2-4-2 Health Services Facilities

1. MEDICAL DENTAL PROCESSING CENTER

Objectives : Functions — A series of procedures of registration, alloting housing, furnishing daily necessities, physical checkups, and orientations to all refugees arriving at PRPC are carried out at Phase I. Physical checkups currently being conducted are usually no more than oral examination, however, the purpose of this upgrading plan is to develop a system in which the 3,000 refugees arriving to PRPC each month can go through more specific and precise screening for their physical and dental health, including hematoscopy, urinalysis and ECG tests, thus contributing to the healthy lives of the refugees thereafter.

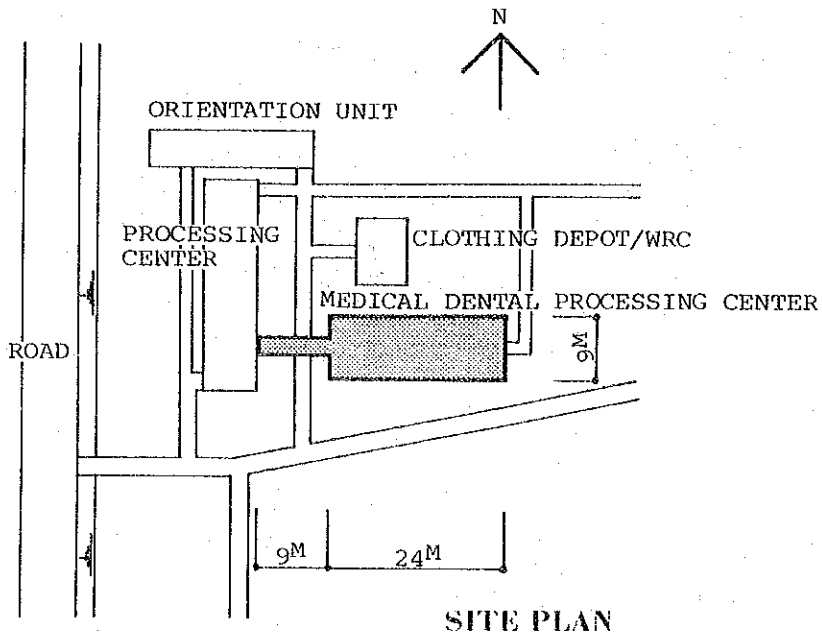
Management Implementation : PRPC-HSG

Location : Phase I, as an annex to the existing Processing Center

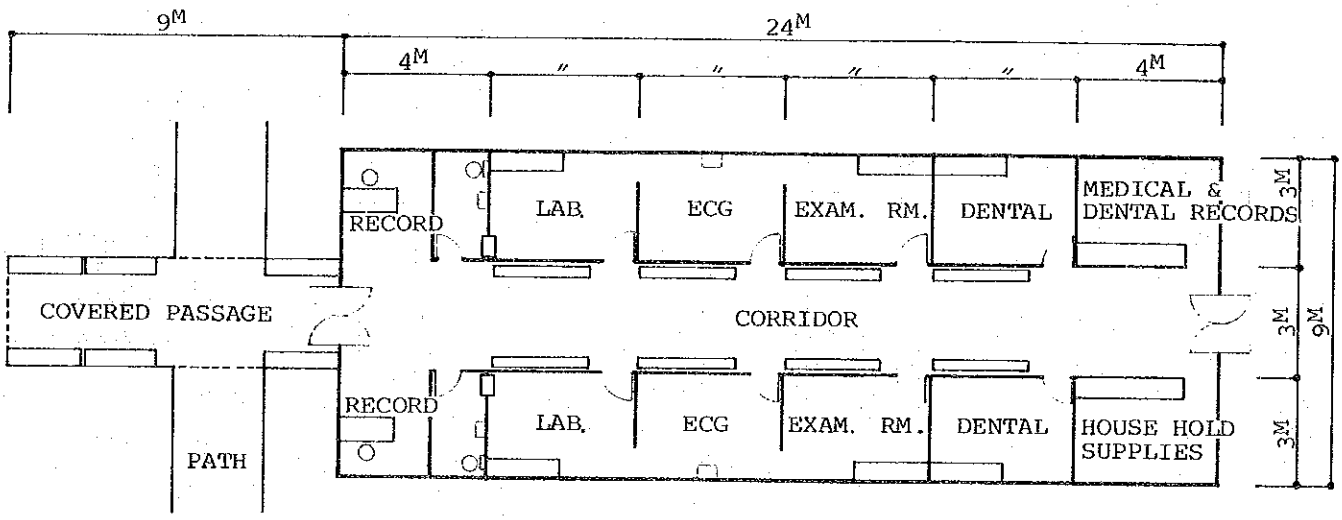
Facility Size : Recording room, laboratory, ECG room, medical and dental examination rooms will be located in two lines parted by a central single corridor to enhance efficient medical and dental screening on the expected 3,000 refugees monthly (150 refugees per day). The center will be connected with a simple wooden roofed corridor so that the two buildings will have a united function. RC + CHB structure is adopted for the Medical Dental Processing Center because many of the rooms and equipment require air conditioning.

Structure Floor Area : RC + CHB structure, 1-story, to be newly constructed, 243 m^2

Major Equipment : Equipment for medical and dental screening, etc.



SITE PLAN



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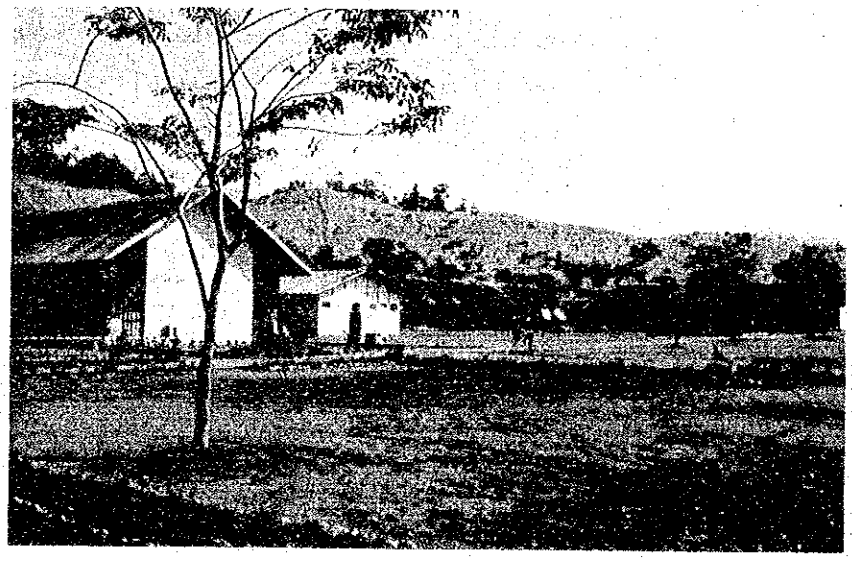


2. MEDICAL DENTAL DISPENSARIES

Objectives : Functions

Approximately 60% of the designed refugee population will need medical or dental treatment of some sort. Moreover, the level of the treatment should meet the health standard of U.S.A. and/or European countries in which the refugees wish to settle down eventually. Currently the Hospital in the Central Area and the medical dispensary and dental clinic of voluntary group in Phase I are in charge of this, but the problem is the serious shortage in facilities, medical equipment and staff. Another problem is that refugees rush to the overcrowded hospital in the Central Area because there are no medical and dental facilities in Phase II. The objective of the planning is to provide more substantial medical services to refugees at both Phases by constructing two new medical dental dispensaries; one each for Phase I (refugee population: 10,000) and for Phase II (refugee population: 7,000).

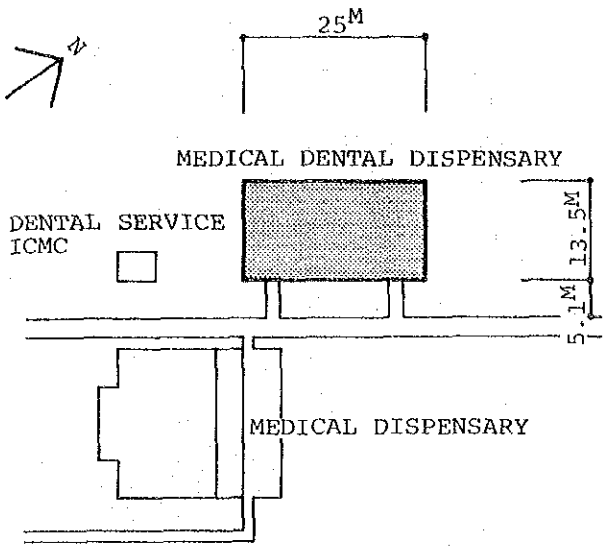
Management Implementation : PRPC - HSG

Location : 2 in all, 1 each in Phase I and Phase II

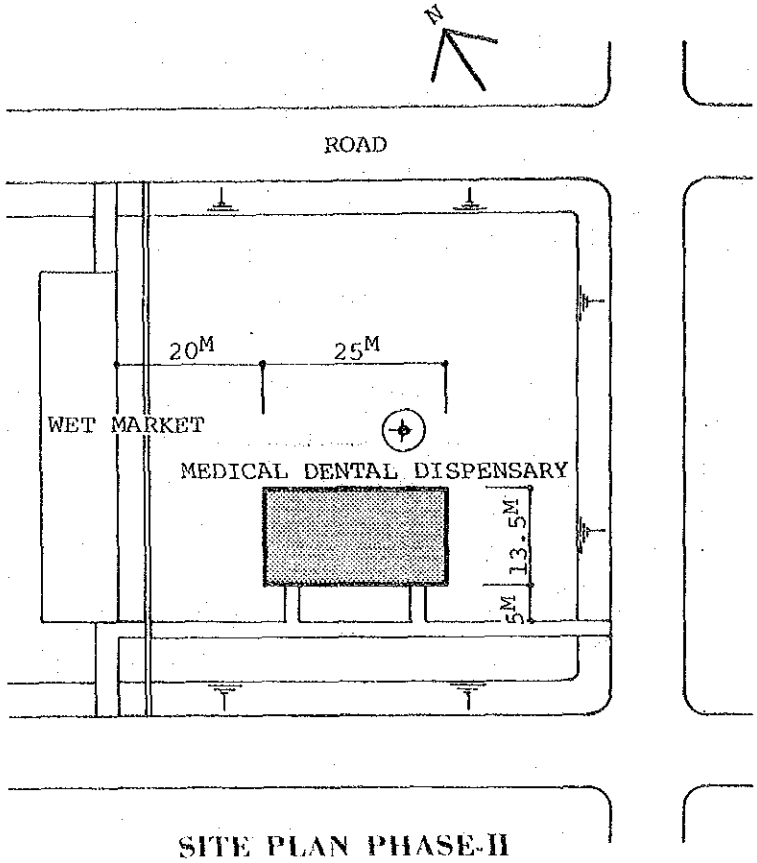
Facility Size : With the exception of special patients who need to be given medical treatment at the Hospital, all refugees arriving at PRPC are to go through oral and general checkups. This plan has been designed on the assumption that there will be 100-150 patients/day at the medical clinic and 40 - 60 patients/day at the dental clinic at each Phase. A simple and roofed external area has been prepared as a waiting room to hold a large number of patients and their families. The pharmacy shared by medical and dental clinics has a hand-over counter facing the external waiting room. This external waiting room can be used at nights for presentations and instructions on public health and hygeine. RC + CHB structure is adopted for medical dental dispensary because many of the rooms and equipment require air conditioning.

Structure Floor Area : 1-story building using RC+CHB structure, 337.5 m^2/bldg. x 2 bldg. to be newly constructed, total floor area 675 m^2

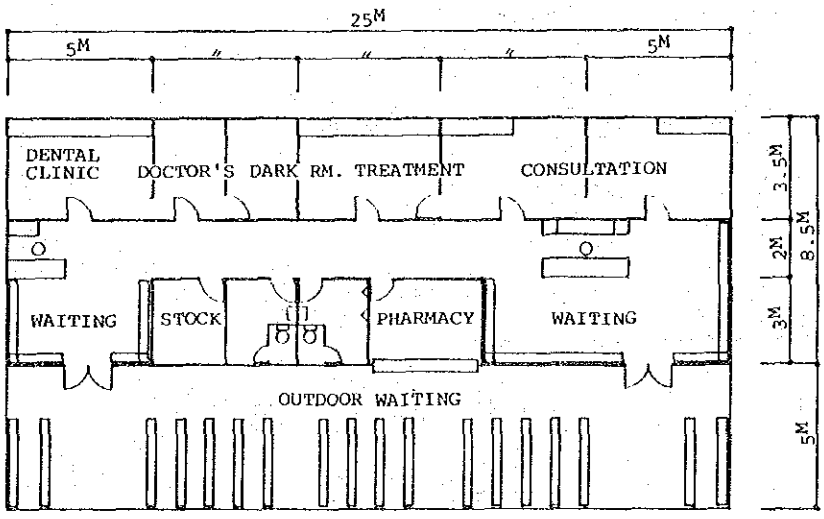
Major Equipment : Medical and dental equipment, etc.



SITE PLAN PHASE- I



SITE PLAN PHASE-II



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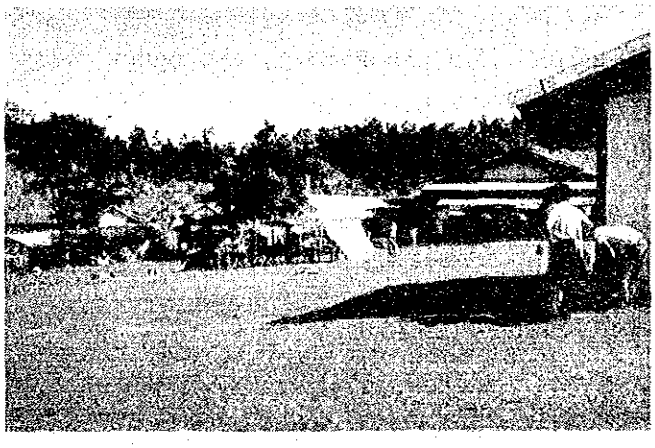
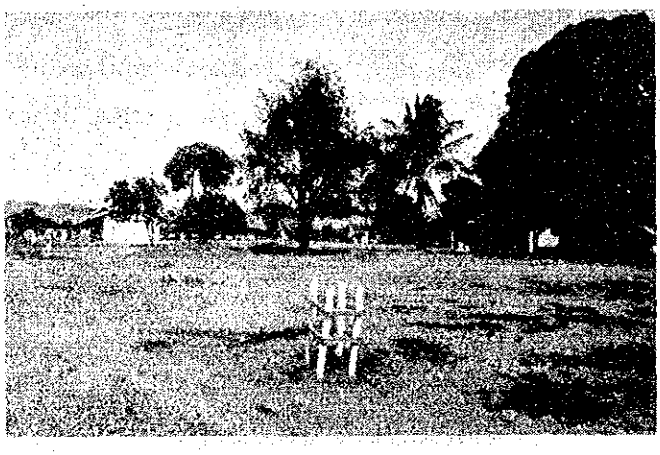


PHASE- I

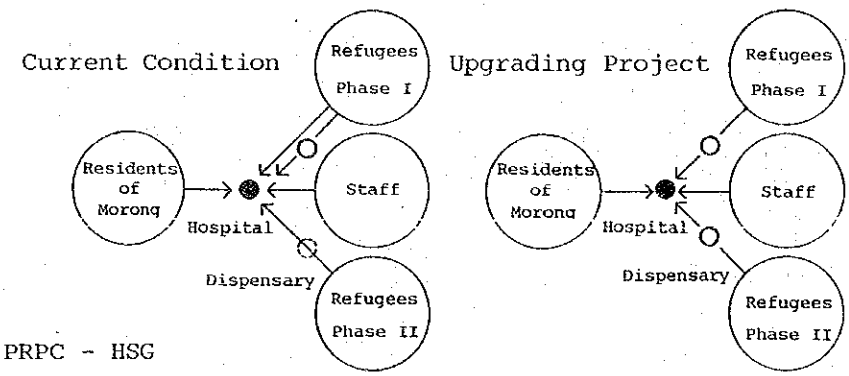


PHASE-II

3. HOSPITAL

Objectives : Functions

The Hospital currently functions as a regional hospital with 40 beds to provide medical services to a total of 26,400 population (designed 17,000 refugee population, 1,000 staff of PRPC and voluntary groups, and 8,400 residents of Morong). However, it does not yet fulfill its function due to the shortage of medical equipment, medical staff and lack of proper facilities. Based on the upgrading plan for health services in this project, 2 new Medical Dental Dispensaries will be constructed and a proper medical network shall be maintained. Facilities for OPD, medical laboratory and emergency room will be improved and new medical equipment will be induced, thus bestowing full function to the Hospital.



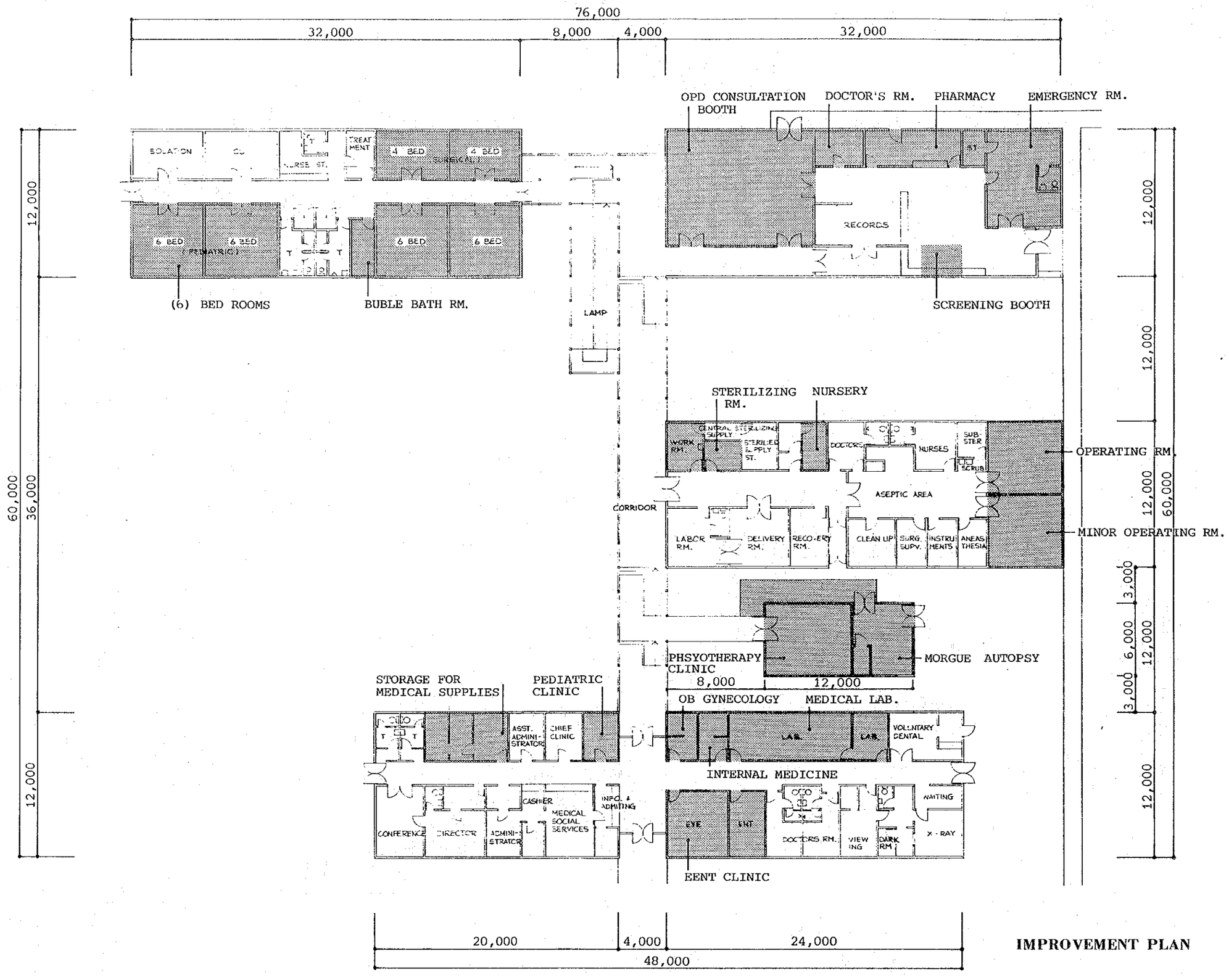
Managament Implementation : PRPC - HSG

Location : Central Area

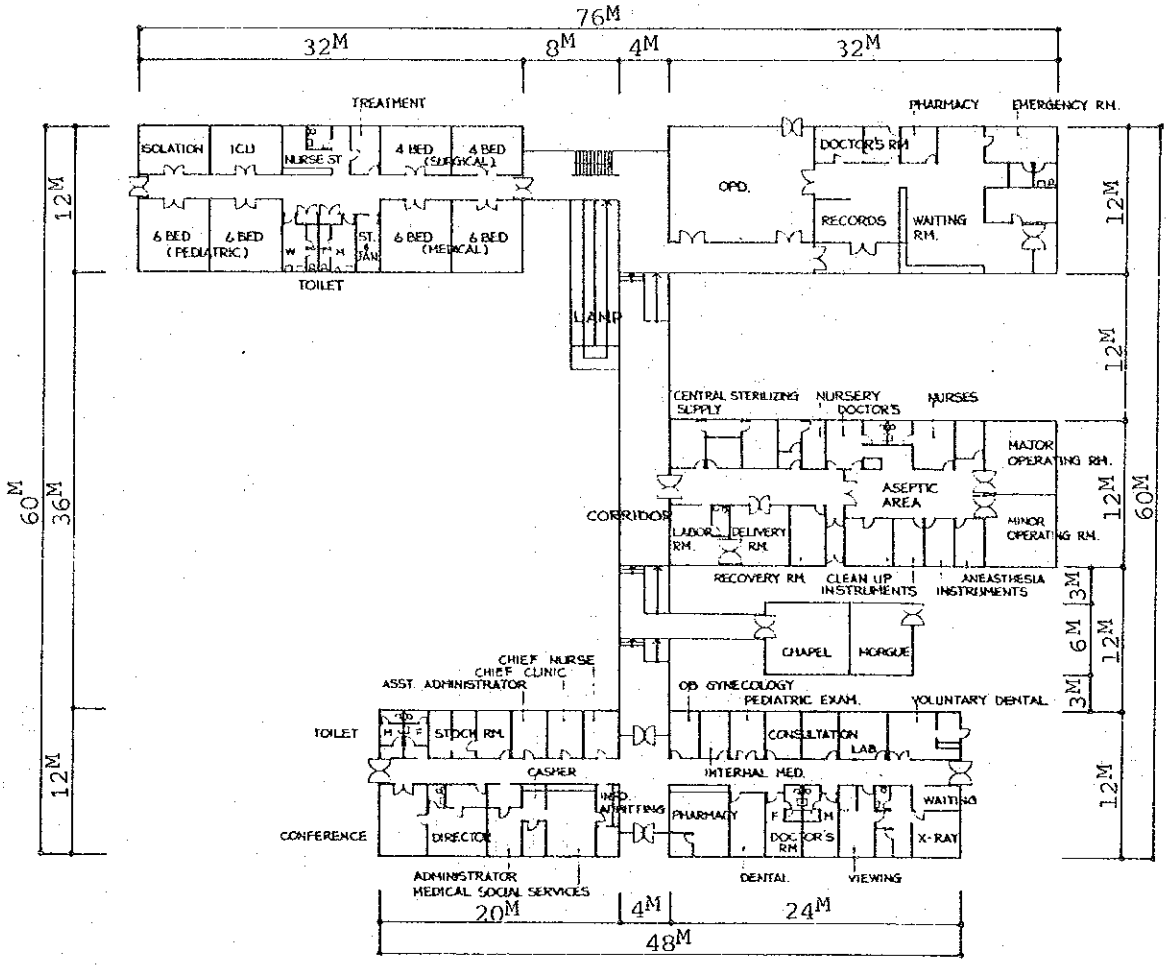
Facility Size : Remodeling of existing Hospital (1-story building in RC + CHB structure, 2,088 m^2)

Floor Area : Remodeling of 761.5 M^2 including remodeling of medical laboratory, emergency room, pharmacy, OPD, operation rooms, bedrooms, etc. and new construction of E. ENT clinics, physiotherapy clinic, morgue/autopsy, etc.

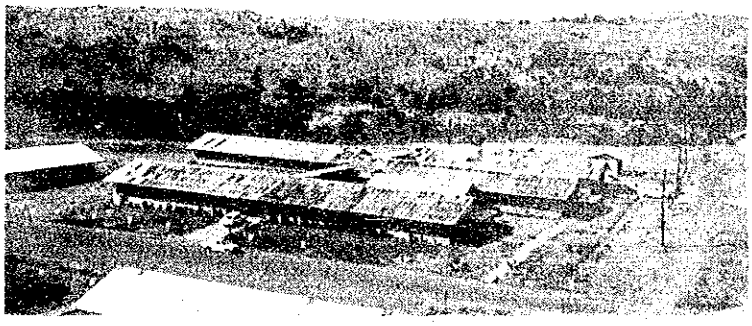
Major Equipment : Medical equipment and devices for laboratory, emergency room, E. ENT, physiotherapy, morgue/autopsy, etc.



IMPROVEMENT PLAN



EXISTING PLAN



4. DENTAL LABORATORY

Objectives Functions : There is virtually no dental prosthetic services, and no further treatment is applied after tooth extraction. However, the health standard of many of the recipient countries like U.S.A. require restoration, so a provision of dental prosthetic laboratory is an urgent matter. This plan is to build a dental laboratory attached to the Hospital where refugees, staff and residents of Morong can receive dental prosthetic services for 30 cases daily.

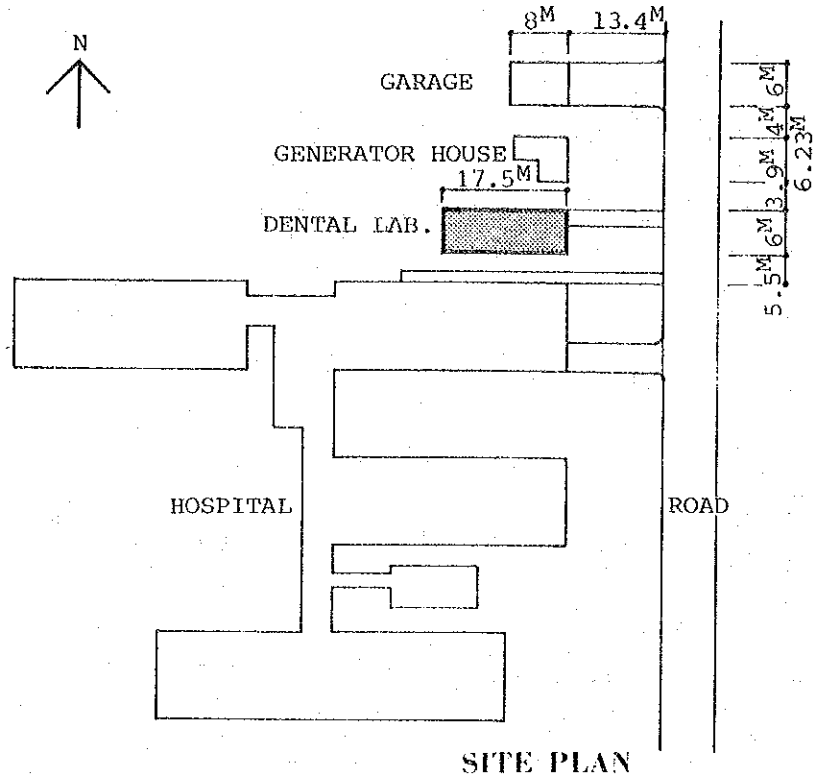
Management Implementation : PRPC - HSG

Location : Central Area, adjoining to the north of the Hospital

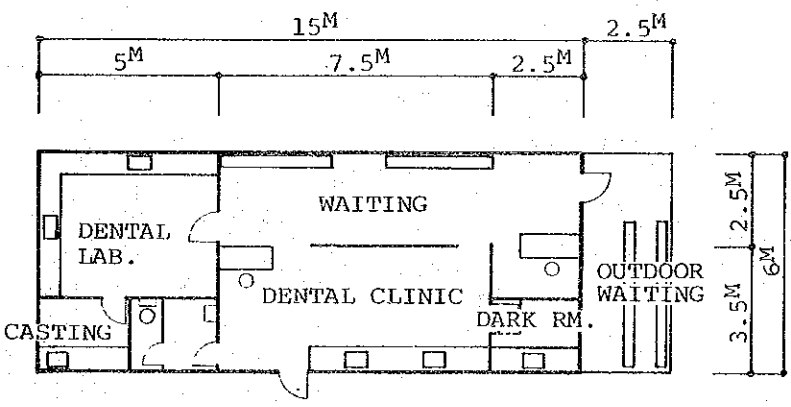
Facility Size : The facility will include laboratory and clinic necessary for dental prosthesis of 30 cases daily, with a simple and roofed external area to be used as waiting room for patients and their families. The function of many rooms and equipment require air conditioning, so RC + CHB structure will be adopted.

Sturcture Floor Area : 1-story building in RC + CHB structure 90 m^2

Major Equipment : Equipment and devices for dental prosthesis



SITE PLAN



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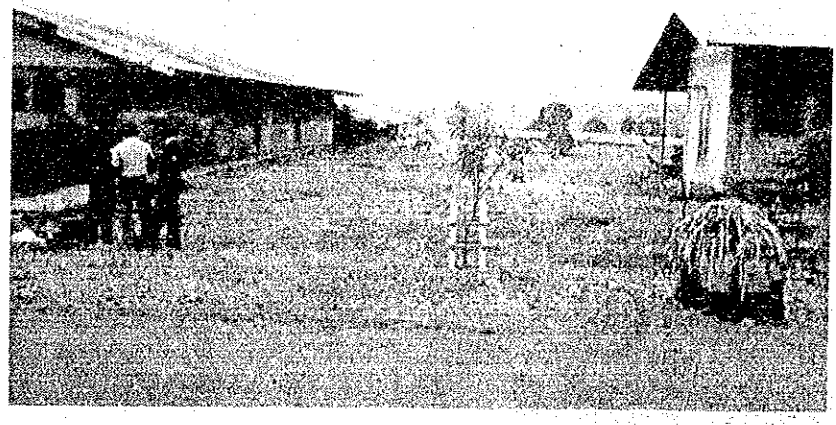


5. AMBULANCE CARS AND GARAGE

Objectives : A garage will be used for parking the 2 ambulance cars.
Functions

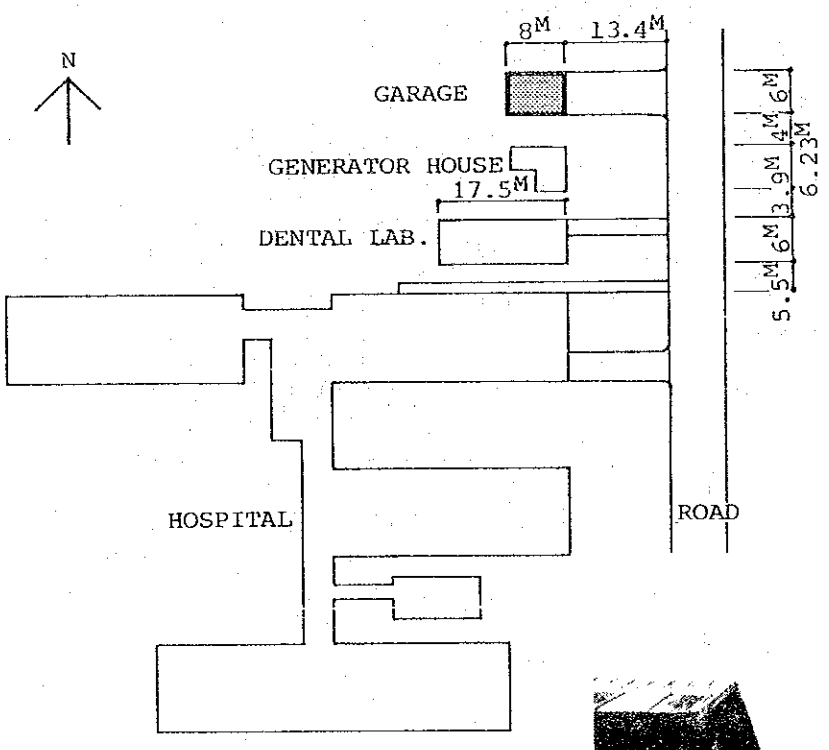
Management : PRPC - HSG
Implementation

Location : Central Area, adjoining to the north of the Hospital

Facility Size : A simple, roofed garage for parking 2 ambulance cars

Structure Floor Area : 1-story, wooden structure to be newly built. 48 m^2

Major Equipment : 2 ambulance cars



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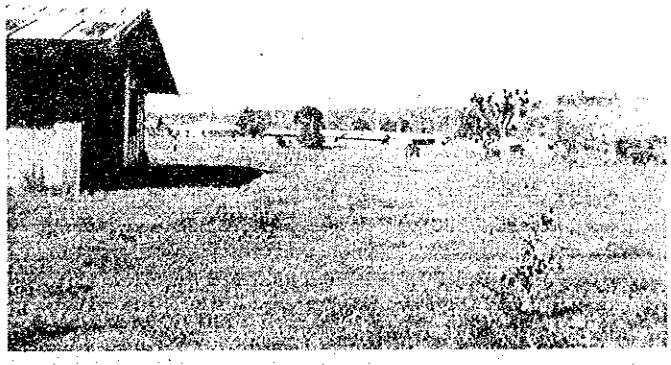


6. MEDICAL SUPPLIES STORAGE

Objectives Functions : Corresponding to the upgrading of health services, a facility will be used for preserving medical supplies, spare parts, and consumables in quantity equivalent to average annual consumption in Japan. Some of the medical supplies need to be preserved in refrigerated condition.

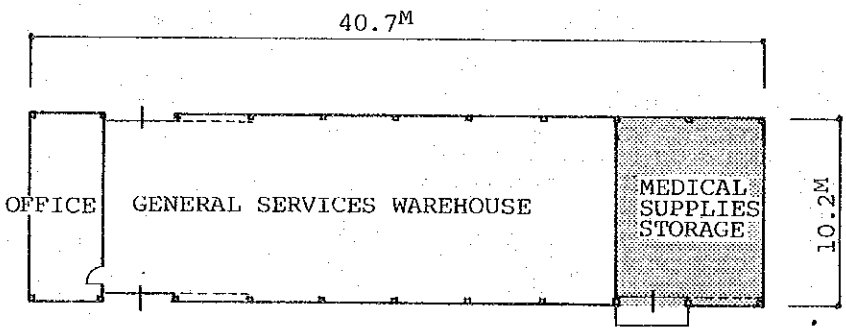
Management Implementation : PRPC - HSG

Location : Central Area, in a part of the service warehouse zone.

Facility Size : Remodeling a part of the existing Warehouse (RC + CHB structure, 1-story building, 400 m^2)

Floor Area : Remodeling of 80 m^2 to be used as storage for medical supplies.

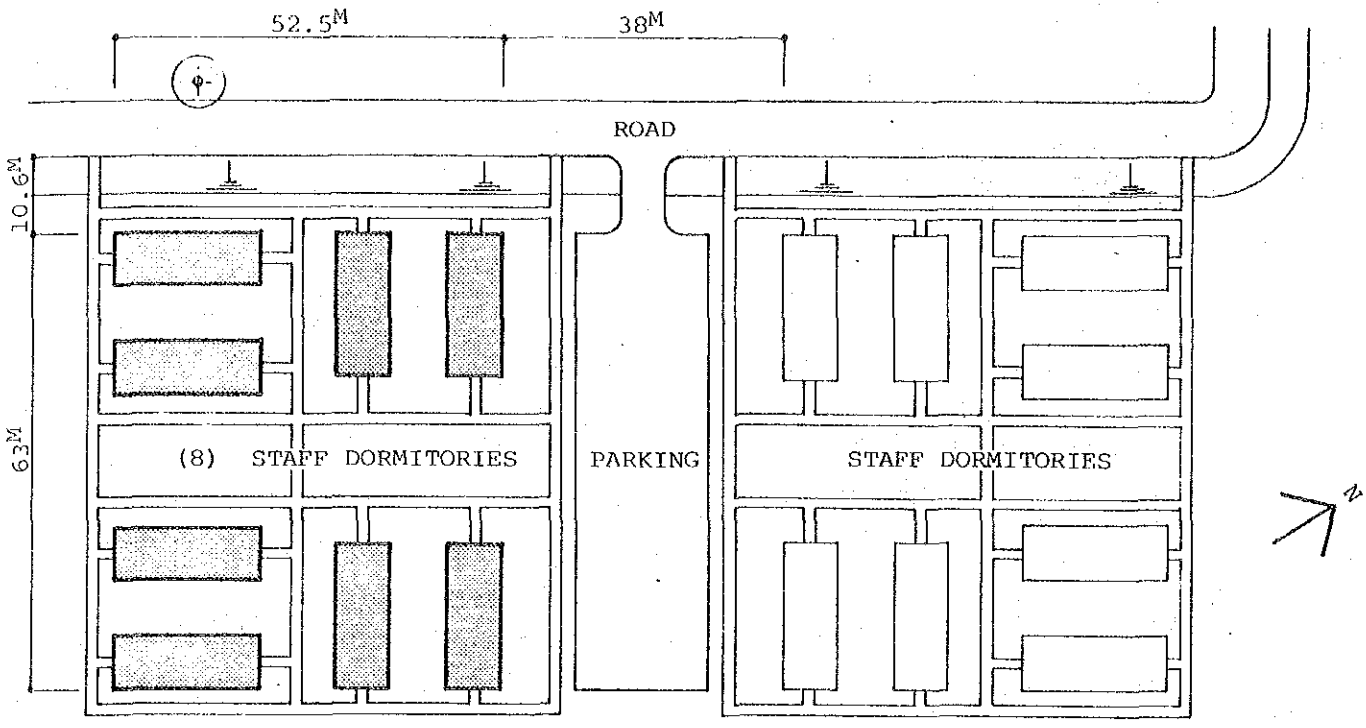
Major Equipment : Refrigerated storage, storage shelves, etc.



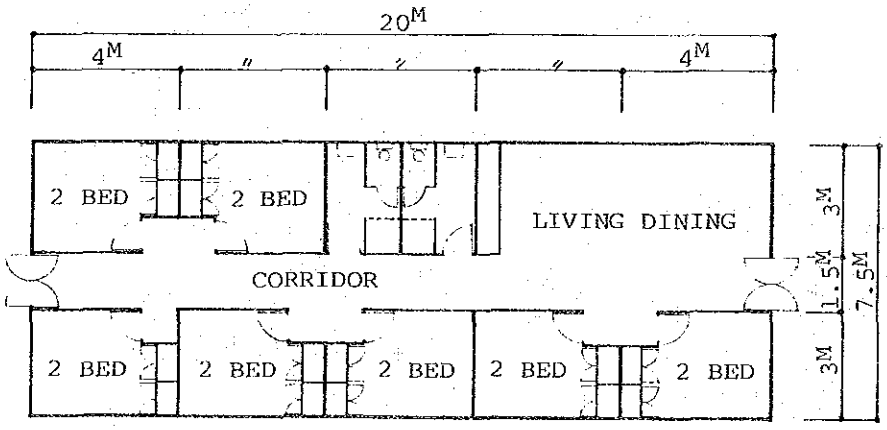
IMPROVEMENT PLAN

7. STAFF DORMITORIES

Objectives Functions	:	To provide staff dormitories in accommodation to increased number of staff corresponding to the upgrading of health services.
Management Implementation	:	PRPC - GSG
Location	:	Central Area, adjacent to the 8 staff dormitories currently under construction.
Facility Size	:	The building should be of the same size as existing staff dormitories - consisting of 7 bedrooms (2 people per room), common use space such as living/dining room and kitchen, common toilet and shower room. Each of the 4 dormitories will accommodate 14 people, so total of 56 staff can be admitted. The 4 dormitories will be constructed adjacent to the 4 dormitories for training staff within the same site.
Structure Floor Area	:	Wooden, 1-story building, 150 m^2/bldg. x 4 bldgs. to be newly constructed, for total floor area of 600 m^2.
Major Equipment	:	Furnitures like bed, table and chair for bedrooms, furnitures for common use like living/dining room, kitchen equipment and utensils, etc.



SITE PLAN



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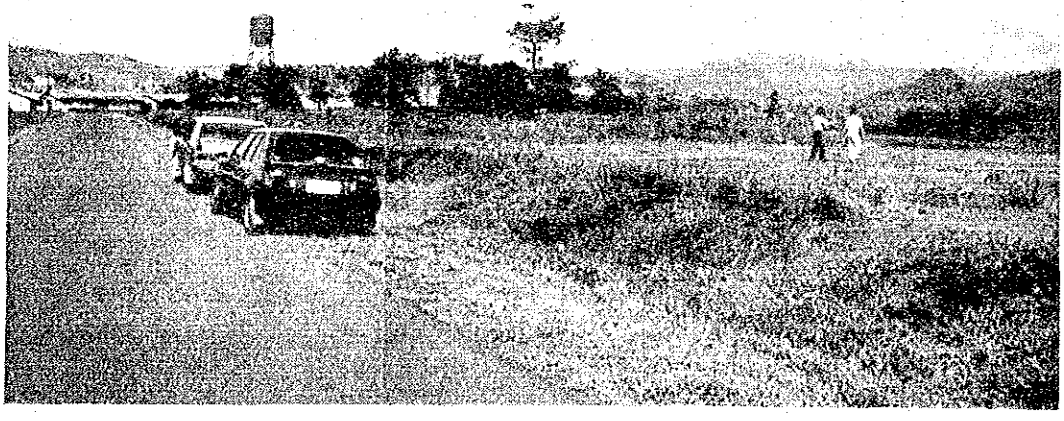


2-5 Utility Design

2-5-1 Electrical System

1. Power Supply System

Electricity will be received from the low-voltage line inside of PRPC. The supply voltage will be single or 3 phase 230-240 v and frequency will be 60 Hz. Necessary electricity will be supplied to equipment and power sources, and lighting and service outlets in each facility. Grounding devices will be provided where necessary mainly on medical equipment. As to remodeling work, efforts will be made on continuing use of existing utility line as they are, without having extension and transference of them. Adjustment should therefore be made in between the existing supplying capacity and newly required capacity.

2. Telephone System

Extension telephones inside of PRPC will be extended where necessary, by using existing exchange system and external telephone cables.

2-5-2 Air Conditioning and Ventilation System

Mainly window-type air conditionders will be installed in rooms that require them. Ceiling fans and ventilation fans will also be installed where necessary.

2-5-3 Water Supply and Sewerage System

1. Water Supply System

Water will be lead in through junctions from existing water main supply line. Necessary measures shall be taken in facilities constructed in refugee neighborhoods against periodical restriction of water supply currently executed. Necessary plumbing fixtures will be installed in facilities to which water supply pipes will be connected. A rationalized planning will be adopted for remodeling work, as in the case of power supply.

2. Sewerage System

Waste water from proposed facilities will be drained through connection to nearest main sewerage line. Remodeling work will also consist of connection to sewerage line in existing facilities in principle.

2-5-4 Outline of Proposed Utility Design

1. Training Facilities

(1) Audio-Visual Students Service Centers

Air Conditioning and Ventilation System:
Air conditioners will be installed in audio-visual room and photo lab.,and ceiling fan in each room. Ventilating fan (light-shielding type) will be installed in photo lab.
Plumbing System:
Water closets, urinals and wash basins will be installed in toilet and service sink will be installed in photo lab.

(2) Mess Hall

Electrical System:
Fire alarm (spot-type) will be installed in each room, and additional power sources for additional kitchen equipment will be supplied in existing kitchen.
Ventilation System:
Ceiling fans will be installed in gift shop and function room.
Plumbing System:
Service sinks will be installed in bakery and fast food section, etc.
Telephone System:
Telephone will be installed in function room.

(3) Guest House

Electrical System:
Additional power sources for additional kitchen equipment will be supplied in existing kitchen and lounge. Fire alarms (spot-type) will be installed in each of the existing rooms.
Air Conditioning and Ventilation System:
Air conditioners will be installed in existing lounge and guest rooms, and ceiling fans will be installed in existing dining/conference room and lobby.
Telephone System:
Existing telephone will be removed to information office.

(4) Schoolhouses

Ventilation System:
Ceiling fan will be installed in each classroom and teacher's room.
Plumbing System:
Water closets, urinals and wash basins will be installed in toilet and teacher's room. A set of bath tub, wash basin, urinal and water closet for training purposes will be installed in each classroom of janitorial services course .

(5) Centralized Public Address System

Electrical System:
Power source for broadcasting devices will be installed in P.A. system control room in existing Administration Building, and lighting and service outlets will be arranged and improved to facilitate to the remodeling work.
Air Conditioning and Ventilation System:
Air conditioner will be installed in telephone exchange room and P.A. system control room.

(6) Staff Dormitories

Plumbing System:
Kitchen sink will be installed in living/dining room, and water closets, wash basins and shower heads will be installed in toilet and shower room accordingly.

2. Health Services Facilities

(1) Medical Dental Processing Center

Air Conditioning and Ventilation System:
Air conditioner and ceiling fan will be installed in each laboratory and examination room.
Plumbing System:
Service sinks will be installed in every laboratory and examination room. Water closets, urinals and wash basins will be installed in toilet.
Telephone System:
Telephone will be installed in recording room.

(2) Medical Dental Dispensaries

Air Conditioning and Ventilation System:
Each consultation and doctor's room will be furnished with air conditioner. Ceiling fans will be installed om waiting room and pharmacy.
Plumbing Services:
Service sinks will be installed in every consultation and treatment room. Water closets, urinals and wash basins will be installed in toilet.
Telephone System:
Telephone will be installed in recording room and doctor's room.

(3) Hospital

Electrical System:
Power sources will be supplied to accommodate to each remodeling work.
Air Conditioning and Ventilation System:
Air conditioner will be installed in each laboratory, clinic, physoitherapy, morgue/autopsy, emergency room, pharmacy and doctor's room. Medical supplies storage, waiting room, recording room and each bedroom will be furnished with ceiling fans.
Plumbing System:
In each remodeling work, water supply and sewage system will be improved to accommodate to each remodeling work.

(4) Dental Laboratory (Annex to the Hospital)

Air Conditioning and Ventilation System:
Air conditioners will be installed in dental laboratory and clinic. Ceiling fans will ne installed in waiting room.
Plumbing System:
Service sinks will be installed in dental laboratory and clinic, and toilet will be furnished with water closet and wash basin.
Telephone System:
Telephone will be installed in dental clinic.

(5) Medical Supplies Storage

Electrical System:
Power source will be supplied to accommodate to partial remodeling of existing Warehouse and also for new installation of refrigerated storage.

(6) Staff Dormitories

Plumbing System:

Kitchen sink will be installed in living/dining room, and water closets, wash basins and shower heads will be installed in toilet and shower room accordingly.

2-6 Equipment Planning

2-6-1 Outline of Proposed Equipment

According to the 2 - 1 Basic Design Concept, the following equipment for training and health services will be provided.

1. Training

(1) Audio-visual equipment, and equipment for producing materials for the presentations, which will be used for more effective presentation overcoming inefficiencies and inconsistency resulting from language barriers.

(2) Materials and practical equipment that can be used for basic vocational training of basic food services, janitorial services, hotel/motel aide, building maintenance, cashier, gardening/landscaping, etc.

(3) Equipment for centralized public address system that will provide refugees with latest news and announcements of the community, and supplementary aid in language and cultural education.

(4) Furnitures and kitchen equipment and utensils for staff dormitories to accommodate increased training staff due to expansion in basic vocational training program.

(5) Vehicles to enable speedy transportation of refugee and staff within the 300ha site for the educational program and training curriculum.

2. Health Services

(1) Medical and dental equipment for physical screening of newly-arrived refugees.

(2) Equipment for providing dental treatment that meet the standards of U.S.A. and other recepient countries of the refugees. Medical equipment which will enable carefully considered medical treatment at each Phase by releiving the concentration of patients at the Hospital.

(3) Medical equipment for OPD, medical laboratory and emergency room, etc. that will be upgraded by the improvement of the medical network of PRPC to enable the Hospital to function as the regional hospital which it originally is intended to be.

(4) Furnitures and kitchen equipment and utensils for staff dormitories to accommodate increased medical staff due to upgrading of health services.

(5) Ambulance cars for transporting patients who cannot be given appropriate treatment at the Hospital.

(6) Medical supplies, spare parts and consumables for the upgrading of health services and storage facilities for them.

2-6-2 Lists of Equipment

1. Training

(1) Audio-Visual Students Service Centers

A. Audio-Visual Equipment

a. Slide/sound synchronized presentation systems
b. VTR presentation systems
c. Overhead projection systems

B. Photo Laboratory Equipment

a. Cameras
b. Printing-enlarging-developing system
c. Accessories

C. General Equipment, Furnitures and Office Apparatus

a. Furnitures for exterior waiting
b. Office apparatus for registration room
c. Furnitures for guidance/counselling room
d. Furnitures for testing room
e. Office apparatus for administration office
f. Furnitures for workshop

(2) Mess Hall

A. Furnitures and utensils for dining hall (within existing Mess Hall)

a. for formal services
b. for self-services

B. Kitchen equipment (within existing Mess Hall)

C. Equipment for bakery

D. Equipment for fast food section

E. Furnitures for gift shop

F. General Equipment

a. office equipment
b. equipment for toilets
c. common equipment and furnitures

(3) Guest House

A. Food services equipment

a. kitchen equipment and utensils
b. Lounge equipment

B. Furnitures and utensils for onference/dining room

C. Furnitures and utensils for guest rooms

D. Equipment and furnitures for lobby and information office

E. General equipment

a. Equipment for bathrooms and toilets

b. Common equipment and furnitures

(4) Schoolhouses

A. Equipment for basic food services

B. Equipment for janitorial services

C. Equipment for hotel/motel aide

D. Equipment for gardening/landscaping

E. Equipment for building maintenance

F. Equipment for cashier course

(5) Staff Dormitories

A. Furnitures and utensils for living/dining room

B. Furnitures for bedrooms

(6) Equipment for Centralized Public Address System

(7) Office equipment for ESTR

(8) Vehicles

A. Buses for refugees

B. Micro buses for staff

2. Health Services

(1) Medical Dental Processing Center

A. Equipment for medical screening

a. Office equipment for recording room
b. Equipment for examination room
c. Equipment for ECG room
d. Equipment foe medical laboratory
e. Medical supplies, spare parts, etc.

B. Equipment for dental clinic

(2) Medical Dental Dispensaries

A. Equipment for medical clinic

a. Office furnitures and equipment for recording room
b. Equipment for examination room
c. Equipment for treatment room
d. Equipment for pharmacy
e. Equipment for medical supplies storage
f. Medical supplies, spare parts, etc.

B. Equipment for dental clinic

a. Equipment for dental clinic
b. Medical supplies, spare parts, etc.

(3) Hospital

A. Equipment for Dental Laboratory

a. Equipment for dental prosthetic laboratory
b. Equipment for dental clinic
c. Accessories, spare parts, etc.

B. Equipment for Medical Laboratory

a. Equipment for medical laboratory
b. Accessories, spare parts, etc.

C. Equipment for Emergency Room

D. Equipment for E. ENT

a. Equipment for E. ENT clinics
c. Accessories, medical supplies and spare parts, etc.

E. Equipment for Physiotherapy

a. Equipment
c. Accessories, spare parts, etc.

F. Equipment for Operating Rooms

G. Ambulance Cars

(4) Staff Dormitories

A. Furnitures and utensils for living/dining room

B. Furnitures for bedrooms

2-7 Implementation Plan

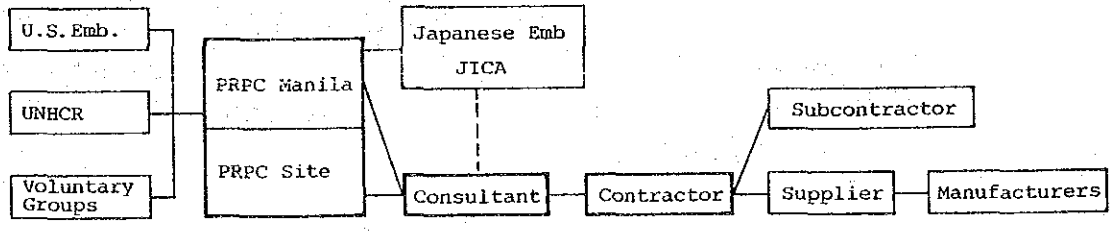
2-7-1 Construction, Supply and Supervising

The construction work required fot this project will consist of new construction of simple wooden and reinforced concrete structure according to the grade of existing facilities, and remodeling work of existing facilities (reinforced concrete structure). Local construction methods should be studied for the construction work, with local labors employed and local materials used wherever possible. It is also necessary to study in detail and grasp the conditions of existing facilities. Experiences in medical equipment supply is important, but the local procurement should also be considered. A carefully thought out implementation schedule is indispensable, especially for the hospital which needs to keep up its regular functions while the investigation, remodeling work, and equipment installation take place.

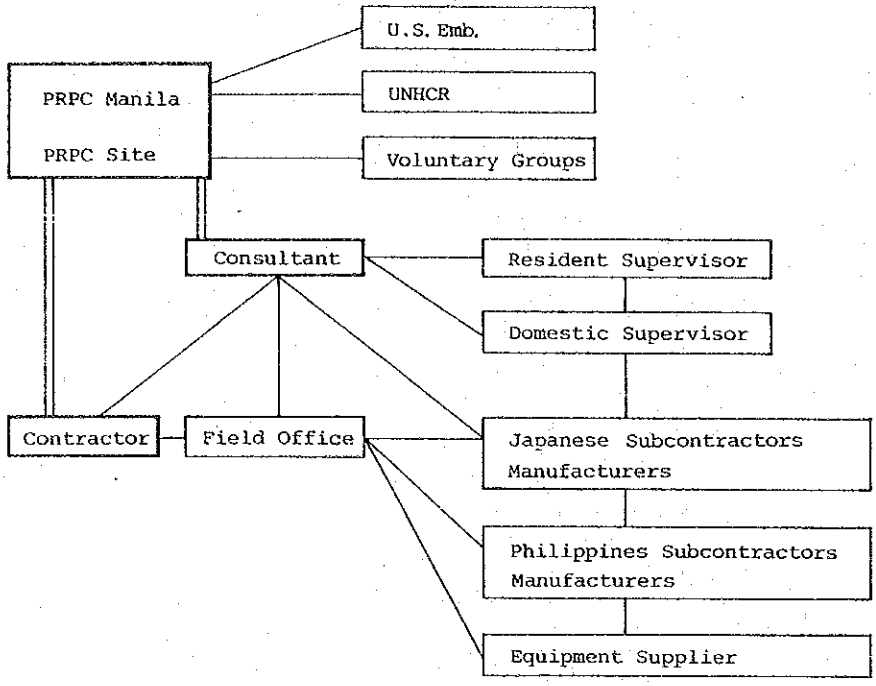
The contractors should be totally aware of the above special circumstances surrounding this project, and proceed with their work with consideration on the customs, practices and technological level of the Philippines.

The consultant will supervise the contractor, subcontractor and/or supplier of the project in Japan and in the field in the Philippines for smooth execution and quality control of the project.

Communication,Instruction and Reporting Flow Chart



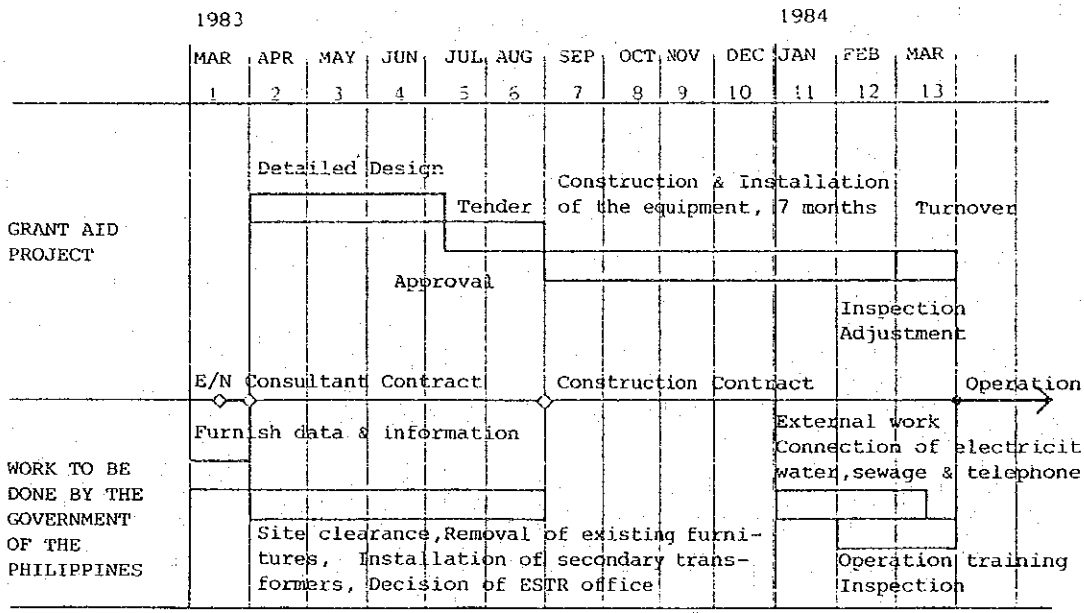
Implementation Organization



2-7-2 Implementation Schedule

The following tentative implementation schedule has been made, with consideration on the various restrictions due to the Japanese grant system, spreaded construction sites and wide variety of equipment, remodeling works that has to be done while the existing facilities keep up their functions, climatic factors and the circumstances in the Republic of the Philippines.

Tentative Implementation Schedule



Notes:

1) The Exchange of Notes was assumed to be concluded in the middle of March.

2) The period for construction and manufacture/installation of equipment is considered to be 7 months starting from September 1983 to the end of March , 1984.

3) Further discussions will be needed with the Philippines government on the arrangements as to the construction schedule of the work to be provided by the Philippines government as the Project progresses.

CHAPTER 3: MAINTENANCE SCHEME

CHAPTER 3: MAINTENANCE SCHEME

3-1 Scheme

When this project is completed and turned over to the Philippines, the Philippines government will operate and maintain the facilities. However, the staff of PRPC are currently on the job in operation and maintenance of the existing facilities, so as to the cost for operating and maintaining the provided facilities and equipment, no specific and detailed comment can be made at this point, since the cost is subject to be changed according to the scope of their working program.
Even though, a sufficient number of staff and a carefully scheduled operating program are indispensable in order to have a successful and effective operation and management of infrastructures; a vital factor for the overall function of the PRPC facilities including facilities to be provided by this Project.
Anyhow, in order to implement the Project, a certain amount of budget shall be demanded because of the increase of energy consumption and additional staff and personnel, especially in health services.
This demand can be estimated, with an assumed condition, as described below.

3-2 Energy Cost

The energy cost for the Project will be converted into the amount of electrical consumption. This means that, in addition to the genuine electrical consumption, the cost for water supply system, for example, will be calculated by the amount of electrical consumption for submerged water pumps in deep wells, and the similar method can be applied to the sewerage treatment system. However, since no change will result from this project in the capacity of sewerage treatment, this will be deleted from the items of annual cost increase.

An annual increase of 142,300 KwH is expected for genuine electrical consumption (except equipment). This is equivalent to about 5.3% of the 1982 actuals; 2,680,000 KwH (according to PRPC data). By deleting from the actual figure for 1982 the amount of 1,138,800 KwH which is thought to have been used for sewerage treatment system, the increase in the cost for lighting, service outlets, etc. goes up to 9.2%. Since the project plans installation of a large number of air conditioners that are still rare in existing facilities, this alone is expected to consume electricity of 40,400 KwH. The increase in the electricity cost for this project as compared to the actual for 1982 is calculated to be around 67,000 pesos per year, for genuine electrical consumption alone.

As to water supply system, an increase of 22,620 ton is expected per year (except equipment); an increase of 10 ton per day. Assuming the water supply capacity of the deep well at 2,200 ton/day (according to PRPC data), this marks a 3% increase and will not be much of an effectiveness. As previously mentioned, the cost for supplying water consists mainly of the cost for operating the submerged water pumps (electricity cost). This is converted into 14,800 KwH/yr, so an increase of about 7,000 pesos per year is expected.

As a result, the total annual increase in energy cost as calculated by electrical consumption will be about 74,000 pesos.

3-3 Personnel Expenses

The maximum increase in the number of staff for this project can also be considered from the capacity of PRPC in the number of staff it can accommodate. From this viewpoint, increase of 56 staff each is possible for basic vocational training and health services for which a substantial increase in personnel expenses is considered. While the average wage is considered to be comparatively high for staff related to health services including doctors, dentists, medical technicians and nurses, it is difficult to establish wage standards for training staff who consist mainly of volunteers, because of the differences in the voluntary groups and countries they come from. The following rough estimation can be made, however, on the pre-supposition that the entire health service staff are to consist of Philippine volunteers.

56 staff for training :	Approximately 1,000,000 pesos/year
56 staff for health services:	Approximately 1,500,000 pesos/year