

Fig. 2-3 Covered Area by Water Tanker (AMMAN)

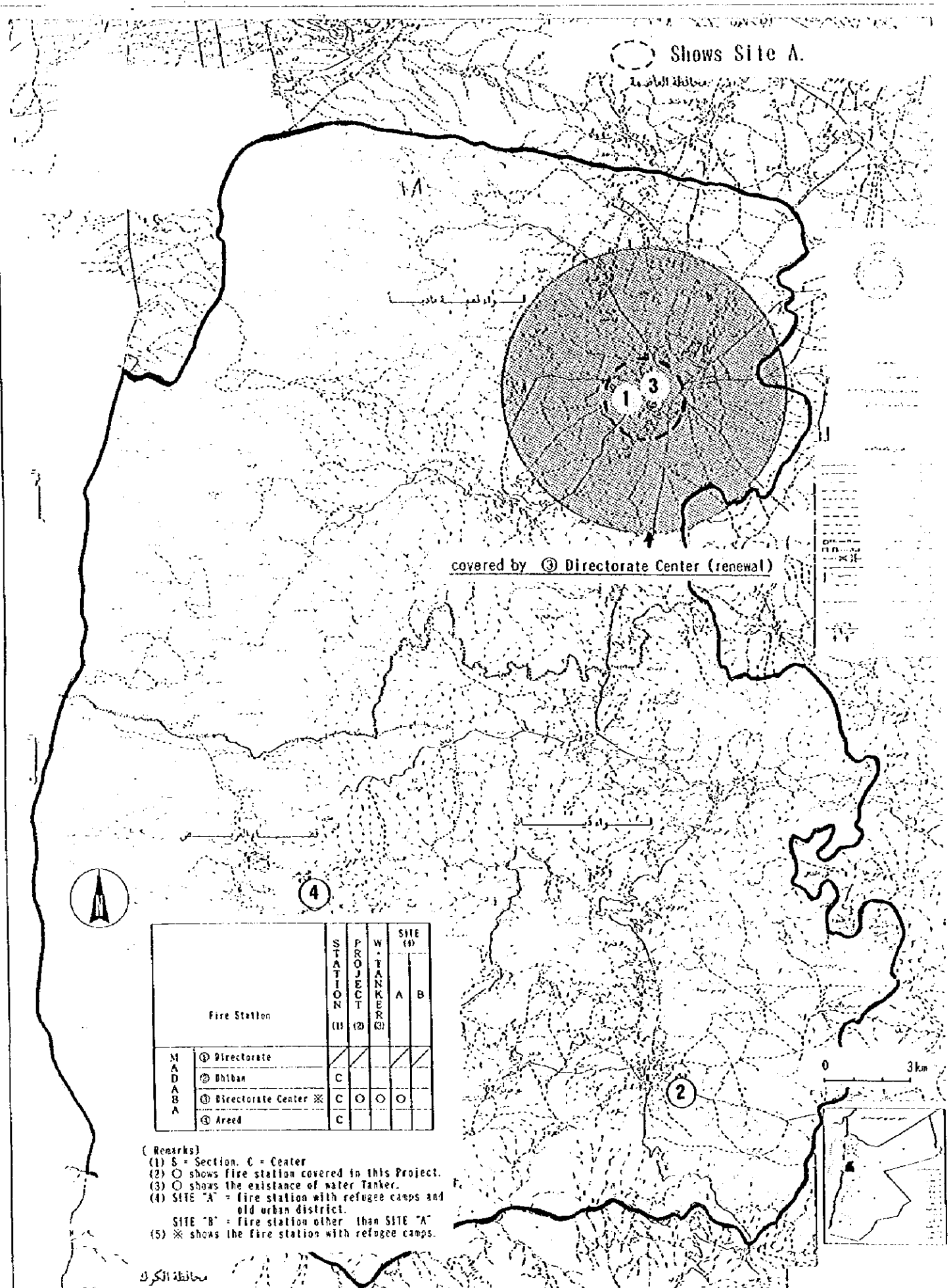
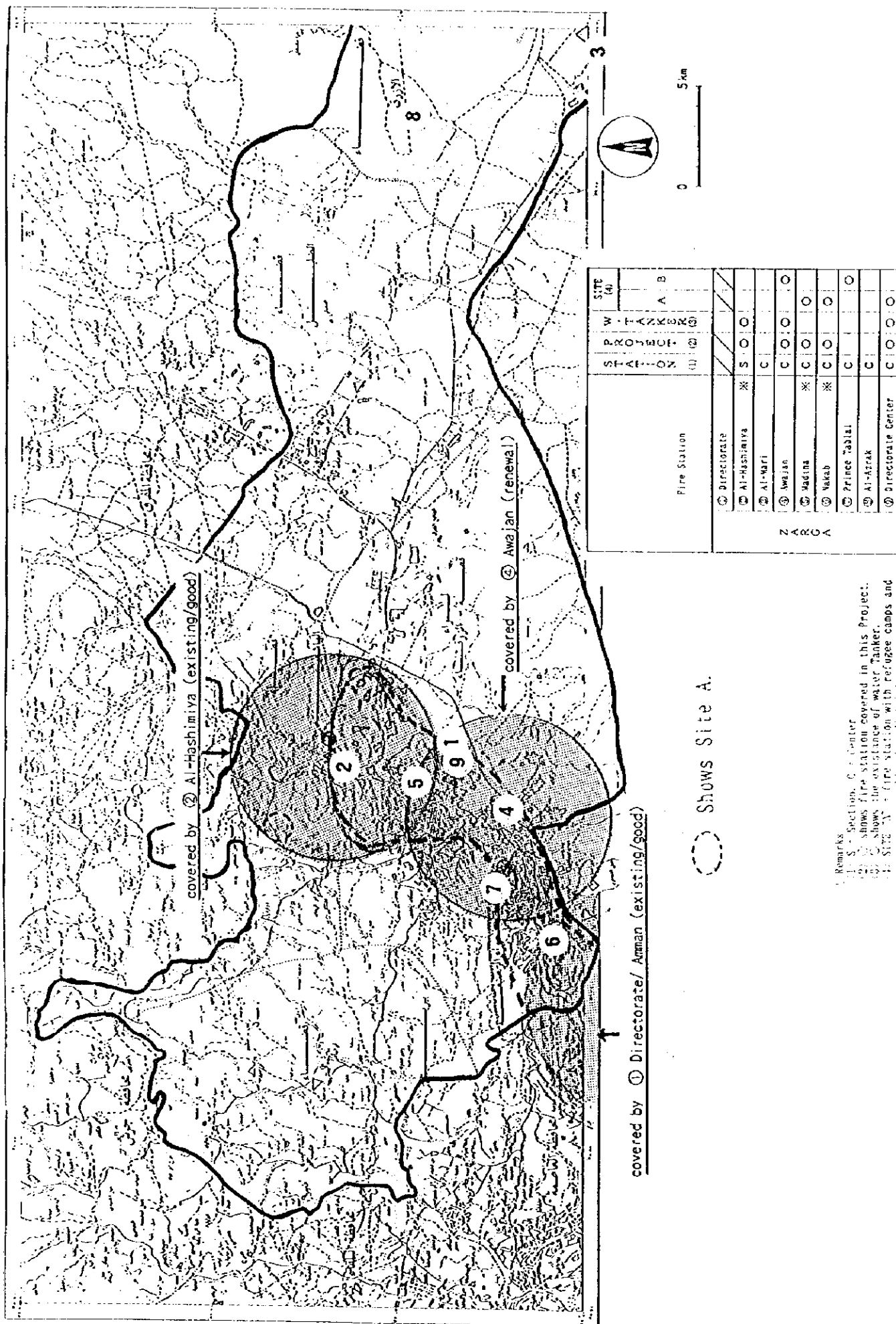


Fig. 2-4 Covered Area by Water Tanker (MADABA)



Remarks:  
 1. S = Section, C = Center.  
 2. Shows fire station covered in this project.  
 3. Shows the existence of water tanker.  
 4. Shows the existence of water tanker.  
 5. Shows the existence of water tanker.  
 6. Shows the existence of water tanker.  
 7. Shows the existence of water tanker.  
 8. Shows the existence of water tanker.  
 9. Shows the existence of water tanker.

Fig. 2-5 Covered Area by Water Tanker (ZARGA)

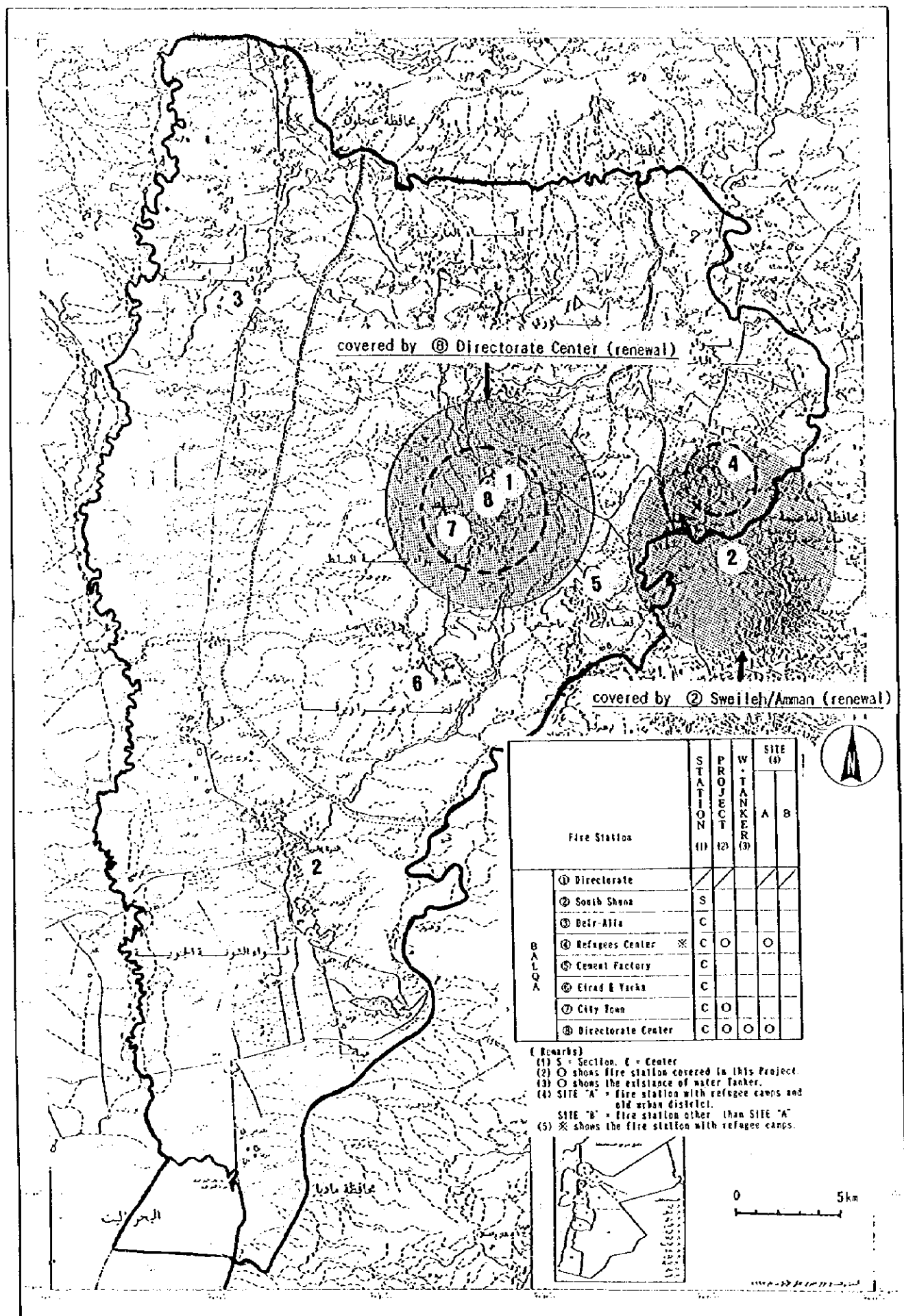


Fig. 2-6 Covered Area by Water Tanker (BALQA)

Table 2-15 Fire Fighting Truck

|   |   |   |        |
|---|---|---|--------|
| <b>1. Chassis</b>   |   | <b>8. Equipment</b>   |        |
| (1)Dimensions   | : Overall length approx. 8,500~9,000                  | (1) Suction hose, 100mm x 2.5 m   | 1 set  |
|   | : Overall width approx. 2,400                         | (2) Suction strainer  | 1      |
|   | : Overall height approx. 3,200                        | (3) Delivery hose (dual covered)  |        |
|   | : Wheelbase approx. 4,700                             | a) 65mm x 25m   | 5      |
| (2) Weight  | : Gross weight approx. 17,000kg                       | b) 38mm x 20m   | 5      |
| (3) Engine  | : Diesel not less than 240ps at 2,200 r.p.m.          | (4) Water nozzle  |        |
| (4) Driving mode  | : 4 x 2 (Rear wheel drive)                            | a) Variable nozzle with 65mm BS coupling  | 2      |
| (5) Steering mode   | : Left hand drive (Power assisted)                    | b) Deluge set (nozzle tip-23mm, 26mm)   | 1      |
| (6) Cabin   | : Double cabin, All steel, Forward control type       | (5) Foam nozzle 400 L/min (with foam mixing equipment)                                | 2      |
| (7) Seating capacity  | : 6 persons (including driver)                        | (6) Divider   | 2      |
| (8) Transmission  | : Manual type, forward 5 reverse 1                    | (7) Light alloy 3-section extension ladder (length 11.5m)                             | 1      |
| <b>2. Pump</b>  |   | (8) Portable search-light set (Generator, tripod, cord reel, search light)            | 1 set  |
| (1) Water pump  | : 2 stage centrifugal pump                            | (9) Portable winch with wire  | 1      |
| (2) Performance   | : not less than 2,800L/min. at 10.5kg/cm <sup>2</sup> | (10) Tools  |        |
|   | : not less than 250L/min. at 40.0kg/cm <sup>2</sup>   | a) Fire axe   | 1      |
| (3) Priming pump  | : 650mmHg within 30 sec.                              | b) Fire bar   | 1      |
| (4) Suction inlet   | : 100mm x 1pc. with BS coupling                       | c) Fire pike  | 1      |
| (5) Delivery outlet   | : 65mm x not less than 2pc. with BS coupling          | d) Wire cutter  | 1      |
| <b>3. Water tank</b>  |   | e) Hammer   | 1      |
| (1) Material  | : All steel type, Square type                         | f) Shovel (square)  | 3      |
| (2) Tank volume   | : not less than 4,500L                                | g) Multipurpose axe (steel)   | 3      |
| <b>4. Foam liquid tank</b>  |   | (11) Fire extinguisher (Dry chemical 6 kg)  | 1      |
| (1) Material  | : Stainless steel or FPR, square type                 | (12) Hand light (Battery Charge type)   | 3      |
| (2) Tank volume   | : not less than 500 L                                 | (13) Fire suits set (Fire suits, helmet, glove, boots, safety-belt)                   | 4 sets |
| (3) Foam mixing system  | : Around the pump proportioner type                   | (14) Air-breathing apparatus (300 kg/cm <sup>2</sup> ) (with each one spare cylinder) | 3 sets |
| Mixing ratio  | : 3 % ~ 6 %   | (15) Heat-resistive firecoat  | 2 sets |
| <b>5. Turret</b>  |   | (16) Hydraulic rescue equipment   | 1 sets |
| (1) Manual type, one (1) on the front deck of the body with foam nozzle |   | <b>9. Accessories</b>   |        |
| (2) Performance; not less than 2,000L/min. at 14kg/cm <sup>2</sup>      |   | (1) Spare tire (not mounted)  | 1      |
| <b>6. High pressure booster hose reel</b>                               |   | (2) Wheel stopper   | 2      |
| (1) One (1), provided in each rear side of the vehicle (Total two)      |   | (3) Chassis standard tool set with toolbox  | 1 set  |
| (2) 25mm x 30m with variable nozzle                                     |   | (4) Tirechain   | 1 set  |
| <b>7. Attachment</b>  |   | (5) Other standard accessories  | 1 set  |
| (1) Multi flash beacon light (Bar-type)                                 | 1   | <b>10. Vehicle paint: Red color</b>   |        |
| (2) Electronic siren and public address system                          | 1 set   |   |        |
| (3) Search light  | 2   |   |        |
| (4) Fixed device of Air-breathing apparatus                             | 3   |   |        |

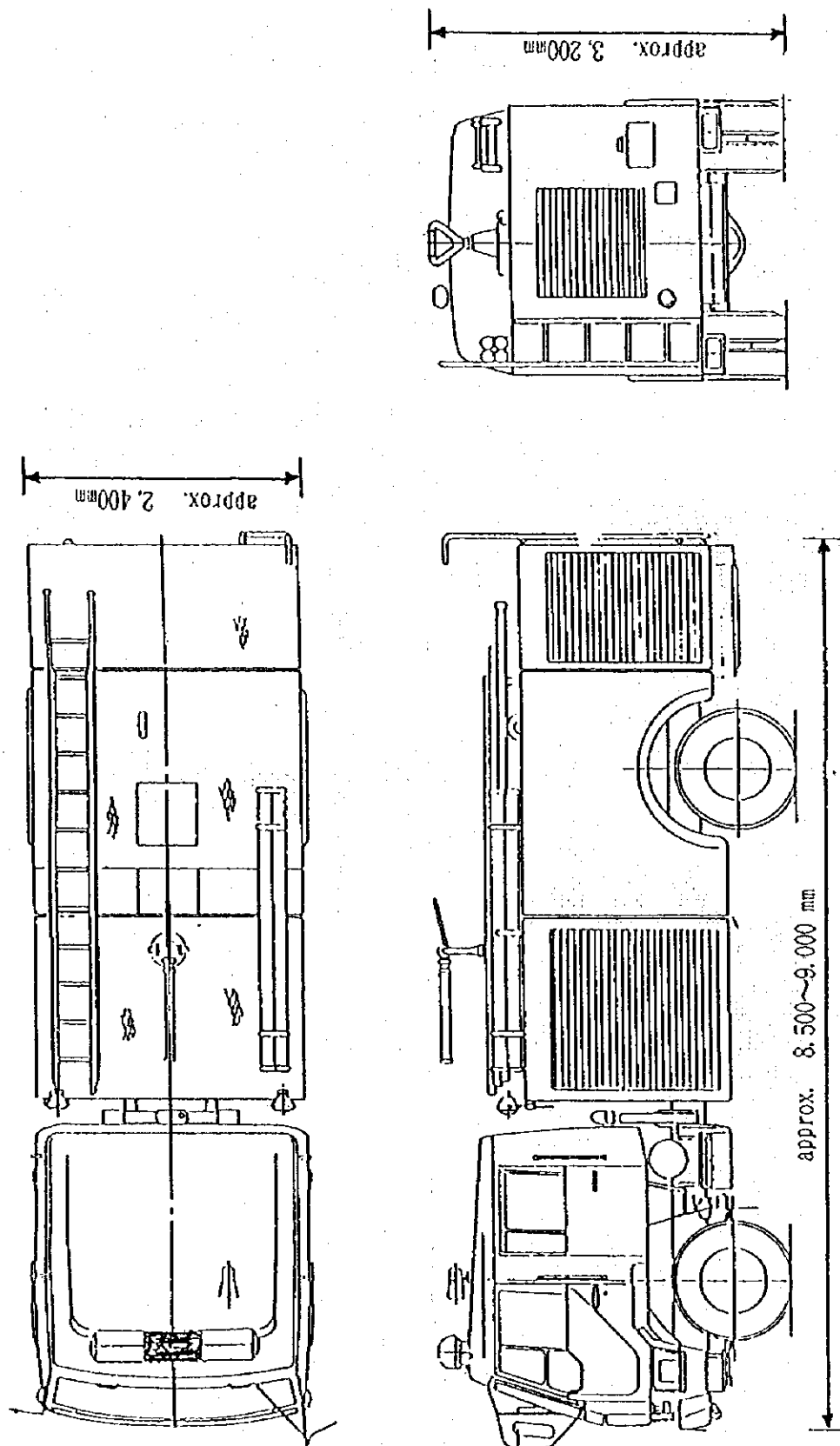


Fig. 2-7 Fire Fighting Truck

Table 2-16 R.I.V. (with Water Tank)

|   |  |   |        |
|---|--|---|--------|
| <b>1. Chassis</b>                               |  | <b>5. Equipment</b>   |        |
| (1) Dimensions                                  | : Overall length approx. 5,400mm<br>: Overall width approx. 2,000mm<br>: Overall height approx. 2,500mm<br>: Wheelbase approx. 2,800mm | (1) Suction hose, 75 mm x 2.5 m   | 4      |
| (2) Weight                                      | : Gross weight no more than 5,000kg  | (2) Suction strainer  | 1      |
| (3) Engine                                      | : Diesel not less than 110ps at 3,500 r.p.m.   | (3) Delivery hose (38mm x 20m) (dual covered)   | 5      |
| (4) Driving mode                                | : 4 x 4 (All wheel drive)  | (4) Variable nozzle tip (100~500L/min.)   | 2      |
| (5) Steering mode                               | : Left hand drive (Power assisted)   | (5) Divider   | 1      |
| (6) Cabin                                       | : Single cabin. Tilting device<br>All steel, Forward control type  | (6) Hydraulic rescue equipment  | 3 sets |
| (7) Seating capacity                            | : 3 persons (including driver)   | (7) Fire extinguisher (Dry-chemical 6kg)  | 2      |
| (8) Transmission                                | : Manual type, forward 5 reverse 1   | (8) Multipurpose axe (steel)  | 2      |
| <b>2. Pump</b>                                  |  | (9) Wire cutter   | 1      |
| (1) Water pump                                  | : Provided at rear of the vehicle<br>Independent engine type   | (10) Fire suits set<br>(Fire suits, helmet, glove, boots, safety-belt)                  | 3 sets |
| (2) Performance                                 | : not less than 1400L/min at 5.5kg/cm <sup>2</sup><br>not less than 1200L/min at 8.0kg/cm <sup>2</sup>                                 | (11) Light alloy 2-section extension ladder (length 6m)                                 | 1      |
| (3) Suction inlet                               | : 75mm x 1 pc. with cap  | (12) Air-breathing apparatus (300kg/cm <sup>2</sup> )<br>(with each one spare cylinder) | 2 sets |
| (4) Delivery outlet                             | : 65mm x 1 pc. with BS coupling  | (13) Hand light (Battery charge type)   | 2      |
| (5) Engine type                                 | : Gasoline engine (Water-cooled)   | (14) Hand loud speaker  | 1      |
| <b>3. Water tank</b>                            |  | (15) Fire bar   | 1      |
| (1) Material                                    | : All steel, Square type   | (16) Fire axe   | 1      |
| (2) Tank volume                                 | : 800 L  | (17) Fire pike  | 1      |
| <b>4. Attachment</b>                            |  | <b>6. Accessories</b>   |        |
| (1) Multi flash beacon light (Bar-type)         | 1  | (1) Spare tire (not mounted)  | 1      |
| (2) Electronic siren with public address system | 1 set  | (2) Wheel stopper   | 2      |
| (3) Search light                                | 1  | (3) Chassis standard tool set with toolbox  | 1 set  |
|   |  | (4) Tire chain  | 1 set  |
|   |  | (5) Other standard accessories  | 1 set  |

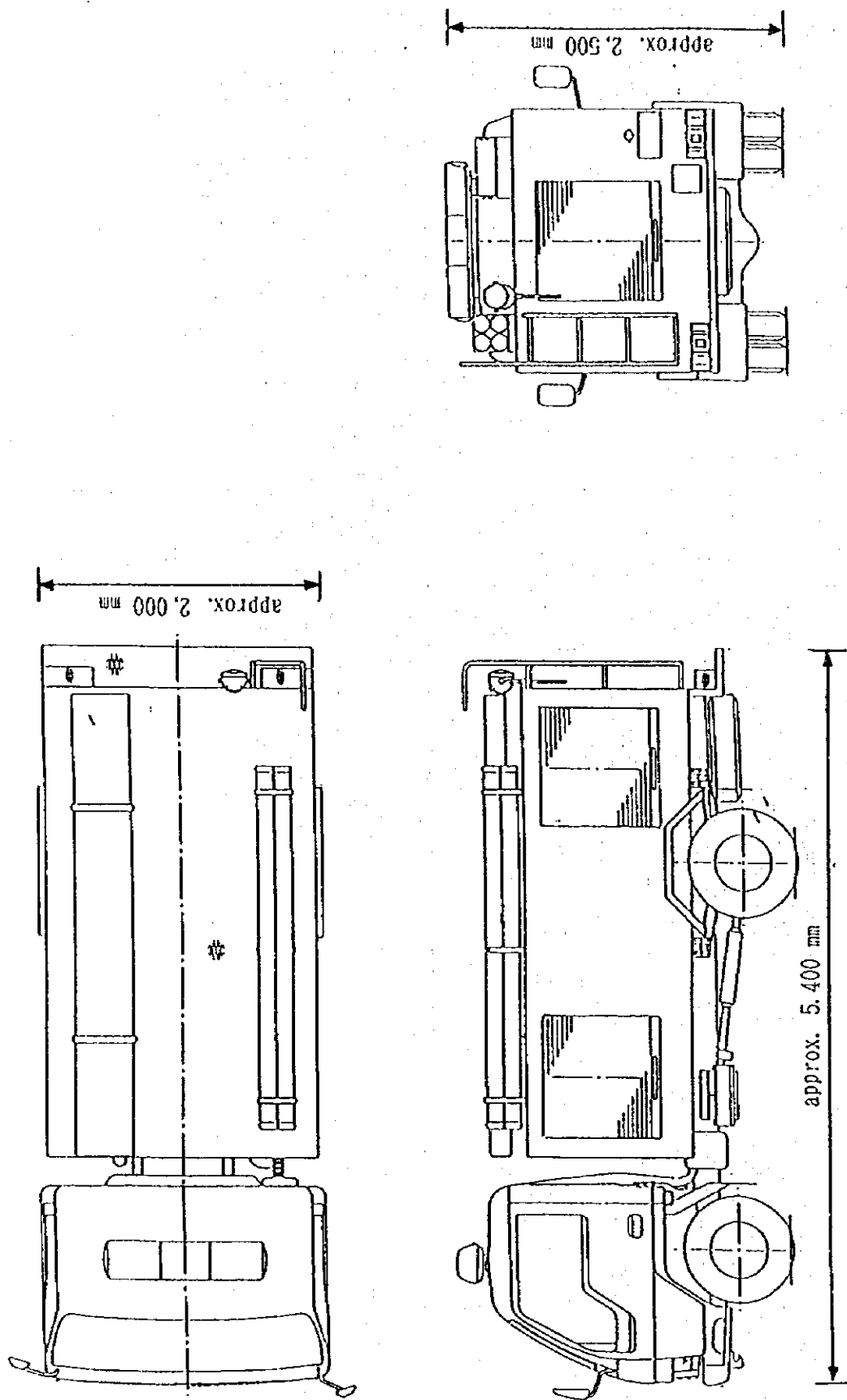


Fig. 2-8 R.I.V. (with Water Tank)



Table 2-17 Ambulance (Wagon Type)

|  |   |   |       |
|--|---|---|-------|
| <b>1. Chassis</b>  |   | <b>3. Equipment</b>                                     |       |
| (1) Dimensions   | : Overall length not less than 4,400mm                            | (1) Main cot stretcher with safety belts                | 1     |
|  | : Overall width not less than 1,650mm                             | (2) Sub-stretcher(Folding type)                         | 1     |
|  | : Overall height approx. 2,400mm                                  | (3) Scoop stretcher                                     | 1     |
|  | : Wheelbase approx. 2,300mm                                       | (4) Oxygen resuscitator                                 | 1 set |
| (2) Weight   | : Gross weight approx. 2,400kg                                    | (5) Manual resuscitator set                             | 1 set |
| (3) Engine   | : Gasoline (not less than 100 ps) or Diesel (not less than 70 ps) | (6) Portable electric suction pump                      | 1     |
| (4) Driving mode   | : 4 x 4 (All wheel drive)   | (7) Searchlight with extension (Magnet type)            | 1     |
| (5) Steering mode  | : Left hand drive (power assisted)                                | (8) Back board (Long and short)                         | 1 set |
| (6) Seating capacity   | : not less than 5 persons (including assistant seat)              | (9) CPR board   | 1     |
| (7) Transmission   | : Manual type, forward 4 reverse 1                                | (10) Vacuum splints                                     | 1 set |
| <b>2. Attachment</b>   |   | (11) Ring cutter  | 1     |
| (1) Multi flash beacon light(bar type-red & blue) on the front | 1   | (12) Patient wrapping sheet                             | 1 set |
| (2) Red rotation lamp at the rear                              | 1   | (13) First aid kit                                      | 1 set |
| (3) Air conditioner  | 1 set   | (14) Multipurpose axe (steel)                           | 1     |
| (4) Illuminated ambulance signboard                            | 1 set   | (15) Hand light (Battery charge type)                   | 1     |
| (5) Electric siren with public address system                  | 1 set   | (16) Sponge cervical collar                             | 1     |
| (6) Medical cabinet with water tank & basin                    | 1 set   | (17) Airway   | 1 set |
| (7) Electric exhaust ventilation                               | 1   | (18) Sterile obstetric kit                              | 1 set |
| (8) Lamp for patient area                                      | 1 set   | (19) Ice pack   | 1 set |
| (9) Rear step (wide type)                                      | 1   | <b>4. Accessories</b>                                   |       |
| (10) Frosted glass   | 1 set   | (1) Chassis standard tool set with toolbox              | 1 set |
| (11) Net shelf   | 1 set   | (2) Spare tire  | 1     |
| (12) Assist grip   | 1 set   | (3) Tire chain  | 1 set |
|  |   | (4) Other standard accessories                          | 1 set |
|  |   | <b>5. Vehicle paint: White color with Name and Logo</b> |       |

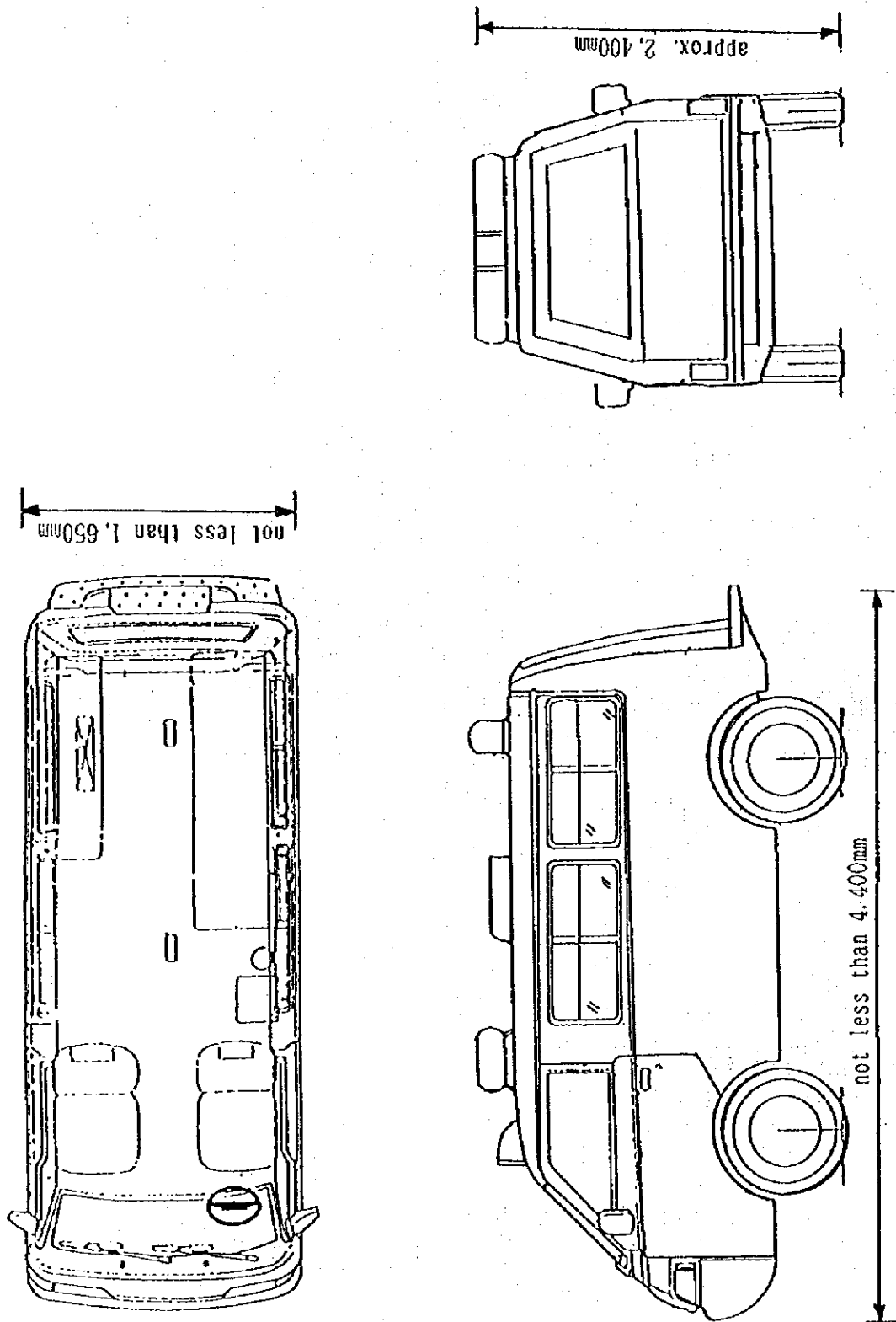


Fig. 2-9 Ambulance

Table 2-18 Water Tanker

|   |  |  |        |
|---|--|--|--------|
| <b>1. Chassis</b>                               |  | <b>5. Equipment</b>  |        |
| (1) Dimensions                                  | : Overall length approx. 9,200mm<br>: Overall width approx. 2,500mm<br>: Overall height approx. 3,100mm<br>: Wheelbase approx. 5,500mm | (1) Suction hose 75 mm x 2.5 m   | 4      |
| (2) Weight                                      | : Gross weight no more than 25,000kg   | (2) Suction strainer   | 1      |
| (3) Engine                                      | : Diesel not less than 300ps at 2,200 r.p.m.   | (3) Delivery hose 65 mm x 25 m   | 5      |
| (4) Driving mode                                | : 6 x 4 (Rear four wheel drive)  | (4) Variable nozzle  | 2      |
| (5) Steering mode                               | : Left hand drive (Power assisted)   | (5) Multipurpose axe (steel)   | 2      |
| (6) Cabin                                       | : Single cabin, All steel, Forward control type  | (6) Fire bar   | 1      |
| (7) Seating capacity                            | : 3 persons (including driver)   | (7) Hand light (Battery charge type)                                   | 1      |
| (8) Transmission                                | : Manual type, forward 6 reverse 1   | (8) Wire cutter  | 1      |
| <b>2. Pump</b>                                  |  | (9) Fire Extinguisher (Dry chemical 6kg)                               | 1      |
| (1) Water pump                                  | : Provided at rear of the vehicle<br>Independent engine type   | (10) Fire suits set<br>(Fire suits, helmet, glove, boots, safety-belt) | 2 sets |
| (2) Performance                                 | : not less than 1,200L/min at 8kg/cm <sup>2</sup><br>not less than 850L/min at 10kg/cm <sup>2</sup>                                    | <b>6. Accessories</b>  |        |
| (3) Suction inlet                               | : 75 mm x 1 pc. with BS coupling and cap   | (1) Spare tire   | 1      |
| (4) Delivery outlet                             | : 65 mm with BS coupling x 2pc. with cock  | (2) Wheel stopper  | 2      |
| (5) Engine type                                 | : Gasoline engine (water-cooled)   | (3) Chassis standard tool set with toolbox                             | 1 set  |
| <b>3. Water tank</b>                            |  | (4) Tire chain   | 1 set  |
| (1) Material                                    | : Steel, Oval type   | (5) Other standard accessories   | 1 set  |
| (2) Tank volume                                 | : 12,000 L   |  |        |
| (3) Water tap                                   | : Four (4) water taps for drinking are provided with each side of the tank (Total 8)   |  |        |
| <b>4. Attachment</b>                            |  |  |        |
| (1) Multi flash beakon light (Bar-type)         | 1  |  |        |
| (2) Electronic siren with public address system | 1 set  |  |        |
| (3) Search light (rear 2, front 1)              | 3  |  |        |
| (4) Equipment locker (Aluminium roller shutter) | 2  |  |        |

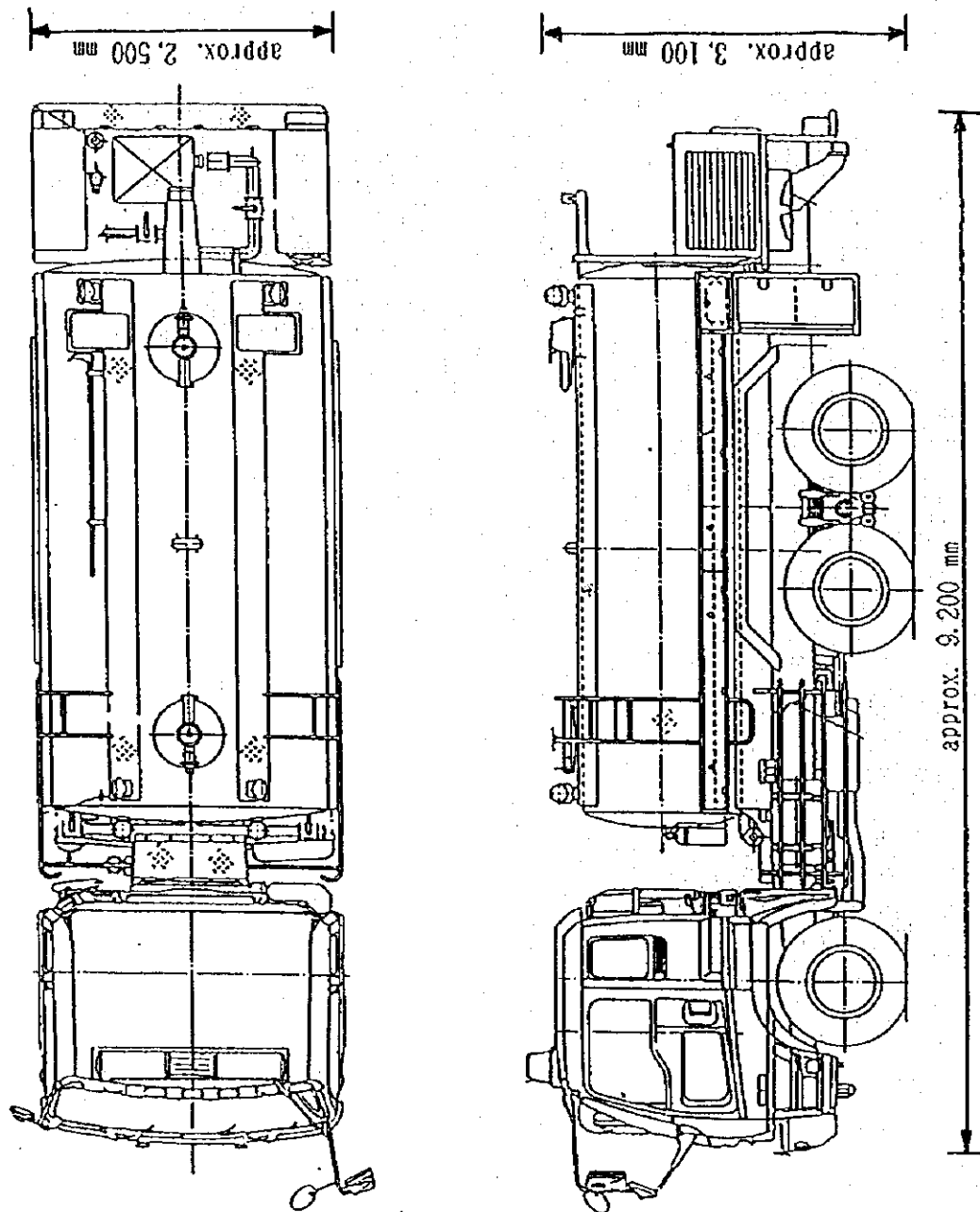


Fig. 2-10 Water Tanker

## **CHAPTER 3 IMPLEMENTATION PLAN**

# CHAPIN PATENT

FOR THE IMPROVEMENT OF THE

MANUFACTURE OF

IRON AND STEEL

IN THE

STATE OF

NEW YORK

IN SENATE

AND ASSEMBLY

OF THE

STATE OF

NEW YORK

IN SENATE

AND ASSEMBLY

OF THE

STATE OF

NEW YORK

## **CHAPTER 3 IMPLEMENTATION PLAN**

### **3.1 Implementation Plan**

#### **3.1.1 Implementation Concept**

The Project will be implemented under the grant aid scheme of Japan following a cabinet decision by the Government of Japan to approve the Project and the subsequent signing of the Exchange of Notes (E/N) by the Government of Japan and the Government of Jordan.

##### **(1) Implementation Schedule**

In the case of the Project's implementation under the grant aid scheme of Japan, it is expected to take some three months to complete the detailed design and the order placement for vehicles, etc. and a further nine months or so to complete the manufacture, transportation and guidance on vehicle handling given the special nature of the vehicles.

##### **(2) Procurement Order Placement Method**

A vehicle supplier will be selected from among Japanese trading companies through open competitive bidding for a lump sum contract.

##### **(3) Implementation System on Jordanian Side**

The project implementation body on the Jordanian side is the Civil Defence and the Civil Defence Director has established a special committee consisting of the head of six departments. This special committee will be responsible for the implementation of the Project at all stages.

##### **(4) Work Implementation System**

###### **1) Consultant**

The consultancy work for the Project will mainly be conducted by a team of three specialists: chief consultant, mechanical (vehicle) engineer and cost estimator. Because installation work is not involved in the Project, it will be unnecessary for the consultant to dispatch engineers to Jordan. However, engineers will be dispatched to the vehicle manufacturer(s) to inspect the vehicles under manufacture, to conduct the pre-delivery inspection and to

supervise the final delivery and training in Jordan to ensure the delivery of vehicles, etc. meeting the required specifications and quality to Jordan within the predetermined project implementation period.

**2) Equipment Supplier**

As soon as the planned vehicles and equipment arrive in Jordan, the equipment supplier will dispatch to Jordan a specialist engineer in fire-fighting trucks, RIVs with a water tank and water tankers for 20 days and another specialist engineer in ambulances for 15 days with a view to providing guidance on the operation and maintenance of these vehicles and equipment for staff members of the Civil Defence.

**3.1.2 Implementation Conditions**

The consultant must pay particular attention to schedule control as the manufacturing period of the vehicles, which only commences with order placement, will require as long as seven months.

**3.1.3 Scope of Works**

The scope of the respective work for which the Government of Japan and the Government of Jordan are responsible for the Project is outlined below.

**(1) Scope of Work for the Government of Japan**

- 1) Procurement cost of the vehicles and equipment to be provided under the Project
- 2) Transportation cost of the vehicles and equipment to be provided under the Project to the landing port in Jordan
- 3) Guidance on the use of the vehicles and equipment to be provided under the Project and the cost of such guidance

**(2) Scope of Work for the Government of Jordan**

- 1) Preparation and provision of the facilities and sites required to base or install the vehicles/equipment to be provided under the Project
- 2) Provision of a temporary storage site(s) for the vehicles and equipment to be provided under the Project



- 3) Landing of the said vehicles and equipment at a Jordanian port and their subsequent customs clearance and domestic transportation
- 4) Provision of all conveniences required to conduct the various work in Jordan in accordance with the verified agreement to implement the grant aid project
- 5) Exemption of the vehicles and equipment and Japanese nationals (and Japanese companies) entering Jordan in accordance with the verified agreements to implement the grant aid project from customs duties and all other domestic taxes
- 6) Assignment of personnel to man the said vehicles and equipment
- 7) Payment of the following costs
  - i) Bank commission arising from the banking agreement (B/A)
  - ii) Costs associated with tax exemption and import procedure
  - iii) Maintenance cost of the said vehicles and equipment

#### **3.1.4 Consultant Supervision**

The consultant, which is an incorporated Japanese company recommended by JICA in accordance with Japan's grant aid scheme, will conclude a consultancy agreement with the Jordanian project implementation body, i.e. the Civil Defence, and will then conduct the detailed design for the Project and the work supervision.

In conducting the work supervision, the consultant will ensure the procurement of the vehicles and equipment in accordance with the detailed design documents and will provide fair guidance, advice and coordination so that the equipment supply agreement is properly carried out. The actual contents of the work supervision are outlined below.

##### **(1) Assistance for Tender for and Signing of Equipment Procurement Agreement**

The consultant will prepare the tender documents required for the selection of the equipment supplier and will conduct such tender-related work as announcement of the tender, distribution of tender documents, acceptance of bidding documents and evaluation of bids. The consultant will also provide advice to the Civil Defence in regard to the equipment supply agreement.

(2) Review and Approval of Shop Drawings, etc.

The consultant will review the shop drawings and various documents submitted by the equipment supplier and approve them if they are found to be satisfactory.

(3) Factory Inspection

The consultant will conduct the on-site inspection of the factories manufacturing the contracted vehicles and equipment if such inspection is deemed necessary with a view to confirming the quality and performance as required by the agreement.

(4) Witnessing of Equipment Delivery

The consultant will witness the delivery inspection of the vehicles and equipment by the Civil Defence, confirm the completion of delivery and obtain certificates of completion from the Jordanian side for the consultant and equipment supplier.

(5) Advice and Guidance for Vehicle/Equipment Operation

The consultant will provide advice and guidance on the planning and contents, etc. of the programme to be prepared and implemented by the equipment supplier to teach the staff members and engineers of the Civil Defence how to operate/handle the vehicles and equipment after their delivery.

### **3.1.5 Procurement Plan**

In principle, the equipment to be procured under Japan's grant aid scheme must be that manufactured either in Japan or the recipient country (Jordan). However, as it is possible for equipment manufactured in a third country to be procured provided that both the Government of Japan and the government of the recipient country (Jordan) find such procurement necessary, the feasibility of procurement from a third country has been studied.

At present, 189 fire vehicles are in use in the Amman municipality and its suburbs, consisting of 126 European (Germany and France, etc.) vehicles (67%), 58 Japanese vehicles (31%) and five South Korean vehicles (2%). From the viewpoint of maintenance, while European and Japanese manufacturers provide a reliable after-service system through local agents, the procurement of spare parts for South Korean vehicles appears difficult due to the lack of such an after-service system.

From the viewpoint of transportation, Jordan is geographically very near to Europe as any import from a European country only takes a few days maritime transportation after road transportation to a port in Italy. Under these circumstances, Europe is judged to be suitable for procurement from a third country if third country products are found necessary. The findings of visits to and study on local agents of European manufacturers and German manufacturers are shown in Table 3-1 - Results of Study on Third Country Manufacturers, all of which are found to be reliable.

As the planned vehicles and equipment are not manufactured in Jordan, candidate countries for procurement are Japan, Germany and France. If procurement from a third country is opted for, the Government of Japan and the Government of Jordan will complete the necessary formalities after signing of the E/N.






Table 3-1 Results of Study on Third Country Manufacturers

| No. | Study Item  | Ziegler<br>(Germany)  | Magirus<br>(Germany)  | Sides<br>(France)   | Benz<br>(Germany)  | Miesen<br>(Germany)   |
|-----|---|---|---|---|--|---|
| 1   | Past business experience in Jordan                                    | Yes   | Yes   | Yes   | Yes  | Yes   |
| 2   | Interest in business in Jordan  | Yes<br>Has exported many fire vehicles to Jordan, has indepth knowledge of the Jordanian situation and is very interested | Yes<br>Has exported some fire vehicles to Jordan in the past and is very interested | Yes<br>Is related to Angus of the UK which has exported some fire vehicles to Jordan in the past and is interested as Sides has fire vehicle division | Yes<br>Has an agent in Jordan, has exported fire vehicles to Jordan in the past and is interested, offering a reliable after-service | Yes<br>Has exported ambulances to Jordan in the past and is very interested                 |
| 3   | Agent in Jordan<br>① Name<br>② Location<br>③ Facilities<br>④ Manpower | Yes<br>The agent of Benz is used as most parts of the chassis are made by Benz  | Yes<br>① Jerusalem Co.<br>② Amman<br>③ Workshop<br>④ 30                             | Yes<br>① Huzaima Nasser Partners Co.<br>② PO Box 9150, Amman<br>③ Workshop<br>④ 12  | Yes<br>① T.Gargoura & Fils Co.<br>② PO Box 419, Amman<br>③ Sales office & workshop<br>④ 170  | Yes<br>① T.Gargoura & Fils Co.<br>② PO Box 419, Amman<br>③ Sales office & workshop<br>④ 170 |
| 4   | After-service and parts supply systems in Jordan                      | As above  | Good parts supply system as it is part of the IVECO Group, a truck manufacturer     | As above  | As above   | As above  |
| 5   | Quality control and production control at manufacturing plant         | Reliable  | Reliable<br>(ISO 9001 certified)  | Reliable<br>(ISO 9001 certified)  | Reliable<br>(ISO 9001 certified)   | Reliable<br>(ISO 9001 certified)  |

### 3.1.6 Implementation Schedule

The implementation schedule following the signing of the E/N regarding the implementation of the Project will consist of two stages, i.e. preparation of the detailed design and equipment procurement. The implementation schedule is shown in Table 3-2.

Table 3-2 Project Implementation Schedule

| No. of Month               | 1   | 2   | 3   | 4  | 5 | 6 | 7 | 8 | 9                  | 10  | 11 | 12 |
|----------------------------|---|---|---|--|---|---|---|---|--------------------|---|----|----|
| Implementa-<br>tion Design |  | (Field study)   |   |  |   |   |   |   |                    |   |    |    |
|                            |   |  | (Work in Japan)   |  |   |   |   |   |                    |   |    |    |
|                            |   |   |  | (Tender & Contracting with supplier)   |   |   |   |   |                    |   |    |    |
|                            |   |   |   |  |   |   |   |   |                    | Total : 3.0 months  |    |    |
| Equipment &<br>Procurement |   |   |   |  |   |   |   |   |                    |   |    |    |
|                            |   |   |   |  |   |   |   |   |                    |   |    |    |
|                            |   |   |   |  |   |   |   |   |                    | (Transportation)  |    |    |
|                            |   |   |   |  |   |   |   |   |                    |  |    |    |
|                            |   |   |   |  |   |   |   |   |                    | (Operation guidance)  |    |    |
|                            |   |   |   |  |   |   |   |   | Total : 9.0 months |   |    |    |

### **3.1.7 Obligations of Government of Jordan**

The scope of work for the Jordanian side has already been described in 3.1.3 and the details of such work are given below.

- (1) To complete the relocation of the existing vehicles, facilities and civil work required prior to the deployment/installation of the vehicles and equipment and settings.
- (2) To provide facilities for the distribution of electricity, water supply, telephone, drainage, sewage and other incidental items required for the Project.
- (3) To ensure proper budgetary allocation for operation and maintenance by the Civil Defence.
- (4) To allocate a sufficient number of trained firemen to the fire stations subject to the Project in order to operate and maintain the vehicles and equipment by the Civil Defence.
- (5) To ensure the proper procurement of the required parts for maintenance purposes by the Civil Defence.
- (6) To provide a garage and warehouse for the secure storage of the vehicles and equipment by the Civil Defence by the time of the delivery of the new vehicles and equipment to the subject fire stations.
- (7) To bear all commissions of the Japanese foreign exchange bank for banking services based on the Banking Arrangements, namely the advising commission of the "Authorisation to Pay" and payment commission.
- (8) To exempt Japanese nationals engaged in the Project from customs duties, internal taxes and other fiscal levies which may be imposed in Jordan.
- (9) To accord those Japanese nationals whose services may be required in connection with the supply of products and services under the verified contracts such facilities as may be necessary for their entry into Jordan and stay therein for the performance of their work in accordance with the relevant laws and regulations of the Hashemite Kingdom of Jordan.
- (10) To secure the necessary permission, licenses and other authorization required for the implementation of the Project.

- (11) To properly and effectively maintain and use the equipment procured under the Project at the responsibility of the Civil Defence.
- (12) To bear all expenses other than those to be borne by the Japanese grant aid within the scope of the Project.
- (13) To ensure prompt unloading and customs clearance at the port of disembarkation in Jordan and prompt internal transportation thereafter of the vehicles and equipment.

### **3.2 Operation and Maintenance Plan**

#### **(1) Operational Issues (Organization, Manpower and Fuel, etc.)**

In principle, the command to dispatch a fire vehicle(s) and/or ambulance(s), including the new vehicles to be provided under the Project, is issued by the command centre of the directorate to the relevant fire station. Needless to say, a company commander and ordinary fire-fighters are simultaneously mobilised. As all the vehicles to be provided under the Project, except for eight RIVs with a water tank, are replacements for existing aged vehicles, the present system should be able to cope with the new fleet strength. Following the implementation of the Project, however, the manpower strength should be increased by 72 fire-fighters to man the new RIVs with a water tank (crew of 3 x 8 RIVs x 3 shifts = 72 persons) at an additional personnel cost of 194,000 JD (annual wage of approximately 2,700 JD x 72; approximately ¥36 million). In fiscal 1997, 100 new fire-fighters have been recruited and are currently undergoing training at a firemen's training college. Funding to recruit an additional 180 fire-fighters (486,000 JD, approximately ¥90 million) has been approved by the Ministry of Finance for fiscal 1988. As the Civil Defence is committed to the priority allocation of manpower to man the new vehicles under the Project, no problems are anticipated in regard to the manning of the new vehicles.

In regard to garages, these are already in place except those for four fire stations. These four missing garages will be constructed by the Jordanian side by the time that the new vehicles are deployed. The construction cost is estimated to be approximately 20,000 JD (approximately ¥3.7 million) which will be met by the maintenance budget of the Civil Defence. The maintenance budget of the Civil Defence for fiscal 1997 is 1,750,000 JD (approximately ¥325 million) and the above construction cost represents a mere 1.1% of the overall maintenance budget which should be easily met.

The increase in fuel consumption by the implementation of the Project will come from the additional RIVs with a water tank and is estimated to be approximately 23,000 litres/year which will cost some 10,000 JD (approximately ¥1.9 million). This figure represents a mere 0.6% of the overall maintenance budget of the Civil Defence of 1,750,000 JD and should, therefore, be easily met.

## (2) Maintenance Issues (Manpower, Spare Parts and Budget)

The maintenance of the new vehicles to be provided under the Project should be sufficiently conducted through regular inspection, maintenance and repair work by the engineers and mechanics of the Civil Defence's workshop, mechanics of the directorates and drivers of the vehicles. The qualification requirements for these positions are shown in Table 3-3 and are deemed sufficient for the proper maintenance of the vehicles in question.

The domestic procurement prospects for spare parts are excellent as all types of spare parts are available in Jordan. The budgetary appropriation by the Civil Defence for spare parts has been steadily increasing and no problems in the future are anticipated in this regard.

Table 3-3 Maintenance Manpower

| Place of Work  | Workshop   |   | Directorate  | Fire Station   |
|--|--|---|--|--|
| Title  | Engineer   | Mechanic  | Engineer   | Driver   |
| Number   | Mechanical: 5<br>Electrical: 2   | 82  | Mechanical: 1<br>Electrical: 1   | 288  |
| Qualifications /<br>Training Experience/<br>Specialist Subject | Graduate with<br>mechanical /<br>electrical /<br>electronic<br>engineering<br>degree | - Mechanic<br>- Electrician<br>- Sheet metal<br>worker/welder<br>- Latheman | Graduate with<br>mechanical /<br>electrical / electronic<br>engineering degree | - High school<br>leaver<br>- Driving license<br>for commercial<br>vehicles<br>(Class 4)<br>- Driver training |

## **CHAPTER 4 PROJECT EVALUATION AND RECOMMENDATION**



## **CHAPTER 4 PROJECT EVALUATION AND RECOMMENDATION**

### **4.1 Project Effect**

#### **(1) Improved Fire and Ambulance Services**

Jordan has a population of 4.44 million with a high population growth rate of 3.5% a year. Most people live in urban areas, particularly in the Amman (capital of Jordan) municipality and its suburbs where some 2.8 million people or two-thirds of the country's total population are concentrated, accelerating the processing of urbanisation in the area. This high population concentration in urban areas has been a contributing factor to the increased number of disasters as well as the increased demand for the ambulance service. In addition, the increased number of large-scale markets, multi-story buildings, hotels and factories as a result of growing socioeconomic activities, coupled with the establishment of refugee camps to accommodate refugees from neighbouring areas, has diversified the types of disasters to be dealt with. Meanwhile, the fire vehicles possessed by the Civil Defence are highly deteriorated, resulting in a noticeable decline of the operation rate. The present fleet is, therefore, not capable of providing an adequate fire service and the damage to both people and assets is increasing.

The implementation of the Project will provide a total of 12 fire-fighting trucks, eight RIVs with a water tank, 11 ambulances and six water tankers for 18 fire stations where the demand for these new vehicles is particularly strong of the 22 fire stations in the Project Area, i.e. the Amman municipality and its suburbs. As a result, the deployment rate by type of vehicle, calculated on the basis of Jordan's vehicle deployment standards, will be 100% for fire-fighting trucks, 100% for RIVs, 98% for ambulances and 30% for water tankers. As water tankers will cover Category A sites with a high risk of fires spreading and human casualties according to the mutual reinforcement, the implementation of the Project will, therefore, greatly contribute to improving the safety of the citizens of the Amman municipality and its suburbs.

#### **(2) Improved Fire Service for Refugee Camps**

Some 60% of Jordan's population are Palestinians and there are approximately 1.1 million Palestinians which are registered as refugees, of which some 260,000 live in refugee camps and receive aid from the UNRWA. These refugee camps are characterised by densely built houses and narrow streets, preventing the access of fire-fighting trucks (the main fire vehicles) to the sites of fire. Narrow body RIVs

without a water tank are currently used to approach fire sites but the portable fire extinguishers which they carry are inadequate to fight fires. With the implementation of the Project, RIVs with a water tank will be deployed at eight fire stations serving refugee camps, establishing an effective initial fire-fighting capability which is vital for fire-fighting activities. As a result, the fire damage to the 260,000 people living in these refugee camps will be reduced.

## **4.2 Recommendation**

The suitability of providing Japanese grant aid for the Project is confirmed by the fact that the Project will not only have significant effects as described above but will also contribute to improving the BHN of people in the Project Area. In regard to the operation and maintenance of the vehicles to be provided under the Project, the Jordanian side is judged to have sufficient manpower and funding capability. However, the objective of the Project will be smoothly and effectively achieved if improvement is made in the following areas.

### **(1) Improved Capability to Deal with Increasing Complexity and Diversity of Disasters**

Socioeconomic progress in Jordan has brought about changes of the urban structure with an increased number of multi-story buildings, large stores and factories of various types, resulting in more complex and diverse disasters. Meanwhile, the country's fire service system has basically remained the same since 1959 when it was first introduced. In the face of more complicated and diverse disasters, it is highly desirable for the Civil Defence to examine effective and efficient methods to deal with such disasters and to improve its firemen training system in the future.

### **(2) Establishment of Fire Water Supply System**

The Amman municipality and its suburbs currently lack fire plugs which are essential for fire-fighting activities and the confinement of fire water supply sources to tanks carried by fire-fighting trucks restricts the scope of fire-fighting activities. Under these circumstances, the further provision of water tankers is planned under the Project. However, the limited tank capacity of these trucks cannot provide a sufficient amount of fire water to deal with large-scale fires involving multi-story buildings, large stores or factories. The introduction of a fire water supply system, such as fire plugs, and a stable supply of fire water to this system will be necessary in the future to secure a sufficient volume of fire water to deal with large-scale fires.

### (3) Effective Operation of Vehicles

At present, the first response to a fire is made by the fire station responsible for the area in which the fire is located on receipt of a command to dispatch a fire company. Any necessity to dispatch a reinforcement team of a fire-fighting truck(s) and/or water tanker(s) in response to a particular type of fire is judged by the first response team. This time lag to confirm the necessity for reinforcement sometimes delays a suitable response, constituting one factor in the spread of damage. The minimisation of disaster damage demands improvement of the vehicle operation method and reinforcement system with the effective use of a radio communication system, including the simultaneous mobilisation of the fire companies of neighbouring fire stations as soon as a disaster occurs, followed by appropriate instructions on the deployment of the arriving companies and expected activities using the radio communication system. To achieve the effective operation of vehicles, the provision of training to improve the fire management capability, including the technical skills, of all people involved in the fire service is desirable in the future. Training at fire service organizations in Japan is also desirable and should prove highly effective.

## **APPENDICES**

## **APPENDIX 1**

### **MEMBER LIST OF THE STUDY TEAM**

#### **1. Basic Design Study**

##### **◆Member of Official side**

|                     |                 |   |
|---------------------|-----------------|---|
| Leader              | Masami OISHI    | Grant Aid Division,<br>Economic Cooperation Bureau,<br>Ministry of Foreign Affairs                            |
| Technical Advisor   | Norio TAKAHASHI | Deputy Director<br>Fire Defence Division,<br>Fire and Disaster Management Agency,<br>Ministry of Home Affairs |
| Project Coordinator | Shigeki FUKUDA  | Follow-up Division,<br>Grant Aid Management Department,<br>Japan International Cooperation Agency             |

##### **◆Member of Consultant side**

|   |                  |   |
|---|------------------|---|
| Chief Consultant /<br>Fire Fighting Planner | Satoru KUTSUNUGI | Fire Protection Equipment and<br>Safety Center of Japan |
| Equipment Planner /<br>Procurement Planner  | Fumio SUEHIRO    | Fire Protection Equipment and<br>Safety Center of Japan |
| Equipment Planner /<br>Procurement Planner  | Mizuhiko TSUNODA | Fire Protection Equipment and<br>Safety Center of Japan |

## **2. Draft Report Consultation**

### **◆Member of Official side**

**Leader**

**Yoshio YABE**

**Leader Resident Representative  
JICA Jordan Office**

### **◆Member of Consultant side**

**Chief Consultant /  
Fire Fighting Planner**

**Satoru KUTSUNUGI**

**Fire Protection Equipment and  
Safety Center of Japan**

**Equipment Planner /  
Procurement Planner**

**Fumio SUEHIRO**

**Fire Protection Equipment and  
Safety Center of Japan**

## APPENDIX 2 SURVEY SCHEDULE

### 1. Basic Design Study

[Period] October 23 ~ November 26, 1997

| No | Date  | OFFICIAL | CONSULTANT  |
|----|-------|----------|---|
| 1  | 10/23 | Thu      | Narita → London   |
| 2  | 24    | Fri      | London → Amman  |
| 3  | 25    | Sat      | Narita → London<br>Courtesy visit & discussion : Civil Defence (CD)   |
| 4  | 26    | Sun      | London → Amman<br>• Courtesy visit : JICA<br>• Discussion : CD  |
| 5  | 27    | Mon      | • Courtesy visit : Ministry of Planning (MOP), JICA, Embassy of Japan (EOJ)<br>• Courtesy visit & discussion : CD                       |
| 6  | 28    | Tue      | Site survey (Fire stations: Amman 2, Madaba 2, Balqa 1, CD workshop)  |
| 7  | 29    | Wed      | Discussion : CD   |
| 8  | 30    | Thu      | Discussion : CD   |
| 9  | 31    | Fri      | Data analysis   |
| 10 | 11/ 1 | Sat      | Discussion : CD   |
| 11 | 2     | Sun      | • Signing on MINUTES<br>• Report : JICA, Embassy of Japan   |
| 12 | 3     | Mon      | Amman → London →  |
| 13 | 4     | Tue      | → Narita<br>Site survey (Fire stations: Amman 1, Zarga 2)   |
| 14 | 5     | Wed      | Data analysis   |
| 15 | 6     | Thu      | Site survey (Fire stations: Zarga 7)  |
| 16 | 7     | Fri      | Site survey (Fire stations: Balqa 7)  |
| 17 | 8     | Sat      | Data analysis   |
| 18 | 9     | Sun      | Site survey (Fire stations: Amman 6)  |
| 19 | 10    | Mon      | Site survey (Fire stations: Amman 4)  |
| 20 | 11    | Tue      | Site survey (Fire stations: Amman 1, Madaba 2)  |
| 21 | 12    | Wed      | Site survey (road condition in Amman)   |
| 22 | 13    | Thu      | Site survey (fire protection equipment in high-rise building and factory)   |
| 23 | 14    | Fri      | Data analysis   |
| 24 | 15    | Sat      | Data analysis   |
| 25 | 16    | Sun      | Site survey (ambulance duties)  |
| 26 | 17    | Mon      | Survey of after-sales service of agents   |
| 27 | 18    | Tue      | • Hearing of licencing of radio wave<br>• Survey of volunteer organization<br>• Site survey (difficult area for fire fighting in Amman) |
| 28 | 19    | Wed      | • Survey of after-sales service of agents (cont'd)<br>• Discussion : CD   |
| 29 | 20    | Thu      | Discussion : CD   |
| 30 | 21    | Fri      | • Discussion : CD<br>• Meeting as to ambulance duties   |
| 31 | 22    | Sat      | Survey of third country<br>Amman → London → Germany   |
| 32 | 23    | Sun      | Data analysis<br>Survey : in Germany  |
| 33 | 24    | Mon      | Discussion : CD<br>Survey : in Germany  |
| 34 | 25    | Tue      | • Final discussion: CD<br>• Report: JICA, EOJ<br>Data analysis  |
| 35 | 26    | Wed      | Survey : in Germany<br>Amman → Frankfurt →<br>Frankfurt →<br>→ Narita   |

## 2. Draft Report Consultation

[Period] January 10 ~ 21, 1998

| No | Date |     | OFFICIAL  | CONSULTANT     |
|----|------|-----|---|----------------|
| 1  | 1/10 | Sat |   | Narita → Paris |
| 2  | 11   | Sun |   | Paris → Amman  |
| 3  | 12   | Mon | Study team meeting  |                |
| 4  | 13   | Tue | <ul style="list-style-type: none"> <li>• Courtesy visit : JICA, Embassy of Japan, Ministry of Planning</li> <li>• Courtesy visit &amp; discussion : Civil Defence (CD)</li> </ul> |                |
| 5  | 14   | Wed | Discussion : CD   |                |
| 6  | 15   | Thu | Site survey (CD workshop, Amman HQ, Refugee camps, Narrow road area)  |                |
| 7  | 16   | Fri | Data analysis   |                |
| 8  | 17   | Sat | Data analysis   |                |
| 9  | 18   | Sun | <ul style="list-style-type: none"> <li>• Signing on MINUTES</li> <li>• Report : JICA, Embassy of Japan</li> </ul>   |                |
| 10 | 19   | Mon |   | Amman → London |
| 11 | 20   | Tue |   | London →       |
| 12 | 21   | Wed |   | → Narita       |



## APPENDIX 3

### LIST OF PARTY CONCERNED IN THE RECIPIENT COUNTRY

#### 1. Basic Design Study

##### ◆ Ministry of Planning

- |                        |  |
|------------------------|--|
| 1) Mr.Salem O. Ghawi   | Assistant Secretary General, International Cooperation |
| 2) Mr.Mustafa Al-Saleh | Director, Bilateral Cooperation Department             |
| 3) Mr.Nael T. Al-Hajaj | Deputy Director, Bilateral Cooperation Department      |
| 4) Mr.Mohammed Mihyar  | Bilateral Cooperation Department                       |

##### ◆ Civil Defence

- |   |  |
|---|--|
| 1) Mr.Deeb Al-Maa'ni                    | Maj-General, Director General                      |
| 2) [Committee members for this Project] |  |
| • Mr.Tawfik y. Al-Hinnawi               | Consultant of C.D.Director General                 |
| • Mr.Mahmoud A. Abbadi                  | Brigadier  |
| • Mr.Nizam Sa'ad                        | Lt. Colonel, Director of Planning & Org. Dept.     |
| • Mr.Ali Nawasreh                       | Manager of Studies, Research and Development Dept. |
| • Mr.Hasan Al-Ajarman                   | Lt. Colonel, Director of Disasters Dept.           |
| • Mr.Mahmoud Al-Anani                   | Communications Dept.                               |
| 3) Mr. Abed Al Kareem Jabareen          | Director of Fire Prevention Dept.                  |
| 4) [Directorate Chief]                  |  |
| • Mr.Nawwaf Sulaibi                     | Brigadier, Amman Directorate Chief                 |
| • Mr.Adel Mutial Ashqar                 | Colonel, Madaba Directorate Chief                  |
| • Mr.Abdullah Hunaiti                   | Colonel, Zarga Directorate Chief                   |
| • Mr.Saad Arabiat                       | Lt. Colonel, Balqa Directorate Chief               |

##### ◆ Ministry of Health

- |                    |                 |
|--------------------|-----------------|
| 1) Mr.Adnan Abbas  | Deputy Minister |
| 2) Mr.Nidal Hamdam | Transport Dept. |

##### ◆ Telecommunications Regulatory Commission

- |                          |   |
|--------------------------|---|
| 1) Mr.Mahmoud y. Wreikat | Director of Technical & Licencing Affairs |
|--------------------------|---|

#### ◆ Vehicle Agent in Amman

- 1) [T.Gargour & Fils Co. (Agent for Mercedes-Benz)]
  - Mr.Ibrahim M. Musallam      Assistant General Manager
- 2) [Transjordan Trading Co. Ltd. (Agent for Mitsubishi Motors)]
  - Mr.Farid E. Dawani      Manager
- 3) [Motor Vehicle Trading Co. Ltd. (Agent for Mitsubishi Motors)]
  - Mr.Nabil S. Abu Khader      General Manager
  - Mr.Mazen Abu Khader      Parts Manager

#### ◆ Manufacturers of Third Countries (Germany)

- 1) [Mercedes-Ben AG]
  - Mr.Torsten Hoppe      Sales and Customer Management
  - Mr.Hans Braun      Middle East Commercial Vehicle Sales & Passenger Car Sales
  - Mr.Wolf-Jurgen Gross      Small Truck Factory
  - Mr.Torsten A. Schmidt      Truck Factory
- 2) [Albert Ziegler GmbH & Co. KG]
  - Mr.Franz J. Preuss      Design Dept.
- 3) [Christian Miesen GmbH]
  - Mr.Gerd Holling      General Manager
  - Mr.Arne W. A. Schauer      Export Manager

#### ◆ Embassy of Japan in Jordan

- 1) Mr.Takayuki Kimura      Ambassador
- 2) Mr.Tomoaki Abe      First Secretary

#### ◆ JICA Jordan Office

- 1) Mr.Kiichiro Kuno      Deputy Director
- 2) Ms.Hiroe Ono      Assistant Resident Representative
- 3) Mr.Hani H. Alkurdi      Program Officer

## **2. Draft Report Consultation**

### **◆Ministry of Planning**

- |                        |  |
|------------------------|--|
| 1) Mr.Salem O. Ghawi   | Assistant Secretary General, International Cooperation |
| 2) Mr.Nael T. Al-Hajaj | Deputy Director, Bilateral Cooperation Department      |

### **◆Civill Defence**

- |   |  |
|---|--|
| 1) Mr.Deeb Al-Maa'ni                    | Maj-General, Director General                      |
| 2) [Committee members for this Project] |  |
| • Mr.Tawfik y. Al-Hinnawi               | Consultant of C.D.Director General                 |
| • Mr.Mahmoud A. Abbadi                  | Brigadier  |
| • Mr.Nizam Sa'ad                        | Lt. Colonel, Director of Planning & Org. Dept.     |
| • Mr.Ali Nawasreh                       | Manager of Studies, Research and Development Dept. |
| • Mr.Hasan Al-Ajarman                   | Lt. Colonel, Director of Disasters Dept.           |
| • Mr.Mahmoud Al-Anani                   | Communications Dept.                               |

### **◆Embassy of Japan in Jordan**

- |                   |                 |
|-------------------|-----------------|
| 1) Mr.Tomoaki Abe | First Secretary |
|-------------------|-----------------|

### **◆JICA Jordan Office**

- |                       |                                   |
|-----------------------|-----------------------------------|
| 1) Mr.Masaaki Iwai    | Assistant Resident Representative |
| 2) Mr.Hani H. Alkurdi | Program Officer                   |

**APPENDIX 4**  
**MINUTES OF DISCUSSIONS**  
**MINUTES OF DISCUSSIONS**  
for  
Basic Design Study  
on the Project for Supply of Fire Fighting Equipment  
in the Hashemite Kingdom of Jordan

In response to a request from the Government of the Hashemite Kingdom of Jordan, the Government of Japan decided to conduct a Basic Design Study on the Project for Supply of Fire Fighting Equipment (hereinafter referred to as "the Project"), and entrusted the study to Japan International Cooperation Agency (JICA).

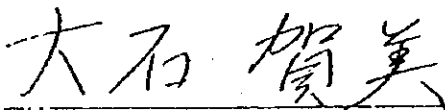
JICA sent to Jordan a study team, which is headed by Ms. Masani OISHI, Grant Aid division, Economic Cooperation Bureau, Ministry of Foreign Affairs, and is scheduled to stay in the country from October 24th to November 25th 1997.

The team held discussions with the officials concerned of the Government of Jordan and conducted a field survey at the study area.

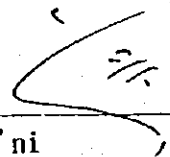
As a result of discussions and field survey, both parties confirmed the main items described on the attached sheets.

The team will proceed to further works and prepare the Basic Design Study Report.

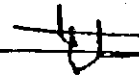
Amman, November 2nd 1997



Masani OISHI  
Leader,  
Basic Design Study Team  
Japan International Cooperation Agency



Decb-Al-Maa'ni  
Director General  
Civil Defence



Salem O. Ghawi  
Assistant Secretary General  
International Cooperation  
Ministry of Planning

## ATTACHMENT

### 1. Objective of the Project

The objective of the Project is to improve the capacity and ability of Fire Fighting Services to protect citizens' life in Amman municipality and its suburbs.

### 2. Project Sites

The Project sites are Amman municipality and its suburbs (Amman, Madaba, Zarga and Balqa), which are shown in Annex-1.

### 3. Responsible and Executing Organization

Civil Defence of Jordan (CD) , Ministry of Interior, which is shown in Annex-2, is the responsible and executing organization of the Project.

### 4. Items Requested by the Jordanian Side

After discussions with the Basic Design Study team, the items listed in Annex-3 were requested by the Jordanian Side.

However, the final components of the Project will be decided after further studies.

### 5. Criteria for Equipment Selection and Design

The equipment will be examined in accordance with the criteria attached as Annex-4.

However, criteria will be added or itemized concretely through further study.

### 6. Japan's Grant Aid Program

1) The Government of Jordan has understood the system of Japanese Grant Aid explained by the Team, described in Annex-5.

2) The Government of Jordan will take the necessary measures, described in Annex-6, for smooth implementation of the Project on condition that Grant Aid assistance by the Government of Japan is extended to the Project.

## 7. Schedule of the Study

- 1) The consultants will proceed to further studies in Jordan until November 25.
- 2) Based on the Minutes of Discussions and technical examination of the study results, JICA will complete the final report and send it to the Government of Jordan around March, 1998.


## 8. Others

### 1) Distribution

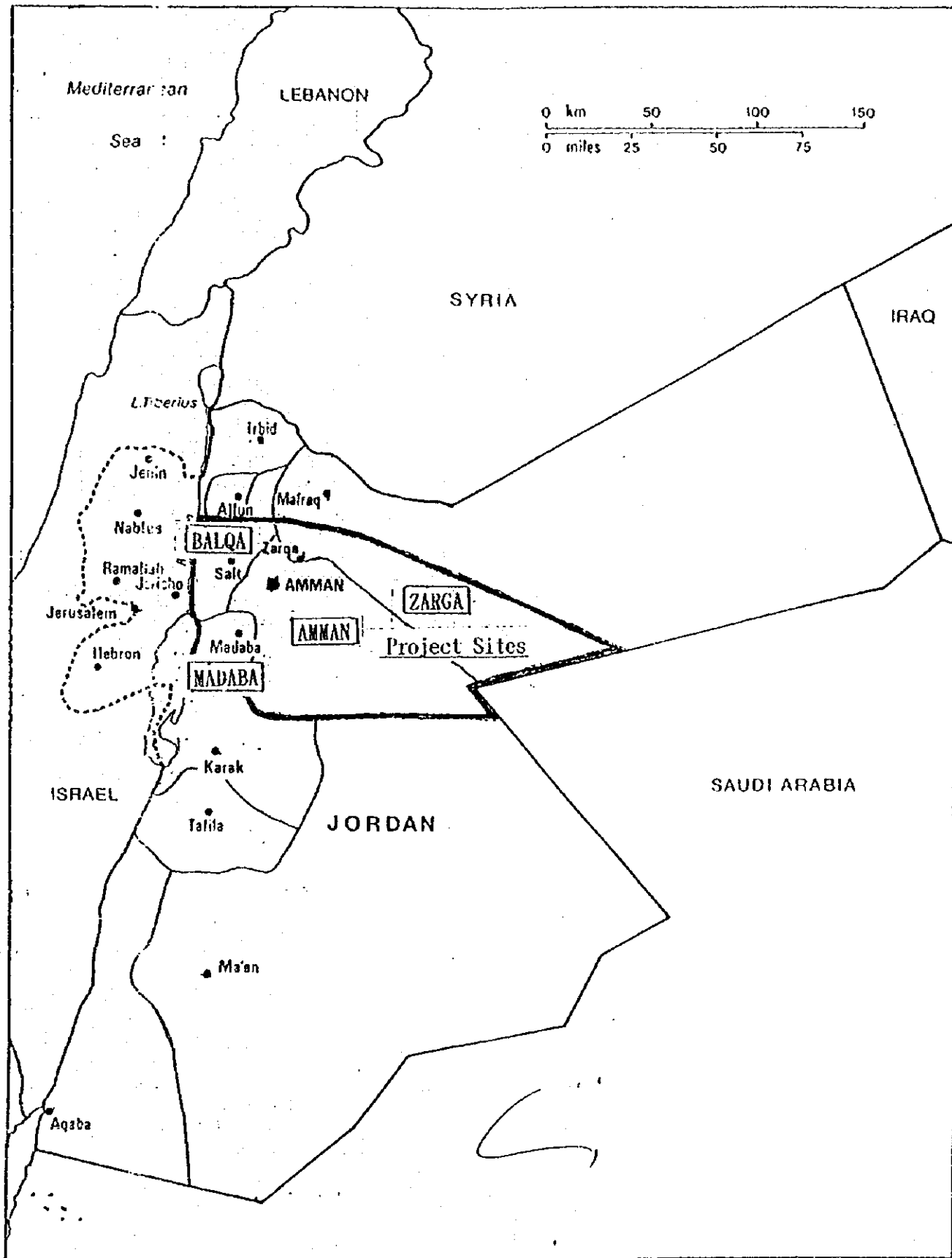
The effective usage and distribution of existing equipment will be examined for the purpose to estimate proper size and distribution of new equipment.

### 2) Ambulance

As for the Ambulance, the demarcation of its usage and operational cooperation system between CD and Ministry of Health and/or hospitals should be clarified during the study carried out by the consultant. According to this clarification, the necessity of the Ambulance may be re considered.



# P R O J E C T   S I T E S



Name of Fire Stations

|        |   |       |  |
|--------|---|-------|--|
| Amman  | ① Directorate<br>② Sweileh<br>③ Sahab<br>④ Qweismeh<br>⑤ Mahatta<br>⑥ Madina (City Center)<br>⑦ Na'aur<br>⑧ Alijeeza<br>⑨ Al-Muwaggar<br>⑩ Manara<br>⑪ Sports City<br>⑫ Jweidah<br>⑬ King Abdallah Garden<br>⑭ Wadi Sir | Zarga | ① Directorate<br>② Al-Ihashimiya<br>③ Al-Mari<br>④ Awajan<br>⑤ Madina<br>⑥ Nakab<br>⑦ Prince Tablal<br>⑧ Al-Azrak<br>⑨ Directorate Center        |
|        |   | Balqa | ① Directorate<br>② Shoth Shuna<br>③ Deir-Alla<br>④ Refugees Center<br>⑤ Cement Factory<br>⑥ Eirad & Yarka<br>⑦ City Town<br>⑧ Directorate Center |
| Madaba | ① Directorate<br>② Dhiban<br>③ Mukavir<br>④ Arced   |       |  |

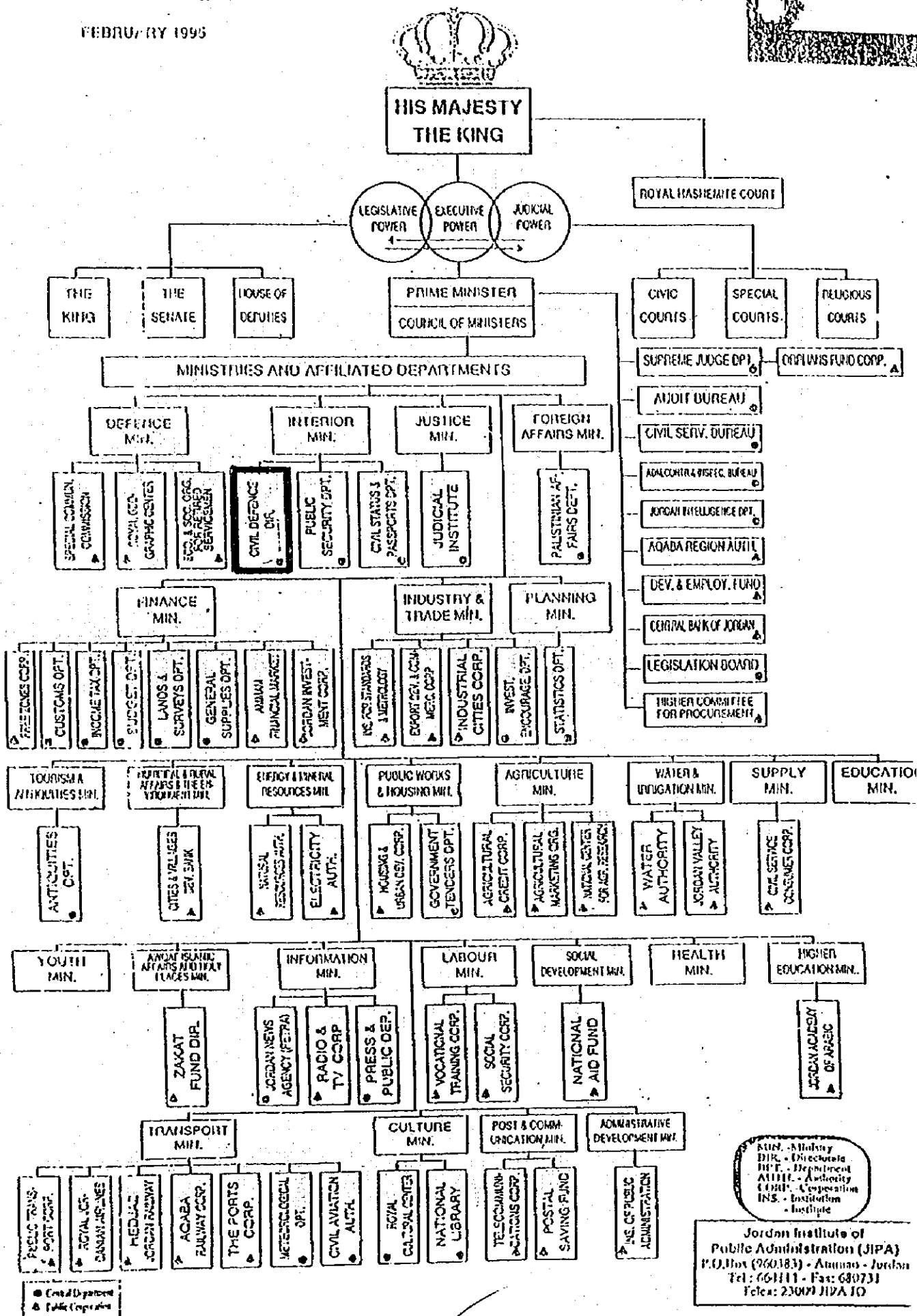
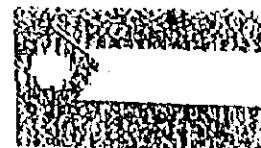


*[Handwritten signature]*

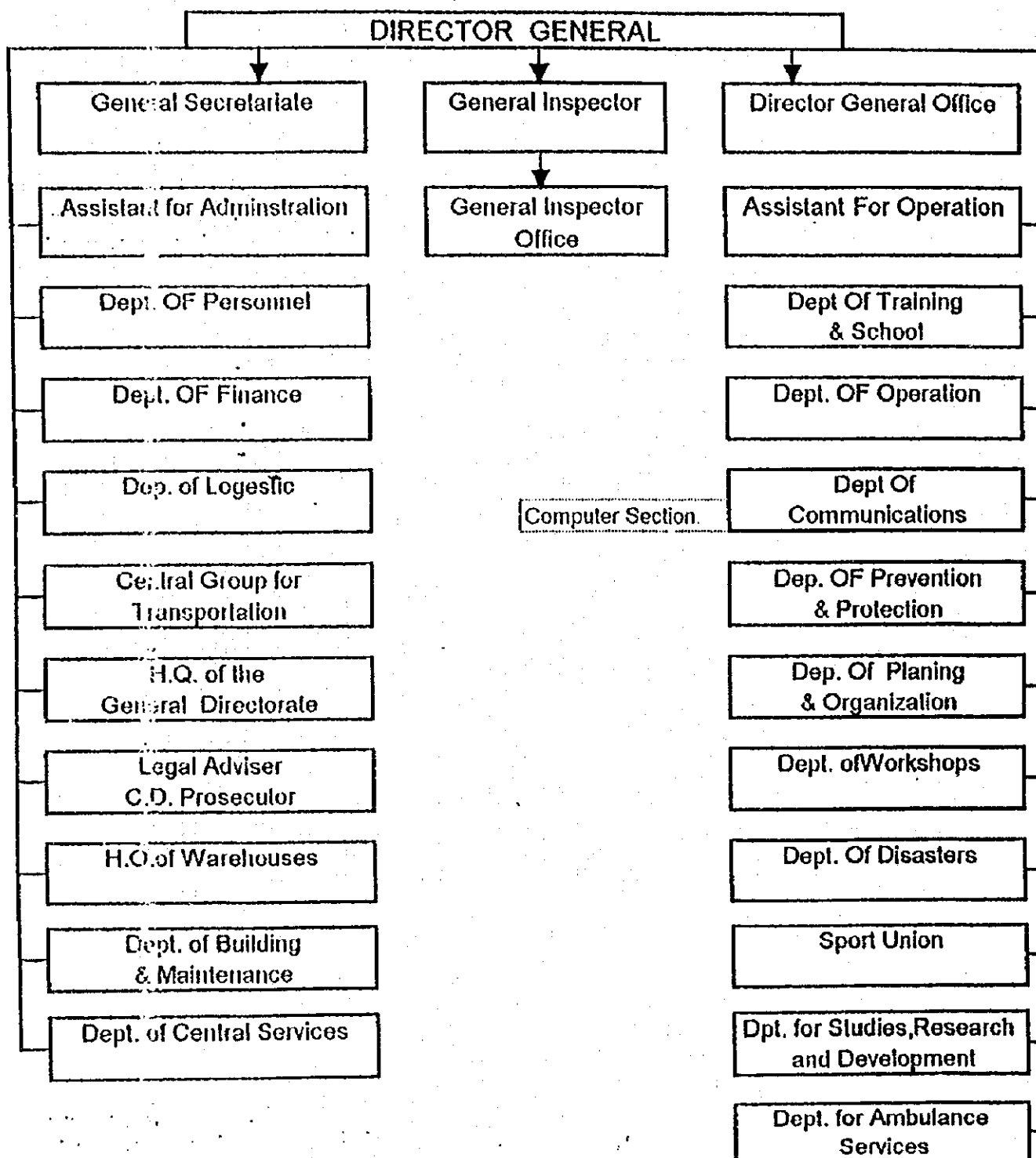


## RESPONSIBLE AND EXECUTING ORGANIZATION

FEBRUARY 1995



# ORGANIZATION OF CIVIL DEFENCE



ITEMS REQUESTED BY THE JORDANIAN SIDE

The contents of the Project covered under the Japan's Grant Aid finally requested by the Hashemite Kingdom of Jordan are as follows with priority "A", "B+", "B" and "C" in this order.

However, the final contents of the Project will be determined by the Japanese side at its discretion.

| Name of equipment                | Number of equipment requested |     |    |    |       |
|----------------------------------|-------------------------------|-----|----|----|-------|
|                                  | Priority                      |     |    |    | Total |
|                                  | A                             | B + | B  | C  |       |
| Fire fighting truck              | 13                            | 3   | 0  | 0  | 16    |
| Rapid intervention vehicle       | 3                             | 6   | 5  | 5  | 19    |
| Ambulance                        | 13                            | 0   | 5  | 2  | 20    |
| Water supply tank nurse tender   | 6                             | 6   | 3  | 5  | 20    |
| Fire equipment carrier           | 0                             | 0   | 4  | 11 | 15    |
| Personnel transportation vehicle | 0                             | 0   | 4  | 8  | 12    |
| Decontamination chemical unit    | 0                             | 0   | 1  | 1  | 2     |
| Recovery winch                   | 0                             | 0   | 0  | 3  | 3     |
| T o t a l                        | 35                            | 15  | 22 | 35 | 107   |

Improvement of radio units was also requested to manage the fire vehicles effectively.

## CRITERIA FOR SELECTION OF EQUIPMENT

### 1. Criteria to give priorities

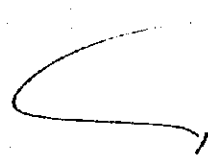
Priority will be given to equipment listed below.

- 1) Equipment which is appropriate to protect citizens' life directly from disasters
- 2) Replacement of existing equipment which is dangerous for continuous usage because of over-aging and does not satisfy the basic function
- 3) Equipment which is used very often in recent years

### 2. Criteria to eliminate from this project

Equipment which is listed below will be eliminated from this project.

- 1) Equipment which is not appropriate to the width and inclination of the road in its operation area
- 2) Equipment which has not enough space to store itself
- 3) Equipment that can be used for various purposes, and has apprehensions about different usage from this project's purpose
- 4) Equipment which is difficult to maintain and control from financial and/or technical point of view
- 5) Equipment whose parts cannot be procured or repaired easily in Jordan



*M.S.*

## JAPAN'S GRANT AID SCHEME

### (1) Grant Aid Procedures

① Japan's Grant Aid Program is executed through the following procedures.

- Application (Request made by the recipient country)
- Study (Basic Design Study conducted by JICA)
- Appraisal & Approval (Appraisal by the Government of Japan and Approval by the Cabinet)
- Determination of Implementation (The Notes exchanged between the Governments of Japan and the recipient country)

② Firstly, the application or request for a Grant Aid project submitted by a recipient country is examined by the Government of Japan (the Ministry of Foreign Affairs) to determine whether or not it is eligible for Grant Aid. If the request is deemed appropriate, the Government of Japan assigns JICA (Japan International Cooperation Agency) to conduct a study on the request.

Secondly, JICA conducts the study (Basic Design Study), using (a) Japanese consulting firm(s).

Thirdly, the Government of Japan appraises the project to see whether or not it is suitable for Japan's Grant Aid Program, based on the Basic Design Study report prepared by JICA, and the results are then submitted to the Cabinet for approval.

Fourthly, the project, once approved by the Cabinet, becomes official with the Exchange of Notes signed by the Government of Japan and the recipient country.

Finally, for the implementation of the project, JICA assists the recipient country in such matters as preparing tenders, contracts and so on.

### (2) Basic Design Study

#### ① Contents of the Study

The purpose of the Basic Design Study (hereafter referred to as "the Study"), conducted by JICA on a requested project (hereafter referred to as "the Project") is to provide a basic document necessary for the appraisal of the Project by the Japanese Government. The contents of the Study are as follows:

- a) Confirmation of the background, objectives, and benefits of the requested Project and also institutional capacity of agencies concerned of the recipient country necessary for the Project's implementation.
- b) Evaluation of the appropriateness of the Project to be implemented under the Grant Aid Scheme from the technical, social and economic point of view.
- c) Confirmation of items agreed on by both parties concerning the basic concept of the Project
- d) Preparation of a basic design of the Project
- e) Estimation of costs of the Project

The contents of the original request are not necessarily approved in their initial form as the contents of the Grant Aid Project. The Basic Design of the Project is confirmed considering the guidelines of Japan's Grant Aid Scheme.

The Government of Japan requests the Government of the recipient country to take whatever measures are necessary to ensure 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 in the recipient country actually implementing the Project. Therefore, the implementation of the Project is confirmed by all relevant organizations of the recipient country through the Minutes of Discussions.

## ② Selection of Consultants

For smooth implementation of the Study, JICA uses (a) registered consultant firm(s). JICA select (a) firm(s) based on proposals submitted by interested firms. The firm(s) selected carry(ies) out a Basic Design Study and write(s) a report, based upon terms of reference set by JICA. The consulting firm(s) used for the Study is(are) recommended by JICA to the recipient country to also work on the Project's implementation after the Exchange of Notes, in order to maintain technical consistency and also to avoid any undue delay in implementation should the selection process be repeated.

## (3) Japan's Grant Aid Scheme

### ① What is Grant Aid?

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

② Exchange of Notes (E/N)

Japan's Grant Aid is extended in accordance with the Notes exchanged by the two Governments concerned, in which the objectives of the Project, period of execution, conditions and amount of the Grant Aid, etc., are confirmed.

- ③ "The period of the Grant Aid" means the one fiscal year which the Cabinet approves the Project for. Within the fiscal year, all procedures such as exchanging of the Notes, concluding contracts with (a) consultant firm(s) and (a) contractor(s) and final payment to them must be completed. However in case of delays in delivery, installation or construction due to unforeseen factors such as weather, the period of the Grant Aid can be further extended for a maximum of one fiscal year at most by mutual agreement between the two Governments.

- ④ Under the Grant Aid, in principle, Japanese products and services including transport or those of the recipient country are to be purchased.

When the two Governments deem it necessary, the Grant Aid may be used for the purchase of the products or services of a third country.

However the prime contractors, namely, consulting constructing and procurement firms, are limited to "Japanese nationals". (The term "Japanese nationals" means persons of Japanese nationality or Japanese corporations controlled by persons of Japanese nationality.)

⑤ Necessity of "Verification"

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

⑥ Undertakings required of the Government of the Recipient Country

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

- a) To secure land necessary for the sites of the Project and to clear, level and reclaim the land prior to commencement of the construction.
  - b) To provide facilities for the distribution of electricity, water supply and drainage and other incidental facilities in and around the sites.
  - c) To secure buildings prior to the procurement in case the installation of the equipment.
  - d) To ensure all the expenses and prompt execution for unloading, customs clearance at the port of disembarkation and internal transportation of the products purchased under the Grant Aid.
  - e) To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which will be imposed in the recipient country with respect to the supply of the products and services under the Verified Contracts.
  - f) To accord Japanese nationals whose services may be required in connection with the supply of the products and services under the Verified Contracts, such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work.
- ⑦ "Proper Use"
- The recipient country is required to maintain and use the facilities constructed and equipment purchased under the Grant Aid properly and effectively and to assign staff necessary for this operation and maintenance as well as to bear all the expenses other than those covered by the Grant Aid.
- ⑧ "Re-export"
- The products purchased under the Grant Aid should not be re-exported from the recipient country.
- ⑨ Banking Arrangements (B/ A)
- a) The Government of the recipient country or its designated authority shall open an account in the name of the Government of the recipient country in an authorized foreign exchange bank in Japan (hereinafter referred to as "the Bank"). The Government of Japan will execute the Grant Aid by making payments in Japanese yen to cover the obligations incurred by the Government of the recipient country or its designated authority under the Verified Contracts.
  - b) The payments will be made when payment requests are presented by the Bank to the Government of Japan under an authorization to pay issued by the Government of the recipient country or its designated authority.



NECESSARY MEASURES TO BE TAKEN BY JORDAN SIDE

Following necessary measures should be taken by the CD on condition that the Grant Aid by the Government of Japan is extended to the Project;

1. To provide data and information necessary for the Project;
2. To complete the relocation of the existing equipment, facilities and civil works required prior to the installation of the equipment and settings;
3. To provide facilities for distribution of electricity, water supply, telephone, drainage, sewage and other incidental items required for the Project;
4. To ensure proper budget for operation and maintenance cost timely and sufficiently by the CD;
5. To allocate enough number of trained firemen to the fire stations to be covered under the Project in order to operate and maintain the equipment by the CD;
6. To procure required parts for maintenance timely and sufficiently by the CD;
7. To ensure the garage and warehouse to keep the equipment securely by the CD;
8. To bear commissions to the Japanese foreign exchange bank for its banking services based upon the Banking Arrangement, namely the advising commission of the "Authorization to Pay" and payment commission;
9. To exempt Japanese juridical and physical nationals engaged in the Project from customs duties, internal taxes and other fiscal levies which may be imposed in Jordan;
10. To accord Japanese nationals 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 Jordan and stay therein for the performance of their work in accordance with the relevant laws and regulations of the Hashemite Kingdom of Jordan;

11. To provide necessary permissions, licenses and other authorizations for implementing the Project, if necessary;
12. To maintain and use properly and effectively the equipment procured under the Project in responsibility of the CD;
13. To bear all the expenses, other than those to be borne by the Japan's Grant Aid within the scope of the Project;
14. To ensure prompt unloading and customs clearance at port of disembarkation in Jordan, and prompt internal transportation therein of the equipment.

## MINUTES OF DISCUSSIONS

on

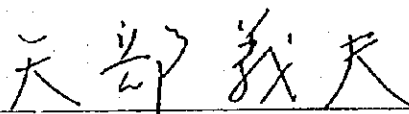
Basic Design Study on the Project for  
Supply of Fire Fighting Equipment  
in the Hashemite Kingdom of Jordan  
(Consultation on Draft Report)

In October 1997, the Japan International Cooperation Agency (JICA) dispatched a Basic Design Study Team on the Project for Supply of Fire Fighting Equipment (hereinafter referred to as " the Project ") to the Hashemite Kingdom of Jordan, and through discussions, field survey, and technical examination of the results in Japan, has prepared the draft report of the study.

In order to explain and to consult with the Jordanian side on the components of the draft report, JICA sent to Jordan a study team, which is headed by Mr. Yoshio YABE, Resident Representative of JICA in Jordan, and is scheduled to stay in the country from January 11 to 19, 1998.

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

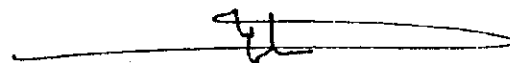
Amman, January 18, 1998



Mr. Yoshio YABE  
Leader,  
Basic Design Study  
Draft Report Explanation Team  
Japan International Cooperation Agency



Mr. Deeb-Al-Maa'ni  
Director General  
Civil Defence



Mr. Salem O. Ghawi  
Assistant Secretary General  
International Cooperation  
Ministry of Planning

## ATTACHMENT

### 1. Objective of the Project

The objective of the Project is to improve the capacity and ability of Fire Fighting Services to protect citizens' life in Amman municipality and its suburbs from general fires and other accidents.

Special disasters (for example big or special fires in hotels or big factories or accidents such as an airplane crash or overturned trains, which do not occur frequently) are not the objective of this Project. To avoid damage by such a disaster, Jordanian side will prepare the equipment or system needed in future.

### 2. Components of Draft Report

The Government of Jordan (hereinafter referred to as "GOJ") has agreed and accepted in principle the components of draft report proposed by the team.

### 3. Responsible and Executing Organization

Civil Defence of Jordan (hereinafter referred to as "CD"), Ministry of Interior (hereinafter referred to as "MOI"), which is shown in Annex-1, is the responsible and executing organization of the Project.

### 4. Proper Use of Equipment

Jordanian side agreed to maintain and use the equipment purchased under the Grant Aid properly.

### 5. Proposal for Managing System of Ambulances

As for the ambulance, the demarcation of its usage and operational cooperation system between CD and Ministry of Health and/or hospitals should be clarified.

### 6. Equipment Selection

Japanese side proposed arrangement of appropriate equipment considering regional character.

As for the R.I.V., through basic design study, Japanese side suggested to arrange equipment with water in refugee camps where roads are narrow and it is difficult for wide cars such as a fire fighting truck or water tanker to run smoothly.

## 7. Disposition of Existing Equipment

Jordanian side (CB) prepares appropriate space, staffs and expenditure for the equipment provided by Japanese side and scrap or provisional relocation of the existing equipment and informs about the plan of disposition to JICA Jordan office.

## 8. Japan's Grant Aid System

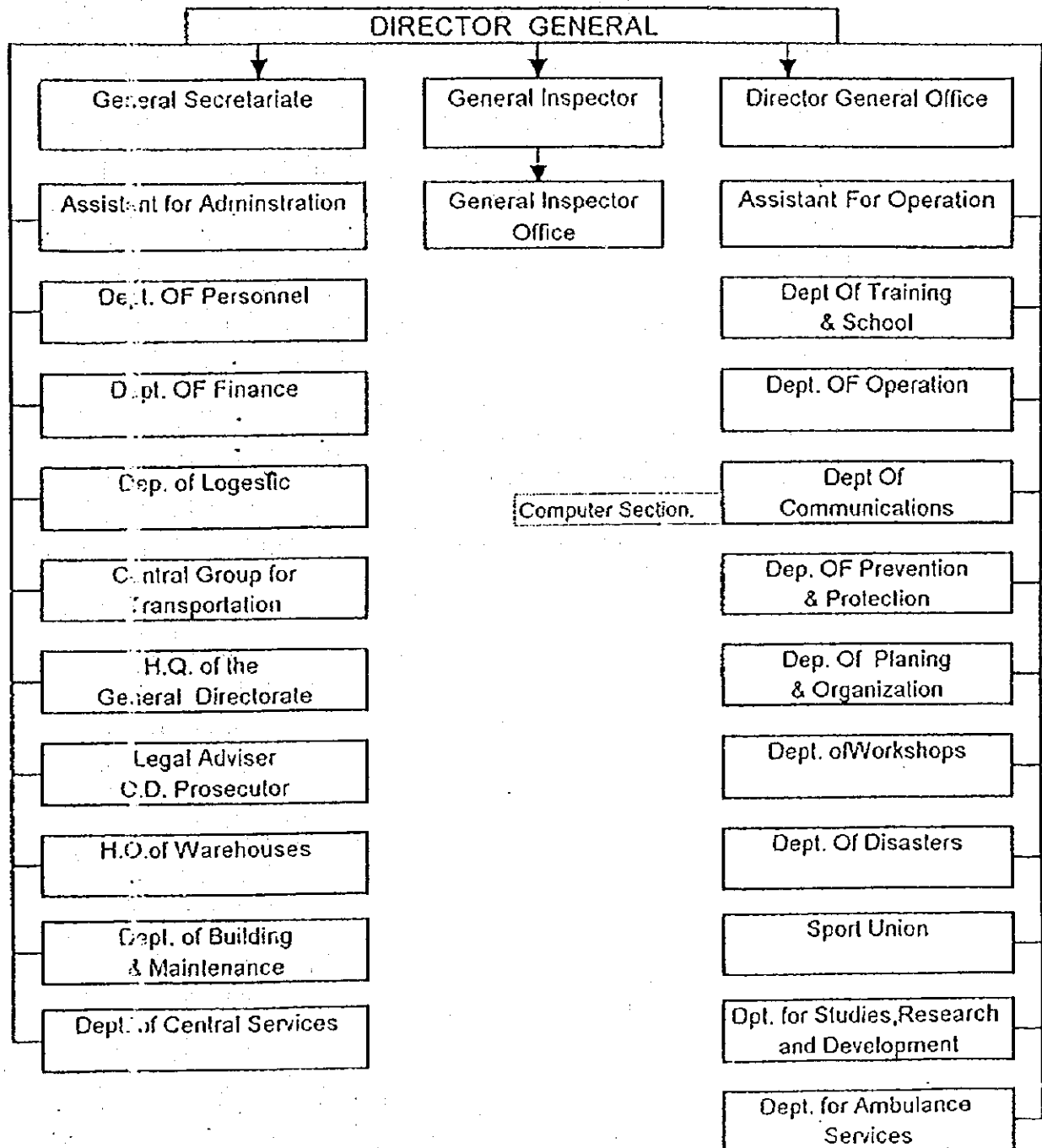
- 1) The GOJ has understood the system of Japanese Grant Aid explained by the Team, described in Annex-2.
- 2) The GOJ will take the necessary measures, described in Annex-3, for smooth implementation of the Project on condition that Grant Aid assistance by the Government of Japan is extended to the Project.

## 9. Schedule of the Study

JICA will complete the final report and send it to the GOJ around March, 1998.



# ORGANIZATION OF CIVIL DEFENCE



## JAPAN'S GRANT AID SCHEME

### (1) Grant Aid Procedures

① Japan's Grant Aid Program is executed through the following procedures.

- Application (Request made by the recipient country)
- Study (Basic Design Study conducted by JICA)
- Appraisal & Approval (Appraisal by the Government of Japan and Approval by the Cabinet)
- Determination of Implementation (The Notes exchanged between the Governments of Japan and the recipient country)

② Firstly, the application or request for a Grant Aid project submitted by a recipient country is examined by the Government of Japan (the Ministry of Foreign Affairs) to determine whether or not it is eligible for Grant Aid. If the request is deemed appropriate, the Government of Japan assigns JICA (Japan International Cooperation Agency) to conduct a study on the request.

Secondly, JICA conducts the study (Basic Design Study), using (a) Japanese consulting firm(s).

Thirdly, the Government of Japan appraises the project to see whether or not it is suitable for Japan's Grant Aid Program, based on the Basic Design Study report prepared by JICA, and the results are then submitted to the Cabinet for approval.

Fourthly, the project, once approved by the Cabinet, becomes official with the Exchange of Notes signed by the Government of Japan and the recipient country.

Finally, for the implementation of the project, JICA assists the recipient country in such matters as preparing tenders, contracts and so on.

### (2) Basic Design Study

#### ① Contents of the Study

The purpose of the Basic Design Study (hereafter referred to as "the Study"), conducted by JICA on a requested project (hereafter referred to as "the Project") is to provide a basic document necessary for the appraisal of the Project by the Japanese Government. The contents of the Study are as follows:



- a) Confirmation of the background, objectives, and benefits of the requested Project and also institutional capacity of agencies concerned of the recipient country necessary for the Project's implementation.
- b) Evaluation of the appropriateness of the Project to be implemented under the Grant Aid Scheme from the technical, social and economic point of view.
- c) Confirmation of items agreed on by both parties concerning the basic concept of the Project
- d) Preparation of a basic design of the Project
- e) Estimation of costs of the Project

The contents of the original request are not necessarily approved in their initial form as the contents of the Grant Aid Project. The Basic Design of the Project is confirmed considering the guidelines of Japan's Grant Aid Scheme.

The Government of Japan requests the Government of the recipient country to take whatever measures are necessary to ensure 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 in the recipient country actually implementing the Project. Therefore, the implementation of the Project is confirmed by all relevant organizations of the recipient country through the Minutes of Discussions.

## ② Selection of Consultants

For smooth implementation of the Study, JICA uses (a) registered consultant firm(s). JICA select (a) firm(s) based on proposals submitted by interested firms. The firm(s) selected carry(ies) out a Basic Design Study and write(s) a report, based upon terms of reference set by JICA. The consulting firm(s) used for the Study is(are) recommended by JICA to the recipient country to also work on the Project's implementation after the Exchange of Notes, in order to maintain technical consistency.

## (3) Japan's Grant Aid Scheme

### ① What is Grant Aid?

The Grant Aid Program provides a recipient country with non-reimbursable funds to procure the facilities, equipment and services (engineering services and transportation of the products, etc.) for economic and social

development of the country under principles in accordance with the relevant laws and regulations of Japan. Grant Aid is not supplied through the donation of materials as such.

② Exchange of Notes (E/N)

Japan's Grant Aid is extended in accordance with the Notes exchanged by the two Governments concerned, in which the objectives of the Project, period of execution, conditions and amount of the Grant Aid, etc., are confirmed.

- ③ "The period of the Grant Aid" means the one fiscal year which the Cabinet approves the Project for. Within the fiscal year, all procedures such as exchanging of the Notes, concluding contracts with (a) consultant firm(s) and (a) contractor(s) and final payment to them must be completed. However in case of delays in delivery, installation or construction due to unforeseen factors such as weather, the period of the Grant Aid can be further extended for a maximum of one fiscal year at most by mutual agreement between the two Governments.

- ④ Under the Grant Aid, in principle, Japanese products and services including transport or those of the recipient country are to be purchased.

When the two Governments deem it necessary, the Grant Aid may be used for the purchase of the products or services of a third country.

However the prime contractors, namely, consulting, constructing and procurement firms, are limited to "Japanese nationals". (The term "Japanese nationals" means persons of Japanese nationality or Japanese corporations controlled by persons of Japanese nationality.)

⑤ Necessity of "Verification"

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

⑥ Undertakings required of the Government of the Recipient Country

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

- a) To secure land necessary for the sites of the Project and to clear, level and reclaim the land prior to commencement of the construction.
- b) To provide facilities for the distribution of electricity, water supply and drainage and other incidental facilities in and around the sites.

- c) To secure buildings prior to the procurement in case the installation of the equipment.
- d) To ensure all the expenses and prompt execution for unloading, customs clearance at the port of disembarkation and internal transportation of the products purchased under the Grant Aid.
- e) To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which will be imposed in the recipient country with respect to the supply of the products and services under the Verified Contracts.
- f) To accord Japanese nationals whose services may be required in connection with the supply of the products and services under the Verified Contracts, such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work.

⑦ "Proper Use"

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

⑧ "Re-export"

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

⑨ Banking Arrangements (B/ A)

- a) The Government of the recipient country or its designated authority shall open an account in the name of the Government of the recipient country in an authorized foreign exchange bank in Japan (hereinafter referred to as "the Bank"). The Government of Japan will execute the Grant Aid by making payments in Japanese yen to cover the obligations incurred by the Government of the recipient country or its designated authority under the Verified Contracts.
- b) The payments will be made when payment requests are presented by the Bank to the Government of Japan under an authorization to pay issued by the Government of the recipient country or its designated authority.

NECESSARY MEASURES TO BE TAKEN BY JORDAN SIDE

Following necessary measures should be taken by the CD on condition that the Grant Aid by the Government of Japan is extended to the Project;

1. To provide data and information necessary for the Project;
2. To complete the relocation of the existing equipment, facilities and civil works required prior to the installation of the equipment and settings;
3. To provide facilities for distribution of electricity, water supply, telephone, drainage, sewage and other incidental items required for the Project;
4. To ensure proper budget for operation and maintenance cost timely and sufficiently by the CD;
5. To allocate enough number of trained firemen to the fire stations to be covered under the Project in order to operate and maintain the equipment by the CD;
6. To procure required parts for maintenance timely and sufficiently by the CD;
7. To ensure the garage and warehouse to keep the equipment securely by the CD;
8. To bear commissions to the Japanese foreign exchange bank for its banking services based upon the Banking Arrangement, namely the advising commission of the "Authorization to Pay" and payment commission;
9. To exempt Japanese juridical and physical nationals engaged in the Project from customs duties, internal taxes and other fiscal levies which may be imposed in Jordan;
10. To accord Japanese nationals 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 Jordan and stay therein for the performance of their work in accordance with the relevant laws and regulations of the Hashemite Kingdom of Jordan;

11. To provide necessary permissions, licenses and other authorizations for implementing the Project, if necessary;
12. To maintain and use properly and effectively the equipment procured under the Project in responsibility of the CD;
13. To bear all the expenses, other than those to be borne by the Japan's Grant Aid within the scope of the Project;
14. To ensure prompt unloading and customs clearance at port of disembarkation in Jordan, and prompt internal transportation therein of the equipment.