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LOCAL DEVELOPMENT II URBAN PROJECT

Submitted to

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INTERIM REPORT
ON
O&M IN QALIUBIA
SHOUBRA EL-KHEIMA CITY

(February 1992)

PREPARED FOR H.E. THE GOVERNOR OF QALIUBIA

INTERIM REPORT ON O&M
IN QALUIBIA (SHOURBRA EL KHEIMA CITY)
PREPARED FOR H.E THE GOVERNOR OF QALUIBIA

(TRANSLATION)

I. PURPOSE

1. It is planned that the intensive technical assistance under the LD II Project may be terminated by June 1992. The Technical Assistance Contractor (TAC) therefore finds it necessary to report to H.E. the Governor on the current status, achievements and problems of O&M activities in order to give a clear picture of the Shoubra El Kheima City fleet and the needs to keep this fleet in good order.
2. Main topics of this report are:
 - 2.1 Garages and workshops construction and renovation program.
 - 2.2 Development of the organization and staffing of a complete and effective O&M hierarchy in the City.
 - 2.3 Garages and workshops management and TAC support
 - o Preventive maintenance (P.M.) planning and problems.
 - o Repair planning and programs.
 - o Shop equipment and tools.
 - o Annual financial needs to keep the fleet at an 80% availability
 - o Spare parts warehousing systems.
 - 2.4 Income generation and privatization, and El Amreya pilot project.
 - 2.5 Conclusions and recommendations.

II. GARAGES AND WORKSHOPS CONSTRUCTION AND RENOVATION PROGRAMS

1. During the NUS Project, renovation and upgrading of the only adequate garage existing in the City was financed and completed. This garage was planned to serve both the City Council and the West District. The garage was however, so small that most of the City Council and the West Districts fleets parked in the surrounding streets.
2. The East District had a very small and inadequate garage not connected to the water, electricity or sewerage utilities.
3. Upon the approval of H.E the Governor of Qalubia, a new site at May 15 street was assigned to construct an O&M complex for Shoubra El Kheima city. TAC subsequently prepared a proposed layout that was approved by the City Mayor. The complex comprises the following facilities:
 - 3.1 A Central Service Station.

- 3.2 A maintenance center to perform annual preventive maintenance (P.M.) and repairs to levels 2 and 3 for the whole City fleet.
- 3.3 A two story garage and a district workshop for the East District. The second story is only for parking light transport vehicles.

The Qalubia Governorate are considering contracting the management of the service station and the maintenance center to a private sector company. The maintenance center will accordingly provide P.M. and repair services to other governmental agencies and to both public and private sectors against payment.

- 4. The TAC also considers that there is a real need to construct a new garage and workshop for the West District and assign the old garage for the City Council only.
- 5. The status of the construction program is shown in table 1.

III. ORGANIZATION AND STAFFING OF THE O&M HIERARCHY

- 1. The organization for garages and workshops in Shoubra El Kheima is currently inadequate and there is no technical O&M body at the City Council level. It is therefore considered essential to review and develop the existing organizations for the Districts and City Garages and Workshop. Job descriptions should be developed. The O&M Team is available to work with the City officials on this issue.
- 2. As proposed in the O&M needs seminar held in December 1990, an O&M governing body at the City Council level should be developed. Its function would be to plan, coordinate and control O&M activities in the City.
- 3. Management responsibility for the Central Service Station and the City Maintenance Center, has not yet been decided. The organization and the relation between these two facilities and the City and district will depend on how the facilities will be managed i.e. by the City or by private contractor, or by lease to a specialized firm.
- 4. Figure 1 shows an organization chart for a complete O&M hierarchy in Shoubra El Khiema City. This was originally presented to the governorate at the December 1990 Seminar. A communication system between the Governorate, the City Council, the Districts and the O&M facilities should be developed. Appendix A attached shows a proposed communication chart and the recommended reporting forms that could be used in such a communication system.
- 5. The new proposed organization has not yet been developed and accordingly staffing of the new facilities may be difficult as there are currently insufficient vacancies. Suitable engineers, supervisors, skilled and semi skilled laborers should be employed. Table 2 shows the staff needed to operate the new facilities.

IV. MAINTENANCE MANAGEMENT

1. Preventive Maintenance (P.M.)

In the City Garage, a P.M. plan was developed and implemented at changing rate. Intensive P.M. and On The Job Training (OJT) has been provided. The performance of regular P.M. for vehicles and equipment has proven very effective by improving fleet availability and reducing the number of simple and current (level 1) repairs.

TABLE 1
 GARAGES & WORKSHOPS
 CONSTRUCTION & RENOVATION PROGRAM
 IN SHOUBRA EL-KHEIMA CITY

PHASE 1

PROJECT NAME	ZONE	CONTRACTED COMPLETION DATE	UTILIZATION DATE	
			ANTICIPATED	ACTUAL
Maintenance Center & East District Garage	City Council East Dist.	Sept. 1991	July 1992	

PHASE II

PROJECT NAME	ZONE	PROPOSED SITE	TYPE OF WORK	COST ESTIMATE L.E.
West District Garage	West Dist.	Not assign.	New Const.	1,000,000

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Figure 1

PROPOSED ORGANIZATION CHART
FOR A COMPLETE O&M HIERARCHY
IN SHOUBRA EL-KHEIMA CITY

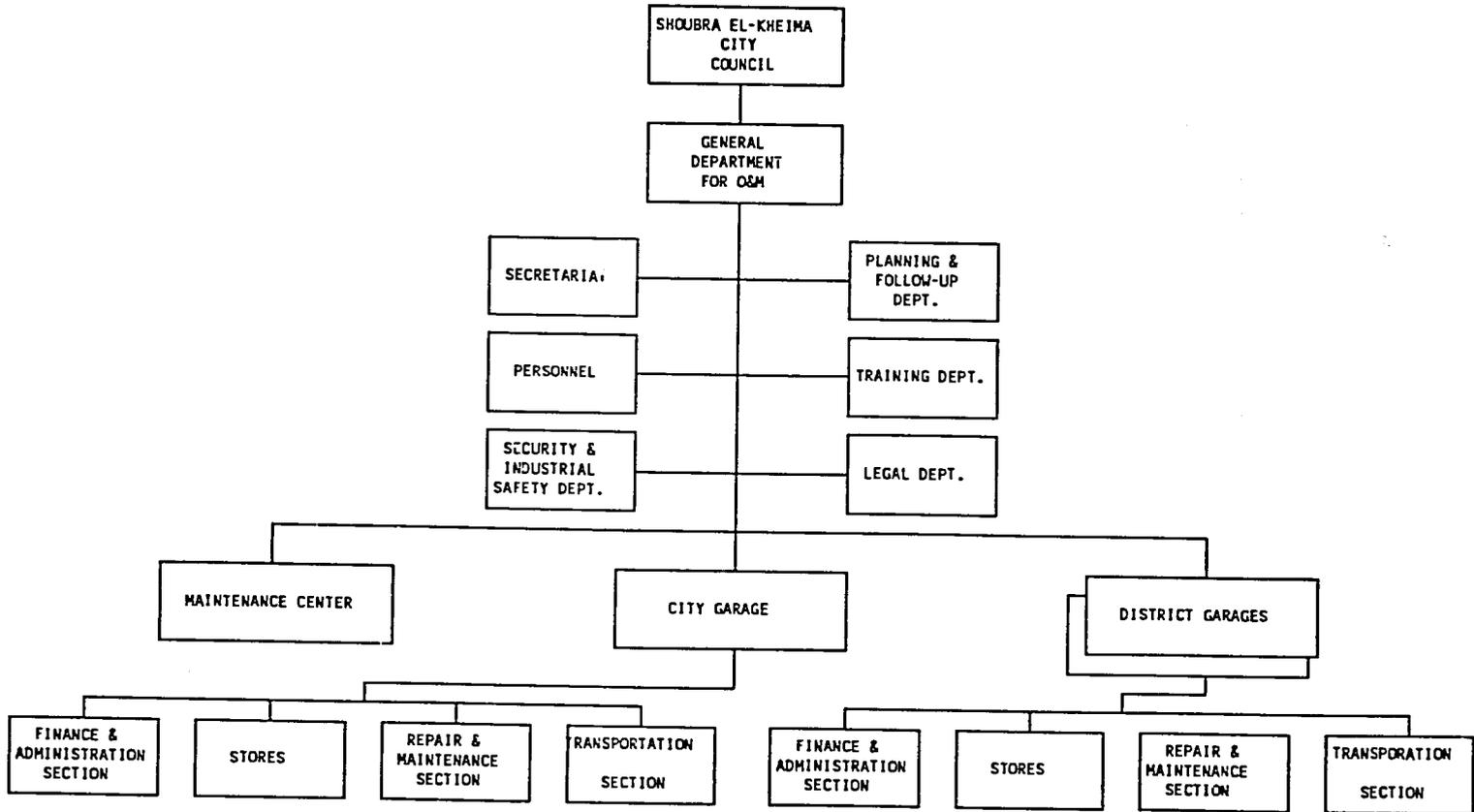


TABLE 2
NEEDS FOR SKILLED
AND SEMI-SKILLED LABORERS
FOR MAINTENANCE CENTER

TRADE	URGENT NUMBERS NEEDED		REMARKS
	SKILLED	SEMI-SKILLED	
Diesel Mechanics	6	6	
Gasoline Mechanics	6	6	
Vehicle Electricians	3	3	
Body Repair Specialists	4	4	
Welders	4	4	
Painters	4	4	
Turning Laborers	1	1	
Filing Laborers	2	2	
Tire Repair Laborers	4	4	
Greasing Laborers	6	-	
Cleaning Laborers	8	8	
TOTAL	48	42	

NOTE

Shoubra El-Kheima City Council have not yet prepared the necessary organization chart.

2. Repair Programs

Due to lack of qualified engineers, skilled labor and spare parts, the City workshop is not capable of conducting all of the needed repairs. The budget allocation is also insufficient for procurement of spare parts, and for performing overhauls and major repairs. Major defects are accumulating, and the fleet on-the-road availability is decreasing (table 3).

3. Shop Equipment and Tools

Most of the needed shop equipment and tools are available in the City Garage. About L.E. one million has been allocated for the procurement of shop equipment and tools for the New Complex. Most of these equipment and shop tools have been supplied and will be installed in the new workshops in the very near future. A further budget should be allocated for the purchase of shop equipment and tools, if a new garage for the West District is constructed.

4. Spare Parts Warehousing Systems

- 4.1 A "Cardex" warehousing systems has not been introduced in the City Garage. It is planned to introduce a "Cardex" warehousing system in Shoubra El Kheima.
- 4.2 An effective spare parts inventory control system has not yet been developed. An adequate continuous flow of spare parts is not insured. Annual spare parts needs have to be defined and an adequate budget should be allocated.

5. Actual Fleet Status

- 5.1 Table 3 shows the total actual fleet status including various types of pickups and transport vehicles. On-the-road availability is almost 60%. Approximately 35 pieces need complete overhauling in specialized dealers workshops, and the rest of the defective pieces need levels 1&2 repairs.
- 5.2 To return accumulated defective vehicles and equipment to the road, a special repair program should be developed, and sufficient budget allocated. The total cost estimate of this program is approximately L.E 2.5 millions; this could be implemented in two to three years.
- 5.3 Table 3 also shows that the City is lacking garbage collection vehicles. At least 20 to 25 back loading refuse trucks are needed.

6. Annual Financial Needs:

- 6.1 Shoubra El Kheima City owns a fleet of heavy vehicle; and engineering equipment, besides a number of pickups and transport vehicles. This fleet has a replacement value of approximately L.E. 40 millions according to current prices. Prices have increased dramatically in the last five years.
- 6.2 To keep this fleet at 80 to 85% on-the- road availability, 5% the total current value of the fleet has to be spent annually on the procurement of spare parts and on performing complete overhauls to remedy major defects. Approximately L.E. 2 millions should be allocated annually for this purpose.
- 6.3 For the next three years (92-94), the following annual budget should be allocated:

- o Procurement of spare parts L.E. 1,000,000 .

TABLE 3

SHOUBRA EL-KHEIMA CITY FLEET STATUS
(AS OF JANUARY 1991)

#	ITEM	QTY.	IN OPERAT.	NEEDED REPAIR			AVAIL.
				LEVEL 1	LEVEL 2	LEVEL 2	%
1	Refuse Truck	7	6	1	-	-	86
2	Refuse Cart	20	5	3	2	10	25
3	Dump Truck	43	29	2	3	9	67
4	Loader	6	4	1	-	1	67
5	Bulldozer	3	2	-	1	-	67
6	Grader	1	-	-	-	1	0
7	Roller	1	1	-	-	-	100
8	Portable Air Compressor	1	1	-	-	-	100
9	Portable Asphalt Mixing Unit	2	-	-	1	1	0
10	Lighting Tower	2	1	1	-	-	50
11	Fork Lift	3	2	-	-	1	67
12	Agricultural Tractor	15	10	-	1	4	67
13	Water Tank and Spray Truck	3	2	1	-	-	67
14	Sewage Truck	14	8	-	2	4	57
15	Excavator	2	1	-	1	-	50
16	Lorry	3	2	1	-	-	67
17	Passanger Car	5	4	1	-	-	80
18	Pickup	22	14	2	2	4	64
	TOTAL	153	92	13	13	35	60

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o	Purchases for P.M. and repair materials (lubricants, paints, steel sections, leather, metal sheets, ect,)	L.E.	150,000.
o	Overhauling of newly defective vehicles and equipment	L.E.	850,000
	Total Annual Needs	L.E.	2,000,000
o	Complete overhauling of one third of the accumulated defective vehicles and equipment (for 3 successive year)		835,000
	Annual Grand Total	L.E.	2,835,000

6.5 Financing for the above mentioned maintenance programs could be from:

- o BAB II and III GOE budget
- o Cleaning Treasuries
- o Local and Community Treasuries
- o USAID Block Grant
- o LD II maintenance allocations
- o Qaluibia Governorate's support to Shoubra El Kheima.

V. INCOME GENERATION

1. O&M annual financial needs are so significant that all current resources may not be sufficient. H.E. the Prime Minister on presenting the GOE budget for F.Y. 1991-1992 to Popular Council, stated that he knows that the GOE budget would not cover all needs. H.E. also said that GOE units have to find other resources to cover their needs.
2. In Alexandria, the El Amreya District Chief took the initiative and developed an income generation pilot project to provide maintenance services to other governmental agencies and to both public and private sectors against payments. By-law regulations have been issued and the pilot project is progressing well.
3. TAC arranged field visits to some of the income generation projects in Menya, Menofia and Alexandria Governorates. Concerned officials in Qaluibia Governorate were invited and attended these field visits. Copies of by-law regulation for the different projects have been handed to all participants.
4. The construction of the new Shoubra El Kheima O&M Complex is about to be completed. It is now time to decide on how this complex will be managed. The City Council has of the following options.

4.1 To run the complex as a governmental entity

This option seems to be not practical because:

- o There is no formal organization for the complex
- o Accordingly no staff could be employed as there is no vacancies
- o Government salaries and incentives do not attract qualified engineers, supervisors and skilled labor.
- o There is not enough budget for the procurement of spare parts

4.2 Income Generation

This option, although proven successful in El Amreya, seems to present difficulties in Shoubra El Kheima because:

- o Shoubra El Kheima does not have qualified and able engineers to run the facility;
- o The service station and the maintenance center have to build up good technical reputation to attract clients;
- o An adequate cash flow is necessary to employ qualified managers, supervisors and skilled labor and to procure needed spare parts and materials
- o A long time may pass (one year or more) before the complex could reasonably be expected to generate sufficient income.

4.3 To Lease the Complex to Specialized Private Sector Companies

This option is probably the best one as Shoubra El Kiema officials will only have to plan and coordinate the P.M. and repair plans. The City could use the money raised to upgrade the City fleets. Preparation of lease agreements may however be difficult and complicated as the concept is new to Qaluibia.

In all cases, the TAC is ready to assist the City in preparing all needed organization charts, management development, preparing bid documents and leasing agreements, as well as providing day-to-day assistance and training.

VI. TAC SUPPORT TO QALUIBIA (Shoubra El-Kheima)

The TAC O&M Team may provide direct intensive support to O&M activities in Shoubra El Kheima in all areas. Close cooperation with concerned officials at the City level and districts has been successful. Technical assistance to date has included:

1. Construction Programs

The O&M team took the lead role in planning this program, for the O&M Complex. The preliminary layout and feasibility study were prepared by the TAC O&M team and they monitored the construction program both technically and financially.

2. Organization and Staffing

The TAC proposed an organization chart showing a complete O&M hierarchy. In cooperation with the Governorate and City officials, the O&M Team is may prepare detailed organization and job specifications.

3. Procurement of New Equipment and Spare Parts

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The O&M Team assisted the City in preparing and reviewing specifications for the purchase of new vehicles, equipment and spare parts. The O&M Team, took the lead role in preparing lists and specification for shop equipment and tools of the new Complex workshops and service station.

4. Training

TAC placed a great effort on training both in Egypt and in the USA. Training included seminars, courses,OJT and site visits. Table 4 shows the different course that have been held and the number of trainees.

VII. CONCLUSIONS AND RECOMMENDATIONS

1. Garages and Workshops Construction Program

- 1.1 Although the Construction of the new Complex is progressing well, equipment installation for the service station is not yet contracted. This could delay the completion of the whole complex. Prompt action should be taken.
- 1.2 A new site for the construction of the West District Garage is needed.

2. Organization and Staffing

- 2.1 An O&M department and a complete O&M hierarchy should be formed in order that O&M activities should be well planned, coordinated, executed and controlled.
- 2.2 The shortage of qualified engineers, supervisors, skilled and semi-skilled labor is a real problem that should be deal with seriously.

3. Maintenance Management

- 3.1 On-the-road availability and the technical condition of Shoubra El Kheima City fleet needs to be upgraded. P.M. and repair programs should be implemented efficiently. continuous supply of spare parts should be ensured. An effective spare parts control system should be built.
- 3.2 O&M annual needs should be pre-planned annually. All financial resources should be gathered together in order to cover the City is annual O&M plan

4. Income Generation

- 4.1 Income generation has become an essential issue.
- 4.2 The El Amreya pilot project is a good example of income generation which may be applicable in Shoubra El Keima if other ideas and modifications are introduced.
- 4.3 The TAC O&M Team is willing to provide intensive direct TA support to the City in developing and running the new Complex and the Districts Garages.
- 4.4 Leasing of the City Maintenance Center and the Central Service Station to a specialized maintenance private sector company should be investigated. This could be one of the leading projects in the whole program.

TABLE 4
 TRAINING EFFORT
 O&M IN SHOUBRA EL-KHEIMA CITY
 (AS OF DECEMBER 1991)

#	COURSE TITEL	TYPE OF TRAINING	COURSE DURATION IN DAYS	NUMBER OF TRAINEES	NUMBER OF TRAINEE DAYS
1	Garage Operation	Off-shore in USA	15	2	30
2	Garage Management	Off-shore in USA	15	2	30
3	P.M. Training for Different Types of Vehicle and Eng. Equipment	OJT in Garages	3	25	75
4	Management Garages	Pimco Course	18	4	72
5	Quality Control	PVTD Course	36	2	72
6	Electrical Systems Maintenance	PVTD Course	18	1	18
7	Diesel Enjines Maintenance	PVTD Course	24	3	72
8	Transmission System	PVTD Course	36	1	36
9	Purchase and Stores Keeper	PVTD Course	24	1	24
10	Automatic Transmission	TOMOVAR	10	2	20
	TOTAL			43	449

TABLE 5

SHOUBRA EL-KHEIMA CITY
TOTAL LD II O&M ALLOCATIONS
FY 1987-1991

FY	O&M ALLOCATIONS IN L.E. 1,000					
	LOCAL SPARE PARTS	REPAIRS IN PRIV. SECTOR	GARAGES CONST- RUCTION	VEHICLE & EQUIP. PURCHASE	SHOP EQUIPMENT & TOOLS	TOTAL
1987	-	189	60	-	20	269
1988	-	-	-	-	-	-
1989*	-	-	1,038	230	400	1,668
1990*	-	-	1,210	643	250	2,103
1991**	-	-	370	265	330	965
TOTAL	-	-	2,678	1,138	1,000	5,005

* Governorate received 7 new trucks in 1991 (allocations of FY 1989, 1990)

** Governorate received in 1991, only 40% of the total grant

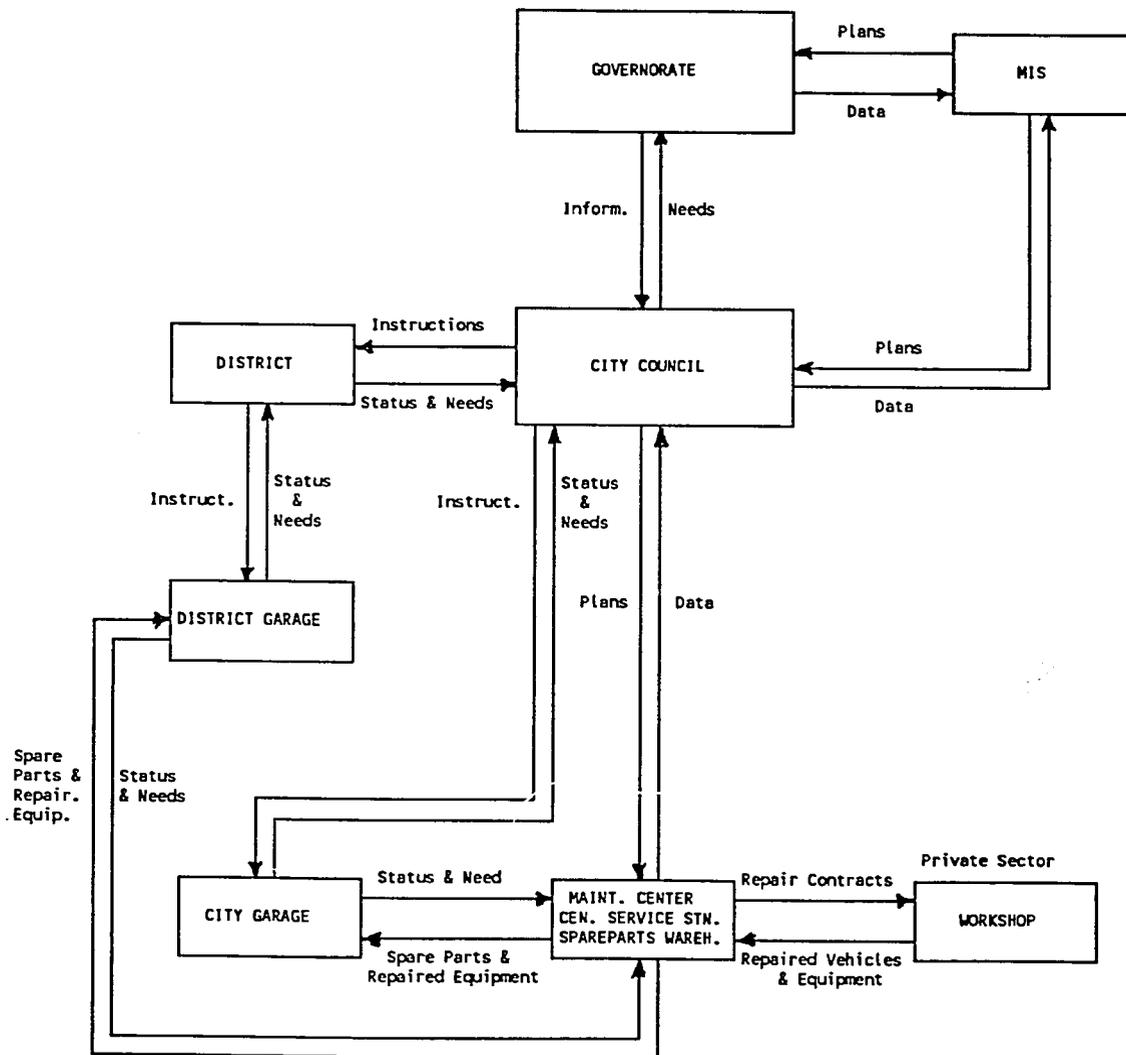
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APPENDIX A

O&M COMMUNICATION SYSTEM AND REPORTING FORMS

O&M COMMUNICATION SYSTEM
IN SHOUBRA EL-KHEIMA CITY



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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 :

nm/Inventor

FUEL AND OIL MONTHLY CONSUMPTION

Governorate : _____

District : _____

Date : _____

S.N	Plate No.	Veh. Name	Type	Total Mo. Work. KM/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
- Breke Oil = L.E

Signature : _____ Position : _____ Name : _____

