

A-5 コンサルタント討議議事録 (T/M) 1

**Technical Memorandum
on the Preparatory Survey for the Project on Construction
of TICAD Human Resource Development Center
for Business and Industry
in the Federal Democratic Republic of Ethiopia**

Based on the Minutes of Discussion dated September 3rd, 2015 signed by Mr. Getahun Tadesse, Director General Ethiopian Kaizen Institute, the Federal Democratic Republic of Ethiopia and Mr. Takusaburo Kimura, Leader of Preparatory Survey Team of JICA, Japan, the Survey Team of Consultants held a series of technical discussions with officials concerned of Ethiopian Kaizen Institute for the above-captioned survey to wrap-up the works carried out during their stay in the Federal Democratic Republic of Ethiopia.

In the course of technical discussions and field survey, the both Japanese and Ethiopia sides confirmed the main items described in the attached sheets.

Addis Ababa, September 17, 2015



Getahun Tadesse
Director General
Ethiopian Kaizen Institute
The Federal democratic Republic
of Ethiopia



Yoshifumi Hoshiai
Leader of the Consultants
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ATTACHMENT

I. Precondition for design

1. Upper Level Plan

It is regarded that the description of “Ministry of Industry Manufacturing Sector of the Growth and Transformation Plan II (GTP II) 2015-2020” is an upper level political decision of the Project on Construction of TICAD Human Resource Development Center for Business and Industry (hereinafter referred as the project). It is understood that the project shall be implemented in accordance with GTP II’s plan.

2. Past and Future plan prepared by Ethiopia Kaizen Institute (EKI)

The number which is described on “Revised Past and Future plan which is prepared on 12 September 2015 (Annex-1) “is the base of the project design.

3. Project implementation

Current and future Organization structure of EKI is shown on Annex-2. EKI will organize new organization from September 2015. The future plan of staff number is shown on Annex-3

4. Revised EKI Training Plan

EKI’s training plan for 2021(three years after the completion of the building construction) is as shown in Annex-4.

5. Budget and current salary

Facts of the budget, current and future salary of EKI staff are show on Annex-5

6. Indication for evaluation for the project

EKI understands that the target year of the project evaluation is three years after the completion of the new building construction. The target year is to be 2021 tentatively.

EKI committed that use ratio of classroom, accommodation and conference room and number of employee in 2021 will be the indicator for the evaluation. The target numbers are as shown in below.

Table 1 Evaluation Indicator

Indicator	Target (2021)
Use ratio of Classroom	More than 70% / working day
Use ratio of Accommodation	More than 70% / working day
Use ratio of Conference room	More than 70% / working day
Number of staff	More than 230 people

II. Land Acquisition for Construction site

Current landowner of the construction site is Public Procurement Enterprise (PPE) under the Privatization and Public Enterprise Supervisory Agency (PPSA) in Ministry of Industry.

EKI confirmed that the process and deadline of the construction site land acquisition is as following below.

Table 2 Process and deadline of the land acquisition

	Process	Deadline
1	Ethiopian Government decide to move the landowner ship from Public Procurement Enterprise (PPE) to EKI	End of October 2015
2	According to the Government decision, Addis Ababa Municipality (AAM) order PPE to remove and pay compensation for the removal.	Mid of November 2015
3	PPE remove the existing warehouse and other sheds including their foundation and leveling the site	End of November 2015
4	AAM changes the landownership form PPE to EKI. EKI submit the title deed to JICA	By the end of December 2015

III. Tax exemption

EKI understand that EKI will continue to clarify the tax exemption issue for the project. EKI will inform JICA of its progress at all time.

And EKI understand that if EKI has to reimburse the tax for the project in the future, EKI secures necessary budget accordingly.

IV. Building design

1. Base number for Building Design

The base number for the building design is introduced from the classroom use simulation chart (Annex-4). According to the result of the simulation, required number of the classrooms and accommodation are as shown in the table below.

Table 3 Basic number of the classrooms and Accommodations

Rooms	Number	Note
Classroom for 10 trainee	2 rooms	By training plan
Classroom for 20 trainee	7 rooms	By training plan
Classroom for 60 trainee	2 rooms	By training plan
Conference room for 120	1 room	By training plan
Accommodations	120 Beds	200 trainee (Max) x 67% (trainees from outside of Addis Ababa) x 90% (trainees stay at the accommodation) =120 Beds

According to the future organization plan, EKI's staff's are as shown in Annex-3. Building design for their offices shall be designed in accordance with the planned staff number of 2021.

The requirement for the office in 2021 is as shown in the table below.

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Table 4 Office room requirement

CODE	Room name	Room capacity (person)
DG-1	Director General room	1
S-1	Secretary room	2
S-2	Supporting Staff room	59
Manufacturing Sector		
TM-1	Deputy Director room	1
TM-2	Secretary room	2
TM-3	Manufacturing Sector's room	60
Capacity Building Sector		
TC-1	Deputy Director room	1
TC-2	Secretary room	2
TC-3	Capacity Building Sector's room	40
Infrastructure, Utility, and Service Sector		
TI-1	Deputy Director room (1)	1
TI-2	Secretary room	1
TI-3	Infrastructure, Utility, and Service Sector's room	40
Research and Certificate Sector		
TR-1	Deputy Director room (1)	1
TR-3	Secretary room	1
TR-4	Research and Certificate Sector	40
Kaizen Center Operation/Maintenance		
KO-1	Operation staff room	40
KM-1	Maintenance staff room	

A summary of room requirement is as following table below.

Table 5 Room requirement for new Building

	Main Room/Space	Request
I	Training Section	
	Classroom (for 10 trainee)	2 rooms
	Classroom (for 20 trainee)	7 rooms
	Classroom (for 60 trainee)	2 rooms
	Conference room (for 120 trainee)	1 room Able to Separate two rooms by movable partition
	Video conference room	1 room
	Preparation Room for classroom	As need
	Library	For trainee
II	Accommodation Section	
	Bed room (standard)	100Beds

	Bed room (Large)	20 Beds
	Lounge for stay trainee	As needs
	Laundry and ironing for stay trainee	Basement With Laundry Equipment
	Linen service room for housekeeper	Each accommodation floor
	Kitchenette for stay trainee	Each accommodation floor
	Dining hall (Cafeteria)	120 seats
	Kitchen for dining / food storage / food refrigerator	With Kitchen equipment and Food refrigerator
	Training Gym	
	Kiosk	
III	Management Section	
	Director General room	1 room With wash room
	DG'S Secretary room	1 room
	Supporting Staff room	1 room
	Sector's Offices	4 rooms
	Sector's Deputy Director Offices	4 rooms
	Deputy Director's Secretary room	4 rooms (each 1 Deputy Director)
	Meeting room (syndicate room)	As need
	Waiting room (Reception room)	As need
	Storage	As need
	Printing room	1 room
	IT room (server room)	1 room
IV	Welfare Section	
	First Aid room	1 room
	Nursery	1 room With WC for kids
V	Public Section	
	Entrance hall	On ground floor
	Reception	For guest
	Lobby	At Entrance
	Exhibition space	On ground floor
	Preparation room	For exhibition and event
	Storage	As need
	Elevator hall	Each floor
	Car parking	Basement
	Kitchenette	Each floor As need
	WC (with Handicapped booth)	As need
VI	Service Section	
	Office for Operation and Maintenance	For Cleaner, Maintenance staff etc
	Security (Janitor) room	
	Garbage storage	Basement
	Machine rooms	As need

2. **Matters to be done by EKI's responsibilities**

EKI understands that following measure shall be done by EKI or under EKI's responsibility.

Table 6 Matters to be done by EKI's responsibilities

	Item to be done by EKI's responsibility	Dead Line
Minutes of Discussion	EKI'S responsibilities which are described in the Minutes of the Discussion dated 9 September 2015 ,signed between EKI and JICA	As shown in the Minutes of Discussion
Infrastructure	To have the permission of electrical power, water supply and optic fiber inlet to the site. To have the permission of sewage water connection to public sewage pipe.	Before the commencement of Construction (November 2016 tentatively)
Cost burden of the infrastructure	Refer to Annex-8	According to the construction process.
Construction permissions	To assist to have construction permission from the Addis Ababa Municipality, Fire department and related authorities those may be concerned with it.	During Design development stage Before the commencement of Construction (November 2016 tentatively)
Fence	Cover the cost of permanent fence around the site. The Location will be indicated on the detail design drawing.	By the end of the construction.
Planting and gardening	Cover the cost of planting and gardening in the site.	By the end of the construction.
Secure the additional space for temporary material storage	Secure the additional space for construction material storage near the construction site	Before the announcement of Prequalification (September 2016 tentatively)




3. Construction site

The area of the construction site, future expansion area and temporary material storage are as shown in the drawing below.

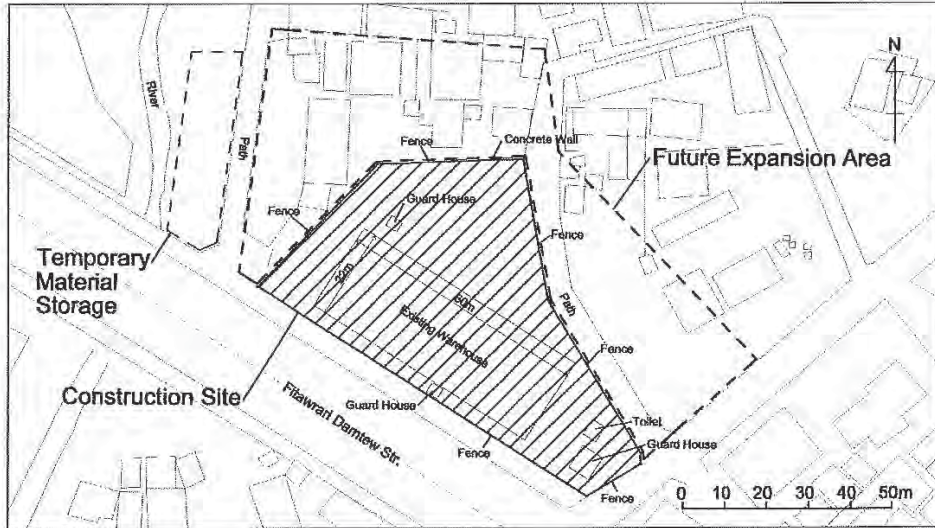


Fig 1 Construction site, future Expansion area and Temporary material storage

According to the result of hearing from the Ledeta sub-city Land management office, the volume condition or limitation of the construction site is as following below.

Table 7 Volume condition or limitation of the construction site

Construction development zone	Zone-2
Height Limitation	Ground floor + 19 stories or 70m
Floor / land area Ratio (FAR)	7 to 10 (700-1,000% to land area)
Building Set back from Boundary	From the boundary of ; South Front Main road: 3m East side path road: 3m Neighboring : 2m North Narrow path: 2m

EKI will confirm exact information of above building conditions from Addis Ababa City Administration Office and Lideta Sub-City Land Management Office with “Planning Consent” soon after obtain the Land ownership certificate and share the information with the JICA consultant team promptly.

EKI and the Consultant team confirmed that the construction site, including a warehouse inside the site, is owned by the PPE under the Ministry of Industry of the Ethiopia, and that there are no residents in the site.

4. Social and environment consideration for the project

- 1) EIA process is required for the Project as provided by the Ethiopia “Environmental Impact Assessment Procedural Guideline Series 1” (2003).

- 2) EKI is the project proponent who bears responsibility for the activities of environmental and social considerations and responds to the requirements both of Ethiopian and JICA environmental guidelines. EKI especially considers: (i) consultation with local stakeholders, (ii) disclosure of the information related to environmental and social considerations if asked, and (iii) preparation of a monitoring plan and implementation of monitoring.
- 3) EKI prepares budget to hire an Ethiopian environmental consultant who is registered with the Ministry of Environment and Forestry, and implements the EIA process with technical support from the JICA consultant team.
- 4) EKI is required to receive environmental approval from Addis Ababa Environmental Authority (AA EPA) before the commencement of the bidding. Tentatively scheduled in September 2016.

Table 8 Activities for environmental and social consideration

Activity stage	Activities for environmental and social consideration	Dead line
After land use license is transferred to EKI	EKI secures budget for hiring registered environmental consultant by next Ethiopian Fiscal Year. (July 2016-) EKI submits the application form to AA EPA.	
Detail Design and preparation of the bidding document	EKI selects an Ethiopian registered environmental consultant and signs the contract. The consultant starts screening and EKI submits it to AA EPA. If AA EPA decides that scoping and EIA study are needed, the consultant implements scoping first and EKI submits the scoping report to AA EPA. After AA EPA accepts it, the consultant implements EIA study and EKI submits the EIA study report to AA EPA.	From July 2016 to August 2016
Commencement of the bidding	EKI receives approval of the EIA from AA EPA before bidding process starts and submits it to JICA.	September 2016
During bidding	EKI presents the approval when required.	
Construction stage	EKI implements monitoring of environmental issues and submits monitoring reports to AA EPA and JICA.	(Tentatively from November 2016-)
Use/operation stage	EKI implements monitoring of environmental issues and submits reports to AA EPA.	

V. Equipment design

EKI understands that following equipment will be in the scope of the project with priority shown in the table below.

Priority A: High priority: Should be procured by the Project

Priority B: Middle priority: Should be procured as possible as the project budget permits

Priority C: Low priority: Should be procured by EKI if the project budget is not able to cover them.

Table 9 List of Equipment and priority

	Items	Priority
1	Desks and Chairs for offices, classrooms and library	B
2	Shelves and Racks for offices and classrooms	B
3	Meeting table and chairs for meeting rooms	B
4	Furniture for Entrance, Reception, lounge and restaurant.	B
5	Display equipment for exhibition	A
6	Electrical display for Entrance hall	A
7	Equipment for First Aid	C
8	Equipment for Nursery	C
9	Equipment for Training Gym	C
10	Personal Computers for staff	C
11	Computer Server System with UPS	A
12	Wireless LAN system	A
13	Video Conference System	A
14	Presentation system for class rooms	A
15	White Board for class rooms	B
16	Printing Machines	A
17	Photocopy Machines	A
18	Bed and furniture for Accommodation	B
19	Equipment for Operation and Maintenance	A
20	Security System	A
21	Cars for training transportation	A

VI. Soft component

EKI committed that EKI will organize new organization which is in charge the Operation and Maintenance of new EKI center. It will be organized before the completion of new building construction

New operation and Maintenance organization will consist of following divisions and tasks.

Table 10 Division and Tasks of the Operation and Maintenance section

Division	Task
Management	Management of the Operation and Maintenance
Front operation	Reception and Accommodation
Cleaning	Cleaning and housekeeping of the Accommodations
Security	Security guard and monitoring
Mechanical & Electrical and IT operation	Engineering service for Mechanical & Electrical and IT.
Mechanical & Electrical Maintenance	Periodical Check for facility and equipment
Car operation	Car maintenance and Driver
Gardening	Gardening service
Laundry and Ironing	Cleaning of the bed sheets and clothes
Classroom and Conference operation	Control the class room and conference reservation and setting.
Restaurant operation	Restaurant operation and in house catering.

EKI requested the soft component (a simple technical cooperation) to assist smooth set up of the Operation and Maintenance organization and develop an operation and maintenance manual for new EKI building. The request will be in consideration by the project.

VII. Final basic Design

The Draft final basic design will be presented at explanation of draft final report which will be planned in January 2016. EKI understands that the scopes and details of the project will be decided after careful consideration by JICA, as well as the decision of the project budget. EKI also understands that this result of discussion of the design may not always be fully reflected on the final result.

VIII. Clarification of Collected Data and Information

The Survey Team requests further collaboration with EKI for clarification of data and information collected during the survey.

IX. Confidentiality

Since this Technical Memorandum includes outline of the Project, both side understand that this Technical Memorandum shall be treated as confidential for the third party. It is a consideration to fair and transparent competition in the future tendering.

Annex


Annex-1: Past Record and Future Plan Prepared for JICA Mission (Revised) September 2015

Annex-2: Current and Future Organization Structure

Annex-3: EKI organization Plan


Annex-4: EKI Training Plan (Revised)

Annex-5 Details of EKI Expense/ Proposed EKI Incentive Scheme/ Proposed Salary Scale by consultants for new organization structure.

Annex-6: Infrastructure demarcation between EKI and Japanese side. (Power, Telecommunication, water and sewage. 

ETHIOPIAN KAIZEN INSTITUTE

PAST RECORDS AND FUTURE PLAN PREPARED FOR JICA MISSION


(Revised)

September 2015

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out

Introduction

This document is prepared for the mission coming from Japan to explore the need of KAIZEN training complex. It is a concise and brief presentation as per the content discussed with Mr. Fekadu. I hope it would shade some lights on the enquiries of the mission and if more information is needed ready to supplement through discussion.

While preparing this document, I have tried to capture all experiences gained for the last five years since KAIZEN is introduced to Ethiopia as a project leader and now heading the institute. The two projects conducted with JICA support have helped us a lot. Our visits to prominent Japanese institutions such as JUSE, JPC, JMA and companies as well as conversations with JICA head quarter and Ethiopia office, KAIZEN professional and GRIPS Professors have enlightened us and widened our scope. The activities illustrated in this document tries to cover the direction given by the national KAIZEN council chaired by the Prime Minister.

The training courses are developed through series of discussion with JICA consultants and finalized with Professor Osada who has assisted us with his professional wisdom.



1. PAST RECORD

1.1 EKI Activities

EKI is established with the following major duties and responsibilities;

- design policy and strategy on Kaizen dissemination;
- Provide training and Consultancy;
- Prepare courses and curriculum on Kaizen;
- Assist Companies while implementing Kaizen ;
- Registration, Certification and awarding best performing Companies, Teams and individuals ; and
- Certify Kaizen Consultants

1.2 Training Participants in 2013-2014

The following table depicts the number of trainees and KPTs established from 2012/2013 to 2013/2014 by EKI consultants.

S. No	Company	Training provided and KPTs established in the year 2012/13 (2005 E.C)						Training provided and KPTs established in the year 2012/14 (2006 E.C)					
		Trainees			Plan	%	KPTs	Trainees			Plan	%	KPTs
		M	F	Total				M	F	Total			
1	Textile	564	568	1132	1189	95	96	3211	6742	9953	10625	94	1054
2	Leather	0	0	0	0	0	0	1907	1269	3176	3682	86	420
3	Sugar Industry	5358	774	6132	6316	97	857	1712	75	1787	606	295	300
4	Cement Industry	0	0	0	0	0	0	1217	248	1465	1200	122	145
5	Chemical Industry	1139	620	1759	1952	90	199	368	43	441	520	85	69
6	Metal Industry	928	34	962	1039	93	73	90	54	144	144	100	31
7	Low Cost Housing	464	217	681	681	100	0	72	17	89	89	100	16
8	Services	334	157	491	579	85	84	199	33	232	232	100	45
9	Universities	426	232	658	730	90	6	1000	1196	2196	2100	105	44
10	TVETs	150	31	181	188	96	0	1328	246	1574	1594	99	151
	Total	9363	2633	11996	12674	95	1315	11104	9923	21027	20792	101	2275

1.3 List of First Level Courses and Curriculum

EKI is already capable in delivering first level KAIZEN training. In the past two years the course delivered to the trainees listed in the above table is presented in the following table. A full-fledged training material, manuals and audiovisual materials is prepared in two languages mainly in English and in Amharic and we are planning to translate in to two languages. First level KAIZEN training takes 6 months for large and medium industries and 4 months for small industries.

KAIZEN MANAGEMENT	KAIZEN Systems	KAIZEN Tools
1. Brief History of the development of scientific Management from 1850-1950. 2. The Emergence and Development of KAIZEN (Japanese Model) <ol style="list-style-type: none"> Japanese Economic History in 1950s and the Quest for learning from abroad. The Role of JPC, JUSE and JMA in Knowledge Transfer and Productivity Movement. TOYOTA KAIZEN Principles of KAIZEN management and the development of KAIZEN from 1950 onwards. 3. Experience of Singapore in KAIZEN Transfer (Singapore Model). 4. Ethiopia KAIZEN Model and Strategies	1. PDCA –SDCA 2. Junior KPTs 3. Autonomous Maintenance 4. Problem Solving Methodologies 5. KAIZEN costing. 6. KAIZEN Consulting procedure	1. 3Mus 2. 5S 3. Soft Problem solving/MUDA Identification, elimination and standardization tools <ol style="list-style-type: none"> Brain Storming 5M+1I analysis QPCDSEMG analysis, Value Analysis- Process evaluation Why-Why Analysis, 5W+2H
Expected Outcome - Organized Work Place		
1. A Comprehensive Understanding of KAIZEN 2. Mind set change	1. Implementing 1 st level K-System 2. Standard Process	1. Practicing 1 st level K-Tools 2. Work Standard

1.4 Evaluation of the Training

During this two years 33,023 of which 20,467 male, 12,556 female management and front line workers were trained and organized under 3,590 KPTS by EKI consultants. Out of 48 companies implemented KAIZEN, 17 organizations 17 KPTS and 17 Individuals competed for national KAIZEN Award. The National KAIZEN award is issued to 3 industries, 3 KPTS and three individuals.

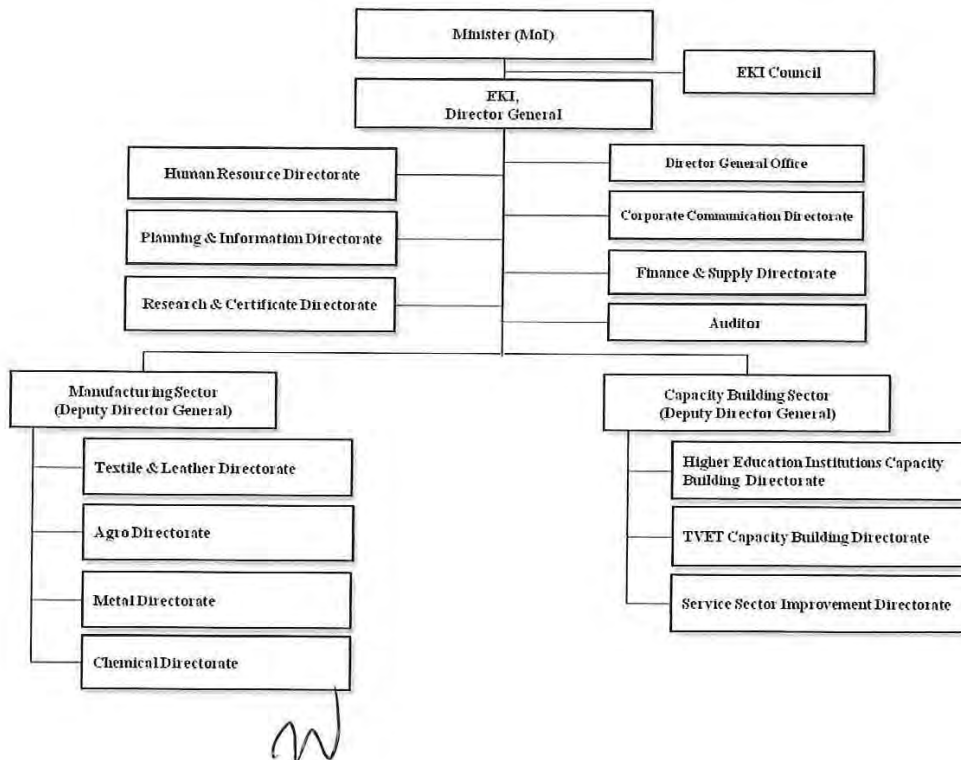
The results achieved from these companies and TVETs are summarized hereunder.

- Improving work place from 17.5% to 65.38%;
- Secured working spaces from 52.6 to 9,053 sq.m after sorting and set-in-order;
- Improve productivity of man power from 1.29% to 60%, machinery from 25% to 75%, raw materials from 4.76% to 19.74%;
- Reduced searching time significantly and attained 30 second rule;
- Reduced defects from 57.1% to 5%;
- Reduction rate of customer complaints from 87.7% to 100%;
- Reduction rate of costs from 6% to 33%;
- Reduced accidents from 49.5% to 14.29%




- Cost saving through cost minimization, availing spare parts and components using internal capacity, converting inventory in to cash etc.. amounts to birr half a billion.
- The first and most important change over and above the quantitatively explained result, the attitudinal change is highly significant. Developing confidence in bringing change, bridging the gap between management and workers through total participatory activities by involving the whole working force was a far reaching result to keep the momentum of continuous improvement. They are still keeping on improving their work place in terms of orderliness and cleanliness, workers safety, workers motivation by increasing their salaries and providing bonuses, improving the quality of products by reducing defects and reworks, improving productivity by reducing waste, improving delivery time in meeting the requirements of their customers. Although, the magnitude differs, all implementing companies have attained such results. This has proved that KAIZEN is an appropriate change vehicle for industrial transformation and human resource development.

1.5 Organizational Chart of Ethiopian KAIZEN Institute



1.6 List of Trainers

EKI is authorized to recruit 166 Consultants and 58 Support Staff altogether 224. Now it has 74 Consultants and 31 Support staff. The current budget is 24 Million Ethiopian birr.

Number of KAIZEN leaders and trainers involved in the past is provided in the following table.

S.no	Position	Sex		Total
		M	F	
1	DIRECTOR GENERAL	1	-	1
2	DEPUTY DIRECTOR	1	-	1
3	DIRECTORS	4	3	7
4	LEAD CONSULTANTS/ RESEARCHERS	4	0	4
5	SENIOR CONSULTANTS/RESEARCHERS	5	1	6
6	CONSULTANTS/RESEARCHERS	3	1	4
7	ASSISTANT CONSULTANTS/RESEARCHERS	12	23	35
8	JUNIOR CONSULTANTS/RESEARCHERS	15	9	24
TOTAL		44	38	82

2. Future Plan

2.1 Vision of EKI

«Being a center of excellence for transformed working culture and innovation management skill».

2.2 Goals

1. Introducing KAIZEN in export and import manufacturing industries in training management and front line workers and organizing them in KPTs with the ultimate goal of improving quality and productivity, reduce wastes and defects, improving work safety,



and satisfying international buyers' requirement to develop competitiveness for export earnings and substituting imports .

2. Support the HRD objective of producing competent working force.
3. Introducing KAIZEN thinking and principles starting from Kindergarten all along the education systems to produce transformed future generation and/ or citizens.
4. Introducing KAIZEN in construction industry and infrastructure development to improve quality of works, reducing wastes in working processes and standardize every activity. Produce capable contractors, construction materials manufacturers,.
5. Implementing KAIZEN in major service organization directly influencing the competitiveness of the manufacturing industry.
6. Implementing KAIZEN principles and systems in tourism industry along the supply chain to enhance country image building and foreign exchange earnings.
7. Support the KAIZEN movement of regional governments.

2.3 Basic Direction of KAIZEN movement

1. Promoting and maintaining comprehensive understanding of KAIZEN and quality of capacity building by transferring KAIZEN philosophy from the source, Japan, step by step based on the learning capability of KAIZEN consultants and absorptive capacity of companies.
2. Giving top priority to manufacturing industry and associated organizations directly contributing to manufacturing competitiveness.
3. A long term vision to lay foundation for longer time span focusing to produce transformed generations.
4. Customize KAIZEN to the need of the country and other change tools where these tools are already implemented and new ones such as BSC, QMS, ISO.

2.4 Objectives

The overall objective of KAIZEN movement during GTP II is to improve quality of products and services, enhance productivity and competitiveness in providing training for management and frontline workers and organize them in KPTs. In manufacturing industry 98,000 trainees and 10,500 KPTs, in HRD 17,140 trainees and 2,450 KPTs, in construction and basic services 20,000 trainees and 2,000 KPTs, all together 135,140 management and frontline workers are trained and organized in 14,950 KPTs. The detail of each sector is presented hereunder.

1. Implement KAIZEN in 160 export companies by training 60,000 management and frontline workers and organizing them under 6,500 KPTs.
2. Implement KAIZEN in 95 imports substituting companies by training 38,000 management and frontline workers and organizing them under 4,000 KPTs.



3. Implement KAIZEN in 100 TVETs and 20 universities by training 17,140 management, instructors, frontline workers and organizing them under 3,140 KPTs.
4. Incorporating KAIZEN training curriculum in 50 TVETs and 20 universities.
5. Introducing KAIZEN in 30 low cost housing projects by training 10,000 management, contractors, consultants, TVETs, MSEs operators, and organizing them under 1,000 KPTs.
6. Introducing KAIZEN in 10 construction companies by training 1,000 management, contractors, consultants, and operators and organizing them under 100 KPTs.
7. Introducing KAIZEN principles in 120 Kindergartens and 120 elementary and secondary schools.
8. Implement KAIZEN in 60 service organizations by training 6,000 management and frontline workers and organizing them under 600 KPTs.
9. Implement KAIZEN in 30 tourism related organizations by training 3,000 management and frontline workers and organizing them under 300 KPTs.
10. Establishing KAIZEN institutions in 4 regions and two cities.

2.5 Implementation Strategy

Establishing and strengthening KAIZEN infrastructure consisting the following.

- I. Strengthen National KAIZEN council
- II. Establish regional and cities KAIZEN institutes by the year 2016.
- III. Establish KAIZEN units under strategic public sector such as infrastructure, logistics, power, water and sewerage and telecommunication and other strategic service sector.
- IV. Establish KAIZEN units under mega project offices and corporations as required.
- V. Install institutional networks among KAIZEN institutions by 2016.
- VI. Capacitate industrial development institute with KAIZEN so as to implement in their respective industries as of 2016.
- VII. Create regional net work for sharing experience.

The role of EKI with respect to Regional KAIZEN institutes to be established and Industrial Development Institutes is to capacitate them step by step to play the role of EKI in their respective Regions, and industrial sub sectors.

Mekelle and Addis Ababa Universities are selected to start with for local capacity building at higher levels in deepening, widening and customizing KAIZEN in our country following the need and level of our development.

Since the Federal and Regional TVET Agencies are the core insinuations in providing KAIZEN consultancy to Micro and Small Enterprise, the role of EKI is to capacitate them step by step and supporting them continuously.




EKI will establish strong relationship with KAIZEN units and or leaders established under different corporations, companies and institutions in developing their capacity step by step to keep the continuity of KAIZEN implementation in their respective areas at expected level of quality.

Each activity should be evaluated by the outcome it is contributing to the improvement of quality, productivity and competitiveness of our companies and its progressive continuity. More specifically, the level of competitiveness attained by export industries could be measured in terms of meeting the requirement of international buyers.



2.6 Plan of action

The details of plan of action during the plan period is given in the following table.

s.no	Major activities	Indicators	Baseline	Annual out puts (the number of companies/organizations)					Total
			2014	2016	2017	2018	2019	2020	
1	Implement KAIZEN in 160 export companies	Num.	15	22	26	31	37	44	160
2	Implement KAIZEN in 95 imports substituting companies	»	12	13	15	18	22	27	95
3	Implement KAIZEN in 100 TVETs	»	5	14	16	19	23	28	100
4	Implement KAIZEN in 20 Universities	»	2	2	3	4	5	6	20
5	Incorporating KAIZEN training curriculum in 20 Universities.	»	-	2	3	4	5	6	20
6	Incorporating KAIZEN training curriculum in 50 TVETs	»	-	7	8	9	12	14	50
7	Introducing KAIZEN in 30 low cost housing projects	»	5	4	5	6	7	8	30
8	Introducing KAIZEN in 10 Construction companies	»	2	-	2	2	3	3	10
9	Introducing KAIZEN principles in 120 Kindergartens schools.	»	-	-	22	24	36	38	120
10	Introducing KAIZEN principles in 120 elementary and secondary schools.	»	-	2	20	24	36	38	120
11	Implement KAIZEN in 60 service organizations	»	2	8	10	12	14	16	60
12	Implement KAIZEN in 30 tourism related organizations	»	-	4	5	6	7	8	30
13	Establishing KAIZEN institutions in 4 regions and two cities.	»	2	1	2	3	-	-	6

s.no	Major activities	Indicators	Baseline	Annual out puts (the number of trainees)					Total
			2014	2016	2017	2018	2019	2020	
1	Number of management and line workers trained by EKI on first level KAIZEN	Num.	15,000	15,000	17,000	27,000	36,280	39,860	135,140
2	Number of KPTs established by EKI on first level KAIZEN	»	1,700	2,000	2,500	2,900	3,600	3,950	14,950
3	Consultants trained advanced KAIZEN by the project	»	30	30	30	30	30	30	150
4	Consultants trained advanced KAIZEN at MSc level	»	20	20	25	30	35	40	150
5	Consultants trained advanced KAIZEN at PhD level	»	-	-	-	5	10	15	30
6	Management of EKI trained on advanced KAIZEN management	»	5	5	6	7	7	-	25

Quantitative and qualitative performance measurements.

1. Fulfilling the requirements of international buyers.
2. Instituting innovation management principles and skill
3. Change of attitude and working culture
4. Improving productivity by 30%
5. Reducing defects on average by 25% and improving quality
6. Reducing wastes on average by 50%.
7. Reducing unnecessary wastes by 50%.
8. Reducing searching time on average by 30%.

3. KAIZEN TRAINING NEED ASSESEMENT

The Ethiopian KAIZEN institute is established with broad objective of transferring KAIZEN from the origin without omission, implement and customize to the development need of the country and absorptive capability of our companies so as to enhance competitiveness. It is mandated to craft policies and strategies on how to undertake its mandate.

The first thing EKI did was to understand the emergence and development of this philosophy as it has been discussed above, learning the experience of other countries such as Japan and Singapore which successfully transferred and owned.

The need for KAIZEN in Ethiopia is basically to transform our working culture through bringing attitudinal change in our society at the grass root level with a greater sense of urgency.

The short term training JICA Consultants offering us is found to be broad and mix of simple to complex systems and technical tools. The training is provided four to six month including theory and practice. We had two terms of capacity building projects for the last four years from which we had benefited a lot although we need more because KAIZEN is a management philosophy developed in Japan for over fifty years and it is not easy to capture in depth with such limited time as explained above.

The third country training running for two to three weeks is also found to be too short. From our two years implementation experience in our country, we have observed that all the training components could not be implemented in one company at a given time mainly due to limited absorptive capability of our companies. It is also recognized that with such short time training, it is difficult to capture the whole KZAIZEN concepts, principles, systems and tools at required levels.

Three areas of equal attention are clearly identified which have great impact on the whole process of transferring, implementation and customization of KAIZEN. These are;

1. The capacity building as a process to develop local competence;
2. Implementation based on absorptive capability of our companies; and
3. Keeping the quality and sustainability.

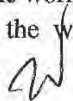
With respect to the first one, EKI has designed Ethiopian KAIZEN model consisting of four interrelated and parallel stages. The four stages are Testing and Institutionalization, Implementation, Sustain and Ownership (TIISO). Each of these stages consists of a number of activities organized end to end with ultimate objective of owning the philosophy, its system and tools at each stage through learning from the source, strengthening local capability, accumulating best experience and customization.



The first stage, testing and institutionalizations, is a process by which we need to learn, implement, produce training materials and institutionalize as a package of training and consultancy services components of each level and disseminate through KAIZEN institutional infrastructure as a continuously step by step . It is based on this broad objective that side by side with JICA project, now a need has been felt to develop local capacity development program. EKI is developing advanced local training program in collaboration with our universities having the following objectives; but not limited to;

1. Realize the goals and objectives of Growth and Transformation Plans in creating competitive manufacturing industries and manpower.
2. Develop quality professional consultants with necessary theoretical knowledge and problem solving technical skills.
3. Enhance university-industry linkage in creating strong bondage among industries, universities and EKI.
4. Building local capability to undertake joint research and development supported by Japanese professionals and enhance transfer of skill and creaming their experience.

The second stage is implementation. The limitation we have observed at this stage emanates from our limited KAIZEN knowledge, limited know how of the environment of local companies by Japanese experts and the readiness and commitment by the company side. Our companies' working environment and absorptive capability differs drastically.

1. Some companies, although they have modern manufacturing machinery and equipment and organizational set up, lack appropriate knowledge and skill how to organize, mobilize and run their company and managing changes.
2. In some companies, the owners are in charge of everything where the management and workers equally receive orders and instructions from one source and any improvement depends on the will of the owners.
3. There are some companies where the owners may not be surprised whether the companies are running at loss or profit. A culture of corporate dependency by which loss makers are subsidized by profitable is observed.
4. Some huge companies are at risk measured by any business standards.
5. The manufacturing industry is characterized by mix of backward technology to the-state-of-the-art.
6. Some companies are characterized by extreme turnover of management and workers not only due to lack of knowledge and skill, but also factors not related to their efficiency.
7. Some companies are sweating to catch up with neck to neck market competition where the benefits are less rewarding.
8. In some companies, the workers are ready to change but the management hesitates.
9. In some companies, the workers are running only after their benefits where their companies are sloppy. 

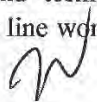
10. Although improvement efforts have been made in some companies, most of them are retreating.

These observed characteristics have their own root causes. The main cause being the attitude in establishing, organizing, and running modern companies in modern way striving for competitiveness. This is the major factor that hinders the absorptive capability of improvements in our companies. That is why EKI believes that a strategy of implementing KAIZEN should be based on the absorptive capability of our companies. We need to prepare our companies by enhancing their capability step by step starting from simple and moving to complex. These steps are designated as « **KAIZEN Implementation Levels**» which are divided in to four as discussed above. Each is presented as follows.

1. The first level is basic KAIZEN which consists of introducing KAIZEN philosophy, ensuring total participation through organizing KAIZEN Promotion Teams (KPT) based on the organizational structure of the companies and Japanese QCC model and introducing simple technical tools of quality and productivity improvement. The main outcome expected at this level is creating a change environment by bringing attitudinal change through total participation of all management and workers and insure an organized work place. A guide line and check list to ensure the quality of the implementation is prepared. The completion of this level with acceptable outcome is a prerequisite for the second stage. The planning process of this level is made to follow the three steps of national planning process i.e. Preparation, Implementation and Evaluation and the four steps of KAIZEN planning i.e. Plan-Do-Check-Act. EKI has now accumulating experience and capable to manage this stage although further improvement is essential. At company level, major difficulty is not observed in understanding and implementing this package once the commitment of management and the motivation of frontline workers are attained.

Customization of KAIZEN is already started at this stage in breeding national planning and KAIZEN planning processes. This part is very important since it involves all stake holders in planning process and insures proper environmental scanning to identify the root causes of problems, generate appropriate solutions and Kaizen systems and tools. It is also instrumental in securing management commitment and initiatives of front line workers.(Methara Sugar Factory is a good example).

2. The second level KAIZEN includes the installation of KAIZEN systems such as Total Productive Maintenance (TPM), preparing Standard Operation Procedures (SOP) both for work place and works, using Basic Industrial Engineering techniques and Quality Control Tools (7QC Tools) and advanced reporting system (QC Story Line). This level requires statistical and technical knowledge and could not be easily handled by supervisors and front line workers. We have tested in Wonji Sugar Factory KPTs who



completed first level KAIZEN and the result confirmed our ideas that it requires education and training on the systems and tools which takes a reasonable time. We are convinced that appropriate MSc program is required to fill this gap. This program could help to develop the professional and analytical capabilities of EKI consultants and KPTs leaders. Otherwise, the participation of supervisors and technical front line workers' will be limited and negatively affecting the core value of KAIZEN i.e. total participation. This may create difficulty to keep the quality of implementation as desired and lead us to the brink of failure as it has been observed in some countries.

3. The third level KAIZEN includes KAIZEN knowledge such as Process capability, Total Quality Management, Value Engineering and/or Value Stream Mapping, the use of advanced Industrial Engineering tools, knowledge of more complex analytical tools and skills that Japanese companies are using now and in the future as we advance, and more broadly Innovation Management. It has been observed, those except few, most of these tools as a package are not applicable in our companies prevailing situations. We have noticed that some companies claiming implementing TQM and ISO series are not to the level of these tools expected to produce. In some companies, we have discussed and agreed that they did it because of certain interest of their own and the implementation of first level and in some cases second level KAIZEN is a prerequisite for effective implementation of these high standard tools. In a nut shell, this level requires advanced knowledge and analytical skill, advanced theoretical education and practical exercises. This where we have felt the PhD program is appropriate.
4. The fourth one is the highest level of KAIZEN aiming at developing our own management system. The components envisaged at this time in point are developing Ethiopia Business Excellence Model (EBEM), transforming KPTs to Innovative KAIZEN Teams (IKT), Innovation Management and Global Networking. This is a stage aiming at completing the three stages successfully, generating own advanced principles, systems and tools based on our best practices and catching up with the latest innovation management. This is a stage whereby our companies may come up with their peculiar management principles. Our companies are expected departing from laggardness and play the role of innovators and/or at least early adopters. The Malaysian lesson is taken as a good source for developing this concept in addition to Japanese experience mentioned above. The Malaysian Productivity Corporation has developed a Business Excellence Framework (BEF) model and Innovative Creative Circles (ICC) activities. These two tools are a customization of KAIZEN to their own need and they have developed full-fledged training and consultancy services for themselves and foreign countries as well.

In general, our capacity enhancement and development follows keeping the quality of KAIZEN implementation at each level by deepening and broadening our knowledge and analytical

capability and thereby producing capable consultants and advanced KPTs. To keep the quality of the philosophy we need to develop local professional and technical capabilities. As it has been time and again explained above, from our experience, the first level KAIZEN could be handled by first degree graduates by providing them with six month class room training and in company training as attachment program to senior consultants and this could be handled by EKI. The second level requires more professional and technical capacity and analytical skills. It is here where we require a second degree equivalent training on medium level KAIZEN systems and tools. The third level KAIZEN includes highly sophisticated systems and tools which requires advanced knowledge and analytical skill. More specifically, advanced theoretical education and practical exercises. This where we have felt the PhD program is appropriate. Both programs are aimed at enhancing the theoretical and practical and/or analytical capabilities required for each steps and complete transfer of the philosophy in promoting local capability in our universities under the guidance of EKI.

It is to this effect that the Ethiopian KAIZEN institute has already started MSc program on KAIZEN with Mekelle Institute of Technology and developing PhD program with Addis Ababa University mainly in three broad areas, KAIZEN management, Quality Management and Productivity Management.

The other thing worth to note the uniqueness of Ethiopia KAIZEN is the customization of organizational structure of KAIZEN implementation as mentioned above. In Japan, there are different organizational framework such as QCCs, 5S committees, SOP committees, TPM committees and TQM committees. We have customized all these committees under KAIZEN Promotion Teams (KPT). The first level KAIZEN is implemented by junior level KPTS, the second Level by Medium level KPTs while the third level is implemented by High level KPTs. The capacities of KPTs would be enhanced by relevant institutions. For instance, any skill gap related to operation observed to implement second level KAIZEN by medium level KPTs would be filled by relevant industrial development institutes and TVETs while the higher level KPTs may involve Universities.

4. Training Programs

KAIZEN is offered at three different levels as explained above.

4.1 First Level KAIZEN Courses

4-6 month based on the type and complexity of companies



KAIZEN MANAGEMENT	KAIZEN Systems	KAIZEN Tools
<ol style="list-style-type: none"> 1. Brief History of the development of scientific Management from 1850-1950. 2. The Emergence and Development of KAIZEN (Japanese Model) <ol style="list-style-type: none"> i. Japanese Economic History in 1950s and the Quest for learning from abroad. ii. The Role of JPC, JUSE and JMA in Knowledge Transfer and Productivity Movement. iii. TOYOTA KAIZEN iv. Principles of KAIZEN management and the development of KAIZEN from 1950 onwards. 3. Experience of Singapore in KAIZEN Transfer (Singapore Model). 4. Ethiopia KAIZEN Model and Strategies 	<ol style="list-style-type: none"> 1. PDCA –SDCA 2. Junior KPTs 3. Autonomous Maintenance 4. Problem Solving Methodologies 5. KAIZEN costing. 6. KAIZEN Consulting procedure 	<ol style="list-style-type: none"> 1. 3Mus 2. 5S 3. Soft Problem solving/MUDA Identification, elimination and standardization tools <ol style="list-style-type: none"> i. Brain Storming ii. 5M+1I analysis iii. QPCDSEMG analysis, iv. Value Analysis- Process evaluation v. Why-Why Analysis, vi. 5W+2H
Expected Outcome - Organized Work Place		
<ol style="list-style-type: none"> 1. A Comprehensive Understanding of KAIZEN 2. Mind set change 	<ol style="list-style-type: none"> 1. Implementing 1st level K-System 2. Standard Process 	<ol style="list-style-type: none"> 1. Practicing 1st level K-Tools 2. Work Standard

4.2 Second Level KAIZEN

6 months to one year for factory training and one and half year for KAIZEN consultants

KAIZEN MANAGEMENT	KAIZEN Systems	KAIZEN Tools
<ol style="list-style-type: none"> 1. KAIZEN Management <ol style="list-style-type: none"> i. Productivity management. ii. Quality management iii. Cost management. iv. Delivery management v. Policy management. vi. Cross-functional management. vii. Daily management. 2. Basics of KAIZEN leadership- Lean Leadership 	<ol style="list-style-type: none"> 1. Medium KPTs 2. TPS 3. TQM. 4. TPM 5. Appropriate Costing System (ABC, Direct, Standard, Target) 6. MRP 7. Production scheduling. 	<ol style="list-style-type: none"> 1. SOP. 2. 7 QC Tools/QC story. 3. Value stream Mapping 4. Quality control process chart. 5. Basic IEs. <ol style="list-style-type: none"> i. Time study ii. motion study . iii. Line balancing iv. Process analysis. v. Operation analysis. vi. Control charts. vii. Process capability index. viii. Ergonomics ix. Layout 6. Multi – Activity Analysis 7. Costing (P = P-C) 8. Ratio-delay study 9. Shortening set-up time
Expected Outcome - Expected Outcome - System Innovation		
<ol style="list-style-type: none"> 1. A Comprehensive Understanding of Advanced KAIZEN Management 2. Strategic Leadership 	<ol style="list-style-type: none"> 5. Implementing 2nd level K-System 6. Standard Systems 	<ol style="list-style-type: none"> 1. Practicing 2nd level K-Tools 2. Operation Standard

4.3 Third Level KAIZEN

One year to two years for factory training and three years for KAIZEN consultants.

KAIZEN MANAGEMENT	KAIZEN Systems	KAIZEN Tools
1. Advanced KAIZEN Management i. Innovation Management ii. Global Production Management iii. Value Management 2. Advanced KAIZEN leadership- Lean Leadership	1. IKT (Innovative KAIZEN Team) 2. TPM 3. Advanced Analytical Systems i. Competitive Analysis ii. Financial Analysis iii. Value Analysis iv. Business Modeling v. Business Systems Analysis vi. Idea generation methods	1. TRIZ 2. Off-shoring 3. Production Sharing 4. Value engineering. 5. Quality function deployment 6. FMEA (Failure Mode Effect Analyses) 7. FTA (Fault Tree Analysis) 8. Reliability Engineering 9. SMED (Single Minutes Exchange of Die)
Expected Outcome - Innovation Management		
1. Excelled Management 2. Lean Leadership	1. Implementing 3 rd level K-System 2. Company Model and Brand	1. Practicing 3 rd level K- Tools 2. World Standard

4.4 List of Trainers

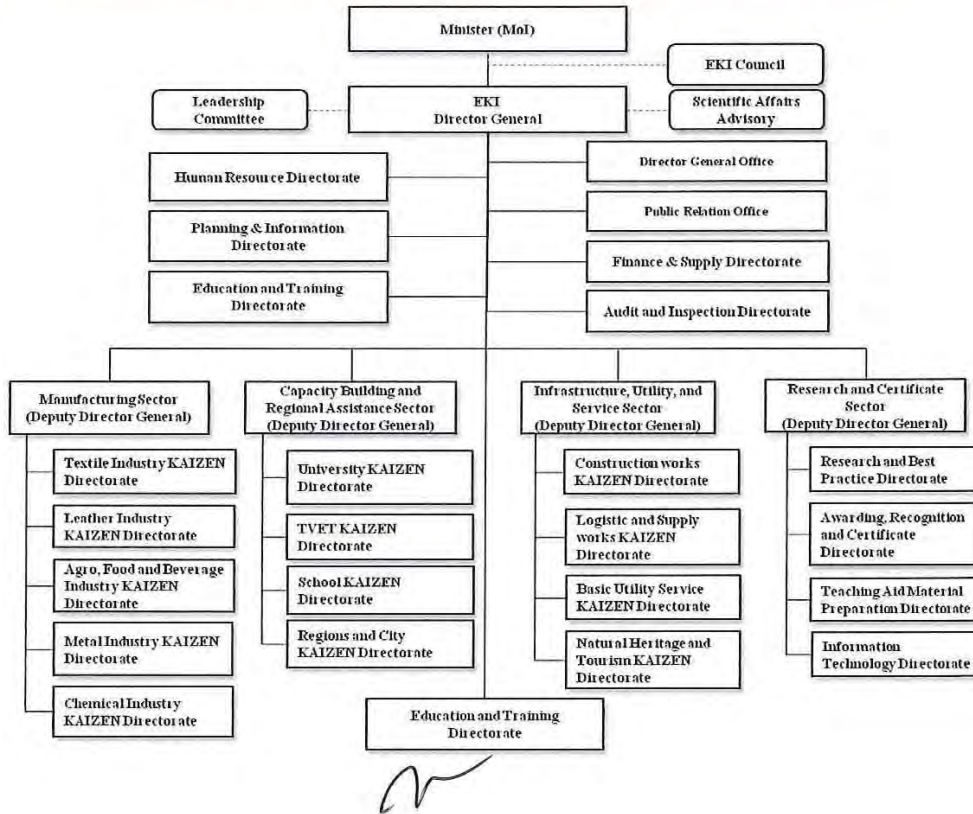
EKI consultants are now preparing second level KAIZEN. 17 High Level consultants shall be graduated at the capacity of MSc in KAIZEN in the coming September. JICA supported project is expected to build the capacity of EKI consultants with third level KAIZEN in the coming few years. The number of existing KAIZEN leaders and consultants is provided in the following table.

S.no	Position	Sex		Total
		M	F	
1	DIRECTOR GENERAL	1	-	1
2	DEPUTY DIRECTOR	1	-	1
3	DIRECTORS	4	3	7
4	LEAD CONSULTANTS/ RESEARCHERS	4	0	4
5	SENIOR CONSULTANTS/RESEARCHERS	5	1	6

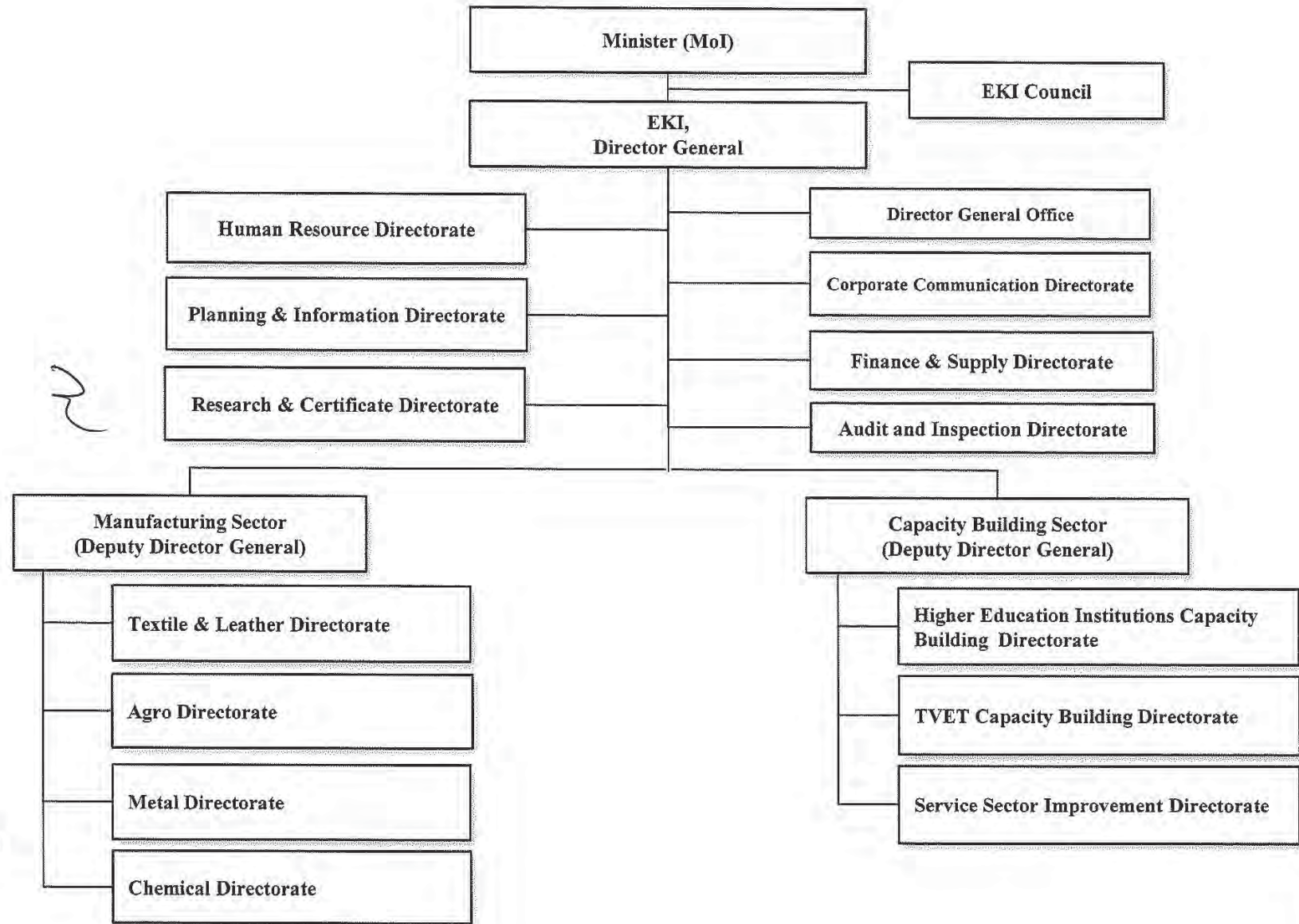
6	CONSULTANTS/RESEARCHERS	3	1	4
7	ASSISTANT CONSULTANTS/RESEARCHERS	12	23	35
8	JUNIOR CONSULTANTS/RESEARCHERS	15	9	24
TOTAL		44	38	82

The enrolment of trainees would be limited to the accommodation capacity of the boarding and training rooms as it is believed the demand is by far higher than 120 bed rooms and flexible training rooms. This could be easily noticed from the planning table for the coming five years shown above. The excess training need could be tried to be accommodated in cooperation with other institutes and in the company training.

4.5 Organizational Chart Under Construction based on future plan.



Current Organization Structure



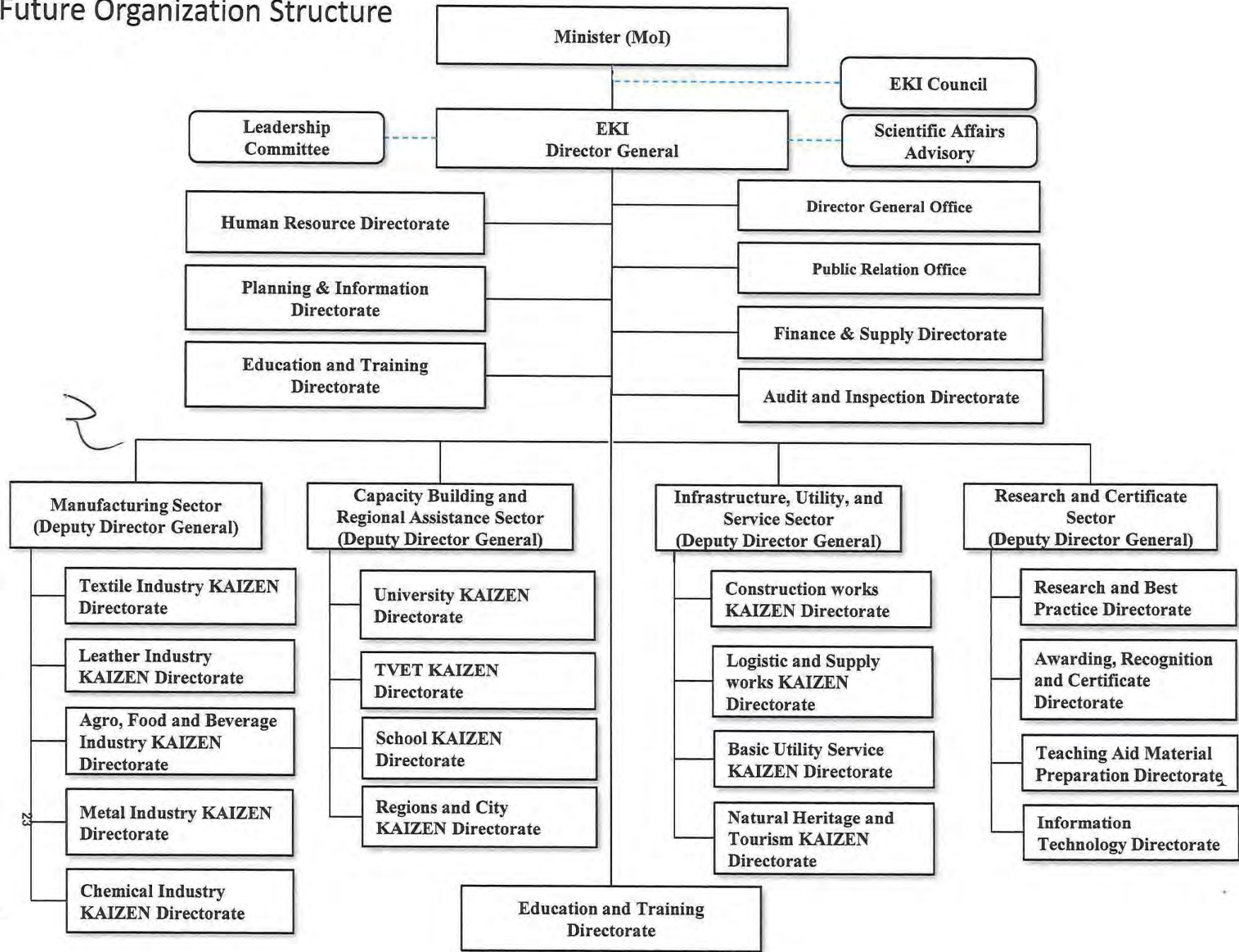
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Annex-2

Future Organization Structure

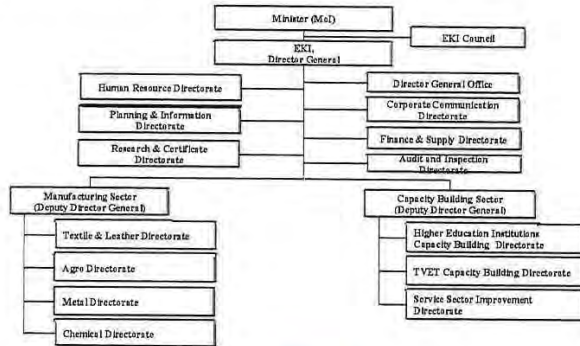


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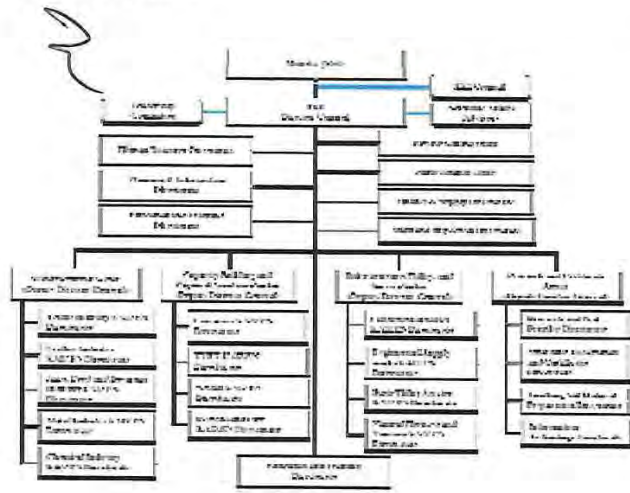
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EKI Organization Plan

2014/15 (Current as of Aug26/2015)



2015/16 (EKI Plan of 2015/16)



Category	Total
Director General	105 / 224
Supporting Staff	31 / 58
Director General Office	2
Human Resource Directorate	1
Planning & Information Directorate	8
Research & Certification Directorate	2
Corporate Communication Directorate	2
*Finance & Supply Directorate	15
Audit and Inspection Directorate	1
Technical Staff	74 / 166
Manufacturing Sector	42
Deputy Director	0
Textile & Leather Directorate	13
Agro Directorate	9
Metal Directorate	9
Chemical Directorate	11
Capacity Building Sector	31
Deputy Director	1
University Directorate	9
TVET Capacity Building Directorate	11
Service Sector Improvement Directorate	10

***Finance & Supply Directorate**

Director	1
Finance & Supply Officer	1
Cashier	1
Accountant	2
Purchaser	1
Store Keeper	2
Cleaner	4
Driver	4

***Human Resource Directorate**

Director	1
Secretary	2
Human Resource Team	10
Personnel Officer	5
Personal Recruiter	1
Health Officer	1
Archive Manager	3
General Services	29 +a
General Service Officer	1
Vehicle Distributor	1
Driver	1 +a
Printer	3 +a
Auto Mechanic	3
Telephone Operator	2
Cooker	1
Messenger Boy	3
Guard/Security	3
Women Guard/Security	2
Janitor	3

***Finance & Supply Directorate**

Director	1
Secretary	1
Finance Group	5
Finance Manager	1
Accountant	2
Cashier	1
Cashier Documentation	1
Purchase & Material Group	5
Purchase Officer	1
Purchaser	1
Warehouse Manager	1
Warehouse worker	1
Material Administrator	1

2021/22 (Evaluation)

KAIZEN Center Operation/Maintenance

Manager	
Operation Staff	
Cleaner	40 + a
Maintenance Staff	
Mechanic	

Category	Total
2015/16 (EKI Plan of 2015/16)	213 + a
Director General	1
Supporting Staff	101 + a
Director General Office	10
*Human Resource Directorate	42 + a
Planning & Information Directorate	6
Education and Training Directorate	11
Public Relation Office	12
Finance & Supply Directorate	15
Audit and Inspection Directorate	5
Technical Staff	111 + a
Manufacturing Sector	33 + a
Deputy Director	3
Textile Directorate	6 + a
Leather Directorate	6 + a
Agro Directorate	6 + a
Metal Directorate	6 + a
Chemical Directorate	6 + a
Capacity Building Sector	27 + a
Deputy Director	3
University Directorate	6 + a
TVET Capacity Building Directorate	6 + a
School Directorate	6 + a
Region and City Directorate	6 + a
Infrastructure, Utility, and Service Sector	26 + a
Deputy Director	2
Construction Directorate	6 + a
Logistic and Supply Directorate	6 + a
Basic Utility Service Directorate	6 + a
Natural Heritage and Tourism	6 + a
Research and Certificate Sector	25 + a
Deputy Director	2
Research and Best Practice	6 + a
Awarding, Recognition and Certification	6 + a
Teaching Aid Material Preparation	6 + a
Information Technology	5 + a

Category	Total
2016/19 (Until New Building Completion)	265 + a
Director General	1
Supporting Staff	101 + a
Director General Office	10
*Human Resource Directorate	42 + a
Planning & Information Directorate	6
Education and Training Directorate	11
Public Relation Office	12
Finance & Supply Directorate	15
Audit and Inspection Directorate	5
Technical Staff	163
Manufacturing Sector	48
Deputy Director	3
Textile Directorate	9
Leather Directorate	9
Agro Directorate	9
Metal Directorate	9
Chemical Directorate	9
Capacity Building Sector	39
Deputy Director	3
University Directorate	9
TVET Capacity Building Directorate	9
School Directorate	9
Region and City Directorate	9
Infrastructure, Utility, and Service Sector	38
Deputy Director	2
Construction Directorate	9
Logistic and Supply Directorate	9
Basic Utility Service Directorate	9
Natural Heritage and Tourism	9
Research and Certificate Sector	38
Deputy Director	2
Research and Best Practice	9
Awarding, Recognition and Certification	9
Teaching Aid Material Preparation	9
Information Technology	9

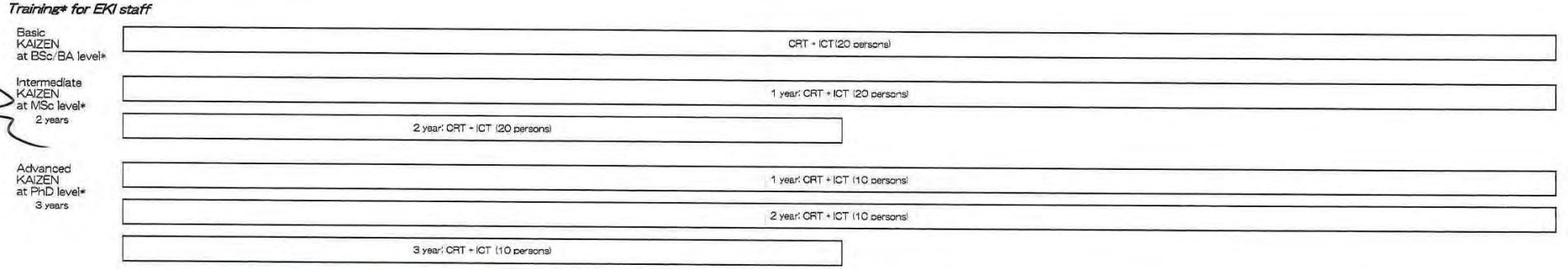
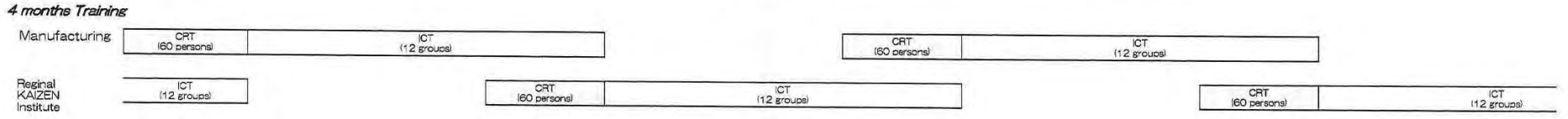
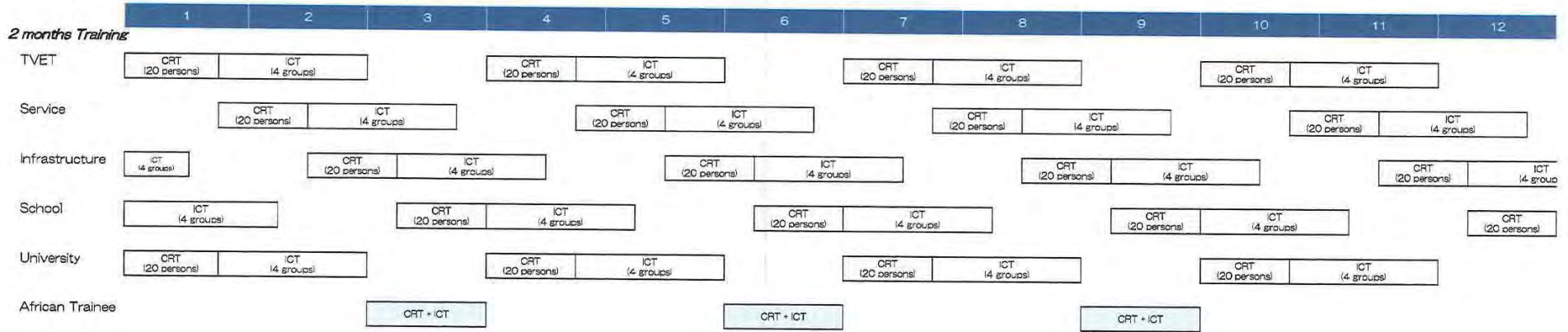
Category	Total
EKI	252
Director General	1
Supporting Staff	61
Director General Office	10
*Human Resource Directorate	13
Planning & Information Directorate	6
Education and Training Directorate	11
Public Relation Office	12
Finance & Supply Directorate	15
Audit and Inspection Directorate	5
Technical Staff	190
Manufacturing Sector	63
Deputy Director	3
Textile Directorate	12
Leather Directorate	12
Agro Directorate	12
Metal Directorate	12
Chemical Directorate	12
Capacity Building Sector	43
Deputy Director	3
University Directorate	9
TVET Capacity Building Directorate	10
School Directorate	10
Region and City Directorate	10
Infrastructure, Utility, and Service Sector	42
Deputy Director	2
Construction Directorate	10
Logistic and Supply Directorate	10
Basic Utility Service Directorate	10
Natural Heritage and Tourism	10
Research and Certificate Sector	40
Deputy Director	2
Research and Best Practice	10
Awarding, Recognition and Certification	10
Teaching Aid Material Preparation	10
Information Technology	10

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Annex-3

EKI Training Plan (Revised)



Classroom

- 10 persons' room : 2
- 20 persons' room : 7
- 60 persons' room : 2
- Conference room (120 persons) : 1

} 11 rooms



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Annex-4

EKI Training Plan Explanation in 2021 (Draft)

No	Activity	Specific Machinery/Equipment required
1	Provide the training of KAIZEN for each sector in Ethiopia.	Company DB for ICT by each sector, Car
2	Accept the trainees from neighboring countries in Africa as the third country's KAIZEN training.	TV Conference System and Room, Car
3	Foster the trainer/consultant of KAIZEN (mainly EKI staff) by providing academic course. (Remote lecture from the University such as Mekelle University.)	Car, (Need help from Japanese Professor/Expert) TV Conference System and Room
4	Provide the KAIZEN consulting for each company/organization as request-base.	Consulting Record DB, Car
5	Widen and Depen KAIZEN technically (MSc and PhD level)	Ergonomics System
6	Stock and supply the data and information of the cases of applying KAIZEN (Best practice DB).	Best Practice DB
7	Research KAIZEN technique/tools/method, etc. (Exchange the knowledge and skill with other research centers.)	ICT System, TV Conference System and Room
8	Certify and award a prize to the excellect company/organization/person made a great result by KAIZEN.	(Plan to oursource)

Demands of KAIZEN Training in 2021 (Draft)

No	Target	# of Trainee /Participant	Duration	# of Annual Batch	# of Annual Trained Person	# of ICT company & org. /batch (*4)	Target of ICT company & org.	# of ICT group /batch	# of car /batch	# of Trainer & Instructor/batch	Current situation
1	TVET	20 persons	2 months	4 times	80 persons	20 companies (1trainee/comp.)	private MSE	4 groups	2 cars	4 instructors (Main: 1, Sub: 3)	Teaching materials such as curriculum, trainee guide, trainee material, etc. have already been
2	Service Sector (Includes Tourism)	20 persons	2 months	4 times	80 persons	20 companies (1trainee/comp.)	private, gov.-owned	4 groups	2 cars	4 instructors (Main: 1, Sub: 3)	
3	Infrastructure Sector (Includes Low Cost Housing)	20 persons	2 months	4 times	80 persons	20 companies (1trainee/comp.)	private, gov.-owned	4 groups	2 cars	4 instructors (Main: 1, Sub: 3)	
4	Industrial Development Institute (Industories under Mol such as Export/Import)	60 persons	4 months	2 times	120 persons	60 companies (1trainee/comp.)	private, gov.-owned	12 groups	6 cars	12 instructors (Main: 1, Sub: 11)	
5	Regional KAIZEN Institute	60 persons	4 months	2 times	120 persons	60 companies (1trainee/comp.)	private, gov.-owned	12 groups	6 cars	12 instructors (Main: 1, Sub: 11)	
6	School Teachers (Kindergarten to High school)	20 persons	2 months	4 times	80 persons	20 companies (1trainee/comp.)	temp. TVET Institute	4 groups	2 cars	4 instructors (Main: 1, Sub: 3)	
7	University Teachers	20 persons	2 months	4 times	80 persons	20 companies (1trainee/comp.)	temp. Amobo University	4 groups	2 cars	4 instructors (Main: 1, Sub: 3)	
8	African Trainees	20 persons	1 month	3 times	60 persons	20 companies (1trainee/comp.)	private, gov.-owned	4 groups	2 cars	4 instructors (Main: 1, Sub: 3)	
700 persons											
9	Basic KAIZEN at BSc/BA level	20 persons	1 year	—	20 persons	20 companies (1trainee/comp.)	private, gov.-owned LME	4 groups	2 cars	—	
10	Intermediate KAIZEN at MSc level	20 persons	1 year and half	—	20 persons (*1)	10 companies (2trainees/comp.)	private, gov.-owned LME	4 groups	2 cars	—	
11	Advanced KAIZEN at PhD level	10 persons	2 years and half	—	10 persons (*1)	3 companies (3trainees/comp.)	private, gov.-owned LME	2 groups	1 car	—	
50 persons											
12	Workshop / Conference	120 persons	5 days	4 times	480 persons (*2)	—	—	—	—	—	
***	KAIZEN Award (different level)	500 persons	2 - 15 days	2 times	1,000 persons (*3)	—	—	—	—	—	

(*1) Intermediate KAIZEN at MSc level and Advanced KAIZEN at PhD level are not completed in one year . This is number is graduates in each year.

(*2) Not all participants use EKI accomodation.

(*3) This will be outsourced. No need to count for the size and number of building.

(*4) All ICT companies and organizations are located in Addis Ababa or within 100 km distance.

Composition of Training

- ★ 2 months Training 3 weeks CRT + 5 weeks ICT (ICT : 5 persons / group, 1 company / person, 2 groups share 1 car.)
- ★ 4 months Training 4 weeks CRT + 12 weeks ICT (ICT : 5 person / group, 1 company / person, 2 groups share 1 car.)
- ★ 1 and half years Training CRT + ICT
- ★ 2 and half years Training CRT + ICT

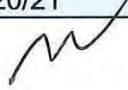
Details of EKI Expenses

	1	2	3
FY of Ethiopia (ETH Calendar)	2005/06	2006/07	2007/08
FY of Ethiopia (Gregorian)	2012/13	2013/14	2014/15
The Amount of Annual Budget/Expense	15 M ETB	18 M ETB	21 M ETB
Summary	15,525,000	17,819,550	21,860,350
6100 Salary	5,159,000	5,467,550	5,879,670
6111 Permanent labor	4,690,000	4,861,550	5,240,690
6121 Permanent per-diem (Daily wage)	47,000	72,000	62,500
6131 Permanent labor pension	422,000	534,000	576,480
6200 Material Usage	9,366,000	11,102,000	14,400,680
6210 Material	1,250,000	1,862,000	2,801,040
6211 Uniform, Worker's cloth	112,000	125,000	250,000
6212 Office supply	297,000	395,000	447,960
6213 Printer	334,000	436,000	647,210
6217 Fuel (Oil)	350,000	600,000	1,100,000
6218 Consumption	51,000	200,000	245,340
6219 Stationary	106,000	106,000	110,530
6230 Travel & Service	955,000	1,898,000	2,905,540
6231 Per-diem (Daily allowance)	284,000	795,000	1,434,010
6232 Transport payment	82,000	183,000	550,000
6233 Facilitation	589,000	920,000	921,530
6240 Maintenance Service (Fixed & Repair)	170,000	457,000	514,610
6241 Maintenance of vehicle	137,000	400,000	450,680
6243 Machinery maintenance	28,000	50,000	55,340
6244 Building material maintenance	5,000	7,000	8,590
6250 Purchasing	5,751,000	4,484,000	5,750,650
6251 Contractual (Outsourcing) Fee		210,000	1,807,560
6252 Rental	2,760,000	2,760,000	2,760,000
6253 Advertisement	200,000	350,000	400,350
6254 Insurance	65,000	105,000	118,800
6255 Logistic	20,000	20,000	24,530
6256 Service charge	2,430,000	644,000	154,860
6257 Electricity	19,000	25,000	30,670
6258 Telephone	217,000	300,000	368,010
6259 Water	40,000	70,000	85,870
6270 Training	1,240,000	2,401,000	2,428,840
6271 Local training	1,240,000	2,401,000	2,428,840
6300 Fixed Asset & Building	1,000,000	1,250,000	1,350,000
6310 Fixed Asset	1,000,000	1,250,000	1,350,000
6313 Plant and Machinery	500,000	600,000	650,000
6314 Building Material Purchase	500,000	650,000	700,000
6400 Other Payments			230,000
6410 Investment			230,000
6412 Donation			55,000
6417			175,000

*The reason of the figure of "6256 Service Charge" in 2012/13 was big is EKI included "6251 Contractual Fee" into this account code at the year.

Annual Budget of EKI

FY of Ethiopia (ETH Calendar)	FY of Ethiopia (Gregorian)	The Amount of Budget/Expense
2003/04	2010/11	4 M ETB
2004/05	2011/12	12 M ETB
2005/06	2012/13	15 M ETB
2006/07	2013/14	18 M ETB
2007/08	2014/15	21 M ETB
2008/09	2015/16	24 M ETB
2009/10	2016/17	27 M ETB
2010/11	2017/18	30 M ETB
2011/12	2018/19	33 M ETB
2012/13	2019/20	36 M ETB
2013/14	2020/21	39 M ETB



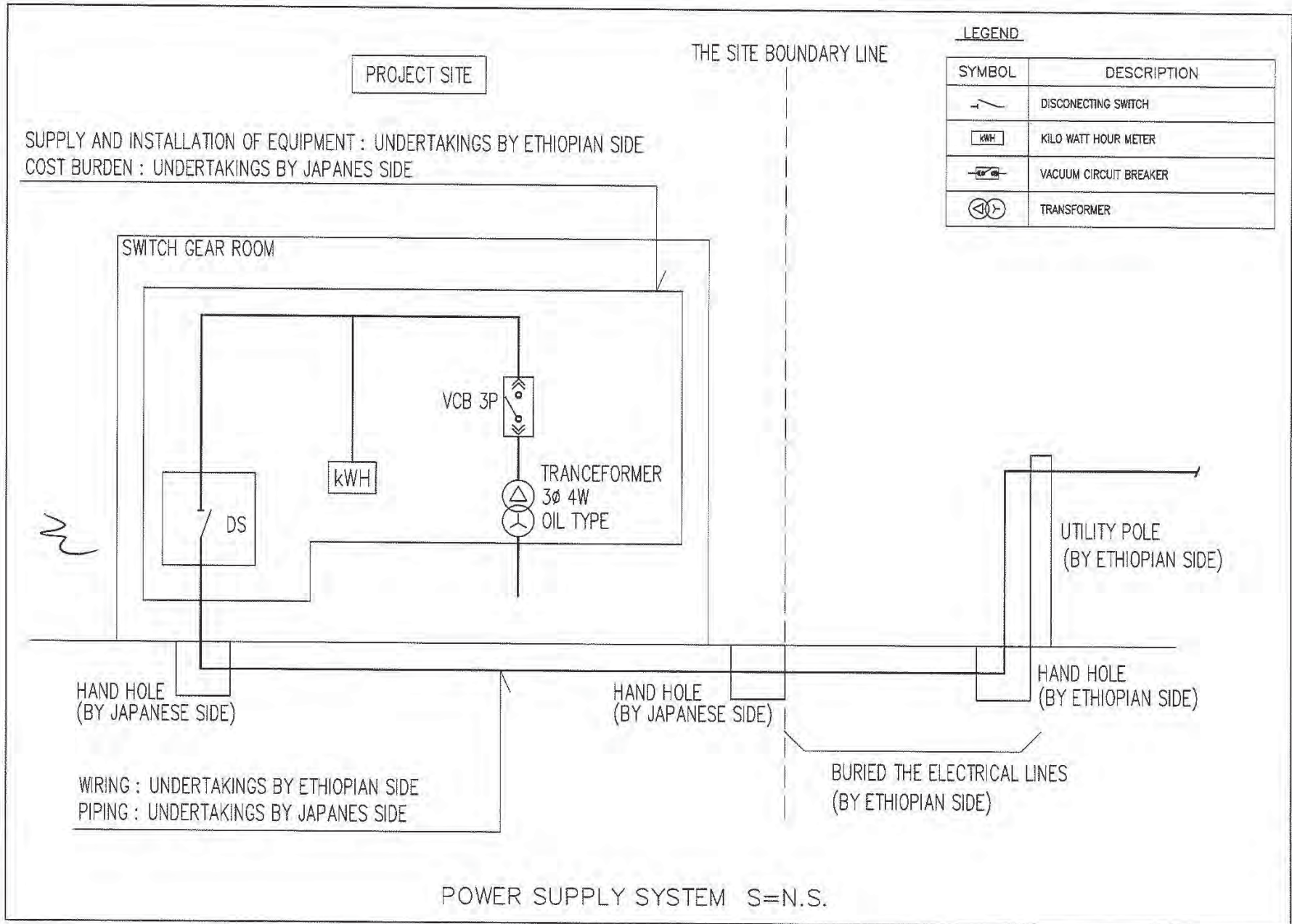
Proposed EKI Incentive Scheme

	Position	Position Allowance	Transport Allowance	House Allowance	Daily Substitution	
					Bed	Food
1	Director General	5000	Vehicle with Fuel	5000	500	500
2	Deputy Director General	5000	Vehicle with Fuel	5000	500	500
3	Director	4000	Vehicle with Fuel	5000	400	400
4	Lead Consultant/Researcher	3000	150 liter/regular	4000	400	400
5	Senior Consultant/Researcher	3000	150 liter/regular	3000	300	300
6	Associate Consultant/Researcher	2000	100 liter/regular	2000	200	200
7	Junior Consultant/Researcher	2000	100 liter/regular	1000	200	200

W

Proposed Salary Scale by Consultants for the New Organization Structure

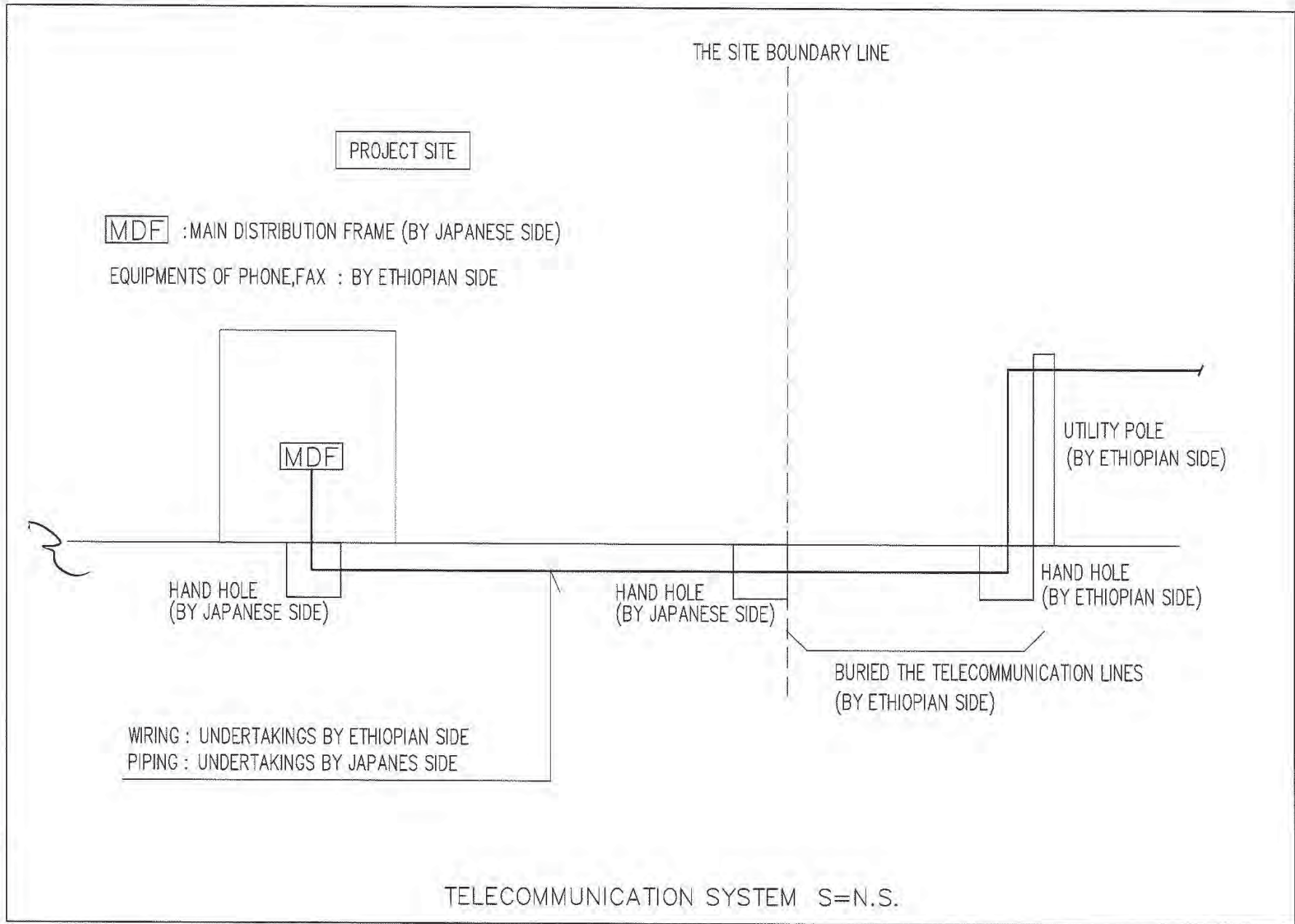
	Position	Base Year	Increment Step (year)									Ceiling
			1	2	3	4	5	6	7	8	9	
I	Administration Staff	660	755	850	967	1086	1206	1350	1494	1638	1798	1989
II		967	1086	1206	1350	1494	1638	1798	1989	2180	2410	2640
III		1350	1494	1638	1798	1989	2180	2410	2640	2867	3145	3434
IV		1798	1989	2180	2410	2640	2867	3145	3434	3750	4075	4425
V		2410	2640	2867	3145	3434	3750	4075	4425	4806	5207	5642
VI		3145	3434	3750	4075	4425	4806	5207	5642	6077	6529	7013
VII	Junior Consultant/Researcher	4075	4425	4806	5207	5642	6077	6529	7013	7518	8069	8623
VIII	Assistant Consultant/Researcher	5207	5642	6077	6529	7013	7518	8069	8623	9227	9834	10481
IX	Senior Consultant/Researcher	6529	7013	7518	8069	8623	9227	9834	10481	11171	11872	12593
X	Lead Consultant/Researcher	8069	8623	9227	9834	10481	11171	11872	12593	133350	14116	14927
XI	Director	9834	10481	11171	11872	12593	13350	14116	14927	15783	16689	17604
XII	Deputy Director General	11872	12593	13350	14116	14927	15783	16689	17604	18569	19586	20624
XIII	Director General	14116	14927	15783	16689	17604	18569	19586	20624	21676	22760	23898



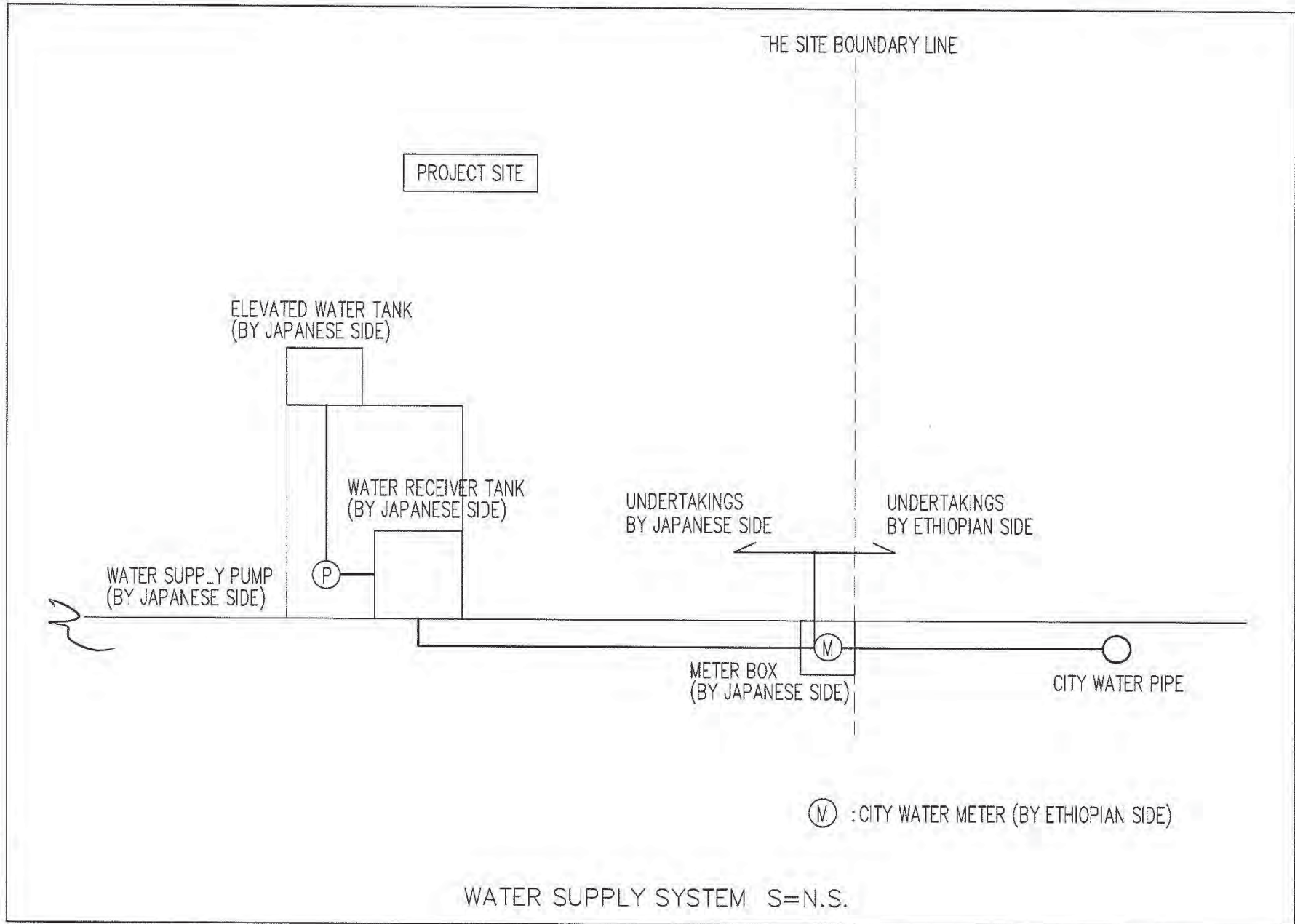
LEGEND

SYMBOL	DESCRIPTION
	DISCONNECTING SWITCH
	KILO WATT HOUR METER
	VACUUM CIRCUIT BREAKER
	TRANSFORMER

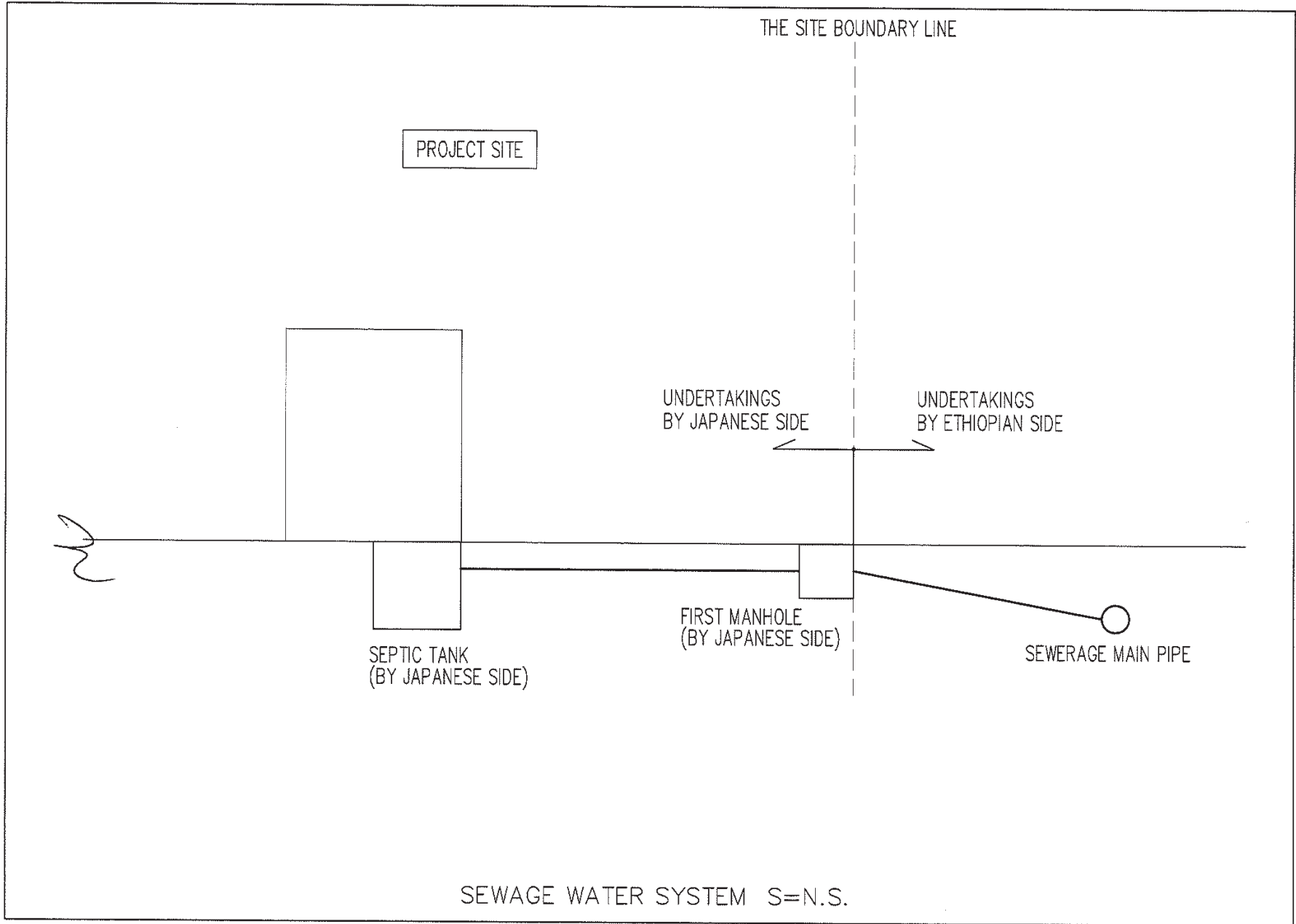
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A-6 討議議事録 (M/D) 2

**Minutes of Discussions
on the Preparatory Survey
for the Project on Construction of TICAD Human Resource Development Center
for Business and Industry
(Explanation on Draft Preparatory Survey Report)**

On the basis of the discussions and field survey in the Federal Democratic Republic of Ethiopia (hereinafter referred to as "Ethiopia") in August and September 2015, and the subsequent technical examination of the results in Japan, the Japan International Cooperation Agency (hereinafter referred to as "JICA") prepared a draft Preparatory Survey Report for the Project on Construction of TICAD Human Resource Development Center for Business and Industry (hereinafter referred to as "the Draft Report").

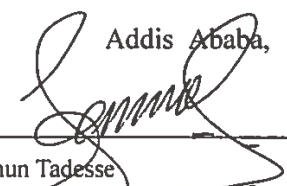
In order to explain the Draft Report and to consult with the concerned officials of the Government of Ethiopia on its contents, JICA sent the Preparatory Survey Team to Ethiopia for the Explanation of the Draft Report (hereinafter referred to as "the Team"), headed by Mr. Hiroyuki Tomita, JICA, and is scheduled to stay in the country from 8th to 14th, May 2016.

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



Hiroyuki Tomita
Leader
Preparatory Survey Team
Japan International Cooperation Agency

Addis Ababa, 13 May, 2016



Getahun Tadesse
Director General
Ethiopian Kaizen Institute
The Federal Democratic Republic of
Ethiopia

Witnessed by



Kokeb Mignot
Director, Bilateral Cooperation Directorate
Ministry of Finance and Economic
Cooperation
The Federal Democratic Republic of
Ethiopia

ATTACHMENT

1. Title of the Preparatory Survey

Both sides confirmed the title of the Preparatory Survey for the Project on Construction of TICAD Human Resource Development Centre for Business and Industry” (hereinafter referred to as “the Project”).

2. Objective of the Project

The objective of the Project is to promote capacity of human resource development for Ethiopia Kaizen Institute(EKI) through building the EKI Complex and procuring necessary equipment for EKI, thereby contributing to developing Quality Control and Productivity in Ethiopia , as TICAD Human Resource Development Center for Business and Industry.

TICAD Human Resource Center for Business and Industry as Center of Excellence, is aiming to educate the people to get the jobs, to foster the human resource to match the demand of labor market, which contribute to the human resource development needs for private companies including Japanese companies in Ethiopia as well as in other African countries.

3. Project Site

Both sides confirmed that the site of the Project is in Addis Ababa City,Lideta Sub – City,Woreda 10,Lideta Tena, which is shown in Annex-1.

4. Line Agency and Executing Agency

Both sides confirmed the line ministry and executing agency as follows:

4-1. The line agency is Ministry of Public Service and Human Resource Development, which would be the agency to supervise the executing agency.

4-2. The executing agency is Ethiopia Kaizen Institute. The executing agency shall coordinate with all the relevant agencies to ensure smooth implementation of the Project and to ensure all the undertakings stipulated in Annex-8 taken by relevant agencies properly and on time. The current organization chart of the executing organization is shown in Annex-2.

5. Contents of the Draft Report

After the explanation of the contents of the Draft Report by the Team, the Ethiopian side agreed in principle to its contents.

6. Cost Estimation

Both sides confirmed that the Project cost estimation described in Annex 3 was provisional and would be examined further by the Government of Japan for its final approval.

7. Confidentiality of the Cost Estimation and Specifications

Both sides confirmed that the Project cost estimation shown in Annex 3 and technical specifications in the Draft Report should never be duplicated or disclosed to any third parties until the procurement contract is concluded between Ethiopian side and Japanese contractor.

8. Japanese Grant Scheme

The Ethiopian side understands the Japanese Grant Scheme and its procedures as described in Annex 4, 5 and 6, and necessary measures to be taken by the Government of Ethiopia.

9. Project Implementation Schedule

The Team explained to the Ethiopian side that the expected implementation schedule is as attached in Annex 7.

10. Expected outcomes and Indicators

Both sides agreed that key indicators for expected outcomes as follows. The Ethiopian side has responsibility to monitor the progress of the indicators and achieve the target in year 2021.

[Quantitative Effect]

Indicator	Current Value (As of End of 2015)	Planned Value (March 2021)
Number of Trainees per year	12,117	38,680

[Qualitative Effect]

It is expected to improve the capacity of human resource development for EKI.

11. Soft Component of the Project

Considering the sustainable operation and maintenance of the provided facility and equipment, following technical assistance is planned to be provided by consultant

3

under the soft component of the Project.

- Supporting formulation of the Operation and Maintenance(O&M) Team in EKI
- Developing the O&M plan in discussion with EKI.
- Training of the O&M team in EKI.

The Ethiopian side confirmed to assign necessary number of competent and appropriate C/Ps as described in the Draft Report.

12. Undertakings Taken by Both Sides

Both sides confirmed undertakings described in Annex 8. The Ethiopian side (EKI) assured to take the necessary measures and coordination including allocation of the necessary budget which are preconditions of implementation of the Project shown in Annex 3. 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.

13. Monitoring during the Implementation

The Project will be monitored at least every once a month by the executing agency with the Project Monitoring Report (PMR). The template of PMR is shown in Annex 9.

14. Ex-Post Evaluation

JICA will conduct ex-post evaluation three (3) years after the project completion with respect to five evaluation criteria (Relevance, Effectiveness, Efficiency, Impact, Sustainability) of the Project. Result of the evaluation will be publicized. The Ethiopian side is required to provide necessary support for them.

15. Issues to be Considered for the Smooth Implementation of the Project

Both sides confirmed to remove debris and foundation before the tender for the smooth implementation of the Project described in Annex 7.

16. Schedule of the Study

JICA will complete the Final Report of the Preparatory Survey in accordance with the confirmed items and send it to the Ethiopian side around July 2016.

17. Environmental and Social Considerations

17-1 General Issues

17-1-1 Environmental Guidelines and Environmental Category

The JICA 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 B because it is not likely to have a significant adverse impact on the environment as the Project is not considered to be a large-scale construction project, is not located in a sensitive area, has none of the sensitive characteristics under the JICA guidelines for environmental and social considerations.

17-1-2 Environmental Checklist

The environmental and social considerations including major impacts and mitigation measures for the Project are summarized in the Environmental Checklist attached as Annex 10. Both sides confirmed that in case of major modification of the content of the Environmental Checklist, The Ethiopian side shall submit the modified version to JICA in a timely manner.

17-2 Environmental Issues

17-2-1 Environmental Impact Assessment (EIA)

Both sides confirmed the procedure of EIA, then, EKI should submit the application of EIA to Ethiopian Environment Agency(EPA) after EKI receives the certificate of land ownership. Both side also confirmed that the final EIA should be approved before starting the tender notice, when it will be around March 2017, and to be submitted it to JICA through EKI in December, 2016.

17-2-2 Environmental Management Plan and Environmental Monitoring Plan

Both sides confirmed Environmental Management Plan (EMP) and Environmental Monitoring Plan (EMoP) of the Project is as Annex 11 and Annex 12 respectively. Both side agreed that environmental mitigation measures and monitoring shall be conducted based on the EMP and EMoP, which may be updated during the detailed design stage.

17-3 Social Environment

Both sides confirmed that land ownership has already been transferred to EKI and there are no inhabitants to be relocated from the site to other place.

17-4 Environmental and Social Monitoring

Both sides agreed that the Ethiopian side will submit results of environmental and

social monitoring to JICA by using the monitoring form attached as Annex 13

18. Other Relevant Issues

18-1. Customs and Tax Issue

Regarding indirect taxes such as Custom Duties, VAT and Stamp duties etc., which may be imposed in Ethiopia with respect to the purchase of the products and the services to be exempted by MOFEC or borne by EKI.

Regarding direct taxes such as corporate tax and personal income taxes, both sides understand that further discussion will be continued between Government of Japan and Government of Ethiopia.

18-2. O & M of the Facility and Equipment

The Team explained the importance of operation and maintenance of the facility and equipment procured by the Project considering that proper asset management impacts greatly on life-span of the facility and equipment and its maintenance cost. EKI shall secure enough staff and budgets necessary for appropriate operation and maintenance of the facility and equipment.

【Annex 1 Project Site】

【Annex 2 Organization Chart of EKI】

【Annex 3 Project Cost Estimation】

【Annex 4 Japanese Grant】

【Annex 5 Flow Chart of Japanese Grant Procedures】

【Annex 6 Financial Flow of Japanese Grant】

【Annex 7 Project Implementation Schedule】

【Annex 8 Major Undertakings to be taken by Each Government】

【Annex 9 Project Monitoring Report】 (template)

【Annex 10 Environmental Check List】

【Annex 11 Environmental Management Plan】

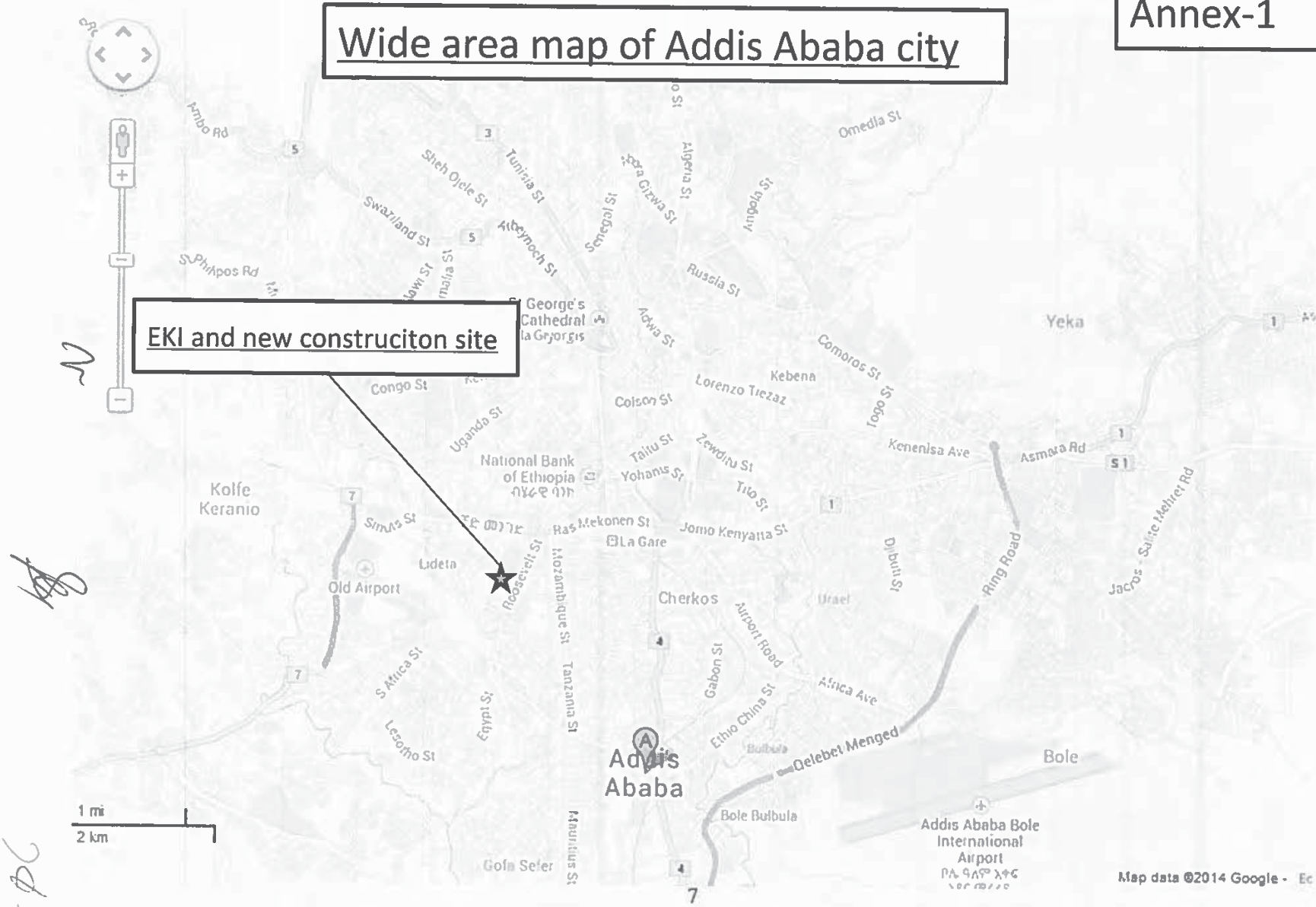
【Annex 12 Environmental Monitoring Plan】

【Annex 13 Environmental and Social Monitoring Form】

Annex-1

Wide area map of Addis Ababa city

EKI and new construction site



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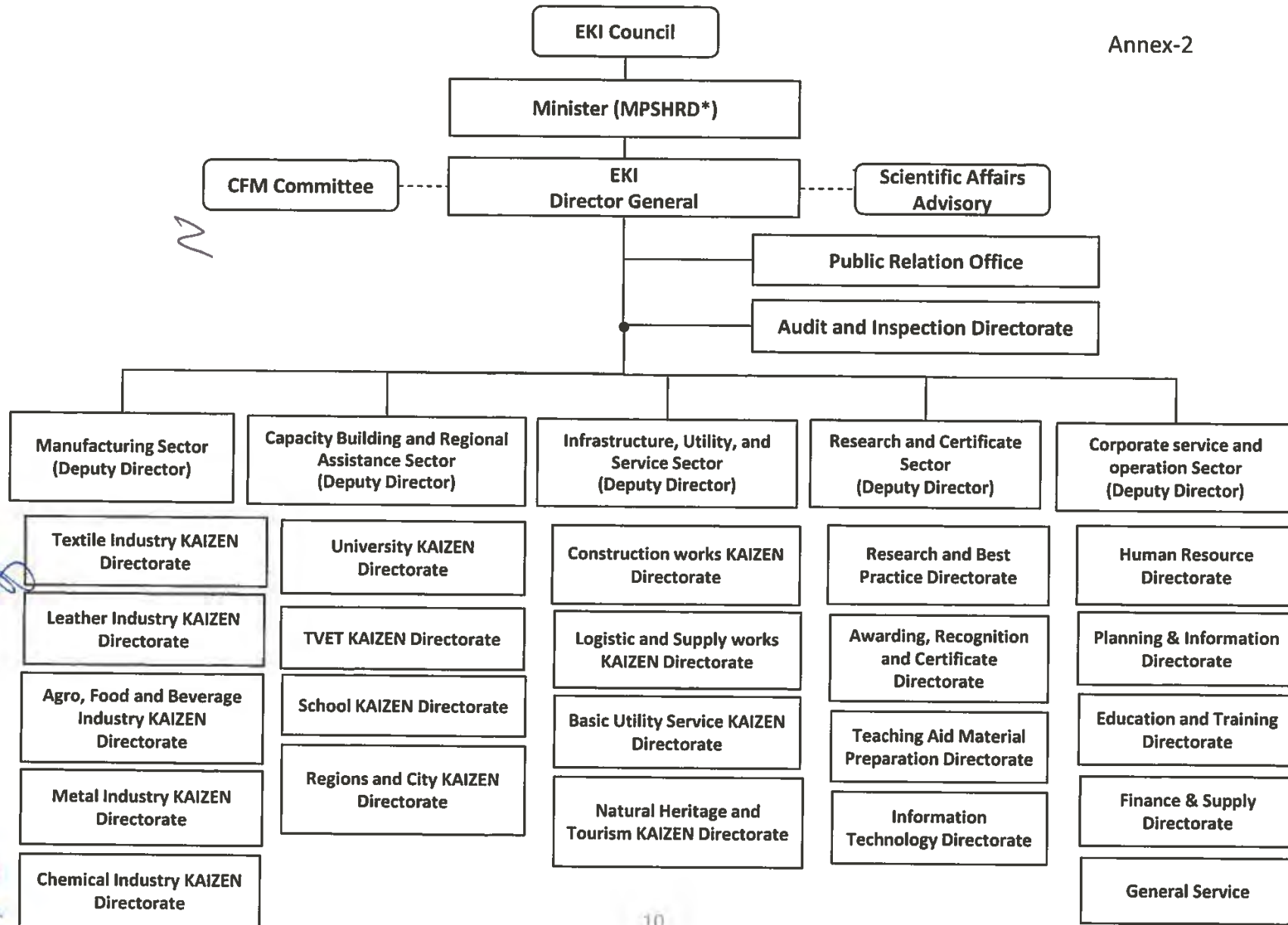
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last

Construction site

River





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Annex 3 Project Cost Estimation (Confidential)

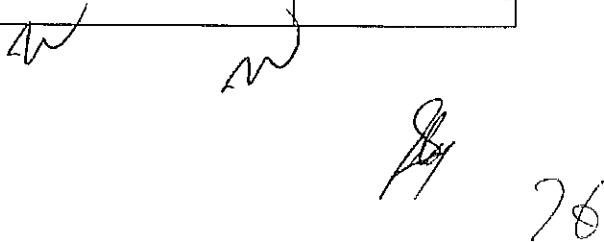
1. Expenses to be borne by Japan

This data is closed due to the confidentiality.

2. Expenses to be covered by the Ethiopia Side

Item to be burden	Item	Estimated cost (in thousand ETB)
Facilities	Removal of the debris in the site (include existing sheds and plants) and site clearance	To be estimated by EKI
	Installation of electricity, water, sewage and telecommunication lines. Commission for construction permission.	To be estimated by EKI
	Planting, furniture and furnishings which are not include in Japanese works	To be estimated by EKI
Bank Commission	Bank Commission (Bank Arrangement B/A, Authorization to Pay A/P) 0.1% of Grant Amount	500
Total		

Source: JICA Survey Team



3. Estimated Indirect Taxes and Direct Taxes

Item to be burden	Item	Approximate Amount (1,000 ETB)
Indirect taxes		
Custom Duties	Exempted or refunded by Ethiopian side	85,000
Input VAT		35,000
Output VAT		75,000
Stamp Duties		50
Sub total		195,050
Direct taxes		
Corporate Income Tax	To be discussed by both governments	15,000
Personal Income Tax		2,400
Sub total		17,400
Total		212,450

Source: JICA Survey Team

4. Condition of Cost estimation

Timing of estimation: September 2015

Exchange rates:

1 ETB =6.030JPY

1 US\$ =124.40JPY

1 Euro =138.68JPY

JAPANESE GRANT

The Japanese Grant (hereinafter referred to as the “Grant”) 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 is not supplied through the donation of materials as such.

Based on a JICA law which was entered into effect on October 1, 2008 and the decision of the GOJ, JICA has become the executing agency of the Japanese Grant for Projects for construction of facilities, purchase of equipment, etc.

1. Grant Procedures

The Grant 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 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 project. The Outline Design of the Project is confirmed based on the guidelines of the Japanese Grant 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) 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. Japanese Grant 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, in accordance with the E/N, 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 Grant, in principle, Japanese products and services including transport or those of the recipient country are to be purchased. The Grant may be used for the purchase of the products or services of a third country, if necessary, taking into account the quality, competitiveness and economic rationality of products and services necessary for achieving the objective of the Project. However, the prime contractors, namely, constructing and procurement firms, and the prime consulting firm are limited to "Japanese nationals", in principle.

(4) Necessity of "Verification"

The Government of the recipient country or its designated authority will conclude contracts denominated in Japanese yen with Japanese nationals, in principle. 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 Project, the recipient country is required to undertake such necessary measures as Annex-8. The Japanese Government requests the Government of the recipient country to exempt all customs duties, internal taxes and other fiscal levies such as VAT, commercial tax, income tax, corporate tax, resident tax, fuel tax, but not limited, which may be imposed in the recipient country with respect to the supply of the products and services under the verified contract, since the Grant fund comes from the Japanese taxpayers.

(6) "Proper Use"

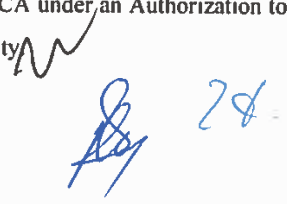
The Government of the recipient country is required to maintain and use properly and effectively the facilities constructed and the equipment purchased under the Grant, to assign staff necessary for this operation and maintenance and to bear all the expenses other than those covered by the Grant.

(7) "Export and Re-export"

The products purchased under the Grant 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"), in principle. JICA will execute the Grant 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.

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(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) Environmental and Social Considerations

The Government of the recipient country must carefully consider environmental and social impacts by the Project and must comply with the environmental regulations of the recipient country and JICA Guidelines for Environmental and Social Consideration (April, 2010).

(11) Monitoring

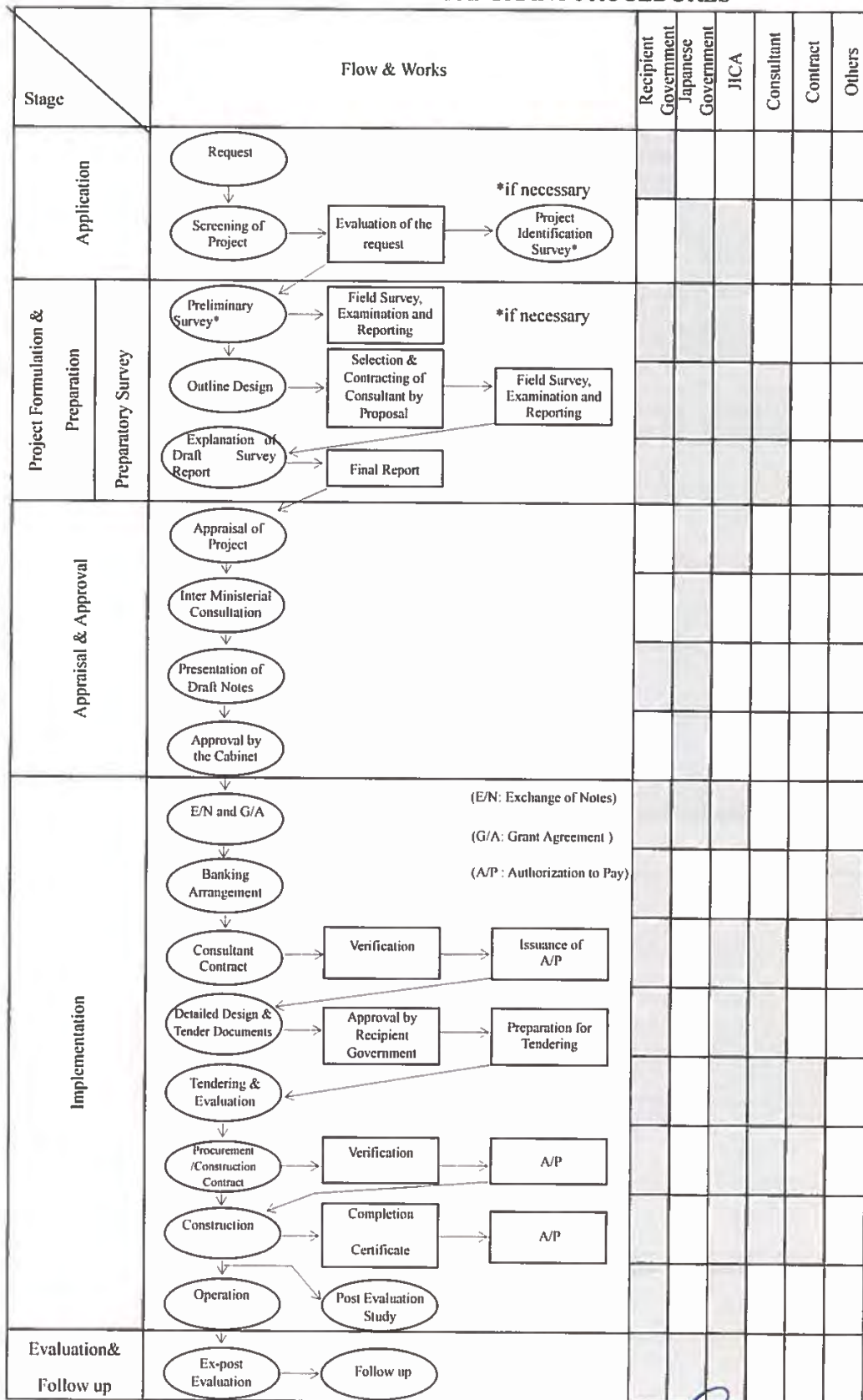
The Government of the recipient country must take their initiative to carefully monitor the progress of the Project in order to ensure its smooth implementation as part of their responsibility in the G/A, and must regularly report to JICA about its status by using the Project Monitoring Report (PMR).

(12) Safety Measures

The Government of the recipient country must ensure that the safety is highly observed during the implementation of the Project.

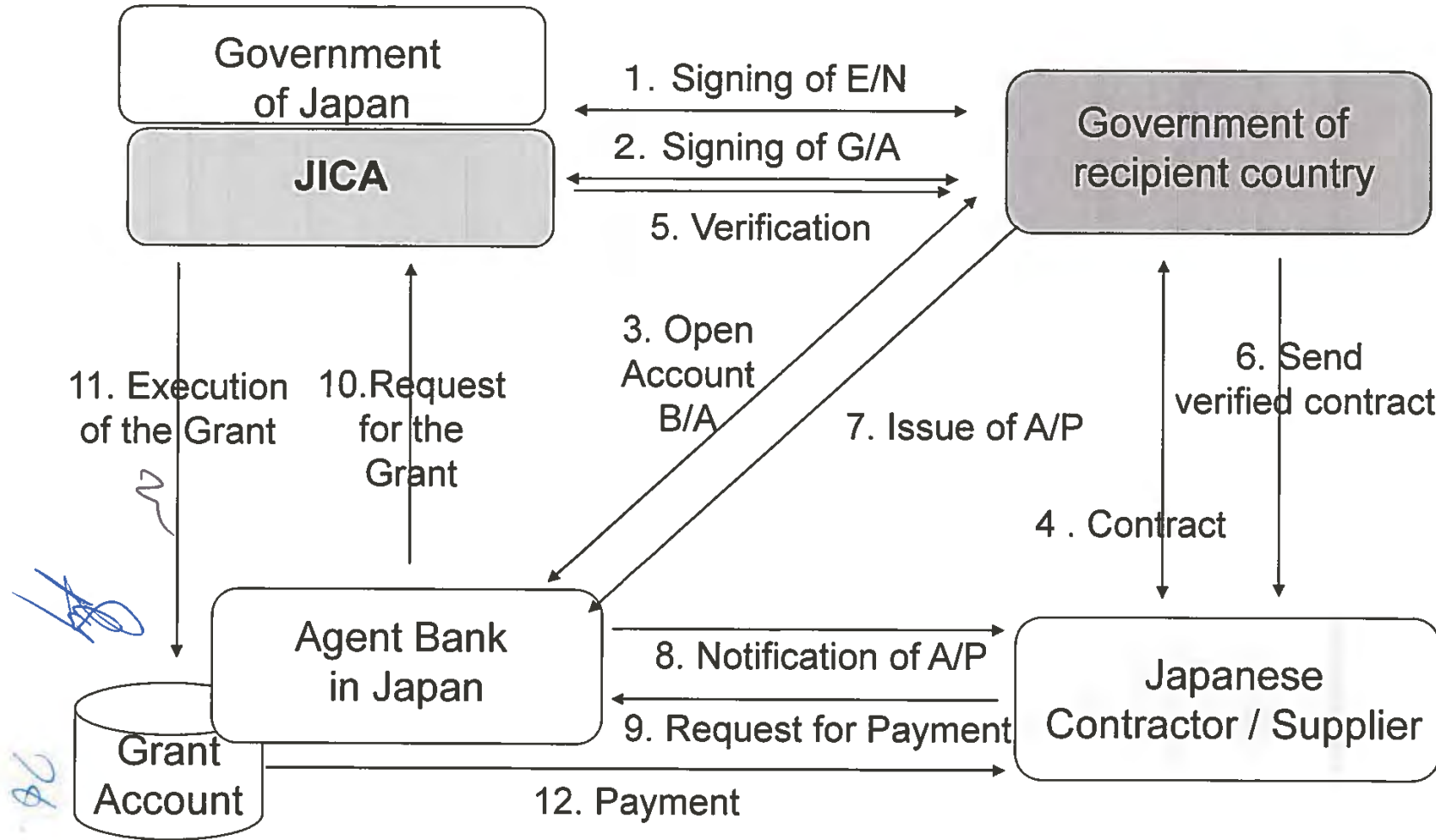


FLOW CHART OF JAPANESE GRANT PROCEDURES



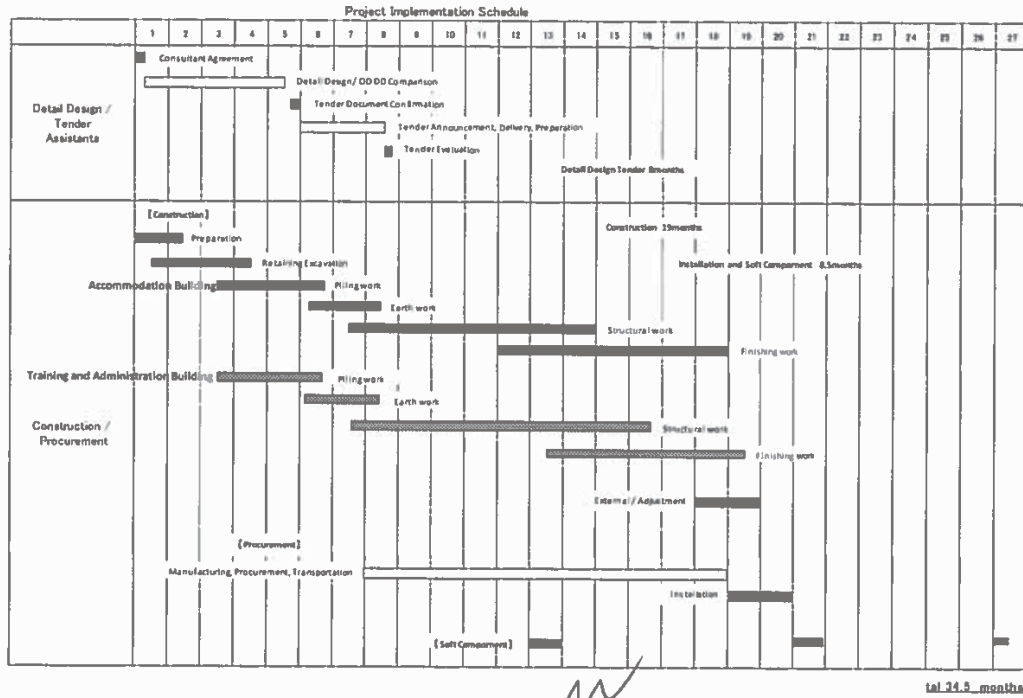
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Financial Flow of Grant Aid (A/P Type)



A-6-18

Annex 7 Project Implementation Schedule



(8 months + 26.5 months)

Major Undertakings to be taken by Recipient Government for the Project

1. Before the Tender

NO	Items	Deadline	In charge	Cost	Ref.
1	To open Bank Account (Banking Arrangement (B/A))	within 1 month after G/A	MOFEC		E/N and GA
2	To approve IEE/EIA	within 1 month after G/A	EKI		
3	To implement EIA	before start of the construction	EKI		
4	To secure the following lands 1) project sites (Approx. 3,700m ²) at Addis Ababa 2) temporary construction yard and stock yard near the Project area	before notice of the tender document	EKI		MD of Preparatory study
5	To obtain the planning, zoning, building permit	before notice of the tender document	EKI		
6	To clear and level the following sites 1) existing facilities (Debris and Foundation) 2) leveling the sites at Addis Ababa	before notice of the tender document	EKI		MD of Preparatory study

2. During the Project Implementation

NO	Items	Deadline	In charge	Cost	Ref.
1	To bear the following commissions to a bank of Japan for the banking services based upon the B/A		EKI		E/N and GA
	1) Advising commission of A/P	within 1 month after the signing of the contract	EKI		
	2) Payment commission for A/P	every payment	MOFEC		
2	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 under the verified contract such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work	during the Project	EKI		

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3	Regarding indirect taxes such as Custom Duties,VAT and Stamp duties etc.,which may be imposed in Ethiopia with respect to the purchase of the products and the services to be exempted by MOFEC or borne by EKI. Regarding direct taxes such as corporate tax and personal income taxes, both sides understand that further discussion will be continued between Government of Japan and Government of Ethiopia.	during the Project	MOFEC EKI		
5	To bear all the expenses, other than those to be borne by the Grant Aid, necessary for construction of the facilities as well as for the transportation and installation of the equipment	during the Project	EKI		
6	To provide facilities for the distribution of electricity, water supply, drainage and other incidental facilities.				MD of Preparatory study
	1)Electricity -The distributing line to a swichboard(high-voltage cable laying, a breaker and transformer) of the site	during the Project	EKI		
	2)Water Supply The city water distribution main to the site	during the Project	EKI		
	3)Drainage The city drainage main (for sewer and others) to the site The rainwater from water channel of the frontal road to public gutter	during the Project	EKI		
	4)Telephone and Communication Line-Telephone line to a main distribution frame(MDF) via an intermediate distribution frame (IDF) -Installing telephone switchboard and terephone	during the Project before start of the construction	EKI		MD of Preparatory study
7	Planting of trees	during the Project	EKI		MD of Preparatory study
8	To implement Environmental Management Plan and Environmental Monitoring Plan	during the Project during the construction	EKI		JICA Environmental and Social guideline(2010)
9	To submit results of environmental monitoring to JICA, by using the monitoring form on monthly basis as a part of Project Monitoring Report	during the Project	EKI		MD of Preparatory study

3. After the Project

NO	Items	Deadline	In charge	Cost	Ref.
1	To maintain and use properly and effectively the facilities constructed and equipment provided under the Grant Aid 1) Allocation of operation and maintenance cost 2) Allocation of operation and maintenance staff 3) Routine check/Periodic inspection	After completion of the construction	EKI		MD of Preparatory study
2	To implement Environmental Management Plan and Environmental Monitoring Plan	for a period based on EMP and EMoP	EKI		JICA Environmental and Social guideline(2010)
3	To submit results of environmental monitoring to JICA, by using the monitoring form, semiannually - The period of environmental monitoring may be extended if any significant negative impacts on the environment are found. The extension of environmental monitoring will be decided based on the agreement between EKI and JICA.	for three years after the Project	EKI		MD of Preparatory study

(B/A: Banking Arrangement, A/P: Authorization to pay, N/A: Not Applicable, MOFEC:Ministry of Finance, Economy and Cooperation)

Major Undertakings to be Covered by the Japanese Grant for the Project

No	Items	Deadline	Cost Estimated (Million Japanese Yen)*
1	To construct of the buildings including fences and procurement of equipment		
2	To ensure prompt unloading and customs clearance at the dry port of disembarkation in recipient country		
1)	a) Air transportation of the products from Japan to the recipient country		
	b) Internal transportation from the port of disembarkation to the project site		
2)	To construct the temporary building		
3)	To provide facilities for the distribution of electricity, water supply, drainage and other incidental facilities		
a)	Electricity		
	The drop wiring and internal wiring within the site		
b)	Water Supply		
	The supply system within the site (receiving and/or elevated tanks)		
c)	Drainage		
	The drainage system (for toilet sewer, ordinary waste, storm drainage and others) within the site		
d)	Furniture and Equipment		
3	To implement detailed design, tender support and construction supervision (Consultant)		
4	Soft Components		
5	Contingency		
	Total		

*; The cost estimates are provisional. This is subject to the approval of the Government of Japan

This data is closed due to the confidentiality.

Project Monitoring Report
on
**for the Project for the Project on Construction of TICAD Human
 Resource Development Center for Industries**
Grant Agreement No. XXXXXXXX
 20XX, Month

Organization Information

Authority (Signer of the G/A)	Person in Charge _____ _____ (Division) _____ Contacts Address: _____ Phone/FAX: _____ Email: _____
Executing Agency	<u>Ethiopia Kaizen Institute(EKI)</u> Person in Charge <u>Mr.Getafun Tadesse</u> <u>Director General</u> Contacts Address: <u>P.O.Box 2292, Addis Ababa, Ethiopia</u> <u>Phone:+251-912-503-023</u> <u>Email: getafuntadesse2007@gmail.com</u>
Line Agency	Person in Charge _____ _____ (Division) _____ Contacts Address: _____ Phone/FAX: _____ Email: _____

Outline of Grant Agreement:

Source of Finance	Government of Japan: Government of Ethiopia:
Project Title	
E/N	Signed date: Duration:
G/A	Signed date: Duration:



1: Project Description

1-1 Project Objective

[Empty box for Project Objective]

1-2 Necessity and Priority of the Project

- Consistency with development policy, sector plan, national/regional development plans and demand of target group and the recipient country.

[Empty box for Necessity and Priority of the Project]

1-3 Effectiveness and the indicators

- Effectiveness by the project

Quantitative Effect (Operation and Effect indicators)		
Indicators	Original (Yr)	Target (Yr)
Qualitative Effect		

2: Project Implementation

2-1 Project Scope

Table 2-1-1a: Comparison of Original and Actual Location

Location	Original: (M/D) Attachment(s):Map	Actual: (PMR) Attachment(s):Map

Table 2-1-1b: Comparison of Original and Actual Scope

Items	Original	Actual
(M/D)	(M/D)	(PMR)

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2-1-2 Reason(s) for the modification if there have been any.

(PMR)

2-2 Implementation Schedule
 2-2-1 Implementation Schedule

Table 2-2-1: Comparison of Original and Actual Schedule

Items	Original		Actual
	DOD	G/A	
Cabinet Approval		-	-
E/N			
G/A			
Detailed Design			
Tender Notice			
Tender			
(Lot1) Construction			
Period			
(Lot2) Installarion of			
Equipement			
Project Completion Date			
Defect Liability Period			

*Project Completion was defined as Check-out of Construction work at the time of G/A.

2-2-2 Reasons for any changes of the schedule, and their effects on the project.

2-3 Undertakings by each Government

2-3-1 Major Undertakings
 See Attachment 2.

2-3-2 Activities
 See Attachment 3.

2-4 Project Cost

2-4-1 Project Cost

Table 2-4-1a Comparison of Original and Actual Cost by the Government of Japan
 (Confidential until the Tender)

Items	Cost (Million Yen)			
	Original	Actual	Original ^(1),2)	Actual
Construction Facilities		Ditto Ditto		

Equipment		Ditto		
Consulting Services	- Detailed design - Procurement Management - Construction Supervision - Soft Component	Ditto		
Total				

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

Table 2-4-1b Comparison of Original and Actual Cost by the Government of Ethiopia

Items		Cost ()	
	Original	Actual	Original ^{1),2)} Actual
		Ditto	
		Ditto	
		Ditto	
		Ditto	
Total			

Note: 1) Date of estimation: October, 2014
 2) Exchange rate: 1 US Dollar = 0.887 Bangladesh Taka (local currency)

2-4-2 Reason(s) for the wide gap between the original and actual, if there have been any, the remedies you have taken, and their results.

(PMR)

2-5 Organizations for Implementation

2-5-1 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: (M/D)

Actual, if changed: (PMR)

2-6 Environmental and Social Impacts

- The results of environmental monitoring as attached in Attachment 4 in accordance with Schedule 4 of the Grant Agreement.

- The results of social monitoring as attached in Attachment 4 in accordance with Schedule 4 of

the Grant Agreement.

- Information on the disclosed results of environmental and social monitoring to local stakeholders, whenever applicable.

3: Operation and Maintenance (O&M)

- 3-1 **O&M and Management**
- Organization chart of O&M
 - Operational and maintenance system (structure and the number ,qualification and skill of staff or other conditions necessary to maintain the outputs and benefits of the project soundly, such as manuals, facilities and equipment for maintenance, and spare part stocks etc)

Original: (M/D)
Actual: (PMR)

- 3-2 **O&M Cost and Budget**
- The actual annual O&M cost for the duration of the project up to today, as well as the annual O&M budget.

Original: (M/D)

4: Precautions (Risk Management)

- Risks and issues, if any, which may affect the project implementation, outcome, sustainability and planned countermeasures to be adapted are below.

Original Issues and Countermeasure(s): (M/D)	
Potential Project Risks	Assessment
1.	Probability: H/M/L
(Description of Risk)	Impact: H/M/L
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action during the Implementation:
	Contingency Plan (if applicable):

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2.	Probability: H/M/L
(Description of Risk)	Impact: H/M/L
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action during the Implementation:
	Contingency Plan (if applicable):
3.	Probability: H/M/L
(Description of Risk)	Impact: H/M/L
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action during the Implementation:
	Contingency Plan (if applicable):
Actual issues and Countermeasure(s)	
(PMR)	

5: Evaluation at Project Completion and Monitoring Plan

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.

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5-3 Monitoring Plan for 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.

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Attachment

1. Project Location Map
2. Undertakings to be taken by each Government
3. Monthly Report
4. Environmental Monitoring Form / Social Monitoring Form
5. Monitoring sheet on price of specified materials (Quarterly)
6. Report on Proportion of Procurement (Recipient Country, Japan and Third Countries)
(Final Report Only)

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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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%)	

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Annex 10 Environment Check List

Category	Environmental Item	Main Check Items	Yes: Y No: N NA: Not applied	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
1 Permits and Explanation	1(1) EIA and Environmental Permits	(a) Have EIA reports been already prepared in official process?	(a) N	(a) EIA reports are required after the determination of detailed design according to the Ethiopian Environmental Guideline. EKI will start EIA process after PMU is established.
		(b) Have EIA reports been approved by authorities of the host country's government?	(b) NA	(b) -
		(c) Have EIA reports been unconditionally approved? If conditions are imposed on the approval of EIA reports, are the conditions satisfied?	(c) NA	(c) -
		(d) In addition to the above approvals, have other required environmental permits been obtained from the appropriate regulatory authorities of the host country's government?	(d) NA	(d) -
	1(2) Explanation to the Local Stakeholders	(a) Have contents of the project and the potential impacts been adequately explained to the Local stakeholders based on appropriate procedures, including information disclosure? Is understanding obtained from the Local stakeholders?	(a) N	(a)
		(b) Have the comment from the stakeholders (such as local residents) been reflected to the project design?	(b) NA	(b) -
	1(3) Examination of Alternatives	(a) Have alternative plans of the project been examined with social and environmental considerations?	(a) N	(a) -
2 Pollution Control	(1) Air Quality	(a) Do air pollutants, (such as sulfur oxides (SO _x), nitrogen oxides (NO _x), and soot and dust) emitted from the proposed infrastructure facilities and ancillary facilities comply with the country's emission standards and ambient air quality standards? Are any mitigating measures taken?	(a) Y/N	(a) It is likely anticipated that the vehicles used for transportation of construction materials at the construction phase will pollute air quality. As Kaizen Center is not a production facility, it will not generate air pollution at the operation phase.

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Category	Environmental Item	Main Check Items	Yes: Y No: N NA: Not applied	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
		(b) Are electric and heat source at accommodation used fuel which emission factor is low?	(b) Y	(b) The Kaizen Center will use commercial power as main power source. As power failure occurs frequently, install of a low-noise type diesel generator is planned. JICA team will suggest EKI to use fuel of high quality and low emission factor for the generator.
	(2) Water Quality	(a) Do effluents or leachates from various facilities, such as infrastructure facilities and the ancillary facilities comply with the country's effluent standards and ambient water quality standards?	(a) Y	(a) There is no quality standard of water discharge. Waste water from the Kaizen Center is planned to discharge to the public sewage system managed by the Addis Ababa Water and Sewage Authority (AASWA).
	(3) Wastes	(a) Are wastes from the infrastructure facilities and ancillary facilities properly treated and disposed of in accordance with the country's regulations?	(a) Y	(a) A garbage collection point is planned on the basement floor. The municipality service will collect garbage. The JICA team will give training (as soft component) on the O&M of facilities including waste management to the staffs.
	(4) Soil Contamination	(a) Are adequate measures taken to prevent contamination of soil and groundwater by the effluents or leachate from the infrastructure facilities and the ancillary facilities?	(a) N	(a) The Kaizen Center will neither be used for the purpose other than training nor generate effluents or leachate.
	(5) Noise and Vibration	(a) Do noise and vibrations comply with the country's standards?	(a) Y	(a) Noise will be made at the construction phase and contractor needs to comply with Ethiopian noise standards. The Kaizen Center will not generate noises and vibrations at the operation phase.
	(6) Subsidence	(a) In the case of extraction of a large volume of groundwater, is there a possibility that the extraction of groundwater will cause subsidence?	(a) N	(a) Kaizen Center will not extract groundwater and will not cause subsidence.
	(7) Odor	(a) Are there any odor sources? Are adequate odor control measures taken?	(a) N	(a) There are no odor sources generated by the Kaizen Center.
3 Natural Environment	(1) Protected Areas	(a) Is the project site or discharge area located in protected areas designated by the country's laws or international treaties and conventions? Is there a possibility that the project will affect the protected areas?	(a) N	(a) The site is not located in the designated protected area.

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Category	Environmental Item	Main Check Items	Yes: Y No: N NA: Not applied	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
	(2) Ecosystem	(a) Does the project site encompass primeval forests, tropical rain forests, ecologically valuable habitats (e.g., coral reefs, mangroves, or tidal flats)?	(a) N	(a) The site of the Kaizen Center does not encompass in the any kind of forests.
		(b) Does the project site encompass the protected habitats of endangered species designated by the country's laws or international treaties and conventions?	(b) N	(b) The site of the Kaizen Center does not encompass the protected habitats.
		(c) Is there a possibility that changes in localized micro-meteorological conditions, such as solar radiation, temperature, and humidity due to a large-scale timber harvesting will affect the surrounding vegetation?	(c) N	(c) The Kaizen Center will not have the possibility the change in micro-meteorological conditions.
		(d) Is there a possibility that the amount of water (e.g., surface water, groundwater) used by the project will adversely affect aquatic environments, such as rivers? Are adequate measures taken to reduce the impacts on aquatic environments, such as aquatic organisms?	(d) N	(d) The Kaizen Center will not use large amount of water.
	(3) Hydrology	(a) Is there a possibility that hydrologic changes due to the project will adversely affect surface water and groundwater flows?	(a) N	(a) The Kaizen Center will not cause the hydrologic changes.
(4) Topography and Geology	(a) Is there a possibility the project will cause large-scale alteration of the topographic features and geologic structures in the project site and surrounding areas?	(a) N	(a) Area of the Kaizen Center is about 3,700m ² and has no possibility to cause large-scale alteration.	
4 Social Environment	(1) Resettlement	(a) Is involuntary resettlement caused by project implementation? If involuntary resettlement is caused, are efforts made to minimize the impacts caused by the resettlement?	(a) N	(a) The building site is the land of other ministry and the land use right will be transferred to EKI. Addis Ababa Municipality is coordinating this matter and there is no objection. No residents live there but a ware house exists and EKI is arranging removal.
		(b) Is adequate explanation on compensation and resettlement assistance given to affected people prior to resettlement?	(b) NA	(b) -
		(c) Is the resettlement plan, including compensation with full replacement costs, restoration of livelihoods and living standards developed based on socioeconomic studies on resettlement?	(c) NA	(c) -

Category	Environmental Item	Main Check Items	Yes: Y No: N NA: Not applied	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
4 Social Environment		(d) Is the compensations going to be paid prior to the resettlement?	(d) NA	(d)
		(e) Is the compensation policies prepared in document?	(e) NA	(e)
		(f) Does the resettlement plan pay particular attention to vulnerable groups or people, including women, children, the elderly, people living below the poverty line, ethnic minorities, and indigenous peoples?	(f) NA	(f)
		(g) Are agreements with the affected people obtained prior to resettlement?	(g) NA	(g)
		(h) Is the organizational framework established to properly implement resettlement? Are the capacity and budget secured to implement the plan?	(h) NA	(h)
		(i) Are any plans developed to monitor the impacts of resettlement?	(i) NA	(i)
		(j) Is the grievance redress mechanism established?	(j) NA	(j)
	(2) Living and Livelihood	(a) Is there a possibility that the project will adversely affect the living conditions of inhabitants? Are adequate measures considered to reduce the impacts, if necessary?	(a) N	(a) Construction of the Kaizen Center follows Ethiopian Laws and regulations regarding building construction. Construction will not start till EKI receives the building permission issued by Addis Ababa Municipality. EKI will inform construction to the inhabitants in the surrounding area before the construction work starts
	(3) Heritage	(a) Is there a possibility that the project will damage the local archeological, historical, cultural, and religious heritage? Are adequate measures considered to protect these sites in accordance with the country's laws?	(a) N	(a) There is no heritage on the project site.
	(4) Landscape	(a) Is there a possibility that the project will adversely affect the local landscape? Are necessary measures taken?	(a) N	(a) The area of the project site is not the specified landscape.
(b) Is there a possibility that landscape is spoiled by construction of high-rise buildings such as huge hotels?		(b) N	(b) The area surrounding the project site is not the specified landscape. The construction plan including building heights follows Ethiopian construction regulations.	

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Category	Environmental Item	Main Check Items	Yes: Y No: N NA: Not applied	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
	(5) Ethnic Minorities and Indigenous Peoples	(a) Are considerations given to reduce impacts on the culture and lifestyle of ethnic minorities and indigenous peoples?	(a) N	(a) No ethnic minorities and indigenous peoples near to the project site.
		(b) Are all of the rights of ethnic minorities and indigenous peoples in relation to land and resources respected?	(b) N	(b) No ethnic minorities and indigenous peoples live in the construction site.
	(6) Working Conditions	(a) Is the project proponent not violating any laws and ordinances associated with the working conditions of the country which the project proponent should observe in the project?	(a) N	(a) The project proponent (EKI) does not violate laws and ordinances associated with the working conditions.
		(b) Are tangible safety considerations in place for individuals involved in the project, such as the installation of safety equipment which prevents industrial accidents, and management of hazardous materials?	(b) Y	(b) EKI considers safety measures at the construction. It is planned to install safety equipment and to construct nurse's room or the first-aid. EKI will not use hazardous industrial materials.
		(c) Are intangible measures being planned and implemented for individuals involved in the project, such as the establishment of a safety and health program, and safety training (including traffic safety and public health) for workers etc.?	(c) Y	(c) Soft component program is planned to support EKI in (i) establishment of management system and (ii) preparation of O&M manual for EKI.
		(d) Are appropriate measures taken to ensure that security guards involved in the project not to violate safety of other individuals involved, or local residents?	(d) Y	(d) JICA expert team shall ask EKI to give proper instruction to the security guards not to violate safety of other individuals and local residents as well as have appropriate human resource management.
	5 Others	(1) Impacts during Construction	(a) Are adequate measures considered to reduce impacts during construction (e.g., noise, vibrations, turbid water, dust, exhaust gases, and wastes)?	(a) Y
(b) If construction activities adversely affect the natural environment (ecosystem), are adequate measures considered to reduce impacts?			(b) NA	(b)

Category	Environmental Item	Main Check Items	Yes: Y No: N NA: Not applied	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
		(c) If construction activities adversely affect the social environment, are adequate measures considered to reduce impacts?	(c) Y	(c) Adequate measure should be considered should be include in the contract with contractor to reduce negative impacts on the social environment during construction. Also construction works should be monitored.
	(2) Monitoring	(a) Does the proponent develop and implement monitoring program for the environmental items that are considered to have potential impacts?	(a) N	(a) JICA project team suggests EKI to start EIA procedure including monitoring plan in accordance with Ethiopian guidelines. EKI confirmed that they will start the procedure after they get land use right
		(b) What are the items, methods and frequencies of the monitoring program?	(b) NA	(b) EKI will prepare the detailed monitoring plan based on the result of EIA study.
		(c) Does the proponent establish an adequate monitoring framework (organization, personnel, equipment, and adequate budget to sustain the monitoring framework)?	(c) NA	(c) JICA project team suggests EKI to establish an adequate monitoring structure.
		(d) Are any regulatory requirements pertaining to the monitoring report system identified, such as the format and frequency of reports from the proponent to the regulatory authorities?	(d) N	(d) Ethiopian environmental guidelines do not provide specific regulatory requirements.
6 Note	Reference to Checklist of Other Sectors	(a) Where necessary, pertinent items described in the Roads, Railways and Bridges checklist should also be checked (e.g., projects including access roads to the infrastructure facilities).	(a) NA	(a) Not necessary
		(b) For projects, such as installation of telecommunication cables, power line towers, and submarine cables, where necessary, pertinent items described in the Power Transmission and Distribution Lines checklists should also be checked.	(b) NA	(b) Not necessary
	Note on Using Environmental Checklist	(a) If necessary, the impacts to transboundary or global issues should be confirmed (e.g., the project includes factors that may cause problems, such as transboundary waste treatment, acid rain, destruction of the ozone layer, or global warming).	(a) NA	(a) Not necessary

1) Regarding the term "Country's Standards" mentioned in the above table, in the event that environmental standards in the country where the project is located diverge significantly from international standards, appropriate environmental considerations are required to be made. In cases where local environmental regulations are yet to be established in some areas, considerations should be made based on comparisons

with appropriate standards of other countries (including Japan's experience).

2) Environmental checklist provides general environmental items to be checked. It may be necessary to add or delete an item taking into account the characteristics of the project and the particular circumstances of the country and locality in which the project is located.

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Annex 11 Environmental Management Plan (Draft)

1. Construction Phase

Category	Environmental Item	Evaluation	Anticipated impacts	Mitigation Measures (preliminary)	Implementer	Responsible Organization
Pollution Control	(1) Air Quality	B-	Due to transportation of construction materials and equipment as well as operation of construction machines, air quality becomes worse temporarily.	EKI/PMU and supervising consultant shall instruct contractor to use unleaded gasoline and maintain their vehicles to keep clean exhaust gas at the construction period. They will conduct periodical monitoring.	Contractor	PMU, Municipality
	(2) Water Quality	B-	Water contamination is anticipated by drainage of used water from construction works.	EKI/PMU and supervising consultant shall instruct contractor to follow the Ethiopian laws and regulations on water drainage. They will conduct periodical monitoring.	Contractor	PMU, Municipality
	(3) Wastes	B-	It is anticipated that waste lumber and waste materials are generated by construction works.	EKI/PMU and supervising consultant shall instruct contractor to treat wastes properly. They will conduct periodical monitoring.	Contractor	PMU, Municipality
	(4) Soil Contamination	B-	Soil contamination is likely anticipated due to leakage of oil for construction and other materials from construction site to a certain volume.	EKI/PMU and supervising consultant shall instruct contractor to use construction machinery of the low oil leakage type. They will do periodical monitoring.	Contractor	PMU, Municipality
	(5) Noise and Vibration	B-	Noise and vibration is anticipated and contractor needs to comply with Ethiopian noise standards.	EKI/PMU and supervising consultant shall instruct contractor to drive construction vehicles at low speed and not to conduct construction work at night time. EKI/PMU will conduct periodical monitoring by installing sound-level meter and vibration meter at the boundary of the Center premises.	Contractor	PMU, Municipality
	(6) Subsidence	D	Kaizen Center will not extract groundwater and will not cause subsidence.	-	-	-
	(7) Odor	D	No construction works are anticipated that cause bad smell.	-	-	-
Natural Environment	(1) Protected Areas	D	Kaizen Centre is located in the urban area and not within or adjacent to the designated protected areas.	-	-	-
	(2) Ecosystem	D	Kaizen Centre is located in the urban area and will not affect natural environment and ecosystem.	-	-	-

Category	Environmental Item	Evaluation	Anticipated impacts	Mitigation Measures (preliminary)	Implementer	Responsible Organization
	(3) Hydrology	D	As construction will not pump up ground water, it will not cause hydrologic changes.	-	-	-
	(4) Topography and Geology	D	Area of the Kaizen Center is about 3,700m ² and has no possibility to cause large-scale alteration.	-	-	-
Social Environment	(1) Resettlement	C-	The building site is the land of other ministry and the land use right will be transferred to EKI. There is no objection. Addis Ababa Municipality is coordinating this matter. No residents live there but a warehouse exists and EKI is arranging removal.	Confirmation of progress of transfer of the land title to EKI.	Municipality	PMU
	(2) Living and Livelihood	D	Construction of the Kaizen Center follows Ethiopian Laws and regulations regarding building construction and will not disturb living and livelihood of surrounding community. JICA study team suggests EKI to inform construction to the inhabitants in the surrounding area before the construction work starts.	-	-	-
	(3) Heritage	D	The project will not damage the local heritage	-	-	-
	(4) Landscape	D	There is no possibility that the project will adversely affect the local landscape.	-	-	-
	(5) Ethnic Minorities and Indigenous Peoples	D	No ethnic minorities and indigenous peoples near to the project site.	-	-	-
	(6) Working Conditions	B-	It is anticipated that construction works cause negative impact on workers.	Safety and health measures at the construction shall be included in the terms of reference to the contractor. EKI/PMU and supervision consultant will instruct contractor to take measure against traffic and industrial accidents. They shall conduct periodical monitoring of working condition.	Contractor	PMU, Municipality

Operational Phase

Category	Environmental Item	Evaluation	Anticipated Impacts	Mitigation Measures (tentative)	Implementer	Responsible Organization
Pollution Control	(1) Air Quality	C-	As Kaizen Center is not a production facility, it will not generate air pollution at the operation phase. Also, it will use commercial power as main power source. However, installation of a low-pollution type diesel generator is planned as a measure to power failure occurring frequently.	JICA consultant team recommends EKI to use diesel of high quality for the generator.	EKI	EKI, Municipality
	(2) Water Quality	C-	As Kaizen Center is not a production facility, it will not discharge large volume of waste water.	The OD Study Team plans that water used in the Kaizen Center will be drained to the public sewage system managed by the Addis Ababa Water and Sewage Authority (AASWA).	EKI, Municipality	EKI, Municipality
	(3) Wastes	C-	Waste from Kaizen Center is neither estimated a large amount nor consisted of hazardous matters.	The OD Study Team plans a garbage collection point on the basement floor and the municipality garbage collection service will collect it. Also, the team plans that JICA expert will give training (as soft component) on the O&M of facilities including waste management to the staffs.	EKI, Municipality	EKI, Municipality
	(4) Soil Contamination	D	Kaizen Center will be used only for the purpose of training and will generate no effluents or leachate.	-	-	-
	(5) Noise and Vibration	D	Kaizen Center will not generate noises and vibrations at the operation phase.	-	-	-
	(6) Subsidence	D	-	-	-	-
	(7) Odor	D	-	-	-	-
Natural Environment	(1) Protected Areas	D	Kaizen Centre is located in the urban area and not within or adjacent to the designated protected areas.	-	-	-
	(2) Ecosystem	D	Kaizen Centre is located in the urban area and will not affect natural environment and ecosystem.	-	-	-
	(3) Hydrology	D	Kaizen Center will not pump up ground water and will not cause hydrologic changes.	-	-	-
	(4) Topography	D	-	-	-	-

Category	Environmental Item	Evaluation	Anticipated impacts	Mitigation Measures (tentative)	Implementer	Responsible Organization
	phy and Geology					
Social Environment	(1) Resettlement	D	-	-	-	-
	(2) Living and Livelihood	B+	Kaizen Center is a training center aiming at enhancement of productivity of Ethiopian industry. It will contribute to strengthening economic competence of Ethiopia and her economic growth. Therefore, Kaizen Center will indirectly give positive impact on the livelihood.	-	-	-
	(3) Heritage	D	The project will not damage the local heritage	-	-	-
	(4) Landscape	D	There is no possibility that the project will adversely affect the local landscape.	-	-	-
	(5) Ethnic Minorities and Indigenous Peoples	C+	Kaizen Center plans to give Kaizen training to trainees from different states (different ethnic groups).	-	-	-
	(6) Working Conditions	C-	Strong negative impact of working condition is not anticipated. EKI will not use hazardous industrial materials.	EKI shall follow Ethiopian Labour Laws and Regulations. BD study team plans to install safety equipment. Also, they plan to construct nurse's room or the first-aid in the Center and JICA consultant will support EKI to prepare working manual to manage the center.	EKI	EKI, Municipality

Legend

A +/- Significant positive/negative impact is expected.

B +/- Positive/negative impact is expected to some extent.

C +/- Extent of positive/negative impact is unknown (A further examination is needed and the impact could be clarified as the study progresses.)

D No impact is expected.

1) Regarding the term "Country's Standards" mentioned in the above table, in the event that environmental standards in the country where the project is located diverge significantly from international standards, appropriate environmental considerations are required to be made. In cases where local environmental regulations are yet to be established in some areas, considerations should be made based on comparisons with appropriate standards of other countries (including Japan's experience).

2) Environmental checklist provides general environmental items to be checked. It may be necessary to add or delete an item taking into account the characteristics of the project and the particular circumstances of the country and locality in which the project is located.

1. Construction phase

Category	Environmental Item	Monitoring Parameters	Means of Monitoring	Environmental Standard	Monitoring Point	Frequency of Monitoring	Implementer	Responsible Organization
Pollution Control	(1) Air Quality	Temperature, humidity, wind velocity, dust, SO ₂ , NO ₂ , CO	Measurement	Ethiopian Air Quality standards	Construction sites	once/ three months	Contractor	PMU, Municipality
	(2) Water Quality	pH, colour, BOD, COD, N, Total P	Measurement	Ethiopian water quality standards	Outlets	once/ three months	Contractor	PMU, Municipality
	(3) Wastes	Kind of wastes, amount, record of collection	Observation	Ethiopian waste management regulations	Construction sites	once/ month	Contractor	PMU, Municipality
	(4) Soil Contamination	Oil leaking	Observation	-	Construction sites	once/ month	Contractor	PMU, Municipality
	(5) Noise and Vibration	Noise (db)	Measurement	Ethiopian noise pollution regulations	Boundary of premises of the medical facilities	once/ three months	Contractor	PMU, Municipality
	(6) Subsidence	-	-	-	-	-	-	-
	(7) Odor	-	-	-	-	-	-	-
Natural Environment	(1) Protected Areas	-	-	-	-	-	-	-
	(2) Ecosystem	-	-	-	-	-	-	-
	(3) Hydrology	-	-	-	-	-	-	-
	(4) Topography and Geology	-	-	-	-	-	-	-
Social Environment	(1) Resettlement	progress of land title transfer	Interview and observation	-	-	At the beginning of construction work	Municipality	PMU
	(2) Living and Livelihood	-	-	-	-	-	-	-
	(3) Heritage	-	-	-	-	-	-	-
	(4) Landscape	-	-	-	-	-	-	-

Category	Environmental Item	Monitoring Parameters	Means of Monitoring	Environmental Standard	Monitoring Point	Frequency of Monitoring	Implementer	Responsible Organization
	(5) Ethnic Minorities and Indigenous Peoples	-	-	-	-	-	-	-
	(6) Working Conditions	Construction accidents, traffic accidents	Record of accidents, interview to labourers	Labour laws, regulations	Construction sites, route of vehicles used for transportation of materials and other necessity	once/ day	Contractor	PMU, Municipality

2. Operational Phase

Category	Environmental Item	Monitoring Parameters	Means of Monitoring	Environmental Standard	Monitoring Point	Frequency of Monitoring	Implementer	Responsible Organization
Pollution Control	(1) Air Quality	Temperature, humidity, wind velocity, dust, SO ₂ , NO ₂ , CO; quality of gasoline	Actual measurement; record	Ethiopian Air Quality standards	Kaizen center	once/ three months	EKI	EKI, Municipality
	(2) Water Quality	pH, colour, BOD, COD N; bacteria, virus	Measurement	Ethiopian water quality standards	Outlets	Always	EKI, Municipality	EKI, Municipality
	(3) Wastes	Kind of wastes, amount, cleanness, record of waste collection	Observation	Ethiopian waste management regulations	Depository	once/ month	EKI, Municipality	EKI, Municipality
	(4) Soil Contamination	-	-	-	-	-	-	-
	(5) Noise and Vibration	-	-	-	-	-	-	-
	(6) Subsidence	-	-	-	-	-	-	-
	(7) Odor	-	-	-	-	-	-	-
Natural Environment	(1) Protected Areas	-	-	-	-	-	-	-
	(2) Ecosystem	-	-	-	-	-	-	-
	(3) Hydrology	-	-	-	-	-	-	-

Category	Environmental Item	Monitoring Parameters	Means of Monitoring	Environmental Standard	Monitoring Point	Frequency of Monitoring	Implementer	Responsible Organization
	(4) Topography and Geology	-	-	-	-	-	-	-
Social Environment	(1) Resettlement	-	-	-	-	-	-	-
	(2) Living and Livelihood	-	-	-	-	-	-	-
	(3) Heritage	-	-	-	-	-	-	-
	(4) Landscape	-	-	-	-	-	-	-
	(5) Ethnic Minorities and Indigenous Peoples	-	-	-	-	-	-	-
	(6) Working Conditions	Health condition of staff members and workers	Periodical medical examination, accident report	-	Kaizen center	once/ six months	EKI	EKI, Municipality

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Annex 13 Environmental and Social Monitoring Form (Preliminary)

A. Construction phase

Name of the construction site / _____ /
 Date of monitoring / _____ / Date of reporting / _____ /
 Person in charge of monitoring / _____ /
 Person in charge of reporting / _____ /

1. Response/Actions to comments and guidance from Government Authorities and the Public

Monitoring item	Monitoring results during the reporting period
Number and contents of formal comments made <u>by the public, if any</u>	
Number and contents of responses from <u>the Government agencies, if any</u>	

2. Pollution control

Item	Unit	Measured Value (mean)	Measured Value (max)	Ethiopian standards	Standards for contract	Referred international standards	Measurement points	Frequency
(1) Air quality								
Temperature	°C							Once/ three months
humidity	%							
wind velocity	m/s							
SO2	µg/m ³							
NO2	µg/m ³							
CO2	µg/m ³							
PM10	µg/m ³							
Pb	µg/m ³							
(2) Waste water quality								
Color	Hazen							Once/ three months
Odor	-							
pH	-							
Turbidity	NTU							
Total Dissolved solids	mg/l							
Total Hardness as CaCO3	mg/l							
(3) Solid waste								
Kind of waste	Type							Once/month
Amount	Ton/ day							
Record of collection	Frequency							
(4) Soil contamination								
Oil & Grease	mg/l							

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(5) Noise and vibration							
Noise (dB)	db						Once/three months

3. Social environment

Item	Monitoring results	Measures to be taken
(6) Resettlement		
Progress of land title transfer		
(7) Working Conditions		
Daily recording		
Construction accidents		
Traffic accidents		
Others		

B. Operational phase

Name of the construction site / _____ /

Date of monitoring / _____ / Date of reporting / _____ /

Person in charge of monitoring / _____ /

Person in charge of reporting / _____ /

1. Response/Actions to comments and guidance from Government Authorities and the Public

Monitoring item	Monitoring results during the reporting period
Number and contents of formal comments made by the public, if any	
Number and contents of responses from the Government agencies, if any	

2. Pollution control

Item	Unit	Measured Value (mean)	Measured Value (max)	Ethiopian standards	Standards for contract	Referred international standards	Measurement points	Frequency
(1) Ambient Air quality								
Temperature	°C							
humidity	%							
wind velocity	m/s							
SO2	µg/m ³							
NO2	µg/m ³							
CO	µg/m ³							
(2) Indoor Air quality								
SO2	µg/m ³							
NO2	µg/m ³							
CO	µg/m ³							
Pb	µg/m ³							
(3) Diesel Generator Stack Emission Monitoring								

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SOx	mg/Nm3							
NOx	mg/Nm3							
CO	mg/Nm3							
Pb	µg/m ³							
(4) Waste water								
Colour	Hazen							
Odour	-							
pH	-							
Oil & Grease	mg/l							
(5) Solid wastes								
Kind of waste	By type							
Amount	t/day							
Cleanness of collection points	-							
Record of collection	Frequenc y							

3. Social environment

Item	Monitoring results	Measures to be taken
(6) Working Conditions		
Daily recording		
Health condition of EKI staff and workers		
Labour accidents		
Traffic accidents		
Others		

Source: Prepared by JICA Expert in charge of environmental and social considerations

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
A-7 コンサルタント討議議事録 (T/M) 2

Technical Memorandum
on the Preparatory Survey for the Project on Construction
of TICAD Human Resource Development Center
for Business and Industry
in the Federal Democratic Republic of Ethiopia

The team of Consultants held a series of technical discussions with officials concerned of Ethiopian Kaizen Institute (EKI) at the meeting during their stay in the Federal Democratic Republic of Ethiopia for explanation of the draft outline design report of the project above captioned.

1. In the course of technical discussions, EKI has requested changes to the consultant team regarding proposed facility design attached in the draft report. The consultant team sincerely consider countermeasures of below requests through discussion with JICA.
 - a. An individual Cashier's Room, an individual Auditor's Room and an individual office space for Public Relation shall be located in the office area according to the revised future organization system of EKI.
 - b. For the Library, the Preparation room, the Conference room and the Waiting room, their partition walls facing to corridor shall be changed to clear glass wall due to transparency in the place of public use.
 - c. The Reception at the Training and Administration Building shall be replaced to the room for Education & Training Directorate with a counter table for providing service of reception & registration.
 - d. The partition wall between the Auditorium (multi-purpose room) and the Pertaining Storage shall be moved some meters to the Pertaining Storage.
 - e. Additional hand wash-basins shall be located at Cafeteria for hygiene.
 - f. 2 guard houses at the main entrance gate and the vehicle entrance gate are needed for security control.
 - g. A space for Utility shall be add in the Accommodation Building.

2. The consultant team mentioned 2 issues below in the discussion
 - a. The set of security system required in the project facilities shall be demarcated into Electrical works of Japanese side obligations. The security system consist of items below.
 - Security doom camera for internal of the building x 3 sets
 - Switching hub with self-power supply x 1 set
 - Computer set with software x 1 set

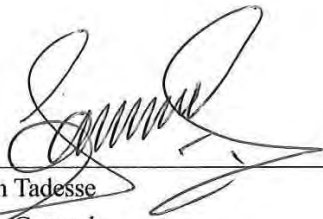
 - b. The specification and quantities of the works by Ethiopian side will be provided by the consultant team. 



Both Japanese and Ethiopia sides confirmed the issues described above in this paper.

Addis Ababa, May 13, 2016

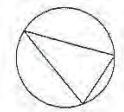
Attached: Drawings for reference



Getahun Tadesse
Director General
Ethiopian Kaizen Institute
The Federal democratic Republic
of Ethiopia

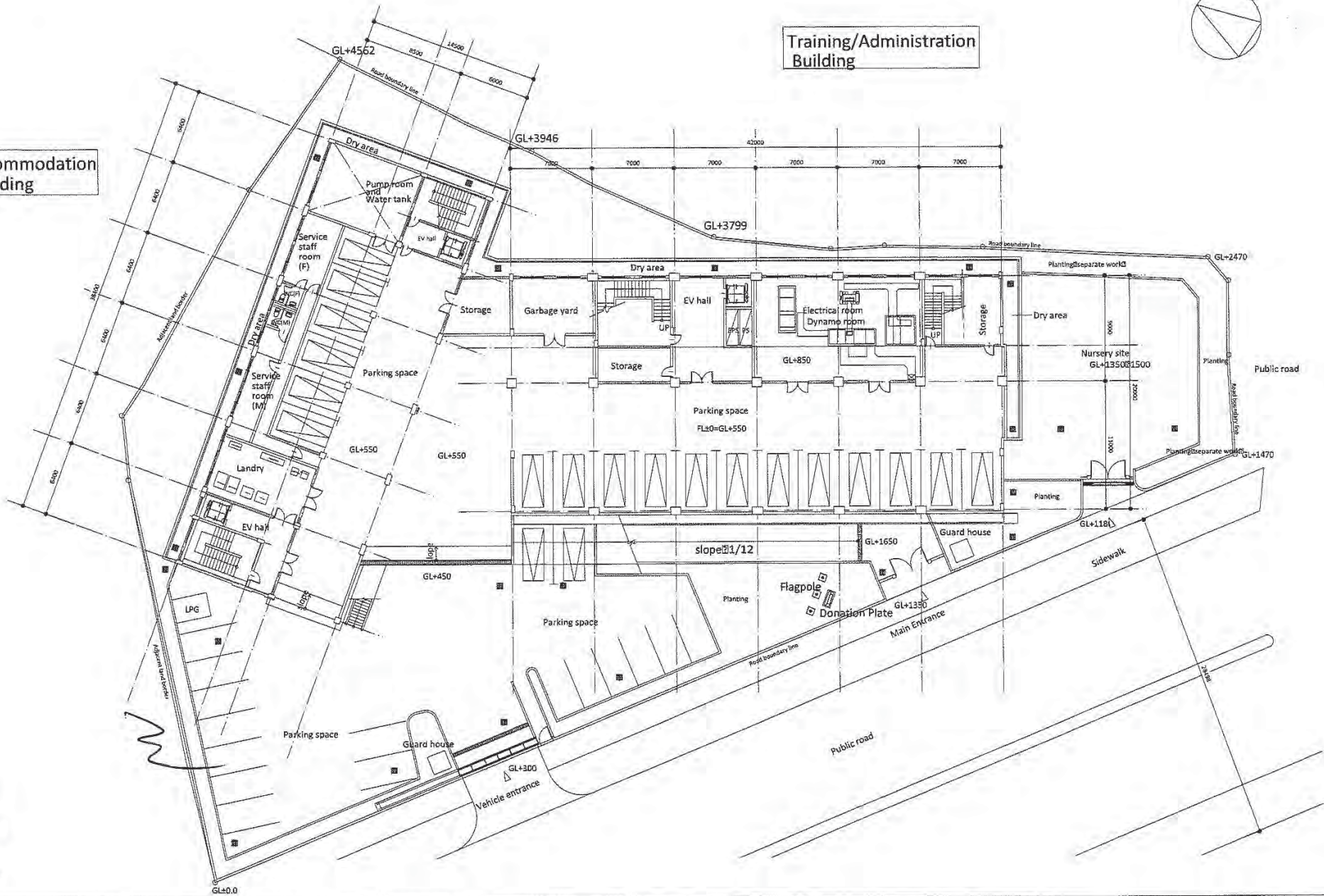


Yoshifumi Hoshiai
Leader of the Consultants
JICA Preparatory Survey Team

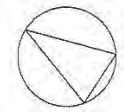


Training/Administration Building

Accommodation Building

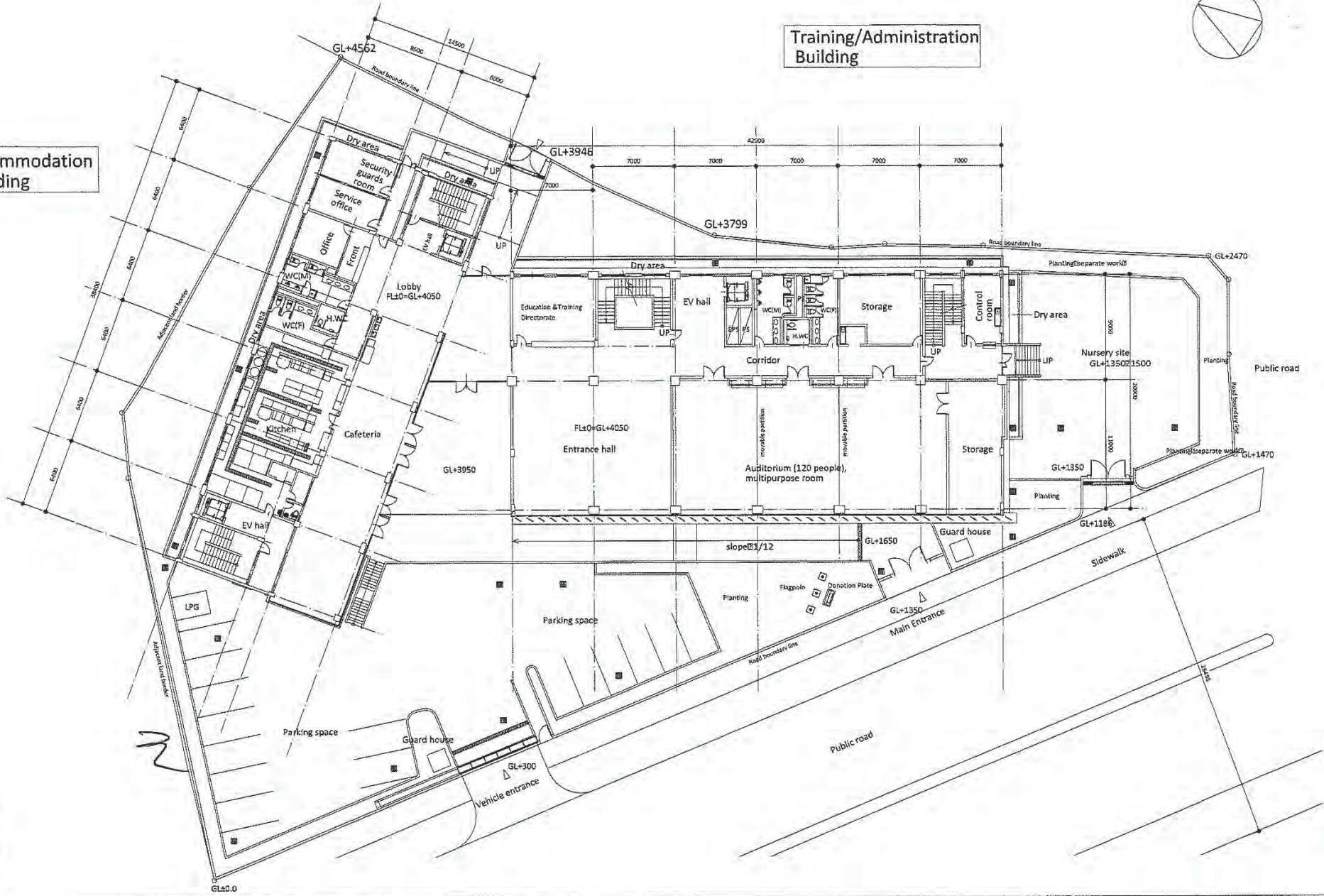


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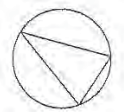
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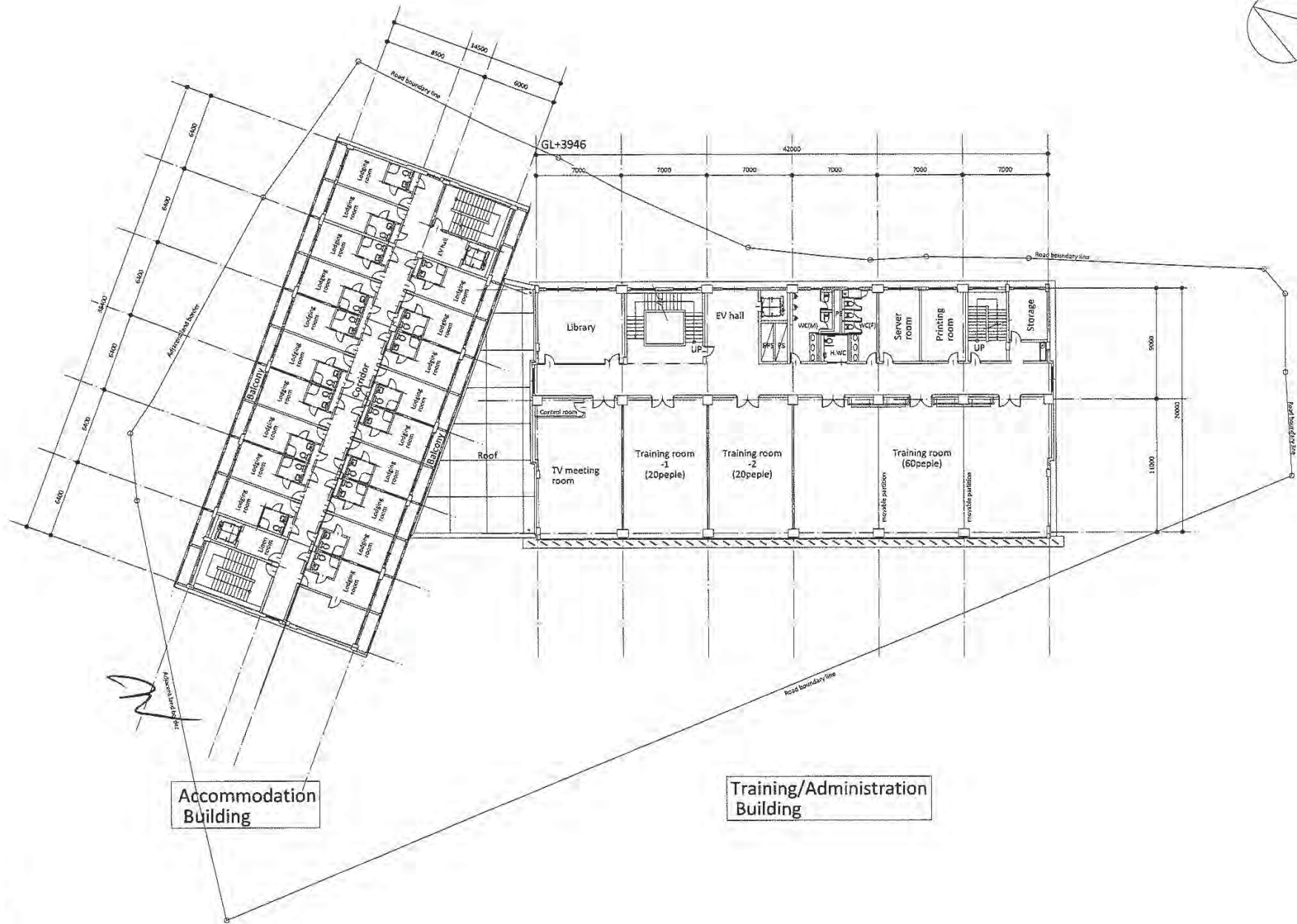


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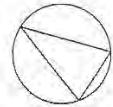


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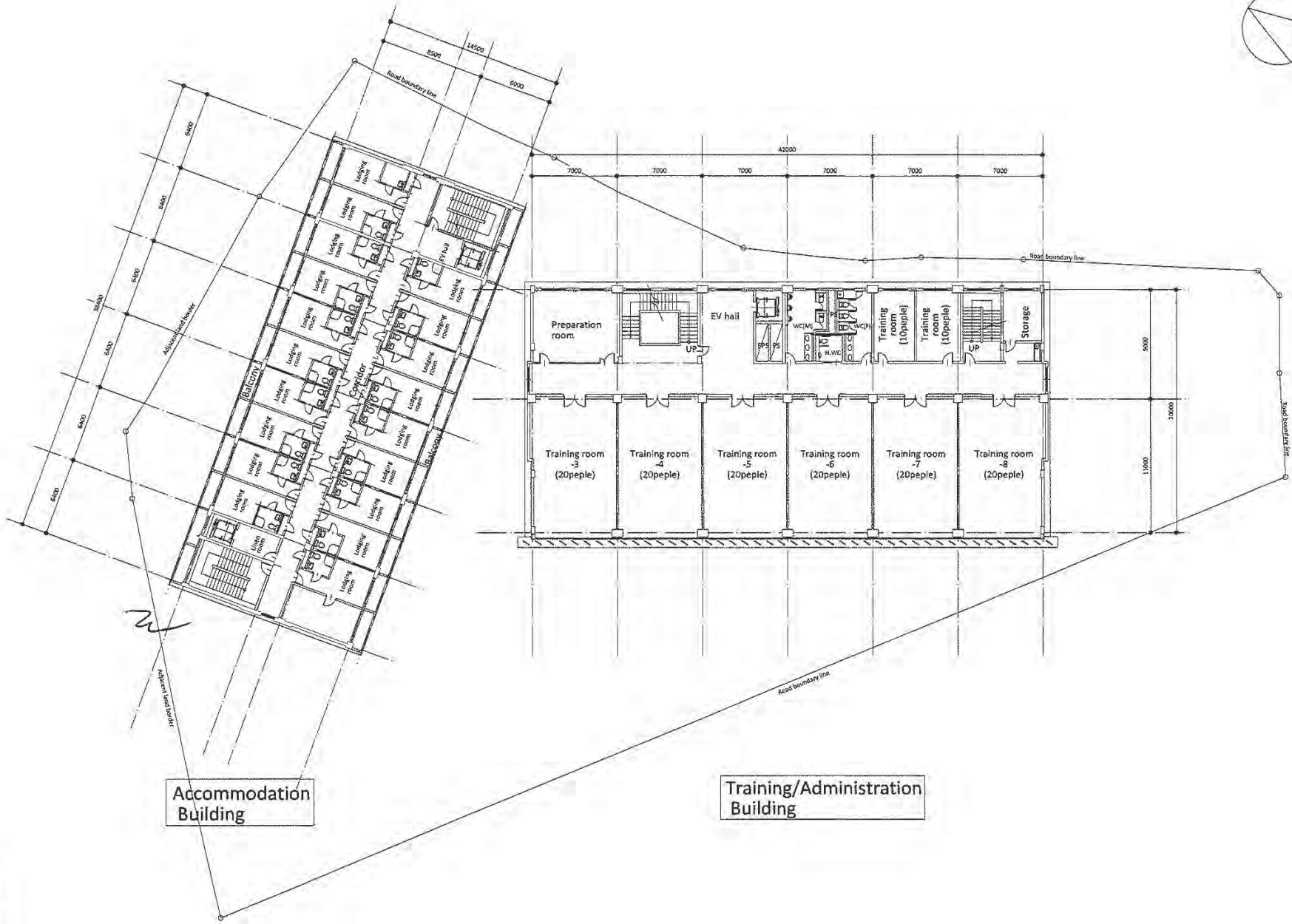


Accommodation Building

Training/Administration Building



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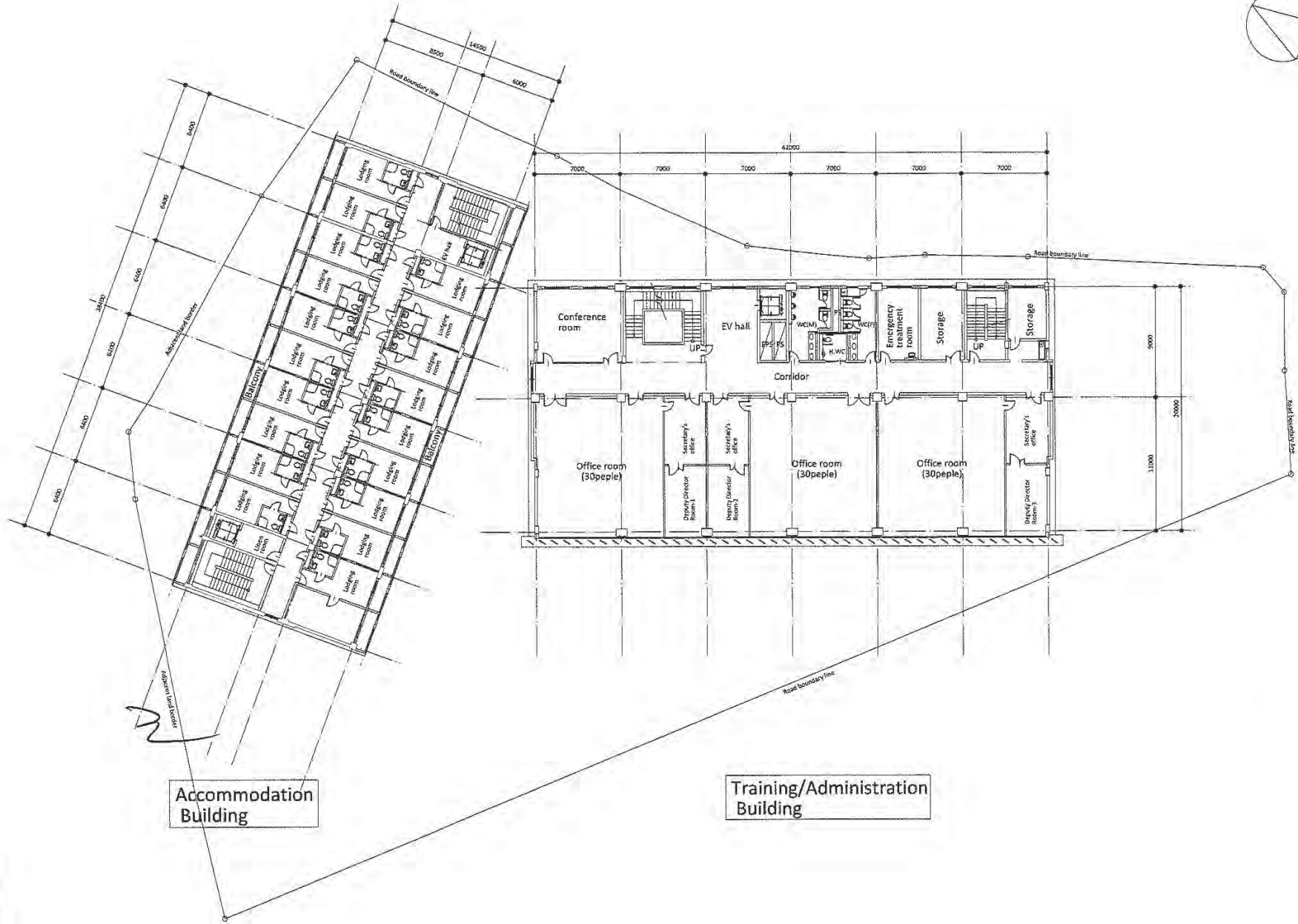


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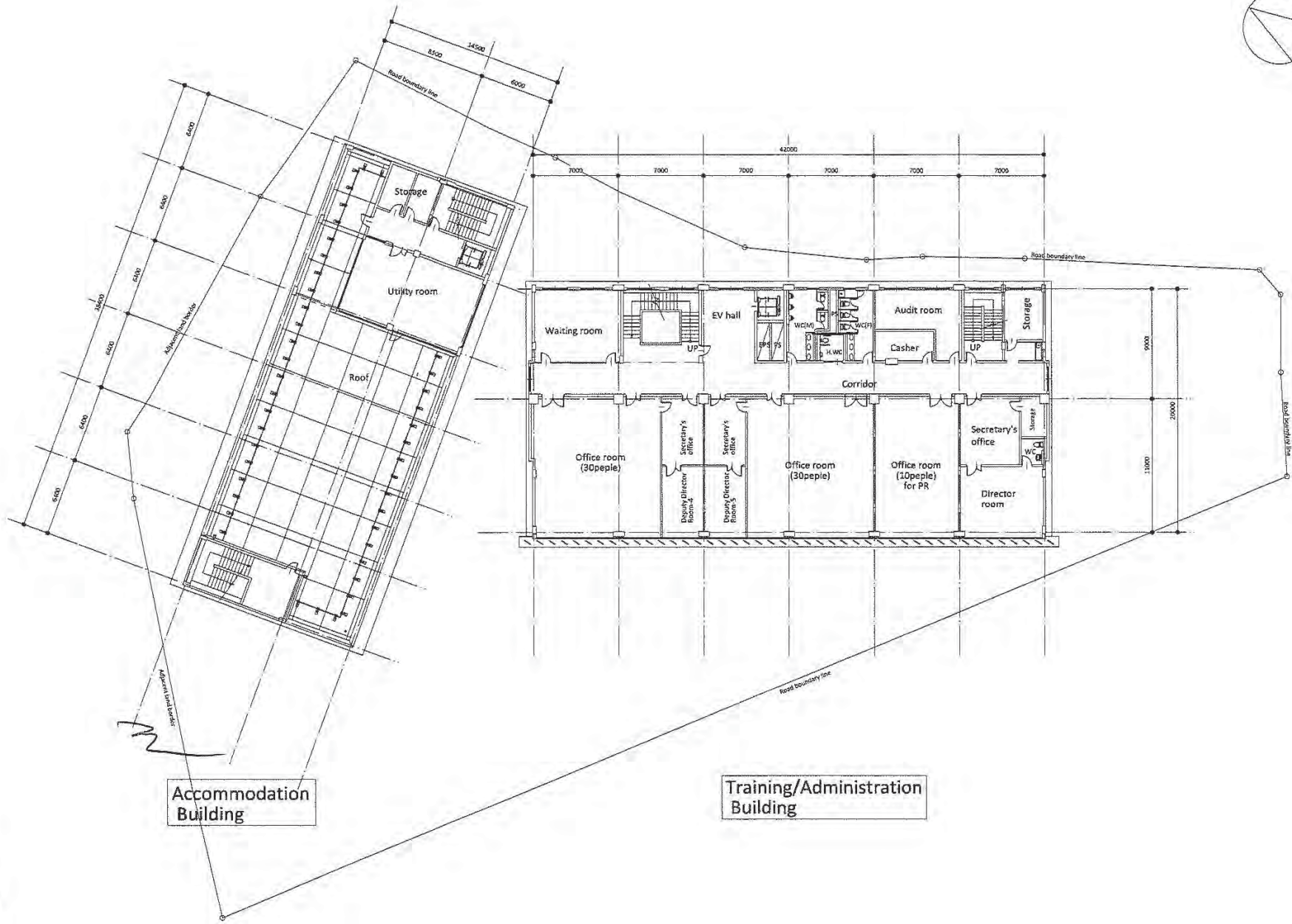
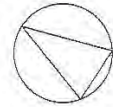
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Accommodation Building

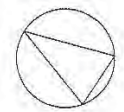
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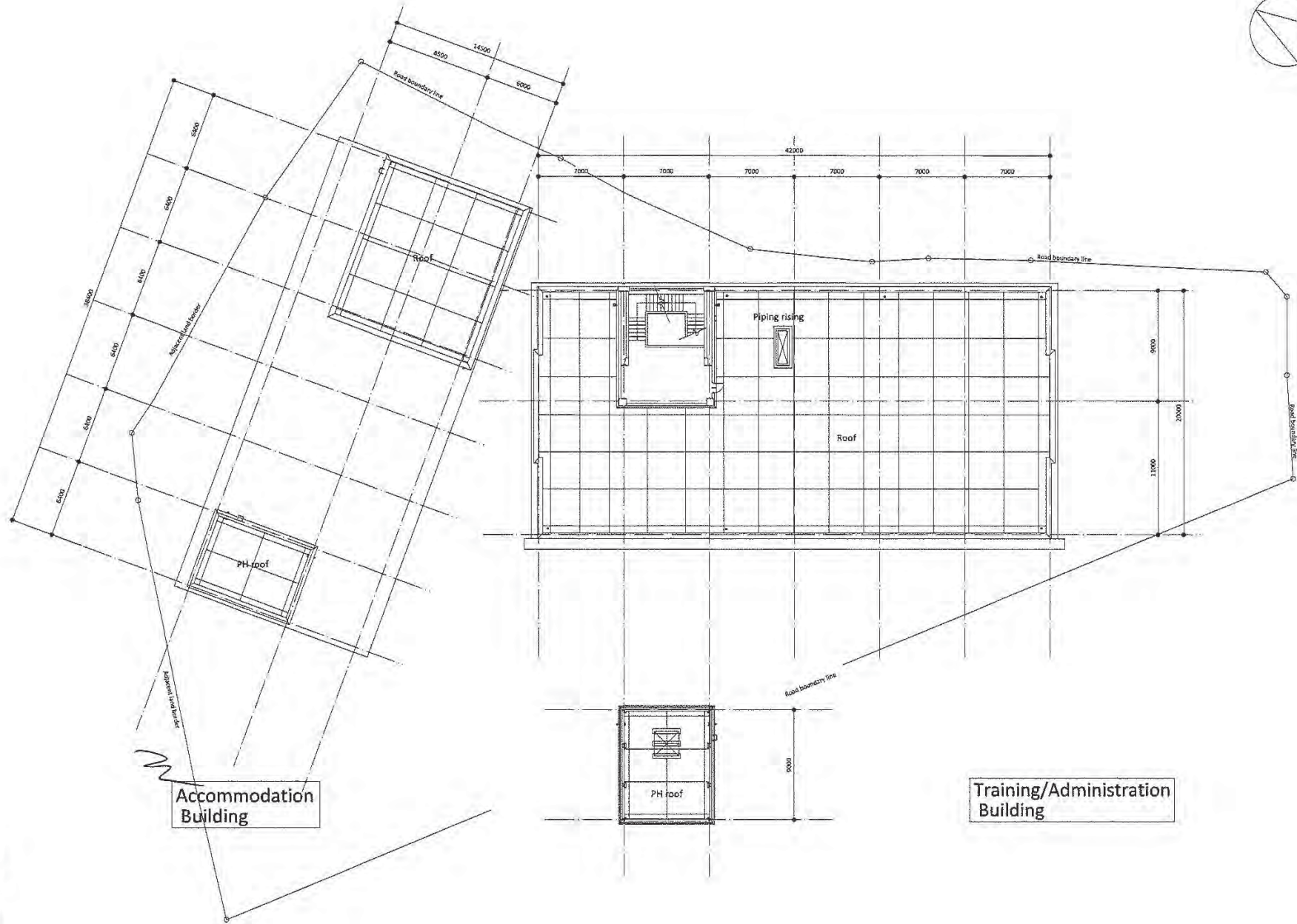


Accommodation Building

Training/Administration Building



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A-8 ソフトコンポーネント計画書

エチオピア連邦民主共和国
TICAD 産業人材育成センター建設計画

ソフトコンポーネント計画書

平成 28 年 4 月

日本工営株式会社
システム科学コンサルタンツ株式会社

エチオピア連邦民主共和国 TICAD 産業人材育成センター建設計画

ソフトコンポーネント計画書

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1 ソフトコンポーネントを計画する背景

本無償資金協力では、エチオピア国より宿泊機能を伴う研修施設の建設が要請されている。この施設建設により、カウンターパートであるエチオピアカイゼン機構(EKI)が実施する研修に必要な施設が整備される。施設完成後の運営維持管理はEKIが行う。

新センターの運営維持管理業務に当たる職員数は、EKIの将来計画によると、施設完成時には約40名になると想定される。施設規模は延床面積約8,450㎡、機能としては研修室やEKI職員の執務室の他、研修生のための宿泊室、研修生や職員が使用する食堂、厨房、来客などが訪れる展示スペース、ランドリーなど多岐に渡る。

本案件で整備される施設のように複合的な機能を有する施設を建設する際は、完成後に施設を所有、運営する組織の将来性、持続性を計画段階から考慮する必要がある。しかしながらEKIはこれまでこのような複合施設を所有しておらず、施設全体や各部門の運営維持管理に関して十分な知識と経験を持たない。本事業で建設される新センターに関して、EKI運営維持管理能力の向上は必要不可欠である。

そこで本事業では、新センターの運営維持管理能力向上を目標として、EKIの運営維持管理担当管理職者を対象とした技術指導を行う。具体的には、新センターの①運営維持管理組織の立ち上げ支援、②運営維持管理マニュアルの作成支援を行い、それぞれ座学・実習による技術指導を行う。

2 ソフトコンポーネントの目標

新センターの運用維持管理に係る技術的指導を行うことにより、新センターにおいて研修活動が円滑に実施され、本無償資金協力終了後も施設の運営維持管理が持続的に行われる基盤を構築することを目標とする。具体的には、エチオピア国のカウンターパートに対し、施設の運営維持管理組織の立ち上げ支援、運営維持管理の技術指導、運営維持管理マニュアルの作成支援を行う。

3 ソフトコンポーネントの成果

本ソフトコンポーネントの導入により、新センターの運営維持管理に係る次のような成果を達成する。

- ・ 新センターの運営維持管理体制計画が策定される。
- ・ 新センターの運営維持管理に関する基礎知識が習得され、運営維持管理マニュアルが作成される。

4 成果達成度の確認方法

以下に示す方法により、成果達成度を確認する。

- ・ 新センターの運営維持管理組織立ち上げが行われたことを確認する。
- ・ 研修終了前に筆記、口頭及び実技形式の試験を行い、基礎的知識の習得度を確認する。
- ・ 運営維持管理マニュアルが完成し、新センター運用への活用が開始されたことを確認する。

5 ソフトコンポーネントの活動(投入計画)

(1) 活動内容

ソフトコンポーネントにおいて、カウンターパートの運営維持管理能力の向上を図るため、①運営維持管理組織の立ち上げ支援、②運営維持管理マニュアルの作成支援を行う。そのために、以下の部門ごとに運営維持管理に関する技術指導を実施し、それぞれ筆記試験・実技試験により技術の習得度を確認する。

- ① 総括部門
- ② フロント業務部門
- ③ 清掃業務
- ④ 警備業務部門
- ⑤ 機械・電気・IT 設備の運用・点検業務部門
- ⑥ 自動車運用業務部門
- ⑦ 植栽管理業務部門
- ⑧ 洗濯部門
- ⑨ 教室・会議室管理業務部門
- ⑩ 食堂部門
- ⑪ 保健・保育部門
- ⑫ 廃棄物管理部門

なお、上記⑫の廃棄物管理部門の指導においては、施設内の廃棄物の収集、一時保管、廃棄物収集業者への引き渡しについて研修を実施する。

(2) 投入計画

ソフトコンポーネントの実施にあたってコンサルタントは、新センターと類似する施設と考えられる貴機構国際センターの運営維持管理業務に従事し、運営維持管理に関する知識・技術に精通した日本人技術者を専任する。また活動期間は、①運営維持管理体制の立ち上げ支援に 1.00 ヶ月、②運営維持管理マニュアルの作成支援に 1.00 ヶ月、③組織始動・マニュアル導入後の課題抽出、改善提案に 0.50 ヶ月を想定する。

上記①では、初めの 0.67 ヶ月間で運営維持管理能力向上のための研修を行う。宿泊、研修、食堂等の各部門について、貴機構国際センターなど日本国内の事例を交えた座学によるトレーニングを行ない、各業務内容の把握と運営維持管理に必要な基礎的知識・技術の習得支援を行う。また、アディスアベバ周辺のホテルや研修施設など、現地類似施設の視察も行ない、より効果的な知識・技術の習得を図る。知識・技術の習熟度を把握するため、最終日に筆記試験を実施する。その後の 0.33 ヶ月間で、現地にて新センター運営維持管理のための組織立ち上げを行う。

なお、廃棄物管理部門の指導では、新センターで生じると想定される紙類、廃棄文房具、ボトル・ペットボトル類、および台所ゴミ等の廃棄物を、エチオピア国及びアジスアベバ市の基準に従って適切な廃棄物管理を行えるよう指導を行う。エチオピア国の Technical Guidelines On Households Waste Management 案(エチオピア歴 2004 年、まだ最終化されていない)による廃棄物管理の方針は以下の通りである。

- ・ ゴミの減量につとめる。
- ・ 燃えるゴミ、再利用できる素材、リサイクル素材、有機ごみ(生ゴミ)等に分別する。
- ・ ゴミ収集と移送をきちんと行う。

上記②では、初めの 0.67 ヶ月間で上記①のソフトコンポーネントにて立ち上げた運営維持管理体制に従い、総括、フロント、清掃といった部門ごとに運営維持管理マニュアルの作成支援を行う。これらを取りまとめた後の 0.33 ヶ月間で、作成したマニュアルに沿って実技試験を行い、新センターの運営維持管理に関する基礎的知識の習熟度を確認する。またマニュアルについては、将来的に実際に生じる要望や問題に対応して改定していくことができるよう支援する。

上記③では、実際に約半年間新センターが運営された後、それまでに上がった施設運営上の課題を抽出し、運営維持管理組織と運営維持感マニュアルの改善提案を行う。組織の立ち上げ、マニュアルの作成時に想定されなかった問題を反映し、より新センターの実情に沿った組織、マニュアルへ改善する提案を行う。期間は 0.50 ヶ月間とする。

表 1 にソフトコンポーネント活動詳細計画(現地活動)を示す。

表1 ソフトコンポーネント活動詳細計画（現地活動）

① 運営維持管理体制の立ち上げ支援

日順	内容	実施期間
①-1 運営維持管理業務の基礎的知識・技術習得＋筆記試験		
1	講師 移動（日本発）	0.67ヶ月
2	講師 移動（アディスアベバ着）、研修内容・会場確認	
3	新センターの運営維持管理に必要な知識①	
4	新センターの運営維持管理に必要な知識②	
5	総括部門	
6	フロント業務	
7	清掃業務	
8	研修結果整理、類似施設視察 現地ホテル	
9	類似施設視察 現地ホテル	
10	警備業務	
11	機械・電気・IT設備の運用・点検業務	
12	自動車運用業務、植栽管理業務	
13	洗濯部門	
14	廃棄物管理部門	
15	研修結果整理、類似施設視察② 現地研修施設	
16	類似施設視察② 現地研修施設	
17	教室・会議室管理業務	
18	食堂部門	
19	保健・保育部門	
20	知識習得状況の確認（筆記・口頭試験）	
①-2 運営維持管理組織の立ち上げ		
21	運営維持管理組織編成①	0.33ヶ月
22	運営維持管理組織編成②	
23	運営維持管理組織編成③	
24	組織のマネジメントに必要な知識①	
25	組織のマネジメントに必要な知識②	
26	組織のマネジメントに必要な知識③	
27	運営維持管理組織の立ち上げ①	
28	運営維持管理組織の立ち上げ②、確認	
29	研修結果整理、講師 移動（アディスアベバ発）	
30	講師 移動（日本着）	

② 運営維持管理マニュアルの作成支援

日順	内容	実施期間
②-1 運営維持管理マニュアルの作成		
1	講師 移動（日本発）	0.67ヶ月
2	講師 移動（アディスアベバ着）、研修内容・会場確認	
3	運営維持管理マニュアルの参考例の紹介と分析①	
4	運営維持管理マニュアルの参考例の紹介と分析②	
5	運営維持管理マニュアルの項目と目標の設定①	
6	運営維持管理マニュアルの項目と目標の設定②	
7	運営維持管理マニュアルの項目と目標の設定③	
8	研修結果整理	
9	総括部門、フロント業務	
10	清掃業務、警備業務	
11	機械・電気・IT設備の運用・点検業務	
12	自動車運用業務、植栽管理業務	
13	洗濯部門、教室・会議室管理業務	
14	食堂部門、保健・保育部門	
15	研修結果整理	

16	運営維持管理マニュアルの取りまとめ①	
17	運営維持管理マニュアルの取りまとめ②	
18	運営維持管理マニュアルのレビュー①	
19	運営維持管理マニュアルのレビュー②	
20	運営維持管理マニュアルの最終化	
②-2 運営維持管理マニュアルに沿った実務演習＋実技試験		
1	総括部門、フロント業務	0.33ヶ月
2	研修結果整理	
3	清掃業務、警備業務	
4	機械・電気・IT設備の運用・点検業務	
5	自動車運用業務、植栽管理業務	
6	洗濯部門、教室・会議室管理業務	
7	食堂部門、保健・保育部門	
8	マニュアルの運用開始確認	
9	研修結果整理、講師 移動（アディスアベバ発）	
10	講師 移動（日本着）	

③組織始動・マニュアル導入後の課題抽出、改善提案

日順	内容	実施期間
1	講師 移動（日本発）	0.50ヶ月
2	講師 移動（アディスアベバ着）、研修内容・会場確認	
3	組織運営、マニュアル活用の実態把握	
4	運営維持管理組織の課題抽出①	
5	運営維持管理組織の課題抽出②	
6	運営維持管理マニュアルの課題抽出①	
7	運営維持管理マニュアルの課題抽出②	
8	研修結果整理	
9	運営維持管理組織の改善提案①	
10	運営維持管理組織の改善提案②	
11	運営維持管理マニュアルの改善提案①	
12	運営維持管理マニュアルの改善提案②	
13	改善された組織の始動、マニュアル運用開始の確認	
14	研修結果整理、講師 移動（アディスアベバ発）	
15	講師 移動（日本着）	

出典：JICA 調査団

6 ソフトコンポーネントの実施リソースの調達方法

EKI にはこれまで、宿泊機能を伴う研修施設の運営実績がない。また新センターは研修・宿泊・アメニティ・サービスなど多種の機能を含んでおり、運営維持管理の方法も複合的となる。そこで貴機構の国内研修施設の運営管理経験のある企業から専門家を派遣し、新センターの運営維持管理を担当する職員を対象に研修を行う。複合的な施設の運営維持管理経験のある日本人を指導員として、運営維持管理指導・運営維持管理計画の策定指導を実施する。

EKI からは技術指導の対象者として、新センターの運営維持管理業務に当たる管理職者等 10 名が選任されることを想定する。また現地活動実施のための会場、マニュアル作成のための事務室の提供等も想定する。ただし、円滑な実施とその後の運営維持管理を有効かつ効率的に行うためには EKI 運営維持管理要員の率先、自発努力が肝要であることから、EKI から受講者の取りまとめ責任者を選任してソフトコンポーネントの実施に当たるものとする。

7 ソフトコンポーネントの実施工程

本体事業とソフトコンポーネントの実施工程の相関を表2に示す。ソフトコンポーネントの実施時期は二回に分け、それぞれの開始時期は①施設建設中、②施設完成時、③施設運用開始から6ヶ月後とする。期間は①と②で1.00ヶ月ずつ、③で0.50ヶ月とする。

表2 ソフトコンポーネント実施計画

月数	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
【施設建設】	準備・仮設工事		杭・基礎工事				躯体工事						仕上工事				外構工事、検査・調整													
【機材調達】									製作、調達、輸送										据付											
【ソフトコンポーネント】											①運営維持管理組織の立ち上げ支援 (1.00ヶ月)				②運営維持管理マニュアルの作成支援・実務指導 (1.00ヶ月)				③組織始動・マニュアル導入後の課題抽出、改善提案 (0.50ヶ月)											

出典：JICA 調査団

表3に訓練工程・派遣計画(M/M)を示す。

表3 工程・派遣計画(M/M)

項目	派遣期間			派遣人数	M/M
	1.00月	1.00ヶ月	0.50ヶ月		
① 運営維持管理体制の立ち上げ支援					
1 運営維持管理業務の基礎的知識・技術習得+筆記試験	20日間			2	1.33
2 運営維持管理組織の立ち上げ		10日間		2	0.67
② 運営維持管理マニュアルの作成支援		//	//		
1 運営維持管理マニュアルの作成		20日間		2	1.33
2 運営維持管理マニュアルに沿った実務演習(見極めテスト)			10日間	2	0.67
③ 組織始動・マニュアル導入後の課題抽出、改善提案				2	1.00
合計					5.00

出典：JICA 調査団

■ 現地作業

8 ソフトコンポーネントの成果品

本ソフトコンポーネントの成果品は次のとおりである。

1) 施主側への提出物

本ソフトコンポーネントの成果品は次のとおりである。

- ・ 運営維持管理マニュアル (Manual of Operation, Maintenance and Management for TICAD Human Resource Development Center)
- ・ レポート (英文)

2) 日本側への提出物

(a) ソフトコンポーネント実施状況報告書

- ・ 当初定めた目標・成果
- ・ 当初定めた投入・活動の履行状況
- ・ 現時点での成果 (テスト結果)
- ・ 施主側コメント

(b) ソフトコンポーネント完了報告書

- ・ 案件概要 (案件名、E/N・G/A 締結日、E/N・G/A 限度額、コンサルタント契約額)
- ・ ソフトコンポーネント概要 (経費、背景、計画した目標、計画した成果、計画した活動内容、従事者、参加者、実施期間 (時期及び M/M)、活動実績、成果の達成状況)
- ・ 効果を持続・発展させ、目標を達成するための課題・提言等
- ・ 添付書類 (ソフトコンポーネント実施スケジュール、参加者リスト、研修出席簿、成果品リスト (成果品資料の名称、作成者、概要))
- ・ 別添資料集 (成果物 (施主への完了報告書、作成したマニュアル類、使用したテキスト、理解度テスト結果等)、映像資料、写真、新聞記事等)

9 ソフトコンポーネントの概略事業費

本ソフトコンポーネントの活動に係る概算事業費を表 4 に示す。

表 4 ソフトコンポーネントの活動に係る概算事業費

項目	金額 (円)
1. 直接人件費	4,350,000
2. 直接経費	5,595,560
3. 間接費	5,568,000
諸経費	3,915,000
技術経費	1,653,000
合計	15,513,560

出典：JICA 調査団

10 相手国側の責務

本ソフトコンポーネントの目的を達成するためには、ソフトコンポーネントで作成される運営維持管理マニュアルが有効に活用され、事業の目標が達成されるようエチオピア国が必要な要員を確保し、予算の措置をとる。

A-9 環境社会配慮の手続き

9-1 エチオピア国環境社会配慮の概要

No.	Title	No/ Date of Issue	Description
1	Environmental Impact Assessment Proclamation	Proc.299/ 2002	This Proclamation states that no person shall commence implementation of any project that requires environmental impact assessment without the authorization from the Environmental Protection Authority. The same provision clearly spells out that any licensing agency shall, prior to issuing an investment permit, a trade or an operation license for a project, ensure that the Authority or the relevant regional environmental agency has authorized the implementation.
2	Environmental Impact Assessment Guideline Document (draft)	May 2000	This Guideline provides background to environmental impact assessment and environmental management in Ethiopia. In essence it aims at being a reference material to ensure effective environmental assessment and management practice for all parties who engage in the process. It has details o the required procedure s for conduction an EIA and the requirements for environmental management.
3	Environmental Impact Assessment Procedural Guideline Series 1	Nov, 2003	This guideline provides detail procedure for the EIA process including definition of terms, comprehensive description of EIA process, roles of stakeholders.
4	Environmental Management Plan (EMP) for the Identified Sectoral Developments in the Ethiopian Sustainable Development and Poverty Reduction Programme (ESDPRP)	May, 2004	In order to ensure the sustainability of the programme this EMP has been prepared specifically aimed at environmental management of the programmes and projects. This management plan is especially rational at a time when recognition of the necessity to preserve the quality of the environment and the consumption of the country's natural resources continues to grow rapidly for the purpose of achieving the objectives of the programme. Besides this, it would also have importance for the proper use, conservation, and development of the
5	Guideline for the Preparation of Environmental Management Plan	n.d.	It is a general guideline for the environmental management explanation.
6	Guideline Series 1: Documents for Reviewing Environmental Impact Study Reports	2003	This section raises a number of fundamental issues with regard to how Competent Authorities review environmental impact study reports, the approaches to be followed in reviewing the reports, a structured questionnaire (checklist) for interpreting the information as well as background information of the suggested review criteria (format) for compiling the review comments.
7	Environmental Assessment Reporting Guide	2004	The focus of this guidance is to facilitate and support the preparation and presentation of a standardized report that help assessors, proponents, reviewers and decision makers.
8	Expropriation of Landholdings for Public Purposes and Payment of Compensation Proclamation	455/ Jul, 2005	This Proclamation grants the power to specified local public bodies to expropriate landholdings for public purposes. The Proclamation sets out the procedure of expropriation and provides with respect to compensation which shall be paid in advance and appeals.
9	Solid Waste Management Proclamation	513/ Feb, 2007	This Proclamation states provision for the management of solid waste and for designation and implementation of solid waste management action plans at the lowest administrative units of urban administrations so as to ensure community participation.
10	Addis Ababa Environmental Protection Aughority	Dec. 2010	This document provides a common understanding and consistent approach to EIA in the preparation and review of EIA document for, condominium housing and real-estate housing projects including multi-storey apartment housing.

Source: arranged by the JICA Study Team based on the EPA documents

9-2 建築プロジェクトのレビュー及び予測される影響に対する軽減策（アジスアベバ EPA）

9-2-1. 環境への影響

No.	Environmental Issues	Potential Negative Impacts	Possibility in the Kaizen Center Project	Mitigation Measures
1	Soil erosion & degradation	(i) Degradation of soil cover by erosion, or loss of soil structures due to compaction (ii) Loss of fertile top soil due to erosion and flood. (iii) Contamination of soil from spilling of hazardous construction waste	(i), (ii) The project site is a flat area and degradation is not anticipated. (iii) Construction waste is not hazardous.	(iii) Appropriate treatment of construction waste will be mentioned in the TOR to the contractor.
2	Ecosystem and bio-diversity damage	(i) Damage to sites and their immediate surroundings resulting from the disruption of the natural environment. (ii) Disposal of construction waste/debris near -by stream or river, open space or green area. (iii) Encroachment into ecologically sensitive areas. (iv) Drainage of wetland. (v) Destruction of vegetation cover. (vi) Loss of bio diversity i.e loss of wildlife habitats (small animals and microorganism, loss of some important flora, fauna and endangered species (vii) Degradation of habitats caused by fragmentation (viii) Loss or degradation of vegetation from unnecessary removal or mechanical damage (ix) Extinction of endangered and threatened species	(i) – (ix) Not applied because the area is inside the city center and along a trunk road.	
3	Landscape deformation	(i) Disturbance of landscape by land clearing, cuttings of slopes (ii) Pit and heap formation on pedestrian, green and open areas (iii) Fragmentation of landscape by gullies (iv) Landslide on loose soil/slope failures	Not applied because the project site is a flat area to be used for construction of a building.	
4	Limitation of green area	(i) Inadequate area allocation for green belt (ii) In proper species selection for green area	Not applied. Trees of appropriate species will be planted outside the new Kaizen Center building.	The project shall apply Addis Ababa building permit regulations No 17/2004.

No.	Environmental Issues	Potential Negative Impacts	Possibility in the Kaizen Center Project	Mitigation Measures
5	Danger to resident /population	(i) Danger to residents from hazardous natural conditions (ii) Danger to residents from hazardous man-made conditions (iii) Hazard to residents from air, water or noise pollution from other adjacent or nearby land use	Not applied because the project site is inside the city center and along the trunk road. (ii) Not applied after commencement of the use because the new Kaizen Center will not generate hazardous waste. Treatment of waste water and waste are planned. (iii) Not applied.	
6	Inefficient infrastructures (road & water supply)	(i) Overloading of existing infrastructures (ii) High consumption of water for construction purpose affects existing community. (iii) Shortage of water for new residents	(ii), (iii) As the project is construction of a new facility and increase of water use is anticipated.	(ii) and (iii) As for the volume of water use, the project proponent and JICA experts will consult Addis Ababa Water Supply and Sewage Authority at the basic design period.
7	Flooding	(i) Flooding (marsh and logging) due to poor construction of rain water collection drainage ditch.	(i) The new Kaizen Center will discharge certain amount of waste water.	(i) Appropriate water discharge system will be applied in consistency with regulation on water drainage of Addis Ababa.
8	Air pollution	(i) Degradation of air quality by dust and vehicle emissions: (ii) Air pollution due to land clearing, operation of diesel engines, demolition, burning of and working with toxic materials. (iii) Dust particles will affect photosynthesis mechanism of plants as a result plant will dry and die.	(i), (iii) Not applied (ii) Diesel engine will be used at the time of blackout of commercial line which will exhaust gas.	(ii) Contractor and the Kaizen Center will follow the regulation on air pollution of Addis Ababa and will use high quality of fuel.
9	Noise pollution	(i) Increase in ambient noise: Noise mainly from vehicles, heavy equipment and machinery, but also from people shouting and radios turned up too loud.	(i) A number of vehicles will be used during the construction period, which will increase noises. However, after commencement of the facility use, Kaizen Center will not generate remarkable noise.	(i) The TOR to the contractor should prescribe to: - avoid noisy works after regular working hours, - use low sound construction equipment, - do careful handling of materials and equipment, - raise awareness of people living around the project site, and - apply strong rules and regulation,
10	Visual pollution	(i) Light pollution (reflection) from buildings and glasses affect visual capacity human beings.	(i) The new Kaizen Center will have glass windows.	(i) The JICA expert recommends - Appropriate types of paints; i.e. paints with minimal reflection. - Reduce the area of wall covered with glass - Select glasses that do not affect the microclimate and having minimum reflection.

No.	Environmental Issues	Potential Negative Impacts	Possibility in the Kaizen Center Project	Mitigation Measures
				- Apply Ethiopian building proclamation No 624/2009
11	Solid waste pollution (1) Communicable (infectious) diseases and breeding of hosts (host breeding?)	(i) Increase of incidence of bad common cold/ influenza (ii) Increase of Vector born- diseases like typhoid etc... (iii) Increase of possibility of hosts breeding environment for rats, rodents etc.	(i) – (iii) Kaizen Centre will generate solid waste.	(i) JICA expert makes guideline for the facility management including appropriate treatment of solid waste and disseminates it.
	(2) Unwanted order and visual pollution	(i) Causes a nuisance odor for the surrounding (ii) Reduce the quality of beauty feature of the surrounding (iii) Cause nasal disease deformation of embryo	(i) Kaizen Centre will generate solid waste. (ii), (iii) Not applied	(i) JICA expert makes guideline for the facility management including appropriate treatment of solid waste and disseminates it.
	(3) Air pollution	(i) Production of the greenhouse gas by releasing the first lightest natural gas CH ₄ , C ₂ H ₆ , C ₃ H ₈ and C ₄ H ₁₀ and other C, N and sulfur gasses at different proportion to the atmosphere.	Not applied	
	(4) Soil pollution and water pollution	(i) Increase of the unwanted chemical content of soil and water	(i) Not applied because appropriate waste management will be taken as mentioned above.	
	(5) Political and ecotourism disruption	(i) Affecting citizen's right to lead quality of live. (ii) Reducing the smooth diplomatic relation with other country i.e. diplomatic complains of international community to live in the city. (iii) Reducing the number of incoming tourists affect the ecotourism. (iv) Affecting cultural and natural heritages	(i) – (iv) Not applied	
	(6) Construction and demolishing waste	(i) Disposal of these wastes along river buffer and green areas (ii) Hazardous nature of these wastes may affect the environment	(i) & (ii) Not applied because appropriate waste management will be taken as mentioned above.	
12	Liquid waste /sewage pollution (1) Unavailability of pit-latrine	(i) Total environmental pollution: pollution of ground water and surface water leads to diarrhea	(i) Not applied because flush toilet and waste water treatment facility is planned for the new Kaizen Center.	
	(2) Insufficient provision of storm or waste water drainage system	(i) The waste water/storm water can possibly direct its way to the lowest grade.	(i) Not applied because the JICA Study Team follows the Ethiopian building code and designs proper drainage system for the new Kaizen Center.	
	(3) Improper	(i) Frequent leakage through the weak point and damages the wall	(i) Not applied because the JICA Study Team designs proper	

No.	Environmental Issues	Potential Negative Impacts	Possibility in the Kaizen Center Project	Mitigation Measures
	connection of internal sewerage pipe for toilet rooms		drainage system for the new Kaizen Center.	
	(4) Absence of vent pipe	(i) Unwanted bad odor because of absence of vent pipe	(i) Not applied because the JICA Study Team designs proper drainage system for the new Kaizen Center.	
	(5) Un properly organized conventional sewage treatment plan	(i) Not economical. (ii) Consumes large area-required efficient and regular control.	(i) Not applied because the JICA Study Team designs proper drainage system for the new Kaizen Center.	
	(6) Insufficient gradient of disposal drainage	(i) Main cause for sedimentation and overflow of sewage	(i) Not applied because the JICA Study Team designs proper drainage system for the new Kaizen Center.	
	(7) Poor construction of manholes	(i) Main cause for sedimentation and overflow	(i) Not applied because the JICA expert will supervise construction works using Japanese construction standard.	
	(8) Improper location of down pipe	(i) Usually disturbs the position of the lower level.	(i) Not applied because the JICA Study Team designs proper drainage system for the new Kaizen Center.	
13	Loss of natural & cultural heritages	(i) Damage or loss/ of natural and cultural heritages	(i) Not applied because the project site is not designated as natural and cultural heritage.	
14	Earth quakes (1) Vulnerability of building	(i) Life lost (ii) Property damage	(i) Not applied because the JICA study team designs the new Kaizen center following Ethiopian and Japanese construction standards and Japanese technology.	
	(2) Collapse and toppling of the structures	(i) Economic dislocation beyond physical damage of the structure.	(i) Not applied because the JICA study team designs the new Kaizen center following Ethiopian and Japanese construction standards and Japanese technology.	
	(3) Geotechnical hazard	(i) Heavy overload soil amplifies seismic amplitude which exposes the structural failure. (ii) Trigger geo-technical hazard like landslides and subsidence (iii) Induces a liquefaction (mud flow)	(i) Not applied because the JICA study team designs the new Kaizen center following Ethiopian and Japanese construction standards and Japanese technology.	
	(4) Subsidence	(i) Charest and tunnel like geological structure can trigger the vertical sinking of structure after a certain period of its construction. (ii) Dissolution of carbonate rock basement can trigger subsidence.	(i) Not applied because JICA study team designs underground parking area in consistency with Japanese construction standards and Japanese technology. (ii) Not applied.	

Source: JICA Study Team

9-2-2. 社会及び文化への影響

No.	Social & cultural Issues	Potential Impacts	Possibility in the Kaizen Center Project	Mitigation Measures
1.	Place for children and youth	(i) Absence of enough playgrounds for children and youth; as a result, limited creativity, poor communication skill with peer groups and weak health condition.	(i) Not applied because the Kaizen center is used for capacity building.	
2.	Psychological impacts	(i) Psychological impacts such as fear associated with living in several storied buildings and depressions of settlers associated with discontinuity of already established social life	(i), (ii) Not applied because the Kaizen center is used for capacity building.	
3.	Communal way of life	(i) Lack of awareness about communal way of life (ii) Absence of rules and regulation about communal way of life	(i), (ii) Not applied because the Kaizen center is used for capacity building.	
4.	Dislocation	(i) Dislocation of people from their neighborhood and their livelihood	(i) Not applied because involuntary resettlement does take place.	
5.	Loss of existing community and living life	(i) Loss of community based organization (<i>edir, eqube mahber</i>), which is considered as one of adverse social and cultural impact. (ii) The livelihood of the community that might depend on making the economic benefits through trade (pity trade) may be affected.	(i) Not applied because the project is construction of a building on a land of 3,700m ² . (ii) Not applied because there is no person living on the project site.	
6.	Friendly to vulnerable people	(i) Complex buildings and condominium houses are inaccessible for the disabled persons. (ii) Danger for children living in storied buildings	(i) Not applied because the JICA study team designs the Kaizen Center in consideration with the friendly to disabled people. (ii) Not applied because no children living in the Kaizen Center.	(i) The JICA study team applies Ethiopian building proclamation No. 624/2009.
7.	Cultural change	(i) Change in the cultural lifestyle (eating, drinking and other cultures like weeding, burial ceremonies...)	(i) Not applied because there is no person living on the project site.	

Source: JICA Study Team

9-2-3. 健康への影響

No.	Health Issues	Potential Impacts	Possibility in the Kaizen Center Project	Mitigation Measures
1	Communicable disease	(i) Communicable disease due to causative agents such as typhoid, bacillary dysentery, cholera gastro enteritis (ii) Viral infections such as Infectious hepatitis, polyoma virus (iii) Protozoan infectious –amoebic dysentery, giardiasis (iv) Helminthes /worm infectious –hook worm, ascariasis	(i) – (iv) Not applied because the JICA Study Team designs proper drainage system for the new Kaizen Center. Also, tap water is prepared for hand washing after excretion.	
2	Non-communicable disease	(i) Non- communicable disease due to organic matter composition (ii) Methamoglobineamia (high concentration of nitrate in water due to seepage)	(i), (ii) Not applied because the JICA Study Team designs proper drainage system for the new Kaizen Center.	
3	Indoor air pollution	(i) Affect respiratory and visual organs of human beings	(i) Not applied because the JICA Study Team designs proper ventilation for the new Kaizen Center.	
4	Accidents	(i) Damage caused by weak and unstable scaffolding (ii) Damage caused by incomplete buildings (iii) Poor safety requirement of the workers during construction (iv) Fire hazard	(i) Not applied because the JICA expert will supervise construction works using Japanese construction standard. (ii) Fire prevention equipment is installed to the Kaizen Center. (iii) Fire prevention management system will be introduced.	

9-3 エチオピア環境法令と JICA ガイドラインとの比較表

Aspect	Gaps between JICA Guidelines and Ethiopian Laws & Guidelines*	Mechanisms to Bridge Gaps
Criteria of EA	Less focus on social considerations, especially involuntary resettlement and indigenous peoples in Ethiopian laws and guidelines.	The project proponent should adhere to the policies of the financial institutions and consider both environmental and social factors.
Environmental Screening	Categorization of project in the JICA Guideline is based on the degree of impact in consideration with project outline, scale or location. That of Ethiopian laws and guidelines is based on the activity. Therefore, there is a possibility that the JICA guideline requires a full EIA and that of Ethiopian laws and guidelines do not and vice-versa. There is discrepancy among them: independent multi-story building is not prescribed in the guideline (2000) as schedule I but it is the target of full EIA in the Procedural Guideline (2003). The preparing of a Resettlement Action Plan (RAP) and an IPP is not mentioned.	The project proponent should consult regional EPA and explain JICA guideline. If a project is required RAP or IPP by the JICA guideline, project proponent shall adhere to the environmental policy of the lending agencies.
EA for Special Project Types	EA for the FI is not described in the Ethiopian laws.	For Category FI projects, the sub-project developer should adhere to the policies of the lending agencies and usually EIA framework is required.
Public Consultation	Public consultation is emphasized in the Ethiopian law and guidelines; however, the detailed requirements are not specified; the preliminary screening consultation is not a mandatory, and the public consultation at the later stage is not clearly specified.	Since JICA emphasizes public consultation meetings with stakeholders including indirectly/directly affected persons at the scoping stage and draft final report stage specifically, project proponent should comply.
Information Disclosure	JICA guideline prescribes that, In principle, project proponents etc. disclose information about the environmental and social considerations of their projects. Public disclosure of the EIA is not specified in the Ethiopian law and guidelines, though the law requires the EIA report needs to be accessible to interested and affected persons.	Project Proponent should to adhere to the framework of the lending agencies.
Monitoring Implementation	Details of monitoring requirements are not discussed in the Ethiopian law and guidelines.	As monitoring and feedback is indispensable for the sustainability of project, the project proponent should implement monitoring in consistency with the requirement of lending agencies.

Source: Arranged by the JICA Study Team based on:

JICA. 2010. Japan International Cooperation Agency (JICA) Guidelines for Environmental and Social Considerations; Environmental Impact Assessment Proclamation, Environmental Protection Agency, 2003; EIA Procedural Guidelines (2003)

9-4 スコーピング案

Category	Environmental Item	Evaluation		Anticipated impacts		Confirmation of Environmental Considerations (Mitigation Measures)
		Before/during construction phase	Operational phase	Construction phase	Operational phase	
Pollution Control	(1) Air Quality	B-	C-	Due to transportation of construction materials and equipment as well as operation of construction machines, air quality becomes worse temporarily.	As Kaizen Center is not a production facility, it will not generate air pollution at the operation phase. Also, it will use commercial power as main power source. However, installation of a low-pollution type diesel generator is planned as a measure to power failure occurring frequently.	<Construction> PMU and supervising consultant shall instruct contractor to use unleaded fuel and maintain their vehicles to keep clean exhaust gas. They will implement periodical monitoring. <Operation> The JICA study team will suggest EKI to use fuel of high quality having low emission factor for the generator.
	(2) Water Quality	B-	C-	Water contamination is anticipated by drainage of used water from construction works.	As Kaizen Center is not a production facility, it will not discharge large volume of waste water.	<Construction> PMU and supervising consultant shall instruct contractor to follow the Ethiopian laws and regulations on water drainage. <Operation> The JICA study team plans that water used in the Kaizen Center will be drained into the public sewer system.
	(3) Wastes	B-	C-	It is anticipated that waste lumber and waste materials are generated by construction works.	Waste from Kaizen Center is neither estimated a large amount nor consisted of hazardous matters.	<Construction> PMU and supervising consultant shall instruct contractor to treat wastes properly according to the regulations and they shall implement periodical monitoring. <Operation> The JICA Study Team plans to design a garbage collection point on the basement floor and the municipality garbage collection service will collect garbage. Also, the team plans that JICA expert will give training (as soft component) on the O&M of facilities including waste management to the staffs.
	(4) Soil Contamination	B-	D	Soil contamination is likely anticipated due to leakage of oil for construction and other materials from construction site to a certain volume.	Kaizen Center will be used only for the purpose of training and will generate no effluents or leachate.	<Construction> PMU and supervising consultant shall instruct contractor to use construction machinery of the low leakage type. They will do periodical monitoring.

Category	Environmental Item	Evaluation		Anticipated impacts		Confirmation of Environmental Considerations (Mitigation Measures)
		Before/during construction phase	Operational phase	Construction phase	Operational phase	
	(5) Noise and Vibration	B-	D	Noise and vibration is anticipated and contractor needs to comply with Ethiopian noise standards.	Kaizen Center will not generate noises and vibrations at the operation phase.	<Construction> PMU and supervising consultant shall instruct contractor to drive construction vehicles at low speed, and monitor the noise and vibration. They will conduct periodical monitoring.
	(6) Subsidence	D	D	Kaizen Center will not extract groundwater and will not cause subsidence.	-	-
	(7) Odor	D	D	No construction works are anticipated that cause bad smell.	-	-
Natural Environment	(1) Protected Areas	D	D	Kaizen Centre is located in the urban area and not within or adjacent to the designated protected areas.		-
	(2) Ecosystem	D	D	Kaizen Centre is located in the urban area and will not affect natural environment and ecosystem.		-
	(3) Hydrology	D	D	As construction will not pump up ground water, it will not cause hydrologic changes.	Kaizen Center will not pump up ground water and will not cause hydrologic changes.	<Construction> PMU and supervising consultant shall instruct contractor to follow Ethiopian regulations relating to use of ground water.
	(4) Topography and Geology	D	D	Area of the Kaizen Center is about 3,700m ² and has no possibility to cause large-scale alteration.	-	-
Social Environment	(1) Resettlement	C-	D	The building site is the land of other ministry and the land use right will be transferred to EKI. There is no objection. Addis Ababa Municipality is coordinating this matter. No residents live there but a ware house exists and EKI is arranging removal.	-	<Construction> Confirmation of the progress of land right transfer
	(2) Living and Livelihood	D	B+	Construction of the Kaizen Center follows Ethiopian Laws and regulations regarding building construction and will not disturb living and livelihood of surrounding community. JICA study team suggests EKI to inform construction to the inhabitants in the surrounding area before the construction work	Kaizen Center is a training center aiming at enhancement of productivity of Ethiopian industry. It will contribute to strengthening economic competence of Ethiopia and her economic growth. Therefore, Kaizen Center will indirectly give positive impact on the livelihood or Addis Ababa people.	-

Category	Environmental Item	Evaluation		Anticipated impacts		Confirmation of Environmental Considerations (Mitigation Measures)
		Before/during construction phase	Operational phase	Construction phase	Operational phase	
				starts.		
	(3) Heritage	D	D	The project will not damage the local heritage		-
	(4) Landscape	D	D	There is no possibility that the project will adversely affect the local landscape.		-
	(5) Ethnic Minorities and Indigenous Peoples	D	C+	No ethnic minorities and indigenous peoples near to the project site.	Kaizen Center plans to give Kaizen training to trainees from different states (different ethnic groups).	-
	(6) Working Conditions	B-	C-	It is anticipated that construction works cause negative impact on workers.	Strong negative impact of working condition is not anticipated.	<Construction> Safety and health measures at the construction shall be included in the terms of reference to the contractor. PMU and supervising consultant will instruct contractor to take measure to avoid accidents and conduct periodical monitoring of working condition. <Operation> It is planned to give training on facility/equipment management to the EKI staff members to avoid industrial accident. Also, JICA study team suggests EKI to give proper instruction to their staff members to use machines properly.

Source: JICA Study Team

9-5 TOR 案

Category	Environmental Item	Evaluation		Items of examination	Means of examination
		Construction	Operation		
Pollution Control	(1) Air Quality	B-	C-	1) Confirmation of air quality standards of Ethiopia, and, if necessary, WHO.	Examination of existing documents
				2) Grasp of present condition of air quality.	Survey of existing documents; actual measurement if required
				3) Estimate of degree of contamination caused by increase of vehicles during construction period.	Examination of properness: items of construction, construction method, period, type of machinery, place, period and time of operation, number of construction vehicles, moving route
	(2) Water Quality	B-	C-	1) Confirmation of water quality standards of Ethiopia, and if necessary, WHO	Examination of existing documents
				2) Estimate of degree of impact caused by water use by the construction	BD document: quantity of water, construction method, period,
	(3) Wastes	B-	C-	1) Means of disposal of construction wastes.	BD document, hearing from related agencies
				2) Means of disposal from Kaizen Center	BD document, hearing from EKI
(4) Soil Contamination	B-	D	1) Measures to avoid oil leaking during the construction period	BD document	
(5) Noise and Vibration	B-	D	1) Confirmation of related standards of noise and vibration of Ethiopia	Examination of existing documents	
			2) Estimate of degree of impact caused by construction.	BD report: construction method, kind of machines, period, type of machinery, place, period and time of operation.	
(6) Subsidence	D	D	-	-	
(7) Odor	D	D	-	-	
Natural Environment	(1) Protected Areas	D	D	-	-
	(2) Ecosystem	D	D	-	-
	(3) Hydrology	D	D	1) Estimate of volume of ground water to be used for construction	BD report: source of water to be used for construction, scale of construction,
				2) Estimate of degree of damage	Analysis
(4) Topography and Geology	D	D	-	-	
Social Environment	(1) Resettlement	C-	D	1) Progress of land title transfer	Hearing from EKI and Addis Ababa Municipality

Category	Environmental Item	Evaluation		Items of examination	Means of examination
		Construction	Operation		
	(2) Living and Livelihood	D	B+	-	-
	(3) Heritage	D	D	-	-
	(4) Landscape	D	D	-	-
	(5) Ethnic Minorities & Indigenous Peoples	D	C+	-	-
	(6) Working Conditions	B-	C-	1) Confirmation of measures to be taken for work safety during the construction period.	BD report, hearing from EKI
2) Confirmation of measures to avoid industrial/ labour accident to be taken during operation period				BD report, hearing from EKI	
3) Confirmation of capacity development program to mitigate industrial/ labour accident and enhance effectiveness of the Kaizen Center management				BD report, hearing from EKI (soft component for organizational management and facility management is planned)	

Source: JICA Study Team

- Rating A +/- Significant positive/negative impact is expected.
 B +/- Positive/negative impact is expected to some extent.
 C +/- Extent of positive/negative impact is unknown (A further examination is needed and the impact could be clarified as the study progresses.)
 D No impact is expected.

1) Regarding the term “Country's Standards” mentioned in the above table, in the event that environmental standards in the country where the project is located diverge significantly from international standards, appropriate environmental considerations are required to be made.

In cases where local environmental regulations are yet to be established in some areas, considerations should be made based on comparisons with appropriate standards of other countries (including Japan's experience).

2) Environmental checklist provides general environmental items to be checked. It may be necessary to add or delete an item taking into account the characteristics of the project and the particular circumstances of the country and locality in which the project is located.

9-6 環境管理計画案

9-6-1. 工事中

Category	Environmental Item	Evaluation	Anticipated impacts	Mitigation Measures (preliminary)	Implementer	Responsible Organization
Pollution Control	(1) Air Quality	B-	Due to transportation of construction materials and equipment as well as operation of construction machines, air quality becomes worse temporarily.	EKI/PMU and supervising consultant shall instruct contractor to use unleaded gasoline and maintain their vehicles to keep clean exhaust gas at the construction period. They will conduct periodical monitoring.	Contractor	PMU, Municipality
	(2) Water Quality	B-	Water contamination is anticipated by drainage of used water from construction works.	EKI/PMU and supervising consultant shall instruct contractor to follow the Ethiopian laws and regulations on water drainage. They will conduct periodical monitoring.	Contractor	PMU, Municipality
	(3) Wastes	B-	It is anticipated that waste lumber and waste materials are generated by construction works.	EKI/PMU and supervising consultant shall instruct contractor to treat wastes properly. They will conduct periodical monitoring.	Contractor	PMU, Municipality
	(4) Soil Contamination	B-	Soil contamination is likely anticipated due to leakage of oil for construction and other materials from construction site to a certain volume.	EKI/PMU and supervising consultant shall instruct contractor to use construction machinery of the low oil leakage type. They will do periodical monitoring.	Contractor	PMU, Municipality
	(5) Noise and Vibration	B-	Noise and vibration is anticipated and contractor needs to comply with Ethiopian noise standards.	EKI/PMU and supervising consultant shall instruct contractor to drive construction vehicles at low speed and not to conduct construction work at night time. EKI/PMU will conduct periodical monitoring by installing sound-level meter and vibration meter at the boundary of the Center premises.	Contractor	PMU, Municipality
	(6) Subsidence	D	Kaizen Center will not extract groundwater and will not cause subsidence.	-	-	-
	(7) Odor	D	No construction works are anticipated that cause bad smell.	-	-	-
Natural Environment	(1) Protected Areas	D	Kaizen Centre is located in the urban area and not within or adjacent to the designated protected areas.	-	-	-
	(2) Ecosystem	D	Kaizen Centre is located in the urban area and will not affect natural environment and ecosystem.	-	-	-

Category	Environmental Item	Evaluation	Anticipated impacts	Mitigation Measures (preliminary)	Implementer	Responsible Organization
	(3) Hydrology	D	As construction will not pump up ground water, it will not cause hydrologic changes.	-	-	-
	(4) Topography and Geology	D	Area of the Kaizen Center is about 3,700m ² and has no possibility to cause large-scale alteration.	-	-	-
Social Environment	(1) Resettlement	C-	The building site is the land of other ministry and the land use right will be transferred to EKI. There is no objection. Addis Ababa Municipality is coordinating this matter. No residents live there but a warehouse exists and EKI is arranging removal.	Confirmation of progress of transfer of the land title to EKI.	Municipality	PMU
	(2) Living and Livelihood	D	Construction of the Kaizen Center follows Ethiopian Laws and regulations regarding building construction and will not disturb living and livelihood of surrounding community. JICA study team suggests EKI to inform construction to the inhabitants in the surrounding area before the construction work starts.	-	-	-
	(3) Heritage	D	The project will not damage the local heritage	-	-	-
	(4) Landscape	D	There is no possibility that the project will adversely affect the local landscape.	-	-	-
	(5) Ethnic Minorities and Indigenous Peoples	D	No ethnic minorities and indigenous peoples near to the project site.	-	-	-
	(6) Working Conditions	B-	It is anticipated that construction works cause negative impact on workers.	Safety and health measures at the construction shall be included in the terms of reference to the contractor. EKI/PMU and supervision consultant will instruct contractor to take measure against traffic and industrial accidents. They shall conduct periodical monitoring of working condition.	Contractor	PMU, Municipality

Source: JICA Study Team

9-6-2. 供与時

Category	Environmental Item	Evaluation	Anticipated impacts	Mitigation Measures (tentative)	Implementer	Responsible Organization
Pollution Control	(1) Air Quality	C-	As Kaizen Center is not a production facility, it will not generate air pollution at the operation phase. Also, it will use commercial power as main power source. However, installation of a low-pollution type diesel generator is planned as a measure to power failure occurring frequently.	JICA consultant team recommends EKI to use diesel of high quality for the generator.	EKI	EKI, Municipality
	(2) Water Quality	C-	As Kaizen Center is not a production facility, it will not discharge large volume of waste water.	The BD Study Team plans that water used in the Kaizen Center will be drained to the public sewage system managed by the Addis Ababa Water and Sewage Authority (AASWA).	EKI, Municipality	EKI, Municipality
	(3) Wastes	C-	Waste from Kaizen Center is neither estimated a large amount nor consisted of hazardous matters.	The BD Study Team plans a garbage collection point on the basement floor and the municipality garbage collection service will collect it. Also, the team plans that JICA expert will give training (as soft component) on the O&M of facilities including waste management to the staffs.	EKI, Municipality	EKI, Municipality
	(4) Soil Contamination	D	Kaizen Center will be used only for the purpose of training and will generate no effluents or leachate.	-	-	-
	(5) Noise and Vibration	D	Kaizen Center will not generate noises and vibrations at the operation phase.	-	-	-
	(6) Subsidence	D	-	-	-	-
	(7) Odor	D	-	-	-	-
Natural Environment	(1) Protected Areas	D	Kaizen Centre is located in the urban area and not within or adjacent to the designated protected areas.	-	-	-
	(2) Ecosystem	D	Kaizen Centre is located in the urban area and will not affect natural environment and ecosystem.	-	-	-
	(3) Hydrology	D	Kaizen Center will not pump up ground water and will not cause hydrologic changes.	-	-	-
	(4) Topography	D	-	-	-	-

Category	Environmental Item	Evaluation	Anticipated impacts	Mitigation Measures (tentative)	Implementer	Responsible Organization
	phy and Geology					
Social Environment	(1) Resettlement	D	-	-	-	-
	(2) Living and Livelihood	B+	Kaizen Center is a training center aiming at enhancement of productivity of Ethiopian industry. It will contribute to strengthening economic competence of Ethiopia and her economic growth. Therefore, Kaizen Center will indirectly give positive impact on the livelihood.	-	-	-
	(3) Heritage	D	The project will not damage the local heritage	-	-	-
	(4) Landscape	D	There is no possibility that the project will adversely affect the local landscape.	-	-	-
	(5) Ethnic Minorities and Indigenous Peoples	C+	Kaizen Center plans to give Kaizen training to trainees from different states (different ethnic groups).	-	-	-
	(6) Working Conditions	C-	Strong negative impact of working condition is not anticipated. EKI will not use hazardous industrial materials.	EKI shall follow Ethiopian Labour Laws and Regulations. BD study team plans to install safety equipment. Also, they plan to construct nurse's room or the first-aid in the Center and JICA consultant will support EKI to prepare working manual to manage the center.	EKI	EKI, Municipality

Source: JICA Study Team

Legend

A +/- Significant positive/negative impact is expected.

B +/- Positive/negative impact is expected to some extent.

C +/- Extent of positive/negative impact is unknown (A further examination is needed and the impact could be clarified as the study progresses.)

D No impact is expected.

1) Regarding the term "Country's Standards" mentioned in the above table, in the event that environmental standards in the country where the project is located diverge significantly from international standards, appropriate environmental considerations are required to be made.

In cases where local environmental regulations are yet to be established in some areas, considerations should be made based on comparisons with appropriate standards of other countries (including Japan's experience).

2) Environmental checklist provides general environmental items to be checked. It may be necessary to add or delete an item taking into account the characteristics of the project and the particular circumstances of the country and locality in which the project is located.

9-7 環境モニタリング計画

9-7-1. 工事中

Category	Environmental Item	Monitoring Parameters	Means of Monitoring	Environmental Standard	Monitoring Point	Frequency of Monitoring	Implementer	Responsible Organization
Pollution Control	(1) Air Quality	Temperature, humidity, wind velocity, dust, SO ₂ , NO ₂ , CO	Measurement	Ethiopian Air Quality standards	Construction sites	once/ three months	Contractor	PMU, Municipality
	(2) Water Quality	pH, colour, BOD, COD, N, Total P	Measurement	Ethiopian water quality standards	Outlets	once/ three months	Contractor	PMU, Municipality
	(3) Wastes	Kind of wastes, amount, record of collection	Observation	Ethiopian waste management regulations	Construction sites	once/ month	Contractor	PMU, Municipality
	(4) Soil Contamination	Oil leaking	Observation	-	Construction sites	once/ month	Contractor	PMU, Municipality
	(5) Noise and Vibration	Noise (db)	Measurement	Ethiopian noise pollution regulations	Boundary of premises of the medical facilities	once/ three months	Contractor	PMU, Municipality
	(6) Subsidence	-	-	-	-	-	-	-
	(7) Odor	-	-	-	-	-	-	-
Natural Environment	(1) Protected Areas	-	-	-	-	-	-	-
	(2) Ecosystem	-	-	-	-	-	-	-
	(3) Hydrology	-	-	-	-	-	-	-
	(4) Topography and Geology	-	-	-	-	-	-	-
Social Environment	(1) Resettlement	progress of land title transfer	Interview and observation	-	-	At the beginning of construction work	Municipality	PMU
	(2) Living and Livelihood	-	-	-	-	-	-	-
	(3) Heritage	-	-	-	-	-	-	-
	(4) Landscape	-	-	-	-	-	-	-
	(5) Ethnic Minorities and Indigenous Peoples	-	-	-	-	-	-	-
	(6) Working Conditions	Construction accidents, traffic accidents	Record of accidents, interview to labourers	Labour laws, regulations	Construction sites, route of vehicles used for transportation of materials and other necessity	once/ day	Contractor	PMU, Municipality

Source: JICA Study Team

9-7-2. 供与時

Category	Environmental Item	Monitoring Parameters	Means of Monitoring	Environmental Standard	Monitoring Point	Frequency of Monitoring	Implementer	Responsible Organization
Pollution Control	(1) Air Quality	Temperature, humidity, wind velocity, dust, SO ₂ , NO ₂ , CO; quality of gasoline	Actual measurement; record	Ethiopian Air Quality standards	Kaizen center	once/ three months	EKI	EKI, Municipality
	(2) Water Quality	pH, colour, BOD, COD N; bacteria, virus	Measurement	Ethiopian water quality standards	Outlets	Always	EKI, Municipality	EKI, Municipality
	(3) Wastes	Kind of wastes, amount, cleanness, record of waste collection	Observation	Ethiopian waste management regulations	Depository	once/ month	EKI, Municipality	EKI, Municipality
	(4) Soil Contamination	-	-	-	-	-	-	-
	(5) Noise and Vibration	-	-	-	-	-	-	-
	(6) Subsidence	-	-	-	-	-	-	-
	(7) Odor	-	-	-	-	-	-	-
Natural Environment	(1) Protected Areas	-	-	-	-	-	-	-
	(2) Ecosystem	-	-	-	-	-	-	-
	(3) Hydrology	-	-	-	-	-	-	-
	(4) Topography and Geology	-	-	-	-	-	-	-
Social Environment	(1) Resettlement	-	-	-	-	-	-	-
	(2) Living and Livelihood	-	-	-	-	-	-	-
	(3) Heritage	-	-	-	-	-	-	-
	(4) Landscape	-	-	-	-	-	-	-
	(5) Ethnic Minorities and Indigenous Peoples	-	-	-	-	-	-	-
	(6) Working Conditions	Health condition of staff members and workers	Periodical medical examination, accident report	-	Kaizen center	once/ six months	EKI	EKI, Municipality

Source: JICA Study Team

9-8 環境チェックリスト

Category	Environmental Item	Main Check Items	Yes: Y No: N NA: Not applied	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
1 Permits and Explanation	1(1) EIA and Environmental Permits	(a) Have EIA reports been already prepared in official process?	(a) N	(a) EIA reports are required after the determination of detailed design according to the Ethiopian Environmental Guideline. EKI will start EIA process after PMU is established.
		(b) Have EIA reports been approved by authorities of the host country's government?	(b) NA	(b) -
		(c) Have EIA reports been unconditionally approved? If conditions are imposed on the approval of EIA reports, are the conditions satisfied?	(c) NA	(c) -
		(d) In addition to the above approvals, have other required environmental permits been obtained from the appropriate regulatory authorities of the host country's government?	(d) NA	(d) -
	1(2) Explanation to the Local Stakeholders	(a) Have contents of the project and the potential impacts been adequately explained to the Local stakeholders based on appropriate procedures, including information disclosure? Is understanding obtained from the Local stakeholders?	(a) N	(a) -
		(b) Have the comment from the stakeholders (such as local residents) been reflected to the project design?	(b) NA	(b) -
	1(3) Examination of Alternatives	(a) Have alternative plans of the project been examined with social and environmental considerations?	(a) N	(a) -
2 Pollution Control	(1) Air Quality	(a) Do air pollutants, (such as sulfur oxides (SOx), nitrogen oxides (NOx), and soot and dust) emitted from the proposed infrastructure facilities and ancillary facilities comply with the country's emission standards and ambient air quality standards? Are any mitigating measures taken?	(a) Y/N	(a) It is likely anticipated that the vehicles used for transportation of construction materials at the construction phase will pollute air quality. As Kaizen Center is not a production facility, it will not generate air pollution at the operation phase.

Category	Environmental Item	Main Check Items	Yes: Y No: N NA: Not applied	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
		(b) Are electric and heat source at accommodation used fuel which emission factor is low?	(b) Y	(b) The Kaizen Center will use commercial power as main power source. As power failure occurs frequently, install of a low-noise type diesel generator is planned. JICA team will suggest EKI to use fuel of high quality and low emission factor for the generator.
	(2) Water Quality	(a) Do effluents or leachates from various facilities, such as infrastructure facilities and the ancillary facilities comply with the country's effluent standards and ambient water quality standards?	(a) Y	(a) There is no quality standard of water discharge. Waste water from the Kaizen Center is planned to discharge to the public sewage system managed by the Addis Ababa Water and Sewage Authority (AASWA).
	(3) Wastes	(a) Are wastes from the infrastructure facilities and ancillary facilities properly treated and disposed of in accordance with the country's regulations?	(a) Y	(a) A garbage collection point is planned on the basement floor. The municipality service will collect garbage. The JICA team will give training (as soft component) on the O&M of facilities including waste management to the staffs.
	(4) Soil Contamination	(a) Are adequate measures taken to prevent contamination of soil and groundwater by the effluents or leachate from the infrastructure facilities and the ancillary facilities?	(a) N	(a) The Kaizen Center will neither be used for the purpose other than training nor generate effluents or leachate.
	(5) Noise and Vibration	(a) Do noise and vibrations comply with the country's standards?	(a) Y	(a) Noise will be made at the construction phase and contractor needs to comply with Ethiopian noise standards. The Kaizen Center will not generate noises and vibrations at the operation phase.
	(6) Subsidence	(a) In the case of extraction of a large volume of groundwater, is there a possibility that the extraction of groundwater will cause subsidence?	(a) N	(a) Kaizen Center will not extract groundwater and will not cause subsidence.
	(7) Odor	(a) Are there any odor sources? Are adequate odor control measures taken?	(a) N	(a) There are no odor sources generated by the Kaizen Center.
3 Natural Environment	(1) Protected Areas	(a) Is the project site or discharge area located in protected areas designated by the country's laws or international treaties and conventions? Is there a possibility that the project will affect the protected areas?	(a) N	(a) The site is not located in the designated protected area.

Category	Environmental Item	Main Check Items	Yes: Y No: N NA: Not applied	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
	(2) Ecosystem	(a) Does the project site encompass primeval forests, tropical rain forests, ecologically valuable habitats (e.g., coral reefs, mangroves, or tidal flats)?	(a) N	(a) The site of the Kaizen Center does not encompass in the any kind of forests.
		(b) Does the project site encompass the protected habitats of endangered species designated by the country's laws or international treaties and conventions?	(b) N	(b) The site of the Kaizen Center does not encompass the protected habitats.
		(c) Is there a possibility that changes in localized micro-meteorological conditions, such as solar radiation, temperature, and humidity due to a large-scale timber harvesting will affect the surrounding vegetation?	(c) N	(c) The Kaizen Center will not have the possibility the change in micro-meteorological conditions.
		(d) Is there a possibility that the amount of water (e.g., surface water, groundwater) used by the project will adversely affect aquatic environments, such as rivers? Are adequate measures taken to reduce the impacts on aquatic environments, such as aquatic organisms?	(d) N	(d) The Kaizen Center will not use large amount of water.
	(3) Hydrology	(a) Is there a possibility that hydrologic changes due to the project will adversely affect surface water and groundwater flows?	(a) N	(a) The Kaizen Center will not cause the hydrologic changes.
	(4) Topography and Geology	(a) Is there a possibility the project will cause large-scale alteration of the topographic features and geologic structures in the project site and surrounding areas?	(a) N	(a) Area of the Kaizen Center is about 3,700m ² and has no possibility to cause large-scale alteration.
4 Social Environment	(1) Resettlement	(a) Is involuntary resettlement caused by project implementation? If involuntary resettlement is caused, are efforts made to minimize the impacts caused by the resettlement?	(a) N	(a) The building site is the land of other ministry and the land use right will be transferred to EKI. Addis Ababa Municipality is coordinating this matter and there is no objection. No residents live there but a ware house exists and EKI is arranging removal.
		(b) Is adequate explanation on compensation and resettlement assistance given to affected people prior to resettlement?	(b) NA	(b) -
		(c) Is the resettlement plan, including compensation with full replacement costs, restoration of livelihoods and living standards developed based on socioeconomic studies on resettlement?	(c) NA	(c) -

Category	Environmental Item	Main Check Items	Yes: Y No: N NA: Not applied	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
4 Social Environment		(d) Is the compensations going to be paid prior to the resettlement?	(d) NA	(d) -
		(e) Is the compensation policies prepared in document?	(e) NA	(e) -
		(f) Does the resettlement plan pay particular attention to vulnerable groups or people, including women, children, the elderly, people living below the poverty line, ethnic minorities, and indigenous peoples?	(f) NA	(f) -
		(g) Are agreements with the affected people obtained prior to resettlement?	(g) NA	(g) -
		(h) Is the organizational framework established to properly implement resettlement? Are the capacity and budget secured to implement the plan?	(h) NA	(h) -
		(i) Are any plans developed to monitor the impacts of resettlement?	(i) NA	(i) -
		(j) Is the grievance redress mechanism established?	(j) NA	(j) -
	(2) Living and Livelihood	(a) Is there a possibility that the project will adversely affect the living conditions of inhabitants? Are adequate measures considered to reduce the impacts, if necessary?	(a) N	(a) Construction of the Kaizen Center follows Ethiopian Laws and regulations regarding building construction. Construction will not start till EKI receives the building permission issued by Addis Ababa Municipality. EKI will inform construction to the inhabitants in the surrounding area before the construction work starts
	(3) Heritage	(a) Is there a possibility that the project will damage the local archeological, historical, cultural, and religious heritage? Are adequate measures considered to protect these sites in accordance with the country's laws?	(a) N	(a) There is no heritage on the project site.
	(4) Landscape	(a) Is there a possibility that the project will adversely affect the local landscape? Are necessary measures taken?	(a) N	(a) The area of the project site is not the specified landscape.
(b) Is there a possibility that landscape is spoiled by construction of high-rise buildings such as huge hotels?		(b) N	(b) The area surrounding the project site is not the specified landscape. The construction plan including building heights follows Ethiopian construction regulations.	

Category	Environmental Item	Main Check Items	Yes: Y No: N NA: Not applied	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)	
	(5) Ethnic Minorities and Indigenous Peoples	(a) Are considerations given to reduce impacts on the culture and lifestyle of ethnic minorities and indigenous peoples?	(a) N	(a) No ethnic minorities and indigenous peoples near to the project site.	
		(b) Are all of the rights of ethnic minorities and indigenous peoples in relation to land and resources respected?	(b) N	(b) No ethnic minorities and indigenous peoples live in the construction site.	
	(6) Working Conditions	(a) Is the project proponent not violating any laws and ordinances associated with the working conditions of the country which the project proponent should observe in the project?	(a) N	(a) The project proponent (EKI) does not violate laws and ordinances associated with the working conditions.	
		(b) Are tangible safety considerations in place for individuals involved in the project, such as the installation of safety equipment which prevents industrial accidents, and management of hazardous materials?	(b) Y	(b) EKI considers safety measures at the construction. It is planned to install safety equipment and to construct nurse's room or the first-aid. EKI will not use hazardous industrial materials.	
		(c) Are intangible measures being planned and implemented for individuals involved in the project, such as the establishment of a safety and health program, and safety training (including traffic safety and public health) for workers etc.?	(c) Y	(c) Soft component program is planned to support EKI in (i) establishment of management system and (ii) preparation of O&M manual for EKI.	
		(d) Are appropriate measures taken to ensure that security guards involved in the project not to violate safety of other individuals involved, or local residents?	(d) Y	(d) JICA expert team shall ask EKI to give proper instruction to the security guards not to violate safety of other individuals and local residents as well as have appropriate human resource management.	
	5 Others	(1) Impacts during Construction	(a) Are adequate measures considered to reduce impacts during construction (e.g., noise, vibrations, turbid water, dust, exhaust gases, and wastes)?	(a) Y	(a) It should be considered and included in the tender document to reduce and mitigate negative impact on the surrounding area during construction. Also Japanese consultant shall supervise the contractor to follow the TOR and regulations.
			(b) If construction activities adversely affect the natural environment (ecosystem), are adequate measures considered to reduce impacts?	(b) NA	(b) -

Category	Environmental Item	Main Check Items	Yes: Y No: N NA: Not applied	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
		(c) If construction activities adversely affect the social environment, are adequate measures considered to reduce impacts?	(c) Y	(c) Adequate measure should be considered should be include in the contract with contractor to reduce negative impacts on the social environment during construction. Also construction works should be monitored.
	(2) Monitoring	(a) Does the proponent develop and implement monitoring program for the environmental items that are considered to have potential impacts?	(a) N	(a) JICA project team suggests EKI to start EIA procedure including monitoring plan in accordance with Ethiopian guidelines. EKI confirmed that they will start the procedure after they get land use right
		(b) What are the items, methods and frequencies of the monitoring program?	(b) NA	(b) EKI will prepare the detailed monitoring plan based on the result of EIA study.
		(c) Does the proponent establish an adequate monitoring framework (organization, personnel, equipment, and adequate budget to sustain the monitoring framework)?	(c) NA	(c) JICA project team suggests EKI to establish an adequate monitoring structure.
		(d) Are any regulatory requirements pertaining to the monitoring report system identified, such as the format and frequency of reports from the proponent to the regulatory authorities?	(d) N	(d) Ethiopian environmental guidelines do not provide specific regulatory requirements.
6 Note	Reference to Checklist of Other Sectors	(a) Where necessary, pertinent items described in the Roads, Railways and Bridges checklist should also be checked (e.g., projects including access roads to the infrastructure facilities).	(a) NA	(a) Not necessary
		(b) For projects, such as installation of telecommunication cables, power line towers, and submarine cables, where necessary, pertinent items described in the Power Transmission and Distribution Lines checklists should also be checked.	(b) NA	(b) Not necessary
	Note on Using Environmental Checklist	(a) If necessary, the impacts to transboundary or global issues should be confirmed (e.g., the project includes factors that may cause problems, such as transboundary waste treatment, acid rain, destruction of the ozone layer, or global warming).	(a) NA	(a) Not necessary

Source: JICA Study Team

- 1) Regarding the term “Country's Standards” mentioned in the above table, in the event that environmental standards in the country where the project is located diverge significantly from international standards, appropriate environmental considerations are required to be made. In cases where local environmental regulations are yet to be established in some areas, considerations should be made based on comparisons with appropriate standards of other countries (including Japan's experience).
- 2) Environmental checklist provides general environmental items to be checked. It may be necessary to add or delete an item taking into account the characteristics of the project and the particular circumstances of the country and locality in which the project is located.

9-9 環境モニタリングフォーム (案)

9-9-1. 工事中

Name of the construction site / _____ /

Date of monitoring / _____ / Date of reporting / _____ /

Person in charge of monitoring / _____ /

Person in charge of reporting / _____ /

1. Response/Actions to comments and guidance from Government Authorities and the Public

Monitoring item	Monitoring results during the reporting period
Number and contents of formal comments made <u>by the public</u> , if any	
Number and contents of responses from <u>the Government agencies</u> , if any	

2. Pollution control

Item	Unit	Measured Value (mean)	Measured Value (max)	Ethiopian standards	Standards for contract	Referred international standards	Measurement points	Frequency
(1) Air quality								
Temperature	℃							Once/ three months
humidity	%							
wind velocity	m/s							
SO2	μg/m ³							
NO2	μg/m ³							
CO2	μg/m ³							
PM10	μg/m ³							
Pb	μg/m ³							
(2) Waste water quality								
Color	Hazen							Once/ three months
Odor	-							
pH	-							
Turbidity	NTU							
Total Dissolved solids	mg/l							
Total Hardness as CaCO3	mg/l							
(3) Solid waste								
Kind of waste	Type							Once/month
Amount	Ton/ day							
Record of collection	Frequency							
(4) Soil contamination								
Oil & Grease	mg/l							
(5) Noise and vibration								
Noise (dB)	db							Once/three months

3. Social environment

Item	Monitoring results	Measures to be taken
(6) Resettlement		
Progress of land title transfer		
(7) Working Conditions		
Daily recording		
Construction accidents		
Traffic accidents		
Others		

9-9-1. 供与時

Name of the construction site / _____ /

Date of monitoring / _____ / Date of reporting / _____ /

Person in charge of monitoring / _____ /

Person in charge of reporting / _____ /

1. Response/Actions to comments and guidance from Government Authorities and the Public

Monitoring item	Monitoring results during the reporting period
Number and contents of formal comments made <u>by the public</u> , if any	
Number and contents of responses from <u>the Government agencies</u> , if any	

2. Pollution control

Item	Unit	Measured Value (mean)	Measured Value (max)	Ethiopia n standard s	Standar ds for contract	Referred international standards	Measurement points	Frequency
(1) Ambient Air quality								
Temperature	°C							
humidity	%							
wind velocity	m/s							
SO2	µg/m ³							
NO2	µg/m ³							
CO	µg/m ³							
(2) Indoor Air quality								
SO2	µg/m ³							
NO2	µg/m ³							
CO	µg/m ³							
Pb	µg/m ³							
(3) Diesel Generator Stack Emission Monitoring								
SOx	mg/Nm ³							
NOx	mg/Nm ³							
CO	mg/Nm ³							
Pb	µg/m ³							
(4) Waste water								
Colour	Hazen							
Odour	-							
pH	-							
Oil & Grease	mg/l							
(5) Solid wastes								
Kind of waste	By type							
Amount	t/day							
Cleanness of collection points	-							
Record of collection	Frequency							

3. Social environment

Item	Monitoring results	Measures to be taken
(6) Working Conditions		
Daily recording		
Health condition of EKI staff and workers		
Labour accidents		
Traffic accidents		
Others		

Source: Prepared by JICA Expert in charge of environmental and social considerations

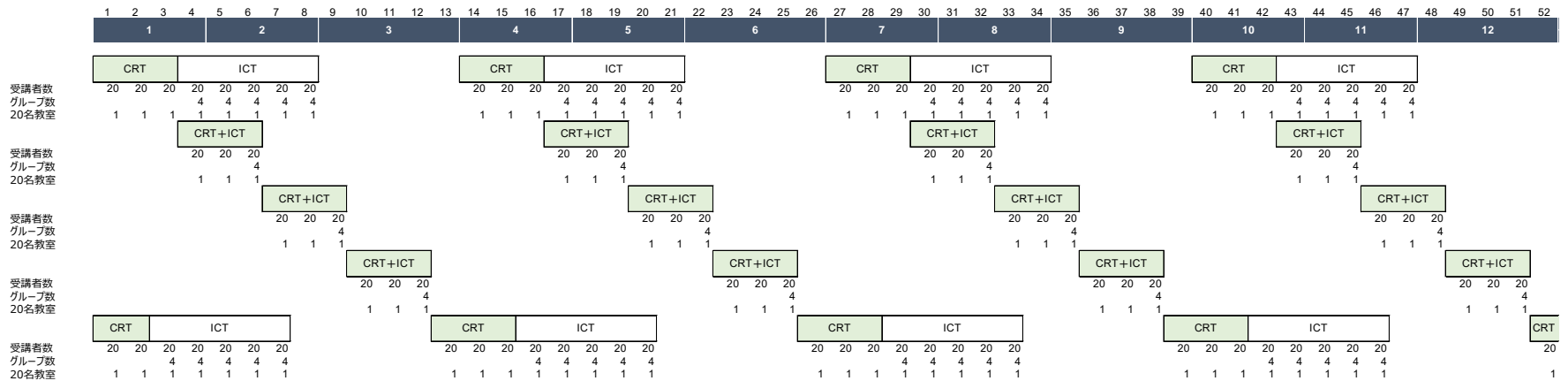
A-10 研修計画

EKI 研修計画

2か月コース

1. 職業訓練校

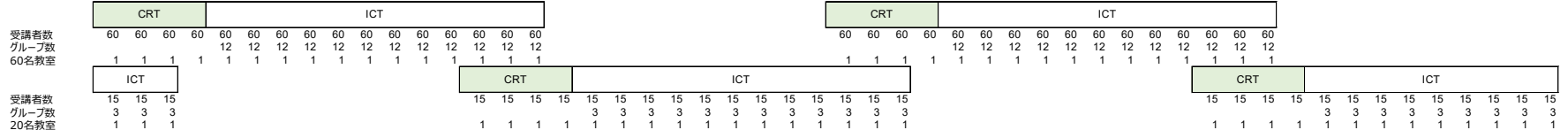
80



4か月コース

6. 製造業

120

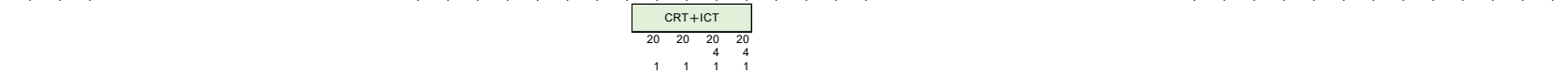


新三國研修

8. アフリカ諸国受講生

20

受講者数
グループ数
20名教室

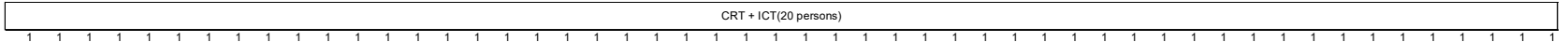


EKI 職員向け研修

9. 学士レベル

1年

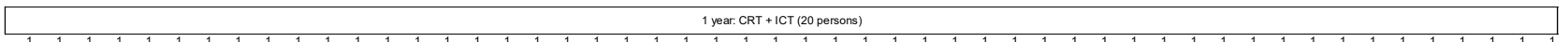
20名教室



10. 修士レベル

2年

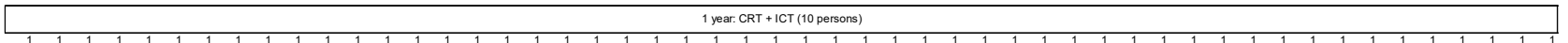
20名教室



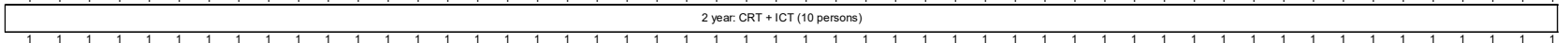
11. 博士レベル

3年

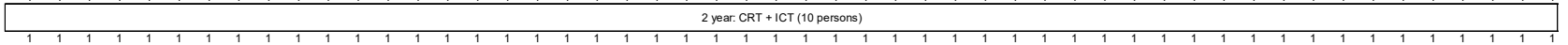
10名教室



10名教室



10名教室



A-11 統計情報

(1) 州別大中企業数

アデイスアベバ市に存在する大中企業は全体の 40%程度である。

表 1 州別 LME 数(2010/2011 年)

No.	サブセクター	1	2	3	4	5	6	業種 合計	%	
		アデイス アベバ市	オロミア	アムハラ	南部	ティグレ	その他			
1	化学	製紙・印刷・化学・プラスチック・非金属	301	150	91	54	85	33	714	32.90%
2	農産物加工	食品・飲料	275	181	70	62	44	54	686	31.61%
3	金属	鉄鋼・金属・機械・車輛	79	43	12	15	38	7	194	8.94%
4	皮革	皮革製品・靴・鞆	87	34	9	1	9	1	141	6.50%
5	繊維	繊維・衣料	45	19	3	4	3	3	77	3.55%
6	その他	タバコ・木材・家具等	87	79	55	98	21	18	358	16.50%
州合計			874	506	240	234	200	116	2,170	100.00%
%			40.28%	23.32%	11.06%	10.78%	9.22%	5.35%	100.00%	

出典：エチオピア中央統計局（CSA）の Report on Large and Medium Scale Manufacturing and Electricity Industries Survey August 2012 をもとに JICA 調査団作成

(2) 州別人口

アデイスアベバ市の人口割合（全体比）は約 4%で年々微減傾向にある。

表 2 州別人口

名前	面積		人口		人口		人口	
	面積 (km ²)		国勢調査 (C)		国勢調査 (C)		推定 (P)	
			1994/10/11		2007/5/28		2015/7/1	
アデイスアベバ市	527	0.05%	2,112,737	4.0%	2,739,551	3.7%	3,273,000	3.6%
アファ	72,053	6.77%	1,106,383	2.1%	1,390,273	1.9%	1,723,000	1.9%
アムハラ	154,709	14.55%	13,834,297	25.9%	17,221,976	23.4%	20,401,000	22.6%
ベニシャングル-グムズ	50,699	4.77%	460,459	0.9%	784,345	1.1%	1,005,000	1.1%
ダリダワ市	1,559	0.15%	251,864	0.5%	341,834	0.5%	440,000	0.5%
ガンベラ	29,783	2.80%	181,862	0.3%	307,096	0.4%	409,000	0.5%
ハラリ	334	0.03%	131,139	0.2%	183,415	0.2%	232,000	0.3%
オロミア	284,538	26.75%	18,732,525	35.0%	26,993,933	36.6%	33,692,000	37.4%
ソマリ	279,252	26.25%	3,152,704	5.9%	4,445,219	6.0%	5,453,000	6.1%
ティグレ	84,722	7.97%	3,136,267	5.9%	4,316,988	5.9%	5,056,000	5.6%
南部	105,476	9.92%	10,377,028	19.4%	14,929,548	20.2%	18,276,000	20.3%
全体	1,063,652	100%	53,477,265	100%	73,750,932	100%	90,078,000	100%

※2007年と2015年の合計値は、Moyale、Afdem、Meda Welabu、Muloの地区に住む人口をそれぞれ96,754人、118,000人含んでいる。また1994年の国勢調査は、アファでは1996年に、ソマリでは1997年に実施されている。また、アファでは2007年11月28日を2007年国勢調査の基準日としている。

出典：1994年数値はBritannica Book of the Year 1999.、2007年と2015年の数値はCentral Statistical Agency of Ethiopia

(3) 州別レベル別教員数と学校数

州別レベル別学校数、及び、教員数は次表の通り。

表3 州別レベル別教員数

	幼稚園		初等学校		中等学校		小計		職業訓練校		国立大学	
	人数	%	人数	%	人数	%	人数	%	人数	%	人数	%
ティグレイ ※	436	3%	24,869	7%	5,536	9%	30,841	7%	1,480	12%	2,393	11%
アファ	47	0.4%	3,068	1%	341	1%	3,456	1%	31	0%	301	1%
アムハラ ※	312	2%	94,564	28%	17,011	26%	111,887	27%	2,545	20%	4,217	19%
オロミア ★	3,979	31%	110,850	33%	21,235	33%	136,064	33%	5,295	41%	4,842	22%
ソマリ		0%	6,682	2%	916	1%	7,598	2%		0%	328	1%
ベニシャングル グムズ	51	0%	4,594	1%	1,175	2%	5,820	1%		0%	162	1%
南部 ★	2,333	18%	69,732	21%	11,850	18%	83,915	20%	1,772	14%	3,428	16%
ガンベラ	51	0%	2,407	1%	619	1%	3,077	1%	47	0%		0%
ハラリ	57	0%	1,338	0.4%	212	0.3%	1,607	0.4%		0%		0%
アディスアベバ市 ★	5,292	42%	14,893	4%	5,651	9%	25,836	6%	1,286	10%	3,358	15%
ダリダワ市 ★	81	1%	2,112	1%	570	1%	2,763	1%	323	3%	2,870	13%
合計	12,639	100	335,109	100	65,116	100	412,864	100%	12,779	100	21,899	100

★は地方カイゼン局（RKI）が設立される予定州。※は JICA 向け研修計画上で地方カイゼン局（RKI）設立予定の追加2州

出典：Ministry of Education, Education .Statistics Annual Abstract, 2005 E.C (2012/2013G.C)

表4 州別レベル別学校数

	幼稚園		初等学校		中等学校		小計		職業訓練校		国立大学	
	人数	%	人数	%	人数	%	人数	%	人数	%	人数	%
ティグレイ ※			2,017	7%	148	8%	2,165	7%	40	9%	3	9%
アファ			539	2%	16	1%	555	2%	2	0%	1	3%
アムハラ ※			7,493	25%	316	17%	7,809	24%	74	17%	7	21%
オロミア ★			12,060	39%	718	38%	12,778	39%	212	49%	7	21%
ソマリ			1,091	4%	78	4%	1,169	4%		0%	1	3%
ベニシャングル グムズ			497	2%	46	2%	543	2%		0%	1	3%
南部 ★			5,685	19%	365	19%	6,050	19%	65	15%	7	21%
ガンベラ			237	1%	32	2%	269	1%	3	1%		0%
ハラリ			70	0.2%	11	1%	81	0.2%		0%		0%
アディスアベバ市 ★			745	2%	163	9%	908	3%	33	8%	5	15%
ダリダワ市 ★			100	0.3%	19	1%	119	0.4%	8	2%	2	6%
合計	3,688		30,534	100	1,912	100	36,134	100%	437	100	34	100

★は地方カイゼン局（RKI）が設立される予定州。※は JICA 向け研修計画上で地方カイゼン局（RKI）設立予定の追加2州

出典：Ministry of Education, Education .Statistics Annual Abstract, 2005 E.C (2012/2013G.C)

レベル別学校数、教員数、及び、州別中等学校教員一人当たり生徒数は次表の通り。

表5 レベル別学校数の推移

学校	2008/09 (2001E.C)	2009/10 (2002E.C)	2010/11 (2003E.C)	2011/12 (2004E.C)	2012/13 (2005E.C)	平均 増加率
幼稚園	2,893	3,318	3,418	3,580	3,688	6.3%
初等学校 (Grade 1-8)	25,212	26,951	28,349	29,643	30,534	4.9%
中等学校 (Grade 9-12)	1,197	1,335	1,517	1,710	1,912	12.4%
小計	29,302	31,604	33,284	34,933	36,134	5%
職業訓練校	458	460	505	505	437	-1.2%
大学	72	70	74	91	99	8.3%

出典：Ministry of Education, Education .Statistics Annual Abstract, 2005 E.C (2012/2013G.C)

表6 レベル別教職員数

学校	アデイスアベバ市		全体		アデイスア ベバ市比率	出典内の表番号 (頁)
	合計	(資格者)	合計	(資格者)		
幼稚園	5,292		12,639		41.9%	Table4.2 (p22)
初等学校	14,893	(12,180)	335,109	(216,665)	4.4% (5.6%)	Table5.9 (p82), Table5.12 (p85)
中等学校	5,651	(5,368)	65,116	(59,552)	8.7% (9.0%)	Table4.26 (p45), Table5.9 (p82), Table5.12 (p85)
小計	25,836		412,864		6.3%	
職業訓練校	1,286		12,779		10.1 %	Table4.38 (p56), Table5.36 (p162)
国立大学	3,358		21,899		15%	Table5.43 (p171, 172)

※大学は教員ではなく職員の数。他は先生の数

出典：Ministry of Education, Education .Statistics Annual Abstract, 2005 E.C (2012/2013G.C)

表7 州別中等学校教員一人当たり生徒数の推移

州	2007/08 (2000E.C)	2008/09 (2001E.C)	2009/10 (2002E.C)	2010/11 (2003E.C)	2011/12 (2004E.C)	2012/13 (2005E.C)
アデイスアベバ市	26	28	22	26	21	21.5
ティグレイ	40	39	41	33	34	31.3
アファ	23	24	32	—	26	24.1
アムハラ	47	41	36	29	27	27.8
オロミア	45	45	39	33	31	29.9
ソマリ	92	92	34	21	34	47.4
ベニシャングル-グムズ	33	31	31	26	29	19.9
南部	53	48	42	35	34	30.2
ガンベラ	29	46	24	23	30	25.6
ハラリ	28	13	26	24	23	26.3
ダリダワ市	27	26	24	22	21	18.9
全体	43	41	36	31	29	28.7

出典：Ministry of Education, Education .Statistics Annual Abstract, 2005 E.C (2012/2013G.C), Table4.25 (p44)

(4) その他統計情報

表 8 その他統計情報

	指標	データ値	出典等
1	経済成長率	8.7%~10%	IMF, 2012 2016-2020年の予想は毎年7.5%以上と想定されている。 世銀によると毎年10%以上と予想されている。
2	人口増加率	2.5%	IMF, 2012 2016-2020年の予想は毎年2%以上と想定されている。
3	平均寿命	62.25歳	WHO, 2011

出典：IMF 2012, WHO 2011

(5) 技術協力プロジェクトの小零細企業（MSE）研修の実績値

2011～2014年に実施した技術協力プロジェクトの零細小企業（MSE）研修では、職業訓練校の先生を受講生として小零細企業のカイゼン指導を実施した。約3年に渡って小零細企業は合計8回開催されたが、その際に参加した職業訓練校の先生の出身地を州別に集計したものが以下の表となる。アディスアベバ市内出身者は33%で、地方出身者は67%であった。

表 9 技術協力プロジェクト小零細企業研修に参加した職業訓練校教師の出身地

州	受講者数 (8回分)	比率
アディスアベバ市	43	33%
オロミア	31	67%
アムハラ	13	
南部	11	
ソマリア	5	
ティグレ	14	
アファ	1	
ベニシヤングル-グムズ	4	
ダリダワ市	4	
ガムベラ	1	
ハラリ	4	
合計	131	100%

出典：技術協力プロジェクト報告書をもとにJICA調査団作成

なお期間中、地方からの受講生の中にアローワンスの支給金額が少ないとの不満が発生し、受講生を一時アディスアベバ市内に限定したことが数回あり、アディスアベバ市内出身者の比率が高くなっている。

A-12 進捗報告書初版

Project Monitoring Report
on
**for the Project on Construction of TICAD Human Resource
 Development Center for Industries**
Grant Agreement No. XXXXXXX
 July, 2016

Organization Information

Authority (Signer of the G/A)	_____ Person in Charge _____ (Division) _____ Contacts Address: _____ Phone/FAX: _____ Email: _____
Executing Agency	_____ Person in Charge _____ (Division) _____ Contacts Address: _____ Phone/FAX: _____ Email: _____
Line Agency	_____ Person in Charge _____ (Division) _____ Contacts Address: _____ Phone/FAX: _____ Email: _____

Outline of Grant Agreement:

Source of Finance	Government of Japan: Government of Ethiopia:
Project Title	
E/N	Signed date: Duration:
G/A	Signed date: Duration:

1: Project Description

1-1 Project Objective

The Project is intended to provide TICAD Human Resource Development Center for Industries and equipment for the purpose of fostering EKI's capacities of training industrial human resources, for which EKI's enhanced capacities will further promote developing industrial human resources in Ethiopia.

1-2 Necessity and Priority of the Project

- Consistency with development policy, sector plan, national/regional development plans and demand of target group and the recipient country.

1-3 Effectiveness and the indicators

- Effectiveness by the project

Quantitative Effect (Operation and Effect indicators)		
Indicators	Original (Yr 2015)	Target (Yr 2021)
Number of trainee	12,117	38,680
Qualitative Effect		
By development of EKI's base and training facility, EKI's activities and the spread of Kaizen activities in Ethiopia will be promoted.		

2: Project Implementation

2-1 Project Scope

Table 2-1-1a: Comparison of Original and Actual Location

Location	Original: (M/D) Attachment(s):Map	Actual: (PMR) Attachment(s):Map

Table 2-1-1b: Comparison of Original and Actual Scope

Items	Original	Actual
(M/D) TICAD Human Resource Development Center for Industries Equipment Consulting Services Soft Component	(M/D)	(PMR)

Table 2-1-1b: Comparison of Original and Actual Scope

Items	Original	Actual
1. Construction of TICAD Human Resource Development Center for Industries	<ul style="list-style-type: none"> ·Structure: Pile foundation, mainly RC structure and partly steel structure. ·Use: Training, office work and lodging ·Floor area: <ul style="list-style-type: none"> -Building for training/ office work: 5,516 m² -Building for lodging: 2,979 m² ·Number of stories: : one underground and five above-ground stories for each building. ·Mechanical & electrical work: Generator, ventilation and firefighting facilities. 	
2.		

2-1-2 Reason(s) for the modification if there have been any.

(PMR)

2-2 Implementation Schedule

2-2-1 Implementation Schedule

Table 2-2-1: Comparison of Original and Actual Schedule

Items	Original		Actual
	DOD	G/A	
Cabinet Approval E/N G/A Detailed Design Tender Notice Tender (Lot1) Construction Period (Lot2) Installation of Equipment Project Completion Date Defect Liability Period			

*Project Completion was defined as Check-out of Construction work at the time of G/A.

2-2-2 Reasons for any changes of the schedule, and their effects on the project.

--

2-3 Undertakings by each Government

2-3-1 Major Undertakings

See Attachment 2.

2-3-2 Activities

See Attachment 3.

2-3-3 Report on RD

See Attachment 4.

2-4 Project Cost

2-4-1 Project Cost

Table 2-4-1a Comparison of Original and Actual Cost by the Government of Japan
(Confidential until the Tender)

Items			Cost (Million Yen)	
	Original	Actual	Original ^{1),2)}	Actual
Construction Facilities	Construction of TICAD Human Resource Development Center for Industries	Ditto Ditto	2,647	
Equipment	Whole set of equipment	Ditto	112	165
	Packing and shipping, installation, procurement supervision, and general administration		53	
Consulting Services	- Detailed design	Ditto	113	229
	-Procurement Management		101	
	-Construction Supervision		15	
Total				

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

Table 2-4-1b Comparison of Original and Actual Cost by the Government of Ethiopia

Items			Cost (Eth)	
	Original	Actual	Original ^{1),2)}	Actual
Facilities/ Equipment	Removal of the debris in the site (include existing sheds and plants) and site clearance	Ditto	578	
	Installation of electricity, water, sewage and telecommunication lines. Commission for construction permission.	Ditto	2,112	
	Wiring, Planting, furniture and furnishings which are not include in Japanese works	Ditto	4,950	

Bank Commission	Bank Commission (Bank Arrangement B/A, Authorization to Pay A/P)	Ditto	500	
Sub total			8,140	
Tax exemption and Refund			267,000	
Total			275,140	

Note: 1) Date of estimation: October, 2014
 2) Exchange rate: 1 US Dollar = 0.887 Bangladesh Taka (local currency)

2-4-2 Reason(s) for the wide gap between the original and actual, if there have been any, the remedies you have taken, and their results.

(PMR)

2-5 Organizations for Implementation

2-5-1 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: (M/D)

Actual, if changed: (PMR)

2-6 Environmental and Social Impacts

- The results of environmental monitoring as attached in Attachment 5 in accordance with Schedule 4 of the Grant Agreement.
- The results of social monitoring as attached in Attachment 5 in accordance with Schedule 4 of the Grant Agreement.
- Information on the disclosed results of environmental and social monitoring to local stakeholders, whenever applicable.

3: Operation and Maintenance (O&M)

3-1 O&M and Management

- Organization chart of O&M
- Operational and maintenance system (structure and the number ,qualification and skill of staff or other conditions necessary to maintain the outputs and benefits of the project soundly, such as manuals, facilities and equipment for maintenance, and spare part stocks etc)

Original: (M/D)
Actual: (PMR)

3-2 O&M Cost and Budget

- The actual annual O&M cost for the duration of the project up to today, as well as the annual O&M budget.

Original: (M/D)

4: Precautions (Risk Management)

- Risks and issues, if any, which may affect the project implementation, outcome, sustainability and planned countermeasures to be adapted are below.

Original Issues and Countermeasure(s): (M/D)	
Potential Project Risks	Assessment
1.	Probability: H/M/L
(Description of Risk)	Impact: H/M/L
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action during the Implementation:
	Contingency Plan (if applicable):
2.	Probability: H/M/L
(Description of Risk)	Impact: H/M/L
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action during the Implementation:
	Contingency Plan (if applicable):

3.	Probability: H/M/L
(Description of Risk)	Impact: H/M/L
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action during the Implementation:
	Contingency Plan (if applicable):
Actual issues and Countermeasure(s)	
(PMR)	

5: Evaluation at Project Completion and Monitoring Plan

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 for 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. Undertakings to be taken by each Government
3. Monthly Report
4. Report on RD
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)
(Final Report Only)

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	2nd	3rd	4th	5th	6th
		●month, 2015	●month, 2015	●month, 2015			
1	Item 1						
2	Item 2						
3	Item 3						
4	Item 4						
5	Item 5						

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

-
-
-

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%)	

A-13 その他の資料・情報

収集資料リスト

2016年6月10日 作成

主管部長	文書管理課長	主管課長	情報管理課長	図書資料室受付印

地域	アフリカ	プロジェクトID		調査団番号		調査の種類	協力準備調査	担当部署	産業開発・公共政策部 民間セクターグループ 第二チーム
国名	エチオピア	調査団 配属機関名	エチオピア連邦民主共和国 TICAD産業人材育成センター建設計画	現地調査期間	第1回：2015年8月23日～2015年9月20日 第2回：2015年11月22日～2016年1月6日 第3回：2016年3月27日～2016年4月7日 第4回：2016年5月7日～2016年5月15日	担当者氏名	種村 秀和		

番号	資料の名称	形態 (図書・ビデオ・ 地図・写真)	発行年	版型	ページ数	オリジナル・コ ピーの別	部数	収集先名称又は発行機関	寄贈・購入 (価格)の別	取扱区分	利用表 示	利用者 所属 氏名	納入予定日	納入 確認欄
1	FINAL CONCEPTUAL DESIGN DOCUMENT FOR ETHIOPIAN KAIZEN INSTITUTE COMPLEX BUILDING IN ADDIS ABABA	図書	2014	A3	13	コピー	1	DTWINS Consulting Engineers PLC, JICAエチオピア事務所	寄贈					
2	ETHIOPIAN KAIZEN INSTITUTE CONCEPTUAL ARCHITECTURAL DESIGN REPORT	図書		A4	12	コピー	1	DTWINS Consulting Engineers PLC	寄贈					
3	Past Records and Future Plan Prepared for JICA Mission	図書	2015	A4	23	コピー	1	Ethiopia Kaizen Institute (EKI)	寄贈					
4	Invest in ETHIOPIA エチオピアに関する投資案内 投資機会と環境 2013	図書	2013	A5	44	オリジナル	1	駐日エチオピア大使館/ エチオピア投資庁	寄贈					
5	Ethiopian Investment Commission Factor Cost	図書	2014	A4	88	オリジナル	1	駐日エチオピア大使館/ Ethiopian Investment Commission	貸与					
6	Data of temperature, humidity, rain fall and wind speed in Addis Ababa	Excelファイル	2014	-	-	コピー	1	National Metrological Agency of Ethiopia (NMAE)	購入					
7	Data of hours of sunlight in Addis Ababa	Excelファイル	2015	-	-	コピー	1	National Metrological Agency of Ethiopia (NMAE)	購入					
8	Impact Assessment Guideline For Housing Projects	図書	2010	Letter	29	コピー	1	Addis Ababa Environmental Protection Authority (AAEPA)	寄贈					
9	Federal Negarit Gezeta, Proclamation No 624/2009 Ethiopian Building Proclamation	図書	2009	A4	28	コピー	1	Corporate Comunication Directrate, EKI	寄贈					
10	Ethiopian Building Code Standard 1 BASIS OF DESIGN AND ACTIONS ON STRUCTURE	図書	1995	A4	120	コピー	1	Ministry of Works & Urban Development	寄贈					
11	Ethiopian Building Code Standard 2 STRUCTURAL USE OF CONCRETE	図書	1995	A4	172	コピー	1	Ministry of Works & Urban Development	寄贈					
12	Ethiopian Building Code Standard 3 DESIGN OF STEEL STRUCTURES	図書	1995	A4	175	コピー	1	Ministry of Works & Urban Development	寄贈					
13	Ethiopian Building Code Standard 4 DESIGN OF COMPOSITE STEEL AND CONCRETE STRUCTURES	図書	1995	A4	140	コピー	1	Ministry of Works & Urban Development	寄贈					
14	Ethiopian Building Code Standard 5 UTIUZATION OF TIMBER	図書	1995	A4	244	コピー	1	Ministry of Works & Urban Development	寄贈					
15	Ethiopian Building Code Standard 6 DESIGN OF MASONRY STRUCTURES	図書	1995	A4	132	コピー	1	Ministry of Works & Urban Development	寄贈					
16	Ethiopian Building Code Standard 7 FOUNDATIONS	図書	1995	A4	134	コピー	1	Ministry of Works & Urban Development	寄贈					
17	Ethiopian Building Code Standard 8 FOR EARTHQUAKE RESISTANCE	図書	1995	A4	142	コピー	1	Ministry of Works & Urban Development	寄贈					
18	Ethiopian Building Code Standard 9 PLUMBING SERVICES OF BUILDINGS	図書	1995	A4	235	コピー	1	Ministry of Works & Urban Development	寄贈					
19	Ethiopian Building Code Standard 10 ELECTRICAL INSTALLATION	図書	1995	A4	502	コピー	1	Ministry of Works & Urban Development	寄贈					
20	Ethiopian Building Code Standard 11 VENTILATION AND AIR CONDITIONING	図書	1995	A4	92	コピー	1	Ministry of Works & Urban Development	寄贈					