

3-7 Number of Staff

The "Guidelines" do not specify the number of staff but suggest that it should be given in the master plan. We have picked up all necessary functions, in addition to teaching activities, for running the training centre, arranged them, and roughly estimated the required number of staff by our experience. Of course, some adjustment by the Indonesian side may be required because of differences in social customs and manners and labor environment between Indonesia and Japan.

No.	Function	Remarks	Required No. of Staff
01	Preparation of basic training principles and annual training plans		} 5
02	Compilation of training curriculums		
03	Preparation for reception of trainees	Preparation of list of trainees and guidebook for trainees	} 2
04	Preparation of training requirements		

(Continued)

05	Preparation of teaching materials	Gathering manuscripts for textbooks, ordering for printing and proofing	3
06	Collection of information regarding new training techniques and teaching materials and their development		} 3
07	Planning and execution of training of trainers		
08	Coordination with associated organizations		1
09	Evaluation of trainees	Preparation of test procedures and publicity of test subjects and date of test Distribution of test and control of test results	} 2
10	Maintenance and control of training records		
11	Issuance of various certificates of trainees and control of their changes in family composition, address, etc.	Issuance of certificates which indicate the completion of courses, etc.	} 2

(Continued)

12	Employment of part-time lecturers		2
13	Coordination with field stations regarding field practice		5
14	Control of buildings, airconditioning and electric facilities	Maintenance and repair	6
15	Control of training facilities such as studios	Maintenance and operation	6
16	Operation of studio equipment, etc.		10
17	Surveillance measures against robbery, fire and other disasters	Guardman	7
18	Cleaning of buildings		15
19	Control/administration work	Administration (Center head and managers) Personnel administration and salary calculation	10 10

(Continued)

		Health control (welfare and medical)	5
		Documents control	1
		Budget control	2
		Procurement control	4
20	Ceremony	Opening and closing ceremonies, etc.	1
21	Liaison and publicity		2
22	Service	Typewriting, copying, bookbinding	3
		Telephone operator	6
		Delivery of mail	2
		Car driver	4
		Office boy	10
		Secretary	2
		Total	131

3-8 Minimum Necessary Quantities of Major Facilities

3-8-1 Lecture Rooms

On the premise that the training process goes ahead in accordance with the framework specified in Fig. 3-1 (page 3-11), we have presented a group development diagram of a total of 480 broadcasting station personnel who enter the training centre at four different times of the year,

and obtained the number of lecture rooms necessary each year by assigning lecture rooms to individual groups in the diagram. The results obtained are shown required at each peak which comes every three months are required at each peak which comes every three months. Since it is necessary to progress work without long-term personnel plan and programming plans here also, we could not help employing uniform distribution of personnel to individual functional groups. In practice, variations may be produced in the number of trainees between different vocational fields in some cases and it may happen, for example, that the announcing group and news reporting group may each be divided into two classes.

3-8-2 Use of Facilities for Practical Training

Let us consider the use of radio studio, radio announcer's booth, radio transmitter, TV studio, TV announcer's booth, and TV transmitter which are common to various vocational fields.

It can be seen in Table 3-4 that the same pattern of classroom use is exactly repeated every three months. The longest period of training is the functional training in the second (final) stage (4 months). By taking the 4 months of, for example, from April to July from Table 3-4 and simplifying the details, we have Fig. 3-3.

Month Phase	April	May	June	July
Overall Training	1st-Term Trainee in Year N			2nd-Term Trainee in Year N
Functional Training in the First Stage		4th-Term Trainee in Year N-1		
Functional Training in the Second (Final) Stage	3rd-Term Trainee in Year N-1			
	2nd-Term Trainee in Year N-1			4th-Term Trainee in Year N-1

Fig. 3-3 Unit Training Pattern

Table 3-4 Necessary Number of Lecture Rooms Based on an "Annual Group Compilation Model".

Note: No. of trainees accepted per year: 480

No. of trainees per group: 24 (maximum)

	April		May		June		July		August		September		October		November		December		January		February		March		
	Acceptance of 1st-term trainees						Acceptance of 2nd-term trainees						Acceptance of 3rd-term trainees						Acceptance of 4th-term trainees						
	Group No.	Rm. No.	Group No.	Rm. No.	Group No.	Rm. No.	Group No.	Rm. No.	Group No.	Rm. No.	Group No.	Rm. No.	Group No.	Rm. No.	Group No.	Rm. No.	Group No.	Rm. No.	Group No.	Rm. No.	Group No.	Rm. No.	Group No.	Rm. No.	
Overall Training	1-A	R01	Same as Apr.		Same as Apr.		2-A	R01	Same as Jul.		Same as Jul.		3-A	R01	Same as Oct.		Same as Oct.		4-A	R01	Same as Jan.		Same as Jan.		
	1-B	R02	Same as Apr.		Same as Apr.		2-B	R02	Same as Jul.		Same as Jul.		3-B	R02	Same as Oct.		Same as Oct.		4-B	R02	Same as Jan.		Same as Jan.		
	1-C	R03	Same as Apr.		Same as Apr.		2-C	R03	Same as Jul.		Same as Jul.		3-C	R03	Same as Oct.		Same as Oct.		4-C	R03	Same as Jan.		Same as Jan.		
	1-D	R04	Same as Apr.		Same as Apr.		2-D	R04	Same as Jul.		Same as Jul.		3-D	R04	Same as Oct.		Same as Oct.		4-D	R04	Same as Jan.		Same as Jan.		
	1-E	R05	Same as Apr.		Same as Apr.		2-E	R05	Same as Jul.		Same as Jul.		3-E	R05	Same as Oct.		Same as Oct.		4-E	R05	Same as Jan.		Same as Jan.		
Office Vocational Training	4-Z	R06	X		X		1-Z	R06	X		X		2-Z	R06	X		X		3-Z	R06	X		X		
Vocational Training in First Stage	Broad-Cast Trainee	X		4-Br-A	R06	Same as Apr.		X		1-Br-A	R06	Same as Aug.		X		2-Br-A	R06	Same as Nov.		X		3-Br-A	R06	Same as Jan.	
		X		4-Br-B	R07	Same as Apr.		X		1-Br-B	R07	Same as Aug.		X		2-Br-B	R07	Same as Nov.		X		3-Br-B	R07	Same as Jan.	
		X		4-Eng-A	R08	Same as Apr.		X		1-Eng-A	R08	Same as Aug.		X		2-Eng-A	R08	Same as Nov.		X		3-Eng-A	R08	Same as Jan.	
		X		4-Eng-B	R09	Same as Apr.		X		1-Eng-B	R09	Same as Aug.		X		2-Eng-B	R09	Same as Nov.		X		3-Eng-B	R09	Same as Jan.	
Vocational Training in Second (Final) Stage	1st/3rd-Term Trainees	3-Prod.	R10	Same as Apr.		Same as Apr.		Same as Apr.		X		X		1-Prod.	R10	Same as Oct.		Same as Oct.		Same as Oct.		X		X	
		3-Ann.	R11	Same as Apr.		Same as Apr.		Same as Apr.		X		X		1-Ann.	R11	Same as Oct.		Same as Oct.		Same as Oct.		X		X	
		3-News	R12	Same as Apr.		Same as Apr.		Same as Apr.		X		X		1-News	R12	Same as Oct.		Same as Oct.		Same as Oct.		X		X	
		3-St.	R13	Same as Apr.		Same as Apr.		Same as Apr.		X		X		1-St.	R13	Same as Oct.		Same as Oct.		Same as Oct.		X		X	
		3-Tx.	R14	Same as Apr.		Same as Apr.		Same as Apr.		X		X		1-Tx.	R14	Same as Oct.		Same as Oct.		Same as Oct.		X		X	
	2nd/4th-Term Trainees	2-Prod.	R07	X		X		4-Prod.	R07	Same as Jul.		Same as Jul.		Same as Jul.		X		X		2-Prod.	R07	Same as Jan.		Same as Jan.	
		2-Ann.	R08	X		X		4-Ann.	R08	Same as Jul.		Same as Jul.		Same as Jul.		X		X		2-Ann.	R08	Same as Jan.		Same as Jan.	
		2-News	R09	X		X		4-News	R09	Same as Jul.		Same as Jul.		Same as Jul.		X		X		2-News	R09	Same as Jan.		Same as Jan.	
		2-St.	R15	X		X		4-St.	R15	Same as Jul.		Same as Jul.		Same as Jul.		X		X		2-St.	R15	Same as Jan.		Same as Jan.	
		2-Tx.	R16	X		X		4-Tx.	R16	Same as Jul.		Same as Jul.		Same as Jul.		X		X		2-Tx.	R16	Same as Jan.		Same as Jan.	
Number of Lecture Rooms/Month	16		14		14		16		14		14		16		14		14		16		14		14		

The relationship between each phase of training and the contents of practical training is estimated to be as shown in Table 3-5.

Table 3-5 Contents of Practical Training
in Each Phase of Training

Phase of Training	Duration	Contents of Practical Training
Overall Training	3 months	Practical training for experience in radio field work is incorporated in inspection and demonstrations.
Functional Training in 1st Stage	2 months	Practical training mainly in radio program production and radio studio techniques is performed by dividing trainees into broadcasting and technical groups. In the second month, practical program production training in which broadcasting personnel and technical personnel are combined together will be performed.
Functional Training in 2nd (Final) Stage	4 months	Training in this stage is mainly training related with TV. In the first half period, trainees are divided into individual functions to master individual basic operating techniques mainly at the following facilities: <ul style="list-style-type: none"> ◦ Program production group TV studio

(Continued)

		<ul style="list-style-type: none">◦ Announcing group ... TV announcer's booth◦ News reporting group ... Lecture room, outdoors or TV announcer's booth◦ Production engineering group ... TV studio, telecine room or CCR room◦ Transmitting engineering group ... Transmitter room <p>In the latter half, joint training of various functional fields is increased little by little and emphasis is given to joint studio production training so as to complete the entire basic training.</p>
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Based on the premises of Table 3-5 and Fig. 3-3 we have prepared a practical facility assignment model shown in Table 3-6.

Regarding Table 3-6, the following points should be added.

- 1) The percentage of overall training may be considered to be less than expected. However, the value of 17% is a ratio in which training can be performed exclusively.

Since the emphasis of practical training items of overall training are put on inspection and demonstration as mentioned in Table 3-5, the ratio of practical training can be raised as high as possible, if required. It should also be pointed out that audio and visual teaching materials such as video tape and film furnished with detailed, proper expressions may further understanding better than inspection or demonstrations.

- 2) Regarding program production and news reporting personnel, a similar situation exists as far as Table 3-6 is concerned. However, it should be considered that many services need to be performed before or after studio work in these vocations. For example, if consideration is given to planning,

Table 3-6 Major Facilities Assignment Model

(R) ... Radio Studio (T) ... TV Studio (R) ... Radio Announcer's Booth (T) ... TV Announcer's Booth
 (▽) ... Radio Transmitter (▽) ... TV Transmitter - ... Joint Training

Phase	Entrance	Class	April							Percentage of Actual Training	May							Percentage of Actual Training	June							Percentage of Actual Training	July							Percentage of Actual Training							
			Weekly Assignment Model								Weekly Assignment Model								Weekly Assignment Model								Weekly Assignment Model														
			Mon.	Tue.	Wed.	Thu.	Fri.	Sat.	Mon.		Tue.	Wed.	Thu.	Fri.	Sat.	Mon.	Tue.		Wed.	Thu.	Fri.	Sat.	Mon.	Tue.	Wed.		Thu.	Fri.	Sat.												
Overall Training	Year N	1-A	(R)		1st-term trainees						(R)											(R)		2nd-term trainees																	
		1-B		(R)									(R)											(R)																	
		1-C			(R)									(R)											(R)																
		1-D				(R)									(R)											(R)															
		1-E					(R)									(R)											(R)														
Vocational Training in 1st Stage	Year N-1	4-Br-A									(R)											(R)	(R)																		
		4-Br-B											(R)												(R)	(R)															
		4-Eng-A											(▽)	(R)	(R)								(R)	(R)		(R)	(T)		(▽)												
		4-Eng-B													(▽)	(R)	(R)							(▽)	(R)	(R)	(T)														
Vocational Training in 2nd(Final) Stage	Year N-1	3-Prod.	(T)	(T)							(T)	(T)										(T)	(T)																		
		3-Ann.	(R)	(R)	(R)	(T)	(T)	(R)				(T)	(T)	(T)	(T)							(T)	(T)	(T)	(T)	(T)	(T)														
		3-News	(T)	(T)												(T)	(T)					(T)	(T)																		
		3-ST Eng			(T)									(T)	(T)	(T)								(T)	(T)	(R)	(T)														
		3-TX Eng	(▽)	(▽)	(R)	(R)	(R)	(R)				(▽)	(R)	(▽)	(R)	(▽)	(R)					(▽)		(▽)	(▽)	(▽)	(R)														
	Year N-1	2-Prod.				(T)	(T)																																		
		2-Ann.			(T)	(T)	(T)	(T)	(R)														(R)	(R)	(R)	(T)	(T)	(R)													
		2-News				(T)	(T)	(T)															(T)	(T)																	
		2-ST Eng				(T)	(T)	(R)																	(T)			(T)													
		2-TX Eng	(▽)	(▽)	(▽)	(▽)	(▽)	(▽)															(▽)	(▽)	(R)	(R)	(R)														

preparation of scripts, preparation of gathering original, compilation of tapes and films, etc. Then it may be impracticable to have studio work as shown in this figure.

- 3) Regarding studio production engineering personnel, since trainees should undergo the training of telecine and CCU in addition to studio work, the ratio of practical training may become extremely high.

3-9 Preliminary Analysis for Detailed Design

3-9-1 Enumeration on Necessary Modules

In order to progress module design, information for forming principles such as long-term operating plan, recruitment plan, personnel assignment plan and programming plan is required as pointed out earlier on in this report. In order to grasp the necessary modules in general, modules have been enumerated for each module group. The results of the enumeration of necessary modules for individual module groups are given in Table 3-7.

Table 3-7 List of Necessary Modules for Individual
Module Groups

Module Group	Module No.	Module Name	No. of Lessons	Duration
Overall Basic Module Group				
	001	Orientation from School to Society	22	1 week
	002	People and Works in the Department of Information, TVRI and RRI	"	"
	003	Program Production Work	"	"
	004	Studio Engineering Work	"	"
	005	Transmitting Engineering Work	"	"
	006	Broadcasting Station Office Work	"	"
	007	Regulations, Safety and Sanitary in Work Field	"	"
	008	Communication in Work Place	"	"
	009	How to Enhance Work Effectively	"	"
	010	Preparation and Control of Documents, Bills, etc.	"	"
	011	Collection and Utilization of Information	"	"
	012	Basic Theory of Mass Communication	"	"
	013	Pancasila and National Basic Law	37	37 weeks
	014	Indonesian Language	"	"
	015	English	"	"
	016	Mathematics	"	"
	017	Physics	"	"
	018	Chemistry	"	"
	019	Physical Exercise	"	"

Basic Broadcasting Training Module Group				
	020	Role of Mass Communication as an Instrument of National Policy	22	1 week
	021	Essentials of Broadcasting	"	"
	022	Regulations of Broadcasting and Related Fields	"	"
	023	Principles for Broadcasting Men	"	"
	024	Introduction to Program Compilation	"	"
	025	Emergency and Broadcasting	"	"
	026	Introduction to Broadcasting Technology (I)	"	"
	027	Introduction to Broadcasting Technology (II)	"	"
Production Module Group				
	028	Essentials of Radio Programs	"	"
	029	Essentials of TV Programs	"	"
	030	Radio Program Production Techniques and Equipment	"	"
	031	TV Program Production Techniques and Equipment	"	"
	032	Broadcasting Terms and Sentences	"	"
	033	Sound Broadcasting and Sound Design	"	"
	034	News Reporting, Recording and Editing	"	"
	035	Studio Production (I)	"	"
	036	Studio Production (II)	"	"
	037	Recording and Relaying	"	"
	038	Hues and Arts of TV	"	"

	039	Photographic Materials and Composition	22	1 week
	040	TV Image Composition and TV Scenarios	"	"
	041	Studio Production, Planning and Practical Training	"	"
	042	Planning and Practical Training of Relayed Programs	"	"
	043	Film and Hand-Held Camera News Gathering and Editing	"	"
Announcing Module Group				
	044	Voice Physiology and Vocalization	"	"
	045	Broadcasting Terms and Sentences	"	"
	046	Audio and TV Broadcasting Technology and Equipment	"	"
	047	Radio News and Interview	"	"
	048	Interview and a program of arranged transcription	"	"
	049	Radio Sports Relay Broadcasting (I)	"	"
	050	Radio Sports Relay Broadcasting (II)	"	"
	051	Disk Jockey (I)	"	"
	052	Disk Jockey (II)	"	"
	053	TV News, Talk and Interview	"	"
	054	TV Expressions	"	"
	055	Hand-Held Camera Relaying (I)	"	"
	056	Hand-Held Camera Relaying (II)	"	"
	057	Show and Quiz Programs	"	"
	058	TV Sport Relaying	"	"
	059	Announcement in Emergency	"	"

News Reporting Module Group				
	060	Essentials of News Programs	22	1 week
	061	Broadcasting Technology and Equipment	"	"
	062	Broadcasting Terms and Sentences (Radio)	"	"
	063	Broadcasting Terms and Sentences (TV)	"	"
	064	Radio News, Voice Report and arranged transcription	"	"
	065	Photographing and Commenting	"	"
	066	Filming, Editing, Commenting(I)	"	"
	067	Filming, Editing, Commenting(II)	"	"
	068	Mini Hand-Held Camera News Gathering, Editing, Commenting (I)	"	"
	069	Mini Hand-Held Camera News Gathering Editing, Commenting (II)	"	"
	070	News Gathering Training (Governmental Organizations)	"	"
	071	News Gathering Training (Enterprises)	"	"
	072	News Gathering Training (Events)	"	"
	073	News Gathering Training (Sports)	"	"
	074	TV News and Voice Report	"	"
	075	Local News Analysis	"	"
Basic Engineering Module Group				
	076	Fundamentals of Electromagnetics	"	"
	077	Fundamentals of Alternating Current Theory	"	"
	078	Fundamentals of Acoustics, Light and Color and Electric Chemistry	"	"
	079	Fundamentals of Electronic Circuits (I)	"	"

	080	Fundamentals of Electronic Circuits (II)	22	1 week
	081	Essentials of Broadcasting Technology	"	"
	082	Fundamentals of Radio Engineering	"	"
	083	Fundamentals of Television Engineering	"	"
Production Engineering Module Group				
	084	Essentials of Radio and TV Program Production and Transmission	"	"
	085	Essentials of Transmitting and Receiving Techniques	"	"
	086	Fundamentals of Digital Technique	"	"
	087	Essentials of Production Engineering	"	"
	088	Measuring Instruments	"	"
	089	Essentials of Voice and Lighting Facilities	"	"
	090	Pick-up Tubes and TV Receivers	"	"
	091	Essentials of Color TV Cameras	"	"
	092	Essentials of Magnetic Recording and Reproducing Facilities	"	"
	093	Essentials of Film Facilities	"	"
	094	Essentials of Subcontrol Facilities	"	"
	095	Essentials of Master Control Facilities	"	"
	096	Essentials of Relay Equipment	"	"
	097	Radio Program Production Training	"	"
	098	TV Program Production and Telecasting Training (I)	"	"
	099	TV Program Production and Telecasting Training (II)	"	"
	100	Outside Broadcast Program Production Training	"	"

Transmitting Engineering Module Group				
	101	Essentials of Radio and TV Program Production and Transmission	22	1 week
	102	Fundamentals of Digital Technique	"	"
	103	Essentials of Program Production Engineering	"	"
	104	Essentials of Transmitting and Receiving Techniques	"	"
	105	Measuring Instruments	"	"
	106	Electron Tubes	"	"
	107	Radio-Frequency Circuits	"	"
	108	Essentials of Radio Broadcasting Equipment	"	"
	109	Essentials of FM Broadcasting Equipment	"	"
	110	Essentials of TV Broadcasting Equipment	"	"
	111	Antennas and Radio Wave Propagation	"	"
	112	Essentials of Power Supply Facilities	"	"
	113	Essentials of Receiving Facilities and Interference	"	"
	114	Radio Broadcasting Equipment and Transmitting Training	"	"
	115	FM Broadcasting Equipment and Transmitting Training	"	"
	116	TV Broadcasting Equipment and Transmitting Training	"	"
	117	Preventive Maintenance and Troubleshooting	"	"
Office Administration Module Group				
	118	Fundamentals in General Affairs	"	"
	119	Fundamentals of Accounting	"	"
	120	Job Control	"	"
	121	Procedures of Meetings, Ceremonies, and Events	"	"

3-9-2 Curriculum and Teaching Material Development Procedures

(1) Curriculum development procedure

We consider that the development of curriculum would be proceeded as follows:

- 1) Clarification of plan for future broadcasting service
- 2) Understanding of problems in current broadcasting service
- 3) Establishment of improvement objectives and items in future and priority order among them
- 4) Establishment of schedule for improvement
- 5) Enumeration of training needs
- 6) Establishment of training scale based on recruitment and personnel assignment plans
- 7) Concrete analysis of presently employed training methods, teaching materials, effects, etc.
- 8) Enumeration of necessary subjects
- 9) Establishment of teaching methods, teaching materials, contents, durations, etc., for individual subjects
- 10) Analysis of subject order
- 11) Curriculum feasibility check by resource simulation

(2) Teaching materials development procedure

1) Types of teaching materials

a) Procured teaching materials

- i) Printed materials (reference books, books of collection of questions for study, wall maps)
- ii) Models, wiring diagrams, component demonstrations
- iii) Program materials, program segments, etc.

b) Prepared teaching materials

- i) Printed teaching materials (textbooks, training sheets, etc.)
- ii) Aural and visual teaching materials (video tape, film, slide, OHP film, block diagram in displays)
- iii) Duplicated materials (Program recordings and scripts already in use)

2) Development procedure and schedule

Of the above-mentioned teaching materials, items b)-i) and b)-ii) are more difficult. It is advisable to secure at least such a procedure and schedule as is shown in Fig. 3-4.

		1982				1983				1984					
Year		January	April	July	October	January	April	July	October	January	April	July	October	January	April
Printed Materials	General and Common Subjects				Data Collection	Original Translation, Photographing		Temporary Printing	Proofing						
	Professional Subjects				Data Collection	Original Translation, Photographing		Temporary Printing	Proofing						
Aural and Visual Teaching Materials	General and Common Subjects				Data Collection	Scenario, Recording, VTR Editing		Temporary Editing	Correction						
	Professional Subjects				Data Collection	Scenario, Recording, VTR Editing		Temporary Editing	Correction						

Fig. 3-4 Teaching Materials Development Schedule

3-9-3 Cultivation of Trainers and Staff

(1) Principles of Cultivation of Trainers and Staff

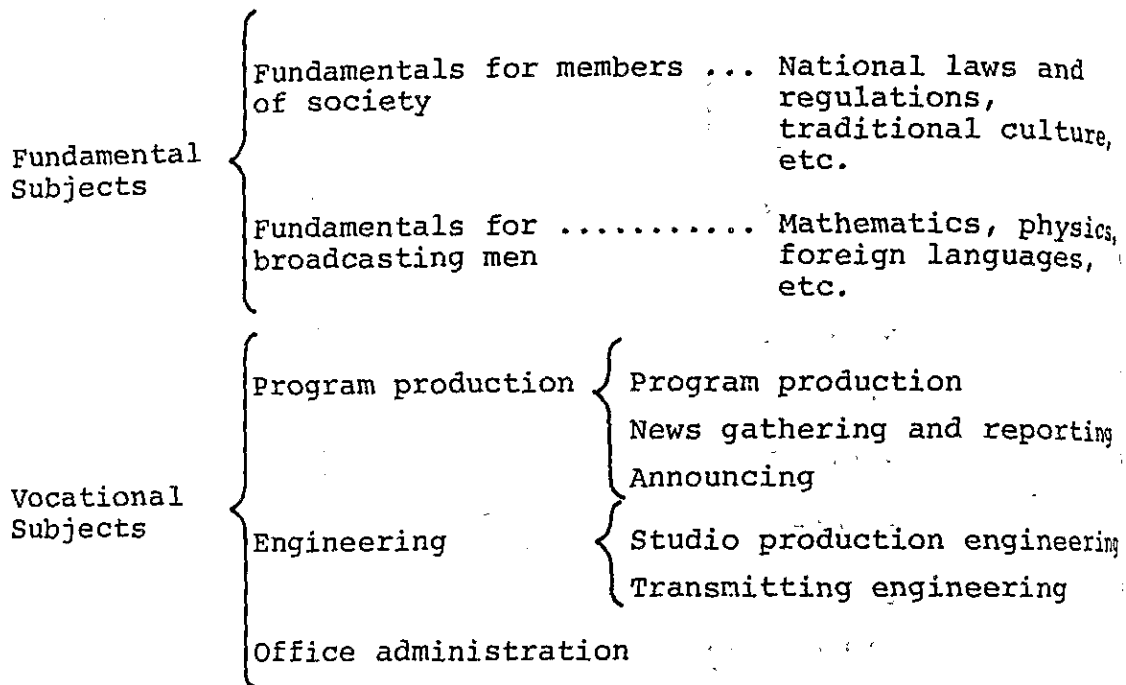
The training centre will cultivate broadcasting personnel. Accordingly, trainers and staff to be engaged in education and training must be well versed in broadcasting. That is, no other persons but broadcasting men should become trainers. At the training centre, the cultivation of broadcasting men will be made by broadcasting men. This may be said not only for vocational training necessary for broadcasting men but also general education necessary for establishing their foundation.

Such subjects of general education as the laws and regulations of the country, science and foreign languages should desirably be taught by teachers selected from among broadcasting men who can offer the most effective guidance and instruction.

(2) Cultivation of trainers and staff in different functional fields

The expected contents to be taught will be as follows:

(These are not necessarily mean the contents of the curriculum.)



It can be easily understood that the method of cultivating trainers and staff depends on the contents to be taught.

That is, regarding fundamental subjects, it is proper to select qualified persons in Indonesia without inviting foreign experts. If there is room for advice or support from foreign experts, it is in the methods of teaching and necessary range of broadcasting. However, this advice and support can easily be realized by short term training or in conference meetings.

Regarding office administration, various new methods have been developed in many countries and the use of computers has been adopted increasingly. However, for the

time being, it is rather difficult to generalize about office administration since each country may have its own proper features. Since it is desirable to develop a unique efficient administration method in Indonesia, it will be appropriate to cultivate staff in this field in Indonesia. As for development in efficiency and office processing by computers, etc., it will be suitable to invite experts for advice and develop new methods and thus improve the contents to be taught.

In the program production and engineering fields, methods, common almost throughout the world have been established. Accordingly, in these fields two methods may be considered: to send expected trainers to advanced countries to be trained or invite experts from advanced countries. Training of expected trainers in advanced countries will be limited in the number of persons to be sent, expense, etc., but has the advantage of permitting learning of latest techniques with latest facilities. On the other hand, training by inviting experts from advanced countries allows a large number of persons to participate in training with less cost, although not allowing latest facilities and techniques to be demonstrated in practice.

For the present project of establishing the training

centre in Indonesia, the expected date of commencement of service at the training centre has been settled and only a short period of time is left before the commencement, so that the adoption of both of these cultivation methods will be most appropriate.

(3) Cultivation of trainers in charge of program production and broadcasting engineerings

At present, there are many facilities in the world that cultivate broadcast program producers and broadcasting technicians/engineers, but there are no such institutes that cultivate trainers for these producers and technicians/engineers.

Only techniques for training broadcasting men are taught in these institutes. In almost all these educational and training institutes those persons having been cultivated as broadcasting men and having acquired training techniques are in charge of training/education of expected trainers.

Accordingly, trainers should be cultivated so as to acquire the sufficiently high knowledge and skills of program production and broadcasting engineering which are indispensable for teaching trainees, and then teaching techniques. This would be the best and practical way.

(4) Problems in cultivation of trainers and staff

Those engaged in broadcasting service generally

have marked individuality. In particular, those engaged in program production tend to have very forceful individuality, so that program production technique varies over a wide range and prevents standardization. Accordingly, excellent program producers can not always be assumed to be excellent instructors in program production. Excellent program production instructors should, before everything, be excellent program producers and, at the same time, should understand most production techniques and have capabilities of guiding and teaching trainees depending on the purposes of the programs to be produced. This means, difficulty in selecting trainers in this field. It is not too much to say that the success of service in a training centre depends entirely on the selection of trainers. Utmost care should be taken in this point. When candidates for trainers are trained in Tokyo, English will be used as the teaching language. All services in Japan are conducted in Japanese and all services in Indonesia in Indonesian language. For the time being, there are no such trainers in Japan who understand both languages, so that it can not be helped but to use English for the common language in training. This may cause some difficulties in understanding in some delicate discussions, so that such able

coordinators who understand both English and Japanese and also some Indonesia will be very helpful.

It can not be helped that training by Japanese experts in Indonesia will be performed in English.

The opportunity of learning the Indonesian language should be given to Japanese experts so that they can conduct training in the Indonesian language from an early stage. If all training is conducted in Indonesian, the efficiency of training will be increased tremendously.

The "Guidelines" set out that a trainer should teach 10 blocks per week, which may be rather excessive. In general, preparation for lecture and preparation of teaching materials require time at least equal to or generally twice as large as the lecture time. Thus, it may be necessary to review the contents of work of trainers.

3-9-4 Organization of Training Centre

Although the organizational structure specified by the "Guidelines"*1 is considered good, there are at least two difficulties with them. One of these difficulties is that the participation of trainees is considered in determining training curriculums and the policies of the training centre.

We have some idea to suggest on letting trainees participate in determining training curriculums. The determination of curriculums should be entrusted to those staff well versed in broadcasting service and training activities. If the voices of trainees who do not know what broadcasting service is, who lack in recognizing the social responsibility of broadcasting, and who have not matured in both intellectual and spiritual levels are reflected directly, the training system will consequently collapse from the inside. Although we should pay our respects to the attitude to be democratic as much as possible, we are afraid to agree with its mechanical application.

The other difficulty is that there is no section that will be in charge of service activities for trainees such as in the publicity of information on the execution of training, preparation of the outlines of lectures, and issuance of various certificates, all of which will become a great deal of work for this number of trainees. Considering all these points, we propose the following alternative plan shown in Fig. 3-5.

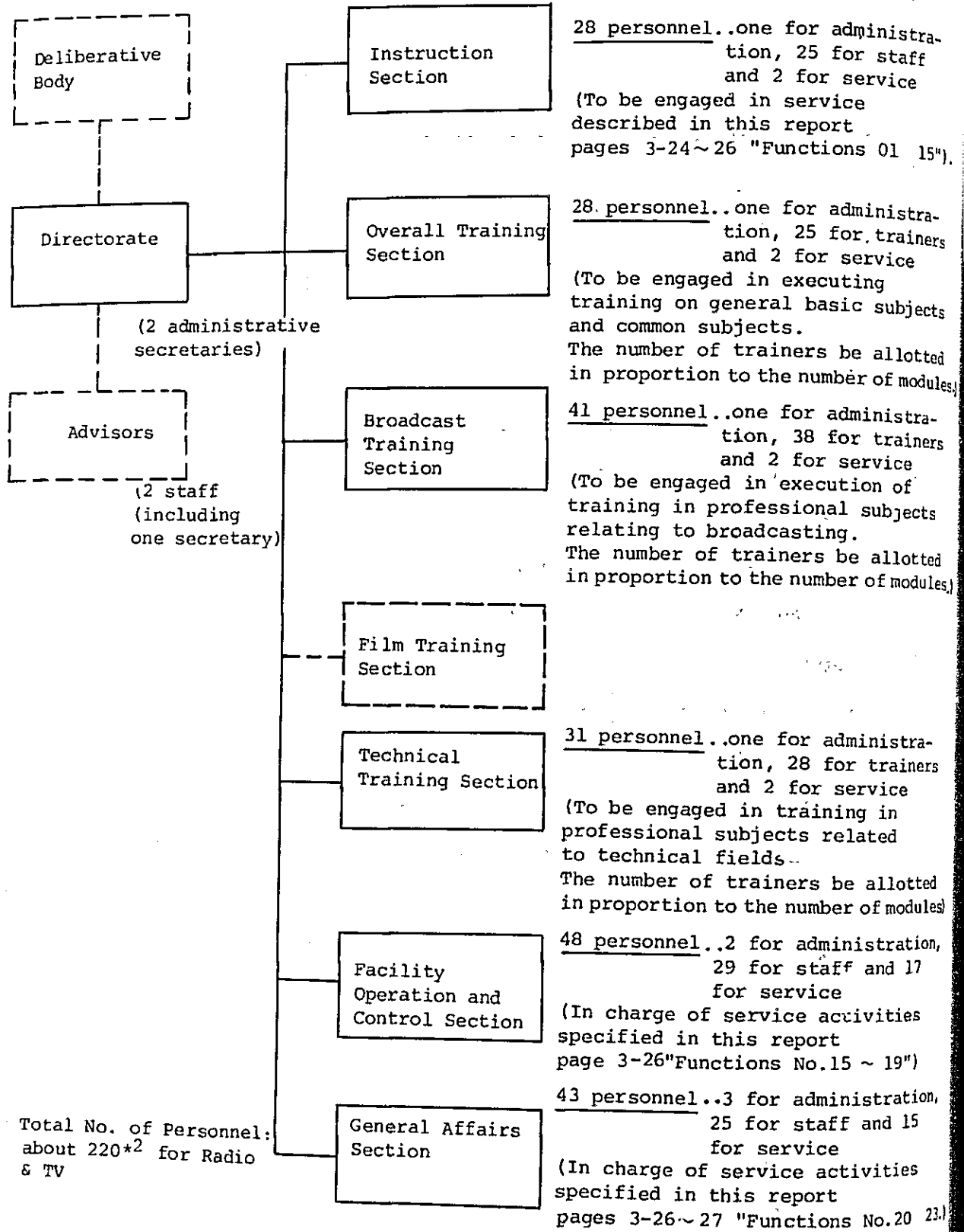


Fig. 3-5 Proposed Organization of Basic Training Centre in Yogyakarta

*1 Guidelines, page 109

*2 This report pages 3-21 and 3-27

3-9-5 Study on Initial Costs and Running Costs

(1) Initial cost about Rp. 110,000,000 (= \$177,540)

The initial cost includes the expenses for office and lecture room fixtures to be borne by the Indonesian side. In estimating the initial cost, the unit prices given in Table 2-9 on page 2-55 in this report were used. The breakdown of the initial cost is as follows:

Table 3-8 Initial Cost Estimation

Item	Cost (Unit = Rp.)	Calculation
Office Desk	11,400,000	@Rp. 60,000 x 190 desks
Office Chair	8,550,000	@Rp. 45,000 x 190 chairs
Cabinet	8,550,000	@Rp. 90,000 x 95 (one cabinet for 2 persons)
Locker	9,900,000	@Rp. 45,000 x 220 lockers (The unit price of lockers is supposed to be similar to that of chairs)
Bookshelf	3,600,000	@Rp. 80,000 x 45 (one bookshelf for two trainers)
Reception Set	1,200,000	@Rp. 150,000 x 8 sets (For use at each section, centre direc- torate and lobby)

(Continued)

Telephone Set	3,000,000	@Rp. 30,000 x 100 sets (Unit price is supposed to be Rp.30,000.)
TV Receiver	23,975,000	@Rp.685,000 x 35 sets (2 sets for each office, one set for each lecture room and 5 lobby, directorate room and others)
Tea Utensil Shelf	1,400,000	@Rp.200,000 x 7 (one shelf for each office room)
Refrigerator	300,000	@Rp.150,000 x 2
Lecture Room Desk	25,000,000	@Rp. 50,000 x 500 desks
Lecture Room Chair	10,000,000	@Rp. 20,000 x 500 chairs
White Board	3,200,000	@Rp. 40,000 x 80 (3 boards for each lecture room, 2 boards for each office and 15 boards for studio and others)
Total	110,075,000	

(2) Running costs

The breakdown of the running costs is: 1) traffic fees, 2) trainee lodging cost, 3) trainee pocket money, 4) trainers' salary, 5) cost for teaching materials, 6) electricity, gas, water and administrative cost.

For the cost of 1) above, the average air flight charge

(one way) is given in this report page 2-34 and for costs of 2) ~ 5) above, reference values are given in this report page 2-33 ~ 2-34. Therefore, by estimating the 6) administrative cost per personnel per month, the costs necessary for the execution of the Basic Training Centre in Yogyakarta have been calculated.

- 1) Estimation of administration cost per month required for execution of training at RRI T/C

The average duration of a training course performed at RRI T/C is about 1.5 months. The cost required for one trainee was explained to be about Rp.500,000 on an average. So, first let us calculate the costs of 1) ~ 5) above by using figures specified in this report pages 2-33 ~ 2-34. (Table 3-9)

Table 3-9 Estimated Costs

Item	Cost	Calculation
Air flight charge (Round trip)	Rp.172,000	@Rp.85,979 x 2
Lodging cost	Rp.225,000	@Rp. 5,000 x 45 days
Pocket money	Rp. 45,000	@Rp: 1,000 x 45 days
Trainers' salary	Rp. 40,320	$\frac{\text{@Rp.3,500} \times 8\text{h} \times 6\text{ days}}{25\text{ personnel}} \times 6\text{ wks}$
Cost for teaching materials	Rp.2,000	
Total	Rp.484,320	

By subtracting the above total cost from Rp.500,000, we obtain Rp.15,680 which can be estimated to be the administrative cost. However, this value has been obtained for the training duration of 1.5 months, so that it is necessary to obtain the value for one month by calculation. Then, we have Rp.10,500. Let us now estimate the cost for training one trainee for one year at the Basic Training Centre in Yogyakarta. The results of calculation are given in Table 3-10.

Table 3-10 Costs for Training One Trainee
for One Year

Item	Cost	Calculation
Air flight charge (Round trip)	Rp. 172,000	@Rp.85,979 x 2
Lodging cost	Rp.1,825,000	@Rp. 5,000 x 365 days
Trainee's pocket money	Rp. 365,000	@Rp. 1,000 x 365 days
Trainer's salary	Rp. 513,333	Refer to equations given below this table.
Cost for teaching materials	Rp. 20,000	@Rp.2,000 x 10
Administration cost	Rp.126,000	@Rp.10,500 x 12 months
Total	Rp.3,021,333	

Equations for estimation of trainers' salary

..... For the training hours and
lecture-to-practical training
ratio set out in the "Guidelines"

a) For lectures (general and professional subjects):

$$S = \frac{\text{@Rp.3,500} \times 14 \text{ blocks} \times 2 \text{ lessons}}{24 \text{ personnel}} \times 40 \text{ weeks}$$

b) For practical training:

$$S = \frac{\text{@Rp.3,500} \times 10 \text{ blocks} \times 2 \text{ lessons}}{8 \text{ personnel}} \times 40 \text{ weeks}$$

That is, the cost per trainee is expected be approximately Rp.3,021,000.

The Indonesian side does not intend to execute training activities in the fullscale from the commencement of service in April 1984. Answers to the questionnaire made by the survey team also specified that the expected capacity of the dormitory will be about 300 trainees at the time of commencement of service.*1

Then, by supposing the increase in the number of trainees as 240 trainees (1984), 360 trainees (1985), 480 trainees (1986) and 480 trainees after 1986, let us estimate the running cost required for five years after 1984.

The results of the estimation are given in Table 3-11

and various prerequisites are set, although the living price rise ratio is not considered.

Table 3-11 Expected Running Cost of Basic Training Centre in Yogyakarta

Fiscal Year Item	1984	1985	1986	1987	1988
Running cost (Unit: Rp.1 million)	725	1,088	1,450	1,450	1,450
Number of trainees to be accepted	240	360	480	480	480
Calculation	Rp.3,021,000 x 240	Rp.3,021,000 x 360	Rp.3,021,000 x 480	Rp.3,021,000 x 480	Rp.3,021,000 x 480

As mentioned in Section 2, an answer of Rp.928,000,000 was made by personnel in charge of training in the Indonesian side in response to the questionnaire regarding the running cost.*2 By preparing this amount with the figures given in Table 3-11, it appears that this amount is less than the running cost of the second year when narrowly 75% capacity of the centre will be achieved. Assuming that the figures given in Table 3-11 are appropriate, the Indonesian side is required to secure a budget of Rp.4,863,000,000 (about US\$7,840,000) for the five years for accomplishing the expected training.

*1 "Questionnaire," (in the Annexed Reference)

*2 This report, page 2-45

SECTION 4 BASIC DESIGN OF BUILDINGS AND FACILITIES

SECTION 4 BASIC DESIGN OF BUILDINGS AND FACILITIES

4-1 Scope of Basic Design and Basic Principles

4-1-1 Scope of Basic Design

This paragraph outlines the scope of basic design of facilities (including buildings and equipment) for implementing the training plan.

(1) Equipment

1) TV Studio Equipment

- (a) Program studio equipment
- (b) Program control studio equipment
- (c) VTR equipment
- (d) Telecine equipment
- (e) Sync equipment
- (f) ENG system
- (g) Film editing machine
- (h) Film processing system
- (i) Master control equipment
- (j) Other equipment and materials

2) Radio Studio Equipment

- (a) Program studio equipment
- (b) Program control equipment
- (c) Tape editing machine
- (d) Master control equipment

- 3) Transmitter and FPU
 - (a) 1kW Medium-wave transmitter
 - (b) 1kW TV Transmitter
 - (c) 50W TV Translator
 - (d) TV Relay equipment
- 4) Measuring Instruments
- 5) Power Supply Equipment
 - (a) 75KVA Engine-generator
 - (b) Dummy load (for engine generator)
- 6) Engineering Communication and Clock System
 - (a) Intercom system
 - (b) Clock system

(2) Building and Building facilities

The basic design of buildings and facilities will be elaborated with the consensus of each side to cope with the entire plan including film training and housing area portion to be constructed by the Indonesian side. The buildings to be constructed in this plan can be classified into the following three types :

1) Facility building

This building will house rooms for practical training in the broadcasting field.

2) Administration building

This building will have rooms related to administration and control.

3) Lecture building

This building is to comprise lecture rooms for all types of lectures.

The basic design will be accomplished for the following scope.

- 1) Architectural design
- 2) Structural analysis
- 3) Building facilities
- 4) Acoustical design

Fig. 5-1 shows a block diagram of the broadcasting facility system planned in this project.

4-1-2 Basic Principles

The basic principles adopted in the basic design are as follows:

- (1) In conformity to the "Minutes of Discussion" prepared on September, 25, 1981, Jakarta (attached to the end of this report), the Japanese side will execute the basic design of the training centre on the basis of

the concept of the MMTC project.

- (2) The training centre will be furnished with facilities for executing basic training of new employees in radio and TV section.
- (3) Buildings will be constructed with reinforced concrete and brick. The functions and construction of buildings and acoustics for studios will be designed suitably for a broadcast training centre and economically. Accordingly, the training facilities will not be suitable for actual broadcasting service.
- (4) Building materials will be procured locally as much as practicable when the locally available materials meet requirements in construction schedule and economical design.
- (5) The power to be supplied to the training centre shall be 220V, 3 phases, 4 wires at the drop point and shall have the required power capacity.
- (6) Japanese regulations and standards applicable to architectural design will be followed when Indonesian regulations and standards do not provide sufficient detailed guidance.

- (7) To facilitate convenient maintenance of the technical facilities, care should be taken to provide means to detect breakdown and execute operation and repair of those facilities.

4-2 Broadcasting Equipment

4-2-1 Principles in Equipment Selection

The broadcasting equipment to be used in the training centre is intended for practical training in the broadcasting field. The progress in the development of broadcasting equipment is so rapid that trainees having completed training at the training centre and assigned to their field stations will scarcely have the opportunity of operating identical equipment to the equipment they use during their training. However, they will be able to operate new equipment using the operating principles, adjustment and production procedures they have acquired with the equipment in the training centre. This training centre is expected to continue the basic training of new employees for a period of at least 10 ~ 15 years. Accordingly, it is desirable to introduce new types of equipment if they assure economy and use the same operating principles as the conventional types of equipment.

4-2-2 General Requirements for Equipment

The general requirements which set out in the basic design phase for broadcasting equipment to be installed in the training centre are as follows:

- (1) The TV system shall be the PAL/B system (which is adopted in the Republic of Indonesia).
- (2) The system*) of equipment and its technical specification should be in accordance with CCIR broadcasting standards and should not be lower than those of PRI and TVRI TC in Jakarta.
- (3) Circuit design shall be made in consideration of latest operating format and every moving mechanism shall be designed to be as durable as possible, and if necessary, reinforcement shall be adopted.
- (4) Inspection lid will be adopted to assure convenience for measuring training.
- (5) In consideration of electrical and mechanical safety, foolproof design shall be adopted.
- (6) Spares of major parts shall be provided in principle and, where recommendable, unit spares will also be provided.

*) An arrangement of components/sub systems so as to make one ordinary working whole in which the components/sub systems are compatible to each other in quality of material and technical performance.

4-2-3 Purpose of Use

The major items of equipment to be incorporated in the broadcasting system of the training centre will be as follows in the phase of basic design.

(1) TV Studio Equipment

1) Production studio equipment

Three studio cameras each having a studio zoomer with 10 magnification will be furnished in the production studio. Manual batten type lighting system will be adopted.

The subcontrol room will be furnished with video and audio lighting control consoles, associated production equipment, and FSS. For the video system, the video room system will be employed. The production studio equipment will be used for training in producing TV drama/news programs and dubbing. (One mobile ENG camera should be usable.)

2) Program Studio Equipment

The TV announcer's room will be furnished with one ENG camera and fixed lighting. The program control room will be furnished with a TV control console. A master control console will be

provided in the TV master control room to work in association with this control console.

The program control studio equipment will be used for training in TV program control.

3) VTR

The VTR room will be furnished with three PAL/Format C 1-inch VTRs, three PAL cassette VTRs, associated editing equipment, and one input/output switching control console for training in recording, transmission and editing general TV programs.

4) Telecine equipment

The telecine room will be furnished with two telecine chains, two cinecoders, and an input/output switching control console for training in telecine operations.

5) Sync equipment

The sync equipment will be installed in the master control room to permit the distribution of sync signals to the training centre.

6) ENG system

Two ENG systems and two sets of portable lighting equipment will be provided for training ENG operations. ENG editing will be performed in the VTR room.

7) Film editors -

16mm film editing machines (one with sound and the other without sound) and editing tools will be provided in the editing room for training in film editing operations.

8) Film processing system

One 16mm film developing set will be provided in the film developing room for training in film developing operations.

9) Master control

The master control console and associated racks (clock and interphone equipment) will be provided in the master control room for training in master control operations. The master control room will also be furnished with production studio CCU and video production racks for training in VE operations.

10) Other equipment and materials

Other equipment and materials include accessories necessary for the maintenance of equipment and consumable parts necessary for program production training. Since as much equipment and materials as will be necessary for training for one year will be provided, it will be necessary

to replenish equipment and materials every year in operating the training centre. This is also the case with radio.

(2) Radio Studio Equipment

1) Production studio equipment

One subcontrol console and one set of associated equipment will be provided in the subcontrol room for training in radio program production and recording operations. One announcer's table and one set of associated equipment will be provided for studio training in announcing operations.

2) Program control studio equipment

Radio program control console will be installed together with the master control console in the master control room for training in radio program control operations.

3) Tape editor

Four tape editing machines and accessories for tape editing will be provided in the tape editing room for training in tape editing and tape recording operations.

4) Master control equipment

One master control console and one associated rack will be provided in the master control room for training in master control activities.

(3) Transmitter and FPU

In order to perform training in transmitting operations, a set of radio and TV transmitter (including monitoring equipment) and one FPU for TV relay will be provided in the transmitter room. All equipment will use solid state circuitry. Dummy antenna will be used for the load of each transmitter excluding the FPU. The FPU will be sufficient to allow outdoor training.

(4) Measuring Instruments

Measuring instruments will be particularly important in the training centre. They are described in paragraph 4-3.

(5) Power Supply Equipment

One 75KVA engine-generator will be installed in the generator room for training in generator operations. The engine generator will be provided for training use and will not be designed for actual service. That is, although the engine generator will have a switching circuit for the main power line, the capacity of its tank will be such that allow continuous operation of approx. 6 hours. Dummy load for generator use will be installed outdoors.

(6) Engineering Communication and Clock System :

The TV master control room will be furnished with an intercom system for communication with related rooms furnished with equipment and a clock system for driving clocks in major rooms in the training centre.

Training Equipment Allocation Plan

<u>Equipment</u>	<u>Q'ty</u>	<u>Location</u>	<u>Purpose/Specifications</u>
Color Studio Camera	3	TV Studio	TV Studio production/with x10 studio zoomer and pedestal
Camera Control Unit (CCU)	3	TV Master control room	VE Training/with master monitor and waveform monitor and one set of VE console
Camera Remote Control	1	TV Subcontrol room	TV Studio production/with some panels for additional control to CCU.
Color Flying Spot Scanner (FSS)	1	TV Subcontrol room	TV Studio production/with scroll
Video Subcontrol Console	1	TV Subcontrol room	TV Studio production/3-mix special effects, chroma key
Video Subcontrol Switching Rack	1	TV Master control room	VE Training
Sound Subcontrol Console	2	TV and radio subcontrol rooms	Mixer training/with echo machine, monitor, 16-mix, announcer's box
Color Master Monitor or Color Monitor	18	1-TV Studio 2-TV Subcontrol room 2-TV Master control room 1-TV Program control room 5-VTR room 1-Telecine room 2-Transmitter room 4-Laboratory	Picture size will be specified separately depending on the purpose, and the number of equipment to be incorporated will also be specified separately.
Picture Monitor	36	1-TV Studio 11-TV Subcontrol room 1-TV Booth 7-TV Master control room 6-TV Program control room 4-Telecine room 2-Transmitter room 4-Laboratory	Picture size will be specified separately depending on the purpose, and the number of equipment to be incorporated will also be specified separately.

(Continued)

Wireless Microphone and Antenna	2	TV Studio	Mixer training
Microphone	25	15-TV Studio 2-TV Booth 6-Radio studio 2-Radio booth	Mixer training/accessories such as microphone stand will be specified separately.
Dimmer	1	TV Subcontrol room	Lighting training/6kW x 10 units, with console and accessories
Lighting Batten (manual)	1	TV Studio	Lighting training/with 142 lighting units and spare lamps
ENG Color Camera	3	1-TV Program control room 2-Store	Program control and outside broadcasting training/with accessories (two cameras for outside broadcasting use: with lighting and cassette VTR)
Character Generator	1	TV Program control room	Program control training
Video Program Control Console and Associated Switching Rack	1	TV Program control room	Program control training/with special effects and chroma key, VE console
Sound Program Control Console	1	TV Program control room	Program control training/with monitor and announce box
1-Inch VTR	3	VTR Room	VTR Training/format C, PAL system, with TBC
Cassette VTR	3	VTR Room	VTR Training/with TBC and editor
VTR Switching Console and Associated Switching Rack	1	VTR Room	VTR Training
Color Telecine Chain	2	Telecine room	Telecine training/3V system, with 16mm and 35mm film projectors and slide projector

(Continued)

Cinecorder	2	Telecine room	Telecine training/16mm magnetic film recorder
Telecine Switching Console and Associated Switching Rack	1	Telecine room	Telecine training
16mm Film Editor	1	Editing room	Film training/one sound editors and 3 silent editors
TV Master Control Console and Associated Switching Rack	1	TV Master control room	TV Master control training/with video and audio switching and sync racks
Disk Player	4	2-TV Subcontrol room 2-Radio subcontrol room	TV and radio studio production
Audio Tape Recorder	8	2-TV Subcontrol room 2-Radio subcontrol room 4-Radio editing room	TV and radio studio production and radio editing training
Sound Control Console	1	Radio program control room	Program control training/with monitor
Cartridge Audio Tape Recorder	1	Radio program control room	Program control training
Radio Master Control Console and Associated Switching Rack	1	Radio master control room	Radio master control training/with monitor and limiter
1kW MW Transmitter	1	Transmitter room	Transmitting training
1kW TV Transmitter	1	Transmitter room	Transmitting training
50W TV Translator	1	Transmitter room	Transmitting training

(Continued)

FPU	1	Transmitter room	Transmitting training/7GHz, with 1.2m ϕ parabolic antenna and tripod
16mm Color Film Developing Machine	1	Developing room	Film training/with mixing tank
Engine Generator	1	Generator room	Engine generator training/ 75KVA, with control board and 200 ℓ fuel tank
Intercom	1	TV Master control room	10-channel intercom
Clock System	1	TV Master control room	Quartz control type

4-3 Measuring Instruments

Measuring instruments to be provided in the training centre for practical training are important since they are required for the operation and maintenance of broadcasting equipment and facilities and since they will be used as teaching materials themselves.

The basic principles of providing measuring instruments are as follows:

- (1) Measuring instruments will be able to cover a wide variety of measuring items necessary for the operation and maintenance of broadcasting equipment and facilities.
- (2) Types of basic measuring instruments that will be used very often will be provided for studio equipment, transmitters and FPU separately.
- (3) Consideration should be given in the training plan so that those measuring instruments that will be used less frequently should be used as common measuring instruments only when necessary.

List of Measuring Instruments for Individual Purposes (1)

	Total	Purpose			
		Studio	MW TX	VHF-TV TX	VHF TV Trans.
TV Test signal generator	2	1		1	
Main unit					
Sawtooth-wave unit					
Sin ² Pulse & bar unit					
Color bar unit					
Multi-burst unit					
Square-wave unit					
Noise test signal unit					
Wideband oscillator	1			1	
20Hz-20MHz					
Standard signal generator	1				1
10-600MHz					
TV IF Signal generator	1				1
VHF Sweep generator	1			1	
Audio distortion meter/oscillator	5	2	1	1	1
Frequency counter	1			1	
1GHz					
SHF	1				1
Spectrum analyzer	1		1		
Oscilloscope	4		1	1	1
20MHz					
100MHz	3	3			
Envelope oscilloscope	1			1	
Vectorscope	1			1	

List of Measuring Instruments for Individual Purposes (2)

	Total	Purpose				
		Studio	MW TX	VHF-TV TX	VHF-TV Trans.	FPU
AM Sideband analyzer	1			1		
FM Sideband Analyzer	1			1		
Envelope delay measuring set	1			1		
DG/DP Measuring instrument	1					1
Color video noise meter	1	1				
Network analyzer	1			1		
Network analyzer						
Trans./ref. test set						
RF Cable & accessories kit						
VHF Field strength meter	1			1		
Field strength meter						
VHF Dipole antenna						
Antenna tripod						
White balance adjuster	1	1				
Illumination meter	1	1				
Color meter	1	1				
Projection stand for color camera	1	1				
Wow flutter meter	1	1				
MW Modulation monitor	1		1			
MW Receiver/generator	1		1			
TV Receiver/monitor	3			1		2

List of Measuring Instruments for Individual Purposes (3)

	Total	Purpose					
		Studio	MW TX	VHF-TV TX	VHF-TV Trans.	FPU	Common
Variable attenuator	3	2	1				
Audio							
Video	2	2					
VHF	2		1		1		
Waveguide attenuator	4					4	
Waveguide-coaxial transducer	4					4	
Low-pass filter circuit	1	1					
High-pass filter circuit	1	1					
CCIR Weighting network	1			1			
Audio							
VHF	1				1		
SHF	1					1	
L.C.R. Meter	1	1					
Operating impedance bridge	1		1				
Transmitter checker	1						1
Circuit tester	10	4	1	1	1	1	2
Electronic voltmeter	2		1				2
DC Voltmeter/Ammeter	2						2
AC Voltmeter/Ammeter	2						2
Clip-on ammeter	1						1
Insulation resistance tester	1						1
Earth tester	1						1

List of Measuring Instruments for Individual Purposes (4)

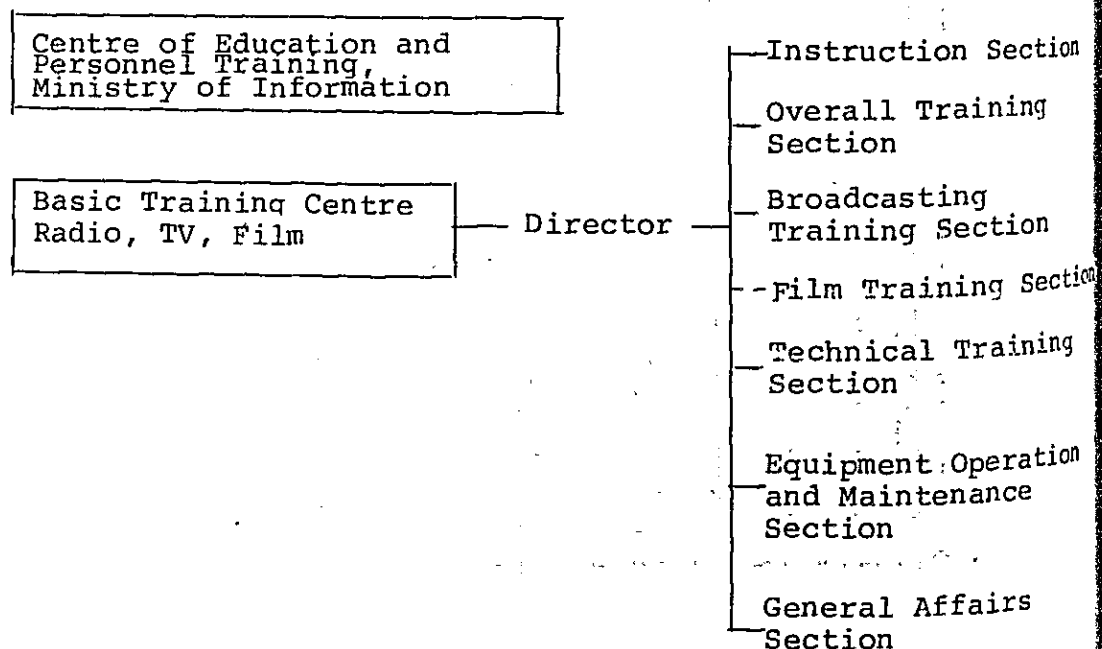
	Total	Purpose					Common
		Studio	MM TX	VHF-TV TX	VHF-TV Trans.	FFU	
Milliohm meter	1						1
Temperature meter	1						1
DC Power supply	2						2
Hand tool set	10	4	1	1	1	1	2
Test chart	2	2					
Resolution chart							
Grayscale chart							
Registration chart							
Linearity chart							
Test film SMPTE	2	2					
Test film	2	2					
16mm grayscale							
16mm registration							
Test slide	2	2					
Linearity ball chart							EIAJ
Resolution slide							EIAJ
Grayscale slide							EIAJ
Registration slide							EIAJ
TV color reference							SMPTE

4-4 Architectural Design

4-4-1 Organization and Facilities

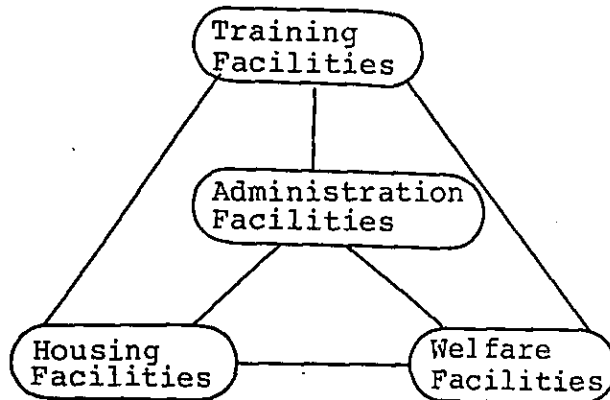
In building planning, the organization or scheme which operates the building is one of the most important design conditions. Major planning parameters include what kind of organization is to use the building and by how many people, what kinds of work these people are to do, what kinds of facilities are necessary for the work, how much space is required, how facilities should be arranged, etc. But in this stage, however, the basic design is being advised on the basis of the organization specified in paragraph 3-9-4. Adjustment shall be done as the software is finalized.

(1) Organization



(2) Composition of facilities

The composition of the facilities of this training centre is schematically shown below.



The training facilities will include ordinary lecture rooms and training rooms such as radio and TV studios and control rooms. Facilities related to film section will be constructed by the Indonesian side.

The administration facilities will include teacher's rooms, general offices, conference rooms, director's room, mechanical room, etc.

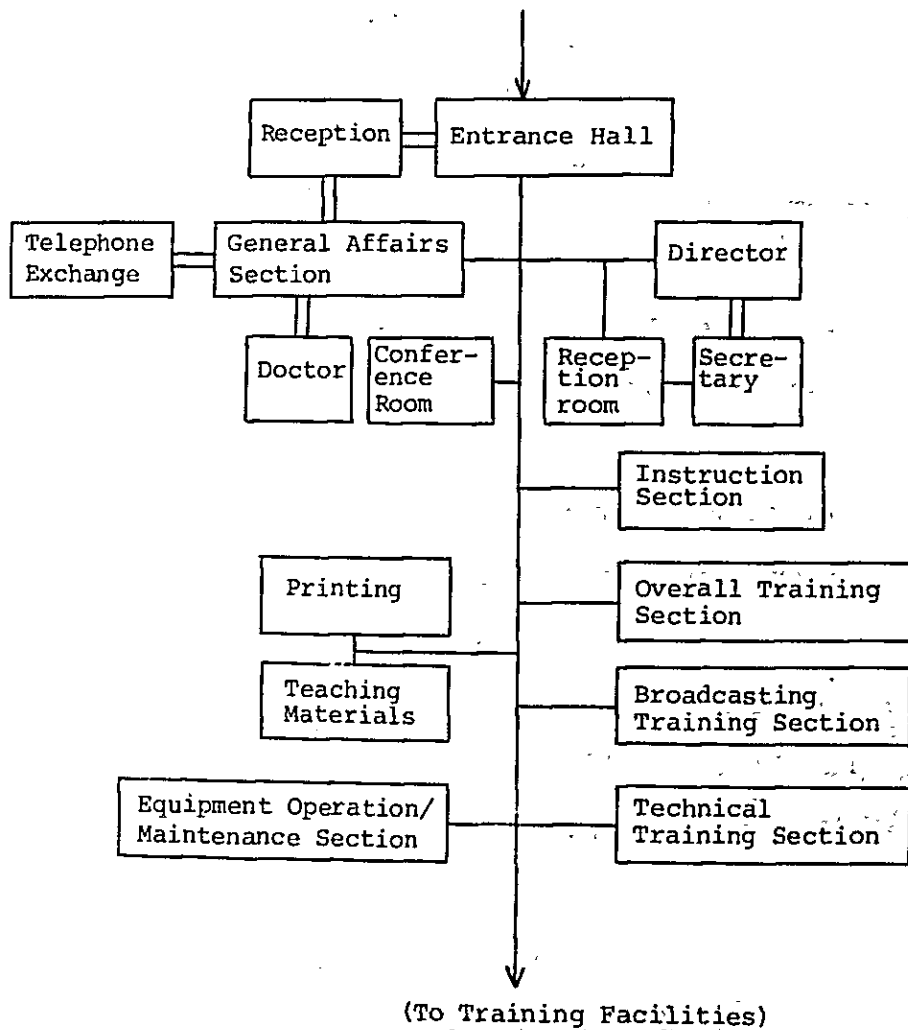
Housing facilities will include dormitories for trainers and trainees, which will be constructed by the Indonesian side.

Welfare facilities will include playground, cafeteria, etc., which will also be constructed by the Indonesian side.

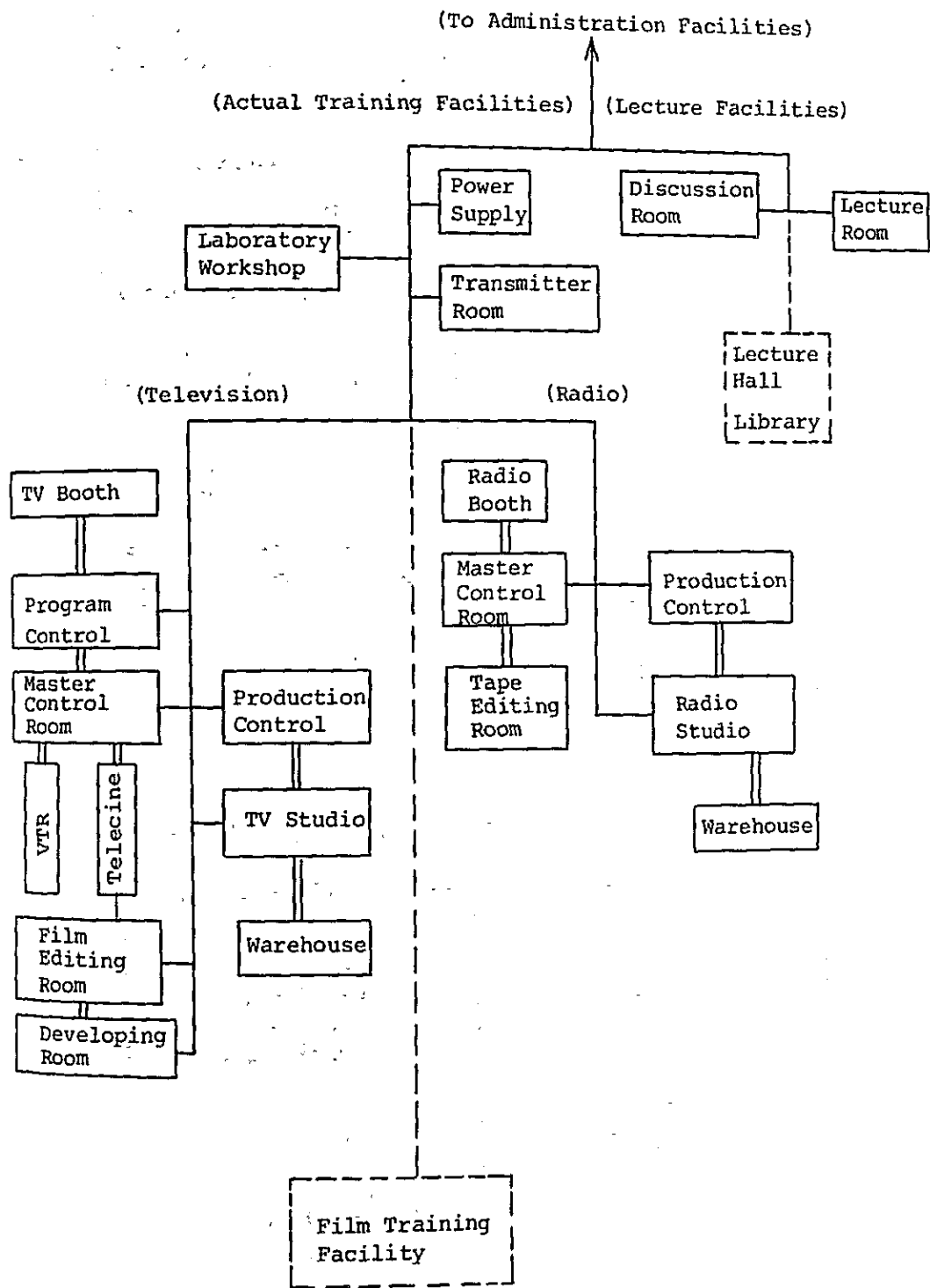
Those portions of the radio and TV training rooms

to be expanded such as lecture hall, library, garage, parking area and internal roads will also be constructed by the Indonesian side.

(3) Composition of Administration Facilities



(4) Composition of Training Facilities:



4-4-2 Necessary Rooms, Their Functions and Necessary Areas

<u>Room</u>	<u>Function</u>	<u>Q'ty</u>	<u>Necessary Area (m²)</u>
Director's Room	Director secretary (1)	1	30
Drawing Room	Reception of visitors, VIP restroom	1	20
Instruction Section	Administration (1), staff (25), service (2)	1	162
Overall Training Section	Administration (1), trainers (25), service (2)	1	162
Broadcast Training Section	Administration (1), trainers (38), service (2)	1	240
Technical Training Section	Administration (1), trainers (28), service (2)	1	180
General affairs Section	Administration (3), staff (25), service such as reception and telephone exchange (15)	1	210
Equipment Operation/Maintenance Section	Administration (2), staff (29), service (17)	1	240
Conference Room	Conference for professors and staff (30m ²)	3	90
Reference Room	Storage of various data	1	50
Teaching Materials Room	Storage of printed matters such as textbooks	1	30
Printing Room	Printing of teaching materials such as textbooks and book binding	1	20
Clinic Room	Diagnosis and first-aid treatment of patients	1	20
Store	Common warehouse	Several places	100
Lecture Room	Lecture training, 25-trainee class (50m ²)	16	800
Discussion Room	Lecture room for small number of participants, small conference room (25m ²)	4	100

Radio Studio	Training in program direction in music, drama, interview, sound effects and technical training in microphone operation, etc.	1	100
Production Control Room	Training in sound adjustment, recording and reproducing techniques (Equipment operation space: 25m ² ; observation seats: 25m ²)	1	50
Announcer's Booth	Training in announcing of news, interview, disk jockey, etc.)	1	50
Master Control Room	Training in sound adjustment, switching operation, recording, reproducing and transmitting techniques (Equipment operation space: 25m ² ; observation seats: 25m ²)	1	50
Tape Editing Room	Training in tape editing technique (Editing space: 20m ² ; auxiliary space: 15m ²)	1	35
Store Attached to Radio Studio	Storage of studio equipment	1	20
TV Studio	Program production training in music, drama, dancing, etc., and training in microphone, lighting and camera operations	1	250
Production Control Room	Technical training in audio, video, lighting adjustment and VTR techniques (Equipment operation space: 60m ² ; observation seats: 25m ²)	1	85
TV Booth	Training in announcing news, etc., and training in microphone, lighting and camera operations	1	50
Program Control Room	Training in audio, video, adjustment, switching and operating techniques (Equipment operation space: 25m ² ; observation seats: 25m ²)	1	50

Master Control Room	Training in program switching and telecasting techniques (Equipment operation space: 60m ² ; observation seats: 25m ²)	1	85
VTR Room	Training in VTR operation and VTR editing technique Equipment operation space: 60m ² ; observation seats: 25m ²)	1	85
Telecine Room	Technical training in telecine operations (Equipment operation space: 50m ² ; observation seats: 25m ²)	1	75
Film Editing Room	Training in film editing technique (Equipment operation space: 20m ² ; observation seats: 15m ²)	1	35
Film Developing Room	Technical Training in film developing, printing and liquid mixing techniques (Equipment operation space: 40m ² ; observation seats: 15m ²)	1	55
Transmitter Room	Training in transmitter (both radio and TV) maintenance technique (Equipment operation space: 60m ² ; observation seats: 25m ²)	1	85
Workshop Room	Technical training in equipment overhaul and repair (Laboratory space: 60m ² ; workshop space: 100m ²)	1	160
Store attached to TV Studio	Storage of studio equipment and settings	1	60
Engine Generator Room	Training in engine generator operating technique	1	50
Power Receiving and Distribution Room	Power receiving facility and distribution board	1	50
Airconditioning, Water Supply and Drainage Facility Room	Airconditioner, refrigerator, pump, etc.	2	150
Others	Entrance hall, corridors, staircase, lavatory, etc. (30% ± 5%)		

4-4-3 Scales of Buildings to be Constructed by the
Indonesian Side

The floor area of the major buildings to be constructed by
the Indonesian side are as follows.

Film Facility:	2,200m ²
Lecture Hall and Library:	1,100m ²
Cafeteria:	1,000m ²
Laboratory:	1,100m ²
Teaching Materials Store:	400m ²
Garage:	400m ²

All facilities not cover under the grant aid project
will be constructed by the Indonesian side.

4-4-4 Design Standard and Basic Plan

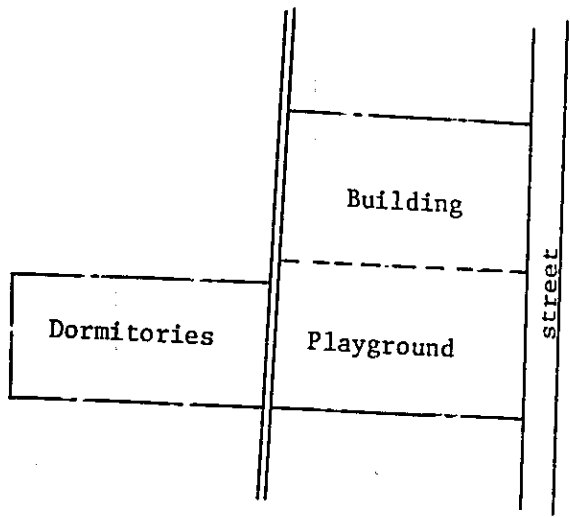
The construction of buildings will be accomplished on the basis of the following principles.

- Construction materials will be procured in Indonesia as much as practicable
- For design and execution standards and related standards, standards employed in Indonesia will be adopted.
- The standard quality of the broadcasting facilities such as studio of Radio and TV TC should not be lower than those of TVRI and RRI TC in Jakarta.

(1) Buildings

1) Site Planning

In accordance with the Indonesian Master Plan, the buildings in the site shall be located as follows.



2) Concept of Planning

(a) In layout planning, the following points have been taken into consideration:

- a) This building shall be such that can function itself as the training centre for radio and TV.
- b) Proper functional connection with the buildings to be constructed by the Indonesian side shall be secured.
- c) Training in major functional rooms shall be observable from outside the rooms.

(b) Block plan

The following principles have been adopted for layout planning of the individual buildings.

a) Administration building

The administration building shall be located to face the road and shall be two-stories.

b) Training building

The training building shall be constructed to connect the administration building and divided into radio and TV sections. The individual functional rooms shall be on the same floor.

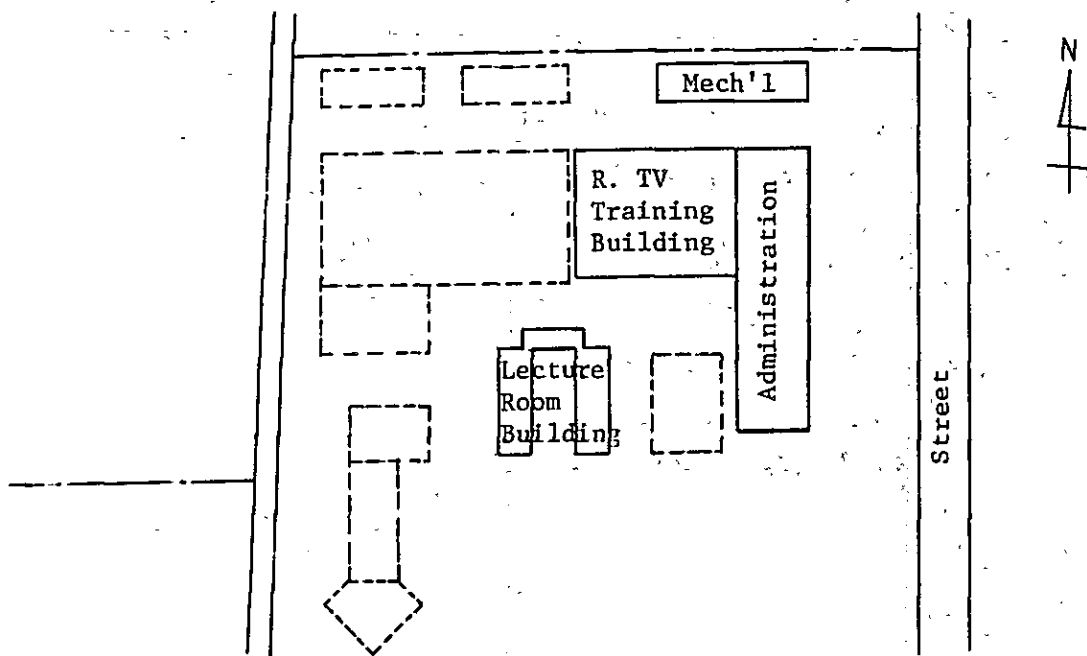
c) Lecture room building

The lecture room building shall be set apart from the administration building so that an auditorium is to be placed between them, and be two-storied.

d) Mechanical building

The engine generator will make noise and thus shall be installed in a separate building located on the north side. The power receiving and distribution room will be provided next to the engine generator room. The transmitter room will also be provided in this building to prevent from interference with other broadcasting equipment.

To summarize, the layout plan of these buildings will be shown below.



(c) Floor Plan

The floor plan prepared on the basis of the above-mentioned conditions are shown in Figs. 5-3-1 and 5-3-2.

The entrance is provided at the centre on the first floor of the administration building. Office room is located on one side of the entrance to connect the director's room located at the southeast corner of the building, and the conference room is placed to face the courtyard on the west.

On the second floor an office room is located on the east and rooms such as the discussion rooms on the west.

TV and radio training rooms are located separately on the right and left of the observation corridor passing straight from the administration building

and major rooms are furnished with windows for observation.

Two of the lecture room buildings are to be placed in parallel and are to be connected with staircases and corridors.

The floor areas of the individual rooms set out in the floor plan are as follows.

<u>Room</u>	<u>Floor Area (m²)</u>
Director	55
Drawing	33
Office	1,224
Conference (33 x 3)	99
Discussion (33 x 4)	132
Printing & Store	66
Reference room	55

Lecture rooms (50 x 16)	800
TV Studio	264
Setting store	99
Production control	132
Master/Program control	149
TV Booth	50
VTR	99
Telecine/Dubbing	99
Editing	55
Store	55
Film processing	90
Radio studio	104
Store	17
Production control	52
Master control	52
Radio booth	52
Editing	52
Workshop	151
Transmitter	115
Generator	115
Mechanical room	115
Mechanical control	58

Airconditioning	115
Store	85
Toilet	112
Corridor & Stair, etc.	1,281
Total	5,752 m ²

(2) Structure

1) Structural design standard

The structural design of the buildings will in principle be accomplished in accordance with the Indonesian architectural execution regulations and Indonesian structural calculation standard. Although the live load of each room in a building will meet the requirements of the Indonesian architectural standard mentioned above the load for special purposes (such as studios, master control room and subcontrol room) will be determined on the basis of standard values employed in NHK through calculation of the weights of the equipment and instruments to be installed in the room. The seismic force and wind pressure of the buildings will be in accordance with the

Indonesian architectural standard. Increase in the coefficient of seismic force specified for special buildings will not be adopted. Although the allowable unit stress of materials used for structural parts will be in conformity with the Indonesian architectural standard, the allowable bearing capacity of soil and the allowable bearing capacity of foundation piles will be determined through analysis of the results of soil survey (including boring and soil tests) of the site. Soil survey will be performed prior to detailed design. The structural analysis and structural design of the buildings will be accomplished in conformity to the Indonesian architectural standard and also to the Japanese Architectural Standard Specification and the structural design standards set out by the Architectural Institute of Japan.

2) Structural Design

All buildings planned in this project will be made of reinforced concrete with rigid frame (Rahmen) construction. By balancing reinforced concrete bearing walls as much as practicable in floor planning, effective structure resistant to earthquakes will be introduced.

From the standpoint of structure, the training building and control building shall be constructed as a single unit, but lecture building and the equipment and transmitter building shall be constructed separately.

3) Foundation structure

All buildings to be constructed in this project will be furnished with footing beams. The building weight will be supported by reinforced concrete footing or cast-in-place concrete piles. Whether footing foundation or foundation supported by piles is employed shall be determined in the phase of detailed design by analyzing the results of the soil survey.

4) Structure of Buildings

The lecture room building and control building shall be made with reinforced concrete and be two-storied above the ground.

The training building shall be an one-story reinforced concrete building furnished with reinforced concrete bearing walls around studios so as to provide soundproofing.

The equipment and transmitter buildings shall be separate one-storied reinforced concrete buildings.

5) Materials used for structural parts

Materials used for structural parts such as steel, reinforcing steel, cement, aggregate for concrete shall be procured from Indonesian products which meet the Indonesian industrial standards.

(3) Acoustics

The requirements for studios are not to be lower than those of TVRI TC in Jakarta.

1) Environmental conditions viewed from the standpoint of noise

The site faces a trunk road on the east side but each place of studios is apated more than about 60m, and the administration building is to be placed between the studios and the road so that the traffic noise is considered to be beside the question.

And the ring road is projected at the north side of the site and the noise is also out of the matter because they are more than about 200 m apart.

On the other hand, the airport is located at a distance of approx. 8km and the site is out of the air route. Hence, for airplane noise, no particular soundproofing is required.

2) Measures against noise

The design objectives against airconditioning noise are as follows:

Room	NC Value
Radio Studio	30
Subcontrol Room	
Announcer's Booth	
Program Control Room	
TV Studio	30
Subcontrol Room	
TV Booth	
Program Control Room	
Master Control Room	35
Tape Editing Room	30
Film Editing Room	

(Continued)

Room	NC Value
Lecture Room	30
Discussion Room	
Office Room	35

Some consideration should be given against external noise into the studios. Soundproofing doors and windows will be provided around the studios.

3) Indoor acoustic design

For reverberation design, the average sound absorption coefficient objectives are as follows. The average absorption coefficient objectives for the radio studios, announcer's booths and TV booths are 0.3 ~ 0.4 at 500Hz and those for TV studios are 0.35 ~ 0.45 at 500Hz. The frequency response characteristics of each average sound absorption coefficient should be flat as much as possible. The design of the subcontrol rooms should also be accomplished in consideration indoor acoustics.

The studio specifications are roughly as follows. These values may change somewhat in the phase of detailed design.

	Length (m)	Width (m)	Height (m)	Floor Area (m ²)	Total surface Area (m ²)	Volume (m ³)	Rever- beration Time (sec)
Radio Studio	10.5	8.0	3.5	84	298	294	0.30 ~ 0.45
Announcer's Booth	8.0	5.0	3.0	40	158	120	0.20 ~ 0.35
TV Studio	22.0	10.5	8.5	231	1,015	1,964	0.50 ~ 0.75
TV Booth	8.0	5.0	3.5	40	171	140	0.25 ~ 0.40

(4) Building facilities

1) Airconditioning facilities

The design temperature and humidity requirements will be as follows:

Outdoor: 32.0 °C 85 % Approx.

Indoor: 25.0 °C 55 % Approx.

Airconditioning facilities including ventilation will be provided for necessary space. The amount of air to be taken in from outside will be 25m³/hr-man as standard.

In addition, air exhausting from lavatories and corridor, and ventilation of the engine generator room, power room and transmitter room will be provided.

2) Plumbing equipment (water supply, drainage and sanitation)
Water supply and drainage within the buildings will be provided in this project and outdoor work will be accomplished separately by the Indonesian side. For Water supply, a water tank will be provided under the floor of the building equipment room and water supply to individual places will be made by a water supply pump with a pressure tank. For fire extinguishing facilities, four indoor fire hydrants will be provided on the first floor and three hydrants on the second floor. For lavatories, only one Western-style toilet will be provided in each lavatory and other toilets are all of the type used generally in Indonesia.

3) Electric facilities

a) Power receiving and distributing facilities and engine generator

Power receiving and distributing facilities will be provided in the power room and an engine generator in the engine generator room.

The power to be received will have the ratings of AC 220/380V, 3 phases, 4 wires. Wiring and related work from the power receiving board up to the outside of the conduit (drop point) is planned in this project and lead-in cable work will be accomplished by the Indonesian side.

The engine generator will have a capacity of 75 kVA per set, employ cell motor starting by batteries, and be of entirely air cooling type. A power supply block diagram is shown in Fig. 5-6.

b) Batteries

The engine generator room will be furnished with one set of batteries for starting the engine generator and emergency lights and one set of batteries for the fire alarm and clock.

c) Main power (See Fig. 5-6)

Low-voltage power distribution board will also be provided in the power room, from which power will be distributed to individual equipment power distribution board, lighting distribution board, and power control board.

d) Lighting and plug socket

For illumination, fluorescent lamps will be used mainly. The illumination of each studio, transmitter room, office room and lecture room will be approx. 400 lux and that of other rooms will be about 200 lux. Plug socket will be provided wherever required. For emergency lighting before the starting of the engine generator in the event of power failure, a DC lamp will be provided near each emergency exit and in some rooms. After starting the engine generator, some lamps will be lighted from the engine generator.

e) Power driving facilities

A power control board will be provided in the mechanical room, by which power will be supplied to each load. The power control board for the ventilation of the transmitter room will be provided in the transmitter room. The start/stop of facilities excluding facilities such as water supply pump that are operated automatically will be initiated manually through pushbutton operation.

Fire hydrant pumps will be able to be switched on at the location of each fire hydrant box.

f) Earthing

Earthing terminals will be provided for the power receiving and distribution board, transmitter, various items of broadcasting equipment, telephone, lightning arrester, etc. Lightning arresters will be provided on the roof of each building.

g) Fire alarm

Heat detectors will be provided in each room and a manual alarm pushbutton will be provided near each fire hydrant box. The receiving point of the fire alarms will be in the office room.

h) Clock system

A crystal oscillation type master clock and batteries will be provided in the TV master control room and slave clocks will be in the individual studios and rooms. Slave clocks in the studios, subcontrol room and master control room will be of one-second type and others of 30-second type.

i) Telephone

A conduit for leading in telephone line, indoor type, grounding terminal and power supply facility will be provided to allow telephone installation.

j) Intercom system

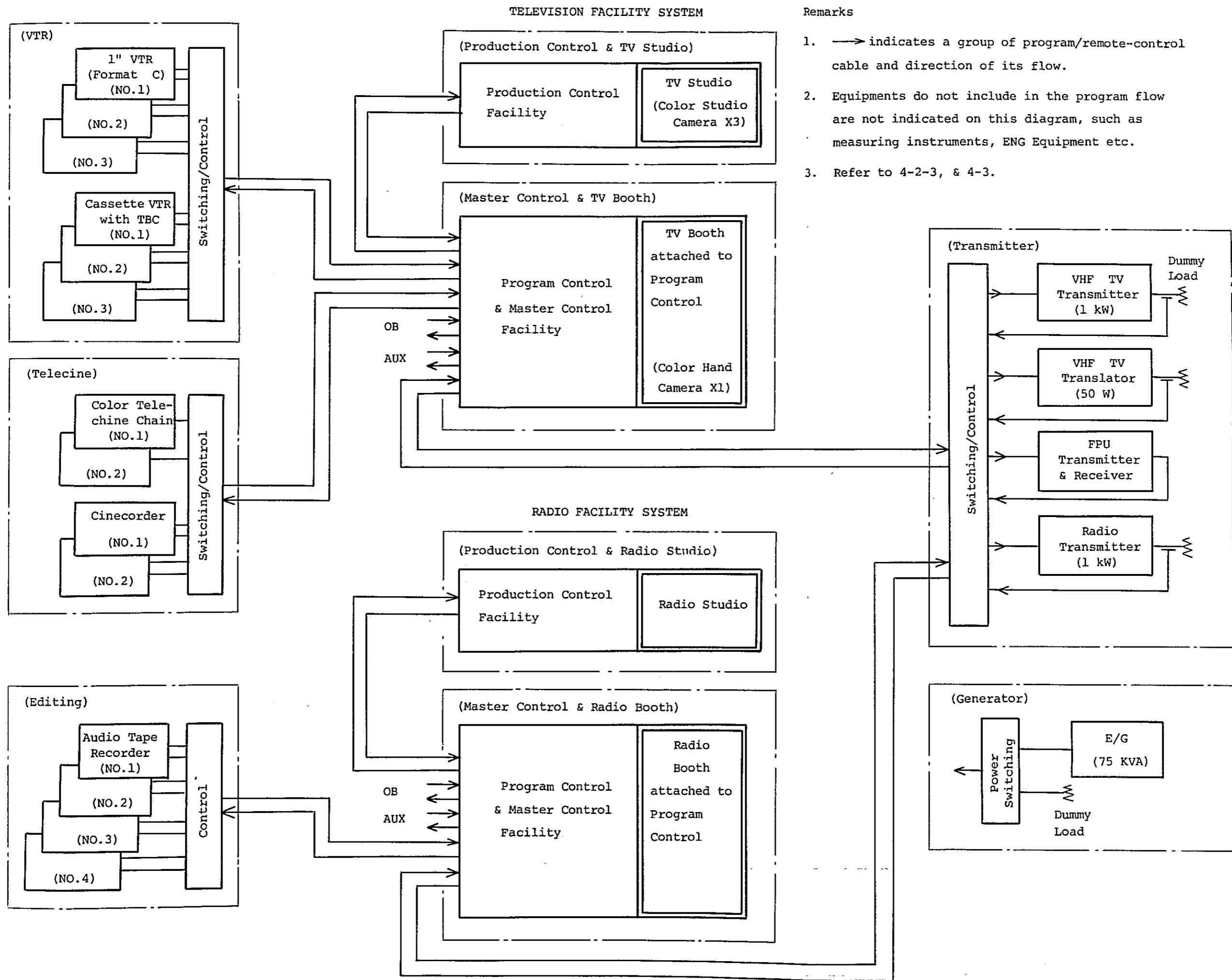
Loudspeaker calling type intercom (interphone) will be provided in the following rooms:

Master control room, subcontrol room, engine generator room, power room, airconditioner room, reception office room and office room on the second floor.

4) Piping for broadcasting use

Piping necessary for broadcasting facilities will be provided in the studios and between the subcontrol and master control rooms.

SECTION 5 BASIC DESIGN DIAGRAMS



Remarks

1. —> indicates a group of program/remote-control cable and direction of its flow.
2. Equipments do not include in the program flow are not indicated on this diagram, such as measuring instruments, ENG Equipment etc.
3. Refer to 4-2-3, & 4-3.

Fig. 5-1 Broadcasting Facility System Block Diagram

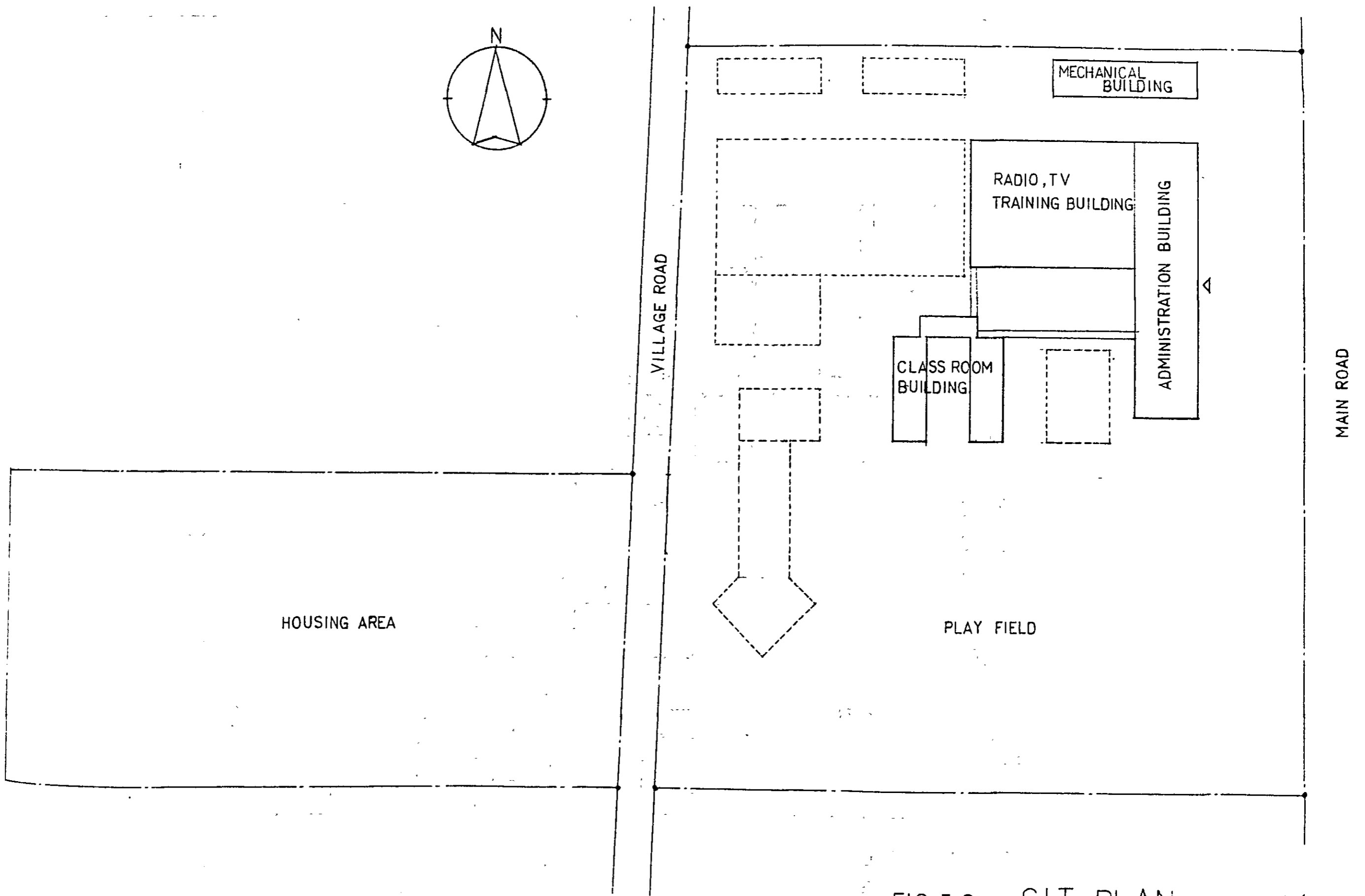
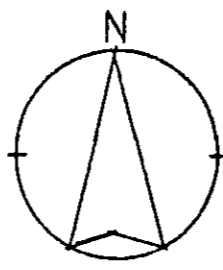


FIG 5-2 SIT PLAN SCALE 1/1000

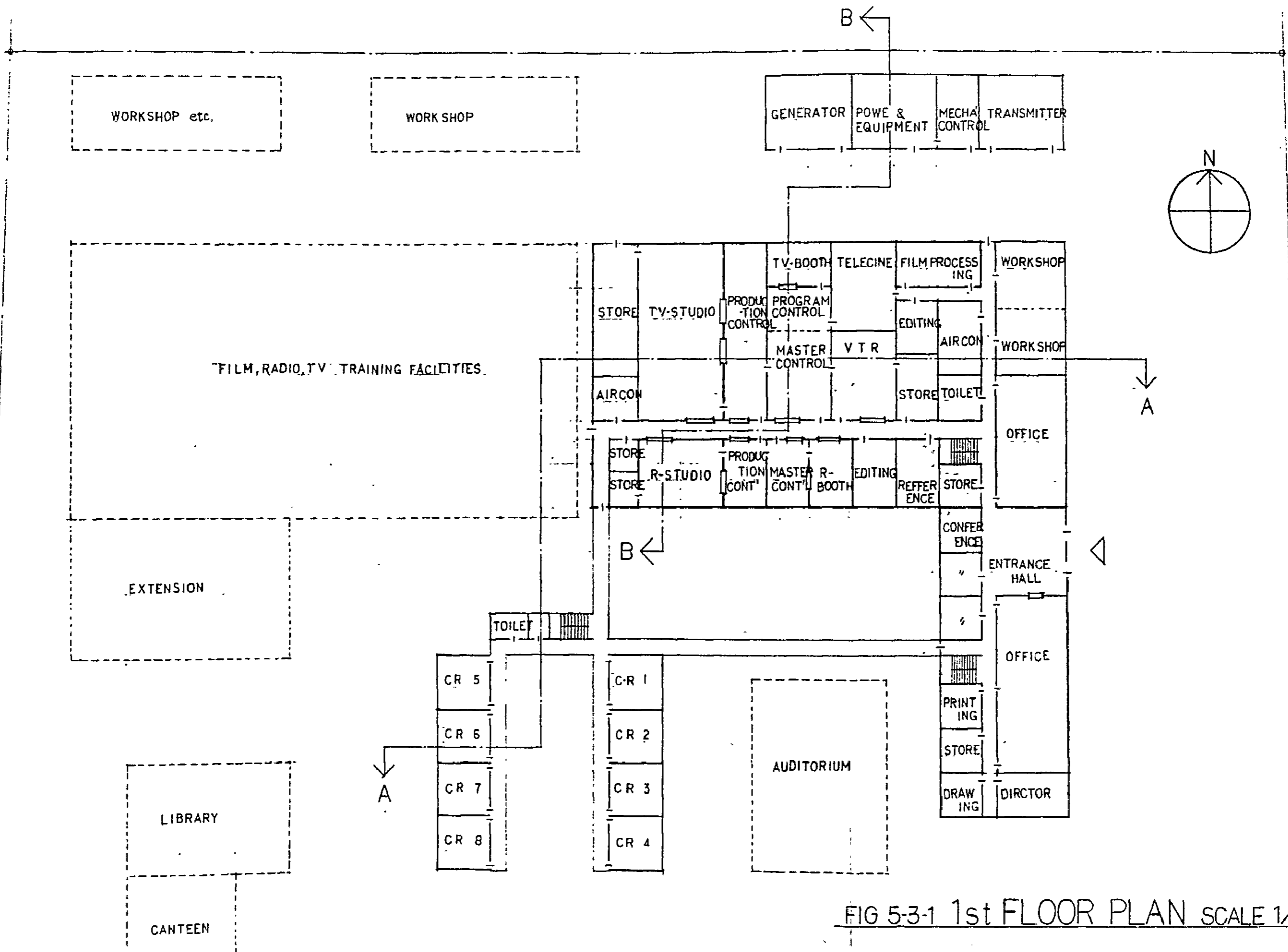


FIG 5-3-1 1st FLOOR PLAN SCALE 1/500

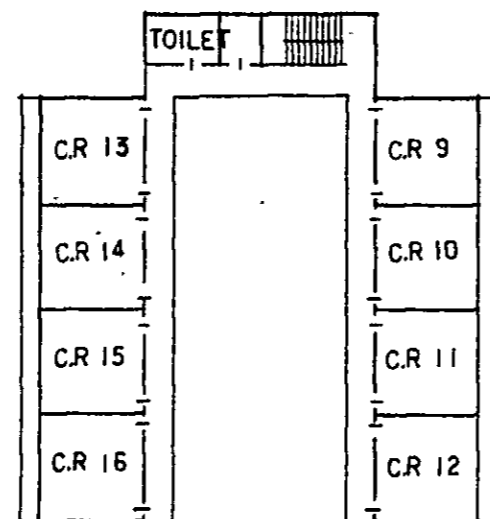
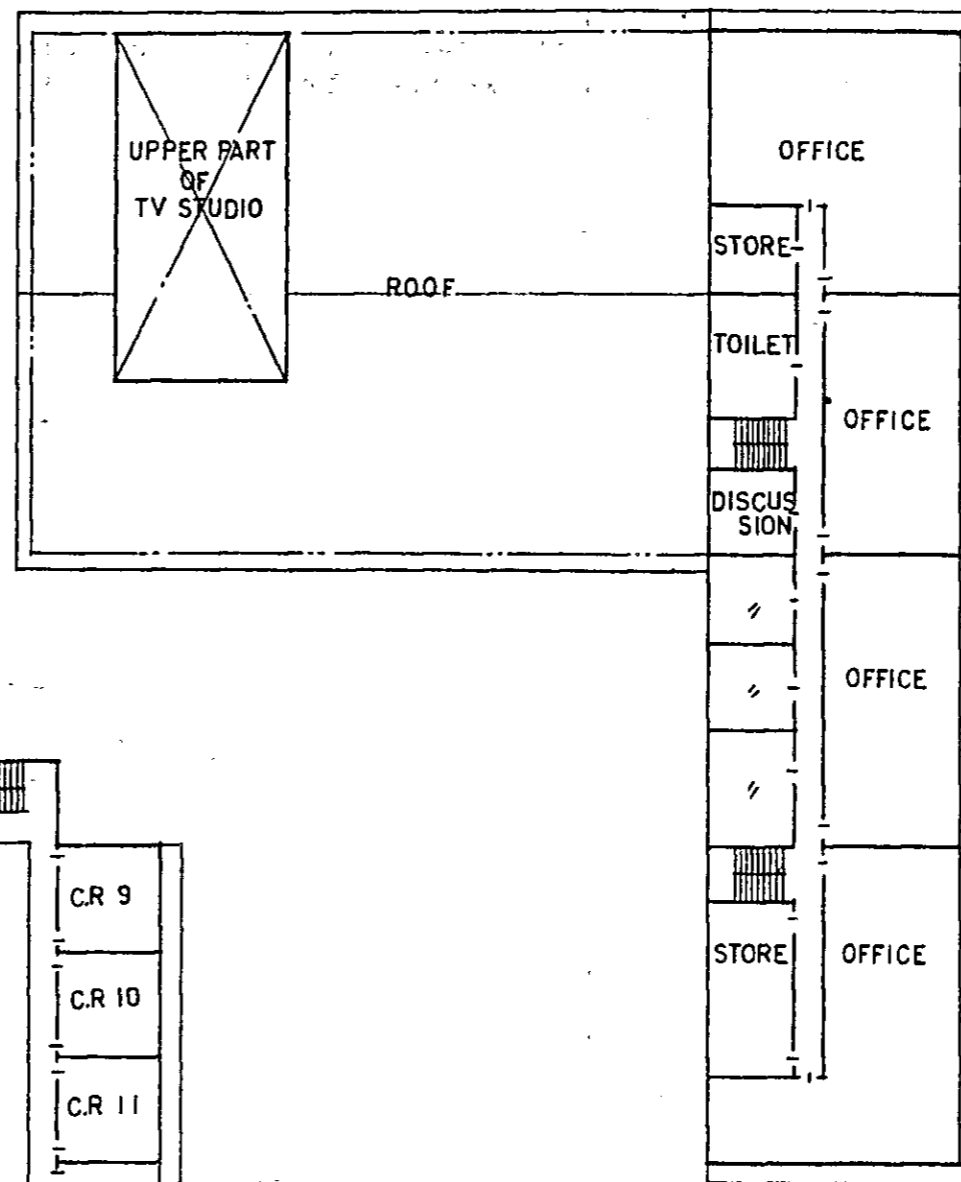
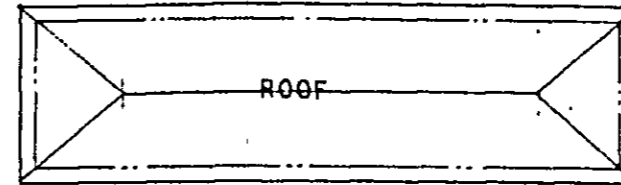
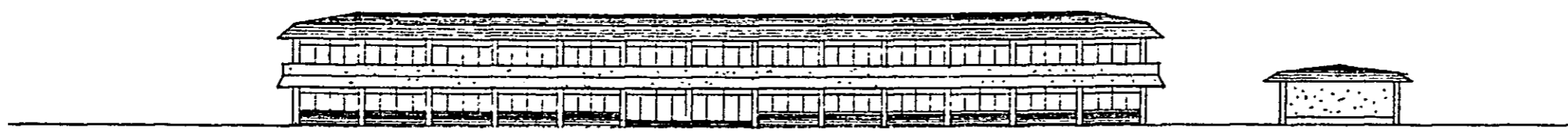
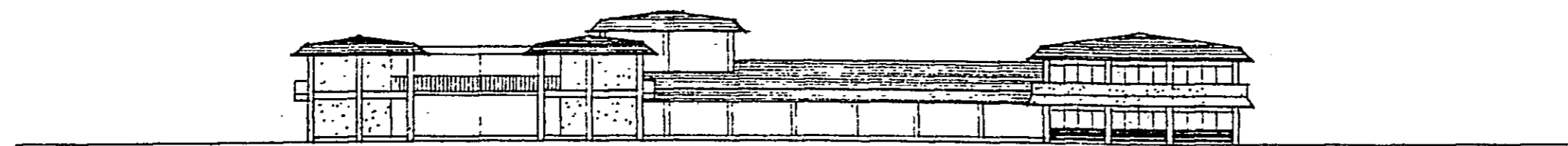


FIG 5-3-2 2nd FLOOR PLAN SCALE 1/500

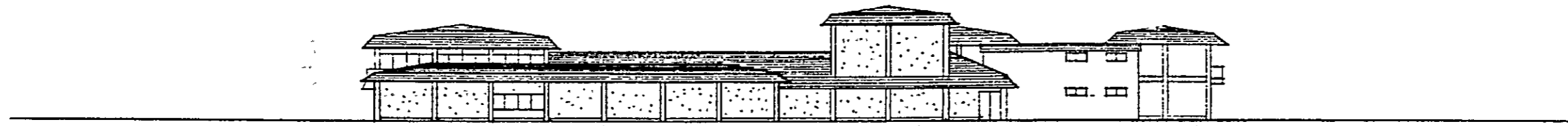


EAST FRONT

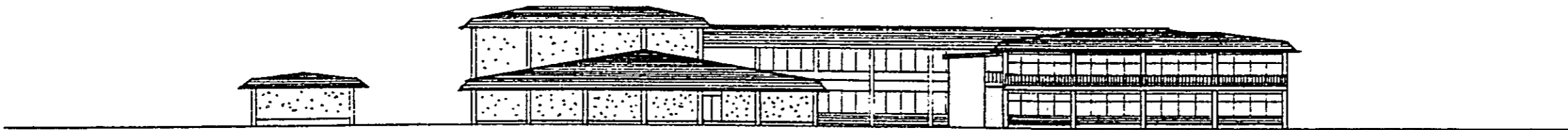


SOUTH

FIG 5-4-1 ELEVATION SCALE 1/500



WEST



NORTH

FIG 5-4-2 ELEVATION SCALE 1/500

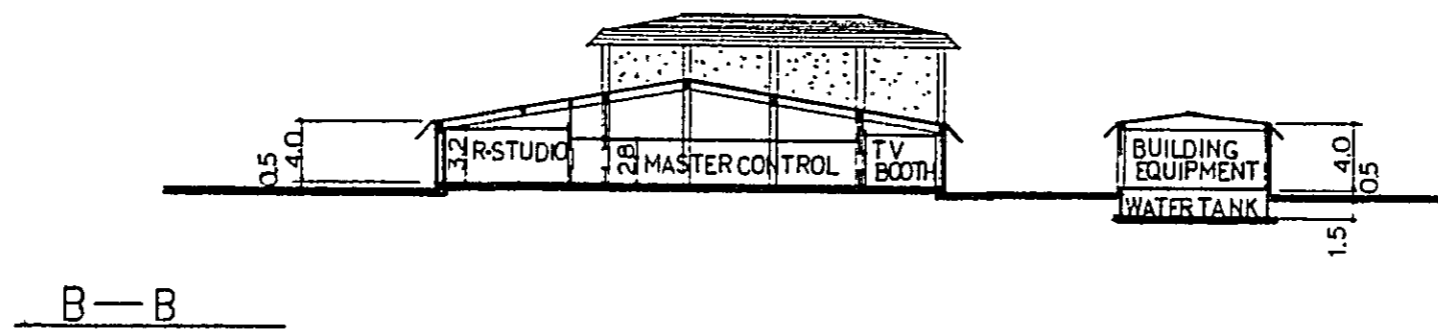
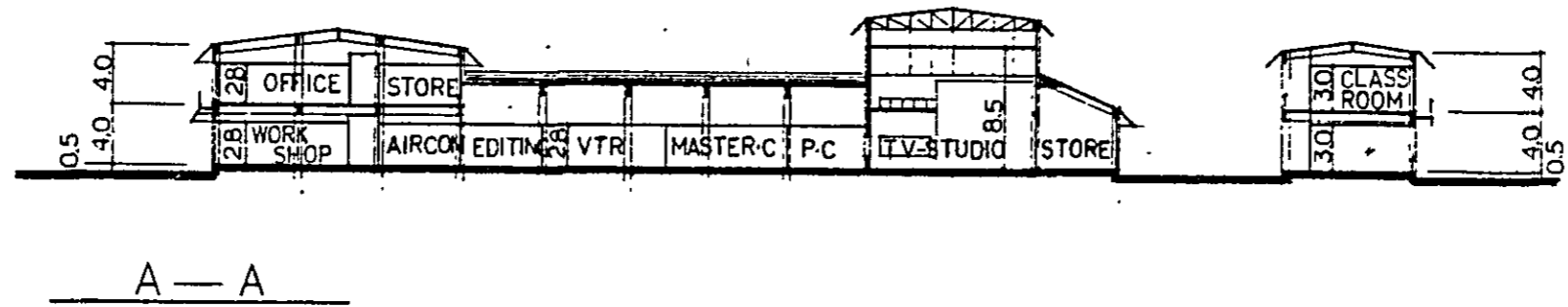


FIG 5-5 SECTION SCALE 1/500

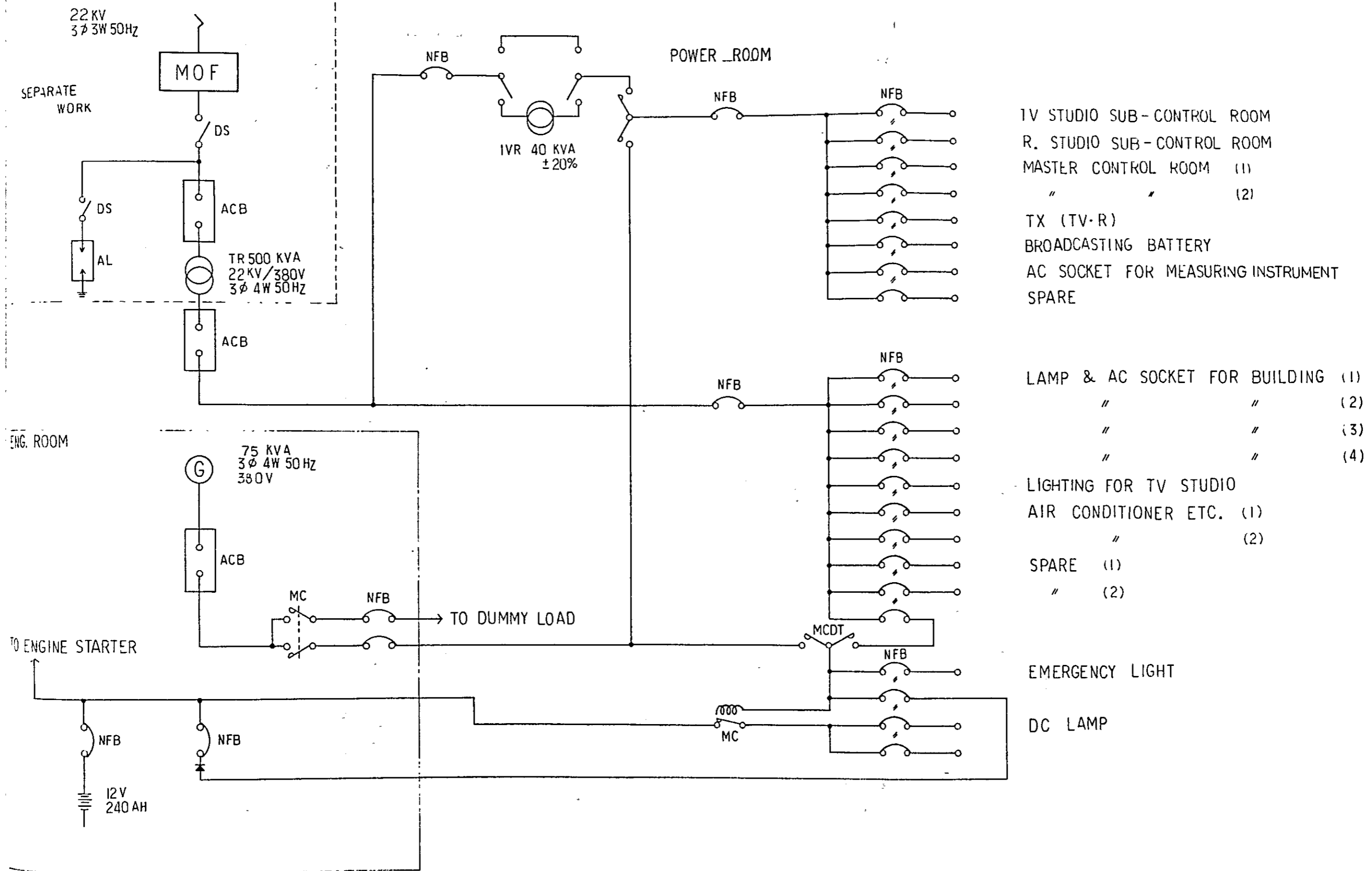


FIG. 5-6 DIAGRAM OF POWER SUPPLY

SYMBOLS	ITEMS	REMARKS
AHU-1	AIR-HANDLING-UNIT-NO.1	T.V. STUDIO
AHU-2	DITTO -NO.2	RADIO STUDIO
AHU-3	DITTO -NO.3	MASTER CONT.
AHU-4	DITTO -NO.4	WORK SHOP
W.CO.-1	WINDOW COOLER -NO.1	DIRECTOR
W.CO.-2	DITTO -NO.2	DRAWING
W.CO.-3~5	DITTO -NO.3~5	CONFERENCE
W.CO.-6~9	DITTO -NO.6~9	DISCUSSION
F-1~6	EXHAUST FAN FOR OFFICE	
F-7	EXHAUST FAN FOR T.V. STUDIO	
F-8	EXHAUST FAN FOR RADIO STUDIO	
F-9	EXHAUST FAN FOR MASTER CONT.	
F-10	EXHAUST FAN FOR WORK SHOP	
F-11~14	EXHAUST FAN FOR TOILETS	
F-15	O.A. SUPPLY FAN FOR TRANSMITTER ROOM	
F-16	EXHAUST FAN FOR TRANSMITTER ROOM	
F-17	O.A. SUPPLY FAN FOR EQUIPMENT ROOM	
F-18	EXHAUST FAN FOR EQUIPMENT ROOM	
F-19	O.A. SUPPLY FAN FOR GENERATOR ROOM	
F-20	EXHAUST FAN FOR GENERATOR ROOM	
F-21~23	EXHAUST FAN FOR CORRIDORS	

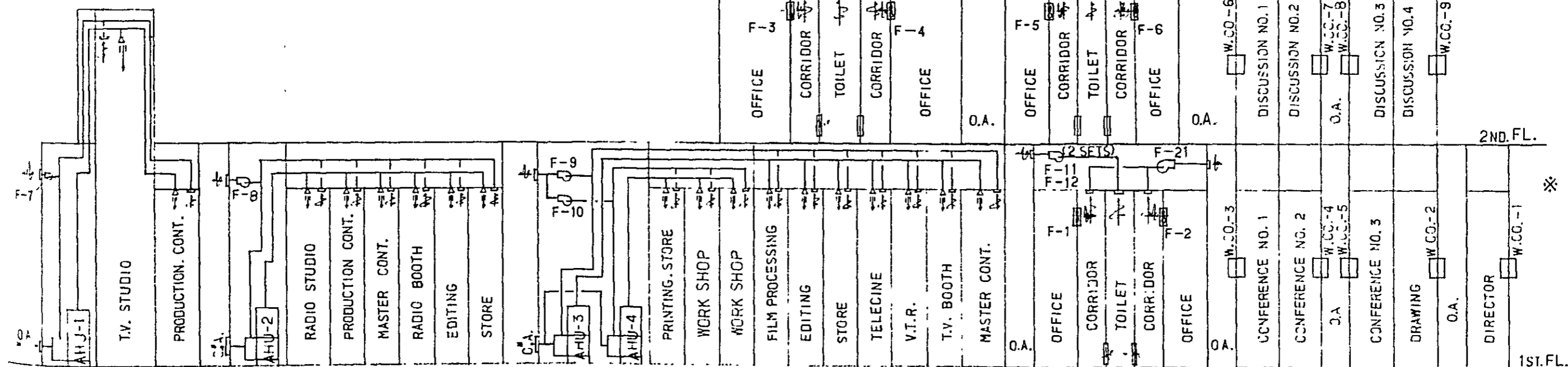
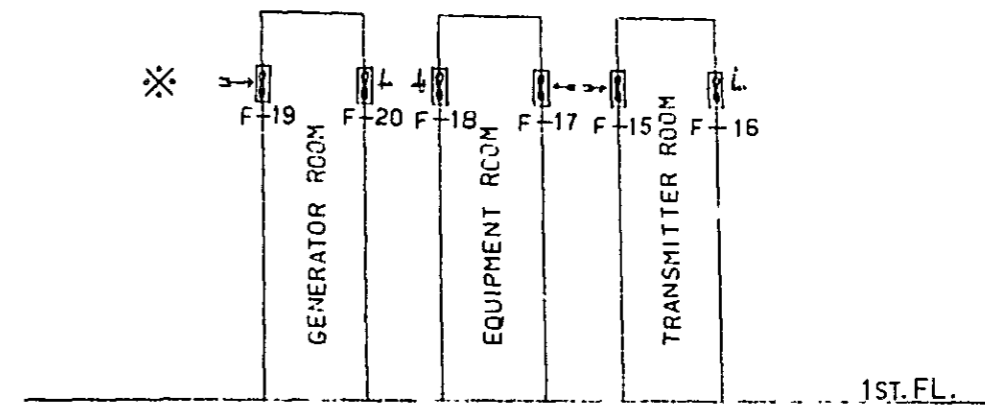


FIG.5-7 DIAGRAM OF AIRDUCT SYSTEM

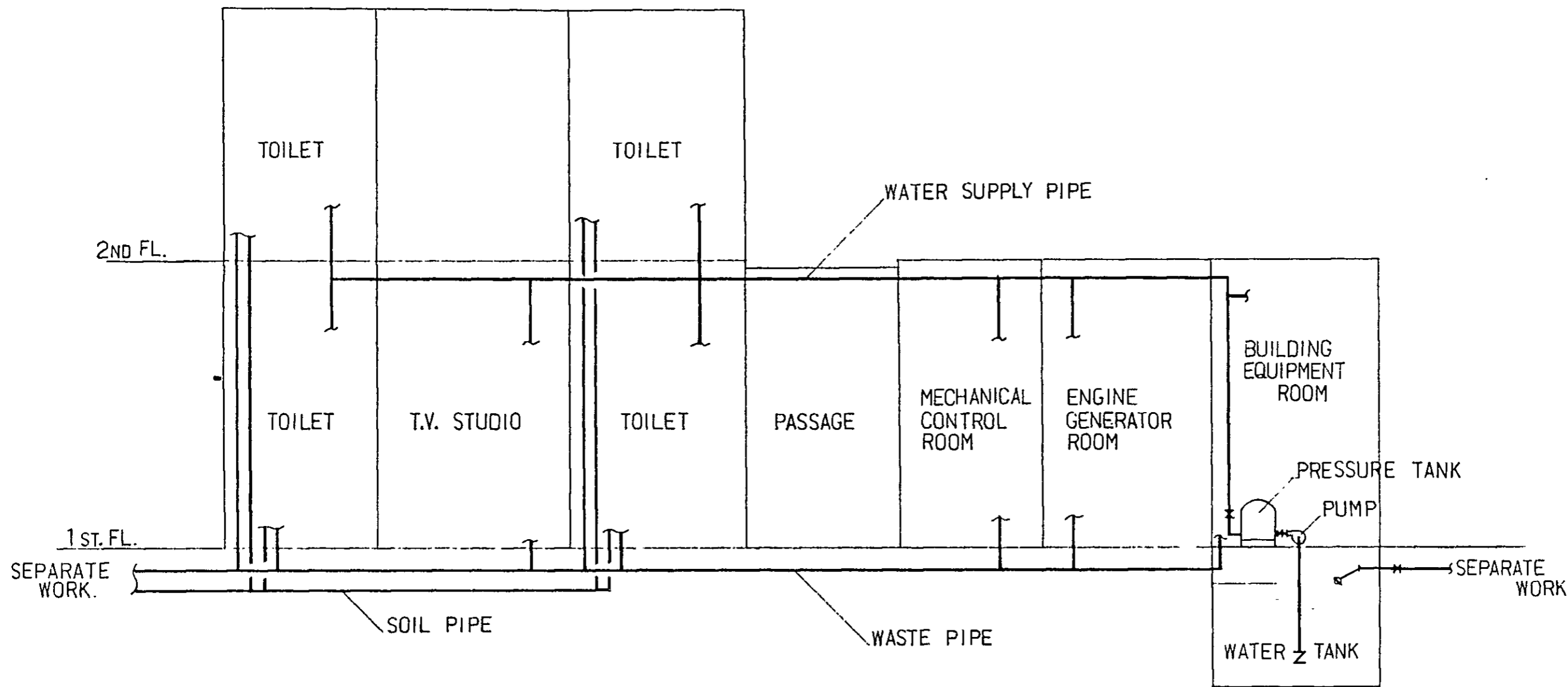


FIG.5-8 DIAGRAM OF PLUMBING

SECTION 6 IMPLEMENTATION PLAN

SECTION 6 IMPLEMENTATION PLAN

This section describes the implementation plan for the construction of the training centre in Yogyakarta. In planning the implementation of this project, the following premises have been put out.

- (1) The construction of the portion of project where the costs are to be borne by the Japanese Government will be implemented in 18 months on the condition that the following items to be implemented by the Indonesian side at the cost of the Indonesian Government should be completed before the commencement of the work to be accomplished at the cost of the Japanese side.
 - 1) Soil survey of the site.
 - 2) Procurement and ground leveling of site.
 - 3) Planning of the entire scheme including the training centre for radio and TV.
 - 4) Planning and implementation of utility services such as water supply, drainage, power line, telephone and gas for the training centre.
- During the implementation periods, the Indonesian side will be responsible for the following items:

- 5) Reception of equipment and materials sent by the Japanese side through customs clearance in Surabaya and their transport to and storage at the site.
- 6) Maintenance of peace and order at the site.

The items schedule of the project to be accomplished at the cost of the Japanese side is shown in Table S5-1 in "SUMMARY." The starting point on this schedule is the time when "Detailed design and determination of the contractor of this project" is accomplished. This schedule has been prepared on the basis of the following conditions.

- (1) Timing of all work on the schedule is given in the total number of months counted from the commencement of work of this project.
- (2) A detailed schedule shall be prepared separately for controlling the process.
- (3) The following durations of works are expected in this table.

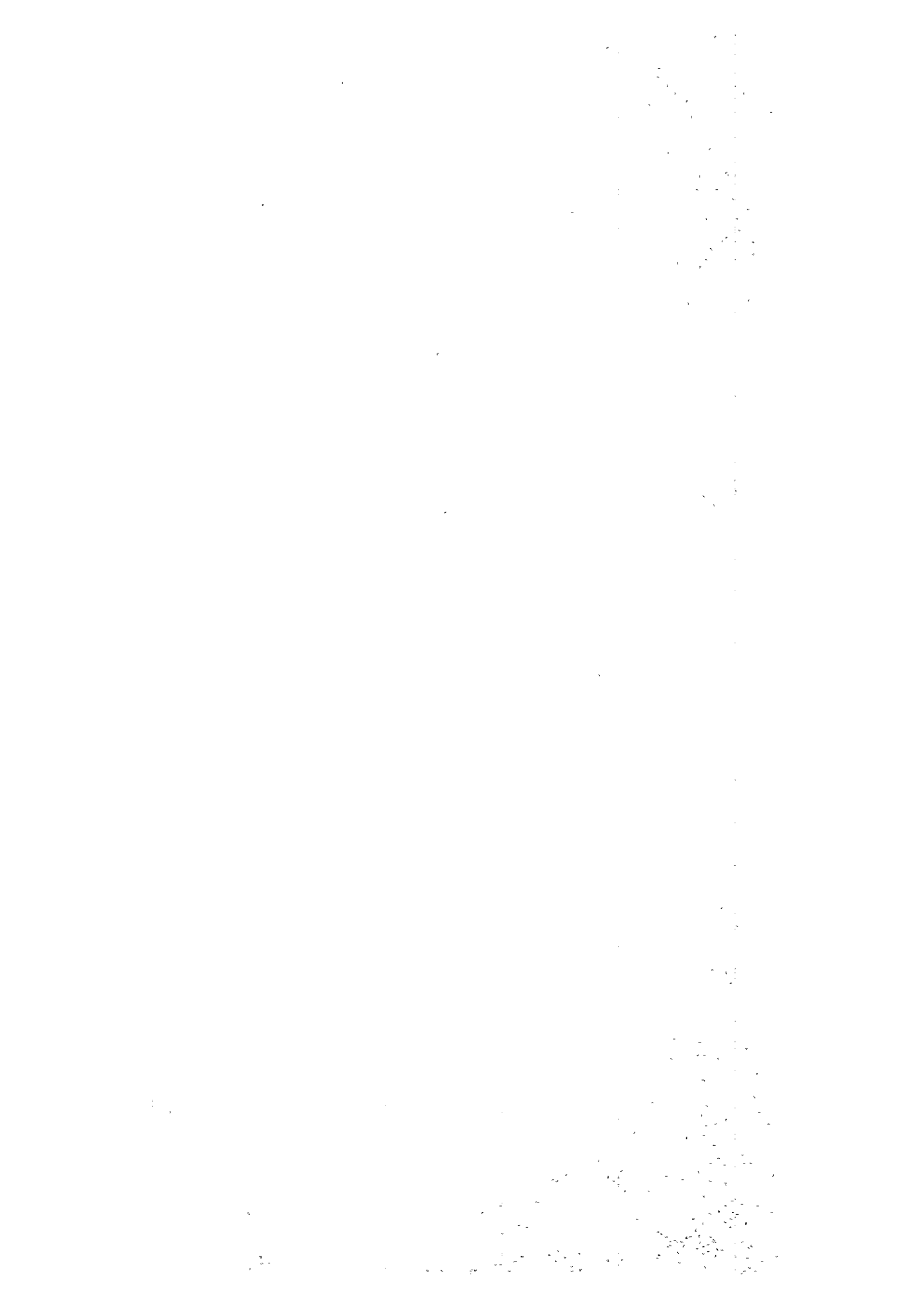
- 1) Manufacture of training equipment ... 12 months
- 2) Transportation of training equipment . 2 months
- 3) Installation of training equipment ... 3 months
- 4) Test operation 1 month

- 5) Transportation of construction materials
(including construction materials
collection period of 2 months) 4 months
- 6) Building construction 15 months

Supplementary Note: Technical Cooperation Project

This training centre project will be accomplished as an economic cooperation project of the Government of Japan. In order to realize the goals of the training project, it is very important and even inevitable to enrich software. Thus, it is necessary to provide technical cooperation in succession to the establishment of hardware.

SECTION 7 PROJECT EVALUATION



SECTION 7 PROJECT EVALUATION

This section presents an evaluation of the training centre project.

First, let us examine the records of training acquired so far by the radio and TV sectors in the Republic of Indonesia

(1) TVRI/TC (National TV Broadcasting Training Centre of Indonesia) Training Record

Course \ Year	Total Number of Trainees in 1970 ~ 1980 Period (11 Years)	Maximum Number of Trainees in 1970 ~ 1980 Period (Fiscal Year)
Basic Training	850	161 (1976)
Upgrading Training	148	140 (1980)
Total	998	199 (1980)

It is understood from this table that the largest training group in TVRI/TC was about 200 trainees in 1980. Recently, TVRI/TC has begun to stress upgrading training.

(2) RRI/TC (National Radio Broadcasting Training
Centre of Indonesia) Training Record

Year Course	Total Number of Trainees in 1977 ~ 1980 Period (4 years)	Maximum Number of Trainees in 1977 ~ 1980 Period (Fiscal Year)
Basic Training	145	50 (1980)
Upgrading Training	491	149 (1977)
Total	636	186 (1977)

The largest training group by RRI/TC was about 200 in 1977. Recently, RRI/TC has begun to stress basic training.

The overall evaluation of these training records is as follows:

- (1) Since the number of new employees to be recruited by the end of fiscal 1983 when the Third Five-Year Development Plan (PELITA III) is to complete is 1660 (TVRI: 1,090 persons; RRI: 570 persons), it is necessary to expand training facilities.

(2) The "necessity of personnel education and training" upon completion of PELITA II was pointed out by representatives of many countries at the Project Evaluation Meeting held in 1978.

Since the total training capacity of both TVRI/TC and RRI/TC is about 400 trainees per year, that is, about 2,000 trainees for five years, new employees to be recruited in PELITA III can be trained. However, in order to give opportunities of retraining to the existing TVRI and RRI personnel (TVRI: about 2,900 personnel; RRI: about 4,000 personnel, that is, about 7,000 in total) the training capacity in Indonesia will be 880 trainees per year since the training capacity of this training centre is 480 trainees per year (radio: 240 personnel; TV: 240 personnel). If the Government of Indonesia plans to maintain these training levels, the capability in the radio and television broadcasting fields in the Republic of Indonesia will steadily be enriched. The present project of the construction of the training centre can be evaluated to be effective.

ANNEXED REFERENCES

Questionnaire

Please return this questionnaire by 17th September to the Japanese Preliminary Research Team on building up the Radio and Television Training Center Project in Yogyakarta.

1. You are kindly requested to answer questions about the staff personnel system. Please mark circle sign (O) or fill in figures in relevant blanks.

(1) Is staff-personnel periodically exchanged their duty between TVRI and RRI.
Yes (O) No ()

(2) In case the answer of the Q(1) is "Yes", which level of staff ranks is conducted.

director level (O) manager level (O)
assistant manager level (O) section chief level (O)
non supervisory level ()

(3) In case the personnel exchange is conducted in level of section chief and/or non supervisory staff, which is the job category ?

producer (O) announcer (O) engineer ()
technician (O) clerical staff () others (O)

(4) How many is the personnel exchange

10 or less () 50 or less (O) 100 or less ()
101 or more ()

(5) How the recruitment is conducted ?

periodically (O) upon occasion (O)

(6) Which is employer ?

The Ministry of Information (O)
each broadcasting station of TVRI and/or RRI (O)

(7) Which kind of recruitment is taken ?

entrance examination (O) personnel connection (O)

(8) Which means are adopted for the entrance examination ?

paper screening (O) personnel interview (O)
written tests (O)

(9) Please show personnel break-down by ages.

organization age	TVRI	RRI	organization age	TVRI	RRI
11 ~ 20	ps.	ps.	41 ~ 50	15 ps.	15 ps.
21 ~ 30	40 ps.	30 ps.	51 ~ 60	5 ps.	5 ps.
31 ~ 40	40 ps.	50 ps.	61 ~ 70	ps.	ps.

(10) Please show also break-down by educational background.

organization educational category	TVRI	RRI	organization educational category	TVRI	RRI
univ. graduates	5 ps.	5 ps.	junior high school graduates	ps.	15 ps.
four year high school graduates	60 ps.	ps.	primary school graduates	10 ps.	10 ps.
three year high school graduates	25 ps.	70 ps.			

(11) break-down by ranks

organization ranks	TVRI	RRI	organization ranks	TVRI	RRI
director level	2	2	assistant manager level	70	250
manager level	14	50	non-supervisory staff	2633	3698

(12) break-down by echelon and by experienced year

1) TVRI

echelon experience	prog. pro- duction	prog. com- piling	announcing	technical staff	clerical staff	others	total
year							
0 ~ 1							
2 ~ 5							
6 ~ 10							
11 ~ 20							

echelon experience	prog. pro- duction	prog. com- piling	announcing	technical staff	clerical staff	others	total
year							
21 ~ 30							
31 ~							

2) RRI

echelon experience	prog. pro- duction	prog. com- piling	announcing	technical staff	clerical staff	others	total
year							
0 ~ 1							
2 ~ 5							
6 ~ 10							
11 ~ 20							
21 ~ 30							
31 ~							

(13) How many staff-members have received training abroad ?

In TVRI (± 50 persons)

In RRI (± 50 persons)

(14) How many people who have received training abroad are working at TVRI or RRI ?

At TVRI (45 persons)

At RRI (90 %)

(15) Where are they working ?

	TVRI	RRI
In Jakarta City	25	
In Jogjakarta City	3	
In Other Cities	17	

(16) How many in all promoted last year ?

TVRI (persons)

RRI (persons)

(17) How many people were promoted from non-supervisory to supervisory posts ?

In TVRI (persons)

In RRI (persons)

(18) Which is more important factor for promotion ?

organization Promotion factor	TVRI	RRI
achievement or ability	○	
years of experience		○

(19) Which is more important factor that is required for the supervisory posts ? Please fill in priority.

organization factor	TVRI	RRI
educational background	1	1
experience	3	3
job knowledge	2	4
good personality	4	2

(20) As one of functions of a supervisor, is it required in each broadcasting organization to guide and train one's subordinates ?

TVRI		RRI	
YES	NO	YES	NO
○		○	

(21) Do you have a periodical wage increase system in each broadcasting organization ?

TVRI		RRI	
YES	NO	YES	NO
○		○	

(22) In case of "yes" to the above question, how the periodical increase system is conducted ?

- 1) by across-the-board increase by rank categories (○)
- 2) by performance rating (○)
- 3) In any other factors ? Please explain ()

(23) Do you have a mandatory retirement system ?

TVRI		RRI	
YES	NO	YES	NO
<input type="radio"/>		<input type="radio"/>	

(24) In case of "yes" to the above question, fill in the retirement age.

TVRI (56 years old) RRI (56 years old)

(25) When some position becomes vacant for rather long time, because of absence owing to illness, participation in training course, etc., is the position covered by any special measures ?

TVRI		RRI	
YES	NO	YES	NO
<input type="radio"/>		<input type="radio"/>	

(26) If does to the above, which the vacant post is covered by ?

- | | TVRI | RRI |
|--|---------------------------|---------------------------|
| 1) somebody is ordered to act for the person whose post is vacant | (<input type="radio"/>) | (<input type="radio"/>) |
| 2) colleagues and/or junior memebers cover the post which is temporarily vacant when necessary | () | () |
| 3) higher echelon covers the post | () | (<input type="radio"/>) |

2. Next questions are related to a personnel planning. Please mark circle sign (O) or fill in figure in relevant blanks.

(1) How do you estimate the number of personnel by functions at the end of PELITA III ?

function \ organization	TVRI	RRI
(1) program production	509	3250
(2) program compiling	73	50
(3) announcing	45	200
(4) film camera-men	70	-
(5) studio production technique	440	500
(6) transmission technique	520	500

(7) maintenance technique	120	500
(8) designing and staging		-
(9) clerical work		
(10) others		

(2) How many employees have actually been recruited for TVRI and RRI since the first fiscal year of PELITA III ?

organization fiscal year	TVRI	RRI
1st fiscal year	persons	persons
2nd fiscal year	persons	persons
3rd fiscal year	persons	persons

(3) How many employees of respective organizations have actually been trained since the first fiscal year of PELITA III ?

organization fiscal year	TVRI	RRI
1st fiscal year	} average 396/year	220
2nd fiscal year		220
3rd fiscal year		220

3. You will be kindly asked about the present staff training system.
Please mark circle sign () or fill in figure in relevant blanks.

(1) Which do you think the present training systems of TVRI and RRI is the nearest to ?

	TVRI	RRI
(1) training by functions	()	(O)
(2) training by level of ranks	()	(O)
(3) combined training of the above 1) & 2) ..	(O)	(O)

(2) Please give information about qualifications for participation, maximum number, period and the executed place of all training courses which were held during the last fiscal year.

1) TVRI

Course Name	Qualification	Maximum Number	Period	Place
technical operation	senior high school	48	9 month	Jakarta
production technical	"	48	9 month	"
transmission technical	"	48	9 month	"

2) RRI

Course Name	Qualification	Maximum Number	Period	Place
Engineering	basic	25	3 month	Jakarta
Programing	"	25	1 month	"
Announcer	intermediate	20	7 month	"
Entertainment program producer	"	20	7 month	"
Reporters	"	20	7 month	"
Rural Broadcasting	"	20	1 month	"
Rural Broadcasting Seminar	advance	30	14 days	other cities
Studio Technique	intermediate	20	1 month	Jakarta
Transmitter Technique	"	20	1 month	"
Studio maintenance Technique	"	20	1 month	"
TX maintenance Technique	"	20	1 month	"

(3) Do employees participate in training courses willingly or reluctantly ?

	TVRI	RRI
willingly	(<input type="radio"/>)	(<input type="radio"/>)
reluctantly	(<input type="radio"/>)	(<input type="radio"/>)

(4) Do higher echelon of respective sections welcome their subordinate's participation in training courses or do not ?

	TVRI	RRI
welcome	(<input type="radio"/>)	(<input type="radio"/>)
not welcome	(<input type="radio"/>)	(<input type="radio"/>)

(5) In case you think the higher echelon do not welcome, what do you think the reasons are ? Please describe as concrete as possible.

(6) How a participant is treated salary payment during a training period ?

	TVRI	RRI
1) totally unpaid	(<input type="radio"/>)	(<input type="radio"/>)
2) payed in reduced amount	(<input type="radio"/>)	(<input type="radio"/>)
3) totally paid	(<input type="radio"/>)	(<input type="radio"/>)

(7) Who pays a dormitory fee directly during a participation in a training course ?

- 1) The Ministry of Information ()
- 2) TVRI Training Center or RRI Training Center ()
- 3) Trainees themselves ()

(8) Are there many trainees who take leaves during the period of training ?

	TVRI	RRI
1) almost none	(<input type="radio"/>)	(<input type="radio"/>)
2) some	(<input type="radio"/>)	(<input type="radio"/>)
3) fairly many	(<input type="radio"/>)	(<input type="radio"/>)

(9) In case someone takes a leave, is his pay deducted ?

	TVRI	RRI
1) yes	(<input type="radio"/>)	(<input type="radio"/>)
2) case by case	(<input type="radio"/>)	(<input type="radio"/>)
3) no	(<input type="radio"/>)	(<input type="radio"/>)

(10) Who takes the initiative in conducting publicity and administrative work for screening and gathering trainees ?

- | | TVRI | RRI |
|-------------------------------|-------|-------|
| 1) Training Center in Jakarta | (O) | (O) |
| 2) Department of Information | () | (O) |
| 3) Other organization | () | (O) |

(11) Which is needed for staff members to participate in training courses.

- | | TVRI | RRI |
|--|-------|-------|
| 1) one's wish | () | () |
| 2) nomination by superiors | (O) | (O) |
| 3) nomination by training center | () | (O) |
| 4) nomination by personnel administrative of the Department of Information | () | (O) |

(12) Who takes the initiative in conducting curriculum compilation and text book edition ?

- | | TVRI | RRI |
|------------------------------------|-------|-------|
| 1) Training Center in Jakarta | (O) | (O) |
| 2) Broadcasting Station in Jakarta | () | () |
| 3) Department of Information | () | () |

(13) What is done to evaluate the effect of training ?

- | | TVRI | RRI |
|--------------------|-------|-------|
| 1) test | () | (O) |
| 2) report writing | () | (O) |
| 3) questionnaire | () | (O) |
| 4) interview | (O) | (O) |
| 5) nothing is done | () | () |

(14) Are certificates granted to trainees who finished a training course ?

- | | TVRI T/C | RRI T/C |
|--------|----------|---------|
| 1) yes | (O) | (O) |
| 2) no | () | () |

(15) Which is the main purpose for the current training system ?

- | | TVRI T/C | RRI T/C |
|---|----------|---------|
| 1) supplementing school education | () | () |
| 2) improving functional knowledge & skill | (O) | (O) |

(16) How much cost needed on an average for training a person ?

- 1) TVRI Training Center (Rp 1,500,000, - per capita)
- 2) RRI Training Center (Rp 1,000,000, - per capita)

(17) How do you think the higher echelon of the section feel the training period ?

- | | TVRI | RRI |
|--------------|-------|-------|
| 1) too long | () | () |
| 2) moderate | (O) | () |
| 3) too short | () | (O) |

(18) How do you think trainees feel the training period ?

- | | TVRI | RRI |
|--------------|-------|-------|
| 1) too long | () | () |
| 2) moderate | (O) | () |
| 3) too short | () | (O) |

(19) Would you please describe the sharing of roles between instructors inside and outside of the organization.

- 1) TVRI
 - a. the role of inside instructors ----- 80%
 - b. the role of outside instructors ----- 20%
- 2) RRI
 - a. the role of inside instructors ----- 80%
 - b. the role of outside instructors ----- 20%

(20) Could you show the breakdown of inside instructors ?

Functions	Training Centers	TVRI T/C	RRI T/C
(1) Program Production		80 (prs)	100 % (prs)
(2) Program Compiling		80	80 %
(3) Announcing		100	100 %
(4) Designing, Staging, Sound-making		100	
(5) Film Camera		80	
(6) Studio Production Technique		80	80 %
(7) Maintenance Technique		80	80 %
(8) Transmitter Technique		80	80 %
(9) Film Developing		80	
(10) Clerical Management		20	
(11) Others		10	50 %

(21) Is the systematic training in inside instructors conducted ?

	TVRI T/C	RRI T/C
1) yes	(0)	(0)
2) no	()	()

(22) If the answer to the above question is "yes", please describe the concrete activities.

INSIDE INSTRUCTORS ACTIVITIES HAVE DUTIES TO PREPARE AND DO INSTRUCTIONS, REPORTING RESULT AND ASSISTING RECRUITING.

(23) Could you show the breakdown of inside instructors ?

1) breakdown by school background

	TVRI T/C	RRI T/C
university graduates	(8)	(4)
four year high school graduates	(11)	(7)
three year high school graduates	()	()
junior high school graduates	()	()

(2) breakdown by the number of experienced years

organization experience (year)	TVRI T/C	RRI T/C
10 years or less	(prs)	100 % (prs)
11 ~ 15 years	(prs)	(prs)
16 ~ 20 years more	(prs)	(prs)
21 years or more	(prs)	(prs)

4. You are kindly requested to answer on training plan in the future.

Please mark circle sign (O) or fill in figures in relevant blanks.

(1) How many do you estimate the number of trainees per year for PELITA III ?

	TVRI	RRI
1) at the peak	(persons)	(persons)
2) average	(150 persons)	(100 persons)

(2) How many do you estimate the number of trainees per year after completion of PELITA III ?

1) TVRI	(288 persons)	2) RRI	(252 persons)
---------	---------------	--------	---------------

(3) Do you review the training system or training courses ?

	TVRI	RRI
YES	(O)	(O)
NO	()	()

(4) If you review it, please put down the contents

(5) What kind of role does M-M T/C play in the training ?

- 1) to assist TVRI T/C and RRI T/C (O)
- 2) to play an alternative role for TVRI T/C and RRI T/C ()
- 3) to play an equal role with TVRI T/C and RRI T/C (O)
- 4) to play as a center to execute TVRI T/C and RRI T/C ()

(6) Do you figure out the running cost of M-M T/C ?

yes () no ()

(7) If you figure it out, please put down the amount of money and the basis for counting.

	Rp. million per year
- Training materials (production radio, TV, film)	180, -
- Maintenance technical facility	120, -
- Electricity water supply	25, -
- Dormitory expense	108, -
- Cleaning gardening	15, -
- Trainee's general expense, travel, per diem	180, -
- Staff expense (instructor, officer)	200, -
- Inventory	100, -
	<hr/>
Total	928, -

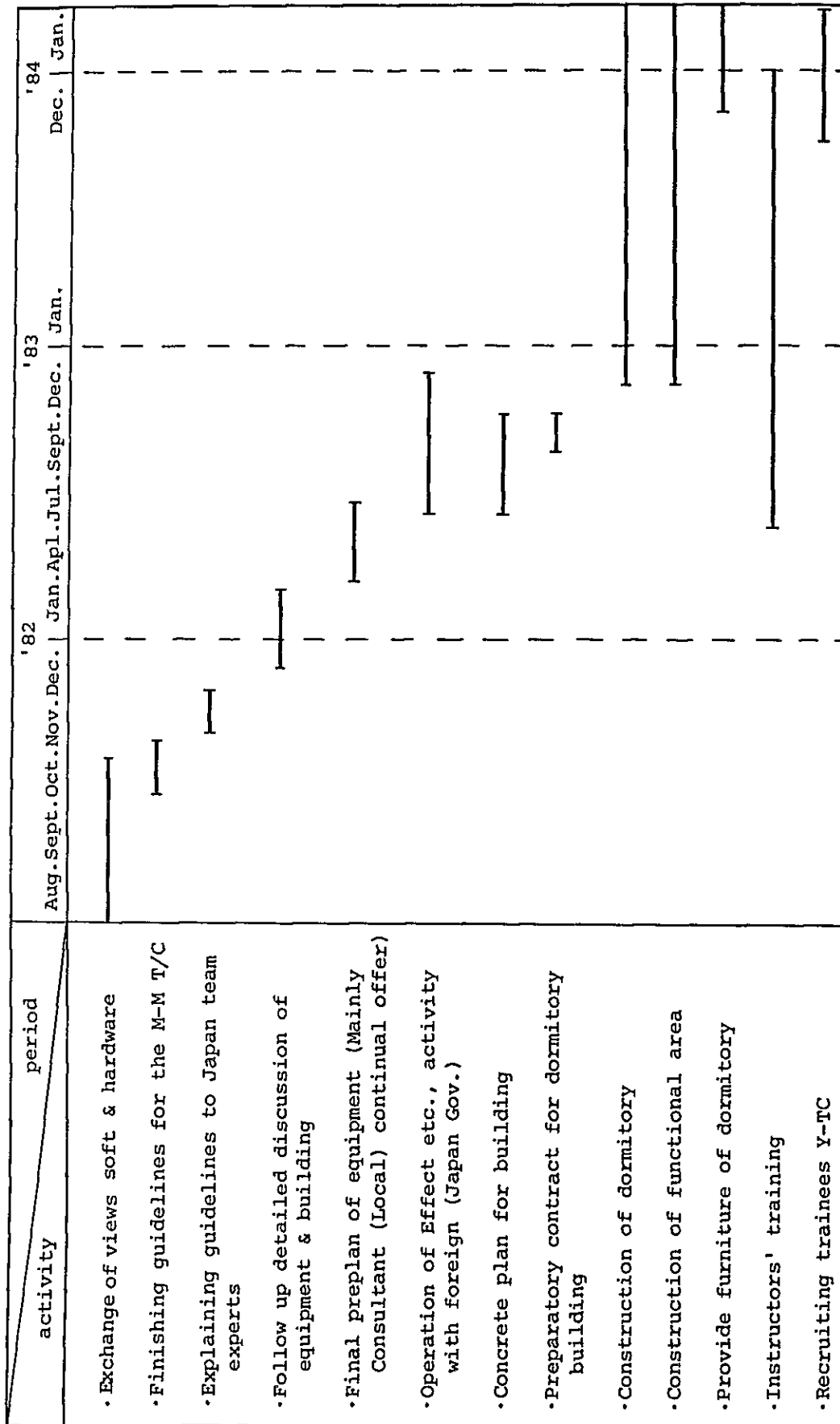
(roughly Rp. 930 million)

(8) On which point do you think you should put an importance ?

Please put down the order of priority.

- 1) making general knowledge full ()
- 2) training the new recruits ()
- 3) improving professional capability of the existing employee ()
- 4) developing supervisory ability ()
- 5) human relationship in office ()

(9) Please put down your schedule in a bar chart before the opening of M-M T/C.



(If the chart is not enough to fill out please make another chart of yourself.)

(10) Which is thought to be most difficult among the problems on preparing for M-M T/C that are foreseen. Please put down from the most difficult to the last in order.

	TVRI T/C	RRI T/C
1) making curriculums	(1)	(1)
2) making textbooks	(7)	(8)
3) securing full-day instructors	(2)	(7)
4) training instructors	(3)	(2)
5) revising related laws and regulations	(5)	(3)
6) preparing the budget for the running cost	(8)	(4)
7) securing trainees	(4)	(5)
8) securing office staff	(6)	(6)

(11) Please put down other problems in details, if any.

(12) How will you secure full-day instructors ? Please mark circle sign (O) in relevant blanks.

- 1) transfer employee of TVRI T/C and RRI T/C to M-M T/C (O)
- 2) collect applicants among employee of the Department of Information, TVRI and RRI (O)
- 3) recruit the instructors among people nationwide (O)
- 4) request educational organization to send instructors (O)
- 5) the other (Please put it down, if any)

(13) How many full-day instructors do you estimate to be needed ?

(30 persons)

(14) What is your plan to train the instructors ?

- 1) train them in domestic organizations of yourselves (O)
- 2) request foreign specialists to train them in domestic organizations (O)
- 3) send Indonesian instructors abroad to be trained in foreign training organizations (O)

(15) If you plan to request foreign specialists, what is your idea on the number, the terms and the fields,

- 1) number (10 persons)
- 2) term (3 months)
- 3) fields (- Programming & Radio Engineering)
 - TV programming and TV engineering
 - Radio and Television, film engineering research & development (technology-communications)

(16) Please put down basic reason for the above answer.

- Because we have not enough Expert in this field.
- technology is advancing at a faster pace than social development.
- for making concrete plans, we have to obtain reliable data, which has to be studied and surveyed.

(17) How many do you estimate other staffs to be needed such as office staff, telephone operator, car-drivers and other labourers ?

Please put down the total number ----- (persons)

(18) How do you plan to secure the above staff ?

- 1) transfer a part of employee of TVRI T/C and RRI T/C ()
- 2) collect applicants among employee of the Department of Information, TVRI and RRI ()
- 3) recruit the staff among people ()
- 4) the other (Please put them down, if any)

(19) What is your plan on capacity of M-M T/C dormitory at the moment of its opening ? ----- (300 persons)

(20) How many beds can trainee of TV and Radio courses use among the above capacity ? ----- (300 beds)

(21) What types of rooms will be made in the dormitory of M-M T/C besides bedrooms, shower rooms, toilet rooms, dining halls ?

- 1) Lounge (O)
- 2) Reading Room (O)
- 3) Recreation Room (O)
- 4) Meeting Room (O)
- 5) Gymnasium (O)

5. We would like to ask matters to dispatch foreign specialist.

Please answer by marking circle sign (O) or filling in figures.

(1) When a specialist tries to find a suitable house for rent, which do you think the situation would be nearer ?

1) extremely difficult ()

2) difficult but fully possible (O)

3) relatively easy ()

(2) If there is such local usage as advance payment system which might be prevailing in Yogyakarta City, please describe it or them below.

No advance payment system

(3) Could you tell the average price of a house for rent in Yogyakarta ?

± Rp. 2,000,000. (two million rupiah per year)

some addition for telephone facility, if necessary

(4) Could you tell the number of educational institutions in Yogyakarta.

1) kindergartens () 2) primary schools ()

3) secondary schools () 4) high schools ()

(5) Could you list up the names of educational institutions for foreign children ? (NONE)

(6) How many general hospitals are there in Yogyakarta City. ... (two)

(7) How many special medical facilities for foreigners are there in Yogyakarta City ? (NONE)

(8) Do you think that a foreign specialist can more easily get a car than do in Jakarta City ?

yes (O) no ()

(9) How many months does it take from order to actual delivery.

(6 - 7 months)

(10) If a foreign specialist tries to hire a driver, is it more difficult than in Jakarta ? yes () no (O)

(11) What public transportation can a foreign specialist use for going to his office in Yogyakarta ?

(1) bus (O) (2) taxi () (3) tramcar ()

(12) How much is the basic transportation fare in Yogyakarta City ?

(1) bus (Rp. 100,-) (2) taxi (Rp. 2500 /hour)

(13) Are they fully reliable and convenient transportation ?

yes (O) no ()

(14) In how many days could letters or postcards mailed in Jakarta be delivered to an addressee who lives in Yogyakarta. ----- (two days)

(15) In how many hours could an urgent telegram which were cabled in Jakarta be delivered to an addressee who live in Yogyakarta ?

1) In a few hours' time ()

2) In a several hours' time ()

3) In a half day's time (O)

Date _____

Signature _____

Name _____

Designation _____

ANNEXED DOCUMENTS

MINUTES OF THE DISCUSSION ON
THE ESTABLISHMENT PROJECT OF RADIO AND TELEVISION
BROADCAST TRAINING CENTRE IN THE REPUBLIC OF INDONESIA.

In the request of the Government of Indonesia, the Government of Japan sent a preliminary study team headed by Mr. Yasuaki Nogawa, Asst. Director, the Second Economic Cooperation Division, Ministry of Foreign Affairs to the Republic of Indonesia to carry out a preliminary study for the Establishment Project of Radio and Television Broadcast Training Centre as part of the Multi Media Training Centre in the Republic of Indonesia starting from January 26 to February 6, 1981.

The team has conducted the field survey, visited location of construction, training facilities, and exchanged views through a series of discussion with officials of the Government of Indonesia on the Establishment Project of Radio and Television Broadcast Training Centre in Yogyakarta, Indonesia.

As a result of the survey and the discussions the Japanese study team will submit and the Indonesian Ministry of Information agreed that the study report to the Government of Japan to facilitate the successful, early realization of forthcoming basic design study for the Establishment Project of Radio and Television Broadcast Training Centre in the Republic of Indonesia.

Referring to the previous discussion and correspondence between the Indonesia Government and Japanese Government, the Ministry of Information expects that this project would be implemented in fiscal 1981.

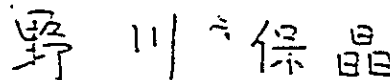
The major issues confirmed by the Indonesian and Japanese counterparts, are attached herewith the Annex.

The major issues discussed by the Indonesian and Japanese counterparts are attached herewith in the Annex II and III in terms of one proposal each for the further study in details.



Mr. F. R. A. C. E. M. A. D. I.
For the Director General,
Research and Development,
Ministry of Information.

Jakarta, February 2, 1981.



Mr. Yasuaki Nogawa,
Leader,
Japanese Preliminary Study
Team.

ANNEX I.

1. Obligation of Indonesian Side.

1. Land acquisition.
2. Land reclamation.
3. Improvement of access road.
4. Utility services, such as, water, sewage, fuel (kelocine or gas), power, telephone, etc.
5. Expenditure of custom duties on imported goods, warehousing charges, inland transportation cost, taxes, and fees, etc.
6. Port of destination : Surabaya Port.

2. Desirable Location of Construction.

1. Training Centre : Kalurahan Sinduadi, Kecamatan Mlati,
Kabupaten Sleman, Yogyakarta, Indonesia.
adjacent to the Yogyakarta.TVRI.
2. Dormitory and Instructors' housing (financed by the Government of Indonesia). :
- The dormitory and instructor's housings should be located near the training centre to the possible extent.

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ANNEX II. (Team's Recommendation).

3. Outline of Training Centre proposed by the preliminary survey team.

- | | |
|---|--------------------------------|
| 1. Total Scale of Building (floor area) | Approx. 3,000 m ² . |
| 2. Outline | |
| - Radio studio | one unit. |
| - TV Studio | one unit. |
| - Master control room | one unit. |
| - Sub-control room | one unit. |
| - Telecine room | one unit. |
| - VTR room | one unit. |
| - Laboratory | one unit. |
| - Transmitter room | one unit. |
| - Film processing room | one unit. |
| - Lecture room | four units. |
| - Conference hall (that can be used for
two lecture rooms) | one unit. |
| - Indispensable training equipment. | |

S.F.

ANNEX III.

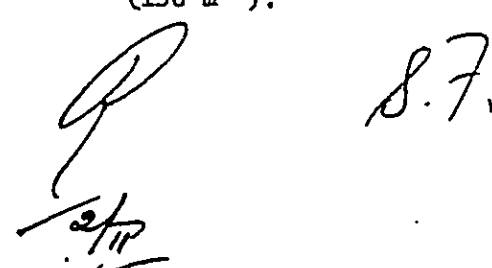
Outline of Training Centre proposed by Ministry of Information
of the Republik of Indonesia.

1. STUDIOS 1750 m².

- 2 Television (450 m²/200 m²).
- 1 Film (450 m²).
- 1 Radio/Dubbing (150 m²).
- 1 Radio (for talks) (100 m²).
- 1 Radio booth (75 m²).
- 1 TV booth (75 m²).
- 1 Sound recording (250 m²).

2. PRODUCTION ROOMS. 1765 m².

- 2 TV production control (25 m²).
- 1 TV programme continuity (50 m²).
- 1 Radio production control (50 m²).
- 1 Radio programme continuity (50 m²).
- 1 Dubbing control (45 m²).
- 1 Tape recorder (55 m²).
- 1 Sound recording control (50 m²).
- 1 Film sound control (50 m²).
- 2 TV Audio control (25 m²).
- 1 Master control (150 m²).
- 3 TV/Film lighting control (40 m²).
- 1 TV telecine (150 m²).



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- 1 TV VTR (100 m2)
- 2 TV VTR Editing (ea.40 m2)
- 3 Radio Editing (ea.15 m2)
- 3 Film Editing (ea.40 m2)
- 2 Film Editing (ea.25 m2)
- 1 Film laboratorium (400 m2)
- 1 Animation room (100 m2)

3. MAINTENANCE ROOMS/LABORATORIES 900 m2

- 1 Lab Radio Frequency (50 m2)
- 1 Lab Audio (50 m2)
- 1 Lab Video (50 m2)
- 1 Lab Electronic (50 m2)
- 1 Lab Film equipment (50 m2)
- 4 Lab for field-equipment (ea.50 m2)
- 1 Lab for field-equipment (100 m2)
- 1 Workshop electronic (50 m2)
- 1 Workshop properties (200 m2)
- 1 Graphic department (100 m2)

4. OFFICE ROOMS 5000 m2

- 2 Language laboratories (ea. 100 m2)
- 1 Auditorium (400 m2)
- 3 Classrooms* (ea.60 m2)
- 3 Classrooms* (ea.40 m2)
- 4 Classrooms* (ea.30 m2)

(* measurement based on 3 m2/student)

3 Conference rooms (ea 75 m^2).

Office space for approx.

300 personnel, garages,

libraries, archives (3775 m^2)

CORRIDORS/LAVATORY

($650,2$)

Based on the training and production rooms it is roughly estimated to require the following equipment :

5. TELEVISION.

STUDIO EQUIPMENT.

- 4 Colour cameras (450 m^2).

- 1 Audio mixer

- 2 Turntable.

- 2 Tape recorder.

- 1 Vision mixer.

(incl. trick facilities).

- 1 lighting desk.

- 1 Reverberation unit.

- Wireless microphones.

- 3 Colour cameras (200 m^2).

1 Audio mixers

2 Turntables.

2. Tape recorder.

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- 1 Vision mixer.
(incl. trick).
- 1 lighting desk.

Program Continuity :

- 1 Colour Camera.
- 1 $\frac{1}{2}$ Audio mixer.
- 2. Turntable.
- 2. Tape recorder.
- 1 Vision mixer
(incl. trick).
- 1 Lighting desk.

Video Tape Recorder :

- 6 - 1" Professional video Tape recorder.
- 2 - 1" Portable ENG units.

Video Tape Recording Editing. :

- 2 Units, each equipped with vision mixer, audio mixer.

- TITLING MACHINE :

- 1 Unit Character Generator.
- 1 Unit Subtitling Generator.

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TELECINE : 4 - 16 mm film scanner
2 - 35 mm film scanner
2 - 8 mm film scanner
2 - slide scanner
2 - caption scanner

6. RADIO

STUDIO EQUIPMENT

Radio/Dubbing : 1 Audiomixer
3 turntable
2 cassette player
4 tape recorder (1")
(1 equiped with pilot synchronization)
1 coromachine 16 mm
1 coromachine 35 mm
1 film synchronization unit
1 film projector 16 mm
1 film projector 35 mm
1 reverberacion unit
Radio continuity : 1 audiomixer
2 turntable.
2 taperecorder
1. stereo FM/AM/SW relay receiver.
Radio (for talks) : 1 audiomixer.
2 turntable.
2 tape recorder.

R
8/11

Soundrecording 1 audiomixer
 1- 24 channel taperecorder
 2 taperecorders
 1 echo unit
 1 reverberation unit
Sound editing 3 x 1 audiomixer
 1 turntable
 3 taperecorders
 1 cassette recorder.

7. FILM

Studio : 1 lighting desk
 1 audiomixer
 2 synchronized taperecorder.
Camera : 2 - 35 mm
 6 - 16 mm
 2 - 8 mm
 4 stillpicture camera 35 mm
 2 stillpicture camera 6 x 6
Sound 8 sound film recorder
Lighting 10 unit
Laboratorium 1 reversal processing machine 35 mm
 2 reversal processing machine 16 mm
 1 reversal processing machine 8 mm
 1 foto processing machine
 1 additive printing machine 35 mm
 1 additive printing machine 16 mm
 2 foto enlarger

R
2/11

1 lightgrading table 35 mm

1 lightgrading table 16 mm

1 sensitometer

2 densitometer

1 unit chemical analyser

2 unit chemical mixer

Editing : 1 tab . 6 plate 35 mm

4 tab . 6 plate 16 mm

2 viewer 16 mm

1 table 6 plate 8 mm

Animation: 2 units animation stand

8. MAINTENANCE/LAB EQUIPMENT

LAB. RADIO FREQUENCY

- RF VOLT METER
- AF/RF GENERATOR
- SPECTRUM ANALYSER
- 100 MHZ OSCILLOSCOPES
- 10 KHZ - 1 GHZ FREQ COUNTER
- RF SWEEP GENERATOR
- DUMMY LOAD
- VHF - UHF TEST RECEIVER
- FIELD STRENGTH METER
- PRECISION AM METER
- TV DEMODULATOR
- AM/FM DEMODULATOR
- TV TRANSMITTER EDUCATION UNIT
- M.W. EDUCATIONAL TEST BENCH
- EDUCATIONAL ANTENNE TEST BENCH

A handwritten signature or initials, possibly 'R', is written above the date '2/11/72'.

- AM/SSB/FSK/CW Transceiver.
- Sideband analyser
- Stereo signal gen.
- DC Generator (power supply).
- Small AM/FM Radio Transmitter.
- AF Generator.
- AF Generator.
- Accoustic and Vibration Measurement.
- Sound level measurement.
- Distortion meter.
- WOW & Flutter meter.
- Stereo coder.
- Stereo decoder.
- AC/DC Power supply.

LAB AUDIO

LAB VIDEO

- Vectorscope.
- Videotest Signal Gen.
- Group delay measurement.
- Colour bar Generator.
- Video test Generator.
- VIT. noise generator.
- Insertion signal gen.
- VIT. Inserter.
- Video Distortion analyser.
- TV Waveform monitor.
- Videoscope (Sweep Gen).
- Frequency Counter.
- DC Power supply.

R
2/

- LAB ELECTRONIC
- FREQ COUNTER
 - AF/RF GENERATOR
 - VIVM
 - AC/DC POWER SUPPLY
 - DIGITAL TRAINING KIT
 - COMPUTER TRAINING KIT
 - 100 MHZ OSCILLOSCOPE
 - CURVE TRACERS
 - LOGIC ANALYZERS
 - FREQ STANDARD
 - INDUCTANCE METER
 - CAPACITANCE METER

9.. AS MENTIONED IN 5.2., IN THE LABORATORIES THE EQUIPMENT WHICH IS USED IN THE STATIONS/PRODUCTION UNITS SHOULD BE AVAILABLE:

E.G.: LAB VTR

LAB CAMERA/VIDEO

LAB SOUND/AUDIO

LAB TRANSMITTER

LAB FILM

WORKSHOPS ELECTRONIC AND PROPERTIES WITH THE RESPECTIVE EQUIPMENT

10. 1 OB van Unit Radio

1, OB van Unit TV

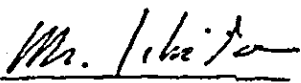
MINUTES OF DISCUSSION ON
THE CONSTRUCTION PROJECT OF
RADIO AND TELEVISION TRAINING CENTRE

In response to the request of the Government of the Republic of Indonesia, the Government of Japan has sent, through the Japan International Cooperation Agency which is an official agency implementing the technical cooperation of the Government of Japan, a team headed by Mr. Minoru ISHIDA, Second Economic Cooperation Division, Economic Cooperation Bureau, Ministry of Foreign Affairs, to conduct a basic design survey on the construction Project of Radio and Television Training Centre (hereinafter called the "Project") for 21 days from September 13, 1981.


The Team had a series of discussions and exchanged views with the Indonesian counterpart's party headed by Mr. F. RACHMADI, Director, Centre of Research and Development of Information System, Ministry of Information.

Both parties have agreed to recommend their respective Governments and the authorities concerned to examine the result of the survey attached herewith toward the realization of the Project.

September 25, 1981. Jakarta.



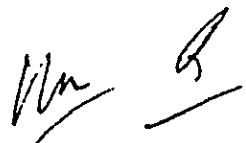
Minoru ISHIDA
Head,
Japanese Survey Team



F. RACHMADI
for the Director
General,
Information Research
and Development,
Ministry of Information.

ATTACHMENT:

1. The objective of the Project is to provide necessary building, facility and equipment for the radio and television training project in Yogyakarta.
2. The Radio and Television Training Centre (hereinafter called the "Centre") will be a part of Basic Training Centre Radio - TV - Film/An Integrated Multi Media - Training Centre projected to be opened at April, 1984 in Yogyakarta by the Ministry of Information.
3. The Indonesian Side expects that it will carry out the basic training for about 9 months and train around 700 personnel a year in the Centre.
4. The Japanese Survey Team will convey the desire of the Government of Indonesia to the Government of Japan that the Government of Japan will take necessary measures to cooperate in implementing the Project and will provide the training facilities as listed in Annex I within the scope of Japanese economic co-operation in grant form.
5. The Team confirmed that the Indonesian Side understood the system of Japan's Grant Aid Programme to be extended by the Government of Japan, especially the arrangements to be taken by the Government of Indonesia (as agreed in the Minutes for this Project dated on February 2, 1981).
6. In relation with the Center, the Indonesian Side will consider to add some facilities to be financed by the Government of Indonesia as listed in Annex II.
7. The proposed site for the Centre is shown on the map of Annex III.
8. The Japanese Side will carry out the basic design work and the lay-out for the Centre in line with the overall MMTC project under consultation with the Indonesian side.

Two handwritten signatures in black ink, one on the left and one on the right, both appearing to be initials or names.

ANNEX I.

Items requested by the Government of Indonesia whose cost will be borne by the Government of Japan are shown as follows:

1. Building and Facility. (approximately 6,000 M², 2 stories)

- (1) T.V. Studio
- (2) Radio Studio
- (3) Production Control Rooms (T.V. & Radio)
- (4) Programme Control Rooms (T.V. & Radio)
- (5) T.V. Booth
- (6) Radio Booth
- (7) Editing Room
- (8) Master Control Room
- (9) V T R Room
- (10) Telecine Room
- (11) Film Processing Room
- (12) Transmitter Room
- (13) Laboratory
- (14) Lecture Rooms
- (15) Library
- (16) Offices and others.

2. Equipment.

- (1) T.V. Studio Equipment
- (2) Radio Studio Equipment
- (3) Transmitting and Monitoring Equipment
- (4) Power Supply Equipment
- (5) Measuring Instrument.

R lh.

ANNEX II.

1. Radio Studio (News).
- 2., Anouncer Booths.
3. Master control Room (Audio Recording).
4. Editing Room.
5. T.V. Studio (News).
6. Art Design Room
7. Make-up Room
8. Editing - Dubbing Room.
9. Lighting Control Room..
10. Animation Room.
11. Properties.
12. T.V. Programme Library.
13. Transmitter Control Room.
14. Telecommunication Room.
15. Workshop.
16. Laboratory.

Mr. S

ANNEX III

TO SEMARANG

TO CEBONGAN

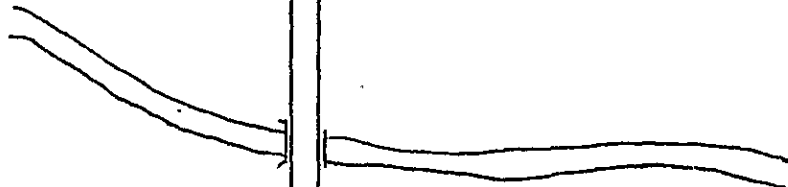
TO JOMBUR

PLANNED ROAD

250 m

200 m

PROJECT SITE



TVRI YOGYAKARTA

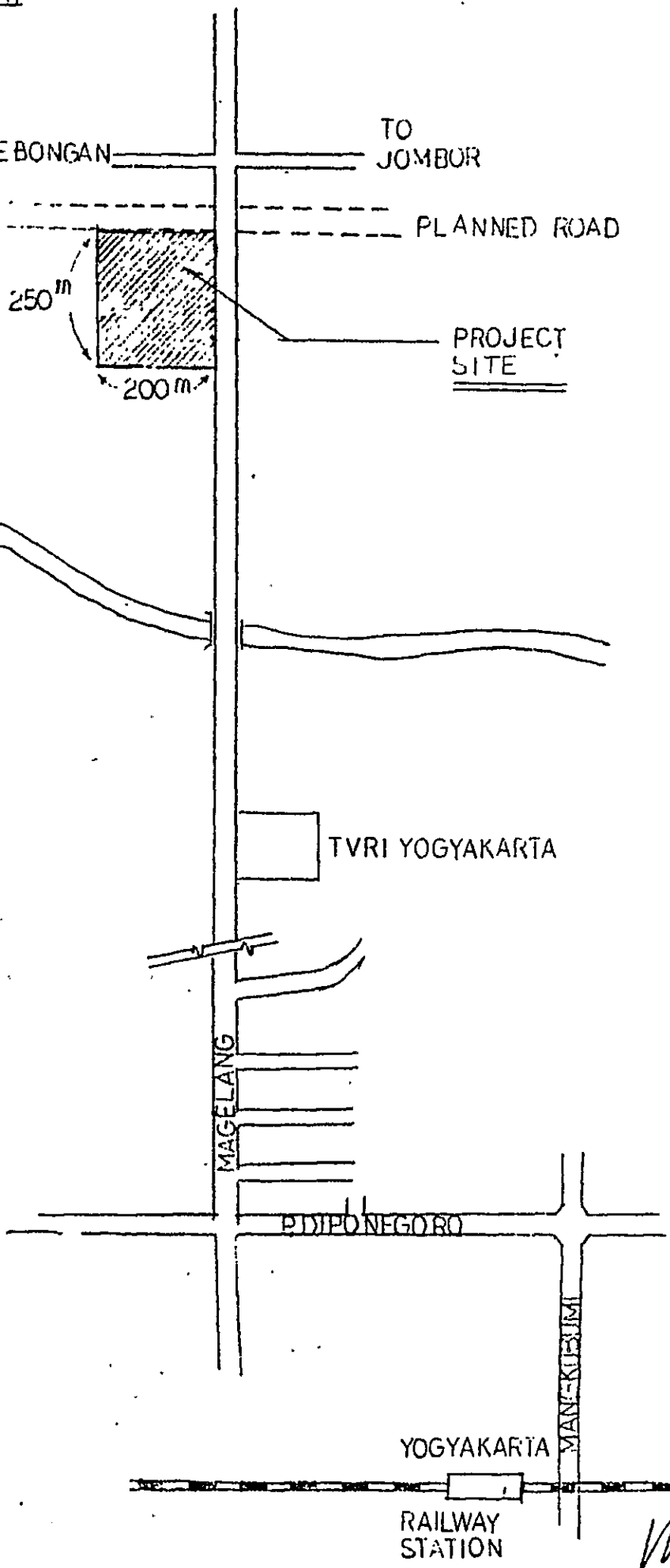
MAGELANG

PIDIPONEGORO

YOGYAKARTA

MAN-KURUMI

RAILWAY STATION



MINUTES OF DISCUSSIONS

THE DRAFT REPORT OF THE BASIC DESIGN FOR THE
CONSTRUCTION PROJECT OF
RADIO AND TELEVISION TRAINING CENTRE

1. The Government of Japan has sent, through Japan International Cooperation Agency (JICA), a Basic Design Confirmation Study Team from 7 to 13, February 1982 submit the Basic Design Report (draft) on the above mentioned project.
2. The Team held meeting with the Indonesian Counterpart to explain and to discuss the draft report. As result of these discussions, both parties agreed that revision be made as specified in the enclosed attachment (I & II).
3. All revisions mentioned above, after completion by Japanese side, will be sent to the Indonesian Government for confirmation before execution.
4. The Team confirmed that the Indonesian side understood the system of Japan's Grant Aid Programme to be extended by the Government of Japan, concerning the arrangements to be taken by the Indonesian side as agreed in the Minutes for this project dated on September 25, 1981, especially on:
 - 1) Procedure of Grant Aid
 - 2) Process of implementation.


MR. MINORU ISHIDA

Leader,
Japanese Study Team


F. RACHMADI

For the Director General,
Information Research and Development,
Ministry of Information

Jakarta, February 12, 1982

Attachment to MINUTES OF THE DISCUSSIONS I

1. The training equipment lists as set down in the draft report (pages:4-13, 4-14, 4-15, 4-16, 4-19, 4-20,4-21, 4-22 and all related explanations) will be revised in accordance with agreed revised draft attached to this minutes.
2. The Basic Design of the buildings as set down in the draft report (dwgs. no. 5-2, 5-3-1, 5-3-2, 5-4-1, 5-4-2, 5-5) and related explanations) will be revised specifically on the points specified in the enclosed attachment.
3. Plan as described on item 3 - 5 (page 3 - 8 to 3 -20) and item 3 - 6 (page 3 - 21 to 3 - 23) will be studied further by Indonesian side).

R M.

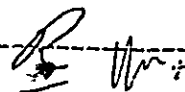
Attachment to MINUTES OF THE DISCUSSIONS II

Page	Line no (from the top)	Agreed Revision
S - 6	5	The execution of detailed design and construction works will be carried out in accordance with Japanese Grant Aid System in consideration with the Indonesian regulation, based on the Master Plan prepared by the local consultant. A local consultant will be appointed and financed by Indonesian Government for the purpose of evaluating the aboved mentioned works to ensure that these works are in 'accordance' to the Master Plan.
2 - 2	16 the Japanese side will cooperate with are a <u>major part</u> of the radio and television media, while remaining parts and the film media
2 - 17	11	In this stage, the Japanese side recommend that it would be important
2 - 17	13 to 17	to be deleted
2 - 19	17 to 20	The largest time ... (to be deleted)
2 - 22	18 to 2 -23, 21	to be deleted
2 - 40	4	(5) TVRI T/C, RRI T/C and together with the Department of Information are entitled to plan and compile training curriculums.
2 - 43	11	... instructors only from the Departement of Information , TVRI and RRI.
2 - 43	12 to 14	but also etc (to be deleted)
2- 44	-	Subject to change, to be added following the diagram
2 - 48	-	Should be changed to new picture
3 - 10	-	(4) <u>office personnel</u> to be changed <u>administration staff</u>

R Mr.

Page	Line no (from the top)	Agreed revision
4 - 5	additonal item	(7) To facilitate convenient maintenance of the technical facilities, care should be taken to provide means to detect breakdown and execute operation and repair of those facilities.
4 - 6	7 (point 2 to be changed)	(2) The system ^{*)} of equipment and its technical specification should be in accordance with CCIR broadcasting standards and should not be lower than those of RRI and TVRI TC in Jakarta. new.
4 - 30	delete to be changed	All facilities not covered under the grant aid project will be constructed by the Indonesian side.
4 - 31	9 (one paragraph to be changed)	. The standard quality of the broadcasting facilities such as studio of radio and television TC should not be lower than those of RRI and TVRI TC in Jakarta.
4 - 32	drawing	Should be changed
4 - 35	diagram	Should be changed to "Space for film and remaining training facilities for radio & tv." to be deleted the first one paragraph.
4 - 41	point (3)	
5 - 2 until 5-7	(all page to be changed base on:	<ul style="list-style-type: none"> - Re arrangement of Building- Mass Lay out Block Plan in accordance to principle integration. - Re arrangement of technical rooms lay out in relation to the studios designed by the Japanese side in accordance with design of the Master Plan. - The use of new structural module throughout the whole complex. in accordance with design of the Master Plan. - Provision of future extension for the radio and television facilities. - Those items should be discussed by both sides

*) by system means:
An arrangement of components / sub systems so as to make one ordinary working whole in which the components/sub systems are compatible to each other in quality of material and technical performance.



JICA