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LOCAL DEVELOPMENT II URBAN PROJECT

Submitted to
USAID / CAIRO

Submitted by
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in association with

PUBLIC ADMINISTRATION SERVICE
DEVELOPMENT CONSULTING OFFICE

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ENGINEERING AND GEOLOGICAL
CONSULTING OFFICE

INTERIM REPORT
on
O&M IN CAIRO
(January 1992)

PREPARED FOR H.E. THE GOVERNOR OF CAIRO

O&M IN CAIRO REPORT
PREPARED FOR H.E. CAIRO GOVERNOR
DECEMBER 1991
(TRANSLATION)

I. PURPOSE

1. The intensive technical assistance provided to Cairo Governorate by TAC under the LD II Project will be terminated by June 1992. TAC finds it essential to report to H.E. Cairo Governor on the actual current status, achievements and problems of O&M activities in order to give a clear picture of the Cairo fleet and needs to keep the fleet in good order.

2. Main topics of this report are:
 - 2.1 Garage and workshops construction and renovation programs.

 - 2.2 Development of the organization and staffing of a complete and effective O&M hierarchy in the Governorate.

 - 2.3 Garages and workshops management.
 - o Preventive maintenance (P.M.) planning and programs;
 - o Repair planning and program;
 - o Shop equipment and tools;
 - o Spare parts warehousing systems; and
 - o Annual financial needs to keep an 80% fleet availability.

2.4 Income generation and privatization issue, and experience gained in other governorates.

2.5 TAC support to Cairo Governorate.

26 Conclusions and recommendations.

II GARAGES AND WORKSHOPS CONSTRUCTION AND RENOVATION PROGRAMS

1. Early during the NUS Project, a special fund was allocated (L.E 4.43 millions) for the instruction and renovation of Cairo Governorate garages and workshops. Extra funds were allocated in the LD II Project for the same purpose (L.E 9.00 millions). Phase I of the construction program is implemented. Although delayed, most of the program has been completed.
2. Phase I only covers 12 district garage and 4 Zonal workshops. Phase II and III are designed to cover the remainder of the needs for Cairo Governorate.
3. Table 1 shows the current phase I Construction program, the future phase II & III construction and renovation programs and their approximate cost estimates.
4. CCBA facilities in El Zawya El Hamra area occupies an area of approximately 12 feddans. This area is one of the most heavily populated areas in Cairo. Approaches to these facilities are always overcrowded and congested with traffic, people and vendors. Being so crowded, this area is exposed to disasters, fire hazards and accidents. The transfer of El Zawya El Hamra CCBA facilities (and even the paving complex) to new sites at the outskirts of Cairo, if considered, would be an excellent land management and income generation project. TAC is ready to develop a preliminary feasibility study for this project. Expected income generated

Table 1
 CURRENT GARAGES AND WORKSHOPS
 CONSTRUCTION AND RENOVATION PROGRAM

Phase I - Cairo

ZONAL/DISTRICT GARAGE	ZONE	ZONAL/DISTRICT WORKSHOP	CONTRACTED COMPLETION DATE	UTILIZATION DATE	
				Anticipated	Actual
1 El Kassarat	North	El Zawya	Feb. 1990		March 1990
2 El Salam Zonal Garage	East	El Salam Shark (Mataria & Ain Shams) Zonal Workshop	Jan. 1990	March 1992	
3 El Waily	West	El Waily Manshiet Naser	March 1991		June 1991
4 El Nozha Zonal Garage	East	Heliopolis Nasr City Zonal Workshop	Nov. 1992	Jan. 1993	
5 El mokattam Zonal Garage	South	South Maadi Misr El Kadima Zonal Workshop	Dec.1990		Feb.1991
6 El Sayeda Nafisa Zonal Garage	West	Central Abdeen Zonal Workshop	Nov. 1988		Nov. 1988

Table 1
GARAGES AND WORKSHOPS
CONSTRUCTION AND RENOVATION PROGRAM

Phase II - Cairo

ZONE	ZONAL/D:STRICT WORKSHOP	PROPOSED SITE	TYPE OF WORK	COST ESTIMATE in L.E.	REMARKS
North	Rod El Farag Shoubra El Sahel	El Zawya El Zawya New Site	Renovation Renovation New Const.	450,000 450,000 1,200,000	Heliopolis Current Garage Shoubra & North Current Grg.
North-East	El Zeitoun	El Zawya	Renovation	500,000	
South	Helwon El Tebbeen Zonal Workshop El Maadi	New Site New Site New Site New Site	New Const. New Const. New Const. New Const.)) 1,350,000) 350,000)) A New Zonal Garage in) Helwan or in May City In Mokattam Zonal Garage
West	West	Current Site	Renovation	550,000	-----
Central Vehicles Workshop Central Heavy Equip. Workshop Central Garage		El Zawya New Site El Zawya	Renovation New Const. Renovation	750,000 1,200,000 600,000	A New Site is a Must
Total Approximate Cost Estimate				7,400,000	

Phase III

For the renovation and upgrading of the rescue garages and workshops, a detailed study of rescue procedures, rescue teams and their distribution among zones and districts is needed.

by selling the old site to the public will be more than L.E 42 millions, while the construction of new modern and more effective facilities will cost no more than L.E 12 millions.

III. ORGANIZATION AND STAFFING OF THE O&M HIERARCHY

1. Early in 1989, when new facilities were about to be completed, TAC, in cooperation with the CCBA officials, developed a complete set of organization charts for district and Zonal garages and workshops (appendix "A"). The formation of a Central Department for operation and maintenance was also proposed to be included in CCBA. Proposed organizations have been accepted and submitted to CCBA's Department of Organization and Administration for formal approval. Unfortunately formula approval of COAO has not yet been given. Accordingly, new vacancies have not been created and staffing is not completed. Appendix "A" attached shows the proposed organization charts.
2. Early in December 1990, and O&M needs seminar was held in Cairo. TAC presented a communication system chart and the proposed reporting forms. It is essential to implement the proposed communication and reporting systems so that the Governorate and CCBA chairman have access to the actual fleet status and the O&M needs. Appendix "B" Attached shows the proposed communication system and the recommended O&M reporting forms.
3. Shortage of capable engineers, mechanics and semi-skilled labors, badly affects O&M activities especially in Zonal Workshops in Sayeda Nafisa and El Mokattam . Staffing will also be a problem for CCBA in El Salam and El Nozha Zonal Workshops. As stated in CCBA Chairman's report to H.E. The Governor, low wages and incentive pays do not attract skilled labor to join CCBA. Better and reasonable incentive pays should be considered.

IV. MAINTENANCE MANAGEMENT

1. Preventive Maintenance (P.M.)

In new garages, namely Sayeda Nafisa, El Kassarat, El Mokattam and El Waily, P.M. programs have been developed and implemented at different rates. TAC provided intensive P.M.OJT to all garages. Performing regular P.M. for vehicles and equipment has proven very effective, and has had excellent impact on improving fleet availability in districts. The number of current, medium and major repairs has also decreased substantially.

2. Repair Programs

- 2.1 Due to shortage in qualified managers, engineers, supervisor, skilled labor and spare parts, workshops are not capable of conducting all of the needed repairs. Major defects in vehicles and equipment have accumulated since 1979. The condition of the defective units is deteriorating and many pieces of equipment need overhauling in dealers workshops.
- 2.2 Budget allocations are also insufficient for procurement of imported and locally produced spare parts, and for performing overhauls and major repairs.
- 2.3 Because of the above mentioned reasons, repair plans are not implemented successfully. CCBA proposed to scrap the following CIP vehicles:

Refuse Truck-Truxmore	51
Refuse Truck-Leach	6
Refuse Truck-Ford 350	1
Refuse Truck-Calabrisi	3
TOTAL	61

NOTE

The cost of garbage collection vehicles and dump trucks has increased substantially over recent years (e.g. a Truxmore current price is L.E. 750,000 including customs), current budgets do not provide for replacements. Upon TAC advise, the CCBA Chairman cancelled the scrapping process as most of the scrapped vehicles could be overhauled. Overhauling cost is L.E 100.000 to 150.000 depending on the condition of the vehicle. A two/three years repair plan should be developed and adequate funds should be allocated. The total repair cost of the defective pieces could be approximately L.E 6-9 millions.

2.4 The current plan shows that P.M. and Repair responsibilities are assigned for different workshops as follows:

P.M. Responsibilities:

District Workshops

P.M. level 1,2 & 3

Zonal Workshops

level 4

Repair Responsibilities

District Workshops

Simple and Current Repairs

Zonal Workshop

Medium Repairs

Central Workshops

Major Repairs

Dealers Workshops

Engines Overhauling, and Vehicles

Equipment Overhauling.

Unfortunately Zonal Workshops in Sayeda Nafesa and El Mokattam are not completely staffed and equipped; and accordingly, Zonal Workshops do not conduct all of the needed repairs. CCBA will probably have the same problems with the Zonal workshops in both El Salam and El Nozha Zonal Garages.

3. Shop Equipment and Tools

3.1 Most of the main shop equipment and tool are available in all garages and workshops. Sufficient budget (about L.E 1,000,000) has been allocated for procurement of shop equipment and tools from NUS and LD II Projects. Table 2 shows the total O&M budget allocations that was expended between FY 1987 and FY 1991 in the LD II Project.

3.2 Garages and workshop are however still in need of extra special tools such as turning tools, drills, fixtures ... etc.

4. Spare parts Warehousing Systems

4.1 Cardex warehousing systems have been introduced in new garages and workshops. These systems are in good order.

4.2 An effective spare parts inventory control system is being developed. An adequate continuous flow of spare parts, both imported and local, is however not insured. Annual spare parts need should be defined, and an adequate annual budget should be allocated.

Table 2
 LOCAL DEVELOPMENT II
 O&M ALLOCATIONS
 (As of December 1991)

FY	O&M ALLOCATIONS IN L.E. 1,000						O&M
	SP 1	SP 2	SP 3	SP 4	SP 5	SP 6	ALLOCAT.
1987	-	175	400	2,469	400	700	4,144
1988	2,250	750	717	2,500	-	150	6,784
1989	-	500	232	2,500	2,911	-	6,143
1990	-	393	50	55	2,373	129	3,000
1991	-	2,427	150	-	462	-	3,009
GRAND TOTAL	2,250	4,245	1,549	7,524	6,146	979	23,072

- SP 1 Imported spare parts procurement sub-project
- SP 2 Locally produced spare parts procurement sub-project
- SP 3 Repairs in private sector firms sub-project
- SP 4 Garages and workshops construction and renovations sub-project
- SP 5 Vehicles and equipment purchase sub-project
- SP 6 Shop equipment, tools and furniture purchase

4.3 when the old main spare parts stores in Ghamra was demolished, all available spare parts were transferred to an inadequate store in the central workshop. In May 27, 1991 H.E. the Cairo Governor ordered that a **new spare parts warehouse** should be constructed and **computer warehousing system** should be introduced. No action by CCBA has been taken up till now. TAC studies show that this project is vital for planning, procurement and control of spare parts in CCBA.

5. Computerization

A computerized spare parts inventory, and a fleet management program were developed by TAC. A computer has been provided for the Sayeda Nafisa Zonal Garage. Users in CCBA (8 participants) received DOS training. Two engineers are currently entering spare parts and fleet inventory in the system and are receiving OJT.

6. Actual Fleet Status

6.1 Table 3 shows the total actual fleet status including various types of pickups transport vehicles, and engineering equipment. On the road availability is almost 68% (scrapped CIP vehicles are included). Approximately 230 pieces need complete overhauling in specialized dealers workshops. These are accumulated defects since 1979 when the first shipment joined CCBA fleet. Approximately 220 other pieces need major repairs.

Table 3

INVENTORY AND STATUS OF CARIO COVERHORATE
(As of December 1991)

Vehicle/Equipment Name	Total	I.O	Need Repair			Avail. %
			Level 1	Level 2	Level 3	
Garbage Collection						
Refuse Truck Side Loading	210	105	60	19	26	50
Refuse Truck Rear Loading	73	45	10	9	9	61
Refuse Truck Pick-up	185	133	12	14	16	72
Refuse Cart	230	110	57	12	51	48
Residue Truck	25	19	2	2	2	75
Street Cleaning						
Sweeper	55	22	8	12	12	40
Water Spray Truck	64	57	3	1	3	89
Trees Irrigation Truck	62	51	5	2	4	82
Road Maintenance and Emergency Fleet						
Dump Truck	274	204	21	15	35	74
Loader	84	69	11	2	2	82
Bulldozer	36	33	3	-	-	92
Grader	8	7	-	1	-	88
Roller	42	39	-	2	1	93
Mastic Mixers	10	10	-	-	-	100
Asphalt Cutters	2	2	-	-	-	100
Utilities and Others						
Sewage Truck	73	65	6	1	1	89
Vacuum Truck	14	10	2	1	1	71
Lighting Tower	36	28	5	2	1	78
Telescopic Crane	6	4	-	1	1	67
TOTAL	1,488	1,012	205	106	165	68

6.2 Implementing P.M. programs in new facilities improved the fleet availability, and decreased the number of simple and level 1 repairs which gave district workshops the chance to meet these repairs. On the other hand, lack of spare parts, qualified garage and workshop managers and skilled labor are the main reason for the significant number of accumulating defects. As an example, while availability in Sayeda Nafisa reached 76.5% and in El Karsarat 83 % in 1990, it fell to 66.5% and 68% because of lack of spare parts and when TAC maintenance experts direct involvement in the day to day operation of the workshops ended in 1991.

6.3 To upgrade the CCBA fleet status, a special repair program should be developed, and sufficient budget allocated. This program could be implemented in 2-3 years . Total cost estimate of this program is approximately L.E 9.5 millions (this should return L.E 115 millions worth of equipment to the road.)

7. Annual Financial Needs

7.1 The Cairo Governorate owns a huge fleet of heavy vehicle, engineer, equipment, pick-ups and transport vehicles. This fleet has a value of approximately L.E 250 millions according to current prices. NOTE prices have increased dramatically in the last five years. As an example, a new Truxmore now costs L.E 750,000 (including customs if direct from local dealers), where as it costs approximately L.E. 70.000 five years ago (not including customs as it was imported directly by the GOE).

7.2 To keep this fleet at a reasonable 85% on the road availability, 5% of the total current value of the fleet has to be spent annually on the procurement of spare parts (both imported and locally produced), and on performing complete overhauls of annual new defects. This amounts to about L.E 12.5 millions.

Table 4

USA MADE CIP FLEET
DELIVERY PROGRAM
CAIRO GOVERNORATE

YEAR RECEIVED	QUANTITY	FINANCIAL SOURCE	TYPES OF VEHICLES/EQUIPMENT
1979	10 35 46 10 9 3	CIP CIP CIP CIP CIP CIP	Leach - 16 cy. Truxmore - 23 cy. IH, Dump Truck Loader, Fiat Allis. Bulldozer Grader
1981	25	CIP	Truxmore - 23 cy.
1982	36 10 2 10 10	CIP CIP CIP CIP CIP	Truxmore - 23 cy. IH, Dump Truck Asphalt Cutter Mastic Mixer Elgin, Sweeper
1983	36 13	CIP CIP	Truxmore - 23 cy. Vacuum Truck
1984	44 36 44	CIP CIP CIP	Truxmore - 23 cy. IH, Dump Truck Dodge, Sweeper
1985	36 43 36 24 77	CIP CIP CIP CIP CIP	Truxmore - 23 cy. Ford, Water Sprinkling Truck Ford, Sewage Truck GMC, Refuse - 25 cy. Ford, Pickup, Refuse - 6 cy.
1986	11 108 30	CIP CIP CIP	Ford, Cedic - 25 cy. Ford, Pickup, Refuse - 6 cy. IH, Dump Truck
1989/ 1990	11 11 2	LD II LD II LD II	Loader Case IH, Dump Truck Ford, Sewage Truck
TOTAL	793		

7.3 Accumulated defects will need extra allocations in order to bring defective pieces back on the road again. An approximate estimate for overhauling accumulated defects is L.E 9.5 millions. This overhauling program could be implemented in 2-3 years.

7.4 The first shipment of the garage collection and utilities fleet was received in 1979. Table 4 indicates numbers and types of equipment received through the CIP , NUS and LD II Projects, and dates on which these pieces were put in operation. Aging pieces could be overhauled and their operation life would be increased. A replacement program does, however, need to be developed, and an adequate budget has to be allocated. A minimum of L.E 12 millions should be allocated annually for replacement.

7.5 For the next three years (1992-94), the following annual budget should be allocated:

- o Procurement of imported spare parts for the USA made vehicles and equipment (most of the fleet). L.E 3,300,000 (\$1,000,000)
- o Purchase of local spare parts (batteries tires, filters, hoods, hoses, lights, glass, ...etc). L.E 3.700,000
- o P.M and repair materials (lubricants, paints, steel sections, leather, metal sheets, ... etc). L.E 500,000

- o Overhauling of newly defected Vehicles and equipment L.E 5,000,000

Total annual needs L.E 7,500,000

- o Complete overhauling of one third of the accumulated defective vehicles and equipment (for 3 successive years). L.E 3,200,000

Total Annual Budget L.E 15,700,000
(not including replacement)

7.6 Financing the about mentioned maintenance programs needs to gather all available to cover all expenditures. Available resources are:

- o BAB II and III GOE budges;
- o Cleaning treasuries;
- o Local and community treasuries;
- o USAID block grant; and
- o LD II maintenance allocations

In all cases, districts should participate in financing maintenance needs as implementing maintenance programs is for the benefit of districts.

V. INCOME GENERATION

1. The financial annual needs as defined above are so significant that available resources may not cover all needs. H.E the Prime Minister, on presenting the FY 1991-1992 budget stated that GOE does not expect that the budget will cover all needs and GOE units should find other ways for income generations. Income generation, accordingly, become an essential issue.
2. In Alexandria, the El Amereya District Chief took the initiative, and developed an income generation pilot project. The district garage and workshop are providing services against payment to other GOE agencies and to both public and private sectors. The garage management is using the excess capabilities of the service station and the workshop. Other initiatives have also been taken in other districts and governorates. Income generated, covers a part of their O&M needs.
3. In Cairo Governorate, other methods and new ideas should be developed. In 1990, Care Service Company submitted the preliminary study for a proposal to rent the Zonal Workshop in Sayed Nafisa Zonal Garage. This proposal is worthy of consideration
4. Leasing some of the O&M facilities to qualified private sector companies would be feasible. Companies that are involved in garbage collection, cleaning and equipment maintenance may be invited for bidding on leasing O&M facilities.

VI TAC SUPPORT TO CAIRO

TAC O&M Team is providing intensive support to CCBA and districts in all O&M activities. Technical assistance and support included the following areas:

1. Construction of New O&M Facilities:

The O&M Team developed the construction program and took a leading role in planning this program, preparation of garage layouts and the monitoring of the construction (both technically and financially).

2. Organization and Staffing:

2.1 The O&M Team developed proposed organization charts for different O&M facilities, defining responsibilities of each facility and proposed an effective communication and reporting system. All of these organizations have been accepted by CCBA and districts officials, and are actually adopted. Proposals for staffing and job descriptions have been submitted to CCBA and then to DOA Formal approval by COAO has not yet been issued.

2.2 Another proposal for the formation of a central Department for O&M has been submitted to CCBA.

3. Direct Management Support:

Three maintenance experts provided direct support to new district and Zonal garages and workshops as follows:

Engineer Nabil El Meghallawi
in Sayed Nafisa Zonal Garage.

From January 1989 to January 1991

Engineer Ahmed El Dardir
in Sayeda Nafisa Zonal Garage;

From January 1989 to March 1990

in El Karsast District Garage; and	From April 1990 to 1991
in El Mokattam Zonal Garage	From April 1991 to date
Engineer Abdalla Shaat	From June 1991 to date
in El Waily District Garage	

Direct support included:

- o Implementing proposed organizations in garages and workshops.
- o Developing managers skills and management systems.
- o Developing and implementing P.M. and repair programs and follow-up implementation of these programs.
- o Develop Cardex run warehouses in new facilities.
- o Provide hands-on management and technical training in new facilities.
- o Assist garages managers in preparing annual O&M budgets and developing economic analysis of O&M activities in new facilities.

4. Procurement of New Equipment and Spare parts:

O&M Team assisted the CCBA staff in preparing and reviewing specifications for the purchase of new vehicles and equipment. O&M Team also assisted in preparing spare parts lists, part description and numbers of needed spare parts.

5. Repairs in Dealers Workshops

O&M Team assisted CCBA and the Central Workshop in preparing bid documents and in negotiations with dealers to conclude repair contracts. "

6. Training

TAC placed great emphasis on training both in Egypt and in the USA. Training included seminars, courses, OJT and hands-on training. Table 5 shows the different courses that have been held and the number of trainees.

VIII CONCLUSIONS AND RECOMMENDATIONS

1. Garage and Workshops Construction Programs

- 1.1 After the completion of phase I of the construction program, phase II & III should be implemented. Deteriorating garages in El Zawya El Hamra area cannot meet O&M needs and they are hazardous to El Zawya El Hamra area.
- 1.2 Transfer of the Central Workshop, the Central Garage and the District Garages in El Zawya El Hamra is a good land management and income generation project which is worthy of consideration.
- 1.3 If CCBA will be responsible for all O&M and cleaning activities, relocation of the CCBA fleet may be considered. This could substantially reduce the costs of phases II & III of the construction program.

2. Organization and Staffing

- 2.1 A Central Maintenance Department should be formed at the CCBA H.Q level to plan, coordinate and control maintenance activities of the CCBA fleet. An effective spare parts central system should be developed.

Table 5

TRAINING EFFORT
O&M IN CAIRO GOVERNORATE
(as of December 1991)

ITEM	COURSE TITLE	TYPE OF TRAINING	COURSE DURATION IN DAYS	NUMBER OF TRAINEES	NUMBER OF TRAINEES
1	Garage Operation	Off-Shore in USA	15	3	45
2	Garage Management	Off-Shore in USA	15		
3	P.M Training for Different Type of Vehicles and Engineering Equipment.	OJT in Garages	3	162	486
4	Vehicle/Equipment Operation	PVTD Course	6	9	54
5	Management Garages	Pimco Course	18	15	270
6	Cummins Engine Over haul & Testing	ADAT	10	5	50
7	Kardex Warehousing System	OJT	26	12	312
8	Procurement Management	Local Course	10	42	420
9	Industrial Safety	In Garages	6	8	48
10	Automatic Transmission	Tonhar T.C	6	12	72
11	Transmission System	PVTD Course	36	4	144
12	Diesel Engine Maintenance	PVTD Course	24	5	120
13	Electrical System for Vehicle /Equipment	PVTD Course	18	3	54
14	Quality Control	PVTD Course	36	2	72
15	O&M Introduction to DOS	Local Course	4	7	28
16	Workshop Foremen	PVTD Course	36	4	144
	TOTAL		297	296	2364

2.2 Being short in qualified engineers, supervisors, skilled and semi-skilled labor is a serious problem that should be dealt with expeditiously.

2.3 Zonal Workshops in new Zonal Garages are supposed to perform medium repairs and level 4 P.M in order to give the chance for the Central Workshop to concentrate on performing major repairs. It is necessary to complete the staffing and equipping of Zonal Workshops in new facilities.

3. Maintenance Management

3.1 On the road availability and the technical condition of the CCBA fleet need to be upgraded. P.M and repair program have to be implemented efficiently. Continuous supply of spare parts must be ensured. An effective spare parts central system has to be built.

3.2 O&M annual needs have to be pre-planned. All financial resources should be gathered together in order to cover the CCBA grand annual plan.

3.3 The CIP fleet is mostly garbage collection and utilities vehicles and equipment. The Cairo Governorate started to receive this equipment in 1979. There is now a need to start planning replacement of the old pieces of equipment.

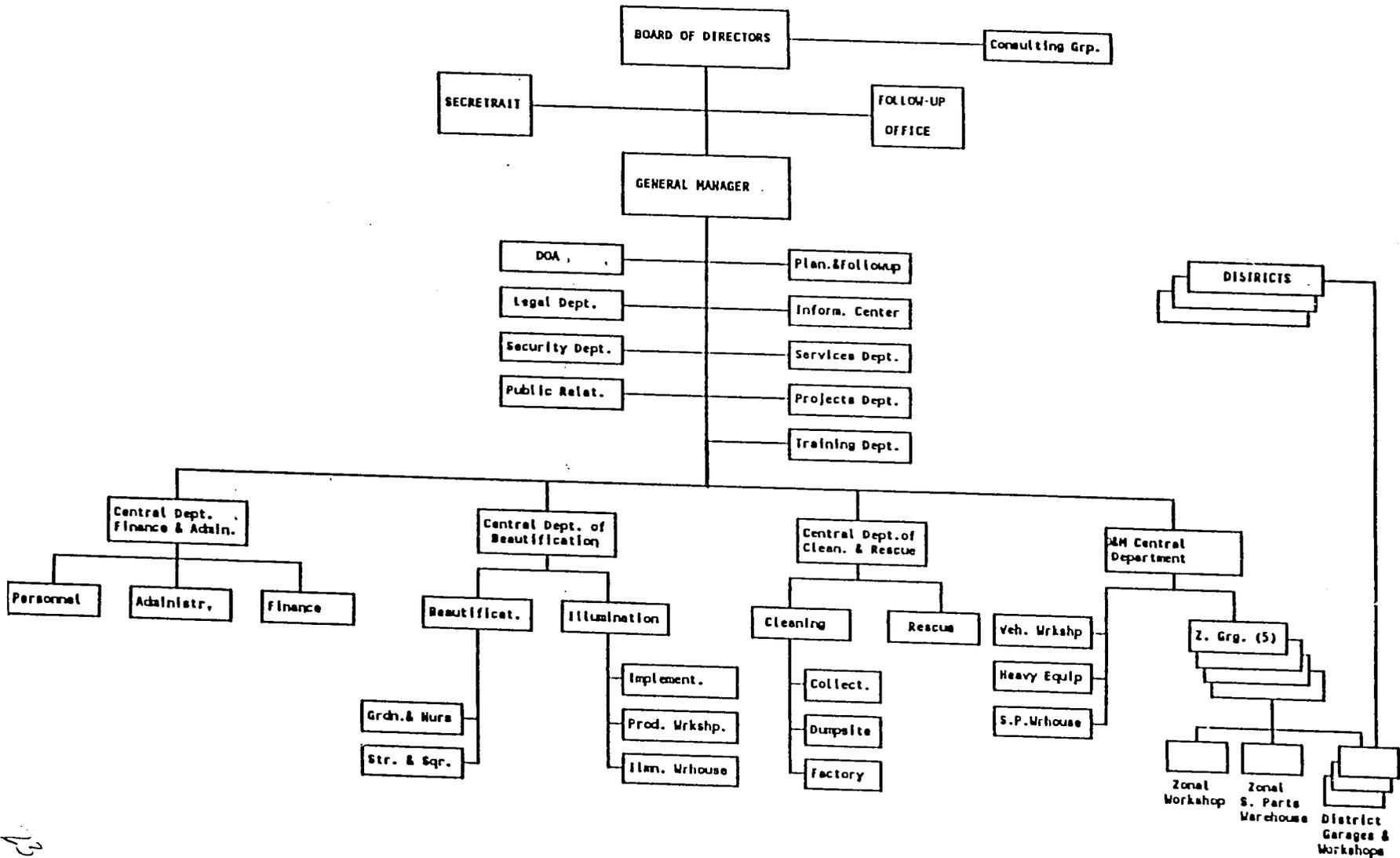
4. Income Generation

4.1 Income generation has become an essential issue!

4.2 The preliminary study for leasing Sayeda Nafisa workshops which was developed by Care Service Company and submitted to H.E. the Cairo Governor, if considered, could be a good project for income generation. Several other private sector companies are interested in leasing O&M facilities in Cairo. The Preliminary study could be used as a basis for preparing bid documents for leasing some of CCBA facilities.

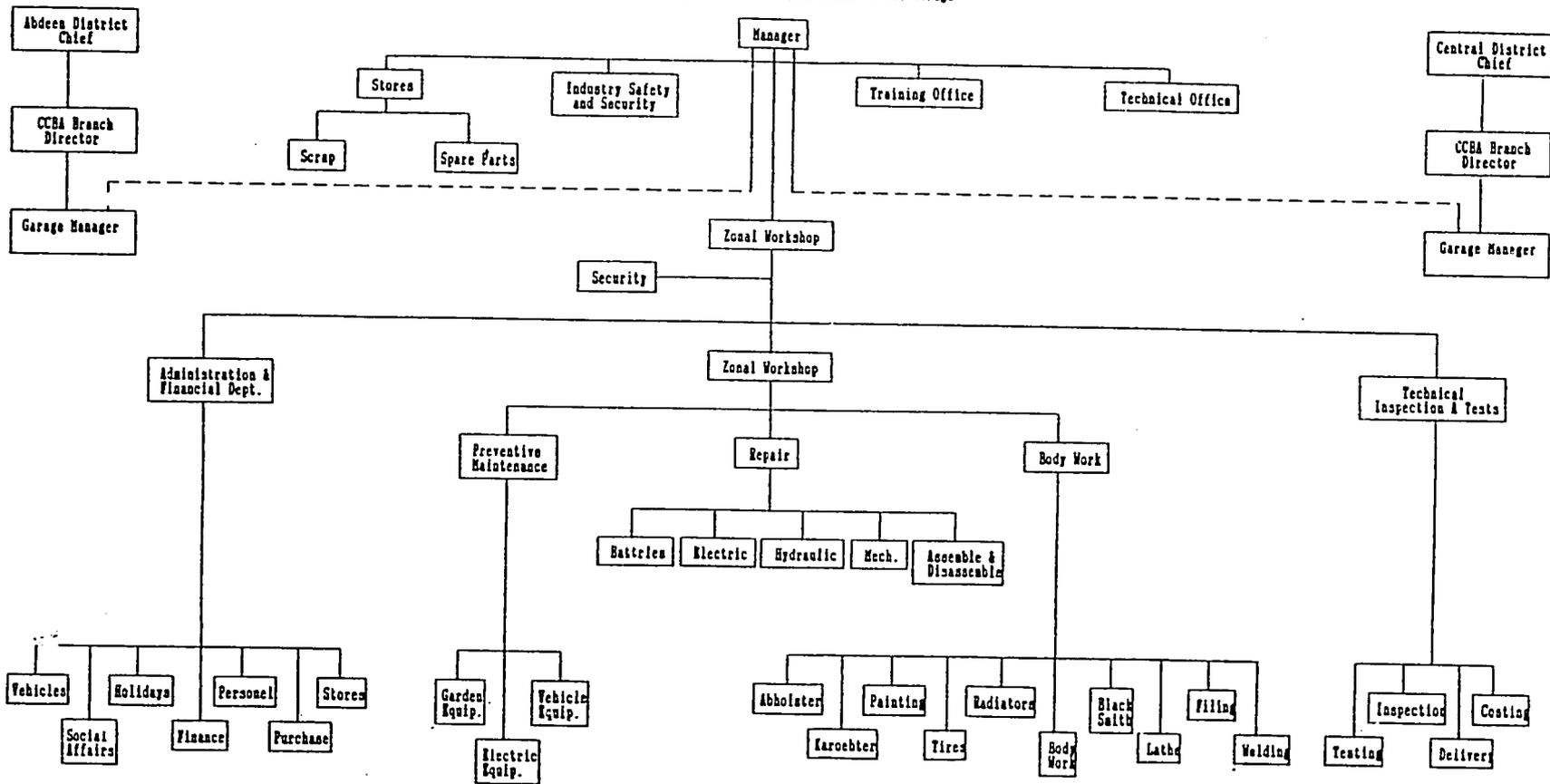
APPENDIX A
CAIRO O&M
PROPOSED ORGANIZATION CHARTS

A PRELIMINARY STUDY
FOR A MODIFIED ORGANIZATION CHART FOR CCBA



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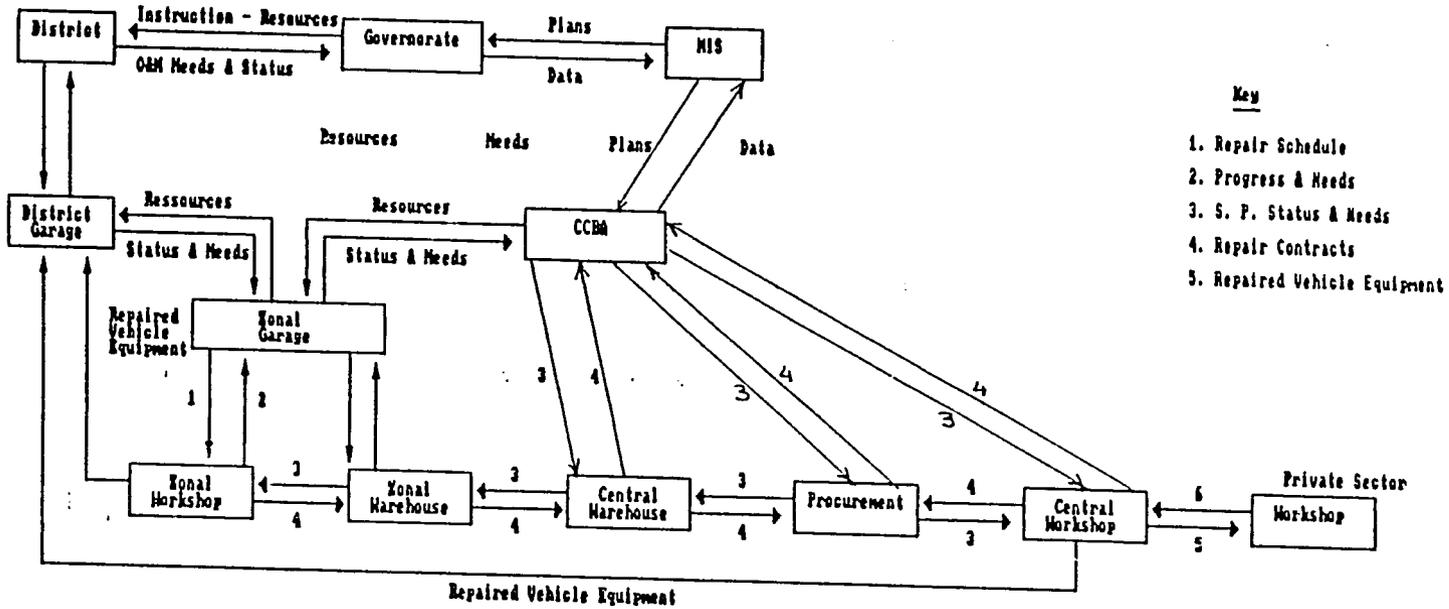
Proposed Organization - Sayeda Mafiza Zonal Garage



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APPENDIX B
O&M COMMUNICATION SYSTEM
AND REPORT FORMS

CCBA Communication and Reporting System; Cairo



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FORM NO. OM-01

VEHICLE / EQUIPMENT DATA SHEET

Governorate : District : Date: / /19

I. BASIC DATA:

Vehicle/Equip. Name:	Plate No.:	
Make :	Model :	VIN:
Year Manufacture :	Date Received : / /	
Engine :	Type : HP:	Engine No.:
No. of Cylinders :	Cooling System :	
Equip. Engine :	Type : HP :	Engine No.:
Capacity : WT. Empty: (tons)	Loaded: (tons)	
Length : (cm) Width :	(cm) Height :	(cm)
Transmission :		
Chassis Type :	Chassis No. :	

II. CAPACITIES:

Fuel :	Tank Capacity :	(liters)
Engine Oil Type :	Eng. Oil Capacity :	(liters)
Hydraulic Oil Type :	Tank Capacity :	(liters)

III. TIRES:

No. of tires : Size :

IV. BATTERIES:

No. of Batteries : Capacity AM/HR : No. of Plates :
Volts :

V. GENERAL CONDITION:

New () Good () Poor ()
Need Repair () To be Scrapped ()

VI. MILEAGE & REPAIR:

Working Hours : (hr) Mileage : (km)
Last Major Repair : / /19 Last Medium Repair : / /19
Last Annual PM Performed : / /19

Inventory and Status of Fleet

Governorate :

District :

Date: / / 19

S.N.	Vehicle/Equipment Name	Total	I.O	Need Repair			To Be Scrapped	% Availability	Remarks
				1	2	3			

Signature:

Position:

Name :

FUEL AND OIL MONTHLY CONSUMPTION

Governorate : _____

District : _____

Date : _____

S.N	Plate No.	Veh. Name	Type	Total Mo. Work. Kt/HRS		Fuel Consumption in Liters		Oil Consumption in kg			Total Monthly Cost in L.E	Remarks
				Planned	Actual	Gasoline	Diesel	Engine	Hydraul	Brake		
Grand Total												

Fuel Oil Prices in L.E :

- Liter of Gasoline = L.E
- Liter of Diesel = L.E
- KG of Eng. Oil = L.E
- KG of Hydr. Oil = L.E
- Brake Oil = L.E

Signature : _____ Position : _____ Name : _____

