No. 08

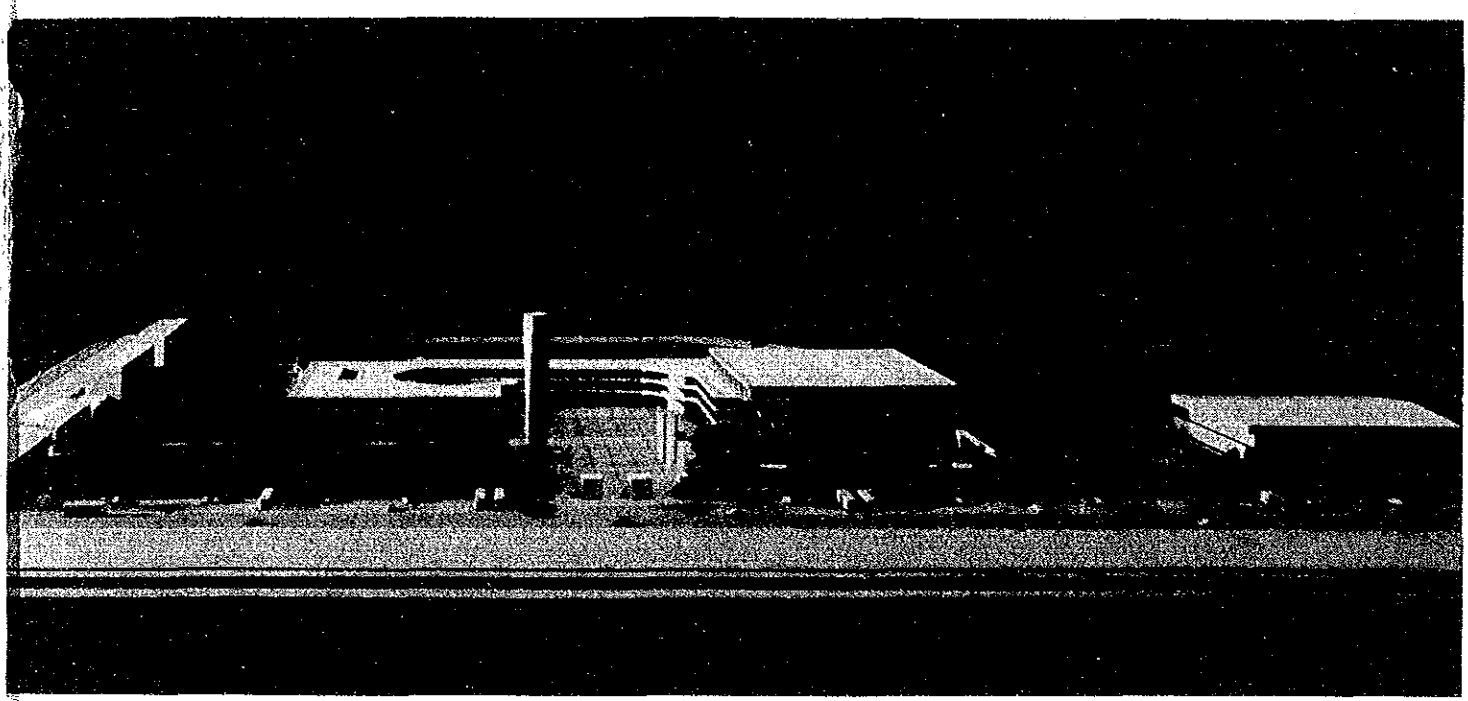
BASIC DESIGN FOR THE YOUTH WELFARE CENTER PROJECT IN THE KINGDOM OF THAILAND

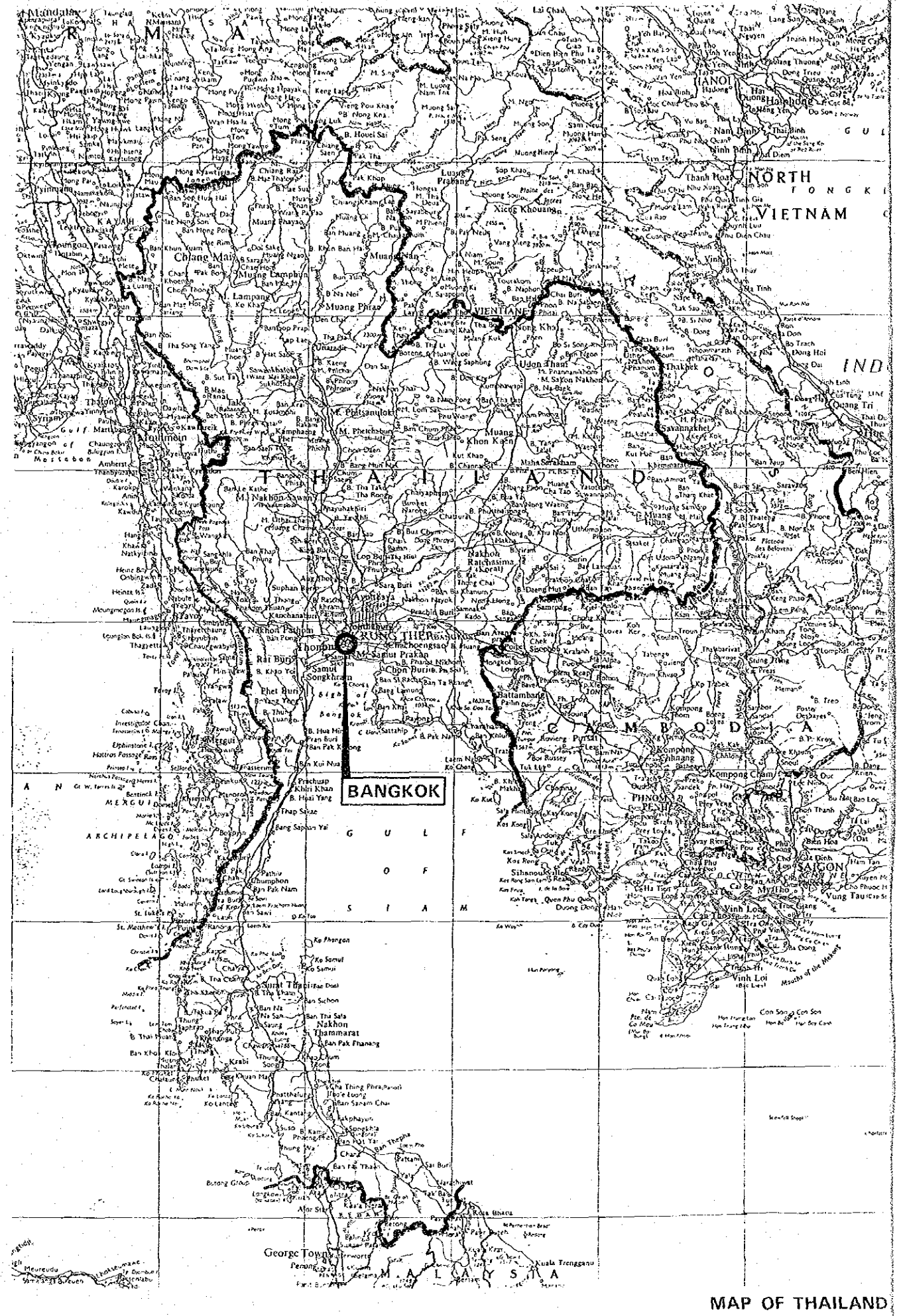
SEPTEMBER 1979

JAPAN INTERNATIONAL COOPERATION AGENCY

BASIC DESIGN
FOR
THE YOUTH WELFARE CENTER PROJECT
IN THE KINGDOM OF THAILAND

KUME ARCHITECTS-ENGINEERS assigned by the Japan International Cooperation Agency, joined the basic design survey team under this project and took charge of compiling this report.





MAP OF THAILAND

PREFACE

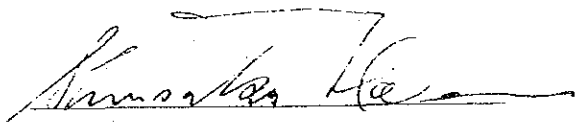
In response to the request of the Government of the Kingdom of Thailand, the Government of Japan has decided to cooperate in the construction project of the Youth Welfare Center in Bangkok Metropolis, and the Japan International Cooperation Agency conducted its basic design survey.

The purpose of the aforementioned center is to promote mental and physical growth of the young people and strengthen their sense of solidarity through social, cultural and sports activities.

An on-the-spot survey of the project was carried out during the period from 10th to 24th June 1979. The basic design derived from the survey was duly explained to and approved by the competent authorities of the Thai Government from 13th to 19th August 1979 before the present report was formulated.

I would like to express my sincere appreciation to the Thai Government and its officials concerned for the close cooperation and assistance extended to our survey team.

September 1979



Shinsaku Hogen
President
Japan International Cooperation Agency

CONTENTS

1. THE YOUTH WELFARE CENTER PROJECT

1-1 BACKGROUND OF THE PROJECT

As the result of the rapid increase of the population in Bangkok Metropolis, particularly of the younger generation (about 60% of the total population of 5 millions in Bangkok is under 25 years old in these years, poverty, domestic discord and crime have become critical social problems in this city.

To solve these problems, it is essential to develop the spirit of mutual assistance among the citizen, especially among the youth, through social activities, symposimus, meetings, lectures and sports activities in their leisure hours out of work or after school, and it is also essential to develop their personality through these cultural activities including simple vocational trainings. Various counseling services are also required for those who are young and in unstable mental state.

The important issue on the educational policy of Thailand is principally to direct educational achievements toward national development. It will be accomplished by giving all nationals free elementary education; particularly, anti-illiteracy education and vocational trainings for the young people who did not fully receive elementary education.

However, the number of such public facilities intended for people of middle and or low classes is actually very few in Bangkok, even though various private halls and gymnasiums are available for rich people.

From the background mentioned above, the Government of Thailand planned the Youth Welfare Center Project and drew up tha Proposal.

From the view point of stabilization of the people's livelihood and reform of the young people's sense of living, the Government of Thailand has been desiring earnestly to prepare and expand pivotal welfare and sports facilities that the young people can use easily with the citizen in general.

It is evident by the fact that the King's and Queen's photographs are being kept in most of the homes and public facilities that the Royal Family is deeply respected and highly trusted by the people. The nation will celebrate the Bicentennial Anniversary of the Chakri Dynasty in 1982. This project, planned as the major commemorative undertaking, has generated earnest enthusiasm and expectation among the people of Thailand.

1-2 OUTLINE OF THE PROJECT

A. Purpose of the construction of the Center

This Center was planned in commemoration of the Bicentennial Aniversary of the Chakri Dynasty to provide a public facility where young people and the other citizens in general are able to access freely and strengthen the sense of social solidarity through circle, cultural and sports activities. It is particularly expected that the youth will promote their mental and physical growth through the activities in this Center.

This Center is expected to perform a major role among existing facilities. The BMA is planning to expand three major facilities -- Din Daeng Center, Bang Mod Center and the Nong Bon Center -- as sports and welfare centers which will lend the necessary equipment and other necessities to the smaller centers providing technical guidance.

B. Administration and management of this Center

BMA, which is expected to directly administrate and manage this Center, has already obtained 25 million baht for the construction in this fiscal year, and BMA is appropriating more funds with the progress of the construction to actively promote this project.

The organization for the administration and management of the Center in BMA is shown in APPENDIX-2. BMA is expected to appropriate 6.2 million baht yearly as the administrative expenses of the maximum allowable figure as compared to the total budget of BMA. In addition, incomes from the users of the Center is not expected. Therefore, it is essential to design the facilities which require minimum maintenance and management expenses.

1-3 THE PROJECT SITE

The project site of this Center is located in Din Daeng, Phaya Thai District, northeast of the Bangkok Metropolis. As shown in the drawing, the Super Highway starting from the center of the city and extending to Saraburi via the Don Muang Airport (road widening, elevated belt highway and ramp of interchange are now under construction) is running about 100m west of the site, therefore the access by transportation to the site is extremely convenient.

2. PLANNING OF FACILITIES

2-1 BASIC POLICY

This Youth Welfare Center is planned to include a main stadium having a 400m track with field inside, gymnasium, swimming pool, and other facilities usable for authorized athletic meetings; training facilities for ball games, judo, boxing, etc; an auditorium; a library; multipurpose rooms for simple vocational trainings and educations; youth hostels; and flats for the staffs and workers of the Center.

Since the area of the planned construction site is not sufficient for arranging these facilities and because the existing youth hostel and gymnasium are situated in the site, prime consideration was given to the following points to set up the basic design:

1) Multipurpose and effective use of the facilities

2) Intensive building development in the limited project site

3) Minimizing construction cost as well as operating cost

4) Positive use of existing facilities and their relation to the new facilities

To design the Center for multiple utilization of its facilities is to meet effective and flexible applications of individual facility in accordance with the various operating plans of the Center. The intensive development of the facilities allows to get sufficient open space around them and to reduce construction cost as well as to make administration and management easier by minimizing circulation and utility lines.

To plan the intensive development of the facilities, it is carefully considered that the pedestrian circulations and the flows of the service vehicles must not be intermingled with each other and that the ordinary uses of the facilities should not be obstructed when an athletic meeting is held in one facility.

2-2 SITE PLANNING

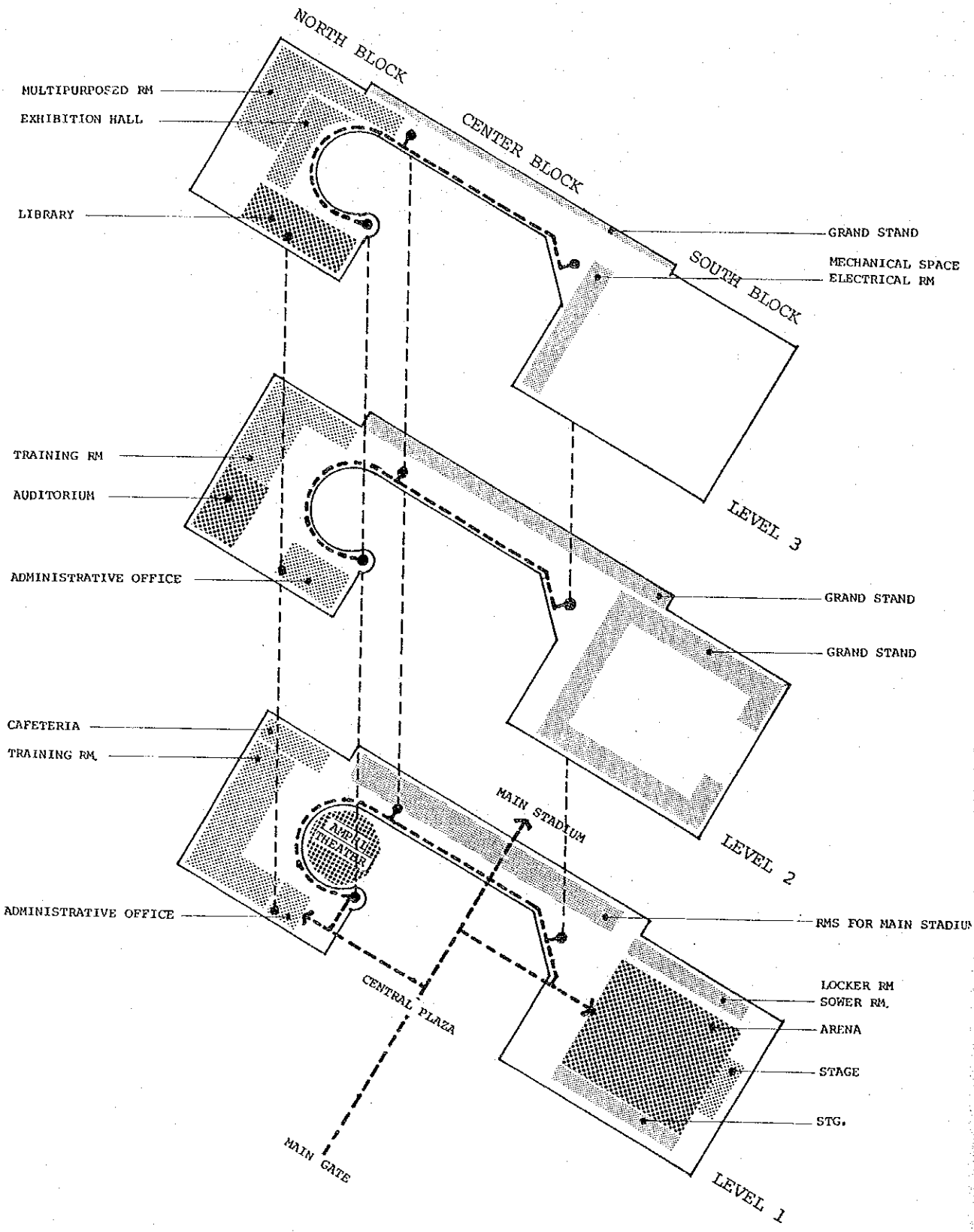
According to the basic design policy described above, the main building is designed as the main facility of this Center, which consists of a gymnasium with a stage, grand stand of the main stadium, student activity rooms, an auditorium, a library, administration offices, etc. in one body.

The main building, directly adjacent at its east side to the main stadium, will be situated at the center of the site with sufficient open space around it apart from the other facilities. The open space in front of the main building at the west will be the Central Memorial Plaza in commemoration of this Project, which is widely open to the public use.

Extending from the existing youth hostel on the northwest side of the site, extension of youth hostel and flats for the staffs and workers of the Center are laid out, forming the accommodation and housing zone. To provide sufficient open space between this zone and the main stadium is to secure good environment and to ensure functional differentiation between them. Swimming pools are arranged adjacent to the existing gymnasium and the projected gymnasium of the main building, various ball game courts are planned in the southeast part of the site, and as a whole, the south portion of the site is designed as a sports zone for swimming, ball games and other sports.

Facing the Rong Pui Road, the main gate is provided in front of the center to form the main access to the main building.

Individual sub-gates facing the Rong Pui Road are provided for the youth hostel and flats of the staffs and workers, for the swimming pools and existing gymnasium. In addition, the other sub-gates are arranged facing on the peripheral roads on the east and south boundary of the site so that complication of pedestrian circulation and flows of service vehicles will be avoided and smooth circulation will be secured at the operating hours when a large volume of egress and ingress concentrate within a short period.



LINKAGE DIAGRAM OF MAIN BUILDING

2-3 FACILITY PLANNING

A. Main building

The main building will be a 3-storey, reinforced concrete structure. It is comprised of three blocks: North, Center, and South. At the joint part of each block are arranged common facilities, such as staircases and lavatories. A circulation space is provided around the central plaza for easiness of access and smooth flow of traffic between individual blocks. The main building consists of the following facilities:

South block	.....	Gymnasium
Center block	.....	Stand of the main stadium
North block	.....	Student activities, Library, Exhibition hall, Cafeteria, Auditorium, and Administrative office

1)	Gymnasium	.....	Arena (2 basketball courts,) Stage, locker rooms, sports equipment storage, control room, grand stand (about 1,500 seats, including royal box, about 4,000 persons accommodated for an Assembly)
2)	Student activities	.....	6 training rooms (for judo, boxing, weight lifting, table tennis, Gymnastic, Physical Fitness Test), 10 multipurpose rooms (cooking, horticulture, handicraft, painting, dancing, music, woodworking, plastering, electric work, and farming)
3)	Library	.....	Comprising about 15,000 volumes
4)	Exhibition Hall		
5)	Cafeteria	.....	Dining room (about 100 seats), kitchen, kiosk
6)	Auditorium	.....	Spectators' seats (about 200 seats), stage, control room, rehearsal room
7)	Administrative office		

8) Grand stand of main stadium

.... Grand stand (about 1,600 seats on the level-2 and about 750 seats on the level-3, total about 2,350 seats), royal box, control room

B. Main stadium ..... 8-course 400m track, football field (105m x 68.5m), backstand (for about 4,650 spectators;)

C. Swimming pool ..... 9-course 50m pool, stand (about 1,000 seats)

D. Central plaza ..... Plaza
Main gate, flagpoles, symbol tower

E. Amphitheater .... Stand, stage

2-4 SCALE OF THE FACILITIES

The scales of the facilities are listed below. Some items to change as deemed necessary during execution of the plans:-

	Facility	Floor Area (m^2)	
A.	Main building	14,200	(Building area)
	• Gymnasium		
	• Student activities		
	• Library		
	• Exhibition hall		
	• Cafeteria		
	• Auditorium		
	• Administrative office		
	• Grand Stand of Main		
	• Stadium		
B.	Main stadium	20,600	
	• Track, field		
	• Backstand		
C.	Swimming pool	3,300	
D.	Central plaza	5,700	
E.	Amphitheater	740	

2-5 ELEMENT PLANNING

Local meteorological conditions are the important factors in designing building elements. In this hot and humid region, solar radiation, rainfall, and ventilation requirements will be important on building design, and suitable measures must be taken against these factors.

1) Roof

Roofs are the element most affected by solar radiation. Adequate heat insulating layers must be provided between the roofs and the interiors to assure water-proofing against heavy rainfall and to protect the interior from the radiation heat.

2) Exterior wall

Exterior walls are also affected by solar radiation. Eaves and louvers must be provided to minimize its effect. There are seasonal winds in Thailand throughout the year. Making the best use of this natural benefit, openings as large as possible will be provided in buildings to facilitate natural ventilation.

3) Floor level

The floor level should be sufficiently high to avoid flooding during the rainy season.

2-6 MATERIAL PLANNING

Considering the easiness of maintenance and construction costs, locally available materials should be used so long as there is no problem of availability.

A. Structural materials

Structure is mainly reinforced concrete framework with concrete block wall. The roof of the gymnasium will be of steel framework.

B. Exterior finish materials

1)	Roof	Resin waterproofing, elongated galvanized iron sheet roofing (backed with insulating materials)
2)	Wall	Washed terrazzo
3)	Fitting	Aluminum, steel, partly wood
4)	Central plaza	Concrete paving block (partly polished terrazzo)
5)	Track	En-tout-cas or all-weather eleastic paving
6)	Field	Lawn

C. Interior finish material

1)	Floor	
	(a) General offices	Vinyl asbestos tile sheet
	(b) Corridor, lobby, etc...	polished terrazzo
	(c) Auditorium, library	Carpet
	(d) Gymnasium, training rooms	Synthetic resin flooring
2)	Wall	Paint finish on cement plaster Acoustic board (Auditorium, AV room)
3)	Ceiling	Acoustic panel, acoustic spray covering

2-7 STRUCTURAL PLANNING

A. Basic concept

Located away from the main seismic zones in Asia, Thailand hardly suffers from earthquakes. The yearly average wind speed is about 2.3m/sec and the maximum instantaneous wind velocity is about 28.8m/sec.

Considering these factors, the beams and columns in the main building will be of reinforced concrete structure, with the only exception of the gymnasium roof which is of steel framework structure. Expansion joints are used in the longitudinal direction of the buildings.

The ground conditions of Bangkok is almost uniform throughout its entire area. Beneath the top soil about 2m thick lies a soft clay layer, followed by a hard clay layer and a dense sand layer. The ground of the construction site comprises top soil containing considerable amount of organic soil followed by clay layers, with the N value increasing with depth. However, no definite bearing layer is found until the sand layer about 25m below ground level. Therefore, the end-bearing pile foundation considering the skin friction should be used for the main building. The piling design will require consideration against the negative frictions due to the land subsidence.

B. Structural design

1) Dead load
Weight of all loads fixed to buildings (structural components, finishing materials, etc.) should be calculated.

2) Live loads
Live loads on individual rooms are approximately as follows:

(kg/m^2)

Room	Floor slab	Column, beam and foundation
Meeting room (fixed seats)	400	270
" (movable seats)	"	330
Training room	"	210
Office	"	180
Stairway, corridor	"	330
Grand Stand	500	330

Live loads for floor slab shall be calculated according to the Control of the Construction of the Buildings Act, 1979. Bangkok, considering coefficient of concentration, live loads for column, beam and foundation shall be based on the Building Standard Law of Japan.

3) Wind load

As the Building hight is lower than 20m, the design wind pressure force of 80kg/m^2 will be considered according to the Control of the Construction of the Building Act.

4) Seismic force

There is no need to take seismic force into consideration.

C. Structural materials

The structural materials are generally determined according to the scale, structure type and usage of building, local availability, quality, construction method, transportation, facilities and cost, etc. Materials suitable for use in the construction of the facilities of this Center are listed below. The allowable unit stresses for materials to be produced in Japan will be those specified by the Architectural Institute of Japan, while that for the locally available materials will be determined taking consistency in quality into consideration.

1) Concrete

Portland cement, fine aggregates, coarse aggregates and other necessary materials are all available locally. A batching plant will be built in the site to effect the mixing and weighing of concrete materials. Normal Portland cement with the strength of F28 210kg/m^2 will be suitably used. It is preferable to adjust actual formulations depending on individual construction conditions. Because of the high temperature in this area, there is a danger of cracking due to the concrete hardening. In order to avoid this problem, concrete is to be of stiff mix. Sufficient application of water to harden concrete and careful curing will also be required.

2) Reinforcing bar

Considering the present situation of local production, SD30 will be chiefly used. Locally available reinforcing bars are of 9.5, 12, 16, 19, 25 and 28mmø both SD30 and SD40.

3) Structural steel

Steel materials SS41 manufactured in Japan will be chiefly used.

4) Piles

Considering to diminish negative frection, wquare shaped concrete piles, of which perimeters are small for their sectional area, will be used for the main building, swimming pool and back stand.

2-8 AIR-CONDITIONING AND VENTILATION SYSTEMS

Considering maintenance, and running costs, the rooms airconditioned will be limited to the gymnasium arena (assembly use), royal box, auditorium, library, and part of the administration office.

1) Design conditions

(1) Outdoor conditions	Temperature	36.1°C,
	Humidity	58%
(2) Indoor conditions		
Gymnasium	Temperature	30±4°C,
	Humidity	55±10%
(when accommodating 4,000 persons)		
Auditorium	Temperature	28±3°C,
	Humidity	53±10%

2) Air-conditioning system

From 8 to 10 package units will be equipped for the gymnasium arena to allow package control in response to the varying loads. The royal box of main stadium, auditorium, library and part of the administration office will be air-conditioned with individual package units.

3) Ventilation system

Mechanically forced ventilation will be provided to lavatories, shower rooms and kitchen.

2-9 PLUMBING SYSTEM

1) Water supply system

Pumped up from the water reserved tank (capacity: about 200m^3) to the elevated water tank (capacity: about 40m^3), water will be supplied to individual facilities. The loop piping system will be employed to secure stable water supply.

The quantity of water required by individual facilities are approximately as follows:

		(m^3/day)
(1)	Gymnasium	40
(2)	Main stadium	50
(3)	Swimming pool	130
(4)	Offices	30
(5)	Outdoor sprinklers	20
(6)	Others	80
	Total	350

2) Outdoor sprinklers

Sprinklers will be provided for the field and for horticulture use.

3) Drainage system

A separate indoor system will be employed for sewage and other waste water. The water discharged is collected outdoors, processed in septic tanks, and finally flown out into the public drainage pipes around the project site. Rainwater will also be discharged into the public drainage pipes. The maximum amount of water discharged from this Center is estimated at about 11,000m^3/day during the rainy season.

4) Sanitary fixture

Sanitary fixture provided in lavatories and shower rooms are of the local style (partly western style).

All of the sanitary fixture are to be of local manufacture, except faucets which will be imported.

5) Septic tank

Both Septic tank of Thai style and aeration septic tank will be used.

2-10 ELECTRICAL SYSTEM

A. Main electrical system

1) Power station system

Supply power (high-voltage, 3 phase, 3 wire, 12KV) received by the power substation is reduced to 380V/220V and distributed to individual loads as shown below.

(1) General lighting, receptacles
(2) Stage illumination .... Gymnasium, Auditorium, Amphitheater
(3) Field illumination .... Main stadium, Gymnasium
(4) Power for air-conditioning and ventilation facilities
(5) Power for water supply and drainage facilities

The total capacity is planned to be about 1,600KVA.

2) Telephone system

At least five trunk lines will be lead-in to the exchange, and about 40 extension telephone sets will be installed. The exchange will be situated in the administration office in the main building.

3) Power generator facility

An independent power plant consisting of the stationary, indoor type diesel engines, will be set up for safety lights and drainage water pumps.

B. General electrical system

1) Power circuit system

Main lines for power driven machines and lighting fixtures will be protected by a circuit breaker mounted on the low-voltage switchboard in the transformer substation. These lines will be connected to the lighting distribution boards and the power control boards through metal conduits. The main stadium illumination will be connected by underground cable.

The main line systems is as follows:

(1) General lighting, receptacles ... 3-phase, 4-wire, 380V/220V
(2) Stage illumination 3-phase, 4-wire, 380V/220V
(3) Field illumination 3-phase, 4-wire, 380V/220V
(4) Air-conditioning and ventilation facilities 3-phase, 3-wire, 380V

Power supply for sounders will be of the independent system using an insulating transformer to prevent external noises. Power for telecasting will be supplied from a power supply vehicle.

2) Lighting equipment

Fluorescent lamps (partly incandescent and mercury lamps) will be mainly used for ordinary rooms. The field illumination will be of the multicolored illumination type using mercury, metal halide and other lamps. The circuit is designed to allow on/off operations for individual groups of lamps.

The intensity of illumination in each facility is as follows:

(1) Gymnasium ..... 500 - 750 (Lx)
(2) Training rooms ... 250 - 300
(3) Swimming pool .... 250 - 300
(4) Field, track .... 150 - 200
(5) Offices ..... 350 - 400

3) Stage illumination

Illumination for the gymnasium and auditorium will be of the adjustable type. Movable illumination equipment will be provided for the amphitheater.

4) Public address

Individual amplifier will be provided for the main stadium, gymnasium and the swimming pool.

5) Stage sound system

Fixed sound system will be equipped for the gymnasium and auditorium, while movable sound system will be provided for the amphitheater.

6) Score indicator

(1) Gymnasium ..... Wall-type

(2) Main stadium, swimming pool .... stand type

7) Fire alarm

Manually operated alarm bells which, in case of fire, will inform the people in the building of a fire hazard and allow them to escape quickly. Automatic fire alarm equipment will be provided for the auditorium and gymnasium.

8) Lightning arrester

Radio isotope lightening arresters will be equipped at the highest part of the buildings.

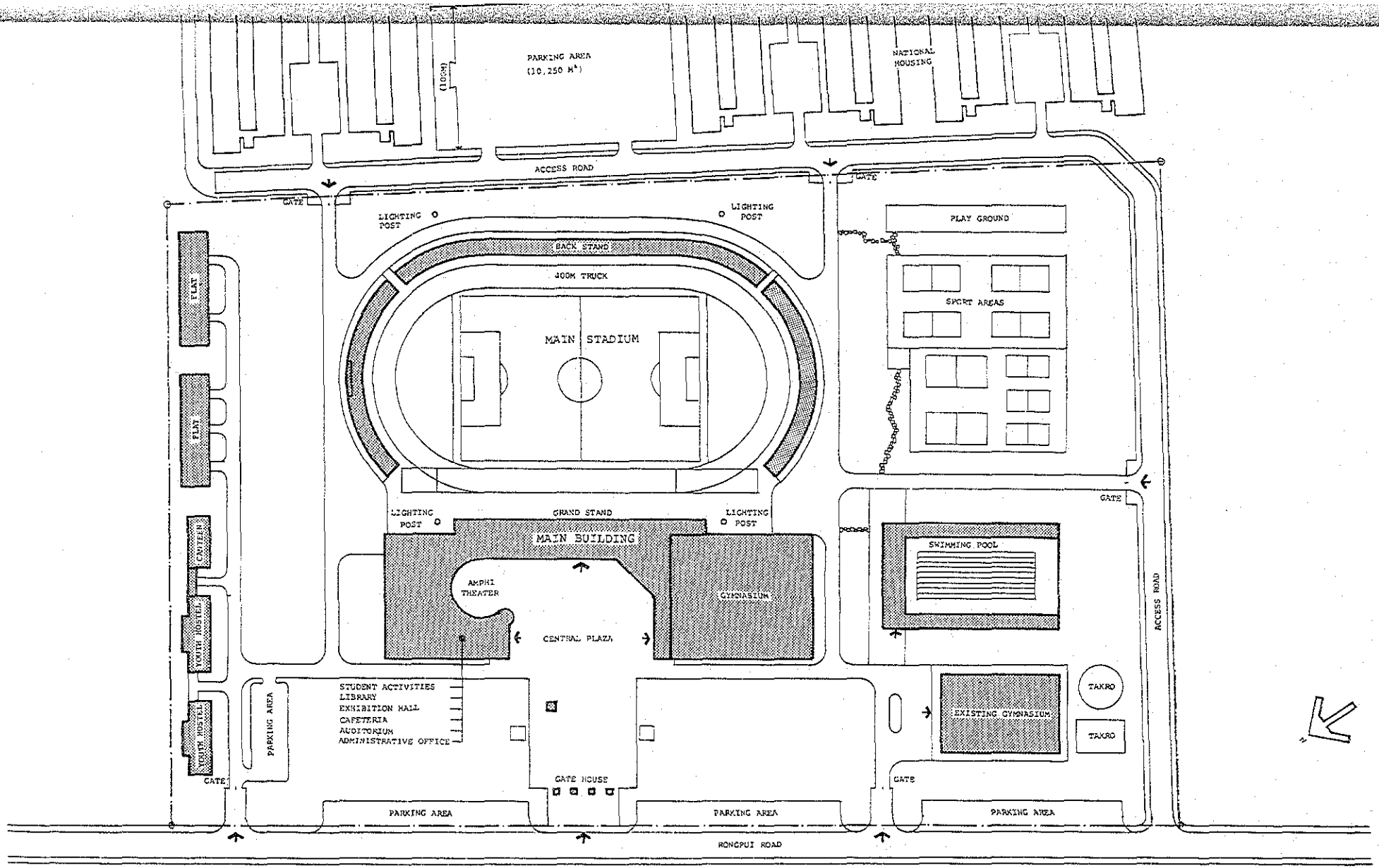
9) Outdoor lighting

Outdoor lighting will be equipped in the central plaza and along service roads for night-time security. Wiring for this system will be installed by underground cables. These lighting can be turned on and off either automatically or manually.

3. BASIC DESIGN

LIST OF DRAWINGS

01	MASTER PLAN	
02	MAIN BUILDING	LEVEL 1 FLOOR PLAN
03	MAIN BUILDING	LEVEL 2 FLOOR PLAN
04	MAIN BUILDING	LEVEL 3 FLOOR PLAN
05	MAIN BUILDING	ELEVATION & SECTION
06	MAIN STADIUM	PLAN, ELEVATION & SECTION
07	SWIMMING POOL	PLAN, ELEVATION & SECTION
08	MASTER PLAN (AREA-J)	
09	WATER SUPPLY SYSTEM	
10	DRAINAGE SYSTEM	
11	ELECTRICAL SYSTEM	
12	TELEPHONE SYSTEM	



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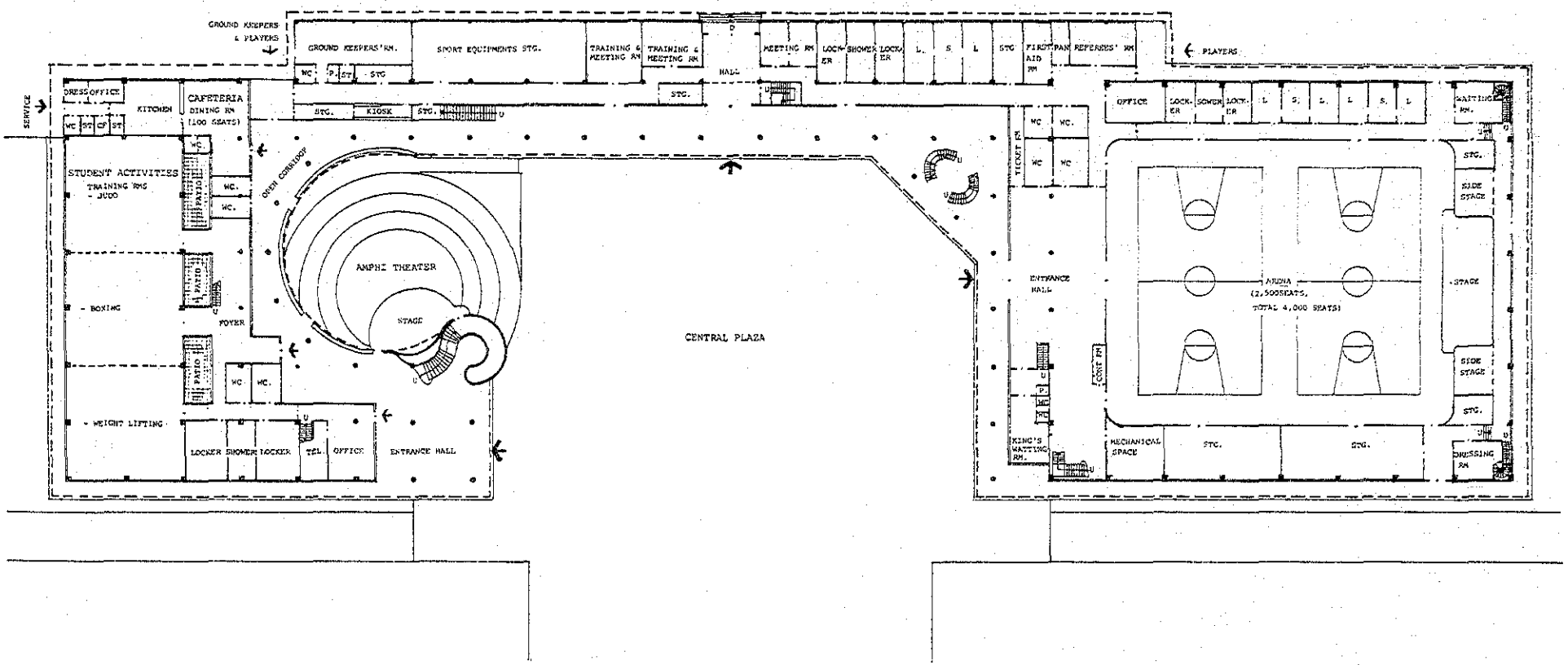
THE YOUTH WELFARE CENTER MASTER PLAN 01



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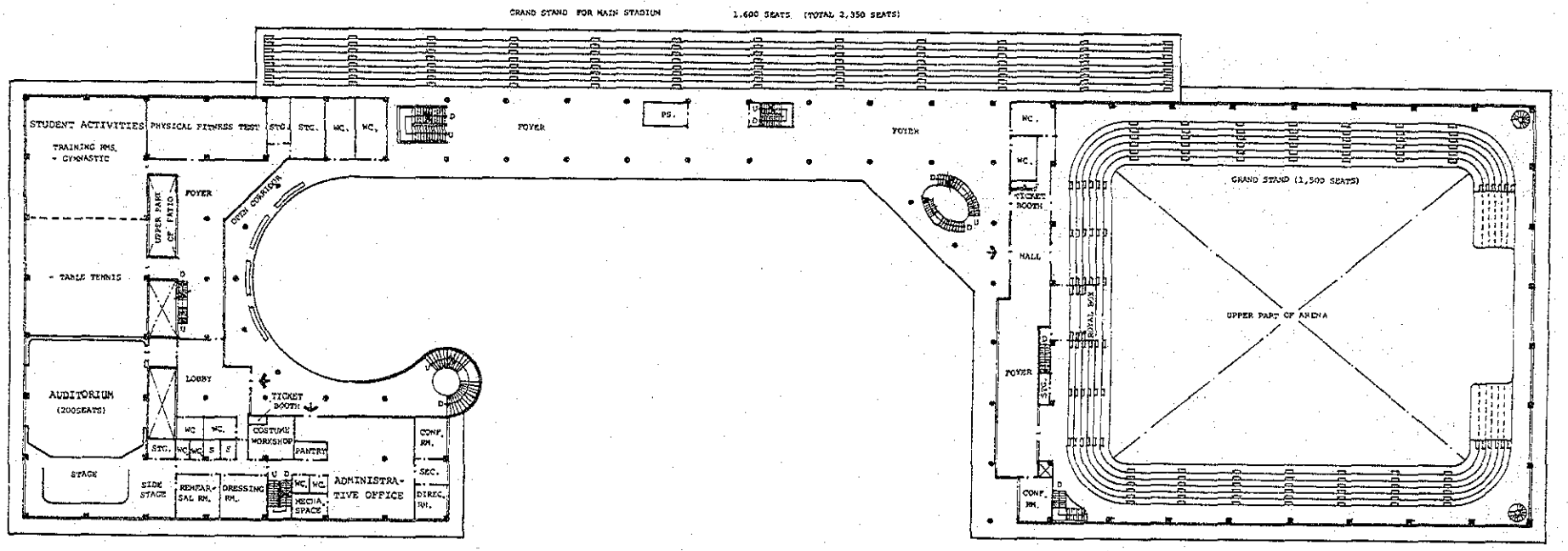
THE YOUTH WELFARE CENTER MAIN BUILDING LEVEL 1 FLOOR PLAN 02



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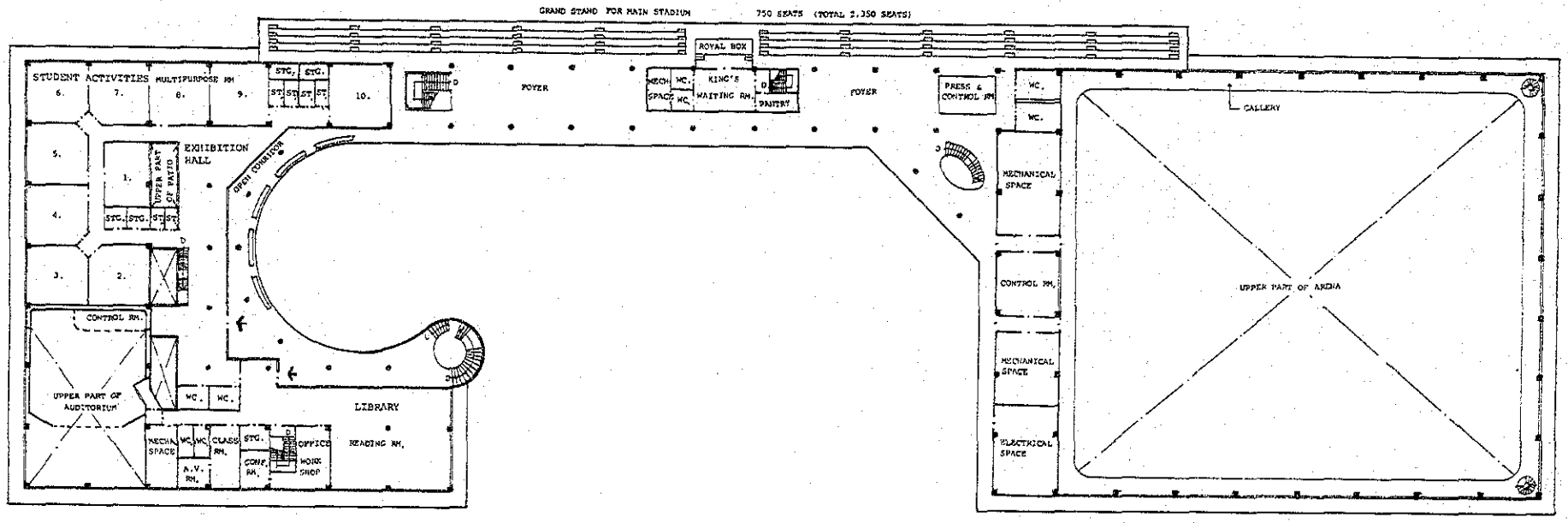
THE YOUTH WELFARE CENTER MAIN BUILDING LEVEL 2 FLOOR PLAN 03



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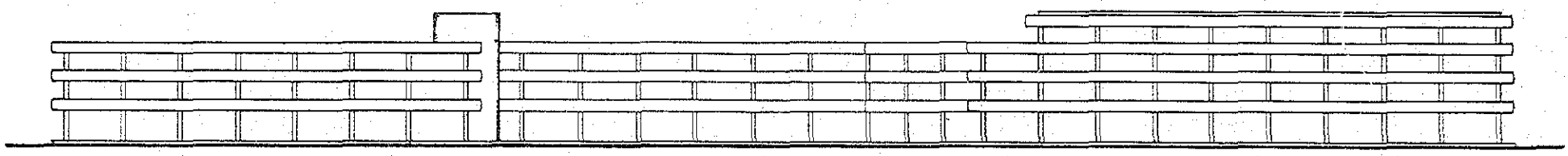
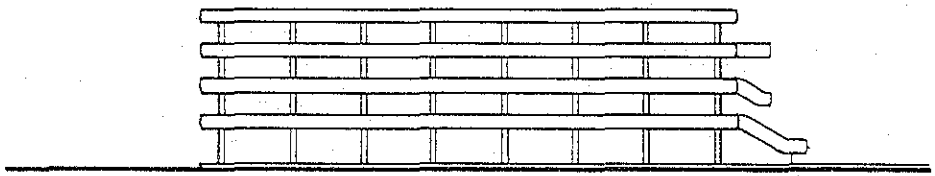
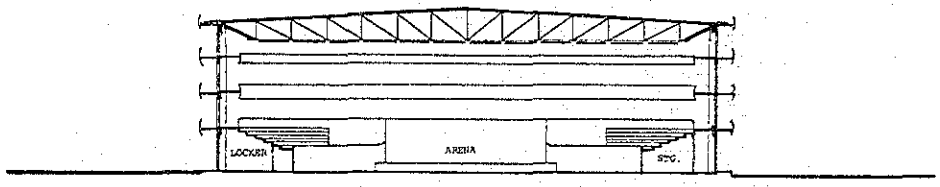
THE YOUTH WELFARE CENTER MAIN BUILDING · LEVEL 3 FLOOR PLAN 04



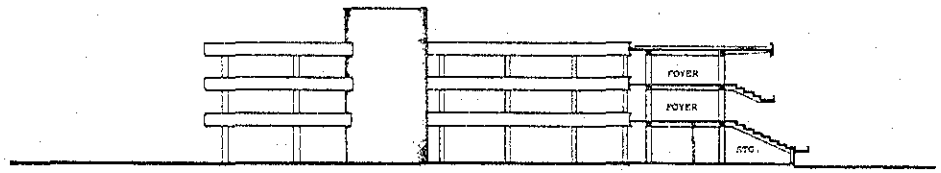
FRONT (WEST) ELEVATION



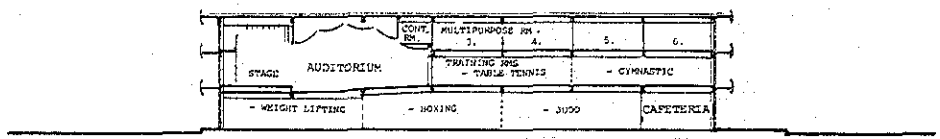
SOUTH ELEVATION



GYMNASIUM SECTION-1



GRAND STAND FOR MAIN STADIUM SECTION-2



STUDENT ACTIVITIES SECTION-3

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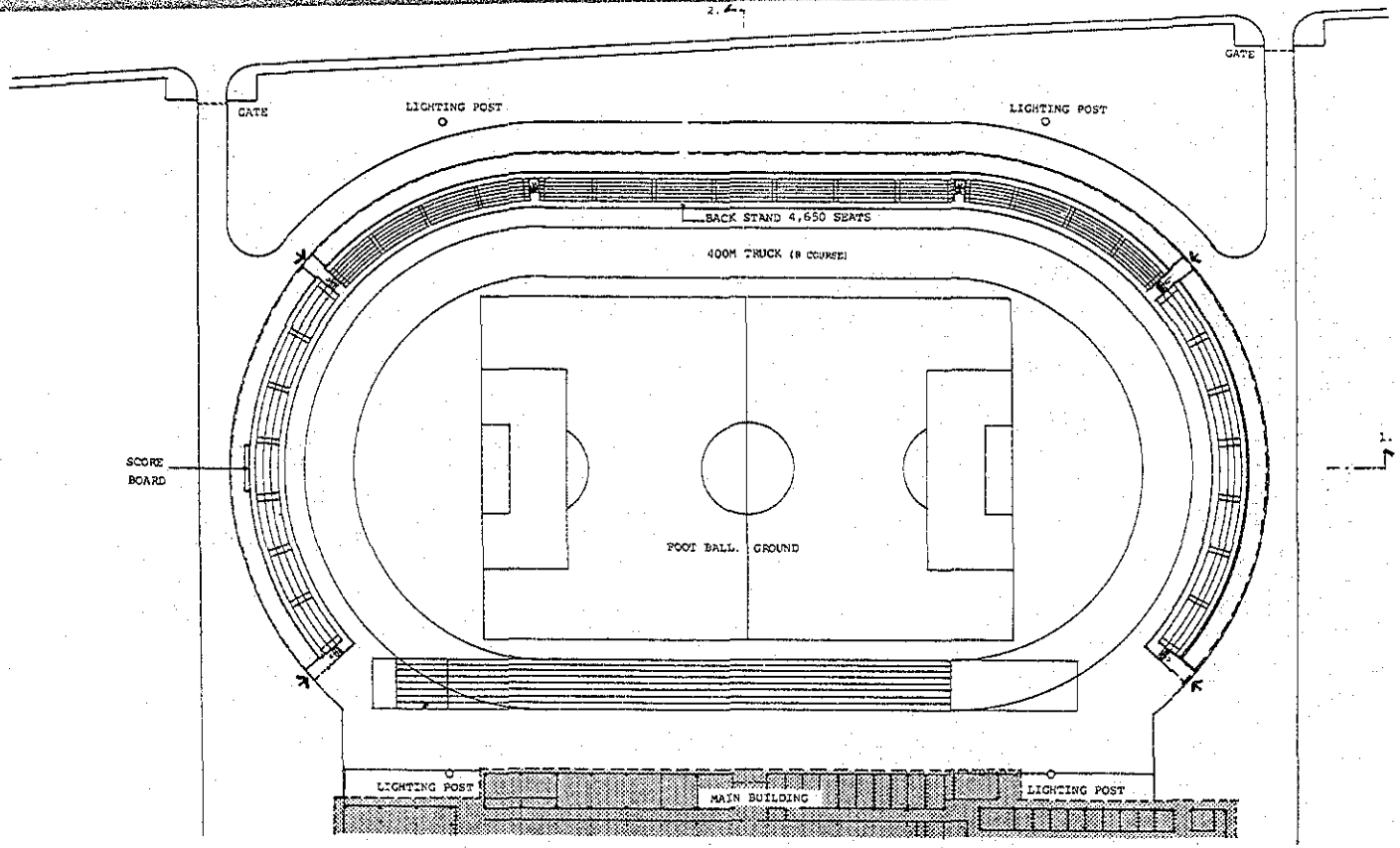
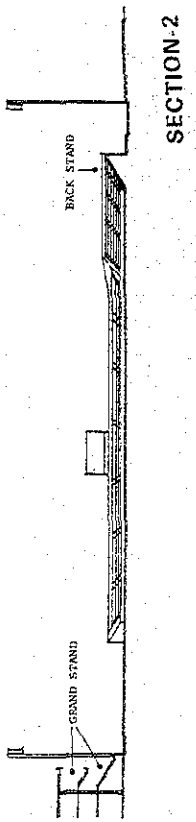
THE YOUTH WELFARE CENTER MAIN BUILDING ELEVATION & SECTION

05



PLAN



SECTION-2

WEST ELEVATION & SECTION-1

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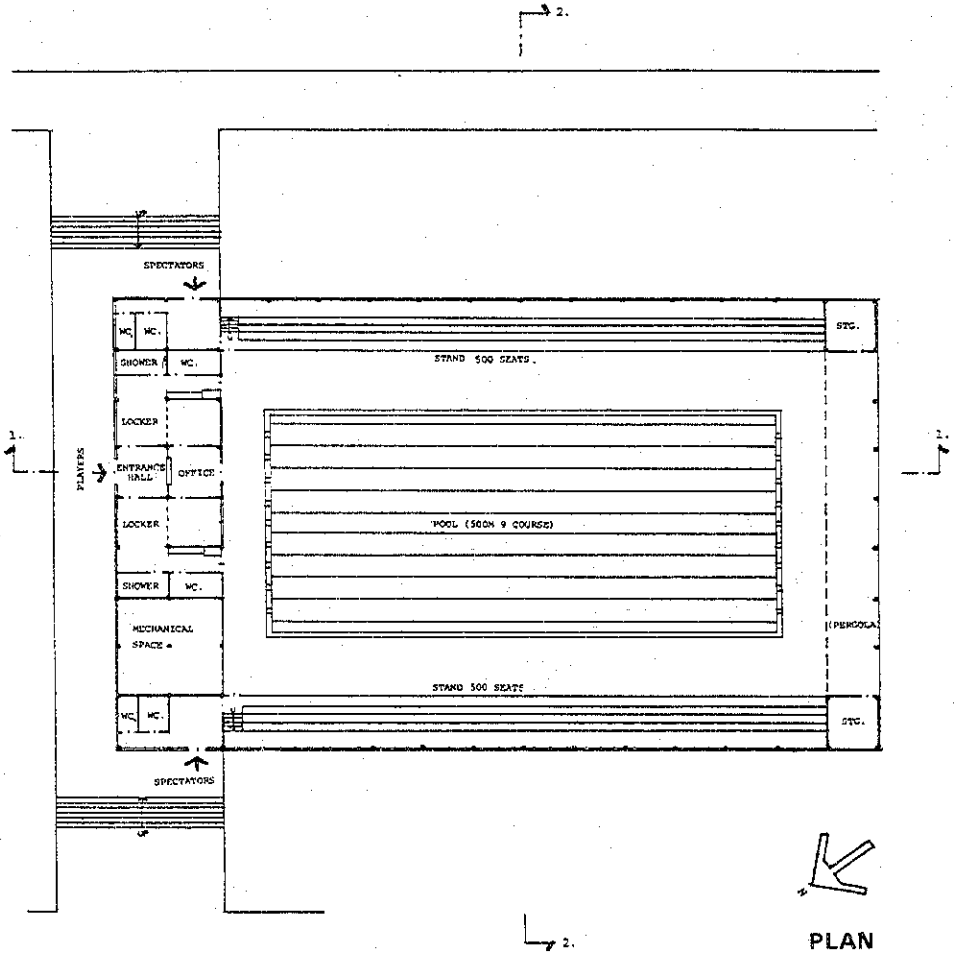
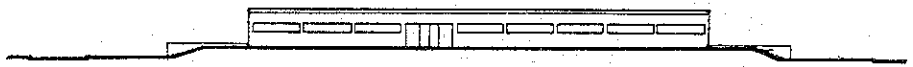
THE YOUTH WELFARE CENTER MAIN STADIUM PLAN, ELEVATION & SECTION **06**



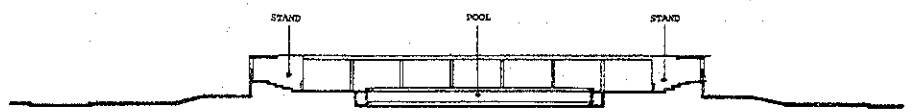
PLAN

WEST ELEVATION



NORTH ELEVATION

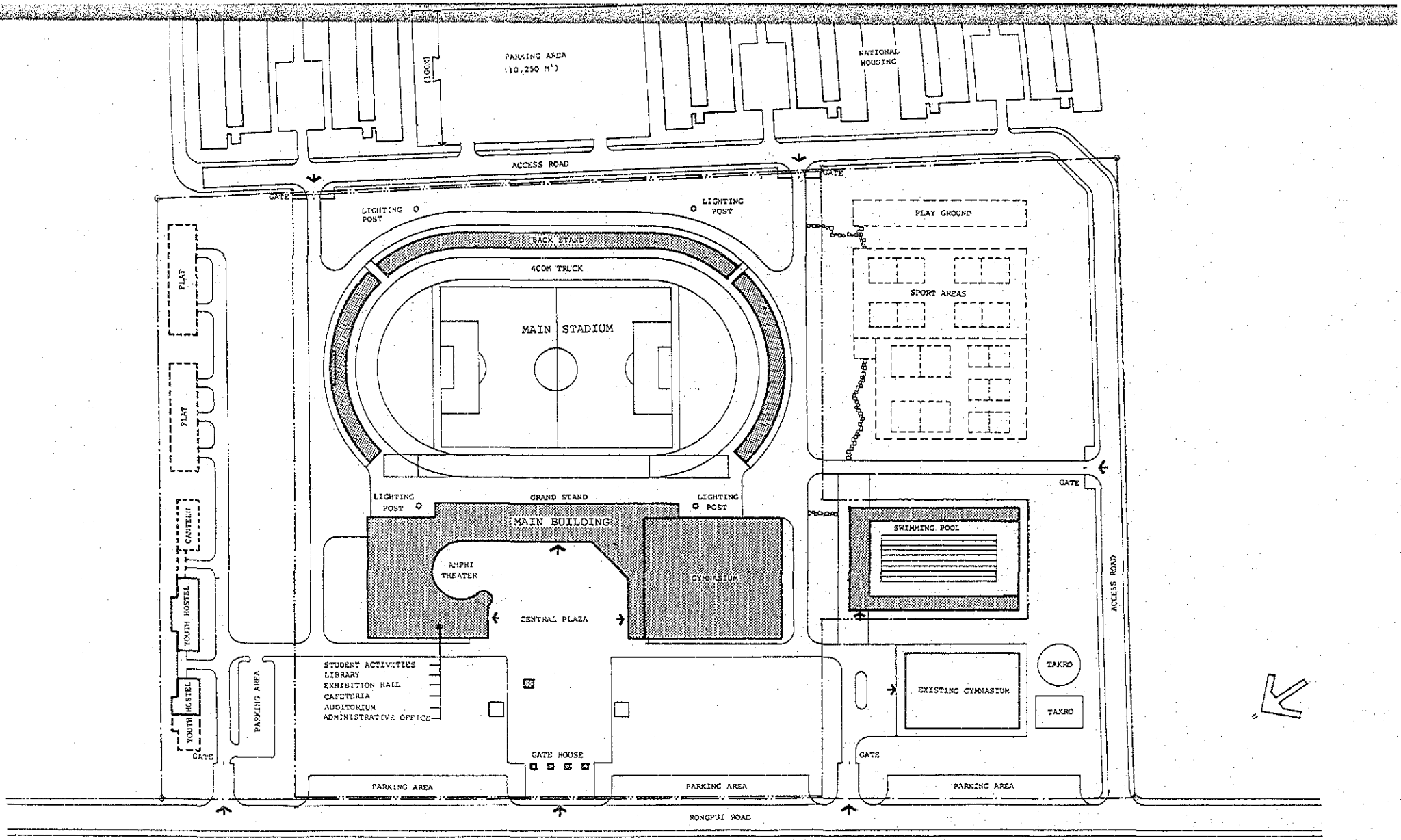
SECTION-1



SECTION-2

0 5 10 20M

THE YOUTH WELFARE CENTER SWIMMING POOL PLAN, ELEVATION & SECTION 07



FACILITIES TO BE PROVIDED BY JAPANESE SIDE

FACILITIES TO BE PROVIDED BY THAI SIDE

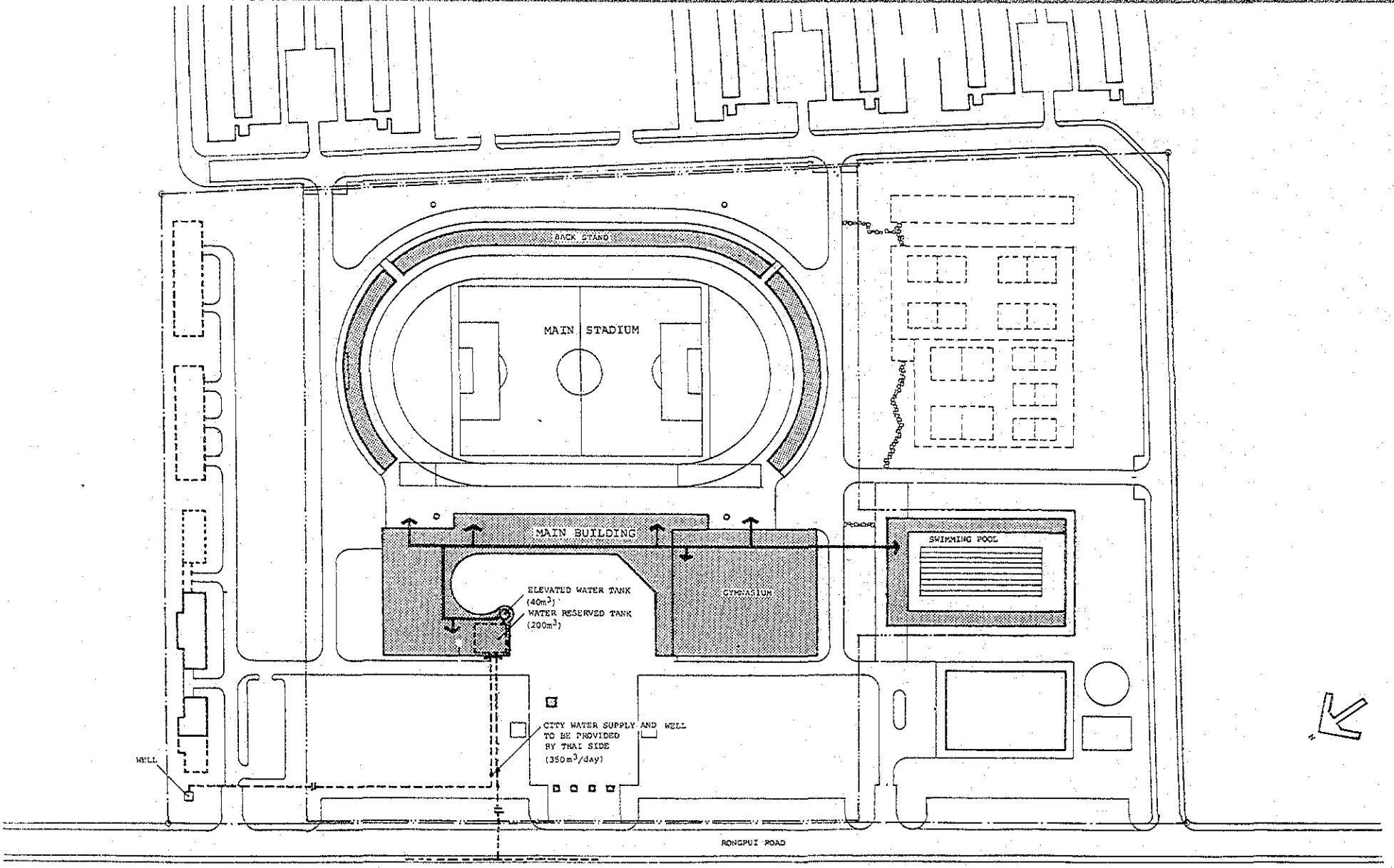
EXISTING FACILITIES

BOUNDARY LINE OF THE CONSTRUCTION SITE

BOUNDARY LINE OF AREA-J (THE SCOPE OF WORK TO BE PROVIDED BY JAPANESE SIDE)

0 10 20 50M

THE YOUTH WELFARE CENTER MASTER PLAN (AREA-J) 08



FACILITIES TO BE PROVIDED BY JAPANESE SIDE

FACILITIES TO BE PROVIDED BY THAI SIDE

EXISTING FACILITIES

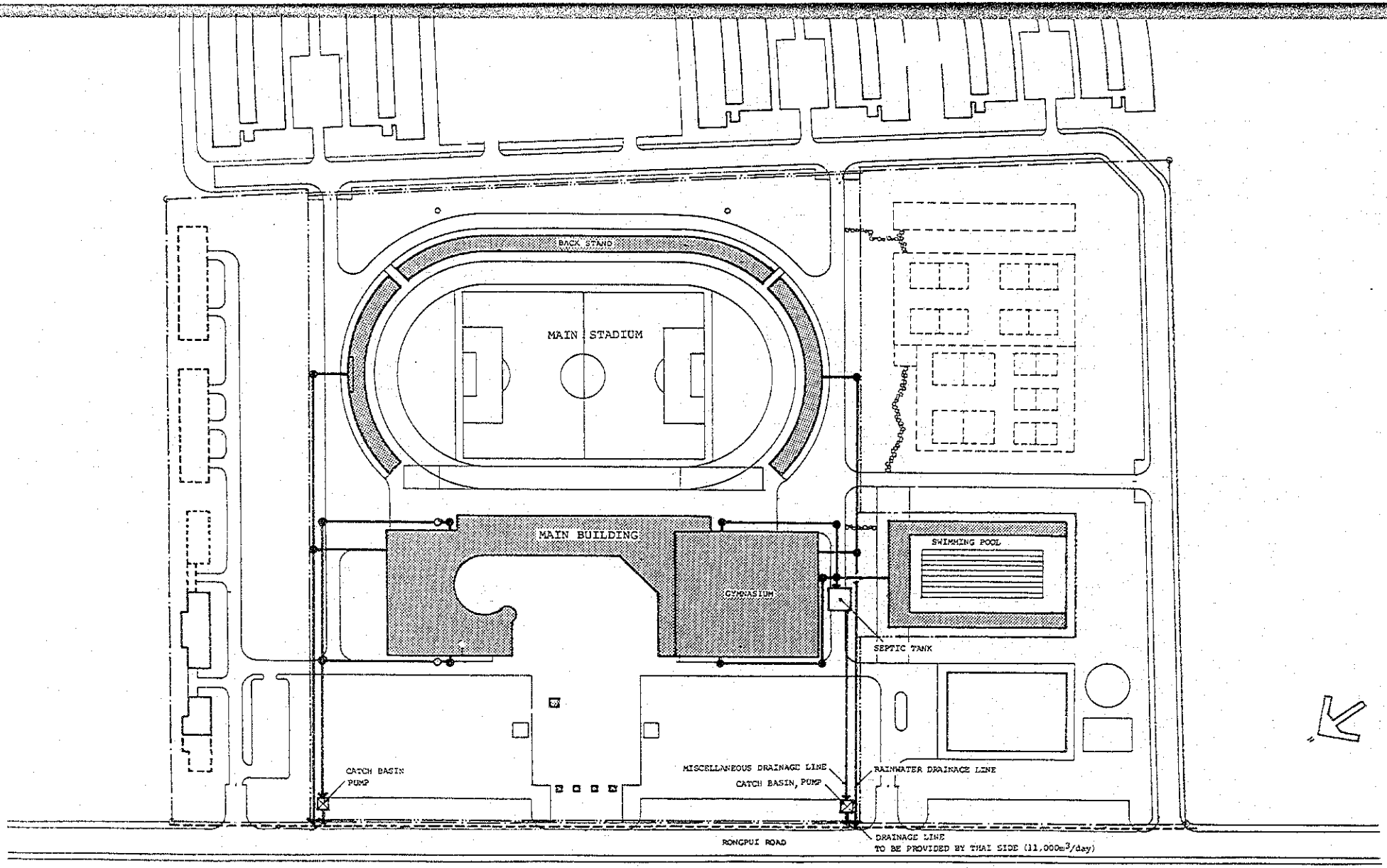
BOUNDARY LINE OF THE CONSTRUCTION SITE

BOUNDARY LINE OF AREA-1 (THE SCOPE OF WORK TO BE PROVIDED BY JAPANESE SIDE)

WATER SUPPLY LINE

0 10 20 50M

THE YOUTH WELFARE CENTER WATER SUPPLY SYSTEM 09

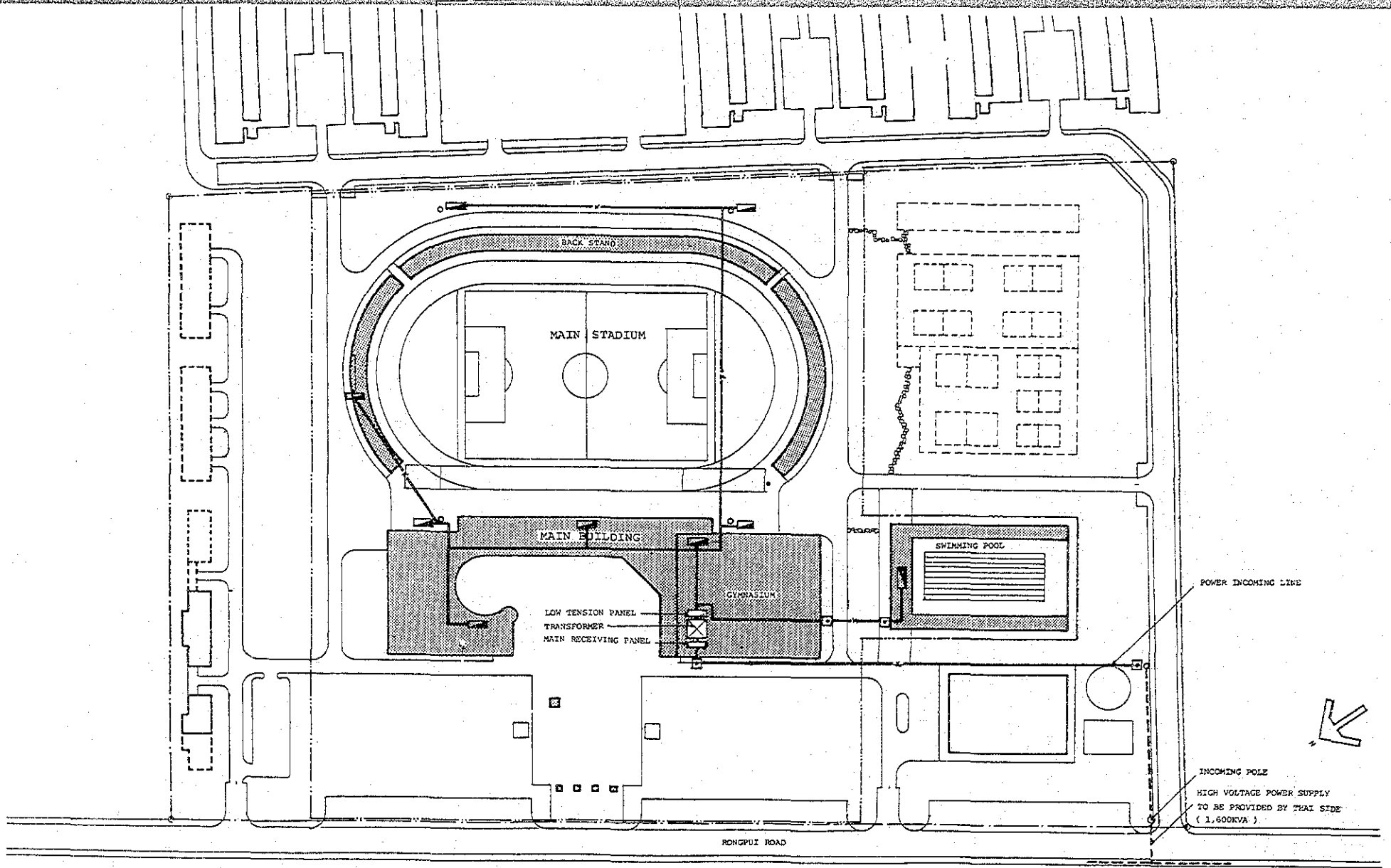


FACILITIES TO BE PROVIDED BY JAPANESE SIDE
FACILITIES TO BE PROVIDED BY THAI SIDE
EXISTING FACILITIES
BOUNDARY LINE OF THE CONSTRUCTION SITE
BOUNDARY LINE OF AREAS (THE SCOPE OF WORK TO BE PROVIDED BY JAPANESE SIDE)

SEWAGE DRAINAGE LINE
CATCH BASIN
SEPTIC TANK

0 10 20 50M

THE YOUTH WELFARE CENTER DRAINAGE SYSTEM 10

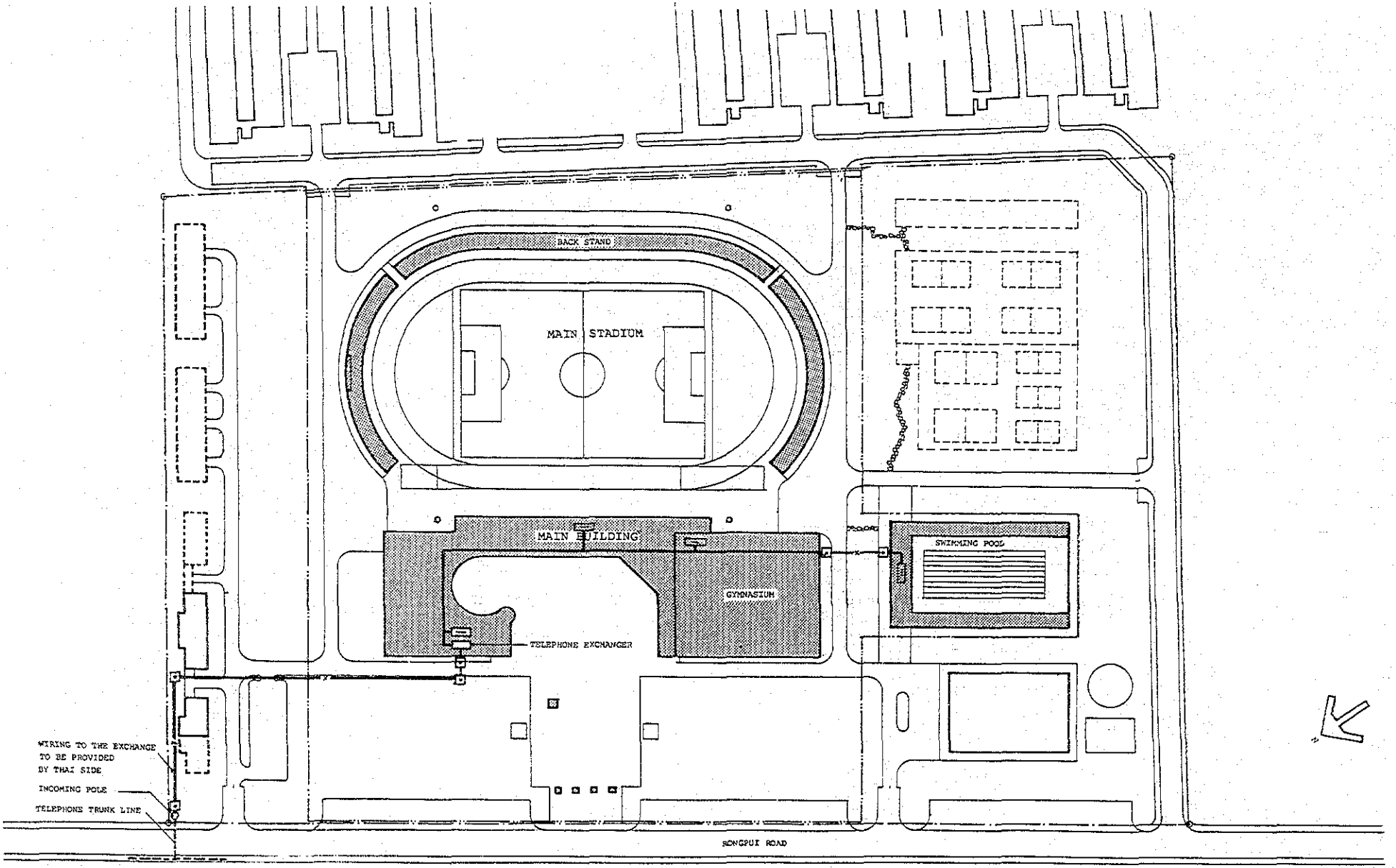


FACILITIES TO BE PROVIDED BY JAPANESE SIDE
FACILITIES TO BE PROVIDED BY THAI SIDE
EXISTING FACILITIES
BOUNDARY LINE OF THE CONSTRUCTION SITE
BOUNDARY LINE OF AREA-J (THE SCOPE OF WORK TO BE PROVIDED BY JAPANESE SIDE)

ELECTRIC POWER LINE
DISTRIBUTION BOARD
HAND HALL

0 10 20 50M

THE YOUTH WELFARE CENTER ELECTRICAL SYSTEM 11



THE YOUTH WELFARE CENTER TELEPHONE SYSTEM

12

4. PLANNING OF CONSTRUCTION

4-1 SCOPE OF THE CONSTRUCTION WORK

During the stay of the survey team in Thailand, specific discussions on the scope of work of the Thai side and that of the Japanese side were held on a number of occasions with the architect group of BMA.

The positioning of the incoming electrical and water supplies as well as the method of drainage were reconfirmed and are indicated in the separately attached drawings.

The scope of work of the Thai side is already stated in the Minutes, the demarcation of each work will be summarized below. (in which AREA-J represents the scope of work to be provided by the Japanese sice. "T" denotes Thailand, and "J" denotes Japan.)

A. Fundamental work

1) Site reclamation

(T) Demolition of existing buildings, leveling, and clearing will be completed before the start of the construction.

2) Water supply

(T) . Providing a water supply of sufficient capacity (350 ton/day) as far as the water reserved tank (J).

(J) . Water supply from that point to the facilities in AREA-J.

3) Electricity

(T) . Providing a 1,600 KVA aerial wiring to the transformer substation (J).

(J) . Electricity supply from that point to the facilities in AREA-J.

4) Telephone

(T) . Leading-in of the telephone trunk line (5 lines) to the exchange (J) to be built in the administrative offices.

(J) . Setting up the telephone equipment, wiring and conduits in AREA-J from that point.

5) Drainage

(T)
- Securing drainage facilities from the catch basin (J) inside AREA-J
- All drainage facilities out of AREA-J

(J)
- Drainage routes within AREA-J

B. Facilities

(T)
- Flats
- Youth Hostels
- Other Sports Areas
- Parking Area out of AREA-J
- Service Road out of AREA-J
- Lawn, Planting and Fence

(J)
- Main Building
  Gymnasium, Student Activities, Auditorium, Library, Exhibition Hall, Cafeteria, Administration Office, and Grand Stand
- Main Stadium (Track and Field)
- Back Stand
- Swimming Pool
- Central Plaza
- Amphitheater
- Gates
- Parking Area in AREA-J
- Service Access to above facilities in AREA-J

C. Furniture & equipment

(T)
- Office furniture and miscellaneous for all facilities in the site

(J)
- Sports equipment
- Book shelves in the library
- Spectators' seats in the auditorium
- Stand of the gymnasium
- Stand of the main stadium

D. Transportation of materials

(T)
- Expense necessary for unloading and customs clearance of imported equipment and other materials required for installation and use at this center at ports of disembarkation in Thailand and internal transportation there of to construction site

(J)
- Packing of materials and equipment to be exported from Japan; insurance charges; loading onto vessels at port of Japan and marine transportation to Thailand

4-2 SCHEDULE OF THE CONSTRUCTION WORK

The work for preparation of working drawings relating to this subject facilities construction under the grant program will commence following the conclusion of the exchange of official notes between both governments.

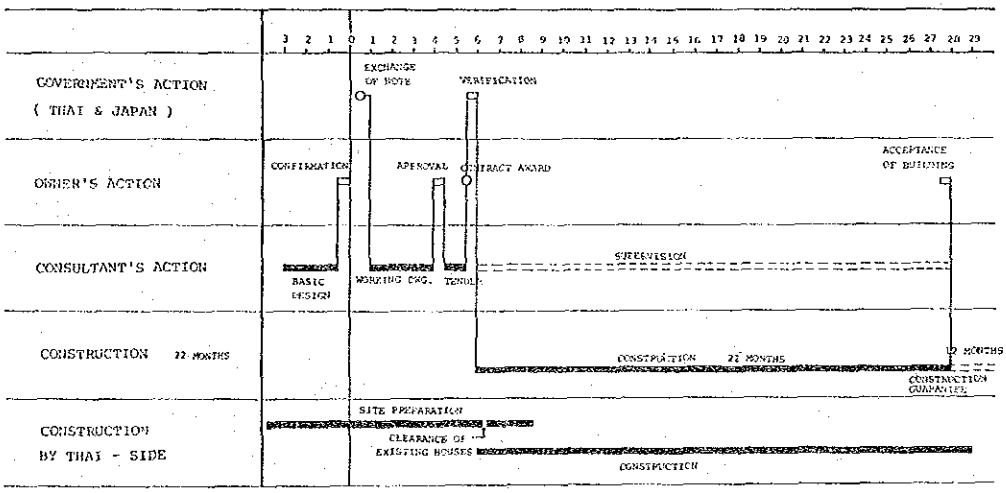
During this stage of the preparation of working drawings, design plans and specifications necessary for the work will be prepared and the contract documents for the tender will be made.

Approval of the owner will be obtained on all documents for construction, after appropriate tenderers are invited for tendering.

After concluding a contract between the successful tenderer and the owner, verification of the Government of Japan will be obtained and the work will then start.

Judging from the scale, structure and contents of equipment of the subject facilities, the period that will be required is approximately 22 months.

The one-year period following the completion of the construction of the building and the delivery thereof to the owners will be the construction guarantee period.



TENTATIVE CONSTRUCTION SCHEDULE

BANGKOK POST FRIDAY JUNE 15, 1979

YOUTH CENTRE PLANNED FOR DIN DAENG

A MODEL of a planned Youth Welfare Centre was presented to Prime Minister Gen Kriangsak Chomanan by Japanese Ambassador Hiroshi Hitomi at the Prime Minister's residence on Wednesday with Thai and Japanese officials witnessing the ceremony.

The Youth Welfare Centre will be constructed in Din Daeng area to commemorate the bi-centennial of the foundation of the capital city. The centre aims to contribute to the strengthening of solidarity and understanding among citizens, especially the young generation, through activities in such areas as group work, welfare, culture, sports and training course.

Among the facilities envisaged for this Welfare Centre are a gymnasium with a stage, small meeting rooms, exhibition rooms, a library and an auditorium which are planned to be constructed during the present Japanese fiscal year. Other facilities, such as the mainstadium,a small outdoor theatre and an outdoor swimming pool are expected to be constructed at a later stage.

Looking at the model of the Youth Welfare Centre (see story) are, from left, Mr T. Tanaka, Mr M. Akiguchi, Gen Kriangsak Chomanan and Japanese Ambassador Hiroshi Hitomi.

COURTESY VISIT TO D.T.E.C.

DATE : 11, JUNE, 1979
PLACE: D.T.E.C.

COURTESY VISIT TO B.M.A.

DATE : 11, JUNE, 1979
PLACE: B.M.A.

DISCUSSION WITH
B.M.A. AUTHORITIES

DATE : 13, JUNE, 1979
PLACE: B.M.A.

SIGNING OF MINUTES

DATE : 22, JUNE, 1979
PLACE: D.T.E.C.

SIGNING OF
RECORD OF THE DISCUSSIONS

DATE : 17, AUGUST, 1979
PLACE: D.T.E.C.

5 DISPATCH OF THE BASIC DESIGN SURVEY TEAM

5-1 PURPOSE OF SURVEY

In 1978, the Government of Thailand requested a grant aid to the Government of Japan concerning the construction project of public facilities, that is the Youth Welfare Center, which will be used for cultural and sports activities by young people.

There are about twenty youth facilities in Bangkok Metropolis which intend to provide welfare of youth, recreation and extracurricular education, and they are widely being used by the young generation through sports and the other circular activities. However, these facilities are by no means well-equipped, and the Youth Welfare Center has been planned to serve as a core function among them.

This Youth Welfare Center project is bringing intensive concern and expectation of the Thai people as the project of which completion is focused to the Bicentennial Anniversary of the Chakri Dynasty, which is one of the major national events of this country.

The Government of Japan understood that this project is aimed at improving the public health and social welfare of the people in Thailand in general and that the contribution to the social and economic development of Thailand by the Japanese Grant Aid will promote the relationship between the two countries, which have been maintaining the friendly relation and cultural exchange over centuries. Therefore, the Government of Japan dispatched the preliminary survey team on September 1978 in order to fully understand the substance of the requirement in reply to the request of the Government of Thailand.

The basic design survey team was dispatched to carry the basic design for the construction of the Youth Welfare Center based on the results of this preliminary survey.

5-2 CIRCUMSTANCES OF THE DISCUSSIONS

The basic design survey team was engaged in necessary field surveys and discussions with related Thai Authorities.
The main Authorities concerned were DTEC (Department of Technical and Economic Cooperation) and BMA (Bangkok Metropolitan Administration Office).
Detailed discussions were held particularly with the members of BMA which is expected to be the central administrative body of the Youth Welfare Center. The discussions were very active. The Thai side was very earnest regarding this project at the meeting. The public interest on this project was also so high that the substance of the discussions were reported through the mass media.

During the course of the survey, two sites, adjacent to each other, north and south (including the plot previously planned;), were proposed by the Thai side as the possible construction site of the project. In reply to their request to examine them, the survey team prepared and presented master plans for these two sites including various construction requirements.
After studying and comparing the two master plans from the view point of implementation of the project in detail, the Thai side came to a decision to carry the basic design of the center on the southern site, and confirmed the selected master plan with some minor amendments as the final. Following this decision, the team continued its basic design survey.
During the second survey, the matters agreed upon between both parties were compiled in the form of the Record of Discussions, which were signed by the representatives of DTEC and BMA, and the Survey Team Leader.

RECORD OF THE DISCUSSIONS
ON THE DRAFT REPORT OF THE BASIC DESIGN
FOR THE CONSTRUCTION OF THE YOUTH WELFARE CENTER

1. The Government of Japan has sent, through Japan International Cooperation Agency (JICA), the Basic Design Survey Team led by Mr. Toshitaka Aige, from 13 August 1979, on the second visit to submit the draft report of the basic design for the construction of the Youth Welfare Center, which was prepared by JICA in accordance with the discussions between the Thai authorities concerned – Department of Technical and Economic Cooperation (DTEC) and Bangkok Metropolitan Administration (BMA) – and the Basic Design Survey Team in June, 1979.

   The Survey Team explained the report to the representatives of BMA and held a series of detailed discussions with the staffs concerned.

2. As a result, BMA and the Survey Team have confirmed the following items :

   a) The master plan
      at Din Daeng, Phaya Thai District, Bangkok; Annex I.

   b) The Government of Japan will provide such buildings of the Center as shown in Annex III.

   c) The Government of Thailand will provide, among other things:
      1) Data and information necessary for the construction
      2) Other items listed in Annex IV.

   d) The draft report with plans of the basic design proposed by the Survey Team was confirmed, leaving the possibility of minor modifications according to the progress of the detailed design.

Bangkok, August 17, 1979

Mr. Xujati Pramoolpol
Director General
Department of Technical
and Economic Cooperation

Mr. Toshitaka Aiga
Team Leader
Japanese Basic Design Survey Team

Mr. Somchai Wudhiprecha
Deputy Governer
Bangkok Metropolitan Administration

ANNEX I

ACCESS ROAD
GATE
TAXAD
TAXAD
PARKING AREA
PLAY GROUND
SHORT AREAS
SWIMMING POOL
EXISTING GYMNASIUM
GATE
PARKING AREA
PARKING AREA
LIGHTING POST
LIGHTING POST
MAIN STADIUM
GRAND STAND
MAIN BUILDING
CENTRAL PLAZA
GATE HOUSE
AMPHI THEATER
LIGHTING POST
PARKING AREA
PARKING AREA
GATE
GATE

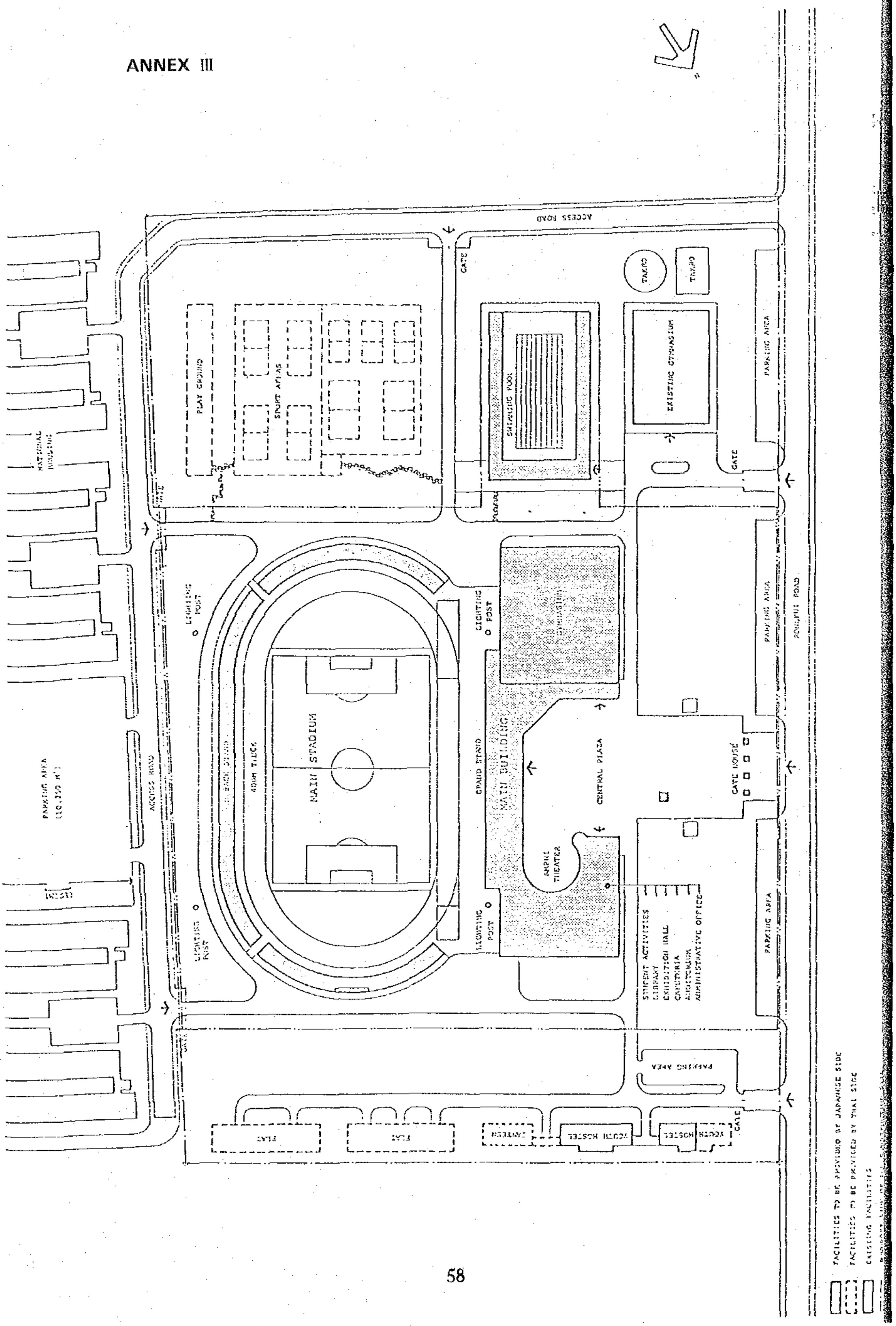
ANNEX II

Facilities to be provided by the Government of Japan

1) Facilities in AREA-J (shown in ANNEX III)
   a) Main Building
      Gymnasium, Student Activities, Auditorium, Library
      Exhibition Hall, Cafeteria, Administrative Office
      and Grand Stand
   b) Main Stadium (Track and Field)
   c) Back Stand
   d) Swimming Pool
   e) Central Plaza
   f) Amphitheater
   g) Gates
   h) Parking Area in AREA-J
   i) Service Access to above facilities

2) Furniture and Eqipment
   a) Sports Equipment
   b) Book shelves for Library
   c) Seats for Auditorium
   d) Seats for Gymnasium
   e) Seats for Grand Stand

ANNEX III


ACCESS ROAD
GATE
PLAY GROUND
SPORT AREAS
SWIMMING POOL
EXISTING GYMNASIUM
PARKING AREA
NATIONAL HOUSING
LIGHTING POST
MAIN STADIUM
400M TRACK
BACK STAND
GRAND STAND
MAIN BUILDING
CENTRAL PLAZA
AMPHI THEATER
GATE HOUSE
STUDENT ACTIVITIES
LIBRARY
EXHIBITION HALL
CAFETERIA
AUDITORIUM
ADMINISTRATIVE OFFICE
PARKING AREA (10,200 m²)
YOUTH HOSTEL
CANTEEN
FLAT
FACILITIES TO BE PROVIDED BY JAPANESE SIDE
FACILITIES TO BE PROVIDED BY THAI SIDE
EXISTING FACILITIES

ANNEX Ⅳ

Items and necessary measures to be undertaken by the Government of Thailand

1) Fundamental Works:

   a) site preparation such as demolition of existing facilities, leveling by pit sand and necessary clearing before the start of construction

   b) provision of electrical main, water supply, drainage and telephone facilities necessary for the Center into the site

2) Facilities

   a) flats (including furniture)

   b) Youth Hostels (including furniture)

   c) Parking Areas out of AREA-J

   d) Sports Areas

   e) Service Road out of AREA-J

   f) Lawn, planting and fence

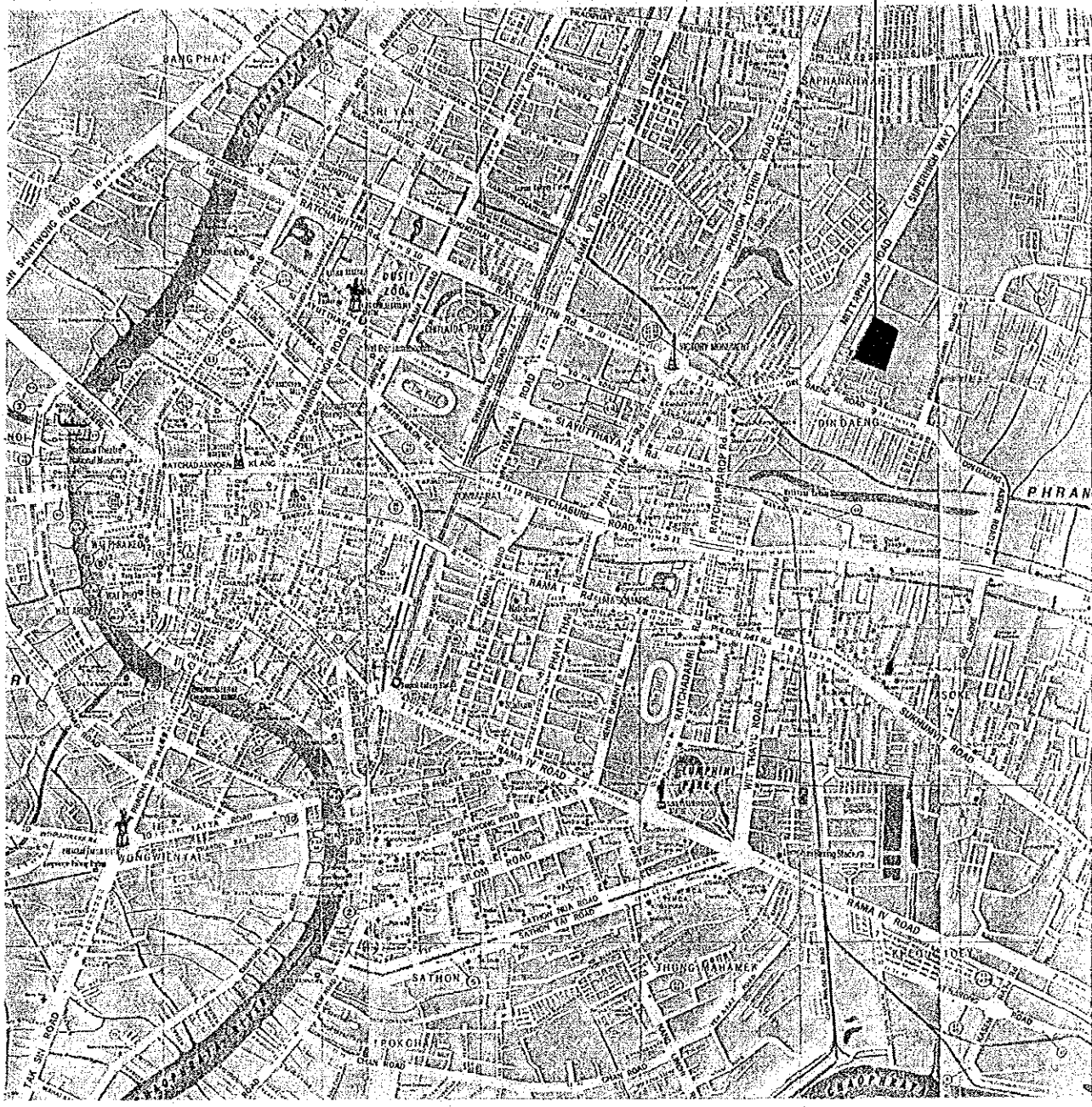
3) Furniture and Equipment

   Office Furniture and miscellaneous for all facilities in the site

4) Expenses necessary for inland transportation from the port of entry to the site of the equipment and other materials required for installation and use at the Center.

THE CONSTRUCTION SITE

FOR THE YOUTH WELFARE CENTE



LOCATION OF THE SIT

5-3 SURVEY OF THE CONSTRUCTION SITE

A. Outline of the construction site

The planned site is a rectangular and plain piece of land, about 420m north-to-south and about 280m east-to-west, covering an area of about 12.0 ha. As illustrated by the drawing, there are small existing sports facilities within the site. Among them, the gymnasium located in the south-west and the youth hostel located in the north-west part of the site, now in service, are both planned to remain as a part of this project. The surface soil of the foundation of the site contains considerable amount of organic soil, which shall be digged out and replaced by pit sand and subsequent enbankment will also be necessary in order to maintain the function of the projected main stadium as an authorized sport stadium. In addition, considerable part of the site is flooded during the rainy season. Hence, arrangement of an adequate drainage system and additional embarkment will be necessary prior to the construction of the Center.

B. Surroundings of the construction site

Adjacent to the west boundary of the site, the Rong Pui Road is running as the access to the Center branched from the Super Highway. Multiple dwellings of National Housing Authority are existing and some of them are under construction, and the building of the National Institute for Skill Development, schools, factories, and office buildings are adjacent to the site.

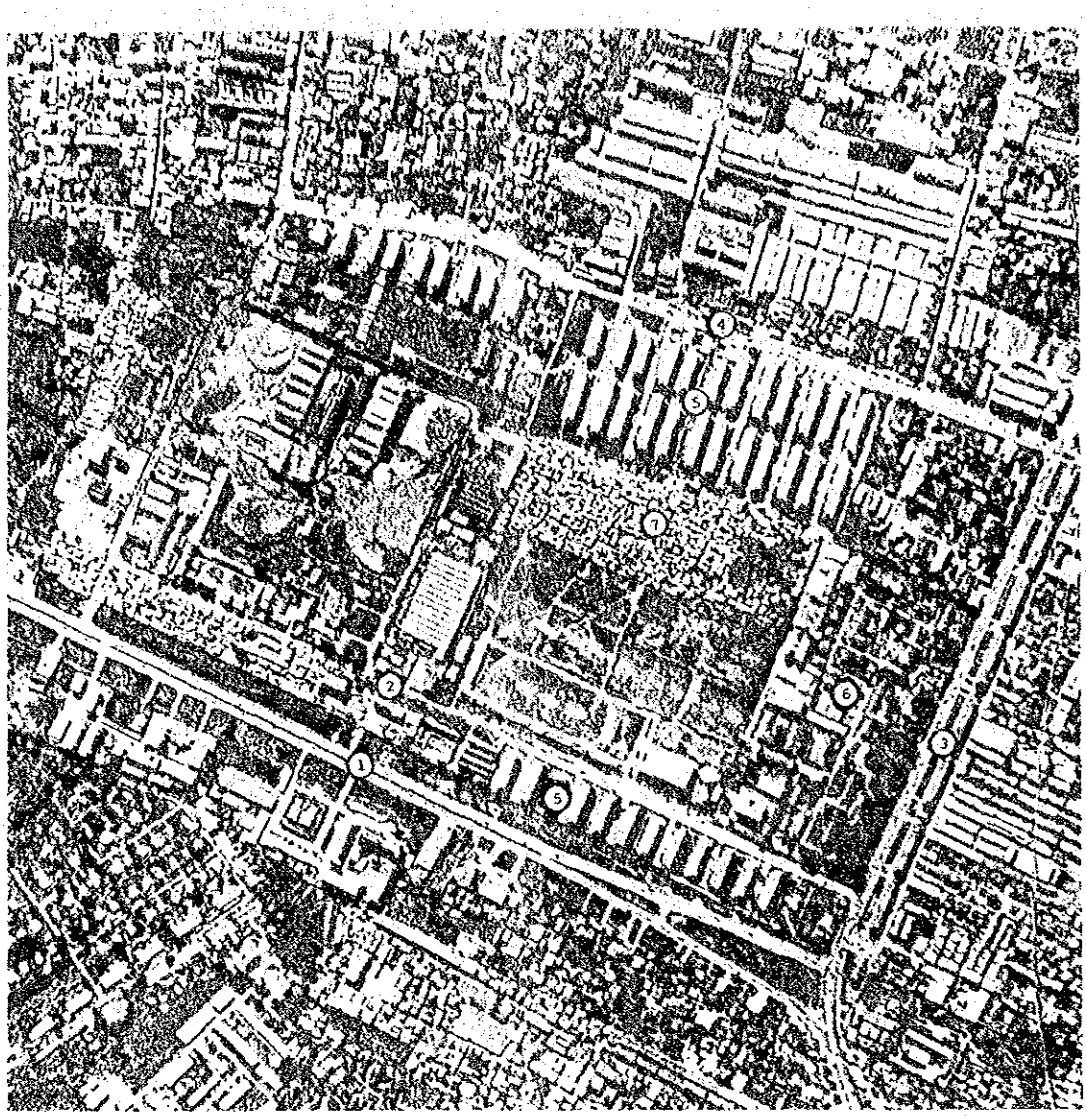
C. Infrastructure around the construction site

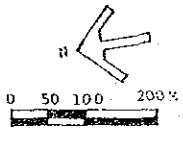
1) A road branching from the Rong Pui Road at the west of the site and leading to the National Housing is being planned along the east and south boundaries of the construction site.

2) The municipal water supply pipes are located along the Rong Pui Road, about 400m east of the site, and along the Super Highway mentioned above.

3) Municipal sewage piping is planned and under construction along the both sides of the Rong Pui Road. The portions of the piping adjacent to the site have already been completed. However, they are not in service at present because their ends are not connected yet.

4) An electrical power line, high-voltage, 3 phase, 12KV, is being arranged along the Rong Pui Road, therefore it is possible to supply the necessary power to the Center.





1 MITTAPHAP ROAD (SUPER HIGH WAY)

2 RONG PUI ROAD

3 DIN DAENG ROAD

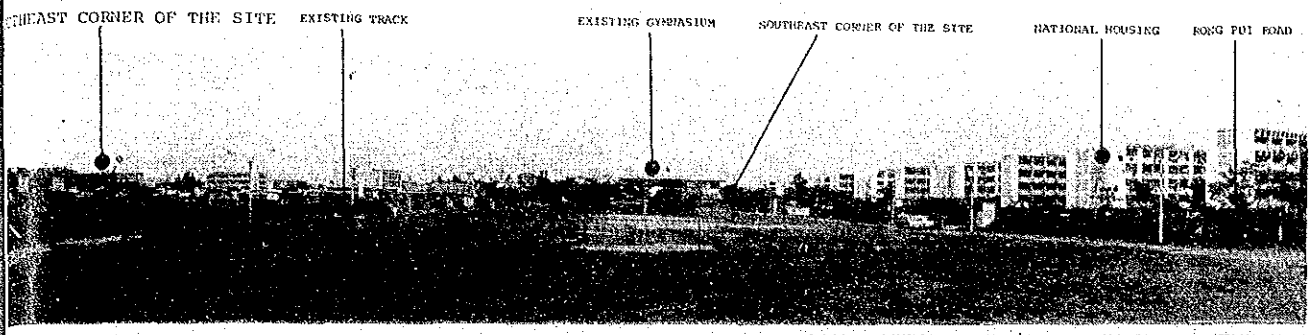
4 PRACHASONG KHRO ROAD

5 NATIONAL HOUSING

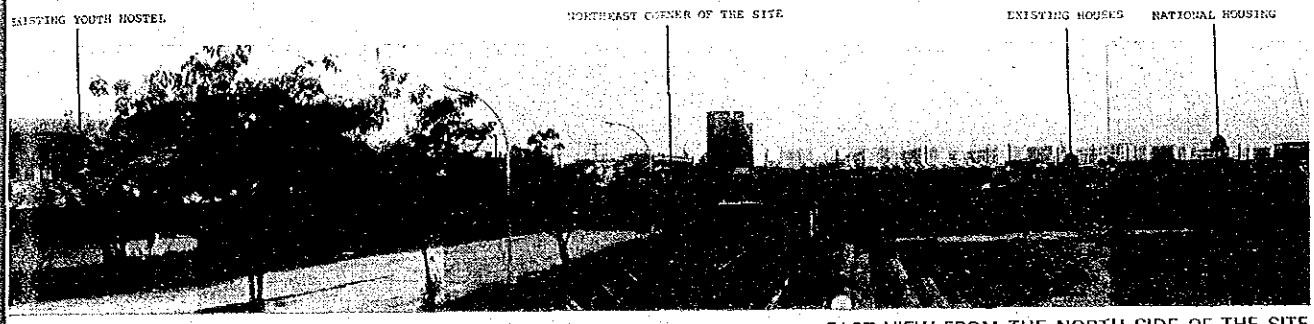
6 N.I.S.D.

7 EXISTING HOUSES

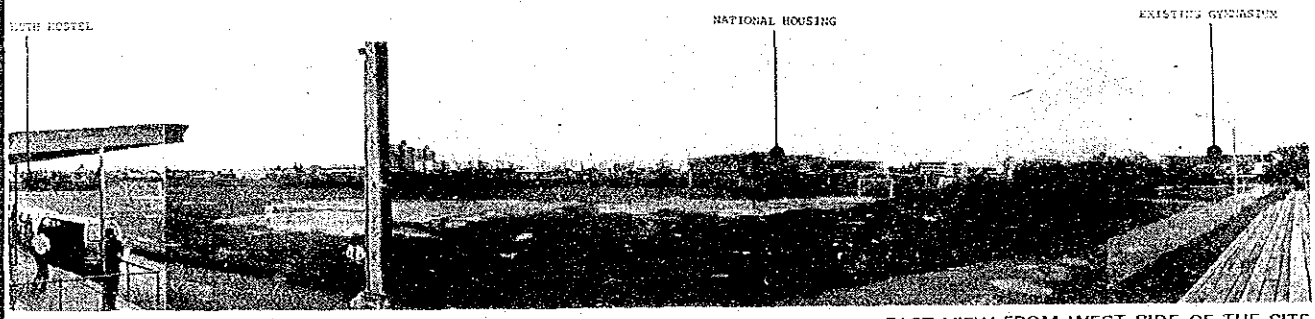
SURROUNDING OF THE SITE



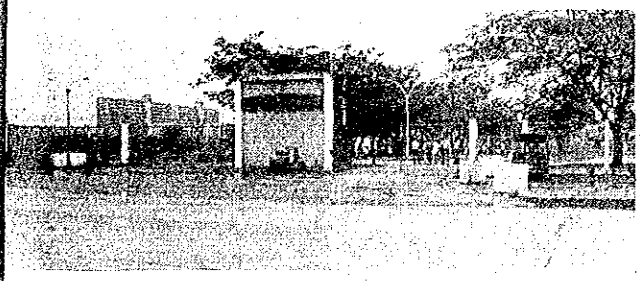
SOUTH VIEW FROM THE NORTH SIDE OF THE SITE



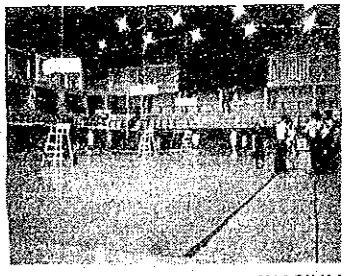
EAST VIEW FROM THE NORTH SIDE OF THE SITE



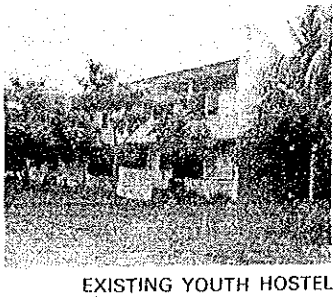
EAST VIEW FROM WEST SIDE OF THE SITE



THE SOUTHWEST GATE

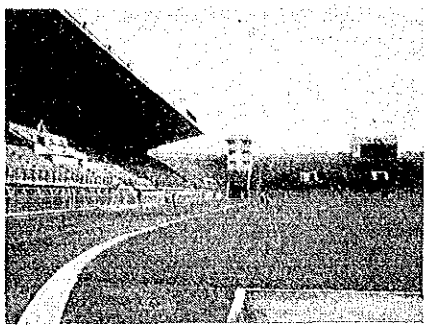


EXISTING GYMNASIUM

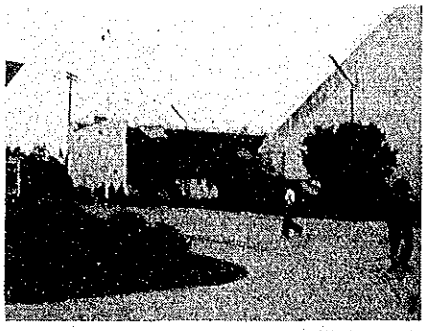


EXISTING YOUTH HOSTEL

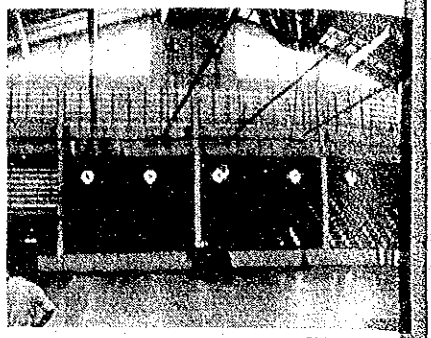
NATIONAL STADIUM



MAIN STADIUM

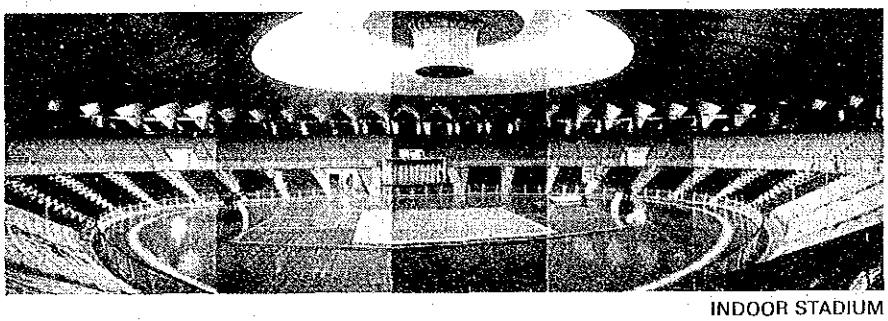


SWIMMING POOL

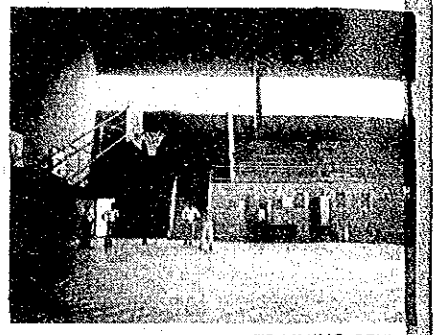


GYMNASIUM

NATIONAL SPORTS COMPLEX

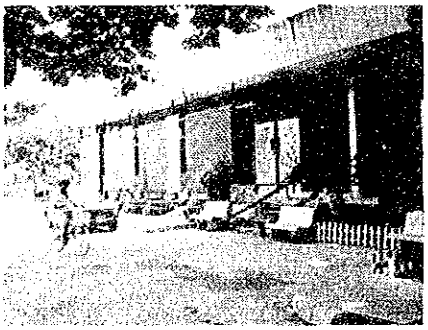


INDOOR STADIUM

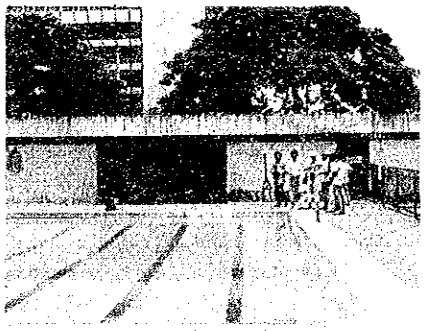


TRAINING CENTER

LUMPINI YOUTH CENTER



ENTRANCE



SWIMMING POOL

MULTIPURPOSE R

5-4 SURVEY OF SPORTS AND CULTURAL FACILITIES AND YOUTH CENTER

The major sports and cultural facilities in and around the Bangkok Metropolis are as follows;

1)	Cultural facilities	National Theater
		National Museum
		National Library
2)	Sports facilities	National Stadium
		National Sports Complex
		Rajdamnden Boxing Stadium
		Lumpini Boxing Stadium
		Charusathien Stadium
		Royal Turf Club
		Royal Bangkok Sports Club

In addition, many private halls, sport clubs and the like are also in service. However, most of them are intended for wealthy people; and facilities available to the general public are very limited.

Besides them, there are 22 cultural and sports facilities for the younger people organized and managed by the Bangkok Metropolitan Administration (refer to the table). However, many of these facilities are using vacant lots in temples and equipped very poorly. The only one exception among them is the Lumpini Youth Center located in the Lumpini Park, which is well equipped even though small in scale.

YOUTH CENTERS IN BANGKOK

NAME	DESCRIPTION OF FACILITIES												NUMBER OF MEMBER
	BASKET BALL	VOLLEY BALL	FOOT BALL	BADMINTON	PING PONG	SWIMMING POOL	DRAMATICS	CRAFT	NURTRITION	ART & SCIENCE	LIBRARY	INFORMATION	
LUMPINI	○	○	○	○		○	○	○			○		3,592
PATHUMWAN	○	○		○			○	○	○				1,209
BONKAI	○	○	○	○			○	○	○		○	○	1,076
SUAN-01	○	○		○			○	○				○	1,303
TECHAVANITCH	○	○					○	○		○		○	1,365
TEVES	○	○		○			○	○	○		○	○	1,325
WAT SOMANUS	○	○		○			○	○	○		○	○	1,505
VITCHUTIS	○	○		○			○	○				○	1,399
VERURACHIN	○	○					○	○					606
WAT DOE-MAI	○	○		○				○					209
BANG KHEAN		○	○	○			○	○					286
CHAT KAEN	○	○		○			○						304
SUEPAWUT BANENA	○	○		○			○	○					250
ROTARY JHONBUR		○		○	○		○	○			○		1,321
WAT HUA-LUMPHONE	Playground of School												750
WAT PATHOM KONEKA	(ditto)												790
WAT CHANA SONG-KRAM	(ditto)												906
WAT TAT-TONE	(ditto)												790
WAT AMBAWA	(ditto)												556
SUWANNARAM	(ditto)												347
RATBURANA	(ditto)												797
WAT MUANG	(ditto)												

APPENDIX

-1 MEMBER LIST OF THE SURVEY TEAM & THAI AUTHORITIES CONCERNED

(1) MEMBER OF THE SURVEY TEAM

(2) THAI AUTHORITIES CONCERNED

(3) OFFICIALS OF THE JAPANESE GOVERNMENT & JICA STATIONED IN THAILAND

-2 ORGANIZATION CHART OF THAI AUTHORITIES CONCERNED

(1) D.T.E.D.

(2) B.M.A.

-3 DATA OF THE INFRASTRUCTURE

(1) WATER SUPPLY

(2) ELECTRIC POWER SUPPLY

(3) DRAINAGE

APPENDIX-1 MEMBER LIST OF THE SURVEY TEAM & THAI AUTHORITIES CONCERNED

(1) MEMBER OF THE SURVEY TEAM

● THE PRELIMINARY SURVEY TEAM

Name	Assignment	Position
Mr. Masatoshi Muto	Team Leader	Development Cooperation Div. Economic Cooperation Bureau Ministry of Foreign Affairs
Mr. Toshitaka Aiga	Architectural Design	Architect Director of Design Kume Architects-Engineers

● THE BASIC DESIGN SURVEY TEAM

Name	Assignment	Position
Mr. Kihachi Shima	Team Leader	Supervisor of Physical Education Physical Education Bureau Ministry of Education, Science and Culture
Mr. Tuneki Mituyasu	Social Education	Senior Specialist of Social Education Social Education Bureau Ministry of Education, Science and Culture
Mr. Mahito Kojima	Grant Assistance Program	Researcher Economic Cooperation Bureau Ministry of Foreign Affairs
Mr. Toshio Ai	Coordination	Coordinator Social Development Cooperation Dept. Japan International Cooperation Agency
Mr. Toshitaka Aiga	Architectural Design	Architect Director of Design Kume Architects-Engineers
Mr. Norio Ihira	Structural Design	Architect International Dept. Kume Architects-Engineers
Mr. Makoto Tanaka	Mechanical Design	Architect International Dept. Kume Architects-Engineers
Mr. Koji Kodama	Quantity Survey	Architect International Dept. Kume Architects-Engineers

(2) THAI AUTHORITIES CONCERNED

- Department of Technical and Economic Cooperation - D.T.E.C.

Dr. Xujati Pramoolpol	Director-General
Mr. Pracha Chaowasilp	Director, Colombo Plan Division
Mr. Apimuk Sukprasit	Colombo Plan Division
Mr. Sutin Susila	Colombo Plan Division
Mr. Tawal Polpuech	Colombo Plan Division

- Ministry of Education

Dr. Bunsom Martin	Minister
Dr. Kaw Swasdi Panich	Deputy Minister
Mr. Suvid Visuddhisin	Secretary
Mr. Sen Keoyote	Planning Organizer

- Bangkok Metropolitan Administration - B.M.A.

Mr. Chaowas Sudlabha	Governor
Mr. Somchai Wudhiprecha	Deputy Governor
Mr. Thumrong Padhanarath	Under Secretary of State
Mr. Muanochai Tajaroensuk	Secretary to the Deputy Governor
Mrs. Kruawal Sukhumanonta	Director, Bureau of Social Welfare
Mr. Snoh Iamopas	Director, Bureau of Sanitation
Mr. Bampen Jatoorapreuk	Director, Design Division
Mr. Pramual Vimolnoj	Chief, Fertilizer Plant Division
Mr. Boonyawat Tiptus	Chief, Design Division
Mr. Bhiroj Bhirunrat	Chief, Recreation Division
Mr. Orabhan Chatuparisut	Chief, Youth Center Section
Mr. Nibhon Lanlua	Chief, Promoting Sports Section
Mr. Boonyakit Stamsakul	Chief, Foreign Relation Office
Mr. Wisut Panutat	Architect
Mr. Prasit Sathorn	Civil Engineer
Miss Jatoobhon Suawanasri	Architect, Design Division
Mr. Paradorn Tanyakorndilole	Architect, Building Control Division
Mrs. Soyangkoon Panapornsirikul	Officer, Foreign Relation Office

- National Housing Authority

Mr. Sompong Hirikul	Deputy Director, Estate Management Dept.
Mr. Boonfaung Pringsulaka	Assistant Director, Dept. Research & Construction

(3) OFFICIALS OF THE JAPANESE GOVERNMENT & JICA STATIONED IN THAILAND

- Embassy of Japan in Thailand

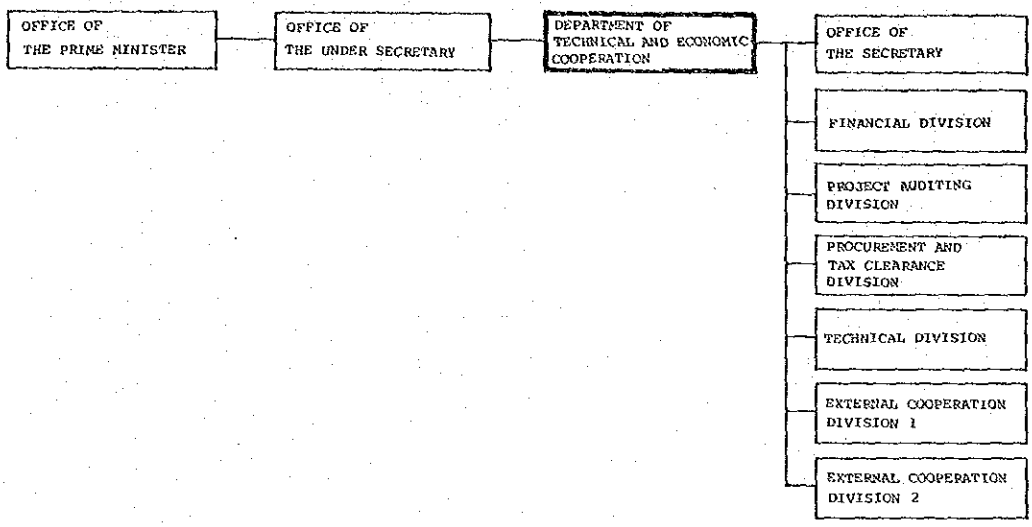
Mr. Hiroshi Hitomi	Ambassador Extraordinary and Plenipotentiary
Mr. Tsuneo Tanaka	Minister
Mr. Hiroyuki Yushita	Councelor
Mr. Morikuni Akiguchi	First Secretary

- Japan International Cooperation Agency, Bangkok Office - JICA

Mr. Yasuo Kitano	Director
Mr. Takanori Jibiki	Officer

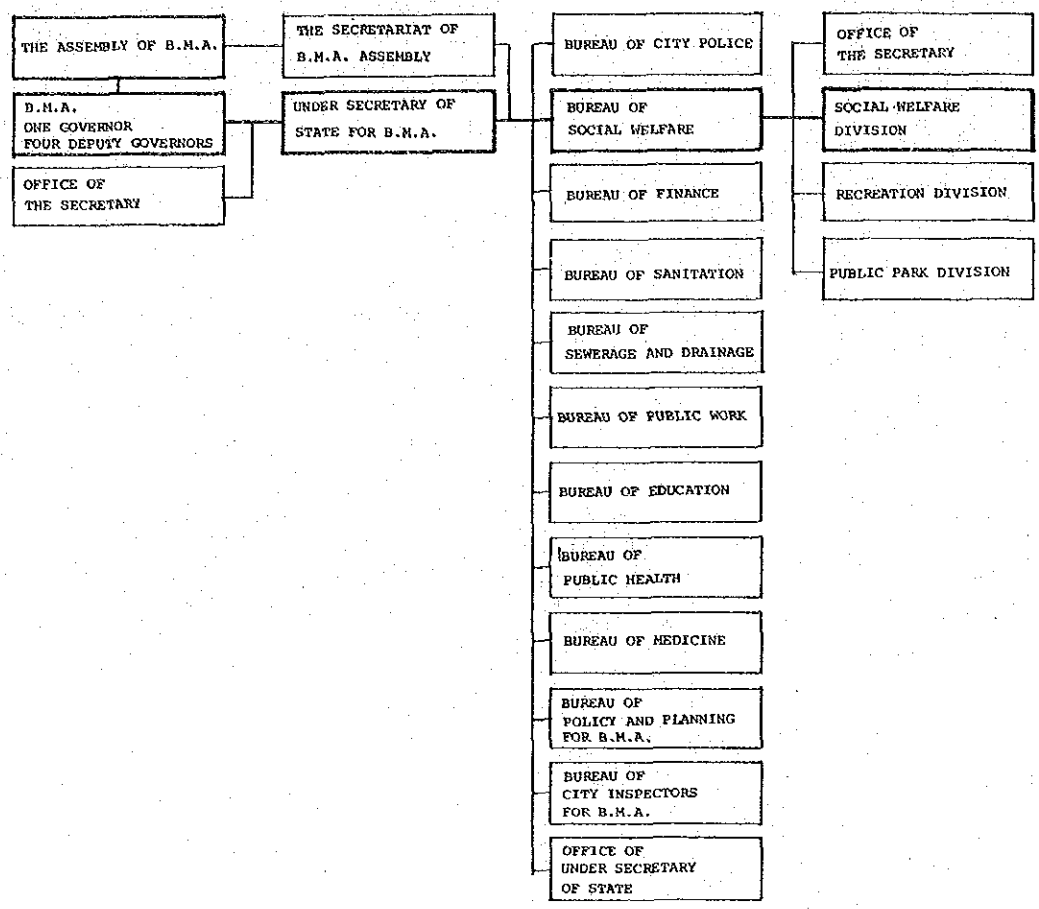
APPENDIX-2 ORGANIZATION CHART OF THAI AUTHORITIES CONCERNED

(1) D.T.E.C.

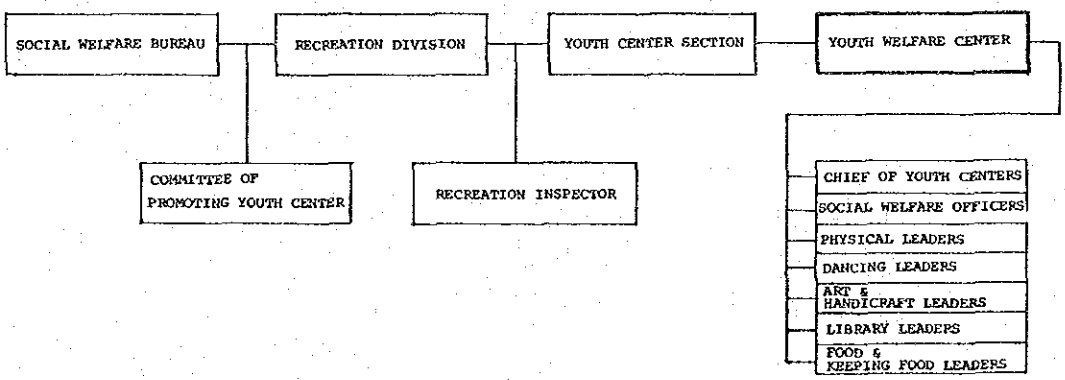


ORGANIZATION CHART OF D.T.E.C.

(2) B.M.A.



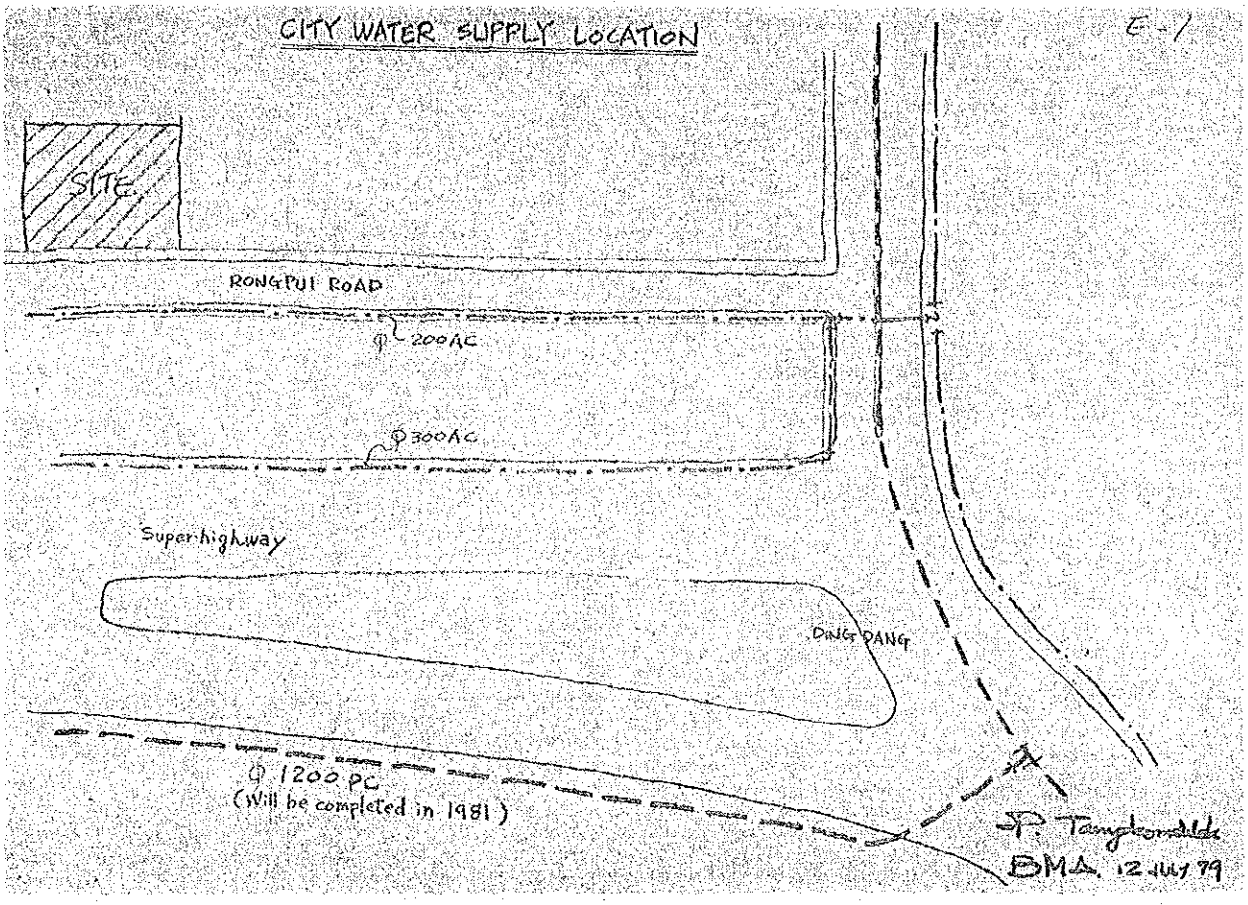
ORGANIZATION CHART OF B.M.A.

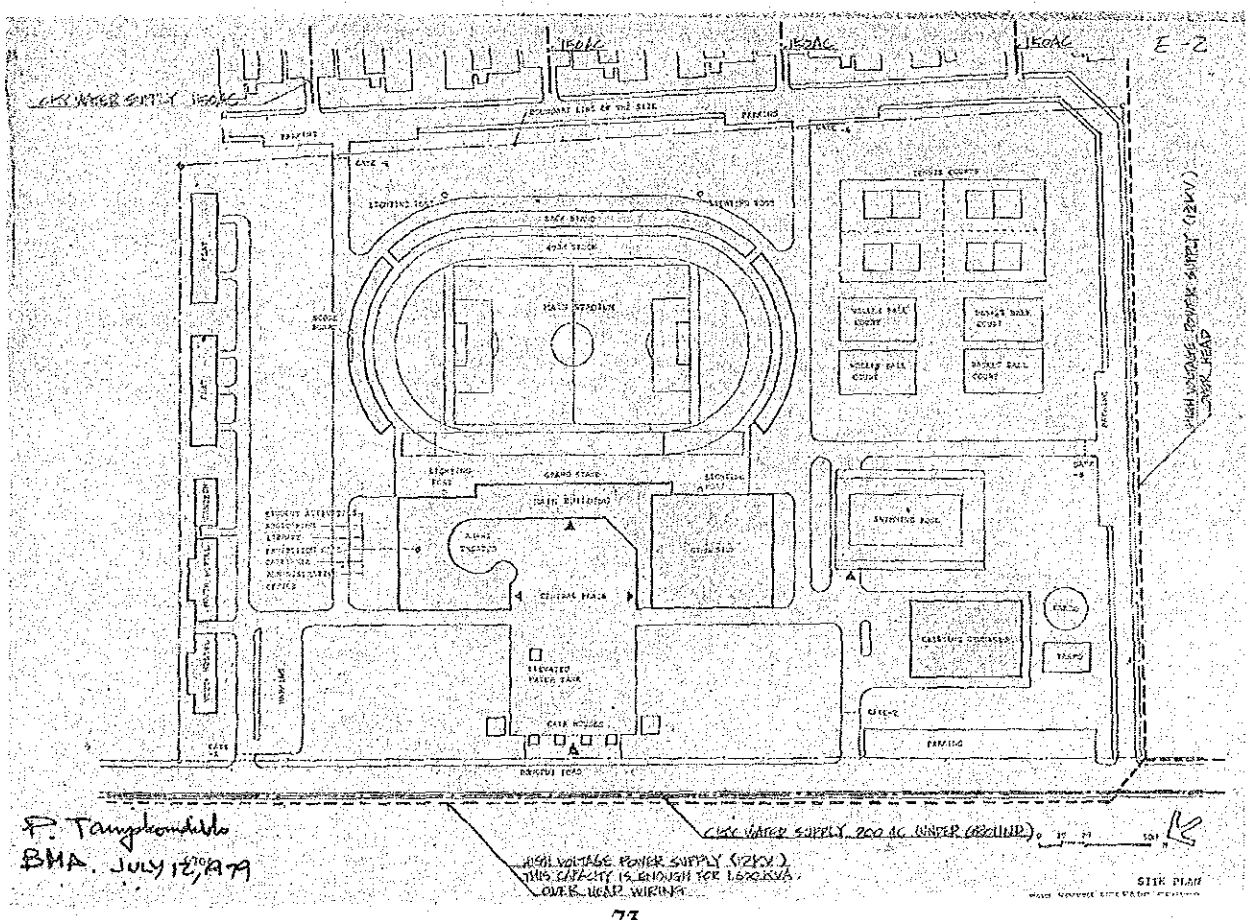


ORGANIZATION CHART OF THE YOUTH WELFARE CENTER

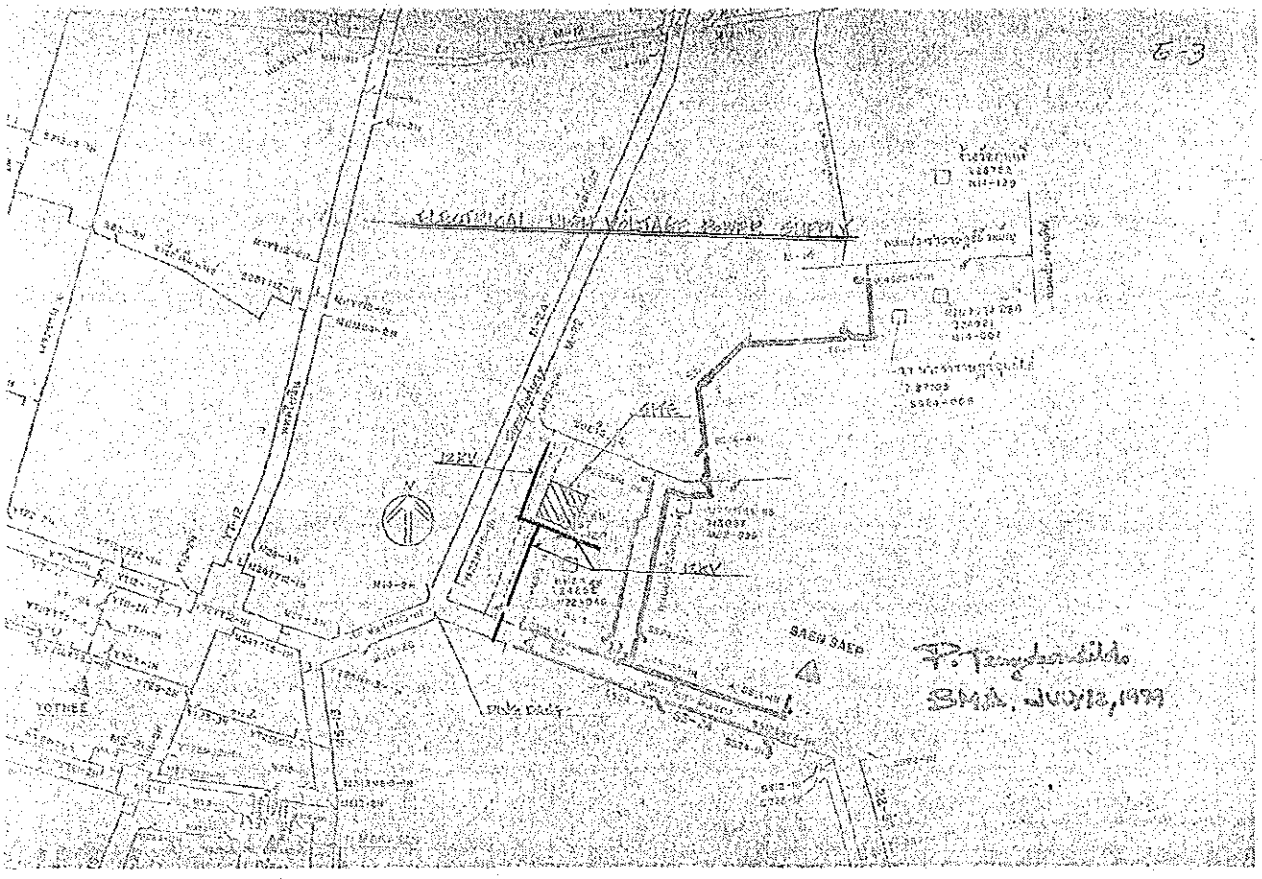
APPENDIX-3 DATA OF THE INFRASTRUCTURE

(1) WATER SUPPLY





(2) ELECTRIC POWER SUPPLY



(3) DRAINAGE