Ministry of Education
Republic of Ghana

No.

OUTLINE DESIGN STUDY REPORT ON THE PROJECT FOR IMPROVEMENT OF ACCESS TO BASIC EDUCATION IN DEPRIVED AREAS IN REPUBLIC OF GHANA

SEPTEMBER 2009

JAPAN INTERNATIONAL COOPERATION AGENCY

SEKKEI KEIKAKU, INC.

Ministry of Education
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PREFACE

In response to a request from the Government of the Republic of Ghana, the Government of Japan decided to conduct a outline design study on the Project for Improvement of Access to Basic Education in Deprived Areas and entrusted the study to the Japan International Cooperation Agency (JICA).

JICA sent to Ghana a study team from January 11 to February 20, 2009.

The team held discussions with the officials concerned of the Government of Ghana, and conducted a field study at the study area. After the team returned to Japan, further studies were made. Then, a mission was sent to Ghana in order to discuss a draft outline design, and as this result, the present report was finalized.

I hope that this report will contribute to the promotion of the project and to the enhancement of friendly relations between our two countries.

I wish to express my sincere appreciation to the officials concerned of the Government of the Republic of Ghana for their close cooperation extended to the teams.

Sepptember 2009

Yoshihisa Uedai
Vice-President
Japan International Cooperation Agency

September, 2009

Letter of Transmittal

We are pleased to submit to you the outline design study report on the project for improvement of access to basic education in deprived areas in the republic of Ghana.

This study was conducted by Sekkei Keikaku, Inc., under a contract to JICA, during the period from November, 2008 to September 2009. In conducting the study, we have examined the feasibility and rationale of the project with due consideration to the present situation of Ghana and formulated the most appropriate outline design for the project under Japan's grant aid scheme.

Finally, we hope that this report will contribute to further promotion of the project.

Very truly yours,

Shiro Sasaki
Chief Consultant,
Basic design study team on
the project for improvement of access to basic education
in deprived areas
Sekkei Keikaku, Inc.,

Summary

The Republic of Ghana has established the Ghana Poverty Reduction Strategy I & II and took human resource development up as the top priority theme. In response to the advocate of Education for All (EFA), the Government of Ghana has established the Free Compulsory Universal Basic Education (fCUBE) Program and the Education Strategic Plan (ESP) and realized completely free basic education by introducing the Capitation Grant since 2005 for the realizing of fair access to education.

As a result of these educational policies, the total school attendance rate in Ghana has greatly improved to 95.2% for primary education and 78.8% for junior high school education during the 2007/2008 fiscal year. On the other hand, however, the regional differences in education and concern for improving school completion rate have become obvious. Under the situation, Ghana conducted the ranking of the 138 districts in the country for gender education, school attendance rate, qualities of teachers, and educational infrastructure and, as a result, defined 53 lover ranking districts as Deprived Areas thereby aiming at improving the school remaining rate, school dropout rate and total school attendance rate in these Deprived Areas. As one of the reasons for the low ranking of the Deprived Areas, appropriate educational environment has not been secured. The Ministry of Education has been asking assistance donors for the improvement of educational facilities in these districts.

In view of the above background, the Government of Ghana requested from the Government of Japan the Grant Aid Program for the construction of educational facilities and water supply facilities and procurement of equipment in the six districts (Northern Region: Sawla Tuna Kalba, Bunkpurugu Yunyoo, Karaga, Central Gonja; and Central Region: Assin North, Assin South) among the above-mentioned 53 districts. The Government of Japan conducted preliminary surveys based on the Request during periods from October through November 2007 and in January 2008 and, a result, confirmed the background, objectives, necessities and appropriateness of the Request. In addition, through the surveys, the possibility of the implementation of the school construction project with the Grant Aid Program for Community Empowerment was studied, and Ghana's project implementing organization and technical capabilities were also examined. As a result, it was confirmed that that the Ministry of Education of Ghana has standard drawings, that capabilities of local consultants and contractors are high, that construction quality of existing school facilities are good, and that there are no problems on project implementing organization and technical levels. Thus, the Government of Japan decided upon to conduct a preparatory survey (outline design) necessary for the implementation of the Grant Aid Program of Japan based on local specifications and design as a premise of using the Community Empowerment Grant Aid. Then, the Japan International Cooperation Agency (JICA) dispatched the Project Survey Team to Ghana during a period from January 10 through February 22, 2009. The Survey Team confirmed the contents of the Request and examined the basic concept for the facilities and educational equipment and the background of the Request and studied the necessity and appropriateness of the implementation of the Project. Further, the Survey Team summarized the basic design and educational equipment selection based on the analyses made after returning to Japan and conducted the presentation of the Draft of the Outline Design Report during a period from May 17 through 30, 2009. The Team explained the tender documents to the Ghanaian Side during a period from August 9 through august 20, 2009 and prepared this Outline Design Report of the Project for Improvement of Access to Basic Education in Deprived Areas in Republic of Ghana.

The contents of the Request of Ghana were to build school facilities for existing 53 primary schools and 7 junior

high schools in the deprived areas of six districts. However, since schools in planning stage and schools having already completed facilities were included in the Request, those schools were changed and existing 54 primary schools and 7 junior high schools in the six districts were selected for the outline survey for the basic design. Although the Request had asked for constructing wells, the well construction was eliminated from the Project for the reason that there were wells or other water sources in the vicinity of those schools. Then, the Team explained the Ghanaian Side about Japan's severe ODA situation and held a discussion with them. The Team set up the following school selection standards based on the discussion and selected 37 schools from proposed 61 schools for the Project.

① Schools requiring construction of more than 3 classrooms judging from existing classroom conditions:
② A school is regarded as necessary to improve its school facilities by national and regional development projects.
③ A school site where basic education is being conducted at site survey time.
④ A school has submitted a donation certificate of land ownership and site survey map.
⑤ In a requested school, facility improvement project is not being conducted by the Government of Ghana, other donors or NGO group when site survey is conducted.
⑥ A school is securing a geologically and environmentally suitable size land for facility improvement.
⑦ A school is not securing adequate access road for construction vehicles.
⑧ A school is having data on the number of students and it is possible to forecast the number of students who are willing to attend at the school.

Scales and contents of facilities to be provided to Project schools were based on the following principles.

① It is assumed that only single session classes will be taught.
② Facility sizes shall be decided upon based on the number of students at each Project school when the preparatory survey was conducted.
③ A necessary number of classrooms shall be calculated based on the classroom capacity of 45 students per classroom for primary schools and 35 students per classroom for junior high schools.
④The size of a classroom shall be 45.82m^2 (6.15m×7.45m) for primary schools and 62.39m^2 (7.05m×8.85m) for junior high schools in accordance with the standard of the Ministry of Education.
⑤A 3-classroom unit and a 6-classroom unit buildings shall be planned based on the need of each Project school. A Need for only one- or two-classroom units shall be coped with conducting double-shift classes following to the real cases in Ghana.
⑥A headteacher's room with store shall be provided only to those schools not having one.
⑦Junior high schools not having a staff room shall be provided with a staff room.
⑧Even if a library is provided, it is assumed that it will not be effectively used. Thus, the Project will not provide a library.
⑨ One toilet booth per classroom shall be provided. However, if toilet booths are already installed to a school, the

existing number of booths shall be subtracted from the calculated number for the school. The maximum number of toilet booths shall be the same to the number of classrooms.

⑩ Project school sites having no lodgings or located in areas with no lodgings in the vicinity will be provided with 3-unit lodgings per school, that is, a minimum standard type of the Ministry of Education. If a school site already has one or two units of lodging facility, only two units or one unit shall be provided.

⑪ Chairs and desks for students and teachers and blackboard will be provided to each Project school.

The result of the contents of these facility are listed in the following table:

Name of Facility		Type	Facility Content	Building Area (m^2)	Floor Area (m^2)
Primary School	Classroom Building	Type 1	3 Classroom + Headteacher's Room（with Store）	203.39	294.96
		Type 2	3 Classroom	174.33	255.33
Junior High School	Classroom Building	Type 3	3 Classroom（with Store）+ Headteacher's Room（with Store）+ Teachers' Room	310.37	432.65
		Type 4	3 Classroom（with Store）	251.87	354.64
Primary and Junior High Schools	Toilet Building	Type A	3 Booths（KVIP Type）	18.30	24.07
		Type B	4 Booths（KVIP Type）	24.40	30.79
		Type C	2 Booths（KVIP Type）	12.20	17.36
	Teachers' Accommodation		3 Units (1LDK Type）	207.33	291.06

The outline furniture for each room is listed in the following table:

Building	Room	Item	Planed Units/Room
Primary and Junior High Schools' Classroom Buildings	Classroom	Students' Desk & Chair Unit（Fixed Type）	23（Primary）, 18（Junior High）
		Teachers' Desks and Chairs	1 each
	Headteacher's Room	Headteacher's Desk & Chair (Including units for visitors）	1 each, 2 for visitors
	Staff Room (only Junior High Schools）	Teachers' Desks & Chairs and Meeting Table	6 each, 1 meeting table

Planned facilities for Project schools are listed in the following table:

		Name of School	Number of Exist Classrooms			Classrooms to be Improved			Rooms to be Improved		Classroom Bldg Type				Toilet Booths to be Improved			Toilet Bldg Type			Teachers' Accommod. Units	
			Not Usable	Usable	Number	Rebuild	New	Total	Hd. Teacher's Rm w/Str	Teachers' Rm	1	2	3	4	Exist No.	New No.	Total Booths	A	B	C	Exist Units	New Units
Sawla-Tuna-Kalba District																						
1	STK1	Tuoyiri Primary	0	0	3.49	0	3	3	1	0	1	0	0	0	0	3	3	1	0	0	0	3
2	STK2	Poru Primary	2	0	4.91	2	1	3	1	0	1	0	0	0	0	3	3	1	0	0	0	3
3	STK4	Gbelpie Primary	3	0	4.67	3	0	3	1	0	1	0	0	0	0	3	3	1	0	0	0	3
4	STK5	Dani-Uuri Primary	3	0	3.58	3	0	3	1	0	1	0	0	0	0	3	3	1	0	0	0	3
5	STK9	Konfali Primary	3	0	3.47	3	0	3	1	0	1	0	0	0	0	3	3	1	0	0	0	3
Primary Schools' Subtotal			11	0	20.12	11	4	15	5	0	5	0	0	0	0	15	15	5	0	0	0	15
6	STK10	Kalba High School	0	3	4.20	0	3	3	0	0	0	0	0	1	4	2	6	0	0	1	0	3
J. High Schools' Subtotal			0	3	4.20	0	3	3	0	0	0	0	0	1	4	2	6	0	0	1	0	3
Primary & J. High Schools' Subtotal			11	3	24.32	11	7	18	5	0	5	0	0	1	4	17	21	5	0	1	0	18
Central Gonja District																						
7	CG3	Adape Primary	5	0	4.04	3	0	3	1	0	1	0	0	0	0	3	3	1	0	0	0	3
8	CG4	Chama Amezyn Primary	3	0	3.69	3	0	3	1	0	1	0	0	0	0	3	3	1	0	0	0	3
9	CG6	Kigbirpe Primary	0	0	3.91	0	3	3	1	0	1	0	0	0	0	3	3	1	0	0	0	3
10	CG8	Jukuku Primary	0	0	4.16	0	3	3	1	0	1	0	0	0	0	3	3	1	0	0	0	3
Primary Schools' Subtotal			8	0	15.80	6	6	12	4	0	4	0	0	0	0	12	12	4	0	0	0	12
11	CG1	Kpabuso J. High School	0	0	3.40	0	3	3	1	1	0	0	1	0	0	3	3	1	0	0	0	3
12	CG2	Sheri J. High School	3	3	3.40	3	0	3	1	1	0	0	1	0	4	2	6	0	0	1	0	3
J. High Schools' Subtotal			3	3	6.80	3	3	6	2	2	0	0	2	0	4	5	9	1	0	1	0	6
Primary & J. High Schools' Subtotal			11	3	22.6	9	9	18	6	2	4	0	2	0	4	17	21	5	0	1	0	18
Karaga District																						
13	KG1	Karaga L/A Primary	0	12	7.80	0	6	6	1	0	1	1	0	0	0	6	6	2	0	0	0	3
Primary Schools' Subtotal			0	12	7.80	0	6	6	1	0	1	1	0	0	0	6	6	2	0	0	0	3
Bunkpurugu District																						
14	BY2	Salimboukou 'B' Primary	6	0	18.96	6	0	6	1	0	1	1	0	0	2	4	6	0	1	0	7	0
15	BY3	Gbankoni Primary	6	0	7.98	6	0	6	1	0	1	1	0	0	0	6	6	2	0	0	4	0
16	BY5	Chintuing No.2 D/A Primary	6	0	5.91	3	0	3	1	0	1	0	0	0	0	3	3	1	0	0	0	0
17	BY6	Suanvusi Primary	3	0	3.78	3	0	3	1	0	1	0	0	0	0	3	3	1	0	0	0	0
18	BY7	Tusug Primary	6	0	7.49	6	0	6	1	0	1	1	0	0	0	6	6	2	0	0	0	0
19	BY10	Kungaar-Bugri Primary	3	0	6.16	3	3	6	1	0	1	1	0	0	4	2	6	0	0	1	4	0
Primary Schools' Subtotal			30	0	50.27	27	3	30	6	0	6	4	0	0	6	24	30	6	1	1	15	0
20	BY1	Kinkangu J. High School	3	0	6.06	3	3	6	1	1	0	0	1	1	0	6	6	2	0	0	0	0
21	BY8	Yunyoo J. High School	3	0	4.00	3	0	3	1	1	0	0	1	0	0	3	3	1	0	0	4	0
J. High Schools' Subtotal			6	0	10.06	6	3	9	2	2	0	0	2	1	0	9	9	3	0	0	4	0
Primary & J. High Schools' Subtotal			36	0	60.3238	33	6	39	8	2	6	4	2	1	6	33	39	9	1	1	19	0
Assin South District																						
22	AS1	Adubiase Presby Primary	6	0	6.22	6	0	6	1	0	1	1	0	0	0	6	6	2	0	0	0	3
23	AS2	Nyankomase Ahenko D/A Primary 'B'	3	0	5.96	3	0	3	1	0	1	0	0	0	0	3	3	1	0	0	0	3
24	AS3	Amanbete D/A Primary	6	0	6.04	6	0	6	1	0	1	1	0	0	0	6	6	2	0	0	6	0
25	AS4	Anyinabrim Methodist Primary	6	0	4.49	3	0	3	1	0	1	0	0	0	0	3	3	1	0	0	0	0
26	AS5	Mesomagor D/A Primary	6	0	4.24	3	0	3	1	0	1	0	0	0	0	3	3	1	0	0	6	0
27	AS6	Dominase D/A Primary	0	0	4.56	0	3	3	1	0	1	0	0	0	0	3	3	1	0	0	0	3
28	AS7	Akoteykrom D/A Primary	6	0	5.53	3	0	3	1	0	1	0	0	0	0	3	3	1	0	0	7	0
29	AS9	Adiembra Catholic Primary A	0	0	7.73	0	6	6	1	0	1	1	0	0	0	6	6	2	0	0	0	3
30	AS10	Homaho D/A Primary	8	0	6.00	6	0	6	1	0	1	1	0	0	4	2	6	0	0	1	0	0
Primary Schools' Subtotal			41	0	50.78	30	9	39	9	0	9	4	0	0	4	35	39	11	0	1	19	12
Assin North District																						
31	AN1	Bereku Nyamebekyere D/A Primary	6	0	3.36	3	0	3	1	0	1	0	0	0	0	3	3	1	0	0	0	0
32	AN2	Odumase Wawase D/A Primary	0	0	4.44	0	3	3	1	0	1	0	0	0	0	3	3	1	0	0	0	3
33	AN4	Sekanbodua M.A. Primary	3	0	4.16	3	0	3	1	0	1	0	0	0	0	3	3	1	0	0	0	3
34	AN5	Awisem Haji Idris Islamic Primary	6	0	9.02	6	0	6	1	0	1	1	0	0	3	3	6	1	0	0	0	3
35	AN8	Abotareye M.A. Primary	6	0	4.64	3	0	3	1	0	1	0	0	0	0	3	3	1	0	0	3	0
36	AN9	Afenase D/A Primary	0	0	5.33	0	3	3	1	0	1	0	0	0	0	3	3	1	0	0	0	3
37	AN-ALT	Krofofordo M.A. Primary	5	0	4.76	3	0	3	1	0	1	0	0	0	0	3	3	1	0	0	0	3
J. High Schools' Subtotal			26	0	35.71	18	6	24	7	0	7	1	0	0	3	21	24	7	0	0	3	15
Primary & J. High Schools' Subtotal			116	12	180	92	34	126	32	0	32	10	0	0	13	113	126	35	1	2	37	57
Primary Schools' Total			9	6	21	9	9	18	4	4	0	0	4	2	8	16	24	4	0	2	4	9
J. High Schools' Total			125	18	202	101	43	144	36	4	32	10	4	2	21	129	150	39	1	4	41	66

When school buildings are either rebuilt or newly constructed by the implementation of the Project, it will be necessary to assign teachers to teach in these classrooms. The total number of classrooms after Project implementation will be 144 (126 classrooms for primary schools and 18 classrooms for junior high schools). Present number of teachers at these Project schools is 206 (180 at primary schools and 26 at junior high schools). As a

sufficient number of teachers are assigned to these schools, it will be possible to meet with new classrooms by reassigning them. As it will not be necessary to newly assign teachers, it is considered that the management of Project schools after Project implementation will be possible with present budgetary funds for management. Furthermore, since electricity is not provided to the Project schools, additional expenditure for electricity is not required.

An overall period of 24 months will be needed for Project construction, including detailed design period. When the Project will be implemented by Japan's Grant Aid Program, undertakings to be borne by the Government of Ghana are estimated to be 8 million yen.

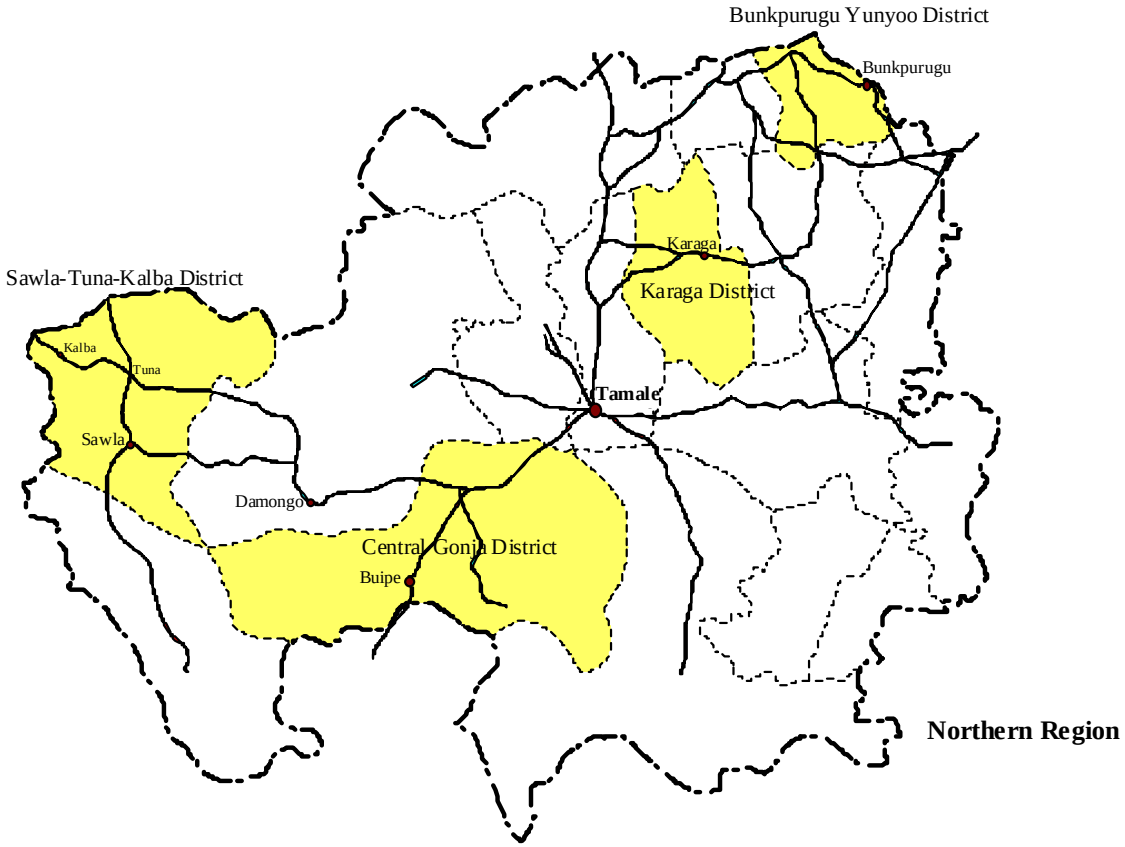
CONTENTS

［**Appendices**］

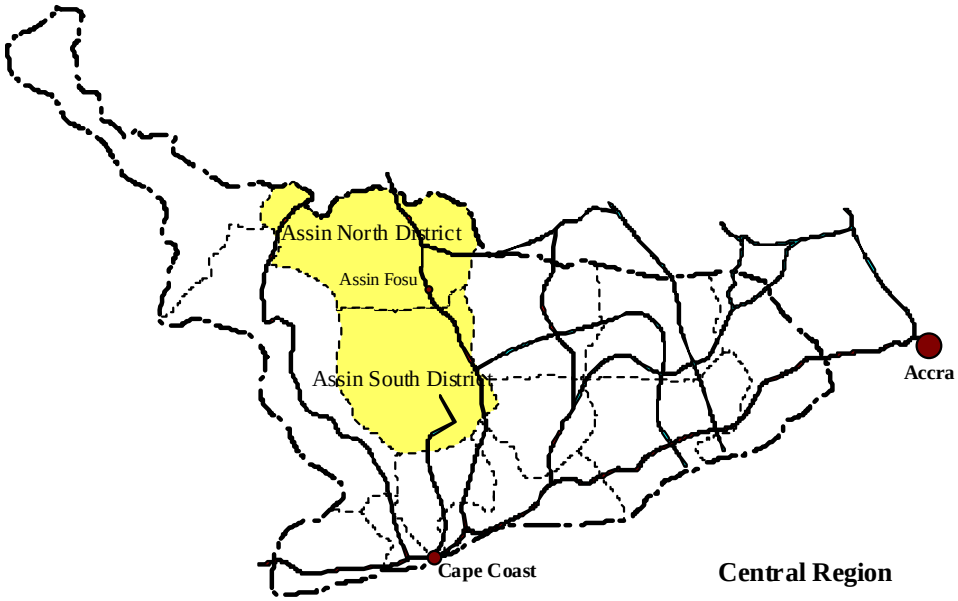
Map of the Republic of Ghana

Map of the Project Area Showing 2 Regions

Map of Northern Region

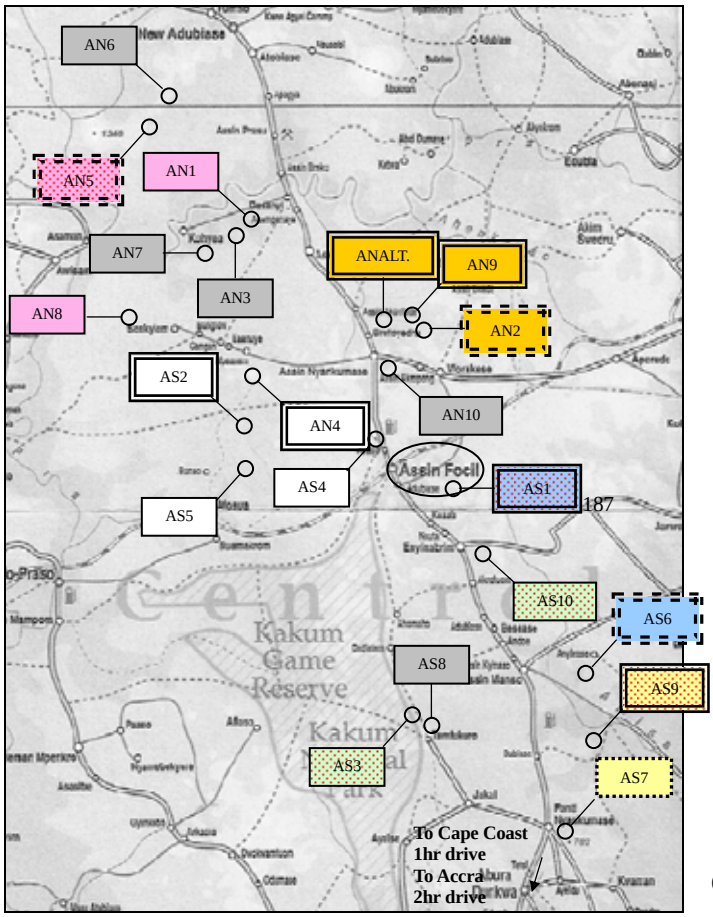


Map of Central Region



School Location Maps

Note: CR+TH CR only Conditional N/A

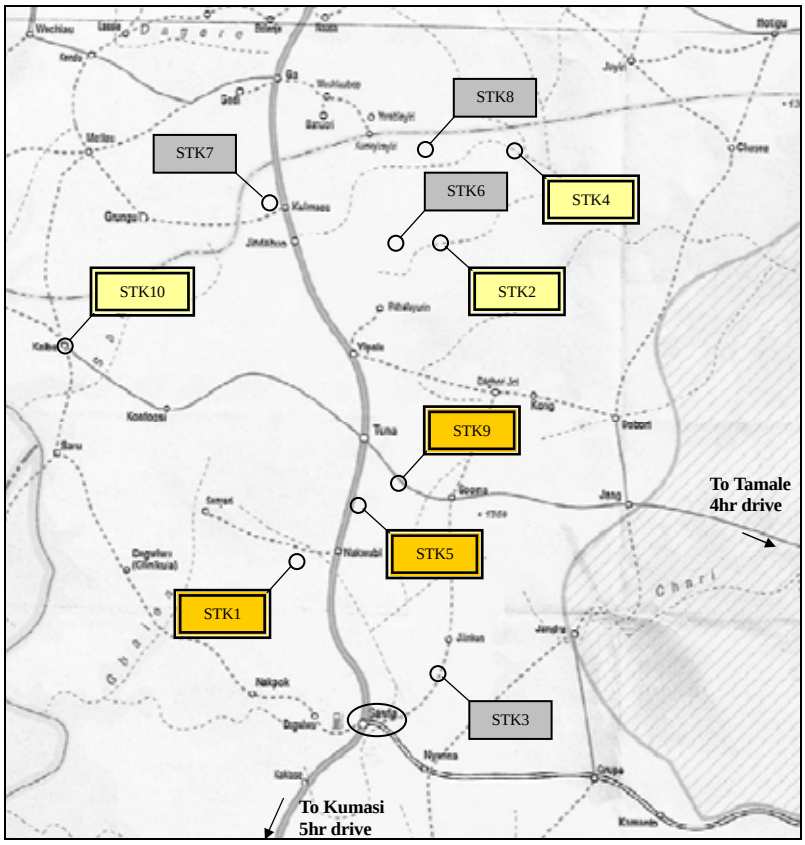


Assin North and Assin South District

1st Phase

- Lot A
- Lot B
- Lot C
- Lot D
- Lot E
- Lot F

0 10km



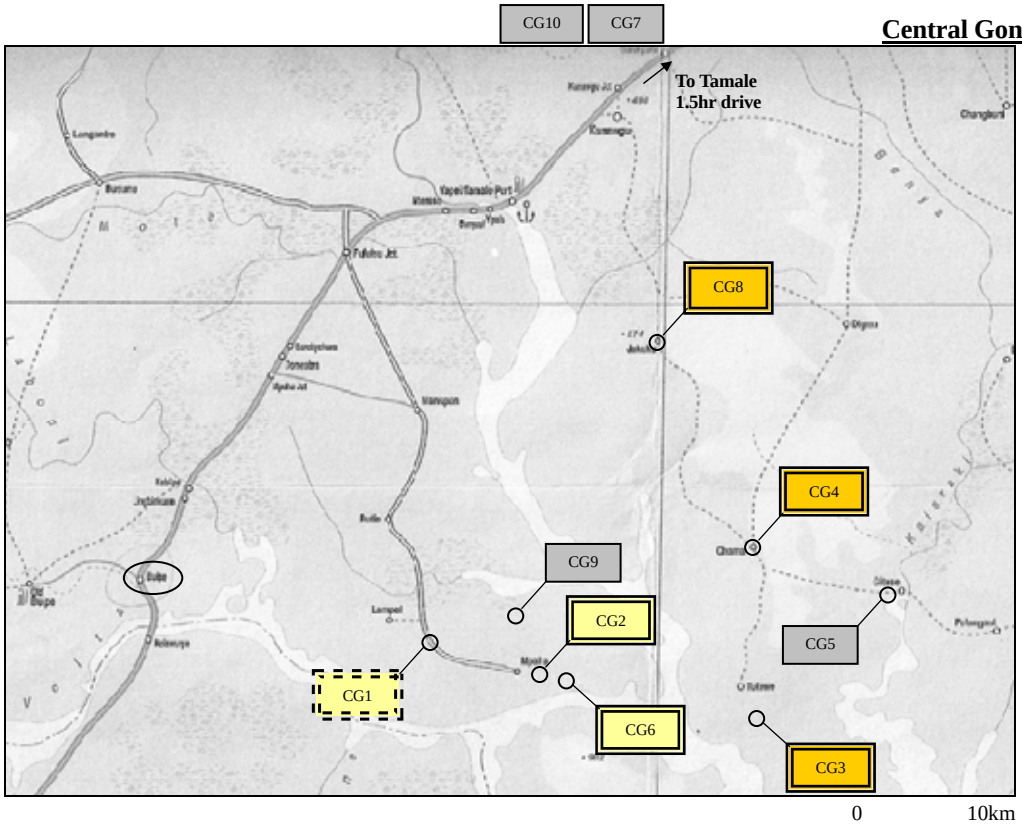
Sawla-Tuna-Kalba District

2nd Phase

Lot A

Lot B

0 10km



Central Gonja District

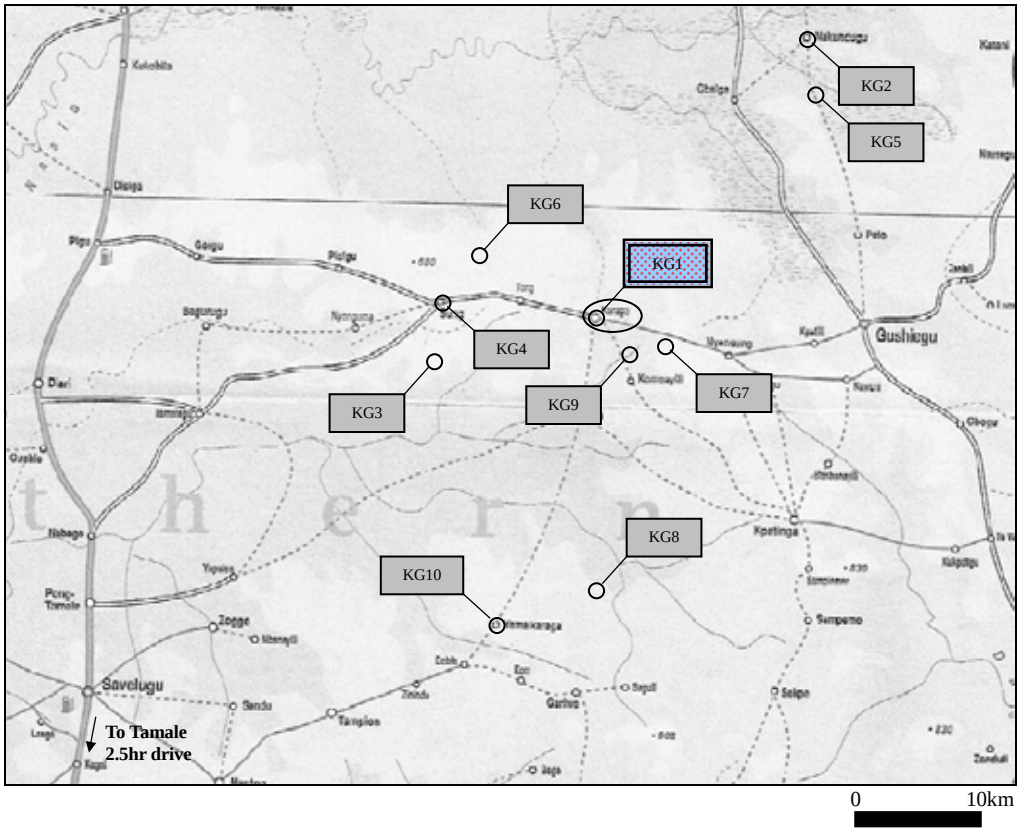
2nd Phase

Lot C

Lot D

0 10km

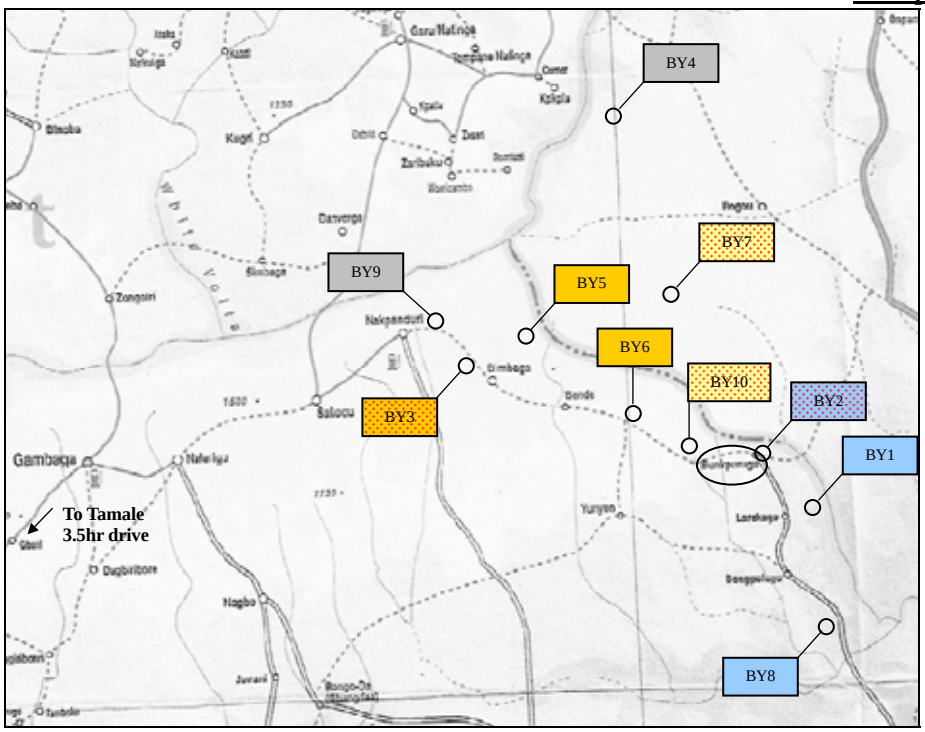
Karaga District



2nd Phase

Lot E

Bunkpurugu Yunyoo District



2nd Phase

Lot F

Lot G

Lot H

The Project for Improvement of Access to Basic Education in Deprived Areas in the Republic of Ghana

List of Figures & Tables

Abbreviations

EFA	Education for All
fCUBE	Free Compulsory Universal Basic Education
ESP	Education Strategic Plan 2003-2015
AfDB	African Development Bank
KVIP	Kumasi Ventilated Improved Pit
FPMU	Funds and Procurement Management Unit
BDI	Islamic Development Bank
GES	Ghana Education Service
SMC	School Management Committee
E/N	Exhange of Minutes
A/M	Agreed Minutes
UNCITRAL	United Nations Commision on International Trade Law
SMC	School Management Committee
VAT	Value Added Tax
PTA	Parent/ Teacher Association
MOE	Ministry of Education
PVC	Polyvinyl Chloride
G/A	Grant Agreement

CHAPTER 1

OUTLINE OF THE PROJECT

Chapter 1 . Outline of the Project

(1) Higher Objective and Project Objective

The Republic of Ghana has established the Ghana Poverty Reduction Strategy I & II and took human resource development up as the top priority theme. In response to the advocate of Education for All (EFA), the Government of Ghana has established the Free Compulsory Universal Basic Education (fCUBE) Program and the Education Strategic Plan (ESP) and realized completely free basic education by introducing the Capitation Grant since 2005 for the realizing of fair access to education.

As a result of these educational policies, the total school attendance rate in Ghana has greatly improved to 95.2% for primary education and 78.8% for junior high school education during the 2007/2008 fiscal year. On the other hand, however, the regional differences in education and concern for improving school completion rate have become obvious. Under the situation, Ghana conducted the ranking of the 138 districts in the country for gender education, school attendance rate, qualities of teachers, and educational infrastructure and, as a result, defined 53 lower ranking districts as Deprived Areas thereby aiming at improving the school remaining rate, school dropout rate and total school attendance rate in these Deprived Areas. As one of the reasons for the low ranking of the Deprived Areas, appropriate educational environment has not been secured. The Ministry of Education has been asking assistance donors for the improvement of educational facilities in these districts.

By taking into account the above situation, the Government of Ghana set up a higher objective as to contribute to the improvement of access chance to basic education and quality of teachers in Ghana and the objective of the Project as to aim at the alleviation of the shortage of educational facilities and the improvement of educational environment in the Deprived Areas.

(2) Outline of the Project

To accomplish the above-mentioned higher objective, the Project intends to provide classroom buildings (classrooms and headteacher’s room with store) for primary schools and classroom buildings (classrooms with store, headtehacher’s room with store and staff room) for junior high schools, teacher accommodation and toilet facilities and educational furniture to those schools that are evaluated as appropriate for the Grant Aid of Japan as a result of site study among 61 requested schools in the Central Region (Assin North and Assin South) and the Northern Region (Sawla Tuna Kalba, Central Gonja, Karaga, Bunkpurugu Yunyoo).

CHAPTER 2

OUTLINE DESIGN OF THE GRANT AID PROJECT

Chapter 2. Outline Design of the Grant Aid Project

2-1 Design Policies

The Project aims at the great cost reduction comparing to ordinary grant aid projects by positively utilizing local design and construction supervision consultants, local contractors and local material suppliers based on local specifications and designs in accordance with a premise that the Project is implemented by Grant Aid for Community Empowerment.

2-1-1 Basic Policy

It is the basic policy to select those schools for the Project from 61 existing primary and junior high schools finally requested by Ghana that meet the site selection conditions agreed upon by both the Ghanaian side and the Japanese side and that are actually lacking 3 or more classrooms (rounded figure) under no-shift class of ordinary teaching at the time of Preliminary Study of the Project (2009).

The facility component of the Project should be classrooms, staff rooms (of junior high schools), headteacher's rooms, stores, teachers' accommodation and toilets excluding the number of usable existing facilities. In addition, classrooms, staff rooms and headteacher's rooms should be furnished with desks and chairs.

2-1-2 Policy for Natural Condition

Climate in Ghana, Project Area, can be largely classified into the two types; the tropical rainforest climate in the southern region and the tropical savanna climate in the northern region.

1) Northern Region: Tropical Savanna Climate
   A period from December through March is the dry season and hot dry trade winds blow from the Sahara Desert located to the northeast. At the end of the dry season, temperature goes up extremely high. A period from April through November is the rainy season. The monthly rainfall amount is the highest in August; 250mm. The number of rainy days is approximately 15 days per month. During this season, the region is under the influence of the wet monsoon wind from the southeastern direction.

2) Southern Region: Tropical Rainforest Climate
   The southern region is humid throughout a year. The average temperature in the region is in the range of 26.2℃to 28℃. There are two rainy seasons in a year; one from April through July and the other from September through November. It rains most heavily in June (210 to 340mm). Raining time is limited. It rarely rains throughout a day. Trade winds blow in January. The greater rainy season enters into monsoon climate.

For this climatic condition, it is important to take into consideration natural ventilation for facility design. As damage to roofs by strong winds is seen, it is necessary to consider horizontal stresses by wind forces. Further, it is also necessary to take into account measures for rain blowing into buildings and rainwater splashing on the ground during the greater rainy season. As damage on school facilities inflicted by termites and bats was seen during site survey period, it would be necessary to provide some measures for them.

Ghana has records of four earthquakes in the past. The biggest one occurred in 1939 with the magnitude of 6.4 and caused 22 death tolls. The earthquake damage occurred in Accra area and along the Gulf of Guinea. These areas are regarded as an earthquake danger zone by the earthquake forecasting information. Structure design for the Project shall be prepared for earthquakes based on the British Standards that are adopted in Ghana, and shall to be planned to be stronger than the standard design of the Ministry of Education

2-1-3 Policy for Socio-Economic Condition

It is necessary to pay a special attention to the design of easily usable toilets for women in order to improve women's school attendance rate. The number of toilet booths to be provided should be decided upon so that they suit the number of classrooms to be either rebuilt or newly constructed. The type of toilets should be of Kumasi Ventilated Improved Pit (KVIP) type with holes in the floor and a septic tank underneath (latrine) which is common in Ghana. Daily maintenance fee of school facilities is subsidized by Capitation Grant financed by the Government of Ghana from a limited amount of the budgetary funds. Thus, the Project's school facilities should be designed so that burden for the maintenance fee can be lessened.

In Ghana, facility plan of primary schools and junior high schools is made based on the standard design of the Ministry of Education. For the Project's facility design, the standard design of the Ministry of Education will basically be taken into account and some improvement shall be added, if necessary, so that existing facilities and new facilities will be harmonized.

2-1-4 Policy for Architectural Situation

(1) Design Standard

Design standard for the Project should be either Ghanaian standards (National Building Regulations, 1996) or British Standards that are commonly used in Ghana. In Ghana, architectural standards for structure design have not been established and British Standards are used. Thus, structure design for the Project shall be prepared based on British Standards.

(2) Procurement of Building Materials and Equipment

In Ghana, it is possible to procure most of building materials and equipment, including imported

products, in Accra. As for cement, domestically manufactured products are available. Desks and chairs of the standard specifications of the Ministry of Education are of local wooden products and are all locally procurable. As the number of their units to be ordered for the Project is quite large, it is important to carefully examine the procurement plan in advance.

2-1-5 Policy for Using of Consultants for Detailed Design and Construction Supervision

The number of consultants registered at the Registry Office under the jurisdiction of the Ministry of Justice and Attorney General's Department is approximately 200 including AESL, a semi governmental firm, and Consortium, a private firm. As Project construction will be carried out maintaining a certain set level at various sites in Northern and Southern two regions, it is necessary to secure a uniform quality control by using local design and construction supervision consultants having a substantial experience and know-how in detailed design and construction supervision work in these regions. Thus, it is important to select consultants suitable for the Project by carefully examining their size and capabilities.

The following table lists the number of registered major consultants firms:

Table 2-1 Number of Registered Major Consultants Firms

Type of Specialty	Registered Number
Architecture	101
Cost Estimation	52
Engineering Work	61

As for supervision of the construction work of primary and junior high school facilities, Funds, Procurement and Management Unit (FPMU) that is under jurisdiction of the Ministry of Education, is normally responsible for the preparation of tender documents and conduction of tendering and the regional educational office under the jurisdiction of the Ghana Education Service of the Ministry of Education conducts construction supervision work. For this reason, local consultants have work experience in the construction projects of higher educational facilities and other public works, but they rarely have work experience in the construction projects of primary and junior high school facilities except the assistance projects of donors, such as AfDB and BDI. Judging from the facility contents of the Project, however, it is considered that local consultants will be able to undertake the detailed design and construction supervision of the Project. Selection of consultants for the Project should be made by evaluating their submitted technical proposals and other materials.

2-1-6 Policy for the Use of Local Contractors

Contractors registered at the Ministry of Works and Housing are classified into D1 through D4 based on the amount of acceptable contract limit due to their financial capabilities and their possessing units of necessary construction equipment and the number of engineers. The following

table lists the number of registered contractors, amount of acceptable contract limit and contractor classification:

Table 2-2 Classification Table of Contractors

Class	**D1**	**D2**	**D3**	**D4**
Registered Number	2,987	6,023	9,068	12,015
Amount of Acceptable Limit（Unit：US$1,000）	Over 500	200 - 500	75 - 200	Less than 75
Required Engineers				
Architect	2	1	-	-
Civil Engineer	2	2	-	-
Estimator	2	1	-	-
Surveyor	2	2	1	-
Accountant	1	1	-	-
Procurement Person	2	1	1	-
Book Keeper	4	2	1	1
Site Supervisor	10	6	2	-
General Foreman	8	5	2	1
Chief Carpenter	8	5	2	1
Chief Mason	8	5	2	1
Chief Painter	8	5	1	1
Chief Re-bar Fabricator	6	4	1	1
Required Equipment Units				
Bulldozer（140HP）	1	-	-	-
Pile Driver（1ton）	1	-	-	-
Concrete Mixer	2	-	-	-
Pump（90000L/h）	2	2	1	1
Water Wagon	1	1	-	-
Dump Truck	5	3	1	-
Pickup Truck	5	3	1	1
Re-bar Bender and Cutter	5	3	1	1
Excavator	1	-	-	-
Vibrator	3	2	1	-
Tower Crane/Hoist	1	-	-	-
Staging	2	1	-	-

Most of contractors having experience in the construction work of public educational facilities belong to D1 through D3 classes in the above table. In particular, contractors classified as D1 or D2 class engage in a nationwide business and have no area limitation for construction sites. Five firms (including British, Italian and Chinese affiliated firms) belonging to D1 class firms are large scale, almost the same size as Japanese large contractors. However, some small size contractors are also included in D1 class. There is a great difference in the size of firms even belonging to the same class.

As for engineers and construction equipment units required for the firm classification, it was learned from the result of locally conducted questionnaires and interview surveys asked to persons concerned that firms were actually registered even they did not have requirement numbers by the classification rule.

Firms having experience in educational facility construction work will be used for the Project

construction. Judging from the amount of construction cost of one school, D3 class contractor will be difficult to conduct the Project's school facility construction work. Thus, it is expected that D1 or D2 class contractor be selected. But, it is necessary to make a careful confirmation and evaluation of the financial and engineering capabilities of contractors to be used for Project construction as well as their bidding prices.

2-1-7 Policy for Maintenance Capability of Project Implementing Organization

Project implementing organization is Ghana Education Service (GES) that is under the jurisdiction of the Ministry of Education. GES works as an implementing window for projects of the improvement of primary school facilities and equipment units supported by donors. Thus, there will be no problems for Project implementation. As for the maintenance of the Project's school facilities at each site, School Management Committee (SMC) will undertake the management and maintenance work of the facilities. SMC applies Capitation Grant for maintenance work and conducts minor repair, but SMC cannot take care of a large scale repair work at present. By taking into consideration this situation, the Project's facility design should be prepared so that the facilities will be easily managed and maintained.

2-1-8 Policy for Setting up Quality Level of Equipment and Materials

As for the setup of quality standard for Project facilities, major structures shall be planned to have a certain set quality level and durability so that continuous facility use and facility maintenance cost reduction may be possible for facility users. As a detail of quality assurance has not been sufficiently developed in the standard design of the Ministry of Education, detailed drawings should be prepared for necessary facility portions.

As for the setup of quality level for educational furniture and equipment, the contents of specifications should be reexamined and their plan should be prepared to secure the sufficient quality level.

2-1-9 Polity for Construction Period

The Project will be implemented under the scheme of Community Empowerment Grant Aid. Thus, Project construction work will be contracted to a multiple number of local contracts. By comprehensively taking into consideration the preparation work such as Procurement Management Agent Contract and tendering preparation work, facilities construction work, and material and equipment procurement work, Project construction period is assumed to be approximately 2 years after signing E/N. It is necessary to prepare a precise construction plan by fully taking into consideration the following factors that may influence the progress of Project construction. Further more, appropriate contractors should be selected for each Project construction area and various construction sites in each construction area should be integrated into one group in order to effectively conduct construction work by taking into account the local contractor's capability.

1) Project Area is separated in the Southern and Northern Regions. Thus, Project construction should be divided into two periods and construction schedule should be planed in the two Phases.

2) A preparation period should be set up between Phase 1 and Phase II construction period.

3) As Project schools are widely scattered, construction schedule should be prepared by taking into account a moving time from one school side to another school site.

4) Construction schedule should be planned avoiding earth work and foundation construction work during the rainy season.

5) Undertakings to be borne by the Ghanaian side, such as site leveling work, tree cutting and removing, land clearing work, demolishing and removing of existing facilities, and staging work during construction period, should be carried out without delay.

2-2 Outline Plan

2-2-1 Setup of Proposal for Project Schools and Setup of Project Content and Scale

(1) Site Selection Method

Requested schools to be included in the Project should be those that meet the below-stated requirements agreed upon by the Ministry of Education and that are lacking more than three classrooms and urgently requiring classroom improvement. Thus, requested schools should be examined for site condition at first then schools satisfying the requirement should be examined for classroom lacking condition and, finally, Project site should be selected based on the priority order of each school site to be made based on the classroom lacking level.

(2) Basis of School Site Selection

1) Basis for Site Requirements

Requirements for Project sites agreed upon with the Ministry of Education are as follows:

a) Based on the existing classroom condition, schools requiring the construction of more than three classrooms.

b) Candidate schools' necessity for facility improvement is recognized by national and local development plans.

c) Basic education is being conducted at site survey time.

d) Ownership or use right of land necessary for school facility construction is confirmed by written documents.

e) The Government of Ghana, other donor, or NGO is not conducting school facility development project when the site survey is conducted.

f) Project school sites are geologically and environmentally safe and an adequate size of land is secured for school facility construction.

g) An access road is secured for construction vehicles.

h) It is possible to analyze present and future number of children who are willing to attend schools based on the date of the number of school-age children and students.

The number of classrooms to be constructed is discussed in the next page. School sites not satisfying one of the above requirements should be automatically excluded from the Project. As for finally selected Project schools and Project contents, it may be necessary to adjust the number of the schools depending upon the circumstance at Project implementation time after signing E/N and the Project contents may not always be adopted as is.

2) Basis of Selection regarding to Classroom Shortage

The Ministry of Education stipulates the number of students in one classroom as 45 for primary schools and 35 for junior high schools. Based on this rule, a school is regarded as “lacking classroom” when the number of students in one class exceeds these figures. For example, when an ordinary school having six classrooms for six graders actually has 450 students, a number of lacking classrooms is 450 (students) ÷ 45 (students/classroom) – 6 (existing classrooms) = 4. Thus, it is evaluated as the school is lacking 4 classrooms. The number of the existing classrooms is the number of the existing classrooms that are possible to utilize continuously in future excluding the number of the dangerous classrooms due to the dilapidation of or inappropriateness of the building materials

(3) Selection Result

1) School Sites Not Satisfying Requirements

The Following schools do not satisfy part of requirements and are excluded from the Project.

a) Schools requiring construction of less than 3 classrooms judging from existing classroom conditions:

STK3 Kodanyine Primary School, STK6 Markayiri Primary School, STK7 Nyoli Primary School, STK8 Goyiri Primary School, CG5 Yala Primary School, CG7 Aduyili Primary School, CG9 Kokope Primary School, CG10 Yiripani D/A Primary School, KG2 Nakunddugu L/A Primary School, KG3 Langogu E/A Primary School, KG4 Sung L/A Primary School, KG5 Namburugu L/A Primary School, KG6 Nyansobga L/A Primary School, KG7 Nuri-Islam E/A Primary School, KG8 Duna L/A Primary School, KG9 ShamsiaE/A Primary School, KG10 Yemo Karaga Primary School, BY4 Tomoni Primary School, BY9 NakpeukD/A Primary School, AS8 Abease Tumfokor Primary School, AN3 Ahunten D/A Junior High School, AN6 Asamang D/A Primary School

These 22 schools were evaluated as not necessary to construct more than three classrooms judging from site survey results, number of students and existing classroom conditions.

b) A school is not regarded as necessary to improve its school facilities by national and regional development projects.

As all requested schools have been selected in “Deprived Areas” where improvement of educational facilities be conducted as a priority project by the Government of Ghana, there are no schools in this category.

c) A school site where basic education is not being conducted at site survey time.

It was confirmed that basic education was being conducted at all requested schools when site survey was carried out. Thus, there are no schools falling into this category.

d) A school has not submitted a donation certificate of land ownership and site survey map.

All requested schools have submitted donation certificates of land ownership in the generally used form in Ghana and their land survey maps to the Study Team when site survey was carried out. Thus, there are no schools in this category.

e) In a requested school, facility improvement project is being conducted by the Government of Ghana, other donors or NGO group when site survey is conducted.

AN10 Nyankomase D/A Junior High School

In this school, construction of six classrooms was progressing when site survey was carried out. Thus, classroom shortage problem will be solved.

f) A school is not securing a geologically and environmentally suitable size land for facility improvement.

During site survey period, it was confirmed that all requested school had no problems for new facility construction. Thus, there are no schools in this category.

g) A school is not securing adequate access road for construction vehicles.

AN7 Siechem Wawasee D/A Primary School

An access road to the school site is inundated during the rainy season. In addition, when site survey was conducted a bridge was being conducted and a vehicle could not reach to the site.

h) A school is not having data on the number of students and it is impossible to forecast the number of students who are willing to attend at the school.
All regional education offices and surveyed schools possessed necessary data. Thus, there are no schools in this category.

At AS6 Dominase D/A Primary School, AN2 Odumase Wawase D/A Primary School, and CG1 Kpbuso Junior High School, it has been proposed to use a new construction site on newly secured land covered with shrubs. Thus, it is necessary to clear existing shrubs on these sites prior to commencing Project construction under the expense of the Ghanaian side. The size of the land of AS5 Awisem Haji A & B Primary Schools and AS7 Akoteykrom D/A Primary School is quite small. Thus, it is necessary the Ghanaian side to demolish and remove existing school buildings by its own expense prior to commencing Project construction. If undertakings to be borne by the Ghanaian side will not be conducted at these school sides without delay, there may be a possibility of the delay of the commencement of school facility construction. It has been agreed upon with the Ministry of Education that the priority of these schools for construction will be lowered in such case.

2) Project School Sites

After excluding 24 schools not satisfying requirements, the Project will be implemented at remaining 37 requested schools. These 37 schools are listed in Table 2-3.

Table 2-3 Examination Result of School Site Selection

Priority Order	School No.	Name of School	Number of Students	Number. of Teachers	Number of Exist. Classrooms			Remarks
					Not usable	Usable	Lacking Number	
1	BY2	Salimboukou 'B' Primary	853	12	6	0	18.96	These schools have a high priority for the Project because their classroom shortage is more than 3 classrooms
2	BY3	Gbankoni Primary	359	6	6	0	7.98	
3	KG1	Karaga L/A Primary	891	20	0	12	7.80	
4	AS9	Adiembra Catholic Primary A	348	6	0	0	7.73	
5	BY7	Tusug Primary	337	5	6	0	7.49	
6	AS1	Adubiase Presby Primary	280	6	6	0	6.22	
7	BY10	Kungaar-Bugri Primary	277	6	3	0	6.16	
8	BY1	Kinkangu Junior High	212	3	3	0	6.06	
9	AS3	Amanbete D/A Primary	272	6	6	0	6.04	
10	AS10	Homaho D/A Primary	270	6	8	0	6.00	
11	AS2	Nyankommase Ahenko D/A Primary 'B'	268	6	3	0	5.96	
12	BY5	Chintlung No.2 D/A Primary	266	6	6	0	5.91	
13	AN9	Afenase M.A. Primary	240	6	0	0	5.33	
14	STK2	Poru Primary	221	2	2	0	4.91	
15	AN-ALT	Krofofordo M.A. Primary	214	5	5	0	4.76	
16	STK4	Gbelpie Primary	210	3	3	0	4.67	
17	AN8	Abotareye M.A. Primary	209	3	6	0	4.64	
18	AS4	Anyinabrim Methodist Primary	202	6	6	0	4.49	
19	AS5	Mesomagor D/A Primary	191	6	6	0	4.24	
20	STK10	Kalba Junior High	252	7	0	3	4.20	
21	CG8	Jukuku Primary	187	4	0	0	4.16	
22	AN4	Sekanbodua M.A. Primary	187	3	3	0	4.16	
23	CG3	Adape Primary	182	4	5	0	4.04	
24	BY8	Yunyoo Junior High	140	6	3	0	4.00	
25	CG6	Kigbirpe Primary	176	6	0	0	3.91	
26	BY6	Suanvusi Primary	170	3	3	0	3.78	
27	CG4	Chama Amezyn Primary	166	4	3	0	3.69	
28	STK5	Dani-Uuri Primary	161	4	3	0	3.58	
29	STK1	Tuoyiri Primary	157	6	0	0	3.49	
30	STK9	Konfali Primary	156	4	3	0	3.47	
31	CG2	Sheri Junior High	224	7	3	3	3.40	
32	AN1	Bereku Nyamebekyere D/A Primary	151	3	6	0	3.36	
33	AS6	Dominase D/A Primary	205	6	0	0	4.56	Low priority for selection for the Project because these are requiring undertakings to be completed by the Ghanaian side's expenses prior to starting Project construction.
34	AN2	Odumase Wawase D/A Primary	200	5	0	0	4.44	
35	CG1	Kpabuso Junior High	119	3	0	0	3.40	
36	AN5	Awisem Haji Idris Islamic Primary	406	6	6	0	9.02	
37	AS7	Akoteykrom D/A Primary	249	6	6	0	5.53	
-	STK3	Kondanyine Primary	134	5	3	0	2.98	These are excluded from the Project because their classroom shortage is less than 3 classrooms.
-	STK6	Malkayiri Primary	122	2	4	0	2.71	
-	KG4	Sung L/A Primary	255	6	3	3	2.67	
-	KG10	Yemo-Karaga Primary	119	6	6	0	2.64	
-	AN3	Anhuntem D/A Junior High	89	5	3	0	2.54	
-	BY4	Tomoni Primary	114	5	6	0	2.53	
-	KG5	Namburugu L/A Primary	114	6	3	0	2.53	
-	CG9	Kokope Primary	111	5	5	0	2.47	
-	STK7	Nyoli Primary	234	6	4	3	2.20	
-	STK8	Goyiri Primary	233	5	2	3	2.18	
-	KG8	Duna L/A Primary	97	5	2	0	2.16	
-	CG10	Yilkpani D/A Primary	90	3	3	0	2.00	
-	KG2	Nakundogu L/A Primary	89	3	3	0	1.98	
-	KG9	Shamsia E/A Primary	88	3	0	0	1.96	
-	BY9	Nakpeuk D/A Primary	82	3	3	0	1.82	
-	AN6	Asamang D/A Primary	74	4	0	0	1.64	
-	CG5	Yala Primary	74	1	0	0	1.64	
-	CG7	Aduyili Primary	72	2	3	0	1.60	
-	KG6	Nyensabga L.A. Primary	72	5	3	0	1.60	
-	AS8	Abease Tumfokor D.A. Primary	328	6	6	6	1.29	
-	KG3	Langogu E/A Primary	169	6	0	3	0.76	
-	KG7	Nuri-Islam E/A Primary	226	6	0	6	-0.98	
-	AN7	Sienchem Wawase D/A Primary	229	3	0	0	5.09	No vehicle access road available
-	AN10	Nyankomase D/A Junior High	N/A					New schoolbuilding is being built

Note: AS: Assin South, AN: Assin North, BY: Bunkpurugu Yunyoo, STK:Sawala-Tuna-Kalba,
CG: Central Gonja, KG: Karaga

(4) Setup of the Scale of Grant Aid Component related to Facilities

1) A Point of View for the Size of Grant Aid Component

①Number of Classrooms to be built

In Ghana, when the number of students in a school is small, the school gives lessons only in three classes adopting the teaching of multi-grade students in one classroom. School buildings for the Project are planned to have three classrooms in accordance with the rule of the Ministry of Education. When a Project school is lacking less than six classrooms, three classrooms will be provided to the school; when lacking more than six, six classrooms will be provided.

②Headteacher's Room

A room for a headteacher responsible for school management is indispensable for effective school management. It is a useful plan to add a store to a headteacher's room for keeping textbooks and teaching materials in view of school management. Thus, it is planned to provide a headteacher's room with store to those Project schools that do not have a headteacher's room.

③Staff Room

The primary schools in Ghana are taught by each class teacher and the class teacher always stays and works in his/her own classrooms. For this reason, it is not necessary to provide a room for teachers. Thus, it is planned not to provide teachers' rooms by the Project. The junior high schools are taught by each subject teacher and a room for teachers is necessary for them in addition to classrooms. For this reason, the Project will provide a teacher's room to such junior high schools that do not have one.

④Library

Existing school libraries in Ghana do not have sufficient books and are mostly used as storage space. Even if libraries are provided, they will not be effectively used. Thus, libraries will not be planned for the Project.

⑤Toilets

It is important to provide an adequate number of toilets in view of sanitary education. The Project will provide toilets to Project schools, as necessary. One booth of toilets will be planned for each classroom in accordance with the standards of the Ministry of Education. When there are existing toilet booths in a Project school site, the existing number of booths shall be subtracted from the necessary number for the school. The maximum number of toilet booths shall be the same to the number of planned classrooms.

⑥Teachers' Accommodation

As a part of measures for alleviating the regional difference in education, construction of an accommodation for teachers has been preponderantly carried out to upgrade the incentive of those teachers who do not want to work in a remote place. Three-unit type accommodation, the standard type of the Ministry of Education, is planned for those Project schools having no accommodation for teachers that are located far from towns and that is difficult to rent a house for accommodation. However, if a Project school has teachers' accommodation in the

same school site, the number of accommodation units to be provided shall be the necessary number minus the existing accommodation units.

⑦Wells

It is necessary to make a technical judgment by conducting an electrical resistivity prospecting in order to find the existence of groundwater aquifer to construct a new well for drinking water within a school ground. Furthermore, even a well is dug, there is a possibility of dry well and well construction money is wasted. As there are wells and other kind of water sources in the vicinity of all Project schools, no new well construction is planned for the Project.

2) List of Facilities at each Project School

As a result of the above examination, scale of Project facilities at each Project school is decided upon as listed in the following table.

Table 2-4 List of Facility Scale at Each Project School Site

		Name of School			Number of Existing Classrooms			Number of Rooms to be built			Number of Toilet Booths to be built		Units of Teachers' Accommodation			Remarks
1	BY2	Salimboukou 'B' Primary	853	12	6	0	18.96	6	1	0	2	4	6	7	0	Close to Town, Max 6 C. Rm
2	BY3	Gbankoni Primary	359	6	6	0	7.98	6	1	0	0	6	6	4	0	Close to Town
3	KG1	Karaga L/A Primary	891	20	0	12	7.80	6	1	0	0	6	6	0	3	Co-used with other group School
4	AS9	Adiembra Catholic Primary A	348	6	0	0	7.73	6	1	0	0	6	6	0	3	New Site
5	BY7	Tusug Primary	337	5	6	0	7.49	6	1	0	0	6	6	0	0	Tech. accommodation not requested
6	AS1	Adubiase Presby Primary	280	6	6	0	6.22	6	1	0	0	6	6	0	3	
7	BY10	Kungaar-Bugri Primary	277	6	3	0	6.16	6	1	0	4	2	6	4	0	T. accommodation not requested
8	BY1	Kinkangu High School	212	3	3	0	6.06	6	1	1	0	6	6	0	0	T. Accommodation not requested
9	AS3	Amanbete D/A Primary	272	6	6	0	6.04	6	1	0	0	6	6	6	0	7 units existing
10	AS10	Homaho D/A Primary	270	6	8	0	6.00	6	1	0	4	2	6	0	0	Close to Town
11	AS2	Nyankomase Ahenko D/A Primary 'B'	268	6	3	0	5.96	3	1	0	0	3	3	0	3	
12	BY5	Chintuing No.2 D/A Primary	266	6	6	0	5.91	3	1	0	0	3	3	0	0	Close to Town
13	AN9	Afenase D/A Primary	240	6	0	0	5.33	3	1	0	0	3	3	0	3	New site, Max 3 C. Rms possible
14	STK2	Poru Primary	221	2	2	0	4.91	3	1	0	0	3	3	0	3	
15	AN-ALT	Krofofordo M.A. Primary	214	5	5	0	4.76	3	1	0	0	3	3	0	3	Alternative for AN10
16	STK4	Gbelpie Primary	210	3	3	0	4.67	3	1	0	0	3	3	0	3	
17	AN8	Abotareye M.A. Primary	209	3	6	0	4.64	3	1	0	0	3	3	3	0	
18	AS4	Anyinabrim Methodist Primary	202	6	6	0	4.49	3	1	0	0	3	3	0	0	Close to Town
19	AS5	Mesomagor D/A Primary	191	6	6	0	4.24	3	1	0	0	3	3	6	0	
20	STK10	Kalba High School	252	7	0	3	4.20	3	0	0	4	2	6	0	3	
21	CG8	Jukuku Primary	187	4	0	0	4.16	3	1	0	0	3	3	0	3	New Site
22	AN4	Sekanbodua M.A. Primary	187	3	3	0	4.16	3	1	0	0	3	3	0	3	New building is being built
23	CG3	Adape Primary	182	4	5	0	4.04	3	1	0	0	3	3	0	3	
24	BY8	Yunyoo High School	140	6	3	0	4.00	3	1	1	0	3	3	4	0	Close to Town
25	CG6	Kigbirpe Primary	176	6	0	0	3.91	3	1	0	0	3	3	0	3	New Site
26	BY6	Suanvusi Primary	170	3	3	0	3.78	3	1	0	0	3	3	0	0	Close to Town
27	CG4	Chama Amezyn Primary	166	4	3	0	3.69	3	1	0	0	3	3	0	3	Poor Access （2hrs）
28	STK5	Dani-Uuri Primary	161	4	3	0	3.58	3	1	0	0	3	3	0	3	
29	STK1	Tuoyiri Primary	157	6	0	0	3.49	3	1	0	0	3	3	0	3	New Site
30	STK9	Konfali Primary	156	4	3	0	3.47	3	1	0	0	3	3	0	3	
31	CG2	Sheri High School	224	7	3	3	3.40	3	1	1	4	2	6	0	3	
32	AN1	Bereku Nyamebekyere D/A Primary	151	3	6	0	3.36	3	1	0	0	3	3	0	0	Close to Town
33	AS6	Dominase D/A Primary	205	6	0	0	4.56	3	1	0	0	3	3	0	3	Selected for Project, but low priority because Ghana Side's undertakings must be accomplished.
34	AN2	Odumase Wawase D/A Primary	200	5	0	0	4.44	3	1	0	0	3	3	0	3	
35	CG1	Kpabuso High School	119	3	0	0	3.40	3	1	1	0	3	3	0	3	
36	AN5	Awisem Haji Idris Islamic Primary	406	6	6	0	9.02	6	1	0	3	3	6	0	3	
37	AS7	Akoteykrom D/A Primary	249	6	6	0	5.53	3	1	0	0	3	3	7	0	
合計			9,608	206	125	18	201.53	144	36	4	21	129	150	41	66	

LEGENDE:: AS：ASSIN SOUTH、AN：ASSIN NORTH、BY：BUNKPURUGU YUNYOO、STK：SAWLA-TUNA-KALBA、CG：CENTRAL GONJA、KG：KARAGA

2-2-2 Local Specifications and Their Improvement Plan

The facilities of primary schools and junior high schools in Ghana are constructed based on the standard design of the Ministry of Education. Local specifications mean the standard design of the Ministry of Education. The standard design and specifications of the Ministry of Education that were confirmed during the site study were examined and their improvement plan was considered for the purpose of continuous use and reduction of maintenance costs as follow:

(1) Improvement Plan for Durability

1) Structure Type

In order to secure stable frame structure (columns and beams), the underground beams that are adopted only at soft ground sites in the standard design will be used at all Project school sites. Floor concrete with wire mesh adopted only at soft ground sides will also be used at all Project school sites to make stable floor structure.

2) Opening

Openings for doors and windows in the standard design are of concrete blocks. As sufficient anchorage to wooden door and window frames can not be made, doors and windows at many schools have problems for opening and closing. To solve these problems, it is planned to build frames by placing concrete with concrete nails thereby securing the installation of doors and windows.

(2) Improvement Plan of Construction Quality

Many buildings with poor quality construction were confirmed during site survey period. Common points to them were contractors' and owners' insufficient knowledge about construction quality control, checking system for inappropriate construction work, and nonexistence of shortcoming correction system. School facility construction for primary and junior high schools that is independently conducted by each district is supervised by the engineers of the District Assembly. However, site visit frequency for inspection is few. For example, quire rudimentary construction defects, such as a concrete column not vertically placed, are overlooked. On the other hand, contractors have to observe contract items and specifications. But, in reality, construction defects do no become responsibility issues unless they are pointed out by construction supervisor.

In view of the above-mentioned situation, it is planned for the construction of the Project to hold a workshop of Japanese supervising engineers and local construction supervising consultants for the purpose of upgrading knowledge about construction quality and emphatically conduct guidance for patrol to each construction site, construction supervision and inspection. In addition, it is planned to establish an inspection system and schedule to prevent occurrence of construction defect problems in advance.

1) Workshop

The workshop is to explain contractors about important points of construction work or important work (steel bar fabrication work, form work, concrete placing work, etc.) before commencing Project construction by showing video tapes and power point screens in order to improve construction quality as well as make the following construction work easier and, as a result, make possible to reduce facility maintenance costs.

2) Construction Supervising System

As for the construction supervising system for Project construction, it is planned to make the engineers of local supervising consultants patrol each construction site once a week and technicians twice a week and make the technicians inform of construction situation to the engineers. Japanese engineers receive report from supervising engineers, give instruction to the supervising engineers, and patrol each Project construction site at least once every three weeks.

.

(3) Measures against Bats

Damage by bats is contamination and foul smell of the urine and droppings of bats dwelling in dark spots above classroom ceilings. It was learned through a questionnaire that only certain regions received damage by bats in Ghana and that Project Area was included in the regions.

1) Bats Prevention Board

It was confirmed during the site survey that bats intrusion into classrooms and bats damage had occurred because of inadequate construction of exterior walls and roof material at their intersecting corners. Those corners of concrete wall blocks and mortar finish of local specifications are not completely closed. Thus, it is proposed to seal those corners with a wooden board whose upper portion is worked to suit roof members.

2) No Ceiling

No ceilings will be provided to classrooms in order to eliminate bats damage even if bats come into the classrooms. For the purpose of acoustic and insulation to prevent a radiant heat, it is proposed to install 12mm thick plywood underneath roof members.

(4) Other Improvement of Educational Environment and Barrier Free

1) Measure for Termites

It is reported the outbreak of termites in Ghana. Thus, wood provided with termite control treatment shall be used for the Project.

2) Ventilating Window

A wooden louver window installed under a beam based on the standard design of the Ministry of Education has a small opening ratio and is insufficient to allow light coming into the classroom.

In the Northern Region, harm to students by bees is reported. Thus, it is proposed to change the use of the louver window to concrete blocks having openings covered with insect nets.

3) Installation of Blackboard on the Back of Classroom

The project area includes remote area in countryside where multiple grade classes are conducted at primary schools. When conducting the teaching of multiple grade students, it is effective to use two blackboards in one classroom; one on the front and the other on the back. In a classroom to conduct ordinary classes, it is expected that a blackboard on the back of the classroom may be effectively used as a bulletin board, may also avoid walls becoming dirty because of no more sticking papers directly on the walls. A blackboard is necessary for a headteacher's room. Thus it is proposed to provide two blackboards to each classroom for primary schools and one to a headteacher's room for both in primary and junior high schools.

4) Slope

Most of primary and junior high schools do not have slopes. By taking into facility use by handicapped persons, it is proposed to provide each building entrance with a slope approach.

5) Shape of Roof Truss

It is planned to raise the truss shaped frame having a horizontal member of the standard design of the Ministry of Education without changing its strength in order to lessen oppressive feeling.

2-2-3 Architectural Planning

(1) Arrangement Plan

Openings of school buildings shall be arranged to face the north-south direction for the purpose of taking natural lighting into the classrooms as well as preventing direct sun in the morning and late afternoon. Northeastern or southwestern winds blow throughout the year in Ghana. Openings shall be planned by taking into account the wind direction for natural ventilation and allowing breeze entering into the classrooms. On the other hand, the openings to toilets direction should be avoided. At a school site having elevation differences, the classroom building shall be arranged so that the depth of the foundation may be the same depth and the building structure will become stable.

(2) Architectural Plan

1) Floor Plan

①Necessary Room Plan

a) Classroom Buildings of Primary Schools

As for classroom buildings, two types of classroom buildings are planned; a building of three classrooms and a building of three classrooms and a headteacher's room with store

based on the standard design of the Ministry of Education. One of these types will be selected to suit each Project school.

b) Classroom Buildings of Junior High Schools

As the same as the above-mentioned primary schools, two types of classroom buildings are planned; a building of three classrooms with stores and a building of three classrooms with stores, a headteacher's room with store and teachers' room based on the standard design of the Ministry of Education. One of these types will be selected to suit each Project school.

c) Toilets

Toilet types of two, three and four booths are set up based on the standard of the Ministry of Education. One of these types will be selected to suit each Project school. When six booths are needed, two toilet buildings each having three booths will be constructed.

d) Teachers' Accommodation Building

It is planned to adopt the accommodation building type of three units of the standard design of the Ministry of Education.

e) Common Facility

One approach slope will be provided to each classroom building for handicapped persons.

These facility types, and their contents and floor spaces are listed in the following table:

Table 2-5 List of Facility Types

Name of Facility		Type	Facility Content	Building Area（m^2）	Floor Area（m^2）
Primary School	Classroom Building	Type 1	3 Classroom + Headteacher's Room（with Store）	203.39	294.96
		Type 2	3 Classroom	174.33	255.33
Junior High School	Classroom Building	Type 3	3 Classroom（with Store）+ Headteacher's Room（with Store）+ Teachers' Room	310.37	432.65
		Type 4	3 Classroom（with Store）	251.87	354.64
Primary and Junior High Schools	Toilet Building	Type A	3 Booths（KVIP Type）	18.30	24.07
		Type B	4 Booths（KVIP Type）	24.40	30.79
		Type C	2 Booths（KVIP Type）	12.20	17.36
	Teachers' Accommodation		3 Units (1LDK Type）	207.33	291.06

②Planned Floor Space of Necessary Room

Planned floor area of each necessary room is shown together with the standard floor area of the Ministry of Education in the following table:

Table 2-6 List of Floor Area of Each Necessary Room

Name of Room	Standard of Ministry of Education	Planned Floor Area	Remarks
Primary School Classroom	6.15×7.45=45.82m^2	6.15×7.45=45.82m^2	Equal to the Standard Design
Primary School Headteacher's Room (with Store)	3.75×5.65=21.19m^2	3.725×6.15=22.91m^2	To suit to the classroom Floor plan
Junior High School Classroom (with Store)	（Classroom） 7.05×8.85=62.39m^2 （Store） 1.20×3.375=4.05m^2 Total: 66.44 m^2	(Classroom) 7.05×8.85=62.39m2 (Store) 1.20×3.375=4.05m2 Total: 66.44 m2	Equal to the Standard Design
Junior High School Headteacher's Room (with Store)	（Headteacher's Room） 3.75×3.90=14.63m^2 （Store） 2.40×3.15=7.56m^2 Total: 22.19m^2	（Headteacher's Room） 3.75×3.55=13.31m^2 （Store） 2.55×3.50=8.93m^2 Total:: 22.24m^2	Conform to the Standard Design
Teacher's Accommodation	4.40×8.70=38.28m^2	4.00×8.70=34.80m^2	Conform to the Standard Design
Toilet Booth	1.025×1.925=1.97m^2	1.025×1.925=1.97m^2	Equal to the Standard Design

2) Section Plan

①Floor Level

Floor level of Project school building shall be 450mm higher than ground level as the same to the standard design of the Ministry of Education in order to prevent flooding during a heavy rain.

②Ventilating Window, Ceiling and Bats Prevention Board

Please refer to the measures mentioned in the above section.

3) Structure Plan

①Structural Method

a) Structure Type

As the structural method of planned facilities, it is planned to adopt a reinforced concrete frame structure (of column and beams) that is suitable for durability and strength and that is commonly used in Ghana.

b) Foundation Method

It is planned to use independent beam foundation by assuming the existence of bearing ground at about -0.5 to -1.0m from the ground surface. It is assumed the bearing strength of the ground as fa=0.5Mpa.

c) Floor Structure

Buildings' floors should be of floor concrete with wire-mesh reinforcement (welled wire mesh), independent from columns and beams.

d) Walls

Each wall that is not a structural wall should be of concrete block made. Around the openings for doors and windows should be placed reinforced concrete to the dimensions of 150×150 vertical direction and 150×225 horizontal direction.

②Design Loads and External Forces

a) Fix Load

Reinforcing Concrete: 24.0 kN/m^3
Concrete Block: 13.5 kN/m^2
Wood: 6.0 to 8.0 kN/m^3
Mortar: 20.0 kN/m^3

b) Live Load

Roof: 1.0 kN/m^2
Classroom: 2.5 kN/m^2

c) Earthquake Forces

Conform to British Standards

d) Wind Forces:

Conform to British Standards

③Use Material

a) Concrete

Site mix concrete
Foundation footing, beam foundation, floor concrete, column, beams:
Fc28=21Mpa (210kg/cm^2)

b) Cement

Ordinary Portland cement (locally manufactured)

c) Reinforcing Bars

Round and deformed (locally marketed imported products)

d) Wood

Local hard wood

4) Facility Plan

①Electrical Facility Plan

It was learned during site survey that no electricity was supplied to most of Project schools. Even some schools were provided with lighting fixtures, they were not used because the schools could not pay electricity fees. The prime objective of the Project is to build as many classrooms as possible. Thus, the Project does not provide lighting fixtures.

②Water Supply, Drainage System and Sewerage System Plan

Project schools are located in areas with no water supply and drainage systems, and also no wells. Thus, the Project will provide KVIP type toilets to school facilities. Teachers' accommodation will be provided with KVIP type toilets and a drainage system to the kitchen and shower room.

5) Building Material Plan

As for the selection of Project use building materials, it is planed to select those materials that suit to the climatic condition in Project areas by laying emphasis to local availability and local building methods and by taking into consideration economy, durability and easy maintenance of completed facilities as listed in below table. In addition, it is planned to provide two blackboards to each classroom for primary school and one blackboard to each classroom for junior high school, having the convex surface in the center portion made with local specifications, and one blackboard for each headteacher's room and one wooden bulletin board to each headteacher's room to be installed on the outside wall for both primary and junior school.

Table 2-7 Major Finishing Materials

	Finishing Part		Standard of MOE	Project Use Specifications	Reason for Use
Classroom Building	Exterior Finishing	Roof	Aluminum-zinc steel plate 0.35mm thick	12mm plywood base 0.35mm thick aluminum-zinc steel plate	Durability, insulation and acoustic capability
		Walls	Mortar base coating finish	Mortar base coating finish	Typical local method
		Floor	Mortar trowel finish	Mortar trowel finish	Typical local method
		Eaves	Plywood base coating finish	None	Bats prevention
	Interior Finishing	Floor	Mortar trowel finish	Mortar trowel finish	Typical local method
		Walls	Mortar base coating finish	Mortar base coating finish	Typical local method
		Ceiling	Plywood base coating finish	None	Bats prevention
	Furniture & Others	Door	Wood made, coating finish	Wood made, coating finish	Typical local method
		Window	Wood made, coating finish	Wood made, coating finish	Typical local method
		Store Door	Wood made, coating finish	Wood made, coating finish	Typical local method
		Vent Opening	Wooden louver, coating finish	Concrete block with openings covered by insect nets	Use of natural lighting Prevent termite damage
Teachers' Accommo-dation	Exterior Finishing	Roof	Aluminum-zinc steel plate 0.35mm thick	Aluminum-zinc steel plate 0.35mm thick	Conform to standard design to install ceiling.
		Walls	Mortar base coating finish	Mortar base coating finish	Typical local method
		Floor	Mortar trowel finish	Mortar trowel finish	Typical local method
	Interior Finishing	Floor	Mortar trowel finish	Mortar trowel finish	Typical local method
		Walls	Mortar base coating finish	Mortar base coating finish	Typical local method

	Finishing Part		Standard of MOE	Project Use Specifications	Reason for Use
		Ceiling	Plywood base coating finish	Plywood base coating finish	Conform to standard design for living
	Furniture & Others	Door	Wood made, coating finish	Wood made, coating finish	Typical local method
		Window	Wood made, coating finish, aluminum jalousie with glass	Wood made, coating finish, aluminum jalousie with glass	Typical local method
Toilet Building	Exterior Finishing	Roof	Aluminum-zinc steel plate 0.35mm thick	Aluminum-zinc steel plate 0.35mm thick	Typical local method
		Walls	Mortar base coating finish	Mortar base coating finish	Typical local method
		Floor	Mortar trowel finish	Mortar trowel finish	Typical local method
	Interior Finishing	Floor	Mortar trowel finish	Mortar trowel finish	Typical local method
		Walls	Mortar base coating finish	Mortar base coating finish	Typical local method
	Furniture & Others	Door	Wood made, coating finish	Wood made, coating finish	Typical local method
		Window	Wood made, coating finish	Wood made, coating finish	Typical local method

2-2-4 Equipment Plan

Equipment to be provided by the Project is educational furniture such as desks and chairs for students and teachers. Equipment plan has been prepared to conform to the standard educational furniture of the Ministry of Education. Proposed furniture units for the Project are listed in the following table:

Table 2-8 List of Equipment Plan

Building	Item		Planed Units/Room
Primary and Junior High Schools' Classroom Buildings	Classroom	Students' Desk & Chair Unit (Fixed Type)	23 (Primary), 18 (Junior High)
		Teachers' Desks and Chairs	1 each
	Headteacher's Room	Headteacher's Desk & Chair (Including units for visitors)	1 each, 2 for visitors
	Staff Room (only Junior High Schools)	Teachers' Desks & Chairs and Meeting Table	6 each, 1 meeting table

2-3 Outline Design Drawing

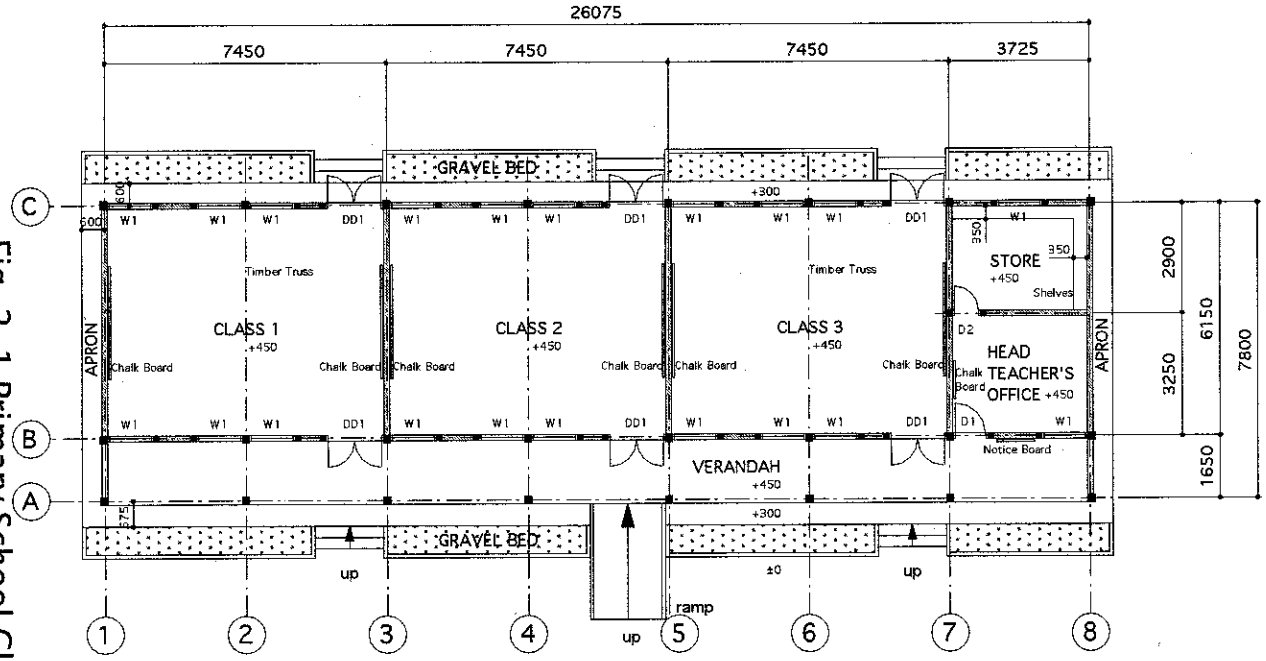
Planned facilities and equipment for Project schools are listed in Table 2-9 and Table 2-10 respectively. Outline design drawings of each facility type are shown in the following pages.

Table 2-9 List of the Contents of Facilities and Their Quantities of Each Project School

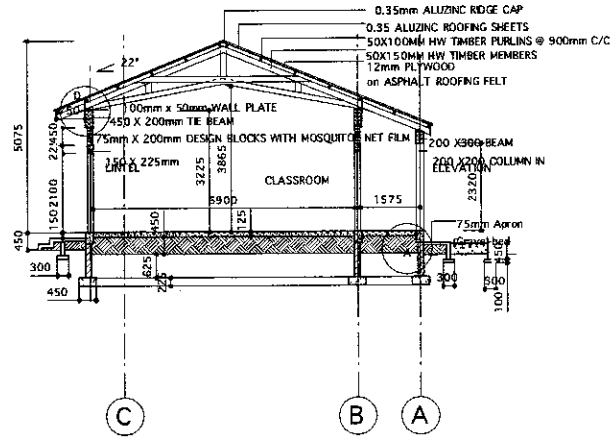
		Name of School	Number of Exist Classrooms			Classrooms to be Improved			Rooms to be Improved		Classroom Bldg Type				Toilet Booths to be Improved			Toilet Bldg Type			Teachers' Accommod. Units	
			Not Usable	Usable		Rebuild	New	Total	Hd. Teacher's Rm w/Str	Teachers' Rm	1	2	3	4	Exist No.	New No.	Total Booths	A	B	C	Exist Units	New Units
Sawla-Tuna-Kalba District																						
1	STK1	Tuoyiri Primary	0	0	3.49	0	3	3	1	0	1	0	0	0	0	3	3	1	0	0	0	3
2	STK2	Poru Primary	2	0	4.91	2	1	3	1	0	1	0	0	0	0	3	3	1	0	0	0	3
3	STK4	Gbelpie Primary	3	0	4.67	3	0	3	1	0	1	0	0	0	0	3	3	1	0	0	0	3
4	STK5	Dani-Uuri Primary	3	0	3.58	3	0	3	1	0	1	0	0	0	0	3	3	1	0	0	0	3
5	STK9	Konfali Primary	3	0	3.47	3	0	3	1	0	1	0	0	0	0	3	3	1	0	0	0	3
Primary Schools' Subtotal			11	0	20.12	11	4	15	5	0	5	0	0	0	0	15	15	5	0	0	0	15
6	STK10	Kalba J. High School	0	3	4.20	0	3	3	0	0	0	0	0	1	4	2	6	0	0	1	0	3
J. High Schools' Subtotal			0	3	4.20	0	3	3	0	0	0	0	0	1	4	2	6	0	0	1	0	3
Primary & J. High Schools' Subtotal			11	3	24.32	11	7	18	5	0	5	0	0	1	4	17	21	5	0	1	0	18
Central Gonja District																						
7	CG3	Adape Primary	5	0	4.04	3	0	3	1	0	1	0	0	0	0	3	3	1	0	0	0	3
8	CG4	Chama Amezyn Primary	3	0	3.69	3	0	3	1	0	1	0	0	0	0	3	3	1	0	0	0	3
9	CG6	Kigbirpe Primary	0	0	3.91	0	3	3	1	0	1	0	0	0	0	3	3	1	0	0	0	3
10	CG8	Jukuku Primary	0	0	4.16	0	3	3	1	0	1	0	0	0	0	3	3	1	0	0	0	3
Primary Schools' Subtotal			8	0	15.80	6	6	12	4	0	4	0	0	0	0	12	12	4	0	0	0	12
11	CG1	Kpabuso J. High School	0	0	3.40	0	3	3	1	1	0	0	1	0	0	3	3	1	0	0	0	3
12	CG2	Sheri J. High School	3	3	3.40	3	0	3	1	1	0	0	1	0	4	2	6	0	0	1	0	3
J. High Schools' Subtotal			3	3	6.80	3	3	6	2	2	0	0	2	0	4	5	9	1	0	1	0	6
Primary & J. High Schools' Subtotal			11	3	22.6	9	9	18	6	2	4	0	2	0	4	17	21	5	0	1	0	18
Karaga District																						
13	KG1	Karaga L/A Primary	0	12	7.80	0	6	6	1	0	1	1	0	0	0	6	6	2	0	0	0	3
Primary Schools' Subtotal			0	12	7.80	0	6	6	1	0	1	1	0	0	0	6	6	2	0	0	0	3
Bunkpurugu District																						
14	BY2	Salimboukou 'B' Primary	6	0	18.96	6	0	6	1	0	1	1	0	0	2	4	6	0	1	0	7	0
15	BY3	Gbankoni Primary	6	0	7.98	6	0	6	1	0	1	1	0	0	0	6	6	2	0	0	4	0
16	BY5	Chintuing No.2 D/A Primary	6	0	5.91	3	0	3	1	0	1	0	0	0	0	3	3	1	0	0	0	0
17	BY6	Suanvusi Primary	3	0	3.78	3	0	3	1	0	1	0	0	0	0	3	3	1	0	0	0	0
18	BY7	Tusug Primary	6	0	7.49	6	0	6	1	0	1	1	0	0	0	6	6	2	0	0	0	0
19	BY10	Kungaar-Bugri Primary	3	0	6.16	3	3	6	1	0	1	1	0	0	4	2	6	0	0	1	4	0
Primary Schools' Subtotal			30	0	50.27	27	3	30	6	0	6	4	0	0	6	24	30	6	1	1	15	0
20	BY1	Kinkangu J. High School	3	0	6.06	3	3	6	1	1	0	0	1	1	0	6	6	2	0	0	0	0
21	BY8	Yunyoo J. High School	3	0	4.00	3	0	3	1	1	0	0	1	0	0	3	3	1	0	0	4	0
J. High Schools' Subtotal			6	0	10.06	6	3	9	2	2	0	0	2	1	0	9	9	3	0	0	4	0
Primary & J. High Schools' Subtotal			36	0	60.3238	33	6	39	8	2	6	4	2	1	6	33	39	9	1	1	19	0
Assin South District																						
22	AS1	Adubiase Presby Primary	6	0	6.22	6	0	6	1	0	1	1	0	0	0	6	6	2	0	0	0	3
23	AS2	Nyankomase Ahenko D/A Primary 'B'	3	0	5.96	3	0	3	1	0	1	0	0	0	0	3	3	1	0	0	0	3
24	AS3	Amanbete D/A Primary	6	0	6.04	6	0	6	1	0	1	1	0	0	0	6	6	2	0	0	6	0
25	AS4	Anyinabrim Methodist Primary	6	0	4.49	3	0	3	1	0	1	0	0	0	0	3	3	1	0	0	0	0
26	AS5	Mesomagor D/A Primary	6	0	4.24	3	0	3	1	0	1	0	0	0	0	3	3	1	0	0	6	0
27	AS6	Dominase D/A Primary	0	0	4.56	0	3	3	1	0	1	0	0	0	0	3	3	1	0	0	0	3
28	AS7	Akoteykrom D/A Primary	6	0	5.53	3	0	3	1	0	1	0	0	0	0	3	3	1	0	0	7	0
29	AS9	Adiembra Catholic Primary A	0	0	7.73	0	6	6	1	0	1	1	0	0	0	6	6	2	0	0	0	3
30	AS10	Homaho D/A Primary	8	0	6.00	6	0	6	1	0	1	1	0	0	4	2	6	0	0	1	0	0
Primary Schools' Subtotal			41	0	50.78	30	9	39	9	0	9	4	0	0	4	35	39	11	0	1	19	12
Assin North District																						
31	AN1	Bereku Nyamebekyere D/A Primary	6	0	3.36	3	0	3	1	0	1	0	0	0	0	3	3	1	0	0	0	0
32	AN2	Odumase Wawase D/A Primary	0	0	4.44	0	3	3	1	0	1	0	0	0	0	3	3	1	0	0	0	3
33	AN4	Sekanbodua M.A. Primary	3	0	4.16	3	0	3	1	0	1	0	0	0	0	3	3	1	0	0	0	3
34	AN5	Awisem Haji Idris Islamic Primary	6	0	9.02	6	0	6	1	0	1	1	0	0	3	3	6	1	0	0	0	3
35	AN8	Abotareye M.A. Primary	6	0	4.64	3	0	3	1	0	1	0	0	0	0	3	3	1	0	0	3	0
36	AN9	Afenase D/A Primary	0	0	5.33	0	3	3	1	0	1	0	0	0	0	3	3	1	0	0	0	3
37	AN-ALT	Krofofordo M.A. Primary	5	0	4.76	3	0	3	1	0	1	0	0	0	0	3	3	1	0	0	0	3
J. High Schools' Subtotal			26	0	35.71	18	6	24	7	0	7	1	0	0	3	21	24	7	0	0	3	15
Primary & J. High Schools' Subtotal			116	12	180	92	34	126	32	0	32	10	0	0	13	113	126	35	1	2	37	57
Primary Schools' Total			9	6	21	9	9	18	4	4	0	0	4	2	8	16	24	4	0	2	4	9
J. High Schools' Total			125	18	202	101	43	144	36	4	32	10	4	2	21	129	150	39	1	4	41	66

Table 2-10 List of the Content of Equipment and Its Quantity of Each Project School

		Name of School	Classroom			Headteacher's Room			Staff Room		
			No. of Rooms	Students' Desk &	Teachers' Desks & Chairs	No. of Rooms	Headteacher's Desks & Chairs	Visitor's Chairs	No. of Rooms	Teachers' Desks & Chairs	Meeting Table
Sawla-Tuna-Kalba District											
1	STK1	Tuoyiri Primary	3	69	3	1	1	2	0	0	0
2	STK2	Poru Primary	3	69	3	1	1	2	0	0	0
3	STK4	Gbelpie Primary	3	69	3	1	1	2	0	0	0
4	STK5	Dani-Uuri Primary	3	69	3	1	1	2	0	0	0
5	STK9	Konfali Primary	3	69	3	1	1	2	0	0	0
Primary Schools' Subtotal			15	345	15	5	5	10	0	0	0
6	STK10	Kalba J. High School	3	54	3	0	0	0	0	0	0
J. High Schools' Subtotal			3	54	3	0	0	0	0	0	0
Primary & J. High Schools' Subtotal			18	399	18	5	5	10	0	0	0
Central Gonja District											
7	CG3	Adape Primary	3	69	3	1	1	2	0	0	0
8	CG4	Chama Amezyn Primary	3	69	3	1	1	2	0	0	0
9	CG6	Kigbirpe Primary	3	69	3	1	1	2	0	0	0
10	CG8	Jukuku Primary	3	69	3	1	1	2	0	0	0
Primary Schools' Subtotal			12	276	12	4	4	8	0	0	0
11	CG1	Kpabuso J. High School	3	54	3	1	1	2	1	6	1
12	CG2	Sheri J. High School	3	54	3	1	1	2	1	6	1
J. High Schools' Subtotal			6	108	6	2	2	4	2	12	2
Primary & J. High Schools' Subtotal			18	384	18	6	6	12	2	12	2
Karaga District											
13	KG1	Karaga L/A Primary	6	138	6	1	1	2	0	0	0
Primary Schools' Subtotal			6	138	6	1	1	2	0	0	0
Bunkpurugu District											
14	BY2	Salimboukou 'B' Primary	6	138	6	1	1	2	0	0	0
15	BY3	Gbankoni Primary	6	138	6	1	1	2	0	0	0
16	BY5	Chintuing No.2 D/A Primary	3	69	3	1	1	2	0	0	0
17	BY6	Suanvusi Primary	3	69	3	1	1	2	0	0	0
18	BY7	Tusug Primary	6	138	6	1	1	2	0	0	0
19	BY10	Kungaar-Bugri Primary	6	138	6	1	1	2	0	0	0
Primary Schools' Subtotal			30	690	30	6	6	12	0	0	0
20	BY1	Kinkangu J. High School	6	108	6	1	1	2	1	6	1
21	BY8	Yunyoo J. High School	3	54	3	1	1	2	1	6	1
J. High Schools' Subtotal			9	162	9	2	2	4	2	12	2
Primary & J. High Schools' Subtotal			39	852	39	8	8	16	2	12	2
Assin South District											
22	AS1	Adubiase Presby Primary	6	138	6	1	1	2	0	0	0
23	AS2	Nyankomase Ahenko D/A Primary 'B'	3	69	3	1	1	2	0	0	0
24	AS3	Amanbete D/A Primary	6	138	6	1	1	2	0	0	0
25	AS4	Anyinabrim Methodist Primary	3	69	3	1	1	2	0	0	0
26	AS5	Mesomagor D/A Primary	3	69	3	1	1	2	0	0	0
27	AS6	Dominase D/A Primary	3	69	3	1	1	2	0	0	0
28	AS7	Akoteykrom D/A Primary	3	69	3	1	1	2	0	0	0
29	AS9	Adiembra Catholic Primary A	6	138	6	1	1	2	0	0	0
30	AS10	Homaho D/A Primary	6	138	6	1	1	2	0	0	0
Primary Schools' Subtotal			39	897	39	9	9	18	0	0	0
Assin North District											
31	AN1	Bereku Nyamebekyere D/A Primary	3	69	3	1	1	2	0	0	0
32	AN2	Odumase Wawase D/A Primary	3	69	3	1	1	2	0	0	0
33	AN4	Sekanbodua M.A. Primary	3	69	3	1	1	2	0	0	0
34	AN5	Awisem Haji Idris Islamic Primary	6	138	6	1	1	2	0	0	0
35	AN8	Abotareye M.A. Primary	3	69	3	1	1	2	0	0	0
36	AN9	Afenase D/A Primary	3	69	3	1	1	2	0	0	0
37	AN-ALT	Krofofordo M.A. Primary	3	69	3	1	1	2	0	0	0
Primary Schools' Subotal			24	552	24	7	7	14	0	0	0
Primary Schools' Total			126	2,898	126	32	32	64	0	0	0
J. High Schools' Total			18	324	18	4	4	8	4	24	4
J. High & Primary Schools' Total			144	3,222	144	36	36	72	4	24	4



FLOOR PLAN



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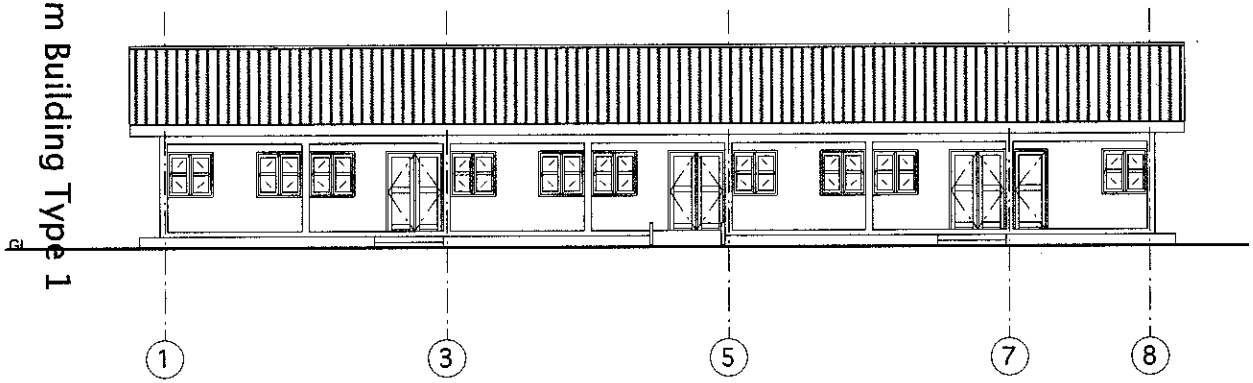
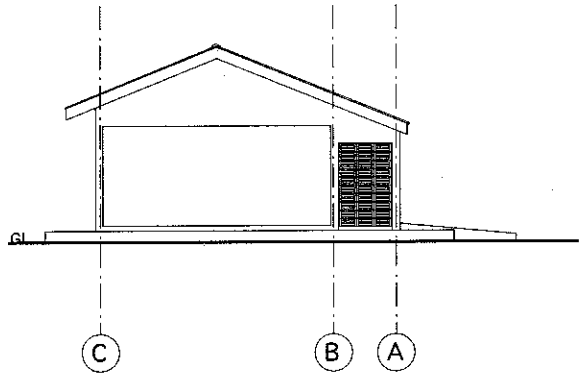


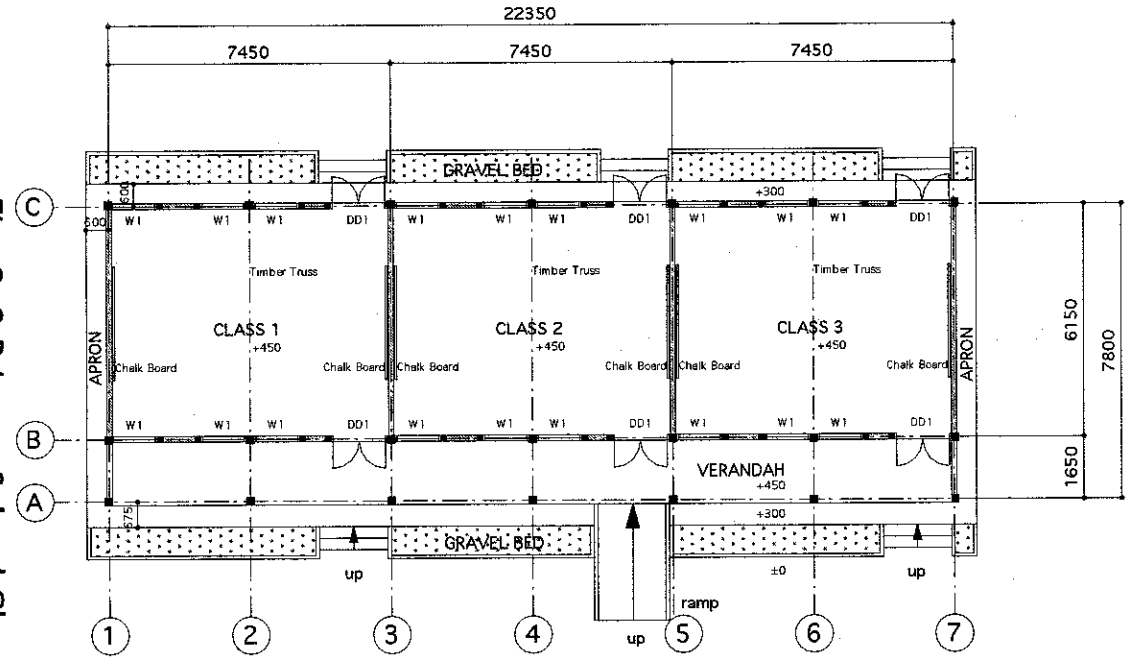
FRONT ELEVATION



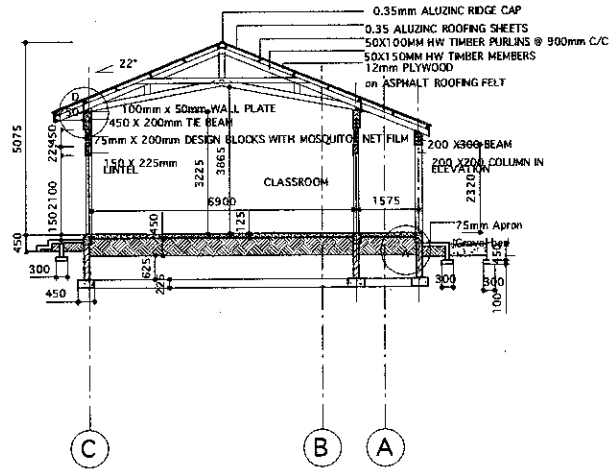
SIDE ELEVATION

Fig. 2-1 Primary School Classroom Building Type 1

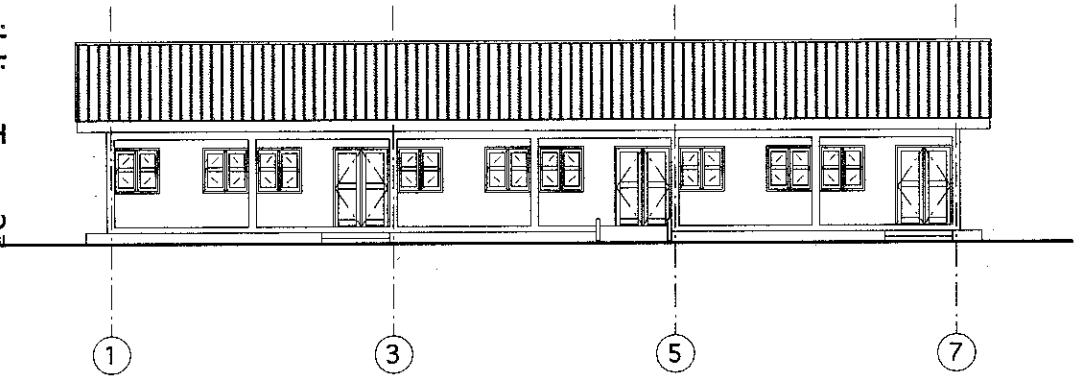
PROJECT TITLE	SCHOOL NAME	DRAWN BY	APPROVED BY	DATE	DRAWING TITLE	SCALE	SHEET NO.
THE PROJECT FOR IMPROVEMENT OF ACCESS TO BASIC EDUCATION IN DEPRIVED AREAS IN THE REPUBLIC OF GHANA					PRIMARY SCHOOL CLASSROOM BUILDING TYPE1	1:200	



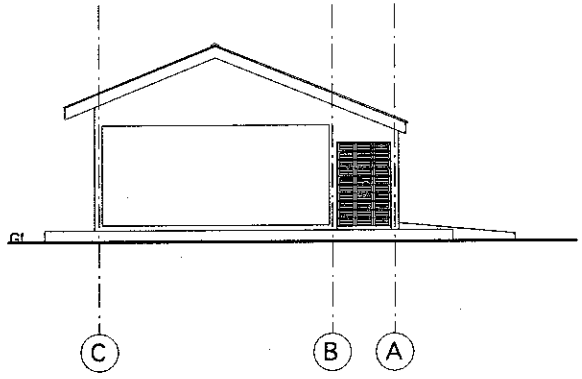
FLOOR PLAN



SECTION



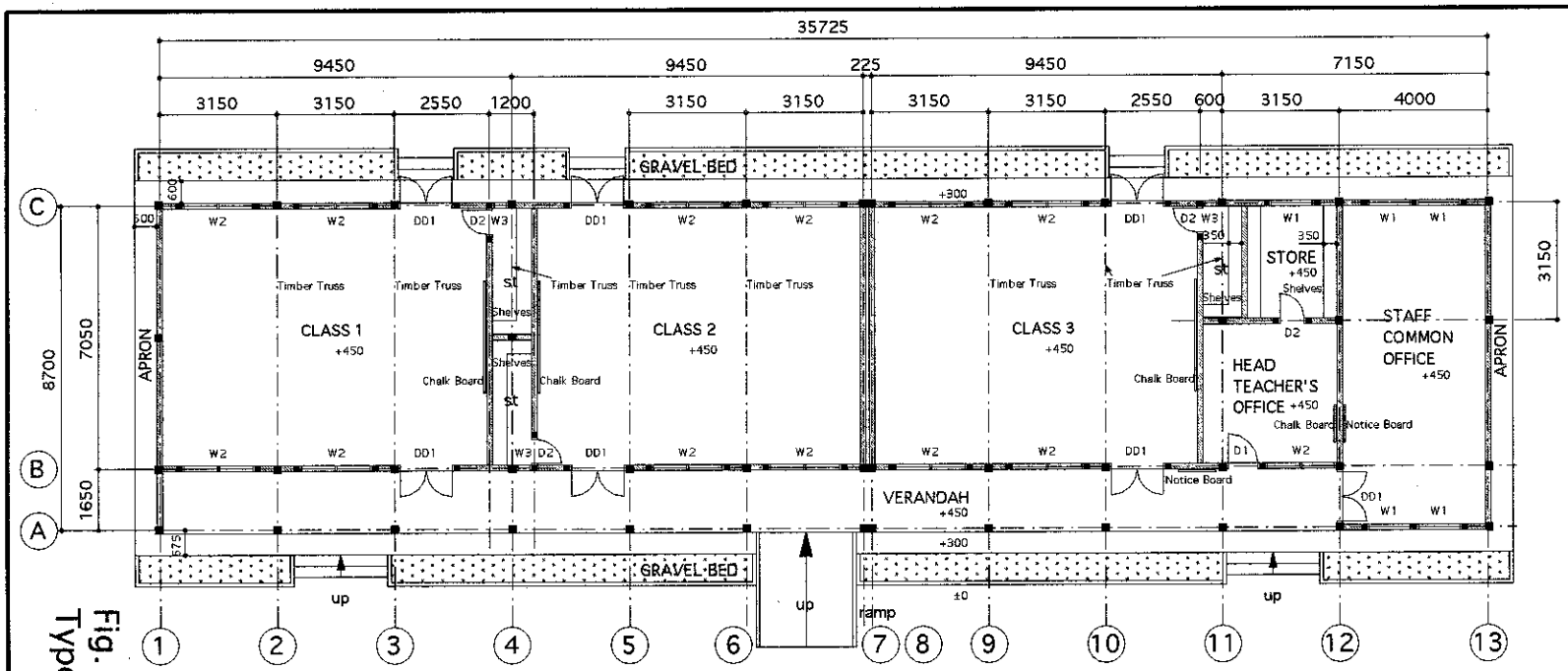
FRONT ELEVATION



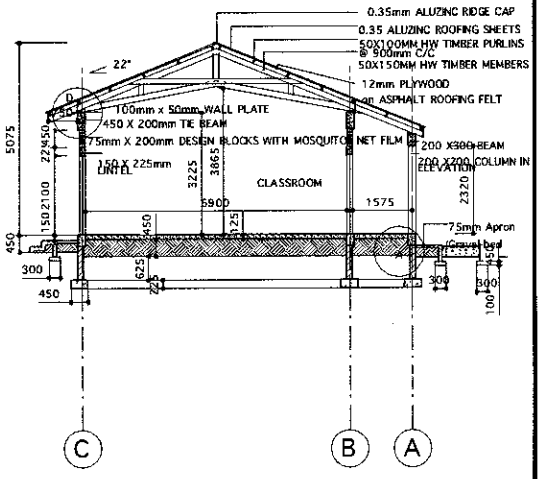
SIDE ELEVATION

Fig. 2-2 Primary School Classroom Building Type 2

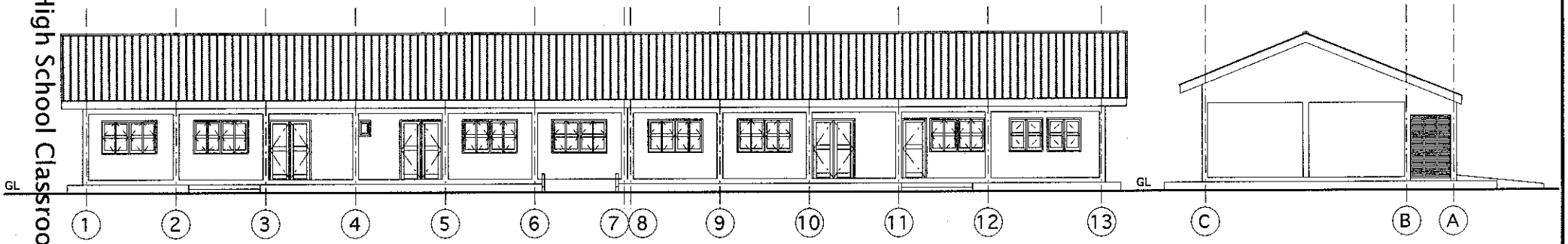
PROJECT TITLE	SCHOOL NAME	DRAWN BY	APPROVED BY	DATE	DRAWING TITLE	SCALE	SHEET NO.
THE PROJECT FOR IMPROVEMENT OF ACCESS TO BASIC EDUCATION IN DEPRIVED AREAS IN THE REPUBLIC OF GHANA					PRIMARY SCHOOL CLASSROOM BUILDING TYPE2	1:200	



FLOOR PLAN



SECTION

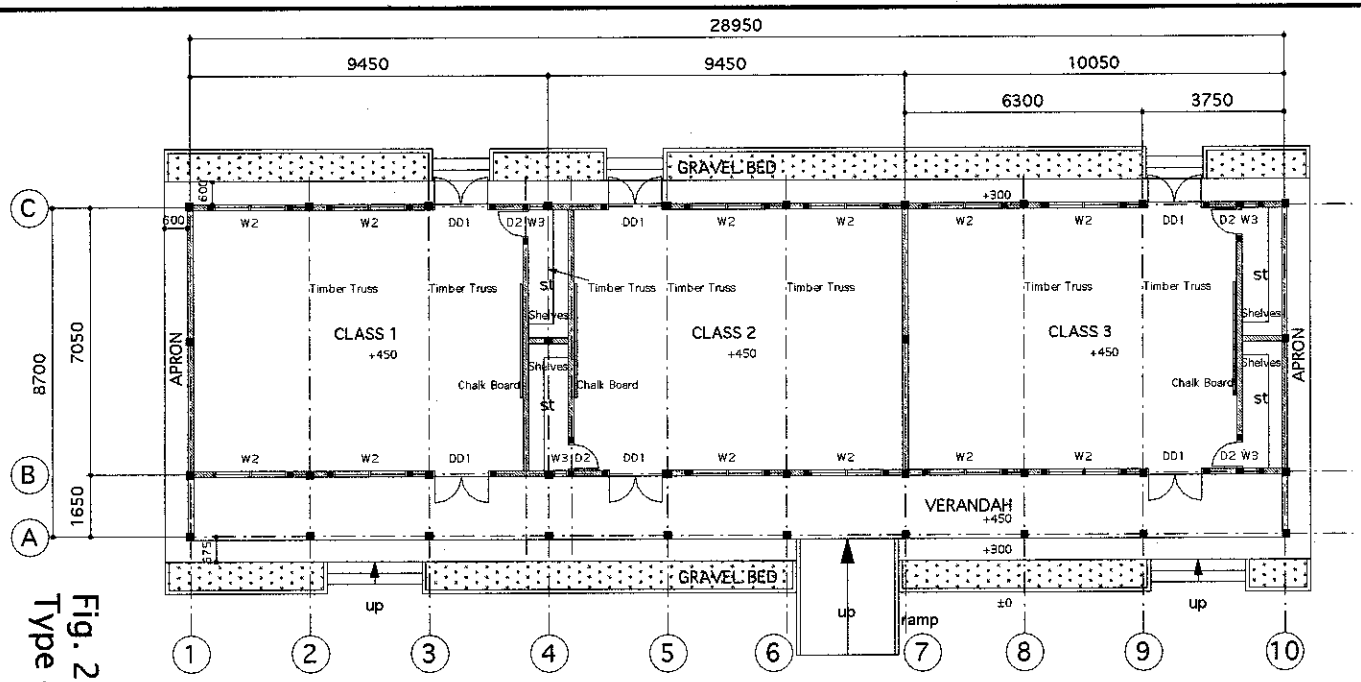


FRONT ELEVATION

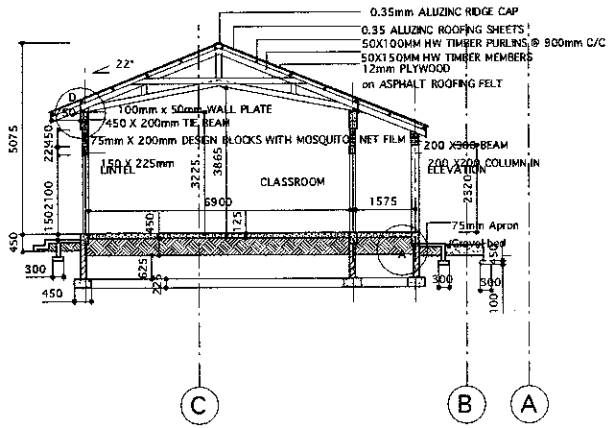
SIDE ELEVATION

Fig. 2-3 Junior High School Classroom Building Type 3

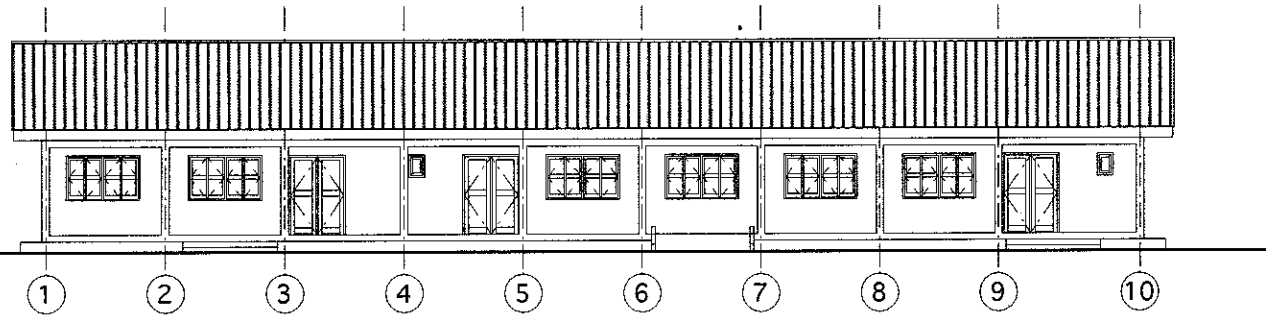
PROJECT TITLE	SCHOOL NAME	DRAWN BY	APPROVED BY	DATE	DRAWING TITLE	SCALE	SHEET NO.
THE PROJECT FOR IMPROVEMENT OF ACCESS TO BASIC EDUCATION IN DEPRIVED AREAS IN THE REPUBLIC OF GHANA					JUNIOR HIGH SCHOOL CLASSROOM BUILDING TYPE 3	1:200	



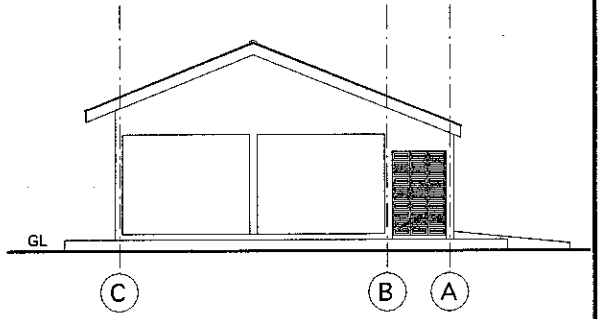
FLOOR PLAN



SECTION



FRONT ELEVATION



SIDE ELEVATION

Fig. 2-4 Junior High School Classroom Building Type 4

PROJECT TITLE	SCHOOL NAME	DRAWN BY	APPROVED BY	DATE	DRAWING TITLE	SCALE	SHEET NO.
THE PROJECT FOR IMPROVEMENT OF ACCESS TO BASIC EDUCATION IN DEPRIVED AREAS IN THE REPUBLIC OF GHANA					JUNIOR HIGH SCHOOL CLASSROOM BUILDING TYPE4	1:200	

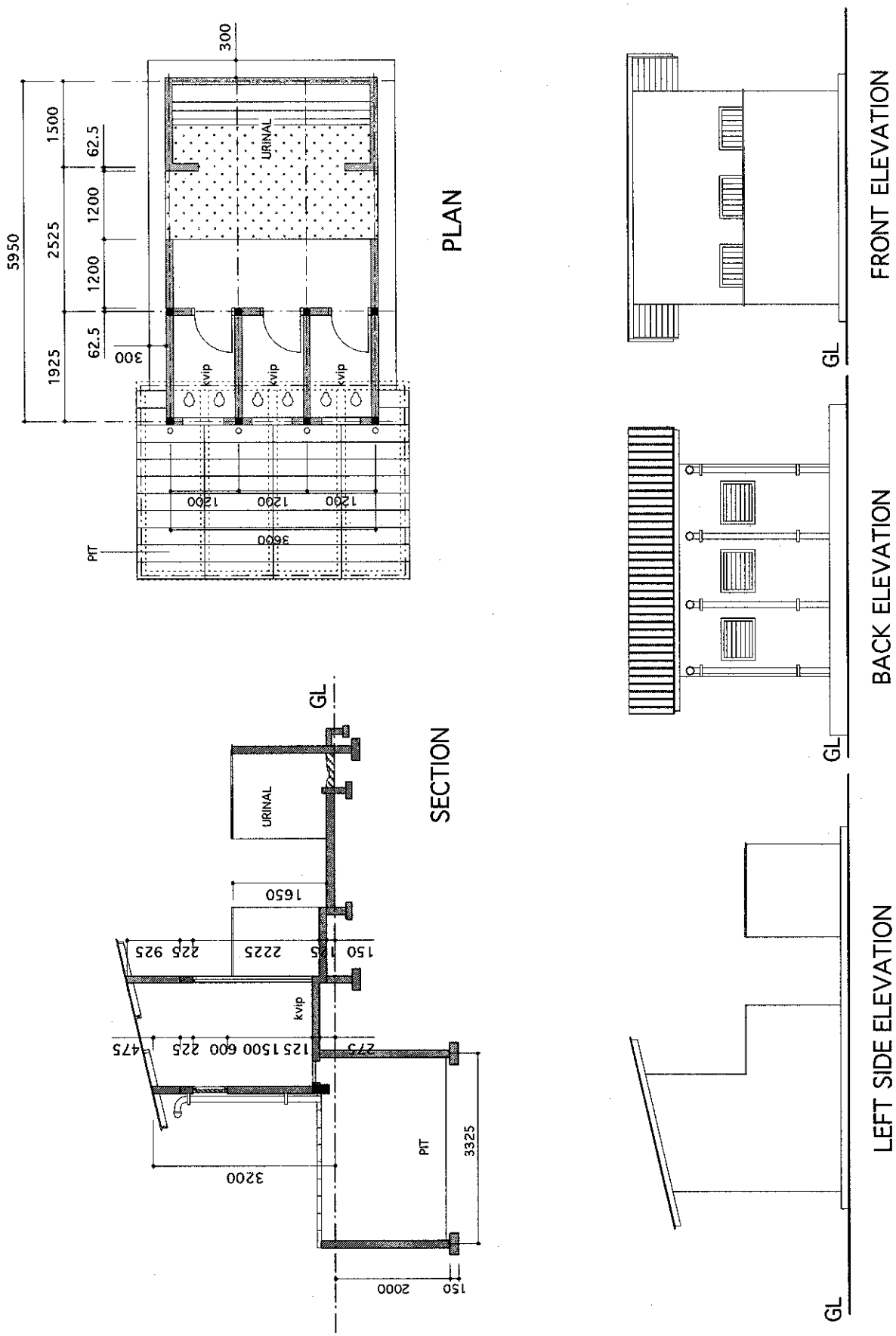
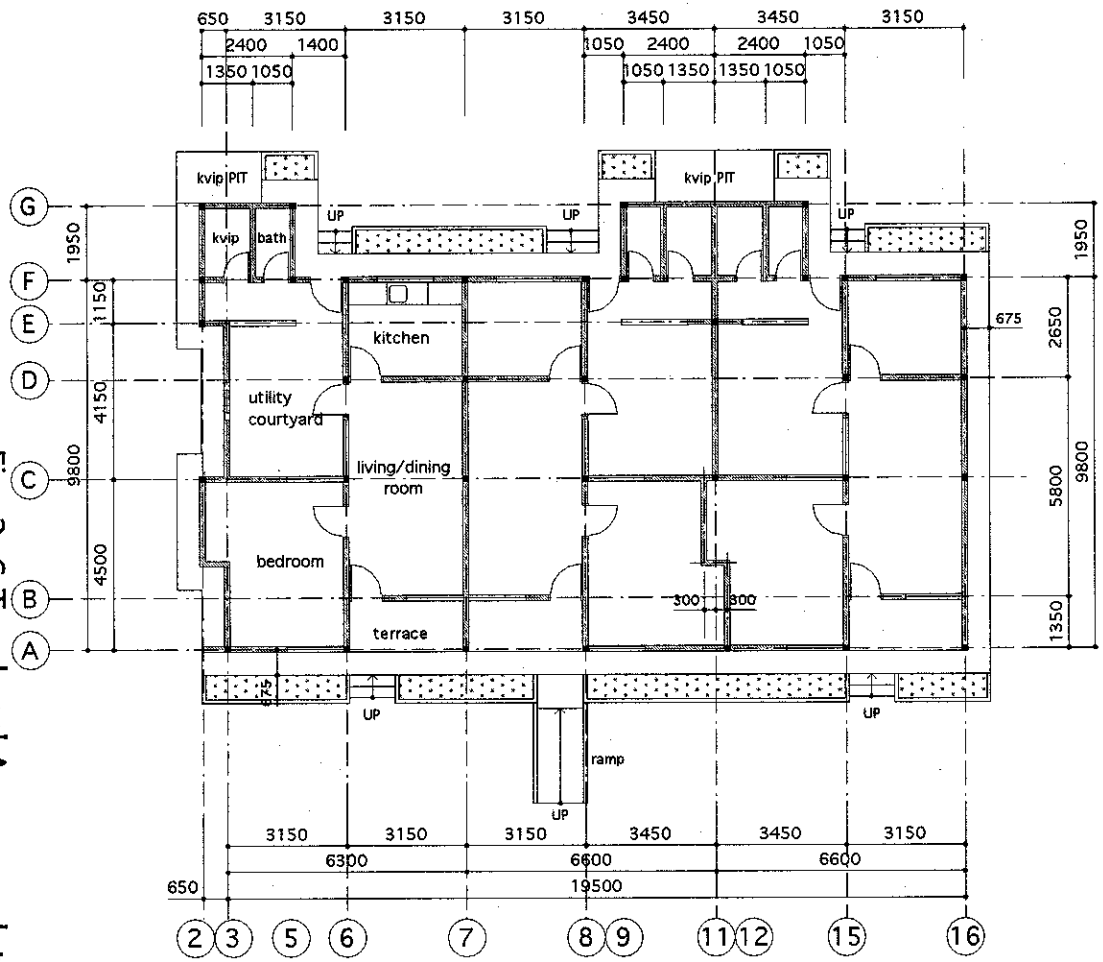
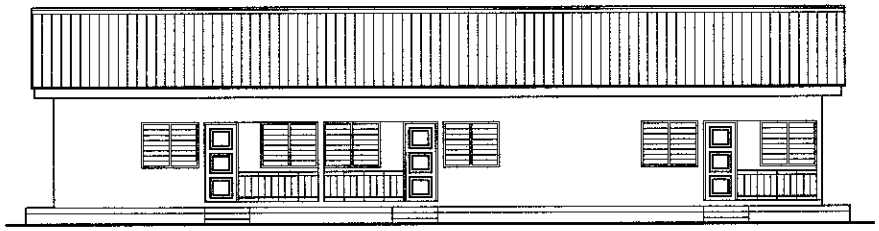


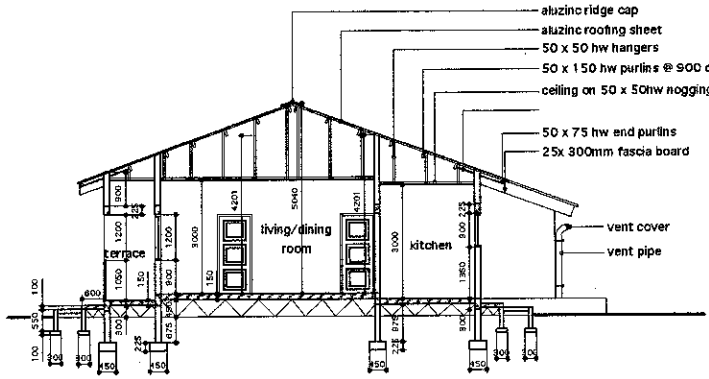
Fig. 2-5 Toilet Building Type A



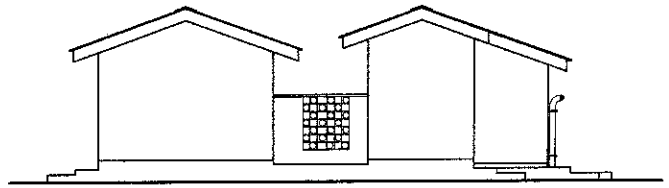
FLOOR PLAN



FRONT ELEVATION



SECTION



RIGHT SIDE VIEW

Fig. 2-6 Teachers' Accommodation Building

PROJECT TITLE	SCHOOL NAME	DRAWN BY	APPROVED BY	DATE	DRAWING TITLE	SCALE	SHEET NO.
THE PROJECT FOR IMPROVEMENT OF ACCESS TO BASIC EDUCATION IN DEPRIVED AREAS IN THE REPUBLIC OF GHANA/ MINISTRY OF EDUCATION/ JICS/ SEKKEI KEIKAKU INC.					TEACHERS' ACCOMMODATION BUILDING	1:200	

2-4 Construction Plan

2-4-1 Construction and Procurement Policies of Procurement Management Agent

(1) Basic Items of Project Implementation

The Project will be formally implemented when the Governments of both countries sign Exchange of Notes and Grant Agreement after approval by the Cabinet Meeting of the Government of Japan. The Government of Ghana, as a responsible organization for the Project implementing, signs the Procurement Management Agent Agreement with a Japanese Procurement Agent and entrusts the Project implementation to the Agent. The Agent acquires local contractors (construction contractors and furniture suppliers) as a representative of the Government of Ghana.

(2) Intergovernmental Committee

After signing Exchange of Notes, an intergovernmental committee is set up. The intergovernmental committee is established by the Government of Japan, the Government of Ghana, and JICA's Ghana Office. A representative of the Government of Ghana will act as the chairman of the committee. The intergovernmental committee for the Project will be consisted of Ghana's Ministry of Education (the main constituent), and the Ministry of Finance and Ministry of Foreign Affairs, as necessary. A representative of the Procurement Management Agent will participate in the committee as an adviser. The committee will make discussions and coordination regarding the Project.

(3) Project Implementation Organization

The responsible organization of the Ghanaian Side who signs Exchange of Note for the Project will be the Ministry of Foreign Affairs of the Government of Ghana. The responsible organization for the Project will the Ministry of Education of Ghana and the Chief Director will coordinate and manage various matters related to the Project as the responsible person for the entire aspects of the Project. Ghana Education Service, that is the implementation organization of the Project, will undertake actual work of the Project. The Chief Director will conduct overall management of undertakings to be borne by the Ghanaian Side, such as access road improvement work, site preparation work, fencing work and gate construction. These undertakings are necessary for facility construction of Project schools.
Parties involved in the implementation of the Project under the Procurement Management Agent, are as follows:

1) Procurement Management Agent

The Ministry of Education and the Procurement Management Agent sign the Procurement Management Agent Agreement based on Agreed Minutes (A/M) attached to Exchange of Notes for the Project. The Procurement Management Agent is in charge of the overall aspects

of the Project and the management of Project funds which includes works related to the preparation of tender documents related to project facilities and equipment, selection of contractors and furniture suppliers through biddings.

2) Construction Supervising Consultants

①Japanese Consultants (Prime Contractor)

The Procurement Management Agent will sign the construction supervision contract with the Japanese consultants conducted the Outline Design Study of the Project. The Japanese consultants firm will dispatch supervising engineers to Ghana. The consultants firm will make an additional construction supervision contract with local consultants. The local consultants assist Japanese engineers dispatched from Japan. The Japanese engineers will set up offices in the middle of Project sites during Project construction period in Accra and Tamale, give guidance related to construction supervision work to local consultants, and confirm the progress of construction work including progress inspection, work completion inspection and inspection of inherent defects. They periodically report the condition of construction progress to the Procurement Management Agent.

②Local Consultants

The local consultants firm signs a construction supervision contract with the Japanese consultants firm that carried out the Outline Design Study of the Project and supports the work of the Japanese supervising engineers. Work to be performed by the local consultants firm includes assisting work related to tendering to select construction contractors and furniture suppliers, construction supervision, work progress inspection and work completion inspection.

3) Dispute Arbitration Organization

The Ghana Institution of Surveyors is supposed to be the third party mediator to solve or mediate problems such as disputes and actions that may arise from time to time between organizations and firms related to the Project during Project implementation period. It is not necessary to hire any person, sign any contract or pay fees to the Institution for a certain period. It needs to pay fees only when problems arise and arbitration is requested to the Institution.

4) Procurement Advisor

The Funds and Procurement Management Unit (FPMU), that is the procurement management organization of the Ministry of Education and the counterpart of the Japanese Side for the Project, is supposed to be the procurement advisor for the Project. As FPMU is a public organization, it is not necessary to sign any contract for advising work.

5) Construction Contractor

Project construction contractors will be selected through a price competitive bidding among participation limited bidders. Selected contractors shall conduct construction work based on the tender documents and their completed work shall be inspected for adequateness and existence of any inherent defects. The contractors shall correct defects found, if any.

6) Furniture Supplier

Furniture suppliers will also be selected through a price competitive bidding among participation limited bidders. Selected suppliers shall procure furniture based on the tender documents.

The chart of Project implementation organization is expected as shown below:

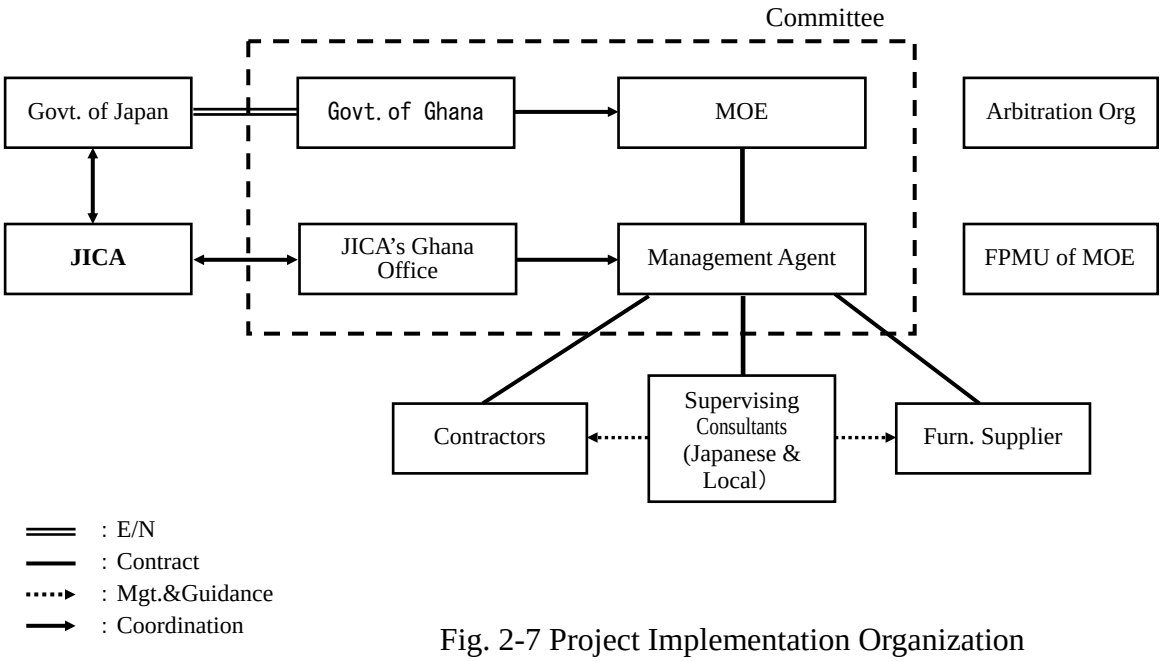


Fig. 2-7 Project Implementation Organization

2-4-2 Matters to be kept in Mind for Construction and Procurement

(1) Natural Condition

It is considered that a special attention will be necessary to the rainy season among the natural conditions for Project implementation. Problems during the rainy season in Ghana are not the decline of construction efficiency but the delay of construction work due to the availability condition of access roads to the construction sites.

The peak of the rainy season is expected to occur during the period from August through October in Northern Region. The number of rainy days is about 15 days in a month and the monthly rainfall is around 180mm. In the Northern Region, there are many places where rock exposes above the ground surface. As roads and drainage systems are not sufficiently developed, access to construction sites is often difficult. It was confirmed by questionnaire conducted during the site survey period that construction work could be continued if access to construction site were possible.

In Southern Central Region, the peak of the rainy season is during the period from May through July. The number of rainy days in a month is less than 15 days. Monthly rainfall is around 220mm. Access to construction sites during the rainy season is not so difficult comparing with Northern Region. It was confirmed through questionnaire that it was quite possible to conduct

construction work between rainy days.

In view of the above confirmation, it is expected to prepare a construction plan that is able to secure access roads to Project sites. In addition, from the viewpoint of constructability and quality control, earth work and concrete work should be planned to avoid the rainy season.

(2) Construction Materials

It is planned that the Project is to be implemented by the method of “Grant Aid for Community Empowerment” that uses local resources. Therefore, local architectural situations will be reflected to the Project. For this reason, focus points for the Project will be the market situations of construction materials and equipment and the level of the dissemination of construction methods and technologies. If there are no fundamental problems, locally obtainable materials and equipment as well as local building methods will be used as a general principle. In particular, since remotely located construction sites are included in the Project, a construction plan that uses hardly obtainable materials and equipment or requires special skilled workers such as skilled welders is considered as inappropriate.

For example, in Ghana, wood is widely used for roof trusses, and doors and windows not only in educational facilities but also in many buildings. In view of structural durability and environmental preservation, use of steel products, instead of wooden products, may be appropriate. This thinking depends on a premise that markets of steel product and distribution system as well as construction technology are stable. But, in reality, these are not fully developed and actually used cases of steel products are rarely seen. It is considered too early to use steel products.

(3) Dispute Handling

The settlement methods of disputes related to procurement contracts in Ghana are as follows:

1) A settling method to appoint an adjudicator then reach to an agreement between parties involved in a concerned contract at the bidding time:

   The Ministry of Education appoints the Ghana Institution of Surveyors and its representative as Adjudicators in accordance with the standard documents prepared by the Public Procurement Bureau and contractors participating to the bidding describe the willingness of the acceptance of the appointment in their bidding documents. The purpose of the adjudicator appointment system is to prevent contractors easily bring a problem to a court. As for arbitration fees, when a problem arises and parties involved ask the arbitration of the problem to the Ghana Institution of Surveyors, fees are necessary. Therefore, it is not necessary to pay arbitration fee only for the appointing an adjudicator. A necessary time period for arbitration procedures greatly varies from case to case. Some can be settled in one week but some other needs more than one year.

2) UNCITRAL

   Problems related to contract matters in Ghana are arbitrated in accordance with the rules of the Ghana Arbitration Center. Arbitrators registered at the Ghana Institution of Surveyors can

handle cases in accordance with internationally used rules such as the United Nations Commission on International Trade Law (UNCITRAL). UNCITRAL does not require the appointment of arbitrator for problems related equipment procurement but specifies the arbitration rules for dispute settlement.

3) Court

When arbitration is not chosen for dispute settlement, parties involved may appeal the dispute to a competent court. When both parties do not agree the arbitration result, they can appeal the problems to a competent court.

As described above, as the same as the Ministry of Education, a party related to Grant Aid for Community Empowerment may appoint the Ghana Institution of Surveyors as an arbitration organization and a representative of the Ghana Institution of Surveyors as an adjudicator. It is considered appropriate to choose the country of Ghana as the place of arbitration. However, it would be necessary to confirm the contents of both articles when deciding which arbitration laws should be applied; Ghana Arbitration Laws or UNCITRAL. In addition, it is considered necessary to judge various questions together with the rules for the Scheme of Grant Aid for Community Empowerment and the situations of ongoing projects; when a problem requiring arbitration occurs, whether or not contractors are allowed to include arbitration fees into the overhead item of bidding price, whether or not arbitration costs are to be secured by Grant Aid funds of the Ministry of Education, whether or not participation to arbitration procedures is regarded as the work of the Procurement Management Agent and whether it is possible or impossible to include arbitration costs into the fee of the Procurement Management Agent.

(4) Procedures for Tax Exemption

The Study Team confirmed through a questionnaire survey to the Ministry of Education, Tax Bureau and the Ministry of Finance that the funds management method of Grant Aid for Community Empowerment and the actual tax exemption method related to the contract of Project construction are the tax exemption method in principle but the reimbursement method is also applicable for the Project. Tax exemption (VAT 12.5%, Insurance 2.5%; a total of 15%) procedures are as follows:

①After signing E/N, G/A and a contract with the Procurement Management Agent, the Procurement Management Agent will explain about the outline of the Project and apply comprehensive tax exemption request to the Ministry of Education.

②The Ministry of Education submits the Procurement Management Agent's tax exemption application to the Ministry of Finance. The Ministry of Finance consults with tax related organizations and requests for the approval of the Diet. After the Diet's approval, the approval is informed to related organizations then tax exemption privilege is awarded to the Procurement Management Agent for one year period. Based on the approval, tax exemption is applied to all contracts signed by the Procurement Management Agent. The Ministry of Education mentioned

that they make a necessary arrangement so that approval by the Diet may be processed in five to six weeks after the Procurement Management Agent makes an application for tax exemption. The Ministry of Education also informed the Study Team of that the Diet sessions are periods from January through April and from the end of Easter to the middle of July, and October to before Christmas. It is also necessary to confirm the necessity of the approval by the Diet because there is possibility that the approval by the Diet may not be required in case of the grant aid project.

③Extension of tax exemption period is possible. Necessary procedures for the extension may be completed within a few days.

④It is required that Ministry of Education submits to Ministry of Finance the copy of E/N, material schedule in addition to the tax exemption application form.

⑤The successful tenderers are requested to bring VAT relief purchase order to the VAT registered shops for the purchase of building materials .

2-4-3 Plan for Dividing Contract into Lots and Tendering Plan

(1) Division into Phases

Project Area can be largely divided into two groups depending upon the above-mentioned natural condition and the below-described access conditions. By taking into consideration effective construction supervision, reselection of good contractors, and the reduction of risks related to the Project of Grant Aid for Community Empowerment which will be the first Community Empowerment project in Ghana, it is decided upon to make the division of Project construction into Phases as the basic policy.

①Northern Region

It takes approximately ten hours from Capital Accra to Tamale, the capital of Region, by car. It is possible to reach by airplane in approximately one hour.

②Southern Central Region

It is possible to access from Capital Accra to Assin Foso, the center of Region, in approximately two hours through the well developed main road by car.

It is planned to select Southern Central Region for Phase I construction because there will be less access problems to the construction sites for personnel related Project construction and for transporting materials and equipment, compared with remote Northern Region for Phase II construction. A construction schedule should be prepared by taking into consideration the use of experience gained during Phase I period and the re-selection of good contractors and access road conditions,

(2) Lot Division

Lot division should be planned by taking into account a distance between each Project site, moving

time between the sites, and contract amount of one lot that correspond to one contractor in a class categorized based on acceptable amount of contract work.

Many contractors engaged in facility construction for primary and junior high schools are registered in D2 and lower D1 class. Thus, it is expected that these experienced contractors are to be selected for Project construction as well as participating in bidding for Project construction work. For these reasons, lot division should be planned by examining the size of work amount (US$20,000 to US$50,000 per lot) for which D2 class contractors can participate in bidding.

(3) Tendering Plan

1) Construction Contractor

Contractors conducting Project construction work will be selected through a price competitive domestic bidding among participation limited bidders for the reduction of period and cost for bidding. Contractors participating in the bidding shall be those domestic and foreign firms that are registered at the Government of Ghana and the bidding will be conducted in Capital Accra. It is not common in Ghana to conduct pre-qualification evaluation at the early stage of tendering procedures. For this reason, the qualification of contractors participating in bidding will be evaluation at the same time when bidding for the Project will be carried out. The qualification evaluation shall be made to evaluate participating contractors' capabilities including construction experience, annual sale amount, financial condition, employees' qualification, possessing construction equipment units, etc. It is also intended to ask participants to submit a technical proposal including a manpower assignment list and construction plan.

2) Furniture Supplier

Procurement of furniture related to educational facilities in Ghana is made through lump sum contract to a supplier. But, procurement of furniture for the Project shall be made through a competitive bidding among participation limited bidders. As the same as the construction work bidding, it is expected that the bidding for furniture procurement is conducted in Capital Accra. But, it is also expected to examine furniture procurement bidding to be conducted in rural cities close to Project sites by inviting those suppliers that are not conducting a nationwide business.

2-4-4 Construction Supervision

Construction supervision work for the Project will be carried out by Japanese engineers, as the central figure, and local consultants by giving advice and guidance to contractors for smooth work progress and closely coordinating with the Ministry of Education, District Education Office, District Assembly, and other related parties, and SMC. Detailed construction supervising work and work organization are as described below:

(1) Construction Supervision Work

①Supervising engineers patrol construction sites according to the frequency and contents specified in contract specifications, secure construction quality, inspect safety precaution, and periodically report construction progress to the Procurement Management Agent.

②When a contractor submits a payment request to the Procurement Management Agent, supervising engineers promptly inspect work progress upon the approval of the Procurement Management Agent and inform of the inspection result to the Procurement Management Agent.

③Supervising engineers conduct work completion inspection and report the inspection result to the Procurement Management Agent.

④Supervising engineers conduct the inspection of inherent defects (the standard inspection frequency in Ghana is every six months) and report the inspection result to the Procurement Management Agent.

(2) Construction Supervising Organization

A construction supervising plan shall be prepared to make smoothly progress of construction work and complete Project construction by the set time specified in the tender documents by providing contractors with appropriate technical guidance related to construction quality, work schedule, and safety at construction sites and conducting a sufficient coordination with related organizations. The following personnel assignment and inspection patrol frequency are expected for the supervision work

1) Phase I

Phase I construction will be carried out in the two districts in Central Region. Access to each construction site is easy and sites are located close to Capital Accra. Thus, it is assumed that facility construction work will be conducted under the construction supervising organization shown in the following figure:

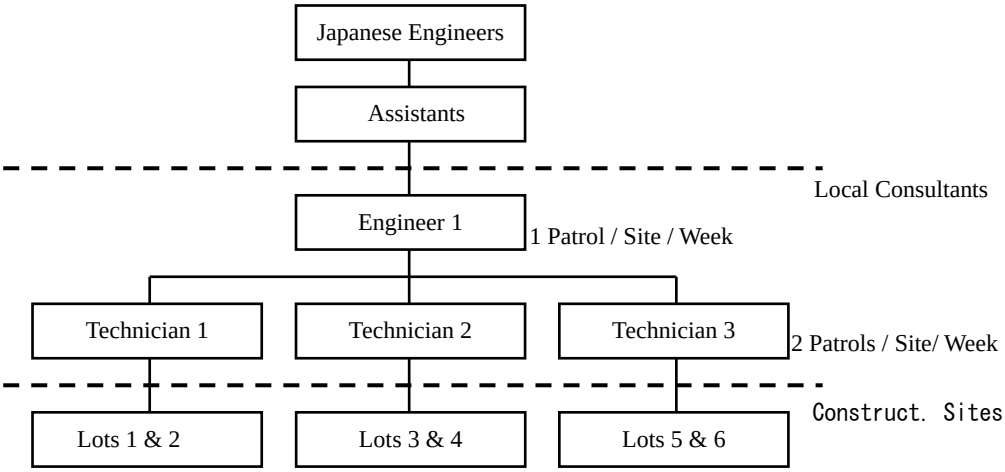


Fig 2-8 Phase I Construction Supervising Organization

2) Phase II

Phase II construction will be conducted in the four districts in Northern Region. Construction

sites are widely scattered in these districts. The following construction supervising organization is expected to secure above-mentioned construction quality.

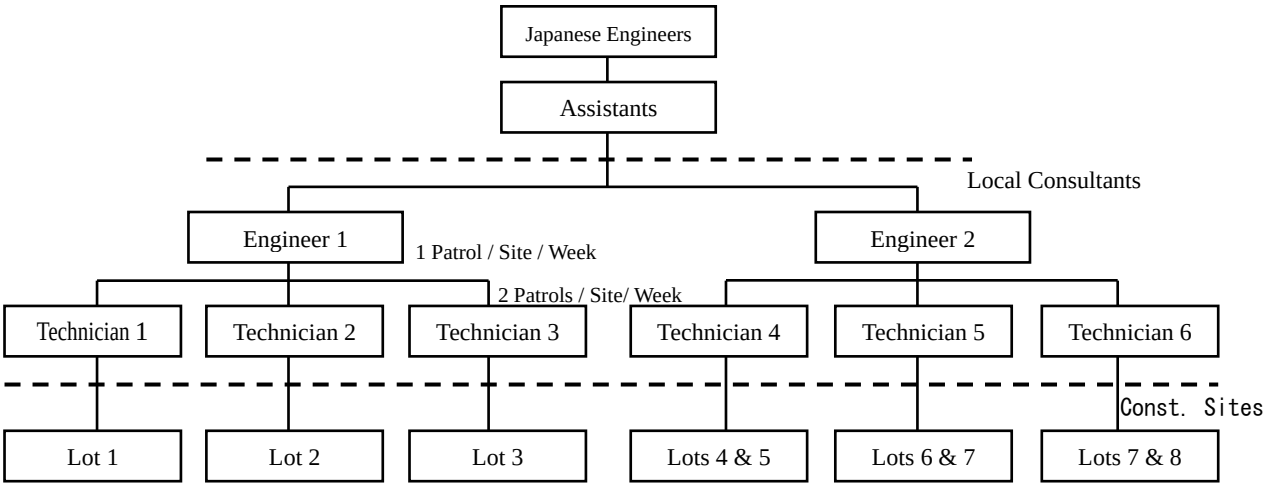


Fig 2-9 Phase II Construction Supervising Organization

2-4-5 Quality Control Plan

(1) Confirmation of Site Condition and Staking Out

It should reconfirm the boundary of each construction site, conditions of existing structures and underground objects, condition of trees, drainage facilities, sewerage treatment method, and elevation difference around facility construction area in each Project site. After confirming these, it should make markings indicating the locations of facilities to be constructed with slaked lime (calcium hydroxide) in order to make clear their boundaries then confirm and adjust the area, if necessary, under the witness of parties related to the Project.

(2) Confirmation of the Bearing Strength of Ground

The bearing strength of the ground at a facility construction site shall be confirmed whether or not strong enough by excavating the ground before starting Project construction. If the ground is evaluated as not sufficiently strong, a necessary measure should be taken based on Japanese Engineer’s direction.

(3) Benchmark, Batter Boarding and Marking

A benchmark should be setup by marking an appropriate elevation on an existing structure or a newly driven stake and a protective measure should be provided around the benchmark in order to prevent it to be removed. Batter board and marking are very important to secure the accuracy of construction dimensions and positions of a facility to be built throughout the construction period. Thus, batter board and marking should be made by using a level or theodolite and be confirmed by a managing engineer.

(4) Earth Work, Excavation and Back Filling

Foundation excavation shall be made 500mm wider then the dimensions of a foundation so that form work can be easily and accurately conducted. Foundation excavation shall be done by hand excavation. Excavation work should be conducted based of a work plan prepared by assuming deep excavation to a designated depth and existence of exposed rock and by examining measures to be taken in advance. Back filling shall be done using good quality soil produced by excavation work.

(5) Reinforcing Bar Work

As a principle, steel bars shall be acquired for each construction site from the same supplier and their inspection certificate shall be checked. A work manual shall be prepared to specify matters related to steel bars' storage, fabrication, fabricating tools, joints, bonding length, shape of hook, thickness of the covering of steel bars, and spacers. Each of these items shall be confirmed.

(6) Form Work

Wood or plywood forms shall be used.

(7) Concrete Work

Mixing of concrete shall be planned not based on weight but volume proportion. A best mixing proportion shall be decided upon by conducting test mixing of the coarse aggregates, cement, sand, and water that will be actually used for Project construction. Mixing shall be conducted by a small mixer or hand mixing on site. A series of concrete work, including storing method and storing period of cement, measures necessary to store for a long period time, grain size control of coarse aggregates, mixing of concrete, and placing work, shall be written into an instruction manual and concrete work shall be sufficiently examined and confirmed based on the manual.
Quality control of concrete shall be conducted once for each lot of the same contractor at the beginning of Project construction work. A slump test shall be conducted and test pieces shall be made at concrete placing time. Compressing test of test pieces shall be conducted and their strength shall be confirmed. Three each test pieces shall be made for one-week strength test and four-week strength test respectively. Tests shall be conducted at a laboratory of an authorized testing organization in Ghana.

(8) Concrete Block Work

Concrete blocks made at each site shall be used for the Project. Mortar for stacking concrete blocks shall be made with river sand as a principle. Content of dirt and organic matters shall be examined before using river sand. Cement shall be of ordinary Portland cement. Mixing shall be conducted by hand mix. Proportion of cement and sand shall be made by the local method as a general principle. A vertical batter board shall be used for stacking concrete blocks in order to secure stacking

accuracy.

(9) Plaster Work

Most of finishing work in Project construction will be made with mortar. Mortar finish is the typical finishing method in Ghana and their finishing technique is high. Mortar shall be made with river sand and ordinary Portland cement.

(10) Doors and Windows Work

Wooden doors and windows are commonly used in Ghana. Dried hard wood of adequate quality will be used for the Project. Concrete blocks having holes covered with insect nets will be used for ventilation openings above windows.

(11) Coating Work

Exterior walls shall be coated with weather resisting emulsion paint of synthetic resins and interior shall be painted with ordinary emulsion paint of synthetic resins. The coating plan shall be prepared by taking into account base preparation and inspection, and a sufficient dry curing period after coating.

2-4-6 Material and Equipment Procurement Plan

In Ghana, the prices of construction materials and equipment are going up about 10% a year, together with the rise of consumer price. Sand, gravel, cement, and wood products are domestically procurable. Steel bars, metal places (steel and aluminum), PVC pipes are relied on imported products from European and Asian countries.

A sufficient amount of materials necessary for the Project are procurable in Capital Accra. There is a limitation for procuring a certain items and a large quantity of materials in rural cities, except Kumasi, but these materials are purchased in Accra and transported to rural cities, as necessary.

Table 2-11 Construction Material Procurement Situations

Name of Material	Origin of Materual			Remarks
	Domestic	Japan	The Third Countries	
Architectural Work				
Cement	○			
Sand & Grave	○			
Steel Bars			○	Imported from Europe
Ceramic Tiles			○	Imported from Europe
Plywood（1.2x2.4mx12mm）			○	Imported from Europe
Wood	○			
Corrugated Aluminum & Zinc-plated Steel Sheets（0.9x4mx0.35mm）			○	South Africa
Sash Windows	○			
Wooden Doors	○			
Glass			○	Imported from Europe
Paint			○	Imported from Europe
Drainage & Sanitation Plumbing Work				
PVC Pipes & Fittings			○	Imported from Europe
Percentage	41.7%	0%	58. 3%	

2-4-7 Project Implementation Schedule

After the Government of Japan and the Government of Ghana sign E/N, the Government of Ghana and the Procurement Management Agent sign the Procurement Management Agent Agreement then Project implementation essentially begins. The Procurement Management Agent, with the support of Japanese consultants, starts the preparation of tender documents then proceeds to conduct tendering, signing construction contract with contractors, inspection of completed construction work, and preparation of contract related documents and accomplishes the construction schedule.

(1) Tender Documents

The Procurement Management Agent will prepare tender documents based on the tendering reference materials prepared by the Japanese Consultants during the Outline Design Study period of the Project.

(2) Contracting and Procurement Work

Contents and period of contracting and procurement work are assumed to be as listed in the following table:

Table 2-12 Contents and Period of Contracting and Procurement Work

Work Type	Scheduled Period	Work Contents
Contracting Work		
Procurement Management Agent Agreement	One month after signing E/N	Entire administrative procedures prior to JICS starting Project implementation work in Ghana
Lawyer Contract	2 to 3 weeks	After signing Procurement Management Agent Agreement
Procurement Work		
Architectural Work		
Preparation of Tender Documents	One month	To prepare based on tender reference materials
Tendering	1.5 months	From tender announcement until tender opening time.
Tender Evaluation	1.5 months	Appraisal, evaluation and approval of submitted documents
Contract	0.5 month	No long term contract negotiation period is scheduled.
Materials and Equipment		
Preparation of Tender Documents	1 month	To prepare based on tender reference materials.
Tendering	1.5 months	From tender announcement to tender opening time
Contract	1 month	No long term contract negotiation period is scheduled.

(3) Construction Work

1) Construction Period

It is said that construction preparation period for constructing one school building with six classrooms is 6 months in Ghana. It is planned to schedule 6.5 months of preparation period for Project construction in view of the rationalization of construction work in each Phase construction period. By taking into consideration material and equipment transportation to remote construction sites, the period of each Phases construction is scheduled as described below.

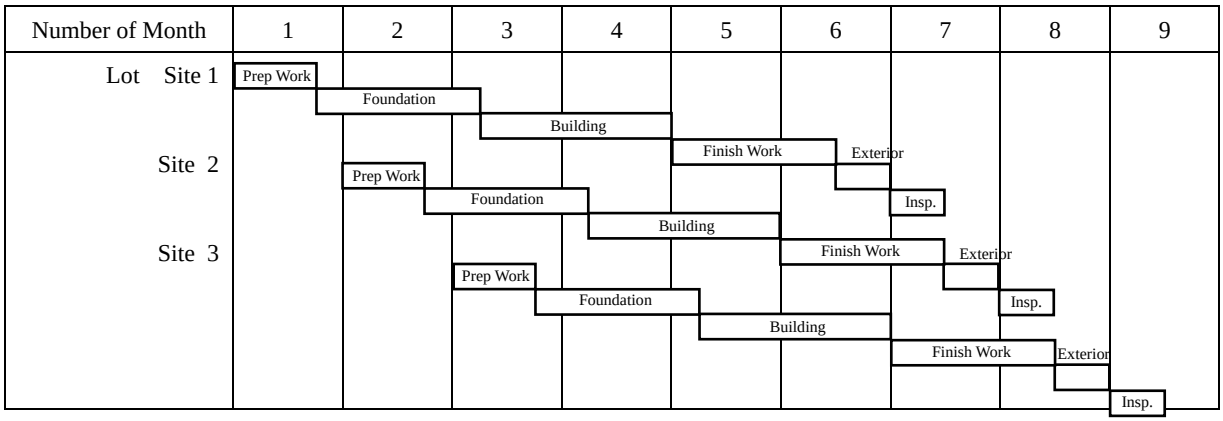
The amount of the contract price per one lot is set less than US$500,000 and average 3 schools per one lot by assuming that D2 class contractors will be awarded construction contract. As for construction order of each school site, it is imagined that construction at each site is shifted and construction equipment such a concrete mixer can be used by turn. When construction work at each site is shifted one month, construction period of each Phase construction will become as listed in below table. As for remote Northern Region, it is planned to set up a preparation time of one half month for material and equipment mobilization.

Table 2-13 Construction Period

Phase	Construction Area	Construction Period	Phase Construction	Remarks
I	Southern Central Region	8.5 months	Assumed the construction period of 6.5 months per one school and 3 schools per one lot	
II	Northern Region	9 months	Assumed 0.5 month of preparation period + 6.5 months of construction period per one school and 3 schools per one lot.	Remote Construction site

Construction period per one school and construction period per one lot are shown in the following diagram. In addition, it is planned that an average of 3 schools will be constructed per one lot.

Table 2-14 Construction Period of Each Lot



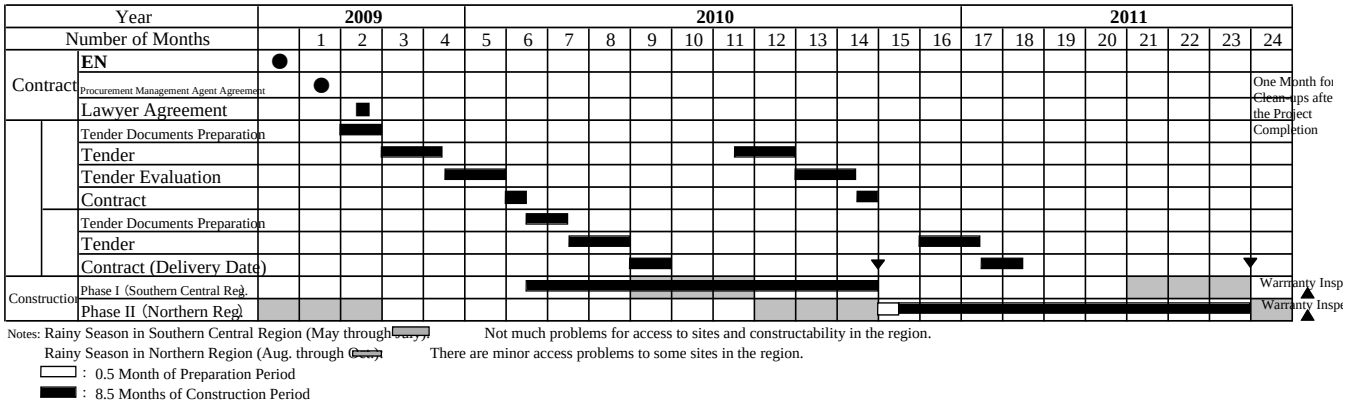
2) Overall Construction Period

Overall Project construction period is assumed to be 24 months after signing E/N and the Procurement Management Agent Agreement until the completion of Project construction work and final clearing work.

3) Implementation Schedule (Proposal).

Project implementation schedule (proposal) is prepared by examining each work item as shown in the following table:

Table 2-15 Project Implementation Schedule (Proposal)



In this Project implementation schedule (proposed), if implementation work is not accomplished as scheduled, a problem of the delay of the implementation schedule will occur. Technical points of this problem are assumed as follows:

①Starting Time of Phase I: Middle of February, 2010

In case that the earth work below ground level and part of concrete work will not be completed before the peak of the rainy season, there is the possibility that the construction schedule might be

delayed. To avoid this delay of the construction schedule, the Project implementation schedule must be prepared with utmost care.

②Time gap between the completion time of Phase I construction and the starting time of Phase II construction: 2 weeks

The 2 weeks are a period for mobilization to remote Northern Region and construction base preparation work. This period is considered necessary for contractors and construction supervising consultants. It will be difficult to simultaneously conduct construction supervising work in both Northern and Southern Central Regions with assumed number of engineers and prepare for mobilization to Phase II construction sites and setting up construction base for Phase II construction. As distance between construction sites is large and tender related work is also planned during this period, it will be difficult to simultaneously conduct these works. For these reasons, a sufficient preparation period will be necessary.

CHAPTER 3

OUTLINE OF UNDERTAKINGS TO BE ACCOMPLISHED BY GHANAIAN SIDE

Chapter 3. Outline of Undertakings to be accomplished by Ghanaian Side

The objective of the Grant Aid of the Government of Japan is to support the self-effort development scheme of recipient countries. Thus, the Government of Japan requests a certain undertakings from recipient countries based on this basic principle. The principle has been equally applied to all recipient countries in the world. Therefore, once the Government of Japan decides the implementation of the Project, the Government of Ghana shall conduct the following undertakings:

3-1 Obligations of Ghanaian Aide

①To provide materials and information necessary for the Project to the Japanese Side.

The Ghanaian Side should provide all materials and information necessary for the smooth implementation of the Project to the Japanese Side.

②To apply for and obtain various authorizations and permits necessary for Project implementation.

The Ghanaian Side should apply for and obtain various authorizations and permits required by Ghanaian laws, including construction permits, that are necessary for Project implementation.

③To exempt the supplies of the products and services for the Project from customs duties, internal taxes and other fiscal levies that will be imposed in Ghana.

A value added tax (VAT) is imposed to goods and services acquired in Ghana. The Government of Ghana shall exempt all taxes related to the Project in accordance with provisions stipulated in E/N.

④To exempt Japanese persons and corporations related to the Project from customs duties, internal taxes and other fiscal levies that will be imposed in Ghana.

Customs duties, income taxes and other fiscal levies to be imposed to Japanese persons and corporations who enter into and stay in Ghana for the Project should be exempt by the Government of Ghana in accordance with provisions stipulated in E/N.

⑤To accord Japanese persons, whose services may be required in connection with the supply of the products and services for the Project, for their entry into Ghana and stay therein for the performance of their work.

The Government of Ghana shall promptly provide facility for obtaining visa and any necessary legal permits to Japanese persons who enter into Ghana and stay therein to perform their work for the Project.

⑥To make bank arrangements and bear costs and fees related to these arrangements.

The Government of Ghana shall make bank arrangements with a Japanese bank immediately after signing E/N and bear fees and costs related to the transfer of the project funds (from the Ghanaian government account to the procurement account).

⑦To bear entire fees and costs necessary for Project implementation except for the construction of Project facilities, transportation of Project-use materials and equipment, and installation of equipment units.

Within the scope of the Project, the Government of Ghana shall bear entire costs other than those

covered by the Grant Aid of Japan.

⑧To secure budgetary funds and personnel necessary for the management and maintenance of facilities and equipment provided by the Project.

The Government of Ghana shall secure sufficient personnel, including teachers and management persons, and budgetary funds in order to properly operate and maintain school facilities after the completion of the Project.

⑨To conduct appropriate and effective use and maintenance of Project facilities and equipment units and report their use and maintenance conditions to the Government of Japan.

Project facilities and equipment units delivered to the Ghanaian Side after Project completion must be appropriately and effectively used and maintained under the responsibility of the Ghanaian Side. The Ghanaian Side should immediately report their use and maintenance conditions to the Government of Japan whenever asked to do so.

In addition to the above items, the Government of Ghana is required to conduct demolishing and removal of existing obstructions existing on Project school sites and land clearing work. The undertakings to be borne by the Ghanaian Side must be completed for those schools that require these works prior to the start of school facility construction. The Government of Ghana is required to surely complete these works before the start of Project construction.

3-2 Costs to be borne by the Ghanaian Side

1) Costs for tax exemption and banking arrangement: 874,070GHC

Item	Contents	Total (GHC)
1. Banking Arrangement	Charge for opening bank account	77,245

2) Costs for removal of existing obstructions in school sites and land clearing works: 15,121GHC

Item	Frequency	Quantity	Total (GHC)
1. Removal of Existing Building (Volume <50m^3)	1 before construction	2 Site	520
2. Removal of Obstructions	1 before construction	3 Sites	780
3. Land Clearing	1 before construction	26.929m^2	11,849
4. Construction Supervision (15% of above mentioned costs)			1,972
Total			15,121

(3) Condition for Cost Estimation

1) Cost estimation time: February 2009

2) Exchange rate: 1 US$ = 100.25 yen
1 GHC = 87.40 yen

3) Construction period: The Project shall be implemented in two Phases. Necessary term is shown in Project construction schedule.

4) Others: The Project shall be implemented in accordance with the rules of the Grant Aid of the Government of Japan.

CHAPTER 4

MANAGEMENTAND MAINTENANCE PLAN OF PROJECT FACILITIES

Chapter 4. Management and Maintenance Plan of Project Facilities

4-1 Management Plan

After the completion of Project facilities, constructed school facilities are to be managed and used, the same as existing school facilities, through Regional Education Offices (two regions) and District Education Offices (six districts) in accordance with the guidance and supervision of the Ghana Education Service which is under the control of the Ministry of Education. The role of each organization is listed in the table below. When the Project is implemented, management and maintenance of Project schools will be carried out by the School Management Committee of each school.

Ministry of Education	・Preparation of Education Plan and Policy Making ・Coordination between Various Executing Agencies and their Supervision ・Work related to material and equipment procurement and construction of educational facilities including teachers' accommodation with the budgetary funds of the Government of Ghana.
Ghana Education Service	・Execution of Educational Administration ・Curriculum Preparation ・Teachers Training and Assignment ・Financial Management ・Acquiring of School Facility Projects supported by Donors
Regional Education Office	・Coordination between Ghana Education Service and District Education Offices ・Collection of Educational Statistics
District Education Office	・Compilation of the Budgetary Funds of District Education Office ・Preparation of District Education Management Plan ・Preparation of Educational Activity Reports ・Management of the Primary and Junior High Schools under the Jurisdiction ・Management of Students' Scholastic Achievement and Attendance Percentages ・Guidance and Control of Teaching Contents and Quality ・Preparation of Teacher Assignment Plan and Request for Construction of Educational Facilities ・Conducting and Grading Students' Advancement Tests and Evaluating Pass or No Pass of Students
Each School	・Recruitment of Students and Teaching ・Evaluation of Students' Performance and Classroom Attitude ・Preparation of Educational Statistics and Submittal of the Statistics to District Education Office ・Organizing School Management Committee and PTA

4-2 Maintenance Plan

Maintenance and repair costs of school facilities and equipment units are subsidized by part of Capital Grant. The Capital Grant is provided to each school at a rate of 3 Cedis per student in each school term. But, most of the grant is spent for school management purpose. For this reason, major activities for facility maintenance are limited only to repair work of classroom furniture and facilities (walls, floors, roofs, and doors), demolishing, assembly and repair of straw thatching classrooms. Thus, facilities and equipment units to be provided by the Project should be planned so that they require minimum maintenance work.

(1) Management Costs

School management costs consist of teachers' salaries, expenditures for the purchase of textbooks, education material and equipment.
Teachers' salaries are paid to bank accounts of teachers directly by the Ministry of Finance. GES provide textbooks, teaching material and equipment to each school through DEO for free of charge.
When school buildings are either rebuilt or newly constructed by the implementation of the Project, it will be necessary to assign teachers to teach in these classrooms. The total number of classrooms after Project implementation will be 144 (126 classrooms for primary schools and 18 classrooms for junior high schools). Present number of teachers at these Project schools is 206 (180 at primary schools and 26 at junior high schools). As a sufficient number of teachers are assigned to these schools, it will be possible to meet with new classrooms by reassigning them. As it will not be necessary to newly assign teachers, it is considered that the management of Project schools after Project implementation will be possible with present budgetary funds for management. Furthermore, since electricity is not provided to the Project schools, additional expenditure for electricity is not required.

(2) Maintenance Costs

Maintenance costs of each school are subsidized by part of Capitation Grant. The Capitation Grant is provided to each school at a rate of 3 Cedis per student in each school term (9 Cedis per student in a year). The number of classrooms to be provided by the Project will be 126 classrooms (92 rebuilding and 34 new addition) for primary schools and 18 classrooms (9 rebuilding and 9 new addition) for junior high schools; a total of 101 rebuilding and 43 addition. The number of student to be accommodated in these newly added classrooms will be 1,530 primary students and 315 junior high school students. Thus, a total of 1,845 students will be accommodated in the newly added classrooms. The amount of Capitation Grant to be provided to these students will be 16,605Cedis in a year. The total amount of Capitation Grant during 2007/2008 fiscal year was 15,000,000. Since the additionally required amount will be 0.1% of the total amount, it is considered that the additional costs will be easily financed. Estimated maintenance costs for one classroom of the

primary and junior high schools included in the Project are shown in below table. The total amount of maintenance costs of all Project schools will be 12,570.66Cedis. As this amount is approximately 0.1% of the total Capital Grant in 2007/2008 fiscal year, it can be understood that there will be no problems for the maintenance of Project school facilities.

Table 4-1 Necessary Maintenance Costs per One Classroom

One Classroom of Primary School

Item		Frequency	Cost/year (GHC)
1. Coating	Interior Walls Repainting	Once/10 years	16.53
	Furniture Repainting	Once/5 years	18.97
	Blackboard Repainting	Once /year	6.36
2. Exterior Wall Repair	Mortar Repair 50% of Wall Surface	Once/10years	16.22
3. Roof Repair	Replacement of Roof Sheet 20% of Roof Area	Once/20years	25.73
Total			83.86/year

One Classroom of Junior High School

Item		Frequency	Cost/year (GHC)
1. Coating	Interior Walls Repainting	Once/10 years	24.98
	Furniture Repainting	Once/5 years	15.44
	Blackboard Repainting	Once/year	7.95
2. Exterior Wall Repair	Mortar Repair 50% of Wall Surface	Once/10years	24.37
3. Roof Repair	Replacement of Roof Sheet 20% of Roof Area	Once/20years	38.61
Total			111.35/year

CHAPTER 5

PROJECT EVALUATION AND RECOMMENDATIONS

Chapter 5. Project Evaluation and Recommendations

5-1 Project Effects

As a result of the implementation of the Project, the following effects are expected:

(1) Direct Effects

Existing Conditions and Problems	Measures to be Provided by the Project（Cooperation Project）	Degree of Project Effects and Improvements by the Project
1. Classrooms are lacking due to a sudden increase of the school attendance rate and it has to accommodate more students in one classroom than its capacity.	For 37 Project schools, 34 classrooms for primary schools and 9 classrooms for junior high schools will be newly built.	The over-crowded classroom condition of 37 Project schools in year 2009 will be alleviated from an average of 67.7 pupils per classroom to 53.5 for primary schools and 63.1 students per classroom to 39.5 for junior high schools in 2011.
2. Many dangerous school buildings were constructed to deal with chronicle classroom shortages, thereby creating a very poor educational environment. In addition, it is forced to spend a substantial amount of repair costs in each year.	A total of 101 classrooms in the areas of very poor conditions (92 classrooms for primary schools and 9 classrooms for junior high schools) will be rebuilt.	101 dangerous classrooms in the poor educational environment will be rebuilt thereby the educational environment will be improved. In addition, annual classroom maintenance costs will be reduced.
3. An adequate number of toilet booths are not provided and the sanitary condition is extremely poor.	For 37 Project school, a total of 129 toilet booths will be built. As a result, the sanitary condition will be improved to the rate of nine booths per 10 classrooms, including existing toilet booths.	An adequate number of toilet booths matching to each school size will be provided and, as a result, the sanitary condition of the school will be improved.

(2) Indirect Effects

Existing Conditions and Problems	Measures to be Provided by the Project（Cooperation Project）	Degree of Project Effects and Improvements by the Project
1. A common practice to go to the bathroom is not thoroughly ensured yet and a contagious disease often breaks out. The Sanitary condition is extremely poor.	A sufficient number of toilet booths will be provided to each Project school in accordance with the standard of the Ministry of Education.	It will be possible to teach students how to properly use the newly provided toilets that meet the standard of the Ministry of Education.
2. A headteacher's room is either not provided or in a very poor condition. School management work is hindered in the schools having dangerous buildings.	Each of 36 schools among a total of 37 Project schools will be provided with a headteacher's room with store.	36 store rooms will be built adjacent to headteachers' rooms and school management work will be properly conducted by those headteachers' rooms and teaching materials will be easily controlled. As a result, school management will be improved.
3. Educational furniture is not sufficiently provided and learning environment for students is very poor.	All of 37 Project schools will be provided with desks and chairs for students; 23 units for each primary school and 18 units for each junior high school.	At 37 Project schools, students will be able to study in a good educational environment.

5-2 Recommendations

The Ghanaian side should tackle the following issues in order for school facilities provided by the Project will be continuously and effectively used, and properly maintained in the future:

① Reassignment of Teachers

In order to smoothly conduct classes in classrooms to be provided by the Project, the Ghana Education Service should appropriately reassign those teachers in Project areas without delay to meet with the delivery time of these school facilities provided by the Project.

② Distribution of Text Books and Educational Materials

The Ghana Education Service should adequately distribute text books and educational materials such as chalks and teaching materials in order to conduct effective education.

③ Retraining of Teachers

Teachers should acquire the appropriate use method of educational materials after sufficiently understanding curriculum in order to properly teach classes. It is highly desired for the Ministry of Education to periodically conduct teacher trainings regarding to the appropriate use method of teaching materials in classes and the contents of curriculum.

APPENDICES

Appendix 1. Member List of the Study Team

1. The Outline Design Study Team (from January 11 to February 20, 2009)

Mr. Tatsuya MURASE	Leader	Senior Assistant to the Director General for Economic Infrastructure Department, Japan International Cooperation Agency
Mr. Keiko KOISO	Procurement Supervision Planning	Second Construction Management Division, First Management Department, Japan International Cooperation System
Mr. Yoshiharu YONEZU	Planning Management	Urban and Regional Development Division 1, Economic Infrastructure Department, Japan International Cooperation Agency
Mr. Shiro SASAKI	Chief Consultant/ Facility Planning /Educational Circumstances	Sekkei Keikaku, Inc.
Mr. Yutaka MASUDA	Facility Design	Sekkei Keikaku, Inc.
Mr. Ryuji TSUYUKI	Procurement Planning	Sekkei Keikaku, Inc.
Mr. Tomihide CHISHINA	Construction Planning/Cost Planning	Sekkei Keikaku, Inc.

2. The Outline Design Draft Report Explanation Team (from May 17 to 30, 2009)

Mr. Masato KUMAGAI	Leader	Senior Representative, Ghana Office, Japan International Cooperation System
Mr. Daishiro MURAKAWA	Procurement Supervision Planning	Urban and Regional Development Division 3, Economic Infrastructure Department, Japan International Cooperation Agency
Mr. Shiro SASAKI	Chief Consultant/ Facility Planning /Educational Circumstances	Sekkei Keikaku, Inc.
Mr. Yutaka MASUDA	Facility Design	Sekkei Keikaku, Inc.

3. The Explanation Team of Reference Materials of Tendering (from August 9 to 20, 2009)

Mr. Shiro SASAKI	Chief Consultant/ Facility Planning /Educational Circumstances	Sekkei Keikaku, Inc.
Mr. Ryuji TSUYUKI	Procurement Planning	Sekkei Keikaku, Inc.

Appendix 2. Study Schedule

1. The Outline Design Study

No.	Date	Week	(a)Leader, (b)Planning Management(JICA)	(c)Procurement Supervision Planning	(d)Chief Consultant /FacilityPlanning/Educational Circumstances	(e)Facility Design	(f)Procurement Planning	(g)Construction Planning/Cost Planning
			MURASE, MURAKAWA	KOISO	SASAKI	MASUDA	TSUYUKI	CHISHINA
			10 Days	16 Days	44 Days	44 Days	30 Days	37 Days
1	12.Jan	Sat			Haneda→			
2	13.Jan	Sun			→Accra(EK787)			
3	14.Jan	Mon			Meeting with JICA, EOJ, GES & FPMU		Preparation for Site Survey	
4	15.Jan	Tue			Accra→Cape Coast Meeting with REO Central & DEO Assin South	Accra→Tamale Meeting w/ REO Northern & DEO Karaga, etc.	Same as (d)	Same as (e)
5	16.Jan	Wed			Survey at 4 Sites in Assin South	Survey at 4 Sites in Karaga	Same as (d)	Same as (e)
6	17.Jan	Thu			Survey at 4 Sites in Assin South	Survey at 5 Sites in Karaga	Same as (d)	Same as (e)
7	18.Jan	Fri			Survey at 2 Sites in Assin South	Survey at 1 Sites in karaga →Move to Tamale	Same as (d)	Same as (e)
8	19.Jan	Sat			CapeCoast→Faso Meeting w/ DEO Assin North, Survey at 2 Sites in Assin North	Meeting w/ REO Northern & Local Consultants	Same as (d)	Same as (e)
9	20.Jan	Sun			Survey at 4 Sites in Assin North	→Move to Tamale, Meeting w/ DEO Sawla-Tuna-Kalba	Same as (d)	Same as (e)
10	21.Jan	Mon			Survey at 3 Sites in Assin North	Survey at 5 Sitess in Sawla-Tuna-Kalba	Same as (d)	Same as (e)
11	22.Jan	Tue			Accra→Tamale Meeting w/ REO Northern →Move to Bunkpurgu Meeting w/ DEO BunkpuruguYunyoo	Survey at 5 Sitess in Sawla-Tuna-Kalba	Same as (d)	Same as (e)
12	23.Jan	Wed			Survey at 4 Sites in Bunkpurugu Yunyoo	→Move to Buipe Meeting w/ DEO Central Gonja Survey at 4 Sites in Central Gonja	Same as (d)	Same as (e)
13	24.Jan	Thu			Survey at 5 Sites in Bunkpurugu Yunyoo	Survey at 5 Sites in Central Gonja →Move to Tamale	Same as (d)	Same as (e)
14	25.Jan	Fri	Tokyo→		Survey at 1 sites in Bunkpurugu Yunyoo Bunkpurugu Yunyoo→Tamale	Survey at 1 Sites in Central Gonja Meeting w/ Construction Companies	Same as (d)	Same as (e)
15	26.Jan	Sat	→Accra(EK787)		Tamale→Accra			
16	27.Jan	Sun	Meeting among Team Members					
17	28.Jan	Mon	Meeting with JICA, EOJ, MOE, GES & FPMU					
18	29.Jan	Tue	Accra→DEO Assin South Meeting w/ DEO & DA Assin South & Site Inspections →move to Accra				Meeting with Local Consultants	
19	30.Jan	Wed	Meeting w/ JICA, discussion on Draft of M/D with MOE Inspections on Existing School Facilities			Reserch on Building Codes and School Facilities	Research on Tax Exemption & Procurement of Construction Materials	Meeting w/FPMU & Research on Tax Exemption
20	31.Jan	Thu	Discussion on Draft of M/D with MOE			Research on Design & Structural Standards	Research on Tax Exemption & Regulations	Research on the Registration for Construction Firms & Cost Estimation Standards
21	1.Feb	Fri	Singning of MD Report to JICA & EOJ Accra(EK788)→	Singning of MD, Report to JICA & EOJ				
22	2.Feb	Sat	→	Data Analysis & Meeting among Team Members				
23	3.Feb	Sun	→Tokyo	Ditto				
24	4.Feb	Mon		Additional Survey	Meeting w/ GES	Meeting w/FPMU & Local Consultants	Reserch on Procurement Situations	Meeting w/FPMU & Local Consultants
25	5.Jan	Tue		Additional Survey	Ditto	Ditto	Research on B/A, Bond & Tax Exemption	Meeting w/ FPMU, Construction Firms, etc.
26	6.Feb	Wed		Additional Survey	Meeting w/ UNICEF & WB	Meeting w/ FPMU, WB & Local Consultants	Research on Arbitration Agency	Meeting w/ FPMU, WB, Soil Investigation & Topography Survey Companies
27	7.Feb	Thu		Additional Survey, Report to JICA & EOJ Accra(EK788)→	Meeting w/FPMU & Local Construction Companies	Meeting w/ FPMU, Examination on Planning of School Facilities	Research on Tendering Methods of MOE	Meeting w/ FPMU & Local Construction Firms
28	8.Feb	Fri		→	Meeting w/ USAID & GES	Ditto	Research on Tax Exemption	Meeting w/ FPMU & Local Consultants
29	9.Feb	Sat		→Tokyo	Data Analysis	Data Analysis	→Dubai→	Data Analysis
30	10.Feb	Sun			Data Analysis	Data Analysis	→Tokyo	Data Analysis
31	11.Feb	Mon			Meeting w/ FPMU & GES	Meeting w/ FPMU & GES		Meeting w/ FPMU & Inspection on Furniture Factories
32	12.Feb	Tue			Meeting w/ GES	Meeting w/ GES		Meeting w/ Local Consultants regarding Tender Documents & Cost Estimation
33	13.Feb	Wed			Meeting w/ FPMU & MCC	Meeting w/ FPMU, Examination on Planning of School Facilities		Meeting w/ FPMU& Local Consultants, Research on Weather Information
34	14.Feb	Thu			Meeting w/ GES	Meeting w/ FPMU, Examination on Planning of School Facilities & Construction Methods		Meeting w/ FPMU, Examination on Planning of School Facilities & Construction Methods
35	15.Feb	Fri			Meeting w/ GES, Research on Furniture Factory	Meeting w/ FPMU, Topolograpy Survey & Soil Investigation Companies		Meeting w/ Topolograpy Survey & Soil Investigation Companies
36	16.Feb	Sat			Data Analysis	Research on Architectural Situation		→Dubai→
37	17.Feb	Sun			Data Analysis	Data Analysis		→Tokyo
38	18.Feb	Mon			Meeting w/ GES & MiDA	Meeting w/ GES & FPMU		
39	19.Feb	Tue			Meeting w/ GES	Meeting w/ GES		
40	20.Feb	Wed			Meeting w/ GES	Meeting w/ GES & FPMU		
41	21.Feb	Thu			Final Meeting w/ MOE & MiDA, Report to JICA			
42	22.Feb	Fri			Accra(EK788)→			
43	23.Feb	Sat			→Dubai→			
44	24.Feb	Sun			→Tokyo			

2. The Outline Design Draft Report Explanation

No.	Date	Week	Planning Management(JICA)	Chief Consultant/Facility Planning/Educational Circumstances	Facility Design
			MURAKAWA	SASAKI	MASUDA
			8 days	14 days	14 days
1	18.May	Sun	Haneda(EK6257 便)→Kansai airport(EK317) →		
2	19.May	Mon	Dubai(EK787) →Accra12:00, Meeting w/ GES		
3	20.May	Tue	Courtegy visit to EOJ, Meeting with JICA & Local Consultants		
4	21.May	Wed	Meeting with MOE		
5	22.May	Thu	Signing of MD at MOE		
6	23.May	Fri	Report to EOJ & JICA		
		Sat	Accra17:30(EK788) →	Meeting with FPMU	
7	24.May	Sun	Dubai(EK316)	Internal Meeting & Data analysis	
8	25.May	Mon	→Kansai airport(EK6250) →Haneda22:15	Ditto	
9	26.May	Tue		Ditto	
10	27.May	Wed		Meeting w/ GES, FPMU & Local Consultant	
11	28.May	Thu		Meeting w/ GES, FPMU, Contrract Signing w/ Local Consultant	
12	29.May	Fri		Report to JICA & MOE	
		Sat		Accra17:30(EK788) →	
13	30.May	Sun		→Dubai(EK316) →	
14	31.May	Mon		→Kansai airport(EK6252) →Haneda20:25	

3. The Explanation of Reference Materials of Tendering

No.	Day	Week	(a) Chief Consultant/Facility Planning/Educational Circumstances	(b) Procurement Planning
			SASAKI	TSUYUKI
			12 Days	12 Days
1	9 August	Sun	Haneda(JL185) →Kansai airport(EK317) →	
2	10 August	Mon	Dubai(EK787) →Accra12:00, Meeting w/ FFPMU & GES	
3	11 August	Tue	Meeting w/JICA, MOE & Local Consultants	
4	12 August	Wed	Meeting w/MOE & MOF	
5	13 August	Thu	Meeting w/ Local Consultants	
6	14 August	Fri	Meeting w/ MOE & Local Consultants	
7	15 August	Sat	Meeting w/ Local Consultants	Preparatory Works for the Construction Supervision
8	16 August	Sun	Data Analysis & Meeting among Team Members	
9	17 August	Mon	Final Meeting w/ MOE, Report to JICA	
10	18 August	Tue	Supplementary Survey, Accra(EK788) →	
11	19 August	Wed	→Dubai	
12	20 August	Thu	Dubai(EK316) →→Kansai airport(JL188) →Haneda	

Appendix 3. List of Parties Concerned in the Recipient Country

1. The Government of the Republic of Ghana

1) Ministry of Education

James O. Afani	Ag. Chief Director
Ato Essuman	Chief Director
Charles Y. Aheto-Tsegah	Director, PBME Division
Charles Aheto-Tsegah	Director, Funds and Procurement Management Unit (FPMU)
Hayford Riley Wilson	Deputy Director, Funds and Procurement Management Unit (FPMU)
Kwesi Danquah-Smith	Consultant, Architect, Funds and Procurement Management Unit (PBME)
Samuel Salifu Mogre	Executive Director, Non-formal Education Division

2) Ghana Education Service

Sammuel Banerman-Mensah	Director General
Emmanuel Opare	Infrastructural Coordination for Basic Education
Sarah Agyeman-Duah	Curriculum Research & Development Division
Ben B. Cronze	Acting Director, Supply & Logistic Division
Victor Kofi Mantye	Director, Teacher Education Division
Vincent Sam Brew	Co-ordinator, Pre-service, Teacher Education division

3) Ministry of Finance and Economic Planning

Samuel Abu-Bonsrah	Ag. Director ERM (Birateral) division
Yaw Sam	Tax Rxemption Unit

4) Central Region, Ghana Education Office

Rosemund Blay	Regional Director
Rockson Kwaue Webeah	Out Pre-and Post Contract Administration works for AEEDA

5) Ghana Education Service, Assin South District

Helena Arkoh	District Director of Education
Anthony Yaw Owusu	Assistant Director, Supervision
Seth Ofori	Assistant Director, Planning, Monitoring, Evaluation
Ekow Chinard Hanson	Assistant Director, HRMD

6) Ghana Education Service, Assin North District

Juliana Ayeh-Gyampoh	District Director of Education

Joohn Essiakoh	Public Relation Office
Jhomas Kuranchoe	Technical Co-ordinator
Samuel Wallace Afful	Circuit Supervisor
Felix Kurankyi-Taylor	Engineer

7) Ghana Education Service, Northern Region

J. K. Harenu	Regional Director
Alhaji Sdddusu Adam	Deputy Director
Alexandra Sopiimen	Metro Director
Tacob A. Alparibo	Assistant Director
Matthias D.K. Naah	Deputy Director
Rahiuatu Bawah	Assistant Director
Napaue Dominic	P.R.O.

8) Ghana Education Service, Karaga District

Suuk Emmanuel K.	Circuit Supervisor
Mahama Albert Nagbam	P.R.O.
Sulemana Ibn Alhassan	Circuit Supervisor
Paul N. Adambil-Laar	Assistant Director, Human Resource
Stans Akomnya	Assistant Director, Supervision
Iubiga Emmanuel B.	Budget Officer

9) Ghana Education Service, Bunkpurugu-Yunyoo District

Christina Bonebe Tampie	District Director of Education
Stephen K. Kombiok	Deputy Director, HRMD
Suuk Gann	Assistant Director, Supervision

10) Ghana Education Service, Central Gonja District

J.K. Kumah	District Director of Education
Abu Baba	Sports Coordinator
Musah Seidu	Planning, P.R.O.
EMMANUEL BOKUMA	Human Resource
Kuipo Harison	Examination

11) Assin South District Assembly

Anthony K. Arthur	Presiding Member

Millicent Alice Kuranchie	D.C.E.
George K. Nyame	Engineer

2. Donors

1) THE WORLD BANK

Eunice Yaa Brimfah Dapaah	Senior Education Specialist, AFTH2, AFCW1

2) MILLENNIUM CHALLENGE CORPORATION

Deepa Ramesh	Development Specialist

3) MILLENNIUM DEVELOPMENT AUTHORITY

Martin Eson-Benjamin	Chief Executive Officer
Samuel Kuma-Botchway	Community Services Project-Manager

4) UNICEF

Madeez Adamu-Issah	Project Officer, Education

3. The Government of Japan

1) Embassy of Japan in Ghana

Yutaka Nakamura	Councellor, Deputy Head of Mission
Yoko Anazawa	First Secretary
Ken Mizuuchi	Coordinator for Economic Cooperation
Asukka Amakawa	Coordinator for Economic Cooperation

2) Japan International Cooperation Agency, Ghana Office

Kunihiro Yamauchi	Chief Representative
Masato Kumagai	Senior Representative
Hitoshi Sato	Senior Representative
Yuji Wakasugi	Assistant Resident Representative
Ichiro Fukuhara	Assistant Resident Representative
Goro Sato	Field Coordinator, Science and Mathematics Education
Mama Owusu	Education Advisor
Tetsuro Takaoka	JOCV
Kenichi Igarashi	JOCV

Appendix 4. Minitues of Discussions

1. Minitues of Discussions for The Outline Design Study

MINUTES OF DISCUSSIONS
ON PREPARATORY SURVEY(OUTLINE DESIGN)
ON THE PROJECT FOR IMPROVEMENT OF ACCESS TO BASIC EDUCATION
IN DEPRIVED AREAS IN REPUBLIC OF GHANA

Based on the results of the Preliminary Survey, the Government of Japan decided to conduct a Preparatory Survey on the Project for Improvement of Access to Basic Education in Deprived Areas (hereinafter referred to as "the Project") and entrusted the survey to the Japan International Cooperation Agency (hereinafter referred to as "JICA").

JICA has sent Ghana the Preparatory Survey Team (hereinafter referred to as "the Team"), which is headed by Mr. Tatsuya Murase, Senior Assistant to the Director General for Economic Infrastructure Department, JICA and is scheduled to stay in Ghana from January 11 to February 20, 2009.

The Team held discussions with the officials concerned of the Ghanaian Side and conducted field survey.

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

Accra, GHANA
January 30, 2009

Mr. Tatsuya Murase
Leader,
Preparatory Survey Team
Japan International Cooperation Agency

Mr.Ato Essuman
Chief Director,
Ministry of Education
Republic of Ghana

Mr.Sammuel Hanneman-Mensah
Director General,
Ghana Education Service
Republic of Ghana

ATTACHMENT

1. Objective of the Project

The objectives of the Project is to improve educational environment and access to basic education through the construction of facilities for primary and junior high schools. Through achievement of this objective, it is expected that the project will contribute to one of the targets of Education Strategic Plan, "Provide and ensure access to free basic education".

2. Project Sites

The Sites of the Project are located in the following Regions and Districts;

Northern Region: Sawla Tuna Kalba, Bunkpurugu Yunyoo, Karaga, Central Gonja

Central Region : Assin North, Assin South

3. Responsible and Implementing Organization

The Ghanaian Side explained that due to the reform of ministries and governmental offices, the responsible organization of the Project became the Ministry of Education, and the implementing organization is Ghana Education Service.

4. Items Requested by the Government of Ghana

The items described in **ANNEX 1** were requested by the Ghanaian side with their priorities.

JICA will assess the appropriateness of the request and will recommend to the Government of Japan for its approval.

5. Japan's Grant Aid Scheme

5-1. The Ghanaian Side understood the Japan's Grant Aid Scheme for Community Empowerment described in **ANNEX 2** , **ANNEX 3** ,**ANNEX 4** and **ANNEX 5**, which were explained by the Team.

5-2. The Ghanaian Side assured to take the necessary measures, as described in **ANNEX 6**, for the smooth implementation of the Project.

6. Framework of Project Implementation and Scope of Works

The Team explained the following framework of implementation;

6-1. Japan's Grant Aid is extended in accordance with the "Exchange Notes" by the two governments concerned and with the "Grant Agreement" between JICA and the Ghanaian side, in which the objectives of the project, period of execution, conditions and amount of Grant Aid, etc., are confirmed.

6-2. After concluding the Exchange Notes and Grant Agreement, the Ghanaian side shall make a procurement management service contract with Japan International Cooperation System (hereinafter referred to as "JICS"). Based on "Procurements Guideline for Grand Aid for Community Empowerment" as shown in **ANNEX 7**, JICS shall conduct the following works;

(1) Administration of the Grant Budget

(2) Preparation for and evaluation of tender
(3) Signing contracts with suppliers and service provider
(4) Procurement of necessary goods
(5) Payment to suppliers and service providers
(6) Assisting to organize committee meetings
(7) Management of the progress of the project

6-3. To implement the project smoothly, both sides confirmed to facilitate a committee composed of the government of Ghana, the government of Japan and JICA. The members of the committee shall be as follows:

(1) Representative of Embassy of Japan in Ghana
(2) Representative of Ministry of Education or his/her deputy
(3) Representative of Ghana Education Service or his/her deputy
(4) Representative of JICA in Ghana

Major functions of the committee are examining major change of the Project, receiving the report of the progress, and examining utilization plan of additional procurement (if any),etc..

7. Schedule of the Survey

7-1. The Consultant members of the Team will proceed to undertake further survey in Ghana until February 20, 2009.

7-2. Based on the results of a field survey in Ghana, the Team will continue the study in Japan until May, 2009. JICA will dispatch the draft report explanation mission to Ghana in May, 2009.

7-3. After 2nd analysis in Japan, the Team will visit Ghana in August 2009 to explain the reference materials for tendering.

8. Other Relevant Issues

8-1. Both sides have confirmed that schools and components to be incorporated to the scope of the Project would be selected based on the criteria described in **ANNEX 8.** The Ghanaian Side has understood that schools and components which would be finally covered by the Project will be determined based on the output of the survey.

8-2. Both sides agreed that library, borehole and teacher's room in primary school would not be included among the Project's components.

8-3. With regard to proper implementation of the Project, the Ghanaian side has committed to take appropriate measures to exempt custom duties, value-added tax , and other fiscal levies which may be imposed in Ghana.

8-4. The Ghanaian Side has agreed to submit to the Japanese side a deed or a letter authorized by community chief for the candidate schools by February 16, 2009. For the appropriate preparation of the Project, both sides agreed that such schools would be excluded from Project's sites in the case of a failure in above mentioned documents, .

8-5. The Ghanaian Side shall be responsible for proper operation and maintenance of schools' facilities provided by the Project.

8-6. The Ghanaian Side has committed to take all necessary measures to assure security of Japanese nationals engaged in the Project.

8-7. The Ghanaian Side has committed to provide the Team with available relevant data, information and materials necessary for the execution of the survey.

8-8. The Ghanaian Side expressed a concern about section 6 and indicated that procurement management service contract should provide an opportunity for competent Ghanaian procurement agent to be a partner of JICS and shares functions for an effective implementation of the Project. This position is proposed for a consideration and further discussion.

The Team explained the procurement agent will be defined by the document between two Governments and expected to be named JICS as a sole agent for the Project.

ANNEX 1: Requested Items by the Ghanaian Side
ANNEX 2: Japan's Grant Aid for Community Empowerment
ANNEX 3: Flow of Funds for implementation under the Japan's Grant Aid for Community Empowerment
ANNEX 4: Implementation Flow of the Japan's Grant Aid for Community Empowerment
ANNEX 5: Flow of Tendering and Supervising Works
ANNEX 6: Major Undertakings by Each Government
ANNEX 7: Procurement Guidelines for the Japan's Grant Aid for Community Empowerment
ANNEX 8: Selection criteria of the Project sites

ANNEX 1 Requested Items by Ghanaian Side

Order of Priority	Dist. code	Name of School	No. of Students	No. of Teachers	Ext. Class Room			Necessary No. of Rooms				No. Toilets			[illegible]		Remarks
					[illegible]	[illegible]	Shortage	Class Room	[illegible]	[illegible]	Library	Ex.	Necessary	Total	Ex.	Necessary	
1	BY2	[illegible] Primary	853	12	6	0	15.90	[illegible]	3	0	0	2	4	0	7	0	[illegible]
2	BY3	[illegible] Primary	359	6	6	0	7.98	6	1	0	0	0	6	6	4	0	[illegible]
3	[illegible]	Karaga L/A Primary	891	26	0	12	7.90	4	0	0	0	0	6	0	0	3	[illegible]
4	[illegible]	[illegible] Catholic Primary A	348	6	0	0	7.73	[illegible]	1	0	0	0	0	0	0	2	[illegible]
5	BY7	[illegible] Primary	331	5	6	0	7.49	[illegible]	1	0	0	0	6	6	0	0	[illegible]
6	[illegible]	[illegible] Presby Primary	380	6	4	0	6.77	6	1	0	0	0	6	6	6	3	
7	[illegible]	[illegible] Primary	377	6	3	0	6.15	6	1	0	0	4	2	6	4	0	[illegible]
8	[illegible]	[illegible] JHS	212	3	3	0	6.05	3	1	1	0	0	3	3	0	0	[illegible]
9	[illegible]	[illegible] D/A Primary	272	6	6	0	6.04	6	1	0	0	0	6	6	6	0	[illegible]
10	[illegible]	[illegible] D/A Primary	270	6	6	0	6.00	6	1	0	0	4	2	6	0	0	[illegible]
11	[illegible]	[illegible] D/A Primary 'B'	268	6	3	0	5.96	3	1	0	0	0	3	3	0	3	
12	[illegible]	[illegible] No 1 Primary	266	6	6	0	5.91	3	1	0	0	0	3	3	6	0	[illegible]
13	[illegible]	[illegible] D/A Primary	240	6	5	0	5.33	3	1	0	0	0	3	3	6	3	[illegible]
14	[illegible]	[illegible] Primary	221	7	3	0	4.91	3	1	0	0	0	3	3	0	3	
15	[illegible]	[illegible] D/A Primary	214	5	6	0	4.76	3	1	0	0	0	3	3	0	3	[illegible]
16	[illegible]	[illegible] Primary	210	3	3	0	4.67	3	1	0	0	0	3	3	0	3	
17	[illegible]	[illegible] D/A Primary	209	3	1	0	4.64	3	1	3	0	0	3	3	3	0	
18	[illegible]	[illegible] Methodist Primary	202	6	6	0	4.49	3	1	0	0	0	2	2	0	0	[illegible]
19	[illegible]	[illegible] D/A Primary	191	6	6	0	4.24	3	1	0	0	0	3	3	6	5	
20	STK10	[illegible] JHS	252	7	6	3	4.20	3	0	0	0	4	0	4	0	3	
21	[illegible]	[illegible] Primary	187	4	6	0	4.16	3	1	0	0	0	3	3	0	3	[illegible]
22	[illegible]	[illegible] D/A Primary	187	3	3	0	4.16	3	1	0	0	0	3	3	0	3	[illegible]
23	[illegible]	[illegible] Primary	182	4	5	0	4.04	3	1	0	0	0	3	3	0	3	
24	[illegible]	[illegible] JHS	140	8	3	0	4.00	3	1	1	0	0	3	3	4	0	[illegible]
25	[illegible]	[illegible] Primary	176	8	0	0	3.91	3	1	0	0	0	3	3	0	3	[illegible]
26	[illegible]	[illegible] Primary	170	3	3	0	3.78	3	1	0	0	0	3	3	0	0	[illegible]
27	[illegible]	[illegible] Primary	166	4	3	0	3.69	3	1	0	0	0	3	3	0	1	[illegible]
28	STK2	[illegible] Primary	161	4	3	0	3.58	3	1	0	0	0	3	3	0	1	
29	STK1	[illegible] Primary	157	6	0	3	3.49	3	1	0	0	0	3	3	0	3	[illegible]
30	[illegible]	[illegible] Primary	156	4	3	0	3.47	3	1	0	0	0	3	3	0	3	
31	[illegible]	[illegible] JHS	224	7	3	3	3.40	3	0	1	0	4	0	4	0	3	
32	[illegible]	[illegible] D/A Primary	151	3	6	0	3.36	3	1	0	0	0	3	3	0	0	[illegible]
33	[illegible]	[illegible] D/A Primary	205	6	0	3	4.56	3	1	0	0	0	3	3	0	3	[illegible]
34	[illegible]	[illegible] D/A Primary	200	5	0	0	4.44	3	1	0	0	0	3	3	0	3	[illegible]
35	[illegible]	[illegible] JHS	119	3	0	0	3.45	3	1	1	0	0	3	3	0	3	[illegible]
36	[illegible]	[illegible] Primary	409	6	6	0	9.07	6	1	0	0	3	3	6	0	3	[illegible]
37	[illegible]	[illegible] D/A Primary	249	6	6	6	5.53	3	1	0	0	0	3	3	7	0	[illegible]
(38)	[illegible]	[illegible]	134	5	3	0	2.98	-	0	0	0	0	0	0	0	0	
(39)	[illegible]	[illegible] Primary	122	2	4	0	2.71	-	0	0	0	0	0	0	0	0	
(40)	[illegible]	[illegible] L/A Primary	263	6	3	3	2.67	-	0	0	0	0	0	0	4	0	[illegible]
(41)	[illegible]	[illegible] Primary	119	6	6	0	2.64	-	0	0	0	4	0	4	4	0	[illegible]
(42)	[illegible]	[illegible] D/A JHS	89	5	3	0	2.54	-	0	0	2	2	0	2	3	0	
(43)	[illegible]	[illegible] Primary	114	5	6	0	2.53	-	0	0	0	0	0	0	0	0	
(44)	[illegible]	[illegible] L/A Primary	114	6	5	0	2.53	-	0	0	0	4	0	4	3	0	[illegible]
(45)	[illegible]	[illegible] Primary	111	5	5	0	2.47	-	0	0	0	0	0	0	0	0	[illegible]
(46)	[illegible]	[illegible] Primary	224	6	4	3	2.20	-	0	0	0	4	0	4	0	0	
(47)	[illegible]	[illegible] Primary	333	5	2	3	2.18	-	0	0	0	4	0	4	4	0	
(48)	[illegible]	[illegible] L/A Primary/[illegible]	97	5	2	0	2.16	-	0	0	0	0	0	0	0	0	
(49)	[illegible]	[illegible] D/A primary/[illegible]	90	3	3	0	2.00	-	0	0	0	0	0	0	0	0	
(50)	[illegible]	[illegible] L/A Primary	88	3	3	0	1.96	-	0	0	0	0	0	0	0	0	
(51)	[illegible]	[illegible] E/A Primary	85	3	0	0	1.96	-	0	0	0	0	0	0	0	0	
(52)	[illegible]	[illegible] D/A Primary	82	3	3	0	1.82	-	0	0	0	0	0	0	0	0	
(53)	[illegible]	[illegible] D/A Primary	74	4	0	0	1.64	-	0	0	0	0	0	0	0	0	[illegible]
(54)	[illegible]	[illegible] Primary	74	1	6	0	1.64	-	0	0	0	0	0	0	3	0	[illegible]
(55)	[illegible]	[illegible] Primary	72	2	3	0	1.60	-	0	0	0	0	0	0	0	0	
(56)	[illegible]	[illegible] L/A Primary	72	8	3	0	1.60	-	0	0	0	4	0	4	2	0	[illegible]
(57)	[illegible]	[illegible] Primary	328	6	6	6	1.29	-	0	0	0	2	0	2	4	0	[illegible]
(58)	[illegible]	[illegible] D/A Primary	166	6	0	3	0.76	-	0	0	0	4	0	4	0	0	
(59)	[illegible]	[illegible] E/A Primary	276	6	5	6	-0.98	-	0	0	0	4	0	4	0	0	[illegible]
(60)	[illegible]	[illegible] D/A Primary	229	3	0	0	5.09	-	-	-	-	0	0	-	0	-	[illegible]
(61)	[illegible]	[illegible] D/A JHS	N/A					-	-	-	-			-			[illegible]

LEGEND

AS : ASSIN SOUTH, AN : ASSIN NORTH, BY : BUNKPURUGU YUNYOO, STK : SAWLA-TUNA-KALBA, CG : CENTRAL GONJA, KG : KARAGA

ANNEX 2

Japan's Grant Aid Scheme for Community Empowerment (Tentative)

The Government of Japan (hereinafter referred to as "the GOJ") is implementing the organizational reforms to improve the quality of ODA operations, and as part of this realignment, JICA was reorganized on October 1, 2008. After the reorganization of JICA, following the decision of the GOJ, Grant Aid is extended by JICA.

Grant Aid is non-reimbursable fund to the government of the recipient country to procure the facilities, equipment and services (engineering services and transportation of the products, etc.) for economic and social development of the country under principles in accordance with the relevant laws and regulations of Japan. The Grant Aid is not supplied through the donation of materials as such.

The Grant Aid scheme for Community Empowerment (hereinafter referred to as "GACE") aims toward development of communities by empowering their capability as a whole to assure the sustainable development and overcome various threats, thus seeks to enhance human security. Multiple components can be combined to effectively meet the needs of communities. Contractors, suppliers or consultants are not confined to Japanese firms only, and construction can be done based on the local method, which leads to cost reduction.

1. Grant Aid Procedure

The Japanese Grant Aid is conducted as follows-

- Preparatory Survey (hereinafter referred to as "the Survey")
  - the Survey conducted by JICA
- Appraisal &Approval
  - Appraisal by the GOJ and JICA, and Approval by the Japanese Cabinet
- Determination of Implementation
  - The Notes (hereinafter referred to as "the E/N") exchanged between the GOJ and a recipient country
- Grant Agreement (hereinafter referred to as "the G/A")
  - Agreement concluded between JICA and a recipient country
- Implementation
  - Implementation of the Project on the basis of the G/A

2. Preparatory Survey

1) Contents of the Survey

The aim of the Survey is to provide a basic document necessary for the appraisal of the Project by JICA and the GOJ. The contents of the Survey are as follows:

(1) Confirmation of the background, objectives, and benefits of the Project and also institutional capacity of agencies and communities concerned of the recipient country necessary for the implementation of the Project.
(2) Evaluation of the appropriateness of the Project to be implemented under the GACE from a technical, financial, social and economic point of view;
(3) Confirmation of items agreed on by both parties concerning the basic concept of the Project.

(4) Preparation of an outline design of the Project.
(5) Estimation of cost for the Project

The contents of the original request by the government of the recipient country are not necessarily approved in their initial form as the contents of the Grant Aid project. The Outline Design of the Project is confirmed considering the guidelines of Japan's Grant Aid scheme.

JICA requests the Government of the recipient country to take whatever measures are necessary to ensure its self-reliance in the implementation of the Project. Such measures must be guaranteed even though they may fall outside of the jurisdiction of the organization in the recipient country actually implementing the Project. Therefore, the implementation of the Project is confirmed by all relevant organizations of the recipient country through the Minutes of Discussions.

2) Selection of Consultants

For smooth implementation of the Survey, JICA uses (a) registered consulting firm(s). JICA selects (a) firm(s) based on proposals submitted by interested firms.

3) Result of the Survey

The Report on the Survey is reviewed by JICA, and after The firm(s) selected carry(ies) out the Survey and write(s) a report, based upon terms of reference set by JICA. The appropriateness of the Project is confirmed, JICA recommends to the GOJ to appraise the implementation of the Project.

3. Japan's Grant Aid Scheme

1) The E/N and G/A

After the project approved by the Cabinet of Japan, the E/N will be signed between the GOJ and the Government of the recipient country to make a plea for assistance, which is followed by the conclusion of the G/A between JICA and the Government of the recipient country to define the necessary articles to implement the Project, such as payment conditions, responsibilities of the Government of the recipient country, and procurement conditions.

2) Necessity of "Verification"

The Government of the recipient country or its designated authority will conclude contracts denominated in Japanese yen. Those contracts shall be verified by JICA. This "Verification" is deemed necessary to secure accountability to Japanese taxpayers.

3) Major undertakings to be taken by the Government of the recipient country

In the implementation of the Grant Aid Project, the government of the recipient country is required to undertake such necessary measures as ANNEX 6.

4) "Proper Use"

The Government of the recipient country is required to maintain and use the facilities constructed and the equipment purchased under the Grant Aid properly and effectively and to assign staff necessary for this operation and maintenance as well as to bear all the expenses other than those covered by the Grant Aid.

5) "Export and Re-export"

The products purchased under the Grant Aid should not be exported and re-exported from the recipient country.

6) Banking Arrangements (B/A)

a) The Government of the recipient country or its designated authority should open an account in the name of the Government of the recipient country in a bank in Japan (hereinafter referred to as "the Bank"). JICA will execute the Grant Aid by making

payments in Japanese yen to cover the obligations incurred by the Government of the recipient country or its designated authority under the Verified Contracts.

b) The payments will be made when payment requests are presented by the Bank to JICA under an Authorization to Pay (A/P) issued by the Government of the recipient country or its designated authority.

7) Authorization to Pay (A/P)

The Government of the recipient country should bear an advising commission of an Authorization to Pay and payment commissions to the Bank.

8) Social and Environmental Considerations

The recipient country must ensure the social and environmental considerations for the Project and must follow the environmental regulation of the recipient country and JICA socio-environmental guideline.

4. Implementation of GACE after the E/N and the G/A

1) Procedural details

Essential points to be agreed upon are outlined as follows.

a) JICA executes the Grant by making payments of the amount agreed upon in the E/N and pays serious attention to ensure the accountability on proper and effective use of the Grant for the Project / the Programme.

b) The products and services shall be procured and provided in accordance with "Procurement Guidelines for Grant Aid for Community Empowerment".

c) The Government of the recipient country shall conclude an employment contract with the Agent.

d) The Government of the recipient country shall designate the Agent as the representative acting in the name of the Government of the recipient country concerning all transfers of funds to the Agent.

2) Focal Points of "Procurement Guidelines for Grant Aid for Community Empowerment"

a) The Agent

The Agent is the organization which provides procurement services of products and services on behalf of the Government of the recipient country according to the Agent Agreement with the Government of the recipient country. The Agent is recommended to the Government of the recipient country by JICA and agreed between the two Governments in the Agreed Minutes (A/M).

b) Agent Agreement

The Government of the recipient country shall conclude an Agent Agreement, within two month after the date of entry into force of the G/A. The scope of the Agent's services shall be clearly specified in the Agent Agreement.

c) Approval of the Agent Agreement

The Agent Agreement, which is prepared as two identical documents, shall be submitted to JICA by the Government of the recipient country through the Agent. JICA confirms whether or not the Agent Agreement is concluded in conformity with the E/N and the G/A and the Procurement Guidelines for Grant Aid for Community Empowerment, and approves the contract.

The Agent Agreement concluded between the Government of the recipient country and the Agent shall become effective after the approval by JICA in a written form.

d) Payment Methods

The Agent Agreement shall stipulate that "regarding all transfers of the fund to the Agent, the Government of the recipient country shall designate the Agent to act on behalf of the

Government of the recipient country and issue a Blanket Disbursement Authorization ("the BDA") to conduct the transfer of the fund (Advances) to the Procurement Account from the Recipient Account."

The Agent Agreement shall clearly state that the payment to the Agent shall be made in Japanese yen from the Advances and that the final payment to the Agent shall be made when the total Remaining Amount become less than 1% of the Grant and its accrued interest.

e) Products and Services Eligible for Procurement

Products and services to be procured shall be selected from those defined in the G/A.

f) Firm

In principle, a Firm of any nationality could be contracted as long as the Firm satisfies the conditions specified in the tender documents.

g) Method of Procurement

In implementing procurement, sufficient attention shall be paid so that there is no unfairness among tenderers who are eligible for the procurement of products and services.

For this purpose, competitive tendering shall be employed in principle.

h) Tender Documents

The tender documents should contain all information necessary to enable tenderers to prepare valid offers for the products and services to be procured by GACE.

The rights and obligations of the Government of the recipient country, the Agent and the Suppliers of the products and services should be stipulated in the tender documents to be prepared by the Agent. Besides this, the tender documents shall be prepared in consultation with the the Government of the recipient country.

i) Pre-qualification Examination of Tenderers

The Agent may conduct a pre-qualification examination of tenderers in advance of the tender so that the invitation to the tender can be extended only to eligible firms. The pre-qualification examination should be performed only with respect to whether or not the prospective tenderers have the capability of accomplishing the contracts concerned without fail. In this case, the following points should be taken into consideration:

(1) Experience and past performance in contracts of a similar kind
(2) Property foundation or financial credibility
(3) Existence of offices, etc. to be specified in the tender documents.

j) Tender Evaluation

The tender evaluation should be implemented on the basis of the conditions specified in the tender documents.

Those tenders which substantially conform to the technical specifications, and are responsive to other stipulations of the tender documents, shall be judged in principle on the basis of the submitted price, and the tenderer who offers the lowest price shall be designated as the successful tenderer.

The Agent shall prepare a detailed tender evaluation report clarifying the reasons for the successful tender and the disqualification and submit it to the Government of the recipient country to obtain confirmation before concluding the contract with the successful tenderer.

The Agent shall, before a final decision on the award is made, furnish JICA with a detailed evaluation report of tenders, giving the reasons for the acceptance or rejection of tenders.

k) Additional Procurement

If there is an additional procurement fund after competitive and / or selective tendering and / or direct negotiation for a contract, and the Government of the recipient country would

like an additional procurement, the Agent is allowed to conduct an additional procurement, following the points mentioned below:

(1) Procurement of the same products and services

When the products and services to be additionally procured are identical with the initial tender and a competitive tendering is judged to be disadvantageous, the additional procurement can be implemented by a direct contract with the successful tenderer of the initial tender.

(2) Other procurements

When products and services other than those mentioned above in (1) are to be procured, the procurement should be implemented through a competitive tendering. In this case, the products and services for additional procurement shall be selected from among those in accordance with the E/N and G/A.

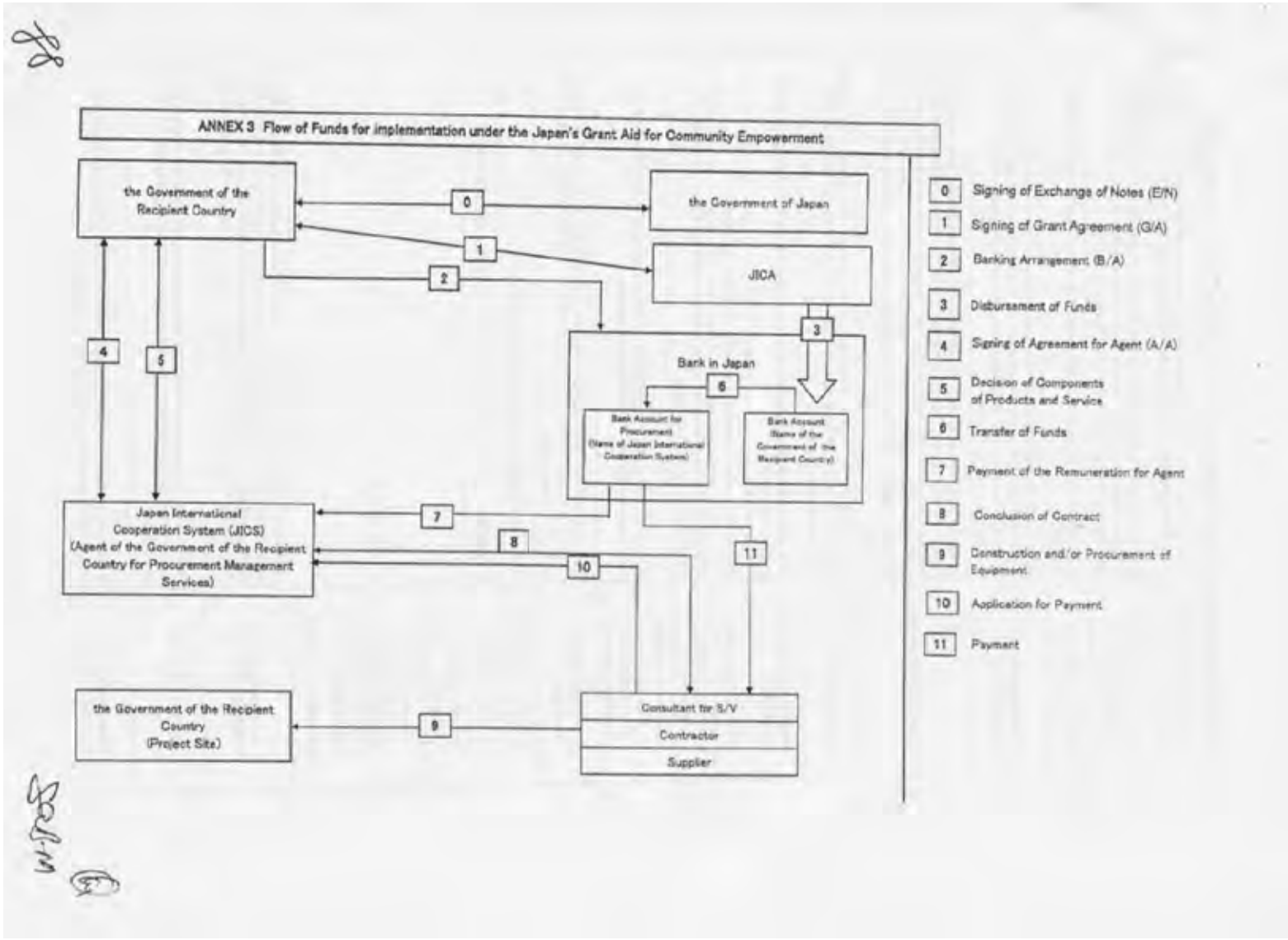
l) Conclusion of the Contracts

In order to procure products and services in accordance with the E/N and the G/A, the Agent shall conclude contracts with firms selected by tendering or other methods.

m) Terms of Payment

The contract shall clearly state the terms of payment. The Agent shall make payment from the "Advances", against the submission of the necessary documents from the Firm on the basis of the conditions specified in the contract, after the obligations of the Firm have been fulfilled. When the services are the object of procurement, the Agent may pay certain portion of the contract amount in advance to the firms on the conditions that such firms submit the advance payment guarantee worth the amount of the advance payment to the Agent.

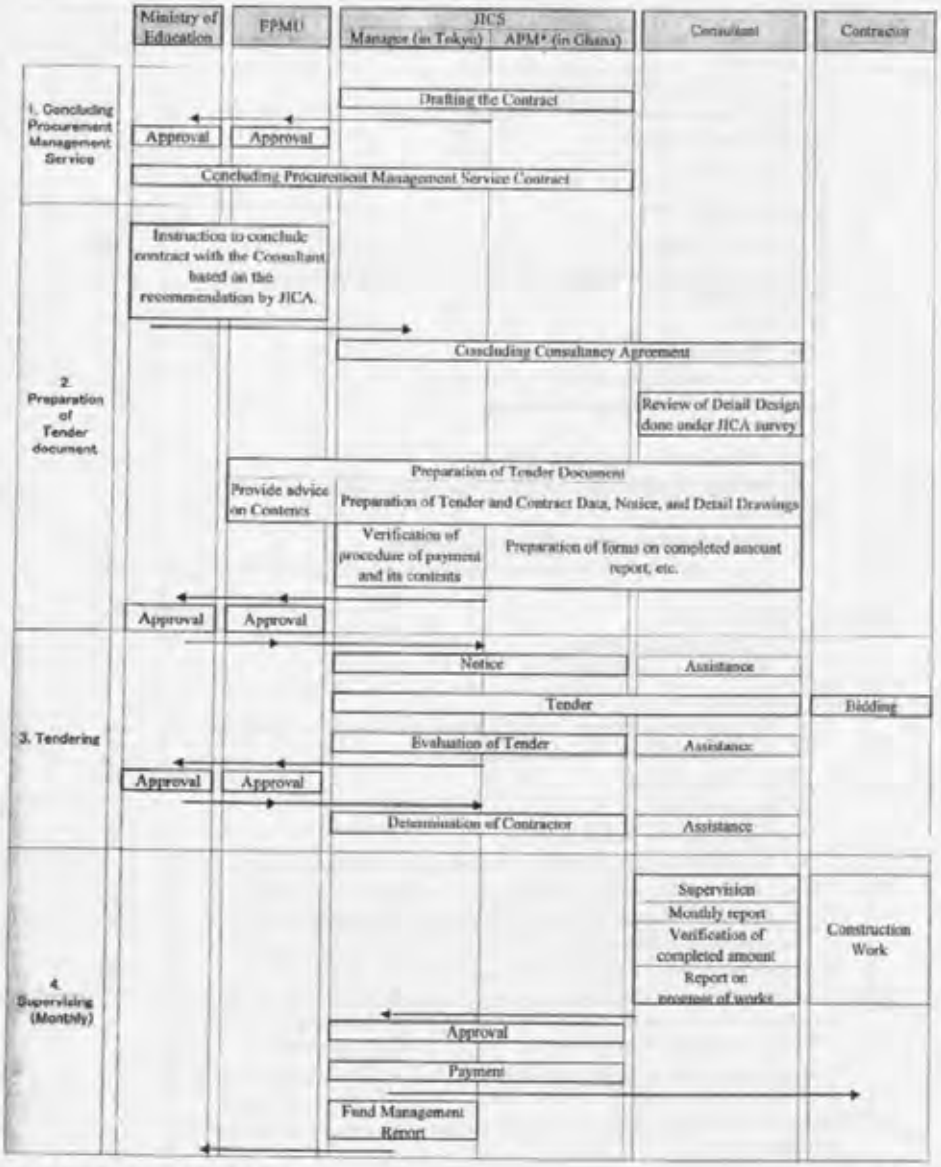
END


ANNEX 3 Flow of Funds for implementation under the Japan's Grant Aid for Community Empowerment
the Government of the Recipient Country
the Government of Japan
JICA
Bank in Japan
Bank Account for Procurement (Name of Japan International Cooperation System)
Bank Account (Name of the Government of the Recipient Country)
Japan International Cooperation System (JICS) (Agent of the Government of the Recipient Country for Procurement Management Services)
the Government of the Recipient Country (Project Site)
Consultant for S/V
Contractor
Supplier
0 Signing of Exchange of Notes (E/N)
1 Signing of Grant Agreement (G/A)
2 Banking Arrangement (B/A)
3 Disbursement of Funds
4 Signing of Agreement for Agent (A/A)
5 Decision of Components of Products and Service
6 Transfer of Funds
7 Payment of the Remuneration for Agent
8 Conclusion of Contract
9 Construction and/or Procurement of Equipment
10 Application for Payment
11 Payment

ANNEX 4 Implementation Flow of the Japan's Grant Aid for Community Empowerment

1 Conclusion of Exchange of Notes (E/N)	The Government of the Recipient Country and the Government of Japan conclude Exchange of Notes (E/N) after approval of the Grant for community empowerment by the Government of Japan
2 Conclusion of Banking Arrangement (B/A)	The Government of the Recipient Country and a bank in Japan (the Bank of Tokyo-Mitsubishi UFJ) conclude Banking Arrangement (B/A) to open an account in the name of the Government of the Recipient Country. The account is called 'Recipient Account'
3 Disbursement of Funds	Following the E/N, G/A and B/A, the total amount of the grant is transferred into the 'Recipient Account'.
4 Conclusion of Agent Agreement (A/A)	As soon as the Exchange of Notes (E/N)and Grant Agreement(G/A) are signed, JICS concludes an Agent Agreement (A/A) with the Government of the Recipient Country. JICS will explain about procurement procedures, responsibilities of the Government the Recipient Country and JICS, and remuneration of JICS as an Agent.
5 Transfer of the Grant Funds	Before starting procurement services, the grant funds are transferred from the 'Recipient Account' to 'JICS Procurement Account'. JICS then takes full responsibility for managing the grant funds until payment is completed for the procurement services. By signing Blanket Disbursement Authorization (BDA), the Government of the Recipient Country designates JICS as their representative and gives authorities to transfer all the funds under this project on behalf of the Government of the Recipient Country.
6 Payment of Agent's Fee	The Government of the Recipient Country shall pay JICS Agent's Fee for its services to be rendered pursuant to the Agent Agreement. Agent's Fee shall be paid to JICS from the fund transferred to 'JICS procurement account'.
7 Selection of a Consultant for Supervision	JICS selects a consultant for Supervision in the proper manner based on the research results of the Outline Design Study.
8 Selection of Contractors	JICS selects contractors, utilizing survey results provided by the consultant.
(1) Tender document preparation	JICS prepares tender documents for selecting contractors based on the survey results and information provided by the consultant.
(2) General Procurement Notice (GPN) and Pre-qualification of Prospective Tenderers	JICS advertises for tenders by means of GPN in widely read newspapers and JICS website. JICS then assesses the eligibility of registered companies for tender.
(3) Tender and Tender Evaluation	JICS conducts a tender by International Competitive Bidding (ICB) or other appropriate manners. The tender is evaluated by JICS and a successful tenderer is determined based on agreement made among the concerned parties.
(4) Conclusion of Contract	Contract is concluded between JICS and the successful tenderer.
9 Procurement of Goods	JICS procures equipment agreed to be procured for the project in the following manner.
(1) Tender document preparation	The same as No. 8.
(2) General Procurement Notice (GPN) and Pre-qualification of Prospective Tenderers	
(3) Tender and Tender Evaluation	
(4) Conclusion of Contract	
10 School Construction and Delivery of Goods	JICS informs the Government of the Recipient Country of the construction and delivery schedule. If any problem should occur, JICS cooperates with the Government of the Recipient Country, JICA and Japanese Embassy in order to solve the problem in accordance with a contract. The Government of the Recipient Country shall take necessary measures to ensure smooth customs clearance and tax exemption.
11 Payment for Goods and Services	When necessary documents for payment are submitted by a contractor (consultant, supplier), JICS examines their contents and, if satisfactory, makes payment from the 'JICS Procurement Account' to the contractant.
12 Implementation of Soft Component Program	In case that a soft component program is implemented, JICS selects NGOs or other agencies for its implementation, concludes a contract and makes a payment.

ANNEX 5: Flow of Tendering and Supervising Works



* APM: Assistant Project Manager of JICS

Annex 6 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	To construct gates and fences in and around the site		●
4	To construct the parking lot	n.a.	n.a.
5	To construct roads		
	1) Within the Site	n.a.	n.a.
	2) Outside the site		●
6	To construct the buildings	●	
7	To provide facilities for the distribution of electricity, water supply, drainage and other incidental facilities		
	1) Electricity		
	a. The distributing line to the site	n.a.	n.a.
	b. The drop wiring and internal wiring within the site	n.a.	n.a.
	c. The main circuit breaker and transformer	n.a.	n.a.
	2) Water Supply		
	a. The city water distribution main to the site	n.a.	n.a.
	b. The supply system within the site (receiving and elevated tanks)	n.a.	n.a.
	3) Drainage		
	a. The city drainage main (for storm, sewer and others)	n.a.	n.a.
	b. The drainage system (for toilet sewer, ordinary waste, storm drainage and others) within the site	n.a.	n.a.
	4) Gas Supply		
	a. The city gas main to the site	n.a.	n.a.
	b. The gas supply system within the site	n.a.	n.a.
	5) Telephone System		
	a. The telephone trunk line to the main distribution frame/panel (MDF) of the building	n.a.	n.a.
	b. The MDF and the extension after the frame/panel	n.a.	n.a.
	6) Furniture and Equipment		
	a. General furniture		●
	b. Project equipment (School furniture)	●	
8	To bear the commissions to the Japanese bank for banking services based upon the B/A		●
9	To ensure unloading and customs clearance at port of disembarkation in recipient country		
	1) Marine (Air) transportation of the products from abroad 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	●	
10	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		●
11	To exempt 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 for the Project		●
12	To maintain and use properly and effectively the facilities constructed and equipment provided under the Grant Aid		●
13	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)

ANNEX 7 **The Procurement Guidelines for the Japan's Grant Aid for Community Empowerment**

PART I Basic Principles

I-1 Introduction

I-1-1 These Guidelines (Type I-C) , which are prepared by Japan International Cooperation Agency (hereinafter referred to as "JICA") and are authorized by the Government of Japan, set forth the general rules to be followed by the Government of the recipient country (hereinafter referred to as "the Recipient") in using Japanese Grant (hereinafter referred to as "the Grant") for the procurement of the products and services for the implementation of the project / the programme (hereinafter referred to as "the Project" / "the Programme") which is agreed upon in the Exchange of Notes (hereinafter referred to as "the E/N") between the Government of Japan and the Recipient. These Guidelines (hereinafter referred to "the Guidelines") are applicable to the Grant Aid for Community Empowerment.

I-1-2 The application of the Guidelines to a particular project / programme funded by the Grant will be stipulated in the Grant Agreement (hereinafter referred to as "the G/A") concluded between JICA and the Recipient.

I-1-3 The rights and obligations of the Recipient, procurement agent (hereinafter referred to as "the Agent") and the firm(s) which supplies or provides the products and services for the Project / the Programme (hereinafter referred to as "the Firm") are governed by the employment contract (hereinafter referred to as "the Agent Agreement") concluded between the Recipient and the Agent which is defined in the Agreed Minutes on procedural details (hereinafter referred to as "the A/M") signed together with the E/N and in the G/A, by the tender documents, and by the contracts concluded between the Agent and the Firm, and not by the Guidelines.

I-II Parties Concerned

In the Guidelines, the Grant Aid means a set of arrangements where, based on the E/N between the Government of Japan and the Recipient, JICA concludes the G/A with the Recipient and provides to the Recipient the Grant to be expended for procuring products and services necessary for the implementation of the Project / the Programme, whereas the Recipient implements the Project / the Programme using the Grant. The roles of the concerned parties, including the Government of Japan, JICA, the Recipient, the Agent and the Firm in relation to the implementation of the Project / the Programme under the Grant are understood as follows.

I-II-1 The Government of Japan extends the Grant for the Project / the Programme.

I-II-2 JICA executes the Grant by making payments of the amount agreed upon in the E/N and pays serious attention to ensure the accountability on proper and effective use of the Grant for the Project / the Programme.

I-II-3 The Recipient is the beneficiary of the Grant and is responsible for the implementation of the Project / the Programme. The Recipient entrusts the Agent with the procurement of the products and services.

I-II-4 The Agent is an impartial and specialized organization which provides procurement services of the products and services on behalf of the Recipient according to the Agent Agreement with the Recipient.

I-II-5 The Firm is the contractor who provides the products and services for the Project / the Programme in accordance with the contract with the Agent.

I-III Safety Considerations

The Recipient shall comply with all the applicable safety regulations and pay full attention to all the safety measures.

Part II Guidelines for the Use of the Agent

II-I General

II-I-1 Role of the Agent

The Agent shall conduct the procurement services of the products and services for the Project / the Programme on behalf of the Recipient. The Agent shall render services with due expertise and in a fair and impartial manner to ensure the smooth and proper implementation of the Project / the Programme in order to contribute to fulfilling the purpose of the assistance.

The Agent shall work to maintain rights and interests of the Recipient and maximize the impacts of Japan's assistance. The Agent is also required to pay attention to minimizing the burden of the Recipient.

II-I-2 Agent Agreement

The Recipient shall conclude an Agent Agreement, in principle within two (2) months after the date of signing of the G/A, with the Agent in accordance with the G/A.

After the approval of the Agent Agreement by JICA in a written form, the Agent shall conduct the services referred to in paragraph II-I-3 below on behalf of the Recipient.

II-I-3 Services of the Agent

The Agent shall conduct the services referred to in the Schedule I of the G/A.

II-II Approval of the Agent Agreement

II-II-1 General

The Agent Agreement is prepared as two identical documents and the copy of the Agent Agreement shall be submitted to JICA by the Recipient through the Agent. JICA confirms whether or not the Agent Agreement is concluded in conformity with the G/A and the Guidelines, and approves the Agent Agreement.

The Agent Agreement concluded between the Recipient and the Agent shall become effective after the approval by JICA in a written form.

II-II-2 Reference to the G/A

The Agent Agreement shall refer to the G/A as follows:

JICA shall execute the Grant to the Government of (name of recipient country) in accordance with the G/A signed on (date of signature) between JICA and the Government of (name of recipient country).

II-II-3 Scope of the Services

The scope of the Agent's services shall be clearly specified in the Agent Agreement. The Agent Agreement with the scope of Agent's services in conflict with the G/A shall not be approved by JICA.

II-II-4 Completion of the Services

The Agent Agreement shall clearly state that when the entire amount of the fund transferred from the Recipient's account in the name of the Recipient at a bank in Japan (hereinafter referred to as "the Recipient Account") to the account in the name of the Agent (hereinafter referred to as "the Procurement Account") has been paid for the procurement of the products and services, or when the remaining amount of the said fund has been transferred to the Recipient Account, the Agent's services shall be regarded as complete.

II-II-5 Agent's Fees

The amount and currency or calculations of Agent's fees shall be precisely and correctly stated in the Agent Agreement. The conditions and amount or calculation for additional fees to which the Agent is entitled shall be clearly stated.

II-II-6 Approval of the Agent Agreement

The Agent Agreement shall clearly state that it shall become effective after the approval by JICA in a written form.

II-II-7 Payment Methods

The Agent Agreement shall stipulate that "regarding all transfers of the fund to the Agent, the Recipient shall designate the Agent to act on behalf of the Recipient and issue a Blanket Disbursement Authorization to conduct the transfer of the fund (hereinafter referred to as "the Advances") to the Procurement Account from the Recipient Account."

The Agent Agreement shall clearly state that the payment to the Agent shall be made in Japanese yen from the Advances and that the final payment to the Agent shall be made when the total remaining amount become less than three percent (3%) of the Grant and its accrued interests excluding the Agent's fees.

II-II-8 Force Majeure

The conditions of the Agent Agreement shall contain a clause stating that failure on the part of the Agent to fulfill obligations under the Agent Agreement would not be considered a default if such failure is the result of an event of force majeure. The scope of force majeure shall be defined in the conditions of the Agent Agreement.

II-II-9 Responsibilities and Obligations of the Recipient

The Agent Agreement shall clearly state the responsibilities and obligations of the Recipient in accordance with the G/A.

II-II-10 Amendment to the Agent Agreement

If an amendment to the Agent Agreement is required, the amended Agent Agreement shall clearly state that:

(1) all the clauses except that which is / are amended, remain unchanged; and

(2) the amendment to the Agent Agreement shall become effective only after the approval by JICA in a written form.

Part III Guidelines for the Procurement of the Products and Services by the Agent

III-I General

III-I-1 Products and Services Eligible for Procurement

The products and services to be procured shall be selected from those defined in the G/A.

The guidelines issued by the Agent shall be applied to the selection of consultants (persons or juridical persons including universities, NGOs, and others with expertise and experience) necessary for the Project / the Programme.

III-I-2 Firm

(1) In principle, a firm of any nationality could be contracted as long as the firm satisfies the conditions specified in the tender documents.

(2) Not withstanding the provision (1) above, as a general rule, consultants that will be employed to do detail design and supervise the work for the Project / the Programme may be Japanese nationals recommended by JICA, for the purpose of maintaining technical consistency with the preliminary examination and other related studies, conducted prior to the signing of the G/A (hereinafter referred to as "the Studies").
The recommendation of the consultant by JICA to the Recipient does not mean that JICA shall assume the responsibilities which the consultant shall bear to the Agent for the Recipient on the basis of the Contract.
(The term "Japanese nationals" wherever used in the Guidelines means Japanese physical persons or Japanese juridical persons controlled by Japanese physical persons.)

III-I-3 Misprocurement
JICA requires that, under contracts funded by the Grant, tenderers and Firms observe the highest standard of ethics during the procurement and execution of such contracts. In this regard, JICA shall demand that the Recipient and the Agent shall reject a tender if it determines that the tenderer has engaged in corrupt or fraudulent practices in competing for the contract in question. JICA will recognize a firm as ineligible, for a period determined by JICA, to be awarded a contract funded by the Grant if it at any time determines that the Firm has engaged in corrupt or fraudulent practices in competing for, or in executing any other contracts funded by the Grant or other Japanese ODA.
When the authorities concerned of the Government of Japan decide to impose against a firm such administrative sanctions as debarment, exclusion of goods manufactured, etc., from Japanese governmental procurement, JICA may ask the Recipient and the Agent to exclude the goods manufactured by the sanctioned firm from the procurement under the Grant, for the period of the sanctions by such authorities concerned of the Government of Japan.

III-II Procurement Procedures
III-II-1 Transfer of the fund
The Agent shall take necessary measures for transferring the fund necessary for the procurement of the products and services from the Recipient Account to the Procurement Account prior to the procurement procedures. The fund transferred to the Procurement Account is called the Advances.

III-II-2 Method of Procurement
(1) Competitive Tendering
In implementing procurement, sufficient attention shall be paid so that there is no unfairness among tenderers who are eligible for the procurement of the products and services.
For this purpose, competitive tendering shall be employed in principle.

(2) Other Procurement Methods
If competitive tendering is deemed inappropriate or impractical due to any of the following special situations, the Agent is permitted to proceed with procurement on selective tendering, international shopping or direct contracting:
1) when spare parts or accessories, etc. for existing equipment or equipment manufactured by specified manufacture are procured (in this case direct contracting is expected);
2) when there are adequate reasons to maintain uniformity and continuity of the products and services provided under an existing contract (in this case direct contracting is expected);
3) when the number of firms to satisfy the conditions is limited (in this case selective tendering or international shopping is expected);
4) when it is quite doubtful that the prospective tenderers would be interested in participating in competitive tendering, and thereby the advantages of competitive tendering would be outweighed by the administrative burdens involved (in this case selective tendering or international shopping is expected);
5) part or all of the tender procedure was not successfully completed and re-tendering is implemented (in this case selective tendering or international shopping is expected);
6) when emergency procurement is required (in this case selective tendering or international shopping is expected); and
7) when consultants are to be selected (in this case, competitions among contents of Technical Proposals and financial proposal or direct contracting with the consultant recommended by JICA is expected).

When procurement method other than competitive tendering are employed, the Agent shall implement procedures in such a manner as to comply with the competitive tendering procedures described in the Guidelines to the fullest possible extent, in order to ensure the transparency of the selecting procedures.

(3) Modifications of the Project / the Programme
The Grant must only be used for procuring the products and services necessary for implementing the Project / the Programme based on the Studies. Therefore, the Recipient is to implement each component based on the items listed on the report of the Studies prepared and submitted for the Recipient by JICA and/or concerned parties. However, on the occasion that the content of the Project /

the Programme shall be modified due to various reasons at the stage of determining the details or implementing the Project / the Programme, the Recipient must obtain prior approval from JICA under the consensus of Committee established in the G/A through the Agent, provided that the modifications of the Project / the Programme are beyond the concept of the Studies.
The prior consent for the modifications is conducted by JICA to ensure that the modifications of the Project / the Programme are appropriate and to confirm whether any modifications are required on the contract price or not, however it does not mean that JICA will assume the legal or technical responsibilities for the substance of the modifications.
On the other hand, provided that the modifications of the Project / the Programme are minor than the concept of the Studies, the Recipient, through the Agent, must obtain post-identification from JICA.
The details of the procedures for modifications will be advised by JICA separately.

(4) Additional Procurement
If the Recipient may request an additional procurement by using the Remaining Amount described in (5) 1) below, the Agent is allowed to conduct an additional procurement, following the points mentioned below.

1) Procurement of the same products and services
The additional procurement may be implemented by a direct contracting with the successful tenderer of the initial tender when a competitive tendering is judged to be disadvantageous or uneconomical in such cases where the products and services to be additionally procured are identical with the initial tender and also the quantity to be additionally procured is limited, or there was no other participants than the successful tenderer in the initial tender. When a direct contracting with the same firm is not necessarily advantageous or appropriate in such case where a portion of the balance is relatively large, firms shall be selected through a new tendering procedure.
2) Other procurements
When the products and services other than those mentioned in (1) above are to be procured, the procurement shall be implemented in principle through a competitive tendering. In this case, the products and services for additional procurement shall be selected from among those in accordance with the G/A.
(5) Handling of the Remaining Amount
1) "The Remaining Amount" refers to the difference in amount between "the total amount of the Grant, accrued interests, and where available, the resources received as delay damages, compensations or penalty(ies) (hereinafter referred to as "the Charges")" and "the total payment amount to the Firm and the Agent."
2) In the case conditions described in 3) below are fulfilled, the Recipient may use the Remaining Amount to cover the charge of the contract price due to the modifications of the Project / the Programme and to fund additional procurements needed in the implementation of the Project / the Programme (including changes in the type of procurement of services, etc.) by taking steps described in (6) below. Any funds that remain after the completion of all procurements are to be returned to JICA.
3) Conditions for using the Remaining Amount are as follows:
(a) it must be used for purposes and scopes stipulated in the G/A;
(b) it must be used in line with the procedure stipulated in the G/A;
(c) it must be used in line with the aims and content listed in the Studies and other documents;
(d) the procurements shall be of the products and services necessary for effectively implementing the relevant projects, and such procurements shall be completed within the period set at the beginning;
(e) in the case of purchasing or additionally procuring spare parts, the amount used for this out of the Remaining Amount must not exceed twenty percent (20%) of the contract price of each equipment (or anticipated price by tender, if more appropriate); and
(f) the reimbursement of the Remaining Amount shall be carried out as stipulated in the G/A.
(6) Authorization Process for Using the Remaining Amount
The following steps shall be taken to obtain prior approval of JICA to use the Remaining Amount:
1) the implementing agency of the Recipient submits a proposal for using the Remaining Amount to the committee stipulated in the G/A and obtains its consensus;
2) upon obtaining the committee's consensus, the implementing agency of the recipient country submits to JICA, through the Agent, a request form clearly indicating, together with the design modifications proposal and/or the proposal of additional procurement, the aim and specific reasons (including technical reasons) for the use of the Remaining Amount;
3) JICA, based on the request form mentioned in 2) above, considers from a technical standpoint whether or not to authorize the use of the Remaining Amount; and
4) JICA responds to the implementing agency of the Recipient, through the Agent, regarding the result mentioned in 3) above.

III-II-3 Size of Tender Lot
If a possible tender lot may be technically and administratively divided and such a division is likely to result in the broadest possible competition, the tender lot shall be divided into two or more. On the other hand, in the interest of obtaining the broadest possible competition, any one lot for which a tender is invited shall, whenever possible, be of a size large enough to attract tenderers.

III-II-4 Tender Conditions

The Agent shall fully study and consider technical specifications, construction period, required technical standards, prices, manufacturing, transportation, trade regulations, etc. regarding the products and services to be procured and finalize appropriate tender and procurement conditions after obtaining confirmation by the Recipient. Also, the price expected for the procurement (referential price) shall be set in advance for reference in the selection of firms.

III-II-5 Public Announcement

Public announcement shall be carried out in such a way that all potential tenderers will have fair opportunity to learn about and participate in the tender.

The invitation to prequalification or to tender shall be publicized at least in a newspaper of general circulation in the recipient country (or neighboring countries) or in Japan, and in the easily accessible webpage operated by the Agent. The items to be contained in the public announcement are as follows:

(1) name of the Grant;
(2) names of the products and services to be procured;
(3) name of the Agent and contact information including a location of its webpage (written as an agent for the Recipient);
(4) required qualifications of tenderers;
(5) date, time and place of the distribution and price of tender documents; and
(6) other relevant information considered to be necessary for firms to determine whether to participate in the tender.

The Agent is required to publicize the information from (1) to (3) above in the newspapers if other details including (4) to (6) above are advertised on the webpage of the Agent.

III-II-6 Language

The tender invitation, tender documents and contracts should be prepared in principle in English, French or Spanish. In case that an announcement is made in a newspaper in circulation in Japan, Japanese translation shall be attached when possible.

III-III Tender Documents

III-III-1 General

(1) The tender documents should contain all information necessary to enable tenderers to prepare valid offers for the products and services to be procured for the Project / the Programme.

(2) The rights and obligations of the Recipient, the Agent and the Firm of the products and services should be stipulated in the tender documents to be prepared by the Agent. The tender documents shall be prepared in consultation with the Recipient.

(3) The tender documents shall clearly state that: JICA shall execute the Grant to the Government of (name of recipient country) in accordance with the G/A signed on (date of signature) between JICA and the Government of (name of recipient country).

(4) The tender documents shall clearly state that "JICA requires that, under contracts funded by the Grant, tenderers and the Firm observe the highest standard of ethics during the procurement and execution of such contracts. In this regard, JICA will demand that the Recipient and the Agent shall reject a tender if it determines that the tenderer has engaged in corrupt or fraudulent practices in competing for the contract in question. JICA will recognize a firm as ineligible, for a period determined by JICA, to be awarded a contract funded by the Grant if it at any time determines that the firm has engaged in corrupt or fraudulent practices in competing for, or in executing any other contracts funded by the Grant or other Japanese ODA. When the authorities concerned of the Government of Japan decide to impose against a firm such administrative sanctions as debarment, exclusion of goods manufactured, etc., from Japanese governmental procurement, JICA may ask the Recipient and the Agent to exclude the goods manufactured by the sanctioned firm from the procurement under the Grant, for the period of the sanctions by such authorities concerned of the Government of Japan."

III-III-2 Contents of the Tender Documents

The tender documents should consist of the following documents:

(1) instruction to tenderers;
(2) procurement conditions;
(3) form of the tender; and
(4) draft of the contract.

If a fee is charged for the tender documents, it should be reasonable and reflect the cost of implementation of the tender procedure.

III-III-3 Major Items Related to the Instruction to Tenderers

(1) The instruction to tenderers should clearly describe the procedure for question and answers, correction regarding the tender documents, tender procedures, tender evaluations, and the other relevant issues of the tendering process.

(2) The instruction to tenderers should clearly describe the products and services to be procured, qualifications required of tenderers, existence of local agents, elimination of disqualified firms from the tender, eligible source countries, size of contract, place of delivery and date of shipment, insurance, transportation, bond, warranty, tax exemption described in the G/A and other pertinent terms.

(3) The instruction to tenderers should clearly describe that the tender price shall be stated in figures and words as firm and final, and if there is a difference between the price in words and that in figures, the price in words is deemed correct.

III-III-4 Procurement Conditions

(1) Clarity and Accuracy of Conditions

The procurement conditions should specify clearly and in detail the services to be performed, the products and services to be supplied and the relevant terms such as contents of the products and services, technical specifications, the place of delivery, etc.

The procurement conditions should identify the main factors or criteria to be taken into account in evaluation and comparison of tenders. The procurement conditions should be prepared so as to secure the broadest possible competitive tendering.

(2) Impartiality of the Technical Specifications

The technical specifications supplied with procurement conditions should be based on the related characteristics and required capacities of the products and services to be procured.

Making reference to trademark names, catalogue numbers or similar classifications should be avoided unless in the case of the procurement of particular spare parts, etc.

(3) Standards

In the event that specifications require the products to comply with industrial standards, technical specifications should be decided in appropriate manner, considering that the products meeting internationally accepted standards and domestically accepted standards and should be stated in the tender document.

III-III-5 Forms of Tender

The following forms of tender should be clarified:

(1) tender qualification certificates;

(2) tender specifications; and

(3) tender price.

III-III-6 Draft of the Contract

The draft contract should clearly state "the contract terms" such as "the rights and obligations of the Recipient, the Agent and the Firm, etc." and the following items:

(1) terms of payment;

(2) warranty period;

(3) performance bond;

(4) non-performance of the contract;

(5) force majeure; and

(6) settlement of disputes.

III-IV Implementation of Tender

III-IV-1 Preparatory Period for the Tender

The allowable period for the preparation and submission of the tender should be determined with due consideration to the particular circumstances related to the Project / the Programme in the recipient country and the scale and complexity of the tender into. Sufficient period before the date of tender should be allowed from the date when the documents are made available for potential tenderers.

III-IV-2 Guarantee for the Tender

The Agent may request that the tenderers submit bid bond (e.g. bank guarantees) for the tender. The amount of the bid bond, however, should not be so high as to discourage potential tenderers. The bid bonds submitted from the unsuccessful tenderers should be returned immediately after the award of the contract.

III-IV-3 Questions and Answers regarding the Tender Documents

The Agent, for the purpose of the smooth implementation of the tender, should accept questions about the tender documents from the purchasers of the documents and provide answers to the questions, in accordance with the following points:

(1) a reasonable period should be set, respectively for accepting questions and providing answers to those questions; and

(2) the answers should be given to all those who have purchased the tender documents well in advance of the date of tender so that the prospective tenderers can take proper measures.

III-IV-4 Correction and Alteration of the Tender Documents

Any additional information, supplementary explanations, correction of errors and alterations related to the tender documents should be notified to all those who have purchased the tender documents well in advance of the date of tender so that prospective tenderers can take proper measures.

III-IV-5 Pre-qualification Examination of Tenderers

(1) The Agent may conduct a pre-qualification examination of tenderers in advance of the tender so that the invitation to the tender can be extended only to eligible firms.

(2) The pre-qualification examination should be performed not to limit the tenderers but to confirm the capability and resources of potential tenderers to perform the particular work satisfactorily and should not hinder the objective of the competitive tendering.
(3)In this case, the following points should be taken into consideration:
1) experience and past performance in contracts of a similar kind;
2) property foundation or financial credibility;
3) existence of local offices, etc. to be specified in the tender documents; and
4) their potentialities to use necessary personnel, equipment and facilities.

III-IV-6 Tender Procedures
(1) The tender documents should clearly indicate the deadline of the date and time for accepting the tendering as well as the date and place for opening the tender.
(2) The tenderer should be instructed to submit the following necessary tender documents:
1) tender qualification certificates;
2) tender specifications; and
3) tender price.
(3) All tenders should be opened in the presence of the Agent and tenderers or their representatives at the fixed date, time and place. The presence of tenderers is not requirement as far as transparency and necessary confidentiality are secured. Tenderers who do not attend the tender opening should not be disadvantaged in the respect of selection procedure.
(4) Any tender submitted after the specified deadline is not acceptable as a valid tender.
(5) In opening tenders with the attendance of tenderers, the name of each tenderer and the tender price concerned shall be read aloud and recorded.

III-IV-7 Supplementary Explanation and Modifications of the Tender during Tender Evaluation
(1) No tenderers shall be permitted to modify the contents of the tenders after the tenders have been opened.
(2) The Agent may request any tenderers to make a supplementary explanation but not permitted to request them for a substantial modifications of the contents of the tenders and a change in tender prices.

III-IV-8 Confidentiality of Tender Process
Until notification of the award has been sent to the successful tenderer, the Recipient and the Agent shall not disclose to the tenderers and to other people who are not officially concerned with the tender procedures, any information on the examination of the tenders, supplementary explanations and evaluations, or any information related to the recommendation of a successful tenderer.

III-IV-9 Examination of Tenders
The Agent shall examine the following items with regard to the submitted tenders:
(1) serious errors in calculation;
(2) attachment of requested documents;
(3) attachment of requested certificates;
(4) attachment of requested guarantees;
(5) confirmation of proper signatures to the documents; and
(6) conformity of the submitted tenders with the instruction of the tender documents.
In examining the tenders, if a tender does not substantially conform to the specifications, or contains inadmissible reservations or is otherwise not substantially responsive to the tender documents, it should be disqualified.
After the above examination, each tender that satisfies the conditions should be technically examined for evaluation and comparison, in principle beginning with those submitted from the tenderer with the lowest tender price.

III-IV-10 Tender Evaluation
(1)The tender evaluation shall be implemented on the basis of the conditions specified in the tender documents.
(2)Those tenders which substantially conform to the technical specifications, and are responsive to other stipulations of the tender documents, shall be judged in principle on the basis of the submitted price, and the tenderer who offers the lowest price shall be designated as the successful tenderer. In case the selection of successful tenderer solely based on the submitted prices is not appropriate or irrational in the respect of the natures of the products and services to be procured, other elements than the price such as length of delivery or construction periods, superiority of technical specifications, etc. might be considered by qualifying their degrees and evaluated comprehensively together with the price competitiveness. In such cases, method and standard of tender evaluation shall be clearly explained in the tender documents.
(3)In cases where satisfactory results in the respect of price or other relevant elements, if any, are not offered in the tender, the Agent may negotiate with the most advantageous tenderer (if this fails to obtain satisfactory results, the second ranking tenderer) to try and conclude a satisfactory contract (a contract ad libitum).
(4)If the tender is divided into several lots, the tender evaluation shall be performed for each lot.

III-IV-11 Tender Evaluation Report

The Agent shall prepare a detailed tender evaluation report clarifying the reasons for the successful tender and the disqualification, and submit it to the Recipient to obtain confirmation before concluding the contract with the successful tenderer. The Agent shall submit a detailed evaluation report of tenders to JICA for its information, while the notification of the results to the tenderers will not be premised on the confirmation by JICA.

III-IV-12 Notification of the Results

(1) The Agent, within the validity period specified in the tender documents, should notify all the tenderers of the results of the tender. In case notification of result within the validity period is not possible, the Agent shall notify all the tenderers of the extension of the period before the expiry of the original period.

(2) No tenderers shall be required, as a condition to be successful tenders, to bear responsibilities or obligations that are not described in the tender documents.

III-IV-13 Rejection of Tenders and Re-tender

(1) The Agent shall not implement the re-tendering with the same specifications merely for the purpose of reducing the price except when the lowest tender price has exceeded the referential price. The rejection of all tenders may only be justified in the following cases.

1) successful tender was not given even after the result of negotiation with the advantageous tenderers in such case where offer prices extremely exceed the referential price;

2) all tenders do not comply with the tender documents as a result of the examination and evaluation of the tenders;

3) it is clear that competition is impeded in the process; and

4) there is a rational reason to believe that the aim of procurement shall not be achieved by continuing the ongoing tender procedure.

(2) In case all the tenders are to be rejected and the re-tender to be called, the Agent should examine the causes and consider revising the specifications and other conditions specified in the original tender documents as well as procurement methods.

III-V Conclusion of the Contract

III-V-1 General

In order to procure the products and services in accordance with the G/A, the Agent shall conclude contracts with the Firm selected by tendering or other methods. If more than one lot is awarded to the same contractor, the contracts may be combined into one.

III-V-2 Reference to the G/A

The contract shall clearly state that JICA shall execute the Grant to the Government of (name of recipient country) in accordance with the G/A signed on (date of signature) between JICA and the Government of (name of recipient country).

III-V-3 Contents of the Products and Services

The contract shall clearly state the contents of the products and services to be procured. The contract of the procurement of the products and services which are not covered by the G/A shall not be concluded.

III-V-4 Contract Price

The amount of all contract prices and, where there is/are amendment(s) of the contract, amended contract prices (hereinafter jointly referred to as "the Contract Prices") and the Agent's Fee shall not exceed the amount of the Grant and its accrued interests. In case that there are the Charges, the total amount of the Contract Prices shall not exceed the sum of the Grant, its accrued interests and the Charges. Each of the Contract Prices and the Agent's Fee shall be precisely and correctly stated in both words and figures. If there is a discrepancy between the price in words and that in figures, the price in words is deemed correct.

III-V-5 Terms of Payment

The contract shall clearly state the terms of payment. The Agent shall make payment from the Advances, against the submission of the necessary documents from the Firm on the basis of the conditions specified in the contract, after the obligations of the Firm have been fulfilled. When the services are the object of procurement, the Agent may pay certain portion of the contract amount in advance to the Firm on the conditions that such the Firm submits the advance payment guarantee worth the amount of the advance payment to the Agent.

III-V-6 Warranty

The contract shall clearly state the contents and the period of warranty if warranty is provided to the products and services to be procured from the providers of such products and services.

III-V-7 Performance Guarantee

Each of the Firm may be requested to submit performance guarantees. Such performance guarantees shall be of an appropriate amount, and it shall be returned immediately after delivery of the products and completion of the services.

III-V-8 Non-performance of the Contract

The contract shall clearly state that if the performance of a contract by the Firm is delayed from the contracted period of execution or

results in non-performance due to other reasons including bankruptcy, etc. the Agent is permitted to claim the payment of indemnities, forfeiture of the performance guarantees, or cancellation of the contract against the Firm.
III-V-9 Force Majeure The contract should contain a clause to the effect that failure on the part of the Firm to fulfill obligations under the contract would not be considered a default if such failure is the result of an event of force majeure as defined in the terms of the contract.
III-V-10 Consultation and Resolution Procedures The procedures for consultation and resolution shall be clearly stipulated for both cases that the damage is ascribed to the Recipient / the Agent and/or the Firm or that the damage is ascribed to force majeure.
III-V-11 Disputes and Arbitration Procedures The procedures for disputes and arbitration shall be clearly stipulated.
III-V-12 Modifications Procedure The modifications procedures of the contract shall be clearly stipulated, when modification is deemed necessary by the Recipient / the Agent and the Firm.
III-V-13 Responsibilities and Obligations of Each Party The contract shall clearly state the responsibilities and obligations of the Recipient, the Agent and the Firms.
III-V-14 Applicable Law The contract shall clearly state the applicable law by which the contract is governed and interpreted.
III-V-15 Effectuation, Amendment, and Announcement of the Results of the Contract (1) The contract shall become effective only after the signing of the contract between the Agent and the Firm. (2) The Agent shall submit the copy of the contract with the Firm to JICA for its information. (3) If an amendment to the contract is required, the Agent, obtaining the consent of the Recipient in advance, shall conclude a contract for the amendment with the Firm. The amended contract shall clearly state that "All clauses except that which is or are amended, remain unchanged". Also, the Agent shall submit a copy of the amended contract to JICA. (4) The Agent shall, as soon as the contract is concluded, announce information on the contract such as names of procured items, name of the Firm, amount of contract and date of contract on the webpage of the Agent.
III-V-16 Reporting to JICA The Recipient, through the Agent, shall periodically submit a written report on the progress of the Project / the Programme to JICA.

ANNEX 8. Selection criteria of the Project sites

Requested schools shall be evaluated based on the selection criteria as follows;

- Facility improvement of the school is identified as necessary in the national/regional plan,
- Basic education is currently provided,
- Land ownership or proper land use right for school construction is legally secured with written evidence,
- No other plan exists for current/ongoing facility improvement by the Ghanaian Government, other donors, NGOs, etc.,
- Topographically/environmentally safe and appropriately sized land for construction is secured,
- Access roads for construction vehicles are properly provided, and
- Present and future demand can be quantitatively estimated by a set of data such as numbers of school-aged children within the catchment area.

2. Minutes of Discussions for the Outline Design Draft Report Explanation

Minutes of Discussions

on

The Preparatory Survey (Explanation on Outline Design Draft Report)
on the Project for
Improvement of Access to Basic Education in Deprived Areas
in the Republic of Ghana

In January 2009, the Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched a Preparatory Survey Team (hereinafter referred to as "the Team") on the Project for Improvement of Access to Basic Education in Deprived Areas (hereinafter referred to as "the Project") to Ghana, and through discussions, site surveys and technical examination of the results in Japan, JICA prepared a draft report of the survey.

In order to explain and to consult the Ghanaian side on the components of the Outline Design draft report, JICA sent the Team for draft report explanation, which was headed by Mr. Masato Kumagai, Senior Representative, JICA Ghana Office, from 17th to 30th May, 2009.

As a result of discussions, both sides have confirmed the main items described on the attached sheet.

Accra, Ghana
21st May 2009

Mr. Masato Kumagai
Leader
Preparatory Survey Team
Japan International Cooperation Agency

Mr. James O. Afrani
Ag. Chief Director
Ministry of Education
Republic of Ghana

Mr. Samuel Bannerman-Mensah
Director General,
Ghana Education Service
Republic of Ghana

Mr. Samuel Abu-Bonsrah
Ag. Director ERM (Bilateral) Division
Ministry of Finance and Economic Planning
Republic of Ghana

ATTACHMENT

1. Contents of the draft report
The Ghanaian side agreed and accepted in principle the contents of the Outline Design draft report explained by the Team.

2. Japan's Grant Aid Scheme
The Ghanaian side understood the Japan's Grant Aid Scheme, and the Ghanaian side assured to take the necessary measures, as described in ANNEX-5 of the Minutes of Discussion signed by both parties on January 30th, 2009. Furthermore, Ghanaian side promised to complete the work mentioned in ANNEX-3 before the commencement of the construction work without any delay.

3. Outline Design Final Report
JICA will complete the Outline Design final report in accordance with the result of discussions and forward it to the Ghanaian side around September 2009.

4. Confidentiality of the Project
Both sides confirmed that all information related to the Project including design documents of facilities and furniture shall not be released to any outside parties before the signing of all the Contract(s) for the Project. 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 parties before the signing of all the Contract(s) for the Project.

5. Other relevant issues

5-1. Schools and components covered by the Project
Both sides agreed on schools and components covered by the Project as shown in ANNEX-2. The Ghanaian side agreed that the Japanese side would make a final decision on this matter through further study in Japan.

5-2. Project cost estimation
The Ghanaian side understood that the Project cost estimation described in ANNEX-1 is not final and subject to change in the examination of the Government of Japan for an approval of the Project.

5-3. Tax exemption

Tax exemption is the fundamental condition of the Project. In case that the construction contractors or furniture suppliers have to purchase taxed building materials, equipment, or furniture for the Project, the Ghanaian side made a definite promise to take necessary measures to provide all the necessary tax exemption for goods and services needed for the implementation of the Project.

5-4. Allocation of necessary budget and personnel

The Ghanaian side agreed to allocate necessary budget and personnel for the proper operation and maintenance of the facilities to be covered by the Project.

5-5. Proper use and maintenance

Both sides understood that proper use and maintenance of the facilities would be indispensable for their long-term use. The Ghanaian side assured the Team that it would facilitate the proper use and maintenance of the facilities in the schools to be covered by the Project with the active involvement of concerned parties such as Ministry of Education, Ghana Education Service, and other concerned organizations.

ANNEX-1 Project cost estimation
ANNEX-2 School and Facilities covered by the Project
ANNEX-3 Works to be undertaken by the Ghanaian side

ANNEX-2

(1) List of the Contents of Facilities and their Quantities of Each Project School

		Name of School	Number of Exist. Classrooms			Classrooms to be Improved			Rooms to be Improved		Classroom Bldg Type				Toilet Booths to be Improved			Toilet Bldg Type				Teachers' Accommod. Units	
											-	-	-	-				-	-	-	-		
Sawla-Tuna-Kalba District																							
1	STK1	Tuuyiri Primary	0	0	8.40	0	3	3	1	0	1	0	0	0	0	3	3	1	0	0	0	1	
2	STK2	Para Primary	2	0	8.91	2	1	3	1	0	1	0	0	0	0	3	3	1	0	0	0	1	
3	STK4	Gbaliyo Primary	3	0	4.67	3	0	3	1	0	1	0	0	0	0	3	3	1	0	0	0	1	
4	STK5	Dasi-Uori Primary	3	0	3.54	3	0	3	1	0	1	0	0	0	0	3	3	1	0	0	0	1	
5	STK9	Kordoh Primary	2	0	5.47	3	0	3	1	0	1	0	0	0	0	3	3	1	0	0	0	1	
Primary Schools' Subtotal			11	0	30.12	11	4	15	5	0	5	0	0	0	0	15	15	5	0	0	0	5	
6	STK10	Kalba High School	0	3	4.20	0	3	3	0	0	0	0	0	0	1	4	2	6	0	0	1	0	1
J. High Schools' Subtotal			0	3	4.20	0	3	3	0	0	0	0	0	0	1	4	2	6	0	0	1	0	1
Primary & J. High Schools' Subtotal			11	3	34.32	11	7	18	5	0	5	0	0	0	1	4	17	21	5	0	1	0	16
Central Gonja District																							
7	CG1	Adapa Primary	3	0	4.04	3	0	3	1	0	1	0	0	0	0	3	3	1	0	0	0	1	
8	CG4	Chami Abotoyo Primary	3	0	3.69	3	0	3	1	0	1	0	0	0	0	3	3	1	0	0	0	1	
9	CG6	Kughuya Primary	0	0	1.91	0	3	3	1	0	1	0	0	0	0	3	3	1	0	0	0	1	
10	CG8	Jokuku Primary	0	0	4.16	0	3	3	1	0	1	0	0	0	0	3	3	1	0	0	0	1	
Primary Schools' Subtotal			6	0	13.80	6	6	12	4	0	4	0	0	0	0	12	12	4	0	0	0	12	
11	CG2	Kpikpira J. High School	0	0	3.40	0	3	3	1	1	0	0	1	0	0	3	3	1	0	0	0	1	
12	CG5	Sisili J. High School	2	3	7.80	3	0	3	1	1	0	0	1	0	1	4	2	6	0	0	1	0	1
J. High Schools' Subtotal			2	3	9.80	3	3	6	2	2	0	0	2	0	1	8	5	9	1	0	1	0	2
Primary & J. High Schools' Subtotal			11	3	22.6	9	9	18	6	2	4	0	2	0	1	4	17	21	5	0	1	0	14
Kpandai District																							
13	KG1	Kulugu L/A Primary	0	12	7.80	0	6	6	1	0	1	1	0	0	0	6	6	2	0	0	0	1	
Primary Schools' Subtotal			0	12	7.80	0	6	6	1	0	1	1	0	0	0	6	6	2	0	0	0	1	
Bunkpurugu District																							
14	BY2	Nakpanduuri 'B' Primary	6	0	18.96	6	0	6	1	0	1	1	0	0	2	4	6	0	1	0	7	0	
15	BY5	Gbankiso Primary	6	0	7.98	6	0	6	1	0	1	1	0	0	0	6	6	2	0	0	4	0	
16	BY9	Chereponi No.2 D/A Primary	6	0	3.91	3	0	3	1	0	1	0	0	0	0	3	3	1	0	0	0	0	
17	BY6	Soamvuli Primary	3	0	3.78	3	0	3	1	0	1	0	0	0	0	3	3	1	0	0	0	0	
18	BY7	Tampi Primary	0	0	7.93	0	0	6	1	0	1	1	0	0	0	6	6	2	0	0	0	0	
19	BY10	Gbegun-Bugri Primary	3	0	6.16	3	3	6	1	0	1	1	0	0	4	2	6	0	0	1	4	0	
Primary Schools' Subtotal			30	0	54.27	27	3	30	6	0	6	4	0	0	6	24	30	6	1	1	15	0	
20	BY1	Kinkanpa J. High School	3	0	6.06	3	3	6	1	1	0	0	1	1	0	6	6	2	0	0	0	0	
21	BY8	Yunyoo J. High School	3	0	4.00	3	0	3	1	1	0	0	1	0	0	3	3	1	0	0	4	0	
J. High School's' Subtotal			6	0	10.06	6	3	9	2	2	0	0	2	1	0	9	9	3	0	0	4	0	
Primary & J. High Schools' Subtotal			36	0	64.3334	33	6	39	8	2	6	4	2	1	6	33	39	9	1	1	19	0	
Asuo South District																							
22	AS1	Adubiase Presby Primary	6	0	6.22	6	0	6	1	0	1	1	0	0	0	6	6	2	0	0	0	1	
23	AS2	Nyankomase Ahmadiya Prim. 'B'	3	0	1.95	3	0	3	1	0	1	0	0	0	0	3	3	1	0	0	0	1	
24	AS3	Asuobeto D/A Primary	6	0	6.04	6	0	6	1	0	1	1	0	0	0	6	6	2	0	0	0	0	
25	AS4	Anglotation Methodist Primary	9	0	4.49	3	0	3	1	0	1	0	0	0	0	3	3	1	0	0	0	0	
26	AS5	Manmagor D/A Primary	6	0	4.24	3	0	3	1	0	1	0	0	0	0	3	3	1	0	0	0	0	
27	AS6	Dominase D/A Primary	0	6	4.56	0	3	3	1	0	1	0	0	0	0	3	3	1	0	0	0	0	
28	AS7	Akrokyiren D/A Primary	0	0	3.53	3	0	3	1	0	1	0	0	0	0	3	3	1	0	0	0	0	
29	AS9	Asuoden Catholic Primary A	0	0	7.73	0	6	6	1	0	1	1	0	0	0	6	6	2	0	0	0	1	
30	AS10	Bamaku D/A Primary	3	0	6.00	0	0	0	1	0	1	1	0	0	0	2	2	0	0	0	0	0	
Primary Schools' Subtotal			43	0	50.78	30	9	39	9	0	9	4	0	0	0	35	39	11	0	0	0	3	
Asuo North District																							
31	AN1	Bonko Nyamekrom D/A Primary	6	0	3.04	3	0	3	1	0	1	0	0	0	0	3	3	1	0	0	0	0	
32	AN2	Odumase Wawase D/A Primary	0	0	4.44	0	3	3	1	0	1	0	0	0	0	3	3	1	0	0	0	0	
33	AN4	Tekomfonina M.A. Primary	3	0	4.16	3	0	3	1	0	1	0	0	0	0	3	3	1	0	0	0	0	
34	AN5	Asuom Hajj Dbr Ismail Primary	0	0	5.02	0	0	0	1	0	1	1	0	0	0	3	3	1	0	0	0	0	
35	AN6	Abotaayo M.A. Primary	6	0	4.04	3	0	3	1	0	1	0	0	0	0	3	3	1	0	0	0	0	
36	AN9	Afenase D/A Primary	0	0	5.33	0	3	3	1	0	1	0	0	0	0	3	3	1	0	0	0	0	
37	AN-AL1	Kyinkrofo M.A. Primary	5	0	4.76	3	0	3	1	0	1	0	0	0	0	3	3	1	0	0	0	0	
J. High Schools' Subtotal			26	0	11.71	18	0	24	9	0	9	1	0	0	0	3	21	24	7	0	0	3	18
Primary & J. High Schools' Subtotal			116	11	185	93	24	126	32	0	32	10	0	0	0	15	115	126	35	1	2	37	97
Primary Schools' Total			9	1	21	6	8	18	4	4	0	0	4	2	3	16	24	4	0	2	4	9	
J. High Schools' Total			125	13	202	101	43	144	36	4	32	10	4	2	21	129	150	39	1	4	43	96	

(2) List of Equipment Plan

Building	Item		Planed Units/Room
Primary and Junior High Schools' Classroom Buildings	Classroom	Students' Desk & Chair Unit (Fixed Type)	23 (Primary), 18 (Junior High)
		Teachers' Desks and Chairs	1 each
	Headteacher's Room	Headteacher's Desk & Chair (including units for visitors)	1 each, 2 for visitors
	Staff Room (only Junior High Schools)	Teachers' Desks & Chairs and Meeting Table	6 each, 1 meeting table

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ANNEX-3

Works to be undertaken by the Ghanaian side

School Name	Removal of obstructions	Removal of existing buildings
Dominase D/A primary	•	
Odumase Wawase D/A Primary	•	
Kpabuso Junior High	•	
Awisem Haji Idris Islamic Primary		•
Akoteykrom D/A Primary		•