

Republic of Lebanon
Office of the Minister of State for Administrative Reform
Center for Public Sector Projects and Studies
(C.P.S.P.S.)

REPUBLIC OF LEBANON
MINISTER OF STATE FOR ADMINISTRATIVE
REFORM

NATIONAL ADMINISTRATIVE REHABILITATION
PROGRAMME
(NARP)

RAILWAYS AND PUBLIC
TRANSPORTATION AUTHORITY

PROGRAMME 1996 - 1998

January 1996

REPUBLIC OF LEBANON

MINISTER OF STATE FOR ADMINISTRATIVE REFORM

NATIONAL ADMINISTRATIVE REHABILITATION PROGRAMME (NARP)

RAILWAYS AND PUBLIC TRANSPORTATION AUTHORITY

PROGRAMME 1996 - 1998

January 1996

RAILWAYS AND PUBLIC TRANSPORTATION AUTHORITY

SUMMARY

The Sector

In the aftermath of fifteen years of civil strife that severely damaged the country's infrastructure, rehabilitating railway and public transportation services is one of Lebanon's recovery and reconstruction priorities.

Prior to the year 1975, the following railway services were provided:

1. Passenger Transport:
 - The Beirut-Aley-Bhamdoun-Zahleh-Ryak-Damascus line existed since 1904 with two departures per day,
 - The Beirut-Tripoli-Aleppo line: a two wagon train,
 - The Beirut-Tripoli-Aleppo-Istanbul: the famous "Orient Express", a five wagon train plus a restaurant wagon with two trips per week..
2. Freight Transport:
 - Cement transport Chekka-Beirut: 7 to 8 trips per day,
 - Livestock transport from Turkey and Syria to Beirut,
 - Various types of goods transport.
3. Fuel Transport:
 - Bedawi -Chekka & Zouk: a 325 ton capacity train with 2 trips per day,
 - Zahrani refinery - Jiyeh power plant: 8 ton capacity train with 4 trips per day.

While railway services are still idle as their operating assets were severely damaged, lost or stolen, public bus transportation services became operational only recently. They are confined, however, to Greater Beirut Area with other major urban agglomerations, and the rural areas still not serviced.

The existing private sector passenger services were unofficially and randomly introduced as a spontaneous reaction to meet the rapidly rising demand. The capacity of this service remains limited, confined to certain localities, and relatively highly priced.

Operating sufficient and efficient public bus transportation services is a priority short term goal, while the longer term transportation strategy would integrate railway and bus networks. This strategy is expected to achieve, among other things:

- decreased time & costs of transportation,
- decreased costs of goods & services,
- increased per capita income,
- improved overall productivity,
- reduced traffic congestion and pollution.

The Institution

The government of Lebanon has entrusted the Railways and Public Transportation Authority (RPTA) with reviving transportation services, and with operating, managing and maintaining Railway Networks and Public Bus Transportation services over the Lebanese territories in an effective manner.

Established in 1961, the RPTA is an autonomous agency working under the tutelage of the newly established Ministry of Transport.

Though RPTA had suffered during the war from the destruction and damage to its assets, as well as outmoded methods of operation and management, old tools and equipment and shortage in qualified staff compared to overstaffing with unskilled labour, RPTA is currently deploying great efforts to increase its operational efficiency. Moreover, it has set its priority goals and its long-term strategies to offer, high levels of public bus transportation services, both urban and inter-city, and to offer, in due course, high levels of railroad transportation services (both passenger and goods transport).

In order for RPTA to upgrade its capabilities, it needs technical assistance to reorganize its administration, set up policies and procedures, introduce information and office technology to enhance office productivity and modernize its operations, recruit personnel and train them accordingly.

This report details the RPTA missions, organization, present status, as well as its long-term and short-term strategies, and identifies the major priority projects it requires to help realize its goals. These projects are divided into the following five categories:

- 1- Furniture and Office Equipment
- 2- Office Technology
- 3- Information Technology Applications
- 4- Organization Study for the Railways
- 5- Technical Assistance for Implementation of Bus Services

Minister of State for Administrative Reform
National Administrative Rehabilitation
Programme
(NARP)

NARP FINANCIAL REQUIREMENTS 1996-1998

AGENCY : RAILWAYS AND PUBLIC TRANSPORTATION AUTHORITY

AGENCY RPTA	Breakdown by category	Year 1 (1996) USD	Year 2 (1997) USD	Year 3 (1998) USD	Total USD	Funds secured	Net amount
GRAND TOTAL	Equipment	41,810	11,420	0	53,230		53,230
	Computer systems	463,400	266,300	266,300	996,000		996,000
	Training	23,400	8,400	8,400	40,200		40,200
	Tech. Assistance & adv.	1,300,000	1,072,000	0	2,372,000		2,372,000
	Total	1,828,610	1,358,120	274,700	3,461,430		3,461,430

Minister of State for Administrative Reform
National Administrative Rehabilitation
Programme
(NARP)

NARP FINANCIAL REQUIREMENTS 1996-1998
BREAKDOWN BY PROJECTS

AGENCY : RAILWAYS AND PUBLIC TRANSPORTATION AUTHORITY

AGENCY RPTA	Breakdown by category	Year 1 (1996) USD	Year 2 (1997) USD	Year 3 (1998) USD	Total USD	Funds secured	Net amount
Project RPTA-1 Furniture and Office Equipment	Equipment & Furniture	41,810	11,420		53,230		53,230
	Computer systems						
	Training						
	Tech. Assistance & adv.						
	Total	41,810	11,420		53,230		53,230
	Premises						
Project RPTA-2 Office Technology	Equipment						
	Computer systems	197,100			197,100		197,100
	Training	15,000			15,000		15,000
	Tech. Assistance & adv.						
	Total	212,100			212,100		212,100
	Premises						
Project RPTA-3 Information Technology Applications	Equipment						
	Computer systems	266,300	266,300		798,900		798,900
	Training	8,400	8,400		25,200		25,200
	Tech. Assistance & adv.						
	Total	274,700	274,700	274,700	824,100		824,100
	Premises						

BREAKDOWN BY PROJECTS

AGENCY : RAILWAYS AND PUBLIC TRANSPORTATION AUTHORITY

AGENCY RPTA	Breakdown by category	Year 1 (1996) USD	Year 2 (1997) USD	Year 3 (1998) USD	Total USD
Project RPTA-4 Organization Study for Railways	Equipment				
	Computer systems				
	Training				
	Tech. Assistance & adv.		372,000		372,000
	Total		372,000		372,000
	Premises				
Project RPTA-5 Tech. Assist. for Implementation of Bus Services	Equipment				
	Computer systems				
	Training				
	Tech. Assistance & adv.	1,300,000	700,000		2,000,000
	Total	1,300,000	700,000		2,000,000
	Premises				

Funds secured	Net amount
	372,000
	372,000
	2,000,000
	2,000,000

TABLE OF CONTENTS

	PAGE
1. OUTLOOK OF THE PRESENT SITUATION	1
1.1 MISSION AND ESSENTIAL FUNCTIONS	1
1.2 ORGANIZATION	2
1.3 PERSONNEL	4
1.4 ONGOING ACTIVITIES	5
1.5 MAIN PROBLEMS	8
2. OBJECTIVES AND PRIORITY REHABILITATION PROJECTS FOR THE NEXT THREE YEARS	10
2.1 ELEMENTS OF A MEDIUM / LONG-TERM STRATEGY AND OBJECTIVES	10
2.2 SHORT-TERM PRIORITY PROJECTS	11
2.3 TRANSITION FROM SHORT-TERM TO LONG-TERM OBJECTIVES	12
3. PRIORITY PROJECTS SUMMARY DESCRIPTION	13
3.1 PRIORITY PROJECT RPTA-1 FURNITURE AND OFFICE EQUIPMENT	13
3.2 PRIORITY PROJECT RPTA-2 OFFICE TECHNOLOGY	15
3.3 PRIORITY PROJECT RPTA-3 INFORMATION TECHNOLOGY APPLICATIONS	16
3.4 PRIORITY PROJECT RPTA-4 ORGANIZATION STUDY FOR THE RAILWAYS	20
3.5 PRIORITY PROJECT RPTA-5 TECHNICAL ASSISTANCE FOR IMPLEMENTATION OF BUS SERVICES	21

CHARTS AND TABLES

CHARTS

- PRESENT ORGANIZATION STRUCTURE
- PROPOSED ORGANIZATION STRUCTURE
- GEOGRAPHIC DISTRIBUTION OF THE FUTURE PLAN

TABLES

TABLE 1 - IMMEDIATE NEEDS FOR PERSONNEL

TABLE 2 - STAFFING NEEDS CLASSIFIED BY FUNCTION

TABLE 3 - OFFICE REHABILITATION NEEDS

TABLE 4 - ESSENTIAL EQUIPMENT NEEDS

NATIONAL ADMINISTRATIVE REHABILITATION PROGRAMME

1996 - 1998

RAILWAYS AND PUBLIC TRANSPORTATION AUTHORITY

1. OUTLOOK OF THE PRESENT SITUATION

1.1 MISSION AND ESSENTIAL FUNCTIONS

The Railways and Public Transportation Authority (RPTA) was established in April 1961 by Decree No. 6479. The authority is charged with the operation and management of the railway and public transportation networks over the Lebanese territories.

The RPTA is placed under the administrative tutelage of the Ministry of Transport, and the financial tutelage of the Ministry of Finance.

Mission I : Railways

The operation and management of railways in Lebanon include the following functions:

- Studies and execution of works related to railway extensions and/or reinforcements of tracks as well as the construction of railway stations
- Studies related to rolling stock
- Operation and maintenance of installations
- Operation and maintenance of rolling stock.
- Operation of the workshops, warehouses and maintenance facilities
- Operation of the cement sleepers factory (entretoises)
- International relations (Union Internationale des Chemins de Fer)
- Commercial, marketing, and revenues collection relative to the transport of goods and passengers

Mission II : Public Bus Transportation

The operation and management of Public Bus Transportation network. (presently this mission is limited to few lines in Beirut and its suburbs, the equivalent of 50-60 large buses). RPTA plans to expand its activities to serve all the Lebanese territories. The functions include:

- Studies of the Public Transportation routes, and means of transport
- Operation of Public Bus Transportation lines as well as maintenance of the bus fleet
- Operation of workshops, warehouses and maintenance facilities
- Commercial, marketing and revenue management

1.2 ORGANIZATION

The Railways and Public Transportation Authority is managed by a Board of Directors consisting of the President and six members.

The existing organization structure of the Authority is outlined as follows: (see Present Organization Structure attached).

The General Directorate consists of: 2 Directorates and the Common Administration :

The Railways Directorate

- Traffic and Transportation Department
- The Rolling Stock Department.
- Railroads and Restoration Department

The Public Bus Transportation Directorate

- Revenues Department.
- Traffic Department.
- Workshop and Warehouses Department

The Common Administration

- Secretariat
- Collectors
- Accounting and Warehouses Unit
- Materials and Procurement Unit
- Doctors Unit
- Litigation Unit

The Authority is currently undergoing a reorganizational / reengineering change including modernizing and automating its structure and functions. The proposed organizational structure of the Authority is developed along with a view to the following guidelines, subject to modifications: (see Proposed Organization Structure attached).

The Railways Directorate

- Tracks and Buildings Department
- Rolling Stock Department
- Traffic Department

The Public Bus Transportation Directorate

- Multimodal Transport Department
- Workshops and Warehouse Department
- Traffic Department

Internal Control Directorate

- Technical Control Department
- Administrative and Financial Control Department

Common Administration Directorate

- Finance Department
 - Bureau of Stores
 - Bureau of Revenues
 - Bureau of Financial and Commercial Accounting
 - Bureau of Administrative Accounting
- Administrative Department
 - Bureau of Materials and Works
 - Bureau of Health Services
 - Bureau of Personnel
 - Bureau of Litigation
 - Secretariat

Projects and Programs Department

- Bureau of Development
- Bureau of Studies

Accounting

Expenditures Controller

1.3 PERSONNEL

Tables 1-A and 1-B show the current human resources allocation of the Directorate General of Railways and the Directorate of Public Bus Transportation. The Railways and Public Bus Transportation Directorates are to undergo reorganization pending their future roles and operations definition. Accordingly, personnel requirements will be decided by subsequent studies.

It is worth noting that none of the RPTA personnel is yet part of the government official cadre.

Railways

Grade	Established Cadre Positions*	Occupied Positions	Vacancies**
I	-	1	-
II	-	-	-
III	-	3	-
IV	-	19	-
V	-	45	-
VI	-	52	-
Total	-	120	-
Contractuals	-	2	-
Daily Works	-	42	-

Public Bus Transport

Grade	Established Cadre Positions*	Occupied Positions	Vacancies**
I	-	-	-
II	-	-	-
III	-	3	-
IV	-	382	-
V	-	207	-
VI	-	11	-
Total	-	603	-
Contractuals	-	7	-
Daily Works	-	-	-

* Established positions are unknown since there is no fixed cadre.

** Before attempting to fill any of these vacancies, a reorganization of the Railways and Public Transportation is required, taking into consideration the policy to be adopted concerning railways and public transportation, and especially whether RPTA will contract out some of its services.

1.4 ONGOING ACTIVITIES

The following projects and activities are underway:

1.4.1 Administration

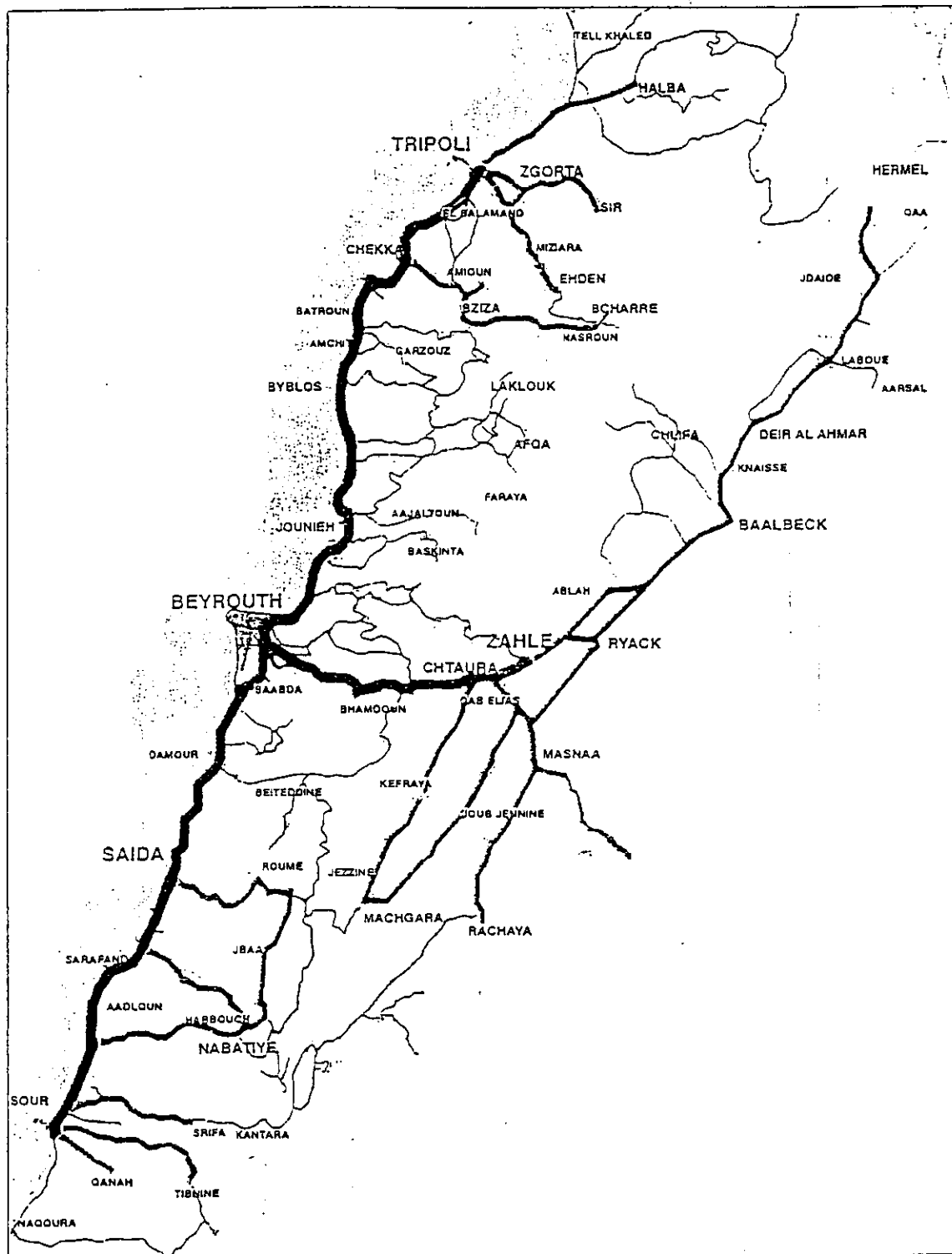
- A contract has been signed in January 1996 with IAURIF, SEMVAT, SYSTRA, and TEAM International, for technical assistance to be completed over a period of 15 months. This study, budgeted at around \$ 2 million will cover the overall organizational structure, training plans, setting up of operations, commercial operations, MIS (Management Information System) requirements, and project implementation assistance.
- RPTA is considering a BOT project (Build, Operate , Transfer) for the set up of the following facilities in its premises at NBT:
 - Bus Depot
 - Bus Terminal
 - Commercial Center
 - Administration Headquarters

1.4.2 Railways and Bus Transportation Services:

A comprehensive study of Public Bus Transportation services has been conducted by RPTA, and a strategy to operate this plan has been developed. The proposed Public Bus Transportation network consists of primary & secondary networks.

The primary network is composed of a north-south coastal line, centered at Beirut with an east-west line connecting Beirut to the Bekaa. This primary network provides for principal stops at the major coastal cities: Tripoli, Saida, Sour, and principal stops at the major internal cities: Chtoura, Zahleh & Baalbeck.

The secondary network, consists either of lateral branches connected to one of the coastal stops, or is a prolongation of the primary network trunk lines as is the case for the northern Bekaa area, Hermel, for example.



— Réseau primaire
 — Réseau secondaire

(*) Source: Direction Générale du Chemin de Fer et des Transports en Commun

The number of lines proposed by the RPTA is indicated in the following table:

REGIONS		Number of Buses		
		of lines	Large	small
North Mohafazat				
	Head of line Tripoli/Region	8	54	
	Intra-muros	4	16	
Bekaa				
	Head of line Zahle/Region	9	44	
	Head of line Baalbeck/Region	2	16	
South Mohafazat				
	Head of line Saida/Region	7	42	8
	Head of line Sour/Region	7	24	
	Saida intra-muros	4		12
	Nabatiyeh region	1	4	
Mount Lebanon				
	Head of lines	9	49	
Greater Beirut Area		29	89	307
TOTAL		80	338	327

- In this regard, the RPTA has purchased, from Renault and Mercedes, under a Lease or Buy Agreement over a period of 7 years, 500 buses and 140 buses from ELBA. The Renault contract incorporates training of existing employees (mainly drivers and mechanics), maintenance of buses and equipping the warehouses.
- A special study of bus lines for the Greater Beirut Area has been completed and plans for the operation and extension of these lines developed. Some old buses have been rehabilitated and lines reactivated to progressively cover more areas.
- A study is underway for the design and construction of Bus & Taxi Terminals on the premises of the RPTA in the following cities: Saida, Tripoli and Zahleh. The most probable financial setup for these projects is the BOT formula (Build, Operate and Transfer) as they incorporate an important commercial function.

The long term objectives of RPTA include providing coordinated multimodal transport services. It is thus envisioned that the real-estate owned by RPTA should be developed into integrated multimodal transport terminals that cater for the railways, buses, and taxis. Since the real-estate owned by RPTA constitutes a major asset, its development to realize its full commercial potential can help RPTA finance its transport operations.

1.4.3 Geographic Distribution

- The present activities and expected expansions will result in the following geographical and functional distribution of RPTA operational units (refer to Geographic Distribution attached)

Beirut:

- Mar Michael: warehouses, terminal
- Bir Hassan: bus depot
- Furn-El Chebbak: bus depot

Saida: bus and taxi terminal, warehouse, railway station

Tripoli:

- Bahsas: railway station, bus and taxi terminal, warehouse
- Port: railway station, bus station, transfer station

Zahle: transfer station, railway station, bus and taxi terminal, w/h

- Riyak: goods storage, warehouse, railway station, maintenance

1.5 MAIN PROBLEMS

- The assets of the Railways and Public Transportation Authority including railway stations, buildings, warehouses, etc. were either destroyed, lost or stolen during the years of strife, which rendered the railway services completely inactive and its operation and management tools obsolete. These need to be modernized and automated.
- The railway tracks and installations were severely damaged at several locations. Furthermore, the absence of maintenance during the years of war and the infringement on the railway right-of-way, rendered the tracks unusable at several locations requiring intensive rehabilitation works and expropriation of land to re-establish the railway track.
- Most of the railway stations and rolling stock were damaged and need to be rebuilt / rehabilitated and stock replaced by modern equipment.
- The bus fleet was also heavily damaged, and only about 50-60 buses are currently operational, while more wait a decision to be rehabilitated or junked.
- All the bus depots and maintenance facilities are damaged and not adequate for performing their function.

- The average age of the current staff is high. No recruitment was made for a long time. In order to operate properly, the Railways and Public Transportation Authority needs to recruit and train new employees on the basis of the new organization (training is included in the Mass Transit Implementation study), and new technologies in operation and management.

The Railway Sector still needs a political decision about its future; whether the Government is prepared to finance or to contract as BOT the massive investments that the operation of the railway sector entails.

2. OBJECTIVES AND PRIORITY REHABILITATION PROJECTS FOR THE NEXT THREE YEARS

2.1 ELEMENTS OF A MEDIUM / LONG-TERM STRATEGY AND OBJECTIVES

The mission of RPTA does not include formulating transport strategies for Lebanon, but rather providing the means for implementing these strategies. The Ministry of Transport is charged with strategy formulation. Such a strategy is still evolving and cannot be described as firm.

During 1993, RPTA commissioned a preliminary study for rehabilitating the Railway service from Tyre to Tripoli, and to the Syrian Border. The results of the study were announced by the President of the Board of RPTA during a special ceremony in February 1994. The project included doubling and electrification of the line between Tyre and Tripoli and single line between Tripoli and the Syrian Border. High speed modern services were planned to operate on it. A budget figure of 500 Million Dollars was quoted. The President of Board of RPTA identified four possible financing sources:

- Establishing mixed private/ public companies
- Liquidating the real-estate assets of RPTA
- Performing via BOT
- Increasing gasoline tax

The next step, which was to commission the design, was never taken yet. A real clear strategy regarding the Railway services does not seem to be crystallized yet.

Studies done for the Greater Beirut Area indicated that fully developed bus transport services on city streets cannot serve the medium and long-term transport needs of Greater Beirut. The services of a commuter railway running almost parallel to the proposed Peripheral Motorway is essential. Mass transit in the form of Metro services and bus on its own right-of-way are also needed.

Given the transport policy uncertainties, and the need to develop a cost-effective multi-modal transport system, the elements of a long-term strategy may include:

- Preserving the railroad right-of-way and real-estate assets
- Integrating railroad trades in the proposed motorway projects
- Reconstruction and operation of the coastal railway, with the commuter service to Greater Beirut and within it as the top priority
- Maintaining and modernizing the bus transport services, urban and intercity, and establishing bus service on its own right-of-way

- Fortifying and maintaining a continuing comprehensive transportation planning activity, and developing the mechanisms for regulating services provided by various operators

2.2 SHORT-TERM PRIORITY PROJECTS

In the short-term, the RPTA activities center around:

- Re-establishment of large scale bus public transport services in Greater Beirut Area.
- Introducing organized public bus transport services in other large urban areas.
- Developing organized bus transport inter-city services

In order to successfully implement this strategy, the Railways and Public Transportation needs technical assistance for developing capabilities in the fields of planning and feasibility studies as well as managing design studies related to railways and public transportation. For this purpose, the RPTA needs to carry out and implement, in parallel to the ongoing activities, the following priority projects:

- A full reorganization study of RPTA structure and functions including setting up policies and procedures, recruitment plan, facilitating planning capacities, etc..
- Computerization of the basic functions like scheduling, program planning, studies, accounting, revenue accounting, inventory control and other operations.
- Integrate, in an interim stage, office and information technology applications to enhance office productivity and modernize operations of RPTA. The information technology applications can be grouped as:

1. Administrative, Financial and Operational Systems

General Accounts

Accounts Payable

Cash Collection System

Payroll / Personnel Systems

Fixed Assets Control System

Inventory Management

Equipment / Site Maintenance and Control System

2. Vehicle / Route / Network Maintenance and Scheduling System

- Manpower Development - personnel recruitment and training are required in line with the new organization of the Authority and automation of its functions.
- Transfer of the General Directorate - the General Directorate will be relocated to its main headquarters NBT (National Bureau of Transport).

2.3 TRANSITION FROM SHORT-TERM TO LONG-TERM OBJECTIVES

Given the above mentioned condition, the following priority projects to be undertaken by the Railways and Public Transportation at the short-term, would represent an interim effort towards reaching its long-term objectives.

3. PRIORITY PROJECTS SUMMARY DESCRIPTION

3.1 Priority Project RPTA-1 Furniture and Office Equipment

A. Railways

Objectives:

The Lebanese Railways is in need for furniture and equipment in order to activate its role and facilitate working conditions.

Scope of Work:

Equip the offices mainly with typewriters, copiers, and calculators. Also furnish the offices with new desks, chairs, gas heaters, fans, cupboards and filing cabinets, and acquire vans, trucks and cranes (refer to Table 4).

Cost:

Brief Description	Cost USD
Office Equipment	31,000 ✓
Office Furniture	11,420
Total Cost USD	42,420

To be allocated as follows: office equipment during the first year and office furniture during the second year.

<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>
31,000	11,420	

B. Public Bus Transportation

Objectives:

The Public Transportation Directorate requires office equipment and furniture to ensure a suitable working environment.

Scope of Work:

Equip the offices mainly with typewriters, copiers, and calculators.
Furnish the offices with new desks, chairs, cupboards and filing cabinets.
(Refer to Table 4)

Cost:

Brief Description	Cost USD
Office Equipment	4,300
Office Furniture	6,510
Total Cost USD	10,810

To be implemented during the first year:

<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>
10,810		

The total budget is:

Directorate	Year 1	Year 2
Railways	31,000	11,420
Public Bus Transportation	10,810	
Total Year (USD)	41,810	11,420

3.2 Priority Project RPTA-2 Office Technology

Objectives:

Equip the RPTA with office technology (OT) to improve productivity and work environment.

Scope of Work:

Equip the offices mainly with PC's, networks, printers, etc...

Cost:

Item	Quantity	Cost	Total
Lan (20 Users)	1	\$ 140,600	\$ 140,600
Lan (5 Users)	1	\$ 56,500	\$ 56,500
Training	25	\$ 600	\$ 15,000
			\$ 212,100

Lan (20 Users)	Quantity
Server	1
PC's + OT S/W	20
Laser Printer	4
Matirx Printer	2
Cabling	1
Hubs	1
Routers	1

Lan (5 Users)	Quantity
Server	1
PC's + OT S/W	5
Laser Printer	1
Matirx Printer	1
Cabling	1
Hubs	1
Routers	1

To be allocated during the first year as follows:

Year 1	Year 2	Year 3
212,100		

3.3 Priority Project RPTA-3 Information Technology Applications

1. Administrative, Financial and Operational Systems

General Accounts : since the Public Transport Authority is an autonomous agency, it has its own books and procedures. Therefore, it requires its own independent accounting system. However, there may be requirements that are requested by the Ministry of Finance which should be incorporated in the accounting system. The system requires the use of multicurrencies although the financial statements will all be in Lebanese Pounds.

Accounts Payable : this system controls the accounts of all suppliers whom the Public Transport Authority may be dealing with. Suppliers are usually local and foreign, which requires the use of multicurrency. The system is fully integrated with the general accounting system. It covers such functions as creditor statements, aging of incoming and outgoing invoices showing all payments made in part and in full.

Payroll/Personnel Systems : being an autonomous authority, the Public Transport Authority handles its own payroll and personnel functions. An integrated system is required to interface with the financial as well as the maintenance systems. The personnel function covers: personnel data, employment and administrative information, educational and training histories, disciplinary actions, and related notes. The payroll system is parametrized to allow the user to define various allowances and regular deductions made on a periodic basis. Other ad hoc entitlements and deductions can be entered through related transactions. Loans and advances as well as their repayments are to be handled by the system. The system should produce pay slips, payroll registers distributing the payments according to mode (Cash, bank, or transfers). It should provide reports concerning related services such as the social security, medical expenses, etc.

Cash Collection System : the PTA collects the cash revenue from sold bus tickets on daily basis and transfers to the Ministry of Finance the following day. This system will keep track of the cash collected from transportation of sold bus tickets. The system will audit tickets sold against cash collected.

Fixed Assets Control System : the Public Transport Authority has a variety of equipment, buildings, vehicles and various items such as furniture and fixtures. A Fixed Assets control system is required to control the location and distribution of these items. Secondly, such a system is required to control the financial depreciation of such assets. In case an Equipment Control System is required by the Public Transport Authority for engineering maintenance, the Fixed Assets System will be interfaced with it.

Equipment/Site Maintenance and Control System : this system has three major functions that apply to both equipment and sites :

- (1) **Equipment Control :** covers the history and transactions that relate to the various equipment and sites of the Public Transport Authority. This means that the system will maintain the cost history, the location and the various actions that take place on each equipment in the Public Transport Authority.
- (2) **Maintenance Control:** The system will setup a standard maintenance plans database containing a detailed definition of the various corrective (If possible) and preventive procedures on each type of equipment. Such plans involve the projected usages of materials, labor, machines as well as textual information related to the maintenance procedures themselves. Each equipment or site will have its preventive maintenance schedule setup on a special database whether the schedule is based on ad hoc planning, cyclical or periodic needs. Work orders are also controlled by this module. However, the costing is described in the third function. Each work order on an equipment goes into its history file. Furthermore, other transactions describe what happens to the equipment in terms of change of location, change of design, installation and removal of rotatables, change of status, cancellation, etc.
- (3) **Maintenance Cost Control :** work orders are issued for both corrective and preventive maintenance. Each work order is supported by transactions that control the issue of : material, labor, machines, subcontracts and other direct costs to the job. The total cost for each work order is accumulated on a work in progress basis. The system will link with the various systems around it to identify such costs relating to : stock control, payroll, payables. It also needs to be integrated to the general accounting system to reflect all costing matters.

Inventory Management System : covers the inventory management for the various stores located at headquarters or other sites. The life cycle of stock starts with a proper control of purchase requests and the related levels of authority needed for such purchases. This results in a local or foreign purchase order. The orders are placed on the system and are closed by the full or partial receipts against them giving the user a full picture of outstanding orders. Once items are received, they are priced and setup on the stock masters. From there on, the system should provide the user with a set of transactions needed for the issue of materials to work orders, transfers from warehouse to warehouse, adjustments, write off's and returns.

Payroll/Personnel Systems : being an autonomous authority, the Public Transport Authority handles its own payroll and personnel functions. An integrated system is required that is interfaced with the financial as well as the maintenance systems. The personnel function covers : personnel data, employment and administrative information, educational and training histories, disciplinary actions and related notes. The payroll system is parameterized to allow the user to define various allowances and regular deductions made on a periodic basis. Other ad hoc entitlements and deductions can be entered through related transactions. Loans and advances as well as their repayments are to be handled by the system. The system should produce pay slips, payroll registers distributing the payments according to mode (Cash, banks or transfers). It should provide reports on related services such as the social security, medical expenses, etc.

2. Vehicle/Route/Network Maintenance and Scheduling System

The PTA will be receiving 390 buses in 1996 in addition to the current 40 buses. The network will serve Greater Beirut. A major task here involves designing, drawing, producing and printing maps specifying all service routes in conjunction with establishing, producing and printing corresponding timetables. As such, the system will integrate a scheduling and a GIS application that will:

- Help in Planning and Scheduling of routes to serve demand
- Help Maintain routes in the network by keeping it up to date
- Generate route maps
- Act as a Decision Support System

Costs:

The following table summarizes these needs:

Applications	Qty	Cost	Totals
General Accounting	1	\$ 49,500	\$ 49,500
Accounts Recievables/ Payable	1	\$ 43,500	\$ 43,500
Payroll/Personnel	1	\$ 78,000	\$ 78,000
Fixed Assets	1	\$ 33,000	\$ 33,000
Cash Collection	1	\$ 27,000	\$ 27,000
Equipment Site Maintenance	1	\$ 78,000	\$ 78,000
Inventory Management	1	\$ 78,000	\$ 78,000
Network Maintence and Scheduling System	1	\$ 123,000	\$ 123,000
	8		\$ 510,000
Setup			
Foundation Hardware			
Server Large	1	\$ 35,000	\$ 35,000
Server Meduim	1	\$ 25,000	\$ 25,000
Server Small	1	\$ 10,000	\$ 10,000
Workstations	5	\$ 5,000	\$ 25,000
PCa + Printer (Remote)	3	\$ 5,000	\$ 15,000
PCs	10	\$ 3,000	\$ 30,000
	21		
Foundation RDBMS/OS			
SQL RDBMS	21	\$ 600	\$ 12,600
NT OS	21	\$ 150	\$ 3,150
			\$ 155,750
			\$ 665,750
Maintenance			\$ 133,150
Training	21	\$ 1,200	\$ 25,200
			\$ 824,100

To be distributed over three years:

<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>
274,700	274,700	274,700

3.4 Priority Project RPTA-4 Organization Study for the Railways

Objectives:

Once the decision is taken to activate the Railways, there will be a need for a full reorganization study to be done to set its policies and procedures and be able to cope with all new developments (introduce a computer network, train, recruit,...)

Scope of Work:

Basic Reorganization

This consultancy service will include the following:

- Assessing the present status of the Lebanese Railway organization and qualifications of its personnel.
- Carrying out a reorganization study including the addition of new departments concerned with planning, feasibility studies, international relations and marketing or any other related activity that is not covered by the present status.
- Documenting/Formalizing job descriptions.
This activity will include: preparation of job descriptions, investigation of the qualifications of the existing personnel and of new recruits, how and where they fit in the new organization structure.

The set up of training requirements for the proposed positions.

- Enhancing professional capabilities in the areas of planning, statistics and studies
- Assisting the planning department and training of its staff on conducting feasibility studies, market surveys, statistics, statistical analysis and planning, etc....

Cost:

Brief Description	Cost USD
Technical Assistance (24 W/M)	372,000
Total Cost USD	372,000

The total study budget estimate is to be allocated for the second year, pending the decision on rail transport.

Year 1	Year 2	Year 3
	372,000	

3.5 Priority Project RPTA-5 Technical Assistance for Implementation of Bus Services

IAURIF, SYSTRA, SEMVAT and TEAM International have been commissioned to provide technical assistance for the Public Transportation Authority to organize the administration, train the personnel, introduce a Management Information System, prepare an operational plan for bus public transport, and supervise its implementation.

Implementation of this contract will commence in February 1996 with a planned duration of 15 months.

Objectives:

The ultimate objective of this project is to provide adequate and improved public transportation services in Beirut and throughout Lebanon.

Scope of Work:

- General Organization:
 - Reorganize the Public Transportation administration.
 - Evaluate the current status of the personnel and prepare job descriptions for various positions of the proposed organization structure, including job requirements and responsibilities.
 - Define the recruitment needs.
 - Issue recruitment advertisements.
 - Assist in evaluating the qualifications of existing staff and new recruits against PTA's strategic human resources requirements.
- Human Resources:
 - Establish training requirements for the proposed positions.
 - Identify the personnel that need training and define their individual training needs.
 - Train the trainers.
 - Assist and train the planning department staff on conducting feasibility studies, contract negotiations and contract administration as well as the overall planning.
 - Upgrade the capabilities in planning and studies.
- Set up of Operations:
 - Specify the required fleet of buses, and identify the route extensions needed, the sizes of buses (large-small), and scheduling of buses and drivers.

- Set up of Commercial Operations:
 - Identify suitable techniques to be used for ticketing (on-bus, by machine, membership, etc.)
 - Marketing: advertisements on the buses (inside, outside, etc..)
- Management Information System
 - Computerization system requirements
- Implementation
 - Follow up on all the procedures, making sure that they are implemented correctly.

Justification:

It is crucial to reorganize the Public Transportation System in Lebanon for many reasons, including:

- The need to reduce traffic congestion
- Render the customers an acceptable and efficient service
- Provide commuters with a wider coverage of service
- Reduce transport costs to the commuter and to society
- Reduce adverse environmental impact of the use of private vehicles.

Cost:

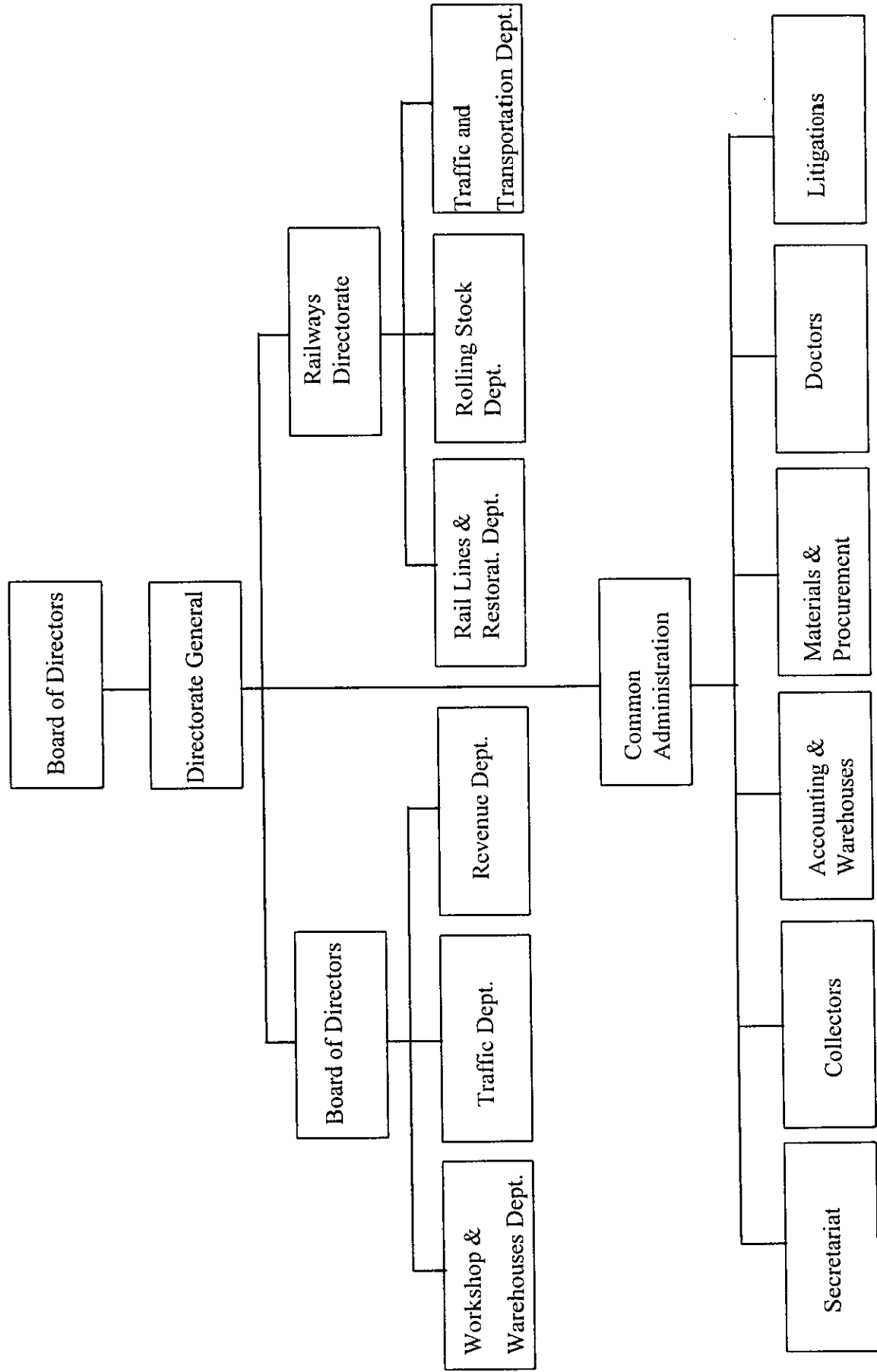
The estimated study budget is USD 2,000,000 equivalent.

To be distributed as follows:

<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>
1,300,000	700,000	

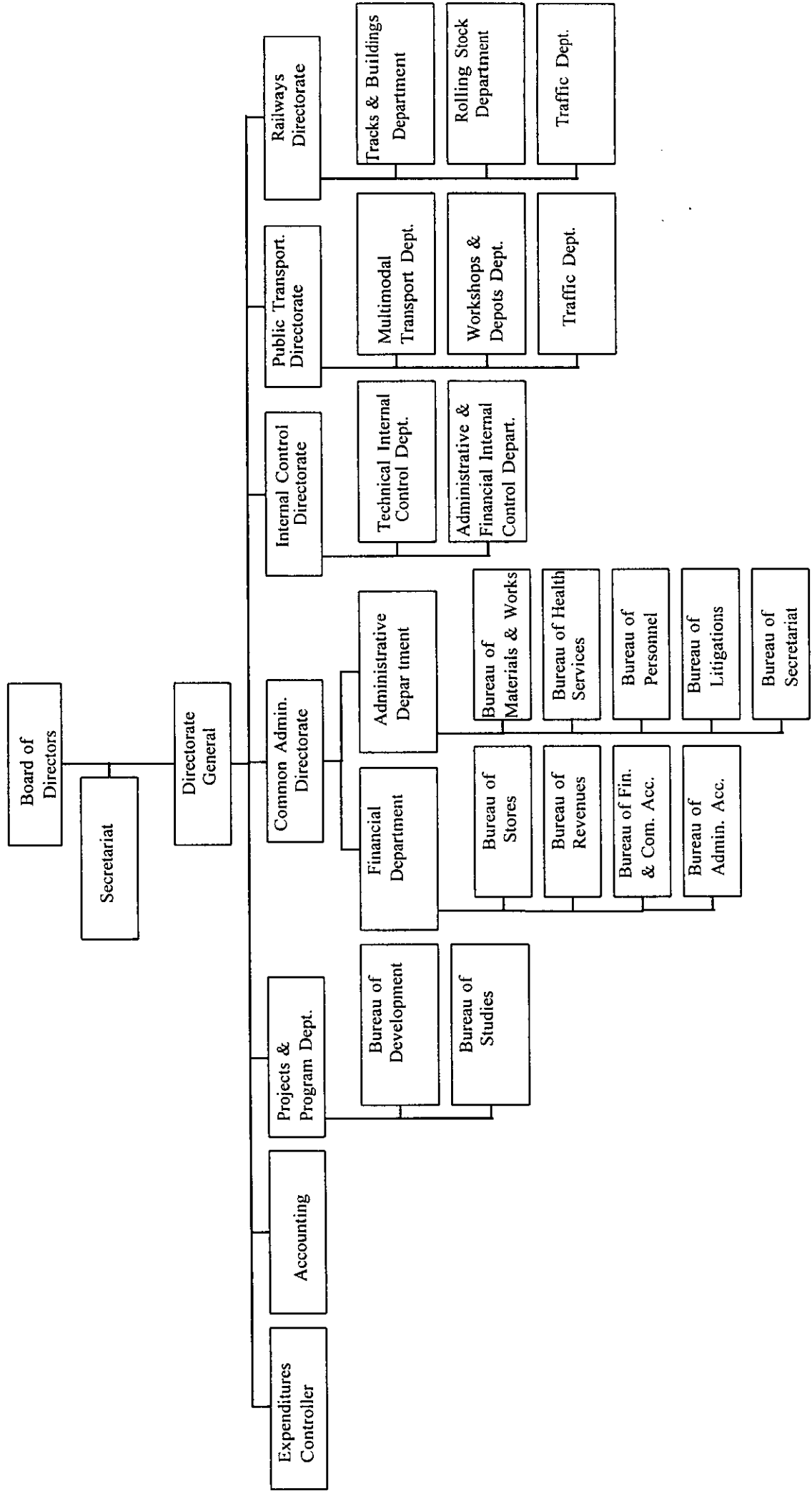
RAILWAYS & PUBLIC TRANSPORTATION AUTHORITY

THE PRESENT ORGANIZATION STRUCTURE



RAILWAYS & PUBLIC TRANSPORTATION AUTHORITY

THE PROPOSED ORGANIZATION STRUCTURE



RAILWAYS & PUBLIC TRANSPORTATION AUTHORITY

GEOGRAPHIC DISTRIBUTION OF THE FUTURE PLAN

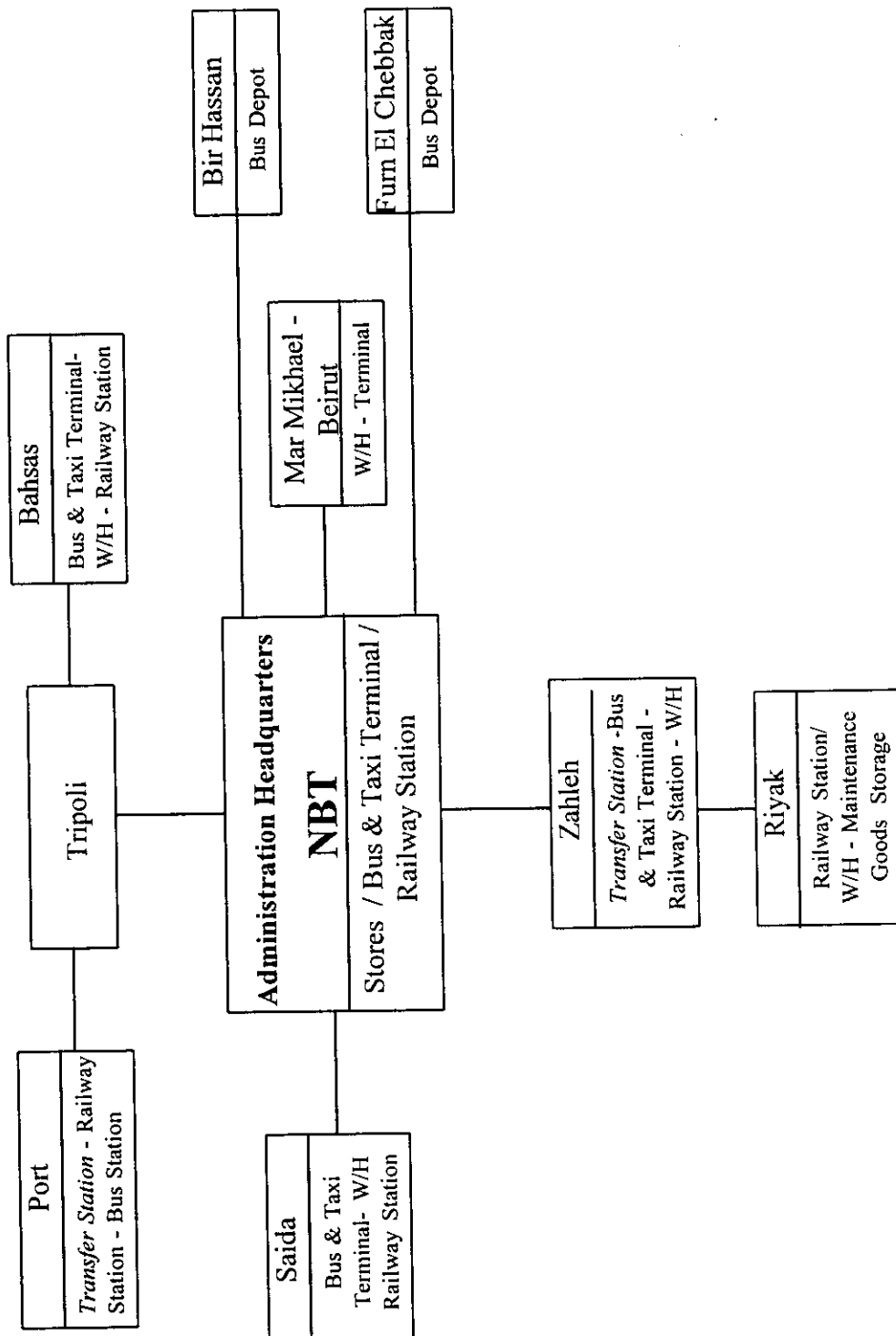


TABLE 1 - A
IMMEDIATE NEEDS FOR PERSONNEL

AGENCY : RAILWAYS AND PUBLIC TRANSPORT AUTHORITY
Branch : Railways

GRADE	ESTABLISHED POSITIONS	TOTAL OCCUPIED	VACANT POSITIONS END 1995	THREE YEAR DISTRIBUTION		
				YEAR 1 1996	YEAR 2 1997	YEAR 3 1998
Grade 1 Tech.I		1				
Grade 2 Adm.I						
Grade 3 Tech.II		3				
Grade 3 Tech.III						
Grade 4 Adm.I		11				
Grade 4 Adm.II		7				
Grade 4 Tech.I		1				
Grade 4 Tech.II						
Grade 4 Tech.III						
Grade 5 Adm.I		11				
Grade 5 Adm.II		24				
Grade 5 Tech.I						
Grade 5 Tech.II		10				
Grade 6 Adm.I						
Grade 6 Adm.II						
Grade 6 Tech.I		17				
Grade 6 Tech.II		35				
TOTAL (Cadre)	0	120		0	0	0
Contractuals		2				
Daily Workers		42				

* The Established positions are not available.

TABLE 1 - B
IMMEDIATE NEEDS FOR PERSONNEL

AGENCY : RAILWAYS AND PUBLIC TRANSPORT AUTHORITY
Branch : Public Transportation

GRADE	ESTABLISHED POSITIONS	TOTAL OCCUPIED	VACANT POSITIONS END 1995	THREE YEAR DISTRIBUTION		
				YEAR 1 1996	YEAR 2 1997	YEAR 3 1998
Grade 3 Tech.II		3				
Grade 3 Tech.III						
Grade 4 Adm.I		6				
Grade 4 Adm.II		14				
Grade 4 Tech.I						
Grade 4 Tech.II		3				
Grade 4 Tech.III		359				
Grade 5 Adm.I		9				
Grade 5 Adm.II						
Grade 5 Tech.I		62				
Grade 5 Tech.II		136				
Grade 6 Adm.I		2				
Grade 6 Adm.II						
Grade 6 Tech.I		9				
Grade 6 Tech.II						
TOTAL (Cadre)	0	603		0	0	0
Contractuals		7				
Daily Workers						

* The Established positions are not available.

** The Public Transportation is to undergo important reorganization depending on it's future operation. The personnel requirements will be decided by the relative studies

TABLE 2 - A
STAFFING NEEDS CLASSIFIED
BY FUNCTIONS

AGENCY : RAILWAYS AND PUBLIC TRANSPORT AUTHORITY
Branch : Railways

GRADE	NO.	FUNCTION	REQUIRED QUALIFICATIONS AND EXPERIENCE	TOTAL PER GRADE
Grade II AD2	3	Head of Department (Administrative)		3
Grade II Tech2	2	Head of Department (Technical)		2
Grade III AD1	8	Head of Section Administrative		8
Grade III AD2	5	Office Manager	University Degree in Law or Administration or equivalent	5
Grade III Tech3	1	Track Branch Manager		
Grade III Tech3	1	Main Depot Manager		
Grade III Tech3	1	Tech. Chief of Section - Procurement		3
Grade III Tech2	1	Civil Engineer - Track	Civil Engineering Degree	
Grade III Tech2	1	Mechanical Engineer - Traction	Mechanical Engineering Degree	
Grade III Tech2	1	Design Engineer		3
Grade IV-I tech	3	Deputy Depot Mgr.		
Grade IV-I tech	1	Train Conductors' Head		
Grade IV-I tech	1	Draftsman-Track		
Grade IV-I tech	1	Chief of Section - Track		
Grade IV-I tech	1	Assistant telephone controller		7

TABLE 2 - A (Cont'd)
STAFFING NEEDS CLASSIFIED
BY FUNCTIONS

AGENCY : RAILWAYS AND PUBLIC TRANSPORT AUTHORITY
Branch : Railways

GRADE	NO.	FUNCTION	REQUIRED QUALIFICATIONS AND EXPERIENCE	TOTAL PER GRADE
Grade IV-II Tech	2	Crew Leader I - Traction		
Grade IV-II Tech	1	Designer/Draftsman - Traction		
Grade IV-II Tech	1	Surveyor - Track		5
Grade IV-II Tech	1	Chief of Section - Track		
Grade V-I Tech	2	Head Supervisor - Traction		3
Grade V-I Tech	1	Shed Supervisor - Track		
Grade V-2 Tech	4	Inspector - Traction		
Grade V-2 Tech	9	Train Conductor		
Grade V-2 Tech	3	Track Technician		
Grade V-2 Tech	7	Traction Technician		31
Grade V-2 Tech	8	Crew Leader - Track		
Grade VI-I Tech	12	Train Traffic Controller		
Grade VI-I Tech	46	Track Labourer		
Grade VI-I Tech	18	Flagman		
Grade VI-I Tech	14	Assistant train conductor		
Grade VI-I Tech	8	Assistant Inspector - Traction		100
Grade VI-I Tech	2	Wireless Operator - Track		
TOTAL				170

TABLE 2 - B
STAFFING NEEDS CLASSIFIED
BY FUNCTIONS

AGENCY : RAILWAYS AND PUBLIC TRANSPORT AUTHORITY
Branch : Public Transportation

GRADE	NO.	FUNCTION	REQUIRED QUALIFICATIONS AND EXPERIENCE	TOTAL PER GRADE
Grade IAD2	1	Department Head		1
Grade IITech2	1	Department Head		1
Grade IIAD1	10	Office Manager		10
Grade IIAD2	2	Chief of Section		2
Grade IIITech1	7	Assistant Department Head		
Grade IIITech1	3	Inspector		
Grade IIITech1	3	Office Manager		13
Grade IIITech2	1	Assistant Chief of Section		1
Grade IIITech3	4	Chief of Section		
Grade IIITech3	6	Technical Chief of Section		10
Grade IVAD2	34	Clerk		34
Grade IVTech 2	7	Crew Leader		
Grade IVTech 2	2	Chief Inspector		
Grade IVTech 2	1	Chief Conductor		
Grade IVTech 2	25	Track Manager		
Grade IVTech2	2	Assistant Engineer		
Grade IVTech2	6	Specialized Technician		43
Grade IVTech3	38	Transportation Inspector		38
Grade VTech1	60	Technician		
Grade VTech1	40	Cleaner		100
TOTAL				253

* The actual staffing needs will be defined more accurately in the Mass Transit Implementation Study

TABLE 3 - A
OFFICE REHABILITATION NEEDS

AGENCY : RAILWAYS AND PUBLIC TRANSPORT AUTHORITY
Branch : Railways

[illegible]

No Data for Rehabilitation Cost Received

TABLE 3 - B
OFFICE REHABILITATION NEEDS

AGENCY : RAILWAYS AND PUBLIC TRANSPORT AUTHORITY
Branch : Public Transportation

LOCATION	DESCRIPTION	AREA SQM	UNIT NBR	RENTAL COST OF ADDITIONS \$ / YEAR
Bir Hassan	Actual Area	8000		
Mar Mkhayel	Partial Rehabilitation			
	for Warehouse and Depots			
Furn El Chebbak	Partial Rehabilitation for Warehouse			
TOTAL				

TABLE 4
ESSENTIAL EQUIPMENT NEEDS

AGENCY : RAILWAYS AND PUBLIC TRANSPORT AUTHORITY

EQUIPMENT	TYPE	NO.	UNIT PRICE	TOTAL COST	TOTAL COST PER GROUP	THREE YEAR DISTRIBUTION		
						YEAR 1 1996	YEAR 2 1997	YEAR 3 1998
OFFICE COMPUTERS								
Local Area Network (20 Users):					140,600			
Server		1						
PC's + OT S/W		20						
Laser Printer		4						
Matrix Printer		2						
Cabling		1						
Hubs		1						
Routers		1						
Lan (5 Users) :		1			56,500			
Server		1						
PC's + OT S/W		5						
Laser Printer		1						
Matrix Printer		1						
Cabling		1						
Hubs		1						
Routers		1						
Training		25			15,000			
TOTAL OT					212,100	212,100	0	0

TABLE 4 (Continued)
ESSENTIAL EQUIPMENT NEEDS

AGENCY : **RAILWAYS AND PUBLIC TRANSPORT AUTHORITY**

EQUIPMENT	TYPE	NO.	UNIT PRICE	TOTAL COST	TOTAL COST PER GROUP	THREE YEAR DISTRIBUTION		
						YEAR 1 1996	YEAR 2 1997	YEAR 3 1998
OFFICE EQUIPMENT								
Railways:								
Typewriters	Elect.Bilingual 43cm	2	1,000	2,000				
Copiers	A3/25cpm/Zoom 50-200	1	8,000	8,000				
Copiers	A0	1	15,000	15,000				
Copiers	A3/15cpm/Normal Zoom 65-141	2	2,500	5,000				
Calculators	Scientific 12 Digits	6	100	600				
Fans	Elect. for Offices	8	50	400	31,000	31,000		
Public Bus Transportation								
Typewriters	Elect.Bilingual 43cm	1	1,000	1,000				
Copiers	A3/15cpm/Normal Zoom 65-141	1	2,500	2,500				
Calculator	14 Digit	4	50	200				
Calculator	14 Digit, paper roll	4	150	600	4,300	4,300		
OFFICE FURNITURE								
Railways								
Desks	Wooden	1	300	300				
Desks	Steel	34	100	3,400				
Chairs	Desk Chair	9	60	540				
Chairs	Normal Chair	26	20	520				
Gaz Heater	For Office Use	6	100	600				
Cupboards	Steel	28	120	3,360				
Filing Cabinets	Steel	18	150	2,700	11,420		11,420	
Public Bus Transportation								
Desks	Wooden	6	300	1,800				
Desks	Steel	12	100	1,200				
Chairs	Desk Chair	6	60	360				
Chairs	Normal Chair	24	20	480				
Cupboards	Steel with 2 Panels	11	120	1,320				
Filing Cabinets	Steel with 4 Drawers	9	150	1,350	6,510	6,510		
TOTAL EQUIPMENT					53,230	41,810	11,420	53,230

Republic of Lebanon
Office of the Minister of State for Administrative Reform
Center for Public Sector Projects and Studies
(C.P.S.P.S.)