4. 協議議事録(M/D)

4-1 現地調査 1

MINUTES OF DISCUSSIONS
ON
THE PREPARATORY SURVEY
ON
THE PROJECT
FOR
EXPANSION AND UPGRADING OF DOMASI/FACULTY OF EDUCATION OF CHANCELLOR COLLEGE AT DOMASI CAMPUS IN ZOMBA
IN
THE REPUBLIC OF MALAWI

In response to the request from the Government of the Republic of Malawi (hereinafter referred to as "Malawi"), the Government of Japan decided to conduct a Preparatory Survey on the Project for Expansion and Upgrading of Domasi/Faculty of Education of Chancellor College at Domasi Campus in Zomba in the Republic of Malawi (hereinafter referred to as "the Project") and entrusted the survey to the Japan International Cooperation Agency (hereinafter referred to as "JICA").

JICA sent to Malawi the Preparatory Survey Team (hereinafter referred to as "the Team"), which is headed by Mr. Kazuhiko TOKUHASHI, Resident Representative, JICA Malawi Office and stayed in the country from 30 September to 9 October, 2014.

The Team had a series of discussions with the Malawian officials concerned, Ministry of Education, Science, and Technology (hereinafter referred to as "MoEST"), and conducted field surveys.

In the course of discussions and field surveys, both sides confirmed the main items described on the attached sheets.

Lilongwe, 9 October, 2014

K. Tokuhashi

Mr. Kazuhiko Tokuhashi
Leader
Preparatory Survey Team
Japan International Cooperation Agency

Ms. Lonely Magreta
Secretary for Education, Science and Technology
Ministry of Education, Science, and Technology
The Republic of Malawi

Mr. Peter Simbani
Director, Debt and Aid Directorate
Ministry of Finance, Economic Planning and Development
The Republic of Malawi

ATTACHMENT

1. Objective of the Project

The objective of the Project is to expand and upgrade the infrastructure of Domasi College of Education (hereinafter referred to as DCE) in order to become a four-year Degree offering institution that can provide qualified secondary school teachers in Malawi.

2. Responsible and Implementing Organization

The responsible and implementing organization of the Project is the Ministry of Education, Science and Technology (hereinafter referred to as "MoEST"), of which Organizational Chart is shown in ANNEX1.

3. Project Title

The Project Title should be "Project for expanding and upgrading the Domasi College of Education".

4. Project Site

The Project area is located in Domasi, Zomba district. JICA will further assess the land condition so as to judge the adequacy and feasibility for the site of the Project.

5. Relevance of the Project

The Project is to contribute to meeting the demand for qualified secondary school teachers, which is stipulated in the National Education Sector Plan (NESP) 2008-2017 and the Education Sector Implementation Plan (ESIP) II 2013-2017. Both Pre-service (Degree/Diploma) and Open and Distance Learning (ODL) at the DCE can contribute to meeting this demand.

The Team confirmed that DCE will continue to provide qualified secondary school teachers.

6. Scope of the Project

Upgrading DCE from a three-year diploma to four-year degree offering institution is the fundamental scope of the Project. In this view, necessary facilities and equipment will be added by the Project to accommodate one additional year with current annual intake (around two hundred and twenty per year) and organization structure. The Malawi government requested to increase annual intake of students at DCE so as to respond to massive demand for qualified secondary school teachers.

7. Components of the Project

After discussions with the Team, the items indicated in the ANNEX2 were requested by the Malawian side. JICA will further assess the appropriateness of the components and the

final components will be determined based on the result of this survey and the budget limitation of the Government of Japan.

Based on the capacity of potential out-of campus accommodation for about three hundred non-residential students, volume of necessary student hostels will be decided.

8. Japan's Grant Aid Scheme

8-1. The Malawian side understands the Japan's Grant Aid described in ANNEX3, which was explained by the Team.

8-2. Both sides agreed that the sub-scheme to be applied to the Project would be "Grant Aid for General Projects". As this is the Project at the university level, it is crucial to ensure the quality and the sustainability of construction and equipment.

8-3. 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 Government of Malawi, in which the objective of the Project, period of execution, conditions and amount of Grant Aid, etc., are confirmed.

9. Measures taken by the Malawian side

The Malawian side assured to take the necessary measures, as described in ANNEX4, for the smooth implementation of the Project. The details of the measures that the Government of Malawi needs to take, will be further assessed and reported to MoEST by the consultants by the end of October 2014.

10. Schedule of the Survey

The Team will proceed to conduct further studies in Malawi until 27 October 2014. Based on the results of field surveys in Malawi and information to be provided by the Malawian side, the Team will prepare a Draft Report in English. The draft report explanation mission to Malawi will be dispatched in and around April 2015, on the condition that the Malawian side submits all the necessary information.

11. Other Relevant Issues

11-1. Personnel (new academic and administrative staff) and staff salary for both new and current staff should be properly made available by MoEST and DCE.

11-2. Quality assurance as a new degree offering institution should be put in place by DCE and supported by MoEST in terms of educational programs, allocation of adequate number of lecturers, quality of lecturers, and quality of students (entrance requirement). MoEST assured the Team that any higher education institutions will have quality assurance officers in place who will coordinate with the National Council for Higher Education.

11-3. At least a rough idea of curriculum and timetable for a four-year Degree program should be presented to the Team by DCE during its stay in Malawi (Oct 27, 2014) in order for the Team to examine the feasibility of facilities and equipment. This is critical because the objective of facilities and equipment should be clearly justified and associated with the

educational programmes that DCE will offer.

11-4. A complete curriculum for the four year Degree program should be made available by DCE before the draft explanation mission comes to Malawi. This work can be done in collaboration with other stakeholders including the Directorate of Education Planning, the Directorate of Secondary and Distance Education, the Directorate of Teacher Education and Development, the Directorate of Higher Education, and other necessary Directorates and institutions. The work is critical as the Minister mentioned that a new Teacher Training College for Lilongwe, which is currently under construction, will use the same curriculum as DCE.

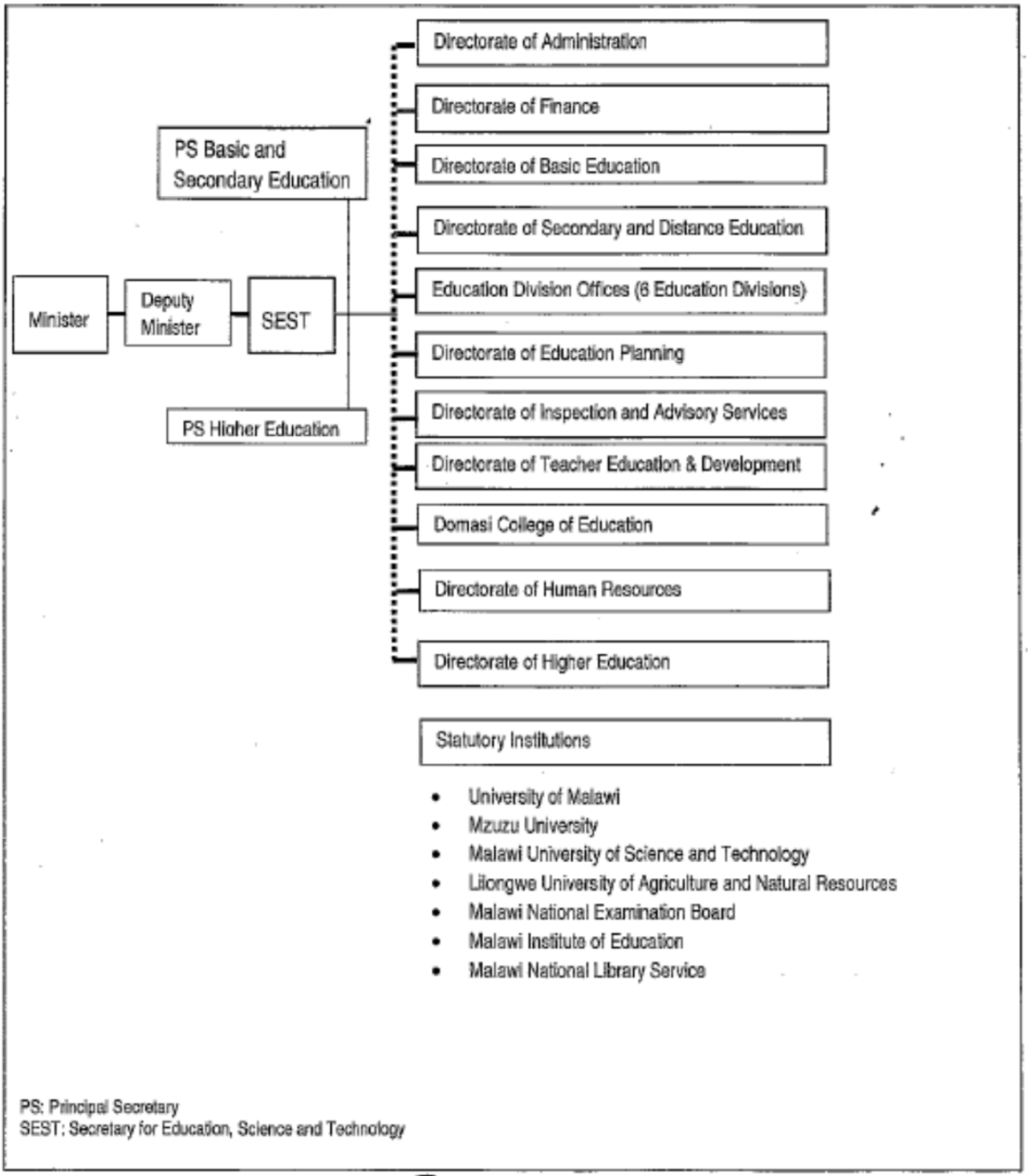
11-5. Strategies that utilize the expanded facilities and equipment effectively should be considered by DCE as well as MoEST. DCE can upgrade and update secondary school teachers through both PRESET programme (Degree/Diploma) and Open and Distance Learning (ODL). Therefore it is critical to pay attention to increasing the capacity and enhancing the quality of both programmes.

11-6. Malawian side will provide necessary information to the Team before Oct 27, 2014, such as the supply and demand projection of secondary school teachers, the definition of qualified secondary school teachers, the reporting line of DCE within MoEST, the enrollment statistics of DCE and etc.

END

ANNEX1 : Organizational Chart of MoEST
ANNEX2 List of Items and Priorities for the Project Requested by the Malawian side
ANNEX3 Japan's Grant Aid Scheme
ANNEX4: Major Undertakings to be taken by Each Government

ANNEX 1 Organizational Chart of the Ministry of Education, Science and Technology



ANNEX2 List of Items and Priorities for the Project Requested by the Malawian side

Facility

Description	Priority
Teaching Space	
Lecture Rooms	A
Laboratories	
Special Needs rooms	
Language Laboratory	B
Library and Audio-Visual Services	
Library	A
Audio-Visual Centre	B
Computer & ICT Services	
ICT Centre	C
Students Computer rooms	B
Office Space	
Office for academic staff	A
Office for administration staff	
Staff and Student Welfare Space	
Junior Staff Common Room	B
Senior Staff Common Room	
Cafeteria	C
Hostel*	
Hostel (Male)	A
Hostel (Female)	

* Based on the capacity of potential out-of campus accommodation for about three hundred non-residential students, volume of hostels will be decided.

Equipment

Description	Priority
Basic Furniture	A
Laboratory Equipment	
Audio-Visual Equipment	B
ICT Equipment	C

Remarks

A: First priority as essential facility/equipment

B: Second priority as necessary facility/eqaipment

C: Third priority to be covered by Malawian side

ANNEX3

JAPAN'S GRANT AID

The Government of Japan (hereinafter referred to as "the GOJ") is implementing the organizational reforms to improve the quality of ODA operations, and as a part of this realignment, a new JICA law was entered into effect on October 1, 2008. Based on this law and the decision of the GOJ, JICA has become the executing agency of the Grant Aid for General Projects, for Fisheries and for Cultural Cooperation, etc.

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

1. Grant Aid Procedures

The Japanese Grant Aid is supplied through following procedures:

・Preparatory Survey
- The Survey conducted by JICA

・Appraisal &Approval
-Appraisal by the GOJ and JICA, and Approval by the Japanese Cabinet

・Authority for Determining Implementation
-The Notes 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 preparatory Survey is to provide a basic document necessary for the appraisal of the Project made by the GOJ and JICA. The contents of the Survey are as follows:

- Confirmation of the background, objectives, and benefits of the Project and also institutional capacity of relevant agencies of the recipient country necessary for the implementation of the Project.
- Evaluation of the appropriateness of the Project to be implemented under the Grant Aid Scheme from a technical, financial, social and economic point of view.
- Confirmation of items agreed between both parties concerning the basic concept of the Project.

- Preparation of an outline design of the Project.
- Estimation of costs of the Project.

The contents of the original request by 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 based on the guidelines of the Japan's Grant Aid scheme.

JICA requests the Government of the recipient country to take whatever measures necessary to achieve 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 of the recipient country which actually implements the Project. Therefore, the implementation of the Project is confirmed by all relevant organizations of the recipient country based on the Minutes of Discussions.

(2) Selection of Consultants

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

(3) Result of the Survey

JICA reviews the Report on the results of the Survey and recommends the GOJ to appraise the implementation of the Project after confirming the appropriateness of the Project.

3. Japan's Grant Aid Scheme

(1) The E/N and the G/A

After the Project is approved by the Cabinet of Japan, the Exchange of Notes(hereinafter referred to as "the E/N") will be signed between the GOJ and the Government of the recipient country to make a pledge 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) Selection of Consultants

In order to maintain technical consistency, the consulting firm(s) which conducted the Survey will be recommended by JICA to the recipient country to continue to work on the Project's implementation after the E/N and G/A.

(3) Eligible source country

Under the Japanese Grant Aid, in principle, Japanese products and services including transport or those of the recipient

country are to be purchased. When JICA and the Government of the recipient country or its designated authority deem it necessary, the Grant Aid may be used for the purchase of the products or services of a third country. However, the prime contractors, namely, constructing and procurement firms, and the prime consulting firm are limited to "Japanese nationals".

(4) Necessity of "Verification"

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

(5) Major undertakings to be taken by the Government of the Recipient Country

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

(6) "Proper Use"

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

(7) "Export and Re-export"

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

(8) Banking Arrangements (B/A)

a) The Government of the recipient country or its designated authority should open an account under 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.

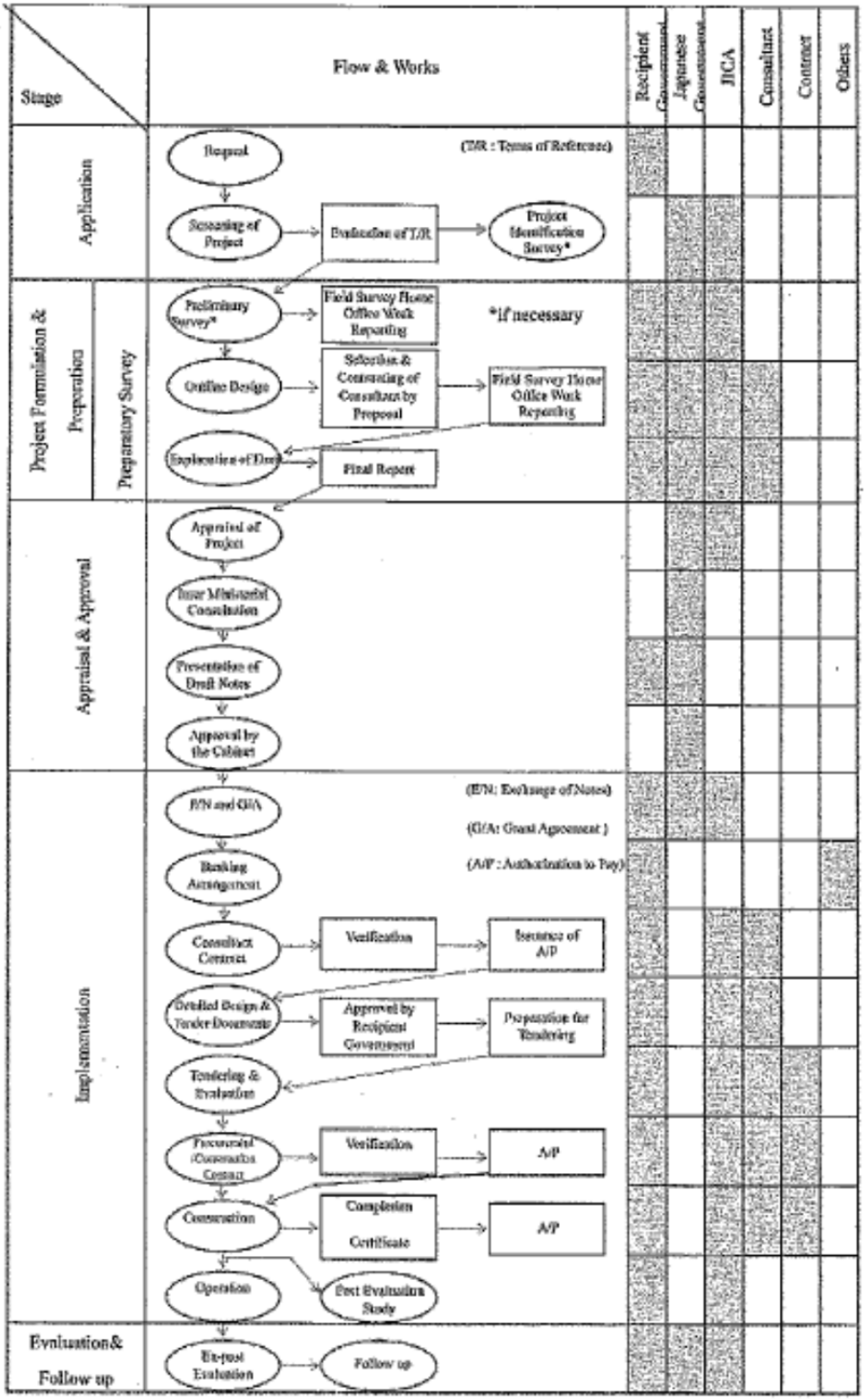
(9) Authorization to Pay (A/P)

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

(10) Social and Environmental Considerations

A recipient country must carefully consider social and environmental impacts by the Project and must comply with the environmental regulations of the recipient country and JICA socio-environmental guidelines.

Flow Chart of Japan's Grant Aid Procedures



ANNEX4 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 adequate land necessary for the implementation of the Project and to clear the site		●
2	To construct the following facilities		
	1) The building	●	
	2) The gates and fences around the site		●
	3) The parking lot	●	
	4) The road within the site	●	
	5) The road outside the site		●
3	To provide facilities for distribution of electricity, water supply and drainage and other incidental facilities necessary for the implementation of the Project outside the site		
	1) Electricity		
	a. The distributing power line to the site		●
	b. The drop wiring and internal wiring within the site	●	
	c. The main circuit breaker and transformer	●	
	2) Water Supply		
	a. The city water distribution main to the site		●
	b. The supply system within the site (receiving and elevated tanks)	●	
	3) Drainage		
	a. The city drainage main (for storm sewer and others to the site)		●
	b. The drainage system (for toilet sewer, common waste, storm drainage and others) within the site	●	
	4) Gas Supply		
	a. The city gas main to the site		●
	b. The gas supply system within the site	●	
	5) Telephone System		
	a. The telephone trunk line to the main distribution frame/panel (MDF) of the building		●
	b. The MDF and the extension after the frame/panel	●	
	6) Internet System		
	a. The internet trunk line to the main router/panel of the building		●
	b. The extension after the router/panel	●	
	7) Furniture and Equipment		
	a. General furniture	●	●
	b. Project equipment	●	
4	To ensure prompt customs clearance and to assist internal transportation in the recipient country and to assist internal transportation therein of the products		●
5	To ensure that customs duties, internal taxes and other fiscal levies which may be imposed in the recipient country with respect to the purchase of the products and the services be exempted		●
6	To accord Japanese physical persons and / or physical persons of third countries whose services may be required in connection with the supply of the products and the services such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work		●
7	To ensure that the Facilities and the Components be maintained and used properly and effectively for the implementation of the Project		●
8	To bear all the expenses, other than those covered by the Grant, necessary for the implementation of the Project		●
9	To bear the following commissions paid to the Japanese bank for banking services based upon the B/A		
	1) Advising commission of A/P		●
	2) Payment commission		●
10	To give due environmental and social consideration in the implementation of the Project.		●
(B/A : Banking Arrangement, A/P : Authorization to pay)			

Minutes of Discussions
on the Preparatory Survey for the Project for
Expanding and Upgrading the Domasi College of Education
(Explanation on Draft Preparatory Survey Report)

With reference to the minutes of discussions signed between Ministry of Education, Science and Technology, the Republic of Malawi and the Japan International Cooperation Agency (hereinafter referred to as "JICA") on 9th October, 2014 and in response to the request from the Government of the Republic of Malawi (hereinafter referred to as "Malawi") dated August, 2013, JICA dispatched the Preparatory Survey Team (hereinafter referred to as "the Team") for the explanation of Draft Preparatory Survey Report (hereinafter referred to as "the Draft Report") for the Project for Expanding and Upgrading the Domasi College of Education (hereinafter referred to as "the Project"), headed by Mr. Kazuhiko Tokuhashi, Chief Representative, JICA from 27th November to 2nd December, 2016.

As a result of the discussions, both sides agreed on the main items described in the attached sheets.

Lilongwe, 2nd December, 2016

Mr. Kazuhiko Tokuhashi
Leader, Preparatory Survey Team
Japan International Cooperation Agency
Japan

Mr. Charles Peter Msosa
Secretary for Education, Science, and Technology
Ministry of Education, Science and Technology
The Republic of Malawi

Ms. Madalo Nyambose
Director, Debt and Aid Division
Ministry of Finance, Economic Planning and Development
The Republic of Malawi

ATTACHMENT

1. Objective of the Project
   The objective of the Project is to provide qualified secondary school teachers by expanding and upgrading the infrastructure of Domasi College of Education (hereinafter referred to as DCE) to become a four-year degree offering institution, thereby contributing to enhance the quality of secondary school education in Malawi.

2. Title of the Preparatory Survey
   Both sides confirmed the title of the Preparatory Survey as "the Preparatory Survey for the Project for Expanding and Upgrading the Domasi College of Education".

3. Project site
   Both sides confirmed that the site of the Project is in Domasi, Zomba district, which is shown in Annex 1.

4. Responsible authority for the Project
   Both sides confirmed the authorities responsible for the Project are as follows:
   The Ministry of Education, Science and Technology (hereinafter referred to as "MoEST") will be the executing agency for the Project (hereinafter referred to as "the Executing Agency"). The Executing Agency shall coordinate with all the relevant authorities to ensure smooth implementation of the Project and ensure that the undertakings for the Project shall be taken care by relevant authorities properly and on time. The organization charts are shown in Annex 2.

5. Contents of the Draft Report
   After the explanation of the contents of the Draft Report by the Team, the Malawian side agreed to its contents, which are outlined in Annex 3.

6. Cost estimate
   Both sides confirmed that the cost estimate described in the Annex 6, Major Undertakings to be taken by the Government of Malawi is provisional and will be examined further by the Government of Japan for its approval.

7. Confidentiality of the cost estimate and technical specifications

Both sides confirmed that the cost estimate and technical specifications in the Draft Report should never be duplicated or disclosed to any third parties until all the contracts under the Project are concluded.

8. Procedures and Basic Principles of Japanese Grant

The Malawian side agreed that the procedures and basic principles of Japanese Grant as described in Annex 4 shall be applied to the Project. In addition, the Malawian side agreed to take necessary measures according to the procedures.

9. Timeline for the project implementation

The Team explained to the Malawian side that the expected timeline for the project implementation is as attached in Annex 5.

10. Expected outcomes and indicators

Both sides agreed that key indicators for expected outcomes are as follows. The Malawian side will be responsible for the achievement of agreed key indicators targeted in year 2022 and shall monitor the progress based on those indicators.

[Quantitative indicators]

The number of degree holders in secondary education from DCE

[Qualitative indicators]

Through the increase of qualified secondary school teachers, the quality of secondary school education is improved.

11. Undertakings of the Project

Both sides confirmed the undertakings of the Project as described in Annex 6.

With regard to exemption of customs duties, internal taxes and other fiscal levies, both sides confirmed that such customs duties, internal taxes and other fiscal levies include VAT, commercial tax, income tax and corporate tax shall be exempted, as stipulated in clause 5 of Annex 6, and clarified in the bid documents by MoEST during the implementation stage of the Project.

The Malawian side assured to take the necessary measures and coordination including allocation of the necessary budget which are preconditions of implementation of the Project. It is further agreed that the costs are indicative, i.e. at Outline Design level. More accurate costs will be calculated at the Detailed Design stage.

Both sides also confirmed that the Annex 6 will be used as an attachment of G/A.

12. Monitoring during the implementation

The Project will be monitored by the Executing Agency and reported to JICA by using the form of Project Monitoring Report (PMR) attached as Annex 7. The timing of submission of the PMR is described in Annex 6.

13. Project completion

Both sides confirmed that the Project completes when all the facilities constructed and equipment procured by the grant are in operation. The completion of the Project will be reported to JICA promptly, but in any event not later than six months after completion of the Project.

14. Ex-Post Evaluation

JICA will conduct ex-post evaluation after three (3) years from the project completion, in principle, with respect to five evaluation criteria (Relevance, Effectiveness, Efficiency, Impact, Sustainability). The result of the evaluation will be publicized. The Malawian side is required to provide necessary support for the data collection.

15. Schedule of the Study

JICA will finalize the Preparatory Survey Report based on the confirmed items. The report will be sent to the Malawian side around May 2017.

16. Environmental and Social Considerations

The Team explained that 'JICA Guidelines for Environmental and Social Considerations (April 2010)' (hereinafter referred to as "the Guidelines") is applicable for the Project. The Project is categorized as C because the Project is likely to have minimal adverse impact on the environment under the Guidelines. However, it is requested in Malawi to obtain an approval from Environmental Affairs Department (EAD), Ministry of Natural Resources, Energy and Environment on Environmental Impact Assessment (EIA) according to Environmental Management Act, No. 23 of 1996. It is Malawian side responsibly to obtain this approval before the beginning of the construction. MoEST assured to take the necessary measures and coordination to avoid the delay of beginning of the construction.

17. Other Relevant Issues

17-1. Disclosure of Information

Both sides confirmed that the Preparatory Survey Report from which project cost is excluded will be disclosed to the public after completion of the Preparatory Survey. The comprehensive report including the project cost will be disclosed to the public after all the contracts under the Project are concluded.

17-2. Project Components

Both sides confirmed that the Project is composed of two components, which are Construction Component and Equipment Component. In each component, one Japanese company shall be contracted with MoEST as a main contractor of facilities or a main supplier of equipment.

17-3. Design of Library

Both sides confirmed that there shall be one emergency exit at the other side of main entrance.

17-4. Electric Oven at Staff Cafeteria

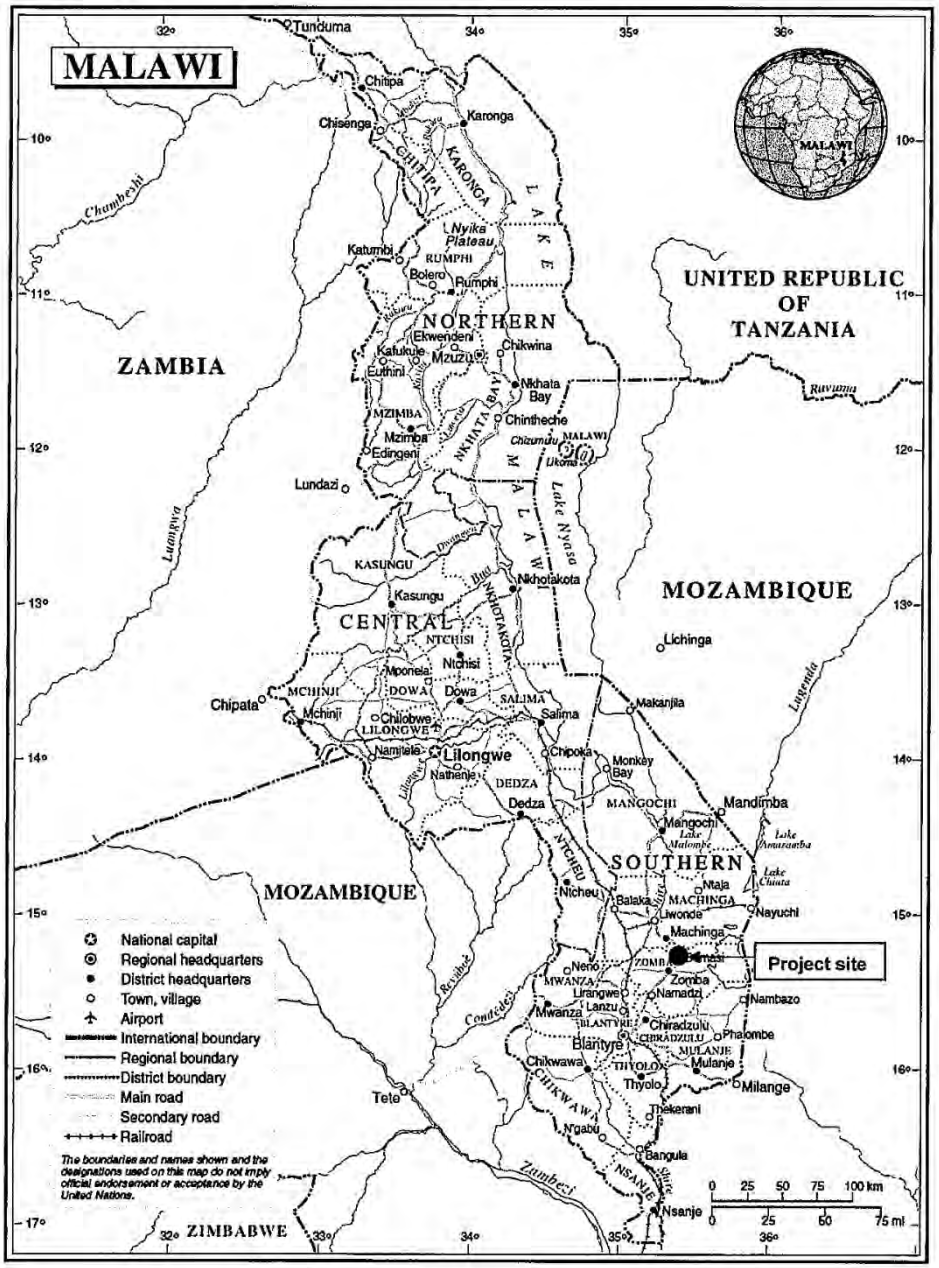
Both sides confirmed that electric oven equipped at staff cafeteria shall have both electric and gas input.

17-5. Incinerator at dormitories for female students

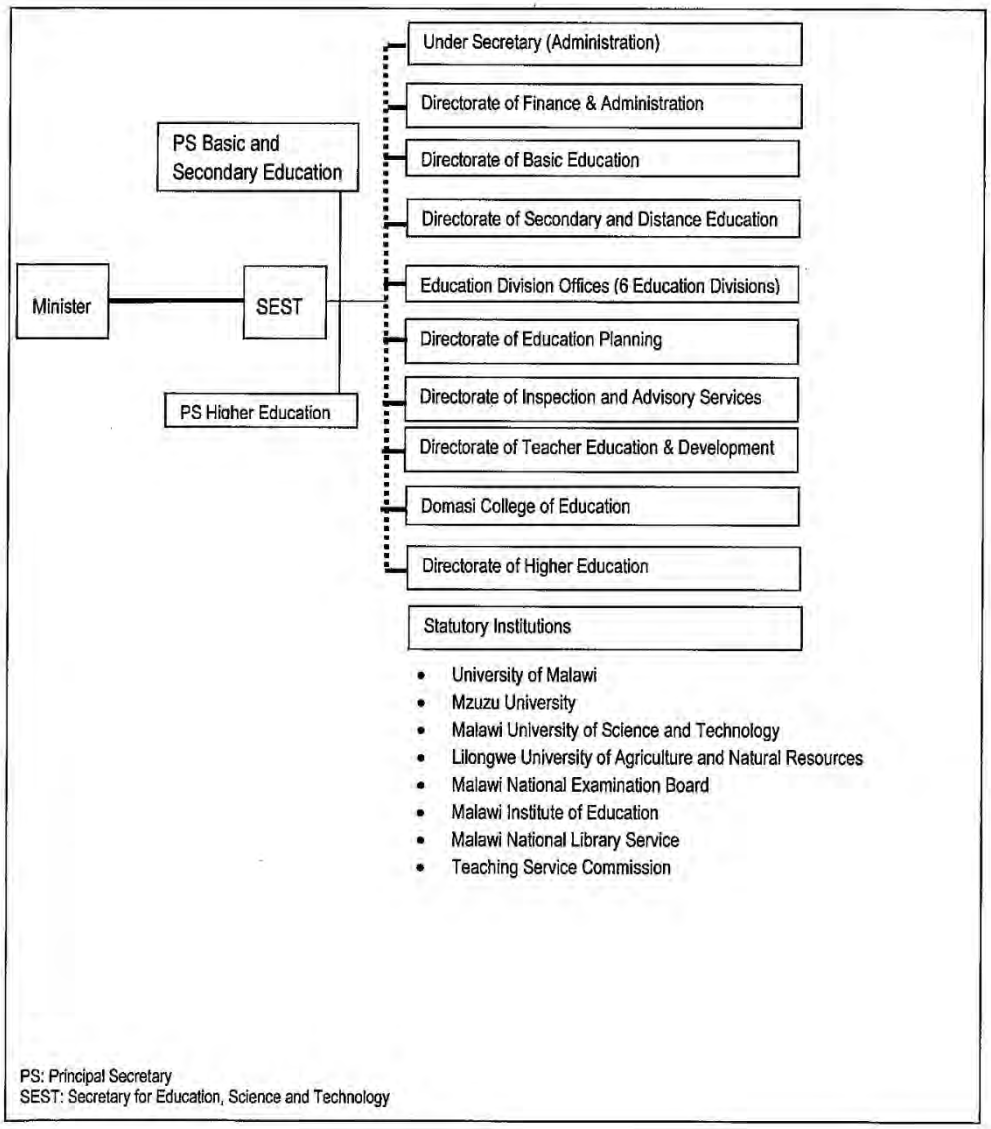
Both sides confirmed that each of three dormitories for female students shall have an incinerator facility for sanitary goods.

Annex 1 Project Site
Annex 2 Organization Chart
Annex 3 Project Scope
Annex 4 Japanese Grant
Annex 5 Project Implementation Schedule
Annex 6 Major Undertakings to be taken by the Government of Malawi
Annex 7 Project Monitoring Report (template)

Annex 1: Project Site



Annex 2: Organizational Chart of the Ministry of Education, Science and Technology



Annex 3: Project Scope

1. Construction Components (Outline of the Proposed Facilities)

Block title	No. of floors	No. of building	Room organization	Floor area (m^2)		
				Ground floor	First floor	Total
A Lecture Block	2-storied	1	Lecture Room (40p) x 3, Lecture Theater (150p) x 2, PC Room (20p), SNE Room, Toilet	856.00	224.00	1,080.00
B Laboratory Block	2-storied	1	Physics Lab. x 2, Chemistry Lab. x 2, Biology Lab. x 2, Preparation Room with Equipment Room, Laboratory Assistants' Room, Office for Part-time Lecturers, Toilet	830.50	706.50	1,537.00
C Library	2-storied	1	Reading Area (494 seats), Open Stacks/Stack Room (40,000 books), Workshop, Toilet, Director's Office/Office, Reference	1,033.25	785.00	1,818.25
D Office Block	2-storied	1	Dean's Office/Secretary Room x each of 3 Faculties, HOD Office x 9, Student Advisor's Office, Toilet, Lecturers' Room (2p) x 11, Office for Part-time Lecturers	520.50	450.00	970.50
E Staff Cafeteria	1-storied	1	Cafeteria, Kitchen, Pantry, Toilet	168.00	-	168.00
F Male Hostel	2-storied	1	Dormitory room (2 beds) x 31, Toilet, Washroom/Shower Room, Laundry Room	440.76	414.55	855.31
G Female Hostel	2-storied	3	Same as above	1,322.28	1,243.65	2,565.93
- Connecting corridor	-	-	Roofed connecting corridors, where necessary	1,348.85	-	1,348.85
			Total			10,343.84

2. Equipment Components

List of Equipment and Distribution is attached.

List of Equipment and Distribution

Code No.	Description	Unit	Q'ty	New Facility																			Existing Facility							
				Lecture Block							Laboratory Block																			
				GF	GF	GF	GF	1F	1F	1F	GF	GF	GF	GF	GF	1F	1F	1F	1F	1F										
				Lecture Hall 1	Lecture Hall 2	Computer room	SNE Room	Lecture room 1	Lecture room 2	Lecture room 3	Physics Lab. 1	Physics Lab. 2	Preparation room for Physics	Biology Lab. 1	Preparation Room for Biology 1	Cheministry Lab 1.	Cheministry Lab. 2	Preparation room for Chemistry	Biology Lab. 2	Preparation room for Biology 2	Library	Staff Cafeteria	Administration Block	Preparation room for P.E.	Computer room	Human Ecology Lab.	Preparation room for Agriculture	Preparation room for Geography	Teacher's room
1	Laboratory table for students	unit	36								6	6		6		6	6		6											
2	Demonstration table	unit	6								1	1		1		1	1		1											
3	Side table (Chemistry and Physics)	set	4								1	1				1	1													
4	Side table (Biology)	set	2											1					1											
5	Preparatory table (Chemistry and Physics)	unit	12										6					6												
6	Preparatory table (Biology)	unit	4												2					2										
7	Side table with sink (Chemistry and Physics)	set	2										1					1												
8	Side table with sink (Biology)	set	2												1					1										
9	Fume hood	unit	4								1	1				1	1													
10	Projector, ceiling-mount type	unit	2	1	1																									
11	Projector screen (Large), wall-mount type	unit	2	1	1																									
12	Portable projector	unit	5			1		1					1					1								1				
13	Roll-up screen (Small)	unit	7			1					1	1		1		1	1		1											
14	Portable screen	unit	2					1																		1				
15	Tripod security gate	pc.	1																		1									
16	Library catalogue cabinet	set	1																		1									
17	Magazine rack with store	unit	1																		1									
18	Newspaper rack	unit	1																		1									
19	Electric warmer table	unit	1																			1								
20	Stainless 2-bowl sink	unit	1																			1								
21	Stainless worktop	unit	2																			2								
22	Stainless rack	unit	2																			2								
23	Compound microscope	unit	49												49															
24	Dissecting microscope	unit	49												49															
25	Polarizing microscope	unit	10																										10	
26	Microscope slides	set	10												10															
27	Cover strips	set	10										10																	
28	Dissecting kit	set	49												49															

Code No.	Description	Unit	Q'ty	New Facility																				Existing Facility							
				Lecture Block							Laboratory Block																					
				GF	GF	GF	GF	1F	1F	1F	GF	GF	GF	GF	GF	1F	1F	1F	1F	1F											
				Lecture Hall 1	Lecture Hall 2	Computer room	SNE Room	Lecture room 1	Lecture room 2	Lecture room 3	Physics Lab. 1	Physics Lab. 2	Preparation room for Physics	Biology Lab. 1	Preparation Room for Biology 1	Cheministry Lab 1.	Cheministry Lab. 2	Preparation room for Chemistry	Biology Lab. 2	Preparation room for Biology 2	Library	Staff Cafeteria	Administration Block	Preparation room for P.E.	Computer room	Human Ecology Lab.	Preparation room for Agriculture	Preparation room for Geography	Teacher's room
29	Hand lens	pc.	98										49		49															
30	Dissecting tray	pc.	49												49															
31	Autoclave, pressure-cooker type	unit	2											1					1											
32	Centrifuge	unit	1												1															
33	Incubator	unit	2											1					1											
34	Water distiller	unit	2											1		1														
35	Thermometer	pc.	125										50		25			50												
36	pH meter	pc.	50												25			25												
37	Soil pH meter	pc.	10																										10	
38	Analytical balance, open type	unit	39								13			13		13														
39	Analytical balance, closed type	unit	13														13													
40	Beam balance	unit	47										22					25												
41	Roberval's balance	unit	25															25												
42	Water bath	unit	26												13			13												
43	Bunsen burner	pc.	26								13			13																
44	Tripod stand for bunsen burner	pc.	39										13		13			13												
45	Sprit burner	pc.	25												25															
46	Tripod stand for spirit burner	pc.	25												25															
47	Wire gauze	pc.	39										13		13			13												
48	Cork borers	set	13												13															
49	Retort stand	unit	75										25		25			25												
50	Burette clamp	pc.	25													25														
51	Retort clamp	pc.	50										25					25												
52	Bosshead clanmp	pc.	50								25					25														
53	G. clamp	pc.	25										25																	
54	Vacuum oven	unit	2													1	1													
55	Temperature controlled oven	unit	1															1												
56	Spectrophotometer	unit	2															1							1					
57	Magnetic stirrer	unit	13													13														

Code No.	Description	Unit	Q'ty	New Facility																			Existing Facility							
				Lecture Block							Laboratory Block																			
				GF	GF	GF	GF	1F	1F	1F	GF	GF	GF	GF	GF	1F	1F	1F	1F	1F										
				Lecture Hall 1	Lecture Hall 2	Computer room	SNE Room	Lecture room 1	Lecture room 2	Lecture room 3	Physics Lab. 1	Physics Lab. 2	Preparation room for Physics	Biology Lab. 1	Preparation Room for Biology 1	Cheministry Lab 1.	Cheministry Lab. 2	Preparation room for Chemistry	Biology Lab. 2	Preparation room for Biology 2	Library	Staff Cafeteria	Administration Block	Preparation room for P.E.	Computer room	Human Ecology Lab.	Preparation room for Agriculture	Preparation room for Geography	Teacher's room
58	Spatulas	pc.	25															25											
59	Washing bottle	pc.	25															25											
60	Barometer	unit	13															13											
61	Carolimeter	pc.	20															20											
62	Power Supply (6-12 V, contolable)	unit	26										13					13											
63	Rheostat	unit	25										25																
64	Voltmetser, multirange	unit	25										25																
65	Ammeter, multirange	unit	25										25																
66	Galvanometer	unit	13										13																
67	Leads and crocodile clip	set	38										13					25											
68	Stop watch	pc.	26										13					13											
69	Rubber stoppers	set	50										25					25											
70	Rubber tube	set	1															1											
71	Eye protector	pc.	49															49											
72	Oscilloscope	unit	5								5																		
73	Vacuum pump	unit	1										1																
74	Vernier calipers	unit	13										13																
75	Microscrew gauge	unit	13										13																
76	Spring balance, 5N and 10N	set	25										25																
77	Spring set	set	20										20																
78	Slinky coil spring	pc.	13										13																
79	Resistors, colour-coded type	set	25								25																		
80	Resistor, cement	pc.	25										25																
81	Ticker tape timer	unit	2										2																
82	Bar magnet	pc.	25										25																
83	Horse shoe magnet	pc.	25										25																
84	Plotting compasse	pc.	25										25																
85	Capacitor set	set	25								25																		
86	Multimeter	unit	13										13																

Code No.	Description	Unit	Q'ty	New Facility																			Existing Facility							
				Lecture Block							Laboratory Block																			
				GF	GF	GF	GF	1F	1F	1F	GF	GF	GF	GF	GF	1F	1F	1F	1F	1F										
				Lecture Hall 1	Lecture Hall 2	Computer room	SNE Room	Lecture room 1	Lecture room 2	Lecture room 3	Physics Lab. 1	Physics Lab. 2	Preparation room for Physics	Biology Lab. 1	Preparation Room for Biology 1	Cheministry Lab 1.	Cheministry Lab. 2	Preparation room for Chemistry	Biology Lab. 2	Preparation room for Biology 2	Library	Staff Cafeteria	Administration Block	Preparation room for P.E.	Computer room	Human Ecology Lab.	Preparation room for Agriculture	Preparation room for Geography	Teacher's room
87	Pulley set	set	13										13																	
88	Mass with hunger	pc.	13										13																	
89	Prisms set	set	7										7																	
90	Optical lens, biconvex	set	7										7																	
91	Optical lens, biconcave	set	7										7																	
92	Optical lens, planoconvex	pc.	7										7																	
93	Lens holder	pc.	21										21																	
94	Stroboscope	unit	7										7																	
95	Potentiometer	unit	13										13																	
96	Burette, 50ml	pc.	50															50												
97	Volumetric flask, 50ml	pc.	26															26												
98	Volumetric flask, 100ml	pc.	26															26												
99	Volumetric flask, 250ml	pc.	25															25												
100	Round-bottom flask, 100ml	pc.	25															25												
101	Conical flask, 300ml	pc.	100												50			50												
102	Beaker, 50ml	pc.	50												25			25												
103	Beaker, 100ml	pc.	50										25		25															
104	Beaker, 150ml	pc.	25												25															
105	Beaker, 250ml	pc.	100										25		25			50												
106	Beaker, 400ml	pc.	50												50															
107	Beaker, 600ml	pc.	50															50												
108	Beaker, 1000ml	pc.	25												25															
109	Measuring cylinder, 10 ml	pc.	25															25												
110	Measuring cylinder, 25 ml	pc.	50															50												
111	Measuring cylinder, 50ml	pc.	25															25												
112	Measuring cylinder, 100ml	pc.	75												25			25		25										
113	Measuring cylinder, 250ml	pc.	50												25			25												
114	Measuring pipette, 2.0ml	pc.	25															25												
115	Measuring pipette, 5.0ml	pc.	25															25												

Code No.	Description	Unit	Q'ty	New Facility																			Existing Facility							
				Lecture Block							Laboratory Block																			
				GF	GF	GF	GF	1F	1F	1F	GF	GF	GF	GF	GF	1F	1F	1F	1F	1F										
				Lecture Hall 1	Lecture Hall 2	Computer room	SNE Room	Lecture room 1	Lecture room 2	Lecture room 3	Physics Lab. 1	Physics Lab. 2	Preparation room for Physics	Biology Lab. 1	Preparation Room for Biology 1	Cheministry Lab 1.	Cheministry Lab. 2	Preparation room for Chemistry	Biology Lab. 2	Preparation room for Biology 2	Library	Staff Cafeteria	Administration Block	Preparation room for P.E.	Computer room	Human Ecology Lab.	Preparation room for Agriculture	Preparation room for Geography	Teacher's room
116	Measuring pipette, 10ml	pc.	10															10											
117	Measuring pipette, 25ml	pc.	75															75											
118	Pippette filler	pc.	25															25											
119	Dropping pipette with teat, 5.0ml	pc.	25															25											
120	Dropping pipette with teat, 2.0ml	pc.	50												25			25											
121	Pipette, bulbed 1.0ml	pc.	25												25														
122	Test tubes	set	3												1			2											
123	Test tube, large	pc.	25												25														
124	Watch glass	pc.	50												25			25											
125	Stirring rod	pc.	50										25		25														
126	Test tube stand, for 12 tubes	pc.	32												7			25											
127	Test tube holder	pc.	50												25			25											
128	Beaker tong	pc.	25															25											
129	Quick fit reflux	set	7															7											
130	Water condenser	pc.	13															13											
131	Funnel	pc.	25															25											
132	Buchner funnel	pc.	25															25											
133	Buchner flask	set	25															25											
134	Desiccator	pc.	5															5											
135	Wheelbarrow	unit	5																							5			
136	Weighing scale, up to 10kg	unit	10																							10			
137	Spring scale, up to 100kg	unit	1																							1			
138	Salinity meter	unit	5																							5			
139	Graphic calculator	pc.	100			100																							
140	Weather station set	unit	1																								1		
141	Binocular	pc.	20																								20		
142	Stereoscope	pc.	20																								20		
143	Planimeter, wheel type	pc.	5																								5		
144	Javelins	set	5																					5					

Code No.	Description	Unit	Q'ty	New Facility																			Existing Facility							
				Lecture Block							Laboratory Block																			
				GF	GF	GF	GF	1F	1F	1F	GF	GF	GF	GF	GF	1F	1F	1F	1F	1F										
				Lecture Hall 1	Lecture Hall 2	Computer room	SNE Room	Lecture room 1	Lecture room 2	Lecture room 3	Physics Lab. 1	Physics Lab. 2	Preparation room for Physics	Biology Lab. 1	Preparation Room for Biology 1	Cheministry Lab 1.	Cheministry Lab. 2	Preparation room for Chemistry	Biology Lab. 2	Preparation room for Biology 2	Library	Staff Cafeteria	Administration Block	Preparation room for P.E.	Computer room	Human Ecology Lab.	Preparation room for Agriculture	Preparation room for Geography	Teacher's room
145	Discus	set	5																					5						
146	Shot puts	set	5																					5						
147	Starting block	unit	5																					5						
148	Washing machine	unit	1																							1				
149	Electric sewing machine	unit	20																							20				
150	Iron	unit	2																							2				
151	Ironing board	unit	2																							2				
152	Vegetable drier	unit	1																							1				
153	Gas cooker	unit	1																							1				
154	Electric oven with 4 solid plates	unit	1																			1								
155	Microwave	unit	2																			1				1				
156	Food thermometer	pc.	15																							15				
157	Refrigerator	unit	1																			1								
158	Frying pan set	set	1																			1								
159	Sauce pan set	set	1																			1								
160	Pot set	set	1																			1								
161	Cooking utensil set	set	1																			1								
162	Hot water dispenser	unit	1																			1								
163	Desktop computer	unit	21			21																								
164	Desktop computer, with wireless LAN function	unit	49				8														20				21					
165	Digital camera	unit	5																											5
166	Video camera	unit	5																											5
167	Lazor printer, monochrome	unit	2			1																			1					
168	Complex type printer, monochrome	unit	1																		1									
169	Braile embosser	unit	1				1																							
170	Scanner	unit	2			1																			1					
171	Scanner with OCR	unit	1				1																							
172	VPN Router	unit	1																				1							
173	LAN cable set	set	1																						1					

Code No.	Description	Unit	Q'ty	New Facility																			Existing Facility							
				Lecture Block							Laboratory Block																			
				GF	GF	GF	GF	1F	1F	1F	GF	GF	GF	GF	GF	1F	1F	1F	1F	1F										
				Lecture Hall 1	Lecture Hall 2	Computer room	SNE Room	Lecture room 1	Lecture room 2	Lecture room 3	Physics Lab. 1	Physics Lab. 2	Preparation room for Physics	Biology Lab. 1	Preparation Room for Biology 1	Cheministry Lab 1.	Cheministry Lab. 2	Preparation room for Chemistry	Biology Lab. 2	Preparation room for Biology 2	Library	Staff Cafeteria	Administration Block	Preparation room for P.E.	Computer room	Human Ecology Lab.	Preparation room for Agriculture	Preparation room for Geography	Teacher's room
174	LAN cable, 2m with connectors	pc.	21			21																								
175	Server, with rack	set	1			1																								
176	UPS (700VA)	unit	71			22	8														20				21				
177	Power extension cable	set	5																						5				
178	IC Voice Recorder	pc.	6				6																						
179	Braille machine	unit	6				6																						
180	Wheelchair	unit	2				2																						

JAPANESE GRANT

The Japanese Grant is non-reimbursable fund provided to a recipient country (hereinafter referred to as "the Recipient") to purchase the products and/or services (engineering services and transportation of the products, etc.) for its economic and social development in accordance with the relevant laws and regulations of Japan. Followings are the basic features of the project grants operated by JICA (hereinafter referred to as "Project Grants").

1. Procedures of Project Grants

Project Grants are conducted through following procedures (See "PROCEDURES OF JAPANESE GRANT" for details):

(1) Preparation

- The Preparatory Survey (hereinafter referred to as "the Survey") conducted by JICA

(2) Appraisal

-Appraisal by the government of Japan (hereinafter referred to as "GOJ") and JICA, and Approval by the Japanese Cabinet

(3) Implementation

Exchange of Notes

-The Notes exchanged between the GOJ and the government of the Recipient

Grant Agreement (hereinafter referred to as "the G/A")

-Agreement concluded between JICA and the Recipient

Banking Arrangement (hereinafter referred to as "the B/A")

-Opening of bank account by the Recipient in a bank in Japan (hereinafter referred to as "the Bank") to receive the grant

Construction works/procurement

-Implementation of the project (hereinafter referred to as "the Project") on the basis of the G/A

(4) Ex-post Monitoring and Evaluation

-Monitoring and evaluation at post-implementation stage

2. Preparatory Survey

(1) Contents of the Survey

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

- Confirmation of the background, objectives, and benefits of the Project and also institutional capacity of

relevant agencies of the Recipient necessary for the implementation of the Project.

- Evaluation of the feasibility of the Project to be implemented under the Japanese Grant from a technical, financial, social and economic point of view.
- Confirmation of items agreed between both parties concerning the basic concept of the Project.
- Preparation of an outline design of the Project.
- Estimation of costs of the Project.
- Confirmation of Environmental and Social Considerations

The contents of the original request by the Recipient are not necessarily approved in their initial form. The Outline Design of the Project is confirmed based on the guidelines of the Japanese Grant.

JICA requests the Recipient to take measures necessary to achieve 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 executing agency of the Project. Therefore, the contents of the Project are confirmed by all relevant organizations of the Recipient based on the Minutes of Discussions.

(2) Selection of Consultants

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

(3) Result of the Survey

JICA reviews the report on the results of the Survey and recommends the GOJ to appraise the implementation of the Project after confirming the feasibility of the Project.

3. Basic Principles of Project Grants

(1) Implementation Stage

1) The E/N and the G/A

After the Project is approved by the Cabinet of Japan, the Exchange of Notes (hereinafter referred to as "the E/N") will be singed between the GOJ and the Government of the Recipient to make a pledge for assistance, which is followed by the conclusion of the G/A between JICA and the Recipient to define the necessary articles, in accordance with the E/N, to implement the Project, such as conditions of disbursement, responsibilities of the Recipient, and procurement conditions. The terms and conditions generally applicable to the Japanese Grant are stipulated in the "General Terms and Conditions for Japanese Grant (January 2016)."

2) Banking Arrangements (B/A) (See "Financial Flow of Japanese Grant (A/P Type)" for details)

a) The Recipient shall open an account or shall cause its designated authority to open an account under the name of the Recipient in the Bank, in principle. JICA will disburse the Japanese Grant in Japanese yen for the Recipient to cover the obligations incurred by the Recipient under the verified contracts.

b) The Japanese Grant will be disbursed when payment requests are submitted by the Bank to JICA under an Authorization to Pay (A/P) issued by the Recipient.

3) Procurement Procedure

The products and/or services necessary for the implementation of the Project shall be procured in accordance with JICA's procurement guidelines as stipulated in the G/A.

4) Selection of Consultants

In order to maintain technical consistency, the consulting firm(s) which conducted the Survey will be recommended by JICA to the Recipient to continue to work on the Project's implementation after the E/N and G/A.

5) Eligible source country

In using the Japanese Grant disbursed by JICA for the purchase of products and/or services, the eligible source countries of such products and/or services shall be Japan and/or the Recipient. The Japanese Grant may be used for the purchase of the products and/or services of a third country as eligible, if necessary, taking into account the quality, competitiveness and economic rationality of products and/or services necessary for achieving the objective of the Project. However, the prime contractors, namely, constructing and procurement firms, and the prime consulting firm, which enter into contracts with the Recipient, are limited to "Japanese nationals", in principle.

6) Contracts and Concurrence by JICA

The Recipient will conclude contracts denominated in Japanese yen with Japanese nationals. Those contracts shall be concurred by JICA in order to be verified as eligible for using the Japanese Grant.

7) Monitoring

The Recipient is required to take their initiative to carefully monitor the progress of the Project in order to ensure its smooth implementation as part of their responsibility in the G/A, and to regularly report to JICA about its status by using the Project Monitoring Report (PMR).

8) Safety Measures

The Recipient must ensure that the safety is highly observed during the implementation of the Project.

9) Construction Quality Control Meeting

Construction Quality Control Meeting (hereinafter referred to as the "Meeting") will be held for quality assurance and smooth implementation of the Works at each stage of the Works. The member of the Meeting will be composed by the

Recipient (or executing agency), the Consultant, the Contractor and JICA. The functions of the Meeting are as followings:

a) Sharing information on the objective, concept and conditions of design from the Contractor, before start of construction.

b) Discussing the issues affecting the Works such as modification of the design, test, inspection, safety control and the Client's obligation, during of construction.

(2) Ex-post Monitoring and Evaluation Stage

1) After the project completion, JICA will continue to keep in close contact with the Recipient in order to monitor that the outputs of the Project is used and maintained properly to attain its expected outcomes.

2) In principle, JICA will conduct ex-post evaluation of the Project after three years from the completion. It is required for the Recipient to furnish any necessary information as JICA may reasonably request.

(3) Others

1) Environmental and Social Considerations

The Recipient shall carefully consider environmental and social impacts by the Project and must comply with the environmental regulations of the Recipient and JICA Guidelines for Environmental and Social Considerations (April, 2010).

2) Major undertakings to be taken by the Government of the Recipient

For the smooth and proper implementation of the Project, the Recipient is required to undertake necessary measures including land acquisition, and bear an advising commission of the A/P and payment commissions paid to the Bank as agreed with the GOJ and/or JICA. The Government of the Recipient shall ensure that customs duties, internal taxes and other fiscal levies which may be imposed in the Recipient with respect to the purchase of the Products and/or the Services be exempted or be borne by its designated authority without using the Grant and its accrued interest, since the grant fund comes from the Japanese taxpayers.

3) Proper Use

The Recipient is required to maintain and use properly and effectively the products and/or services under the Project (including the facilities constructed and the equipment purchased), to assign staff necessary for this operation and maintenance and to bear all the expenses other than those covered by the Japanese Grant.

4) Export and Re-export

The products purchased under the Japanese Grant should not be exported or re-exported from the Recipient.

Attachment 1

PROCEDURES OF JAPANESE GRANT

Stage	Procedures	Remarks	Recipient Government	Japanese Government	JICA	Consultants	Contractors	Agent Bank
Official Request	Request for grants through diplomatic channel	Request shall be submitted before appraisal stage.	x	x				
1. Preparation	(1) Preparatory Survey Preparation of outline design and cost estimate		x		x	x		
2. Appraisal	(2)Preparatory Survey Explanation of draft outline design, including cost estimate, undertakings, etc.		x		x	x		
	(3)Agreement on conditions for implementation	Conditions will be explained with the draft notes (E/N) and Grant Agreement (G/A) which will be signed before approval by Japanese government.	x	x (E/N)	x (G/A)			
	(4) Approval by the Japanese cabinet			x				
3. Implementation	(5) Exchange of Notes (E/N)		x	x				
	(6) Signing of Grant Agreement (G/A)		x		x			
	(7) Banking Arrangement (B/A)	Need to be informed to JICA	x					x
	(8) Contracting with consultant and issuance of Authorization to Pay (A/P)	Concurrence by JICA is required	x			x		x
	(9) Detail design (D/D)		x			x		
	(10) Preparation of bidding documents	Concurrence by JICA is required	x			x		
	(11) Bidding	Concurrence by JICA is required	x			x	x	
	(12) Contracting with contractor/supplier and issuance of A/P	Concurrence by JICA is required	x				x	x
	(13) Construction works/procurement	Concurrence by JICA is required for major modification of design and amendment of contracts.	x			x	x	
	(14) Completion certificate		x			x	x	
4. Ex-post monitoring & evaluation	(15) Ex-post monitoring	To be implemented generally after 1, 3, 10 years of completion, subject to change	x		x			
	(16) Ex-post evaluation	To be implemented basically after 3 years of completion	x		x			

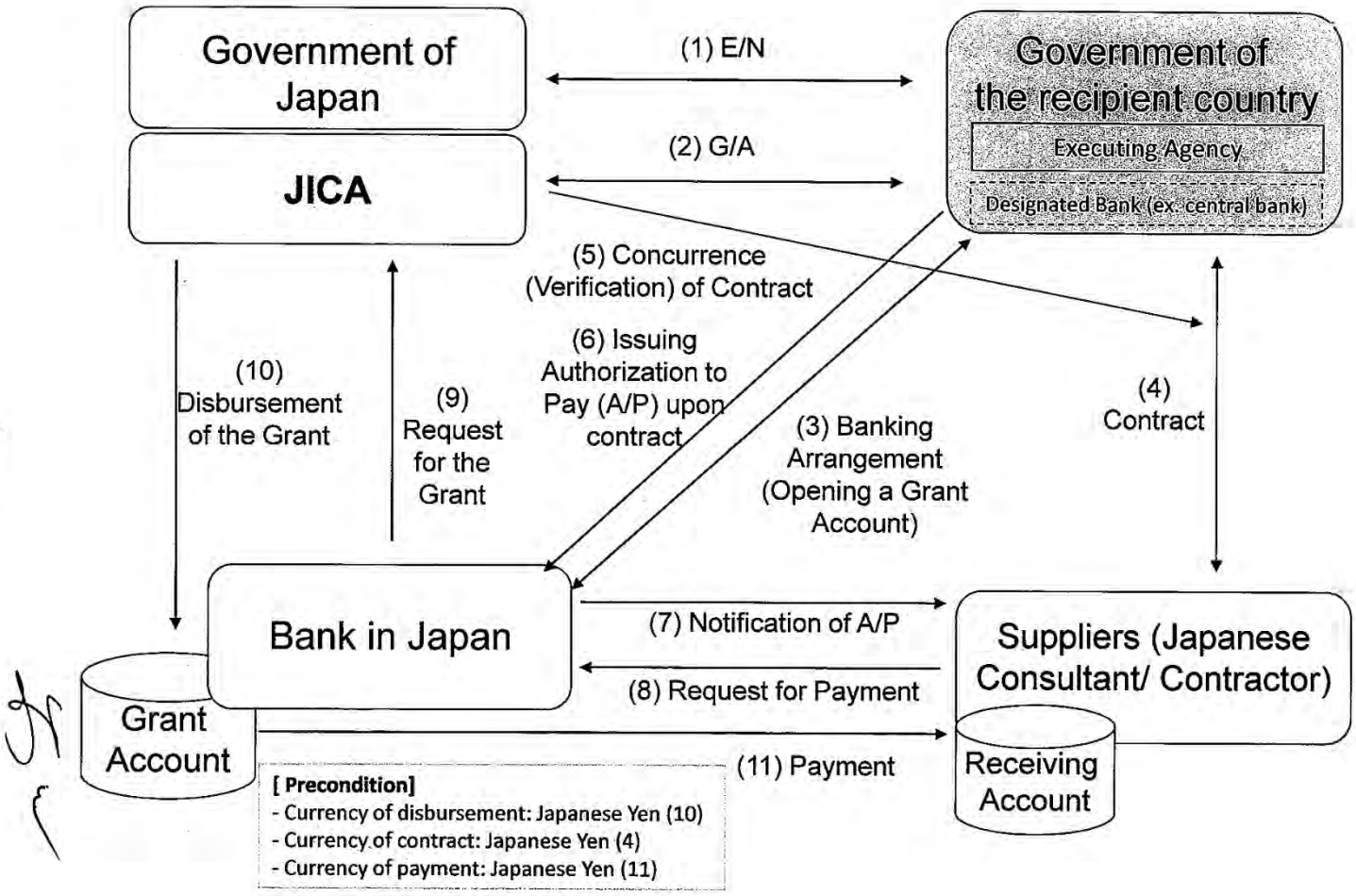
notes:

1. Project Monitoring Report and Report for Project Completion shall be submitted to JICA as agreed in the G/A.

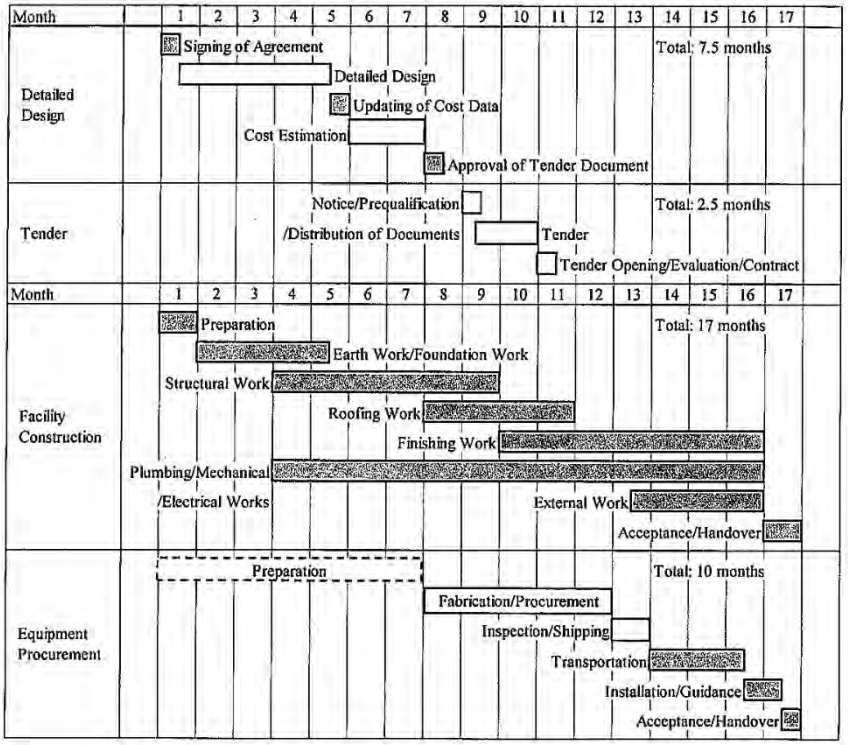
2. Concurrence by JICA is required for allocation of grant for remaining amount and/or contingencies as agreed in the G/A.

Attachment 2

Financial Flow of Japanese Grant (A/P Type)



Annex 5: Project Implementing Schedule



Annex 6

Major Undertakings to be taken by the Government of Malawi

1. Specific obligations of the Government of Malawi which will not be funded with the Grant

(1) Before the Tender

NO	Items	Deadline	In charge	Estimated Cost (USD)	Ref.
1	To prepare budget for the Project for FY 2017 and 2018	by the end of March, 2017	MoEST/ MoFEPD		
2	To open bank account (B/A)	within 1 month after the signing of the G/A	MoEST/ MoFEPD		
3	To issue A/P to a bank in Japan (the Agent Bank) for the payment to the consultant	within 1 month after the signing of agreement with Consultant	MoEST/ MoFEPD		
4	To bear the following commissions to a bank of Japan for the banking services based upon the B/A	within 1 month after the signing of agreement with Consultant	MoEST/ MoFEPD	1,616	
	1) Advising commission of A/P				
	2) Payment commission for A/P	every payment			
5	To obtain building permit	before notice of the bidding document	MoEST	6,136	
6	To submit Project Monitoring Report (with the result of Detail Design)	before preparation of bidding documents	MoEST		
7	To obtain EIA License from Environmental Affairs Department (EAD), Ministry of Natural Resources, Energy and Environment	Before the contract(s) of construction	MoEST	18,559	
8	To secure and clear the following lands 1) Project area: remove obstacles such as trees, vegetation, rainwater gutters, open walkway 2) stock yard and route: secure area for material stock and transmission	before notice of the bidding document	MoEST	27,707	

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

(2) During the Project Implementation

NO	Items	Deadline	In charge	Estimated Cost (USD)	Ref.
1	To issue A/P to a bank in Japan (the Agent Bank) for the payment to the Contractor(s) and Supplier(s)	within 1 month after the signing of the contract(s)	MoEST/ MoFEPD		

2	To bear the following commissions to a bank in Japan for the banking services based upon the B/A	within 1 month after the signing of the contract(s)	MoEST/ MoFEPD	13,155	
	1) Advising commission of A/P				
	2) Payment commission for A/P	every payment			
3	To ensure prompt customs clearance and to assist the Contractor(s) and Supplier(s) with internal transportation in recipient country	during the Project	MoEST/ MoFEPD		
4	To accord Japanese nationals and/or physical persons of third countries whose services may be required in connection with the supply of the products and the services such facilities as may be necessary for their entry into the country of the Recipient and stay therein for the performance of their work	during the Project	MoEST		
5	To ensure that customs duties, internal taxes and other fiscal levies which may be imposed in the country of the Recipient with respect to the purchase of the products and/or the services be exempted.	during the Project	MoEST/ MoFEPD		
6	To bear all the expenses, other than those covered by the Grant, necessary for the implementation of the Project	during the Project	MoEST		
7	1) To submit Project Monitoring Report	1) every month	MoEST		
	2) To submit Project Monitoring Report (final)	2) within one month after signing of Certificate of Completion for the works under the contract(s)			
8	To submit a report concerning completion of the Project	within six months after completion of the Project	MoEST		
9	To provide facilities for distribution of electricity, water supply and drainage and other incidental facilities necessary for the implementation of the Project outside the site(s)		MoEST		
	1) Water Supply Additional city water supply to the site	3 months before completion of the construction		427	
	2) Electricity ESCOM inspection on additional transformer	1 month before completion of the construction			
	3) LPG Procurement and connection	1 month before completion of the construction			

(3) After the Project

NO	Items	Deadline	In charge	Estimated Cost (USD)	Ref.
1	To renovate existing facilities 1) Renovation work 2) Supply furniture	After completion of the construction	MoEST	122,452	
2	To maintain and use properly and effectively the facilities constructed and equipment provided under the Grant Aid 1) Allocation of maintenance cost 2) Operation and maintenance structure 3) Routine check/Periodic inspection	After completion of the construction	MoEST		
3	To allocate lecturers and staffs required for school management	After completion of the construction	MoEST		

Note: Estimation of costs is calculated by the exchange rate of 1.00USD=707.81MWK

Project Monitoring Report
on
Project Name
Grant Agreement No. XXXXXXX

20XX, Month

Organizational Information

Signer of the G/A (Recipient)	Person in Charge	(Designation)
	Contacts	Address: Phone/FAX: Email:
Executing Agency	Person in Charge	(Designation)
	Contacts	Address: Phone/FAX: Email:
Line Ministry	Person in Charge	(Designation)
	Contacts	Address: Phone/FAX: Email:

General Information:

Project Title	
E/N	Signed date: Duration:
G/A	Signed date: Duration:
Source of Finance	Government of Japan: Not exceeding JPY _____ mil. Government of (_____): _____

1: Project Description

1-1 Project Objective

1-2 Project Rationale

- Higher-level objectives to which the project contributes (national/regional/sectoral policies and strategies)
- Situation of the target groups to which the project addresses

1-3 Indicators for measurement of "Effectiveness"

Quantitative indicators to measure the attainment of project objectives		
Indicators	Original (Yr)	Target (Yr)
Qualitative indicators to measure the attainment of project objectives		

2: Details of the Project

2-1 Location

Components	Original *(proposed in the outline design)*	Actual
1.		

2-2 Scope of the work

Components	Original* *(proposed in the outline design)*	Actual*
1.		

Reasons for modification of scope (if any).

(PMR)

2-3 Implementation Schedule

Items	Original		Actual
	(proposed in the outline design)	*(at the time of signing the Grant Agreement)*	

Reasons for any changes of the schedule, and their effects on the project (if any)

2-4 Obligations by the Recipient

2-4-1 Progress of Specific Obligations

See Attachment 2.

2-4-2 Activities

See Attachment 3.

2-4-3 Report on RD

See Attachment 11.

2-5 Project Cost

2-5-1 Cost borne by the Grant(Confidential until the Bidding)

Components			Cost (Million Yen)	
	Original *(proposed in the outline design)*	Actual *(in case of any modification)*	Original[1),2)] *(proposed in the outline design)*	Actual
	1.			
Total				

Note: 1) Date of estimation:
2) Exchange rate: 1 US Dollar = Yen

2-5-2 Cost borne by the Recipient

Components			Cost (1,000 Taka)	
	Original *(proposed in the outline design)*	Actual *(in case of any modification)*	Original[1),2)] *(proposed in the outline design)*	Actual
	1.			

Note: 1) Date of estimation:
2) Exchange rate: 1 US Dollar =

Reasons for the remarkable gaps between the original and actual cost, and the countermeasures (if any)

(PMR)

2-6 Executing Agency

- Organization's role, financial position, capacity, cost recovery etc,
- Organization Chart including the unit in charge of the implementation and number of employees.

Original *(at the time of outline design)* name: role: financial situation: institutional and organizational arrangement (organogram): human resources (number and ability of staff):
Actual *(PMR)*

2-7 Environmental and Social Impacts

- The results of environmental monitoring based on Attachment 5 (in accordance with Schedule 4 of the Grant Agreement).
- The results of social monitoring based on in Attachment 5 (in accordance with Schedule 4 of the Grant Agreement).
- Disclosed information related to results of environmental and social monitoring to local stakeholders (whenever applicable).

3: Operation and Maintenance (O&M)

3-1 Physical Arrangement

- Plan for O&M (number and skills of the staff in the responsible division or section, availability of manuals and guidelines, availability of spareparts, etc.)

Original *(at the time of outline design)*
Actual *(PMR)*

3-2 Budgetary Arrangement

- Required O&M cost and actual budget allocation for O&M

Original *(at the time of outline design)*

Actual *(PMR)*

4: Potential Risks and Mitigation Measures

- Potential risks which may affect the project implementation, attainment of objectives, sustainability
- Mitigation measures corresponding to the potential risks

Assessment of Potential Risks *(at the time of outline design)*

Potential Risks	Assessment
1. (Description of Risk)	Probability: High/Moderate/Low
	Impact: High/Moderate/Low
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:
	Contingency Plan (if applicable):
2. (Description of Risk)	Probability: High/Moderate/Low
	Impact: High/Moderate/Low
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:
	Contingency Plan (if applicable):
3. (Description of Risk)	Probability: High/Moderate/Low
	Impact: High/Moderate/Low
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:

	Contingency Plan (if applicable):
Actual Situation and Countermeasures	
(PMR)	

5: Evaluation and Monitoring Plan (after the work completion)

5-1 Overall evaluation

Please describe your overall evaluation on the project.

5-2 Lessons Learnt and Recommendations

Please raise any lessons learned from the project experience, which might be valuable for the future assistance or similar type of projects, as well as any recommendations, which might be beneficial for better realization of the project effect, impact and assurance of sustainability.

5-3 Monitoring Plan of the Indicators for Post-Evaluation

Please describe monitoring methods, section(s)/department(s) in charge of monitoring, frequency, the term to monitor the indicators stipulated in 1-3.

Attachment

1. Project Location Map
2. Specific obligations of the Recipient which will not be funded with the Grant
3. Monthly Report submitted by the Consultant

Appendix - Photocopy of Contractor's Progress Report (if any)
- Consultant Member List
- Contractor's Main Staff List

4. Check list for the Contract (including Record of Amendment of the Contract/Agreement and Schedule of Payment)
5. Environmental Monitoring Form / Social Monitoring Form
6. Monitoring sheet on price of specified materials (Quarterly)
7. Report on Proportion of Procurement (Recipient Country, Japan and Third Countries) (PMR (final)only)
8. Pictures (by JPEG style by CD-R) (PMR (final)only)
9. Equipment List (PMR (final)only)
10. Drawing (PMR (final)only)
11. Report on RD (After project)

Attachment 6

Monitoring sheet on price of specified materials

1. Initial Conditions (Confirmed)

	Items of Specified Materials	Initial Volume A	Initial Unit Price (¥) B	Initial total Price C=A×B	1% of Contract Price D	Condition of payment	
						Price (Decreased) E=C−D	Price (Increased) F=C+D
1	Item 1	●●t	●	●	●	●	●
2	Item 2	●●t	●	●	●		
3	Item 3						
4	Item 4						
5	Item 5						

2. Monitoring of the Unit Price of Specified Materials

(1) Method of Monitoring : ●●

(2) Result of the Monitoring Survey on Unit Price for each specified materials

	Items of Specified Materials	1st ●month, 2015	2nd ●month, 2015	3rd ●month, 2015	4th	5th	6th
1	Item 1						
2	Item 2						
3	Item 3						
4	Item 4						
5	Item 5						

(3) Summary of Discussion with Contractor (if necessary)

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Attachment 7

Report on Proportion of Procurement (Recipient Country, Japan and Third Countries)
(Actual Expenditure by Construction and Equipment each)

	Domestic Procurement (Recipient Country) A	Foreign Procurement (Japan) B	Foreign Procurement (Third Countries) C	Total D
Construction Cost	(A/D%)	(B/D%)	(C/D%)	
Direct Construction Cost	(A/D%)	(B/D%)	(C/D%)	
others	(A/D%)	(B/D%)	(C/D%)	
Equipment Cost	(A/D%)	(B/D%)	(C/D%)	
Design and Supervision Cost	(A/D%)	(B/D%)	(C/D%)	
Total	(A/D%)	(B/D%)	(C/D%)	

5. 参考資料／入手資料リスト

	資料名	発行年	種類	発行者・著作者
教育政策・計画／現状分析				
1	National Strategy for Teacher Education and Development (NSTED) 2007-2017	2007	電子データ	MoEST
2	National Strategy for Teacher Education and Development (NSTED) 2007-2017	2007	電子データ	MoEST
3	Education Sector Implementation Plan II (2013/14-2017/18) Version 1	2014a	電子データ	MoEST
4	Education Sector Performance Report 6/2013-6/2014	2014b	電子データ	MoEST
5	基礎教育セクター情報収集・確認調査 国別教育セクター分析報告書-マラウイ-	2012	電子データ	JICA
6	Education for All Goals Assessment Report: Will Malawi Meet the Six EFA Goals by 2015	2011	電子データ	Civil Society Coalition for Quality Basic Education
7	Integrated Household Survey 2010-2011: Household Socio-Economic Characteristics Report	2012	電子データ	National Statistical Office (NSO)
8	Cluster System Assessment: Towards quality secondary education in Malawi (draft)	2013	電子データ	JICA Malawi Office and MoEST
9	Education Sector Progress Report for the Quarter Ending on 31st March, 2013	2013	電子データ	MoEST
10	Joint-IDA-IMF Staff Advisory Note on the Second Malawi Growth and Development Strategy (MGDS II)	2012	電子データ	World Bank
11	Education Sector Implementation Plan II (2013-17) (draft)	2013	電子データ	MoEST
教育統計				
12	Education Basic Statistics, Malawi 2000	2000	電子データ	Malawi Government
13	Education Basic Statistics, Malawi 2001	2001	電子データ	Malawi Government
14	Education Basic Statistics, Malawi 2002	2002	電子データ	Malawi Government
15	Education Basic Statistics, Malawi 2003	2003	電子データ	Malawi Government
16	Education Statistics 2004	2004	電子データ	EMIS Section, Ministry of Education
17	Education Statistics 2005	2005	電子データ	EMIS Section, Ministry of Education
18	Education Statistics 2006	2006	電子データ	EMIS Section, Dept. of Education Planning, Ministry of Education and Vocational Training
19	Education Statistics 2007	2007	電子データ	EMIS Section, Dept. of Education Planning, MoEST
20	Education Statistics 2008	2008	電子データ	EMIS Section, Dept. of Education Planning, MoEST
21	Education Statistics 2009	2009	電子データ	EMIS Section, Dept. of Education Planning, MoEST
22	Education Statistics 2010	2010	電子データ	Ditto.
23	Education Statistics 2011	2011	電子データ	Ditto.
24	Education Statistics 2012	2012	電子データ	Ditto.
25	Education Statistics 2013	2013	電子データ	Ditto.
26	Education Statistics 2014	2014	電子データ	Ditto.
国家予算関係文書				
27	2010/11 Budget Statement	2010	電子データ	Ministry of Finance
28	2010/11 Budget Performance Quarterly Report (Q2)	2011	電子データ	Ministry of Finance

29	2011/12 Draft Financial Statement	2011	電子データ	Ministry of Finance
30	2011/12 Budget Statement	2011	電子データ	Ministry of Finance
31	2011/12 Budget Vote 250: Ministry of Education, Science and Technology	2011	電子データ	Ministry of Finance
32	Draft Estimates of Expenditure on Recurrent and Capital Budget for the Financial Year 2011/12 (Detailed Estimates) Vol.2 (Vote 210-279, 250)	2011	コピー	Ministry of Finance
33	Draft 2012/13 Financial Statement	2012	電子データ	Ministry of Finance
34	Draft Estimates of Expenditure on Recurrent and Capital Budget for the Financial Year 2013/2014: Detailed Estimates Vol.2 (Votes 250-310)	2013	コピー	Ministry of Finance
他ドナーの協力事業等				
35	Appraisal Report: Support to Secondary Education (Education V) Project	2006	電子データ	African Development Fund
36	Project Complection Report: Malawi/ADF Education V Project (Support to Secondary Education)	2013	コピー	African Development Fund
37	Education and Employment in Malawi (Working Paper Series)	2010	電子データ	African Development Bank Group
38	Project Appraisal Report: Support to Higher Education, Science and Technology (HEST)	2011	電子データ	African Development Bank Group
39	Project Appraisal Document: Project to Improve Education Quality in Malawi (PIEQM)	2010	電子データ	World Bank
40	Restructuring Paper: Project to Improve Education Quality in Malawi Project Loan	2011	電子データ	World Bank
41	Implementation Status & Results: Project to Improve Education Quality in Malawi (PIEQM) Seq.No.3	2012	電子データ	World Bank
42	Implementation Status & Results: Project to Improve Education Quality in Malawi (PIEQM) Seq.No.4	2012	電子データ	World Bank
43	Implementation Status & Results: Project to Improve Education Quality in Malawi (PIEQM) Seq.No.5	2013	電子データ	World Bank
44	Restructuring Paper: Project to Improve Education Quality in Malawi Project Grant	2013	電子データ	World Bank
45	UNICEF Country Programme Action Plan 2008-2011	2007	電子データ	UNICEF
46	Malawi Annual Report 2010	2011	電子データ	UNICEF
47	Logical Framework (Updated July 2013): Education Sector Reform Programme	2013	電子データ	Department for International Development (DFID)
その他資料				
48	Timetable for Year 2013 Primary School Leaving Certificate Examination	2013	電子データ	Malawi National Examinations Board
49	Timetable for Year 2013 Junior Certificate Examination	2013	電子データ	Malawi National Examinations Board
50	Timetable for Year 2013 Malawi School Certificate Examination	2013	電子データ	Malawi National Examinations Board

6.　その他

6-1. 敷地測量図

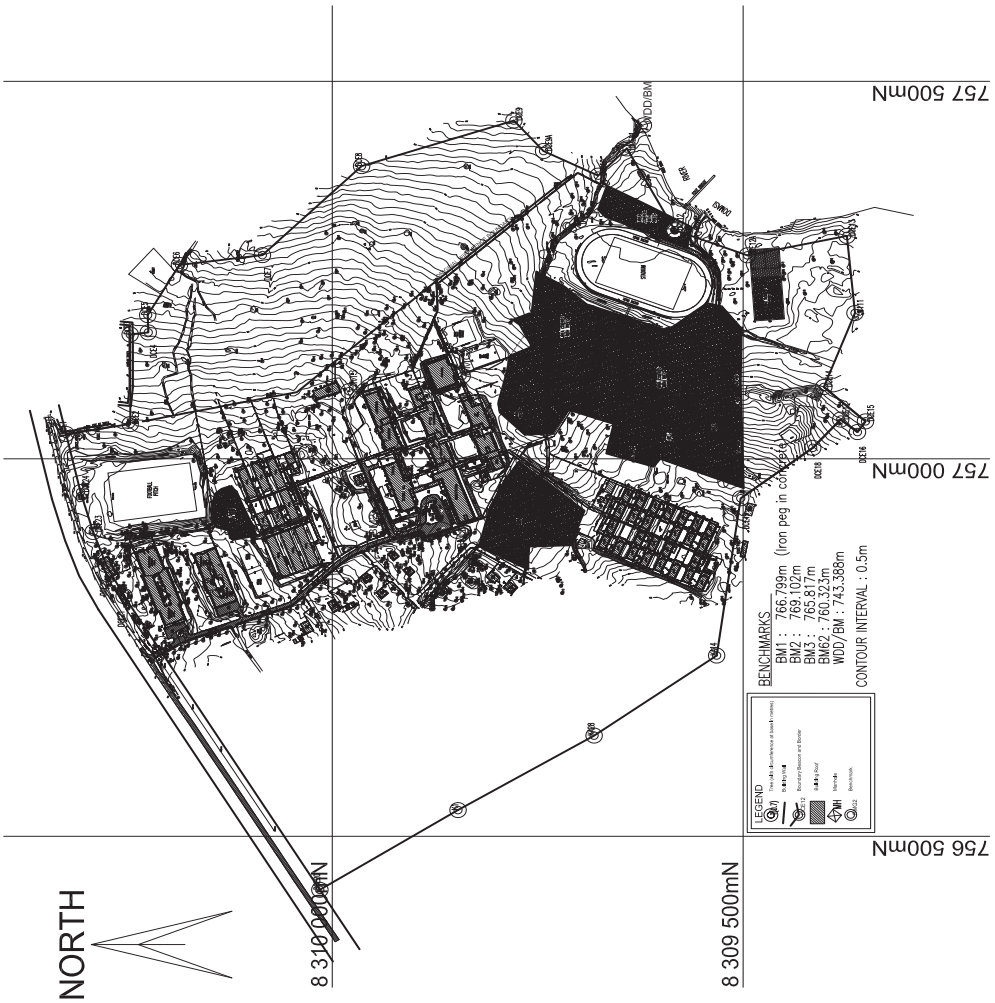
6-2. 地質調査報告書(抜粋)

6-3. 要請機材の検討と機材選定過程

6-4. DCE 生徒数統計

6-1. 敷地測量図

6-1.敷地測量図



6-2. 地質調査報告書(抜粋)

MALAWI POLYTECHNIC
CIVIL ENGINEERING DEPARTMENT

REPORT ON GEOTECHNICAL INVESTIGATIONS SURVEY AT CHANCELLOR COLLEGE, DOMASI CAMPUS IN ZOMBA DISTRICT

TO: MATSUDA INTERNATIONAL CONSULTANTS

PREPARED BY: TUTULE MSUKWA, MPhil, BSc Civil Eng, Reng.
Geotechnical Engineer

November 2014

INTRODUCTION

1.1 General

Matsuda International Consultant contacted Malawi Polytechnic, Civil Engineering Department to conduct geotechnical investigations surveys and recommend appropriate bearing capacity of structures to be built at Chancellor College, Domasi campus.

Site reconnaissance, instu testing and soil sampling for the site was carried out from 16th October to 22nd October 2014. Laboratory testing proceeded immediately at the Malawi Polytechnic Laboratory in Blantyre.

1.2 Project Description

It is our understanding that the project involves the construction of new classroom and laboratory blocks which we understand will be one storey building. Apart from load bearing walls on concrete strip footings, the structure will also have concrete pad or raft or continuous footings supporting column loads from the structure above.

1.3 Objectives of the Soil Investigation Survey

The purpose of the geotechnical exploration exercise was to:

1. To determine the subsoil conditions under the proposed sites for the construction of blocks.
2. To determine the engineering properties of the subsoil.
3. To comment on the type of foundation to be adopted.
4. To assess the bearing capacity of the soil in line with the type of structure to be erected.
5. To assess the percolation characteristics of the subsoil

2 Soil Sampling and Testing

Five trial pits for soil sampling and triaxial testing were dug around the proposed site. The trial pits were dug in order to reveal the soil profile, carry out insitu tests and get samples for laboratory testing. Location for trial pits (SS) were agreed with Matsuda Consultants. The trial pits were approximately 3.5m deep. Three samples were collected from each trial pit, viz. at 1.3m deep, 2.5m deep and 3.5m deep. Samples collected were taken to Polytechnic laboratory and tested for specific gravity, moisture density and particle size analysis. It was a requirement to carry out triaxial test at each of these depths but due to the nature of the soil it was not possible to collect undisturbed samples for triaxial testing in most cases (majority of soils were decomposed to slightly decomposed rocks).

In addition Water Percolation test (WPT) and Dynamic Cone Penetration Test (DCPT) were carried out. WPT was carried out on four locations while DCPT was carried out on 125 points.

3. Observations and Discussions

Observation on the trial pits showed that the soils at the site were varying from dark reddish lateritic gravel sands with traces of quartz alternating with decomposed rocks at a depth range of 1.2m to 3.5m on SS1 and SS2. On SS3, SS4 and SS5 pits light reddish grey decomposed rock were observed at a depth range of 0.8m to 3.5m together with traces of gravels and cobble stone size materials. The decomposed rocks were difficult to excavate with a pick. From the particle size analysis the soils can be classified as light grey reddish gravelly sands. Because of the nature of the soil (predominantly decomposed rocks) it was difficult to obtain samples for triaxial testing.

The soils beyond 1m at the site are predominantly decomposed rock which was difficult to excavate with a pick. According to BS8004 the safe bearing capacity for decomposed rock can be taken as 600kN/m^2. The proposed building is the one storey building with load bearing walls on strip footing and concrete foundations supporting columns. In case of concrete foundations supporting column loads, a factor of safety of 1.5 should be applied, thus the allowable bearing capacity should be *400kN/m^2*. This is to take into account variation of foundation sizes and possible soil conditions. The foundations should be placed at a depth of not less than 1.5m and the smallest dimension of the foundation should be not less than 1m to take into account the effect of punching. In case of strip footing supporting load bearing walls, the foundation depth should be not less than 1m and the width of the footing should be not less than three times the thickness of the load bearing wall. Derivation of bearing capacity from the results of triaxial test was not possible due to the nature of the soil.

Density or compaction test were carried out on the samples collected in accordance with BS 1377 part 4, 1990 using the 4.5kg hammer. It was observed that for all the five pits at all the depth in question the maximum dry density (MDD) ranged from 1811kg/m^3 to 2028kg/m^3 with an average of 1977kg/m^3 and the optimum moisture content (OMC) ranged from 7% to 13.9% with an average of 9.27%. Where necessary these materials can be used as fill provided they are compacted to their maximum dry density.

Specific gravity test results from trial it samples showed that the specific gravity of the soil at Domasi varied from 2.44 to 2.76 with an average of 2.57.

From the DCP test it was observed that most locations at all depth had a Penetration Index (PI) of less than 13mm/blow (approx. CBR of 15.8). This indicates that averagely Domasi has a quite strong and stable ground condition which can ably accommodate normal foundation loads from buildings.

However some isolated pockets of weak points were observed, i.e., point No 1, 4, 41,94 and 116 at depth of 0.8m, 1m, 1m, 1.23m and 0.2m respectively. These weak points are not a concern as they can easily be bridged by the base of the foundation. Foundations being made of concrete are rigid in nature as such they are regarded to bridge weak points. Another alternative can be re compacting the weak area or location to improve the bearing capacity.

The water percolation test results gave a varying set of results. On PT 1 and 4 the percolation rate was very fast. On PT 2 the average percolation rate was 183s/mm and on point 3 the average was 10.15s/mm. If used for soakaway the appropriate area is on PT 3. On PT 1 and 2 the rate is so fast such that the soil will not be able to return bacteria and nutrients for effective decomposition while on point 2 the rate is so slow such that saturation of the soil is eminent causing water logged conditions which can affect performances of soakaways. Water logged conditions can also affect the bearing capacity of the soil. Where this has occurred, a factor of safety of 2 on the bearing capacity should be applied.

4. 0 Recommendations

The soil conditions at the proposed site at Domasi beyond 1m have a safe bearing capacity of 600kN/m^2. In case of foundations supporting column loads, a factor of safety of 1.5 should be applied, i.e. the foundations should be designed based on 400kN/m^2 as the allowable bearing capacity of the soil. In addition the foundations should be placed at a depth not less than 1.5m and the smallest dimension should be not less than 1m. In case of load bearing walls, the foundations should be placed at a depth of not less than 1m and the width of the strip footing should be not less than three times the wall thickness. Where the percolation value has indicated potential for saturation the safe bearing capacity should be reduced to 300kN/m^2, i.e. applying a factor of safety of 2.

5.0 References

1. Soil mechanics by R.F. Graig
2. Elements of Soil mechanics by G.N. Smith

6.0 Appendices (attached separately)

1. Classification /Grading Test results
2. Moisture Density results
3. Specific Gravity Test Results
4. Triaxial Test Results
5. DCP Test results

6-3. 要請機材の検討と機材選定過程

凡 例

記号 / 選定過程	O/可	X/不可/調達困難	非該当	N.D.
① 要請	有り	無		
② 現行カリキュラム	掲載有	掲載無	カリキュラムと無関係	
③ 使用頻度/費用対効果	高～中程度	低いもしくは無		実績なし
④ 類似校における機材活用状況	高～中程度	低いもしくは無		調査データなし
⑤ 代替可否	他の機材で代替が可能	他の機材で代替が不可能		
⑥ 特定消耗品/調達困難	メーカー特有の消耗品あり	調達自体がむずかしい	消耗品をもたない	
⑦ 維持管理	可能	不可能もしくは難しい		
⑧ 判定	計画する	計画しない		

対象各教科の機材選定過程

アイテム番号	機材名	要請	使用頻度/費用対効果	現行カリキュラム	類似校での機材活用状況	代替可否	特定消耗品/調達困難	維持管理	判定
生物学									
BIO-1	滅菌器（滅菌用圧力鍋）	O	O	O	O	不可	非該当	O	O
BIO-2	遠心分離機（20,000 回転/分タイプ）	O	O	O	O	不可	非該当	O	O
BIO-3	マイクロ遠心機	O	X	X	X	不可	非該当	X	X
BIO-4	インキュベーター	O	O	O	O	不可	非該当	O	O
BIO-5	浄水装置（蒸留水製造装置）	O	O	O	O	不可	非該当	O	O
BIO-6	温度計	O	O	O	O	不可	非該当	O	O
BIO-7	pH 計	O	O	O	O	不可	非該当	O	O
BIO-8	双眼顕微鏡（光源装置付）	O	X	X	O	不可	非該当	O	X
BIO-9	生物顕微鏡	O	O	O	O	不可	非該当	O	O
BIO-10	解剖顕微鏡	X	O	O	O	不可	非該当	O	O
BIO-11	電子てんびん	O	O	O	O	不可	非該当	O	O
BIO-12	水槽	O	X	O	O	可	非該当	O	X
BIO-13	ウォーターバス（恒温水槽）	O	O	O	O	不可	非該当	O	O
BIO-14	ガスバーナー（ブンゼンバーナー）	O	O	O	O	不可	非該当	O	O
BIO-15	三脚（バーナー用）	X	O	O	O	不可	非該当	O	O
BIO-16	アルコールランプ	X	O	O	O	不可	非該当	O	O
BIO-17	三脚（アルコールランプ用）	X	O	O	O	不可	非該当	O	O
BIO-18	金網	X	O	O	O	不可	非該当	O	O
BIO-19	コルクボーラー	O	O	O	O	不可	非該当	O	O
BIO-20	虫眼鏡	O	O	O	O	不可	非該当	O	O
BIO-21	解剖器具セット	O	O	O	O	不可	非該当	O	O
BIO-22	解剖皿	O	O	O	O	不可	非該当	O	O
BIO-23	ビーカー 50ml	O	O	O	O	不可	非該当	O	O
BIO-24	ビーカー 100ml	O	O	O	O	不可	非該当	O	O
BIO-25	ビーカー 150ml	O	O	O	O	不可	非該当	O	O
BIO-26	ビーカー 250ml	O	O	O	O	不可	非該当	O	O
BIO-27	ビーカー 400ml	O	O	O	O	不可	非該当	O	O
BIO-28	ビーカー 1000ml	O	O	O	O	不可	非該当	O	O
BIO-29	三角フラスコ 250ml	O	O	O	O	不可	非該当	O	O
BIO-30	三角フラスコ 500ml	O	O	O	O	不可	非該当	O	O
BIO-31	メスシリンダー 100ml	O	O	O	O	不可	非該当	O	O
BIO-32	メスシリンダー 250ml	O	O	O	O	不可	非該当	O	O
BIO-33	撹拌棒	O	O	O	O	不可	非該当	O	O
BIO-34	滴下ピペット 2ml	O	O	O	O	不可	非該当	O	O
BIO-35	駒込ピペット 1.0ml	O	O	O	O	不可	非該当	O	O
BIO-36	試験管	O	O	O	O	不可	非該当	O	O
BIO-37	試験管（大）	O	O	O	O	不可	非該当	O	O
BIO-38	ペトリ皿	O	O	O	O	不可	非該当	O	O
BIO-39	時計皿	O	O	O	O	不可	非該当	O	O
BIO-40	スライドガラス	O	O	O	O	不可	非該当	O	O

アイテム番号	機材名	要請	使用頻度/費用対効果	現行カリキュラム	類似校での機材活用状況	代替可否	特定消耗品/調達困難	維持管理	判定
BIO-41	カバーガラス	O	O	O	O	不可	非該当	O	O
BIO-42	試験管用スタンド	X	O	O	O	不可	非該当	O	O
BIO-43	試験管ばさみ	X	O	O	O	不可	非該当	O	O
BIO-44	鉄製スタンド	O	X	O	O	不可	非該当	O	X
BIO-45	ストップウォッチ	X	X	O	O	不可	非該当	O	X
BIO-46	薬品用冷蔵庫	O	X	非該当	O	可	非該当	O	X
BIO-47	可動式プロジェクター	O	O	非該当	O	不可	非該当	O	O
BIO-48	ロールアップスクリーン（小）	X	O	非該当	O	不可	非該当	O	O
BIO-49	デスクトップコンピューター	O	X	非該当	O	不可	非該当	O	X
BIO-50	レーザープリンター	O	X	非該当	O	不可	非該当	O	X
BIO-51	ビデオカメラ	O	X	非該当	O	不可	非該当	O	X
BIO-52	デジタルカメラ	O	X	非該当	O	可	非該当	O	X
BIO-53	テレビモニタ	O	X	非該当	O	不可	非該当	O	X
BIO-54	スライドプロジェクター	O	X	O	O	不可	非該当	O	X
BIO-55	実験台（生徒用）	X	O	非該当	O	不可	非該当	O	O
BIO-56	実験台（教員用）	X	O	非該当	O	不可	非該当	O	O
BIO-57	実験台（準備室用）	X	O	非該当	O	不可	非該当	O	O
BIO-58	サイド実験台（実験室用）	X	O	非該当	O	不可	非該当	O	O
BIO-59	サイド実験台（準備室用）	X	O	非該当	O	不可	非該当	O	O
物理学									
PHY-1	マルチ電流計	O	O	O	O	不可	非該当	O	O
PHY-2	放射線源セット	O	X	O	X	不可	非該当	O	X
PHY-3	マルチ電圧計	O	O	O	O	不可	非該当	O	O
PHY-4	ガイガー・ミュラー管	O	X	O	X	不可	非該当	O	X
PHY-5	ニュートン環装置	O	X	X	O	不可	非該当	O	X
PHY-6	レンズ（焦点距離 10cm）	O	O	O	O	不可	非該当	O	O
PHY-7	レンズ（焦点距離 15cm）	O	O	O	O	不可	非該当	O	O
PHY-8	光学レンズ（平突）	X	O	O	O	不可	非該当	O	O
PHY-9	光学台	O	O	O	O	不可	非該当	O	X
PHY-10	ノギス	O	O	O	O	不可	非該当	O	O
PHY-11	マイクロメーター	O	O	O	O	不可	非該当	O	O
PHY-12	ばねばかり（0-0.5kg/5N）	O	O	O	O	不可	非該当	O	O
PHY-13	ばねばかり（0-1.0kg/10N）	O	O	O	O	不可	非該当	O	O
PHY-14	電子てんびん	O	O	O	O	不可	非該当	O	O
PHY-15	オシロスコープ	O	O	O	O	不可	非該当	O	O
PHY-16	ストップウォッチ	O	O	O	O	不可	非該当	O	O
PHY-17	三竿精密秤	O	O	O	O	不可	非該当	O	O
PHY-18	シリンジ各サイズ	O	X	O	O	不可	非該当	O	X
PHY-19	連通管	O	X	X	N.D.	不可	非該当	O	X
PHY-20	測温抵抗体	O	X	X	N.D.	不可	非該当	O	X
PHY-21	容積式温度計	O	X	X	N.D.	不可	非該当	O	X
PHY-22	アルキメデス原理説明器	O	X	X	N.D.	不可	非該当	O	X
PHY-23	Light gate 実験器	O	X	X	N.D.	不可	非該当	O	X
PHY-24	ばね	O	O	O	O	不可	非該当	O	O
PHY-25	ニクロム線	O	X	X	X	不可	非該当	O	X
PHY-26	銅線	O	X	X	X	不可	非該当	O	X
PHY-27	カラーコード抵抗器	O	O	O	O	不可	非該当	O	O
PHY-28	抵抗	O	O	O	O	不可	非該当	O	O
PHY-29	二重金属板	O	X	O	O	可	非該当	O	X
PHY-30	記録タイマー	O	O	O	O	不可	非該当	O	O
PHY-31	水波投影装置	O	O	O	O	不可	非該当	O	X
PHY-32	スリンキーばね	O	O	O	O	不可	非該当	O	O
PHY-33	信号発生装置	O	O	O	O	不可	非該当	O	X
PHY-34	モノコード	O	X	O	X	不可	非該当	O	X
PHY-35	ギター	O	X	X	N.D.	可	非該当	O	X
PHY-36	真空ポンプ	O	O	O	O	不可	非該当	O	O
PHY-37	力学滑走台	O	X	X	X	不可	非該当	O	X
PHY-38	棒磁石	O	O	O	O	不可	非該当	O	O
PHY-39	馬蹄型磁石	O	O	O	O	不可	非該当	O	O
PHY-40	方位磁石	O	O	O	O	不可	非該当	O	O
PHY-41	金属棒（アルミ、銅、ニクロム、鉄等）	O	O	O	X	不可	非該当	O	X
PHY-42	発光ダイオード（LED）	O	X	O	X	不可	非該当	O	X

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PHY-43	サーミスタ	O	X	O	X	不可	非該当	O	X
PHY-44	ダイオード	O	X	O	X	不可	非該当	O	X
PHY-45	フォトレジスター	O	X	X	X	不可	非該当	O	X
PHY-46	トランジスター	O	X	X	O	不可	非該当	O	X
PHY-47	コンデンサ セット	X	O	O	O	不可	非該当	O	O
PHY-48	電子モジュール	O	X	X	X	不可	非該当	O	X
PHY-49	ポータブルガス分析装置	O	X	X	X	不可	非該当	O	X
PHY-50	レーザーガス分析装置	O	X	X	X	不可	非該当	O	X
PHY-51	アボメーター→マルチメーター	O	O	O	O	不可	非該当	O	O
PHY-52	検電器	O	X	O	X	不可	非該当	O	X
PHY-53	可変抵抗器	O	O	O	O	不可	非該当	O	O
PHY-54	ビーカー 100ml	X	O	O	O	不可	非該当	O	O
PHY-55	ビーカー 250ml	X	O	O	O	不可	非該当	O	O
PHY-56	攪拌棒	X	O	O	O	不可	非該当	O	O
PHY-57	ブンゼンバーナー	X	O	O	O	不可	非該当	O	O
PHY-58	三脚（ブンゼンバーナー用）	X	O	O	O	不可	非該当	O	O
PHY-59	レトルトスタンド	X	O	O	O	不可	非該当	O	O
PHY-60	ボスヘッドクランプ	X	O	O	O	不可	非該当	O	O
PHY-61	G クランプ	X	O	O	O	不可	非該当	O	O
PHY-62	金網	X	O	O	O	不可	非該当	O	O
PHY-63	滑車セット	X	O	O	O	不可	非該当	O	O
PHY-64	力学実験用錘（フック付）	X	O	O	O	不可	非該当	O	O
PHY-65	虫めがね	X	O	O	O	不可	非該当	O	O
PHY-66	プリズムセット(45 度及び 60 度)	X	O	O	O	不可	非該当	O	O
PHY-67	レンズホルダー	X	O	O	O	不可	非該当	O	O
PHY-68	ストロボスコープ	X	O	O	O	不可	非該当	O	O
PHY-69	電源装置（12V）	X	O	O	O	不可	非該当	O	O
PHY-70	検流計	X	O	O	O	不可	非該当	O	O
PHY-71	みのむし付リード線	X	O	O	O	不可	非該当	O	O
PHY-72	熱量計	X	O	O	O	不可	非該当	O	X
PHY-73	温度計	X	O	O	O	不可	非該当	O	O
PHY-74	ゴム栓	X	O	O	O	不可	非該当	O	O
PHY-75	ポテンシオメータ	X	O	O	O	不可	非該当	O	O
PHY-76	可動式プロジェクター	O	O	非該当	O	不可	非該当	O	O
PHY-77	ロールアップスクリーン（小）	X	O	非該当	O	不可	非該当	O	O
PHY-78	ホワイトボード	O	X	非該当	O	不可	非該当	O	X
PHY-79	テレビモニタ（DVD プレーヤー付）	O	X	非該当	O	不可	非該当	O	X
PHY-80	実験台（生徒用）	X	O	非該当	O	不可	非該当	O	O
PHY-81	実験台（教員用）	X	O	非該当	O	不可	非該当	O	O
PHY-82	実験台（準備室用）	X	O	非該当	O	不可	非該当	O	O
PHY-83	サイド実験台（実験室用）	X	O	非該当	O	不可	非該当	O	O
PHY-84	サイド実験台（準備室用）	X	O	非該当	O	不可	非該当	O	O
PHY-85	ドラフトチャンバー	X	O	非該当	O	可	非該当	O	O
化学									
CHE-1	ビュレット	O	O	O	O	不可	非該当	O	O
CHE-2	メスシリンダー（10ml）	X	O	O	O	不可	非該当	O	O
CHE-3	メスシリンダー（25 ml）	O	O	O	O	不可	非該当	O	O
CHE-4	メスシリンダー（50ml）	X	O	O	O	不可	非該当	O	O
CHE-5	メスシリンダー（100ml）	O	O	O	O	不可	非該当	O	O
CHE-6	メスシリンダー（250ml）	X	O	O	O	不可	非該当	O	O
CHE-7	メスシリンダー（1000ml）	O	X	O	O	可	非該当	O	X
CHE-8	メスフラスコ（50ml）	X	O	O	O	不可	非該当	O	O
CHE-9	メスフラスコ（100ml）	O	O	O	O	不可	非該当	O	O
CHE-10	メスフラスコ（200ml）	O	X	O	O	不可	非該当	O	X
CHE-11	メスフラスコ（250ml）	O	O	O	O	不可	非該当	O	O
CHE-12	丸底フラスコ（100ml）	X	O	O	O	不可	非該当	O	O
CHE-13	三角フラスコ（300ml）	X	O	O	O	不可	非該当	O	O
CHE-14	融点測定器	O	X	X	N.D.	不可	非該当	X	X
CHE-15	還流反応装置	O	O	X	O	不可	非該当	O	O
CHE-16	吸引濾過装置（ブフナーロート）	O	O	O	O	不可	非該当	O	O
CHE-17	ブフナーフラスコ	O	O	O	O	不可	非該当	O	O

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CHE-18	リービッヒ冷却管	X	O	O	O	不可	非該当	O	O
CHE-19	デシケーター	O	X	O	O	不可	非該当	O	O
CHE-20	ロート	X	O	O	O	不可	非該当	O	O
CHE-21	分液ロート	O	X	O	O	不可	非該当	O	X
CHE-22	滴下ロート	O	X	O	O	不可	非該当	O	X
CHE-23	撹拌機	O	X	X	O	可	非該当	X	X
CHE-24	ウォーターバス	O	O	O	O	不可	非該当	O	O
CHE-25	真空乾燥器	O	X	X	O	不可	非該当	O	O
CHE-26	電子てんびん（カバー付）	O	O	O	O	不可	非該当	O	O
CHE-27	電子てんびん	X	O	O	O	不可	非該当	O	O
CHE-28	三竿精密秤	O	O	O	O	不可	非該当	O	O
CHE-29	上皿てんびん	X	O	O	O	不可	非該当	O	O
CHE-30	ブロックインキュベーター	O	X	X	N.D.	不可	非該当	X	X
CHE-31	ラボシェーカー	O	X	X	N.D.	不可	非該当	X	X
CHE-32	pH 計（デジタル）	O	O	O	O	不可	非該当	O	O
CHE-33	分光光度計	O	O	O	O	不可	非該当	O	O
CHE-34	浄水装置	O	O	O	O	不可	非該当	O	O
CHE-35	定温乾燥機	O	X	X	O	不可	非該当	O	O
CHE-36	マグネチックスターラー	O	O	O	O	不可	非該当	O	O
CHE-37	ピペットフィラー	O	O	O	O	不可	非該当	O	O
CHE-38	メスピペット（2ml）	X	O	O	O	不可	非該当	O	O
CHE-39	メスピペット（5ml）	X	O	O	O	不可	非該当	O	O
CHE-40	メスピペット（10ml）	X	O	O	O	不可	非該当	O	O
CHE-41	メスピペット（25ml）	X	O	O	O	不可	非該当	O	O
CHE-42	マイクロピペット	O	X	O	N.D.	可	非該当	O	X
CHE-43	滴下ピペット（2ml 及び 5ml）	X	O	O	O	不可	非該当	O	O
CHE-44	滴下ボトル	O	X	O	O	可	非該当	O	X
CHE-45	レトルトスタンド	X	O	O	O	不可	非該当	O	O
CHE-46	ビュレット用クランプ	X	O	O	O	不可	非該当	O	O
CHE-47	レトルトクランプ	X	O	O	O	不可	非該当	O	O
CHE-48	ボスヘッドクランプ	X	O	O	O	不可	非該当	O	O
CHE-49	試験管	X	O	O	O	不可	非該当	O	O
CHE-50	試験管ばさみ	X	O	O	O	不可	非該当	O	O
CHE-51	試験管立て（12 本用）	X	O	O	O	不可	非該当	O	O
CHE-52	ビーカー（50ml）	X	O	O	O	可	非該当	O	O
CHE-53	ビーカー（250ml）	X	O	O	O	不可	非該当	O	O
CHE-54	ビーカー（600ml）	X	O	O	O	不可	非該当	O	O
CHE-55	ビーカー（1000ml）	X	O	O	N.D.	可	非該当	O	O
CHE-56	ビーカー挟み	X	O	O	N.D.	不可	非該当	O	O
CHE-57	時計皿	X	O	O	O	不可	非該当	O	O
CHE-58	薬さじ	X	O	O	O	不可	非該当	O	O
CHE-59	三脚（バーナー用）	X	O	O	O	不可	非該当	O	O
CHE-60	金網	X	O	O	O	不可	非該当	O	O
CHE-61	気圧計	X	O	O	O	不可	非該当	O	O
CHE-62	温度計	X	O	O	O	不可	非該当	O	O
CHE-63	熱量計	X	O	O	O	不可	非該当	O	O
CHE-64	電源装置（6-12V 調整可）	X	O	O	O	不可	非該当	O	O
CHE-65	可変抵抗器	X	O	O	O	不可	非該当	O	O
CHE-66	みのむし付リード線	X	O	O	O	不可	非該当	O	O
CHE-67	ストップウオッチ	X	O	O	O	不可	非該当	O	O
CHE-68	ゴム栓	X	O	O	O	不可	非該当	O	O
CHE-69	ゴムチューブ	X	O	O	O	不可	非該当	O	O
CHE-70	保護眼鏡	X	O	O	O	不可	非該当	O	O
CHE-71	可動式プロジェクター	O	非該当	O	O	不可	非該当	O	O
CHE-72	ロールアップスクリーン（小）	X	非該当	O	O	可	非該当	O	O
CHE-73	テレビモニタ	O	非該当	X	N.D.	可	非該当	X	X
CHE-74	DVD プレーヤー	O	非該当	X	N.D.	可	非該当	X	X
CHE-75	実験台（生徒用）	X	非該当	O	O	不可	非該当	O	O
CHE-76	実験台（教員用）	X	非該当	O	O	不可	非該当	O	O
CHE-77	実験台（準備室用）	X	非該当	O	O	不可	非該当	O	O
CHE-78	サイド実験台（実験室用）	X	非該当	O	O	不可	非該当	O	O
CHE-79	サイド実験台（準備室用）	X	非該当	O	O	不可	非該当	O	O
CHE-80	ドラフトチャンバー	X	非該当	O	O	不可	非該当	O	O

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人間生態学									
HEC-1	可動式プロジェクター	O	非該当	O	N.D.	不可	非該当	O	O
HEC-2	洗濯機	O	O	O	N.D.	不可	非該当	O	O
HEC-3	電動ミシン	O	O	O	N.D.	不可	非該当	O	O
HEC-4	手動ミシン	O	O	O	N.D.	可	調達困難	O	X
HEC-5	織機	O	O	X	N.D.	不可	非該当	O	X
HEC-6	編機	O	O	X	N.D.	不可	非該当	O	X
HEC-7	野菜乾燥機	O	O	O	N.D.	不可	非該当	O	O
HEC-8	アイロン台	O	O	O	N.D.	不可	非該当	O	O
HEC-9	アイロン	X	O	O	N.D.	不可	非該当	O	O
HEC-10	電磁調理器	O	O	O	N.D.	可	非該当	O	X
HEC-11	ガス調理台	O	O	O	N.D.	不可	非該当	O	O
HEC-12	パン生地用ミキサー	O	X	X	N.D.	不可	非該当	O	X
HEC-13	電子レンジ	O	O	O	N.D.	不可	非該当	O	O
HEC-14	冷蔵庫	O	O	X	N.D.	不可	非該当	O	X
HEC-15	タンパク質消化装置	O	X	X	N.D.	可	O	X	X
HEC-16	タンパク質分析計	O	X	X	N.D.	可	O	X	X
HEC-17	分光光度計	O	O	O	N.D.	不可	非該当	O	O
HEC-18	キュベット（ガラス）	O	X	X	N.D.	不可	非該当	O	X
HEC-19	キュベット（クオーツ）	O	X	X	N.D.	不可	非該当	O	X
HEC-20	マグネチックスターラー	O	X	X	N.D.	不可	非該当	O	X
HEC-21	マイクロピペット	O	X	X	N.D.	不可	非該当	O	X
HEC-22	滴下ボトル	O	X	X	N.D.	不可	非該当	O	X
HEC-23	マイクロ遠心機	O	X	X	N.D.	不可	O	O	X
HEC-24	フリーズドライヤー	O	X	X	N.D.	不可	非該当	O	X
HEC-25	高速液体クロマトグラフィー（HPLC）	O	X	X	X	不可	O	X	X
HEC-26	HPLC 用カラム	O	X	X	X	不可	O	X	X
HEC-27	ボルテックスミキサー	O	X	X	N.D.	不可	非該当	O	X
HEC-28	ロッドホモジェナイザー―	O	X	X	N.D.	不可	非該当	O	X
HEC-29	チャンバー式ホモジェナイザー―	O	X	X	N.D.	不可	非該当	O	X
HEC-30	マッフル炉	O	X	X	O	不可	非該当	O	X
HEC-31	卓上グラインダー	O	X	X	N.D.	不可	非該当	O	X
HEC-32	ウォーターバス	O	X	X	N.D.	可	非該当	O	X
HEC-33	ウォーターバスシェーカー	O	X	X	N.D.	不可	非該当	O	X
HEC-34	SDS-PAGE 電気泳動装置	O	X	X	X	不可	O	X	X
HEC-35	pH 計	O	X	X	N.D.	不可	非該当	O	X
HEC-36	デジタル秤（マイクログラム・ミリグラム用）	O	X	X	N.D.	不可	非該当	O	X
HEC-37	デジタル秤（ミリグラム及びグラム用）	O	X	X	N.D.	不可	非該当	O	X
HEC-38	メスシリンダー	O	X	X	N.D.	不可	非該当	O	X
HEC-39	ビーカー	O	X	X	N.D.	不可	非該当	O	X
HEC-40	超音波水槽	O	X	X	N.D.	不可	非該当	O	X
HEC-41	食料用温度計	O	O	O	N.D.	不可	非該当	O	O
HEC-42	ソックスレー抽出器	O	X	X	N.D.	不可	非該当	O	X
HEC-43	ピペット	O	X	X	N.D.	不可	非該当	O	X
HEC-44	定温乾燥機	O	X	X	N.D.	不可	非該当	O	X
農業（農学）									
AGR-1	スプリンクラー	O	O	X	N.D.	不可	非該当	O	X
AGR-2	鋤（牛が引くタイプ）	O	O	X	N.D.	不可	非該当	O	X
AGR-3	土寄せ機	O	O	X	N.D.	可	非該当	O	X
AGR-4	メイズシェラー	O	O	X	N.D.	可	非該当	O	X
AGR-5	落花生皮むき機	O	O	X	N.D.	可	非該当	O	X
AGR-6	手押し車（一輪車）	O	O	X	N.D.	不可	非該当	O	O
AGR-7	手持ち熊手	O	O	O	N.D.	可	非該当	O	X
AGR-8	園芸用シャベル	O	O	O	N.D.	可	非該当	O	X
AGR-9	レーキ	O	O	X	N.D.	不可	非該当	O	X
AGR-10	スコップ	O	O	X	N.D.	不可	非該当	O	X
AGR-11	はかり（10kg まで）	O	O	O	N.D.	不可	非該当	O	O
AGR-12	はかり（100kg まで）	O	O	O	N.D.	不可	非該当	O	O
AGR-13	ホース	O	O	X	N.D.	不可	非該当	O	X
AGR-14	土壌塩分計	X	O	O	N.D.	不可	非該当	O	O
AGR-15	pH 計（土壌用）	X	O	O	N.D.	不可	非該当	O	O

アイテム番号	機材名	要請	使用頻度/費用対効果	現行カリキュラム	類似校での機材活用状況	代替可否	特定消耗品/調達困難	維持管理	判定
コンピュータ科学									
COM-1	デスクトップコンピューター	O	O	O	O	X	非該当	O	O
COM-2	可動式プロジェクター	O	非該当	O	O	X	非該当	O	O
COM-3	ホワイトボード	O	非該当	O	O	X	非該当	O	X
COM-4	ロールアップスクリーン（小）	X	非該当	O	O	O	非該当	O	O
COM-5	レーザープリンター（モノクロ）	X	非該当	O	O	X	非該当	O	O
COM-6	スキャナー	X	非該当	O	O	X	非該当	O	O
COM-7	ルーター	X	非該当	O	O	X	非該当	O	O
COM-8	ハブ	X	非該当	O	O	X	非該当	O	O
COM-9	サーバー	X	非該当	O	O	X	非該当	O	O
COM-10	サーバーラック	X	非該当	O	O	X	非該当	O	O
COM-11	LAN ケーブル	X	非該当	O	O	X	非該当	O	O
COM-12	無停電電源装置（700VA）	X	非該当	O	N.D.	X	非該当	O	O
COM-13	無停電電源装置（1.0kVA）	X	非該当	O	N.D.	X	非該当	O	O
COM-14	電源延長ケーブル	X	非該当	O	N.D.	X	非該当	O	O
数学									
MAT-1	デスクトップコンピューター	O	O	X	N.D.	可	非該当	O	X
MAT-2	数値解析ソフトウェア（Matlab）	O	O	O	N.D.	不可	調達困難	X	X
MAT-3	数式処理ソフトウェア（Maple）	O	O	O	N.D.	不可	調達困難	X	X
MAT-4	数式処理ソフトウェア（Mathematica）	O	O	O	N.D.	不可	調達困難	X	X
MAT-5	統計解析ソフトウェア（SPSS）	O	O	O	N.D.	不可	調達困難	X	X
MAT-6	グラフ関数電卓	O	O	O	N.D.	不可	非該当	O	O
MAT-7	可動式プロジェクター	O	X	X	N.D.	可	非該当	O	X
	※数学の実習機材について、コンピュータ実習機材と重複する MAT-1 については、数学機材として配備しない（「使用頻度/費用対効果」の項目に X を記載）。								
地理学									
GEO-1	望遠鏡	O	O	X	N.D.	不可	非該当	O	X
GEO-2	エバポレーター	O	X	X	N.D.	不可	非該当	X	X
GEO-3	百葉箱	O	O	O	N.D.	不可	非該当	O	O
GEO-4	ガラスキューブもしくは光源	O	O	X	N.D.	可	非該当	O	X
GEO-5	pH 計（土壌用）	O	O	O	N.D.	不可	非該当	O	O
GEO-6	顕微鏡	O	O	X	N.D.	可	非該当	O	X
GEO-7	定温乾燥機	O	O	X	N.D.	可	非該当	O	X
GEO-8	電子てんびん	O	O	X	N.D.	可	非該当	O	X
GEO-9	試験管	O	O	X	N.D.	可	非該当	O	X
GEO-10	ガラス製ビーカー	O	O	X	N.D.	可	非該当	O	X
GEO-11	スパチュラ	O	O	X	N.D.	可	非該当	O	X
GEO-12	土壌堆積実験装置	O	O	X	N.D.	可	非該当	O	X
GEO-13	双眼顕微鏡	O	O	O	N.D.	不可	非該当	O	O
GEO-14	双眼鏡	O	O	O	N.D.	不可	非該当	O	O
GEO-15	インキュベーター	O	O	X	N.D.	可	非該当	O	X
GEO-16	原子吸光分光光度計	O	X	X	N.D.	不可	非該当	X	X
GEO-17	炎光光度計	O	X	X	N.D.	不可	O	X	X
GEO-18	カメラ	O	O	X	N.D.	可	非該当	O	X
GEO-19	実体鏡	O	O	O	N.D.	不可	非該当	O	O
GEO-20	面積計（車輪式）	O	O	O	N.D.	不可	非該当	O	O
GEO-21	面積計（ドットグリッド方式）	O	O	O	N.D.	可	調達困難	O	O
GEO-22	方位磁石	O	O	X	N.D.	可	非該当	O	X
GEO-23	展示棚	O	O	X	N.D.	不可	非該当	O	X
	※地理学の実習機材について、理系実験機材と重複するものは、地理学機材として配備しない（「使用頻度/費用対効果」の項目に X を記載）。								
体育									
PE-1	フィットネスルーム用機材	O	O	O	N.D.	不可	非該当	X	X
PE-2	やり 800g	O	O	N.D.	N.D.	不可	非該当	O	O
PE-3	やり 600g	O	O	N.D.	N.D.	不可	非該当	O	O
PE-4	円盤 2.0kg	O	O	N.D.	N.D.	不可	非該当	O	O
PE-5	円盤 1.0kg	O	O	N.D.	N.D.	不可	非該当	O	O
PE-6	砲丸 7.0kg	O	O	N.D.	N.D.	不可	非該当	O	O

アイテム番号	機材名	要請	使用頻度/費用対効果	現行カリキュラム	類似校での機材活用状況	代替可否	特定消耗品/調達困難	維持管理	判定
PE-7	砲丸 4.0kg	O	O	N.D.	N.D.	不可	非該当	O	O
PE-8	スターティングブロック	O	O	N.D.	N.D.	不可	非該当	O	O
PE-9	ランニングトラック	O	O	N.D.	N.D.	可	非該当	O	X
特別支援室									
SNE-1	スクリーンリーダー搭載コンピュータ	O	非該当	O	N.D.	不可	非該当	O	O
SNE-2	点字用スキャナー	O	非該当	O	N.D.	不可	非該当	O	O
SNE-3	墨字プリンター	O	非該当	N.D.	N.D.	不可	非該当	O	X
SNE-4	点字プリンター	O	非該当	O	N.D.	不可	非該当	O	O
SNE-5	車いす	O	非該当	N.D.	N.D.	不可	非該当	O	O
SNE-6	点字タイプライター	O	非該当	O	N.D.	不可	非該当	O	O
SNE-7	白杖	O	非該当	X	N.D.	不可	非該当	O	X
SNE-8	携帯用ラジオ	O	非該当	O	N.D.	不可	非該当	O	O
SNE-9	カセットテープ	O	非該当	N.D.	N.D.	不可	非該当	O	X
SNE-10	補聴装置	O	非該当	X	N.D.	不可	非該当	X	X
SNE-11	オーディオメーター	O	非該当	X	N.D.	不可	非該当	X	X

6-4. DCE 生徒数統計

ディプロマ（在学）		寄宿生		通学生		1 年生		2 年生		3 年生		合計	
		男	女	男	女	男	女	男	女	男	女	男	女
2009	人文					83	52	55	32	177	93	416	218
	理数					53	23	48	18				
2010	人文	315	202	90	51	107	93	80	52	55	32	405	253
	理数					62	35	53	23	48	18		
2011	人文	310	207	125	59	93	37	106	93	79	52	435	266
	理数					44	26	61	35	52	23		
2012	人文	305	145	172	74	115	32	93	37	106	87	477	219
	理数					58	14	44	26	61	23		
2013	人文							115	32	93	37	310	109
	理数							58	14	44	26		

ディプロマ（遠隔）		1 年生		2 年生		3 年生		合計	
		男	女	男	女	男	女	男	女
2008	人文	103	39	47	53	71	18	513	181
	理数	187	14	56	24	49	33		
2009	人文	14	30	104	38	49	51	616	179
	理数	213	21	180	15	56	24		
2010	人文	41	41	14	30	104	39	599	178
	理数	53	32	213	23	174	13		
2011	人文	111	35	40	39	14	30	489	174
	理数	58	15	53	32	213	23		
2012	人文			111	35	40	39	262	121
	理数			58	15	53	32		

中等学位(アップグレード)		4 年生		5 年生		合計	
		男	女	男	女	男	女
2010	人文	59	22	0	0	66	33
	理数	7	11	0	0		
2011	人文	0	0	59	22	85	40
	理数	20	7	6	11		
2012	人文	25	3	0	0	103	40
	理数	58	30	20	7		

初等学位		寄宿生		通学生		1 年生		2 年生		3 年生		4 年生		合計	
		男	女	男	女	男	女	男	女	男	女	男	女	男	女
2008						22	17	14	16	22	7	33	30	102	83
	（転入）									11	13				
2009						21	19	23	16	14	16	22	7	103	80
	（転入）									12	9	11	13		
2010		75	63	41	28	20	9	21	20	31	27	14	16	116	91
	（転入）									18	10	12	9		
2011		80	58	56	44	34	24	20	9	20	20	29	27	136	102
	（転入）									15	12	18	10		
2012		85	49	65	38	45	17	34	24	20	9	17	19	150	87
	（転入）									20	7	14	11		