

2-3-3 Basic Design

(1) Site Layout Plan

Since conditions on each Project site differ, the optimum layout plan for each site has been compiled upon considering the form and orientation of sites and surrounding conditions, etc.

Below are indicated the main concepts that have been adopted in the layout planning.

- In the case of MCHCs, consideration shall be given to securing clear traffic lines with existing provincial hospital main buildings.
- In the case of RHUs and BHSs, with consideration given to linkage with neighboring facilities and traffic lines, suitable open land shall be secured beside roads to provide space for people to gather.
- In cases where ample site area exists, the layout plan shall take future site usage into consideration.
- In consideration of foundation structure safety, facilities shall be located away from sloping or banked ground as much as possible.
- In order to secure natural ventilation, the layout plan shall take wind direction and intervals with neighboring buildings into account.
- Layout shall be planned in a manner that does not have a negative effect on existing facilities.
- Layout shall be planned in a manner that ensures that electricity and water supply lines can be extended economically.
- Concerning the location of wells and septic tanks, a distance of at least 25 m shall be secured between drinking water wells and tanks.
- Layout shall be planned in a manner that ensures existing trees are retained as much as possible.

(2) Building Plan

1) Floor Plan

- In the floor plan for MCHCs, rooms shall be divided into those for investigation, examination and treatment, and those for training, and waiting space shall be incorporated into the plan.
- In the floor plan and section plan for RHUs and BHSs, dimensions shall be standardized and common fittings and finishing materials shall be used, in order to reduce construction costs, shorten the construction period and secure unified work precision.
- Prepare winds space between main rooms and comfort room in order to vent an odor.

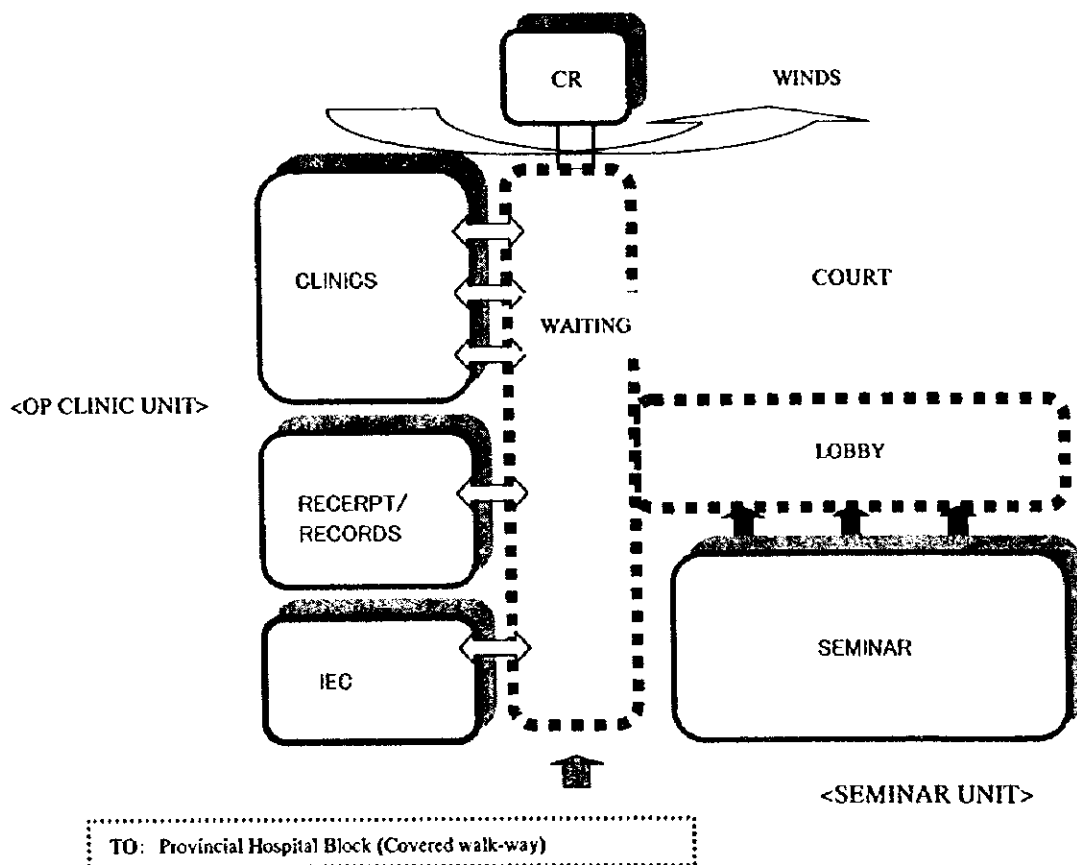


Figure-2 ZONING PLAN OF MCHC (BULACAN)

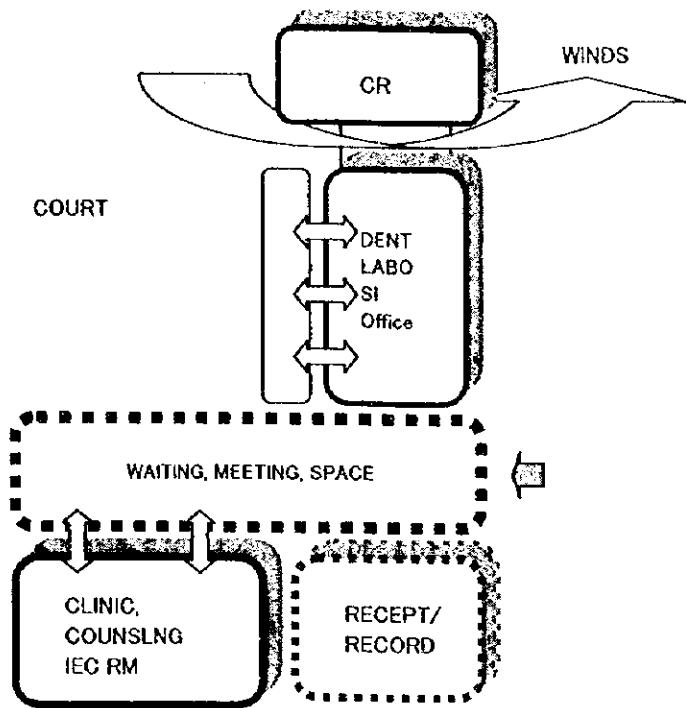


Figure-3 ZONING PLAN OF RHU

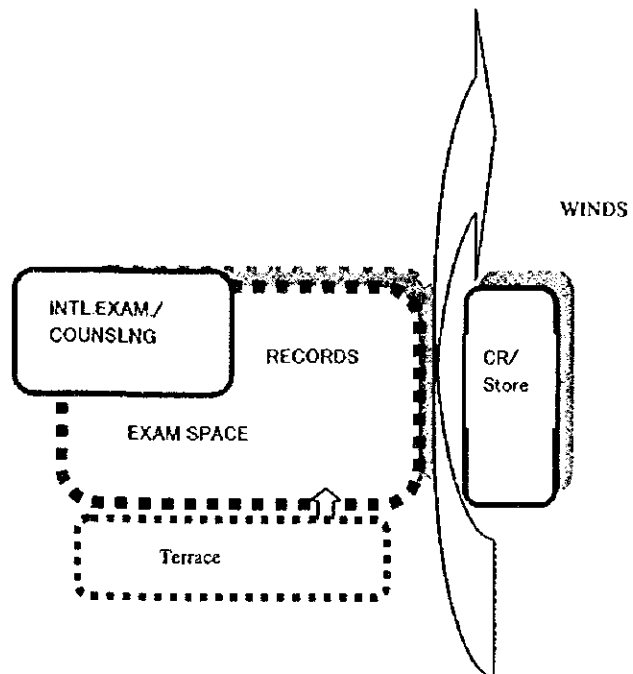


Figure-4 ZONING PLAN OF BHS

2) Vertical Section Plan

- In each facility, natural ventilation shall be secured and designs shall ensure that roof surfaces are insulated and attic spaces are ventilated.
- Avoid direct sunlight, for example, installation of eaves, window louvers and perforated blocks, shall be employed, however, methods for indirectly incorporating natural light shall be planned in order to maintain interior brightness.
- Floor level rises around 80 cm from ground in order to avoid flood water, and takes ventilation for termites.

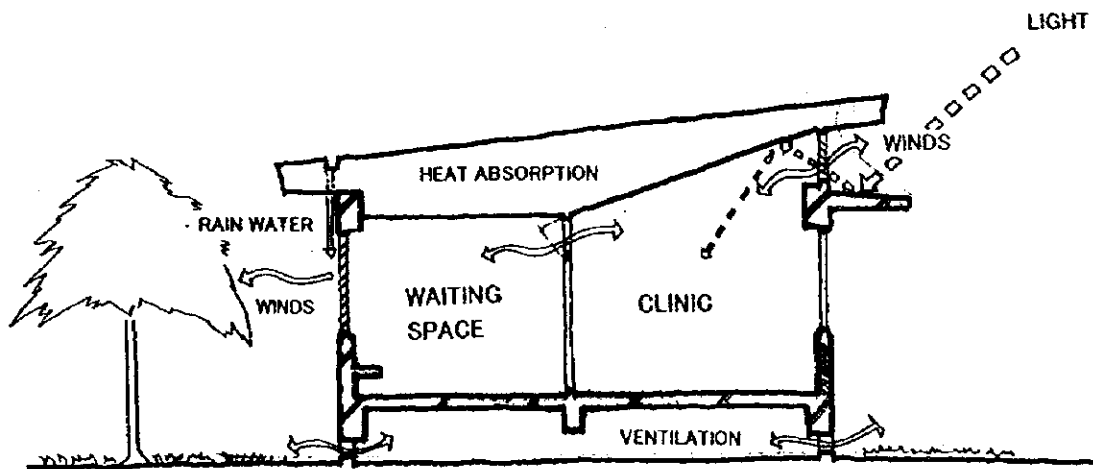


Figure-5 Sectional Planning

The following table summarizes the floor area of facility and each type by province from the above design criteria (based on the calculated size of each main room).

| | MCHC (5) | RHU (18) | | | BHS (60) | | | Sub-total |
|--------------|---------------------------|--------------------------------|--------------------------------|---------------------------|-------------------------------|-------------------------------|-------------------------------|---------------------------|
| | | A type (160m ²) | B type (130m ²) | Sub-total | A type (80m ²) | B type (60m ²) | C type (35m ²) | |
| Balaan | 410 | 160 | 260 | 420 | 80 | 540 | — | 620 |
| Bulacan | 405 | 160 | 260 | 420 | 80 | 420 | 70 | 570 |
| Nueva Ecija | 385 | 160 | 260 | 420 | — | 540 | 35 | 575 |
| Pampanga | 420 | — | 390 | 390 | 80 | 480 | 35 | 595 |
| Tarlac | — | 160 | 260 | 420 | — | 600 | — | 600 |
| Zambales | 400 | — | 390 | 390 | 160 | 480 | — | 640 |
| Total | 2,020m² | | | 2,460m² | | | | 3,600m² |

(3) Structural Plan

Since the Project will involve the simultaneous construction of large numbers of relatively small structures, planning shall be advanced based on the following concept.

- Structures and construction methods that enable locally commonplace execution technology to be applied shall be adopted.
- Structures and materials that are durable and easy to maintain shall be adopted.
- Common construction methods shall be adopted as much as possible on each site, in order to promote uniformity of work precision.
- Structures and construction methods that enable works periods to be reduced shall be adopted.

In consideration of the above, a reinforced concrete pillar and beam structure, combined with concrete block walls and steel frame purlines, is judged to be most appropriate. Moreover, the scale of facilities and site conditions mean that all facilities can be constructed as single story buildings. Safe and economic structural plans shall be adopted while maintaining close coordination between the building plans and execution plans.

1) Ground Conditions and Foundation Structure

Simple penetration testing conducted during the site surveys found almost site have hard soil layer around 60 cm from ground. Therefore, this layer is enough for structure bearing for single story buildings.

However, there to be some sites where ground is soft to between 1.5-2.0m below the surface. On the Detail Design Stage, it will be necessary to conduct detailed soil surveys on these sites in the implementation design stage.

2) Structural System and Design Criteria

Design shall basically comply with the National Structural Code of the Philippine (NSCP), and this shall partly be complimented by various Japanese design criteria.

① Live load:

The following values shall be adopted in accordance with the NSCP.

| | Live Load (Pa) | (kg/m ²) |
|----------------------------|----------------|----------------------|
| Office, Clinic, other room | 2,400 | 245 |
| Training room | 4,800 | 490 |
| Store room | 6,000 | 610 |

② Wind pressure:

According to the NSCP, the target area belongs to Zone II on wind pressure maps. Wind speed and wind pressure according to building height are as indicated below.

$$P = C_e \cdot C_q \cdot q_s \cdot I$$

| | | |
|----------------|---------------------|---------------------------------|
| P | : wind pressure | |
| C _e | : gust coefficient | 1.08 |
| C _q | : wind coefficient | 0.7 |
| q _s | : wind pressure | 1,500Pa (153kg/m ²) |
| I | : usage coefficient | 1.0 |

③ Seismic Force:

The Philippines, like Japan, is situated on the circumpacific earthquake zone, and two or three earthquakes are reported to occur every year. Seismic force is calculated using the following expression in accordance with the NSCP.

$$V = \frac{Z \cdot I \cdot C}{R_w} \cdot W \quad C = \frac{1.25S}{T^{2.3}} \leq 2.75 \quad T = C_t (h_n)^{3/4}$$

| | | | | | |
|----|------------------------|-----|------------------|-------------------------------|-------|
| V: | Design seismic force | | C _t : | Reinforced concrete structure | 0.075 |
| Z: | Regional coefficient | 0.4 | h _n : | Height above ground (m) | 3.5 |
| I: | Usage coefficient | 1.0 | S: | Ground coefficient | 1.5 |
| T: | Primary natural period | | R _w : | Structural system coefficient | 10 |

3) Structural Materials

Local structural materials shall be used as much as possible, and quality, precision and price levels shall be amply confirmed in advance. Concrete shall have a design strength of $f_c = 21 \text{ N/mm}^2$.

- ◆ Cement: Ordinary Portland cement
- ◆ Aggregate: Local crushed stone, Local river sand
- ◆ Reinforcing steel: Philippine Grade 60 and Grade 40
(equivalent to Japanese SD345 and SD295)
- ◆ Steel for frame: H-shape(SS400 eq.), Light-weight (SSC400 eq.)

(4) Facility Equipment Plan

1) Basic Concept

The facility equipment plan shall give consideration to local characteristics and living customs, and close coordination shall be maintained with building spatial plans. In order to minimize running costs and maintenance costs, natural forms of energy shall be appropriately utilized (incorporation of natural light, natural ventilation, limiting of direct sunlight, etc.), and planning shall ensure that maintenance is economical and easy.

Consideration shall also be given to the environmental impact of sanitary sewage and solid waste discharged from the facilities on areas outside of sites. Each equipment plan shall be formulated according to the following concept.

2) Air Conditioning and Ventilation Equipment

Judging from conditions at existing facilities, air conditioning equipment shall be kept to a minimum. Instead, wall fans shall be installed in general occupied rooms, and ceiling fans shall be installed in waiting rooms and lobbies, etc.

Separate type air conditioners shall be installed in Seminar room, MCHC.

3) Plumbing and Sanitary Installations

The contents of plumbing equipment shall be designed in accordance with the water supply and water source plan on each site. The existence of some means of water supply shall be a condition for site selection and, based on the survey findings, the same water supply equipment as used in nearby facilities shall be installed. Moreover, since the Project deals with the construction of health facilities, water supply systems and enough water supply capacity to maintain clean toilets shall be secured.

① Water Supply Equipment

The following standard water supply equipment shall be adopted in each type of facility.

MCHC:

- Since each provincial hospital uses a system of gravity water supply from elevated water tanks located within site grounds, facilities shall be directly linked to and receive water from this system.
- Faucets and flush toilets shall be installed inside facilities.

RHU:

- Water taken from the local water supply system or exclusive-use wells shall be supplied by means of the pressure tank system, which is commonplace in the target area.
- Faucets and flush toilets shall be installed inside facilities, however, hand carrying shall also be considered in remote areas.

BHS:

- As a rule, water taken from the local water supply system or exclusive-use wells shall be hand carried to facilities. Inside facilities, storage tanks (plastic buckets, etc.) and hand basins shall be used.
- Use of rain water during the rainy season shall also be considered.
- Regarding the drainage plan, since it is normal for infiltration septic tanks to be adopted in the target area, this method shall be complied with.
- Concerning the positioning of septic tanks, in cases where nearby wells already exist or new wells are constructed within site grounds, care shall be taken to secure sufficient distance from these.

② Drainage and Septic Tank Equipment

Since relatively few people will use the Project facilities, in the case of MCHCs, if existing septic tanks belonging to the provincial hospitals can be used, the new facilities shall be connected to these. The same shall also apply in the case of RHUs. In the case of BHSs, however, since many of these will be newly constructed, new septic tanks shall be installed.

Concerning the structure of septic tanks, the structure that is commonly used in the target area, i.e. dual chamber septic tanks and infiltration pipe, shall be adopted.

The chamber capacity shall be calculated based on National Plumbing Code 1985 criteria.

④ Sanitary Installations

Following sanitary system shall be planned for each level of planned facilities.

MCHCs: low-tank water closets (four places), urinals (one place), a wash stand, sink for cleaning and general sink, etc. shall be installed.

RHUs: low-tank water closets (one place), a wash stand and general sink shall be installed.

BHSs: locally used pour-flush toilets (one place), a wash stand and general sink shall be installed.

Table 2-3-6 Planning Equipment List

| Room Name | Floor Area (m ²) | Air Conditioner | Fan | | Ventilation | Wash-basin /Sink | Toilet | |
|------------------------------|------------------------------|-----------------|------|---------|-------------|------------------|--------|--------|
| | | | Wall | Ceiling | | | Booth | Urinal |
| MCHC | | | | | | | | |
| OP Clinic Unit | | | | | | | | |
| O/G Clinic | 18 | | ○ | | | Sink | | |
| Internal Exam. RM | 9 | | ○ | | | | | |
| Counseling RM | 9 | | ○ | | | | | |
| PD Clinic | 18 | | ○ | | | Sink | | |
| U5 Clinic | 18 | | ○ | | | | | |
| Ligation/Rec RM | (18) | (A/C) Bataan | | | ○ | WB | | |
| PHO Office | 20 | | | | | | | |
| Recept/Records | 18 | | | | | | | |
| Waiting | 60 | | | ○ | | | | |
| Seminar Training Unit | | | | | | | | |
| Seminar RM | 84 | A/C | | | | | | |
| Prep./Store | 10 | | | | ○ | | | |
| IEC RM | 18 | | ○ | | | | | |
| Lobby | 30 | | | ○ | | | | |
| Conform RM | 20 | | | | | WB(4) | 4 | 1 |
| RHU | | | | | | | | |
| Nurse Office | 13 | | | | | WB | | |
| General Clinic | 10 | | | | | | | |
| Counseling RM | 13 | | ○ | | | WB | | |
| Doctor's Office | 10 | | ○ | | | WB | | |
| Dental Clinic | 10 | | | | | Sink | | |
| Laboratory | 7 | | | | | Sink | | |
| SI Room | 7 | | | | | | | |
| Waiting | 20 | | | | | | | |
| Meeting Corner | 15 | | | | | | | |
| Kitchen | 2 | | | | | Sink | | |
| Comfort RM | 23 | | | | | WB | 1 (2) | |
| BHS | | | | | | | | |
| Midwife Corner | 7 | | | | | | | |
| Clinic Corner | 10 | | | | | | | |
| Counseling RM | 13 | | | | | | | |
| Waiting | 10 | | | | | | | |
| Terrace | 12 | | | | | | | |
| Kitchen | 8 | | | | | Sink | | |
| Comfort RM | 2 | | | | | Sink | 1 | |

WB: Wash-hand Basin, (2) provide only A-type.

(5) Electric Equipment

1) Power Line Extension and Power Source Equipment

Based on the grant aid scheme of the Government of Japan, power extension works shall be borne by the Philippine side. It is necessary to implement extension by the method shown below before the start of the construction works. Receiving system shall be single-phase two-wire 220 V from existing transformers or incoming panels.

- MCHC:** The Philippine government side shall secure branch connections with existing transformers and power source equipment at each provincial hospital.
- RHU:** The Philippine government side shall distribute power to within each Project site using existing incoming systems.
- BHS:** Power shall be distributed from the nearest low voltage power lines to electric poles on the Project sites.

2) Electricity Mains

Mains shall consist of conduit pipe and proposed load capacities are as follows.

- MCHC:** 20 kVA
RHU: 10 kVA
BHS : 5 kVA

3) Lighting Equipment

The Planned facilities are usually open from 8:00 to 17:00 and not regularly open at night. Lighting equipment shall be kept to a minimum in order to reduce maintenance costs. Fluorescent lamps shall be used as light sources since they incur a low power charge and are easy to procure locally. With a view to reducing running costs, switches shall be provided even in the smallest of zones.

Design illuminant in each room:

- Clinic ,Office and Seminar Room: 300 - 400 lx
Halls and toilets: 50 - 100 lx

4) Socket Outlet

Appropriate sockets shall be selected upon confirming the electric capacity of medical equipment. Socket voltage shall be single-phase 220 V (100 V sockets shall not be installed).

5) Telephone Equipment

In the case of MCHCs, consideration shall be given to connecting extension lines with existing provincial hospitals and installing line wires.

As for RHUs and BHSs, since telephone equipment is hardly installed at all in existing facilities, installation shall not be carried out in the Project facilities.

(6) Building Materials Plan

In selecting the building materials, materials and finishing methods that fit with the local climate and are well established locally shall be adopted, and facilities that afford easy maintenance shall be aimed for. Moreover, by maximizing the use of locally procurable building materials, cost reduction will be promoted and local repair and maintenance simplified. Since the Project deals with health facilities, the following materials shall be used with a view to securing durability and easy cleaning.

Table 2-3-7 Comparison of Local and Adopted Construction Methods

| | Local Methods | Adopted Methods | Reasons |
|------------------|---|---|--|
| External: Roofs | Steel sheet(pitched roof) Flat roof (asphalt waterproof) | Pitched roof with pre-colored GI sheet | Pre-color GI sheet are commonly used in houses and give good weather resistance. |
| Outside walls | Paint finish Washed Terrazzo Local Stones | Paint finish | This is common practice in the area. |
| Fittings | Aluminum Wooden | Aluminum | Weather resistance is excellent. Wooden fittings are prone to termite damage. |
| Interior: Floors | Mortar Steel Trowel PVC tiles In-situ terrazzo | PVC tiles Ceramic tiles | These materials are clean and can be cleaned easily. |
| Walls | Paint finish (EP) Veneer | Paint finish (EP) | This is commonplace in the target area. |
| Ceilings | Rock wool acoustic tiles Cement board(EP) Soft board (EP) | Rock wool acoustic tiles Cement board (EP) | Good noise absorption effect and is common in the target area. |

The main materials used are as follows.

◆ **Structural Materials**

Reinforced concrete, which is commonly used in the target area, shall be used in major structural sections such as foundations, pillars and beams. Trusses for supporting roofs shall be steel frame trusses, which provide excellent strength, durability and protection against termites.

Floors shall consist of slab bar arrangement for the sake of durability.

◆ **Roof Materials**

Pre-colored GI sheet (Galvanized Iron sheet) is commonly used in the target area, but this requires periodic repainting. Therefore, consideration shall be given to the use of galvanium sheet (steel and aluminum alloy sheet), which offers excellent weather resistance.

◆ **Windows and Doors**

Steel glass jalousie windows and aluminum horizontally sliding windows, which are commonly used in the target area, shall be adopted. With a view to protecting glass and preventing crime, consideration shall be given to fitting steel lattices. As for doors, consideration shall be given to the adoption of steel frames and wooden door bodies.

◆ **Internal Finishing Materials**

In consideration of durability, floors shall consist of reinforced concrete slabs with ceramic tile or PVC tiles. In order to secure greater cleanliness in examination and treatment rooms, consideration shall also be given to the adoption of ceramic tiles, which are commonly used locally.

Concerning outside walls, with a view to raising the insulation effect, ordinary piled concrete blocks with mortar and paint finish shall be adopted. As for ceilings, lightweight steel frame substrate and acoustic tile shall be considered.

Table 2-3-8 Major Finishing Materials Plan

| Room | Floors | Walls | Ceilings | Reason for Selection |
|--|---------------|----------------------|--------------------------|---|
| MCHC | | | | |
| < OP Clinic Unit > | | | | |
| Examination and Clinic | Ceramic tiles | Paint | Rock wool acoustic tiles | Durability and cleanliness |
| Counseling room | PVC tiles | Vinyl cloth | Rock wool acoustic tiles | Durability and pleasant feel |
| Ligation/ Recovery room | Ceramic tiles | Ceramic tiles | Rock wool acoustic tiles | Cleanliness and easy cleaning |
| Office/ Reception | PVC tiles | Paint | Rock wool acoustic tiles | Economy |
| Waiting/ Lobby | Washed stone | Spray tiles | Cement board | Economy and durability |
| <Seminar/ Training Unit > | | | | |
| Seminar/ Preparation room | Ceramic tiles | Paint | Rock wool acoustic tiles | Durability and sound insulation |
| IEC Room | PVC tiles | Paint | Rock wool acoustic tiles | Economy |
| Lobby | Washed stone | Spray tiles | Cement board | Weather resistance and easy maintenance |
| Comfort Rms | Mosaic tiles | Ceramic tiles | Cement board | Cleanliness and easy cleaning |
| RHU | | | | |
| Nurse Office | PVC tiles | Paint | Rock wool acoustic tiles | Economy and cleanliness |
| Doctor's/ Counseling room | PVC tiles | Paint | Rock wool acoustic tiles | Economy and sound insulation |
| Laboratory/ Kitchen | PVC tiles | Ceramic tiles/ Paint | Rock wool acoustic tiles | Economy and easy cleaning |
| Waiting/ Lobby | PVC tiles | Spray tiles | Rock wool acoustic tiles | Economy and durability |
| Comfort RM | Mosaic tiles | Ceramic tiles | Cement board | Cleanliness and easy cleaning |
| BHS | | | | |
| Office/ Clinic/ Waiting corner | PVC tiles | Paint | Rock wool acoustic tiles | Economy and cleanliness |
| Internal Exam. and Counseling room | PVC tiles | Paint | Rock wool acoustic tiles | Economy and sound insulation |
| Comfort RM | Mosaic tiles | Ceramic tiles | Cement board | Cleanliness and easy cleaning |
| Outdoor Terrace | Washed stone | Spray tiles | Cement board | Economy and durability |

(6) Water Supply and Well Plan

1) Water Source Classifications and Water Supply Methods

The site surveys found that, apart from one site (6.3.7), it is possible to secure water sources at all the sites. Water sources can be divided into public water supply and privately owned water sources (mainly wells). The concept regarding the water supply method for each facility level is given below.

- Apart from Bulacan Provincial Hospital, it is possible to directly connect MCHCs to the water supply pipes on the hospital grounds of the remaining four sites. At Bulacan Provincial Hospital, a pressure tank shall be installed to overcome insufficient water pressure.
- At RHUs, water shall either be directly supplied by pipes from the local water supply systems, or domestic pumps and pressure tanks shall be used to supply water from wells located within site grounds.
- At BHSs, water shall basically be hand carried, and no electric water supply equipment shall be planned. In cases where there barangay water supply systems are already in place, pipe connections shall be made, however, users will have to deal with low water pressure and restrictions on supply times themselves. Rain water collected through hanging gutters shall be used for cleaning toilets.

2) Designed Well and Supply System

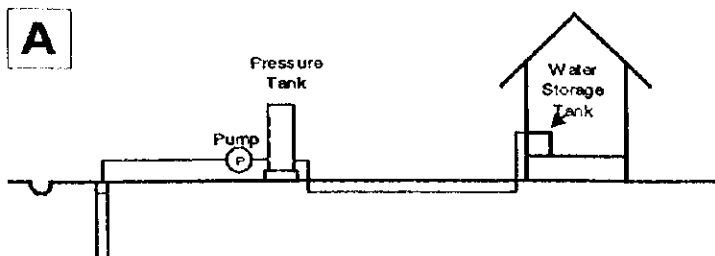
The results of Site Survey, the following table shows number of well and types of supply system by Provinces. The water supply systems for each facility are shown in the appendices.

Table 2-3-10 Designed Number of Well and Water Supply System

| | Construct ion of New Well | Well Supply System | | | District Supply System | | | |
|--------------|---------------------------------|--------------------|-----------|----------|------------------------|----------|----------|----------|
| | | A | B 1) | B 2) | C | D | E | F |
| Bataan | 4 | — | 5 | — | 4 | 3 | 2 | — |
| Bulacan | 1 | 2 | 2 | 1 | 6 | 1 | 1 | — |
| Nueva Ecija | 6 | 1 | 3 | 3 | 5 | 1 | — | 1 |
| Pampanga | 7 | 2 | 6 | — | 6 | — | — | — |
| Tarlac | 5 | 2 | 9 | — | 1 | 1 | — | — |
| Zambales | 4 | — | 4 | 1 | 6 | 3 | — | — |
| Total | 27 | 7 | 29 | 5 | 28 | 9 | 3 | 1 |

Figure-6 Water Sources and Planned Water Supply system

(1) Well Water System

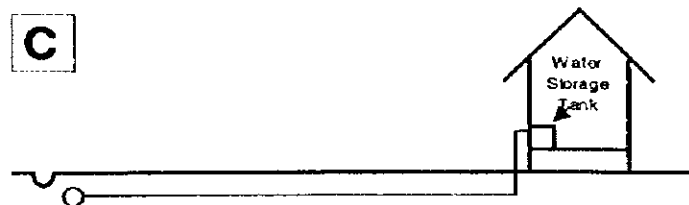


For RHU
Connect shallow/deep well and install motor pump and pressure tank

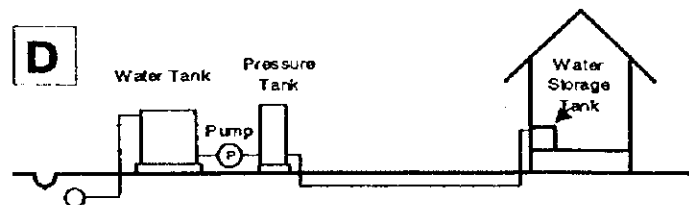


For BHS
1) Utilize the existing shallow/deep well hand pump and carry the water by hand
2) Utilize the existing shallow/deep well with replacement of pump unit and carry the water by hand

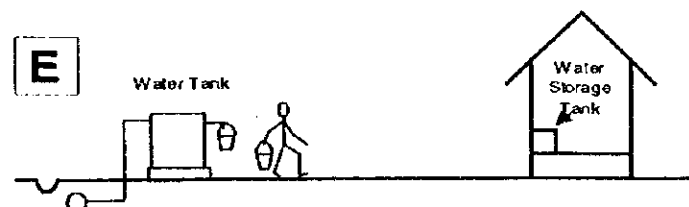
(2) Piped Water System



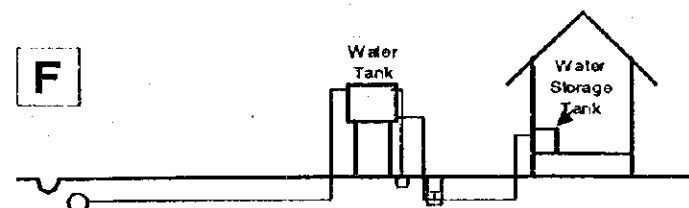
For MCIC/RHU/BHS
Connect to the existing water system with high pressure near the site



For RHU
Connect to the existing water system with low pressure near the site. Construct water tank, and install motor pump and pressure tank



For RHU/BHS
Connect to the existing water system with low pressure near the site. Construct water tank and carry the water by hand



For RHU
Connect to the existing rationed water system near the site and construct a water tank

Table 2-3-9 Planned Type of Facility and Water Supply

| Re. No. | Facility Name | Municipality | Facility | | Existing Water Supply | | Planned Pump and Well | | | Planned Type of Water Supply |
|--------------------|---------------------------------|-------------------------|----------|------------------------|---------------------------|----------------|-----------------------|------------|-----------|------------------------------|
| | | | Type | Area (m ²) | Type of WS System | Water Sources | Hand Pump | Well Depth | Well Dia. | |
| BATAAN | | | | | | | | | | |
| 1.1.0 | Bataan Provincial Hospital | Balanga | 410 (0) | 410 | Individual WS | Flee flow well | - | - | - | C |
| 1.2.1 | Cabcaben RHU | Cabecaban | B | 130 | Municipal WS | Deep Well | - | - | - | D |
| 1.2.2 | Bagac RHU | Bagac | B | 130 | Municipal WS | Deep Well | - | - | - | D |
| 1.2.3 | Orion RHU | Orion | A | 160 | Municipal WS | Deep Well | - | - | - | D |
| 1.3.1 | Tipo BHS | Hermosa | B | 60 | Individual WS | Deep Well | - | - | - | B 1) |
| 1.3.2 | Mabiga BHS | Hermosa | B | 60 | Barangay WS | Spring | - | - | - | E |
| 1.3.4 | Roosevelt BHS | Dinalupihan | A | 80 | Barangay WS | Spring | - | - | - | C |
| 1.3.5 | Sabatan BHS | Orion | B | 60 | Public WS | Shallow Well | Shallow HP | 18 | 32 | B 1) |
| 1.3.6 | Gen. Lim BHS | Orion | B | 60 | Barangay WS | Shallow Well | - | - | - | C |
| 1.3.7 | Sapa BHS | Samal | B | 60 | Barangay WS | Deep Well | - | - | - | E |
| 1.3.8 | Omboy BHS | Abucay | B | 60 | Public WS | Deep Well | - | - | - | C |
| 1.3.9 | Tortugas BHS | Balanga | B | 60 | Individual Well | Shallow Well | Shallow HP | 36 | 32 | B 1) |
| 1.3.10 | Pita BHS | Dinalupihan | B | 60 | Shallow Well | Shallow Well | Shallow HP | 18 | 32 | B 1) |
| 1.3.11 | Nagwaling BHS | Pitar | B | 60 | Shallow Well | Shallow Well | Shallow HP | 9 | 38 | B 1) |
| BULACAN | | | | | | | | | | |
| 2.1.0 | Bulacan Provincial Hospital | Malolos | 390 (15) | 405 | Malolos Water District | Deep Well | - | - | - | D |
| 2.2.1 | Obando RHU | Bgy. Paliwas Obando | B | 130 | Obando Water District | Deep Well | - | - | - | D |
| 2.2.2 | San Miguel RHU | Bgy. Salacot San Miguel | B | 130 | Individual WS | Deep Well | - | - | - | A |
| 2.2.3 | San Rafael RHU | Bgy. Maginao San Rafael | A | 160 | Individual WS | Deep Well | - | - | - | A |
| 2.3.1 | Balubad BHS | Bulacan | C | 35 | Public WS | Deep Well | - | - | - | C |
| 2.3.2 | Buguion BHS | Calumpit | B | 60 | Calmpit Water District | Deep Well | - | - | - | C |
| 2.3.3 | San Pedro BHS | San Jose Del Monte | B | 60 | San Jose Water District | Deep Well | - | - | - | C |
| 2.3.4 | Pinalagdan BHS | Panbong | B | 60 | Individual WS | Deep Well | - | - | - | C |
| 2.3.5 | Dulong Malabon | Pulilan | B | 60 | Individual WS | Deep Well | - | - | - | B 1) |
| 2.3.6 | Bubulong Munti | San Ildefonso | B | 60 | Barangay WS | Deep Well | - | - | - | C |
| 2.3.7 | Muzon BHS | San Jose Del | C | 35 | Ind./Private WS | Deep Well | - | - | - | C |
| 2.3.8 | Diliman 1 BHS | San Rafael | B | 60 | Individual WS | Shallow Well | Shallow HP | 18 | 50 | B 2) |
| 2.3.9 | Sta Cruz BHS | Sta Maria | B | 60 | Private WS | Deep Well | - | - | - | B 1) |
| 2.3.10 | Babaguin BHS | Sta Maria | A | 80 | Barangay WS | Deep Well | - | - | - | C |
| NUEVA EJICA | | | | | | | | | | |
| 3.1.0 | Eduardo L. J. Memorial Hospital | Cabanatuan City | 370 (15) | 385 | Cabanatuan Water District | Deep Well | - | - | - | C |
| 3.2.1 | Pantabagan RHU | Pantagaban | B | 130 | Municipal WS | Deep Well | - | - | - | F |
| 3.2.2 | Gabaldon RHU | Gabaldon | B | 130 | Municipal WS | Spring | - | - | - | D |
| 3.2.3 | San Isidro RHU | San Isidro | A | 160 | Public Well | Shallow Well | Shallow HP | 42 | 32 | A |
| 3.3.1 | Labi BHS | Bongaban | B | 60 | Barangay WS | Spring | - | - | - | C |
| 3.3.2 | San Felipe BHS | Laur | B | 60 | Barangay WS | Deep Well | - | - | - | C |
| 3.3.3 | Pinahan BHS | Gen Natividad | B | 60 | Public WS | Deep Well | Shallow HP | 30 | 100 (32) | B 2) |
| 3.3.4 | Paitan Sur BHS | Cuyapo | B | 60 | Public WS | Deep Well | - | - | - | B 1) |
| 3.3.5 | Puncan BHS | Carranglan | C | 35 | Barangay WS | Spring | - | - | - | C |
| 3.3.6 | Alula BHS | Talugtug | B | 60 | Public WS | Deep Well | Deep well HP | 30 | 100 (32) | B 2) |
| 3.3.7 | San Nicolas BHS | Llanera | B | 60 | Private/Public WS | Shallow Well | Shallow HP | 12 | 32 | B 1) |
| 3.3.8 | Coception BHS | General Tinio | B | 60 | Barangay WS | Deep Well | - | - | - | C |
| 3.3.9 | San Miguel BHS | Quezon | B | 60 | Individual WS | Shallow Well | Shallow HP | 36 | 50 | B 2) |
| 3.3.10 | Monic BHS | Nampicuan | B | 60 | Individual WS | Dug Well | Shallow HP | 7 | 38 | B 1) |

Cont.,

| Re. No. | Facility Name | Municipality | Facility | | Existing Water Supply | | Planned Pump and Well | | | Planned Type of Water Supply |
|-----------------|--------------------------------------|----------------------|----------|-----------------------|----------------------------|---------------|-----------------------|------------|-----------|------------------------------|
| | | | Type | Are (m ²) | Type of WS System | Water Sources | Hand Pump | Well Depth | Well Dia. | |
| PAMPANGA | | | | | | | | | | |
| 4.1.0 | Pampanga Provincial Hospital | Guagua | 390 (30) | 420 | Individual WS | - | - | - | - | C |
| 4.2.1 | Arayat RHU I | Arayat | B | 130 | Individual WS | - | - | - | - | C |
| 4.2.2 | San Ildefonso RHU | Magalang | B | 130 | Private WS | Shallow Well | Shallow HP | 8 | 38 | A |
| 4.2.3 | Mexico I RHU | Mexico | B | 130 | Individual WS | Shallow Well | Shallow HP | 24 | 32 | A |
| 4.3.1 | Pauc Pac BHS | Lubao | B | 60 | Private WS | Shallow Well | Shallow HP | 12 | 32 | B 1) |
| 4.3.2 | Malabo BHS | Floridablanca | B | 60 | Private WS | Shallow Well | Shallow HP | 12 | 32 | B 1) |
| 4.3.3 | Tagulod BHS | Candaba | B | 60 | Private WS | Shallow Well | Shallow HP | 48 | 32 | B 1) |
| 4.3.4 | Paligui BHS | Apalit | C | 35 | Private WS | Deep Well | - | - | - | C |
| 4.3.5 | Pulungmasle BHS | Guagua | B | 60 | Private WS | Shallow Well | Shallow HP | 18 | 32 | B 1) |
| 4.3.6 | San Isidro BHS | San Luis | B | 60 | Private WS | Shallow Well | Shallow HP | 54 | 32 | B 1) |
| 4.3.7 | Batang II BHS | Sasmuan | B | 60 | Individual WS | Deep Well | - | - | - | B 1) |
| 4.3.8 | Aguso BHS | Mabalacat | B | 60 | Mabalacat Water District | - | - | - | - | C |
| 4.3.9 | Pio BHS | Porac | B | 60 | Barrangay WS | - | - | - | - | C |
| 4.3.10 | San Juan BHS | Sta Ana | A | 80 | Individual WS | - | - | - | - | C |
| TARLAC | | | | | | | | | | |
| 5.1.1 | San Clemente RHU | San Clemente | B | 130 | Individual WS | Shallow Well | - | - | - | A |
| 5.1.2 | Moncada RHU | Moncada | A | 160 | Municipal WS | - | - | - | - | D |
| 5.1.4 | Victoria II RHU | Victoria | B | 130 | Individual WS | Deep Well | Shallow HP | 10 | 38 | A |
| 5.2.1 | Manga BHS | Capas | B | 60 | Public WS | Shallow Well | - | - | - | B 1) |
| 5.2.2 | Ventimilia BHS | Paniqui | B | 60 | Individual WS | Shallow Well | - | - | - | B 1) |
| 5.2.3 | Dela Paz BHS | Tarlac | B | 60 | Private WS | Shallow Well | Shallow HP | 9 | 38 | B 1) |
| 5.2.4 | Parang BHS | Conception | B | 60 | Private WS | Shallow Well | - | - | - | B 1) |
| 5.2.5 | San Francisco BHS | Sta. Ignacia | B | 60 | Public WS | Shallow Well | - | - | - | B 1) |
| 5.2.7 | Tancarang BHS | Mayantoc | B | 60 | Barangay WS | - | - | - | - | C |
| 5.2.8 | Quezon BHS | Gerona | B | 60 | Private WS | Deep Well | - | - | - | B 1) |
| 5.2.9 | Pacpaco BHS | San Manuel | B | 60 | Individual WS | Deep Well | Deep well HP | 18 | 100 (32) | B 1) |
| 5.2.10 | Nilasin BHS | Pura 1st | B | 60 | Individual WS | Shallow Well | Shallow HP | 12 | 32 | B 1) |
| 5.2.11 | San Juan BHS | Ramos | B | 60 | Individual WS | Shallow Well | Shallow HP | 12 | 32 | B 1) |
| ZAMBALES | | | | | | | | | | |
| 6.1.0 | Pres. R. Magsaysay Memorial Hospital | Iba | 370 (30) | 400 | Individual WS | - | - | - | - | C |
| 6.2.1 | Sta. Cruz RHU I | Sta. Cruz | B | 130 | Municipal WS | - | - | - | - | D |
| 6.2.2 | Botolan RHU II | San Juan, Botolan | B | 130 | Barangay WS | - | - | - | - | D |
| 6.2.3 | San Antonio RHU | San Antonio | B | 130 | San Antonio Water District | - | - | - | - | D |
| 6.3.2 | San Isidro BHS | Subic | A | 80 | Subic Water District | - | - | - | - | C |
| 6.3.3 | Umayya BHS | San Narciso | B | 60 | Barangay WS | - | - | - | - | C |
| 6.3.4 | Sta. Barbara BHS | Iba | B | 60 | Iba Water District | - | - | - | - | C |
| 6.3.5 | Panglit BHS | San Lorenzo Masinloc | B | 60 | Public WS | Dug Well | Dug HP | 8 | 38 | B 1) |
| 6.3.6 | Babancal BHS | Candelaria | A | 80 | Barangay WS | - | - | - | - | C |
| 6.3.8 | Balincaging BHS | San Felipe | B | 60 | Barangay WS | - | - | - | - | B 2) |
| 6.3.9 | Felimida Diaz BHS | Cabangan | B | 60 | Barangay WS | Shallow Well | Shallow HP | 12 | 32 | B 1) |
| 6.3.10 | Looc BHS | Castillejos | B | 60 | Barangay WS | Shallow Well | Shallow HP | 18 | 32 | B 1) |
| 6.3.12 | Sabang BHS | Sta. Cruz | B | 60 | Barangay WS | - | - | - | - | C |
| 6.3.14 | Tubo-tubo North BHS | Sta. Cruz | B | 60 | Public WS | Shallow Well | Shallow HP | 28 | 32 | B 1) |

(7) Equipment Plan

The requested equipment is standardized for each facility level, and the requested number of items is 20 for MCHCs, 38 for RHUs and 25 for BHSs, in addition to IEC equipment and vehicles (two). In the Project study, contents of the returned survey forms were confirmed on site and the requested equipment was examined in accordance with the basic concept described below.

1) Equipment Plan Basic Concept

① Compatibility with the Target Facilities

Upon confirming the quantities of requested equipment, it was found that equipment requested by RHUs contained items intended for use in subordinate BHSs, and that BHS equipment lists included items intended for use in RHUs. From the viewpoint of maintaining and managing the supplied equipment, equipment shall only be supplied to facilities that are targeted by the Project, and equipment quantities shall be limited to items intended for direct utilization in each target facility.

② Equipment Standardization at each Facility Level

The Project targets three types of facilities, each operating at a different level. However, due to differences in staff skill levels and operating budget sizes, slight differences can also be seen in the contents and range of activities conducted at facilities on the same level. Having said that, it is judged that, if training, transfer of technology and appropriate budget allocation are carried out through implementation of the Project, the functions and roles of facilities on each level will basically be equalized. Accordingly, standardized equipment contents shall be provided to facilities on each level.

③ Compatibility with Building Plans

Equipment shall be limited to items required for the activities conducted by each facility, and careful consideration shall be given to achieving compatibility with building plans through close coordination.

④ Local Procurement as a Rule

In order to make operation and maintenance of equipment following supply easy, items that are currently widely available on the Philippine market shall be selected and local procurement shall be practiced as a rule.

⑤ Omission of Expendable Items

The requested equipment included expendable items such as disposable syringes, funicular clamps and test reagents, etc. Although there is deemed to be a high necessity for such items in the target facilities, since they are not included in the scope of grant aid supply, they have been omitted from the Project.

⑥ Procurement and Installation Procedure

In view of the large numbers of sites and items of equipment, efficient implementation plans shall be compiled upon carefully examining the schedule from procurement through to installation and handing over.

2) Examination of Requested Equipment

Each item of requested equipment was examined based on the following criteria, and the results of this were compiled into a requested equipment examination sheet. Equipment that was considered to be inappropriate under any one of the first four criteria headings was omitted from the Project. Moreover, concerning equipment where doubts were raised regarding appropriateness under Item 5., the Project quantities were reexamined.

① Compatibility with contents of activities

Judge whether or not the equipment is necessary for the activities performed in the target facilities.

○: Equipment of high necessity

×: Equipment of no or minor necessity

② Compatibility with technical levels

Judge whether or not problems exist in the use of equipment, considering the technical levels of staff assigned to the target facilities.

○: No problems exist

×: Use of equipment is difficult with existing staff technical levels

③ Compatibility with maintenance setups

Judge whether or not expendable items required for using the equipment in question can be independently procured over the long term.

○: Equipment where no problem exists

×: Equipment that incurs high maintenance costs

④ Applicability of the principles of deletion

Judge whether or not the principles of deletion given in the minutes apply to equipment.

○: Not applicable

×: Applicable

⑤ Appropriateness of the Project quantity

Judge whether or not reexamination of the Project quantity is necessary through comparing the requested quantity with the required quantity.

○: Quantity is appropriate

×: Reexamination of quantity is required

The results of conducting the above examination are given in requested equipment examination sheet shown in Table 2-3-10.

Table 2-3-10 Investigation Results of Requested Equipment

(1) Equipment for BHS (60 Nos.)

(1) indicates additional request during Survey.

| No. | Code No. | Name of Equipment | Requested Quantity | Examination | | | | | Result | Planned Quantity |
|-----|----------|--------------------------------|--------------------|-------------|---|---|---|---|--------|------------------|
| | | | | 1 | 2 | 3 | 4 | 5 | | |
| 1 | MED-01 | Weighing Scale (Adult) | 1 | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 2 | MED-02 | Weighing Scale (Pediatric) | 1 | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 3 | MED-03 | Sphygmomanometer (Table) | 1 | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 4 | MED-06 | Stethoscope | 1 | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 5 | MED-08 | Examining Table | 1 | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 6 | MED-09 | Vaginal Speculum(for Virginal) | 1 | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 7 | MED-10 | Vaginal speculum (medium) | 1 | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 8 | MED-11 | Universal diagnostic set | 1 | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 9 | MED-12 | Hysterometer | 1 | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 10 | MED-13 | Hemometer | 1 | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 11 | MED-16 | Three-panel screen | 1 | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 12 | MED-17 | Examination lamp | (1) | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 13 | MED-20 | Nebulizer | (1) | × | ○ | ○ | ○ | ○ | × | . |
| 14 | MED-23 | Tenaculum | 1 | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 15 | MED-24 | Uterine Forceps | 1 | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 16 | MED-25 | Ovum Forceps | 1 | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 17 | MED-26 | Scissors | 1 | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 18 | MED-27 | Kelly Pad | 1 | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 19 | MED-29 | Oxygen Gauge | (1) | × | ○ | ○ | ○ | ○ | × | . |
| 20 | MED-30 | Oxygen Tank (200 l) w/carriage | (1) | × | ○ | ○ | ○ | ○ | × | . |
| 21 | MED-31 | Instrument Sterilizer | 1 | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 22 | MED-33 | Instrument pushcart/trolley | (1) | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 23 | MED-34 | Refrigerator (5 cubic f) | (1) | × | ○ | ○ | ○ | ○ | × | . |
| 24 | MED-35 | Hilot kit | 10 | × | ○ | ○ | ○ | × | × | . |
| 25 | MED-36 | Umbilical Cord Clamp | 10 | ○ | ○ | × | ○ | × | × | . |

Cont.

| No. | Code No. | Name of Equipment | Requested Quantity | Examination | | | | | | Planned Quantity |
|-----|----------|-------------------------------|--------------------|-------------|---|---|---|---|---|------------------|
| | | | | | | | | | | |
| 26 | MED-37 | Syringes with needles | 10 | ○ | ○ | × | ○ | × | × | - |
| 27 | MED-38 | Home delivery kit | (1) | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 28 | MED-39 | Pregnancy Test Kit | (100) | ○ | ○ | × | ○ | × | × | - |
| 29 | MED-40 | Urine Test Kit | (100) | ○ | ○ | × | ○ | × | × | - |
| 30 | MED-44 | Instrument set for Exam. Room | (1) | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 31 | MED-45 | Instrument Cabinet | (1) | × | ○ | ○ | ○ | ○ | × | - |
| 32 | MED-49 | Physicians Desk & Chair | (3) | ○ | ○ | ○ | ○ | × | ○ | 1 |
| 33 | MED-50 | Patient Chair | (1) | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 34 | OFC-01 | Typewriter | 1 | × | ○ | ○ | ○ | ○ | ○ | - |
| 35 | OFC-02 | Filing Cabinet | 1 | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 36 | OFC-03 | Motorcycle (125 cc) | (1) | ○ | ○ | × | ○ | ○ | × | - |
| 37 | OFC-04 | VHF | 1 | × | ○ | ○ | ○ | ○ | × | - |
| 38 | IEC-01 | Megaphone | 1 | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 39 | IEC-02 | JFPA Magnel display | 1 | ○ | ○ | ○ | ○ | ○ | ○ | 1 |

(2) Equipment for RHU (18 Nos.)

(1) indicates additional request during Survey.

| No. | Code No. | Name of Equipment | Requested Quantity | Examination | | | | | | Planned Quantity |
|-----|----------|---------------------------------|--------------------|-------------|---|-----|---|---|--------|------------------|
| | | | | 1 | 2 | 3 | 4 | 5 | Result | |
| 1 | MED-01 | Weighing Scale (Adult) | 2 | ○ | ○ | ○ | ○ | × | ○ | 1 |
| 2 | MED-02 | Weighing Scale (Pediatric) | 10 | ○ | ○ | ○ | ○ | × | ○ | 1 |
| 3 | MED-03 | Sphygmomanometer (Table) | 2 | ○ | ○ | ○ | ○ | ○ | ○ | 2 |
| 4 | MED-06 | Stethoscope | 2 | ○ | ○ | ○ | ○ | ○ | ○ | 2 |
| 5 | MED-08 | Examining Table | 1 | ○ | ○ | ○ | ○ | × | ○ | 2 |
| 6 | MED-09 | Vaginal Speculum (for Virginal) | 1 | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 7 | MED-10 | Vaginal speculum (medium) | 5 | ○ | ○ | ○ | ○ | × | ○ | 1 |
| 8 | MED-11 | Universal diagnostic set | 1 | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 9 | MED-12 | Hysterometer | 5 | ○ | ○ | ○ | ○ | × | ○ | 1 |
| 10 | MED-13 | Hemometer | 10 | ○ | ○ | ○ | ○ | × | ○ | 1 |
| 11 | MED-14 | Doppler Apparatus | 1 | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 12 | MED-15 | ECG (Portable type) | (1) | × | ○ | × | ○ | ○ | × | - |
| 13 | MED-16 | Three-panel screen | 1 | × | ○ | ○ | ○ | ○ | × | - |
| 14 | MED-17 | Examination lamp | 1 | ○ | ○ | ○ | ○ | × | ○ | 2 |
| 15 | MED-18 | Suction Unit | 1 | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 16 | MED-19 | Dental Unit | 1 | ○ | ○ | (×) | ○ | ○ | ○ | 1 |
| 17 | MED-20 | Nebulizer | 1 | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 18 | MED-21 | Ambubag (Adult) | 1 | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 19 | MED-22 | Ambubag (Pediatric) | 1 | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 20 | MED-23 | Tenaculum | 5 | ○ | ○ | ○ | ○ | × | ○ | 1 |
| 21 | MED-24 | Uterine Forceps | 5 | ○ | ○ | ○ | ○ | × | ○ | 1 |
| 22 | MED-25 | Ovum Forceps | 5 | ○ | ○ | ○ | ○ | × | ○ | 1 |
| 23 | MED-26 | Scissors | 5 | ○ | ○ | ○ | ○ | × | ○ | 1 |
| 24 | MED-27 | Kelly Pad | 1 | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 25 | MED-29 | Oxygen Gauge | 1 | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 26 | MED-30 | Oxygen Tank (200 l) w/carriage | 1 | ○ | ○ | ○ | ○ | × | ○ | 2 |
| 27 | MED-31 | Instrument Sterilizer | 1 | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 28 | MED-32 | Boiling Sterilizer | 1 | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 29 | MED-33 | Instrument pushcart/trolley | 1 | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 30 | MED-34 | Refrigerator (6 f3) | 1 | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 31 | MED-35 | Hilot kit | 30 | × | ○ | ○ | ○ | × | × | - |
| 32 | MED-36 | Umbilical Cord Clamp | 100 | ○ | ○ | × | ○ | × | × | - |
| 33 | MED-37 | Syringes with needles | 100 | ○ | ○ | × | ○ | × | × | - |

Cont.

| No. | Code No. | Name of Equipment | Requested Quantity | Examination | | | | | | Planned Quantity |
|-----|----------|-------------------------------|--------------------|-------------|---|---|---|---|---|------------------|
| | | | | | | | | | | |
| 34 | MED-38 | Home delivery kit | 10 | ○ | ○ | ○ | ○ | × | ○ | 1 |
| 35 | MED-44 | Instrument set for Exam. Room | (1) | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 36 | MED-45 | Instrument Cabinet | (2) | ○ | ○ | ○ | ○ | × | ○ | 1 |
| 37 | MED-46 | Minor surgical instrument set | 1 | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 38 | MED-48 | Autoclave | (1) | × | ○ | ○ | ○ | ○ | × | . |
| 39 | MED-49 | Physicians Desk & Chair | (6) | ○ | ○ | ○ | ○ | × | ○ | 1 |
| 40 | MED-50 | Patient Chair | (2) | ○ | ○ | ○ | ○ | × | ○ | 1 |
| 41 | MED-56 | Microscope | (1) | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 42 | MED-57 | Centrifuge | (1) | × | ○ | ○ | ○ | ○ | × | . |
| 43 | MED-58 | Incubator | (1) | × | ○ | ○ | ○ | ○ | × | . |
| 44 | MED-59 | Instrument set for laboratory | (1) | × | ○ | ○ | ○ | ○ | × | . |
| 45 | MED-60 | Blood chemistry Analyzer | (1) | × | × | × | ○ | ○ | × | . |
| 46 | OFC-01 | Typewriter | 1 | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 47 | OFC-02 | Filing Cabinet | 1 | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 48 | OFC-03 | Motorcycle (125 cc) | 1 | ○ | ○ | × | ○ | ○ | × | . |
| 49 | OFC-04 | VHF | 1 | × | ○ | ○ | ○ | ○ | × | . |
| 50 | IEC-01 | Megaphone | 1 | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 51 | IEC-02 | JFPA Magnet display | 1 | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 52 | IEC-03 | Sound system | (1) | × | ○ | ○ | ○ | ○ | × | . |
| 53 | IEC-06 | Slide Projector | (1) | × | ○ | ○ | ○ | ○ | × | . |
| 54 | IEC-07 | OHP | (1) | × | ○ | ○ | ○ | ○ | × | . |
| 55 | IEC-08 | 35 mm Camera | (1) | × | ○ | ○ | ○ | ○ | × | . |
| 56 | IEC-10 | White Board | (1) | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 57 | IEC-11 | VTR & Monitor set | (1) | ○ | ○ | ○ | ○ | ○ | ○ | 1 |

(3) Equipment for MCHC (5 Nos.)

(1) indicates additional request during Survey.

| No. | Code No. | Name of Equipment | Requested Quantity | Examination | | | | | Result | Planned Quantity |
|-----|----------|------------------------------|--------------------|-------------|---|---|---|---|--------|------------------|
| | | | | 1 | 2 | 3 | 4 | 5 | | |
| 1 | MED-01 | Weighing Scale (Adult) | (2) | ○ | ○ | ○ | ○ | ○ | ○ | 2 |
| 2 | MED-02 | Weighing Scale (Pediatric) | (2) | ○ | ○ | ○ | ○ | × | ○ | 1 |
| 3 | MED-03 | Sphygmomanometer (Table) | 5 | ○ | ○ | ○ | ○ | × | ○ | 2 |
| 4 | MED-04 | Sphygmomanometer (Pediatric) | 10 | ○ | ○ | ○ | ○ | × | ○ | 2 |
| 5 | MED-05 | Sphygmomanometer (Stand) | 5 | ○ | ○ | ○ | ○ | × | ○ | 2 |
| 6 | MED-06 | Stethoscope | 10 | ○ | ○ | ○ | ○ | × | ○ | 5 |
| 7 | MED-07 | Stethoscope (Littman type) | 5 | ○ | ○ | ○ | ○ | × | ○ | 3 |
| 8 | MED-08 | Examining Table | (3) | ○ | ○ | ○ | ○ | ○ | ○ | 3 |
| 9 | MED-09 | Vaginal Speculum (small) | (5) | × | ○ | ○ | ○ | ○ | × | . |
| 10 | MED-10 | Vaginal speculum (medium) | (10) | × | ○ | ○ | ○ | ○ | × | . |
| 11 | MED-12 | Hysterometer | (2) | × | ○ | ○ | ○ | ○ | × | . |
| 12 | MED-13 | Hemoglobin Meter | (2) | ○ | ○ | ○ | ○ | ○ | ○ | 2 |
| 13 | MED-14 | Doppler Apparatus | 1 | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 14 | MED-15 | ECG (Portable type) | 1 | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 15 | MED-17 | Examination lamp | (3) | ○ | ○ | ○ | ○ | ○ | ○ | 3 |
| 16 | MED-18 | Suction Unit | 1 | ○ | ○ | ○ | ○ | × | ○ | 2 |
| 17 | MED-20 | Nebulizer | 1 | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 18 | MED-21 | Ambubag (Adult) | 5 | ○ | ○ | ○ | ○ | × | ○ | 1 |
| 19 | MED-22 | Ambubag (Pediatric) | 5 | ○ | ○ | ○ | ○ | × | ○ | 1 |
| 20 | MED-23 | Tenaculum | (2) | × | ○ | ○ | ○ | ○ | × | . |

Cont.

| No. | Code No. | Name of Equipment | Requested Quantity | Examination | | | | | | Planned Quantity |
|-----|----------|-------------------------------|--------------------|-------------|---|---|---|---|-----|------------------|
| | | | | | | | | | | |
| 21 | MED-26 | Scissors | (1) | × | ○ | ○ | ○ | ○ | × | - |
| 22 | MED-28 | Stretcher | 1 | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 23 | MED-29 | Oxygen Gauge | 5 | ○ | ○ | ○ | ○ | × | ○ | 2 |
| 24 | MED-30 | Oxygen Tank (200 L) /carriage | 5 | ○ | ○ | ○ | ○ | × | ○ | 4 |
| 25 | MED-31 | Instrument Sterilizer | (1) | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 26 | MED-34 | Refrigerator (5 f3) | 2 | ○ | ○ | ○ | ○ | × | ○ | 1 |
| 27 | MED-37 | Syringes with needles | (100) | ○ | ○ | × | ○ | ○ | × | - |
| 28 | MED-39 | Pregnancy Test Kit | 1,000 | ○ | ○ | × | ○ | ○ | × | - |
| 29 | MED-40 | Urine Test Kit | 1,000 | ○ | ○ | × | ○ | ○ | × | - |
| 30 | MED-41 | Operating Light | (2) | ○ | ○ | ○ | ○ | × | (○) | (1) |
| 31 | MED-42 | Operating Table | (1) | ○ | ○ | ○ | ○ | ○ | (○) | (1) |
| 32 | MED-43 | Anesthesia machine | (1) | ○ | ○ | ○ | ○ | ○ | (○) | (1) |
| 33 | MED-44 | Instrument set for Exam. Room | (1) | ○ | ○ | ○ | ○ | × | ○ | 3 |
| 34 | MED-45 | Instrument Cabinet | (1) | ○ | ○ | ○ | ○ | × | ○ | 3 |
| 35 | MED-46 | Minor surgical instrument set | (3) | ○ | ○ | ○ | ○ | × | ○ | 2 |
| 36 | MED-47 | Electric Suction Pump | (2) | ○ | ○ | ○ | ○ | × | (○) | (1) |
| 37 | MED-48 | Autoclave | (1) | ○ | ○ | ○ | ○ | ○ | (○) | (1) |
| 38 | MED-49 | Physicians Desk & Chair | (3) | ○ | ○ | ○ | ○ | ○ | ○ | 3 |
| 39 | MED-50 | Patient Chair | (2) | ○ | ○ | ○ | ○ | × | ○ | 3 |
| 40 | MED-51 | Ultra-sound Scanner | (1) | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 41 | MED-52 | Wheelchair | (1) | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 42 | MED-53 | Hypodermic Tray | (2) | × | ○ | ○ | ○ | ○ | × | - |
| 43 | MED-54 | Measuring Tape | (5) | ○ | ○ | ○ | ○ | × | ○ | 2 |
| 44 | MED-55 | Instrument set for Ligation | (1) | ○ | ○ | ○ | ○ | ○ | (○) | (1) |
| 45 | MED-59 | Instrument set for laboratory | (1) | × | ○ | ○ | ○ | ○ | × | - |
| 46 | OFC-01 | Typewriter | 1 | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 47 | OFC-02 | Filing Cabinet | 2 | ○ | ○ | ○ | ○ | × | ○ | 3 |
| 48 | OFC-05 | Paging System | (1) | × | ○ | ○ | ○ | ○ | × | - |
| 49 | IEC-03 | Sound system | 3 | ○ | ○ | ○ | ○ | × | ○ | 1 |
| 50 | IEC-06 | Slide Projector | (1) | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 51 | IEC-07 | Over Head Projector | (1) | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 52 | IEC-08 | 35 mm Camera | (1) | × | ○ | ○ | ○ | ○ | × | - |
| 53 | IEC-09 | Conference Desk & Chair set | (1) | ○ | ○ | ○ | ○ | ○ | ○ | 1 |
| 54 | IEC-11 | VTR & Monitor set | (1) | ○ | ○ | ○ | ○ | ○ | ○ | 1 |

(4) Equipment for RHO (1 No)

| No. | Code No. | Name of Equipment | Requested Quantity | Examination | | | | | Result | Planned Quantity |
|-----|----------|-------------------|--------------------|-------------|---|---|---|---|--------|------------------|
| | | | | 1 | 2 | 3 | 4 | 5 | | |
| 1 | IEC-04 | IEC Van | 3 | ○ | ○ | ○ | ○ | ○ | ○ | 3 |
| 2 | IEC-05 | IEC equipment | 3 | ○ | ○ | ○ | ○ | ○ | ○ | 3 |

From the results of the examination sheet, a uniform package of equipment was arrived at for each level of facility (BHS, RHU or MCHC) upon examining the requested equipment for each facility, omitting items considered to be used only infrequently, and limiting equipment to items that are only actually used. The following gives an outline of the types of equipment for which such examination was carried out.

① Refrigerators and radios (BHS):

Since these were judged to be used only infrequently, they were omitted from the Project.

② Dental examining tables (RHU):

These were included in the Project conditional on requesting the Philippine side to permanently assign dentists or organize regular dentist rounds.

③ Microscopes (RHU):

Since these are essential for investigating sputum, malaria and cells, etc. and many of the existing microscopes are more than 20 years' old and in need of replacement, they were included in the Project.

④ VTR monitors (RHU):

These are considered to be necessary for showing health education videos produced under the project technical cooperation to waiting patients and thus aiding education and enlightenment.

⑤ Motorcycles (RHU):

These were requested for use by patrolling sanitary inspectors (SIs), however, since it is thought that they would break down a lot and be used for private use, they were omitted from the Project.

⑥ Ultrasound layer diagnosis equipment (MCHC):

Such apparatus was supplied under the project technical cooperation to Tarlac provincial hospital and is used for accurately diagnosing fetal growth and placenta and umbilical cord conditions. Therefore, five of these have been included in the Project, one to be installed in the internal examination room of each MCHC.

⑦ Ambulances (MCHC):

Similarly, since an ambulance was provided to Tarlac provincial hospital under the project technical cooperation and is used to transport emergency patients, renewal of or addition to the existing vehicles of each provincial hospital was requested. However, since the frequency of use and link with the contents of Project activities are unclear, ambulances have been omitted from the Project.

⑧ IEC vehicles (RHU):

The existing vehicles are on loan from JICA and have been in use for 10 years. These vehicles (three) shall be renewed under the Project.

Concerning the IEC vehicles in particular, those in use in Tarlac province were registered in 1989, have already traveled 15,000 km (as of March 1998) and have reached their renewal stage. These vehicles were loaned for IEC activities in 1993 and have been used to carry out

patrols to 286 barangay throughout the province as of March 1998. IEC activities for educating and enlightening local inhabitants are an important component of FP/MCH Project, in which it is planned to divide the six target provinces into three regions consisting of two provinces each. In consideration of the above, one vehicle was added to the request, giving a total of three vehicles.

Table 2-3-11 shows the Project equipment and purposes of use that have been finally obtained from the above examination results and analysis of current conditions in the site surveys. The quantities of equipment for each site are indicated in Table 2-3-12.

Table 2-3-11 Specification and Purpose of Planned Equipment

| No | Code No. | Description | Qty | Specification | Purpose to Use |
|----|----------|--|-----|--|---|
| 1 | MED-01 | Weighing Scale (Adult) | 88 | Double beam type, Capacity: 100kg, Sensitivity: 50g | Measurement of weights in out-patients |
| 2 | MED-02-1 | Weighing Scale (Pediatric /Hanging type) | 78 | Hanging type, Capacity: 20kg, Sensitivity: 10g | Measurement of baby's weights in a visit medical checkup |
| 3 | MED-02-2 | Weighing Scale (Pediatric/ Table top type) | 83 | Double beam type, Capacity: 10kg, Sensitivity: 100g | Measurement of weights in pediatric out-Patients |
| 4 | MED-03 | Sphygmomanometer (Table type) | 106 | Mercury, Desk-top type, Range: 0-300mmHg | Measurement of blood pressure in out-patients by doctor |
| 5 | MED-04 | Sphygmomanometer (for Pediatric) | 10 | Mercury, Desk-top type, Range: 0-300mmHg, w/cuff for pediatric | Measure of blood pressure in pediatric out-patients by doctor |
| 6 | MED-05 | Sphygmomanometer (Stand type) | 10 | Mercury, Floor type, Range: 0-300mmHg | Measure of blood pressure in out-patients by nurse or midwife |
| 7 | MED-06 | Stethoscope | 121 | Single head type for nurse, Aluminum head | Measure of blood pressure in out-patients by nurse or midwife |
| 8 | MED-07 | Stethoscope (Double head type) | 15 | Double head type, Aluminum head | Auscultation by doctor |
| 9 | MED-08-1 | Examining Table (General type) | 88 | General type, 510x1,200x800mm | Table for medical checkup of out-patients |
| 10 | MED-08-2 | Examining Table (OB&GY type) | 23 | OB & GY type, 510x1,200x800mm | Table for obstetrics checkup of out-patients |
| 11 | MED-09 | Vaginal Speculum (for Virginal) | 78 | Cusco's type, Stainless | Speculum for internal examination |
| 12 | MED-10 | Vaginal speculum (medium) | 78 | Sakurai's type, Stainless | Speculum for internal examination |
| 13 | MED-11 | Universal diagnostic set | 78 | Halogen type, Ophthalmoscope & Otoscope head | Checkup for the nose and ears |
| 14 | MED-12 | Hysterometer | 78 | Approx. 300(L)mm, Stainless | Measurement of the uterus depth |
| 15 | MED-13 | Hemometer | 88 | Zahli pipette, Standard filter etc. | Measurement of Hemoglobin |
| 16 | MED-14 | Doppler Apparatus | 23 | Portable type (AC/DC), Ultrasonic output: 10mW | Examination of fetal heart-beat |
| 17 | MED-15 | ECG (Portable type) | 5 | 1ch. Portable type, thermal pen, AC/DC | Recording of electrocardiogram |
| 18 | MED-17 | Examination lamp | 111 | Flexible neck type, Tungsten lamp (60W) | Light for medical examination |
| 19 | MED-18 | Suction Unit | 28 | Desk top type, Capacity: 24 liter/min | Removing of sputum in medical examination for out-patients |

Cont.

| No | Code No. | Description | Qty | Specification | Purpose to Use |
|----|----------|-------------------------------------|-----|--|--|
| 20 | MED-19 | Dental Chair | 18 | Dental chair, Spittoon unit, Instrument set for exam. etc. | Dental checkup and Instruction of prevention |
| 21 | MED-20 | Nebulizer | 23 | Ultrasonic type, Nebulizing rate: 4ml/min | Inhalation cure for lung diseases |
| 22 | MED-21 | Ambubag (Adult) | 23 | Bag, Valve, Face mask, etc. | Manual respirator for emergency case |
| 23 | MED-22 | Ambubag (Pediatric) | 23 | Bag, Valve, Face mask, etc., for pediatric | Ditto |
| 24 | MED-23 | Tenaculum | 78 | Approx. 260(L)mm, Stainless | Fixing of the uterus at obstetrics examination |
| 25 | MED-24 | Uterine Forceps | 78 | Approx. 280(L)mm, Stainless | Ditto |
| 26 | MED-25 | Ovum Forceps | 78 | Approx. 270(L)mm, Stainless | Holding of afterbirth |
| 27 | MED-26 | Scissors | 78 | Straight, 140(L)mm, Stainless | General purpose in out-patient |
| 28 | MED-27 | Kelly Pad | 78 | Rubber, dia.400mm | Support of patient at examination |
| 29 | MED-28 | Stretcher | 5 | Stainless, 1,800x550x800mm | Transportation of patients |
| 30 | MED-29 | Oxygen Gauge | 28 | Pressure reducing valve, Oxygen mask, tube, etc. | Oxygen inhaler set |
| 31 | MED-30 | Oxygen Tank with carriage | 56 | Cap. approx 2000liter, BS standard connector | Oxygen supply for MED-29 |
| 32 | MED-31 | Instrument Sterilizer | 83 | Electricity or Kerosene type, Cap. Approx. 12 liter | Disinfection of equipment |
| 33 | MED-32 | Boiling Sterilizer | 18 | Electricity or Kerosene type, Cap. Approx. 5liter | Ditto |
| 34 | MED-33 | Instrument pushcart/trolley | 78 | 750x450x800mm, Stainless | Cart for medical equipment in out-patient |
| 35 | MED-34 | Refrigerator | 23 | 2 doors, Cap. 2000liter | Preservation of medicine and vaccine |
| 36 | MED-38 | Home delivery kit | 78 | Thermometer, Umbilical scissors, Enema syringe, bag. | Instrument set for delivery at home |
| 37 | MED-41 | Operating Light * | 1 | Bulb: halogen, Ceiling type, dia. approx. 800mm | Lights for operation |
| 38 | MED-42 | Operating Table * | 1 | Universal type, approx. 1,900 x 450 x 750 ~ 1,000 mm | Table for operation |
| 39 | MED-43 | Anesthesia machine * | 1 | Main unit, Vaporizer, Ventilator, etc. | Anesthesia machine for operation |
| 40 | MED-44 | Instrument set for Examination Room | 93 | Pus basin, Forceps stand, Dressing jar, etc. | Standard instrument set for out-patient dept. |
| 41 | MED-45 | Instrument Cabinet | 33 | Approx. 800 x 400 x 1,700 mm, Steel | Preservation of medical instrument |
| 42 | MED-46 | Minor surgical instrument set | 28 | Operating knife, Retractor, Probe, Needle holder, etc. | Instrument set for minor operation |
| 43 | MED-47 | Electric Suction Pump * | 1 | Portable type, Cap. Approx. 45litter/min | Aspiration of blood and others in operation |
| 44 | MED-48 | Autoclave * | 1 | Table top type, Cap. appx. 90 litter, Electrical heater | Sterilization of operating equipment |
| 45 | MED-50 | Patient Chair | 93 | Approx. 330(dia.) x 380 ~ 480(h) mm | Stool for patients in examination |
| 46 | MED-51 | Ultra-sound Scanner | 5 | Portable type, 3.5MHz convex Probe & 5MHz TV probe | Observation of fetus |
| 47 | MED-52 | Wheelchair | 5 | Approx. 400 x 400 x 470 mm, Wheel 24" | Transportation of patients |

Cont.

| No | Code No. | Description | Qty | Specification | Purpose to Use |
|----|----------|-------------------------------|-----|---|--|
| 48 | MED-54 | Measuring Tape | 10 | Max. 2m, Vinyl coated cloth | Measurement of body |
| 49 | MED-55 | Instrument set for Ligation * | 1 | Uterotubal forceps, Round ligament traction retractor, etc. | Standard instrument set for contraceptive operation |
| 50 | MED-56 | Microscope | 18 | Binocular, 20W halogen bulb lighting, max. magnifctn: x1000 | Observation of specimen |
| 51 | OFC-01 | Typewriter | 23 | Manual type, Carriage width: approx. 600mm | Making of documents |
| 52 | OFC-02 | Filing Cabinet | 93 | Approx. 460 x 620 x 1,400 mm, Steel | Preservation of documents |
| 53 | IEC-01 | Megaphone | 78 | Hand grip type, Battery operation, Output: approx. 23W | Handy loudspeaker for lectures in enlightenment activities |
| 54 | IEC-02 | JFPA Magnel display | 78 | Panel, Models of body parts, Manuals, etc. | Panel for explanation in enlightenment activity |
| 55 | IEC-03 | Sound system | 5 | Floor type, Amplifier, Microphone, Speaker | Loudspeaker system for lecture in enlightenment activity |
| 56 | IEC-04 | IEC Van | 3 | High roof top type, 3000cc Diesel | Transportation for enlightenment activity tour |
| 57 | IEC-05 | IEC equipment | 3 | VTR, Video projector, Speaker System, Generators, etc. | Audio Visual equipment set for enlightenment activity tour |
| 58 | IEC-07 | OHP | 5 | Portable type, Halogen 250W, max size A4 | Overhead projector for enlightenment activities |
| 59 | IEC-10 | White Board | 18 | Wall mount type, approx. 1,600 x 1,000 mm | For enlightenment activities |
| 60 | IEC-11 | VTR & Monitor set | 23 | VTR: VHS/NTSC, Monitor: 29" color/NTSC | Audio Visual equipment set for enlightenment activities |

* shows for the Ligation Room in Bataan MCHC.

Table 1-3-12 Quantity of Planed Equipment by Facilities

(1) indicates additional request during Survey.

| No. | Code No. | Name of Equipment | BHS (60) | | RHU (18) | | MCHC (5) | | RHO (1) | | TOTAL | |
|-----|----------|---------------------------------|----------|---------|----------|---------|----------|---------|---------|---------|---------|---------|
| | | | Request | Planned | Request | Planned | Request | Planned | Request | Planned | Request | Planned |
| 1 | MED-01 | Weighing Scale (Adult) | 1 | 1 | 2 | 1 | | 2 | | | 96 | 88 |
| 2 | MED-02-1 | Weighing Scale (Ped./Hanging) | 1 | 1 | 10 | 1 | | | | | 240 | 78 |
| 3 | MED-02-2 | Weighing Scale (Ped./Table top) | (1) | 1 | (1) | 1 | (1) | 1 | | | 83 | 83 |
| 4 | MED-03 | Sphygmomanometer (Table) | 1 | 1 | 2 | 2 | 5 | 2 | | | 121 | 106 |
| 5 | MED-04 | Sphygmomanometer (Pediatric) | | | | | 10 | 2 | | | 50 | 10 |
| 6 | MED-05 | Sphygmomanometer (Stand) | | | | | 5 | 2 | | | 25 | 10 |
| 7 | MED-06 | Stethoscope | 1 | 1 | 2 | 2 | 5 | 5 | | | 121 | 121 |
| 8 | MED-07 | Stethoscope (Double head) | | | | | 10 | 3 | | | 50 | 15 |
| 9 | MED-08-1 | Examining Table (General type) | 1 | 1 | 1 | 1 | (2) | 2 | | | 88 | 88 |
| 10 | MED-08-2 | Examining Table (OB&GY) | | | (1) | 1 | (1) | 1 | | | 23 | 23 |
| 11 | MED-09 | Vaginal Speculum (Small) | 1 | 1 | 1 | 1 | | | | | 78 | 78 |
| 12 | MED-10 | Vaginal speculum (medium) | 1 | 1 | 5 | 1 | | | | | 150 | 78 |
| 13 | MED-11 | Universal diagnostic set | 1 | 1 | 1 | 1 | | | | | 78 | 78 |
| 14 | MED-12 | Hysterometer | 1 | 1 | 5 | 1 | | | | | 150 | 78 |
| 15 | MED-13 | Hemometer | 1 | 1 | 10 | 1 | | 2 | | | 240 | 88 |
| 16 | MED-14 | Doppler Apparatus | | | 1 | 1 | 1 | 1 | | | 23 | 23 |

Cont.

| No. | Code No. | Name of Equipment | BHS (60) | | RHU (18) | | MCHC (5) | | RHO (1) | | TOTAL | |
|-----|----------|-------------------------------|----------|--------|----------|--------|----------|--------|---------|--------|---------|--------|
| | | | Request | Plannd | Request | Plannd | Request | Plannd | Request | Plannd | Request | Plannd |
| 17 | MED-15 | ECG (Portable type) | | | | | 1 | 1 | | | 5 | 5 |
| 18 | MED-17 | Examination lamp | (1) | 1 | 1 | 2 | (3) | 3 | | | 111 | 111 |
| 19 | MED-18 | Suction Unit | | | 1 | 1 | 1 | 2 | | | 23 | 28 |
| 20 | MED-19 | Dental Chair | | | 1 | 1 | | | | | 18 | 18 |
| 21 | MED-20 | Nebulizer | | | 1 | 1 | 1 | 1 | | | 23 | 23 |
| 22 | MED-21 | Ambubag (Adult) | | | 1 | 1 | 5 | 1 | | | 43 | 23 |
| 23 | MED-22 | Ambubag (Pediatric) | | | 1 | 1 | 5 | 1 | | | 43 | 23 |
| 24 | MED-23 | Tenaculum | 1 | 1 | 5 | 1 | | | | | 150 | 78 |
| 25 | MED-24 | Uterine Forceps | 1 | 1 | 5 | 1 | | | | | 150 | 78 |
| 26 | MED-25 | Ovum Forceps | 1 | 1 | 5 | 1 | | | | | 150 | 78 |
| 27 | MED-26 | Scissors | 1 | 1 | 5 | 1 | | | | | 150 | 78 |
| 28 | MED-27 | Kelly Pad | 1 | 1 | 1 | 1 | | | | | 78 | 78 |
| 29 | MED-28 | Stretcher | | | | | 1 | 1 | | | 5 | 5 |
| 30 | MED-29 | Oxygen Gauge | | | 1 | 1 | 5 | 2 | | | 43 | 28 |
| 31 | MED-30 | Oxygen Tank with carriage | | | 1 | 2 | 5 | 4 | | | 43 | 56 |
| 32 | MED-31 | Instrument Sterilizer | 1 | 1 | 1 | 1 | (1) | 1 | | | 83 | 83 |
| 33 | MED-32 | Boiling Sterilizer | | | 1 | 1 | | | | | 18 | 18 |
| 34 | MED-33 | Instrument pushcart/trolley | (1) | 1 | 1 | 1 | | | | | 18 | 78 |
| 35 | MED-34 | Refrigerator | | | 1 | 1 | 2 | 1 | | | 28 | 23 |
| 36 | MED-38 | Home delivery kit | (1) | 1 | 10 | 1 | | | | | 180 | 78 |
| 37 | MED-41 | Operating Light * | | | | | (1) | 1 | | | 1 | 1 |
| 38 | MED-42 | Operating Table * | | | | | (1) | 1 | | | 1 | 1 |
| 39 | MED-43 | Anesthesia machine * | | | | | (1) | 1 | | | 1 | 1 |
| 40 | MED-44 | Instrument set for Exam.Room | (1) | 1 | (1) | 1 | (3) | 3 | | | 93 | 93 |
| 41 | MED-45 | Instrument Cabinet | | | (1) | 1 | (3) | 3 | | | 33 | 33 |
| 42 | MED-46 | Minor surgical instrument set | | | 1 | 1 | (2) | 2 | | | 28 | 28 |
| 43 | MED-47 | Electric Suction Pump * | | | | | (1) | 1 | | | 1 | 1 |
| 44 | MED-48 | Autoclave * | | | | | (1) | 1 | | | 1 | 1 |
| 45 | MED-50 | Patient Chair | (1) | 1 | (1) | 1 | (3) | 3 | | | 93 | 93 |
| 46 | MED-51 | Ultra-sound Scanner | | | | | (1) | 1 | | | 5 | 5 |
| 47 | MED-52 | Wheelchair | | | | | (1) | 1 | | | 5 | 5 |
| 48 | MED-54 | Measuring Tape | | | | | (2) | 2 | | | 10 | 10 |
| 49 | MED-55 | Instrument set for Ligation * | | | | | (1) | 1 | | | 1 | 1 |
| 50 | MED-56 | Microscope | | | (1) | 1 | | | | | 18 | 18 |
| 51 | OFC-01 | Typewriter | 1 | | 1 | 1 | 1 | 1 | | | 23 | 23 |
| 52 | OFC-02 | Filing Cabinet | 1 | 1 | 1 | 1 | (3) | 3 | | | 93 | 93 |
| 53 | IEC-01 | Megaphone | 1 | 1 | 1 | 1 | | | | | 78 | 78 |
| 54 | IEC-02 | JFPA Magnel display | 1 | 1 | 1 | 1 | | | | | 78 | 78 |
| 55 | IEC-03 | Sound system | | | | | 3 | 1 | | | 15 | 5 |
| 56 | IEC-04 | IEC Van | | | | | | | 3 | 3 | 3 | 3 |
| 57 | IEC-05 | IEC equipment | | | | | | | 3 | 3 | 3 | 3 |
| 58 | IEC-07 | OHP | | | | | (1) | 1 | | | 5 | 5 |
| 59 | IEC-10 | White Board | | | (1) | 1 | | | | | 18 | 18 |
| 60 | IEC-11 | VTR & Monitor set | | | (1) | 1 | (1) | 1 | | | 23 | 23 |

* shows for the Ligation Room in Bataan MCHC.

Basic Design Drawings

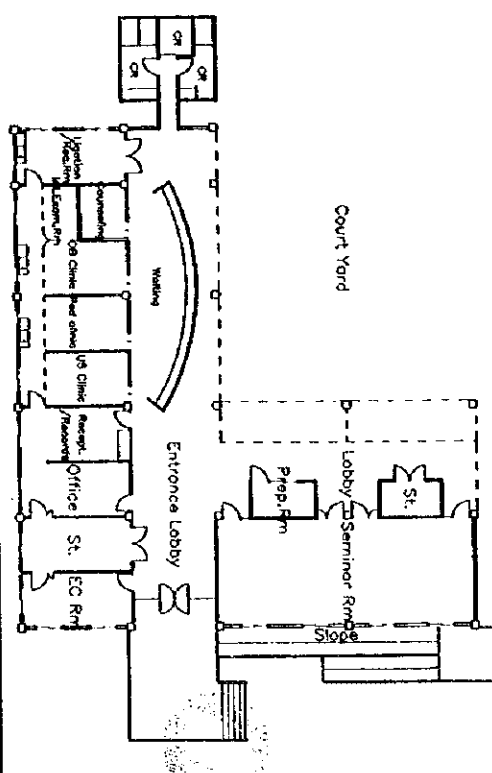
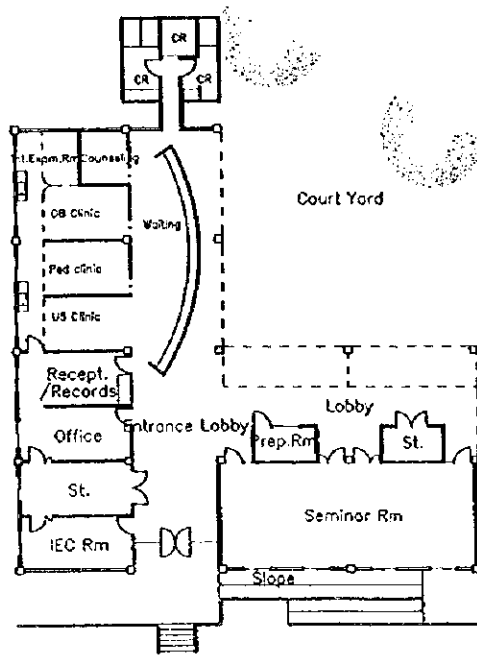
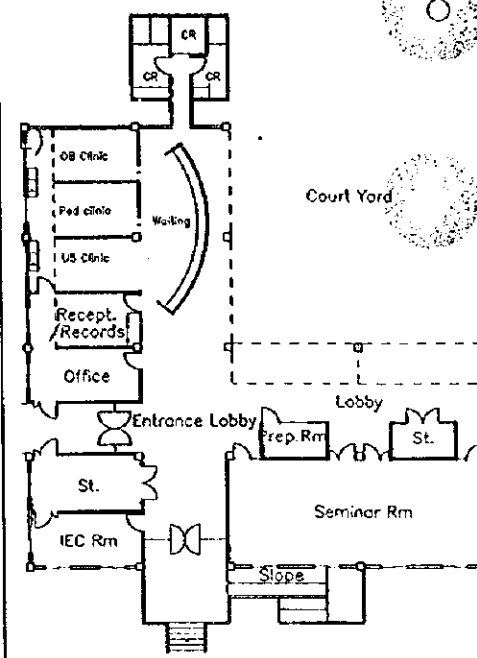
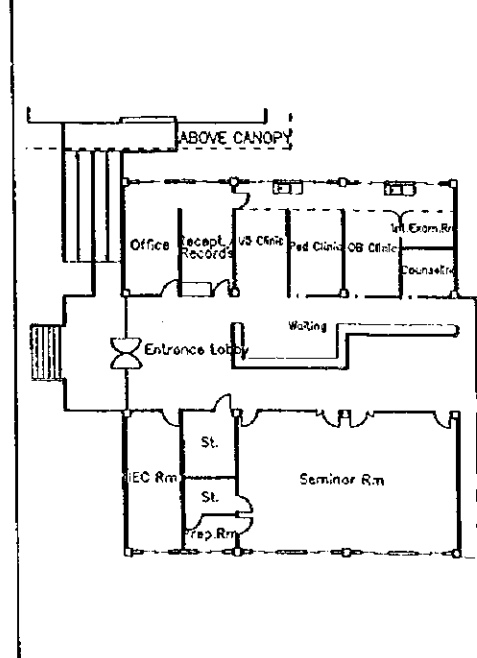
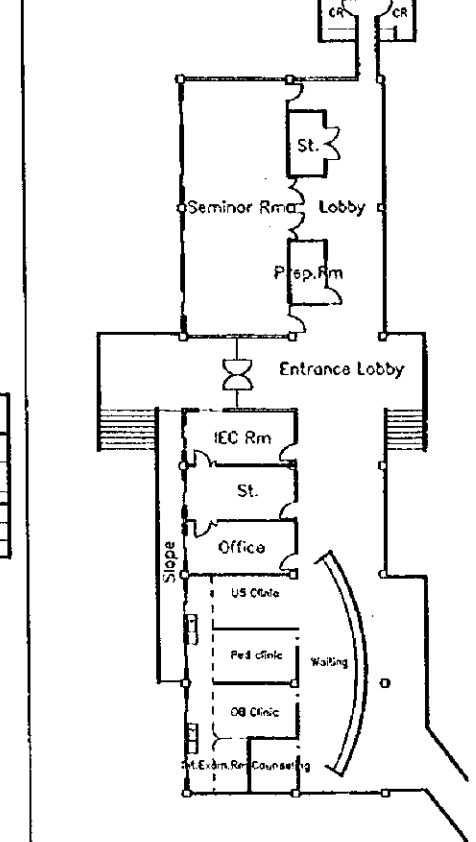
| | Scale |
|-----------------------------------|-------|
| 1. MCHC / Building Type Schedule | 1:400 |
| 2. MCHC / Standard Type (Bulacan) | 1:200 |
| 3. MCHC / Pampanga Type | 1:200 |
| 4. RHU / Building Type Schedule | 1:400 |
| 5. RHU / Standard Type | 1:200 |
| 6. BHS / Building Type Schedule | 1:400 |
| 7. BHS Standard Type | 1:200 |
| 8. MCHC / Equipment List & Layout | 1:200 |
| 9. RHU / Equipment List & Layout | 1:200 |
| 10. BHS / equipment List & Layout | 1:200 |

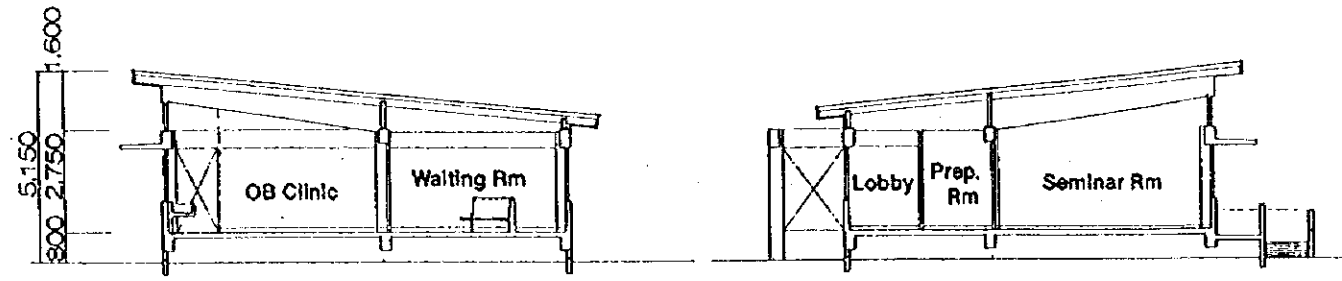
* Site Plans for 83 proposed facilities are separated Volume.

Planned Floor Area

| | MCHC (5 No.) | RHU (18 No.) | | | BHS (60 No.) | | | Sub-total |
|--------------|---------------------------|--------------------------------|--------------------------------|---------------------------|-------------------------------|-------------------------------|-------------------------------|---------------------------|
| | | A type (160m ²) | B type (130m ²) | Sub- total | A type (80m ²) | B type (60m ²) | C type (35m ²) | |
| Bataan | 410 | 160 | 260 | 420 | 80 | 540 | — | 620 |
| Bulacan | 405 | 160 | 260 | 420 | 80 | 420 | 70 | 570 |
| Nueva Ecija | 385 | 160 | 260 | 420 | — | 540 | 35 | 575 |
| Pampanga | 420 | — | 390 | 390 | 80 | 480 | 35 | 595 |
| Tarlac | - | 160 | 260 | 420 | — | 600 | — | 600 |
| Zambales | 400 | — | 390 | 390 | 160 | 480 | — | 640 |
| Total | 2,020m² | | | 2,460m² | | | | 3,600m² |

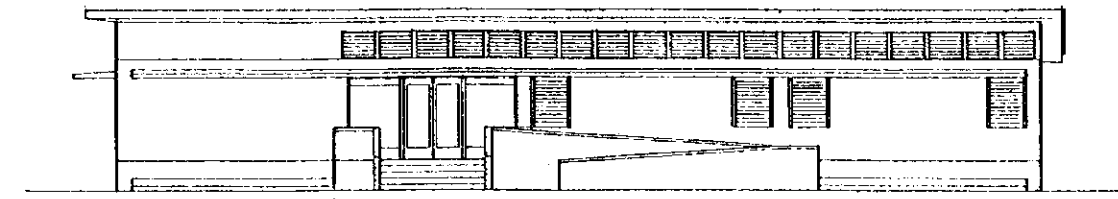
Total Floor Area : 8,080 m²

| SITE/TYPE | BATAAN/L1-Type | BULACAN/L2-Type | NUEVA ECUIJA/L3-Type | PAMPANGA/L-Type | ZAMBALES/I-Type |
|-----------------------|--|--|---|---|--|
| PLAN |  |  |  |  |  |
| <FACILITIES> | | | | | |
| OB Clinic | ○ | ○ | ○ | ○ | ○ |
| Counseling/Int. Exam. | ○ | ○ | — | ○ | ○ |
| Ped Clinic | ○ | ○ | ○ | ○ | ○ |
| US Clinic | ○ | ○ | ○ | ○ | ○ |
| Ligation/Rec. Rm | ○ | — | — | — | — |
| PHO Office | ○ | ○ | ○ | ○ | ○ |
| Recept./Records | ○ | ○ | ○ | ○ | — |
| Seminar Rm | ○ | ○ | ○ | ○ | ○ |
| IEC Rm | ○ | ○ | ○ | ○ | ○ |
| Covered Walkway | — | ○ | ○ | ○ | ○ |

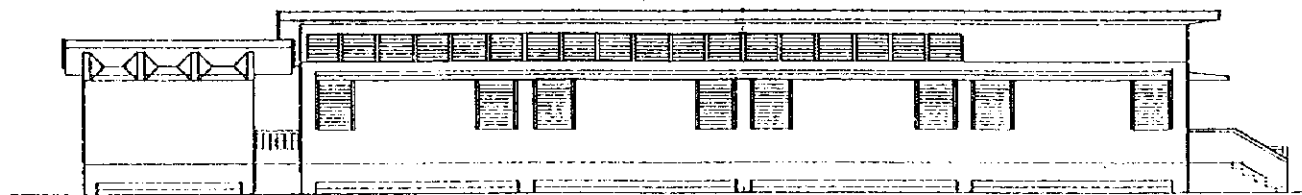


X - X SECTION

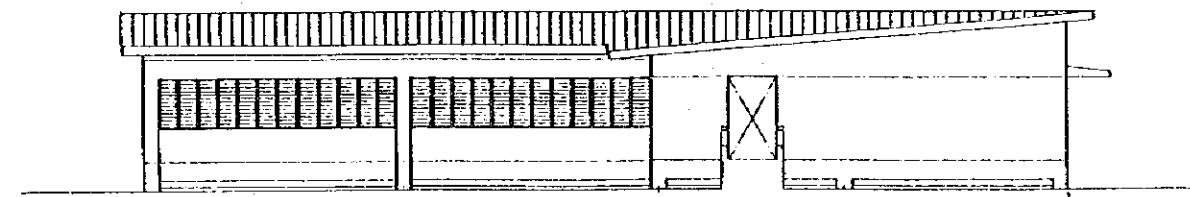
Y - Y SECTION



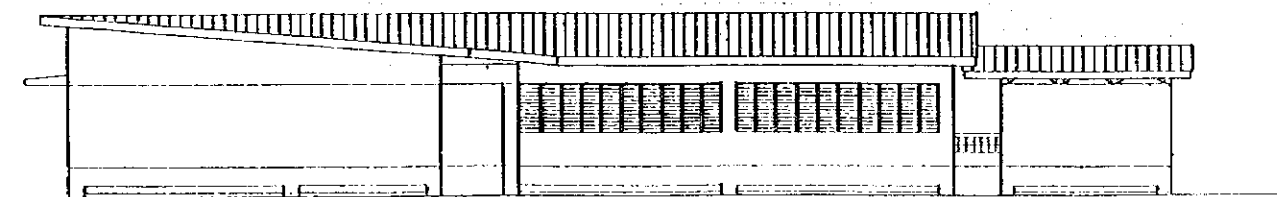
A ELEVATION



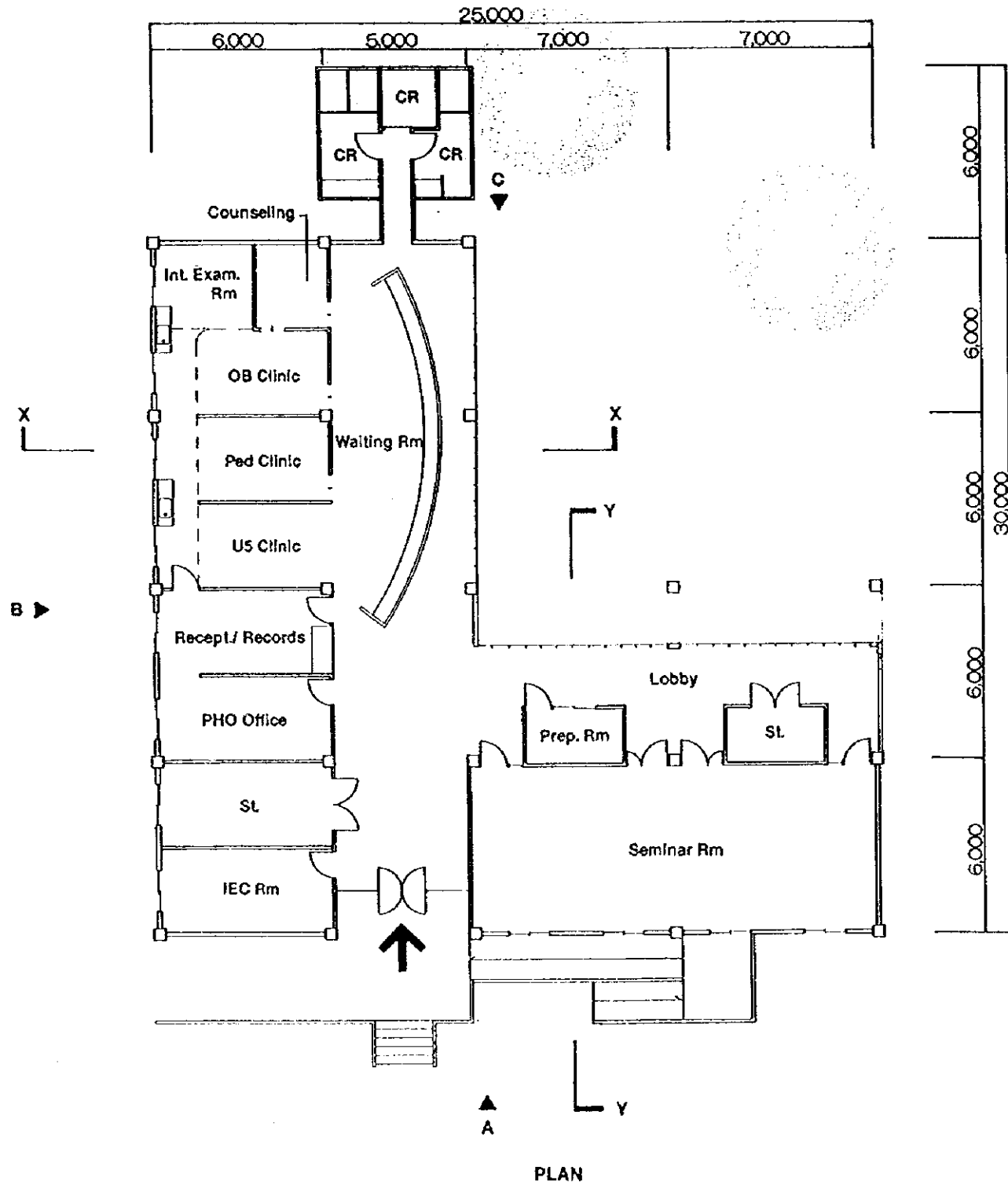
B ELEVATION



C ELEVATION



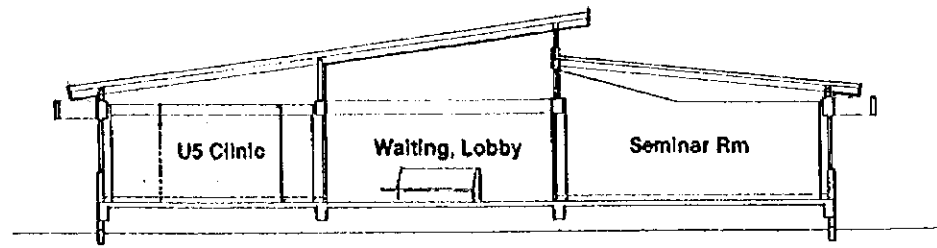
D ELEVATION



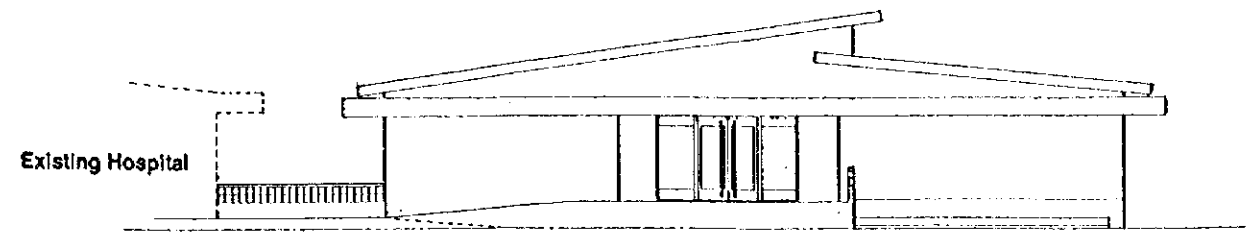
PLAN

MCHC Standard Type(Bulacan)
Plan, Elevations and Sections
S. 1:200

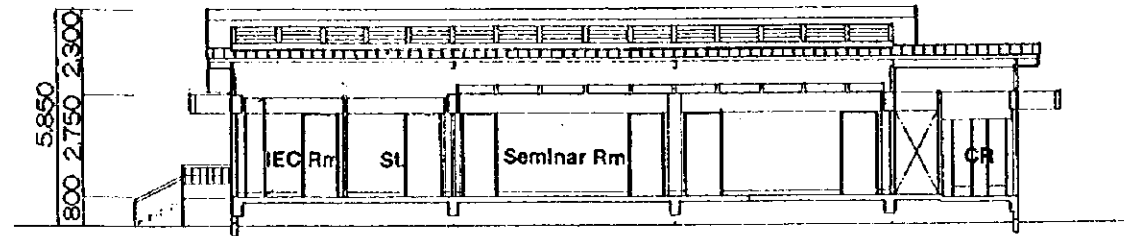
The Project for Upgrading of Facilities and Equipment in Selected Field Health Units



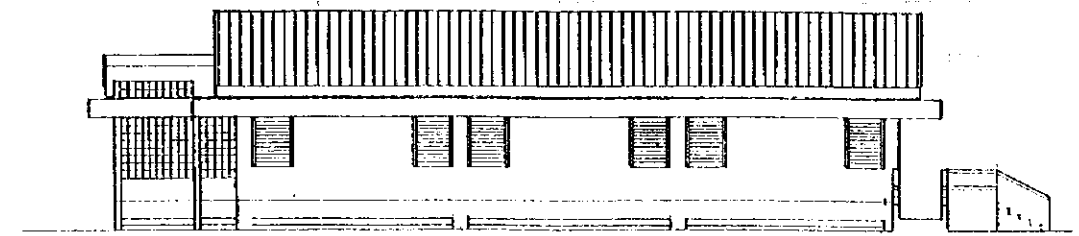
X - X SECTION



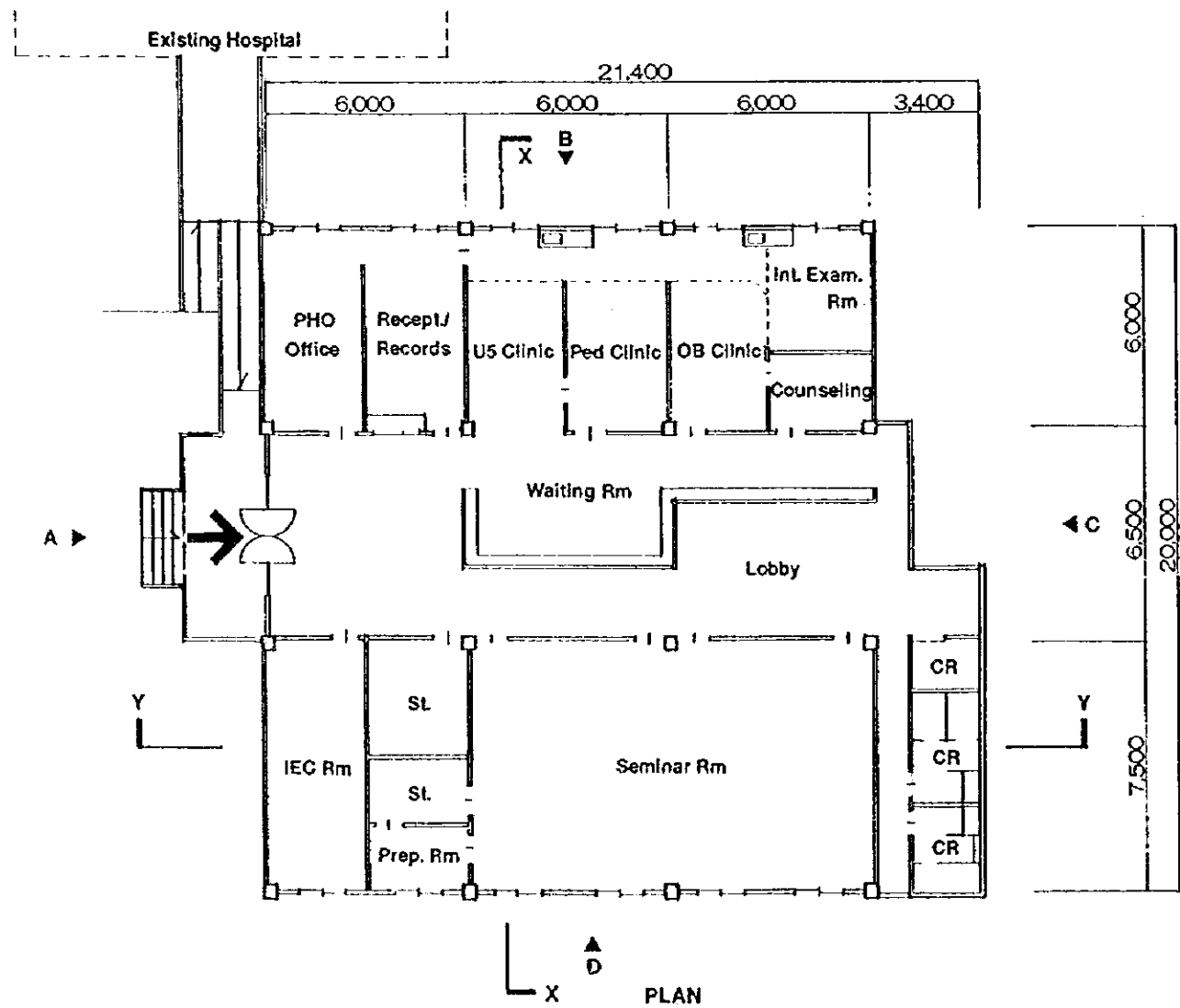
A ELEVATION



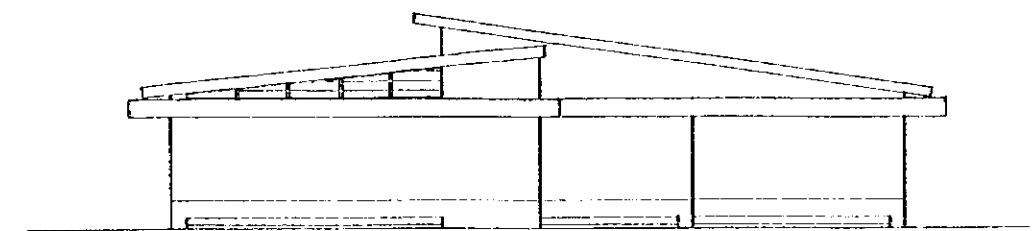
Y - Y SECTION



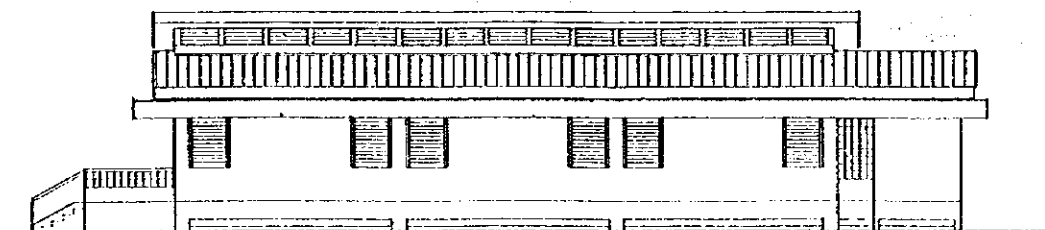
B ELEVATION



PLAN



C ELEVATION



D ELEVATION

MCHC Pampanga Type
Plan, Elevations and Sections
S. 1:200

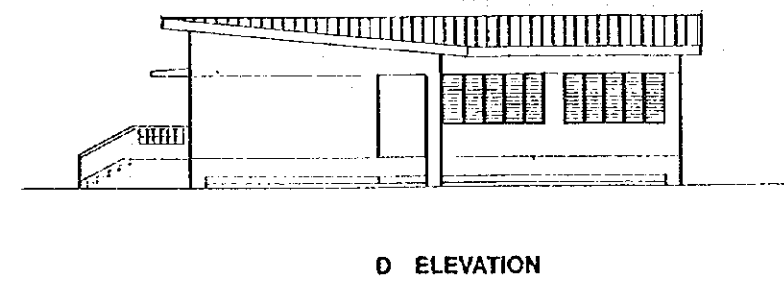
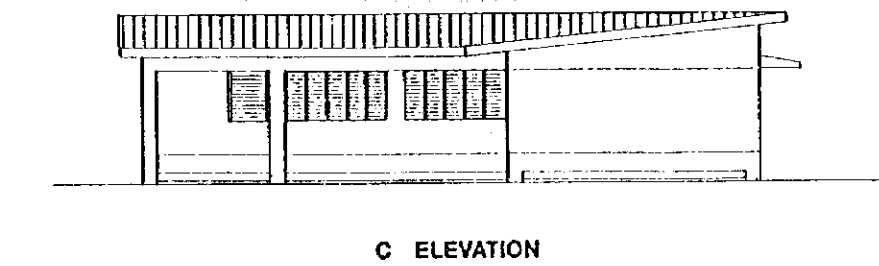
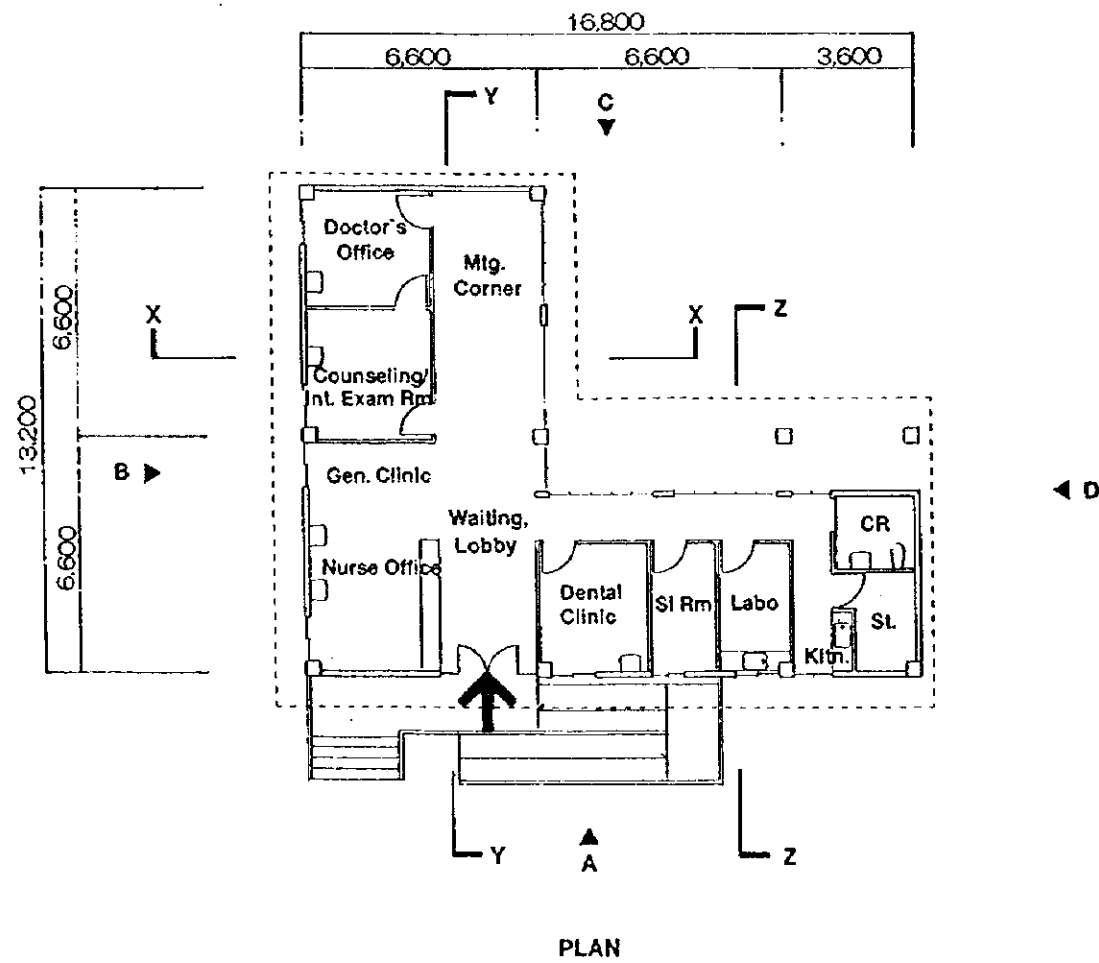
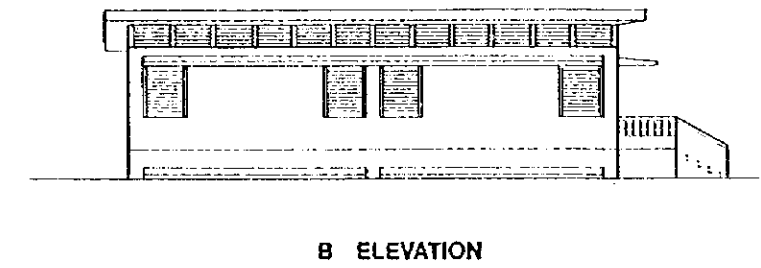
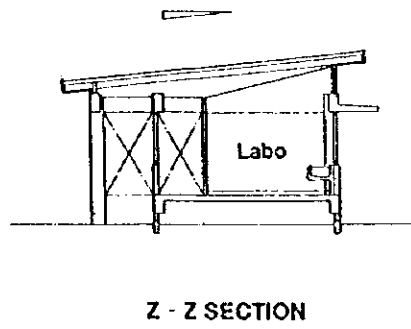
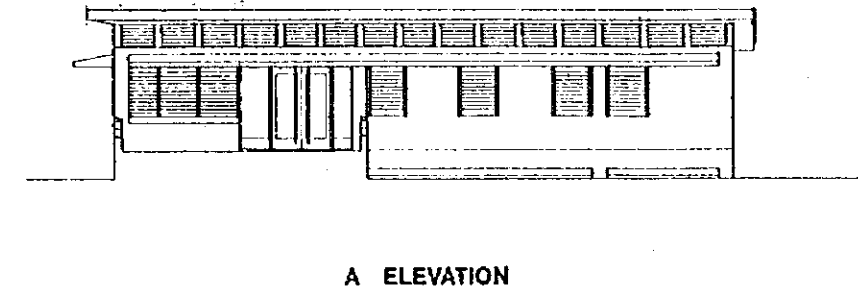
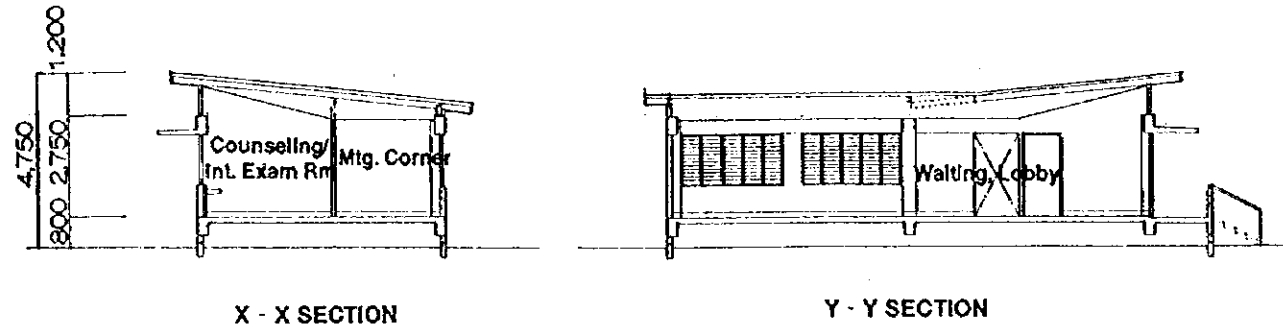
The Project for Upgrading of Facilities and Equipment in Selected Field Health Units

| TYPE/Floor Area/Nos. | A-1 | 160m ² | 2 | A-2 | 160m ² | 1 | A-3 | 160m ² | 1 | B-1 | 130m ² | 2 | B-2 | 130m ² | 1 |
|----------------------|---|-------------------|---|---|-------------------|---|---|-------------------|---|---|-------------------|---|---|-------------------|---|
| PLAN | | | | | | | | | | | | | | | |
| SITE | 1-2-3/ BATAAN/ Orion 2-2-3/BULACAN/San Rafael | | | 3-2-3/NUEVA ECIJA/San Isidro | | | 5-1-2/TARLAC/Moncada | | | 3-2-1/NUEVA ECIJA/Pantabangan 4-2-2/PAMPANGA/San Ildefonso | | | 4-2-3/PAMPANGA/Mexico | | |
| TYPE/Nos. | B-3 | 130m ² | 2 | B-4 | 130m ² | 3 | B-5 | 130m ² | 2 | B-6 | 130m ² | 1 | B-7 | 130m ² | 3 |
| PLAN | | | | | | | | | | | | | | | |
| SITE | 3-2-2/NUEVA ECIJA/Gabaldon 4-2-1/PAMPANGA/Arayat | | | 5-1-1/TARLAC/San Clemente 6-2-2/ZAMBALES/Butolan 6-2-3/ZAMBALES/San Antonio | | | 2-2-1/BULACAN/Obando 6-2-1/ZAMBALES/Sta Cruz | | | 1-2-2/BATAAN/Bagac | | | 1-2-1/BATAAN/Cababalan 2-2-2/BULACAN/San Miguel 5-1-4/TARLAC/Victoria | | |

RHU / Building Type Schedule

S. 1:400

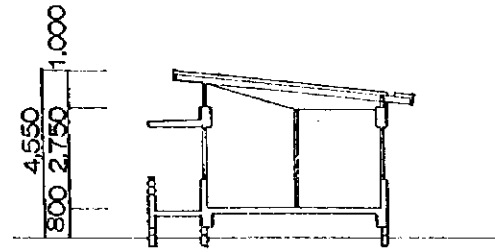
The Project for Upgrading of Facilities and Equipment in Selected Field Health Units



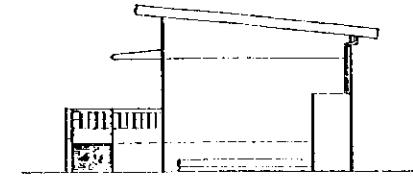
RHU Standard Type
Plan, Elevations and Sections
S. 1:200

The Project for Upgrading of Facilities and Equipment in Selected Field Health Units

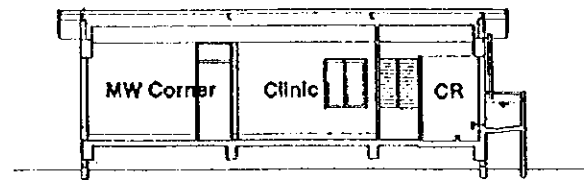
| Type/Floor Area/Nos | A-1 | 80m ² | 2 | A-2 | 80m ² | 2 | A-3 | 80m ² | 1 | B-1 | 60m ² | 21 | B-2 | 60m ² | 22 | B-3 | 60m ² | 2 | | | |
|---------------------|--|------------------|---|---|------------------|---|---|------------------|---|---|------------------|----|---|------------------|----|--|------------------|---|---|--|--|
| PLAN | | | | | | | | | | | | | | | | | | | | | |
| SITE | 1-3-4/BATAAN/Roosevelt 4-3-10/PAMPANGA/San Juan | | | 6-3-2/ZAMBALES/San Isidro 6-3-6/ZAMBALES/Babancal | | | 2-3-10/BULACAN/Bagbaguin | | | 1-3-1/BATAAN/Tipa 1-3-5/BATAAN/Sabatan 1-3-8/BATAAN/Gen. Lim 1-3-7/BATAAN/Sapa 1-3-8/BATAAN/Omboy 1-3-11/BATAAN/Nagwaling 2-3-3/BULACAN/San Pedro 2-3-5/BULACAN/Dolong Malabon 3-3-3/NUEVA ECIJA/Pinahan 3-3-4/NUEVA ECIJA/Paitan Sur 3-3-6/NUEVA ECIJA/Alufa 3-3-8/NUEVA ECIJA/Concepcion | | | 4-3-1/PAMPANGA/Laoc Pao 4-3-2/PAMPANGA/Malabo 4-3-3/PAMPANGA/Taglod 4-3-8/PAMPANGA/Aguso 5-2-8/TALRAC/Quezon 5-2-9/TALRAC/Pescado 6-3-4/ZAMBALES/Sta Barbara 6-3-9/ZAMBALES/Fatimida Diaz 6-3-14/ZAMBALES/Tubo-tubo | | | 1-3-2/BATAAN/Mabiga 1-3-9/BATAAN/Tortugas 1-3-10/BATAAN/Pita 2-3-4/BULACAN/Pinalagdan 2-3-6/BULACAN/Bubulong Munti 2-3-8/BULACAN/Diñman 3-3-1/NUEVA ECIJA/Labi 3-3-2/NUEVA ECIJA/San Felipe 3-3-9/NUEVA ECIJA/San Miguel 4-3-5/PAMPANGA/Pulungmasilo 4-3-6/PAMPANGA/San Isidro | | | 3-3-7/NUEVA ECIJA/San Nicolas 5-2-5/TALRAC/San Francisco | | |
| TYPE/Nos. | B-4 | 60m ² | 2 | B-5 | 60m ² | 3 | C-1 | 35m ² | 3 | C-2 | 35m ² | 1 | C-3 | 35m ² | 1 | | | | | | |
| PLAN | | | | | | | | | | | | | | | | | | | | | |
| SITE | 5-2-10/TALRAC/Nilasin 6-3-12/ZAMBALES/Sabang | | | 2-3-2/BULACAN/Buguiun 3-3-10/NUEVA ECIJA/Monic 5-2-11/TALRAC/San Juan | | | 2-3-1/BULACAN/Bulubad 3-3-5/NUEVA ECIJA/Puncan 4-3-4/PAMPANGA/Paligui | | | 5-2-2/TALRAC/Ventiniña | | | 2-3-7/BULACAN/Muzon | | | | | | | | |



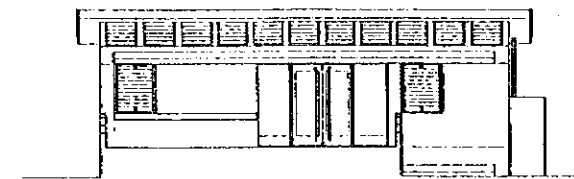
X - X SECTION



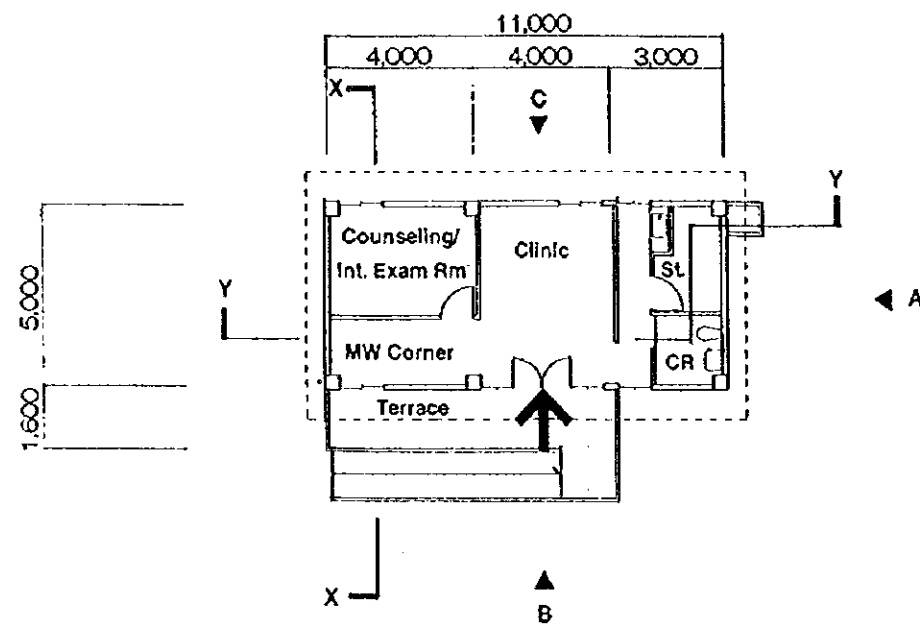
A ELEVATION



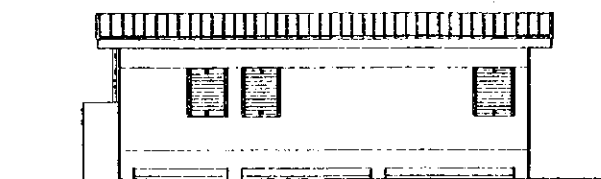
Y - Y SECTION



B ELEVATION



PLAN

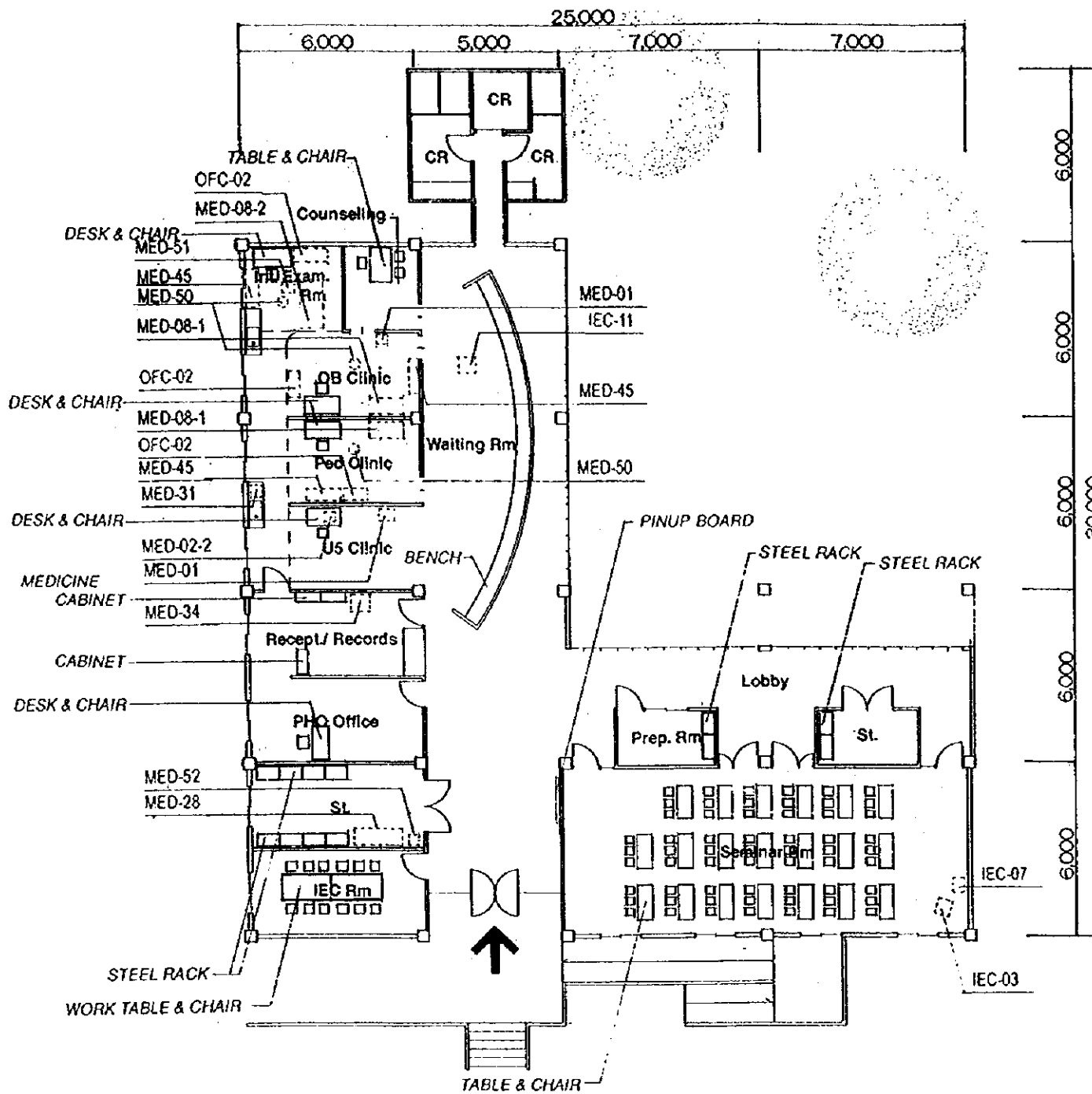


C ELEVATION

BHS Standard Type
Plan, Elevations and Sections
S. 1:200

The Project for Upgrading of Facilities and Equipment in Selected Field Health Units

Planned Equipment for MCHC



PLAN

Furniture described in Italics are BUILDING WORK

| No. | Code No. | Name of Equipment | Sub-Total |
|-----|----------|---|-----------|
| 1 | MED-01 | Weighing Scale (Adult) | 2 |
| 2 | MED-02-2 | Weighing Scale (Pediatric/Table top type) | 1 |
| 3 | MED-03 | Sphygmomanometer (Table type) | 2 |
| 4 | MED-04 | Sphygmomanometer (for Pediatric) | 2 |
| 5 | MED-05 | Sphygmomanometer (Stand type) | 2 |
| 6 | MED-06 | Stethoscope | 5 |
| 7 | MED-07 | Stethoscope (Double head type) | 3 |
| 8 | MED-08-1 | Examining Table (General type) | 2 |
| 9 | MED-08-2 | Examining Table (OB&GY type) | 1 |
| 10 | MED-13 | Hemometer | 2 |
| 11 | MED-14 | Doppler Apparatus | 1 |
| 12 | MED-15 | ECG (Portable type) | 1 |
| 13 | MED-17 | Examination lamp | 3 |
| 14 | MED-18 | Suction Unit | 2 |
| 15 | MED-20 | Nebulizer | 1 |
| 16 | MED-21 | Ambubag (Adult) | 1 |
| 17 | MED-22 | Ambubag (Pediatric) | 1 |
| 18 | MED-28 | Stretcher | 1 |
| 19 | MED-29 | Oxygen Gauge | 2 |
| 20 | MED-30 | Oxygen Tank with carriage | 4 |
| 21 | MED-31 | Instrument Sterilizer | 1 |
| 22 | MED-34 | Refrigerator | 1 |
| 23 | MED-41 | Operating Light | (1) |
| 24 | MED-42 | Operating Table | (1) |
| 25 | MED-43 | Anesthesia machine | (1) |
| 26 | MED-44 | Instrument set for Examination Room | 3 |
| 27 | MED-45 | Instrument Cabinet | 3 |
| 28 | MED-46 | Minor surgical instrument set | 2 |
| 29 | MED-47 | Electric Suction Pump | (1) |
| 30 | MED-48 | Autoclave | (1) |
| 31 | MED-50 | Patient Chair | 3 |
| 32 | MED-51 | Ultra-sound Scanner | 1 |
| 33 | MED-52 | Wheelchair | 1 |
| 34 | MED-54 | Measuring Tape | 2 |
| 35 | MED-55 | Instrument set for Ligation | (1) |
| 36 | OFC-01 | Typewriter | 1 |
| 37 | OFC-02 | Filing Cabinet | 3 |
| 38 | IEC-03 | Sound system | 1 |
| 39 | IEC-07 | OHP | 1 |
| 40 | IEC-09 | Conference Desk & Chair set | 1 |
| 41 | IEC-11 | VTR & Monitor set | 1 |

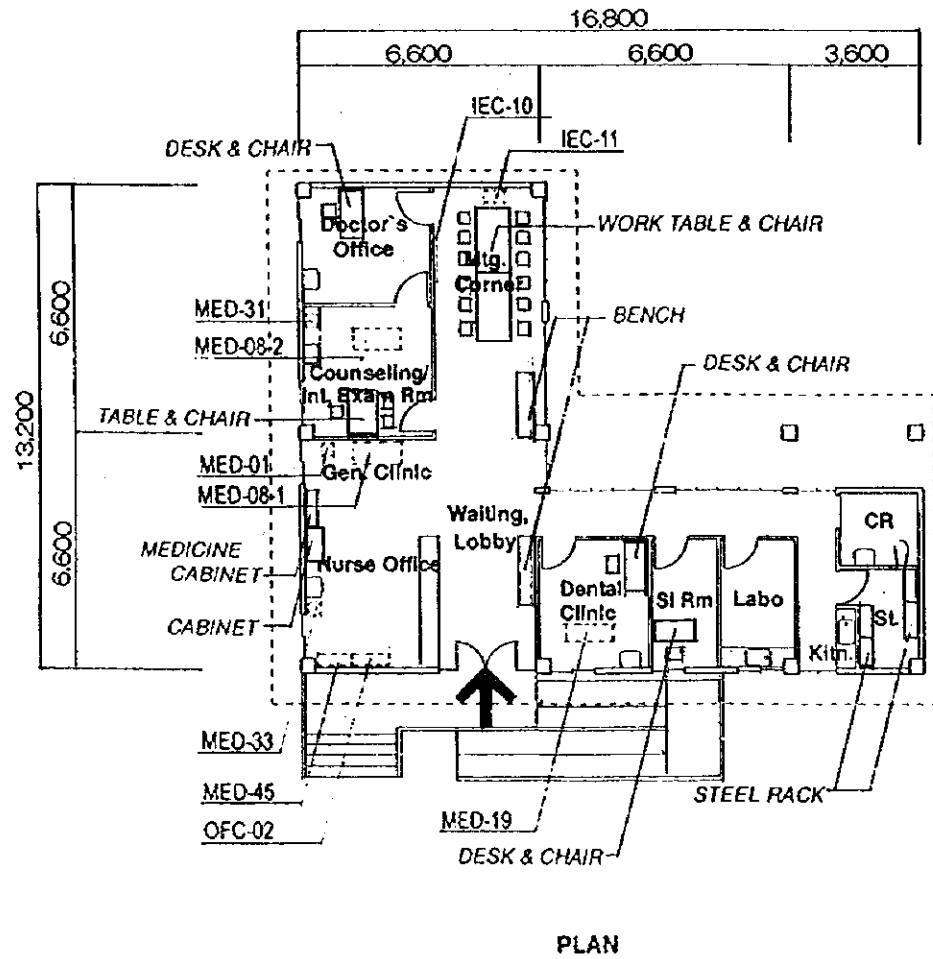
(1) shows equipment for Ligation at Bataan MCHC.

Planned Equipment for RHO

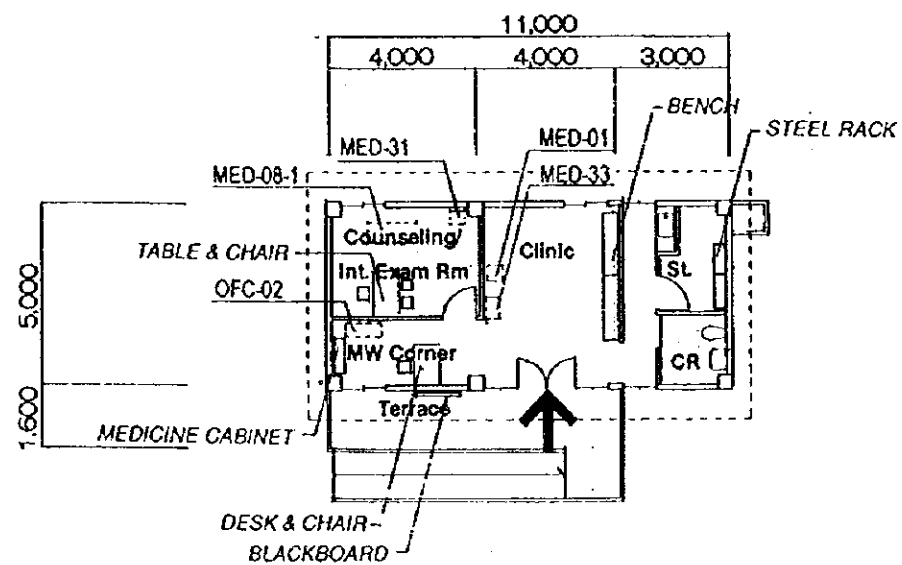
| No. | Code No. | Name of Equipment | Sub-Total |
|-----|----------|-------------------|-----------|
| 1 | IEC-04 | IEC Van | 3 |
| 2 | IEC-05 | IEC equipment | 3 |

Planned Equipment for RHU

| No. | Code No. | Name of Equipment | Sub-Total |
|-----|----------|---|-----------|
| 1 | MED-01 | Weighing Scale (Adult) | 1 |
| 2 | MED-02-1 | Weighing Scale (Pediatric/Hanging type) | 1 |
| 3 | MED-02-2 | Weighing Scale (Pediatric/Table top type) | 1 |
| 4 | MED-03 | Sphygmomanometer (Table type) | 2 |
| 5 | MED-06 | Stethoscope | 2 |
| 6 | MED-08-1 | Examining Table (General type) | 1 |
| 7 | MED-08-2 | Examining Table (OB&GY type) | 1 |
| 8 | MED-09 | Vaginal Speculum (for Virginal) | 1 |
| 9 | MED-10 | Vaginal speculum (medium) | 1 |
| 10 | MED-11 | Universal diagnostic set | 1 |
| 11 | MED-12 | Hysterometer | 1 |
| 12 | MED-13 | Hemometer | 1 |
| 13 | MED-14 | Doppler Apparatus | 1 |
| 14 | MED-17 | Examination lamp | 2 |
| 15 | MED-18 | Suction Unit | 1 |
| 16 | MED-19 | Dental Chair | 1 |
| 17 | MED-20 | Nebulizer | 1 |
| 18 | MED-21 | Ambubag (Adult) | 1 |
| 19 | MED-22 | Ambubag (Pediatric) | 1 |
| 20 | MED-23 | Tenaculum | 1 |
| 21 | MED-24 | Uterine Forceps | 1 |
| 22 | MED-25 | Ovum Forceps | 1 |
| 23 | MED-26 | Scissors | 1 |
| 24 | MED-27 | Kelly Pad | 1 |
| 25 | MED-29 | Oxygen Gauge | 1 |
| 26 | MED-30 | Oxygen Tank with carriage | 2 |
| 27 | MED-31 | Instrument Sterilizer | 1 |
| 28 | MED-32 | Boiling Sterilizer | 1 |
| 29 | MED-33 | Instrument pushcart/trolley | 1 |
| 30 | MED-34 | Refrigerator | 1 |
| 31 | MED-38 | Home delivery kit | 1 |
| 32 | MED-44 | Instrument set for Examination Room | 1 |
| 33 | MED-45 | Instrument Cabinet | 1 |
| 34 | MED-46 | Minor surgical instrument set | 1 |
| 35 | MED-50 | Patient Chair | 1 |
| 36 | MED-56 | Microscope | 1 |
| 37 | OFC-01 | Typewriter | 1 |
| 38 | OFC-02 | Filing Cabinet | 1 |
| 39 | IEC-01 | Megaphone | 1 |
| 40 | IEC-02 | JFPA Magnet display | 1 |
| 42 | IEC-10 | White Board | 1 |
| 43 | IEC-11 | VTR & Monitor set | 1 |



Furnitures described in Italics are BUILDING WORK



PLAN

Furnitures described in Italics are BUILDING WORK

Planned Equipment for BHS

| No. | Code No. | Name of Equipment | Sub-Total |
|-----|----------|---|-----------|
| 1 | MED-01 | Weighing Scale (Adult) | 1 |
| 2 | MED-02-1 | Weighing Scale (Pediatric/Hanging type) | 1 |
| 3 | MED-02-2 | Weighing Scale (Pediatric/Table top type) | 1 |
| 4 | MED-03 | Sphygmomanometer (Table type) | 1 |
| 5 | MED-06 | Stethoscope | 1 |
| 6 | MED-08-1 | Examining Table (General type) | 1 |
| 7 | MED-09 | Vaginal Speculum (for Virginal) | 1 |
| 8 | MED-10 | Vaginal speculum (medium) | 1 |
| 9 | MED-11 | Universal diagnostic set | 1 |
| 10 | MED-12 | Hysterometer | 1 |
| 11 | MED-13 | Hemometer | 1 |
| 12 | MED-17 | Examination lamp | 1 |
| 13 | MED-23 | Tenaculum | 1 |
| 14 | MED-24 | Uterine Forceps | 1 |
| 15 | MED-25 | Ovum Forceps | 1 |
| 16 | MED-26 | Scissors | 1 |
| 17 | MED-27 | Kelly Pad | 1 |
| 18 | MED-31 | Instrument Sterilizer | 1 |
| 19 | MED-33 | Instrument pushcart/trolley | 1 |
| 20 | MED-38 | Home delivery kit | 1 |
| 21 | MED-44 | Instrument set for Examination Room | 1 |
| 22 | MED-50 | Patient Chair | 1 |
| 23 | OFC-02 | Filing Cabinet | 1 |
| 24 | IEC-01 | Megaphone | 1 |
| 25 | IEC-02 | JFPA Magnet display | 1 |

CHAPTER 3 IMPLEMENTATION PLAN

CHAPTER 3 IMPLEMENTATION PLAN

3-1 Implementation Plan

3-1-1 Basic Concept

The Project will be implemented in accordance with the framework of the grant aid scheme of the Government of Japan after the conclusion of the Exchange of Notes (E/N) by both Governments of Japan and the Philippines following a cabinet decision on the implementation of the Project by the Government of Japan. The Government of the Philippines will then select a Japanese consultant firm as the Consultant for the Project to proceed with the detailed design work on the facilities and equipment. Following finalization of the detailed design documents, a Japanese construction company and a Japanese equipment supplier, selected on a tender basis and acting as the Contractor and Equipment Supplier respectively for the Project, will conduct the construction work and the equipment procurement and installation. All of the consultancy, construction and equipment procurement / installation agreements will become valid once they have been certified by the Government of Japan.

The work management system will be established by the Project Implementation Body, the Consultant, the Contractor and the Equipment Supplier under the control of the related organizations of the two governments involved. The basic issues and points to note for the implementation of the Project are described below.

(1) Project Implementation Body

The Office for the Public Health Services, Department of Health (DOH) will be the Philippines side agency overseeing the implementation of the Project and will act as the Philippines side party to the official agreements. The Regional Health Office-3 (RHO-3) of DOH will act as the front office for project implementation and will be responsible for general coordination during the project implementation period. And each Provincial Governments and Municipalities will be the actual project implementation units and its Engineers Office will be in charge of technical issues.

In view of the above division of work, the establishment of the Project Implementation Committee is desirable to act as the project implementation body on the Philippines side to manage all processes from the detailed design to the handing-over of the various facilities and equipment. The members of this Committee should preferably include representatives of the Office of the Public Health Services / DOH, Regional Health Office-3, each Provincial Health Office (PHO), the National Economic Development Agency (NEDA), the JICA Philippines Office.

(2) Consultant

Following the signing of the above-mentioned E/N, the Government of the Philippines will conclude a consultancy agreement on the detailed design for the Project with a Japanese consultant firm and this agreement must be certified by the Government of Japan. For the smooth progress of the detailed design stage, the prompt conclusion of the consultant agreement after the signing of the E/N is crucial.

After certification of the agreement, the Consultant will prepare the detailed design documents based on the present basic design study report through consultations with the DOH/RHO-3 and will have the documents approved by the Government of the Philippines.

At the tender and construction stages, the Consultant will conduct the tender and work supervision based on the detailed design documents/drawings. The Consultant will also supervise the equipment-related work, ranging from the tender for equipment to installation, test operation and final handing-over.

(3) Contractor

The Contractor will be selected from among Japanese construction companies which satisfy certain qualifications, will construct the planned facilities within the contracted period in accordance with the detailed design documents prepared by the Consultant and will hand them over to the Philippines side.

The main components of the construction work will comprise building construction, water supply and sanitation, air-conditioning & ventilation, electrical installation and external work, all of which will be conducted by the Contractor using subcontractors, engineers and workers from the Philippines and/or Japan.

(4) Equipment Supplier

The equipment supplier will be selected from among Japanese trading companies which satisfy certain qualifications and will procure and install the equipment which will meet the specifications set forth by the Consultant and approved by the project implementation body within the contracted period. At the installation stage, the Equipment Supplier will dispatch engineers specializing in the procured equipment to the Philippines to supervise the work and to also explain how to operate the equipment to the Philippines side.

3-1-2 Implementation Conditions

(1) Local Construction Industry

The general conditions of the local construction industry in the Central Luzon are described below.

- Many large-scale public works are conducted by foreign-affiliated local construction companies mainly within the Metro Manila. As local construction companies are not general contractors and their work scale / annual turnover is fairly small.
- Carpentry, plastering, reinforcing and finishing, etc. are established as special trades (vocations). But, laborers are often temporary workers and tend to lack specialist knowledge. As a result, manpower of 2.5 - 3 times the case in Japan is required on average.
- As there are not many ready-made industrial products, materials are often processed to the required specifications on the construction site.
- There are many price fluctuations. In the case of such key materials as concrete and reinforcing bars for example, the price has risen by 6 - 11% in the last 12 months. Especially after economy crisis, labor cost has also risen by some 15% (on a local currency basis).

(2) Important Points for Project Implementation

- The rainy season in the Philippines continues from May to November. During this period, some roads often become submerged as a result of localized torrential downpours. Accordingly, a sufficient curing period must be allowed for foundation and concrete work during the rainy period..
- The planned facilities are single-story reinforced concrete building and foreign-affiliated local construction companies have sufficient technical ability to construct such a building. Meanwhile, local laborers are often temporarily employed and do not have special skills. The construction schedule must, therefore, be carefully planned to avoid any unnecessary repetition or waiting.
- A stable supply of crushed stone and sand for concrete will be essential for the successful management of the work schedule. As river sand frequently containing mud or organic matters is commonly used near major river or coast side in Central Luzon, strict quality control will be required at the concrete plant on the construction site.
- As the Project intends the extension and renovation of existing health facilities, protection and safety measures to ensure the patients/users of the existing facilities will be required for the planning of temporary structures.
- As the Project expand 83 facilities within 6 provinces in Central Luzon, the procurement and logistic of materials will be carefully planned. Also, construction period is tight if consider with number of facilities, but the size of each facility is fairly small. Therefor, well organized Construction area as divided three are adequate for supervise of the construction works.
- Local materials should be used where possible. In addition, materials and finishing should be selected which are easy to maintain.

(3) Work Supervisors

For the punctual completion of the facilities meeting the specifications set forth in the detailed drawings / documents within the planned construction period, the Japanese Contractor must be capable of smoothly conducting the joint work with local construction companies while providing appropriate technical guidance and implementing strict schedule control. It is, therefore, desirable that the Contractor appoints work supervisors conversant with the local conditions to achieve high quality facilities based on a precise understanding of the nature of the planned facilities.

Given the contents and scale of the facilities planned under the Project, the following full-time work supervisors will be required.

< Building Work >

- ◆ Chief supervisor: 1 person
General management, total coordination, others.
- ◆ Building Engineer: 2 person
Guidance on construction works, schedules control, guidance on working drawing preparation, etc.
- ◆ Services Engineer: 3 person
Water/electrical equipment installation and test operation, technical guidance, schedule control, others.
- ◆ Administrator: 1 person
Administrative work, labor control, import procedure, others.

< Equipment Work >

As required: installation and test operation of equipment, technical guidance and instructions on operation manuals.

3-1.3 Scope of Works

The following scope of works between the two governments for implementation of the Project appears reasonable.

(1) Works to be undertaken by Government of Japan

1) Facilities

a) MCHC (Maternal and Child Health Center)

- ◆ Out-Patient Units: Obstetric Clinic, Internal Exam, Counseling room, Pediatrics Clinic, Under Five Clinic, Sterilization room, PHO Office, Reception/Record Room, others.
- ◆ Training Units: Seminar room, Preparation/Store, IEC room, others.
- ◆ Common Facilities: Lobby, Kitchen, Comfort room, others.

b) RHU (Rural Health Unit)

- ◆ Out-Patient Units: Nurse/Midwife room, Internal Exam/Counseling room, Doctors Office (MHO), Dental Clinic, Med. Laboratory, Sanitary Inspectors room, others.
- ◆ Common Facilities: Waiting Space, Meeting Space, Kitchen, Comfort room, others.

c) BHS (Barangay Health Station)

- ◆ Clinical rooms: Midwife Space, Exam Space, Internal Exam / Counseling room, others.
- ◆ Common Facilities: Waiting Space, Outside Terrace, Kitchen, Comfort room, others.

2) Equipment

- a) MCHC equipment: weighing scale, sphygmomanometer, stethoscope, examining table, hemometer, doppler apparatus, ECG portable, nebulizer, ambubag, minor surgical instrument set, ultra-sound scanner, typewrite, etc.

- b) RHU equipment: weighing scale, sphygmomanometer, stethoscope, examining table, hemometer, doppler apparatus, dental chair, nebulizer, forceps, ambubag, minor surgical instrument set, microscope, VTR monitor set, etc.
- c) BHS equipment : weighing scale, sphygmomanometer, stethoscope, examining table, hemometer, forceps, instrument set for examination, etc.
- d) RHO equipment: IEC Van, IEC equipment.

(2) Works to be undertaken by Government of the Philippines

- 1) To procure the site for construction before commencement of the work.
- 2) To demolish and removal of existing buildings/structures and obstacles.
- 3) To supply electric power, water, and drainage facilities, etc. to the construction site.
- 4) To provide general office furniture and appliances.
- 5) To supply consumable and spare parts required for planned activities.
- 6) Banking arrangements and payment of banking commission.
- 7) Swift arrangement of landing, tax exemption facilities, customs clearance and inland transportation of imported equipment, etc.

3-1-4 Consultant Supervision

In accordance with the policy on Grant Aid laid down by the Government of Japan, an appointed Consultant will organize a project implementation team to carry out detailed design and supervising services that are in line with the basic design policies. This will ensure appropriate coordination among concerned parties and the smooth construction of the Project facilities.

At the construction stage, the Consultant will dispatch a resident supervisor with ample technical capabilities to issue instructions to contractors and to communicate with them. Also, the Consultant will assign technical experts in each construction stage on a short-term basis in accordance with the progress of the work, in order to carry out inspection, attendance and guidance on execution.

(1) Basic Policies of Supervision

Punctual completion of the facilities based on the construction schedule will be aimed at through close communication with and reporting to the related organizations and those in charge in Japan and the Philippines.

- ◆ Prompt and appropriate guidance and advice will be provided for those involved in the work to ensure that the constructed facilities meet the specifications set forth by the design documents.
- ◆ Priority will be given to the use of local construction methods using local materials as much as possible.
- ◆ Aim to control uniform qualities at all construction site.
- ◆ Appropriate guidance and advice will be provided in regard to post-handing-over maintenance and economical operation to facilitate the smooth operation of the facilities.

(2) Contents of Work Supervision

- ◆ Assistance to conclude the construction agreement:
Selection of the Contractor (determination of the contracting method, preparation of the draft agreement, confirmation of the contents of the specifications and witnessing of the work agreement, etc.).
- ◆ Inspection and approval of shop drawings, etc.:
Inspection and approval of the shop drawings, samples and materials, etc. submitted by the Contractor and their checking if necessary.
- ◆ Work guidance:
Examination of the schedule plan and work outline, etc., provision of guidance for the Contractor and reporting of the work progress to the Owner.
- ◆ Assistance in the payment authorization procedure:
Assistance in the payment authorization procedure through examination of the contents of invoices and the work progress in regard to the construction cost to be paid during the construction work and upon completion of the said work.
- ◆ Inspection and approval:
According to necessity, to conduct inspections on each work area and provide guidance to the contractor during the construction period.

The Consultant shall confirm the completion of the work in accordance with the conditions of the contract, attend the handing over of the completed work, and obtain acceptance from the owner. Also, it shall report to the Government of Japan any important matters related to the progress of the construction work, payment procedures and handing over of the completed work.

The construction supervision system and related agencies described above are shown in the following diagram.

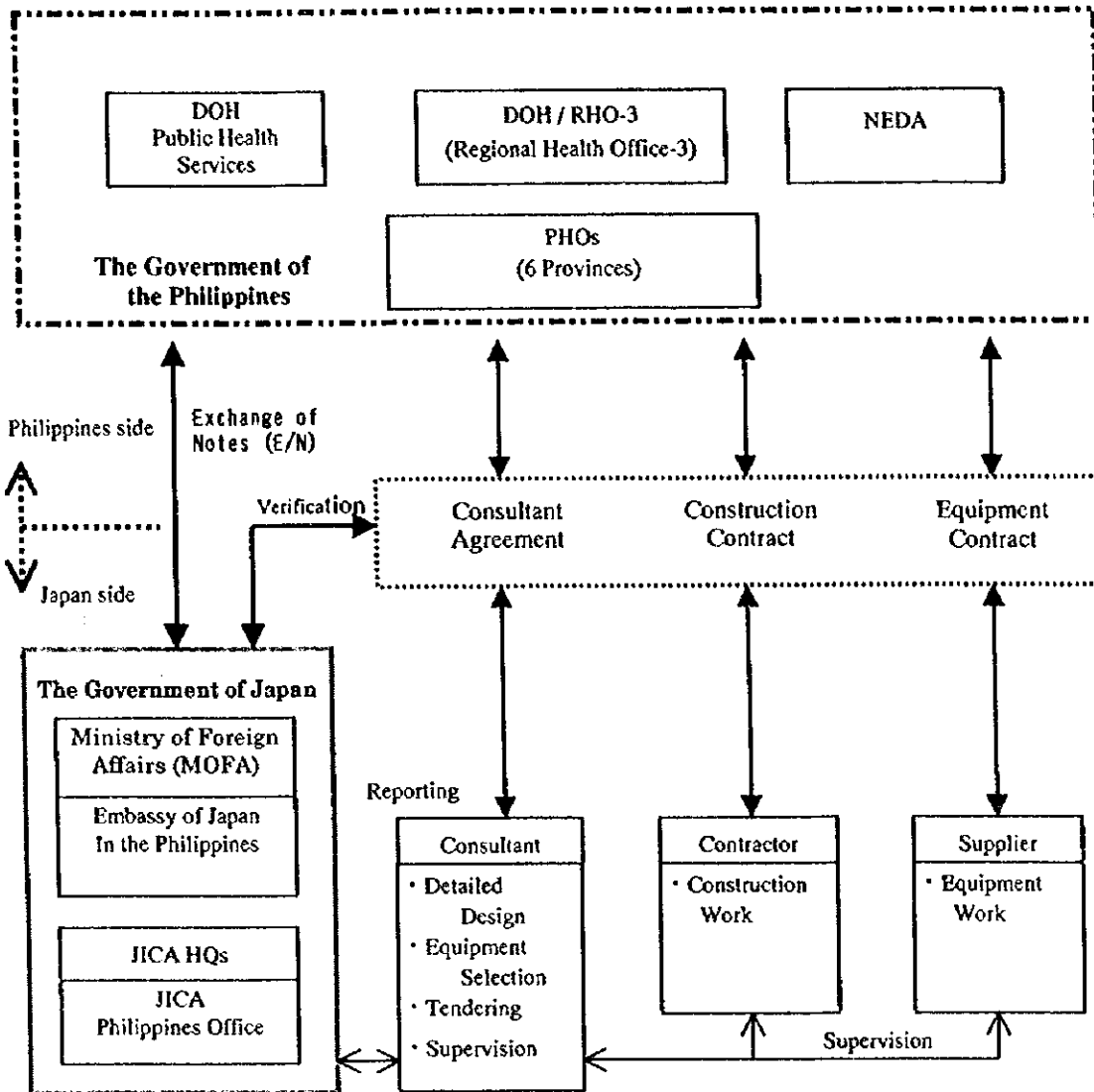


Figure-7 Construction Supervision Plan

3-1-5 Procurement Plan

The following items should be taken to consideration when procuring construction materials and equipment to be used in construction of the Project facilities.

(1) Procurement Policy

Most of the construction materials can be procured locally. Hence, the procurement policy is to procure materials in a reasonable manner by considering supply capabilities and quality vis-à-vis local manufacturers and supplies.

Materials to be procured from Japan should be kept to minimum, and should be restricted to items which cannot be procured locally due to special specifications, poor performance or simply an insufficient local supply capacity.

(2) Procurement in Japan

In the case of equipment and materials of which local procurement is difficult, their procurement in Japan will be considered. In the case of building service equipment and electrical equipment which will require special ordering, timely orders in accordance with the work progress will be required as a long time is required to complete the process from initial order placement to design approval, manufacture and shipment from the manufacturer.

(3) Local Procurement

Since almost all the construction materials can be locally procured, the facilities can be maintained without any particular difficulties and, even if equipment and materials suffer damage, they can be easily repaired. However, sufficient consideration should be given to ensuring uniform quality and supply volumes of materials so that they do not hinder the functions of the buildings and the construction process.

(4) Cost

Upon comparing materials that can be procured both locally and in Japan, those with lower costs will be employed. Procurement from Japan requires additional packing, transportation and insurance expenses on top of the market prices, but import duties are exempt.

(5) Procurement Schedule

Based on the above-mentioned factors, materials and equipment to be used in construction of the Project facilities will be procured in the manner described below.

1) Construction of Building Frames

Almost all the materials required in the construction of building frames, namely sand, gravel, cement, concrete, reinforcing bars, steel frames, and concrete blocks are locally available in the Philippines. However, proper care should be taken with regard to the procurement of reinforcing bars and cement because such items can sometimes be difficult to obtain as a result of the boom in the construction sector.

2) Interior and Exterior Finishing Work and External Work

Almost all the materials required in the buildings, namely timber, aluminum fittings, plastering materials, tiles, roof tiles, metal roofing materials, paints, and glass are locally available in the Philippines (some of these materials are imported). However, aluminum coping, waterproofed materials and other special items, as well as hardware and metal fittings for moving partitions, etc. (due to maintainability) are to be procured in Japan.

3) Air-conditioning and Sanitary Work

Regarding the air-conditioning and sanitary work, as the quality level of local materials (mainly imported or locally knock-down items) has improved in recent years, priority shall be given to local procurement as much as possible.

Apparatus (such as valves and dampers) to be used in this work are to be procured in Japan, but sanitary ware shall be procured in the Philippines. Air conditioners, fans and other instruments are also to be procured in locally.

4) Electrical work

Electrical work materials such as illumination lamps, power transformers, electric wires and cables, and PVC pipes are to be procured locally (including imports from third country). Lighting fixtures, power distribution boards, low-voltage electrical apparatus, etc., for which ready-made items are suitable, are to be procured locally as far as possible, after first comparing costs.

5) Equipment Work

The equipment and instruments to be installed in the Project facilities shall basically be procured in the Philippines to make maintenance easy. However, electronic equipment may need to be procured in Japan, in which case due care shall be taken with regard to marine and inland transportation. For some advanced instruments, it may be necessary to consider training of the Philippine staff members to accustom them to operation methods, to ensure that the instruments are utilized efficiently after installation.

6) Transportation Plan

In principle, maritime transportation will be used for the transportation of equipment and materials from Japan to Manila port. This Maritime transportation usually takes 5 days and custom clearance at port Manila takes usually 3 to 7 days although the actual time depends on the balk of containers. The Government of the Philippines currently considering a review of tax exemption measures as part of its overall taxation reform. There is a possibility that the customs clearance procedure may become more complicated and time-consuming. The Contractor and Equipment Supplier must ensure that all the required documents for customs clearance are in order. Meanwhile the Philippine side Department of Health should provide the necessary measures to ensure the prompt customs clearance of the materials and equipment imported to the Philippines.

Estimating 10 days for ex-factory to loading in Japan, there should need one month time by maritime and inland transportation to the site.

Table 3-1-1 Study of Major Construction Materials and Procurement Plan

(1) Building Materials

| Works | Materials | Place of Procurement | | | Remarks |
|------------------|---------------------------|----------------------|-------|--------|--|
| | | Local | Japan | Others | |
| Concrete work | Portland Cement | ○ | | | Supply becomes scarce in the dry season, and the price to rise. Deformed bars are also available. Veneer imports are prohibited. |
| | Sand/Crushed Stone | ○ | | | |
| | Reinforcement bars | ○ | | | |
| | Wooden forms | ○ | | | |
| Steel work | Formed Steel | ○ | ○ | | Time is required for manufacture. Ditto |
| | Sheet Metal | ○ | ○ | | |
| Masonry work | Concrete block | ○ | | | 150mm, 100mm are commonly used. |
| Water-proof Work | Asphalt W/Proofing | ○ | | | Commonly used. Ditto |
| | Cement W/Proofing | ○ | | | |
| Tile work | Ceramic tile | ○ | | | Many kinds are available. Ditto |
| | Semi-Porcelain tile | ○ | | | |
| Wooden work | Wood | ○ | | | Widely used. Veneer/Plywood imports are banned. |
| | Plywood | ○ | | | |
| Roof work | Color metal sheet | ○ | | | Widely used. Highly weatherproofed. |
| | Galva-rium sheet | ○ | ○ | | |
| Metal work | Light steel ceiling frame | ○ | | | Delivery time is unstable. Widely used. |
| | Aluminum Louvers | ○ | | | |
| Plaster work | Terrazzo in situ | ○ | | | Many kinds are widely used. Local stones are widely used. |
| | Stone | ○ | | | |
| Metal Sash Work | Alum window frame | ○ | | ○ | Low cost country shall be selected. Widely used locally. Poor skill for spot-welding. |
| | Alum louver window | ○ | | | |
| | Steel door | ○ | | ○ | |
| Wooden Sash Work | Wooden door | ○ | | | Widely used in local. Ditto, but need ant-proof solution. |
| | Wooden door frame | ○ | | | |
| Ironmongery | Door handle, lock | ○ | ○ | | Poor quality of local materials. Ditto |
| | Door closer | ○ | ○ | | |
| Grass work | Plane grass | ○ | | | Widely used in local. Ditto |
| | Pane grass | ○ | | | |
| Paint work | Interior paint | ○ | | | Widely used. Ditto, but poor weatherproofing. |
| | Exterior paint | ○ | | | |
| Interior work | Gypsum board | ○ | | ○ | Plaster board is used locally. Widely used in local. Use wooden-fiber cement board. |
| | Rockwool Acc. Board | ○ | | | |
| | Form Polystyrene | ○ | | | |
| Furniture work | Labo/Kitchen sink | ○ | | | Small qualities are available in local. Widely used. Widely used. |
| | Table/Chairs(wooden) | ○ | | | |
| | Table/Chairs(steel) | ○ | | | |
| External work | Pavement block | ○ | | | Widely used. |

(2) Mechanical and Sanitary Work

| Works | Materials/Equipment | Place of Procurement | | | Remarks |
|----------------|---------------------|----------------------|-------|--------|---|
| | | Local | Japan | Others | |
| A/C & Fan work | Separate type A/C | ○ | | | Knockdown units are available. Locally available. Ditto |
| | Exhaust Fan | ○ | | | |
| | Insulation Material | ○ | | | |
| Sanitary work | Pump & Tank | ○ | | | Locally available. Ditto Ditto Ditto |
| | Sanitary Ware | ○ | | | |
| | Pipe (PVC) | ○ | ○ | | |
| | Pipe (Steel) | ○ | ○ | | |

(3) Electric Equipment Work

| Works | Materials/Equipment | Place of Procurement | | | Remarks |
|-------------------------|---------------------|----------------------|-------|--------|---------------------------------|
| | | Local | Japan | Others | |
| Lighting & Cabling work | Lighting Fixtures | ○ | | ○ | Locally available. |
| | Panel | ○ | | ○ | Ditto |
| | Wire/Cables | ○ | | ○ | Ditto |
| Equipment work | Telephone set | ○ | | ○ | Small quantities are available. |
| | Ceiling Fan | ○ | | | Widely available. |

3-1-6 Implementation Schedule

When the construction of the facilities is implemented under the Grant Aid System of the Government of Japan, the following procedures are to be taken:

- a) Signing of an Exchange of Notes (E/N) between the two countries,
- b) Selection of a Japanese design and supervision consulting company by the Government of the Philippines,
- c) Conclusion of a design supervision agreement between the Government of the Philippines and the consulting company,
- d) Three preparatory steps including preparation of documents for implementation, tendering, and conclusion of a construction contract with the successful tenderer,
- e) Construction of the facilities concerned.

After the E/N is signed, DOH will act as the implementation agency of the Philippine Government for Consultant Agreement, Construction Contract, Certificates for Payments, etc..

1) Detailed Design Stage

Tender documents will be prepared based on the basic design, and these will consist of detailed design drawings, specifications, estimations and budget statements, etc. Close discussions are held with related agencies of the Government of the Philippines in the initial, middle and final stages of the detailed design preparation stage. After the final results are approved by the agencies concerned, tendering procedures will be undertaken.

3-1-7 Obligations of Recipient Country

(1) Items to be done by the Philippine side

In the case where the Project is implemented in accordance with the guidelines of Japan's Grant Aid System, the necessary measures to be taken by the Government of the Philippines / Local Government Units are as follows.

- 1) Provision and clearance of the project site prior to the commencement of the construction work.
- 2) Provision of sites for temporary buildings and material storage.
- 3) Connection of infrastructure such as electricity, water supply, telephone line access road and auxiliary external works including gate/fence, landscaping and outdoor lighting.
- 4) Procurement of common office furniture, fixtures and fittings.
- 5) Supply of expendables and spare parts required for facility and equipment maintenance.
- 6) Banking arrangement and payment of bank commission for Authorization to Pay.
- 7) Application for building approval and payment of various fees, if necessary.
- 8) Swift arrangement of landing, tax exemption facilities, customs clearance and inland transportation of the equipment and materials to be procured within the scope of the grant aid.
- 9) Exemption of Japanese companies and Japanese nationals involved in the Project from customs duty, domestic taxes and any other levies imposed in the Philippines
- 10) Provision of all conveniences for the Japanese nationals referred to in 9) above in relation to their entry to and stay in the Philippines to perform their assignments under the Project.
- 11) Appropriate and effective use and maintenance of the facilities constructed and equipment procured under the Project.
- 12) Smooth transfer of existing equipment, etc. and payment of all necessary costs following the renovation work.
- 13) Payment of all expenses required for the implementation of the Project which are not covered by the grant aid

(2) Cost estimates of Works to be done by the Philippine side

In addition to the items to be addressed by the Government of the Philippines in relation to the construction work under the Project, the related items during the construction works are listed as follows. While these items directly affect the commencement of the construction of the Project, timely arrangements are essential and effective for project implementation.

| | Pesos |
|---|-------------------------|
| 1) Land Reclamation work | <u>250,000-</u> |
| To cut and fill of soil, construction of access way, backfill of soil, so on. | |
| 2) Removal of Existing Structures | <u>2,491,000-</u> |
| To demolish of existing RHU/BHS, old structures, temporally huts, so on. | |
| 3) Water supply work | <u>485,000-</u> |
| To connect water pipe with existing water supply system, when available. | |
| 4) Electricity Supply work | <u>592,000-</u> |
| To connect electricity line from nearest supply main, when available. | |
| 5) Banking Commission | <u>303,000-</u> |
| Approximately 0.01% of E/N amount | |
| 6) Building permission / Registration Fee | <u>80,500-</u> |
| Approximately 10 peso/m ² × 8,000 m ² | |
| Total | Pesos 4,201,000- |

Construction related works by each Provinces are shown on next table, and detailed list has attached ANNEX.

Table 3-1-2 Estimated Costs by the Philippine Side (Peso)

| | Land Reclamation | Removal of Existing Structures | Water Supply Work | Electricity Supply Work | Provincial Total |
|-------------|------------------|--------------------------------|-------------------|-------------------------|------------------|
| Bataan | 110,880 | 512,560 | 74,030 | 66,045 | 763,515 |
| Bulacan | 4,620 | 837,885 | 43,745 | 39,915 | 926,165 |
| Nueva Ecija | 56,980 | 302,177 | 188,440 | 252,990 | 800,587 |
| Pampanga | 39,270 | 239,588 | 70,665 | 85,635 | 435,158 |
| Tarlac | 0 | 201,900 | 13,460 | 47,541 | 262,901 |
| Zambales | 38,500 | 397,753 | 94,220 | 99,795 | 630,258 |
| Sub-total | 250,250 | 2,491,863 | 484,560 | 591,921 | 3,818,584 |

3-2 Operation and Maintenance Plan

3-2-1 Facility Operation and Maintenance Plan

(1) Buildings

The main points in regard to building maintenance are daily cleaning, repairs of worn or damaged parts and security in order to ensure building safety and security. Daily cleaning will have a favorable effect on the attitude of those using the building and is also important to maintain the necessary level of cleanliness for the health facilities. It also leads to the early discovery of damage and equipment breakdowns and subsequent early repair, thus prolonging the life of building / equipment and medical equipment.

Repair work mainly consists of the repair or renewal of exterior and interior finishing materials, which protect the structure of building. Based on Japan's experience, it is believed that remodeling or partial rebuilding will be required every ten years due to changes in activities and/or staff increases. The regular inspections and repairs required to prolong the building life will be described in detail in the maintenance manual to be presented to the owner side at the time of handing over the building and are outlined below.

Table 3-2-1 Outline of Regular Building Inspections

| Exterior | |
|--|------------------------|
| - Repair or repainting of exterior finishes | every 5 years |
| - Inspection or repair of metal roof | Inspection: every year |
| - Periodical cleaning of downspouts and drains, etc. | Every month |
| - Inspection and repair of sealing of doors/windows | every 5 year |
| - Periodical inspection and cleaning of drainage | every year |
| Interior | |
| - Changes in interior finishes | as required |
| - Repair and repainting of interior walls | as required |
| - Repairing of ceiling | as required |
| - Retightening or changing of fittings | every year |

With regard to security work, access to the building must be checked and security measures must be taken to prevent the theft of any equipment.

(2) Service Equipment

Regular "preventive maintenance" is essential for building service equipment prior to reaching the stage of repairing breakdowns and replacing parts. While the life of building service equipment is determined by the length of operation, it can certainly be prolonged by proper operation and regular checks, oiling, adjustment, cleaning and repair, etc. Regular checks can prevent breakdowns and accidents and can also prevent the unnecessary extension of an accident.

During regular checks, expendable parts are replaced and overhauling and cleaning, etc. are conducted in accordance with the maintenance manuals, making it essential that the maintenance staff fully understand the designed systems and capacities, etc. to prevent any accident. Accordingly, it is necessary to appoint maintenance technicians for the electrical, air-conditioning, water supply and drainage and special equipment fields. Next Table shows the lives of the major building service equipment.

Table 3-2-2 Lives of Major Building Service Equipment

| Electrical Equipment | |
|----------------------------------|-----------------------|
| Generator | 15 to 20 years |
| Panel Boards | 20 to 30 years |
| Fluorescent Lamps | 5,000 to 10,000 hours |
| Incandescent Lamps | 1,000 to 1,500 hours |
| Plumbing Equipment | |
| Pumps | 10 to 15 years |
| Tanks | 15 to 20 years |
| Pipes and Valves | 10 to 15 years |
| Plumbing Fixtures | 20 years |
| Sewage Treatment Plant | 10 years |
| Air-conditioning and Ventilation | |
| Pipes | 10 to 15 years |
| Fans | 10 to 15 years |
| Air Conditioners | 10 years |
| Separate-Typed Air Conditioners | 5 to 10 years |

(3) Medical Equipment

1) Medical Equipment

The proper maintenance of Medical equipment is important to ensure safe and efficient activities at the planned facilities. Some of the equipment to be provided under the Project uses precision parts and/or electronic circuitry which are

vulnerable to changes of such ambient factors as temperature and humidity as well as vibration and shock.

In general, equipment maintenance mainly comprises daily checking by users, breakdown checking by expert engineers and regular checking which is conducted once or twice a year. Regular checking and the detection of problematic areas requiring repair are not assigned to the maintenance staff. As there are few local agents at present, much relies upon the follow-up service provided by JICA. In order to improve the situation, it will be necessary to introduce measures designed to encourage manufacturers to appoint local agents so that the closer linkage between the User and local agents enhances the technical abilities of both parties. Table outlines the required maintenance for various kind of equipment.

Table 3-2-3 Outline of Required Equipment Maintenance

| | Self Check | Service Agent (recommended) |
|-------------------------|------------------------|--------------------------------|
| General equipment | 4 times / year | once / year |
| Analytical apparatus | inspection only, | twice / year |
| Optical apparatus | regularly twice / year | once / year |
| Sterilization apparatus | regularly twice / year | once / year |

2) Disposals and Consumables

It will be necessary for the disposals and consumables required by health facilities to be procured by the Local Government Units (LGUs). Systematic procurement and control will be essential for the proper use of these items in each health unit to ensure smooth activities. Unlike a hospital where reagents and consumables require regular restocking, the LGUs require reagents and consumables for each health facilities. This indicates the importance of a carefully planned procurement program so that wasteful reagents and consumables do not remain after the completion of a project.

3-2-2 Estimation of Operation and Maintenance Cost

The following sections describe trial calculations of the annual operating expenses and maintenance cost of Project facilities following commencement of operation.

(1) Facilities Operating Expenses

The operating expenses of Project facilities and equipment have been calculated in the following manner according to ① electricity charge, ② water supply charge, and ③ consumables for equipment.

Table 3-2-4 Trial Calculation of Facilities Operating Expenses (Peso/year)

| | MCHC(5Nos.) | RHU(18Nos.) | BHS(60Nos.) | Notes |
|-----------------------------|-------------|-------------|-------------|-----------------------------|
| ① Electricity | 72,600 | 20,820 | 2,300 | |
| ② Water | 7,920 | 5,280 | 1,320 | |
| ③ Consumables for Equipment | 1,900 | 1,800 | 250 | Gasoline, etc. (120,000) |
| Sub-total (1 facility) | 82,420 | 27,900 | 3,870 | |
| Total (all facilities) | 412,000 | 502,000 | 232,200 | |
| Ground Total | | | | 1,266,000 Peso |

The following table shows estimation of power and water charge.

Table 3-2-5 Estimation of Power and Water Consumption/ Charges (Peso/month)

| | Electricity Charge (P2.75/kWh) | | Water Charge (P5.50/m3) | | Total(month) |
|------|-----------------------------------|------------------------|----------------------------|------------------------|--------------|
| | Consumption (kWh) | Charge (Peso/month) | Consumption (m3) | Charge (Peso/month) | |
| MCHC | 2,200 | 1,894 | 120 | 660 | 6,710 Peso |
| RHU | 631 | 690 | 60 | 440 | 2,175 Peso |
| BHS | 70 | 192 | 20 | 110 | 302 Peso |

Note) The monthly charge for local water supply is set at roughly P 20-150.

The power charge has been calculated based on the quantity and usage of fixtures and equipment as shown in the following table. The monthly amounts used by power and water supply for equipment have been calculated as shown below.

Electricity consumption included 5 sets of Air-conditioning machine for MCHC, this estimated as future installation by the Philippine side.

Table 3-2-6 Estimation of the Power Charge

| | MCHC | | RHU | | BHS | |
|------------------------------|---------------------|-----------------|------------------|-----------------|------------------|-----------------|
| | Installed Number | Consumptn (kWh) | Installed Number | Consumptn (kWh) | Installed Number | Consumptn (kWh) |
| Lighting Fixtures | 32 | 115 | 11 | 40 | 4 | 14 |
| Socket Outlets | 16 | 102 | 11 | 70 | 2 | 12 |
| Air Conditioner | (OP 5) Seminar 2 | 1,728 268 | (Doctor 1) | 336 | — | — |
| Fans | 7 | 156 | 2 | 89 | — | — |
| Equipment (Sterilizer, etc.) | — | 48 | — | 96 | — | 44 |
| Sub-Total | | 2,200 kWh | | 631 kWh | | 70 kWh |

Note) Air conditioner operating days shall be 20 days per month and 10 days per month (training rooms).

The expendable items required for equipment to be provided by the Project are generally as indicated below.

Table 3-2-7 Annual Usage of Expendable Items (Peso/year)

| Equipment Name | Consumables | MCHC | RHU | BHS | RHO |
|----------------|--------------------------|------|------|-----|--------------|
| Hemometer | Dilute Hydrochloric acid | 600 | 300 | 150 | — |
| Typewriter | Carbon Paper | 300 | 300 | 100 | — |
| Microscope | Slide Glass | — | 700 | — | — |
| Oxygen Gauge | Oxygen Gas | 1000 | 500 | — | — |
| IEC Van | Gasoline, etc. | — | — | — | 120,000 |
| Sub-total | | 1900 | 1800 | 250 | 120,000 |
| Grand Total | | | | | 123,950 Peso |

(2) Facilities and Equipment Maintenance Cost

Based on the aforementioned maintenance plan, expenses presumed to be necessary over the long term have been calculated on an annual average basis. The facilities and equipment are composed of simple structures and functions, and the annual maintenance cost per unit of floor area has been set as approximately P 50. Since much of the equipment consists of apparatus and examining tables, the annual maintenance cost has been set as roughly 0.02% of the equipment price.

Since these figures are annual averages, they are cumulative and will arise from 2000, when the facilities are due to commence service. The following table shows the calculated cost.

Table 3-2-8 Facilities and Equipment Maintenance Cost (Year)

| | MCHC(5Nos.) | RHU(18Nos.) | BHS(60Nos.) |
|-----------------------------------|-------------|-------------|--------------|
| Facility (50peso/m ²) | 20,000 | 6,500 | 3,000 |
| Equipment (0.02%) | 7,900 | 2,800 | 800 |
| Sub-total (1 facility) | 27,900 | 9,300 | 3,800 |
| Total (all facility) | 139,500 | 167,400 | 228,000 |
| Grand Total | | | 534,900 Peso |

(3) Operating Expenses and Maintenance Cost Burden

Since responsibility for management of the Project facilities lies with each local municipal government, the operating expenses and maintenance cost for each facility have been calculated. The annual cost burden for each type of facility will be P 110,000 for each MCHC, P 37,000 for each RHU, and P 8,000 for each BHS. These are new costs brought about by implementation of the Project and are added to the existing personnel expenses, medical supplies and expendable items costs, etc.

Table 3-2-9 Operation and Maintenance Cost Burden (Peso)

| | MCHC(5Nos.) | RHU(18Nos.) | BHS(60Nos.) |
|------------------------|-------------|-------------|----------------|
| Operation Cost | 82,420 | 27,900 | 3,870 |
| Maintenance Cost | 27,900 | 9,300 | 3,800 |
| Sub-total(1 facility) | 110,325 | 37,218 | 7,730 |
| Total (all facilities) | 551,625 | 669,924 | 463,800 |
| Grand Total | | | Peso 1,685,349 |

Since the MCHCs will be additional facilities to provincial hospitals, the above figures shall be examined from the viewpoint of the annual expenditure of each provincial hospital as indicated in the following table. The annual operation and maintenance cost of each MCHC (P 110,325) accounts for 0.65% of the annual expenditure of Nueva Ecija provincial hospital in 1996. If the additional expenditure is around this much, it is considered that each provincial hospital can handle the additional burden.

Table 3-2-10 Expenditure of Each Provincial Hospital (Peso/year)

| | 1996 | 1997 | 1998年(Est.) |
|----------------|------------|------------|-------------|
| Nueva Ecija PH | 16,907,583 | 23,133,196 | 20,394,142 |
| Pampanga PH | 18,473,023 | 24,054,737 | 27,074,239 |
| Tarlac PH | 34,179,842 | 43,758,966 | 49,464,739 |

Source: Survey form responses

The operation and maintenance costs of RHUs and BHSs will be covered by each municipal budget, however, the amount provided will be influenced by the scale of each municipality's finances and the ratio of spending devoted to the health sector. The following table shows part of the survey form responses, but the total amount of spending on health ranges between P 1,500,000 and P 6,000,000. Of the said allocation, roughly 15% or P 300,000 is apportioned to operation and maintenance costs. Since the additional cost incurred by the Project is P 37,000 and P 7,700 in the case of one RHU and one BHS respectively, it is thought that these costs can be comfortably covered.

However, in some municipalities, the budget allocation for maintenance is not enough, accounting for just 5% of the total budget or P 46,000 for example. In such municipalities, it is necessary for the budget allocation to the health sector to be increased and the ratio of this health spending used on operation and maintenance to be raised to around 15% by 2000, when the Project will be implemented.

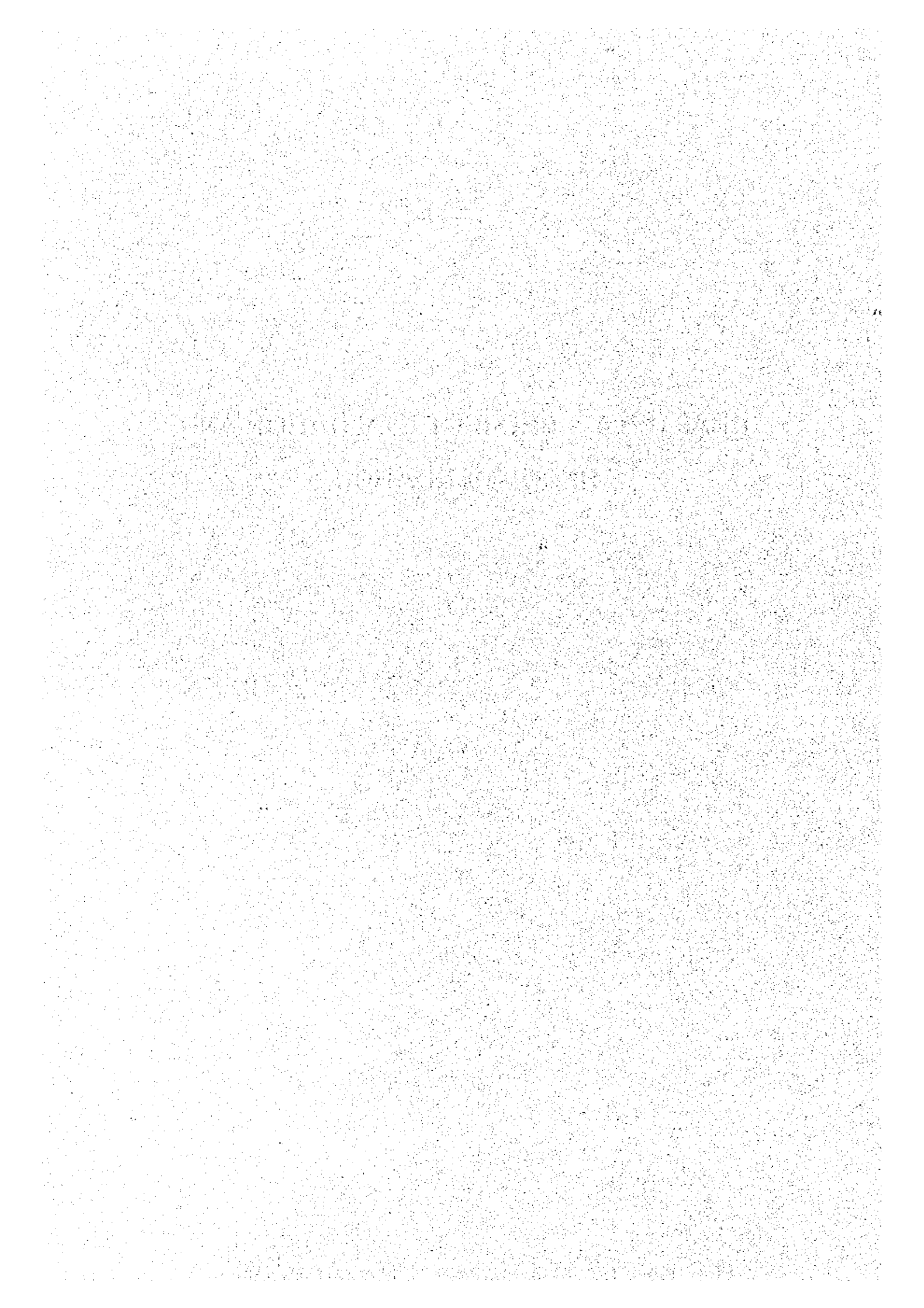
Table 3-2-11 Health Expenditures by Municipalities (1997 : Peso)

| Name of Municipality | | Personal Services (1) PS | | Maintenance, Operation and others. (2) MOOE | | Capital Outlay (3) CO | Total Health Expenditures (1)+(2)+(3) |
|----------------------|--------------------|--------------------------|-------|---|-------|-----------------------|---------------------------------------|
| BATAAN | | | | | | | |
| 1.2.2 | Bagac | 1,233,527 | 79.1% | 325,000 | 20.9% | 0 | 1,558,527 |
| 1.3.8 | Abucay | 2,057,866 | 94.9% | 65,000 | 3.0% | 45,000 | 2,167,866 |
| 1.3.9 | Balanga | 4,808,225 | 76.4% | 1,469,165 | 23.0% | 100,000 | 6,377,390 |
| BULACAN | | | | | | | |
| 2.2.1 | Obando | 1,590,893 | 84.3% | 296,000 | 15.7% | 0 | 1,886,893 |
| 2.3.3 | San Jose del Monte | 5,414,445 | 79.2% | 1,305,200 | 19.1% | 116,000 | 6,835,645 |
| 2.3.9 | Sta. Maria | 2,779,173 | 46.9% | 3,142,600 | 53.1% | 0 | 5,921,773 |
| NUEVA ECIJA | | | | | | | |
| 3.3.3 | Gen.M.Natividad | 860,871 | 94.4% | 46,000 | 5.0% | 5,000 | 911,871 |
| 3.3.4 | Cuyapo | 2,748,089 | 85.5% | 455,000 | 14.2% | 10,000 | 3,213,089 |
| 3.3.6 | Talugtug | 931,122 | 73.9% | 319,000 | 25.3% | 10,000 | 1,260,122 |
| PAMPANGA | | | | | | | |
| 4.2.1 | Arayat | 1,731,969 | 74.8% | 545,000 | 23.5% | 40,000 | 2,316,969 |
| 4.3.4 | Apali | 2,307,536 | 38.1% | 69,000 | 1.1% | 3,062,536 | 6,060,072 |
| 4.3.7 | Sasmuan | 1,271,230 | 68.8% | 555,600 | 30.0% | 20,400 | 1,847,230 |
| TARLAC | | | | | | | |
| 5.1.4 | Victoria II | 1,956,273 | 73.7% | 696,700 | 26.3% | 0 | 2,652,973 |
| 5.2.2 | Paniqui | 2,400,079 | 65.8% | 1,235,000 | 33.9% | 10,000 | 3,645,079 |
| 5.2.4 | Concepcion | 2,827,852 | 52.7% | 2,373,090 | 44.3% | 160,000 | 5,360,942 |
| ZAMBALES | | | | | | | |
| 6.2.3 | San Antonio | 1,713,068 | 86.0% | 280,000 | 14.0% | 0 | 1,993,068 |
| 6.3.5 | Masinloc | 2,163,100 | 65.4% | 1,146,200 | 34.6% | 0 | 3,309,300 |
| 6.3.9 | Cabangan | 1,054,487 | 53.1% | 912,074 | 45.9% | 20,000 | 1,986,561 |

Note: PS: Personal Services, MOOE: Maintenance and Other Operating Expenditures, CO: Capital Outlay.

Source: Survey forms responses

CHAPTER 4 PROJECT EVALUATION AND RECOMMENDATION



Chapter 4 Project Evaluation and Recommendation

4-1 Project Effect

4-1-1 Examination of Project Suitability

(1) Suitability with National Plans

Maternal and Child Health Care is clearly specified as a policy objective in the Medium-term Philippine Development Plan, the National Health Plan and the Public Investment Plan, etc., and improvement of preventive health services, health education, and promotion of local health services based on public participation are raised as improvement items. Accordingly, it can be said that the Project is compatible with superior plans and will contribute towards achievement of the goals contained in the national health development plan.

Moreover, Japan has made the Philippines a target for global issue initiative (GII) within the Japan-US Common Agenda. The Project, in tandem with the project technical cooperation (DOH/JICA FP/MCH Project Phase II) currently under implementation, will contribute towards development of a comprehensive approach to health including PHC and basic medical care for women and children (as a goal of the GII) and reproductive health.

(2) Operating Systems

Concerning the operating systems for the facilities planned for construction under the Project, no major additions or revisions are required. In other words, RHUs and BHSs will either be newly constructed or prepared by rehabilitating facilities that already exist within each municipality's health care system, and these facilities will be operable by existing health care staffs. Concerning the Maternal and Child Health Centers (MCHCs), too, since the outpatients departments of provincial hospitals will be transferred to these facilities, it will not be necessary to employ additional staff.

With respect to training departments, since offices in charge of MCH will be transferred within the existing operating systems of training at provincial health offices and provincial hospitals, there will again be no need to organize new operating setups.

(3) Budget of each LGUs

The facilities planned for construction under the Project involve rehabilitation and expansion work with the aim of raising the level of Health Services in the existing FP/MCH sector, and the Project basically aims to improve such services and expand access to services by enhancing the contents of existing activities. Accordingly, personnel costs will remain as they are and only minor increases in expenditure will be incurred.

The operation and maintenance costs of each type of facility were described earlier. It is estimated that operation and maintenance of each MCHC will be 110,000 Pesos per year, which accounts for merely 0.65% of the annual expenditure of Nueva Ecija Provincial Hospital and is thus judged to be easily affordable.

For each RHU and BHS, it is estimated that the annual operation and maintenance costs will be approximately 37,000 Pesos and 8,000 Pesos respectively. However, if around 15% of the annual health budget, i.e. approximately 300,000 Peso, is allocated to the maintenance and operating expenses of each municipality, it is again thought that these amounts can be comfortably afforded. But, there are some municipalities where only between 1-5% of the annual budget is devoted to operation and maintenance expenses. Mutual agreements have been obtained from these municipalities that the necessary budget will be found for operation and maintenance by 2000 when the Project facilities are to be completed.

(4) Examination of Social Needs

RHUs are the core facilities of public health and basic medical care on the LGU level and they are the only local health and medical care facilities that are permanently manned by physicians. BHSs, on the other hand, are closely involved in the daily lives of community peoples. RHM (the rural health midwives who work at these facilities) are responsible for providing not only MCH services but also Nutritional guidance and First Aid so on.

Since the RHUs and BHSs to be constructed under the Project are located in rural and remote sub-urban areas where there are few nearby private clinics and pharmacies, there is a strong needs among local inhabitants for the services that these facilities offer.

As was clearly appeared by analyzing the survey form findings, RHUs provide outpatient services consisting of prenatal and post-natal examinations, preventive

inoculations and infant examinations, etc. to between 30-50 people per day. As for BHSs, although activities vary depending on the facility, each BHS deals with around 10 outpatients per day, and RHMs do rounds of the Barangay in the afternoons to check on the health of pregnant women, children and villagers.

Concerning the MCH service acceptance at Provincial Hospitals, Nueva Ecija PH, which has around 100 beds, accepts 47 patients per day, and Bataan PH, which has around 200 beds, accepts 124 patients per day. These services will be transferred to the MCHCs planned for construction under the Project. Therefore, the social needs for MCHCs, RHUs and BHSs are deemed to be extremely high.

To sum up the results of the above examination, the Project is fit for implementation under the Grant Aid Scheme of the Government of Japan and it is deemed will have an important effect in tandem with existing project technical cooperation.

4-1-2 Effect of Project Implementaion

(1) Implementation Effect

It is anticipated that implementation of the Project will bring about the following direct and indirect effects.

1) Direct Effect

- ◆ Establishment of the MCHCs will enable a more comprehensive approach to be taken to FP/MCH services on the provincial level and will serve to demonstrate various activities to subordinate RHUs and BHSs.
- ◆ In the under-five infant clinics(U5 clinic) to be installed in each MCHC, it will be possible to conduct comprehensive preventive health activities via health diagnoses and growth monitoring of infants, and this will pave the way for dissemination of similar clinic activities to RHUs and BHSs.
- ◆ In the training rooms to be installed in each MCHC, it will be possible to effectively train and develop provincial FP/MCH staff in a proper training environment.

- ◆ Through the provision of vehicles for IEC activities, it will be possible to implement IEC activities to the remote Barangays that have so far been well received in Tarlac Province. This IEC activities will be expanded to the remaining five provinces of Region III.
- ◆ Construction of RHUs and installation of equipment at these facilities will enable effective FP/MCH services to be provided, and this will lead to the qualitative improvement of health services on the RHU level.
- ◆ Through construction of BHSs and installation of equipment at these facilities, it will be possible to establish and maintain centers of RHM activity within the Barangay, and this will give local inhabitants greater opportunity for access to FP/MCH services.

In this way, by providing facilities for the implementation of activities under project technical cooperation, it will be possible to realize the objectives of this cooperation, i.e. improvement of the health and nutrition of women and children in Region III.

2) Indirect Effect

- ◆ The implementation of training at MCHCs will raise the technical levels of health service staff. When this spreads throughout the provinces, it will become possible to provide higher quality services at each RHU and BHS. Moreover, this will encourage health education and participation within each community.
- ◆ Through the establishment of MCHCs, improvement of RHUs and BHSs and implementation of staff training, it can be expected to improve that the referral system for infants, high-risk expectant mothers and other patients.
- ◆ Since health staff who receive training will work at newly established health centers (RHUs / BHSs), they will be able to put the put outcomes of their training into practice and will have a better motivation (morale) to work.
- ◆ The rehabilitation of deteriorated RHUs and BHSs and qualitative improvement of services at these facilities will lead to more inhabitants in need of preventive help and treatment gaining access to these facilities.

It can be expected that these Project effects, in combination with the activities of ongoing technical cooperation(JICA FP/MCH Project phase-II), will lead to the

overall improvement of MCH services on the province-wide level. In order to ensure the achievement of this goal, it will be necessary for the Philippine side to conduct self-reliance such as; the continuation of staff training and education; implementation of regular monitoring and technical guidance; assignment of Dentist/Labo-technician to RHUs; assignment of RHMs to work in the remote Barangay; improving of logistics of samples / medical supplies; phased continuation or rehabilitation of other RHUs and BHSs, and so on.

(2) Benefiting Population

Since implementation of the Project will lead to the upgrading of FP/MCH services and improvement of the referral system within the target provinces, it is judged that all infants and women of productive age (15-49) who reside in Region III will benefit. From Table 4-1-1, which shows the benefiting population estimated from the total population and target population in each province, it can be seen that the overall benefiting population throughout Region III is estimated to be approximately 2,500,000 equivalent to approximately 38% of the total population.

Moreover, if the improvement of women's and children's health as a result of the provision of FP/MCH services leads to general health improvement in each home, it is thought that the total population of Region III (approximately 6,500,000) will eventually benefit from the Project.

Table 4-1-1 Target Population as a Ratio of Total Population in Each Province

| | Total Population a) | U5 Infants b) | Women of Productive Age * c) | Total Target population d)=b) + c) | Ratio of Total Population d)/a) |
|--------------|------------------------|------------------|---------------------------------|---------------------------------------|------------------------------------|
| Bataan | 504,870 | 76,639 | 116,574 | 193,214 | 38.3% |
| Bulacan | 1,927,366 | 268,868 | 411,685 | 680,553 | 35.3% |
| Nueva Ecija | 1,114,177 | 161,558 | 285,587 | 447,145 | 40.1% |
| Pampanga | 1,551,946 | 245,692 | 375,337 | 621,029 | 40.0% |
| Tarlac | 987,883 | 126,745 | 247,564 | 374,309 | 37.9% |
| Zambales | 396,933 | 51,443 | 108,482 | 159,925 | 40.3% |
| Total | 6,483,175 | 930,945 | 1,545,229 | 2,476,175 | 38.2% |

Note) * Women aged 15-49

Viewed in terms of the type of facility to be established under the Project, Table 4-1-2 shows the total target population, the number of U5 infants and women of productive age.

Activities at the RHUs and BHSs will center on the provision of FP/MCH services, but will also include general primary level examinations/treatment and first aid. Since facilities and equipment for implementing general examinations and treatment will also be provided under the Project, it is thought that the Project beneficiaries will not only be limited to infants and women but be extended to the general population of the Project catchment area.

In view of the above, it is estimated that the benefiting population of each type of Project facility will be approximately 450,000 at RHUs and 200,000 at BHSs, amounting to approximately 650,000 in total.

Table 4-1-2 Target Populations of RHUs and BHSs

| | Project RHUs | | | Project BHSs | | |
|--------------|------------------------|-----------------|---------------------------|------------------------|-----------------|---------------------------|
| | Target Area Population | Infants Under 5 | Women of Productive Age * | Target Area Population | Infants Under 5 | Women of Productive Age * |
| Bataan | 66,720 | 10,128 | 15,406 | 24,102 | 3,659 | 5,565 |
| Bulacan | 109,516 | 15,332 | 23,436 | 45,825 | 6,416 | 9,807 |
| Nueva Ecija | 70,045 | 10,157 | 17,932 | 24,616 | 3,569 | 6,302 |
| Pampanga | 89,592 | 14,156 | 21,681 | 59,769 | 9,444 | 14,464 |
| Tarlac | 61,237 | 7,838 | 15,370 | 21,514 | 2,754 | 5,400 |
| Zambales | 52,161 | 5,273 | 11,919 | 12,099 | 1,223 | 2,765 |
| Total | 449,271 | 62,884 | 105,744 | 187,925 | 27,064 | 44,302 |

Note) * Women aged 15-49

4-2 Recommendation

Implementation of the Project, in combination with the aforementioned JICA technical cooperation (FP/MCH Project-II), can be expected to bring about immense effects. In particular, the program of public participation-oriented MCH care is encouraged by the World Bank / WHO as a highly sustainable method of promoting preventive sanitation and PHC. Moreover, the Government of Japan appraises the Project as a GII matter under the Japan-US Common Agenda since it deals with the issues of population and health (population, AIDS and children's health) and women in developing countries (WID). The Project is deemed to be highly significant and, concerning operation and maintenance, too, the setup on the Philippine side is thought adequate in terms of personnel and funds.

Having said that, improvement and enhancement of the following issues is considered to be essential in ensuring the smooth and effective implementation of the Project.

(1) Monitoring and Evaluation

Regular monitoring and evaluation are required to ensure the effective utilization of the Project facilities and equipment. Provincial health offices will largely be responsible for monitoring of indicators showing the conditions of use of the facilities and equipment which are attached to the minutes signed and agreed at the time of the draft explanation. It is important that quantitative monitoring be continued via technical guidance under the JICA technical cooperation (FP/MCH Project-II).

In the workshop that was held at the time of the basic design study, it was agreed that continued monitoring and evaluation are important elements in implementation of the overall Project including the JICA technical cooperation, and these elements were added to the activity items of the PDM which formulated by the JICA technical cooperation.

Accordingly, in tandem with the health indicators adopted as improvement targets for the JICA technical cooperation, it is thought that monitoring of the conditions of use of the Project facilities and equipment and comparison with other RHUs and BHSs will prove useful for compiling appropriate activity plans in the future.

(2) Project Profitability

The Project intends to support the qualitative improvement of free public health services and expect an improvement of the health situations of infants and women as an indirect economic effect. Nevertheless, no-revenue will directly be generated by activities from the planned facilities. However, there is a limit to the degree with which all public health and medical care services can be supported by public funds, and the imposition of a reasonable burden on beneficiaries has become a worldwide trend in the field of medical care policy.

When one also considers that budgets of LGUs in the wake of decentralization are restricted, measures to partially cover operation and maintenance costs and secure expendable supplies should be examined.

Hospitals obtain some revenue from beneficiaries by imposing paying beds and applying health insurance, however, examination or treatment charges at the planned RHUs and BHSs are practically non-existent. Meanwhile, due to budget limitations within LGUs, there are shortages of expendable items, especially medical supplies. Since this perennial depletion of services adversely affects public confidence and thus

leads to reduced access to preventive services, it is necessary to devise measures to overcome this problem.

(3) Dissemination of Botika Binhi (Village Pharmacies and Insurance System)

Following the promotion of decentralization, the types and quantities of essential medical supplies provided by the central government have been drastically reduced and the level of confidence placed in Regional Medical Services has declined.

In the JICA technical cooperation (Phase I), a certain degree of success was achieved through promoting village pharmacies and health insurance (Botika Binhi) by public participation in Tarlac Province. As was mentioned previously, local inhabitants contribute between 5-20 pesos to a joint fund for purchasing medical supplies and operating village pharmacies. Moreover, minor revenue from these pharmacies is used to provide health insurance for participating families, and this system can be described as the Philippine version of the Bamako Initiative being encouraged by the WHO.

Facilities and equipment will be established and strengthened under the Project, however medical supplies shall be prepared by the Philippine side. Apart from permanent essential medical supplies for RHUs by the DOH or some amounts purchased by LGU, almost medicines and supplies will need to be purchased by patients from pharmacies. In the case of BHSs, medical supplies cannot be obtained locally and medicines are not normally administered.

Therefore, if the above-mentioned system (Botika Binhi) is spread to the other five provinces in Region III, local inhabitants will be able to obtain basic medical supplies at less than market price close to their local BHSs. In order for this to be realized, in addition to active peoples participation, it will be necessary for provincial health offices and municipal health offices to take an active approach.

(4) Administration Setup and Responsible Officials

The planned health facilities to be established under the Project will be administered by each municipal health office, while the maintenance and repair of facilities will be undertaken by Maintenance Unit of Municipal Offices. Moreover, since the objective of RHUs and BHS is to improve access to regional health services, it is planned for many of these facilities to be constructed in rural areas.

Accordingly, it is desirable for each municipality to strengthen a maintenance system

whereby a person is appointed to go round the RHUs and BHSs under his jurisdiction (generally four or five facilities) and carry out maintenance and simple repair work on facilities and equipment. Moreover, from the viewpoint of raising moral motivation to clean and keep facilities in good condition and preventing theft of equipment, it is necessary to clearly establish facilities managers.

Incidentally, the Maintenance Units of Municipalities are staffed by small numbers and it is thought that they have little experience in maintaining and repairing health facilities which require a high degree of cleanliness. Accordingly, it is desirable to see the establishment of Provincial Maintenance Systems whereby engineers of provincial health offices and hospitals tour local RHUs and BHSs and provide guidance on maintenance and repairs.

(5) Environmental Impact

It is judged that implementation of the Project will not generate any major changes in the natural environment and will thus have a minimal environmental impact. Moreover, since the activities envisaged in the Project are already being implemented, new or additional medical wastes will not be generated.

However, in the current situation, medical waste (specimens, syringe needles, biological wastes, etc.) is not collected for proper disposal but is treated individually at each health facility. Therefore, it is recommended that the provincial health offices draw up guidelines and advise and supervise each municipal health office in order to implement appropriate measures including retrieval and treatment of waste; disaffection, bury deeply, incineration, so on.

