUDING ONE TO BE REMOVED)
 - HANDHOLE
 - BN CABLE, 3000V, 8 Sq. mm (CONDUIT VP-50)
 - CROSS CABLE DUCT (2-100 mm φ)
 - BN CABLE, 5000V, 8 Sq. mm (CONDUIT SGP-50A)
 - ⊙ GROUNDING ROD
- DIMENSIONS ARE IN METERS.



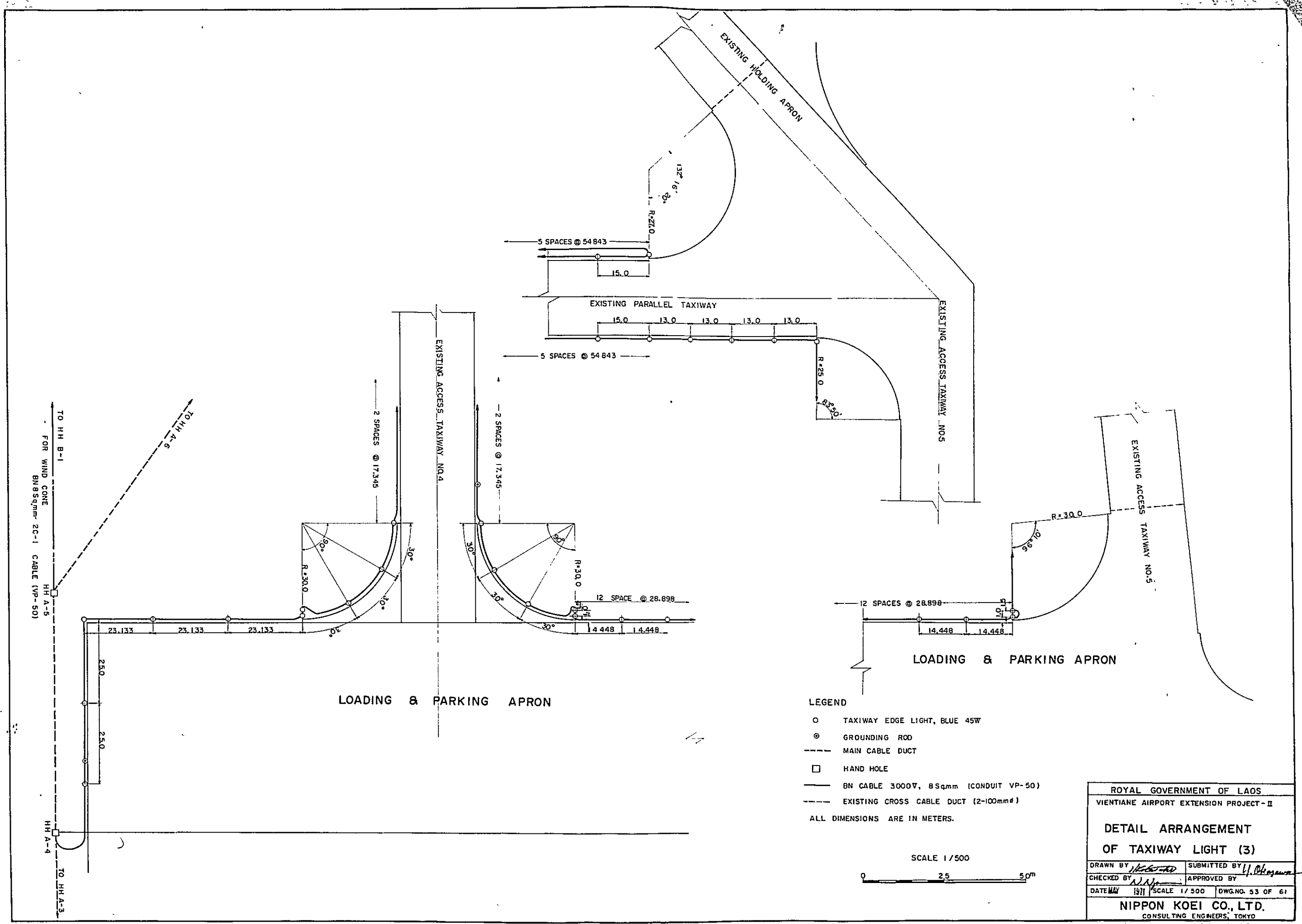
ROYAL GOVERNMENT OF LAOS	
VIENTIANE AIRPORT EXTENSION PROJE-II	
DETAIL ARRANGEMENT OF TAXIWAY LIGHT (I)	
DRAWN BY <i>[Signature]</i>	SUBMITTED BY <i>[Signature]</i>
CHECKED BY <i>[Signature]</i>	APPROVED BY <i>[Signature]</i>
DATE: 1971	SCALE: 1/500 DWG. NO. 51 OF 61
NIPPON KOEI, CO., LTD. CONSULTING ENGINEERS, TOKYO	



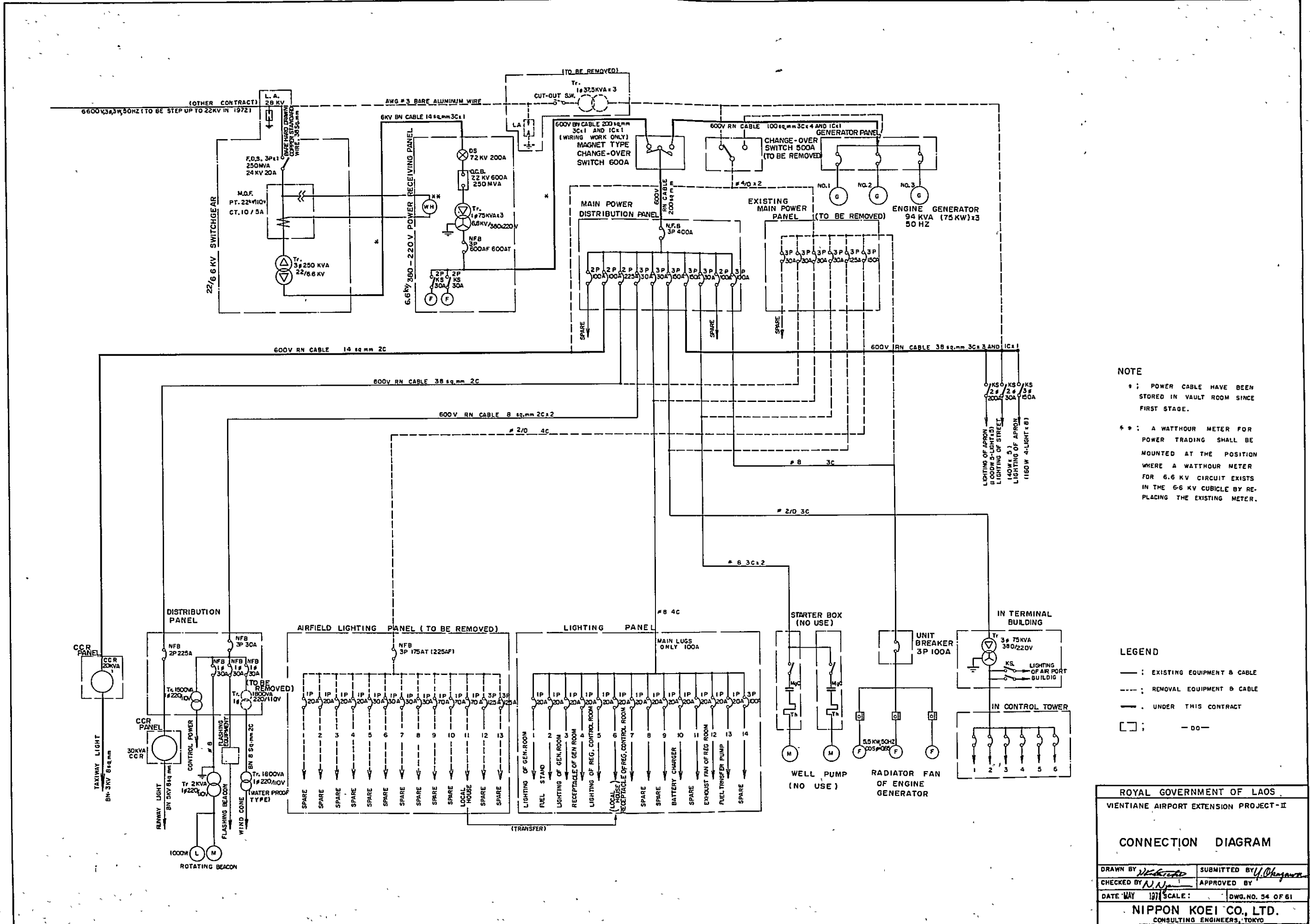
- LEGEND
- TAXIWAY EDGE LIGHT, BLUE 45W
 - ⊗ RUNWAY EDGE LIGHT, WHITE - WHITE 200W
 - ⊕ RUNWAY EDGE LIGHT, YELLOW-WHITE 200W
 - ⊖ EXISTING RUNWAY EDGE LIGHT, YELLOW-WHITE 200W
 - ⊙ GROUNDING ROD
 - MAIN CABLE DUCT (6-100mm ϕ)
 - HAND HOLE
 - CROSS CABLE DUCT (2-100mm ϕ)
 - EXISTING CROSS CABLE DUCT (2-100mm ϕ)
 - BN CABLE 3 000V, 85qmm, (CONDUIT VP-50)
 - BN CABLE 5000V, 85qmm, (CONDUIT SGP-50A)
- ALL DIMENSIONS ARE IN METERS



ROYAL GOVERNMENT OF LAOS	
VIENTIANE AIRPORT EXTENSION PROJECT - II	
DETAIL ARRANGEMENT OF TAXIWAY LIGHT (2)	
DRAWN BY <i>[Signature]</i>	SUBMITTED BY <i>[Signature]</i>
CHECKED BY <i>[Signature]</i>	APPROVED BY <i>[Signature]</i>
DATE MAY 1971 SCALE 1/500 DWG. NO. 52 OF 61	
NIPPON KOEI CO., LTD. CONSULTING ENGINEERS, TOKYO	



ROYAL GOVERNMENT OF LAOS	
VIENTIANE AIRPORT EXTENSION PROJECT - II	
DETAIL ARRANGEMENT OF TAXIWAY LIGHT (3)	
DRAWN BY <i>[Signature]</i>	SUBMITTED BY <i>[Signature]</i>
CHECKED BY <i>[Signature]</i>	APPROVED BY <i>[Signature]</i>
DATE MAY 1971	SCALE 1/500 DWG. NO. 53 OF 61
NIPPON KOEI CO., LTD. CONSULTING ENGINEERS, TOKYO	



NOTE

- * : POWER CABLE HAVE BEEN STORED IN VAULT ROOM SINCE FIRST STAGE.
- ** : A WATTHOUR METER FOR POWER TRADING SHALL BE MOUNTED AT THE POSITION WHERE A WATTHOUR METER FOR 6.6 KV CIRCUIT EXISTS IN THE 6.6 KV CUBICLE BY REPLACING THE EXISTING METER.

LEGEND

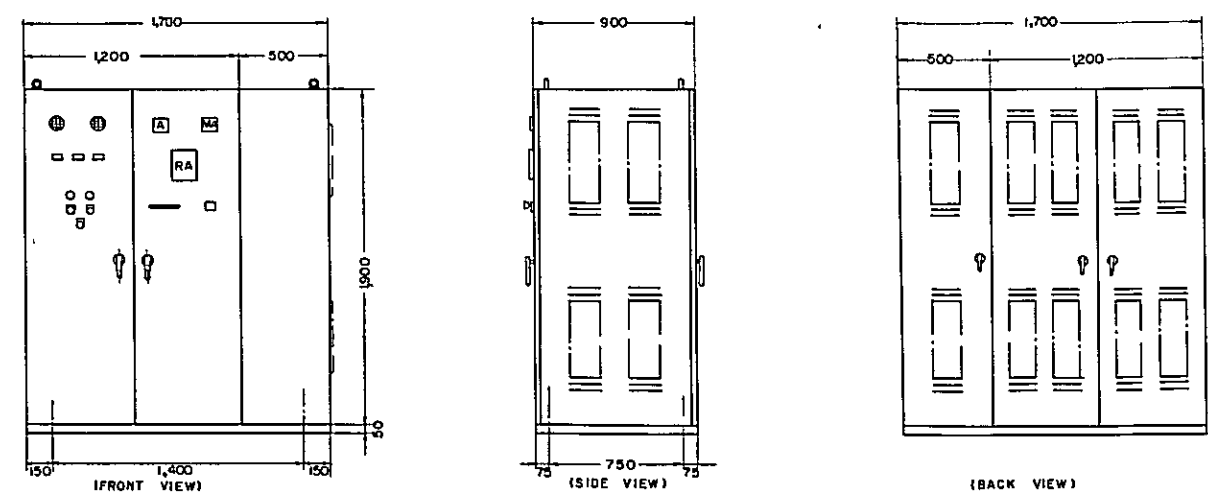
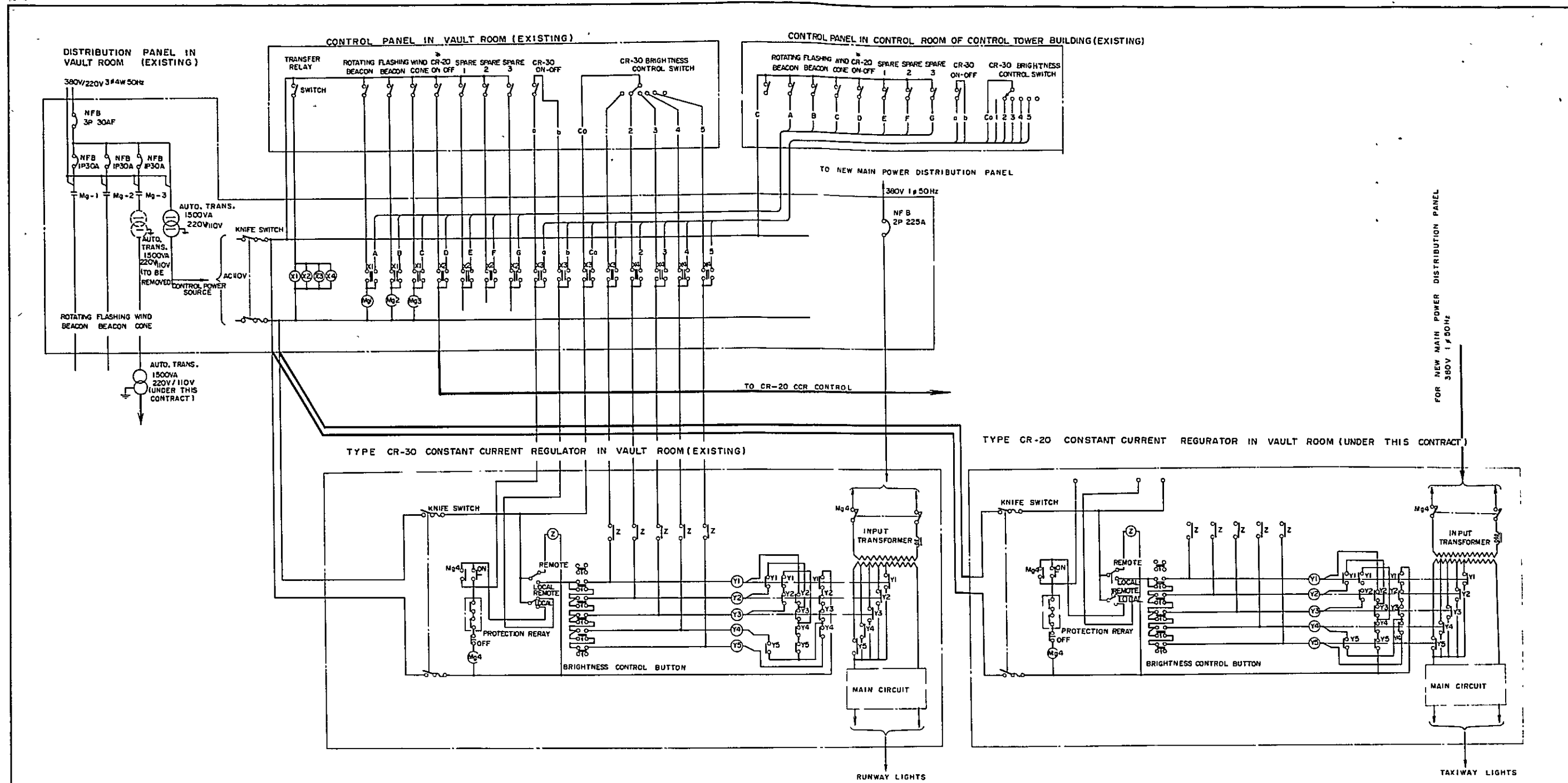
- : EXISTING EQUIPMENT & CABLE
- - - : REMOVAL EQUIPMENT & CABLE
- : UNDER THIS CONTRACT
- [] : — 00 —

ROYAL GOVERNMENT OF LAOS
VIENTIANE AIRPORT EXTENSION PROJECT-II

CONNECTION DIAGRAM

DRAWN BY <i>[Signature]</i>	SUBMITTED BY <i>[Signature]</i>
CHECKED BY <i>[Signature]</i>	APPROVED BY <i>[Signature]</i>
DATE MAY 1971	SCALE: DWG. NO. 54 OF 61

NIPPON KOEI CO., LTD.
CONSULTING ENGINEERS, TOKYO



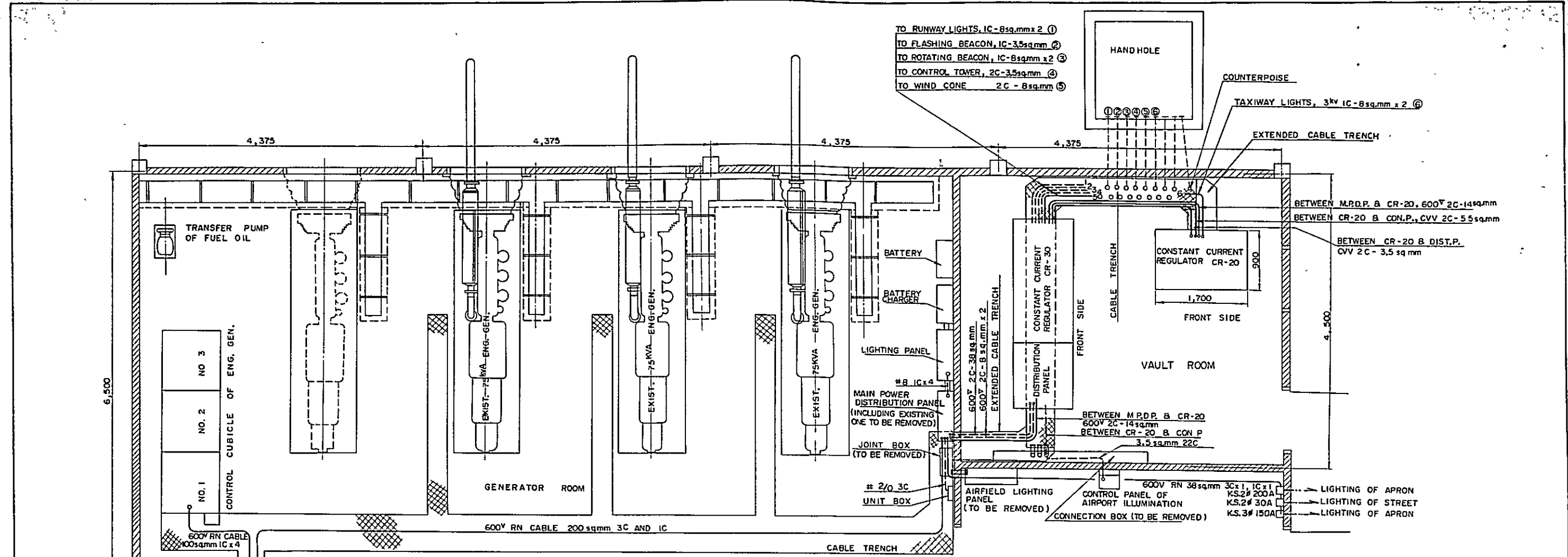
CONSTANT CURRENT REGULATOR (TYPE CR-20)

SEQUENCE DIAGRAM

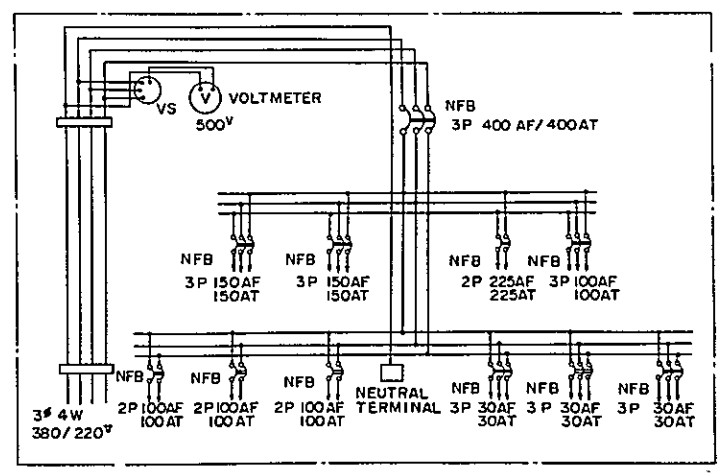
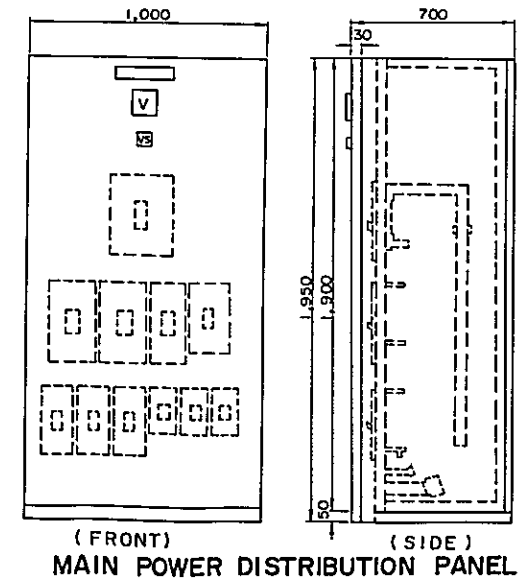
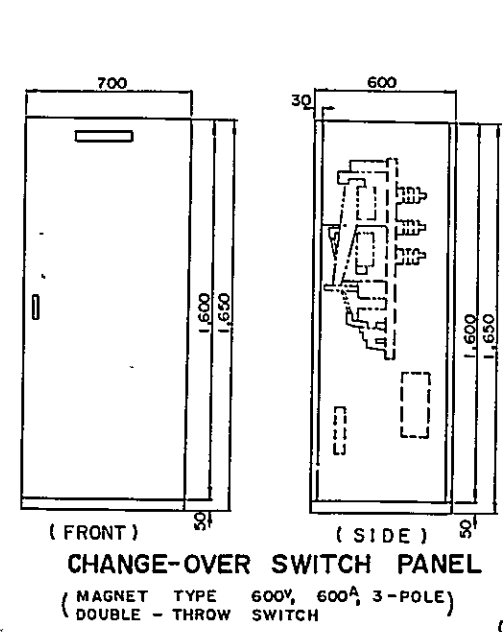
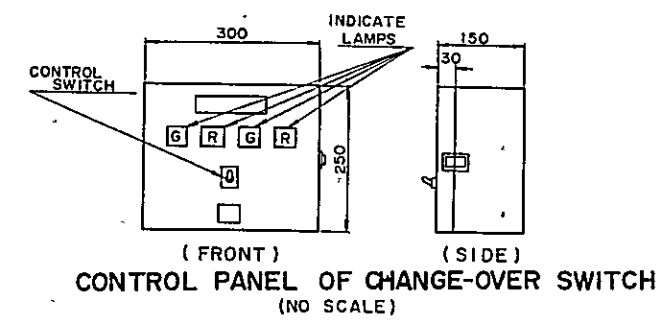
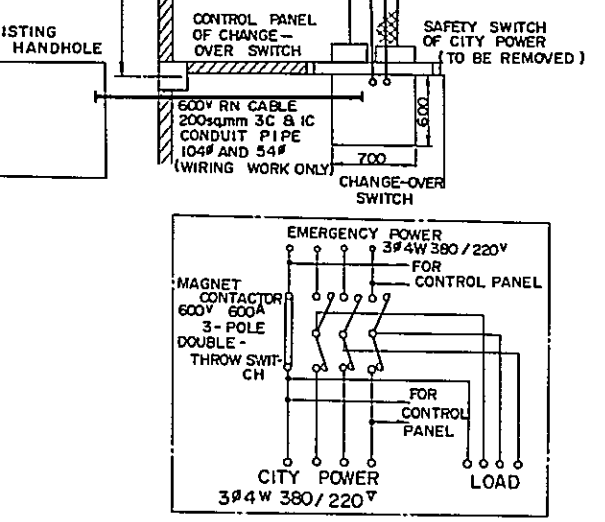
LEGEND

- 1. : UNDER THIS CONTRACT.
- 2. : DO
- 3. * : CR-20 ON-OFF SWITCH SHALL USE OF THE EXISTING SWITCH.
- 4. DIMENSIONS ARE IN MILLIMETERS

ROYAL GOVERNMENT OF LAOS	
VIENTIANE AIRPORT EXTENSION PROJECT-II	
SEQUENCE DIAGRAM FOR ILLUMINATION	
DRAWN BY <i>[Signature]</i>	SUBMITTED BY <i>U. Okagawa</i>
CHECKED BY <i>[Signature]</i>	APPROVED BY
DATEWAY 1971	SCALE DWG No 55 OF 61
NIPPON KOEI CO., LTD.	
CONSULTING ENGINEERS, TOKYO	



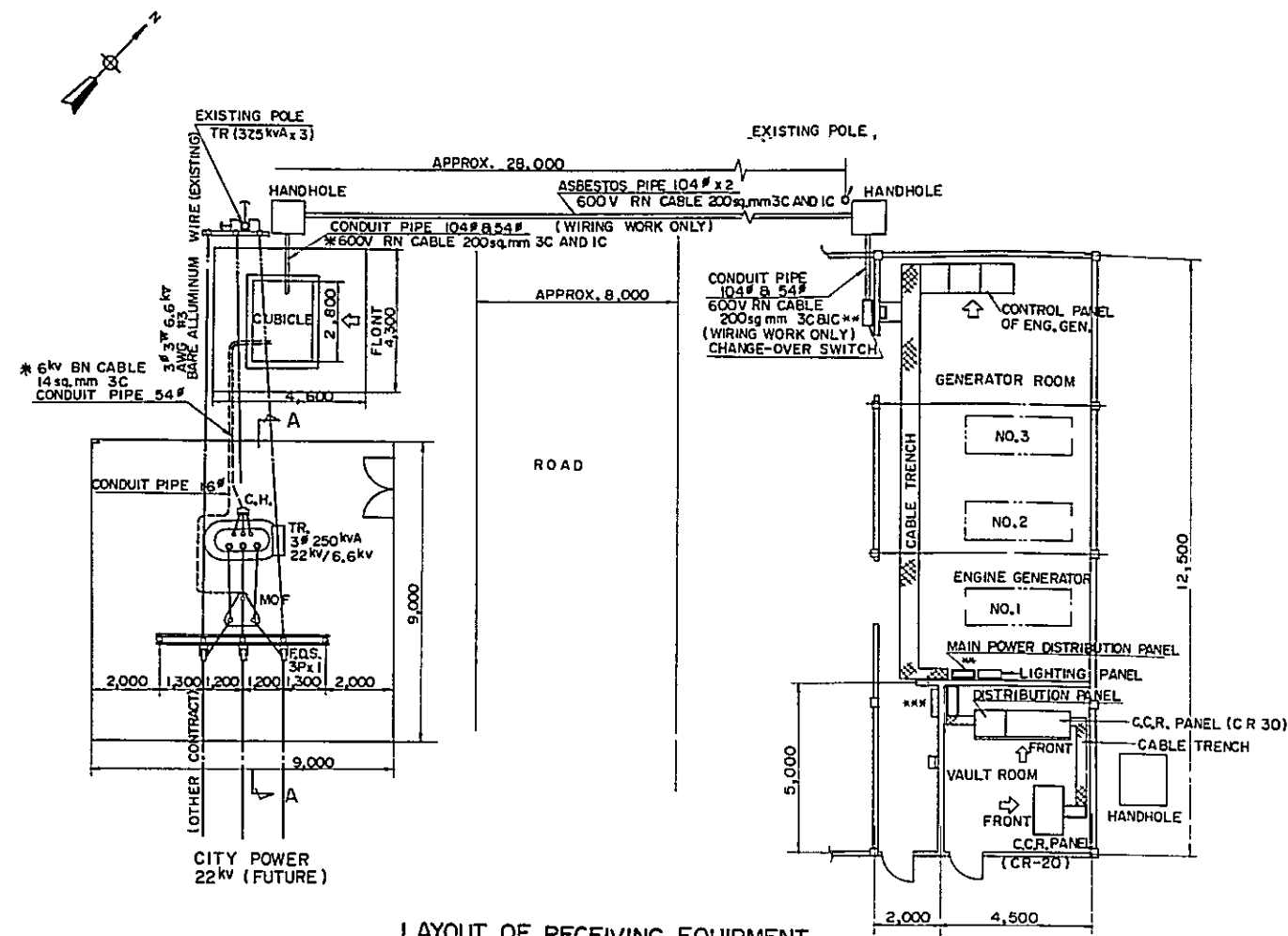
SCALE 1/20
 0 0.1 0.2 0.3m



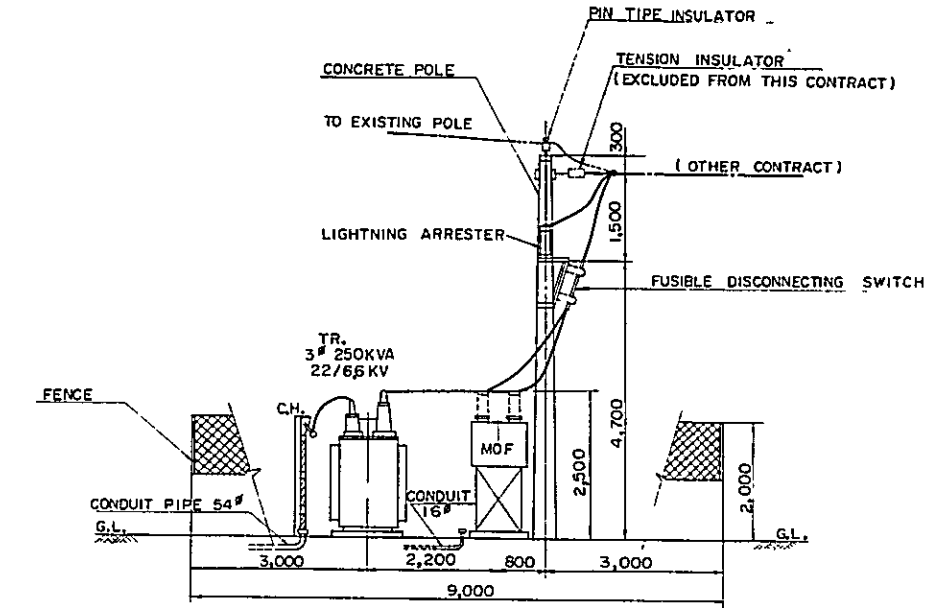
BLOCK DIAGRAM OF MAIN POWER DISTRIBUTION PANEL

LEGEND
 — NEW CABLES
 - - - EXISTING CABLES
 □ NEW EQUIPMENT
 ALL DIMENSIONS ARE IN MILLIMETERS.

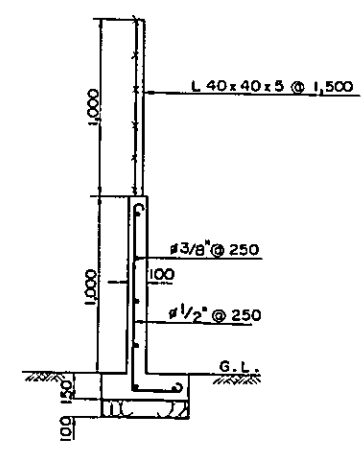
ROYAL GOVERNMENT OF LAOS
 VIENTIANE AIRPORT EXTENSION PROJECT-I
LAYOUT OF PANEL ARRANGEMENT
 DRAWN BY *[Signature]* SUBMITTED BY *[Signature]*
 CHECKED BY *[Signature]* APPROVED BY *[Signature]*
 DATE MAY 1977 SCALE AS SHOWN DWG NO 56 OF 61
NIPPON KOEI CO., LTD.
 CONSULTING ENGINEERS, TOKYO



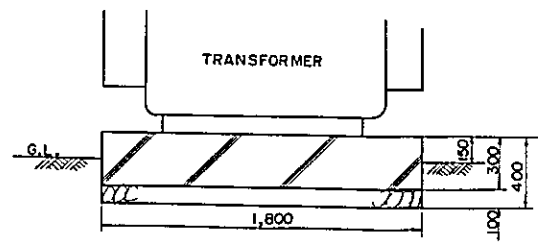
LAYOUT OF RECEIVING EQUIPMENT
 SCALE : 1/100
 0 1 2 3 4 5m



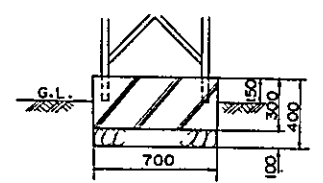
SECTION A-A
 SCALE 1/60
 0 1 2 3m



DETAIL OF FENCE
 SCALE : 1/20
 0 0.5 1m



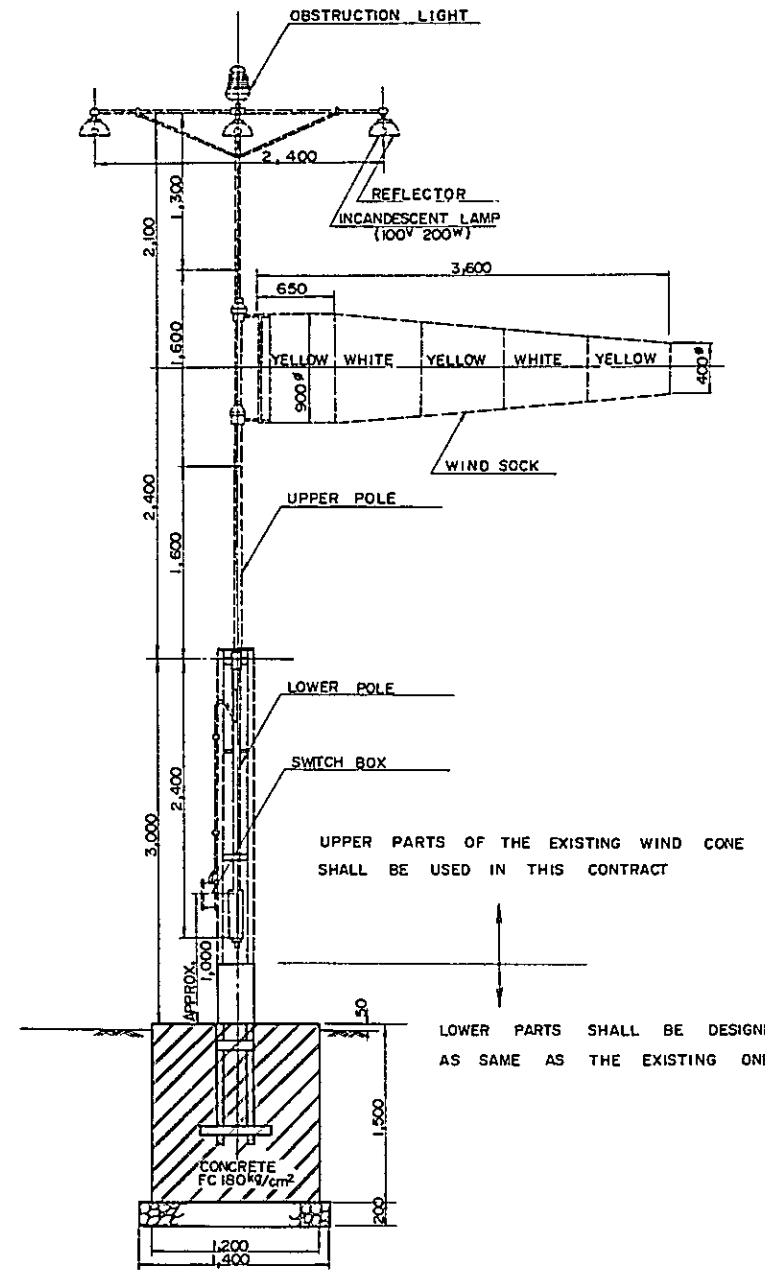
BASE OF TRANSFORMER
 SCALE : 1/20
 0 0.5 1m



BASE OF METERING OUTFIT
 SCALE : 1/20
 0 0.5 1m

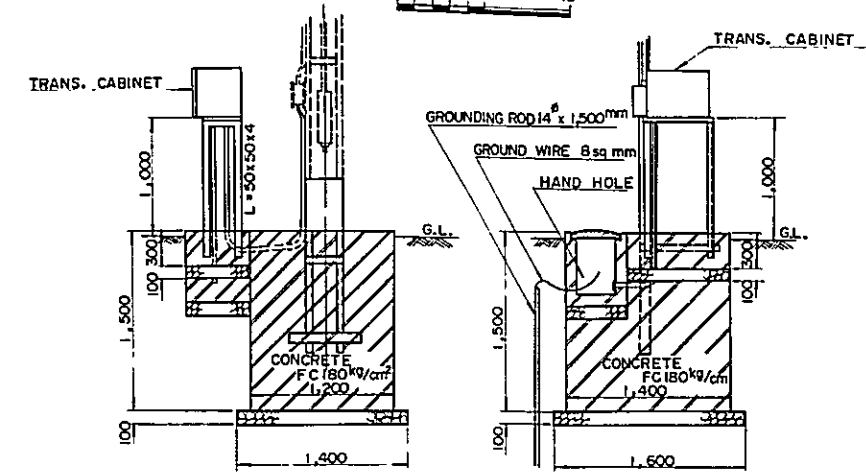
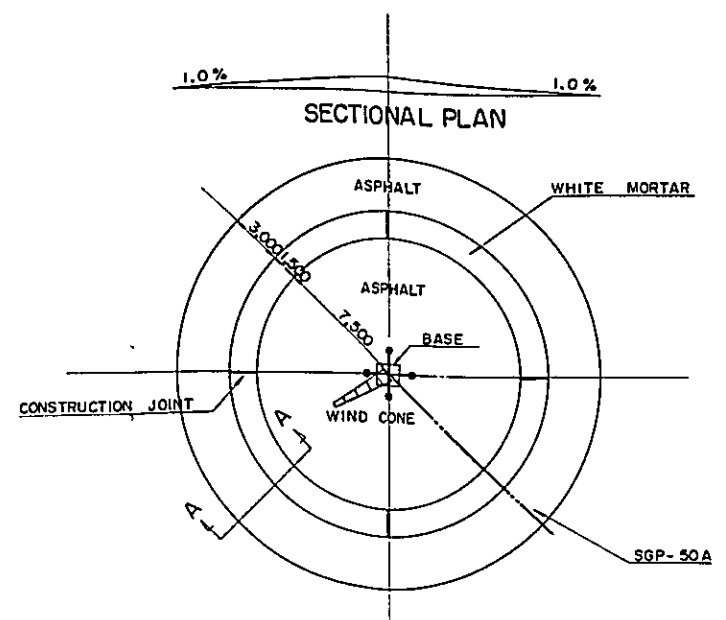
- LEGEND
- UNDER THIS CONTRACT
 - - - DO - - -
 - * POWER CABLE HAVE BEEN STORED IN VAULT ROOM SINCE FIRST STAGE
 - ** INCLUDING THE EXISTING ONE TO BE REMOVED
 - *** TO BE REMOVED
- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE INDICATED
 - - THIS SYMBOL IS CONSTRUCTED WHEN DELAYED THE 22KV DISTRIBUTION.

ROYAL GOVERNMENT OF LAOS	
VIENTIANE AIRPORT EXTENSION PROJECT - II	
LAYOUT OF POWER RECEIVING EQUIPMENT	
DRAWN BY <i>[Signature]</i>	SUBMITTED BY <i>[Signature]</i>
CHECKED BY <i>[Signature]</i>	APPROVED BY <i>[Signature]</i>
DATE MAY 1971	SCALE: AS SHOWN DWG No 57 OF 61
NIPPON KOEI CO., LTD CONSULTING ENGINEERS, TOKYO	

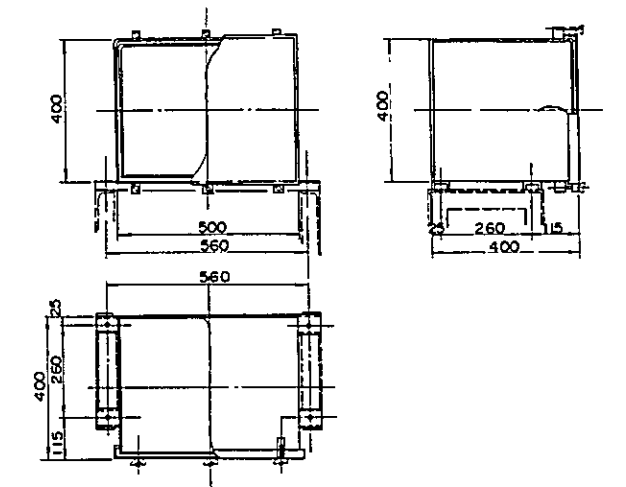
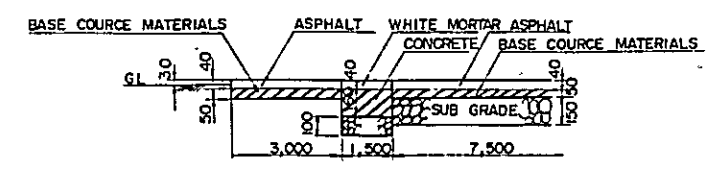
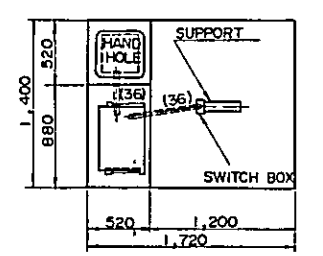


BASE OF WIND CONE

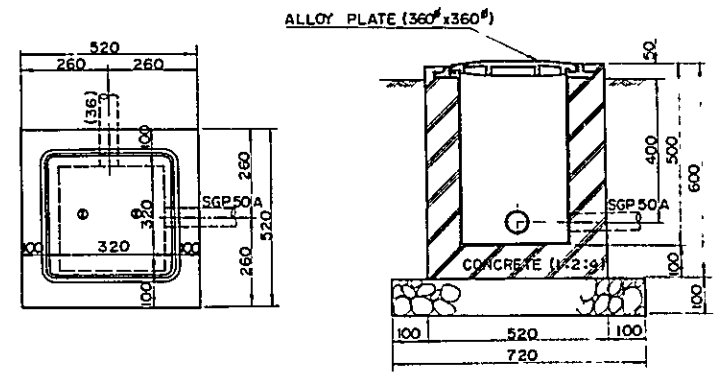
SCALE: 1/30



INSTALLATION OF UNDERGRUND CABLE



TRANSFORMER CABINET



HANDHOLE

SCALE: 1/10

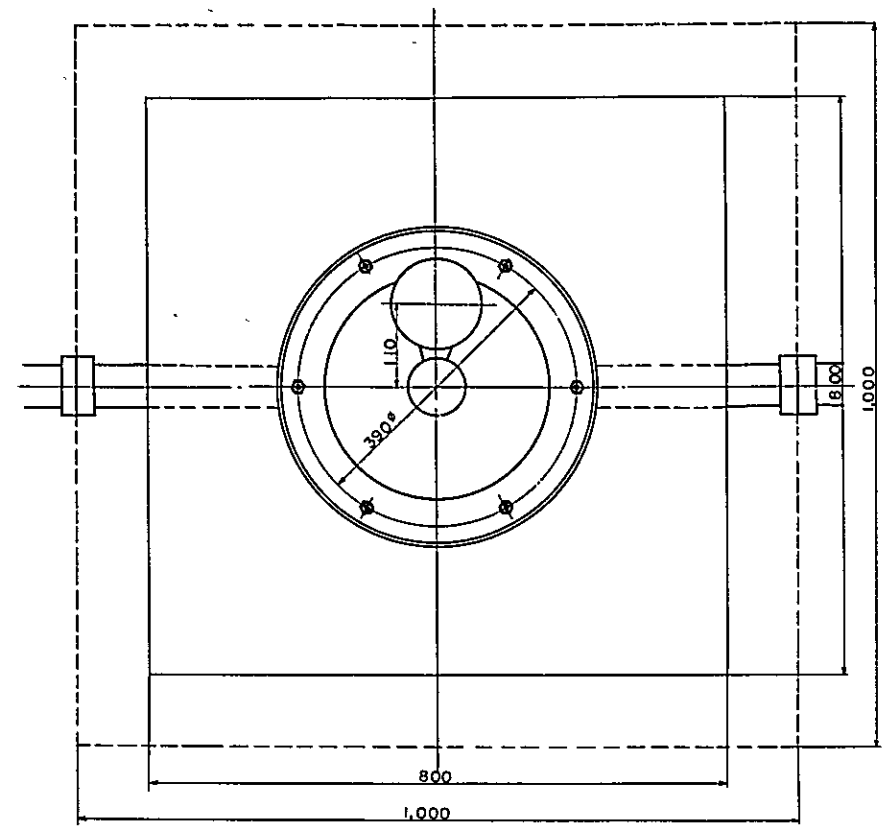
LEGEND:
ALL DIMENSIONS ARE IN MILLIMETERS.

ROYAL GOVERNMENT OF LAOS
VIENTIANE AIRPORT EXTENSION PROJECT - II

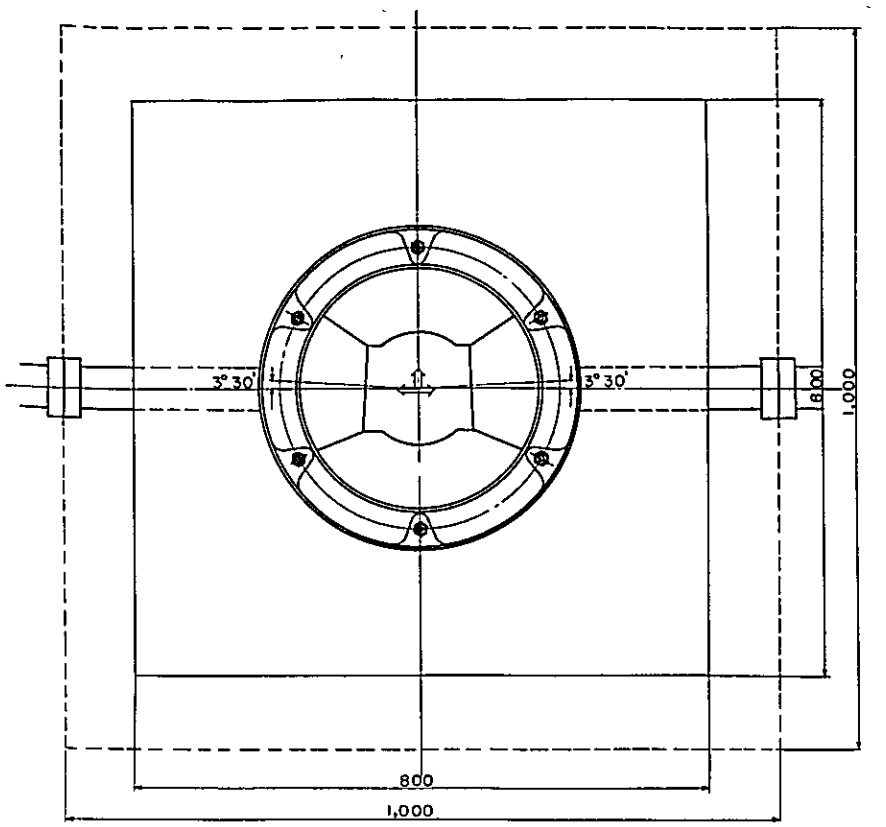
DETAIL OF WIND CONE

DRAWN BY	SUBMITTED BY
CHECKED BY	APPROVED BY
DATE: MAY 1971	SCALE: AS SHOWN DWG No 58 OF 61

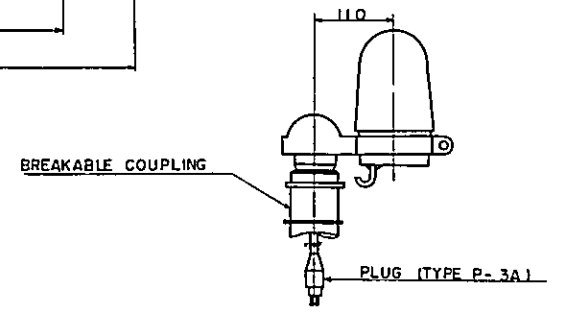
NIPPON KOEI CO., LTD.
CONSULTING ENGINEERS, TOKYO



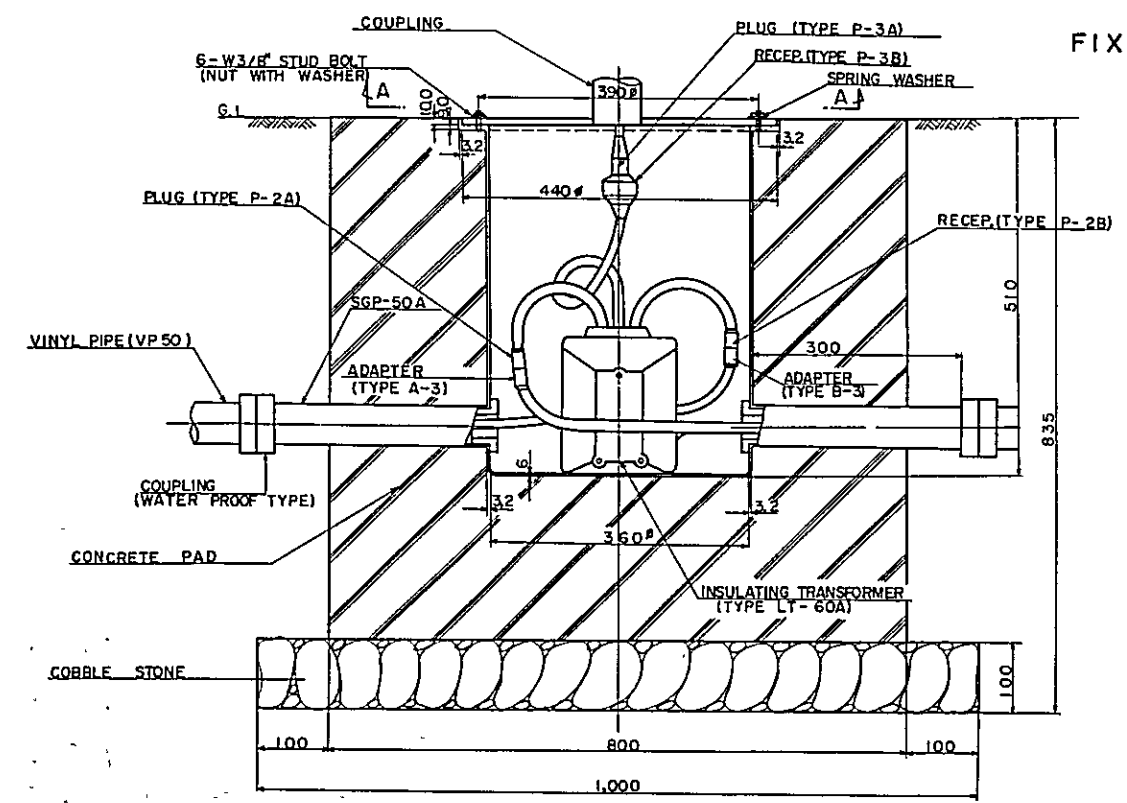
SECTION A - A



SECTION B - B

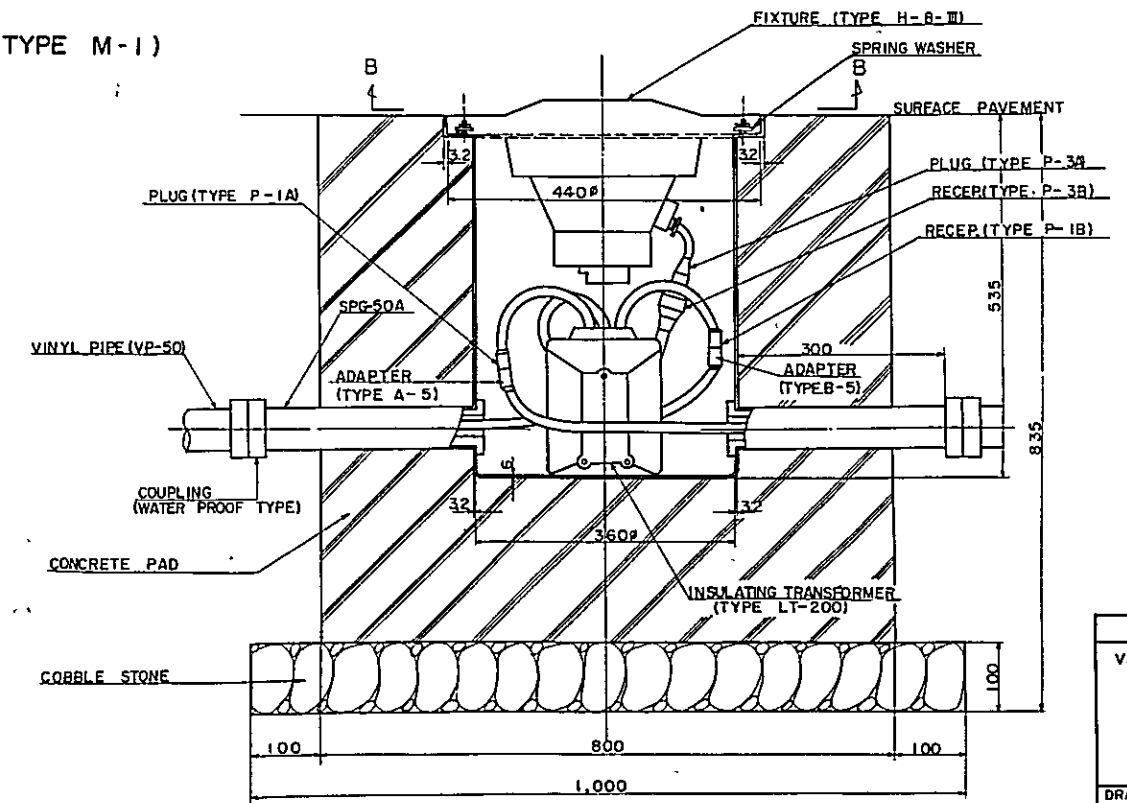


FIXTURE (TYPE M-1)



TAXIWAY LIGHT BASE

SCALE 1/5
0 0.1 0.2 0.3m



RUNWAY LIGHT BASE

SCALE 1/5
0 0.1 0.2 0.3m

LEGEND
ALL DIMENSIONS ARE IN MILLIMETERS

ROYAL GOVERNMENT OF LAOS	
VIENTIANE AIRPORT EXTENSION PROJECT-II	
DETAIL OF LIGHT BASE	
DRAWN BY <i>[Signature]</i>	SUBMITTED BY <i>[Signature]</i>
CHECKED BY <i>[Signature]</i>	APPROVED BY <i>[Signature]</i>
DATE MAY 1971	SCALE: 1/5 DWG.No. 59 OF 61
NIPPON KOEI CO., LTD.	
CONSULTING ENGINEERS, TOKYO	

NO.	DESCRIPTION	QUANTITY	UNIT	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	REMARK	
	SITE PREPARATION WORKS	1	1s									
A	TAXIWAY											
A-1	STRIPPING OF TOPSOIL	14,100	M ³								BY DUMP TRUCK BY CARRY-ALL SCRAPER BORROWING AND SUBGRADING BORROWING AND GRADING 28 ^{cm} THICKNESS	
A-2	STRIPPING OF TOPSOIL	12,500	M ³									
A-3	CUTTING AND FILLING	1,600	M ³									
A-4	EMBANKMENT	54,600	M ³									
A-5	BASE COURSE	11,000	M ³									
A-6	CONCRETE PAVEMENT	12,000	M ³									
A-7	SHOULDER SODDING	23,500	M ²									
A-8	GRADED AREA SEEDING	37,200	M ²									
B	APRON AND FILLET IMPROVMENT											
B-1	STRIPPING OF TOPSOIL	6,100	M ³								BY DUMP TRUCK BORROWING AND SUBGRADING BORROWING AND GRADING 20, 28, 35 & 38 ^{cm} THICKNESS	
B-2	REMOVAL OF SOFT CLAY	13,800	M ³									
B-3	REPLACEMENT WITH SAND	5,700	M ³									
B-4	CUTTING AND FILLING	900	M ³									
B-5	EMBANKMENT	16,800	M ³									
B-6	BASE COURSE	6,900	M ³									
B-7,8,9,10	CONCRETE PAVEMENT	5,800	M ³									
B-11	SHOULDER SODDING	5,500	M ²									
B-12	GRADED AREA SEEDING	2,300	M ²									
C	DRAINAGE											
C-1	EXCAVATION AND REFILLING	1,700	M ³									BOX CULVERT NO 1 BOX CULVERT NO 2 BOX CULVERT NO 3
C-2	MACADAM STONE FOR STRUCTURAL BED	110	M ³									
C-3	STRUCTURAL CONCRETE	241	M ³									
C-4	STRUCTURAL CONCRETE	222	M ³									
C-5	STRUCTURAL CONCRETE	116	M ³									
C-6	EXCAVATION EARTH OPEN DITCH	2,600	M ³									
D	MISCELLANEOUS WORKS	1	1s									
E	LIGHTING INSTALLATIONS											
	LIGHTING FACILITIES	207	NOS								TAXIWAY RUNWAY WIND CONE	
	LIGHTING FACILITIES	9	NOS									
	LIGHTING FACILITIES	1	1s									
	MAIN CABLE DUCTS AND HAND HOLES	500	M									
	POWER RECEIVING EQUIPMENT	1	1s									

ROYAL GOVERNMENT OF LAOS	
VIENTIANE AIRPORT EXTENSION PROJECT - II	
CONSTRUCTION SCHEDULE	
DRAWN BY <i>N. J. J.</i>	SUBMITTED BY <i>V. J. J.</i>
CHECKED BY <i>H. J. J.</i>	APPROVED BY
DATE <i>MAY 1971</i> SCALE	DWG No 61 OF 61
NIPPON KOEI CO., LTD.	
CONSULTING ENGINEERS, TOKYO	

