

The expansion of the existing broadcasting network will play an important role in the promotion of the national development of Nepal, and its early realization is much hoped for by the people of Nepal.

9-5. Conclusion and Proposal

The expansion plan for television broadcasting in the Kingdom of Nepal plays the most important role in the National Development Plan for upgrading the educational level of the nation, for improvement of the literacy rate, and for promotion of industrial education, and the outcome of the plan is seriously awaited by the Government and the nation.

For the implementation of the plan, much financial investment is required. However on referring to the present difficulties in the financial condition of HMG of Nepal and the current level in the possession of foreign currency, it can be assumed that it would be difficult for the Government alone to bear the investment. Therefore it would be necessary to accept aid from advanced countries for programme production and especially for the education of employees together with aid for network construction.

However, it is considered that once the foundation of the television broadcasting network is established, television broadcasting could easily be operated and maintained by NTV itself.

The execution of the plan is considered to provide visible and intangible benefits to the people of Nepal and to the development of the nation, and the realization of the plan is hoped to be as early as possible.

In consideration of the viewpoints mentioned above, the Japanese Study Team propose and recommend to NTV that it takes action on the following items.

- (1) In order to construct a sound financial foundation, further close contacts should be made with related Governmental bodies in order to execute a receiving tax system and increase revenue.
- (2) The policy on programming should be clarified and further attractive programmes should be produced.

- (3) The training of employees should be aggressively promoted whenever there is time and opportunity.
- (4) The modernization of the organizational structure and equipment should be promoted.
- (5) The cooperation of advanced countries could be accepted as and when necessary in the field of programming and engineering, by asking for the dispatch of experts from advanced countries in order to establish the foundation of NTV.
- (6) The market for advertisements should be further exploited to increase advertising revenue.
- (7) Operation and maintenance functions should be strengthened and in particular reference materials should be systematically provided.
- (8) NTV should aggressively promote and assist CVCs which will also contribute to the diffusion of TV receivers.

PART IV

CONCEPTUAL DESIGN

PART IV CONCEPTIONAL DESIGN

1. Outline of Studio Equipment

(1) Master Control

1) Switching equipment	1 set
2) Monitoring equipment	1 set
3) Synchronizing signal system	1 set
4) Video timer	1 set
5) Room to room communication system	1 set
6) Colour opaque projector	1 set
7) VTR	2 sets
8) Tape recorder	1 set
9) Standards converter and VTR	1 set
10) Telecine equipment	1 set

(2) Studio (65 m²)

1) Colour camera	2 sets
2) Video switching system	1 set
3) Audio mixer	1 set
4) Colour opaque projector	1 set
5) Character generator	1 set
6) VTR	2 sets
7) Disc player, Tape recorder	each 1 set
8) Monitoring equipment	1 set
9) Lighting equipment	1 set

(3) Studio (200 m²)

1) Colour camera	3 sets
2) Video switching system	1 set
3) Audio mixer	1 set
4) Colour opaque projector	1 set
5) Character generator	1 set
6) VTR	2 sets
7) Disc player, Tape recorder	each 1 set
8) Monitoring equipment	1 set
9) Lighting equipment	1 set

(4) Studio (300 m²)

1) Colour camera	3 sets
2) Video switching system	1 set
3) Audio mixer	1 set
4) Colour opaque projector	1 set
5) Character generator	1 set
6) VTR	2 sets
7) Disc player, tape recorder	each 1 set
8) Monitoring equipment	1 set
9) Lighting equipment	1 set

(5) Dubbing studio

1) Audio mixer	1 set
2) Tape recorder	1 set
3) VTR	1 set
4) Monitoring equipment	1 set
5) Locking system	1 set

(6) Power Supply Equipment

1) Receiving cabinet rack	1 set
2) Distributing board	1 set
3) Transformer	1 set
4) Automatic voltage regulator	1 set
5) Engine-generator	1 set

(7) Outside Broadcasting Van

1) Colour camera	3 sets
2) Opaque projector	1 set
3) Character generator	1 set
4) Video production equipment	1 set
5) Audio production equipment	1 set
6) Monitoring equipment	1 set
7) VTR	1 set
8) Microwave transmitter	1 set
9) VHF communication equipment	1 set
10) Engine-generator	1 set

- | | |
|--------------------------------|-------|
| 11) Air conditioner | 1 set |
| 12) Vehicle | 1 set |
| (8) Others | |
| 1) Telephone switch board | 1 set |
| 2) Clock equipment | 1 set |
| (9) Measuring equipment | |
| Oscilloscope, Vectorscope etc. | 1 lot |

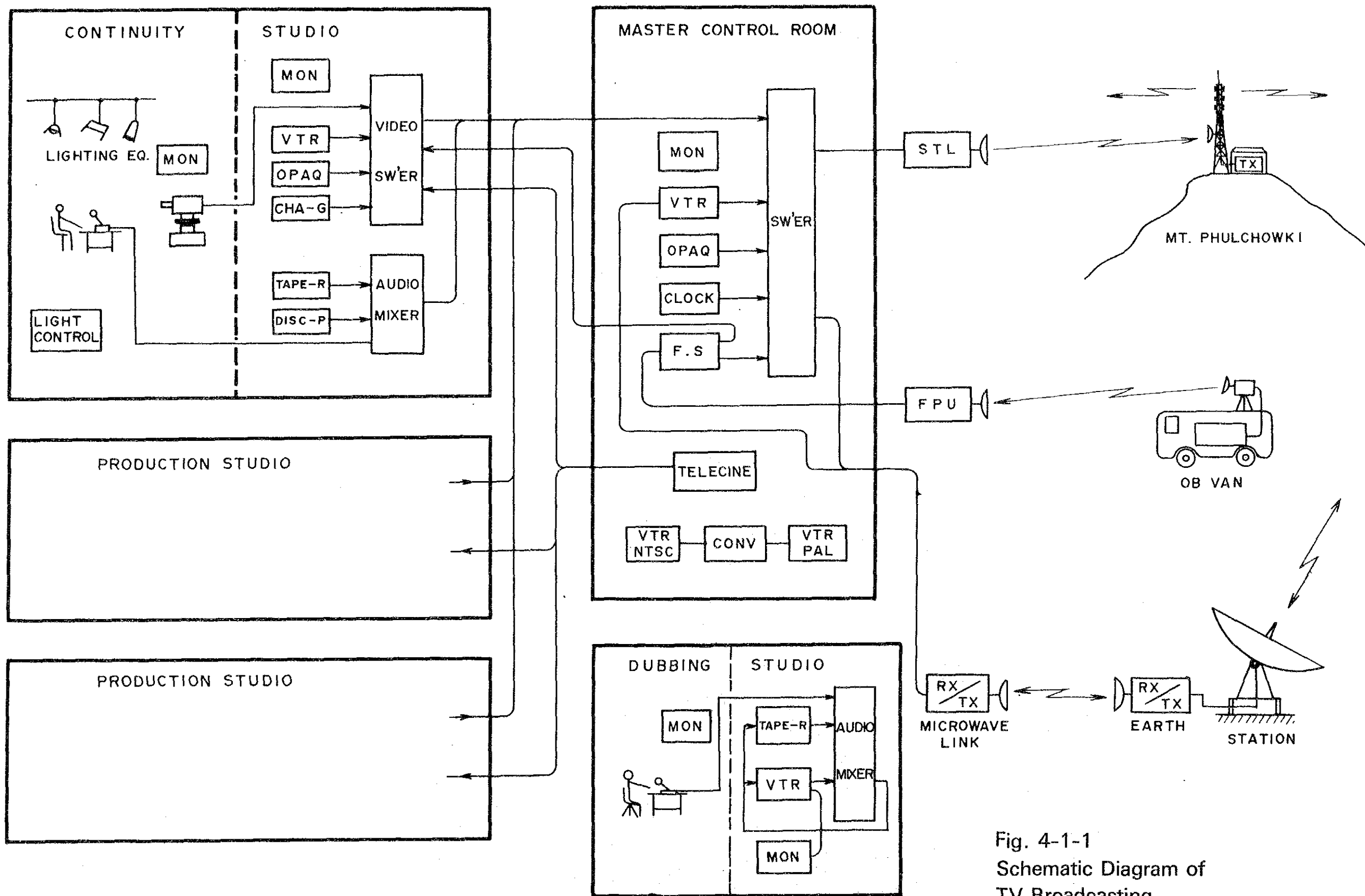


Fig. 4-1-1
Schematic Diagram of
TV Broadcasting

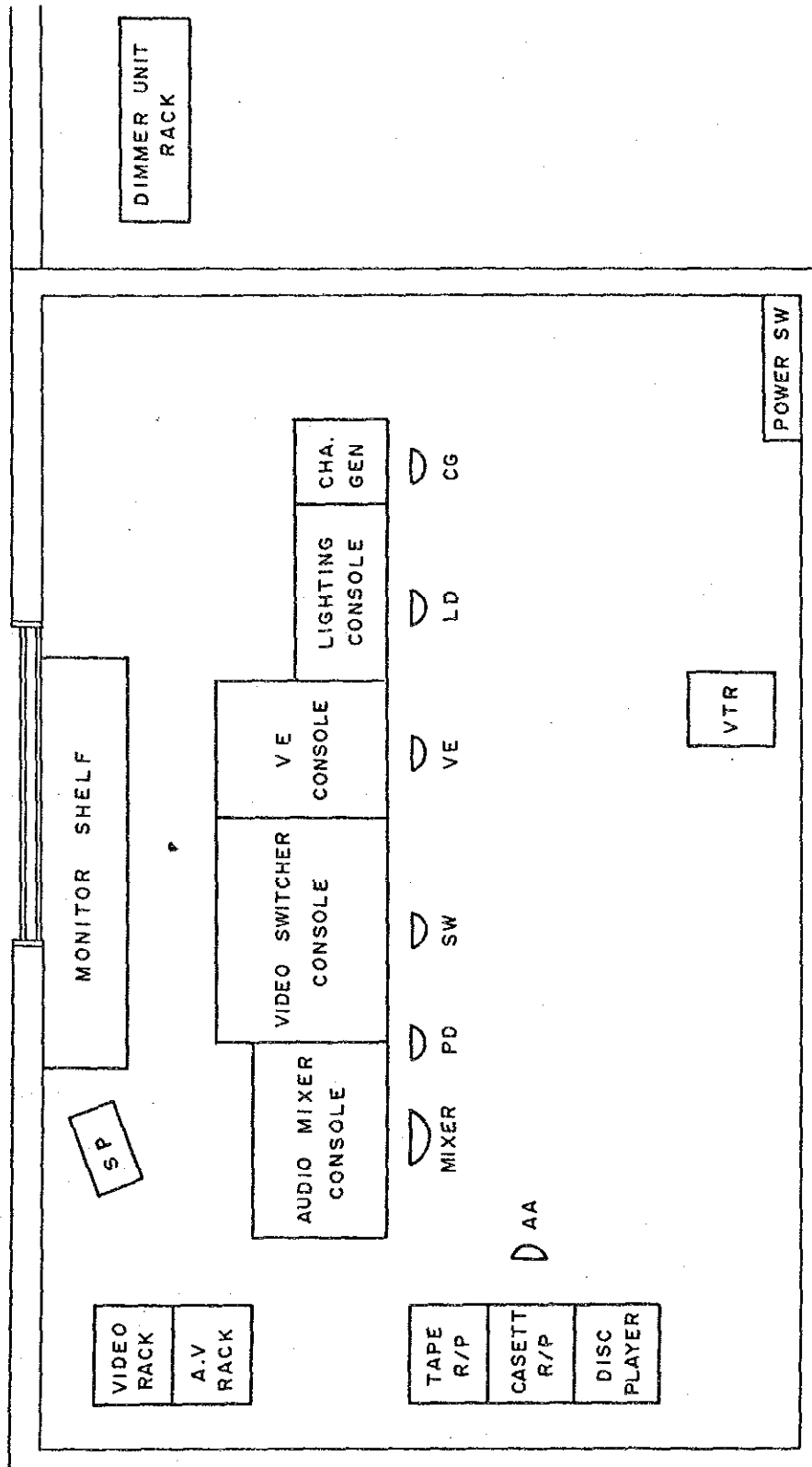


Fig. 4-1-2 Layout of Studio Equipment

2. Outline of Transmitting Facilities

(1) Phulchowki Transmitter Station

- 1) 2 kW VHF TV Transmitter (with standby) 1 set
refer to Fig. 4-2-1
including input and output equipment, and
auxiliary equipment
- 2) STL Transmitter (with standby) 1 set
refer to Fig. 4-2-1
including parabola antenna and feeder for TX and RX
- 3) Transmitting Antenna 1 set
refer to Fig. 4-2-2
 - o 2 Dipole pannel antenna, 4 stage 2 face and
2 stage 2 face
 - o Coaxial feeder
 - o Auxiliary equipment
- 4) Tower (Self supporting type ... height approx. 50m) 1 set
refer to Fig. 4-2-2
- 5) Power Supplies 1 set
 - o Electricity receiving and switching boards
 - o Emergency engine-generator
- 6) Building (Prefabricated) 1 set
refer to Fig. 4-3-4
- 7) Site Approx. 700 m²
refer to Fig. 4-3-4

(2) Jaleswar Transmitting Station (TE₂)

- 1) 5 kW VHF TV Transmitter (with standby) 1 set
refer to Fig. 4-2-3
including
 - o Input and output equipment
 - o Off-air receiver
 - o Auxiliary equipment

- 2) Transmitting antenna 1 set
refer to Fig. 4-2-4
 - o 2-Dipole pannel antenna 2 stage - 3 face
 - o Coaxial feeder
 - o Auxiliary equipment

- 3) Receiving antenna 1 set
 - o Yagi antenna
 - o Receiving feeder

- 4) Tower (Guyed mast ... height approx. 140m) 1 set
refer to Fig. 4-2-4

- 5) Power supply 1 set
 - o Electricity receiving and switching boards
 - o Emergency engine-generator

- 6) Building (Manned station) 1
refer to Fig. 4-3-5

7) Site

Area ... Approx. 200m x 150m

In case, receiving antenna is installed at different place,
acquisition of the site for laying feeders underground
between transmitter station and receiving antenna site
is necessary.

(3) Transposer station (for E, W and P station)

- 1) 10 - 500W VHF transposer (with standby) 1 set
refer to Fig. 4-2-5

As to the output of each station, refer to Table 3-4-4

- 2) Transmitting antenna 1 set
refer to Fig. 4-2-6

- o As for the antenna composition, refer to Table 3-4-4.
- o Coaxial feeder
- o Auxiliary equipment

- 3) Receiving antenna
- o Yagi-antenna (for suppressing interfering signal or strong fading, space diversity is used in some stations)
 - o Coaxial feeder

- 4) Tower (Self supporting type h = approx. 15m - 30m) 1 set
refer to Fig. 4-2-6

As for the tower height, refer to Table 3-4-4.

- 5) Power supply 1 set
- o Electricity receiving and switching boards
 - o Emergency engine generator

- 6) Building (Prefabricated ... unmanned type) each 1
refer to Fig. 4-3-6

- 7) Site
refer to Fig. 4-3-6

Area Approx. 22m x 20m

In case, receiving antenna is installed at different place, acquisition of the site for laying feeders underground and receiving antenna is necessary.

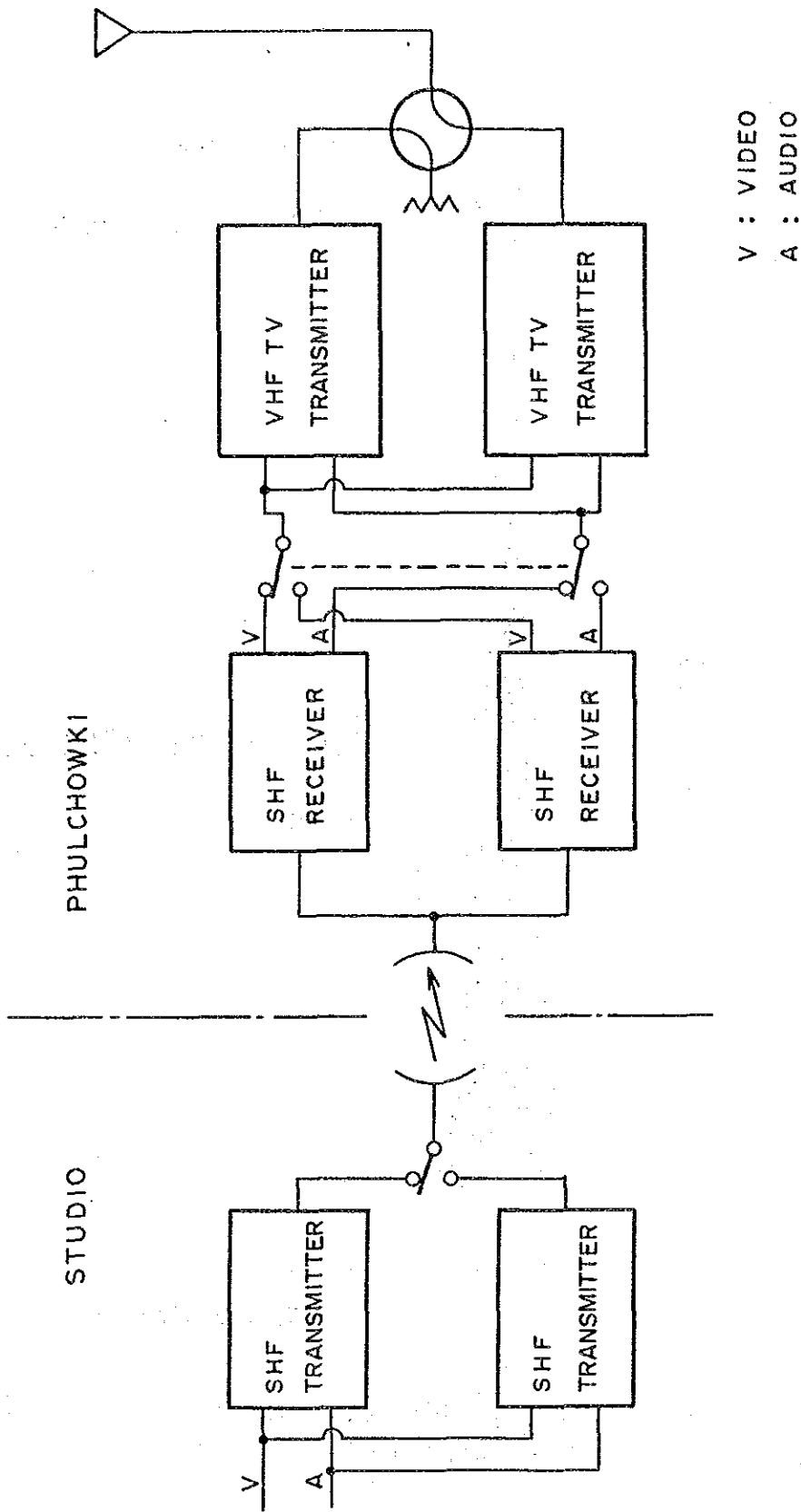


Fig. 4-2-1 Block Diagram of Phulchowki Transmitter Station

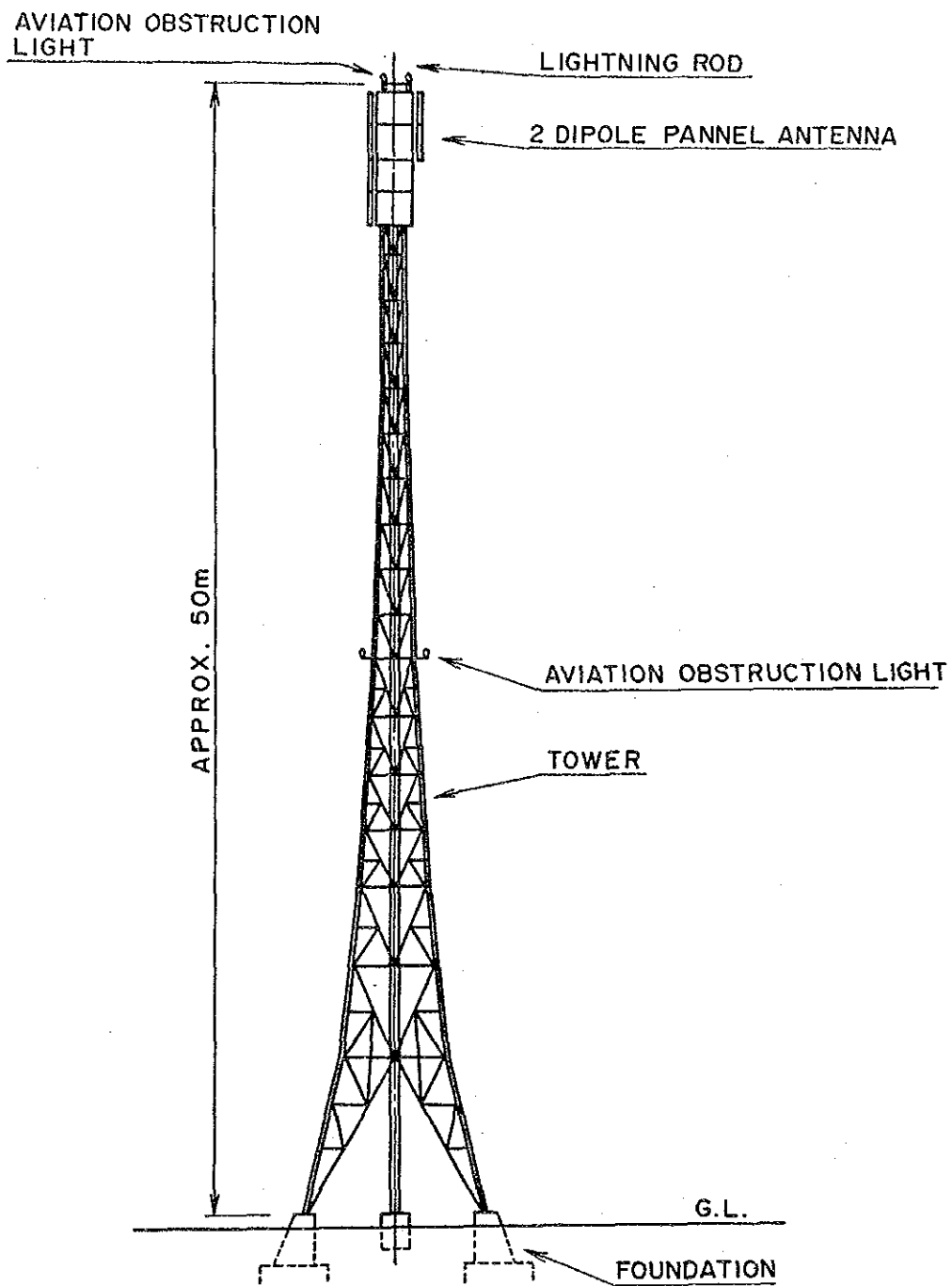
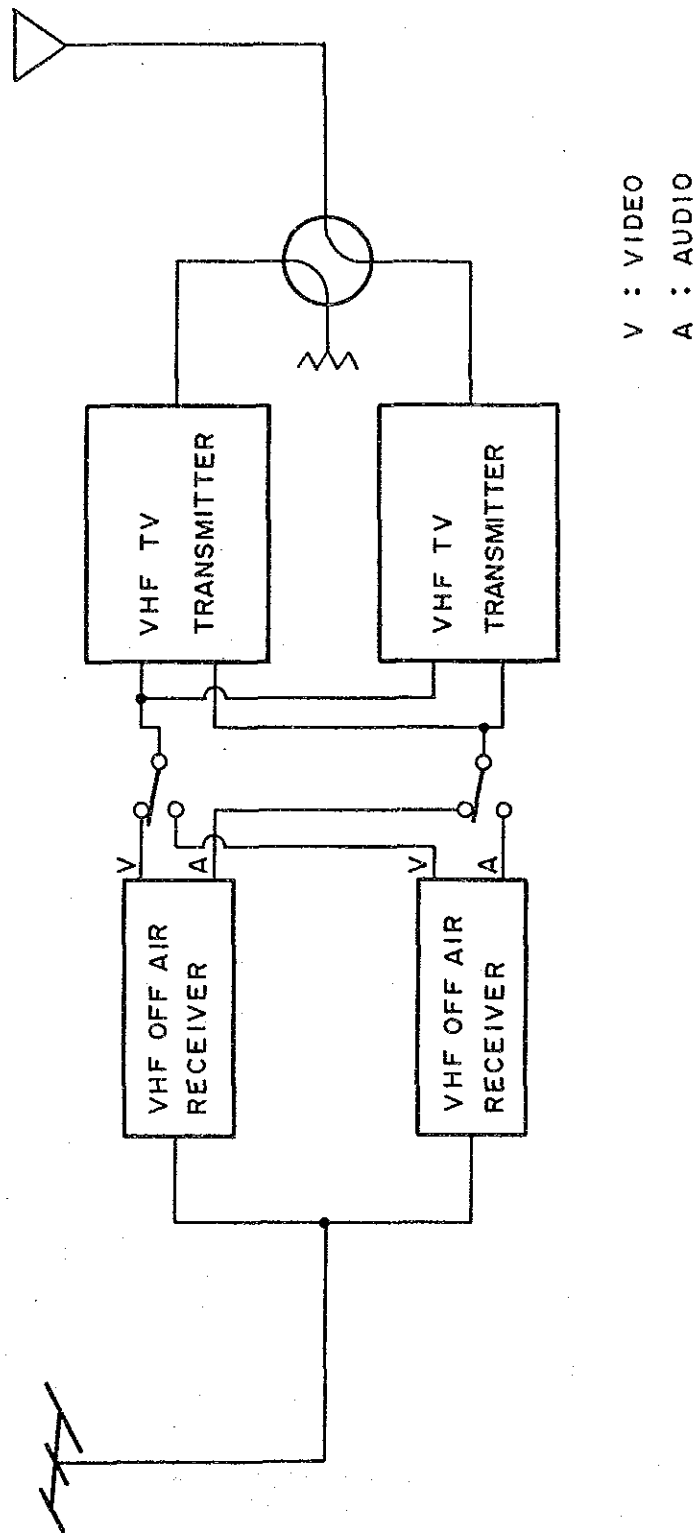


Fig. 4-2-2 Transmitting Antenna and Tower
(Phulchowki Station)



V : VIDEO
A : AUDIO

Fig. 4-2-3 Block Diagram of Transmitter Station (TE 2)

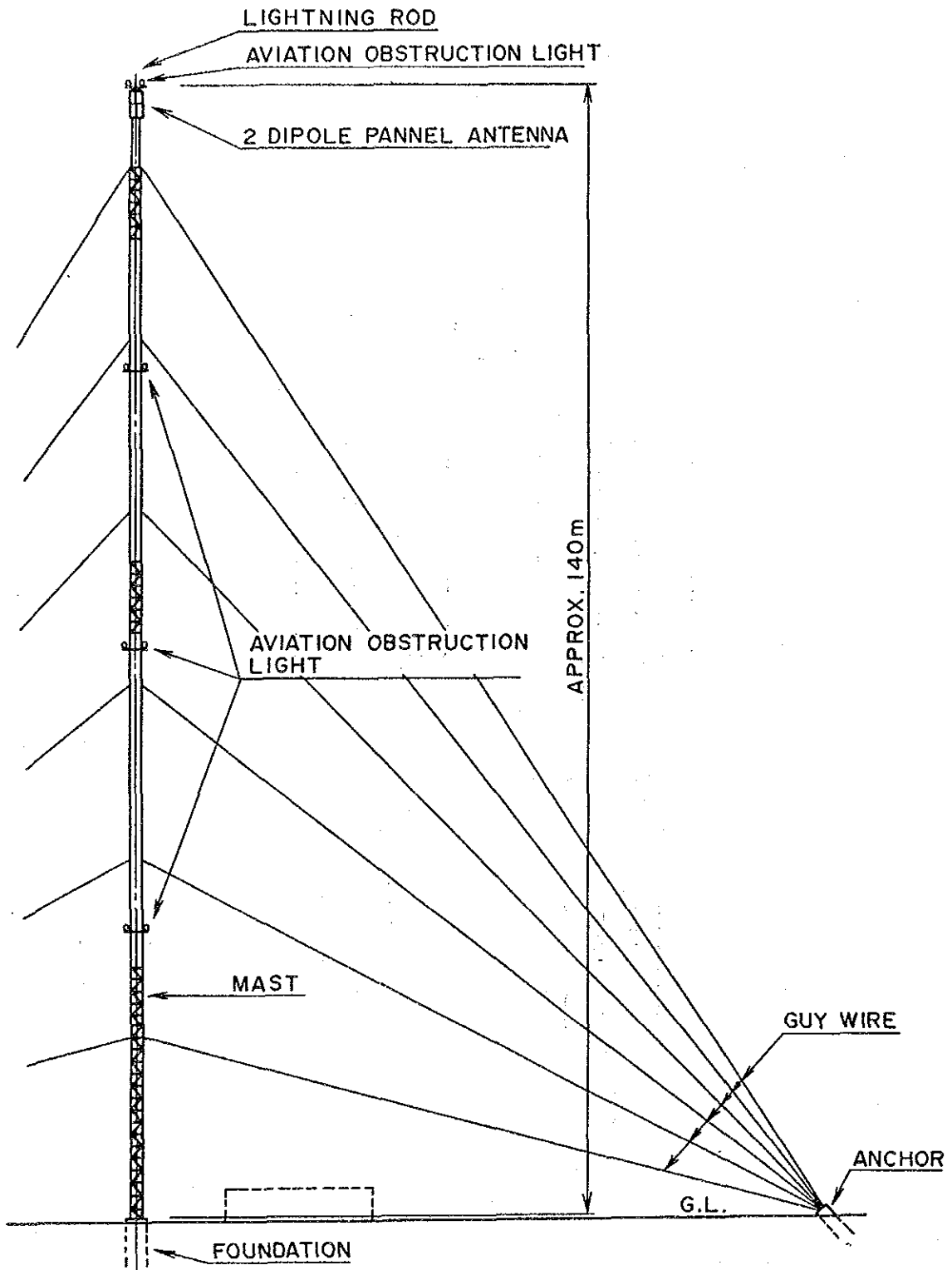


Fig. 4-2-4 Transmitting Antenna and Tower (TE2)

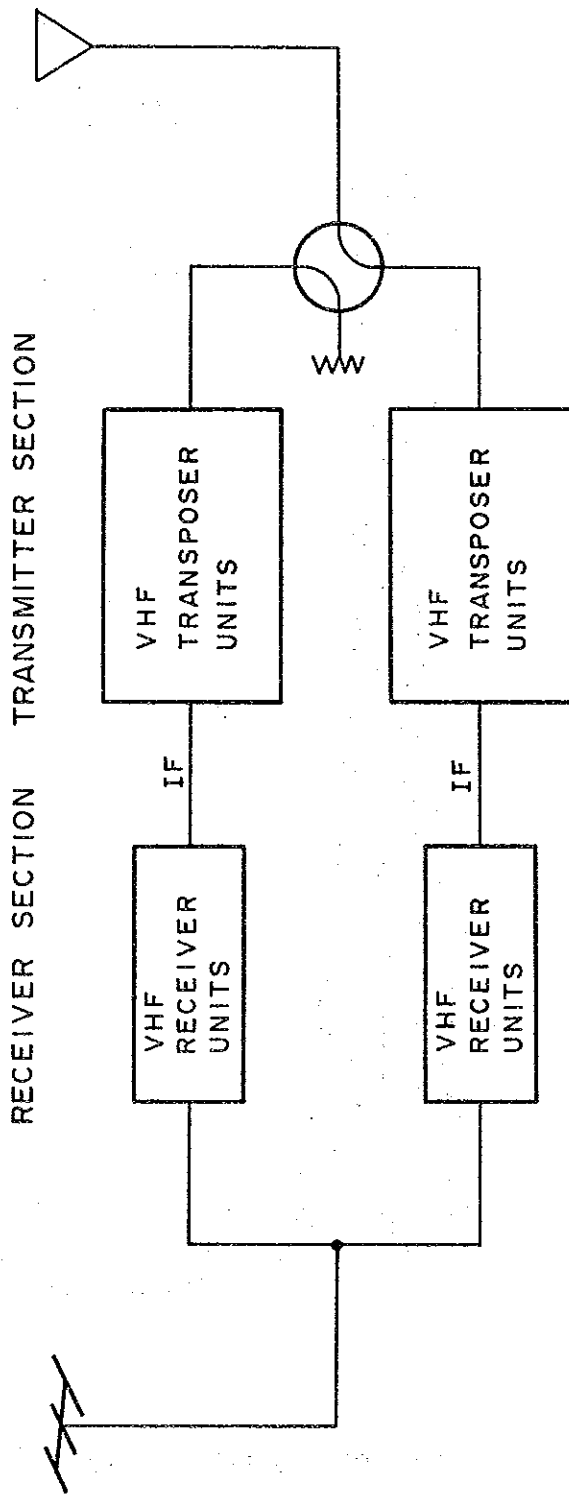


Fig. 4-2-5 Block Diagram of Transposer Station

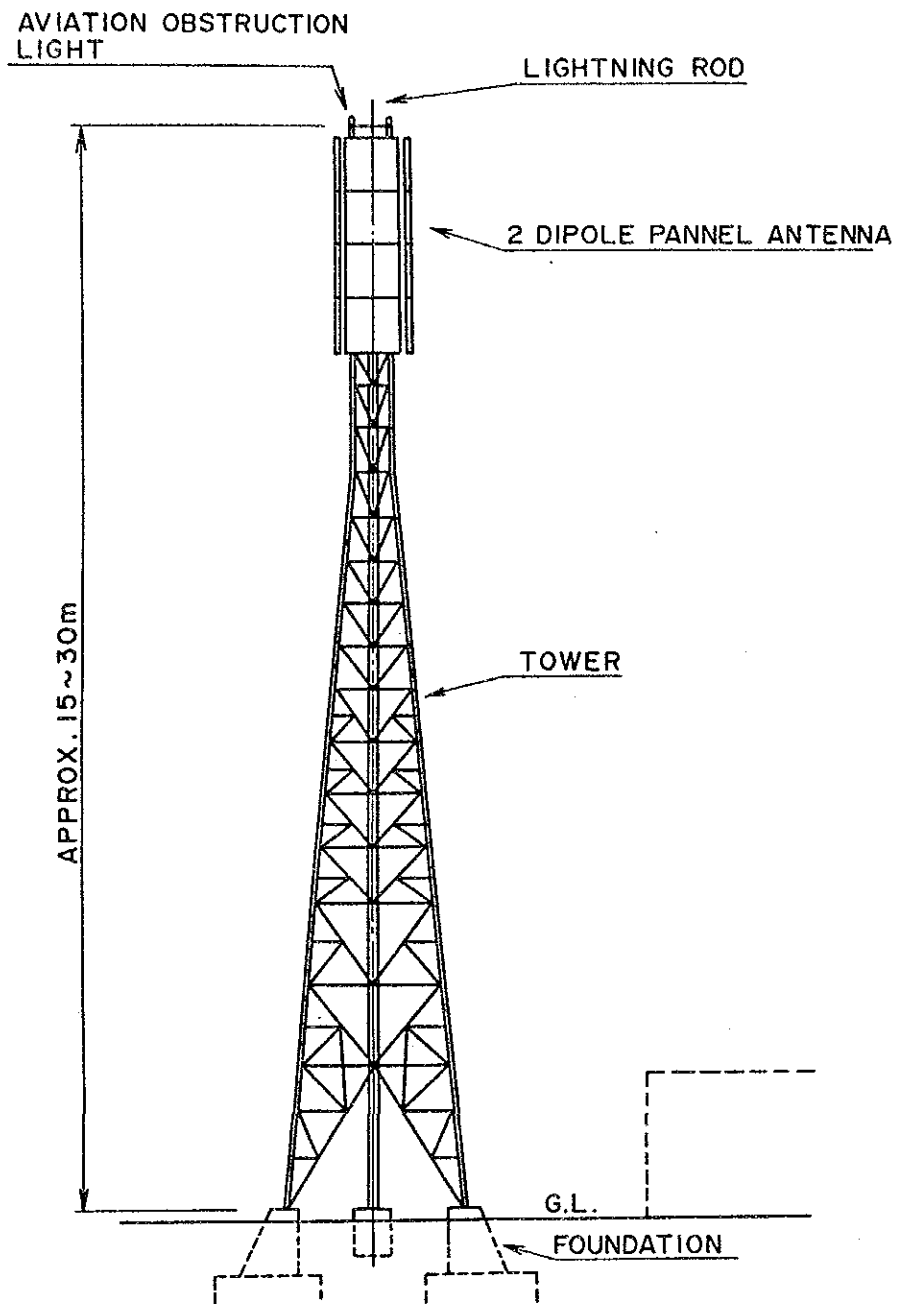


Fig. 4-2-6 Transmitting Antenna and Tower
(Transposer Station)

3. Outline of Building Facilities

(1) Broadcasting centre

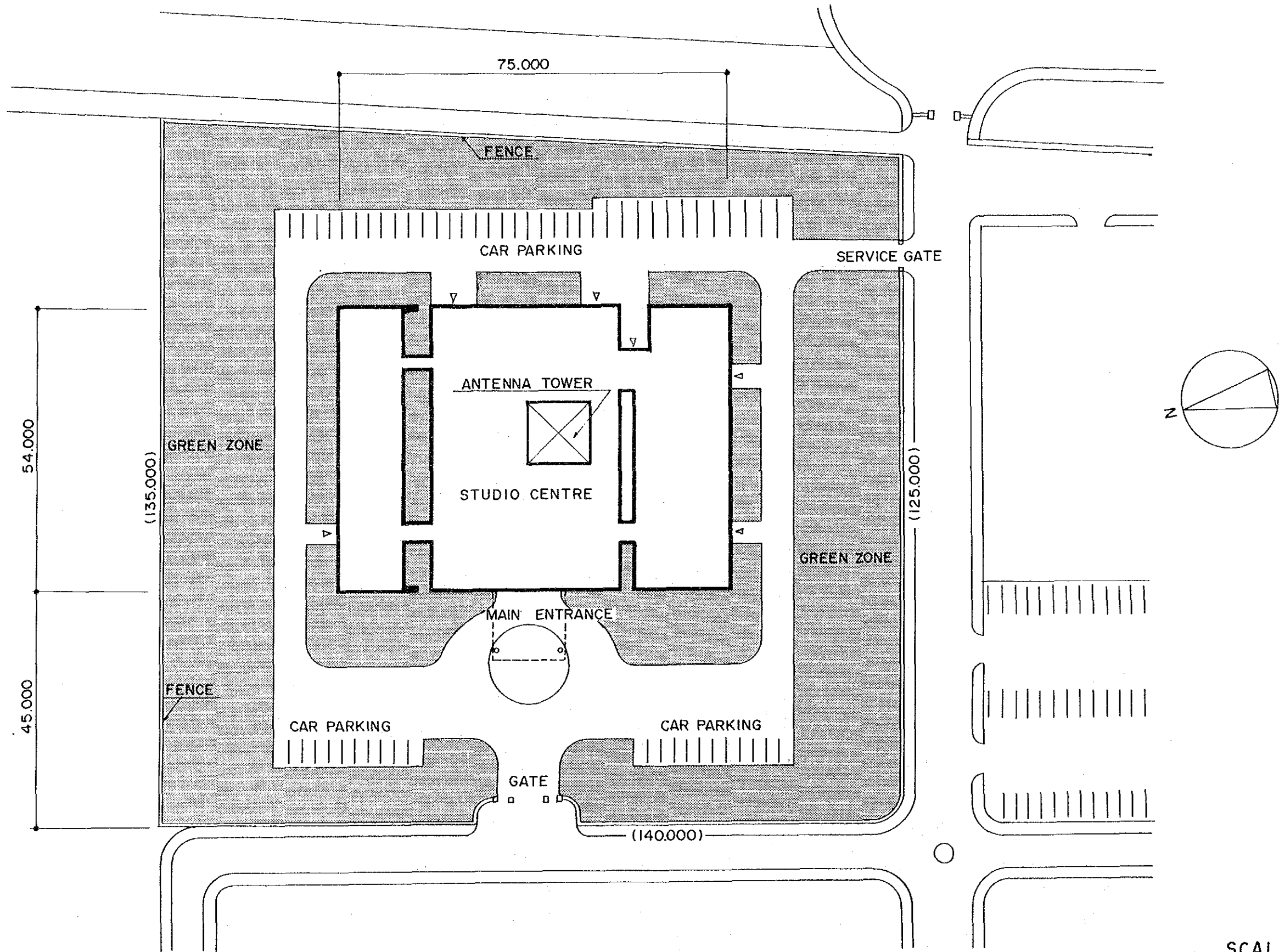
- 1) Studio A (65 m²)
- 2) Studio B (200 m²)
- 3) Studio C (300 m²)
- 4) Dubbing studio (30 m²)
- 5) Scenery properties store
- 6) Performer's room
- 7) Master control room
- 8) Maintenance room
- 9) News editor's office
- 10) Program producer's office
- 11) Editing room
- 12) Materials room
- 13) Building equipment room
- 14) Common space
- 15) Offices
- 16) Others

(2) Phlchowki and Jaleswar transmitter station

- 1) Transmitter room
- 2) Power equipment room
- 3) Workshop
- 4) Tower

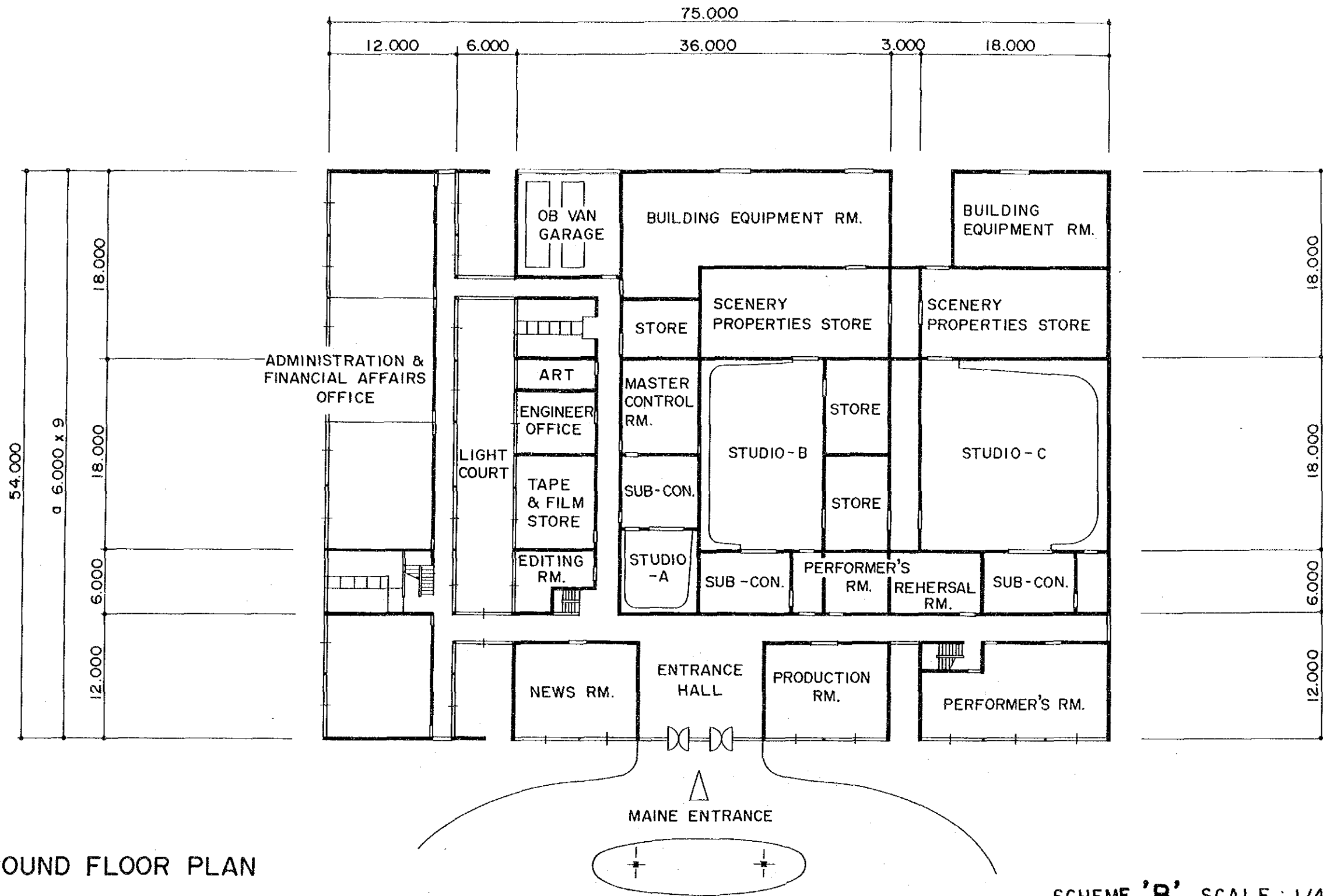
(3) Transposer station

- 1) Transposer room
- 2) Power equipment room
- 3) Tower



SCALE : 1/750

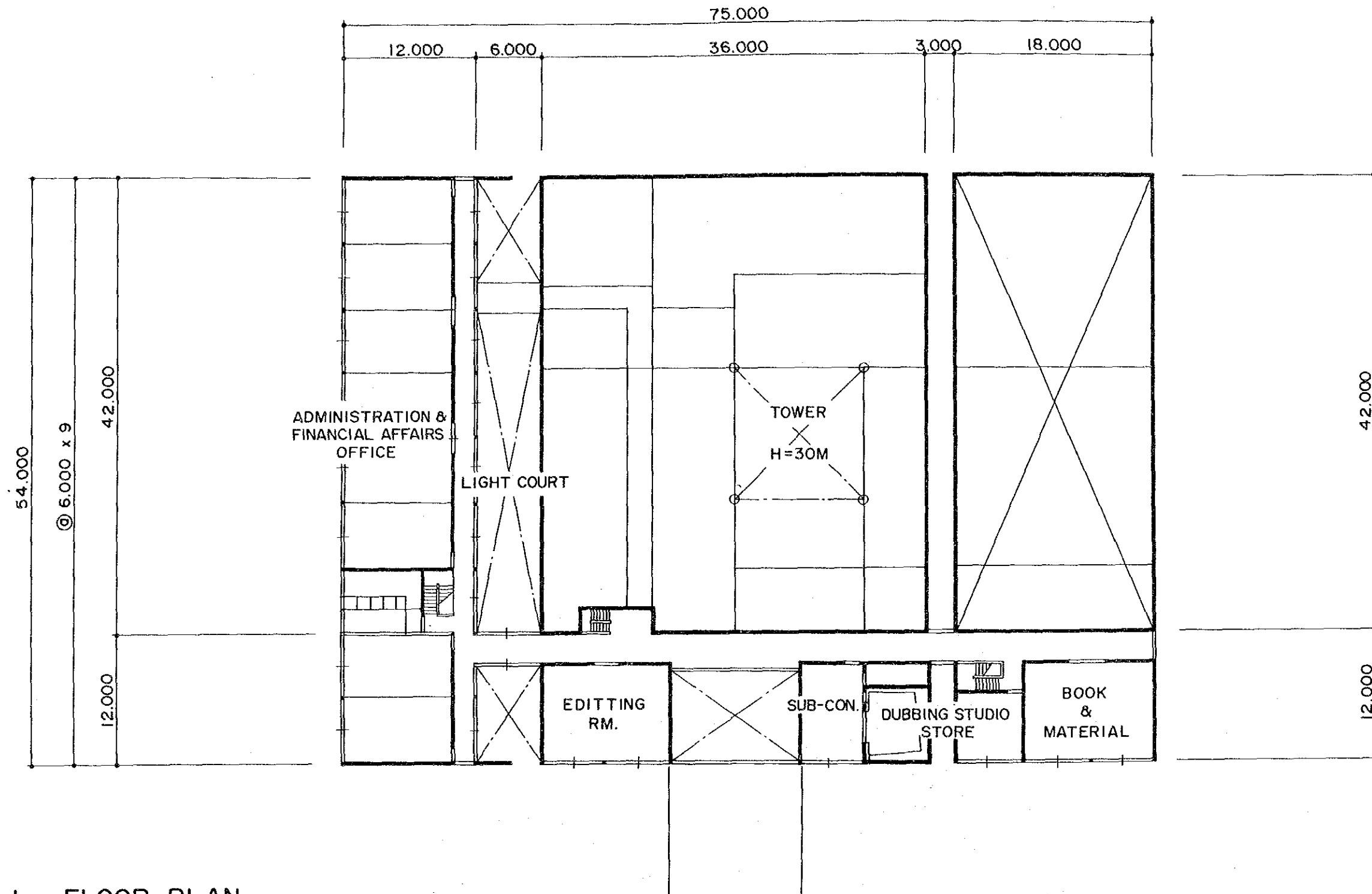
Fig. 4-3-1 Site Plan of NTV of Broadcasting Centre



GROUND FLOOR PLAN

SCHEME 'B' SCALE : 1/400

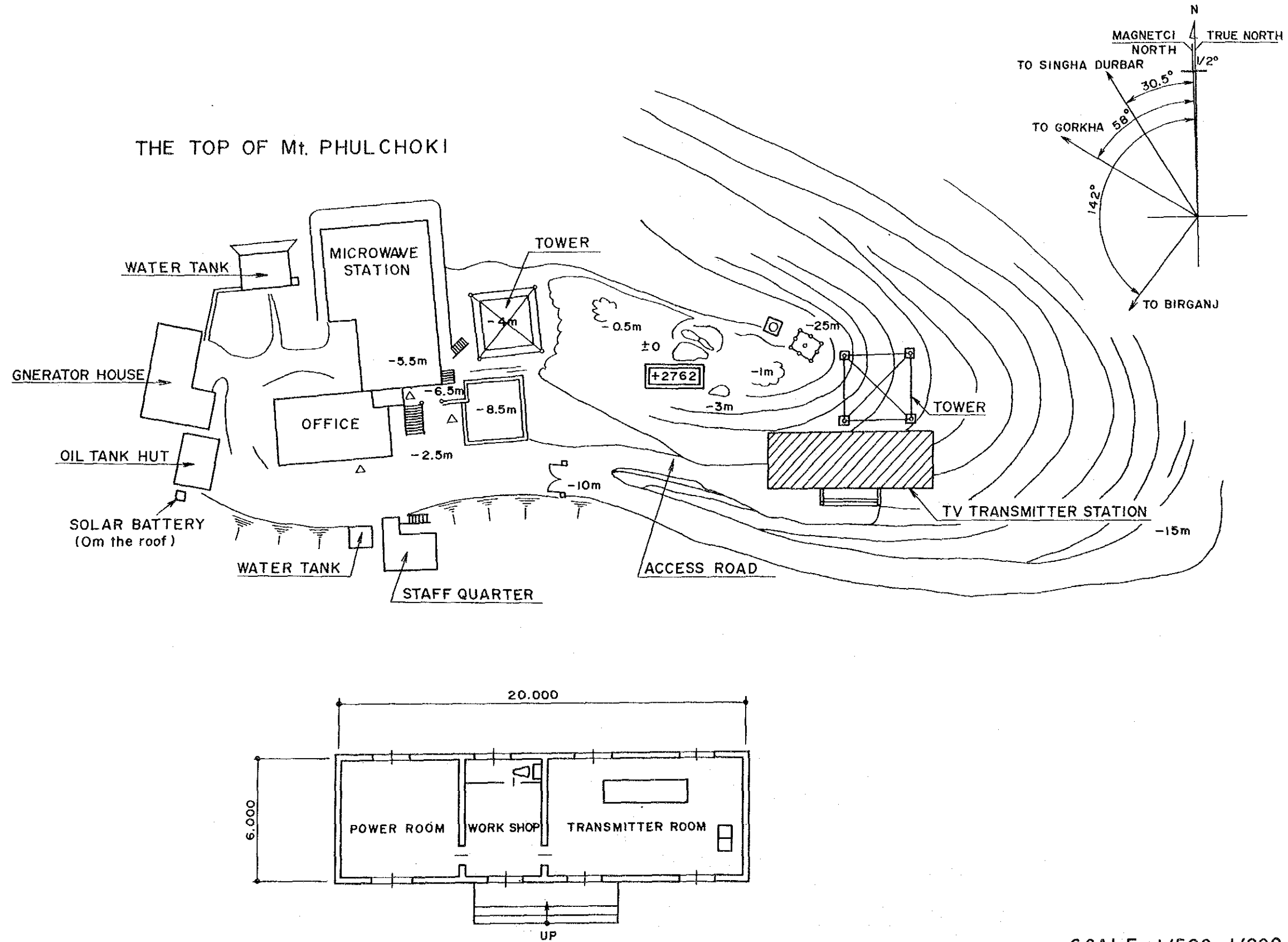
Fig. 4-3-2 Plan of NTV of Broadcasting Centre (Proposed Plan).



1st FLOOR PLAN

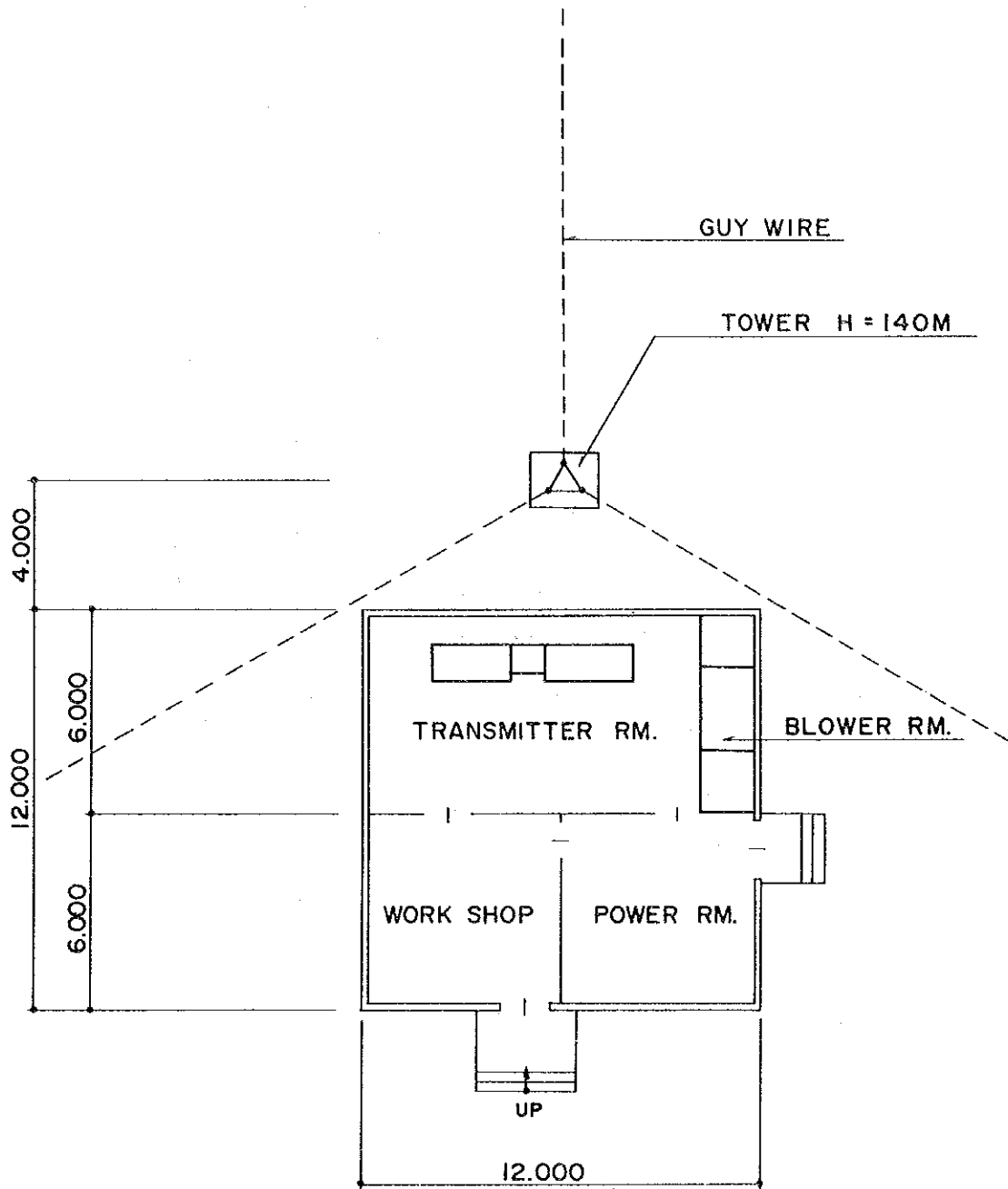
SCHEME 'B' SCALE: 1/400

Fig. 4-3-3 Plan of NTV of Broadcasting Centre
(Proposed Plan)



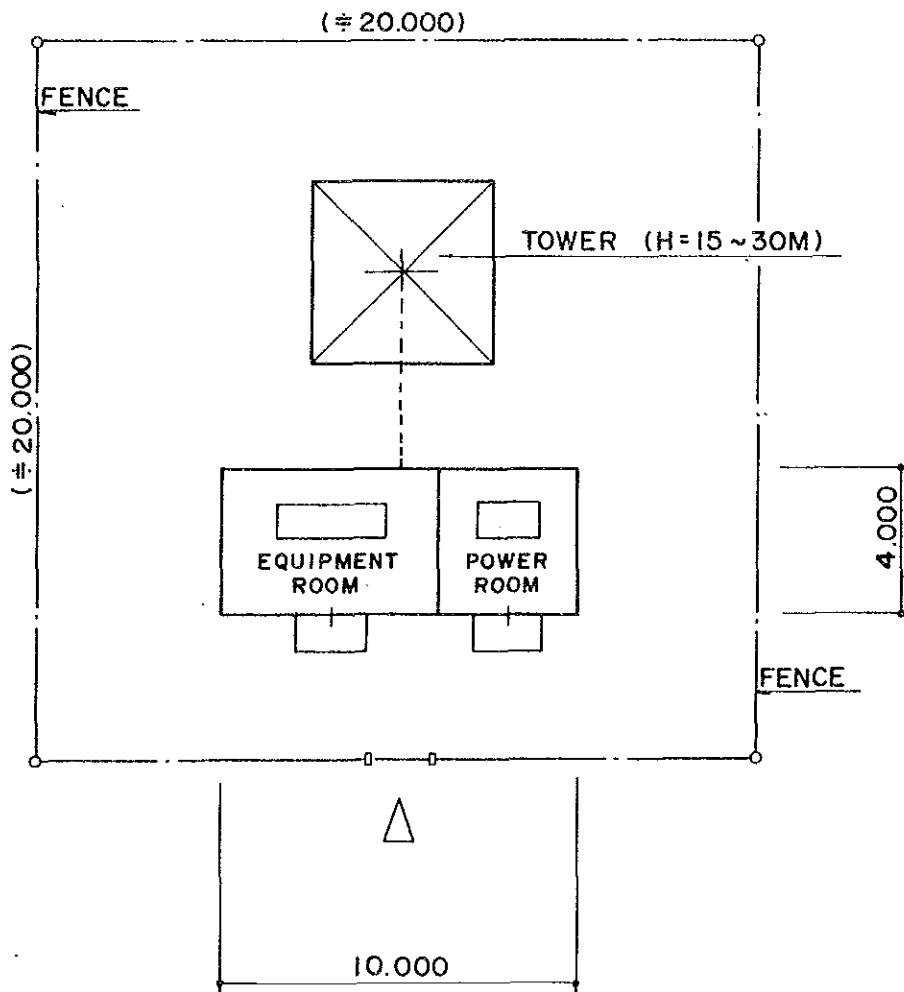
SCALE : 1/500, 1/200

Fig. 4-3-4 Plan of TV Transmitter Station At Mt. Phulchoki



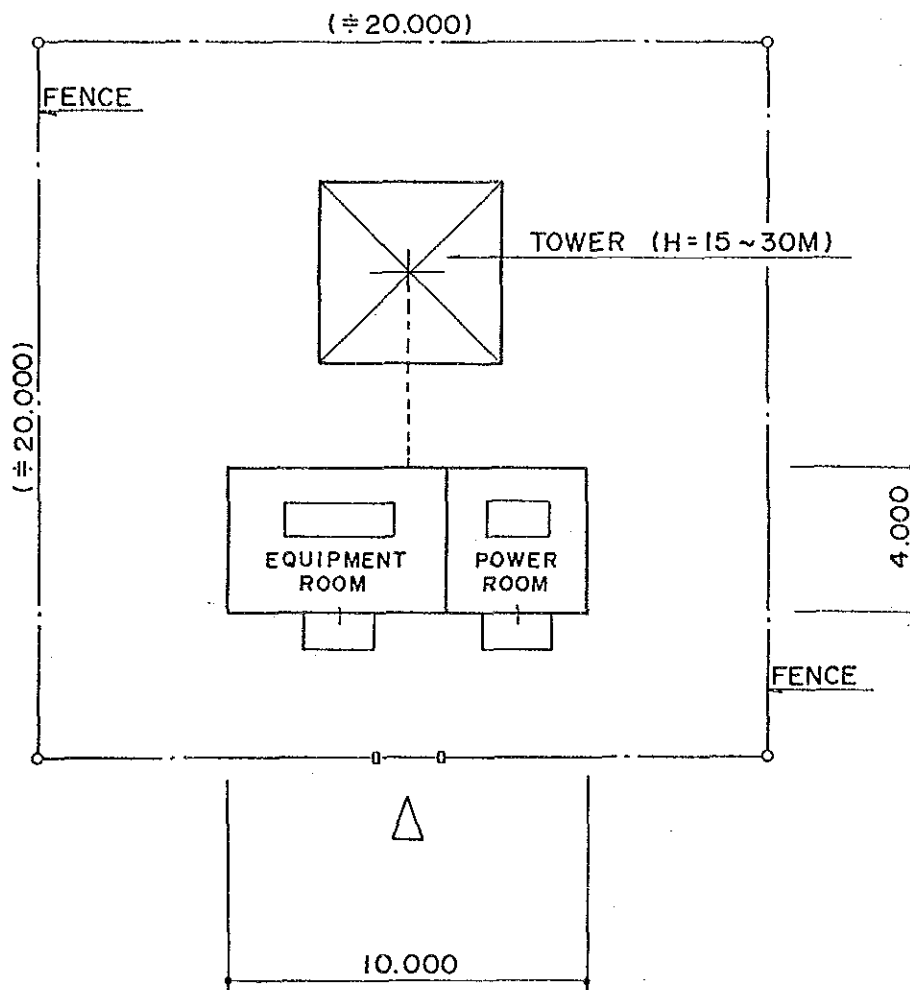
SCALE : 1/200

Fig. 4-3-5 Plan of Transmitter Station At Jaleswar



SCALE : 1/200

Fig. 4-3-6 Plan of Transposer Station



SCALE : 1/200

Fig. 4-3-6 Plan of Transposer Station

Appendix

Appendix 1. Itinerary of Preliminary Survey

- Feb. 8 (Sun.) Leave, Tokyo
- 9 (Mon.) Arrive, Kathmandu
Courtesy call to the Embassy of Japan and JICA office and meeting with their staff
- 10 (Tue.) Courtesy call to the Ministry of Foreign Affairs and Finance, survey of equipment in NTV and inspection of earth station
- 11 (Wed.) Courtesy call to General Manager of NTV
Discussion on the S/W with NTV staff
Survey of 3 proposed sites for studio and 1 proposed site for transmitting station
- 12 (Thu.) Consultation of S/W with NTV staff
Survey of proposed site for studio
Meeting with manager in the communication department
- 13 (Fri.) Courtesy call to the palace, Deputy Minister of Information and Communication Department
- 14 (Sat.) Move from Kathmandu to Pokhara
- 15 (Sun.) Survey of radio transmitter station
Survey of Telecom at Pokhara
Return to Kathmandu
Survey of microwave repeater station
- 16 (Mon.) Meeting with staff of Telecom, Power supply department and Film corporation
Survey of the studio in Radio Nepal
Consultation of the Minutes
- 17 (Tue.) Meeting with WIF staff
Consultation of S/W and Minutes with NTV staff
Courtesy call to deputy Minister of Education and Culture
Study for programme transmission at evening
- 18 (Wed.) Exchange of S/W and minutes
Report to the Embassy of Japan and JICA office
- 20 (Fri.) Bangkok to Tokyo

Appendix 2. Itinerary of First Survey

- June 24 (Wed.) Leave, Tokyo
- 25 (Thu.) Arrive, Kathmandu
Courtesy call to JICA and NTV
- 26 (Fri.) Courtesy call to the Government of Nepal and the Embassy of Japan. Explanation on the IC/R.
- 27 (Sat.) Team meeting
(Mr. Ichihara leave Kathmandu)
- 28 (Sun.) Survey of studio, transmitter, proposed site for new studio and transmitter house on Mt. Phulchowki
- 29 (Mon.) Explanation on IC/R, Meeting on M/M
- 30 (Tue.) Exchange of Minutes. Report to the Embassy of Japan and JICA office. Courtesy call to the Palace
- July 1 (Wed.) Courtesy call to the Ministry of Education
(Mr. Yasunari and Mr. Ichimura leave Kathmandu)
- 2 (Thu.) Participation to CVC workshop
- 3 (Fri.) Meeting with NTV counterparts
- 4 (Sat.) Team meeting
- 5 (Sun.) Survey of the studio and transmitter in Radio Nepal
Study of programme production in NTV
- 6 (Mon.) Survey of the earth station
Meeting with staff of the Ministry of Education
- 7 (Tue.) Meeting with staff of Telecom
Meeting with staff of NTV
Discussion of programme production
- 8 (Wed.) Meeting on the questionnaire
Survey of the proposed transmitting site
Study of the purchased programme

- 9 (Thu.) Meeting with staff of NTV
Study of programme production schedule
(Mr. Ueda and Mr. Fujimoto arrive at Kathmandu)
- 10 (Fri.) Collection of the member list in NTV
Arrangement of survey maps
Survey of NTV studio
- 11 (Sat.) Arrangement of survey materials
- 12 (Sun.) Move to Pokhara
- 13 (Mon.) Courtesy call to Zonal Commissioner and Visit to schools
Measurement of field strength
Survey for radio transmitter station
- 14 (Tue.) Move to Bhairahawa
Measurement of latent field strength at Bhairahawa
- 15 (Wed.) Move to Kathmandu
- 16 (Thu.) Discussion with NTV executives
Study on programme production cost
Study on studio construction plan
- 17 (Fri.) Meeting for the discussion of proposed transmitter site
Discussion on the programmes
Discussion with staff of finance division
- 18 (Sat.) Team meeting
- 19 (Sun.) Discussion on operation plan
Discussion with staff of the Ministry of Education
Discussion on flow of funds
- 20 (Mon.) Discussion on the schedule of developing plan
Measurement of field strength at Janakpur
Study of construction plan for studio and transmitting site
Meeting on the budget
- 21 (Tue.) Site survey at Janakpur area
Discussion of future plan
Discussion on the personnel, organization, and budget
- 22 (Wed.) Report on the results of the survey to General Manager
Measurement of latent field strength at Biratnagar area

- 23 (Thu.) Inspection tour of TV receiver production company in Kathmandu
Site survey at Biratnagar area
- 24 (Fri.) Regular meeting with staff of NTV
Move to Kathmandu
- 25 (Sat.) Data arrangement, Preparation of progress reports (Draft)
Discussion on transmitter site
- 26 (Sun.) Survey of transmitter site on Mt. Phulchowki
Study and discussion on CVC plan
- 27 (Mon.) Discussion on the organization and personnel plan
Drawing up of progress report (Draft)
Study of building construction plan
- 28 (Tue.) Survey of proposed transmitter site
Drawing up of progress report (Draft)
- 29 (Wed.) Discussion on the progress report with NTV
Measurement of latent field strength at Hotel
Preparation of progress report (Draft)
- 30 (Thu.) Discussion on TV broadcasting network plan
Visit to primary school
Description of progress report (Draft)
- 31 (Fri.) Final regular meeting with staff of NTV
Description of progress report (Draft)
- Aug. 1 (Sat.) Description of progress report (Draft)
- 2 (Sun.) Presentation of progress report (Draft) to NTV and its discussion
Meeting with power supply department
Meeting with Ministry of Education
Discussion on the finance and organization
- 3 (Mon.) Final meeting on the progress report (Draft) with General
Manager and counterparts
Correction of progress report (Draft)

- 4 (Tue.) Presentation of progress report to NTV
Exchange of M/M
Report on the results of survey to the Embassy of Japan and JICA
- 5 (Fri.) Préparation for home coming
(Messrs. Ueda, Fujimoto leave Kathmandu)
- 6 (Thu.) (Messrs. Nishimura, Ohno, Hara, Funakoshi leave Kathmandu)
- 7 (Fri.) (Messrs. Nishimura, Ohno, Hara, Funakoshi arrive at Tokyo)

Appendix 3.

Schedule of Second Survey

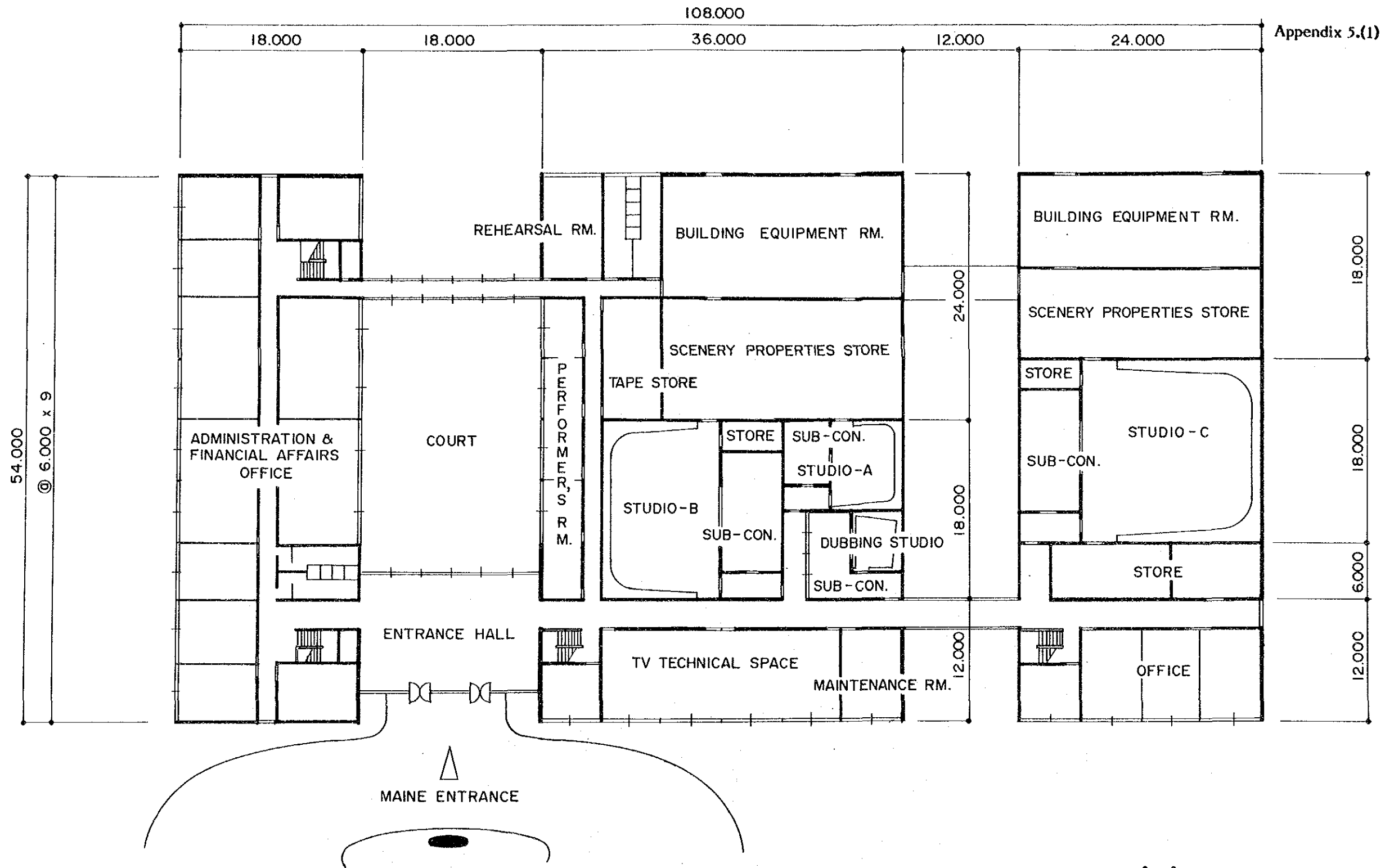
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|----|-------|--------|---|
| 1 | 10/18 | (Sun.) | Trip from Tokyo to Bangkok.
(Messrs. Nishimura, Suenaga, Satoh, Fujimoto) |
| 2 | 19 | (Mon.) | Trip Bangkok to Calcutta, and returned to Bangkok due to the bad weather. |
| 3 | 20 | (Tue.) | Trip from Bangkok to Kathmandu.
Courtesy call to the JICA office. |
| 4 | 21 | (Wed.) | Courtesy call to NTV.
Opening of luggage of test equipment.
Technical Cooperation for the repair of TV transmitter. |
| 5 | 22 | (Thu.) | ditto |
| 6 | 23 | (Fri.) | Explanation on the Interim Report.
Cooperation for the repair of TV transmitter. |
| 7 | 24 | (Sat.) | ditto
Operation test of VHF and UHF communication equipment. (Mr. Hara arrived at Kathmandu) |
| 8 | 25 | (Sun.) | ditto
Exchange of Minutes on Interim report. |
| 9 | 26 | (Mon.) | Courtesy call to the Embassy of Japan.
Operation test of measuring equipment. |
| 10 | 27 | (Tue.) | Operation test of FPU equipment. |
| 11 | 28 | (Wed.) | Tentative installation of FPU equipment in the TV transmitting station and studio. |
| 12 | 29 | (Thu.) | Measurement of field strength within the Kathmandu valley. |
| 13 | 30 | (Fri.) | ditto |
| 14 | 31 | (Sat.) | Move from Kathmandu to Birganj and measurement of field strength of CH-5. |
| 15 | 11/ 1 | (Sun.) | Measurement of field strength in terai area. |
| 16 | 2 | (Mon.) | Preparation for the measurement of field strength in Eastern Terai area.
(Mr. Ueda arrived at Kathmandu) |
| 17 | 3 | (Tue.) | Report on the results of field strength measurement to NTV. |

18	4	(Wed.)	Move from Kathmandu to Janakpur (Group A). Meeting on the site survey in Eastern terai area (Group B).
19	5	(Thu.)	Site Survey at E ₃ point (Group A). Move from Kathmandu to Janakapur (Group B).
20	11/ 6	(Wed.)	Propagation test from Janakpur to site E ₃ .
21	7	(Sat.)	Move from Janakpur to Biratnagar.
22	8	(Sun.)	Propagation test from E ₃ to E ₄ Sites.
23	9	(Mon.)	Move from Biratnagar to Kathmandu.
24	10	(Tue.)	Arrangement of data and materials on the results of propagation test.
25	11	(Wed.)	Report on the results of propagation test to NTV.
26	12	(Thu.)	Detailed explanation on the Interim Report to NTV.
27	13	(Fri.)	ditto
28	14	(Sat.)	Arrangement of test data. (Mr. Ueda leave Kathmandu for Tokyo).
29	15	(Sun.)	Discussion on the site survey in Western terai area. (Messrs. Satoh and Fujimoto leave Kathmandu for Tokyo).
30	16	(Mon.)	Preparation for the site survey in the Western terai area.
31	17	(Tue.)	Move from Kathmandu to Hetauda. Site survey in Hetauda area.
32	18	(Wed.)	Move from Hetauda to Bharatpur, Narayangadh (W ₁), Butwal (W ₂) and Bhairahawa.
33	19	(Thu.)	Move from Bhairahawa to Butwal and Nepalganj. Site survey of W ₃ , W ₄ and W ₅ .
34	20	(Fri.)	Move from Nepalganj to Kohalpur.
35	21	(Sat.)	Move from Nepalaganj to Kathmandu.
36	22	(Sun.)	Arrangement of data and materials.
37	23	(Mon.)	Report on the results of site survey in Western area to NTV.
38	24	(Tue.)	Explanation on the operation of test equipment to NTV staff.

- | | | | |
|----|-------|--------|--|
| 39 | 25 | (Wed.) | Final meeting with NTV executives on the contents of the Interim Report. |
| 40 | 26 | (Thu.) | Meeting with the staff of Nepal Electric Power Authority on the future extension plan of electricity in each site. |
| 41 | 11/27 | (Fri.) | Report on the results of secondary survey to the Embassy of Japan and JICA. |
| 42 | 28 | (Sat.) | Arrangement of survey materials. |
| 43 | 29 | (Sun.) | Tentative hand over of test equipment from JICA to NTV. |
| 44 | 30 | (Mon.) | Trip from Kathmandu to Bangkok.
(Messrs. Nishimura, Suenaga, Hara). |
| 45 | 12/1 | (Tue.) | Trip from Bangkok to Tokyo. |

Appendix 4. Schedule on the Explanation of Draft Final Report

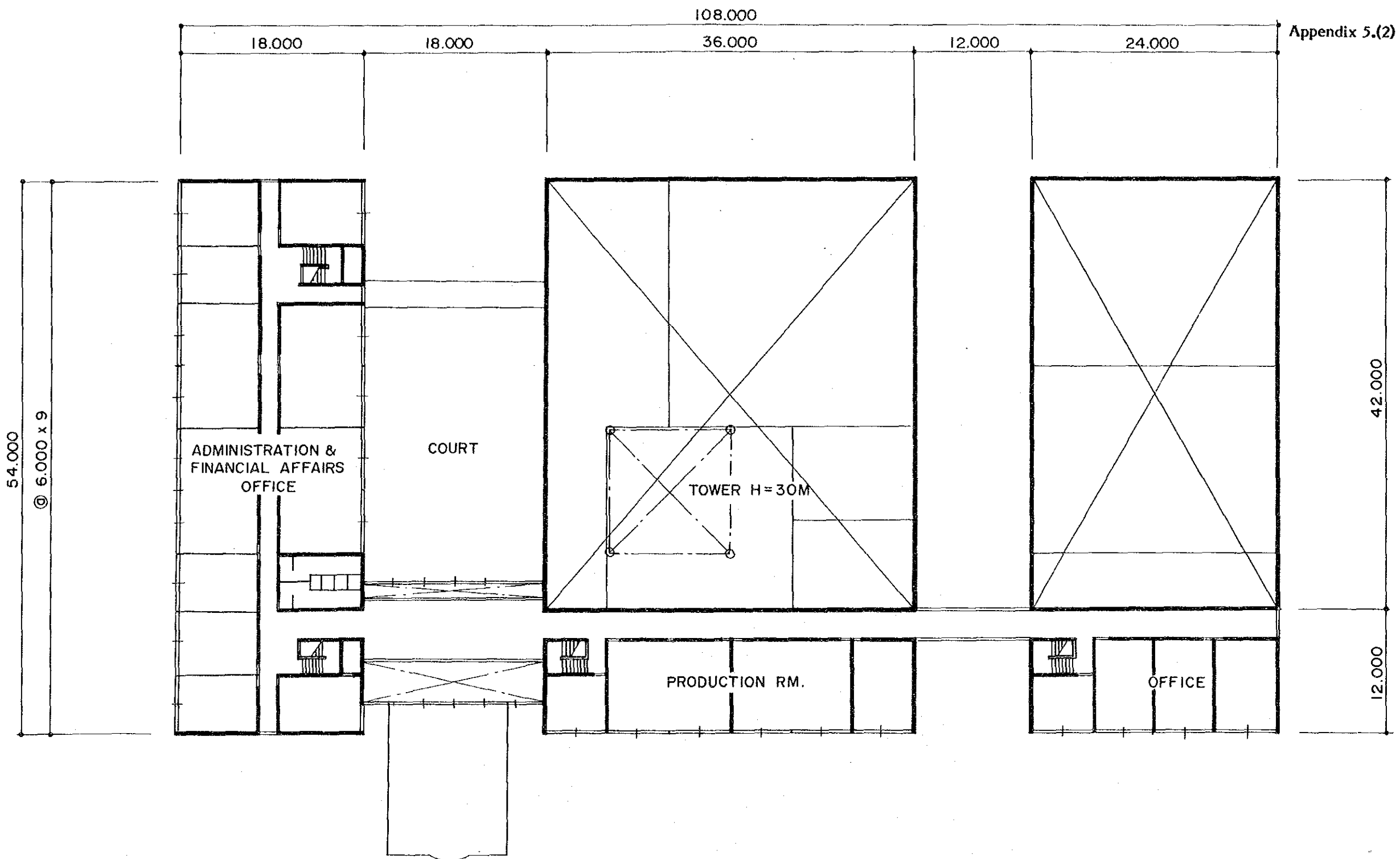
1	2/ 16	(Tue.)	Leave Tokyo
2	17	(Wed.)	Arrive at Kathmandu
3	18	(Thu.)	Courtesy call to JICA and the Embassy of Japan
4	19	(Fri.)	Discussion on the Draft Final Report (D F/R)
5	20	(Sat.)	Provision of the draft of Minutes of Meeting (DF/R)
6	21	(Sun.)	Discussion on the Draft Final Report
7	22	(Mon.)	ditto
8	23	(Tue.)	Exchange of Minutes of Meeting
9	24	(Wed.)	Report to JICA and the Embassy of Japan Leave Kathmandu
10	25	(Thu.)	Arrive at Tokyo



GROUND FLOOR PLAN

SCHEME 'A' SCALE : 1/400

Plan of NTV of Broadcasting Centre

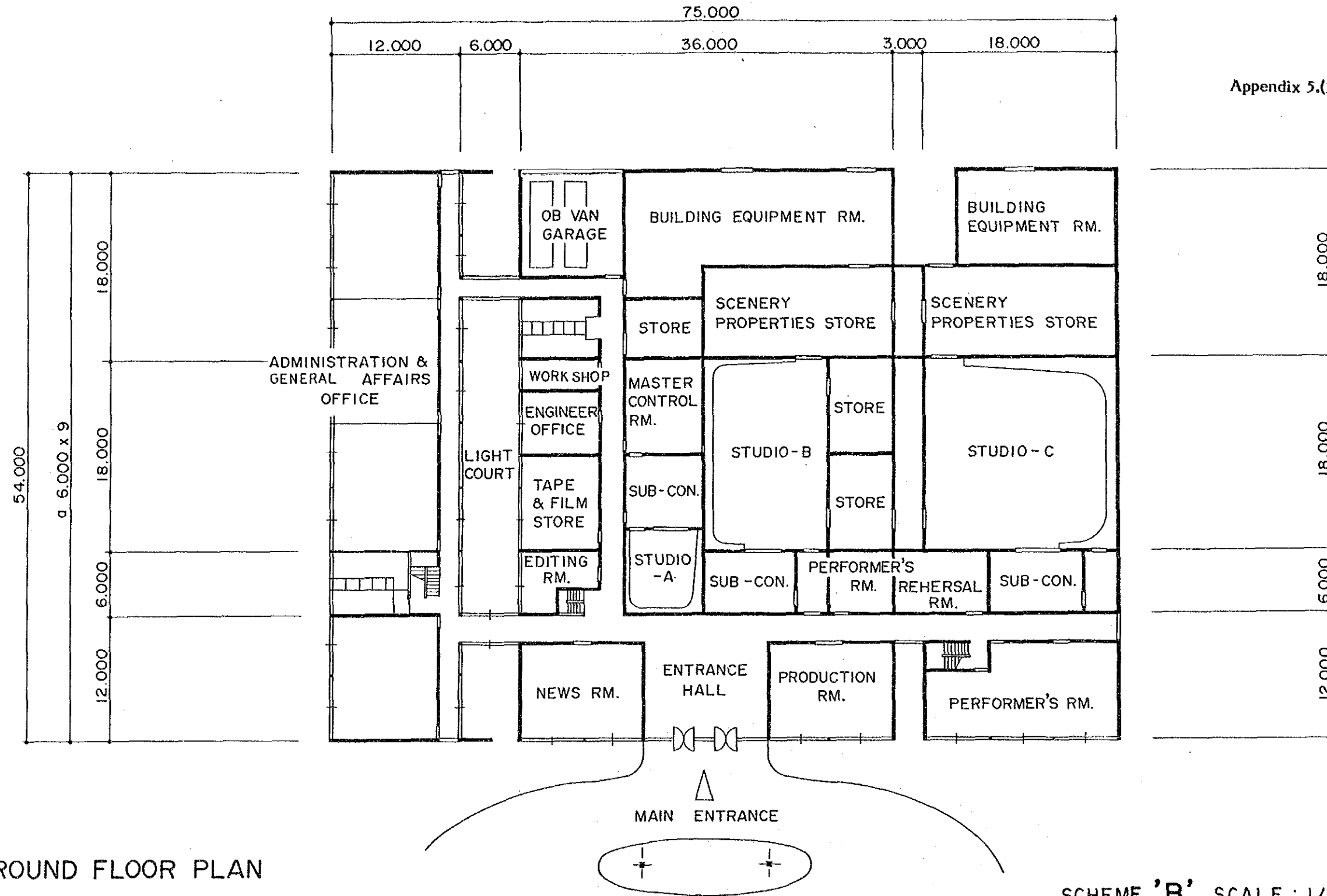


1st FLOOR PLAN

SCHEME 'A' SCALE : 1/400

Plan of NTV of Broadcasting Centre

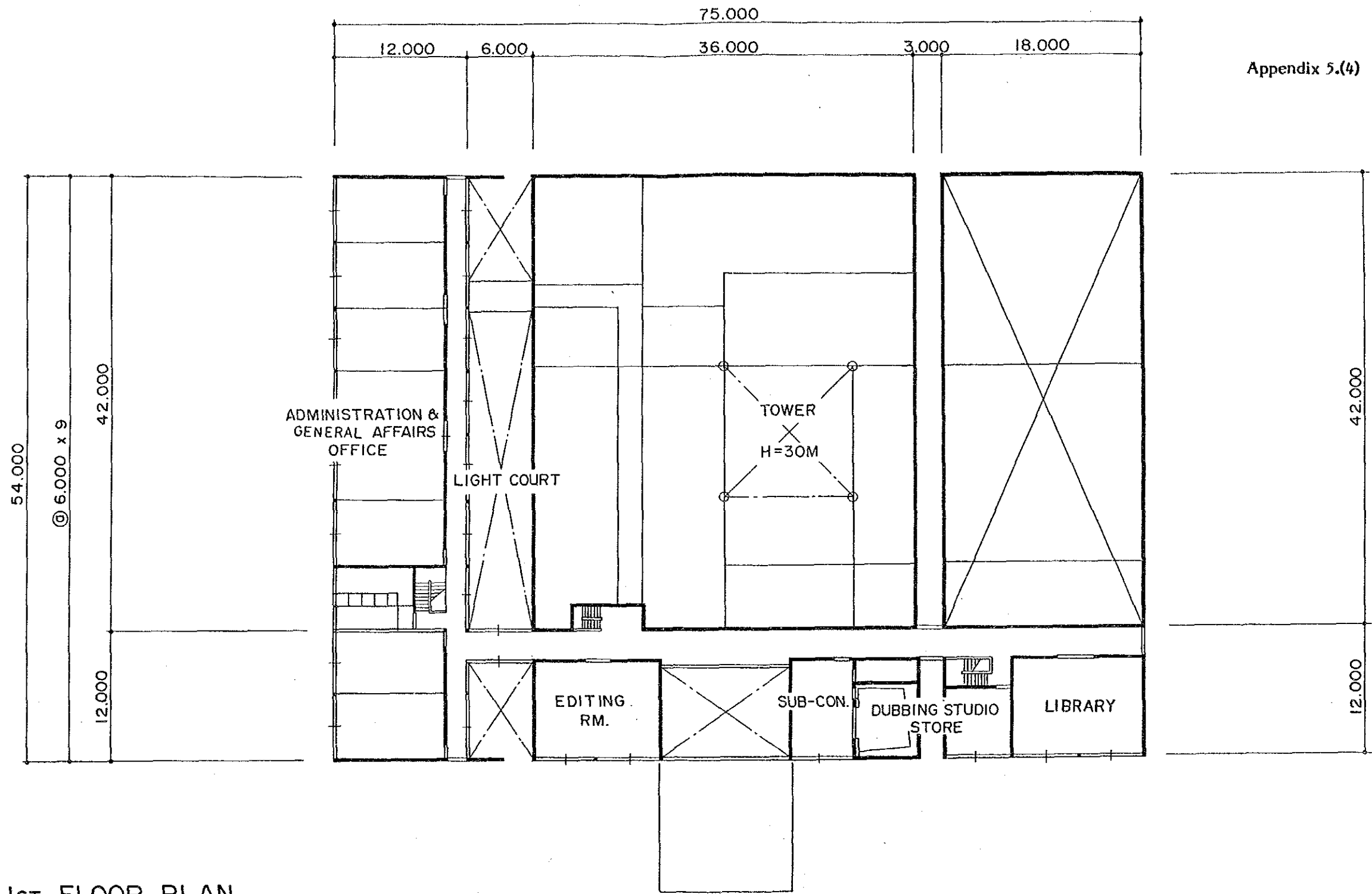
Appendix 5.(3)



GROUND FLOOR PLAN

SCHEME 'B' SCALE : 1/400

Fig. 4-3-2 Plan of NTV of Broadcasting Centre (Proposed Plan)

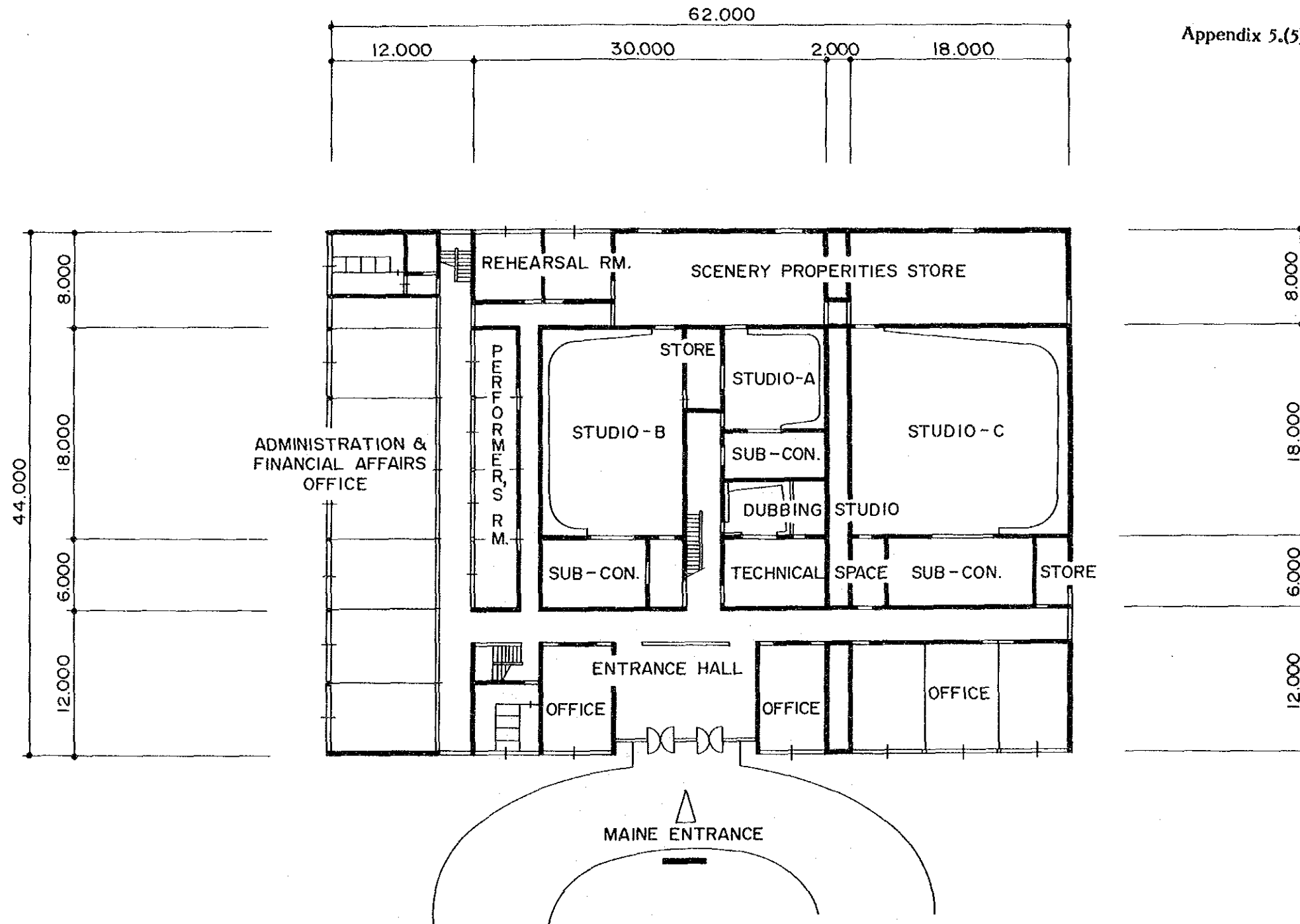


1ST FLOOR PLAN

SCHEME 'B' SCALE : 1/400

Fig. 4-3-3 Plan of NTV of Broadcasting Centre (Proposed Plan)

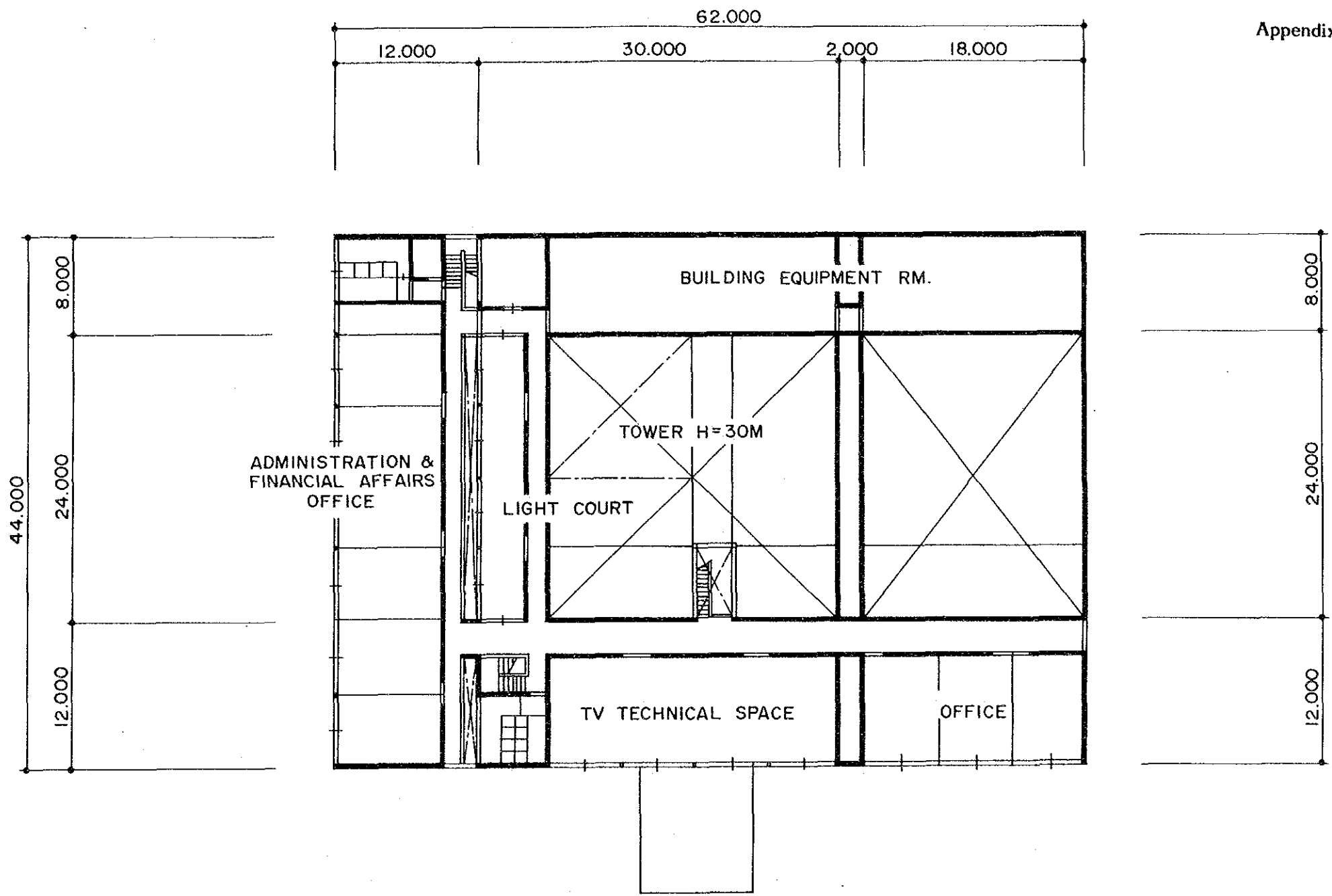
Appendix 5.(5)



GROUND FLOOR PLAN

SCHEME 'C' SCALE : 1/400

Plan of NTV of Broadcasting Centre



Appendix 5.(6)

1ST FLOOR PLAN

SCHEME 'C' SCALE : 1/400
 Plan of NTV of Broadcasting Centre

Appendix 6. Field Strength of Phulchowki TV Station
(ch 5) (in the Kathmandu Valley)

Oct. 29-30, '87

No.*1	Place	Vision Carrier	Sound Carrier	Remarks *2
K1	Dhulikhel	88.8 dBu/m	79.2 dBu/m	
K2	Banepa	66.3	55.0	
K3	Sanga	48.1	32.0	Ghost/Shadow
K4	Bhaktapur	86.4	72.4	
K5	Ring road to Phulchowki	87.5	76.3	
K6	Pharphing	88.5	79.0	
K7	Ring road to Thankot	73.0	62.0	
K8	Balambu	82.5	74.0	0.5km to Earth station
K9	Thankot	69.4	59.4	
K10	Rin road to Burhanilkanth	85.0	76.0	
K11	Burhanilkanth	81.3	74.6	
K12	Ring road to Kakani	86.0	77.0	
K13	On the way to Kakani	49.0	41.0	
K14	Kakani	81.0	71.5	Observation Platform
K15	Sakhu	67.4	59.0	not within the line of sight
K16	Nagarkot	83.2	77.0	

*1 Refer to the map showing measuring points of Field Strength.

*2 Height of receiving antenna is 4m.

Field Strength of Phulchowki TV Station
(ch 5) (Eastern Terai)

Oct. 31, Nov. 1, '87

No.*1	Place	Vision Carrier	Sound Carrier	Remarks *2
1	Birganj	63.5 dB μ /m	51.6 dB μ /m	
2	East-South direction of Kalaiya	68.5	59.0	
3	Gaur	63.0	54.0	
4	Pathalaiya	50.5	36.0	
5		45.0	32.4	
6		56.5	43.5	
7		56.8	43.5	
8		65.0	53.6	
9		34.6	26.0	
10		58.3	46.6	
11		65.0	55.0	
12	Malangwa	71.8	64.5	
13	Hetauda (3km South)	51.5	47.0	
14	" (South)	39.0	31.8	
15	" (North)	Nil	Nil	
16	Tistung	over 60		
17	Naubise	29.0	20.0	

*1 Refer to the map showing measuring points of field strength.

*2 Height of receiving antenna is 4m except for remarks.

Field Strength of Phulchowki TV Station
(ch 5) (Western Terai)

Nov. 5, 6, '87

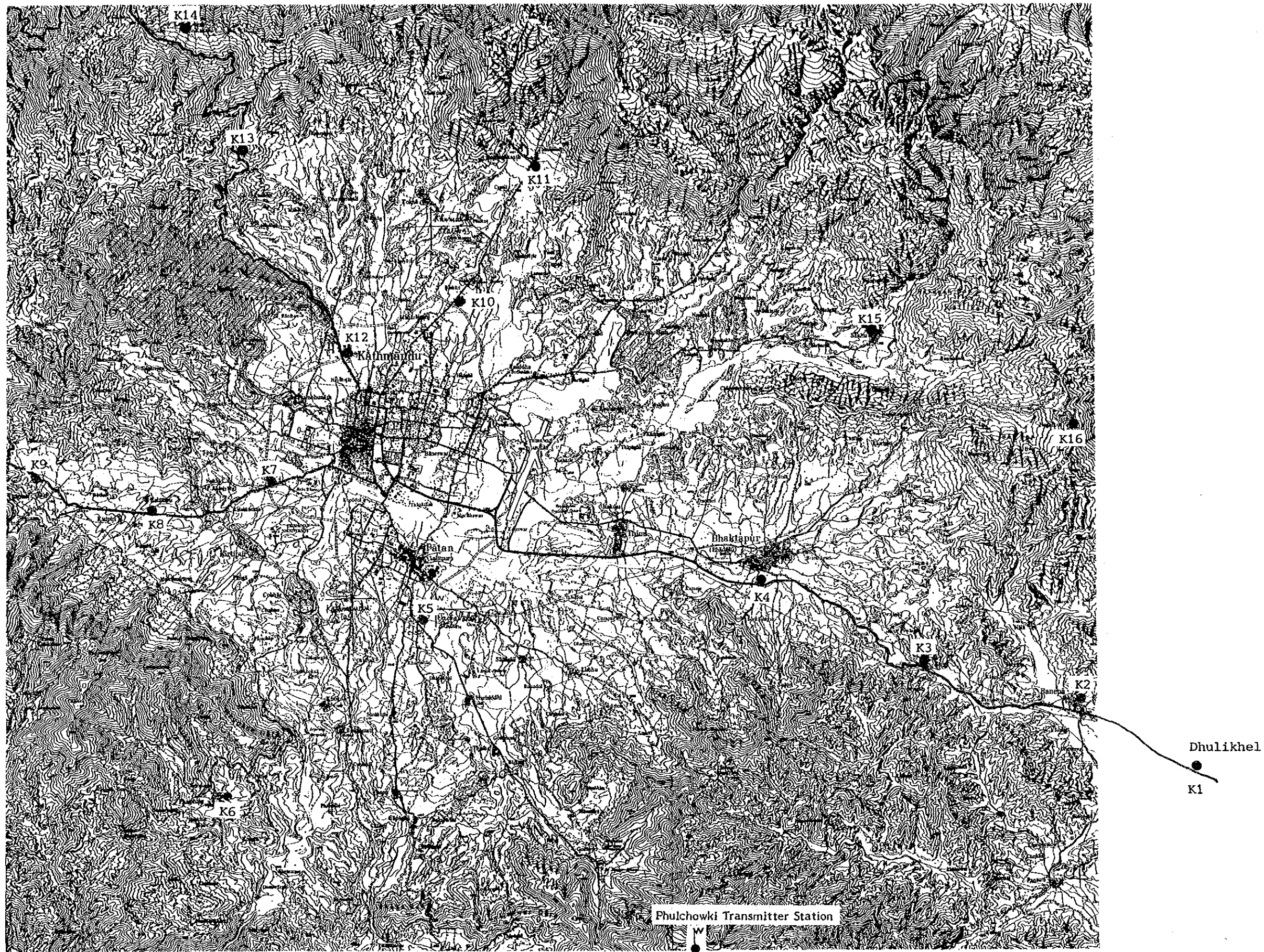
No.*1	Place	Vision Carrier	Sound Carrier	Remarks *2
18	Janakpur	40.0 dB μ /m	35.0 dB μ /m	h = 16m
19	Lahan	32.5	23.0	
20	Golangbazar	25.0	17.0	
21	Siraha (Midpoint)	26.0	21.0	
22	Siraha	41.0	33.0	
23	Jaleswar (a)	53.0	43.0	
24	" (b)	60.0	54.0	
25	E ₃	24.6	27.5	

Nov. 17, 18, '87

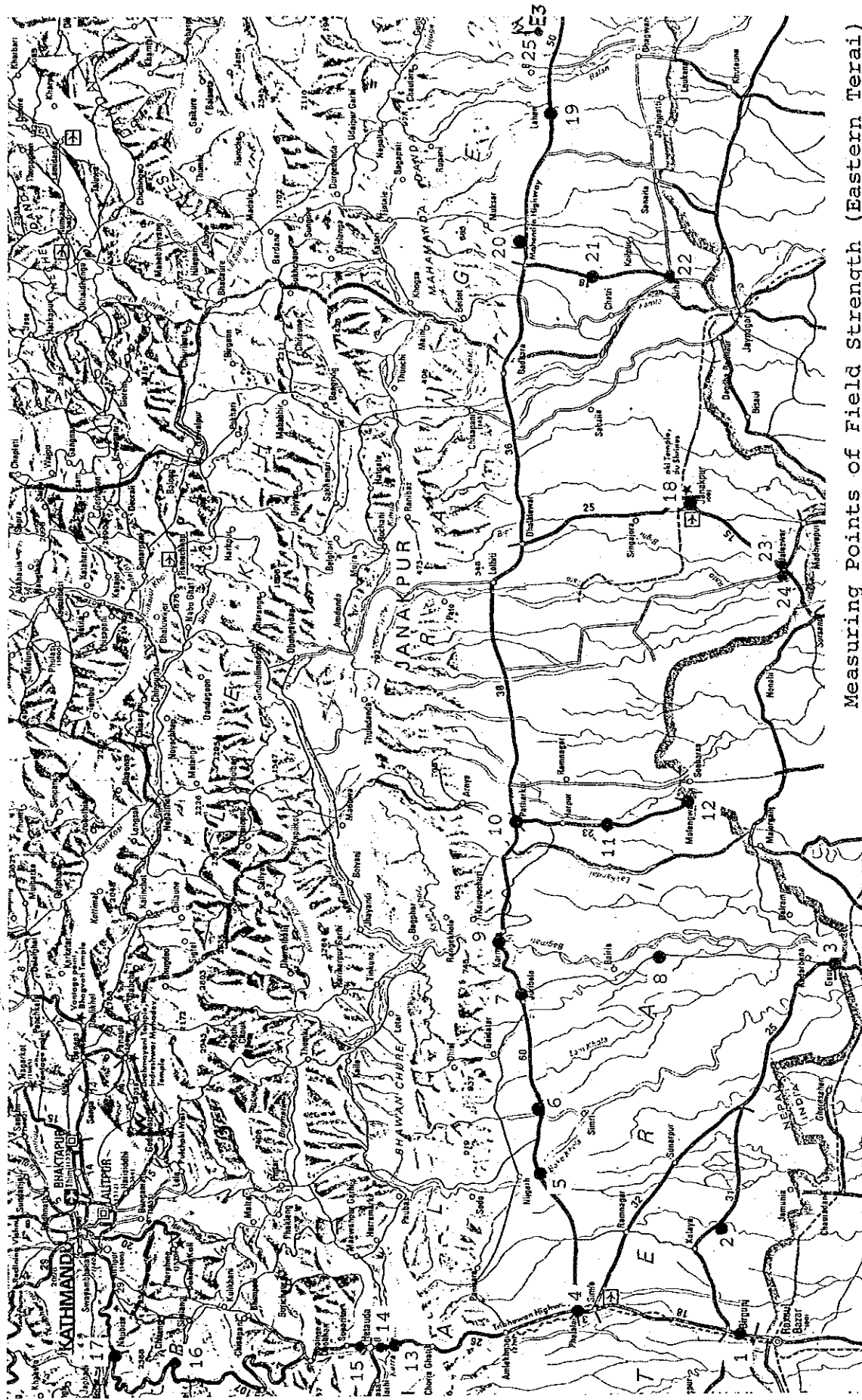
No.*1	Place	Vision Carrier	Sound Carrier	Remarks *2
26	Hetauda	49.5 dB μ /m	38.6 dB μ /m	
27		62.5	54.0	h = 2m
"		57.0	47.6	
"		45.0	40.0	h = 4.5m
28	Bharatpur	25.5	20.0	
29		33.5	24.5	
30		35.5	25.5	h = 4.5m
"		33.5	23.5	
31		32.5	20.5	h = 4.5m
32	Dewanee Devi (W ₁)	55.0	40.5	

*1 Refer to the map showing measuring points of field strength.

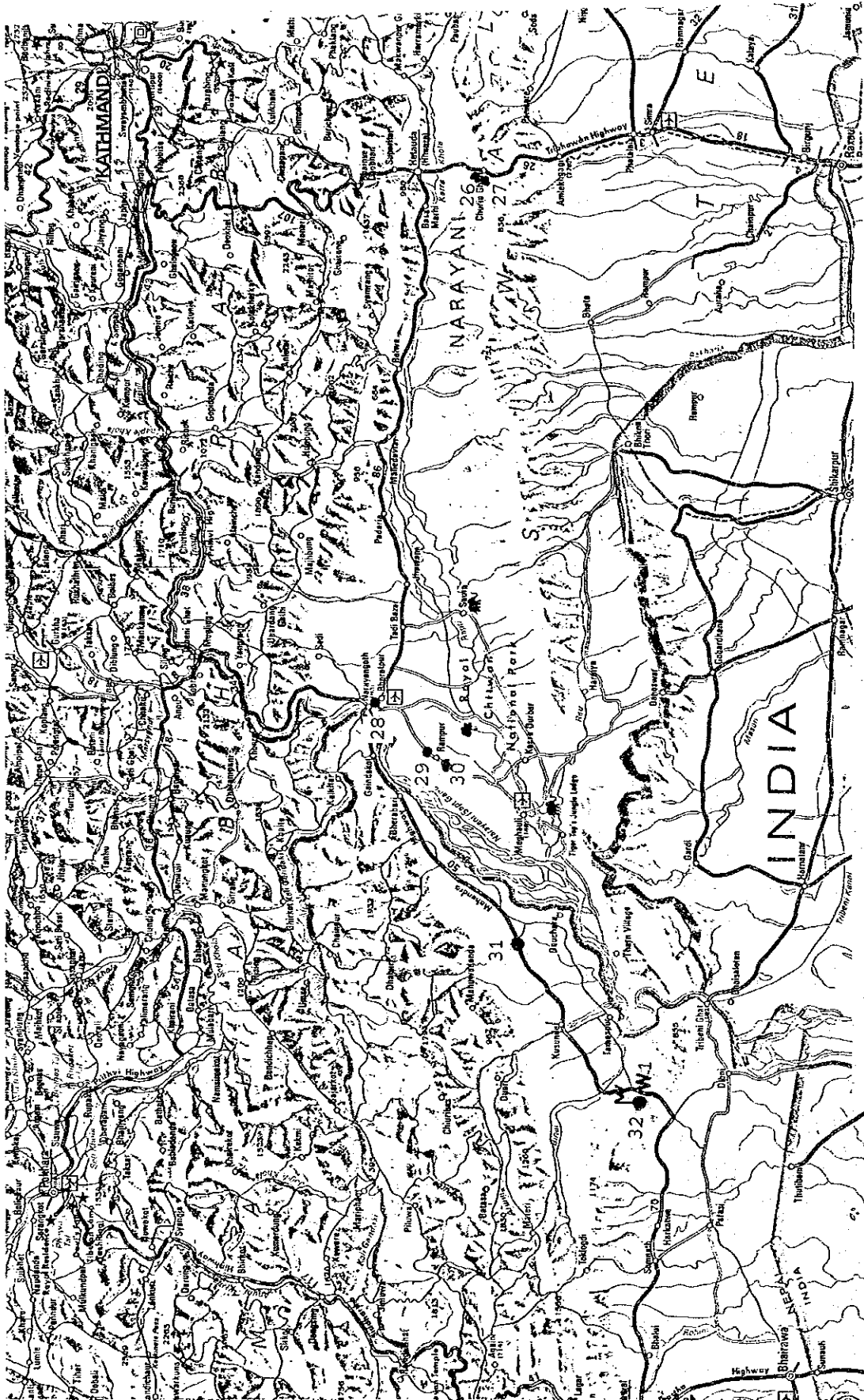
*2 Height of receiving antenna is 4m except for remarks.



Measuring Points of Field Strength (Kathmandu Valley)



Measuring Points of Field Strength (Eastern Terai)

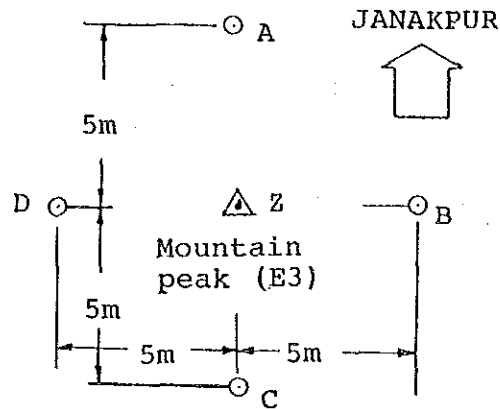


Measuring Points of Field Strength (Western Terai)

Appendix 7. Propagation Test

(1) Janakpur E₃

1) Measuring point (E₃)



2) Measured value

Z	49.0	dBu/m
A	48.7	
B	48.0	
C	46.1 - 47.2	
D	46.2 - 47.0	

3) Expected Field Strength of Jaleswar station at E₃ is over 62 dBu/m

(Calculation)

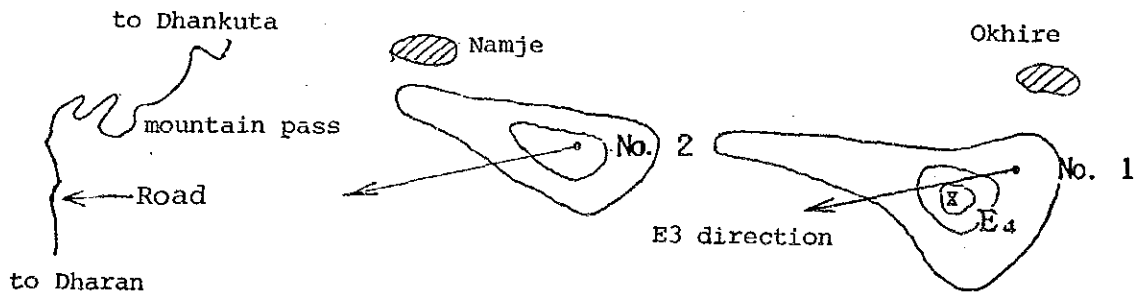
- o E.R.P. of test transmitter 151 W *1
- o E.R.P. of TE₂ station 12.7kW (refer to Table 3-4-4)
- o Compensation factor for the measured value of propagation test

$$10 \cdot \log \frac{12,700}{151} = 19\text{dB}$$
- o Horizontal directivity of TE₂ to E₃ direction with refer to maximum radiation -2dB
- o Distance compensation factor for the change of the Transmitter station from Janakpur to Jaleswar -1.5dB *2

*1	antenna gain	7.8dB
	feeder loss	-3.0dB
		<hr/>
		4.8dB (3.02 times)
	transmitter output power	50W
	E.R.P.	151W
*2	distance from Janakpur to E ₃	66.3km
	distance from Jaleswar to E ₃	78.8km
	distance compensation	$20 \cdot \log \frac{66.3}{78.8} = -1.5\text{dB}$

(2) E₃ E₄

1) Measured point



2) Measured value

No.1 26.5 dBu/m
No.2 49.8 dBu/m

3) Expected Field Strength of E₃ station at E₄ is over 65 dBu/m(No.2 point)

(Calculation)

- o E.R.P. at propagation test 25 W *1
 - o E.R.P. of E₃ 1.7kW
 - o Compensation for the measured value of propagation test
- $$10 \cdot \log \frac{1700}{25} = 18.3\text{dB}$$

o Horizontal directivity of E_3 to E_4 direction with refer to maximum radiation. 2dB

*1 antenna gain	8.5dB
feeder loss	-1.5dB
<hr/>	
	7.0dB (5.01 times)
transmitter out put power	5W
E.R.P.	25W

*2 As there is jungle at area around E_4 , it was impossible to access E_4 and so we measured at point No.1 and No.2 (another peak near E_4) instead of E_4 .

Appendix 8. Latend Field Strength

Place : Top of Mt. Phulchowki

Date June 28, '87

Time 16.00~16.30

Channel	Measured Value (dB μ /m)		Remarks
	F V	F A	
2~5	nil	nil	Dipole:Horizontal
6	49.7	42~43	"
7	43.8	-	"
8	30.0	25	"
9	62.3	54	"
10	81.0	63.2	"
11	nil	nil	"
12	48.9	37.0	"

Receiving antenna height : 4m above ground level.

Place : Pokhara (Square in front of Hotel Crystal)

Date July 13, '87

Time 19.00~19.30

Channel	Measured Value (dB μ /m)		Remarks
	F V	F A	
2~3	nil	nil	
4	29/25~30	14/v.w.	
5	nil	nil	
6	19/v.w. (18)	19~20/v.w. (14)	
7	nil	nil	
8	28 29/27.6	v.w. (13.5)/15	
9	45/38.5	27/22~23	
10	28~29/34	16/14	
11~12	nil	nil	
Dipole:Horizontal/Vertical			

Receiving antenna height : 4m above ground level

Latent Field Strength

Place : Bhairahawa (Square in front of Hotel Lumbini)

Date July 14, '87

Time 19.00 ~ 19.30

Channel	Measured Value (dB μ /m)		Remarks
	F V	F A	
2~8	nil	nil	Dipole:Horizontal
9	38	31	"
10	v.w. (18~19)	nil	"
11~12	nil	nil	"

Receiving antenna height : 4m above ground level.

Place : Janakpur (Square in front of the Guest House)

Date July 20, '87

Time 19.30 ~ 20.00

Channel	Measured Value (dB μ /m)		Remarks
	F V	F A	
2~5	nil	nil	Dipole:Horizontal
6	25~26.5	14~15	"
7~9	nil	nil	"
10	38	20.6	"
11~12	nil	nil	"

Receiving antenna height : 4m above ground level.

Latent Field Strength

Place : Biratnagar (Square in front of the Hotel Ashiyana)

Date July 22, '87

Time 20.30~20.50

Channel	Measured Value (dB μ /m)		Remarks
	F V	F A	
2~5	nil	nil	Dipole:Horizontal
6	21	v.w. (11)	"
7	nil	nil	"
8	60	50	"
9	nil	nil	"
10	26~27	v.w. (12)	"
11~12	nil	nil	"

Receiving antenna height : 4m above ground level.

Place : Kathmandu (Rooftop of the Hotel Himalaya)

Date July 29, '87

Time 19.00~19.20

Channel	Measured Value (dB μ /m)		Remarks
	F V	F A	
2~3	nil	nil	Dipole:Horizontal
4	89	75.9	NTV "
5	nil	nil	"
6	24	12.5	"
7	nil	nil	"
8	v.w. (19)	nil	"
9	24.6	v.w. (11.2)	"
10	50	34	"
11~12	nil	nil	"

Receiving antenna height : 4m above rooftop
(approx. 20m above ground level.)

Latent Field Strength

Place : Birgangj (Rooftop of the Hotel Diyalo)

Date Oct. 31, '87

Time 21.00~21.30

Channel	Measured Value (dB μ /m)		Remarks
	F V	F A	
2~4	nil	nil	
5	57.6	45.5	Phulchouki (NTV)
6	31	20.2	
7~8	nil	nil	
9	19.8	v.w. (10.7)	
10	36.5	15.7	
11~12	nil	nil	
Dipole : Horizontal			

Receiving antenna height : 4m above rooftop.
(approx. 15m above ground level.)

Place : Janakpur (Rooftop of the Hotel Holiday)

Date Nov. 5, '87

Time 20.00~20.30

Channel	Measured Value (dB μ /m)		Remarks
	F V	F A	
2~3	nil	nil	
4	v.w. (11.5)	nil	
5	39.5~41.1	35~36	NTV
6	43	42	
7	32	22	
8	23~26	13.7	
9	21.5	v.w. (10)	
10	53.3	35	
11	nil	nil	
12	37.5	27	
Dipole : Horizontal			

Receiving antenna height : 4m above rooftop.
(approx. 15m above ground level.)

Latent Field Strength

Place : E 3

Date Nov. 6, '87

Time 12.00~12.30

Channel	Measured Value (dB μ /m)		Remarks
	F V	F A	
2~3	nil	nil	Dipole:Horizontal
4	v.w. (17)	v.w. (6)	"
5	22~27	27.5	NTV "
6	32	24	"
7	24.3	12	"
8	32.3	26.2	"
9	22.7	v.w. (11.6)	"
10	35.3	22	"
11	nil	nil	"
12	38	25	"

Receiving antenna height : 4m above ground level.

Place : Bhairahawa (Rooftop of the Hotel Lumbini)

Date Nov.18, '87

Time 20.45~21.00

Channel	Measured Value (dB μ /m)		Remarks
	F V	F A	
2~3	nil	nil	Dipole:Horizontal
4	20	v.w. (12)	"
5	30.5~31	26.5	NTV "
6	v.w. (15.8)	v.w. (9)	"
7	23.8~24	nil	"
8	26.5~28.8	13.5~14	"
9	37	29	"
10	29	v.w. (10)	"
11~12	nil	nil	"

Receiving antenna height : 4m above rooftop.
(approx. 15m above ground level.)

Latent Field Strength

Place : Nepalganj (Square in front of the Hotel Sneha)

Date Nov. 19, '87

Time 19.30~20.00

Channel	Measured Value (dB μ /m)		Remarks
	F V	F A	
2~3	nil	nil	Dipole:Horizontal
4	23	v.w.(8)	"
5~7	nil	nil	"
8	20	v.w.(9.5)	"
9~12	nil	nil	"

Receiving antenna height : 4m above ground level.

Appendix 9. TV Channel Frequencies in VHF and UHF Bands

VHF TV channel

Band I		Band III			
ch	MHz vision/sound	ch	MHz vision/sound	ch	MHz vision/sound
E-2	48.25/53.75	E-5	175.25/180.75	E-9	203.25/208.75
E-2A	49.75/55.25	E-6	182.25/187.75	E-10	210.25/215.75
E-3	55.25/60.75	E-7	189.25/194.75	E-11	217.25/222.75
E-4	62.25/67.75	E-8	196.25/201.75	E-12	224.25/229.75

UHF TV channel

Band IV		Band V			
ch	MHz vision/sound	ch	MHz vision/sound	ch	MHz vision/sound
21	471.25/476.75	39	615.25/620.75	57	759.25/764.75
22	479.25/484.75	40	623.25/628.75	58	767.25/782.75
23	487.25/492.75	41	631.25/636.75	59	775.25/780.75
24	495.25/500.75	42	639.25/644.75	60	783.25/788.75
25	503.25/508.75	43	647.25/652.75	61	791.25/796.75
26	511.25/516.75	44	655.25/660.75	62	799.25/804.75
27	519.25/524.75	45	663.25/668.75	63	807.25/812.75
28	527.25/532.75	46	671.25/676.75	64	815.25/820.75
29	535.25/540.75	47	679.25/684.75	65	823.25/828.75
30	543.25/548.75	48	687.25/692.75	66	831.25/836.75
31	551.25/556.75	49	695.25/700.75	67	839.25/844.75
32	559.25/564.75	50	703.25/708.75	68	847.25/852.75
33	567.25/572.75	51	711.25/716.75	69	855.25/860.75
34	575.25/580.75	52	719.25/724.75		
35	583.25/588.75	53	727.25/732.75		
36	591.25/596.75	54	735.25/740.75		
37	599.25/604.75	55	743.25/748.75		
38	607.25/612.75	56	751.25/756.75		

In Nepal, final frequency allocation plan in UHF band is not yet determined.

Appendix 10. Financial Condition of NTV

NEPAL TELEVISION
STATEMENT OF PROFIT AND LOSS
FOR THE YEAR ENDED 1985/86 and 1986/87

(Amount in NRs)

Particulars	1985/86	1986/87
<u>Income:</u>		
o Gross income from commercial	1,233,250	2,957,430
Less: Agency commission etc.	-97,377	-374,216
o Production fee	34,020	539,150
o Cassette transfer fee	19,035	30,396
o Other income	218,550	53,915
o Grants from HMG	-	3,772,000
Total income	1,407,478	6,978,675
<u>Expenditure:</u>		
o Production and purchase of programmes	165,911	637,138
o Purchase of News	-	75,000
o Production of advertisement	-	5,385
o Raw material purchase (VHS Cassette)	135,295	120,207
o Mentenance and Repair	405,605	99,603
o Training expense	40,781	24,437
o Depreciation	380,223	2,327,893
o Personnel wages	843,681	2,127,617
o Travelling expense	367,904	189,921
o Fuel for vehicles	87,536	212,004
o Office materials	565,310	193,245
o Postage/Telex/Telephone	57,651	106,951
o Interest and Bank commission	336,499	1,635,998
o Other expense	526,579	657,949
Total expenditure	3,912,975	8,413,348
<u>Loss (Surplus)</u>	<u>-2,505,497</u>	<u>-1,434,673</u>

NEPAL TELEVISION
STATEMENT OF BALANCE-SHEET
FOR THE YEAR ENDED 1985/86 AND 1986/87

(Amount in NRs.)

Assets	July 15, 1986	July 16, 1987	Liabilities and Shareholders' Equity	July 15, 1986	July 16, 1987
<u>Current Assets:</u>			<u>Current Liabilities:</u>	<u>9,685,033</u>	<u>9,585,862</u>
Receivable from customers	7,629,976	<u>8,939,444</u>	Short-term debt (Bank loan)	9,400,000	9,400,000
Advance to employee	328,626	350,675	Advance from customers	9,340	89,220
Other advance and deposit	53,518	75,493	Payable to employee	24,590	19,407
L/C margin	665,494	482,558	Other liabilities	251,103	77,235
Cash and Bank balance	680,000	384,000			
	5,902,338	7,646,718			
<u>Fixed Assets (After depreciation):</u>			<u>Shareholders' Equity capital:</u>	<u>3,000,000</u>	<u>12,228,000</u>
Plant and Machinery	2,594,151	<u>8,978,839</u>	<u>Profit and Loss A/C:</u>	<u>-2,460,906</u>	<u>-3,895,579</u>
Furniture	1,675,444	7,841,242	Up to the end of previous year's profit (Loss)	44,591	-2,460,906
Vehicles	135,402	188,349	Add: Profit (Loss) of this year	-2,505,497	-1,434,673
	783,305	949,248			
Total	10,224,127	17,918,283	Total	10,224,127	17,918,283

NEPAL TELEVISION
SOURCES & USES OF FUND,
FISCAL YEAR 1987/88 (PROVISION)

Particulars	Amount in Rs.	Amount in Rs.
<u>SOURCES OF FUND:-</u>		
o Opening Bank Balance	7,000,000	
o Accounts Receivable	500,000	
o Govt. grants	5,072,000	
o Govt. investment on Shares	* 9,428,000	
o Commercial Revenue	4,570,000	26,570,000

	* Not including Extra Budget for SAARC	
<u>USES OF FUND:-</u>		
o Programme Section	6,600,000	
o News Section	4,735,000	
o Engineering Section	9,810,000	
o Administration Section	4,075,000	25,220,000
	-----	-----
o Closing Balance of Cash		1,350,000
		=====

NEPAL TELEVISION
SOURCES & USES OF FUND,
FISCAL YEAR 1987/88 (PROVISION)

Particulars	Amount in Rs.	Amount in Rs.
-------------	---------------	---------------

USES OF FUND:

PROGRAMME SECTION:-

o	Programme Production Expense	4,800,000	
o	Travelling Expense	200,000	
o	Rent Expense (Motor & Camera)	50,000	
o	Training Expense	250,000	
o	Fuel Expense	135,000	
o	Vehicles Expense	400,000	
o	Wedges Expenses	765,000	6,600,000

NEWS SECTION:-

o	Reporting Expense (Asia Vision R.S.S. Bulletin)	3,075,000	
o	Travelling Expense	200,000	
o	Rent Expense (House, Motor & Camera)	250,000	
o	Fuel/Water/Electricity Expense	150,000	
o	Wedges Expense	620,000	
o	Vehicle Expense	400,000	
o	Books & News paper	40,000	4,735,000

Particulars	Amount in Rs.	Amount in Rs.
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ENGINEERING SECTION:-

o Maintenance Expense	1,500,000	
o Projection Study of National Network Project	500,000	
o Community Viewers' Centre	340,000	
o Machinery & Equipment Expense	6,650,000	
o Wedges Expense	745,000	
o Fuel Expense	75,000	9,810,000

ADMINISTRATION SECTION:-

o Wedges Expense	870,000	
o Postage/Telephone/Telex Expense	200,000	
o Furniture & Office Expense	300,000	
o Bank Interest	1,800,000	
o Board of Directors' Expense	100,000	
o Auditing Expense	20,000	
o Legal Expense	25,000	
o Advertisement Expense	100,000	
o Insurance Expense	100,000	
o Donation & Prizes	20,000	
o Renewals & Fees	50,000	
o Reception Expense	100,000	
o Stationery Expense	150,000	
o Medical Facility Expenses	100,000	
o Miscellaneous Expense	140,000	4,075,000

TOTAL:-

25,220,000

Appendix 11. Growth of Population

NATIONAL POPULATION COMMISSION

District Population Survey Report

Fertility Rate - 4 (2000)

Eastern Development Region

District	1985 Population	1990 Population	1995 Population	2000 Population
TAPLEJUNG	123,221	124,350	120,394	116,874
SANKHUWASABHA	132,250	133,919	137,035	138,131
SOLUKHUMBU	91,262	93,891	94,521	93,434
PANCHTHAR	158,669	159,699	152,564	142,772
ILAM	192,286	209,305	224,472	237,741
TERHATHUM	97,226	82,362	70,995	58,167
DHANKUTA	137,921	147,586	155,453	161,722
BHOJPUR	196,144	197,456	198,422	195,992
KHOTANG	214,667	213,147	205,270	192,180
OKHALDHUNGA	142,119	146,187	146,914	144,334
UDAYAPUR	182,105	212,442	243,384	273,346
JHAPA	619,248	804,998	1,012,324	1,234,073
MORANG	663,647	847,971	1,009,938	1,177,805
SUNSARI	398,991	474,046	553,477	635,437
SAPTARI	420,659	475,374	529,569	574,585
SIRAHA	410,480	455,780	499,000	539,111
TOTAL	4,180,895	4,778,513	5,353,732	5,915,704

Fertility Rate - 4 (2000)

Central Development Region

District	1985 Population	1990 Population	1995 Population	2000 Population
DOLHKA	156,398	162,166	164,998	165,554
SINDHUPALCHOW	242,094	252,349	257,856	258,617
RASUWA	31,426	32,718	33,370	33,334
RAMECHHAP	159,716	153,764	142,123	125,816
SINDHULI	198,370	216,243	231,728	244,908
NUNAKOT	213,494	225,053	232,817	236,730
DHADING	256,601	272,402	283,898	291,265
KABHE	335,726	372,667	407,936	441,063
BHAKTAPUR	177,647	201,696	225,342	247,233
KATHMANDU	458,658	505,500	574,701	589,132
LALITPUR	203,987	230,323	256,330	281,659
MAKAWANPUR	280,723	331,979	385,655	440,077
DHANUSA	480,968	544,951	608,883	671,582
MAHOTTARI	396,060	442,101	486,172	526,330
SARLAHI	455,456	533,548	617,060	695,444
CHITAWAN	297,972	350,231	404,561	449,385
ROUTAHAT	372,530	427,265	482,238	534,183
BARA	361,527	419,458	478,028	532,679
PARSA	325,170	381,861	439,451	495,264
TOTAL	5,404,523	6,056,275	6,713,147	7,260,255

Fertility Rate - 4 (2000)

Western Development Region

District	1985 Population	1990 Population	1995 Population	2000 Population
MANANG	6,611	5,820	4,674	3,163
MUSTANG	14,061	15,586	16,947	18,374
GORKHA	250,918	276,735	303,450	328,943
LAMJUNG	164,835	180,858	195,380	207,403
KASKI	248,840	286,575	325,175	363,505
PARBAT	133,464	138,622	140,783	139,735
TANAHUO	250,365	287,046	321,848	354,921
SYANJA	278,293	282,875	279,349	266,549
PALPA	231,658	251,208	267,632	279,790
GULMI	250,545	264,913	275,291	281,532
ARGHAKHANCHI	168,918	183,990	197,662	210,542
MYAGDI	100,976	103,620	105,345	108,836
BAGLUNG	231,153	250,905	269,132	282,635
NAWAL PARASI	374,081	467,351	569,560	677,512
RUPANDEHI	446,642	545,448	652,126	762,687
KAPILVASTU	301,145	343,629	385,721	424,352
TOTAL	3,452,505	3,885,181	4,310,175	4,710,479

Fertility Rate - 4 (2000)

Middle Western Development Region

District	1985 Population	1990 Population	1995 Population	2000 Population
HUMLA	16,653	10,604	7,207	4,129
MUGU	50,971	61,125	71,858	82,704
KALIKOT	94,981	104,152	112,557	120,045
JUMLA	71,846	74,614	75,835	75,933
DOLPA	23,560	24,947	26,096	27,174
RUKUM	146,943	165,757	184,226	201,913
ROLPA	171,606	173,523	170,031	161,666
SALYAN	155,515	156,479	152,461	143,037
PYUTHAN	166,624	176,470	183,120	185,871
JAJARKOT	105,146	111,408	115,666	112,361
DAILEKH	171,943	175,768	174,893	168,448
SURKHET	197,349	241,257	288,557	337,551
DANG	307,395	362,762	419,996	476,661
BANKE	244,100	299,042	357,867	417,328
BARDIYA	250,739	325,043	407,348	433,616
TOTAL	2,175,371	2,462,951	2,747,718	2,948,437

Fertility Rate - 4 (2000)

Far Western Development Region

District	1985 Population	1990 Population	1995 Population	2000 Population
BAJURA	80,178	87,626	94,297	99,821
BAJHANG	130,078	136,616	140,680	141,025
DARCHUYLA	96,738	104,815	114,185	119,568
ACHHAM	193,199	201,667	211,477	234,052
DOTI	164,530	178,457	194,753	209,260
BAITADI	187,602	197,002	202,785	204,278
DADELDHUKA	100,229	118,724	138,244	158,197
KAILALI	323,365	417,160	506,301	599,217
KANCHANPUR	223,613	303,354	393,044	488,896
TOTAL	1,499,530	1,745,421	1,995,766	2,254,314
NEPAL	16,712,824	18,928,341	21,120,538	23,089,189

Appendix 12. Average Population per Ward

Eastern Development Region

District	Village : Panchayat	Village : Panchayat Ward	Town : Panchayat	Town : Panchayat Ward	Total Ward	* Total : Population of District	Average : Population per Ward
TAPLEJUNG	48	432	—	—	432	124,350	288
SANKHUWASABHA	36	324	—	—	324	133,919	413
SOLUKHUMBU	34	306	—	—	306	93,891	307
PANCHTHAR	45	405	—	—	405	159,699	394
ILAM	48	432	1	9	441	209,305	475
TERHATHUM	31	279	—	—	279	82,362	295
DHANKUTA	35	315	1	9	324	147,586	456
BHOJPUR	63	567	—	—	567	197,456	348
KHOTANG	76	684	—	—	684	213,147	312
OKHALDHUNGA	54	486	—	—	486	146,187	301
UDAYAPUR	47	423	—	—	423	212,442	502
JHAPA	49	441	2	34	475	804,998	1,695
MORANG	65	585	1	22	607	847,971	1,397
SUNSARI	50	450	2	29	479	474,046	990
SAPTARI	114	1,026	1	10	1,036	475,374	459
SIRAHA	111	999	1	10	1,009	455,780	452
TOTAL	906	8,154	9	123	8,277	4,778,513	577

* Estimate population as of the year 1990

Source: National Population Commission

Central Development Region

District	Village : Panchayat	Village : Panchayat Ward	Town : Panchayat	Town : Panchayat Ward	Total : Ward	* Total : Population of District	Average : Population per Ward
DOLHKA	: 54	: 486	: —	: —	: 486	: 162,166	: 334
SINDHUPALCHOW	: 79	: 711	: —	: —	: 711	: 252,349	: 355
RASUWA	: 18	: 162	: —	: —	: 162	: 32,718	: 202
RAMECHHAP	: 55	: 495	: —	: —	: 495	: 153,764	: 311
SINDHULI	: 55	: 495	: —	: —	: 495	: 216,243	: 437
NUNAKOT	: 80	: 540	: 1	: 11	: 551	: 225,053	: 408
DHADING	: 50	: 450	: —	: —	: 450	: 272,402	: 605
KABHE	: 96	: 864	: 2	: 20	: 884	: 372,667	: 422
BHAKTAPUR	: 21	: 189	: 1	: 17	: 206	: 201,696	: 979
KATHMANDU	: 66	: 594	: 1	: 33	: 627	: 505,500	: 806
LALITPUR	: 40	: 360	: 1	: 22	: 382	: 230,323	: 603
MAKAWANPUR	: 43	: 387	: 1	: 11	: 398	: 331,979	: 834
DHANUSA	: 102	: 918	: 1	: 15	: 933	: 544,951	: 584
MAHOTTARI	: 76	: 684	: 1	: 13	: 697	: 442,101	: 634
SARLAHI	: 100	: 900	: 1	: 9	: 909	: 533,548	: 587
CHITAWAN	: 38	: 342	: 1	: 19	: 361	: 350,231	: 970
ROUTAHAHAT	: 101	: 909	: —	: —	: 909	: 427,285	: 470
BARA	: 104	: 936	: 1	: 11	: 947	: 419,458	: 561
PARSA	: 81	: 729	: 1	: 19	: 748	: 381,861	: 511
TOTAL	1,239	11,151	13	200	11,351	6,056,275	534

* Estimate population as of the year 1990

Western Development Region

District	Village : Panchayat	Village : Panchayat Ward	Town : Panchayat	Town : Panchayat Ward	Total Ward	* Total : Population of District	Average : Population per Ward
MANANG	: 12	: 108	: —	: —	: 108	: 5,820	: 54
MUSTANG	: 16	: 144	: —	: —	: 144	: 15,586	: 108
GORKHA	: 68	: 612	: —	: —	: 612	: 276,735	: 452
LAMJUNG	: 61	: 549	: —	: —	: 549	: 180,858	: 329
KASKI	: 47	: 423	: 1	: 18	: 441	: 286,575	: 650
PARBAT	: 54	: 486	: —	: —	: 486	: 138,622	: 285
TANAHUO	: 45	: 405	: —	: —	: 405	: 287,046	: 709
SYANJA	: 68	: 612	: —	: —	: 612	: 282,875	: 462
PALPA	: 64	: 576	: 1	: 11	: 587	: 251,208	: 428
GULMI	: 79	: 711	: —	: —	: 711	: 264,913	: 373
ARGHAKHANCHI	: 41	: 369	: —	: —	: 369	: 183,990	: 499
MYAGDI	: 40	: 360	: —	: —	: 360	: 103,620	: 288
BAGLUNG	: 62	: 558	: —	: —	: 558	: 250,905	: 450
NAWAL PARASI	: 77	: 693	: —	: —	: 693	: 467,351	: 674
RUPANDEHI	: 84	: 756	: 2	: 20	: 776	: 545,448	: 703
KAPILVASTU	: 78	: 702	: 1	: 11	: 713	: 343,629	: 482
TOTAL	896	8,064	5	60	8,124	3,885,181	478

* Estimate population as of the year 1990

Middle Western Development Region

District	Village : Panchayat	Village : Panchayat Ward	Town : Panchayat	Town : Panchayat Ward	Total : Ward	* Total : Population of District	Average : Population per Ward
HUMLA	: 26	: 234	: —	: —	: 234	: 10,604	: 45
MUGU	: 24	: 216	: —	: —	: 216	: 61,125	: 283
KALIKOT	: 29	: 261	: —	: —	: 261	: 104,152	: 399
JUMLA	: 30	: 270	: —	: —	: 270	: 74,614	: 276
DOLPA	: 23	: 207	: —	: —	: 207	: 24,947	: 120
RUKUM	: 43	: 387	: —	: —	: 387	: 165,757	: 428
ROLPA	: 51	: 459	: —	: —	: 459	: 173,523	: 378
SALYAN	: 47	: 423	: —	: —	: 423	: 156,479	: 370
PYUTHAN	: 49	: 441	: —	: —	: 441	: 176,470	: 400
JAJARKOT	: 30	: 270	: —	: —	: 270	: 111,408	: 413
DAILEKH	: 60	: 540	: —	: —	: 540	: 175,768	: 325
SURKHET	: 50	: 450	: 1	: 12	: 462	: 241,257	: 522
DANG	: 39	: 351	: 1	: 11	: 362	: 362,762	: 1,002
BANKE	: 46	: 414	: 1	: 17	: 431	: 299,042	: 694
BARDIYA	: 34	: 306	: —	: —	: 306	: 325,043	: 1,150
TOTAL	581	5,228	3	40	5,269	2,462,951	467

* Estimate population as of the year 1990

Far Western Development Region

District	Village : Panchayat	Village : Panchayat Ward	Town : Panchayat	Town : Panchayat Ward	Total Ward	* Total : Population of District	Average : Population per Ward
BAJURA	: 27	: 243	: —	: —	: 243	: 87,628	: 361
BAJHANG	: 47	: 423	: —	: —	: 423	: 136,816	: 323
DARGHUYLA	: 41	: 369	: —	: —	: 369	: 104,815	: 284
ACHHAM	: 75	: 675	: —	: —	: 675	: 201,667	: 299
DOTI	: 52	: 468	: 1	: 10	: 478	: 178,457	: 373
BAITADI	: 68	: 612	: —	: —	: 612	: 197,002	: 322
DADELDHUKA	: 25	: 225	: —	: —	: 225	: 118,724	: 528
KAILALI	: 43	: 387	: 1	: 14	: 401	: 417,160	: 1,040
KANCHANPUR	: 19	: 171	: 1	: 18	: 189	: 303,354	: 1,605
TOTAL	397	3,573	3	42	3,615	1,745,421	483
TOTAL	4,019	36,171	33	465	36,636	18,928,341	517

* Estimate population as of the year 1990

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