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1. Member List of the Basic Study Team

1-1 Outline Design Study

From 31st May to 27th June, 2009 (28 days)

Position	Name	Period (2009)	Organization
1.Leader	Mr. Kenzo IWAKAMI	17/Jun.- 20/Jun.	Senior Representative Philippine Office, JICA
2.Technical Adviser	Dr. Shinsuke MIYANO	7/Jun.- 23/Jun.	Bureau of International Cooperation, International Medical Center of Japan, Ministry of Health, Labor and Welfare
3.Program Coordinator	Ms. Yutori SADAMOTO	14/Jun.- 23//Jun.	Assistant Director, Health System Div., Health Systems and Reproductive Health Group, Human Development Department, JICA
4.Project Manager/ Architectural Planning	Mr. Hozumi OGAWA	31/May- 27/Jun.	Azusa Sekkei Co., Ltd.
5.Health Planning/ Hospital Management	Mr. Kazumi AKITA	31/May- 27/Jun.	Azusa Sekkei Co., Ltd.
6.Architectural and Facilities Planning	Mr. Hideaki KANAYAMA	31/May- 27/Jun.	Azusa Sekkei Co., Ltd.
7.Equipment Planning	Mr. Yasumichi DOI	31/May- 27/Jun	INTEM Consulting, Inc.
8.Procurement/ Cost Estimation	Ms. Tomoko KORI	7/Jun.- 27/Jun.	INTEM Consulting, Inc.
9.Construction Planning and Cost Estimation	Mr. Yasuhiro MATSUMOTO	7/Jun.- 27/Jun.	Azusa Sekkei Co., Ltd.
10.Facilities Planning	Mr. Ryo TANADA	13/Jun.- 22/Jun.	Azusa Sekkei Co., Ltd.

1-2 Explanation of the Draft Report

From 10th to 26th Jan., 2010 (17 days)

Position	Name	Period (2010)	Organization
1.Leader	Mr. Kenzo IWAKAMI	19/Jan.- 21/Jan.	Senior Representative Philippine Office, JICA
2.Program Coordinator	Ms. Yutori SADAMOTO	16/Jan.- 22/Jan.	Assistant Director, Health System Div., Health Systems and Reproductive Health Group, Human Development Department, JICA
3.Project Manager/ Architectural Planning	Mr. Hozumi OGAWA	16/Jan.- 26/Jan.	Azusa Sekkei Co., Ltd.
4.Health Planning/ Hospital Management	Mr. Kazumi AKITA	10/Jan.- 20/Jan.	Azusa Sekkei Co., Ltd.
5.Equipment Planning	Mr. Yasumichi DOI	16/Jan.- 26/Jan	INTEM Consulting, Inc.

2. Study Schedule

2-1 Outline Design Study

From 31st May to 27th June, 2009 (28 days)

No.	Date	Time	Activity
01	31 May (Sun.)	09:30 3:05	Lv. Tokyo by JL-741 (Mr. Ogawa, Mr. Akita, Mr. Kanayama & Mr. Doi) Ar. Manila
02	1 Jun. (Mon.)	08:30 09:30 11:00 14:00 16:00	Courtesy call to JICA and submission and explanation of the inception report and questionnaire (Mr. Iwakami & Ms. Yamagishi) Courtesy call to the Embassy of Japan and explanation of the inception report and questionnaire (Ms. Ogawa, Secretary) Courtesy call to NEDA Courtesy call to DOH Courtesy call to UPM-SHA
03	2 Jun. (Tue.)	07:00 15:50	Lv. Manila to Baler (Mr. Ogawa, Mr. Akita, Mr. Kanayama & Mr. Doi) Ar. Baler & Courtesy call to PGA(Dr. Teh & Dr. Tomboc)
04	3 Jun. (Wed.)	08:30 13:00 14:00 15:00	Courtesy call to AMH and submission and explanation of the inception report and questionnaire (Dr. Teh, Dr. Tomboc & Dr. Mael) Survey of the project site Observation of AMH Meeting with AMH
05	4 Jun. (Thu.)	09:00 13:30 14:30 15:15	Meeting with AMH Observation of Maria Aurora Community Hospital Observation of UPM-SHS, Baler Meeting with AMH
06	5 Jun. (Fri.)	08:30 10:00 14:00 18:30	Courtesy call to Ms. Angara, Governor Meeting with AMH Meeting with AMH Dinner party hosted by Ms. Angara, Governor
07	6 Jun. (Sat.)	06:15 11:30 13:20 18:10	Lv. Baler to Casiguran Ar. Casiguran and Observation of Casiguran District Hospital Lv. Casiguran Ar. Baler
08	7 Jun. (Sun.)	All day 09:30 3:05	Internal meeting (Mr. Ogawa, Mr. Akita, Mr. Kanayama & Mr. Doi) Filing documents Lv. Narita by JL-741 (Dr. Miyano, Ms. Kori & Mr. Matsumoto) Ar. Manila
09	8 Jun. (Mon.)	08:30 09:30 14:00 14:30 15:00 07:00 12:20 14:00 15:00 09:00	Meeting with AMH (Mr. Ogawa, Mr. Akita, Mr. Kanayama & Mr. Doi) Separate meeting at AMH: Architect (Mr. Ogawa & Mr. Kanayama), Equipment (Mr. Doi) & Hospital Management (Mr. Akita) Survey of the project site (Mr. Ogawa & Mr. Kanayama) Observation of Rice Processing Complex (KOICA) (Mr. Ogawa & Mr. Kanayama) Meeting with Baler municipal office (Mr. Ogawa & Mr. Kanayama) Lv. Manila to Baler (Dr. Miyano) Ar. Baler Survey of the project site Observation of AMH & confirmation of equipment list Meeting with local relegated companies and local contractors (Mr. Matsumoto) Research of local equipment suppliers (Ms. Kori)
10	9 Jun. (Tue.)	08:30 09:00 10:30 09:00 06:30 13:10 15:00	Meeting with AMH (Dr. Miyano, Mr. Ogawa, Mr. Akita, Mr. Kanayama & Mr. Doi) Meeting with UPM-SHA, Baler (Dr. Miyano, Mr. Ogawa & Mr. Kanayama) Observation of Maria Aurora Community Hospital Meeting with AMH (Mr. Akita & Mr. Doi) Lv. Manila to Baler (Ms. Kori & Mr. Matsumoto) Ar. Baler Join each meeting

No.	Date	Time	Activity
11	10 Jun. (Wed.)	08:30	Meeting with AMH (Dr. Miyano, Mr. Ogawa, Mr. Doi, Ms. Kori & Mr. Matsumoto)
			Survey of project site (Mr. Ogawa & Mr. Matsumoto)
		11:00	Observation of RHU
		14:30	Meeting with local relegated company (geological investigation) and confirmation of boring points at project site
		07:30	Lv. Baler to Baguio via Cabanatuan (Mr. Akita & Mr. Kanayama)
		10:00	Survey of Eduardo L. Joson Memorial Hospital (Nueva Ecija Provincial Hospital) at Cabanatuan
		15:00	Move to Baguio
12	11 Jun. (Thu.)	08:30	Meeting with AMH (Mr. Ogawa & Mr. Matsumoto)
		09:00	Confirmation of geological investigation started
			Meeting with local relegated company (water quality analysis), extraction of 5 water samples and returning to Manila
		16:00	Meeting with AMH
		09:00	Survey of Benguet General Hospital (Mr. Akita & Mr. Kanayama)
		07:30	Lv. Baler to Cabanatuan (Dr. Miyano, Mr. Doi & Ms. Kori)
		10:00	Observation of Eduardo L. Joson Memorial Hospital
13	12 Jun. (Fri.)	08:00	Lv. Baler to Baguio (Mr. Ogawa & Mr. Matsumoto)
		15:00	Ar. Baguio
		07:00	Lv. Cabanatuan to Baguio (Dr. Miyano, Mr. Doi & Ms. Kori)
		12:30	Ar. Baguio
14	13 Jun. (Sat.)	19:00	Internal meeting
		09:00	Observation of Benguet General Hospital
			Internal meeting
		09:30	Lv. Tokyo by JL-741 (Mr. Tanada)
15	14 Jun. (Sun.)	3:05	Ar. Manila
		09:00	Lv. Baguio to Baler (Dr. Miyano, Mr. Ogawa, Mr. Akita, Mr. Kanayama, Mr. Doi, Ms. Kori & Mr. Matsumoto)
		16:30	Ar. Baler
		09:30	Lv. Tokyo by JL-741 (Ms. Sadamoto)
		3:05	Ar. Manila
16	15 Jun. (Mon.)	07:00	Lv. Manila to Baler (Mr. Tanada)
		13:00	Ar. Baler
		08:30	Meeting with AMH
			Meeting for management & equipment (Dr. Miyano, Mr. Akita, Mr. Doi & Ms. Kori)
		09:00	Survey of AMH infrastructure (Mr. Ogawa, Mr. Kanayama, Mr. Matsumoto & Mr. Tanada)
			Survey of project site
		11:00	Survey of Rice Processing Complex infrastructure (KOICA)
		11:30	
		07:00	Lv. Manila to Baler (Ms. Sadamoto)
		12:15	Ar. Baler
17	16 Jun. (Tue.)	14:00	Meeting with AMH
			Meeting for management & equipment (Dr. Miyano, Ms. Sadamoto, Mr. Akita, Mr. Doi & Ms. Kori)
			Hearing from EENT doctor, Ob-Gyn & pediatric doctor
		14:15	Visiting electrical company (AURELCO) (Mr. Ogawa, Mr. Kanayama, Mr. Matsumoto & Mr. Tanada)
		15:30	Visiting Department of Public Works and Highway (DPWH)
17	16 Jun. (Tue.)	08:30	Meeting with AMH
			Meeting for management & equipment (Dr. Miyano, Ms. Sadamoto, Mr. Akita, Mr. Doi & Ms. Kori)
			Hearing from surgeon
		09:00	Meeting with local relegated company (topographical survey) and confirmation of topographical survey area (Ms. Sadamoto, Mr. Ogawa & Mr. Matsumoto)

No.	Date	Time	Activity
		08:30	Survey of Rice Processing Complex infrastructure (KOICA) (Mr. Kanayama & Mr. Tanada) Confirmation of sewage line Meeting with fire department
		13:30	Internal meeting (Dr. Miyano, Ms. Sadamoto, Mr. Ogawa, Mr. Akita, Mr. Kanayama, Mr. Doi, Mr. Matsumoto & Mr. Tanada)
		15:00	Meeting with AMH
		08:30	Lv. Baler to Manila (Ms. Kori)
		17:00	Ar. Manila
18	17 Jun. (Wed.)	08:30	Meeting with AMH Meeting for management and equipment Confirmation of questionnaire Internal meeting for (building outline and minutes)
		12:30	Lv. Manila to Baler (Mr. Iwakami & Ms. Yamagishi)
		18:30	Ar. Baler
		09:00	Survey for equipment (Ms. Kori)
19	18 Jun. (Thu.)	08:30	Meeting with AMH
		09:00	Observation of the project site and neighboring facilities (Mr. Iwakami, Ms. Yamagishi. Mr. Ogawa & Ma. Kanayama)
		10:00	Meeting with AMH for minutes
		09:00	Survey for equipment (Ms. Kori)
20	19 Jun. (Fri.)	09:00	Meeting with AMH
		11:00	Signing on the Minutes of Discussion at PGA
		14:00	Observation of Baler city
		16:00	Internal meeting
		19:00	Dinner party hosted by Ms. Angara, Governor
21	20 Jun. (Sat.)	09:00	Survey for equipment (Ms. Kori)
		07:00	Lv. Baler to Manila (Mr. Iwakami, Ms. Yamagishi, Dr. Miyano & Ms. Sadamoto)
		13:30	Ar. Manila
		08:00	Confirmation of topographical survey (Mr. Ogawa, Mr. Kanayama, Mr. Matsumoto & Mr. Tanada)
		08:30	Lv. Baler to Manila via Cabanatuan
		11:30	Observation of Dr. Paulino J. Garcia Memorial Research and Medical Center
		16:30	Ar. Manila
22	21 Jun. (Sun.)	09:00	Filing documents at AMH (Mr. Akita & Mr. Doi)
		09:00	Survey for equipment (Ms. Kori)
		All day	Filing documents (Dr. Miyano, Ms. Sadamoto, Mr. Ogawa, Mr. Kanayama, Mr. Matsumoto, Ms. Kori & Mr. Tanada)
		All day	Filing documents (Mr. Akita & Mr. Doi)
23	22 Jun. (Mon.)	10:00	Report of Basic Design Survey at NEDA to DOH, UPM-SHS, Embassy of Japan & JICA(Mr. Iwakami, Ms. Yamagishi, Dr. Miyano, Ms. Sadamoto, Mr. Ogawa, Mr. Kanayama, Mr. Matsumoto & Ms. Kori)
		15:30	Report to Mr. Katsura, Ambassador (Mr. Iwakami, Dr. Miyano, Ms. Sadamoto, Mr. Ogawa, Mr. Kanayama & Mr. Matsumoto)
		16:45	Report to Mr. Matsuda, Chief Representative, JICA Philippine Office
		08:30	Meeting for management & equipment at AMH (Mr. Akita & Mr. Doi)
		14:00	Survey for equipment (Ms. Kori)
		09:00	Lv. Manila by JL-746 (Mr. Tanada)
		14:25	Ar. Narita
24	23 Jun. (Tue.)	10:00	Visiting local consultant (Mr. Ogawa, Mr. Kanayama & Mr. Matsumoto)
		14:00	Visiting local consultant
		08:30	Survey for equipment (Ms. Kori)
		08:30	Meeting for management & equipment at AMH (Mr. Akita & Mr. Doi)
		09:00	Lv. Manila by JL-746 (Dr. Miyano & Ms. Sadamoto)
		14:25	Ar. Narita
25	24 Jun.	All day	Filing documents (Mr. Ogawa, Mr. Kanayama & Mr. Matsumoto)

No.	Date	Time	Activity
	(Wed.)	09:30	Survey for equipment (Ms. Kori)
		08:30	Meeting for management & equipment at AMH (Mr. Akita & Mr. Doi)
		10:30	Lv. Baler to Manila
		17:00	Ar. Manila
26	25 Jun. (Thu.)	10:00	Meeting with DOH Meeting for management & equipment at AMH (Mr. Akita & Mr. Doi)
			Survey of environmental factor
		15:00	
		09:00	Survey for equipment (Mr. Doi & Ms. Kori)
27	26 Jun. (Fri.)		Filing documents (Mr. Ogawa, Mr. Akita, Mr. Kanayama, Mr. Doi, Ms. Kori & Mr. Matsumoto)
		16:00	Report to JICA
28	27 Jun. (Sat.)	09:00	Lv. Manila by JL-746 (Mr. Ogawa, Mr. Akita, Mr. Kanayama, Mr. Doi, Ms. Kori & Mr. Matsumoto)
		14:25	Ar. Narita

2-2 Explanation of the Draft Report

From 10th to 26th Jan., 2010 (17 days)

No.	Date	Time	Activity
01	10 Jan. (Sun.)	09:30 3:05	Lv. Tokyo by JL-741 (Mr. Akita) Ar. Manila
02	11 Jan. (Mon.)	07:00 15:50	Lv. Manila to Baler (Mr. Akita) Ar. Baler & Courtesy call to PGA(Dr. Teh & Dr. Tomboc)
03	12 Jan. (Tue.)	08:30 14:00	Meeting with PGA about ICC Submission and explanation of the Report of the Recommendations for Actions to Strengthen Hospital Management of AMH
04	13 Jan. (Wed.)	08:30	Meeting with PGA about the financial forecast of ICC
05	14 Jan. (Thu.)	04:00 09:00 10:00 16:00	Lv. Baler to San Fernando Meeting with Region 3, NADA about ICC Lv. San Fernando Ar. Baler
06	15 Jan. (Fri.)	08:30 13:30 15:00	Meeting with PGA about the hospital management Meeting with AMH about 5S and observation of AMH Meeting with PGA about the hospital management
07	16 Jan. (Sat.)	All day 09:30 13:05	Preparation of ICC explanatory material about the financial forecast (Mr. Akita) Lv. Tokyo by JL-741 (Ms. Sadamoto, Mr. Ogawa & Mr. Doi) Ar. Manila
08	17 Jan. (Sun.)	All day 08:30 13:45 14:30	Preparation of ICC explanatory material about the project site (Mr. Akita) Lv. Manila to Baler (Ms. Sadamoto, Mr. Ogawa & Mr. Doi) Ar. Baler Internal Meeting (Ms. Sadamoto, Mr. Ogawa, Mr. Akita & Mr. Doi)
09	18 Jan. (Mon.)	08:30 10:00 11:00 14:00	Courtesy call to PGA Courtesy call to Ms. Hon. Bellaflor J. Angara-CASTILLO, the Governor Preparation of NEDA explanatory material and explanation the hospital management to the Governor Meeting with PGA about the Minutes
10	19 Jan. (Tue.)	08:30 14:00 07:00 12:30 13:00 09:00 13:00	Meeting with PGA about the Minutes (Component, Schedule, etc.) Observation of Baler Lv. Manila to Baler (Mr. Iwakami) Ar. Baler Courtesy call to the Governor Lv. Baler to Manila(Mr. Akita) Ar. Manila

No.	Date	Time	Activity
11	20 Jan. (Wed.)	10:00	Signing on the Minutes of Discussion at PGA
		14:00	Observation of the construction site
		15:00	Observation of road situation
		09:00	Lv. Manila by JL-746 (Mr. Akita)
		14:25	Ar. Narita
12	21 Jan. (Thu.)	09:00	Meeting with PGA, confirmation of facility and equipment (Mr. Ogawa & Mr. Doi)
		07:00	Lv. Baler to Manila (Mr. Iwakami & Ms. Sadamoto)
		13:00	Ar. Manila
		14:00	Report to NEDA
		16:00	Report to Mr. Katsura, Ambassador
13	22 Jan. (Fri.)	09:00	Meeting with PGA, confirmation of facility and equipment (Mr. Ogawa & Mr. Doi)
		09:00	Lv. Manila by JL-746 (Ms. Sadamoto)
		14:25	Ar. Narita
14	23 Jan. (Sat.)	08:20	Lv. Baler to Manila (Mr. Ogawa & Mr. Doi)
		13:30	Ar. Manila
15	24 Jan. (Sun.)	All day	Filing documents (Mr. Ogawa & Mr. Doi)
16	25 Jan. (Mon.)	09:30	Report to JICA (Mr. Matsuda, Mr. Iwakami, Mr. Iwase & Ms. Yamagishi)
		14:00	Internal meeting and filing documents
17	26 Jan. (Tue.)	09:30	Lv. Manila by JL-746 (Mr. Ogawa & Mr. Doi)
		13:45	Ar. Narita

3. List of Parties Concerned in the Recipient Country

Organization	Position	Name
Provincial Government of Aurora (PGA)	Governor	Hon. Bellaflor J. Angara-CASTILLO
	Provincial Health Officer II	Dr. Luisito G. Teh, MD
	Provincial Health Officer I	Dr. Raul G. Tomboc, MD, MPH
	Executive Assistant	Mr. Guy A. Tuzon
	Provincial Engineer	Mr. Rodante A. Tolentino
	Provincial Engineer III	Mr. Ariel P. Costa
	Provincial Engineer III	Mr. Danilo P. Marpuez
	Provincial Engineer IV	Mr. Julian S. Narvas
Aurora Memorial Hospital	Chief of Hospital	Dr. Mael M. Cautivar
	Internist(Full-Time)	Dra. Marilen Bautista
	Surgeon(Schedule)	Dr. Leonides Ciriaco A. Papa
	EENT Doctor(Schedule)	Dr. Benedicto Magnaye, MM
	Pediatric Doctor (Schedule)	Dr. Nomita G. Mangaba
	Ob-Gytn (Schedule)	Dr. Laarni T. Pantaleon
Municipality of Baler	Municipal Engineer, Municipal Engineering Office	Mr. Sofronio Rual A. Egargue
Department of Health (DOH)	Director, Bureau of International Health Cooperation	Ms. Maylene M. Beltran
	Senior Health Program Officer	Ms. Evelyn C. Mendoza
	Director, National Center for Health Facility Department	Arq. Ma. Rebecca M. Penafiel
	Officer, National Center for Health Facility Department	Arq. Maria Minnie O. Aban
University of the Philippines Manila (UPM)	Vice Chancellor for Planning and Development, Professor	Ms. Zorayda E. Leopando, MD, MPH
	Dean UPM-SHS	Prof. Jusie-Lydia J. Siega-Sur
	College of Public Health	Prof. Noel Lawas
	Project Development Officer	Ms. Miladilla A. Santiago
	College of Architecture	Mr. Jose Danilo Silvestre
	College of Architecture	Prof. Mary Ann A. Espina
University of the Philippines Manila, School of Health Sciences UPM SHS Extension Campus Baler, Aurora	Director	Prof. Julia Elisa C. Puertoliano, MMPH, CPH
	Community Coordinator	Mr. Pedro M. Magadan
	Batch Coordinator	Mr. Michel Anthony O. Samanielo
	Student Relations Officer	Ms. Daisy C. Nava
	Faculty	Ms. Kristine Joy L. Ricafori
	Clinical Coordinator	Ms. Bernaoette M. Octa
NEDA	OIC Chief, Asia Pacific Div.	Ms. Ameta B. Benjamin
	EDS (Economic Development Specialist) Chief	Ms. Arlene Ruiz
	EDS I	Ms. Kathleen Virtucio
	EDS II, Region 3	Ms. Maria Theresa D. Tuazon
	C/EDS, Region 3	Ms. Aurora M. Joson
	Director, Region 3	Ms. Lynette Bautista
	EDS Supervisor	Mr. Edgardo Aranjuez
	SDS Supervisor	Mr. Dune Aranjuez
Maria Aurora Community Hospital	MD, Medical Officer III	Dra. Myrna P. Nicer
Casiguran District Hospital	MD, Medical Officer III	Dr. Rowel C. Riofororido
	Voluntary Doctor	Dr. German N. Tiongson
Dingalan District Hospital	MD, Medical Officer III	Dra. Julie Ann R. Mandapat M.D.

Organization	Position	Name
Dr. Paulino J. Garcia Memorial Research and Medical Center	Chief Administration Officer	Ms. Evangeline P. Ruanto
	Medical Officer III, Pediatric Division (NICU)	Dra. Rosa Maria Cabanuis
	Pathologist	Dra. M.A. Delacruz
	Health Physicist	Dra. M. Medina
	Nurse II	Ms. Chrisophon S. Anu
	Nurse III	Ms. Maria Mapili
	Engineer I	Mr. Phripp Dasawa
Eduardo L. Joson Memorial Hospital	Administration Officer V	Ms. Anabella S. Cruz
	Provincial Health Officer I	Ms. Dollie B. Praod M.D.
	Chief OPD Clinics	Dr. Melchon M. Sanangasa
	Medical Technologist	Mr. Adonacion V. De Lana
	OP Nurse	Ms. Maria P. Jaurin
Benguet General Hospital	Chief of Hospital	Ms. Ronald Magbitang
	Administration Officer	Ms. Anabella Cruz
	MSII-COIII	Ms. Josepia A. Cabinata
	M. PHO Director	Ms. Pacalso
	Surgical Director	Dr. Aebanlog
	Engineer	Mr. Palasiun
Department of Public Works and Highway (DPWH)	Sub Director	Mr. Angel Beltran, Jr
Fire Department, Baler	In charge of Fire	Mr. Freddie Delos Trinos
Local Consultant Perez-Espina & Associates	Business Partner	Prof. Mary Ann A. Espina
Local Consultant TCGI ENGINEERS	President & CEO	Mr. Virgilio A. Madrazo (PEE)
	Assistant Vice President	Mr. Jose I. Ortega (CE)
Local relegated company Geological Investigation INFRA-GEOSERVICES	General Manager	Mr. Clodualdo T. Contawe
Local relegated company Water Quality Analysis CRL Environment	Client Service Representative	Mr. Ronald A. Agabin
	Senior Field Technician	Mr. Romeo E. Lugtu
Local relegated company Topographical Survey TRINAV SURVEYS	Vice President	Mr. Ian Grob
Embassy of Japan	Ambassador	Mr. Makoto KATSURA
	Minister, Economic Affairs	Mr. Tomochika UYAMA
	Second Secretary	Dra. Shoko OGAWA, M.D.
JICA Philippine Office	Chief Representative	Mr. Norio MATSUDA
	Senior Representative	Mr. Kenzo IWAKAMI
	Representative	Mr. Makoto IWASE
	Health Program Coordinator	Ms. Nobuko YAMAGISHI

4. Minutes of Discussions (M/D)

4-1 Outline Design Study

**MINUTES OF DISCUSSIONS
ON THE PREPARATORY SURVEY 2 (BASIC DESIGN)
ON THE PROJECT FOR IMPROVEMENT OF AURORA MEMORIAL HOSPITAL
IN THE REPUBLIC OF THE PHILIPPINES**

Based on the results of the Preparatory Survey¹, the Government of Japan decided to conduct a Preparatory Survey 2(Basic Design Study) on the Project for Improvement of Aurora Memorial Hospital (hereinafter referred to as "the Project") in the Republic of the Philippines (hereinafter referred to as "the Philippines) and entrusted the study to the Japan International Cooperation Agency (hereinafter referred to as "JICA").

JICA sent to the Republic of the Philippines the Preparatory Survey 2 (Basic Design)Team (hereinafter referred to as "the Team"), which is headed by Mr. Kenzo IWAKAMI, Senior Representative, JICA Philippines Office, and is scheduled to stay in the country from May 31 to June 27, 2009.

The Team held discussions with the officials concerned of the Government of the Philippines and conducted a field survey at the study area.

In the course of discussions and field survey, both parties confirmed the main items described in the attached sheets. The Team will proceed to further works and prepare the Basic Design Study Report.

Baler, Province of Aurora, June 19, 2009



Kenzo IWAKAMI
Team leader
Preparatory Survey Team
Japan International Cooperation
Agency
Japan



Hon. Bellaflor Angara-CASTILLO
Governor,
Provincial Government of Aurora
Republic of the Philippines

ATTACHMENT

1.Objective of the Project

The objective of the Project is to strengthen the services of the Aurora Memorial Hospital (hereinafter referred to as "AMH") by improving its infrastructure and equipment. The Project will facilitate the hospital to be established as a general hospital which will play a central role in the local health referral system.

2.Project site

The site of the Project is "Barangay Reserva", Baler, Aurora Province.

3. Responsible and Implementing Agency

3-1.The responsible agency is Provincial Government of Aurora.

3-2.The implementing agency is Provincial Health Office.

4.Items requested by the Government of Aurora Province(Philippines)

After discussions with the Team, the items described in Annex-1 were finally requested by Philippines side. JICA will assess the appropriateness of the request and will recommend to the Government of Japan for approval.

- | | | |
|---------------|---|---|
| (1) Function | : | Details are listed in Annex-1. |
| (2) Facility | : | Details are listed in Annex-2. |
| (3) Equipment | : | Details of items are listed in Annex-3. |

5. Japan's Grant Aid Scheme

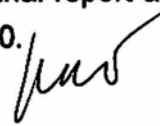
Philippine side understands the Japan's Grant Aid Scheme and the necessary measures to be taken by the Government of the Philippines(Aurora Province) as explained by the Team and described in Annex-4 and Annex-5 of the Minutes of Discussions signed by both parties on February 3, 2009.

6. Schedule of the Study

6-1. The consultants will proceed to further studies in the Philippines until June 27, 2009.

6-2. JICA will prepare the draft report in English and dispatch a mission to Aurora in order to explain its contents in October, 2009.

6-3. In case that the contents of the report is accepted in principle by the Government of Aurora, Philippines, JICA will complete the final report and send it to the Government of the Philippines by the end of January, 2010.



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7. Other relevant issues

7-1. Both sides understood that the strengthening of the management capability especially in the following areas is essential in order to provide quality services continuously.

Human resources

Finance

Information

Supply

7-2. Both sides understood that employing the services of specialists is most important to attain the project objective. The Philippine side confirmed that affiliation agreement with candidate specialists (Surgery, Obstetrics/Gynecology, Pediatrics and EENT) will be concluded by the end of July, 2009. They will be visiting and part time doctors of AMH. And Philippine side continues to exert effort to secure permanent specialist doctors (Surgery, Ob/Gyn).

7-3. AMH financial augmentation scheme (e.g. revolving fund, hospital income retention scheme) would be institutionalized to ensure financial viability.

7-4. "Client-friendly hospital" is a goal commonly recognized among hospitals.

Philippine side agreed that AMH starts to introduce the methods of 5-S activities and staff training to improve their skills in communicating and building rapport with patient to this end.

7-1, 7-2, 7-3, 7-4 Detailed in Annex-6

7-5. Both sides understood that Provincial health budget especially for hospitals should continue increasing to the level recommended in the "FOURmula One for Health" of DOH and be allocated proportionately according to patient load of each hospital.

7-6. Both sides understood that an effective "two-way referral system" should be put in place among health facilities (hospital, RHU, BHS) with AMH as the main referral hospital in Aurora.

7-7. The hospital site is described in Annex-4. (lot no. 2609). A building of UPM-SHS extension campus will be constructed by UP Manila in the adjacent site (lot no. 2608).

7-8. PGA agreed to demolish existing buildings in the site and to fill the soil for the site higher than road level before July, 2010.

7-9. The Philippine side will take necessary measures to ensure tax exemption and smooth custom clearance of the Project at the port of disembarkation.

7-10. The Philippine side agreed to provide for the VAT component of the Project. The team will estimate amount of VAT refund and notify the Philippine side by next mission (October, 2009).



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LIST OF ADDITIONAL FUNCTIONS TO BE UNDERTAKEN IN THE PROPOSED HOSPITAL

ASPECT	SECTION	CURRENT FUNCTIONS	ADDITIONAL FUNCTIONS
Curative	OPD	Consultations Tooth extraction/cleaning Prenatal check up	Health information dissemination Reproductive health care Specialty clinics - Internal Medicine - Pediatrics - OB/GYN - Surgery - EENT (Eye, Ear, Nose & Throat) - Dental
	ER	Management of Minor surgical cases - wound repairs - dressing	Advanced life support - respiratory monitoring - cardiac monitoring Minor operations for excisions and trauma Refer severe cases to upper level hospital
	Ward	Management of vector-borne diseases - malaria - dengue (up to stage 3) Management of mild to moderate CVA Management of mild to moderate respiratory cases Management of simple fractures Nursing care	Management of vector-borne diseases - malaria - dengue (up to stage 4) Management of moderate to severe cardiac cases Management of moderate to severe CVA cases Management of moderate to severe respiratory cases Management of moderate to severe pediatric cases Management of surgical cases (pro- and post-operation) Nursing care for complicated cases
	ICU	none	High Care Units for management of medical / surgical patients requiring close monitoring and management - CVA - Cardiac monitoring - Respiratory monitoring - Post-operation
	NICU	none	Neonates care - Hyperbilirubinemia
	OR	Elective surgery (surgical missions)	Management of major abdominal surgery (elective & emergency) - appendectomy - exploratory laparotomy - cholecystectomy - hernioplasty - hemorrhoidectomy - thyroidectomy
	OB-GYN	Normal spontaneous delivery Dilatation and curettage Manual placental extraction	Caesarian Section Hysterectomy Bilateral Tubal Ligation Management of ruptured ectopic pregnancy Pre-eclampsia / eclampsia Fetal monitoring



Rehabilitative		Management of simple cases	Management of complicated cases (physical therapy) ^ - post-cerebrovascular cases - burn contractures - musculo-skeletal disorder - congenital disorder - post-trauma
Diagnostic		Routine laboratory procedures - CBC - Urinalysis - Fecalalysis - Malarial smears - Blood typing - Cross-matching - Gram staining/Acid Fast Staining - KOH Abdominal ultrasound Plain X-Ray X-ray pelvimetry	Blood chemistry analysis (blood sugar, cholesterol, triglycerides, BUN, creatinine, SGOT, SGPT) Electrolyte determination Blood coagulation analysis Pap smear Aspiration biopsy Histopathologic procedure (initial step) Quantitative platelet determination Transvaginal ultrasound Gastro-intestinal series
Community activities		Outreach programs - medical missions - dental missions	
Referral System		one-way system	Two-way system - hospital - hospital - hospital - rural health units
Health promotion		Poster display Radio plugging	Audio-visual presentations Diet counselling - diabetic, hypertensive, arthritic, with peptic ulcer...
Preventive Care		none	
Blood management		Blood collection unit	Blood banking
Post-mortem examination		Gross examination	Autopsy

Facility

Functions & Rooms	Plan	Remarks
1. Administrative Service		
-Lobby	o	
-Waiting Area	o	
-Information, Reception and Communication Area	o	
-Toilet	o	
-Admitting and Social Service Office	o	
-Business Office	o	
-Billing	o	
-Cashier	o	
-Budget and Finance	o	To be included in Administrative Officer's room
-Medical Records and Personnel Office	o	
-Office of the Administrative Officer	o	
-Office of the Chief of Hospital	o	
-Conference and Training Room	o	
-Staff Toilet	o	
-Laundry and Linen Office	o	
-Sorting and Washing Area	o	
-Pressing and Ironing Area	o	
-Storage Area	o	
-Maintenance Office	o	Merged w/ work area
-Work Area	o	
-Housekeeping Area	o	
-Motorpool and Ambulance Parking Area	o	
-Property and Supply Office	o	
-Waste Holding Room	o	
-Dietary	o	
-Dietitian Office	o	
-Supply Receiving Area	o	
-Cold and Dry Storage Area	o	
-Food Preparation Area	o	
-Cooking and Baking Area	o	
-Serving and Food Assembly Area	o	
-Washing Area	o	
-Garbage Disposal Area	o	
-Dining Area	o	
-Toilet	o	
-Mortuary	o	Merged w/ autopsy room



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Functions & Rooms	Plan	Remarks
2. Clinical Service		
-Emergency Room	o	4 beds
-Waiting Area	o	
-Toilet	o	
-Nurse Station	o	
-Examination and Treatment Area with Lavatory/Sink	o	
-Observation Area	o	
-Equipment and Supply Storage Area	o	
-Wheeled Stretcher Area	o	
-Outpatient Department	o	
-Waiting Area	o	
-Toilet	o	
-Admitting and Records Area	o	
- Examination and Treatment Area with Lavatory/Sink	o	
-Consultation Area	o	general consultation area, 4 booths
-Dental Clinic	o	
-Office of Medical Specialist Clinics	o	
-Medicine	o	
-Pediatrics	o	
-Obstetrics and Gynecology	o	
-Surgery and Anesthesia	o	
-EENT	o	
-Surgical Service	o	
-Major Operating Room	o	2 O/Ts
-Recovery Room	o	2-stretcher space
-Sub-sterilizing Area/Work Area	o	
-Sterile Instrument, Supply and Storage Area	o	
-Scrub-up Area	o	
-Clean-up Area	o	
-Male Dressing Room and Toilet	o	
-Female Dressing Room and Toilet	o	
-Nurse Station/Work Area	o	
-Wheeled Stretcher Area	o	
-Janitor's Closet	o	
-Obstetrical Service	o	
-Delivery Room	o	2 rooms w/ 1 bed each, 1 room bigger than the other for teaching purposes
-Labor Room with Toilet	o	

-Pathologic – Premature Nursery	o	NICU: 2 incubator, 2 cots
-Pathologic Room	o	
-Premature Room	o	
-Work Area with Sink	o	
-Viewing Area	o	Just use curtains
-Breastfeeding Area	o	
-Nursing Unit	o	
-Patient Room	o	
-Toilet	o	
-Isolation Room with Toilet	o	
-Nurse Station	o	2 Nurse stations
-Utility Area	o	
-Linen Area	o	
-Toilet	o	
-Treatment and Medication Area with Lavatory/Sink	o	
-Intensive Care Unit	o	High care room, a room in medical ward & surgical ward
-Central Sterilizing and Supply Room	o	
-Receiving and Releasing Area	o	
-Work Area	o	
-Sterilizing Area	o	
-Sterile Supply Storage Area	o	
-Nursing Service	o	
-Office of the Chief Nurse	o	
-Toilet	o	
3. Ancillary Service		
-Clinical Laboratory	Secondary	
-Clinical Work Area with Lavatory/Sink	50sq.m	to include area for blood collection, sputum area and blood bank section
-Pathologist Area	o	
-Toilet	o	
-Radiology	2 nd level	
-X-ray Room with Control Booth, Dressing Area and Toilet	o	
-Dark Room	o	
-Film File and Storage Area	o	
-Radiologist Area	o	
-Pharmacy	o	30 sq.m + storage area
Ultrasound sound	o	within radiology complex
Physical therapy room	o	

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Requested Equipment List

Annex-3

S/No.	Department	No.	Description	Q'ty
1	OPD	1	Examination Couch (Adult And Pediatrics)	3
2	OPD	2	Doctor Desk & Chair	3
3	OPD	3	Patient Stool	3
4	OPD	4	X-ray Film Illuminator	2
5	OPD	5	Sphygmomanometer (Adult And Pediatrics)	2
6	OPD	6	Stethoscope (Adult And Pediatrics)	5
7	OPD	7	Hammer	3
8	OPD	8	Diagnostic Set	1
9	OPD	9	Sterile Reservoir Stand	4
10	OPD	10	Treatment Table	1
11	OPD	11	Instrument Sterilizer	1
12	OPD	12	Medicine And Instrument Cabinets	1
13	OPD	13	Weighing Scales (Adult, Pediatrics And Baby/Infant)	1
14	OPD	14	Ultrasonic Nebulizer	1
15	OPD	15	Instrument Table	1
16	OPD	16	Wheelchair	2
17	DENTAL	1	Treatment Cabinet	1
18	DENTAL	2	Dental X-ray Unit And Film Processor With X-ray Film Viewer	1
19	PT	1	Hot Pack Unit	1
20	PT	2	Paraffin Bath	1
21	PT	3	Shoulder Wheel	1
22	PT	4	Rotary Wrist	1
23	PT	5	Wrist Roll	1
24	PT	6	Shoulder Ladder	1
25	PT	7	Exercise, Finger	1
26	PT	8	Exercise, Bicycle	1
27	PT	9	Parallel Bars	1
28	PT	10	Posture Training Mirror	1
29	PT	11	Chest Pulley	1
30	PT	12	Wall Stall Bars	1
31	PT	13	Chinning Bar	1
32	PT	14	Exercise Stairs	1
33	PT	15	Mat Platform	1
34	PT	16	Treatment Table	1
35	PT	17	Training Bed	1
36	PT	18	Dumbbells	1
37	PT	19	Universal Cart	1
38	PT	20	Working Table	1
39	PT	21	Ultraviolet & Infrared Lamp	1
40	PT	22	Traction	1
41	PT	23	Crutch	2
42	PT	24	Quad Cane	2
43	PT	25	Walker, Folding	2
44	PT	26	Wheelchair	2
45	X-ray	1	General X-ray System	1
46	X-ray	2	Protective Instrument Set	1
47	X-ray	3	Film Loading Desk	1
48	X-ray	4	Pass Box	1
49	X-ray	5	Keeping Shelf	1
50	X-ray	6	X-ray Film Cabinet	1
51	X-ray	7	Cassette and Cassette Trolley	1
52	X-ray	8	X-ray Film Illuminator	1
53	X-ray	9	X-ray Film Processor (Automatic)	1
54	X-ray	10	X-ray Film Dryer	1
55	X-ray	11	Darkroom instrument Set	1
56	X-ray	12	Thickness Calipers	1
57	X-ray	13	Film Marker	1
58	X-ray	14	Ultrasound Machine	1
59	X-ray	15	Electrocardiograph Machine	1
60	LABO	1	Hematology Analyzer	1
61	LABO	2	Blood Coagulation Analyzer	1
62	LABO	3	Electrolyte Analyzer	1

Requested Equipment List

Annex-3

S/No.	Department	No.	Description	Q'ty
63	LABO	4	Blood Gas Analyzer	1
64	LABO	5	Spectrophotometer (Clinical use, semi-automatic)	1
65	LABO	6	Blood Sedimentation Stand	1
66	LABO	7	Shaker	2
67	LABO	8	Needle Destroyer	1
68	LABO	9	Microscope, Biological, Binocular	2
69	LABO	10	Autopsy Instrument (Basic Model)	1
70	LABO	11	Autopsy Table	1
71	LABO	12	Morgue Cart	1
72	LABO	13	Hot Air Sterilizer for Laboratory	1
73	LABO	14	Autoclave (Table Top Type)	1
74	LABO	15	Medical Refrigerator with Freezer	1
75	LABO	16	pH Meter	1
76	LABO	17	Analytical Balance, Electronic	1
77	LABO	18	Centrifuge	1
78	LABO	19	Laboratory Center Table	1
79	LABO	20	Fume Hood	1
80	LABO	21	Storage Cabinets	1
81	LABO	22	Water Bath	1
82	LABO	23	Mixer	1
83	LABO	24	Distiller	1
84	LABO	25	Ultrasonic Cleaner	1
85	LABO	26	Digital Micro Pipette (Autoclavable)	1
86	LABO	27	Bed, Standard For Blood Donors	1
87	LABO	28	Blood Bank Refrigerator	1
88	LABO	29	Screen	1
89	PHARMACY	1	Medical Refrigerator f or Medicines	1
90	PHARMACY	2	Medicine Filing Cabinets (Storage Room)	1
91	PHARMACY	3	Medicine Shelves	1
92	WARD	1	Laundry Bag Carrier/Cart	2
93	WARD	2	Syringe Infusion Pump w/Stand	2
94	WARD	3	Infusion Pump w/Stand	2
95	WARD	4	Blood Infusion Warmer	1
96	WARD	5	I.V. Hanger Stand	20
97	WARD	6	Needle Destroyer	2
98	WARD	7	Gatch Bed With Side Railings	32
99	WARD	8	Bed, Pediatrics	14
100	WARD	9	Over bed Table	32
101	WARD	10	Bedside Cabinet	46
102	WARD	11	Stretcher Trolley	2
103	WARD	12	Oxygen Tent (for Pediatric)	1
104	WARD	13	Oxygen Regulator w/Trolley & Tank (Big)	13
105	WARD	14	Suction Unit	2
106	WARD	15	Resuscitation Bag	2
107	WARD	16	Emergency Cart	2
108	WARD	17	Ultrasonic Nebulizer	2
109	WARD	18	Dressing And Instrument Cart	2
110	WARD	19	Dressing Case /Drum Stand	2
111	WARD	20	Utility Work Table	2
112	WARD	21	Wheelchair	4
113	WARD	22	Sphygmomanometers (Adult And Pediatrics)	4
114	WARD	23	Stethoscopes (Adult And Pediatrics)	4
115	WARD	24	Instrument Sterilizer	2
116	WARD	25	Weighing Scales (Adult, Pedia And Baby/Infant)	2
117	WARD	26	Laryngoscope (Adult, Pediatric And Infant)	2
118	WARD	27	Medical Refrigerator f or Medicines	2
119	WARD	28	Ultraviolet Sterilizer	1
120	WARD	29	Pulse Oximeter	2
121	WARD	30	Defibrillator With Cardiac Monitor	1
122	LAUNDRY	1	Washing Machine	1
123	LAUNDRY	2	Dryer	1
124	LAUNDRY	3	Ironing Machine	1

Requested Equipment List

Annex-3

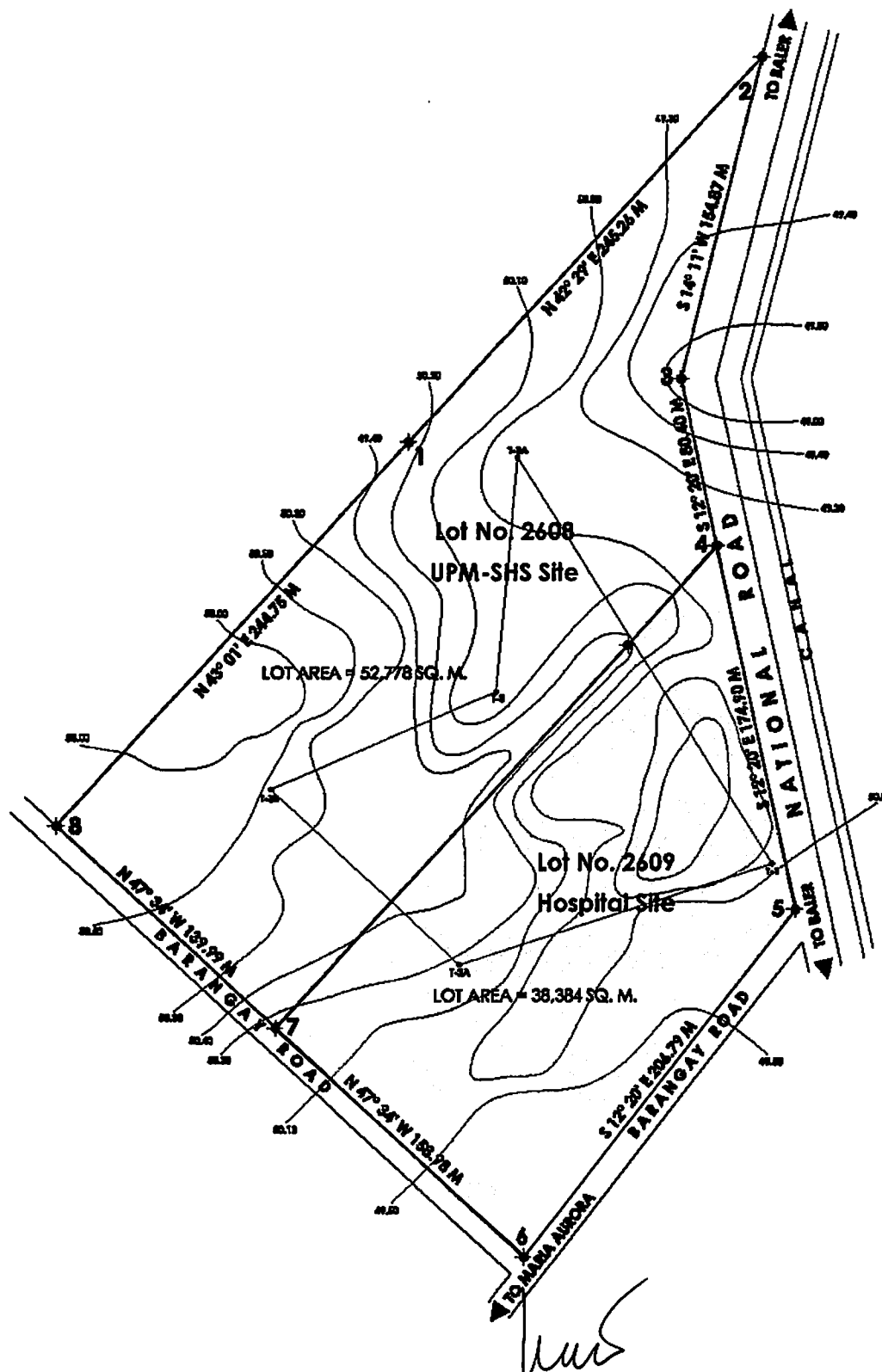
S/No.	Department	No.	Description	Q'ty
125	CSSD	1	Autoclave	2
126	CSSD	2	Hot Air Sterilizer	1
127	CSSD	3	Bedpan Flushing And Sanitizing Apparatus	1
128	CSSD	4	Working Table	1
129	CSSD	5	Washing Sink	1
130	CSSD	6	Shelves	2
131	CSSD	7	Instrument Cabinets	2
132	DIETARY	1	Microwave Ovens/Cooking Range And Stove	1
133	DIETARY	2	Freezer/Refrigerator	1
134	DIETARY	3	Food Warmer And Serving Trolley	2
135	ER	1	Operating Instrument Set For Minor Surgery/Emergency Room	4
136	ER	2	Stethoscopes (Adult And Pediatrics)	1
137	ER	3	Sphygmomanometers (Adult And Pediatrics)	1
138	ER	4	X-ray Film Illuminator	1
139	ER	5	Autoclave (Table Top Type)	1
140	ER	6	Medical Refrigerator f or Medicines	1
141	ER	7	Medicine Cabinets	2
142	ER	8	Diagnostic Set	1
143	ER	9	Instrument Cabinets	1
144	ER	10	Weighing Scales (Adult, Pediatrics And Infants)	1
145	ER	11	Electrocardiograph Machine	1
146	ER	12	Defibrillator With Cardiac Monitor	1
147	ER	13	Cauterization Unit/Electro-Surgical Unit	1
148	ER	14	Wheelchair	1
149	ER	15	Bed, Emergency	3
150	ER	16	Needle Destroyer	1
151	ER	17	Stretcher Trolley	1
152	ER	18	Resuscitation Bag (Adult, Pediatrics And Infant)	1
153	ER	19	Laryngoscope (Adult, Pediatric And Infant)	1
154	ER	20	Emergency Cart	1
155	ER	21	Ultrasonic Nebulizer	1
156	ER	22	Instrument Table	1
157	ER	23	Operating Light	1
158	ER	24	Examination Light, Goose Neck Type	2
159	ER	25	Treatment Table	1
160	ER	26	Suction Unit	1
161	ER	27	Revolving Stool	2
162	ER	28	Dressing Case /Drum Stand	1
163	ER	29	Basin Stand, Two-Basin	1
164	ER	30	Instrument Stand, Mayo's	2
165	ER	31	Foot Stool, Two-Step	1
166	ER	32	Kick Bucket	1
167	ER	33	Water Sterilizing Unit	1
168	ER	34	Bedside Monitor	1
169	H.C.U./N.I.C.U.	1	Bed, I.C.U.	4
170	H.C.U./N.I.C.U.	2	Medicine Cabinets	2
171	H.C.U./N.I.C.U.	3	Resuscitation Bags (Adult And Pedia)	2
172	H.C.U./N.I.C.U.	4	Infant Incubator	1
173	H.C.U./N.I.C.U.	5	Infant Incubator (Transport type)	1
174	H.C.U./N.I.C.U.	6	Infant Warmer	1
175	H.C.U./N.I.C.U.	7	Phototherapy Unit	1
176	H.C.U./N.I.C.U.	8	Infant Bassinet Stand	1
177	H.C.U./N.I.C.U.	9	Defibrillator With Cardiac Monitor	1
178	H.C.U./N.I.C.U.	10	Suction Unit	2
179	H.C.U./N.I.C.U.	11	Over bed Table	4
180	H.C.U./N.I.C.U.	12	Bedside Cabinet	4
181	H.C.U./N.I.C.U.	13	Infusion Pump w/Stand	2
182	H.C.U./N.I.C.U.	14	Mechanical Ventilator	1
183	H.C.U./N.I.C.U.	15	Sphygmomanometer (Adult And Pediatrics)	2
184	H.C.U./N.I.C.U.	16	Stethoscope (Adult And Pediatrics/Infant)	2
185	H.C.U./N.I.C.U.	17	Bedside Monitor	2
186	H.C.U./N.I.C.U.	18	Bilirubin Meter	1

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Requested Equipment List

Annex-3

S/No.	Department	No.	Description	Q'ty
187	OP	1	Anesthesia Apparatus w/Vaporizer (Adult, Pediatrics/Infant)	2
188	OP	2	Instrument Cabinets	1
189	OP	3	Medicine Cabinets	1
190	OP	4	Instrument Tray Stand	2
191	OP	5	Instrument Stand, Mayo's	2
192	OP	6	Instrument Stand for Anesthesia	2
193	OP	7	Operating Tables	2
194	OP	8	Operating Lights	2
195	OP	9	Sphygmomanometer (Adult And Pediatrics)	2
196	OP	10	Stethoscope (Adult And Pediatrics)	1
197	OP	11	Defibrillator With Cardiac Monitor	1
198	OP	12	X-ray Film Illuminator	2
199	OP	13	Operating Instrument Set f or Cholecystectomy	2
200	OP	14	Operating Instrument Set f or Thyroidectomy	2
201	OP	15	Operating Instrument Set for Appendectomy	2
202	OP	16	Operating Instrument Set for Emergency Tracheotomy	2
203	OP	17	Operating Instrument Set for Section Cesarean Section	2
204	OP	18	Operating Instrument Set for Explore Laparotomy	2
205	OP	19	Operating Instrument Set for Hernioplasty	2
206	OP	20	Operating Instrument Set for Minor Surgery	3
207	OP	21	Electro-Surgical Unit	1
208	OP	22	Stretcher Trolley	2
209	OP	23	Revolving Stool	2
210	OP	24	Dressing Case /Drum Stand	2
211	OP	25	Basin Stand, Two-Basin	2
212	OP	26	I.V. Hanger Stand	2
213	OP	27	Kick Bucket	2
214	OP	28	Foot Stool, Two-Step	2
215	OP	29	Bedside Monitor	2
216	OP	30	Suction Unit	2
217	OP	31	Endotracheal Set	1
218	OP	32	Ultraviolet Sterilizer	1
219	OP	33	Autoclave (Table Top Type)	1
220	OP	34	Surgical Scrub Station	1
221	OB/GY	1	Examination Table for OB/GY	1
222	OB/GY	2	Examination Unit, Gynecology	1
223	OB/GY	3	Labor Bed	2
224	OB/GY	4	Delivery And Operating Table, Obstetrics	2
225	OB/GY	5	Suction Unit	1
226	OB/GY	6	Vacuum Extractor	1
227	OB/GY	7	Speculum, Vaginal	2
228	OB/GY	8	Doppler Fetus Detector	1
229	OB/GY	9	Fetal Monitor	1
230	OB/GY	10	Instrument Set For Dilatation And Curettage	2
231	OB/GY	11	Instrument Set For Delivery	2
232	OB/GY	12	Comfort Stool	1
233	OB/GY	13	Dressing And Instrument Cart	1
234	OB/GY	14	Instrument Tray Stand	1
235	OB/GY	15	Water Sterilizing Unit	1
236	OB/GY	16	Needle Destroyer	1
237	OB/GY	17	Oxygen Tank (Big) & Trolley w/Regulator	2
238	OB/GY	18	Ultrasound Machine	1
239	EENT	1	E.N.T. Treatment Chair	1
240	EENT	2	E.N.T. Treatment Unit	1
241	EENT	3	Head Mirror	1
242	EENT	4	Speculum, Nasal	1
243	EENT	5	Audiometer	1
244	EENT	6	Slit Lamp	1
245	EENT	7	Foreign Body Forceps	1



Major Undertakings to be taken by Each Government

NO	Items	To be covered by Grant Aid	To be covered by Recipient side
1	To secure land		●
2	To clear, level and reclaim the site when needed		●
3	Relocation, improvement and/or repair of existing utilities (power lines, telecommunication lines, water lines, etc.), if necessary		●
4	To bear the following commissions to a bank of Japan for the banking services based upon the B/A		
	1) Advising commission of A/P		●
	2) Payment commission		●
5	To ensure prompt unloading and customs clearance at the port of disembarkation in recipient country		
	1) Marine (Air) transportation of the products from Japan to the recipient country	●	
	2) Tax exemption and custom clearance of the products at the port of disembarkation		●
	3) Internal transportation from the port of disembarkation to the project site	●	
6	To accord Japanese nationals whose services may be required in connection with the supply of the products and the services under the verified contract such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work		●
7	To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which may be imposed in the recipient country with respect to the supply of the products and services under the verified contract		●
8	To maintain and use properly and effectively the facilities constructed and equipment provided under the Grant Aid		●
9	To bear all the expenses, other than those to be borne by the Grant Aid, necessary for the transportation and installation of the equipment		●

(B/A: Banking Arrangement, A/P: Authorization to pay, N/A: Not Applicable)



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Recommendation to the Governor on the AMH Project

1. Recruitment of Medical Specialists

Securing medical specialist is one of critical & essential prerequisites to attain the project goal successfully, hence the Japanese side pays high attention to the progress of recruiting them. Table (A) shows the remarkable result of PGA's efforts to this end and they well deserve praise. Currently PGA offers two (2) positions for medical specialists but is still waiting for applications.

Specialty	Permanent	Contract	Part-time/ Visiting	Start from:
■ Internal Medicine	1			From April, 2009
■ Surgery	Still Vacant	1	1	From July
■ Ob/Gyn			1	From July
■ Pediatrics			1	From July
Anesthesiology		1		5days/w, in-place
Radiology		1		1day/m, in-place
Pathology		1		1 day/m, in-place
■ EENT			1	From July
Specialty Total	1	4	4	
GP (resident)	4			
Dentist	1			

The team has praise for PGA's efforts so far and make following suggestions.

- 1) To conclude the affiliation agreements with part-time and visiting consultants by the end of July.
- 2) To continue efforts to recruit permanent specialists for surgery and obstetrics/gynecology.
- 3) To retain specialist who are employed or contracted with maximum efforts.

2. Strengthening of Hospital Management to improve Cost Recovery

Cost recovery ratio (Services income/Total expenditures) of AMH shows a remarkable improvement during the first half of 2009 compared to 2008. Just a revision of tariff makes this difference. If new AMH could uplift its cost recovery ratio from current 14% to 20% as same level as current Biliran, AMH may cover the additional operational costs which is expected to increase, by its income increase only. This means that PGA may not need to bear the additional budgetary burden to run the new AMH.

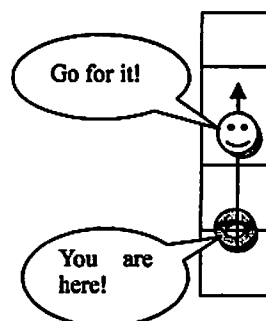
3 Hospitals Comparison of Cost Recovery Rate (unit: 000) in 2008

Item	Period	AMH		Biliran	Benguet
		2008	1-5, 2009	2008	2008
DOH Licensing level		1		2	3
1. Generated Income (A)		2,849	1,526	9,908	55,702
2. Total Expenditure (B)		31,878	10,898	48,293	87,408
3. Cost Recovery Ratio (A/B)		9%	14%	21%	63%

JICA study team expects PGA to keep AMH from being financed heavily in the long run, since appropriate distribution of health resources among hospitals is believed the base of well functioning local health referral system. To this end, following suggestions are made in order to enhance AMH's financial independence.

- 1) Building Hospital Management Capacity

JICA team assesses the current level of AMH's Hospital Management as follows from the information utilization view point. As AMH is aiming for Level 3 hospital, hospital management capacity must be strengthened especially among top management.

Grade		Information used for the management
	3	Grade-2 + in-hospital Information used for assessing achievement of its strategic goals (performance indicators): Personal performance measurement, Cost Analysis by unit and/or by patient
	2	Grade-1 + information produced in-hospital for the purpose of simple management Monthly Activity Report, General Cost Analysis
	1	Managed based on the information produced by government order Annual Hospital Report, Mortality Report, Budgetary Report

- a) To enhance the competence of the top of administrative officer as the chief's right-hand man
 - b) To provide administrative staff with chances to develop their capacities and to learn advanced practices in other hospitals.
- 2) To hold down the increase of hospital employees except for specialists
Current AMH has already enough staff even for 50 beds hospital in both AMH and other offices.
 - 3) To take measures to prevent occurring services interruption by stock-out of drugs and supplies and by equipment break-down

Such stock-out & breakdown makes AMH and PGA lost not only patients' confidence but chances to generate income. JICA team fully supports PGA's ideas to establish Trust Funds of laboratory tests and X-ray exams for AMH in order to buy consumables and supplies in a timely manner.

- a) 1st. priority- to allow AMH creating the Revolving Funds of Laboratory tests and X-ray exams.
- b) 2nd. priority- to expand the trust funds schemes to the whole hospital by allowing AMH retaining its income and disposing it.

4. Increasing Patient's Satisfaction

1) Result of the survey

Complaints mainly concentrate on Cleanliness and Staff's attitude

Category	Item	Rate				
		Very Satisfied	-	Gray	-	Very Dissatisfied
About services	<i>politeness of explanation</i>	4	10	11	4	0
	<i>period of hospitalization</i>	8	11	8	3	0
	<i>skill of treatment</i>	4	14	9	2	1
	<i>skill of nursing</i>	5	13	12	0	0
	<i>arrangement of equipment</i>	0	8	10	7	5
	<i>doctor's attitude</i>	3	17	7	1	2
	<i>doctor's vocabulary</i>	2	13	9	2	1
About facility	<i>in-building atmosphere</i>	1	7	10	9	3
	<i>in-building cleanliness</i>	2	6	9	10	3
	<i>comfort of bed rooms</i>	1	11	8	7	3
	<i>comfort of toilets and utilities</i>	0	7	5	10	8
	<i>meals</i>	3	12	11	4	0
about staffs manners	<i>staff's manner of speaking</i>	4	16	8	1	1
	<i>staff's greetings</i>	4	14	8	1	3
	<i>regards to patient's privacy</i>	5	15	8	1	1
	<i>procedural understandability</i>	5	13	7	3	1
	<i>staff's sensitivity to you</i>	3	9	8	6	3

2) Suggestions:

- a) To expand 5S activities to AMH from the Provincial Office in respond to customers' opinion.
Preventive maintenance and daily care of equipment by end-users are part of 5S activities.
- b) To take measures to respond quickly to patient' complaints,
- c) Governor's unscheduled visits to AMH surely make difference in staff's behavior.



4-2 Explanation of the Draft Report

MINUTES OF DISCUSSIONS

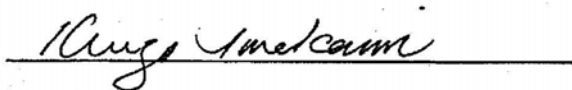
ON THE PREPARATORY SURVEY 3 (Explanation of the Draft Report) ON THE PROJECT FOR IMPROVEMENT OF AURORA MEMORIAL HOSPITAL IN THE REPUBLIC OF THE PHILIPPINES

In June 2009, the Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched the Preparatory Survey 2(Basic Design) on the Project for Improvement of Aurora Memorial Hospital (hereinafter referred to as "the Project") in the Republic of the Philippines (hereinafter referred to as "the Philippines")and through discussions, field surveys, and technical examination of the results in Japan, JICA prepared the draft report of the study.

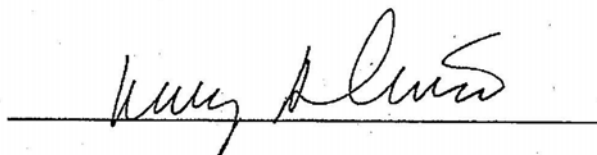
In order to explain and to consult the Government of the Philippines on the components of the draft report, JICA sent to Philippines the Draft Report Explanation Team (hereinafter referred to as "the Team"), which is headed by Mr. Kenzo IWAKAMI, Senior Representative, JICA Philippines Office, from January 10 to 26.

As a result of discussions, both parties confirmed the main items described on the attached sheets.

Baler, Province of Aurora, January 20, 2010



Kenzo IWAKAMI
Team leader
Preparatory Survey Team
Japan International Cooperation
Agency
Japan



Hon. Bellaflor J. Angara-CASTILLO
Governor,
Provincial Government of Aurora
Republic of the Philippines

ATTACHMENT

1. Components of the Draft Final Report

The Government of the Philippines agreed and accepted in principle the components of the draft final report and the recommendations explained by the Team.

2. Japan's Grant Aid scheme

Philippines side understands the Japan's Grant Aid (JGA) Scheme and the necessary measures to be taken by the Government of Philippines as explained by the Team and described in Annex-4 and Annex-5 of the Minutes of Discussions signed by both parties on June 19, 2009.

3. Schedule of the Study

JICA will complete the final report in accordance with the confirmed items and send it to the Government of Philippines by the end of March, 2010.

4. Confidentiality of the Project

Both sides confirmed that all information related to the Project including detailed specifications of the equipment and other technical information shall not be released to any outside party before the signing of all the Contract(s) for the Project.

5. Other relevant issues

5-1. The Team explained the cost estimation of the Project as described in Annex-1.

Both sides agreed that the Project Cost Estimation should never be duplicated or released to any outside party before signing of all the Contract(s) for the Project.

Philippines side understood that the Project Cost Estimation attached as Annex-1 is not final and is subject to change.

5-2. The Team explained the amount of VAT refund. The Philippines side agreed to provide for the VAT component of the Project.

5-3. Philippines side promised to demolish existing buildings in the site and to fill with backfill materials the site higher than road level before July, 2010.

5-4. Both sides understood that Philippines side continues to exert effort to secure permanent specialist in Surgery and Obstetrics/Gynecology.

5-5. The Team strongly recommended to assign a Head of Administration and a Financial Officer of the Hospital. The Philippines side concurred with the recommendation.

5-6. Both sides understood that it is essential to strengthen the capacity of the hospital staff in order to attain the project goals. The Philippines side confirmed to develop the training plan and implement it with enough budget based on the training needs survey

of Aurora Memorial Hospital.

5-7. Philippines side understood that following measures should be taken to strengthen the Aurora Memorial Hospital management foundation:

5-7-1. Hospital income retention scheme for Aurora Memorial Hospital should be institutionalized to ensure financial viability taking into consideration the social responsibility of the Hospital. Philippines side starts studying the said schemes of other hospitals in the country and adopt appropriate model for Aurora Memorial Hospital through local ordinance.

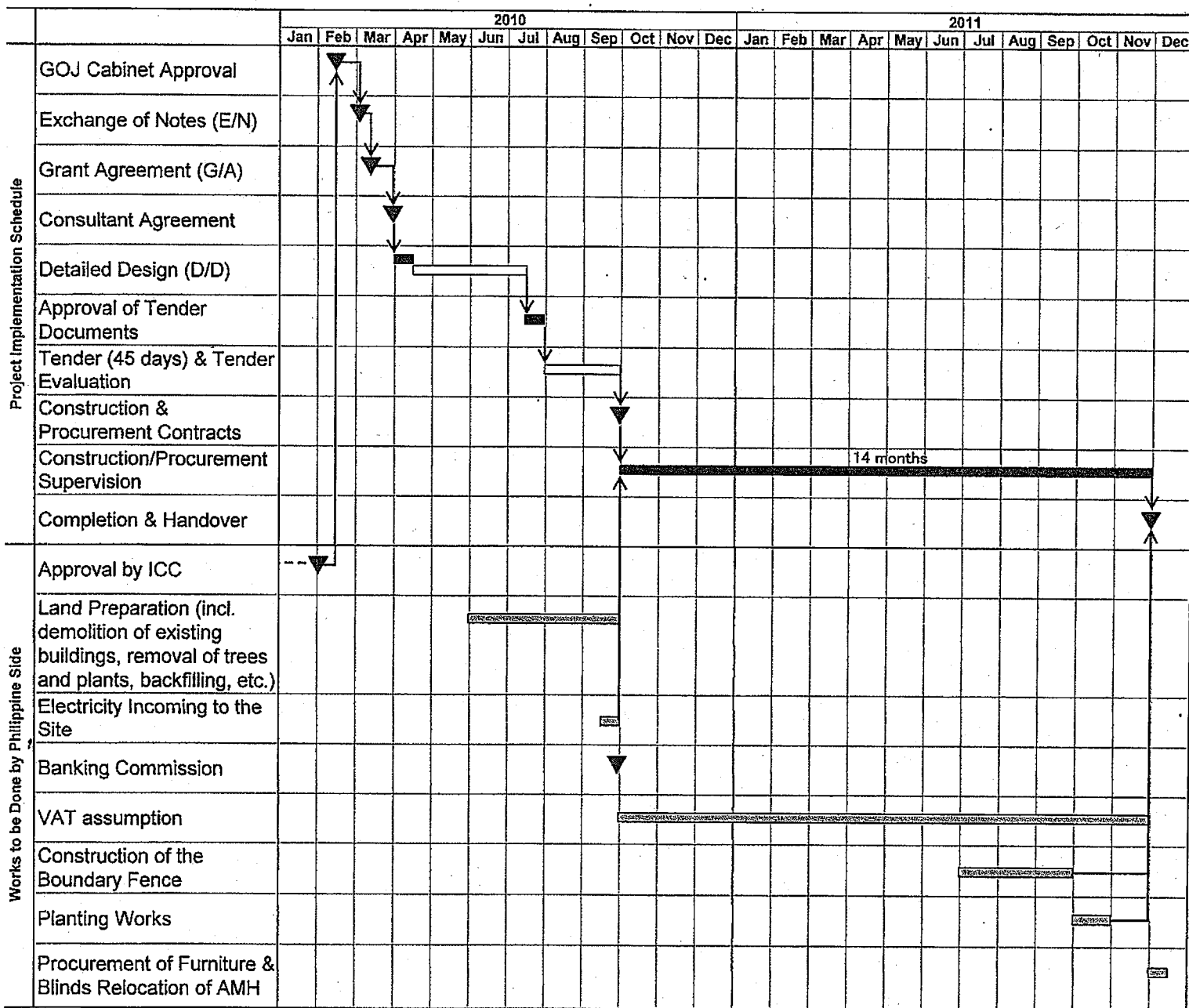
5-7-2. In addition to assigning a financial officer to Aurora Memorial Hospital, Philippines side agreed to develop and introduce hospital information system, a computer network system, if possible, that can precisely and quickly produce the accounting and medical information on inpatient and outpatient separately.

5-8. Philippines side agreed that Aurora Memorial Hospital starts 5-S activities and set it in place by the inauguration of the new hospital.

5-9. Both sides understood that a "Referral Office" under the Provincial Health Office should be set up at Aurora Memorial Hospital with functions of intermediation and coordination with other health facilities and assign full-time staff in order to make "two-way referral system" functioning effectively.

Annex-1 Cost Estimation
Annex-2 Implementation Schedule

Project Implementation Schedule
Project for Improvement of Aurora Memorial Hospital



5. References

No.	Title	Issuing Institution	Issued Year
1	THE NATIONAL BUILDING CODE OF THE PHILIPPINES	Department of Public Works & Highways	2007
2	FIRE CODE OF THE PHILIPPINES	Department of the Interior and Local Government	2008
3	NATIONAL STRUCTURAL CODE OF THE PHILIPPINES 2001 Volume I, FIFTH EDITION	Association of Structural Engineers of the Philippines	2001
4	THE LABOR CODE OF THE PHILIPPINES	Presidential Decree No. 442 Fidel V. Ramos, President of the Philippines	1996
5	THE PHILIPPINE NURSING ACT OF 2002 2004 EDITION	The Nursing Board	2004
6	MANUAL ON TECHNICAL GUIDELINES FOR HOSPITALS AND HEALTH FACILITIES PLANNING AND DESIGN	Department of Health, National Center for Health Facility Development	2001
7	A HANDBOOK ON INTER-LOCAL HEALTH ZONES, District Health System in a Devolved Setting	Department of Health	2002
8	The FOURmula One for Health 2005-2010	Department of Health	2009
9	THE IMPLEMENTING RULES AND REGULATIONS (IRR) OF REPUBLIC ACT 9003	Department of Environment and Natural Resources	2000
10	HEALTH CARE WASTE MANAGEMENT MANUAL	Department of Health	2004
11	Making your local health system work	Dr. Eddie G. Dorotan, Dr. Zsolt Mogyorosy / DOH, GTZ	2004
12	PHILIPPINES, ROADS ATLAS 4 TH Edition	PDP DIGITAL, INC.	2008
13	THE PHILIPPINES, TRAVEL MAP FORTH Edition	NATIONAL BOOK STORE	2009
14	THE PHILIPPINES, COUNTRY MAP 3RD Edition	PERIPLUS	

6. Other Relevant Data

6-1. Topographic Map of the Site



6-2. Boring Data of the Site

(1) Bore Hole Point "BH-1"

FINAL BOREHOLE LOG AND SUMMARY OF TEST RESULTS															Appendix A-1					
															Sheet 1 of 1					
PROJECT: <u>PROPOSED AURORA MEMORIAL HOSPITAL</u>															HOLE NO.: <u>BH-1</u>					
LOCATION: <u>National Road, Barangay Reserva, Baler, Aurora</u>															ELEV.: <u>4.86 m</u>					
DATE DRILLED: <u>11 Jun 2009</u>															WATER LEVEL: <u>0.60 m below ground surface</u>					
DATE GAUGED: <u>12 Jun 2009</u>																				
HOLE COORDINATES: <u>Northing:</u>															<u>Easting:</u>					
RIG USED: <u>TOHO Drilling Machine</u>																				
DEPTH, m	SAMPLE NUMBER	% RECOVERY	% ROD	SAMPLE TYPE	LOG SYMBOL	UNIFIED CLASSIFICATION	DESCRIPTION	STANDARD PENETRATION TEST				GRAPH	MOISTURE CONTENT, %	ATTERBERG LIMITS		SIEVE ANALYSIS % PASSING SIEVE NO.				
								BLOWS	15 cm	15 cm	15 cm			N-VALUE	LL (%)	PI (%)	4	10	40	100
							Ground Surface													
1	SS-1	100				CL	Sandy CLAY, brown; appreciable amount of fine sand; traces of plant roots; moderate plasticity; soft.	1	2	2	4		31	34	19	100	88	58	54	
	SS-2	89				SM	Silty Fine to Medium SAND, dark brown; little non-plastic fines; medium dense.	3	4	3	7		27		NP	100	82	13	7*	
2	SS-3	89					Fine SAND, brown to dark brown; predominantly fine-grained sand; negligible fines; medium dense.	4	5	7	12		24		NP	100	84	12	3	
3	SS-4	64				SP		3	5	8	13									
4	SS-5	84					Fine to Medium SAND, dark brown; negligible non plastic fines; medium dense to very dense.	7	9	10	19		20		NP	100	97	36	4	
5	SS-6	100						23	33	48	81									
6	SS-7	100				SP SM	Silty SAND, brownish gray; fine to coarse-grained; traces of subrounded fine gravel; non plastic fines; very dense.	25	29	33	62		9		NP	82	62	30	13	
7	SS-8	89					Silty SAND, gray; fine to medium grained; traces of subrounded fine gravel; non plastic fines; dense.	17	17	23	40									
8	SS-9	84				SM		13	18	28	46									
9	SS-10	84					Silty SAND, gray; fine to medium-grained; traces of subrounded pea size gravel; appreciable non plastic fines; dense to very dense.	21	30	46	76		20		NP	100	99	82	21	
10	SS-11	89						18	22	32	54									
							End of Borehole at 10.00 m Depth.													
11																				
12																				
13																				
14																				
15																				
16																				
17																				
18																				
19																				
20																				

LEGEND: SS-SPLIT SPOON SAMPLE WS-WASH SAMPLE UDS-UNDISTURBED SAMPLE CR-CORE SAMPLE DR-DRIVE SAMPLE

OTHER TESTS/REMARKS: * with hydrometer analysis
Specific Gravity of SS-2 = 2.70

(2) Bore Hole Point "BH-2"

FINAL BOREHOLE LOG AND SUMMARY OF TEST RESULTS															Appendix A-2					
															Sheet 1 of 1					
PROJECT: PROPOSED AURORA MEMORIAL HOSPITAL										HOLE NO.: BH-2										
LOCATION: National Road, Barangay Reserva, Baler, Aurora										ELEV.: 4.63 m		DEPTH: 10.00 m								
DATE DRILLED: 07 Jun 2009					WATER LEVEL: 0.43 m below ground surface					DATE GAUGED: 13 Jun 2009										
HOLE COORDINATES: Northing: _____ Easting: _____										RIG USED: TOHO Drilling Machine										
DEPTH, m	SAMPLE NUMBER	% RECOVERY	% ROD	SAMPLE TYPE	LOG SYMBOL	UNIFIED CLASSIFICATION	DESCRIPTION	STANDARD PENETRATION TEST				GRAPH	MOISTURE CONTENT, %	ATTERBERG LIMITS		SIEVE ANALYSIS % PASSING SIEVE NO.				
								BLOWS			N-VALUE			LL (%)	PI (%)	4	10	40	100	200
								15 cm	15 cm	15 cm										
							Ground Surface													
1	SS-1	89				SM	Silty SAND, brown; fine to very fine grained with pockets of clay; considerable slight to non plastic fines; loose.	2	3	5	8		19	25	2	100	85	32	26	
	SS-2	89				SP	Fine to Medium SAND, dark brown; negligible amount of non plastic fines; medium dense.	10	11	11	22		23		NP	100	84	13	4*	
2	SS-3	100				SP SM	Silty Fine to Medium SAND, dark brown; traces of fine to medium subrounded gravel; little non-plastic fines; medium dense to very dense.	9	9	10	19		21		NP	100	85	16	7	
3	SS-4	89				SP	Fine to Medium SAND, dark brown; negligible amount of non plastic fines; medium dense.	3	5	8	13									
4	SS-5	89				GP	Sandy GRAVEL, grayish brown; subrounded fine to medium gravel; negligible non plastic fines; medium dense.	8	10	14	24		22		NP	98	92	56	8	
5	SS-6	100						19	45	69	114									
6	SS-7	89				SP	Medium to Coarse SAND, brownish gray; with subrounded fine to medium gravel; negligible fines; very dense.	16	12	10	22									
7	SS-8	78						21	28	54	82		10		NP	86	43	13	5	
8	SS-9	84				SM	Silty SAND, dark brown; fine to medium-grained; traces of fine to medium subrounded gravel; little to appreciable non plastic fines; very dense.	22	29	22	51									
9	SS-10	76						17	18	49	67									
10	SS-11	84					End of Borehole at 10.00 m Depth.	18	22	30	52		13		NP	96	91	64	28	
11																				
12																				
13																				
14																				
15																				
16																				
17																				
18																				
19																				
20																				

LEGEND:	SS-SPLIT SPOON SAMPLE	WS-WASH SAMPLE	UDS-UNDISTURBED SAMPLE	CR-CORE SAMPLE	DR-DRIVE SAMPLE
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OTHER TESTS/REMARKS: * with hydrometer analysis
Specific Gravity of SS-2 = 2.71

(3) Bore Hole Point "BH-3"

FINAL BOREHOLE LOG AND SUMMARY OF TEST RESULTS															Appendix A-3					
															Sheet 1 of 1					
PROJECT: PROPOSED AURORA MEMORIAL HOSPITAL										HOLE NO.: BH-3										
LOCATION: National Road, Barangay Reserva, Baler, Aurora										ELEV.: 4.71 m		DEPTH: 10.00 m								
DATE DRILLED: 13 Jun 2009					WATER LEVEL: 0.50 m below ground surface					DATE GAUGED: 14 Jun 2009										
HOLE COORDINATES: Northing: _____ Easting: _____										RIG USED: TOHO Drilling Machine										
DEPTH, m	SAMPLE NUMBER	% RECOVERY	% ROD	SAMPLE TYPE	LOG SYMBOL	UNIFIED CLASSIFICATION	DESCRIPTION	STANDARD PENETRATION TEST				MOISTURE CONTENT, %	ATTERBERG LIMITS		SIEVE ANALYSIS % PASSING SIEVE NO.					
								BLOWS			N-VALUE		GRAPH	LL (%)	PI (%)	4	10	40	100	200
								15 cm	15 cm	15 cm										
							Ground Surface													
1	SS-1	100				SC	Clayey SAND, brown; very fine to fine grained traces of root fragments; moderate to low plastic fines; loose.	3	3	4	7		23	27	12	100	82	24	19	
	SS-2	89						8	8	14	22		18		NP	100	83	13	4*	
2	SS-3	100					Fine to Medium SAND, gray to grayish brown; traces of plant roots; negligible non-plastic fines; medium dense.	9	10	12	22		21		NP	100	79	12	4	
3	SS-4	73				SP		5	8	10	18									
4	SS-5	89					Fine SAND, grayish brown; predominantly fine-grained; traces of fine subrounded gravel; negligible non plastic fines; very dense.	10	11	17	28									
5	SS-6	84					Silty SAND, gray; fine to medium grained; traces of fine to medium subrounded gravel; little non plastic fines; very dense.	28	48	40	88		18		NP	100	98	89	8	
6	SS-7	89				SP SM		34	34	25	59									
7	SS-8	84					Silty Gravelly SAND, gray; fine to coarse-grained with subrounded fine to medium gravel; little non plastic fines; very dense.	16	22	29	51		8		NP	71	53	25	13	
8	SS-9	84						18	28	32	60									
9	SS-10	84				SM	Silty SAND, gray; fine to medium-grained; traces of fine to medium subrounded gravel; appreciable non plastic fines; very dense to dense.	14	22	29	51		18		NP	96	91	68	22	
10	SS-11	89						22	22	26	48									
							End of Borehole at 10.00 m Depth.													
11																				
12																				
13																				
14																				
15																				
16																				
17																				
18																				
19																				
20																				

LEGEND:	SS-SPLIT SPOON SAMPLE	WS-WASH SAMPLE	UDS-UNDISTURBED SAMPLE	CR-CORE SAMPLE	DR-DRIVE SAMPLE
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OTHER TESTS/REMARKS: * with hydrometer analysis
Specific Gravity of SS-2 = 2.70

(4) Bore Hole Point "BH-4"

FINAL BOREHOLE LOG AND SUMMARY OF TEST RESULTS															Appendix A-4				
PROJECT: <u>PROPOSED AURORA MEMORIAL HOSPITAL</u>															HOLE NO.: <u>BH-4</u>				
LOCATION: <u>National Road, Barangay Reserva, Baler, Aurora</u>															ELEV.: <u>4.72 m</u>		DEPTH: <u>10.00 m</u>		
DATE DRILLED: <u>14 Jun 2009</u>															WATER LEVEL: <u>0.50 m below ground surface</u>		DATE GAUGED: <u>14 Jun 2009</u>		
HOLE COORDINATES: Northing: _____ Easting: _____															RIG USED: <u>TOHO Drilling Machine</u>				
DEPTH, m	SAMPLE NUMBER	% RECOVERY	% ROD	SAMPLE TYPE	LOG SYMBOL	UNIFIED CLASSIFICATION	DESCRIPTION	STANDARD PENETRATION TEST				MOISTURE CONTENT, %	ATTERBERG LIMITS		SIEVE ANALYSIS % PASSING SIEVE NO.				
								BLOWS			N-VALUE		GRAPH	LL (%)	PI (%)	4	10	40	100
15 cm	15 cm	15 cm																	
							Ground Surface												
1	SS-1	89				SC	Clayey SAND, brown; fine to medium-grained; traces of root fragments; appreciable low to moderately plastic fines; loose.	2	3	6	8		30	33	17	100	79	31	28
	SS-2	89						14	14	22	36		24	NP	100	68	6	2*	
2	SS-3	100				SP	Fine to Medium SAND, grayish brown; traces of plant roots; negligible non-plastic fines; dense to medium dense.	4	6	12	18		20	NP	100	68	10	5	
3	SS-4	84						5	8	10	18								
4	SS-5	84						11	14	25	39		21	NP	99	94	52	6	4
5	SS-6	78						22	42	55	97								
6	SS-7	87				SP SM	Silty Gravelly SAND, gray; coarse to medium grained with subrounded fine to coarse gravel; appreciable non plastic fines; very dense.	28	29	33	62								
7	SS-8	73						24	28	36	64		7	NP	68	45	22	13	10
8	SS-9	73						23	29	22	51								
9	SS-10	78				SM	Silty SAND, gray; very fine to fine grained; traces of fine to coarse subrounded gravel; appreciable non plastic fines; very dense and dense.	22	29	29	58		17	NP	91	87	72	23	13
10	SS-11	76					End of Borehole at 10.00 m Depth.	12	22	29	51								
11																			
12																			
13																			
14																			
15																			
16																			
17																			
18																			
19																			
20																			

LEGEND:	SS-SPLIT SPOON SAMPLE	WS-WASH SAMPLE	UDS-UNDISTURBED SAMPLE	CR-CORE SAMPLE	DR-DRIVE SAMPLE
OTHER TESTS/REMARKS: * with hydrometer analysis Specific Gravity of SS-2 = 2.70					

6-3 Water Quality Survey Result

Azusa Sekkei Co. Ltd.

Drinking Water Quality Monitoring Report

CRL-0609-019-001

5

4.2 Results and Discussions

Table 1 shows the test results of the ground water samples taken from the subject deepwells on June 11, 2009.

Table 1 – Summary of Test Results for Ground Water Samples

Parameters, units	KOICA	EU-1	EU-2	COCO	DPWH	PNSDW Limits
pH	7.52	7.63	7.64	7.64	7.70	6.5-8.5
Temperature, °C	28.3	27.9	28.4	28	29.3	---
Conductivity, $\mu\text{S}/\text{cm}$	160	180	180	180	190	---
Color, PCU	< 4	< 4	< 4	< 4	< 4	10
Turbidity, NTU	0.1	0.1	0.1	0.1	0.1	5
COD, mg/L	60	50	50	30	45	---
TS, mg/L	71	98	98	98	114	500 as TDS
Chloride, mg/L	1.1	1.1	2.2	1.6	1.1	250
Total Hardness as CaCO_3 , mg/L	20	40	39	34	34	300 as CaCO_3
Nitrate+Nitrite, mg/L	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	50
Nitrite, mg/L	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	3
Phosphate, mg/L	0.09	0.08	0.08	0.08	0.08	---
Total Phosphorus, mg/L	4.8	7.8	16	3.7	9.8	---
Sulfide, mg/L	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.05
Hexavalent Chromium, mg/L	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	---
Ammonia, mg/L	0.24	0.11	0.11	< 0.05	< 0.05	---
Fluoride, mg/L	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	1.0
Sulfate, mg/L	12	12	12	12	11	250
Potassium Permanganate Consumption, mg/L	Passed	Passed	Passed	Passed	Passed	---
Arsenic, mg/L	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	0.05
Copper, mg/L	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	1.0
Iron, mg/L	< 0.08	0.56	< 0.08	< 0.08	< 0.08	1.0
Manganese, mg/L	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	0.40
Zinc, mg/L	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	5.0
Total Coliforms, MPN/100mL	6.9	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1
HPC, CFU/mL	12	6.0	13	15	7.5	< 500



CRL Environmental
Corporation

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■ Laboratory: Bldg. 2 Berthaphil Cmpd. I • Berthaphil Inc. Industrial Park • Jose Abad Santos Ave.
• Clark Freeport Zone (CFZ) • Pampanga, Philippines 2009
Tel: (63 45) 599-3943 • (63 2) 299-5826 • Fax (63 45) 599-3963