

APPENDIX

Appendix 1 Member List of Study Team

1. Member List of Study Team

(Basic Design Study)

Assignment	Name	Position
Leader	Hisatoshi OKUBO	Deputy Director; First Project Management Div., Grant Aid Management Dept., Japan International Cooperation Agency
Grant Aid Cooperation	Hisashi NOGUCHI	Deputy Director; Grant Aid Cooperation Div., Economic Cooperation Bureau, The Ministry of Foreign Affairs
Technical Adviser (Waste Treatment System)	Isamu YOKOTA	Professor; University of Shizuoka Prefecture Lab. of Environmental Policy
Technical Adviser (Waste Management Administration)	Teruaki FUJIKAWA	Chief Engineer; Construction Dept., Environmental Management Bureau Osaka City
Chief Consultant/ Waste Management Plan	Shigeru KANAYA	Nippon Koei Co., LTD.
Equipment Plan/ Cost Estimation (1)	Hideaki WAKASA	Nippon Koei Co., LTD.
Social and Environmental Survey	Hiroshi HASEGAWA	Nippon Koei Co., LTD.
Facility Plan/ Cost Estimation (2)	Shungo SOEDA	Nippon Koei Co., LTD.
Environmental Monitoring Plan	Satoshi HIGASHINAKAGAWA	Nippon Koei Co., LTD.
Interpreter (Vietnamese)	Hiroshi MIYAUCHI	Nippon Koei Co., LTD.

(Draft Basic Design Report Consultation)

Assignment	Name	Position
Leader	Hisatoshi OKUBO	Deputy Director; First Project Management Div., Grant Aid Management Dept., Japan International Cooperation Agency
Grant Aid Cooperation	Masanori YAGI	Deputy Director; Grant Aid Cooperation Div., Economic Cooperation Bureau, The Ministry of Foreign Affairs
Chief Consultant/ Waste Management Plan	Shigeru KANAYA	Nippon Koei Co., LTD.
Equipment Plan/ Cost Estimation (1)	Shungo SOEDA	Nippon Koei Co., LTD.
Interpreter (Vietnamese)	Takashi HASHIMOTO	Nippon Koei Co., LTD.

Appendix 2 Survey Schedule

-Basic Design Study

-Draft Basic Design Report Consultation

2. Survey Schedule

Basic Design Study (January 8, 2002 ~ February 8, 2002)

No.	Date	Time	Move	Contents	Site	
1	Jan 8	Tue		Official Leave Narita (Narita-Hanoi)	Okubo, Noguchi, Fujikawa	On the board
2	Jan 9	Wed	9:00 14:00		Visiting to EOI and JICA Meeting with URENCO	Hanoi Hanoi
3	Jan 10	Thr	9:00	Consultants leave Narita (Narita-Hanoi)	Meeting with URENCO Kanaya, Wakasa, Higasinakagawa, Miyauchi	Hanoi On the board
4	Jan 11	Fri	Daylong		Meeting with URENCO Visiting to JICA	Hanoi Hanoi
5	Jan 12	Sat	Daylong 9:00		Field Survey (Nam Son, Landfill Site, etc) Equipment Survey	Hanoi Hanoi
6	Jan 13	Sun			Inner Meeting	Hanoi
7	Jan 14	Mon	8:30 14:00 Daylong		Visiting to Hanoi Mayor Meeting with URENCO Meeting about Water Quality Survey	Hanoi Hanoi Hanoi
8	Jan 15	Tue	Daylong	Consultants leave Narita (Narita-Hanoi)	Hasegawa, Soeda Meeting about Social and Water Quality Survey Consultant leave Japan (Narita-Hanoi)	On the board Hanoi Hanoi
9	Jan 16	Wed	11:00 9:00	Official Leave Narita (Narita-Hanoi)	Yokota Signing of Minutes of Discussion Meeting about Water Quality Survey	On the board Hanoi Hanoi
10	Jan 17	Thr		Official Leave Hanoi (Hanoi-Narita)	Okubo, Noguchi, Fujikawa Meeting about Survey Schedule, Social Survey Field Survey (Transfer Station, Composting Plant)	On the board Hanoi Hanoi
11	Jan 18	Fri	Daylong		Field Survey (Landfill Site) Car Factory Survey Meeting about Social Survey	Hanoi Hanoi Hanoi
12	Jan 19	Sat	9:00 13:30 14:30 Daylong		Discussion with Official Team Meeting with URENCO Car Factory Survey Social Survey	Hanoi Hanoi Hanoi Hanoi
13	Jan 20	Sun		Official Leave Hanoi (Hanoi-Narita)	Yokota Inner Meeting	On the board Hanoi
14	Jan 21	Mon	9:00 8:30 14:00		Meeting with URENCO Social Survey Meeting about Water Quality Survey	Hanoi Hanoi Hanoi
15	Jan 22	Tue	Daylong 8:30 16:00		Meeting with URENCO Summarize the Data Social Environment Survey Meeting about Water Quality Survey	Hanoi Hanoi Hanoi Hanoi
16	Jan 23	Wed	9:00 Daylong Daylong 8:30		Meeting with TUPWS (Road, Leachate) Collection and Summarization of Documents Social Environment Survey Water Sampling (Nam Son)	Hanoi Hanoi Hanoi Hanoi
17	Jan 24	Thr	9:00 Daylong Daylong		Meeting with URENCO Collection and Summarization of Documents Social Survey	Hanoi Hanoi Hanoi
18	Jan 25	Fri	9:00 9:00 Daylong Daylong		Meeting with Enterprise, Site Survey of Car Base Survey of EM Research Center Social Environment Survey Natural Environment Survey	Hanoi Hanoi Hanoi Hanoi
19	Jan 26	Sat	8:30 14:00		Inner Meeting Hi Phon Sea Port Survey	Hanoi Hi Phon
20	Jan 27	Sun			Hi Phon Sea Port Survey	Hi Phon
21	Jan 28	Mon	9:00 9:00 Daylong		Meeting with URENCO (Equipment) Meeting with URENCO Collection and Summarization of Documents	Hanoi Hanoi Hanoi
22	Jan 29	Tue	10:00 14:00 14:00		Meeting with URENCO (Equipment) Meeting with URENCO (Equipment, Social Survey) Meeting with DOSTE (Monitoring)	Hanoi Hanoi Hanoi
23	Jan 30	Wed	Daylong 9:00 Daylong		Field Survey (Nam Son) Meeting with URENCO (Equipment) Collection and Summarization of Documents	Hanoi Hanoi Hanoi
24	Jan 31	Thr	Daylong 9:00	Consultants Leave Hanoi (Hanoi-Narita)	Soeda Collection and Summarization of Documents Social Survey	On the board Hanoi Hanoi
25	Feb 1	Fri	10:00 Daylong Daylong		Report for the Embassy and JICA Collection and Summarization of Documents Social Survey	Hanoi Hanoi Hanoi
26	Feb 2	Sat	8:30 13:00 Daylong		Inner Meeting Collection and Summarization of Documents Social Survey	Hanoi Hanoi Hanoi
27	Feb 3	Sun	Daylong	Consultants Leave Hanoi (Hanoi-Narita)	Kanaya, Higasinakagawa, Hasegawa Collection and Summarization of Documents	On the board Hanoi
28	Feb 4	Mon	9:00 Daylong	Consultant Leave Narita (Narita-Hanoi)	Meeting with URENCO Collection and Summarization of Documents Soeda	Hanoi Hanoi On the board

No.	Date	Time	Move	Contents	Site
29	Feb 5	Tue	Morning 14:00	Collection and Summarization of Documents Meeting with URENCO (Equipment and Output Indicator)	Hanoi Hanoi
30	Feb 6	Wed	Daylong 13:30 Afternoon	Summarize the Data, Translation, Calculation of Number of Equipment Final Confirmation of Workshop Equipment Confirmation of Waste Collection Condition	Hanoi Hanoi Hanoi
31	Feb 7	Thr	10:00 14:00	Final Meeting with URENCO Report to EOJ and JICA	Hanoi Hanoi
32	Feb 8	Fri		Consultants Leave Hanoi (Hanoi-Narita)	Wakasa, Soeda, Miyauchi On the board

Draft Basic Design Report Consultation Team

No.	Date	Time	Move	Contents	Site
1	Apr 21	Sun		Consultants leave Narita (Narita-HCM)	Kanaya, Soeda, Hashimoto On the board
2	Apr 22	Mon	Daylong	Official Leave Narita (Narita-Hanoi) Consultant: Meeting with Manufacture/CITENCO	Okubo, Yagi On the board HCM
3	Apr 23	Tue	9:00 9:00 14:00	Official: Meeting with EOJ and JICA Consultant: Meeting with CITENCO Consultants leave HCM (HCM-Hanoi)	Hanoi HCM Kanaya, Soeda, Hashimoto
4	Apr 24	Wed	9:00 12:00	Official: Meeting with HPC and URENCO Site survey	Hanoi Hanoi
5	Apr 25	Thr	Daylong	Official: Meeting with HPC and URENCO Consultant: Meeting with URENCO	Hanoi Hanoi
6	Apr 26	Fri	Daylong	Official: Signing of M/D, Report to JOCA Consultant: Meeting with URENCO	Hanoi Hanoi
7	Apr 27	Sat	Daylong	Official Leave Hanoi (Hanoi-Narita) Consultant: Meeting with URENCO	Okubo, Yagi On the board Hanoi
8	Apr 28	Sun		Consultants Leave Hanoi (Hanoi-Narita)	Kanaya, Soeda, Hashimoto On the board

Appendix 3 List of Parties Concerned in the Vietnam

3 List of Parties Concerned in the Vietnam

- 1) Transport and Urban Public Works Service (TUPWS)
Ms. Nguyen Van Khoi Deputy Director General
Mr. Pham Thi Thanh Huong Expert of Planning and Investment Dep't
Mr. Nguyen Hucc Suag Director of Board of Project & Maintenance Management
- 2) DOSTE
Ms. Duong Thuy Kim Senior Expert of Environmental Management Division
- 3) Hanoi Chief Architect Office
Mr. Trinh Dinh Lap Expert of Planning Management Dep't
Mr. Hoang anh Tuan Deputy Manager of Planning Management Dep't
- 4) URENCO
Mr. Chu Van Chung Director
Mr. Dinh Dang Minh Deputy director
Mr. Duongt Haihung Director of Mechanism Environment Company
Mr. Tran Quang Huy Engineer-Director
Ms. Nguyen Thi Hoang Lan Head of International Relation Dep't
Mr. Nguyen Xuan Huynh Chief of Technical Material Dep't
Mr. Pham Van Duc Head of Center
- 5) Mr. Luong Xuan Tung Vice Director of VINACONEX Trading Center
- 6) Urban Environment Enterprise (UEE)
Mr. Bach Dang Thinh Vice director of UEE No.1
Mr. Vu Luong Dinh Vice director of UEE No.2
Mr. Nguyen Van Quang Vice director of UEE No.3
Mr. Nguyen Manh Hung Vice director of UEE No.4
Mr. Pham Duc Quang Vice director of UEE No.5
- 7) HAPULICO (Lighting and Urban Equipment Company)
Mr. Nguyen Viet Tuyen Director
- 8) Hino Motors Vietnam, LTD
Mr. Kiyoshi Ogura Chiarman & General Director
- 9) Center of Environmental Engineering of Towns and Industrial Areas
Dr. Nguen Thi Kim Thai Head of Solid Waste Management Section
- 10) NGO
Mr. Pham Tuong Vi Researcher of Center for Natural resources and Env. Studies
Ms. Thi Hyen Thu Recycle Materials Dealer
- 11) JETRO in Vietnam
Mr. Takeshi Arai Director
- 12) The Embassy of Japan in Vietnam
Mr. Kenji Miyagawa First Secretary
- 13) JICA Interanational Cooperation Agency (JICA), Vietnam Office
Mr. Morimasa Kanamaru Resident Representative
Mr. Masahito Togawa Assistant Resident Representative
Mr. Hiroyuki Kobayashi Deputy Resident Representative

Appendix 4 Minutes of Discussions

**MINUTES OF DISCUSSIONS
BASIC DESIGN STUDY ON
THE PROJECT FOR
URGENT EQUIPMENT SUPPLY FOR WASTE MANAGEMENT
IN HANOI CITY
(EXPLANATION OF DRAFT REPORT)**

In January 2002, the Japan International Cooperation Agency (hereinafter referred to as "JICA") dispatched a Basic Design Study Team on the Project for Urgent Equipment Supply for Waste Management in Hanoi City (hereinafter referred to as "the Project") to the Socialist Republic of Viet Nam (hereinafter referred to as "Viet Nam"), and through discussions, field surveys, and technical examinations of the study results in Japan, JICA prepared a draft report of the study.

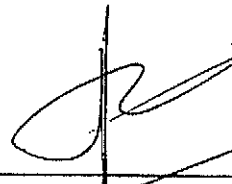
In order to explain to the Vietnamese side the components of the draft report, JICA sent to Viet Nam the Draft Report Explanation Team (hereinafter referred to as "the Team"), headed by Hisatoshi Okubo, Deputy Director, First Project Management Division, Grant Aid Management Department, JICA, from 22nd to 27th April, 2002.

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

Hanoi, 26th April, 2002



Mr. Hisatoshi Okubo
Team Leader
JICA
Japan



Mr. Do Hoang An
Vice Chairman
Hanoi People's Committee (HPC)
Viet Nam



Mr. Doan Tho Nam
Deputy Director
Department of Foreign Economic Relations
Ministry of Planning and Investment (MPI)
Viet Nam

ATTACHMENT

1. Components of the Draft Report

The Vietnamese side agreed and accepted in principle the components of the draft report explained by the Team.

2. Minutes of Discussions (16th January, 2002 and 3rd August, 2001)

Both sides read and confirmed again all the contents of 2 previous Minutes of Discussions, one on the Basic Design Study of 16th January 2002 and the other on the Preparatory Study of 3rd August 2001.

3. Japan's Grant Aid Scheme

(1) The Vietnamese side understands the Japan's Grant Aid Scheme explained by the Japanese side (see Annex III of the Minutes of Discussions on the Preparatory Study).

(2) The Vietnamese side will take the necessary measures, as described in the Minutes of Discussions on the Preparatory Study for smooth implementation of the Project, as a condition for the Japanese Grant Aid to be implemented (see Annex IV of the Minutes of Discussions on Preparatory Study).

4. Schedule of the Study

JICA will complete the final report and send it to the Government of Viet Nam around July 2002.

5. Recent Progress of SWM in Hanoi City

The Vietnamese side explained to the Japanese side about the recent progress of implementation of Solid Waste Management (SWM) since January 2002 in Hanoi City as follows:

(1) Nam Son Solid Waste Treatment Complex

The plot 5, area of 6.52 ha, has been constructed and put in use. The leachate treatment ponds, total area of 4.11 ha, have been constructed and now contain leachate removed and transferred from the plot 3. The water drainage and electric power supply facilities have also been installed and are being used. The concrete road entering the Complex is now under construction.

HO. *ph* *Nky*

(2) Phu Minh Mechanical Workshop

Construction of the new mechanical workshop at Phu Minh has been completed. The staff and some equipment have been moved here already from the old mechanical workshop. The new mechanical workshop officially started its operation in March 2002.

(3) Dong Ngac Transfer Station

The feasibility study of the Transfer Station at Dong Ngac has been completed and now under evaluations by the departments concerned for submission for approval by HPC.

6. "Soft Component"

The Vietnamese side requested the Japanese side to include a "Soft Component" as a part of the Project. The Japanese side explained that the "Soft Component" in the Project is very small and that the priority, therefore, should be given to technical support regarding environmental monitoring.

7. Other Relevant Issues

(1) The Vietnamese side will secure the official appraisal and approval required for the implementation of the Project by the Government of Viet Nam by the end of May 2002.

(2) Hanoi Urban Environment Company (URENCO) is responsible for improving the environment in the City as preparation for the 22nd Seagames (South East Asian Games) to be held in Hanoi in 2003. Therefore the Vietnamese side strongly hopes that arrival of the equipment and vehicles under the Project should be as early as possible.

(3) The Vietnamese side proposed that there should be technical assistance, such as dispatch of experts to Viet Nam and training in Japan, during the implementation of the Project, aiming at continuing and developing efficiency of the Project in SWM in Hanoi based on the JICA masterplan "the Study on Environment Improvement for Hanoi City" (July 2000). The Vietnamese side particularly stressed the need for training of technical staff on operation and maintenance of new equipment and vehicles. The Japanese side has taken notes of the proposal and has promised to convey it to the Japanese authority. The Japanese side explained that the Vietnamese side should submit separate official requests for obtaining the Japanese technical assistance.

HO. *ph* *Nky*

**MINUTES OF DISCUSSIONS
BASIC DESIGN STUDY ON
THE PROJECT FOR
URGENT EQUIPMENT SUPPLY FOR WASTE MANAGEMENT
IN HANOI CITY**

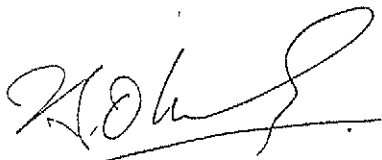
Based on the results of the Preparatory Study, the Government of Japan decided to conduct a Basic Design Study on the Project for Urgent Equipment Supply for Waste Management in Hanoi City (hereinafter referred to as "the Project") and entrusted the Study to the Japan International Cooperation Agency (JICA).

JICA sent to the Government of the Socialist Republic of Viet Nam (hereinafter referred to as "Viet Nam"), the Basic Design Study Team (hereinafter referred to as "the Team") headed by Mr. Hisatoshi Okubo, Deputy Director, First Project Management Division, Grant Aid Management Department, JICA, from 8th January to 8th February 2002.

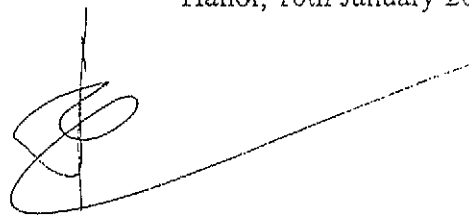
The Team held a series of discussions on the Project with the officials concerned of the Government of Viet Nam and conducted field surveys in the Study area.

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

Hanoi, 16th January 2002

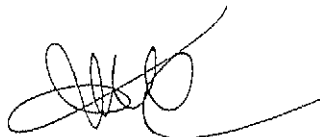


Mr. Hisatoshi Okubo
Leader, Basic Design Study Team
Japan International Cooperation Agency
Japan



Mr. Do Hoang An
Vice Chairman
Hanoi People's Committee (HPC)
Viet Nam

Witness:



Dr. Duong Duc Ung
Director General
Department of Foreign Economic Relations
Ministry of Planning and Investment (MPI)
Viet Nam

ATTACHMENT

1. Objective of the Project

The objective of the Project is to procure urgent requirement of equipment, machinery and vehicles to contribute to the improvement of the solid waste management (SWM) in Hanoi City.

2. Project Site

The site of the Project is Hanoi City (See Map in Annex I).

3. Responsible and Implementing Agencies

The responsible agency is Hanoi People's Committee (HPC) and the implementing agency is Hanoi Urban Environment Company (URENCO).

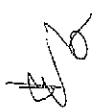
4. Minutes of Discussions on the Preparatory Study

Both sides have read and reconfirmed all the contents of the Minutes of Discussions on the Preparatory Study signed on 3rd August 2001. The copy of the Minutes is attached herein as Annex II.

5. Items Requested by the Vietnamese Side

After discussions with the Japanese side, the items described in Annex III were finally requested by the Vietnamese side with priority orders. JICA will assess the appropriateness of the request and will report the findings to the Government of Japan. However the final items, both quantity and specifications, to be procured under Japan's Grant Aid will be determined after further studies in Viet Nam and Japan. Such determination or selection of the final contents of the Project will be done based on the criteria as in Annex IV.

The Vietnamese side has strongly appealed to the Japanese side that inclusion in the Project of as many items as possible in Annex III, stressing the problem of degraded fleet of existing vehicles of transportation. The Japanese side appreciated the problem from reporting of the Vietnamese side and the field observations. But the Japanese side also stated that due mainly to limitation of prospect budget for the Project, scope would be focused only on very urgent requirement.

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6. Japan's Grant Aid Scheme

(1) The Vietnamese side understands the Japan's Grant Aid Scheme explained by the Japanese side, as described in the Minutes of Discussions on the Preparatory Study (See Annex III in Annex II).

(2) The Vietnamese side will take the necessary measures, as described in the Minutes of Discussions on the Preparatory Study for smooth implementation of the Project, as a condition for the Japanese Grant Aid to be implemented (See Annex IV in Annex II).

7. Schedule of the Study

(1) The Team will continue the Study in Viet Nam until the 8th February 2002.

(2) JICA will prepare the draft report and dispatch a mission to explain it to Viet Nam in April 2002.

8. Recent Progress of SWM in Hanoi City

The Vietnamese side explained to the Japanese side about the recent progress (particularly since the Preparatory Study in Hanoi, August, 2001) of implementation of SWM in Hanoi City as follows:

(1) Nam Son Solid Waste Treatment Complex

At Nam Son Landfill Site, the plots 4A and 4B have been completed and ready for use. Currently the plots 5A and 5B are under construction. The system of oxidation ponds is also being constructed for treatment of leachate based on the approval by the Department of Science, Technology and Environment (DOSTE), HPC. A large quantity of leachate is still kept in the plot 3. The small urgent leachate treatment station adjacent to the plot 3 has been completed and put into operation recently but has not so far yielded a very good result. It is therefore an urgent problem of the Vietnamese side to treat leachate effectively in Nam Son Solid Waste Treatment Complex.

(2) Mechanical Workshop

The Phu Minh Workshop has nearly come to completion. Some items have been moved already here from the old workshop. Usable and repairable equipment and machinery in the old workshop, although not many, will soon be brought in and the new workshop will start its operation around March 2002.

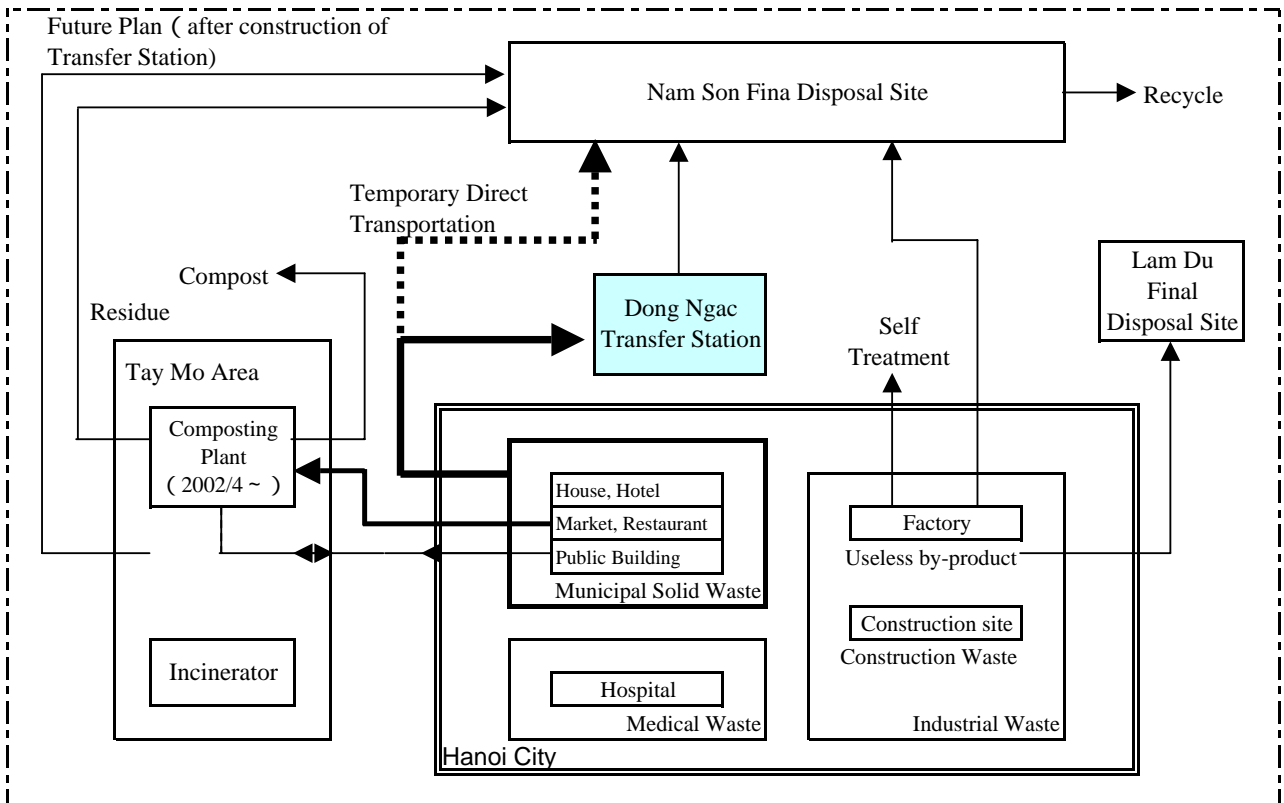
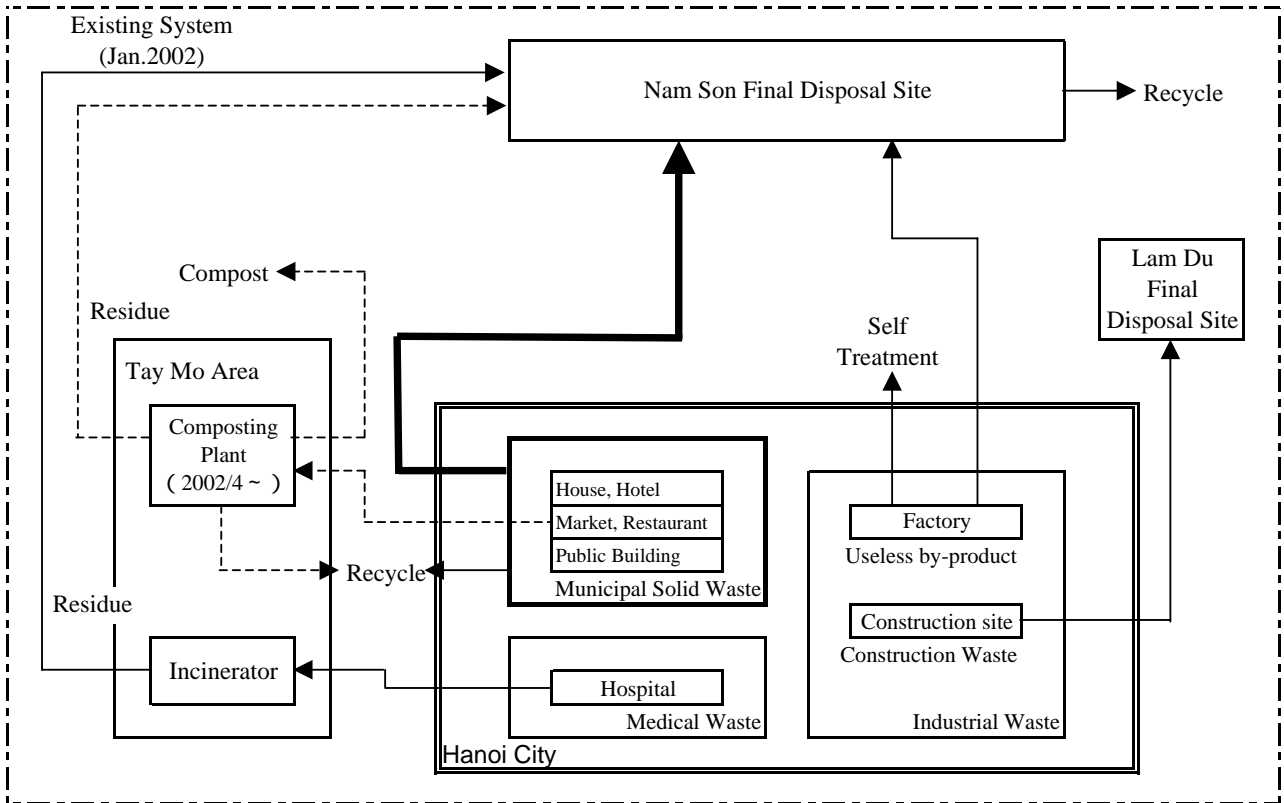
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Appendix 5 Reference

5. Reference

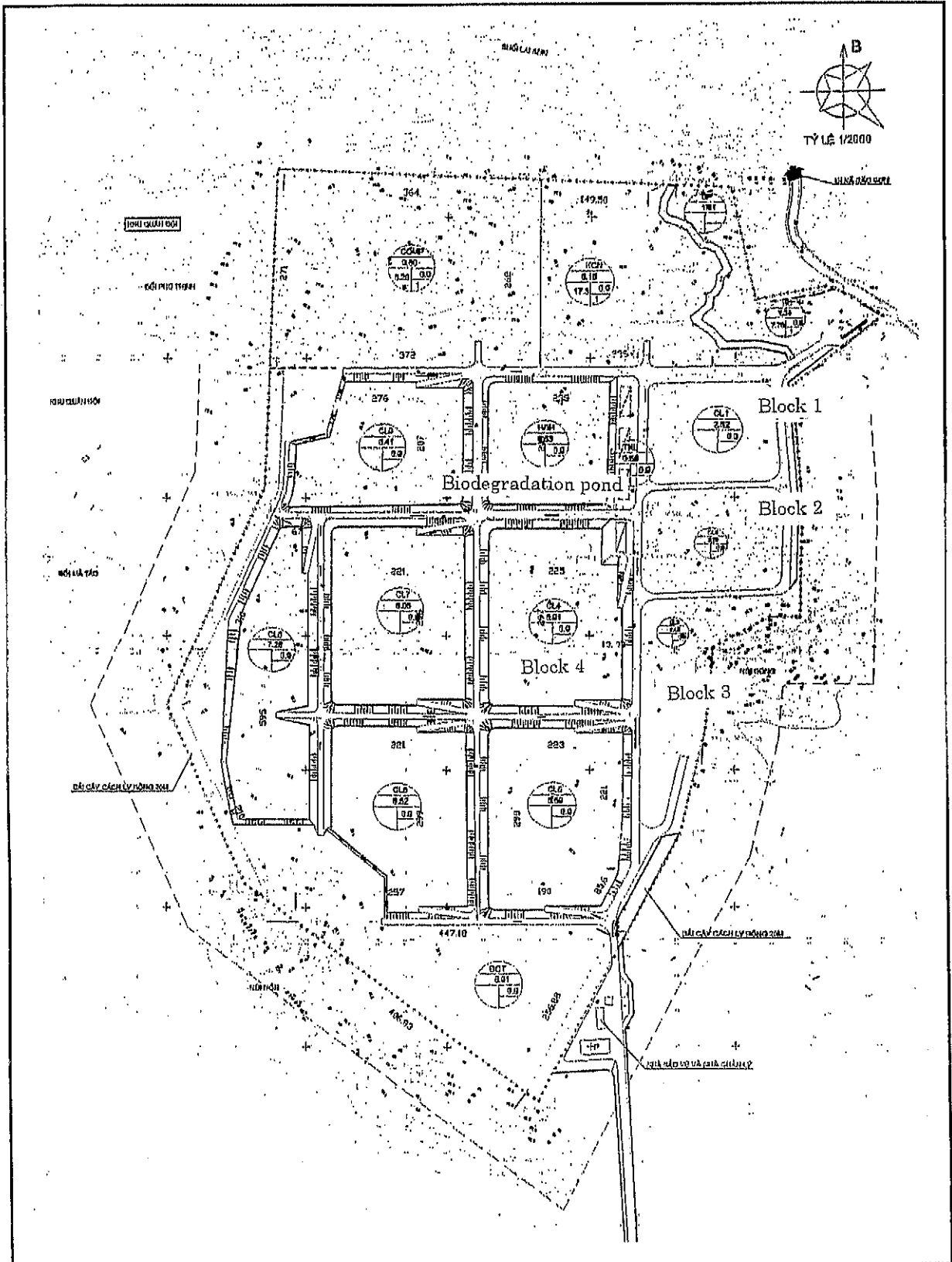
No.	Name of Documents	Style	Original/Copy	Publisher/Issued Organization	Year
1	Population and Urban Living Environment in Hanoi City	Book	Original	National Political Publishing House	2000
2	Hanoi Statistical Year Book 2000	Book	Original	Hanoi Statistics Office	2001
3	Private Solution for Infrastructure	Book	Original	World Bank in Vietnam	1999
4	Overview of Official Development Assistance : Vietnam	Book	Original	UNDP	2000
5	URENCO, Operation Record of Vehicles	Book	Copy	URENCO	2001
6	URENCO, Accounting Record of Vehicles	Print	Copy	URENCO	2001
7	FS Report of Transfer Station	Print	Copy	URENCO	2001
8	Floor Plan of Workshop	Print	Copy	URENCO	2001
9	Registration Book of Workshop Equipment	Print	Copy	URENCO	2001
10	URENCO, Operation Standards for Nam Son Final Disposal Site	Print	Copy	URENCO	2000
11	Equipment List	Print	Copy	URENCO	2001
12	Organization Chart of URENCO	Print	Copy	URENCO	2001
13	Organization Chart of TUPWS	Print	Copy	URENCO	2001
14	Site Plan of Nam Son Final Disposal Site	Print	Copy	URENCO	2001
15	The Export and Import Tariff	Print	Copy	Statistics Publishing House	2001

Appendix 6 Flow of Solid Waste in Hanoi



Appendix 6 Flow of Solid Waste in Hanoi City

Appendix 7 Plan of Nam Son Final Disposal Site

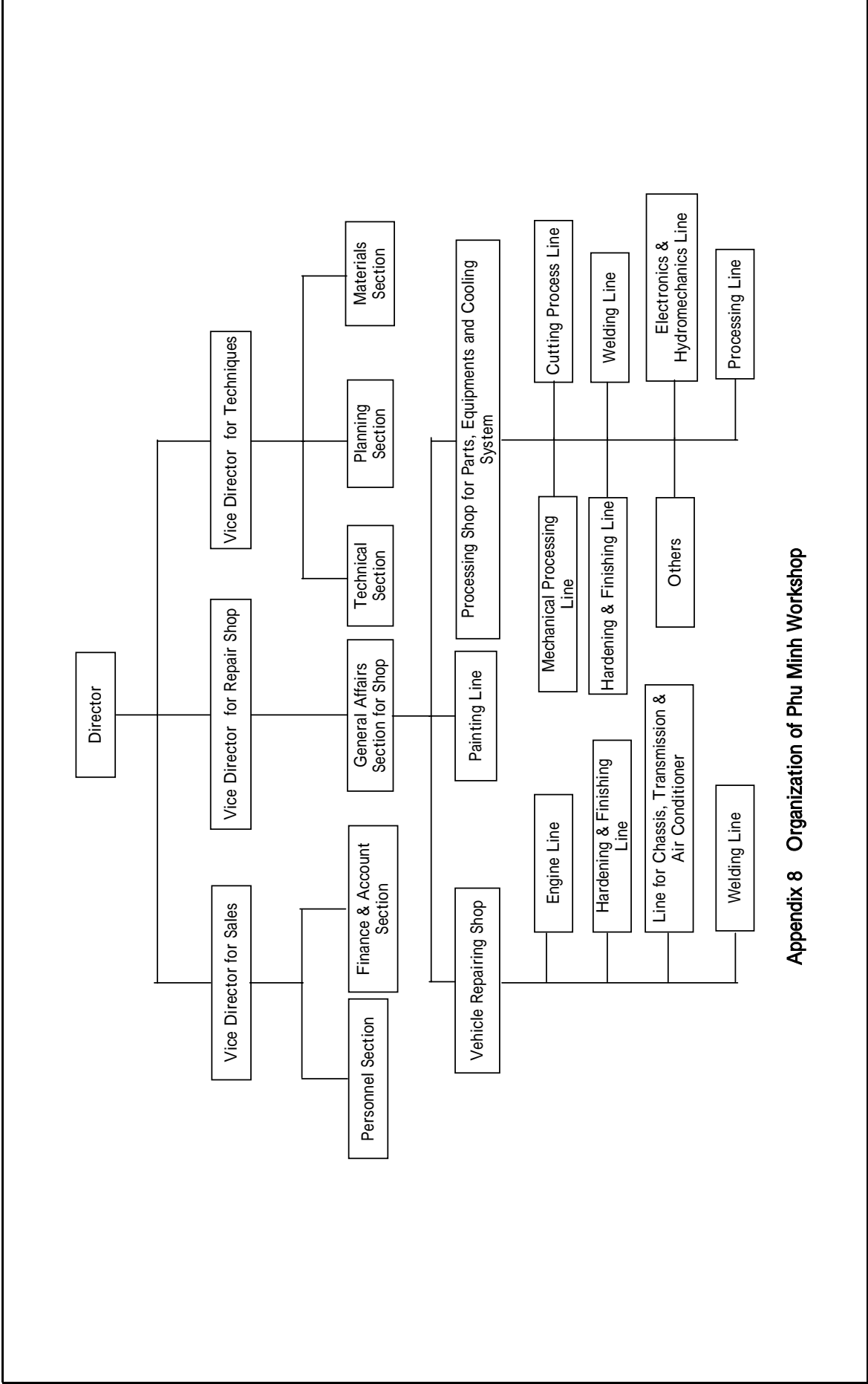


Urgent Equipment Supply for Waste Management in Hanoi City

Nippon Koei Co., Ltd.

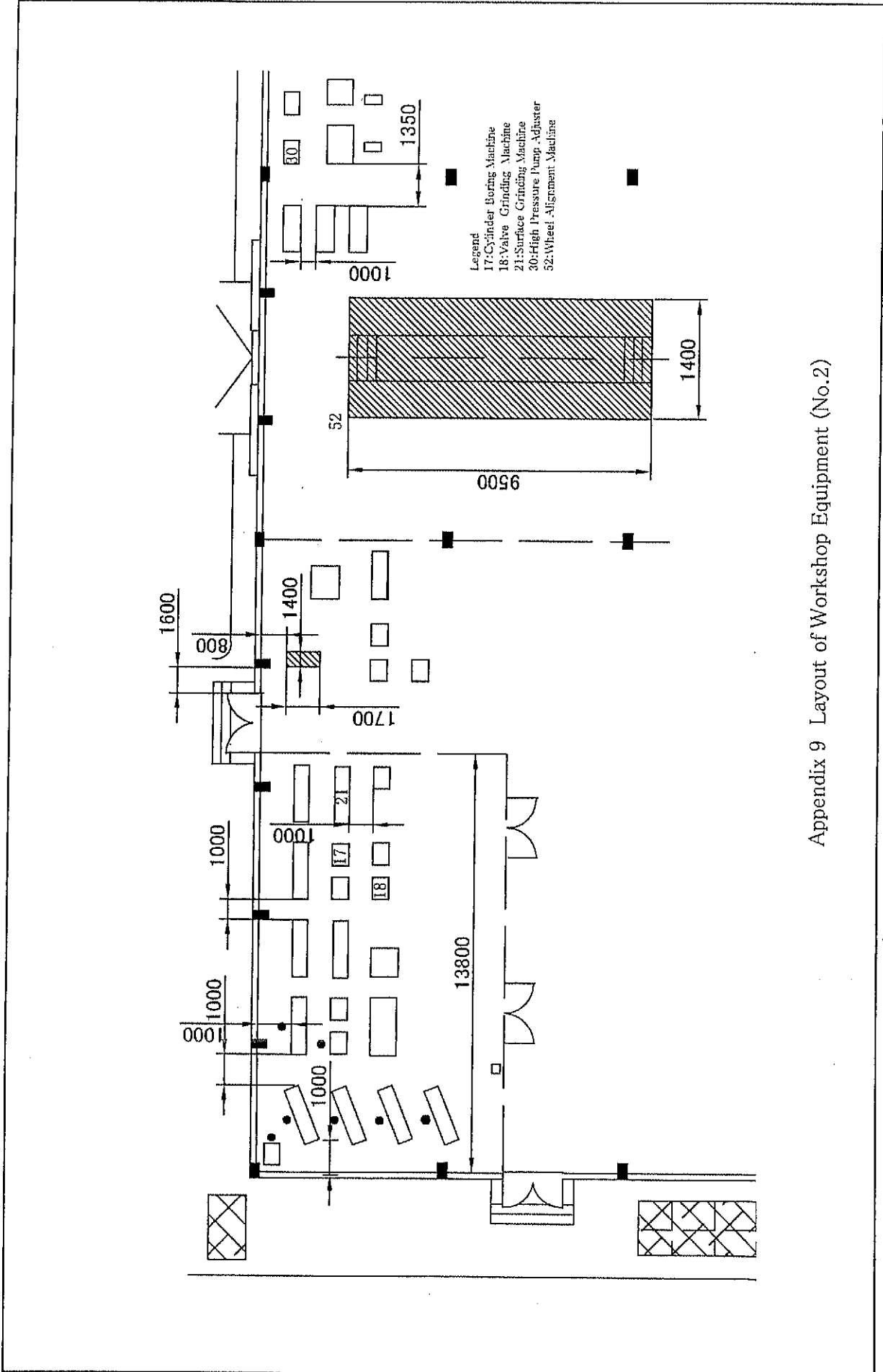
Plan of Nam Son Final Disposal Site

Appendix 8 Organization of New Phu Minh Workshop



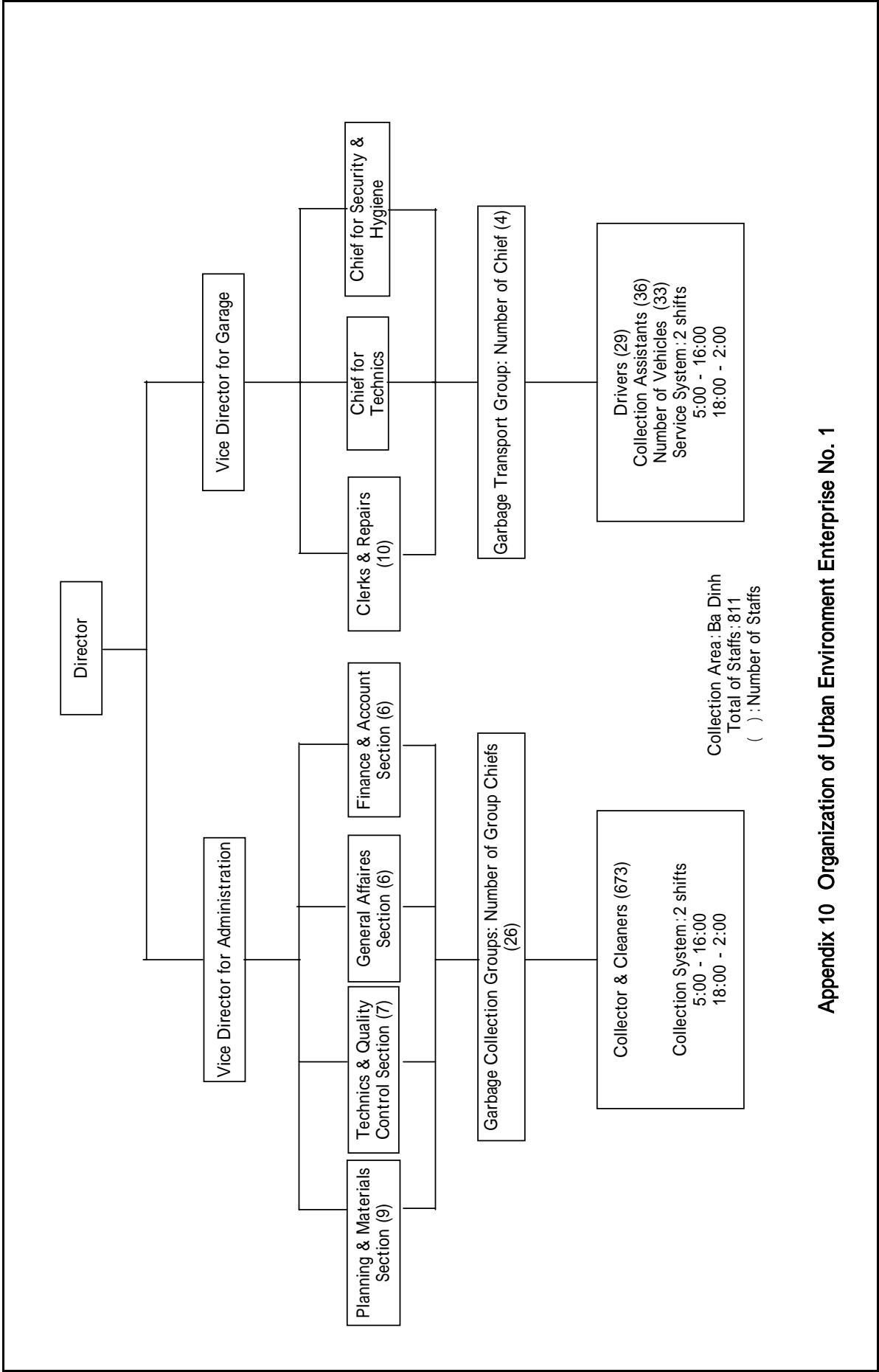
Appendix 8 Organization of Phu Minh Workshop

Appendix 9 Layout of Workshop Equipment

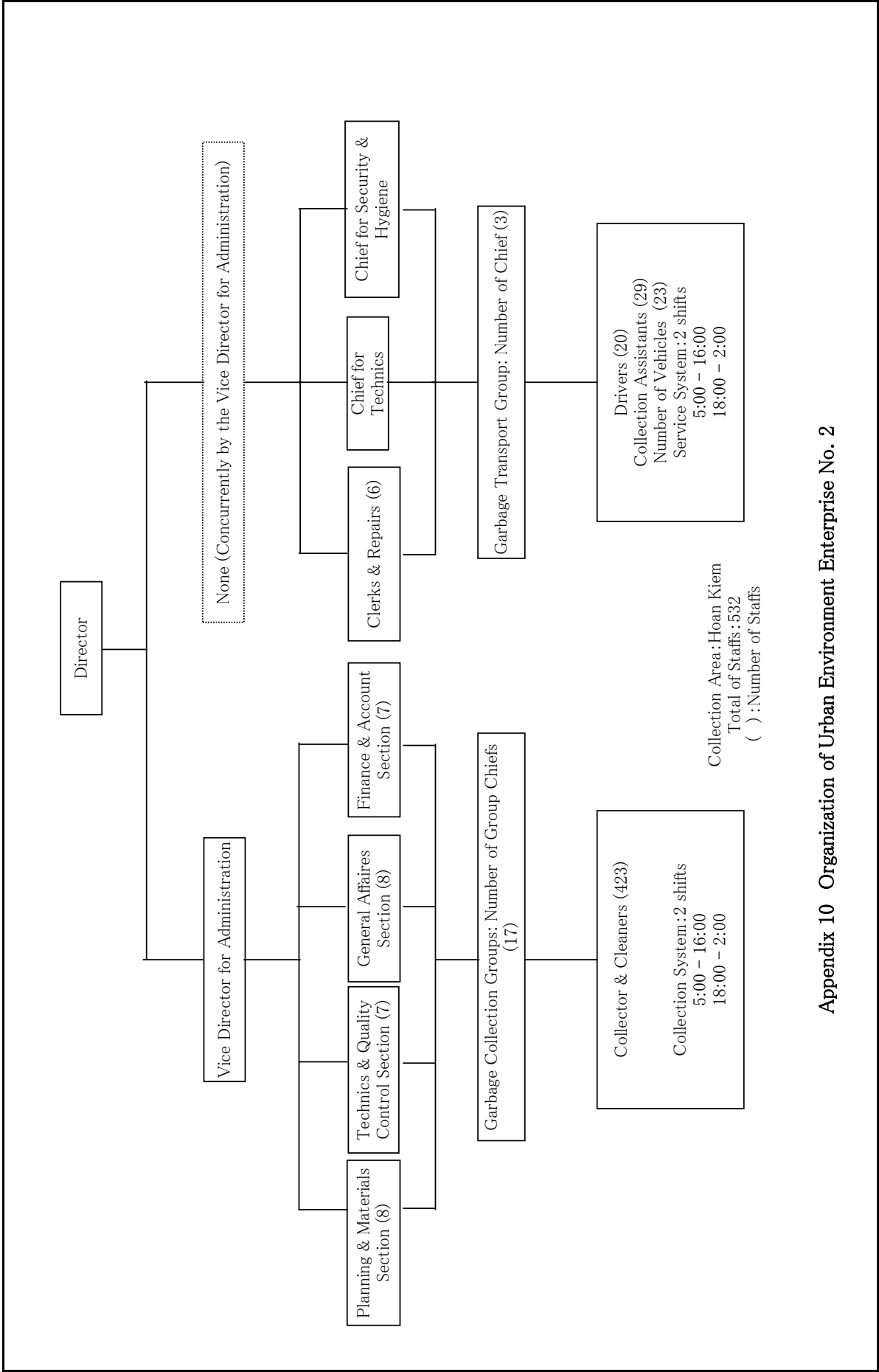


Appendix 9 Layout of Workshop Equipment (No.2)

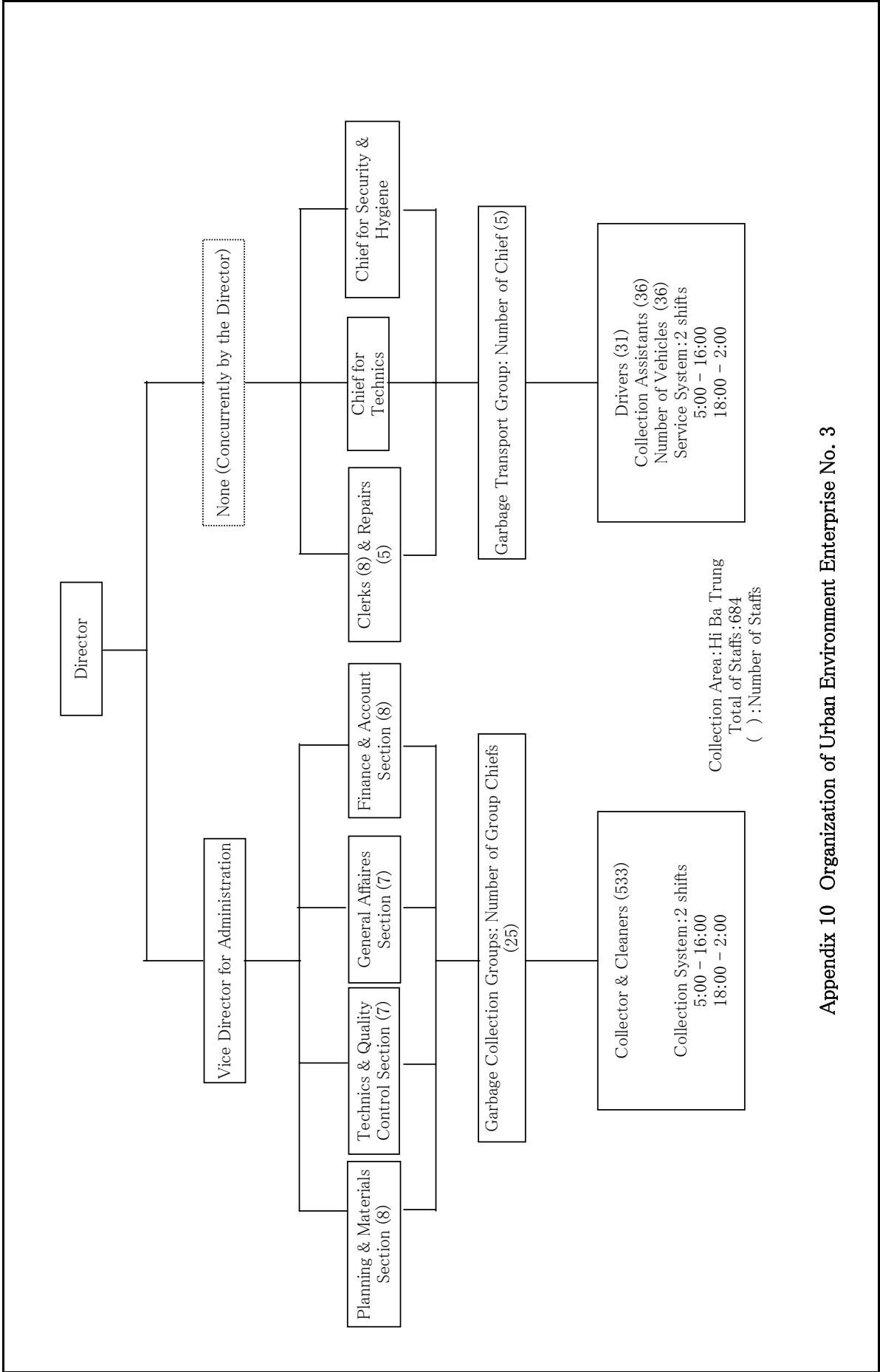
Appendix 10 Organization of Urban Environment Enterprise



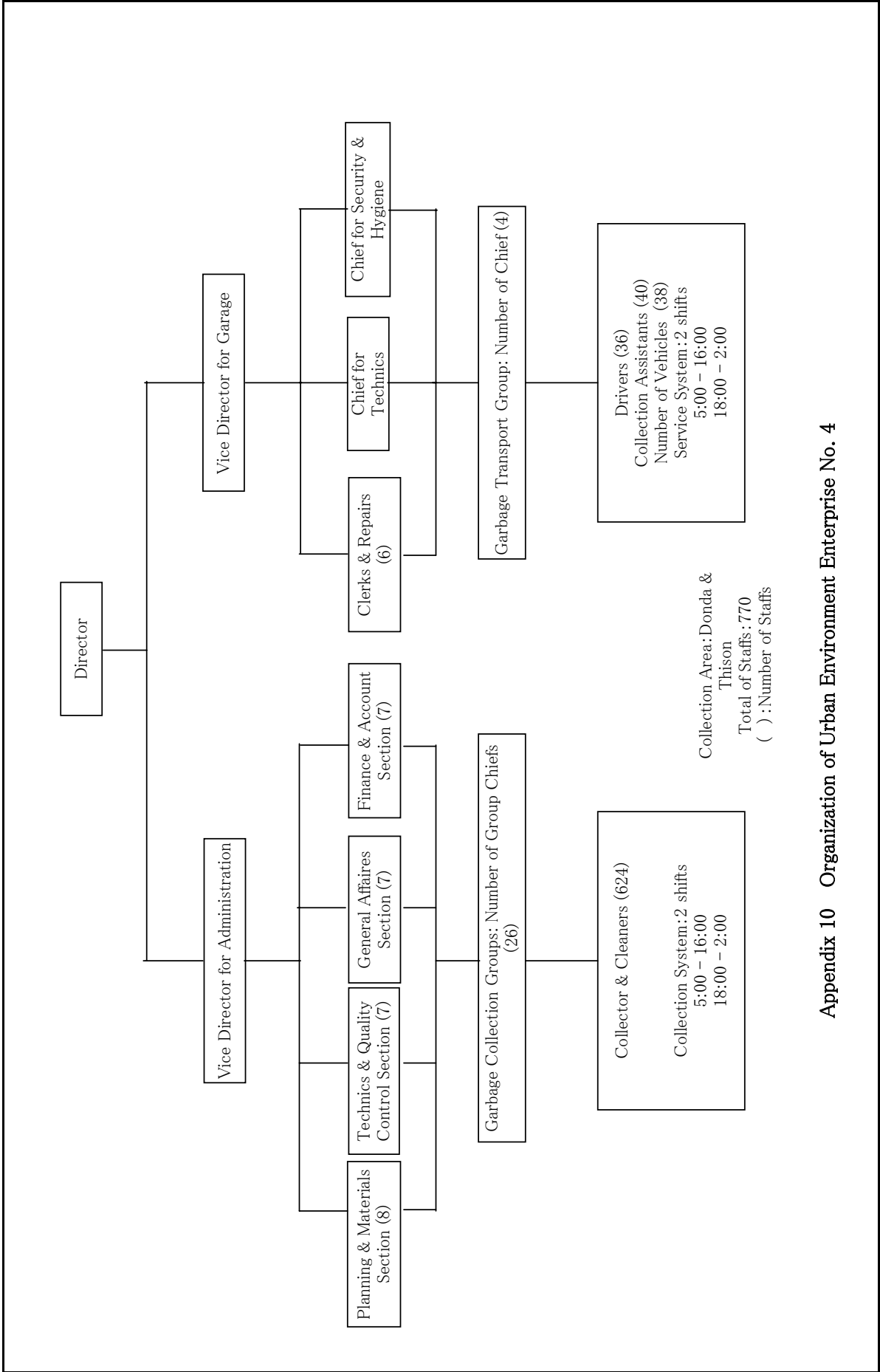
Appendix 10 Organization of Urban Environment Enterprise No. 1



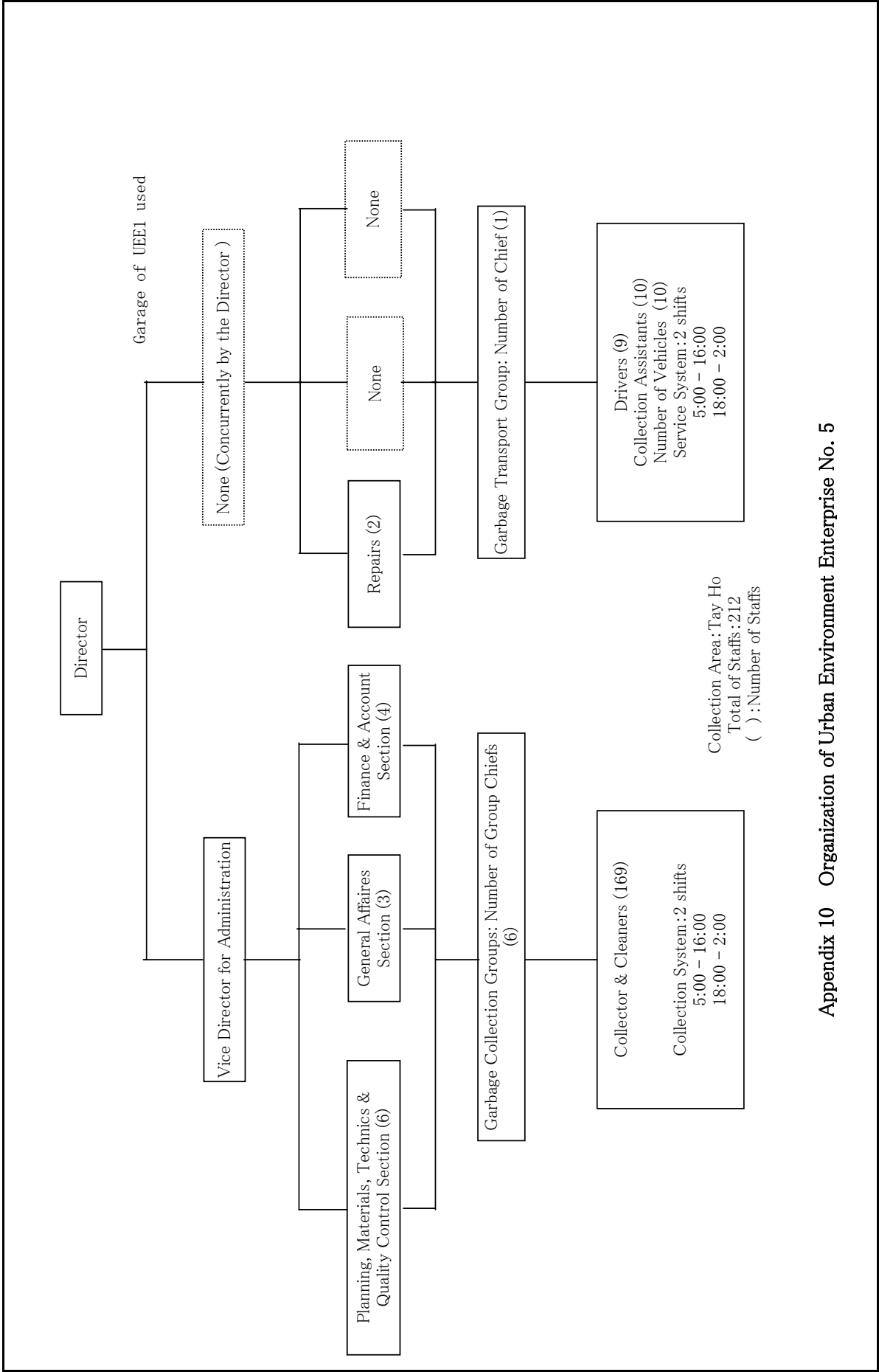
Appendix 10 Organization of Urban Environment Enterprise No. 2



Appendix 10 Organization of Urban Environment Enterprise No. 3

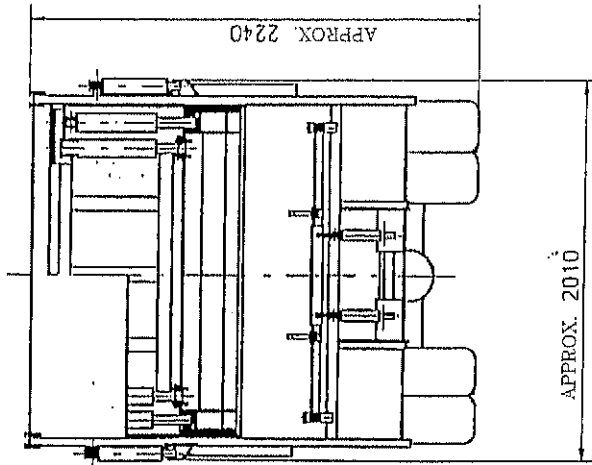
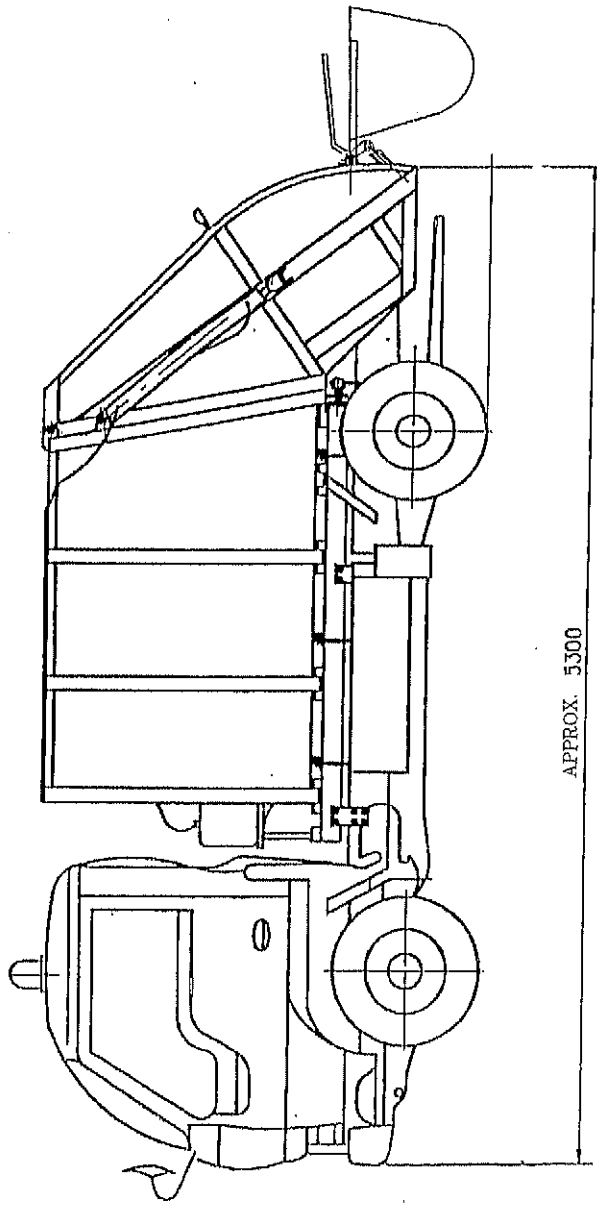


Appendix 10 Organization of Urban Environment Enterprise No. 4



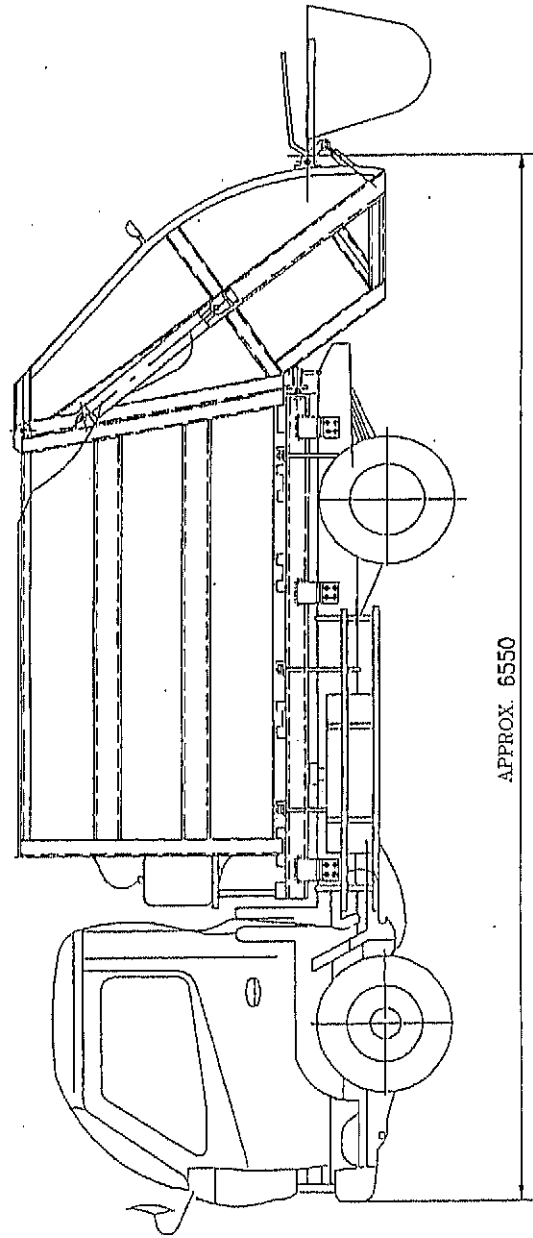
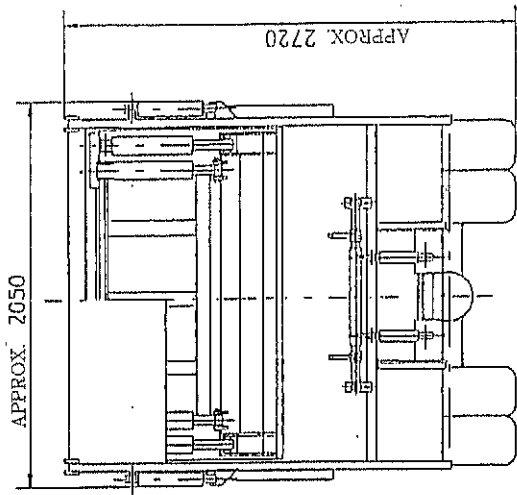
Appendix 10 Organization of Urban Environment Enterprise No. 5

Appendix 11 Sketch of Small Size Compactor Truck



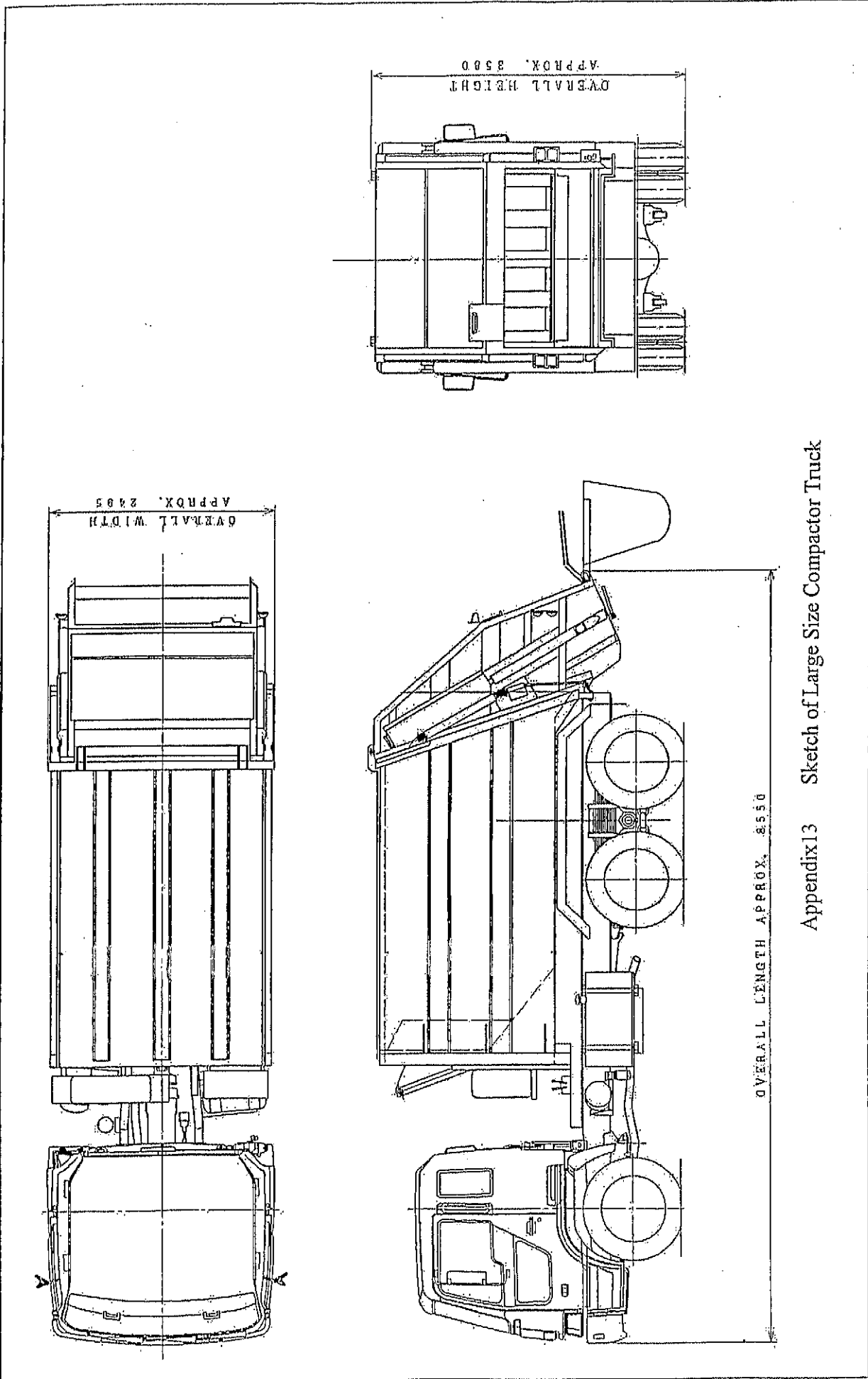
Appendix I I Sketch of Small Size Compactor Truck

Appendix 12 Sketch of Medium Size Compactor Truck



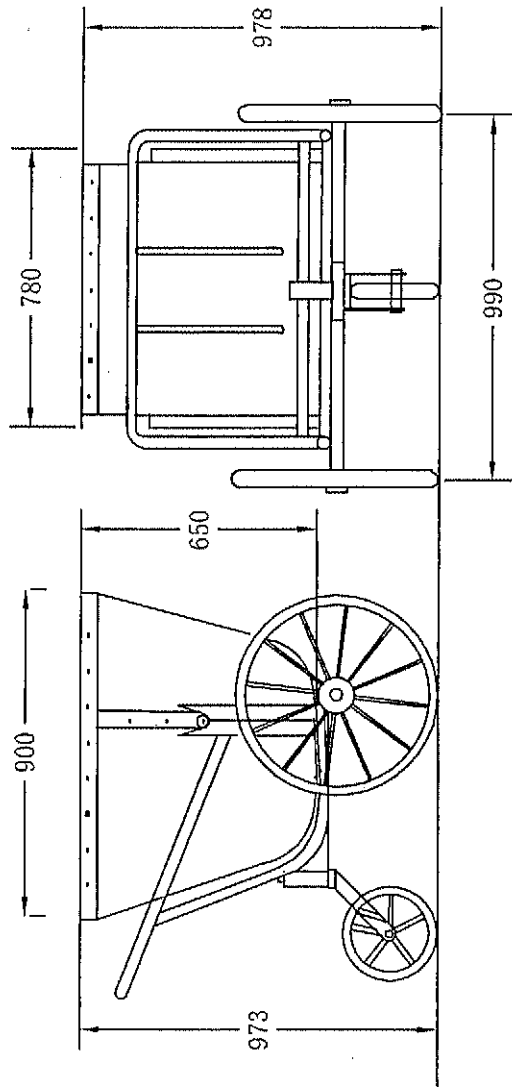
Appendix 12: Sketch of Medium Size Compactor Truck

Appendix 13 Sketch of Large Size Compactor Truck



Appendix 13 Sketch of Large Size Compactor Truck

Appendix 14 Sketch of Handcart



Appendix 14 Sketch of Handcart