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U N C L A S S I F I E D

PROJECT PAPER

SYRIA: RURAL ROADS

PROJECT NO. 276-0033
LOAN NO. 726-K-021

U N C L A S S I F I E D

RURAL ROADS PROJECT

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RURAL ROADS PROJECT
 SYRIAN ARAB REPUBLIC

I. PROJECT DESCRIPTION

A. SUMMARY AND RECOMMENDATIONS

1. Borrower: The Government of the Syrian Arab Republic.

2. Loan: A loan not to exceed \$26.4 million.

	<u>EX</u>	---	(\$000)	---	
		<u>LC</u>		<u>Total</u>	<u>Percent</u>
A.I.D. Loan	50	26,350		26,400	70
S.A.R.G.	<u>0</u>	<u>11,500</u>		<u>11,500</u>	<u>30</u>
TOTAL	50	37,850		37,900	100

3. Terms: Repayable in U.S. dollars over a period of forty (40) years including a ten (10) year grace period with interest payments only. Interest is payable on the unpaid balance at an annual rate of two percent (2%) during the grace period and at an annual rate of three percent (3%) thereafter.

4. Disbursements: A modified Fixed Amount Reimbursement (FAR) method will be used to make direct reimbursement to the Borrower for the construction of each of the sixty road projects. Disbursements for technical services will be made directly by AID.

5. Description of the Project: The project consists of the construction of approximately 60 rural roads totaling 1126 kilometers in the four Muhafazats (Provinces) of Aleppo, Raqqa, Deir Ezzor and Hasakah; and technical services to provide appropriate engineering technology on construction materials/methods and social/economic experience to carry out project evaluations.

6. Summary of Findings: The project roads are a part of the Government of Syria's Fourth Five-Year Development Plan to improve the economic and social welfare of the rural poor in the northeastern provinces by providing better access to markets and social infrastructure.

The project roads will provide the rural population with all weather access to agricultural inputs and markets and to the Government's social services such as education, health care, etc. The individual road projects were examined in detail and it was determined that the economic and social benefits to the population justify AID financing.

An evaluation of the methods used for selecting the individual roads, determining the type of roads to be constructed and the construction methods to be used were found to be technically sound. The cost estimates are based on existing cost data from on-going construction projects in the area and they are considered to be reasonable.

The central point of contact in the Government will be the Ministry of Local Administration. The technical backup will be provided by the Ministry of Communications Directorate of Construction and Maintenance of Roads and Bridges. The Ministries and the individual Muhafazats (provinces) have the necessary financial resources, administrative and technical staff and equipment to finance, design, supervise construction and maintain the project roads.

7. Statutory Checklist

The Project meets all applicable statutory criteria and certifications (See Annexes B and G).

8. A.I.D. Funding Source: Economic Support Fund.

9. Mission Views: The Ambassador and the AID Mission Director strongly support the Project.

10. Issues: None

11. Recommendation: That a loan in the amount of U.S. \$26.4 million be authorized on the terms and conditions set forth herein.

B. THE PROJECT

1. General Description: The Project consists of 60 road projects which comprise a total length of 1,126 kilometers of farm to market roads in the four northeastern Muhafazats of Aleppo, Raqqa, Deir Ezzor and Hasakah (See Annex A, Exhibits 3-6). These rural roads end, in all cases, either at a market center or at an intersection with national, secondary or other rural highways leading to a nearby market or an urban center.

The project roads are a part of an on-going construction program and many of the roads are already under construction. Annex C, Exhibit 2 lists all the project roads in order of priority and indicates which items of work remain each road have been completed and what items of work remain to be accomplished. The loan will finance only incompleted work. Annex C, Exhibit 2 contains more roads than are included in the project. These additional roads have met the same selection criteria as the project roads and may be substituted for some of the project roads which are in advanced stages of construction.

All of the project roads currently exist as unimproved roads or tracks and will require upgrading or reconstruction. Work on these roads will include earthwork, drainage structures (culverts and bridges), sub-base and base course and either a bituminous surface treatment or bituminous pavements in one or two layers. The longest construction period for any particular road is estimated to be 30 months.

C. PROJECT PURPOSE AND STRATEGY

1. Statement of the Problem to be Addressed: The majority of Syria's rural population in the northeastern provinces are not served by all weather roads and a very large percentage of those not presently served are the poorest of the poor in rural Syria. Existing roads in these rural areas are inadequate in the dry season but most become impassable during the winter wet season. This imposes considerable hardships on the people in the rural areas who do not have year-round access to markets for their agricultural production, cannot obtain agriculture inputs to increase production, or benefit from Government administrative and other public services needed to improve their standard of living. This lack of all weather access also constrains the

Government from being able to provide such public services as are needed for development.

2. Project Goal and Purpose: The goal of the Syrian Government is to assist the rural poor in Syria to improve their relative welfare and to provide them all weather access to agricultural inputs and markets and social service centers. The Fourth Five-Year Plan for the period 1976-1980 includes many projects that are primarily directed at helping the rural population in the fields of communication, transportation, agriculture, education, health care, housing, water supply, electricity and other social services. In transportation and communication, especially roads, the Government's policy is to continue to concentrate on roads as the basic means for providing transportation for moving people and goods to and from market and population centers. This plan proposes to concentrate on the completion of the secondary network of roads which feeds the main highways and railroads.

The purpose of this project is to assist the Syrian Government carry out the objectives of the Fourth Five Year plan to construct and improve rural all weather farm to market roads in the four muhafazats of Aleppo, Raqqa, Deir Ezzor and Hasakah and provide year round access to as many of the villages and rural population as possible. The next Five Year Plan, which begins in 1981, will most likely focus more heavily on the problems of the rural population in order to slow the migration of the rural population to the urban centers. The SARG is making a major effort to develop agriculture in the northeastern area, particularly in the Euphrates River Basin, which will require public infrastructure to make the investment in agriculture a success. The provision of roads is one of the basic elements that is required since almost all other elements of development depend on some form of transportation. The SARG has determined that roads are the best and least expensive method of providing this transportation service.

3. Project Beneficiaries: An estimated 212,300 persons, essentially rural people, located in either small villages or farms will be served by the rural roads in this project. The population served is 9% of the four Muhafazats and is 15% of the rural population. As a result of their present isolation, the proposed beneficiaries are the poorest of the population in a region that the SARG considers to be the most deprived area of the country. A more detailed description of the effects and benefits of the project to the beneficiaries is shown in the Environmental and Socio-Economic Analysis (Annex D) of this paper.

4. AID Objectives: The Rural Roads Project is designed to benefit directly the rural poor and is in accordance with the Mission's Country Development Strategy Statement with regard to assistance to the poor segments of the Syrian society. For details of these objectives, see the 1980 AID CDSS.

D. BACKGROUND

The bulk of the need for transport facilities is for low volume all weather roads which generally carry from 50-300 vehicles per day. In the Fourth Five-Year Plan, the Government identified approximately 2157 kilometers of rural roads for construction in the four northeastern Muhafazats. Approximately 52% of these roads have been completed. Most of the remaining roads, including the roads for this project, are in various stages of construction but progress has been slowed due to budgetary constraints. In order for the SARG to meet its Fourth Five-Year Plan objectives, additional funding will be required from external sources.

1. Regional Setting of Proposed Project: Syria is administratively divided into fourteen (14) Muhafazats (provinces). Each Muhafazat is generally divided into Mantikas (districts) and each Mantika is further divided into smaller administrative units called Nahia (sub-district). A Nahia contains a number of villages and is the smallest administrative unit.

The project area consists of the four (4) northern Muhafazats of Aleppo, Raqqa, Deir Ezzor and Hasakah spanning a distance of approximately 500 kilometers, from Aleppo province in the northwest, eastward to Hasakah province which is next to Iraq. The four provinces together comprise 51.0 percent of Syria's total land area and contain 36.1 percent of its population. The provinces are primarily rural in character with only 44.1 percent of their population considered urban compared with the national average of 52 percent. However the population of Deir Ezzor, Raqqa and Hasakah are distinctively more rural with percentages varying between 66.1 and 76.2.

Although agriculture in Syria accounts for only 17 percent of GDP and 32 percent of employment and has steadily declined in importance during the last several years, it nevertheless remains the primary economic activity of these four provinces. The provinces contain 60.0 percent of the nation's cultivable area and most of its irrigation potential. At present the region is of primary importance in the production of food grains and cotton and an important producer of wool, dairy and meat products. 4) It is not a significant producer of vegetable and tree crops.

Despite its agricultural preeminence the region is relatively poor when compared to the rest of the country. Although official income estimates are not available at the provincial level, per capita incomes in the rural areas of the four provinces appear to average about 30% of the national average. 5)

4) The four provinces produce 70% of the wheat, 78% of the barley, 80% of the cotton, 55% of the wool, 37% of the dairy products and 52% of the meat products.

5) Based on average rural family income of SP 6,000 ÷ 6 compared to national per capital GDP of SP 3,315 (1977). Average rural family income and size are based on three AID financed studies: Asmon (1973), Chatty (1979), and Benedict and Lintner (1979). An independent study by Bakour (1976) also supports these findings.

There are other indicators of general welfare that strongly support the notion that this region is relatively poor compared to the rest of the nation. Forty-two percent of the population in the region is considered non-literate compared to 33 percent for all Syria. Crude death rates in these provinces range from 1.9 to 2.9 percent compared to 1.5 percent for the nation as a whole. The average number of persons per doctor, dentist or pharmacist range from 2 to almost 4 times the national average. Excluding the city of Aleppo, electricity consumption and telephone service are approximately 50 percent of the national average. Together, these factors suggest a population low on the Syrian income scale and relatively short in its basic services.

2. Road Network in Region: Existing asphalted road connections between the main highways within the area are very limited. The principal highways in the region are: the Damascus-Aleppo Highway, Aleppo-Raqqa-Deir Ezzor-Abu Kamal Highway along the Euphrates River, and the Deir Ezzor-Hasakah-Qamishly-Tall Kojak Highway. The Aleppo-Damascus and the Aleppo-Raqqa Highways are relatively new and in very good condition whereas the others are deteriorating rapidly. There are several secondary highways within the region all in need of upgrading to meet present day traffic demands.

With financial assistance provided by Kuwait, Saudi Arabia, IBRD and the EEC, the Government now has under construction a new primary Aleppo Tall-Kojak Highway which will link Aleppo directly with Tall Kojak on the Iraqi border. The old route through Deir Ezzor, Hasakah and Qamishly is 685 kilometers whereas the new highway will be 588 kilometers long. The estimated cost is 596,224,700 Syrian Pounds (U.S. \$152,878,128). Several sections of the road have already been let to contract and all sections are expected to be under construction within the next 12 months. With the exception of the roads in Deir Ezzor Muhafazat, the roads proposed for AID financing under this project will form an essential part of a feeder road network which will support the Aleppo-Tall-Kojak Highway. (See Annex A, Ex. 2)

E. PROJECT PRIORITY AND RELATION TO OTHER PROGRAMS

1. SARG Priorities: Syria's Fourth Five-Year Plan, covering the period 1976-1980, embodies a strong thrust toward self-sufficiency, especially in the production of principal food and clothing items and agricultural machinery. The Plan includes the following policy objectives:

a. Geographic distribution of projects to improve work opportunities, living conditions and basic services in rural areas, and to increase the exploitation of unutilized agricultural resources.

b. Improvement in nutrition, especially with regard to animal protein.

c. Development of transport and communications networks.

d. Gradual and voluntary substitution of cooperatives for individual forms of enterprise in the agricultural, commerce and transport sectors.

At the inception of the Fourth Five-Year Plan, agricultural growth was expected to average eight (8) percent annually, while the industry, mining and energy, construction, transportation and communication sectors were anticipated to grow at about twice this rate. Growth in other services was expected to be in the 10-12 percent range. Original Plan allocations called for agriculture to receive 24 percent of total investment, slightly more than industry and mining. In contrast, actual data for 1976 and 1977 show agriculture receiving only 7.5 percent of total investment, while industry and mining received 47 percent.

2. AID Priorities: The AID program in Syria is an ESF Program with a political rationale and objective. However, AID assistance is being used for development purposes and, to the extent possible, in accordance with the new directions policy and other policy guidelines that apply to development assistance programs. The new programs for AID in Syria represents an effort to direct U.S. assistance to the rural areas where a large percentage of the poorest of the poor live. Almost all new AID capital projects are now

directed at the rural poor sector of Syria in the fields of education, health care, water supply, electricity and agriculture. AID plans to focus its initial rural projects primarily in the northeast region of Syria, an area that in general appears to be most needy. By grouping our activities into one area, this should produce mutual reinforcement of their effects on the population.

3. Other AID Projects: See Annex K. Exhibit 1.
4. Other Donor Activity: See Annex K. Exhibit 2.

II. PROJECT SPECIFIC ANALYSIS

A. TECHNICAL ANALYSIS

1. Project Description: The loan will provide funding for the construction of approximately 60 rural roads totaling 1126 kilometers in the four Muhafazats of Aleppo, Raqqa, Deir Ezzor and Hasakah. The following is a detailed list of the roads to be funded under the project with the approximate length yet to be completed. (See Annex C, Exhibit 2, for details of road status.)

NO. 1 ROAD DESCRIPTION

<u>ALEPPO MUHAFAZAT</u>	<u>LENGTH IN KILOMETERS</u>
1. Aleppo-Kale't Sama'an-Jnedres-Hamam	33.000
2. Sfere-Khanaser	22.000
3. Ien Arab-Sereen	35.000
4. Manbej-Khafse	33.000
5. Bab-Der Hafer	24.000
6. Nabi Houri-Der Sawan	10.500
7. Khanaser-Tal Daman	31.000
8. Shiuekh Foukani-Shiuekh Tahtani	29.000
9. Manbej-Abu Kalkal-Sandaleyeh	29.500
10. Manbej Khafse Road-Abu Kahef	40.000
11. Ien Arab-Jalabiyeh	<u>40.000</u>
Muhafazat Total	327.000
 <u>RAQQA MUHAFAZAT</u>	
1. Ien Issa-Kfefe-Zarzouri	14.000
2. Mreran-Ien Issa	6.000
3. Jouneyeh-Thawra	4.000
4. Zedi-Kantari	20.000
5. Zedi-Nosf Tal	18.000
6. Heshe-Sharakrak	9.000
7. Hamarat	35.000
8. Slouk-Ras Alien	45.000
9. Tal Abyad	50.000
10. Slouk-Alzedi	20.000
11. Slouk-Kantari	<u>24.000</u>
Muhafazat Total	245.000

DEIR EZZOR MUHAFAZAT

LENGTH IN KILOMETERS

1. Deir Ezzor-Bserah-Bawara	67.000
2. Deir Ezzor-Hatle-Mrat-Maxloun	23.000
3. Ma'adan-Attik	13.000
4. Shehel School-Kraieyh	2.500
5. Sheikh Hamad	3.000
6. Jdid-Bakara	2.000
7. Kouriyeh Jamieyh	4.000
8. Kharitra	2.000
9. Gabra-Deir Ezzor Hwy.	3.500
10. Abu Hardoub-Deir Ezzor Hwy.	3.500
11. Salhiyeh-Deir Ezzor Hwy.	3.000
12. Mayadin-Badiyeh	3.000
13. Sayaleh-Deir Ezzor Hwy.	7.500
14. Ramadi-Deir Ezzor Hwy.	6.000
15. Al Bagous-Alma'abar	0.900
16. Al Tayaneh-Mazraet Shanah	3.800
17. Almaslakha-Alramadi	5.500
18. Alkoureyeh-Alsharah	4.500
19. Hemar Alkasrah-Hemar Alali	5.000
20. Ziban-Alnaheyyeh	8.300
21. Almaryameyyeh-Al Taes	1.500
22. Aldewar	3.000
23. Alabas	3.500
24. Altawatemeh	3.500
25. Zeger-Aljazereh	0.600
26. Darnej-Alma'abar	2.000
27. Almaryaeyeh-Alsharke	2.500
28. Mazraet Shanam	0.900
29. Alragib-Zebian	<u>2.400</u>

Muhafazat Total

191.200

HASAKAH MUHAFAZAT

1. Hasakah-Amouwda	35.000
2. Jabal Abdul Aziz-Goura-Tamer	32.000
3. Mafrak Al Houli-Tal Brak	40.000
4. Tal Tamer-Aburasen-Al Kassra	35.000
5. Jawadiyeh-Jonop Al Rad	60.000
6. Leilan-Hamarnah	2.600
7. Oum Kakeif-Tahtani	7.600
8. Hasakah-Derbaseseyeh	65.000
9. Hasakah-Tal Mojdal-Tal Tamer-Rasien	<u>85.000</u>

Muhafazat Total

362.200

Project Total

1,125.400

Use

1,126

a. Road Construction: Construction of almost all of the project roads was initiated under the Fourth Five-Year Plan which went into effect in 1976. Some of the roads were begun in the early stages of the Plan period while others were started more recently. Some earthwork has been completed for most of the roads but none have been completed through the surfacing stage. Therefore, the AID funds will be used to finance all aspects of construction, i.e. earthwork, drainage structures, sub-base and base course and bituminous surfacing.

b. Technical Services: USAID will contract a local engineering firm to provide the services of four full time Syrian highway engineers with extensive knowledge and experience in the field of road construction for the monitoring of construction. They will be specifically knowledgeable in the financing and construction of rural roads. One engineer will be assigned to each Muhafazat and be responsible for assisting the road engineering office in each of the four Muhafazats in monitoring and coordinating the project with USAID. They will assist each Muhafazat engineering office prepare the necessary design and construction package for each road project which will be submitted to AID for review and approval. This package will include the plans, technical specifications, contract documents, bill of quantities and cost estimate for each road to be financed under the loan. The engineers will be responsible for the inspection of all construction work, make monthly progress reports to the Government and AID, and assist the provincial engineering offices prepare requests for reimbursement from AID. They will also provide technical advice to the Muhafazats' road engineers on improving the soils and materials testing on the construction projects. In order for the engineers to accomplish all the above work, they will require the use of a four-wheel drive vehicle and office space in each of the Muhafazats. The office space will be provided by each Muhafazat engineering office and the vehicles will be procured as part of the contract.

2. Road Selection Criteria: The roads included in the project are the rural roads to be improved to all weather standards and financed under the Fourth Five-Year Plan, or important local roads not in the Five-Year Plan, but specifically requested by the Government for consideration under this project. The roads underwent extensive review and analysis by the Muhafazat Road Committees, the Ministry of Local Administration, and the State Planning Commission. The following general criteria were used by the Government and AID to select the roads for AID assistance from those already approved by the Government for construction during the Fourth Five-Year Plan period:

a. SARG Criteria:

- 1) The proposed road must connect to an existing all weather road which leads to markets, agricultural collection centers, processing centers or social service centers.
- 2) The proposed road will have a potential for increasing agricultural production in the area and provide an assured access to markets for production.
- 3) The proposed road will serve a significant number of small farmers within the roads' area of influence.
- 4) The area of influence of the proposed road must be substantial.

b. AID Criteria:

- 1) The proposed road must be scheduled for improvement under the Fourth Five-Year Plan or must be specifically requested by the Government.
- 2) The proposed road should be located in the rural and least developed areas of the Muhafazats which show a potential for development.
- 3) The proposed road will benefit some of the most deprived segments of the population by providing access to basic social, education and health services.

- 4) The proposed road will lead to development of the agricultural potential and additional social infrastructure.
- 5) The proposed road is the best method at a reasonable cost for providing all weather access to the population.
- 6) The proposed road is expected to receive adequate maintenance.

3. Design Standards: The Ministry of Communications has adopted a typical cross section for all rural roads (Annex C, Exhibit 1). This roadway section is used for all rural roads that are to be paved with asphalt initially or at a later time. This typical roadway consists of a paved asphalt surface of two lanes, each three meters in width. It has a one meter shoulder on each side. The design speed is a maximum of 65 kilometers per hour and is designed to carry up to 500 vehicles per day. The project roads will be constructed to these design standards except for asphalt surfacing. The roads will be constructed with either a surface treatment or 6 cm bituminous base course. A final bituminous wearing course may be added at some future date as traffic increases.

The designs consist of a simple plan and profile sheet indicating existing topography, ground lines and proposed road profile grade line, proposed drainage structure locations, and a typical road cross section. The design standards are based on French standards and modified to conform to conditions and laws existing in Syria. In general, they meet the basic requirements of U.S. standards and are fully acceptable for rural roads.

a. Plans: The plans prepared for each project contain the following elements and are in accordance with the standards adopted by the Ministry of Communications and Muhafazats for rural road construction:

(1) Plan and Profile Sheets:

The plan and profile sheets indicate the existing topography, existing ground line on the center line of proposed roadway, the proposed profile grade on the center line of the proposed roadway, the location of proposed drainage structures and the size and type of structure and the typical road cross section.

(2) Design Detailed for Structures: The plans will contain details as to the design of reinforced concrete pipe culverts, reinforced concrete box culverts and reinforced concrete bridge structures. Minor drainage structures consist of pipe culverts of 80 and 100 centimeters and box culverts with one to three cells with heights that vary from 1 to 2 meters and width that varies from 2 to 3 meters. Major drainage structures consist of simple span bridges with a sufficient opening to allow the passing of a 50 year peak runoff with an average speed of 3.0 meters per second. The simple span design is used for simplicity of construction and low cost.

(3) Bill of Quantities: A bill of quantities is provided for each road project. The bill of quantities is broken down into four major sub-categories of earthwork, drainage structures, sub-base and base courses, and bituminous surfacing as each of these major items may be let in separate contracts. See Annex C, Exhibit 2 for details of the breakdown.

b. Technical Specifications: The Ministry of Communications and the Muhafazats have developed standard specifications for the construction of each type of work. These technical specifications have been reviewed by USAID engineers and found to be satisfactory to insure a quality construction product.

c. Plan Preparation: The Department of Communications of each Muhafazat will prepare the plans, specifications and bid documents. The roads will be designed and constructed in accordance with the standards adopted and by the Muhafazats and approved by the Ministry of Communications, Department of Construction and Maintenance of Roads and Bridges. The design package for each individual road project will be reviewed by USAID, Syria prior to the release of loan funds to finance the construction costs for that particular road.

4. Construction Methods:

a. Contract: The road projects will be performed by either local Syrian private contractors or Government owned companies except as described in paragraph b. below. The contracts will be awarded to the lowest bidder in accordance with the established practice of the Ministry of Communications. There are enough private contractors available in Syria to offer sufficient competition for the work to be performed. Standard Department of Communications

contracts will be used for construction. These are based on the Contracting Procedures Decree 288 of the Syrian Arab Republic. Construction contracts are awarded by the individual Muhafazats and reviewed by the Ministry of Communications to insure that they meet the standards adopted by the Ministry of Communications. The Government's standard contract has been reviewed and is considered satisfactory to AID.

The inspection/supervision of construction will be done by the engineering staff of the Directorate of Communications in each of the Muhafazats. The Muhafazats' Directorate of Communications have been doing this type of work for several years and all have sufficient number of experienced and qualified personnel to perform the inspection and supervision of the work contemplated.

b. Force Account Work: In some Muhafazats, to fully utilize available staff, some of the construction work may be done on force account basis. This method is presently being utilized on some projects that are on-going, particularly in the Muhafazat of Deir Ezzor. The Muhafazats have considerable experience and the necessary personnel and equipment to perform some of the work by force account.

c. Materials and Construction: Virtually all of the materials required for construction are indigenous to Syria and are readily available, including bituminous and POL products. However, at times there are shortages of some materials such as reinforcing steel, cement and asphalt products which may have to be imported into Syria.

A large deposit of natural sand asphalt is located in Deir Ezzor Muhafazat. The local name for it is beshiry and is being used on many of the rural roads under construction in Deir Ezzor and Hasakah Muhafazats. MC-C is normally added to the crushed beshiry to make bituminous pavements. The cost of this bituminous pavement is approximately 50 percent of normal asphaltic concrete pavement. The U.S. Department of Transportation (DOT) conducted an analysis of the sand asphalt and concluded it would be suitable for paving under certain conditions. (See Annex C, Exhibit 5.)

5. Maintenance: Maintenance costs of rural roads are financed through the Ministry of Local Administration Office in each Muhafazat and carried out by the Directorate of Communications. The Directorate of Communications Office is further divided into maintenance crews located strategically within the Muhafazats. Each Muhafazat has an equipment maintenance repair shop located in the capital city. The shop space and open storage in these facilities are adequate but shop tools and equipment are often poor. Maintenance methods were reviewed during the development of the project. While present maintenance methods and equipment are below desirable standards, they are adequate to maintain the existing and proposed roads.

The Government is attempting to upgrade the maintenance capability of the provincial offices and is currently preparing the terms of reference for a maintenance requirements study to be financed by the IBRD. The study will cover the four northeastern Muhafazats and identify facility and equipment requirements. In the interim, if additional equipment and tools are necessary to ensure proper maintenance of the project, the SARG will be encouraged to procure this equipment with funds from the existing or future CIP loans.

The total Government expenditures on roads, including funds from foreign sources, increased during the period 1971-76 at an average annual rate of 29%. Since 1973 the amount of funds spent on maintenance increased from 9.0 million Syrian pounds to 59.0 million in 1978. The following table gives the annual amount spent on administration, construction works, maintenance and equipment:

HIGHWAY EXPENDITURES

(S.L. MILLIONS)

<u>Item</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>
Administration	16.0	16.9	17.3	16.0	21.2	23.7	25.8	26.8
Construction	48.2	48.0	41.8	61.3	96.8	175.5	219.7	242.3
Maintenance	9.0	9.0	9.0	31.3	44.0	45.3	56.0	59.0
Equipment								
Purchases	----	----	----	----	----	----	1.5	0.5
	<u>73.2</u>	<u>73.9</u>	<u>63.1</u>	<u>108.6</u>	<u>162.0</u>	<u>244.5</u>	<u>303.0</u>	<u>328.6</u>

B. ECONOMIC, SOCIAL AND ENVIRONMENTAL ANALYSES

1. Economic: The Syrian Arab Republic has a land area of 185,180 square kilometers. Of this 7.9 million hectares are cultivable with approximately 9 percent of the area under irrigation in 1977. Irrigation projects are planned or underway, particularly in the Euphrates Basin, to expand agricultural production. Syria's population of eight million is concentrated mainly along the coast and in the Aleppo to Damascus strip east of Lebanon. For the period 1970-1976 urban population grew at about 5% per annum compared with an average annual growth rate in the rural population of about 2.2 percent. Recent demographic surveys conducted by the Syrian Central Bureau of Statistics (CBS) indicates the natural increase in rural areas is approximately 4% per year and 3.3% in urban areas. The CBS projections indicate the population growth rate for the country as a whole could exceed 3.5% through 1990. Damascus is presently the main focus of internal migration, with some shift expected towards the north central region as various development schemes in the Euphrates Basin are expanded.

Since attaining independence in 1946, Syria has had several changes in regime, culminating in the dominance of the Baath Socialist Party beginning in 1963. There has been a concomitant shift of the economy from an essentially laissez-faire system to a largely publicly-owned and centrally regulated one. There has been a substantial continuity of emphasis on economic and social development policies and reforms together with a recent trend to economic pragmatism. Within this context and accompanied by sharp rises in petroleum export earnings, emigrant remittances and by substantial Arab and other economic assistance during the mid-1970's, significant economic growth has taken place.

Between 1970 and 1976, Syria's real gross domestic product increased by an annual average of 10%. Construction was particularly dynamic during this period with an average annual growth rate of 17 percent. Government expanded by 14% percent annually. The average annual growth rate in agriculture was 8 percent. This rapid expansion was accompanied by steep rises in budgetary outlays and double digit inflation. Fueled by large increases in foreign assistance, total budgetary expenditures jumped from SP 3.3 billion in 1973 to SP 11.3 billion in 1976. During the same years, investment spending soared from SP 1.1 billion to SP 5.2 billion.1)

1) \$1 = SP 3.90

Since 1976, there has been a slow-down in all of the above economic indicators. Real economic growth may now be averaging about 5-7 percent annually, or at about the same rate as experienced in the decade before 1974. Actual Government spending in most areas is going up very little. The slow-down is a reflection of the previous very high rates of growth which could not be sustained, combined with a leveling off in foreign assistance and with Governmental efforts to restrain inflation and widening balance of payments gaps.

The Government's Fourth Five-Year Plan (1976-1980) calls for total investment spending in the public sector of SP 53 billion during the plan period with SP 44.8 billion coming from domestic revenues and SP 8.1 billion coming from domestic and foreign credits. These are broken down into SP 32.3 billion in projects brought forward from the previous plan period and SP 20.5 billion in new projects. There are in addition SP 9.2 billion in "reserve projects" dependent upon additional financing becoming available. Allocated local revenues, principally from the surpluses of public entities, were originally projected to total SP 24 billion out of the SP 44.8 billion necessary to cover the local share of anticipated expenditures. Based, however, on past experience and new budgetary projections, it does not appear that such revenues will exceed SP 20 billion. The total of realized development credits may have been correctly anticipated at about SP 8 billion.

Actual investment expenditures have been running at SP 5-6 billion annually during 1976-78, with the total for the Fourth Plan (1976-1980) likely to fall short of SP 30 billion. Since investment spending is running at only some 53 percent of that envisaged on completing projects already underway rather than launching new ones.

A sectoral breakdown of investment spending for the years 1976-79 is given in the table below:

Investment Expenditures 1976-79
(SP Millions)

	<u>1976</u> <u>Actual</u>	<u>1977</u> <u>Preliminary</u> <u>Actual</u>	<u>1978</u> <u>Budget</u>	<u>1979</u> <u>Budget</u>
Agriculture & Irrigation	636	551	1,441	1,654
Industry, Mining & Power	2,176	3,492	4,613	3,832
Transportation, Public Utilities & Public Works	1,068	1,224	1,990	2,058
Education	760	497	707	808
Social & Health	60	62	95	96
Other	<u>512</u>	<u>512</u>	<u>1,896</u>	<u>2,632</u>
TOTAL	5,212	6,339	10,742	11,080

2)

2. Social

a. General: The project areas consist of a number of regions defined either by agricultural zone (e.g. measurement of rainfall), by major physiographic features (e.g. semi-arid plains or river valleys), or by level of infrastructure development (e.g. Aleppo vs. an administrative region such as Hasakah, the latter of which has only recently benefited from sustained Governmental attention). Despite variation in relative levels of development, the lack of year around quality rural roads has affected the performance of local agricultural production and animal husbandry, has contributed to rising transport costs in terms of time, capital and convenience, and in a most pronounced manner has maintained the isolation of rural communities in terms of access to services, facilities and basic commodities.

2) The Embassy and USAID have received estimates that actual development spending during 1978 may have fallen below the level attained during the previous year.

Road improvement will impact upon these conditions differentially depending upon the character of local constraints. Obviously, major improvements in agricultural production will only occur if a range of complementary investments is made and the structure of incentives is modified. The twin issues of reduction in road user costs and improved access to resources and services are sensitive to the type of road improvement envisaged in this project. Quantification of project benefits in terms of certain improvements in rural welfare is not possible without techniques such as traffic, household and merchant surveys.

b. Summary of Social and Economic Impacts:

The Environmental and Socio-Economic Analysis indicates that the construction of rural roads will provide some beneficial effects in five general areas. These areas are listed below with a description of the impacts on each area given in Annex D:

1. Transport and Agricultural Production;
2. Transport and Market Structures;
3. Transporters and Traders;
4. Consumer Access to Facilities, Services and Goods; and
5. Employment Generation from Road Construction and Maintenance

C. ENVIRONMENTAL: The environmental analysis indicates that there will be some minor environment impacts during the construction of the roads. However, it is not anticipated that there will be any major long-term detrimental effects on the environment. The analysis identified the five environmental issues listed below, all of which have been addressed. (See p. 16, Annex D):

1. Siting of borrow pits;
2. Ungraded borrow areas;
3. Ungraded right of way and spoil areas;
4. Inadequate grading at drainage structures; and
5. Irrigation ditches.

III. FINANCIAL ANALYSIS

A. Financial Plan: Total estimated project construction and technical services cost of \$37,900,000 and source of financing are shown in the following table, Summary Cost Estimate and Financial Plan.

The AID loan (\$26,400,000) will be used for local cost financing of construction and technical services. The AID loan will finance up to 75 percent of the construction cost of roads and all of the technical services costs. The Syrian Government will finance not less than 25 percent of the construction cost of roads and 100 percent of the design and construction supervision cost

B. Disbursement Schedule: Project disbursements are expected to begin in the fourth quarter of FY 1979 and terminate in FY 1982. The estimated disbursement schedule shown in the following tables are based on the detailed schedules shown in Annex E, Exhibit 2.

C. Construction Reimbursement Plan and Procedures: A modified Fixed Amount Reimbursement (FAR) method will be followed in financing the sixty road construction projects. Reimbursement will be made for each road project upon notification by SARG of the percentage of construction work completed and receipt of request for reimbursement. Reimbursement will be based on completed kilometers of earth work (25%), drainage structures (10%), sub-base course (18%), base course (22%) and bituminous surfacing (25%). Each road project will have ten (10) percent of the AID amount withheld until the road project is completed.

Construction progress and adherence to agreed upon plans and specifications will be verified by direct hire AID engineers, AID local engineers, or a local consulting engineering firm. Regular site inspections will be made and monthly progress reports prepared for the SARG and AID. Upon a determination made by AID, either through direct hire employees or a consulting engineering firm, that the work conforms to the agreed plans and specifications, AID will make direct reimbursements to the Ministry of Finance for that portion of the work completed. The Ministry of Finance will open and maintain a special account into which the AID funds will be deposited. The Ministry of Finance will be

D. SUMMARY COST ESTIMATE AND FINANCIAL PLAN

(US \$000)
RURAL ROADS PROJECT PAPER

SOURCE	AID		Host Country		Total
	FX	LC	FX	LC	
1. <u>Road Construction</u>					
a. Design				809	809
b. Construction Supervision				1,349	1,349
c. Construction		20,224		6,742	26,966
2. Technical Services	50				50
3. Inflation		3,389		1,469	4,858
4. Contingency		2,687		1,037	3,724
TOTAL	50	26,300		11,406	37,756
TOTAL COST		26,400		11,500	37,900
PERCENTAGE		70		30	100

Inflation Factors

AID FX - 9 months @ 8% yearly

AID LC - 18 months @ 11% yearly

Host Country FX - 9 months @ 8% yearly

Host Country LC - 18 months @ 11% yearly

Contingency

AID FX - @ 10%

AID LC - @ 10%

Host Country FX - @ 10%

Host Country LC - @ 10%

E. PROJECTION OF EXPENDITURES BY FISCAL YEAR

(US \$000)

RURAL ROADS PROJECT PAPER

Fiscal Year	AID			HOST COUNTRY			
	Const.	T.S.	Total	Const.	Design	Superv.	Total
<u>1979</u>	(326)	()	(326)	(109)	(135)	(49)	(293)
4th Qt.	326	.	326	109	135	49	293
<u>1980</u>	(9,665)	(25)	(9,690)	(3,222)	(592)	(588)	(4,402)
1st Qt.	1,330	.	1,330	443	148	147	738
2nd Qt.	2,230	25	2,255	744	202	147	1,093
3rd Qt.	2,938	.	2,938	979	121	147	1,247
4th Qt.	3,167	.	3,167	1,056	121	147	1,324
<u>1981</u>	(9,371)	(25)	(9,396)	(3,124)	(82)	(576)	(3,782)
1st Qt.	2,824	.	2,824	942	82	147	1,171
2nd Qt.	2,959	25	2,984	986	.	147	1,133
3rd Qt.	2,124	.	2,124	708	.	147	855
4th Qt.	1,464	.	1,464	488	.	135	623
<u>1982</u>	(860)	()	(860)	(287)	.	(136)	(423)
1st Qt.	680	.	680	227	.	110	337
2nd Qt.	180	.	180	60	.	26	86
Inflation	3,389	.	3,389	1,112	134	223	1,469
Contingency	2,677	.	2,677	736	94	157	1,037
TOTAL	26,288	50	26,338	8,640	1,037	1,789	11,466

responsible for making funds available to the implementing agency in the Muhafazats (Directorate of Communications) in accordance with their normal budgetary process when and as required. The FAR schedule of reimbursements are shown on Page 24.

F. Technical Services Disbursement Plan and Procedures: AID will contract local engineering firms to supply all technical, monitoring, and inspection services under this project. USAID direct contract will be used. Disbursements will be made by AID to the contractor.

G. Debt Service Capability: During the period 1974-1977, Syria's balance of payments deficit increased from a of modest \$294 million to \$1.4 billion.

	(\$ Millions)			
	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>
Exports (f.o.b.)	783	943	1,065	1,077
Imports (c.i.f.)	1,122	1,561	2,270	2,625
Trade Balance	-399	-618	-1,205	-1,548
Goods and Services				
Balance	-294	621	-1,226	-1,411

The worsening in the trade gap has come about through rapid increases in imports in both the development and consumption areas not matched by corresponding increase in the value of exports. The growth in exports has been almost entirely a function of higher prices for crude petroleum. There has been virtually no expansion in export volumes. Because of the prospects for export growth appear relatively meager, the Syrian government has made a determined effort since late 1977 to restrict imports. Imports in 1978 were in fact very close to the 1977 levels. Should import growth continue at a low rate and some export expansion obtained from the opening of some export-oriented industries during the early 1980's, the trade gap would be

below \$2.5 billion in 1985. The re-opening of the Iraqi pipeline through Syria in March 1979 should permit the deficit on the goods and services balance to stay in the \$2 billion range during the early and mid-1980's.

An important source for financing these deficits has been the remittances from the 100,000 or so Syrians working in the Gulf. The official figures indicate that these remittances rose from \$45 million in 1974 to \$93 million in 1977. The great bulk of the remittances do not go through official channels, however, and a conservative estimate for the total of recorded and unrecorded remittances during 1977 would be \$300 million. The year 1977 might well have been the peak year for remittances from the Gulf so that a reasonable figure for 1985 might be \$200 million, or allowing for inflation, not more than \$300 million in 1985 dollars.

Well over half of Syria's foreign assistance comes from neighboring oil exporting countries in the form of general budgetary grants or development loans. Substantial development assistance also comes from Eastern Europe, Western Europe, The United States and multilateral institutions. Temporary political factors have often affected the timing of Syria's foreign assistance. Average annual foreign loans and grants in the 1979-85 period may approximate that of the 1974-78 period, or about some \$600-\$800 million per year.

Net disbursed foreign debt at the end of 1977 owed to foreign governments or multilateral institutions was \$1.0 billion. An additional \$1.2 billion of foreign loans committed over the previous decade remained undisbursed at the end of 1977.

Annual debt service payments continue to rise sharply. They amounted to \$47 million in 1973 and \$105 million in 1976 and are scheduled to rise to \$270 million in 1979 and to \$425 million in 1983. The debt service ratio during this same period is projected to rise from 7.9 to 13 percent. With a debt service ratio rising in this fashion, Syria clearly needs to manage the assumption of new debt obligations to keep the repayment burden within reasonable limits. Under these circumstances, concessional loan terms are clearly in order.

IV. IMPLEMENTATION ARRANGEMENTS

A. ADMINISTRATIVE ARRANGEMENTS:

1. Syrian Arab Republic (SARG): The State Planning Commission will represent the Government as the Borrower.

a. Implementation Agency: The Ministry of Local Administration will be the implementing agency working through the Directorate of Communications in each of the Muhafazats of Aleppo, Raqqa, Deir Ezzor and Hasakah. The Directorate of Communications in each Muhafazat has been delegated authority by the Government to carry out actual administration, contracting and management of the Project.

b. Design: The Directorate of Communications in each of the Muhafazats will do the design, technical specifications and contract documents. This will also include the bill of quantities and cost estimate. The Directorate of Design for Highways and Bridges of the Ministry of Communications will provide technical backstopping for the Muhafazats.

c. Supervision of Construction: The Directorate of Communications in each of the Muhafazats will do the contracting and supervision of construction. The Directorate of Construction and Maintenance for Highways and Bridges of the Ministry of Communications will provide technical backstopping for the Muhafazats.

d. Project Disbursements: The Directorate of Communications in each of the Muhafazats will be responsible for submitting a progress report each month to the Ministry of Local Administration. The Ministry of Local Administration will combine the four Muhafazats' request for reimbursement and submit to AID as one package each quarter.

e. Maintenance and Operation: The Directorate of Communications in each Muhafazat is responsible for the maintenance and operation of rural roads. The Directorate of Construction and Maintenance for Highways and Bridges of the Ministry of Communications is responsible for providing technical backstopping in this field.

f. SARG Responsibilities: The SARG through its implementing agencies is responsible for:

- 1) Provision of plans, technical specifications, contracting documents, bill of quantities and cost estimates for each road project;
- 2) Contracting and procurement services;
- 3) Supervision of construction;
- 4) Disbursements to contractors;
- 5) Certification of satisfactory project completion;
- 6) Subsequent maintenance and operation; and
- 7) Notification and certification as required under the periodic FAR reimbursement process, including notification of contractors' notice to proceed.

2. USAID: Project implementation management and monitoring of the AID inputs for the proposed loan will be the responsibility of the Office of Capital Development. A member of the Office of Capital Development will be assigned as the Mission Project Manager for the direct monitoring of the project. The Chief Capital Development Officer will represent the Mission in loan negotiations and the Chief Engineer on technical matters. USAID will contract a local engineering firm to provide the services of four Syrian civil engineers (highway engineers), one to be located in each of the four Muhafazats, to monitor the construction of each road project and prepare or assist the SARG in preparing all necessary reports, project approval packages and reimbursement request information. USAID will have access to all pertinent project reports and other documents issued by the implementing agency, project management office and the construction contractors that relate to project progress and problems. USAID will monitor all activities, including quality control measures, that relate to reimbursement of local currency cost and field inspections as required.

B. IMPLEMENTATION PLAN

1. Schedule of Major Events

<u>Action</u>	<u>Event</u>	<u>Date</u>
1.	Project Paper submitted to AID/W	04/20/79
2.	Project Paper approved by AID	07/79
3.	Project Authorization issued	08/14/79
4.	Loan Agreement signed	08/29/79
5.	Implementation Letter No.1 issued covering project implementation procedures	08/29/79
6.	First 9 road projects approved	10/15/79
7.	Local Engineering Firm Contracted	10/30/79
8.	Three road projects approved	11/15/79
9.	Cps satisfied	11/30/79
10.	First two road projects completed	11/30/79
11.	First request for disbursement	11/30/79
12.	Eight road projects approved	12/15/79
13.	Three road projects approved	01/01/80
14.	Twelve road projects approved	03/01/80
15.	Three road projects approved	05/01/80
16.	Five road projects approved	06/01/80
17.	Three road projects approved	07/01/80
18.	Three road projects approved	09/01/80
19.	Three road projects approved	11/01/80
20.	Five road projects approved	01/01/81
21.	Evaluation ^{1/}	
22.	Last three road projects approved	03/01/81
23.	Last road project completed	02/15/82
24.	Second evaluation of road project begins	03/15/82
25.	Second survey and evaluation within 2 years after completion	08/15/82

^{1/} Collection of baseline data in each sub-project area 6 months prior to completion of sub-project.

C. PROJECT MONITORING

The FAR method involves regular monitoring and inspection for project certification. This monitoring and inspection will be accomplished by a USAID contracted local engineering firm. The engineers will prepare a written report on the status of each road project under construction each month. A direct-hire USAID engineer will visit each road site as often as possible to insure that the work is being done in accordance with the approved plans and specifications. The USAID direct-hire staff will provide necessary monitoring until the engineering firm is contracted. This will prevent delay in getting the project underway.

D. PROJECT APPROVAL OF EACH ROAD

The SARG, through the Directorate of Communications in each Muhafazat, must submit the design and construction package for each road project to USAID. This package will consist of plans, technical specifications, contract documents if used, bill of quantities and final cost estimate. Upon satisfactory submission of this design and construction package, USAID will issue an Implementation Letter for each road specifying the exact amount of AID's contribution. In general, this contribution will be a maximum of 75 percent of the approved cost estimate. AID may decide on a lesser amount if it feels that the cost estimate submitted by the Government is too high. Some of the projects are presently under construction. Prior to issuing Implementation Letters on these projects, USAID will conduct an on-site inspection of each road project to determine the exact amount of each type of work to be done and if the already completed work is satisfactory.

E. PROJECT CONSTRUCTION SCHEDULE

A construction progress schedule is included in Annex F, Technical Analysis, for each of the four Muhafazats. These schedules indicate the starting date, time frame and ending date for each road construction project. This schedule will be kept up to date during project implementation.

V. EVALUATION PLAN

AID and the Government will jointly collect baseline data and carry out periodic evaluations. A sociologist under a personal services contract with the Mission will coordinate the collection of baseline data in each of the sub-project areas at least six months prior to the completion of each sub-project. This survey will be followed by a second survey and evaluation within two years after completion. The services of the sociologist will be financed out of the Mission's operating budget if the sociologist is employed for three rural projects or loan FX if employed only for this project. Any post-project evaluation costs will be financed from the Technical Services/Feasibility Studies Grant. The initial survey will be designed to develop data required to evaluate the achievement of social/economic objectives set forth in Annex H.

VI. CONDITIONS AND COVENANTS

A. Conditions Precedent:

1. The loan agreement will include standard conditions precedent requiring a legal opinion and a statement of Borrower's representatives.

2. Prior to any disbursement to finance construction costs of a sub-project, or the issuance of any commitment documents under the Project Agreement for such disbursement, the Cooperating Country, shall, except as A.I.D. may otherwise agree in writing, submit, in form and substance satisfactory to A.I.D., designs and cost estimates for that sub-project.

B. Covenants

1. The Cooperating Country further warrants that, to the maximum extent practicable, all construction contracts awarded after the Project loan agreement is signed will be made on the basis of competitive bidding procedures.

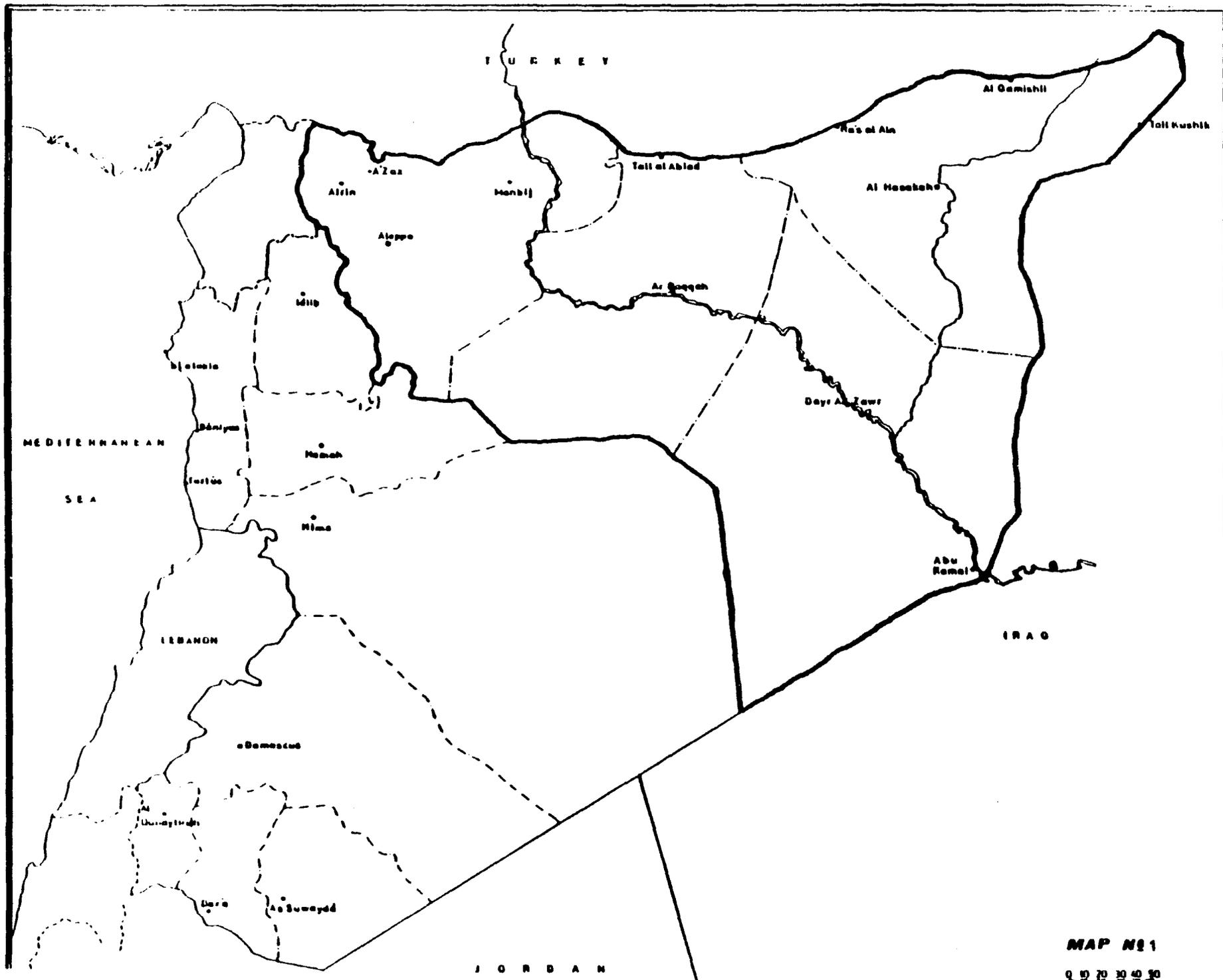
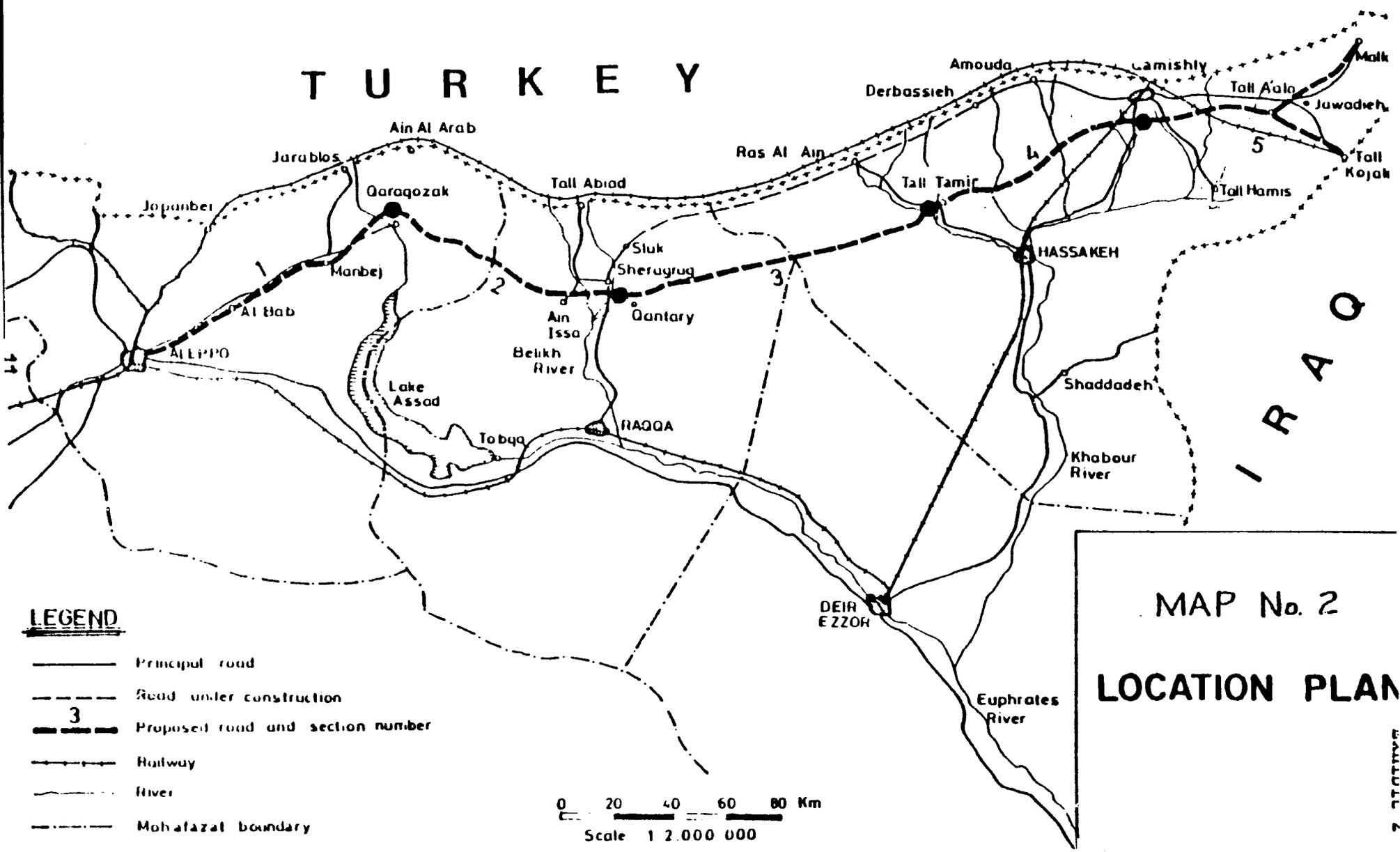


EXHIBIT 1

MAP NO 1

0 10 20 30 40 50
Kilometers

TURKEY

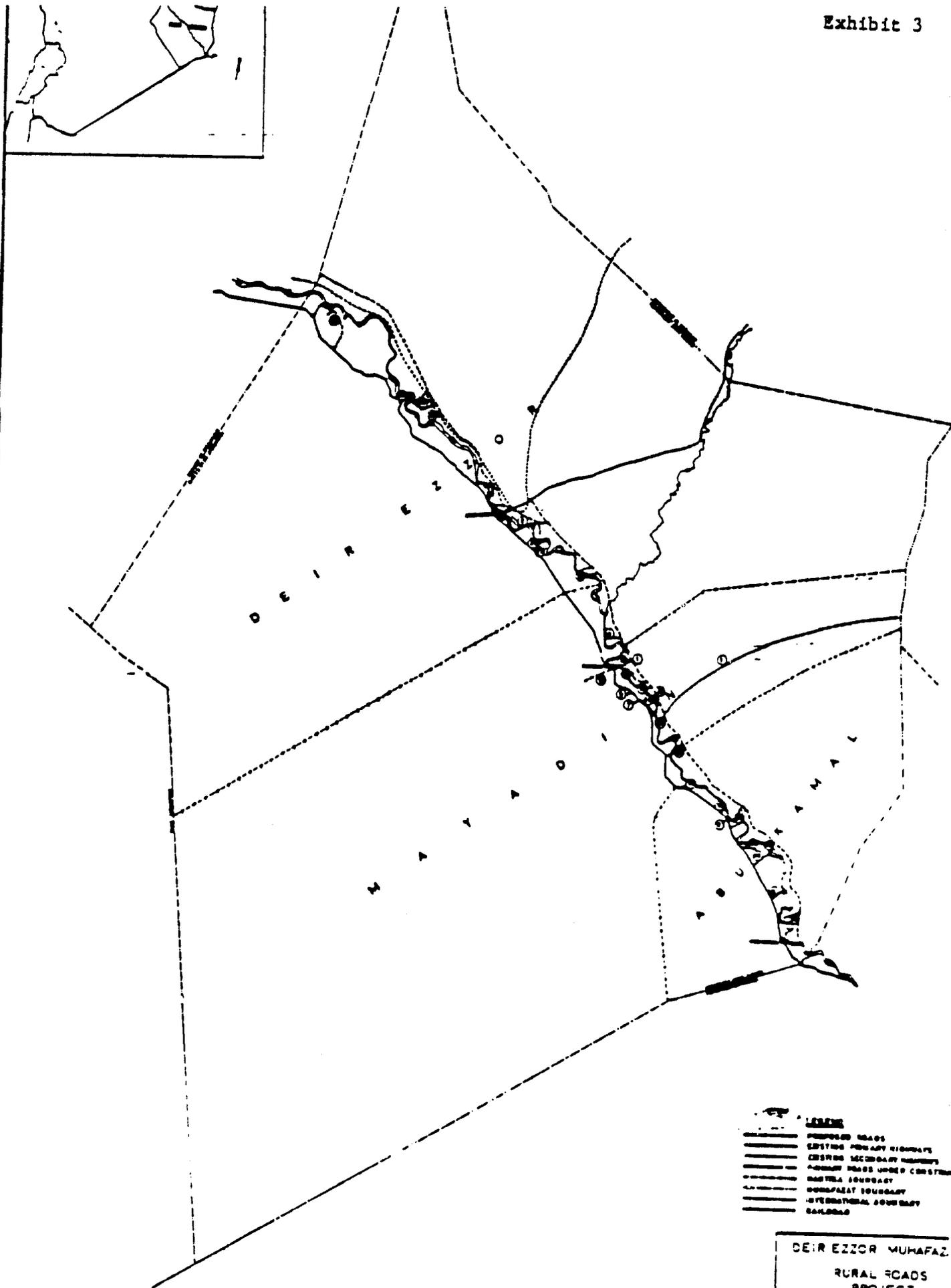


LEGEND

- Principal road
- Road under construction
- 3 Proposed road and section number
- Railway
- River
- Mohafazat boundary

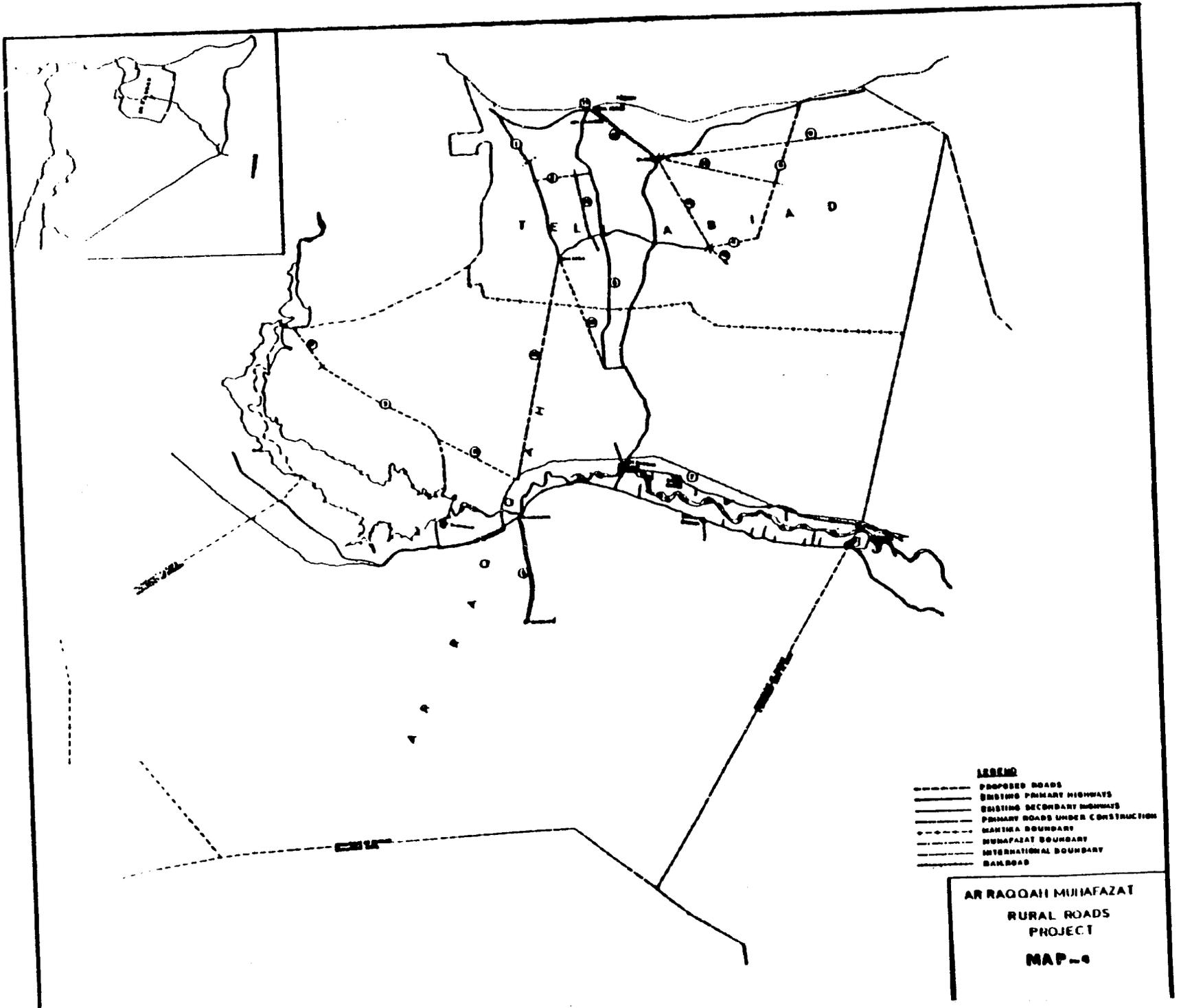
0 20 40 60 80 Km
Scale 1 2 000 000

MAP No. 2
LOCATION PLAN



- LEGEND**
- PROPOSED ROADS
 - EXISTING PRIMARY HIGHWAYS
 - EXISTING SECONDARY HIGHWAYS
 - PROPOSED ROADS UNDER CONSTRUCTION
 - DISTRICT BOUNDARY
 - MUHAFAZAT BOUNDARY
 - GOVERNORATE BOUNDARY
 - CANTONMENT

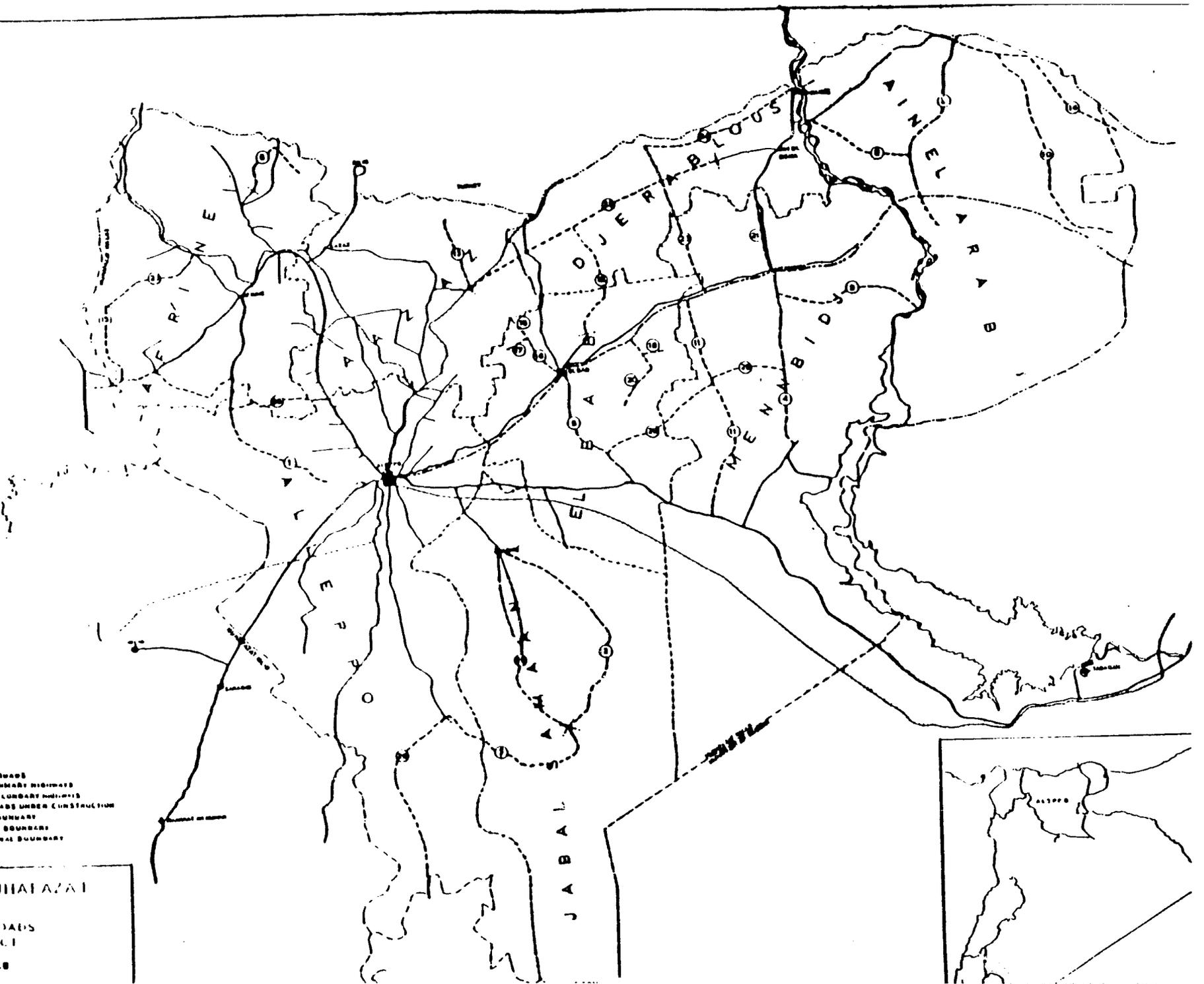
DEIR EZZOR MUHAFAZ
RURAL ROADS
PROJECT
MAP 03



- LEGEND**
- PROPOSED ROAD
 - ===== EXISTING PRIMARY HIGHWAYS
 - EXISTING SECONDARY HIGHWAYS
 - PRIMARY ROADS UNDER CONSTRUCTION
 - MUNICIPAL BOUNDARY
 - MUNICIPAL BOUNDARY
 - INTERNATIONAL BOUNDARY
 - RAILROAD

ALLEPPO MUIHAZATI

RURAL ROADS
PROJECT
MAP No. 1



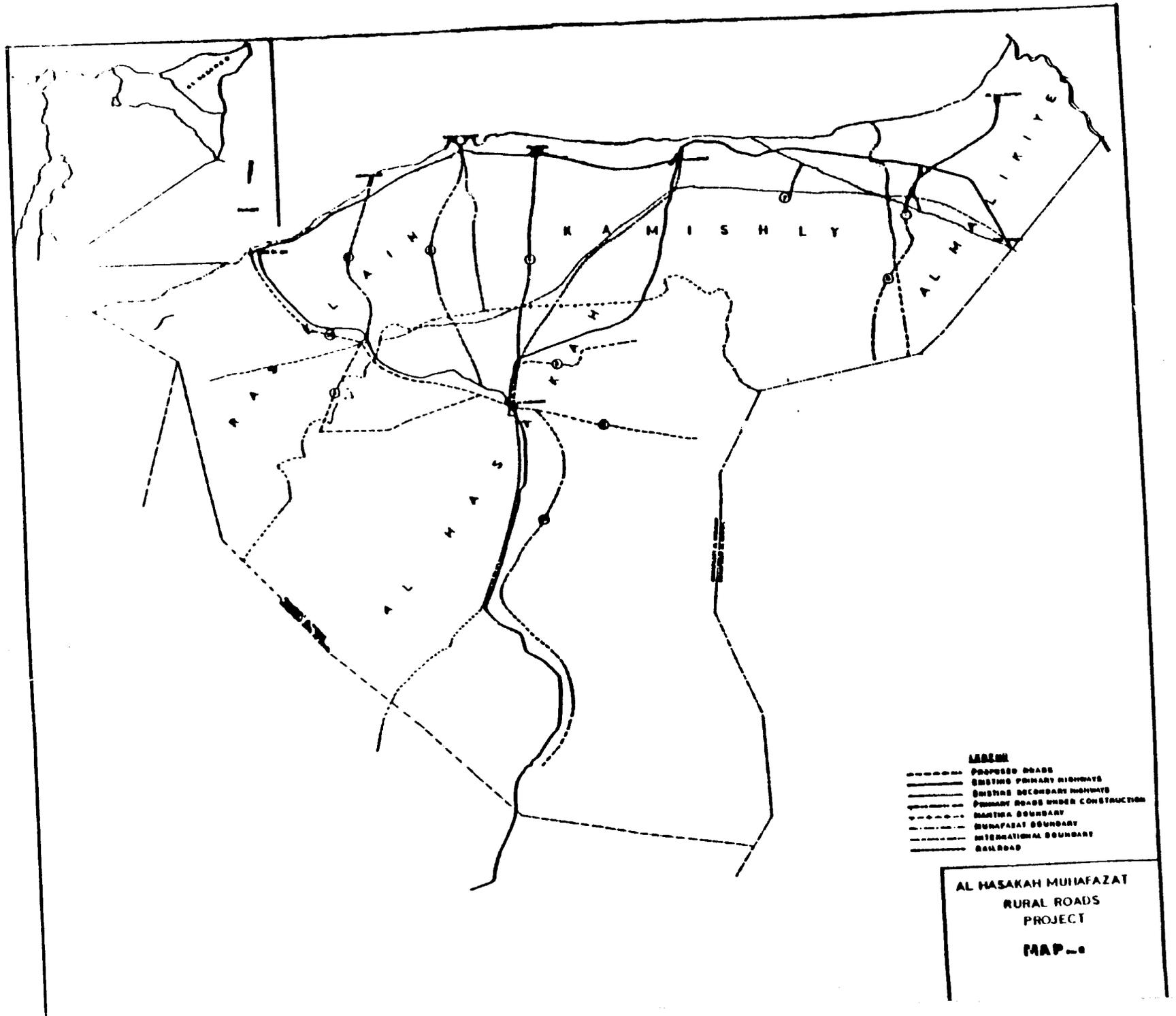


Exhibit 6

SC(1) - COUNTRY CHECKLIST

Listed below are, first, statutory criteria applicable generally to FAA funds, and then criteria applicable to individual fund sources: Development Assistance and Economic Support Fund.

A. GENERAL CRITERIA FOR COUNTRY ELIGIBILITY

1. FAA Sec. 116. Can it be demonstrated that contemplated assistance will directly benefit the needy? If not, has the Department of State determined that this government has engaged in a consistent pattern of gross violations of internationally recognized human rights?

It can be demonstrated that the contemplated assistance will directly benefit the needy. The Department of State has not determined that the Syrian government has engaged in a consistent pattern of gross violations of internationally recognized human rights.
2. FAA Sec. 481. Has it been determined that the government of recipient country has failed to take adequate steps to prevent narcotic drugs and other controlled substances (as defined by the Comprehensive Drug Abuse Prevention and Control Act of 1970) produced or processed, in whole or in part, in such country, or transported through such country, from being sold illegally within the jurisdiction of such country to U.S. Government personnel or their dependents, or from entering the U.S. unlawfully?

No such determination has been made
3. FAA Sec. 620(b). If assistance is to a government, has the Secretary of State determined that it is not controlled by the international Communist movement?

The Secretary has determined that Syria is not controlled by the international Communist movement.
4. FAA Sec. 620(c). If assistance is to a government, is the government liable as debtor or unconditional guarantor on any debt to a U.S. citizen for goods or services furnished or ordered where (a) such citizen has exhausted available legal remedies and (b) debt is not denied or contested by such government?

At present there are no claims which require that assistance be terminated pursuant to this section.

10. FAA Sec. 620(o); Fishermen's Protective Act of 1967, as amended, Sec. 5. If country has seized, or imposed any penalty or sanction against, any U.S. fishing activities in international waters,

Not applicable.

a. has any deduction required by the Fishermen's Protective Act been made?

b. has complete denial of assistance been considered by AID Administrator?

11. FAA Sec. 620; FY 79 App. Act Sec. 603.

(a) No.

(a) Is the government of the recipient country in default for more than six months on interest or principal of any AID loan to the country?

(b) Is country in default exceeding one year on interest or principal on U.S. loan under program for which App. Act appropriates funds?

(b) No.

12. FAA Sec. 620(s). If contemplated assistance is development loan or from Economic Support Fund, has the Administrator taken into account the percentage of the country's budget which is for military expenditures, the amount of foreign exchange spent on military equipment and the amount spent for the purchase of sophisticated weapons systems? (An affirmative answer may refer to the record of the annual "Taking Into Consideration" memo: "Yes, as reported in annual report on implementation of Sec. 620(s)." This report is prepared at time of approval by the Administrator of the Operational Year Budget and can be the basis for an affirmative answer during the fiscal year unless significant changes in circumstances occur.)

Yes, as reported in the FY 1977 620 report to Congress, approved on August 11, 1978. It has been determined that there has been no significant change which would affect the conclusion of that report.

13. FAA Sec. 620(t). Has the country severed diplomatic relations with the United States? If so, have they been resumed and have new bilateral assistance agreements been negotiated and entered into since such resumption?
- Syria severed diplomatic relations with the United States in 1967. Diplomatic relations have been resumed and new bilateral assistance agreements are currently being negotiated.
14. FAA Sec. 620(u). What is the payment status of the country's U.N. obligations? If the country is in arrears, were such arrearages taken into account by the AID Administrator in determining the current AID Operational Year Budget?
- Syria has fully paid its U.N. obligations as of September 30, 1978.
15. FAA Sec. 620A, FY 79 App. Act, Sec. 607. Has the country granted sanctuary from prosecution to any individual or group which has committed an act of international terrorism?
- Syria has itself been the object of terrorist attacks. We know of no recent case in which Syria has granted sanctuary to individuals or groups in connection with acts of international terrorism.
16. FAA Sec. 666. Does the country object, on basis of race, religion, national origin or sex, to the presence of any officer or employee of the U.S. there to carry out economic development program under FAA?
- No.
17. FAA Sec. 669, 670. Has the country, after August 3, 1977, delivered or received nuclear enrichment or reprocessing equipment, materials, or technology, without specified arrangements or safeguards? Has it detonated a nuclear device after August 3, 1977, although not a "nuclear-weapon State" under the nonproliferation treaty?
- No.
No.

B. FUNDING CRITERIA FOR COUNTRY ELIGIBILITY

1. Development Assistance Country Criteria.

a. FAA Sec. 102(b)(4). Have criteria been established and taken into account to assess commitment progress of country in effectively involving the poor in development, on such indexes as:

a. Not applicable..

- (1) increase in agricultural productivity through small-farm labor intensive agriculture,
- (2) reduced infant mortality,
- (3) control of population growth,
- (4) equality of income distribution,
- (5) reduction of unemployment, and
- (6) increased literacy.

b. FAA Sec. 104(d)(1). If appropriate, is this development (including Sahel) activity designed to build motivation for smaller families through modification of economic and social conditions supportive of the desire for large families in programs such as education in and out of school, nutrition, disease control, maternal and child health services, agricultural production, rural development, and assistance to urban poor?

b. Not applicable

2. ECONOMIC SUPPORT FUND COUNTRY CRITERIA.

a. FAA Sec. 502B. Has the country engaged in a consistent pattern of gross violations of internationally recognized human rights?

a. No.

b. FAA Sec. 533(b). Will assistance under the Southern Africa program be provided to Mozambique, Angola, Tanzania, or Zambia? If so, has President determined (and reported to the Congress) that such assistance will further U.S. foreign policy interests?

b. No

c. FAA Sec. 609. If commodities are to be granted so that sale proceeds will accrue to the recipient country, have Special Account (counterpart) arrangements been made?

c. No commodities will be granted under this project.

d. FY 79 App. Act. Sec. 113. Will assistance be provided for the purpose of aiding directly the efforts of the government of such country to repress the legitimate rights of the population of such country contrary to the Universal Declaration of Human Rights?

No.

e. FAA Sec. 620B. Will security supporting assistance be furnished to Argentina after September 30, 1978?

Not applicable.

SYRIA - Rural Roads
276-0033
5C(2) - PROJECT CHECKLIST

Listed below are statutory criteria applicable generally to projects with FAA funds and project criteria applicable to individual fund sources: Development Assistance (with a subcategory for criteria applicable only to loans); and Economic Support Fund.

CROSS REFERENCES: IS COUNTRY CHECKLIST UP TO DATE? IDENTIFY. HAS STANDARD ITEM CHECKLIST BEEN REVIEWED FOR THIS PROJECT?

GENERAL CRITERIA FOR PROJECT

- FY 79 App. Act Unnumbered; FAA Sec. 653(b); Sec. 634A.

(a) Congress will be notified of the Project in accordance with agency procedures since the Project did not appear in the FY 1979 Congressional Presentation

(a) Describe how Committees on Appropriations of Senate and House have been or will be notified concerning the project; (b) is assistance within (Operational Year Budget) country or international organization allocation reported to Congress (or not more than \$1 million over that figure)?

(b) Yes.

FAA Sec. 611(a)(1). Prior to obligation in excess of \$100,000, will there be (a) engineering, financial, and other plans necessary to carry out the assistance and (b) a reasonably firm estimate of the cost to the U.S. of assistance?

(a) Yes.

(b) Yes.

FAA Sec. 611(a)(2). If further legislative action is required within recipient country, what is basis for reasonable expectation that such action will be completed in time to permit orderly accomplishment of purpose of the assistance?

No further legislative action is necessary.

FAA Sec. 611(b); FY 79 App. Act Sec. 101. If for water or water-related land resource construction, has project met the standards and criteria as per the Principles and Standards for Planning Water and Related Land Resources dated October 25, 1973?

Not applicable.

5. FAA Sec. 611(e). If project is capital assistance (e.g., construction), and all U.S. assistance for it will exceed \$1 million, has Mission Director certified and Regional Assistant Administrator taken into consideration the country's capability effectively to maintain and utilize the project?

Yes. See Annex G of Project Paper.

6. FAA Sec. 209. Is project susceptible of execution as part of regional or multilateral project? If so why is project not so executed? Information and conclusion whether assistance will encourage regional development programs.

Project is not so susceptible. Project will not directly encourage regional development programs.

7. FAA Sec. 601(a). Information and conclusions whether project will encourage efforts of the country to: (a) increase the flow of international trade; (b) foster private initiative and competition; (c) encourage development and use of cooperatives, credit unions, and savings and loan associations; (d) discourage monopolistic practices; (e) improve technical efficiency of industry, agriculture and commerce; and (f) strengthen free labor unions.

The project will improve the technical efficiency of agriculture by reducing rural-urban migration and increasing rural productivity.

8. FAA Sec. 601(b). Information and conclusion on how project will encourage U.S. private trade and investment abroad and encourage private U.S. participation in foreign assistance programs (including use of private trade channels and the services of U.S. private enterprise).

The project assistance will be used to finance local costs for construction and foreign exchange for technical assistance.

9. FAA Sec. 612(b); Sec. 616(h). Describe steps taken to assure that, to the maximum extent possible, the country is contributing local currencies to meet the cost of contractual and other services, and foreign currencies owned by the U.S. are utilized to meet the cost of contractual and other services.

Syria will contribute approximately 25% of the costs of construction including all foreign exchange costs. The U.S. owns no foreign currencies which will be utilized in the project.

10. FAA Sec. 612(d). Does the U.S. own excess foreign currency of the country and, if so, what arrangements have been made for its release?
11. FAA Sec. 601(e). Will the project utilize competitive selection procedures for the awarding of contracts, except where applicable procurement rules allow otherwise?
12. FY 79 App. Act Sec. 608. If assistance is for the production of any commodity for export, is the commodity likely to be in surplus on world markets at the time the resulting productive capacity becomes operative, and is such assistance likely to cause substantial injury to U.S. producers of the same, similar or competing commodity?

The U.S. owns no excess foreign currency of Syria which may be released for this project

The project will utilize the procurement procedures of Syria in accord with AID regulations. Syria's procedures allow for competitive selection of goods and services. Goods and services shall be procured competitively to the maximum extent practicable.

The project does not involve the production of any commodity for export.

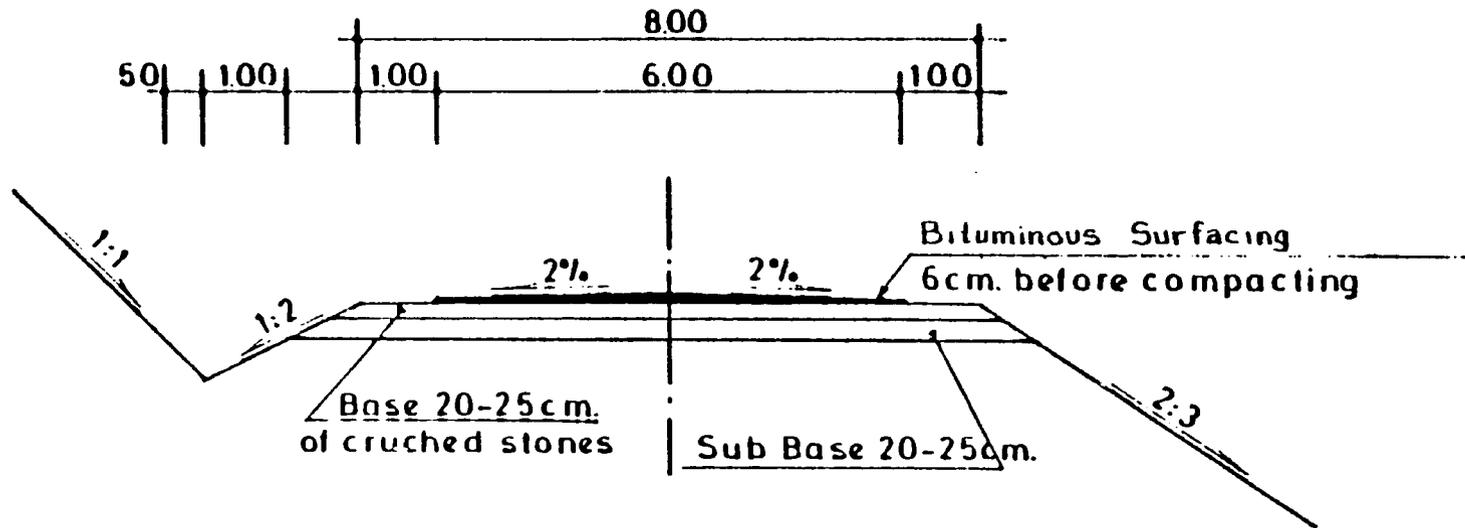
FUNDING CRITERIA FOR PROJECT

1. Project Criteria Solely for Economic Support Fund
- a. FAA Sec. 531(a). Will this assistance support promote economic or political stability? To the extent possible, does it reflect the policy directions of section 102?
- b. FAA Sec. 533. Will assistance under this chapter be used for military, or paramilitary activities?

(a)1. The assistance will support the economic stability of Syria by constructing approximately 1126 kilometers of farm-to-market roads feeding the main highways and connecting local communities with a recently-completed railroad in the northeast.

2. The project reflects the policy directions of section 102 by improving the well being of deprived rural families through year-round accessibility to agricultural inputs, markets and social services.

(b) No assistance through this project will be used for military or paramilitary activities.



TYPICAL CROSS SECTION
RURAL ROADS PROJECT

LIST OF ROAD PROJECTS RURAL ROADS PROJECT

No. of Road	ROAD NAME	TOTAL ROAD LENGTH	COMPOSED FROM ROAD IMPROVEMENTS				COST IN MAND	MONEYS TO BE EXPENDED UNDER THIS PROJECT										TOTAL PROJECT COST	TOTAL PROJECT LENGTH
			ASPHALT PAVEMENT	GRAVEL PAVEMENT	SUB-BASE	ADDITIONAL PAVEMENT		ESTIMATED		MAINTENANCE & REPAIRS		SIGNALS		ASPHALT PAVEMENT		TOTAL	TOTAL		
								EST	COST	EST	COST	EST	COST	EST	COST				
17	Nayabeh - Hadayeh	3.000	3.000	3.000	0.000	0.000	120,000	0.000	0	0.000	0	0.000	3.000	150,000	3.000	155,000	265,000	405,000	101,000
18	Sayabeh - Inya As Zous Highway	7.500	7.500	7.500	0.000	0.000	300,000	0.000	0	0.000	0	7.500	375,000	7.500	382,500	712,500	1,032,500	250,000	250,000
19	Hamad - Inya As Zous Highway	6.000	6.000	6.000	0.000	0.000	240,000	0.000	0	0.000	0	6.000	300,000	6.000	306,000	570,000	810,000	207,000	207,000
20	Al Bayma - Almadhar	0.800	0.800	0.800	0.000	0.000	0	0.800	10,000	0.800	22,500	0.800	43,000	0.800	40,500	110,000	110,000	30,000	30,000
21	Al Sayabeh - Pastoush Shanab	3.000	0.000	0.000	0.000	0.000	0	3.000	45,000	3.000	95,000	3.000	190,000	3.000	175,000	510,000	545,000	120,000	120,000
22	Almadhar - Almadhar	5.500	0.000	0.000	0.000	0.000	0	5.500	84,000	5.500	112,500	5.500	275,000	5.500	247,500	720,000	720,000	180,000	180,000
23	Almadhar - Almadhar	4.500	0.000	0.000	0.000	0.000	0	4.500	34,000	4.500	112,500	4.500	225,000	4.500	202,500	594,000	594,000	152,000	152,000
24	Almadhar - Almadhar	5.500	0.000	0.000	0.000	0.000	0	5.500	63,000	5.500	112,500	5.500	265,000	5.500	238,500	699,000	699,000	179,000	179,000
25	Almadhar - Almadhar	8.500	0.000	0.000	0.000	0.000	0	8.500	99,000	8.500	207,500	8.500	415,000	8.500	373,500	1,095,000	1,095,000	280,000	280,000
26	Almadhar - Almadhar	1.500	0.000	0.000	0.000	0.000	0	1.500	10,000	1.500	37,500	1.500	75,000	1.500	67,500	190,000	190,000	50,000	50,000
27	Almadhar - Almadhar	3.500	0.000	0.000	0.000	0.000	0	3.500	42,000	3.500	87,500	3.500	175,000	3.500	157,500	462,000	462,000	110,000	110,000
28	Almadhar - Almadhar	3.500	0.000	0.000	0.000	0.000	0	3.500	42,000	3.500	87,500	3.500	175,000	3.500	157,500	462,000	462,000	110,000	110,000
29	Almadhar - Almadhar	0.800	0.000	0.000	0.000	0.000	0	0.800	7,200	0.800	15,000	0.800	30,000	0.800	27,000	79,200	79,200	20,000	20,000
30	Almadhar - Almadhar	2.000	0.000	0.000	0.000	0.000	0	2.000	26,000	2.000	50,000	2.000	100,000	2.000	90,000	260,000	260,000	67,000	67,000
31	Almadhar - Almadhar	2.500	0.000	0.000	0.000	0.000	0	2.500	30,000	2.500	67,500	2.500	125,000	2.500	112,500	330,000	330,000	84,000	84,000
32	Almadhar - Almadhar	0.800	0.000	0.000	0.000	0.000	0	0.800	10,000	0.800	22,500	0.800	45,000	0.800	40,500	110,000	110,000	30,000	30,000
33	Almadhar - Almadhar	2.400	0.000	0.000	0.000	0.000	0	2.400	10,000	2.400	60,000	2.400	170,000	2.400	100,000	310,000	310,000	81,200	81,200
	TOTAL	191.300														19,947,400	19,947,400	5,012,513	5,012,513

LIST OF ROAD PROJECTS

RURAL ROADS PROJECT

PRIORITY No	ROAD NAME	TOTAL ROAD LENGTH (KMS)	COMPLETED ROAD IMPROVEMENTS					ROAD TO BE COMPLETED UNDER THIS PROJECT										TOTAL PROJECT COST (K\$)	TOTAL PROJECT LENGTH (KMS)		
			EARTH MAINT (K\$)	DRAINAGE (K\$)		SUB-BASE (K\$)	ASPHALT PAVEMENT (K\$)	CUT IN WORK COMPLETED (K\$)	CLEARING (K\$)		MATERIALS BRICKS AND CEMENTS (K\$)		STRUCTURES (K\$)		SIGNAGE (K\$)		TOTAL PROJECT COST (K\$)			TOTAL PROJECT LENGTH (KMS)	
				MAINT (K\$)	DRAIN (K\$)				MAINT (K\$)	MAINT (K\$)	MAINT (K\$)	MAINT (K\$)	MAINT (K\$)	MAINT (K\$)	MAINT (K\$)	MAINT (K\$)					MAINT (K\$)
1	Harshat - Amara	25.000	25.000	25.000	25.000	25.000	1,175,000	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	1,175,000	25.000
2	Sunk - Al-Azraq	45.000	45.000	0.000	45.000	0.000	1,975,000	0.000	0	45.000	1,125,000	0.000	0	45.000	2,250,000	1,665,000	0.000	0	1,665,000	45.000	
3	Sunk - Al-Azraq	20.000	20.000	20.000	20.000	20.000	2,700,000	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	2,700,000	20.000
4	Sunk - Al-Azraq	30.000	30.000	30.000	30.000	0.000	4,500,000	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	4,500,000	30.000
5	Sunk - Al-Azraq	20.000	20.000	20.000	0.000	0.000	800,000	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	800,000	20.000
6	Sunk - Al-Azraq	24.000	0.000	0.000	0.000	0.000	0	24.000	840,000	24.000	600,000	24.000	681,000	24.000	1,344,000	1,395,000	3,394,000	0.000	0	1,395,000	24.000
7	Sunk - Al-Azraq	18.000	0.000	0.000	0.000	0.000	0	18.000	720,000	18.000	450,000	18.000	318,000	18.000	1,008,000	2,000,000	2,000,000	0.000	0	2,000,000	18.000
8	Sunk - Al-Azraq	20.000	0.000	0.000	0.000	0.000	0	20.000	800,000	20.000	500,000	20.000	600,000	20.000	1,120,000	1,620,000	1,620,000	0.000	0	1,620,000	20.000
9	Sunk - Al-Azraq	20.000	0.000	0.000	0.000	0.000	0	20.000	800,000	20.000	500,000	20.000	600,000	20.000	1,120,000	1,620,000	1,620,000	0.000	0	1,620,000	20.000
10	Sunk - Al-Azraq	20.000	0.000	0.000	0.000	0.000	0	20.000	800,000	20.000	500,000	20.000	600,000	20.000	1,120,000	1,620,000	1,620,000	0.000	0	1,620,000	20.000
11	Sunk - Al-Azraq	15.000	0.000	0.000	0.000	0.000	0	15.000	600,000	15.000	375,000	15.000	432,000	15.000	840,000	2,262,000	2,262,000	0.000	0	2,262,000	15.000
12	Sunk - Al-Azraq	20.000	0.000	0.000	0.000	0.000	0	20.000	2,000,000	20.000	1,750,000	20.000	2,016,000	20.000	3,976,000	10,482,000	10,482,000	0.000	0	10,482,000	20.000
13	Sunk - Al-Azraq	12.000	0.000	0.000	0.000	0.000	0	12.000	480,000	12.000	300,000	12.000	345,000	12.000	672,000	1,297,000	1,297,000	0.000	0	1,297,000	12.000
[REDACTED]																					
[REDACTED]																					
14	Harshat - Amara	40.000	35.000	35.000	35.000	25.000	2,700,000	25.000	300,000	25.000	625,000	25.000	1,250,000	35.000	1,575,000	3,750,000	5,950,000	0.000	0	5,950,000	40.000
15	Harshat - Amara	22.000	22.000	22.000	22.000	20.000	2,180,000	25.000	300,000	25.000	625,000	25.000	1,250,000	32.000	1,640,000	3,615,000	5,995,000	0.000	0	5,995,000	22.000
16	Harshat - Amara	40.000	20.000	0.000	0.000	0.000	300,000	20.000	240,000	40.000	1,000,000	40.000	2,000,000	40.000	1,600,000	5,040,000	5,340,000	0.000	0	5,340,000	40.000
17	Harshat - Amara	35.000	0.000	0.000	0.000	0.000	0	35.000	420,000	35.000	875,000	35.000	1,750,000	35.000	1,575,000	4,620,000	4,620,000	0.000	0	4,620,000	35.000
18	Harshat - Amara	40.000	0.000	0.000	0.000	0.000	0	40.000	720,000	40.000	1,500,000	40.000	2,000,000	40.000	2,700,000	3,920,000	3,920,000	0.000	0	3,920,000	40.000
19	Harshat - Amara	44.000	44.000	44.000	44.000	44.000	1,132,000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1,132,000	44.000
20	Harshat - Amara	2.000	0.000	0.000	0.000	0.000	0.000	2.000	171,301	2.000	48,172	2.000	272,480	2.000	165,784	679,765	679,765	0.000	0	679,765	2.000
21	Harshat - Amara	2.000	0.000	0.000	0.000	0.000	0.000	2.000	166,594	2.000	109,272	2.000	296,480	2.000	486,599	1,986,965	1,986,965	0.000	0	1,986,965	2.000
22	Harshat - Amara	65.000	65.000	65.000	65.000	35.000	2,800,000	0.000	0	0.000	0	0.000	0	30.000	1,350,000	4,150,000	4,150,000	0.000	0	4,150,000	65.000
23	Harshat - Amara	85.000	75.000	75.000	75.000	50.000	3,230,000	10.000	120,000	10.000	250,000	10.000	500,000	35.000	1,575,000	5,465,000	5,465,000	0.000	0	5,465,000	85.000
24	Harshat - Amara	180.000	18.000	20.000	20.000	0.000	2,580,000	80.000	940,000	80.000	2,000,000	80.000	4,000,000	100.000	6,000,000	11,680,000	15,000,000	0.000	0	15,000,000	180.000
[REDACTED]																					
[REDACTED]																					
25	Harshat - Amara	67.000	67.000	67.000	0.000	0.000	2,700,000	0.000	0	0.000	0	0.000	0	67.000	3,350,000	67.000	3,015,000	0.000	0	3,015,000	67.000
26	Harshat - Amara	23.000	23.000	23.000	0.000	0.000	1,307,000	0.000	0	0.000	0	0.000	0	23.000	1,150,000	23.000	1,035,000	0.000	0	1,035,000	23.000
27	Harshat - Amara	13.000	13.000	13.000	0.000	0.000	716,000	0.000	0	0.000	0	0.000	0	13.000	650,000	13.000	585,000	0.000	0	585,000	13.000
28	Harshat - Amara	2.500	2.500	2.500	0.000	0.000	150,000	0.000	0	0.000	0	0.000	0	2.500	125,000	2.500	112,500	0.000	0	112,500	2.500
29	Harshat - Amara	3.000	3.000	3.000	0.000	0.000	110,000	0.000	0	0.000	0	0.000	0	3.000	150,000	3.000	135,000	0.000	0	135,000	3.000
30	Harshat - Amara	2.000	2.000	2.000	0.000	0.000	80,000	0.000	0	0.000	0	0.000	0	2.000	100,000	2.000	90,000	0.000	0	90,000	2.000
31	Harshat - Amara	4.000	4.000	4.000	0.000	0.000	160,000	0.000	0	0.000	0	0.000	0	4.000	200,000	4.000	180,000	0.000	0	180,000	4.000
32	Harshat - Amara	2.000	2.000	2.000	0.000	0.000	80,000	0.000	0	0.000	0	0.000	0	2.000	100,000	2.000	90,000	0.000	0	90,000	2.000
33	Harshat - Amara	2.500	2.500	2.500	0.000	0.000	140,000	0.000	0	0.000	0	0.000	0	2.500	125,000	2.500	112,500	0.000	0	112,500	2.500

ANNEX C EX-2

AVERAGE UNIT PRICES

RURAL ROADS PROJECT

ITEM	UNIT	UNIT PRICES LS	UNIT PRICES U.S. \$
A. EARTHWORK			
1. Clearing and Grubbing	M ²	0.25	0.06
2. Common Excavation	M ³	4.77	1.22
3. Soft Rock Excavation	M ³	8.03	2.06
4. Hard Rock Excavation	M ³	13.37	3.43
5. Borrow Excavation	M ³	5.56	1.43
6. Embankment	M ³	3.52	0.90
7. Subgrade Preparation	M ²	1.11	0.29
8. Overhaul	M ³ /Km	0.97	0.25
B. BRIDGES AND CULVERTS			
1. Excavation for Structures	M ³	22.18	5.69
2. Reinforced Earth	M ³	785.68	201.46
3. Concrete 200 Kg/M ³	M ³	212.31	54.44
4. Concrete 300 Kg/M ³	M ³	360.79	92.51
5. Concrete 350 Kg/M ³	M ³	443.73	113.75
6. Concrete 450 Kg/M ³	M ³	569.34	146.11
7. Reinforcing Steel	Kg	3.11	0.80
8. Pipe, 60 cm	LM	269.00	69.00
9. Pipe, 80 cm	LM	507.00	130.00
10. Pipe, 100 cm	LM	713.00	184.00
C. SURFACING			
1. Sub-Base Aggregate Course	M ³	27.74	7.11
2. Base Aggregate Course	M ³	33.97	8.71
3. Bituminous Prime Coat	M ²	1.11	0.29
4. Bituminous Tack Coat	M ²	0.61	0.16
5. Bituminous Base Course	M ³	141.00	36.00
6. Bituminous Wearing Course	M ³	168.50	43.23
7. Bituminous Surface Treatment	M ²		

SOURCE OF BITUMINOUS BINDERS:

1. Asphalt: The 80/100 and 60/70 bitumen binder used in the construction of bituminous pavement roads in Syria is produced by the Homs Refinery. However the quantity needed for the road construction program of the country is not totally satisfied by the present refinery production. Additional quantities of asphalt needed for road construction is presently imported from other sources such as other Mediterranean refineries at a much higher price than that fixed by the government for the Homs refinery. The Homs refinery is being expanded and the new Tartous refinery when it comes on stream in the near future should provide adequate asphalt products for all road construction in Syria.

2. Rock Bitumen: At about 70 kilometers southeast of Raqqa, a huge source of rock bitumen exists at the locality of Bishri Mountain. The above rock bitumen is composed of about 15 percent of bitumen and 85 percent of pure silicious sand of grain size varying between 0.074mm and 4.7mm. The characteristics of bitumen makes it similar to SC-4 grade of cut back asphalt. The tests carried out by the Central Laboratory of the Ministry of Communications, proved that Bishri Rock Bitumen, if hot mixed with specially graded sand gravel would yield a bitumen concrete pavement suitable for bitumen base courses and bitumen surface courses. The ratio of mixing of rock bitumen to mineral aggregates should be in the range of 1 to 3. "Transport and Road Research Laboratory" of England have recommended to the Syrians that the use of rock bitumen be limited to the base course. The economics of the use of Bishri Bitumen lies in the fact that it is a local mined product with a very big capacity which would save mainly foreign exchange. The present cost per ton of rock bitumen in situ is LS 17. Transportation to the road site, for example Tartary, may cost up to LS 40 per ton. That would make the total cost per ton LS 57. Using Bishri bitumen at LS 57 per ton and aggregate at LS 25 per ton, the cost of one ton of bituminous pavement be $57/4 + 25 = 3/4 =$ LS 33 per ton.

Environmental and Socio-economic Analysis

The following section is an integrated analysis of several concerns: (a) physical aspects of road improvements and (b) socio-economic variables which are sensitive to changes in transport and transport-dependent activities. It is based on field investigations and office research conducted during parts of February and March 1979 by Peter Benedict, senior behavioral science advisor and Stephen F. Lintner, senior environmental coordinator, both of the Near East Bureau, AID/W. Due to a lack of prior research data on transport-related issues for the project area, many observations presented here are qualitative in nature.*

1. SUMMARY OF THE PROBLEM

The project area consists of a number of regions defined either by agricultural zone (eg. measurement of rainfall), by major physiographic features (eg. semi-arid plains or river valleys), or by level of infrastructure development (eg. Aleppo vs. an administrative region such as Hasakah the latter of which has only recently benefitted from sustained governmental attention.) Despite variation in relative levels of development, the lack of year around quality rural roads has affected the performance of local agricultural production and animal husbandry, has contributed to rising transport costs in terms of time, capital and convenience, and in a most pronounced manner has maintained the isolation of rural communities in terms of access to services, facilities and basic commodities.

Road improvement will impact upon these conditions differentially depending upon the character of local constraints. Obviously, major improvements in agricultural production will only occur if a range of complementary investments is made and the structure of incentives is modified. The twin issues of reduction in road user costs and improved access to resources and services are sensitive to the type of road improvement envisaged in this project. Quantification of project benefits in terms of certain improvements in rural welfare is not possible without techniques such as traffic, household and

* Further supportive material can be found in field notes in USAID/Damascus and AID/W entitled: Case Studies Relating to Environmental and Social Soundness Analyses of Provincial Water, Rural Roads and Rural Schools Projects - Aleppo, Raqqah, Deir Ez-Zor, and Hasakah Muhafazats, Syrian Arab Republic: 2- February - 3 March 1979.

merchant surveys. The following case material and discussion of issues, however, point to the major benefits which will accrue to the project areas under consideration.

2. CASE STUDIES

The following case studies briefly describe the effects of road improvements on life in four rural villages and from the experience of a rural merchant.

A. Tel Debek, Qamishli Mantika; Hasakah

Tel Debek is one of many dispersed small villages spread across the low rolling plain north of Hasakah. It was founded in 1939 and has a population of 120. Houses are moderately clustered and are constructed of both mudbrick and cement block. Students attend school in an adjacent village.

Livelihood: Agricultural production is restricted to rainfed wheat (75%) and barley (25%) with an average farm size of 20 - 30 hectares. Each household keeps a herd of 20-100 sheep. During February - April 10% of the community moves to pasturage. The village mukhtar (headman) reported that the annual marketable surplus was limited to 20 tons of wheat, 5 tons of barley and an undetermined amount of sheep products (cheese, fat, meat, milk). Thirty five percent (35%) of the villagers are involved in ex-community employment; men serve as seasonal wage laborers (farm machinery operators) while women and girls handpick cotton. Average annual income is reputed to be about 10,000 S.P. per household of which 3,000 is derived from crops and 2,000 from animals. The amount attributed to auto consumption could be as high as 2,000 S.P. Average annual level of household expenditure is reputed to be about 6,000 S.P.

Road Improvement: In 1977 an all weather asphalt road connecting Tel Debek with the regional centers of Derbasyeh and Hasakah was completed, replacing a dirt road which was barely passable during winter months. Villagers believe this improvement has allowed user rates to remain constant rather than doubling in the face of rapid increases in fuel and vehicle maintenance costs.

Road improvement has most directly effected the previously grave winter transportation problems confronting the village,

especially medical emergencies. Previously when the road became impassable, to reach Hasakah (45 km. to south), the provincial center, it was necessary to walk to Derbasyeh (20 km to north, 3 hours travel time), then take a vehicle to Qamishli (50 km. to east) and then take a second vehicle to Hasakah (90 km. to south). On the asphalt road it is a 15 minute trip to Derbasyeh and a one hour trip to Hasakah during all seasons.

Since road improvement, transportation service along the road has increased and there are now daily buses to Derbasyeh and Hasakah, supplemented by pickup trucks. This increased service makes the marketing of sheep products and provision of domestic supplies much more convenient. The improved road assists in the rapid and economic movement of villagers to the site of seasonal employment opportunities.

3. Hureijy, Deir Ezzor Mantika, Deir Ezzor

Hureijy is a low density village of 1300 persons aligned along the Khabour River. The village moved from a site on the edge of the river to the edge of the river terrace following the flood of 1962. Houses are constructed of mud brick and concrete block. It is located within the area of the proposed Suwar water treatment and distribution system. There is a government built school and a health clinic under construction.

Livelihood: Agricultural production is limited to irrigated wheat (30 %), barley (20 %), cotton (40%), and sugar beet (10%). With the exception of cotton and sheep products, there is little marketable surplus. Sheep herds are large and account for as much as 30% of income and auto consumption. Over half of the community move to pasturage during February-April. Ex-community employment, similar to other such communities, includes seasonal farm wage labor, and casual labor in Deir Ezzor and Hasakah. Average annual income is reputed to be 5,000 S.P. plus probably 2,000 - 3,000 S.P. in auto consumption of crops and animal products.

Road Improvement: In 1976 an all weather asphalt road was built connecting Hureijy with the Deir Ezzor-Hasakah highway. This replaced an unimproved dirt road which provided poor summer passage and was impassable during much of the winter.

Improvement of the road has increased opportunities for marketing crops and sheep products through the stabilization of transport prices, the expansion of user access, and the reduction in travel time. Previous to road improvement the villagers had great difficulty in hiring trucks to transport crops due to the very poor quality of the road. Limited road traffic made the transport of live sheep, cheese, and fat to the main highway (15 km. away) a slow process. Following the completion of the new road the cost of transporting cotton dropped 70 - 50% from the 100 S.P./ton to 30 - 50 S.P./ton.

Although transportation costs for humans and livestock have remained constant (5 - 7 S.P./person, 3 - 5 S.P./sheep to Dair Ezzor , 70 km. to southwest) the frequency of service has increased. There are now two minibuses providing daily service to Dair Ezzor , supplemented with pickup trucks. This improved service offers expanded opportunities for ex-community casual and seasonal employment.

C. Jagar Bazar, (new name Hatin) Qamishli Mantika, Hasakah.

Jagar Bazar is a small village on the plain north of Hasakah. It provides some local marketing functions and has three small stores. Since 1960 the population has declined from 500 to 200, this is attributed to drought (1959-61, 1965, 1970-73), lack of services and limited employment opportunities. Buildings are mudbrick. There is a large locally built school and a police post.

Livelihood: Agricultural production is restricted to rainfed wheat and barley. During March - May 90% of the community moves to pasturage 50 km. south in the Jabal Abd-el-Asir. There is a limited marketable surplus of grain and sheep products. Villagers are involved in ex-community employment as unskilled workers in regional urban centers such as Hasakah and Qamishli. Average annual income is reputed to be 6,000 - 7,000 S.P. plus probably 2,000 - 3,000 S.P. in auto consumption of crops and animal products.

Road Improvement: In 1976 an improved road bed was constructed between Amuda and Hasakah upgrading an unimproved dirt/gravel road. Prior to construction of the improved road bed the road was barely passable in winter months. Often there would be no traffic for two months and any trips had to be made by foot or riding donkeys.

A local merchant who markets domestic commodities (matches, rice, sugar, tea, tobacco, vegetable oil, etc.) through a small shop stated that upgrading of the road bed has reduced his costs by 50%. This was achieved by savings in travel time and reductions in transportation and loading costs. A major benefit was the decrease in travel times to the local wholesale centers of Amuda (50%--from 1½ hours to 1 hour) and Hasakah (200%--from 3 hours to 1 hour). Rather than having to use commercial buses for transportation of merchandise he now rents local pickup trucks at 30 - 35 S.P. for shopping trips. Prior to road improvements there were no locally owned vehicles in the village. He reported additional savings in time and money because he no longer needed to hire porters to move materials from the place of purchase to the bus station.

Lower costs have not caused him to change his merchandise. It could not be ascertained if the merchant passed any of his savings on to the local consumer.

For villagers improvement of the road bed resulted in maintenance of constant human, livestock, and crop transport rates in the face of increased operator costs. Further road improvements would provide increased access to treated water which villagers currently obtain in 20 liter tins transported from Amuda (25 km) for use in food preparation (local well water is saline). Prior to the construction of the improved road bed when an individual became seriously ill, villagers would have to call a taxi from Hasakah at a cost of 100 to 150 S.P. Now in medical emergencies they bring the individual directly from the village using a rented pickup truck.

If the road were to be upgraded by asphaltting the merchant felt the principal advantages to him would be savings in travel time and an improved quality of life through improved access of services. He suggested that with this improvement he might expand the number of items marketed in his shop.

D. Kfefe, Tell Abiad Mantika, Raqqa

Kfefe is a small village on the rolling plain north of Raqqa . It has a population of 70 divided among 10 households. The village is composed of moderately spaced, dome roofed mudbrick houses. There is a newly constructed school and a police post.

Livelihood: Agriculture involves the rainfed (95%) and irrigated (5%) production of wheat (50%) and barley (50%) on farms of 5-10 hectares. The village previously grew some cotton. Each household keeps a herd of 20-30 sheep and a few goats which graze in the vicinity of the village. The village produces a limited marketable surplus of grain and sheep products. Average annual income is reputed to be 6,000 SP and is derived from wheat (4,000 SP) and barley (2,000 SP) plus approximately 2,000 - 3,000 SP in auto consumption of crops and animal products.

Road Improvement: In 1978 an all weather asphalt road was completed between Kfefe and Raqqa . This was complemented by construction of an improved road bed between Kfefe and Tell Abiad. These replace a semi-improved dirt/gravel road which remained passable in winter months; however, access to Tell Abiad remains difficult and slow.

Villagers identified the greatest benefit of the road improvements to be greater and more rapid access to emergency medical services. They felt that emergency travel time and transport cost had been reduced by 50% as a result of the construction. Villagers bitterly complained that transportation costs for agricultural inputs and products had risen sharply following the completion of the road. Transport costs for seed purchased in Tell Abiad have increased from 12 SP/ton to 23 SP/ton. The price of hauling cotton increased by approximately 50% to Aleppo (23 SP/ton to 40 SP/ton). They also rent pickup trucks at 30 SP per round trip to transport fodder purchased from the government distribution center of Ain Aissa (12 km to southwest). The drivers justify their price increases on the basis of increased operational and maintenance costs.

There is one pickup in the village which makes a daily trip to Tell Abiad; service is supplemented by active north-south traffic on the road. Rates for this 25 km trip (15 minutes travel time) are 5-6 SP for humans and 1 SP for sheep. Travel is principally for domestic shopping, marketing sheep products, conducting of government business, and use of medical services in Tell Abiad and Raqqa .

3. PHYSICAL ASPECTS

The area to be affected by the proposed rural roads project is climatically characterized as semi-arid to arid with pronounced variation in rainfall and frequent periods of drought. Proposed roads would be constructed within two physiographic zones; (1) level to low rolling plains on which rainfed production of wheat and barley from thin soils combined with extensive grazing predominate land use and (2) along the floodplain and river terraces of the Euphrates River and its tributaries the Balikh and Kabour Rivers where land use is characterized by irrigation of the fertile soils through pumps.

There are no remaining areas of natural vegetation with the exception of limited stands of trees in restricted upland areas. The region has been subjected to heavy overgrazing by sheep under traditional village, transhumant and nomadic management methods. There are limited surface water resources and ground water is frequently saline. Water quality in the Euphrates drainage is declining due to additions of untreated municipal sewerage and the return of irrigation waters bearing concentrations of salts.

It is anticipated that there will be minor localized environmental impacts through direct physical disturbance during the construction phase of the proposed projects. These will result from clearing of new rights of way, widening of existing rights of way, roadside procurement of surficial earth and unconsolidated rock for construction purposes, the excavation of materials from borrow pits, and a very restricted number of small road cuts. Project design requires borrow pits to be sited at safe distances from the road and to be graded for drainage so that water will not collect.

Project implementation will involve the relocation of minor small drainage courses and irrigation ditches through the construction of small bridges, culverts and drainage pipes. In limited areas there will be minor unavoidable disruption of drainage. The construction of the roads will result in the unavoidable creation of small areas of salinized soil through creation of closed drainage systems immediately adjacent to the road bed.

Due to the generally level topography, road construction will result in only minor local increases in erosion and sedimentation. Right of way clearance, especially as a result of roadside procurement of earth and unconsolidated rock for road bed construction, will in

most cases result in a zone of surface and vegetative disturbance 3-5 meters in width on both sides of the road bed. Within this zone, due to the disruption of the stable surficial crust and restricted vegetative cover, there will be a minor to moderate increase in water and wind erosion. These problems are being mitigated by the design requirement of contour grading the disturbed right of ways. Given the lack of host government experience, absence of equipment, limited knowledge of appropriate plant species, and local grazing traditions it is not currently feasible under Syrian conditions to require roadside seeding as a realistic mitigation for right of way vegetative disruption.

Construction of asphalt paved roads will be beneficial as it will serve to reduce the high road dust levels, especially in summer, associated with unpaved dirt and gravel roads. This will significantly reduce the amount of damage to roadside crops and reduction of forage palatability attributable to road dust coating. A minor benefit will be a slight reduction in trachoma, an eye disease associated with high dust levels, this will be particularly true in those settlements sited directly adjacent to the road. Suppression of dust will improve general air quality and will reduce vehicle maintenance costs associated with the air intake system, especially the carburetor. In addition construction of improved road beds and paved surfaces will reduce the amount of land disrupted by the numerous informally created dirt roads running parallel to the main road in unpassable or marginally serviceable sections.

There are no known threatened endangered animal and plant species or critical habitat in the areas of proposed road construction. No known archaeological or historical sites would be impacted.

4. BENEFIT INCIDENCE

A. Transport and Agricultural Production

National long term development plans for this region project major improvements in agricultural production both in terms of crop yields and expanded animal meat production. The attached profile of agricultural conditions, "Regional Profile of Aleppo, Raqqa, Deir Ezzor, and Hasakah Muhafazats, Syrian Arab Republic," indicates the variation in agriculture throughout this area. Major changes rely upon developments in production technologies, e.g. intensive irrigation in river valley systems, continued mechanization, use of fertilizers, pesticides, and improved genetic material.

Conditions in the road influenced areas vary markedly. For the most part, however, road improvements will occur in areas of low economic activity characterized by the following factors: (a) marginal sufficiency in grain production, severely affected by recent drought conditions, (b) low utilization of inputs, (c) production income determined by governmental controls over crop rotation, acreage, marketing, and farmgate prices for major cereals, cotton and sugar beets, and (d) minimal or no marketable surplus in both controlled and non-controlled crops and animal products. Given current conditions it is unlikely that there will be rapid incremental producer surpluses generated by road improvement alone.

A second set of determinants related to production potential is tenure arrangements. Syrian agrarian reform over the past 20 years has alleviated historical problems related to intensive land fragmentation, large absentee ownership of underutilized lands and the issue of landlessness itself. By determining control over and investments in land, the government has also affected the value of land. Consequently, the ownership, value and management of land are all less sensitive to changes in transport variables than would be the case if such controls were non-existent. Functions of governmental control of land management are land use and crop rotation. There is seemingly relatively little flexibility within farm management to vary crop mixes vis-a-vis opportunities presented by reduced transport costs and access to new markets.

Improved roads in the cases under consideration will have no dramatic effect on further changes in land use.

Road improvements in the region will impact on the efficiency of agricultural purchasing and distribution cooperatives in obtaining inputs on a timely basis with some reduction in costs. Similarly, roads should enhance the effectiveness of central government services such as veterinary, credit, agricultural extension, mechanization and irrigation. It was noted in conversations with both village farmers and representatives of provincial ministries of agriculture that a major constraint to the provision and utilization of extension services was the travel time involved. Farmers in Raqqa and Hasakah stated that to visit the veterinary center would require the minimum of one day. Such complementary investments in productive resources will require a considerable effort in managing the delivery of services as well as the management of demand for services, e.g. changes in incentive structures.

3. Transport and Market Structures

The diversity of road-influenced areas in terms of orientation, both to market centers and to government agricultural commodity collection and storage points, makes it impossible to evaluate the sensitivity of market flows to road improvements. For marketable crop and animal surplus production there is basically a dual market system. First, for government regulated crops, principally wheat, barley, cotton and sugar beets, preharvest production estimates are made by agricultural agents. Production surplus above that needed for auto consumption and seed is transported and sold to government collection points. Sale price and, to an extent, freight rates are fixed by the government. Prices are adjusted annually to provide a reasonable return to producers.

Secondly, private sector marketing of vegetables, melons, fruits, cheese, animal fat, yogurt, butter, etc., albeit minimal, either occurs at provincial market centers or through itinerant commission agents. Some effort is made to control the selling price of these items once in the market place. Meat is totally controlled by the government from the levy of head tax to retailing.

Data are not available at the district or lower levels to estimate the volume of surplus which is privately marketed on a cash basis. For government purchased crops, however, it can be said that they are limited to restricted grain surpluses and cotton. Average yields on rural farms in agricultural zone I (greater than 300mm of annual rainfall) are 2 - 2.5/tons/hectare for barley. In Tal Debek with 240 hectares under cultivation the net grain surplus was reported at 20 tons of wheat and 5 tons of barley. Optimum controlled cultivation conditions at State Farms with adequate inputs and improved genetic material produce yields of 3.0/ton/hectare for wheat and 3.0/ton/hectare for barley in agricultural zone I.

For some communities road upgrading will provide the potential of orientation toward new private markets. Villagers in Kasser Adleh who currently primarily market their surplus sheep products in Aleppo to minimize travel time stated they would market milk and sell at district markets if roads were improved. For most communities, however, deficits in marketable surplus, government or privately marketed, will remain a serious constraint in developing new market orientations through road improvement. For the immediate future, demand for more readily accessible markets for obtaining imports rather than as markets to serve as commodity outlets will continue to characterize this area of Syria.

C. Transporters and Traders

Direct and immediate beneficiaries of secondary and farm-to-market road improvements throughout the area will be transporters and transport-dependent tradesmen such as private commodity buyers (e.g. garden crops, animal fat, butter, cheese), itinerant marketers and town-based retailers (e.g. equipment, hardware, appliances). Due to a lack of origin/destination traffic surveys on road segments to be upgraded, data are non-existent on freight rates, fares, trip purposes and frequency. Additionally, project roads are dispersed through various unrelated localized market regions, making it difficult to speculate on the probable impacts on regional flows of goods, services, and other categories of movement. Random interviews with transporters, and transport-dependent village tradesmen and villagers have provided some general observations along the following lines: (a) modest road user savings will occur; (b) car/jeep/pickup/bus-related investments and services will expand; (c) some commodity flows will be altered; and (d) "isolation" will be reduced.

Specifically, observations support the following impact hypotheses:

1. The rural transport sector, in general, is competitive. Operators of cars/jeeps, pickups and minibuses are basically not governed by regulatory bodies. Spot checks with operators of 15 - 20 passenger modified Toyota and Mazda pickups claim that road surface improvement would permit them to reduce freight charges and fares by 25%. Factors cited are standard: lower maintenance costs, safety, and increased volume through faster turn around time. Small bus companies are more regulated by municipal regulations. The most regulated aspect of rural transport in the project area is freight rates on handling wheat, barley, cotton and sugar beets to government collection points. Standard rates of 0.5 SP ton/km are posted, however, in fact heavy truck transporters often obtain as much as 35% above this for a higher profit margin during seasonal peak demand for transport. For example, the official rate to market from Jagar Bazar and Tel Debek is 20 SP/ton. Locals report that after bartering with the driver the rate is usually 25 SP/ton.
2. Despite road user savings for vehicle operators it is unclear whether much will be passed on to users. Operating costs have soared in recent years, e.g. fuel prices have increased dramatically and are now 105% above 1974 prices, spare parts and mechanics fees are increasing in cost. Evidence from field interviews indicates that in most cases freight rates and fares remained constant because of the effect of inflation on other truck operating cost factors, such as fuel, parts and drivers' wages. In Tel Debek the village mukhtar stressed that if the road had not been improved transport rates would have doubled due to increased operator expenses.
3. Traffic composition will probably not greatly alter. Major increases in tonnage of cash crops is not foreseen due to agricultural constraints. A slow build up of smaller vehicles at more frequent intervals for increased passenger service, and increased imports into the region of both staple commodities and manufactured consumer goods is a likely development.
4. Because data on regional marketing and the location

of economic activities are lacking it is difficult to estimate benefits to fixed and itinerant traders. Village grocery/actions shops are rare in communities below 1,000 - 1,500 in size. Itinerant marketing out to villages was not observed; however there is an obvious periodicity to the level of market activities in provincial towns. Surfaced roads will certainly affect the frequency and convenience of travel to market towns and might stimulate trader use of transport services. Essentially, the low density widely dispersed hamlet settlement pattern does not favor the development of lower order markets.

D. Consumer Access to Facilities, Services, and Goods

The road segments scheduled for upgrading represent highly diverse non-comparable situations. They include: (a) short village-highway access roads in the densely settled Euphrates Valley such as in the area along the river between Dair Ezzor and Abu Kamal, (b) long penetration roads into semi-arid plateau grazing land with low density populations dependent on marginal rain-fed agriculture such as the area north of Hasakah city and the northeastern portion of Raqqa muhafazat, and (c) agricultural zones with sufficient rainfall, mixed cropping, and a balanced distribution of middle-sized villages such as the areas to the northwest and northeast of the city of Aleppo. Cases range from settlements totally inaccessible in winter to those facing minimal inconvenience. Road improvement in the most disadvantaged areas will have a major impact on the social welfare of isolated populations lacking schools, clinics, potable water, and other basic amenities. Elsewhere with higher agricultural potential and an existing, albeit inadequate infrastructure, road improvements will impact more on opportunities to increase agricultural production through improved access to coefficients of production.

Despite this regional diversity in levels of development and degrees of deprivation, certain observations can be made regarding the probable incidence of benefits to those in the road influenced areas:

1. Limited inquiries into household income and expenditures, presented in detail in the Syria Provincial Water Project Paper, indicate a heavy reliance on market items which are outside household production. Beyond farm family consumption of wheat,

barley, sugar beets, mutton, butter, cheese and yogurt, households depend upon provincial market centers for basic commodities. Households interviewed perceive road benefits as including lower transport costs, more frequent travel to market, more frequent purchases of bulky goods, e.g. animal feed, kerosene, potable water and more exposure to non-essential consumer items. Whether a reduction in transport costs actually occurs in all cases, and whether accessible transport will increase the marketing of animal by-products must be determined on a case by case basis. If present, both would contribute to more available income for market purchases.

2. The amount of off-farm and migrant agricultural wage labor could not be determined. Cases were reported of female wage labor opportunities in cotton picking, males working in nearby provincial towns, landless households who follow wage labor opportunities, and, in all four provinces, specific verbal reporting on rural to urban internal migration. Since 1960 approximately 60% of the population of Jagar Bazar has moved to the medium size towns of Masakah and Qamishi, informants attribute this to drought, poor level of services, and limited employment opportunities. Improved roads will undoubtedly facilitate patterns of labor mobility which now prevail. Faster and cheaper transport to provincial centers will allow villagers to readily access unskilled labor markets when seasonal under-employment permits. The existence of periurban squatter settlements around provincial capitals suggests considerable competition for the few available opportunities in the construction and government service sectors.

3. The single most cited benefit from improved roads is that of access to health services. Few basic clinics exist outside of provincial centers and mobile health teams are few in number. Before-and-after comparisons made in interviews were striking. In Kfefe villagers deemed the greatest benefit of road improvement was in emergency situations in terms of both travel time (reduced by 50%) and emergency transportation cost (reduced by 50 - 80%). Currently in Al Zeidi, which is serviced by only a poorly maintained road, medical emergencies require the hiring of a car at 100 SP and a 2½ - 3 hour trip to Raqqa. Reduced transit time will facilitate emergency treatment and will encourage the use of clinics for routine maternal child care and diagnostic treatment. Small primary

schools are distributed in most areas; secondary education, however, is provided only in larger towns and in the provincial capitals. Low enrollment of village children, particularly girls, is directly attributed, in part, to the necessity to board village students. An informant in Al Zeidi reported that a major constraint to secondary school attendance was that poor transportation service to the nearest school in Slouk, 40 km away, necessitated that students board. To an extent road improvements will encourage student daily commutation to secondary schools.

4. A complementary development is road improvement in areas where water treatment plants and limited distribution systems are being constructed (see Syria Provincial Water Project Paper). Tanker trucks, obtaining water from the new system will improve coverage of unserved areas through usage of upgraded roads. Up to one-half of transport distance from treatment plants to remote communities will be on improved roads which should increase the frequency of now intermittent delivery and reduce transport costs to the government.

E. Employment Generation from Road Construction and Maintenance

Because of the relatively high financial cost of unskilled farm labor (minimum wage for agriculturalists set at 15 SP = \$3.50 per day), use of labor intensive road construction and maintenance technique is not feasible from a financial standpoint. The relative higher potential per capita income of farm labor in a real economic sense (\$900/year) seems also to preclude labor-intensive approaches in road construction. Unskilled labor requirements by contractors have been largely met with recruitment of urban unskilled labor, for example, the road improvement serving Alashin was built with labor from Raqqa and the construction of the improved road bed at Jagar Bazar was done with labor from Hasakah. In road maintenance, particularly in pothole patching of asphalted surfaces, unskilled hand labor is utilized quite extensively, however, the low wages paid for such seasonally employed labor (March - November) are not competitive with alternative agricultural wages and make it difficult to recruit road maintenance crews. Balayadets in Hasakah pay unskilled laborers 11.33 SP/day and foremen 14.16 SP/day in contrast to the 14 - 20 SP/day which

can be earned handpicking cotton. Culvert cleaning is another appropriate task for unskilled labor.

Mechanization of agriculture is extensive in all road influenced areas and there are no high value labor intensive crops other than cotton which continues to be handpicked and which requires seasonal wage labor (primarily women and children). Although some surplus rural labor is suggested by general agricultural conditions, the availability and value of this labor has not been measured.

5. RECOMMENDED ENVIRONMENTAL ACTIONS: The environmental evaluation process has identified five issues as warranting consideration during the implementation of the project. The SARG has agreed to address the following problem areas during the implementation of the project:

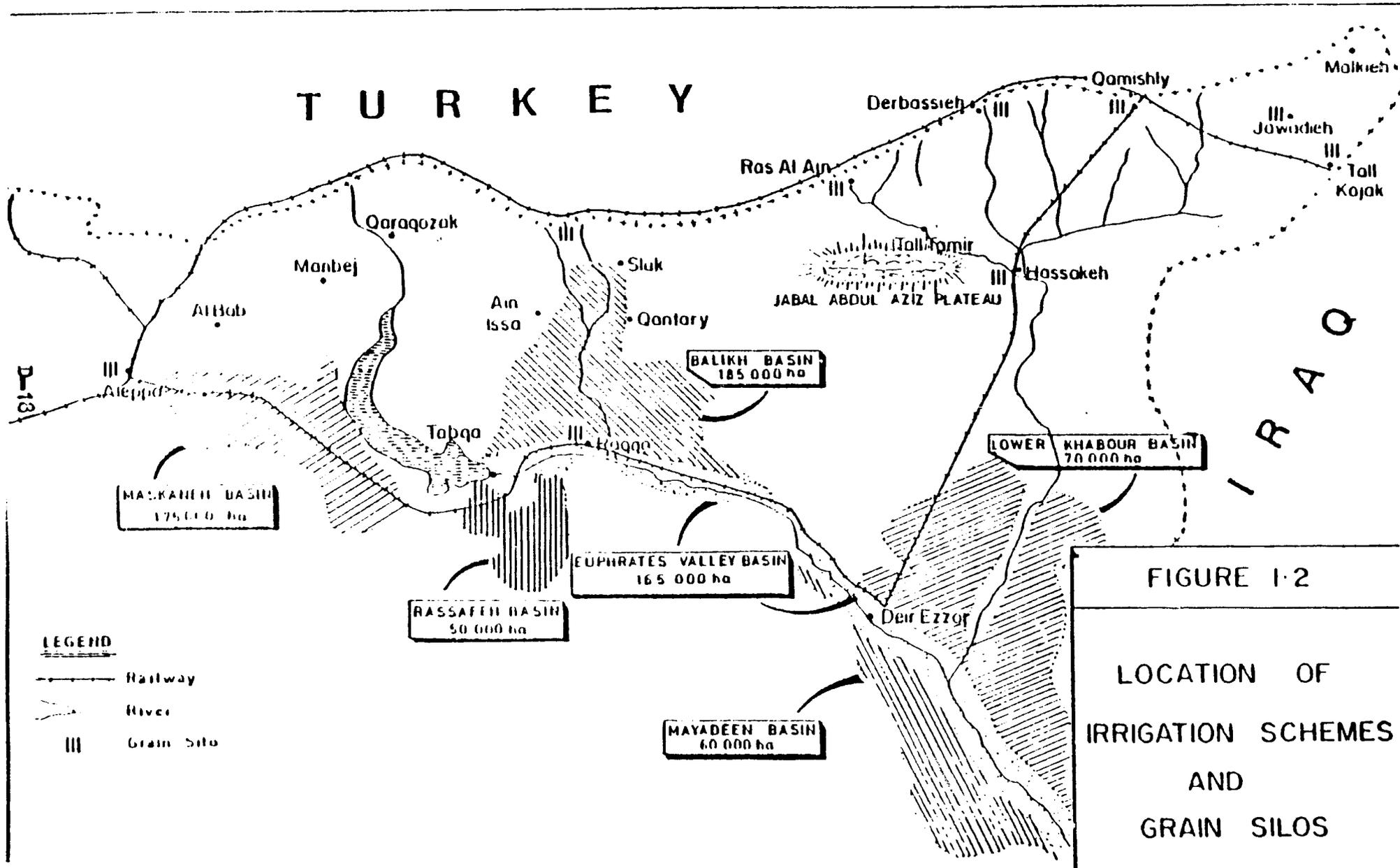
A. The current practice of siting deep borrow pits immediately adjacent to the edge of the road bed which create a moderate hazard for vehicles and a minor hazard to human and livestock traffic which frequently parallels rural roads. The final designs submitted to AID for approval should indicate that borrow pits will be sited at a safe distance from the roadway.

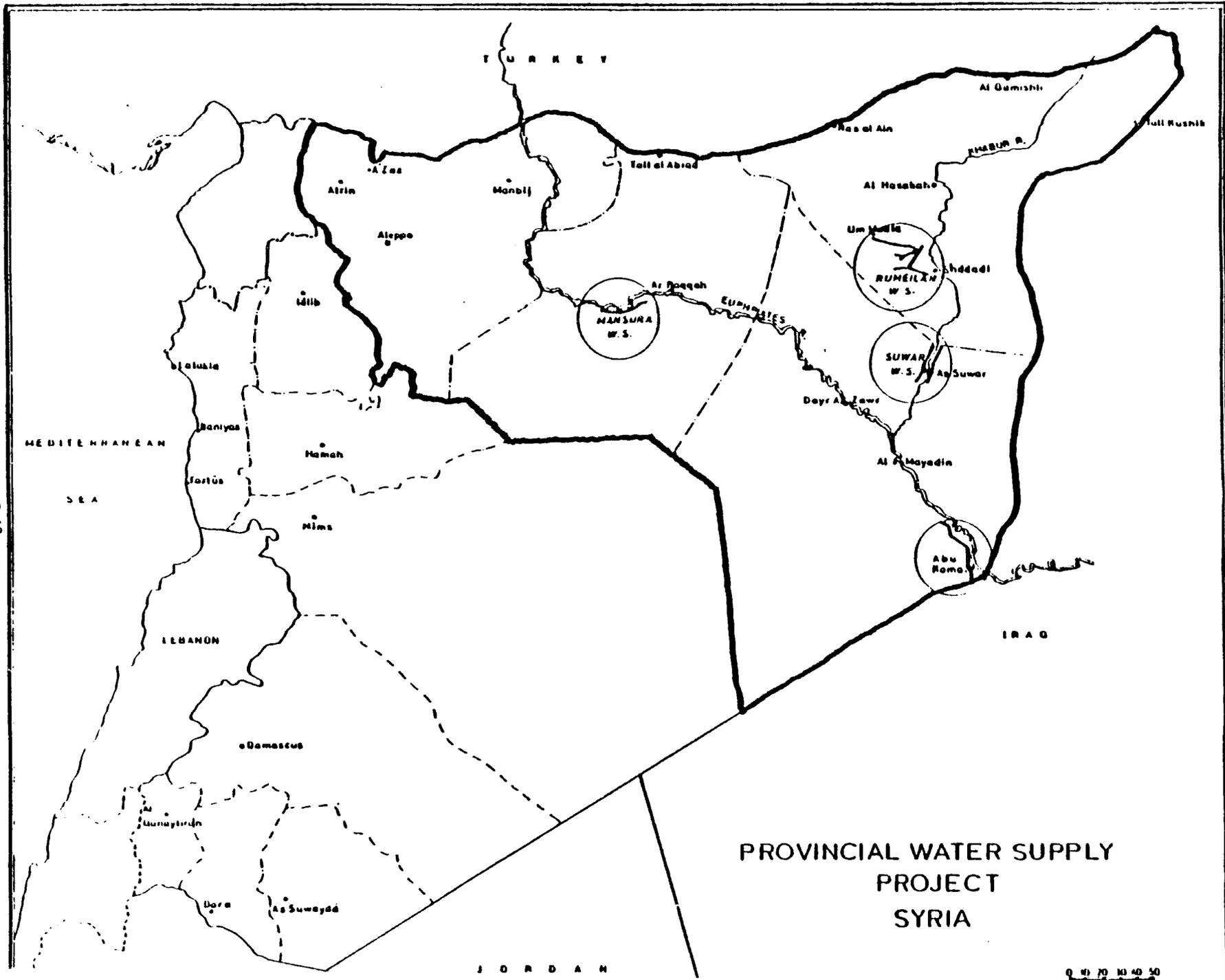
B. The current practice of leaving abandoned borrow pits ungraded which creates sites for the pooling of water and hence create breeding habitat for disease vectors (flies and mosquitoes) In addition they create sites for the informal dumping of garbage and trash, frequently by the truck load. The designs submitted for AID approval should indicate that borrow pits be graded so that drainage will not collect.

C. The current practice of leaving surface materials collection scars in the right of way zone untreated results in the formation of an uneven broken microtopograph of ridges, pits, and pedestals of earth. This surface configuration retards the natural vegetative restabilization of the right of way areas and pits often become highly salinized. The designs should ensure that disturbed right of way areas will be cross graded to establish a smooth graded contour.

D. The current practice of inadequate grading and surface preparation in the area of road drainage structures results in their short term clogging with sediment and creates high initial maintenance demands. The designs should include proper grading and surface preparation in the area of drainage structures.

E. The current practice of constructing roads through locally irrigated areas without adequate consideration of the agricultural integrity of existing drainage structures for secondary irrigation ditches often results in the local farmers making minor to moderate size cuts across the road and road bed to create informal cross drainage structures. The cutting of the road reduces its usefulness by creating a vehicular hazard and requires adopting lower traffic speed, in extreme cases the road can become locally impassable. The final designs submitted to AID for approval for each road should evidence that natural drainage, existing and planned national irrigation schemes and local farmer irrigation networks have been carefully considered and drainage structures planned accordingly. AID may require additional drainage structures if the designs are found lacking.





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PROVINCIAL WATER SUPPLY
PROJECT
SYRIA

J O R D A N

0 10 20 30 40 50

RURAL ROADS PROJECT

SUMMARY OF PROJECT COST

NO.	ROAD DESCRIPTION	LENGTH KILOMETERS	TOTAL COST			
			AID 75% U.S. \$	SARG 25% U.S. \$	TOTAL COST U.S. \$	L.S.
<u>ALEPPO MUHAFAZAT</u>						
1.	Aleppo - Kale't Sama'an - Jnedra - Hamam	33.000	385.577	128.526	514.103	2.005.000
2.	Sfere - Khanaser	22.000	244.231	81.410	325.641	1.270.000
3.	Ten Arab - Bereen	35.000	682.692	227.564	910.256	3.550.000
4.	Hambej - Khafse	33.000	559.615	186.539	746.154	2.910.000
5.	Bab - Der Hafer	24.000	392.308	130.769	523.077	2.040.000
6.	Nabi Hourl - Der Sawan	10.500	171.635	57.211	228.846	892.500
7.	Khanaser - Tal Daman	31.000	877.885	292.628	1.170.513	4.565.000
8.	Shiuekh Foukani - Shiuekh Tahtuni	29.000	799.039	266.346	1.065.385	4.155.000
9.	Hambej - Abu Kalkal - Sandaleye	29.500	519.231	173.077	692.308	2.700.000
10.	Hambej Khafse Road - Abu Kahaf	40.000	664.423	221.474	885.897	3.455.000
11.	Ten Arab - Jalabiyeh	40.000	1.091.539	363.846	1.455.385	5.676.000
	Muhafazat Total	327.000	6.388.173	2.129.391	8.517.564	33.218.500
<u>RAQQA MUHAFAZAT</u>						
1.	Ten Issa - Kfefe - Zarzouri	14.000	218.077	72.692	290.769	1.134.000
2.	Moran - Ten Issa	6.000	93.461	31.154	124.615	486.000
3.	Jouneyeh - Thawra	4.000	62.308	20.769	83.077	324.000
4.	Zedi - Kantari	20.000	388.462	129.487	517.949	2.020.000
5.	Zedi - Hof Tal	18.000	349.615	116.539	466.154	1.818.000
6.	Heshe - Sharakrak	9.000	170.962	56.987	227.949	889.000
7.	Hamarat	35.000	376.923	125.641	502.564	1.960.000
8.	Stouk - Ras Allen	45.000	700.961	233.654	934.615	3.645.000
9.	Tal Abyad	50.000	538.462	179.487	717.949	2.800.000
10.	Stouk - Alzedi	20.000	369.231	123.077	492.308	1.920.000
11.	Stouk - Kantari	24.000	691.346	230.449	921.795	3.595.000
	Muhafazat Total	245.000	3.959.808	1.319.936	5.279.744	20.591.000

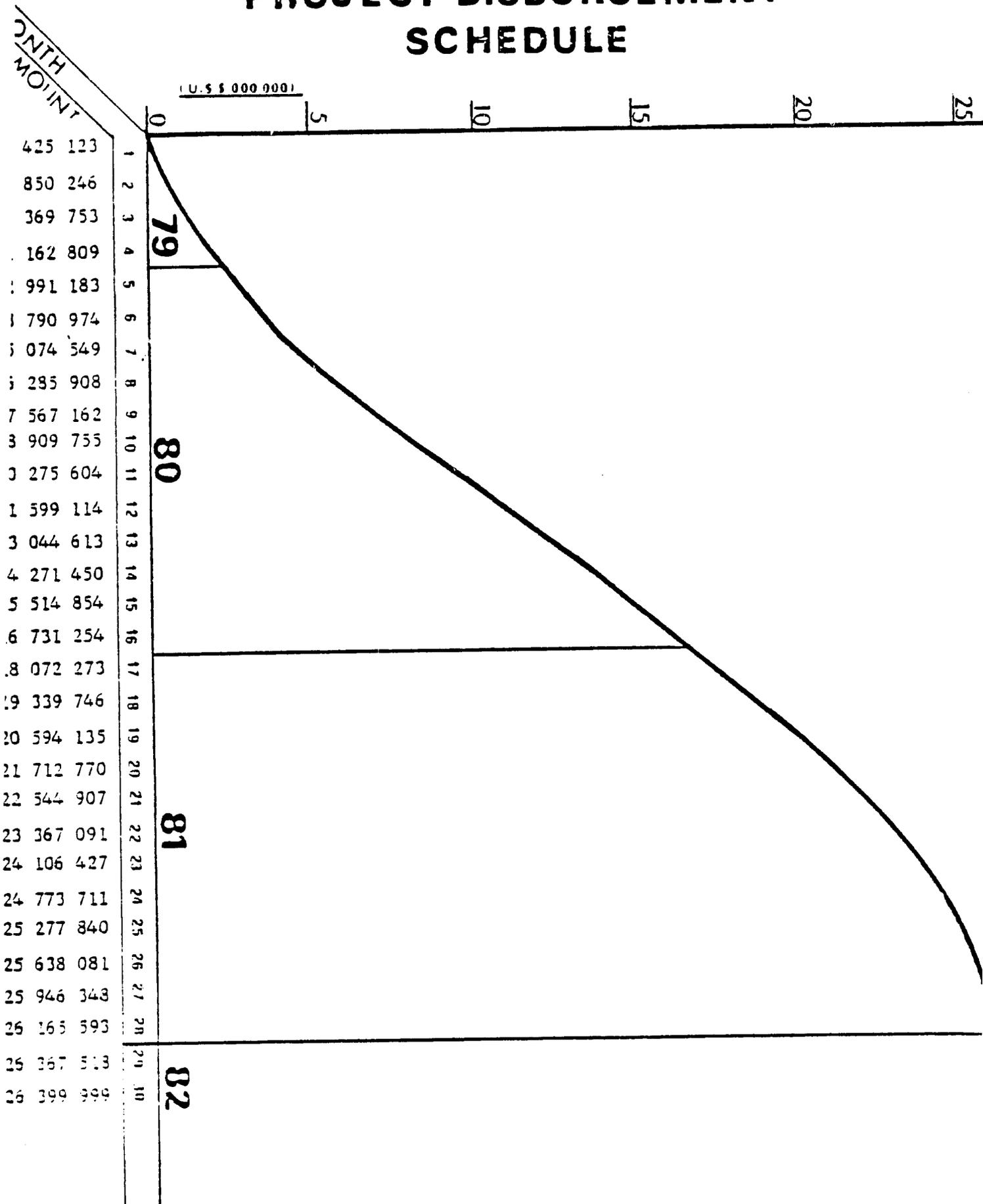
RURAL ROADS PROJECT
SUMMARY OF PROJECT COST

NO.	ROAD DESCRIPTION	LENGTH KILOMETERS	AID 75%	SARG 25%	TOTAL COST	
			U.S. \$	U.S. \$	U.S. \$	L.S.
<u>DEIR EZZOR MUHAFAZAT</u>						
1.	Deir Ezzor - Bserah - Bavara -	67.000	1,224,039	408,013	1,632,051	6,365,000
2.	Deir Ezzor - Hulle - Mrat - Maxlouh	23.000	420,192	140,064	560,256	2,185,000
3.	Ma'adan - Al'lik	13.000	237,500	79,167	316,667	1,235,000
4.	Shehel School - Kraleiyh	2.500	45,577	15,192	60,769	237,000
5.	Sheikh Hamad	3.000	54,808	18,269	73,077	285,000
6.	Jdid - Bakara	2.000	36,538	12,180	48,718	190,000
7.	Kouriyeh Jamiyeh	4.000	73,077	24,359	97,436	380,000
8.	Kharitra	2.000	36,538	12,180	48,718	190,000
9.	Gabra - Deir Ezzor Hwy.	3.500	63,942	21,314	85,256	332,500
10.	Abu Hardoub - Deir Ezzor Hwy.	3.500	63,942	21,314	85,256	332,500
11.	Sathiyeh Deir Ezzor Hwy.	3.000	54,808	18,269	73,077	285,000
12.	Mayadin - Badiyeh	3.000	54,808	18,269	73,077	285,000
13.	Sayaleh - Deir Ezzor Hwy.	7.500	137,019	45,673	182,692	712,500
14.	Ramadi - Deir Ezzor Hwy.	6.000	109,615	36,539	146,154	570,000
15.	Al Bagous - Alma'abar	0.900	22,846	7,615	30,462	118,800
16.	Al 'Ayaneh - Mazraet Shanani	3.800	96,461	32,154	128,615	501,600
17.	Almaslakha - Alramadi	5.500	139,615	46,538	186,154	726,000
18.	Alkoureyeh - Alasharah	4.500	114,231	38,077	152,308	594,000
19.	Hemar Alkasrah - Hemar Alali	5.300	134,539	44,846	179,385	699,600
20.	Ziban - Alnahayeh	8.300	210,692	70,231	280,923	1,095,600
21.	Almaryameyeh - Al 'Aes	1.500	38,077	12,692	50,769	198,000
22.	Aldevar	3.000	76,153	25,385	101,538	396,000
23.	Alabas	3.500	88,846	29,616	118,462	462,000
24.	Allavalemech	3.500	88,846	29,616	118,462	462,000
25.	Zeger - Aljaterah	0.600	15,231	5,077	20,308	79,200
26.	Darnej - Alma'abar	2.000	50,769	16,923	67,692	264,000
27.	Almaryameyeh - Alsharki	2.500	63,461	21,154	84,615	330,000
28.	Mazraet Shanani	0.900	22,846	7,616	30,462	118,800
29.	Alragib - Zebian	2.400	60,923	20,308	81,231	316,800
Muhafazat Total		191.200	3,835,942	1,278,648	5,114,590	19,946,900

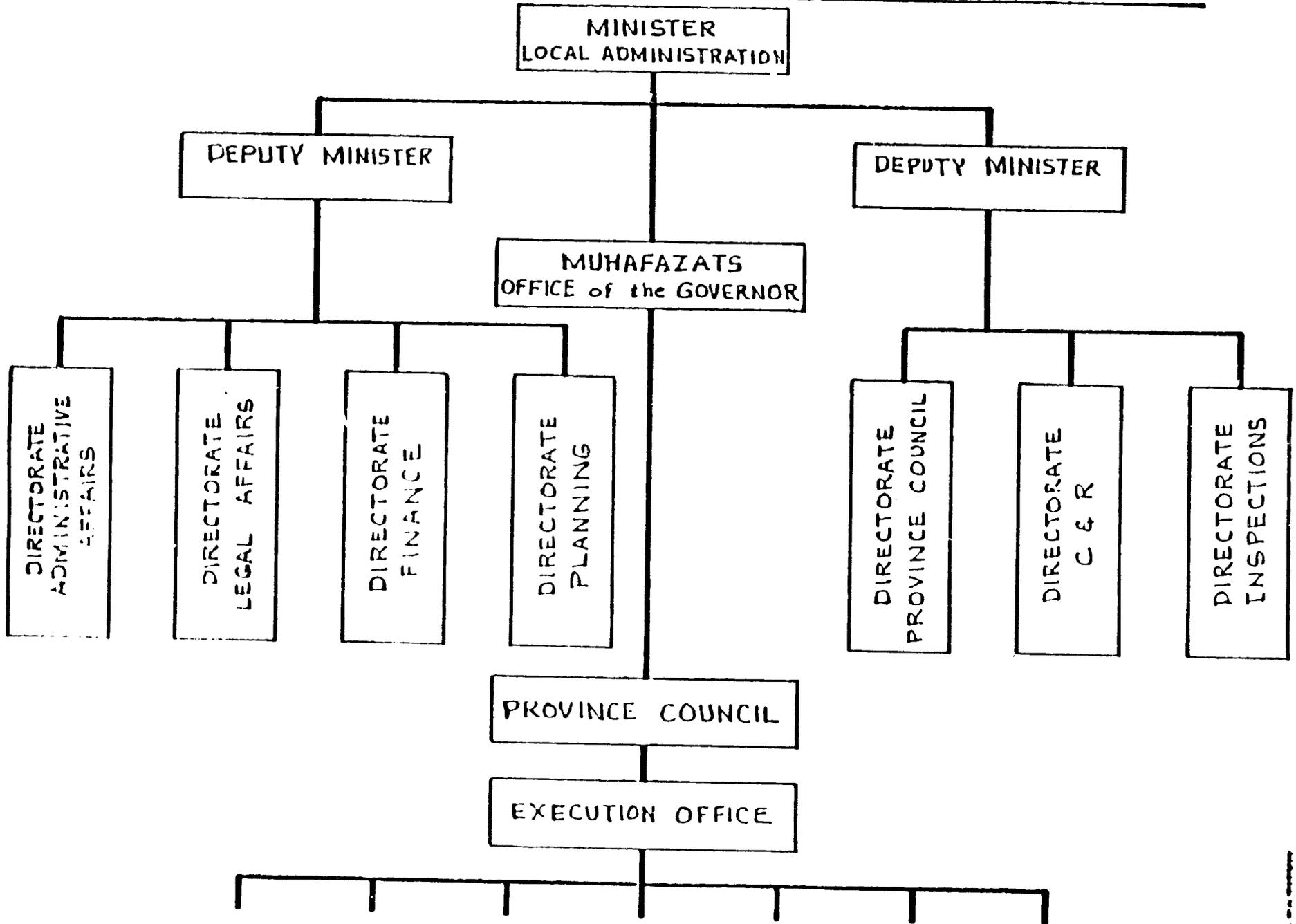
RURAL ROADS PROJECT
SUMMARY OF PROJECT COST

NO.	ROAD DESCRIPTION	LENGTH KILOMETERS	AID 75%		SARG 25%		TOTAL COST	
			U.S. \$		U.S. \$		U.S. \$	L.S.
<u>HASAKAH MUHAFAZAT</u>								
1.	Hasakah - Amouda	35.000	721.154		240.384		961.538	3.750.000
2.	Jabal Abdul Aziz - Goura - Tamer	32.000	695.192		231.731		926.923	3.615.000
3.	MaFrak Al Houf - Tal Brak	40.000	969.231		323.077		1.292.308	5.040.000
4.	Tal Tamer - Aburasen - Al Kussra	35.000	888.461		296.154		1.184.615	4.620.000
5.	Jawadiyeh - Jonop Al Rad	60.000	1.523.077		507.692		2.030.769	7.920.000
6.	Lellan - Hamarneh	2.600	130.720		43.573		174.293	679.745
7.	Oum Eakoff - Tahtani	7.600	382.105		127.368		509.473	1.986.945
8.	Hasakah - Derbaseyeh	65.000	259.615		86.538		346.154	1.350.000
9.	Hasakah - Tal Mojdal - Tal Tamer - Rusien	85.000	470.193		156.730		626.923	2.445.000
	Muhafazat Total	362.200	6.039.748		2.013.248		8.052.996	31.406.690

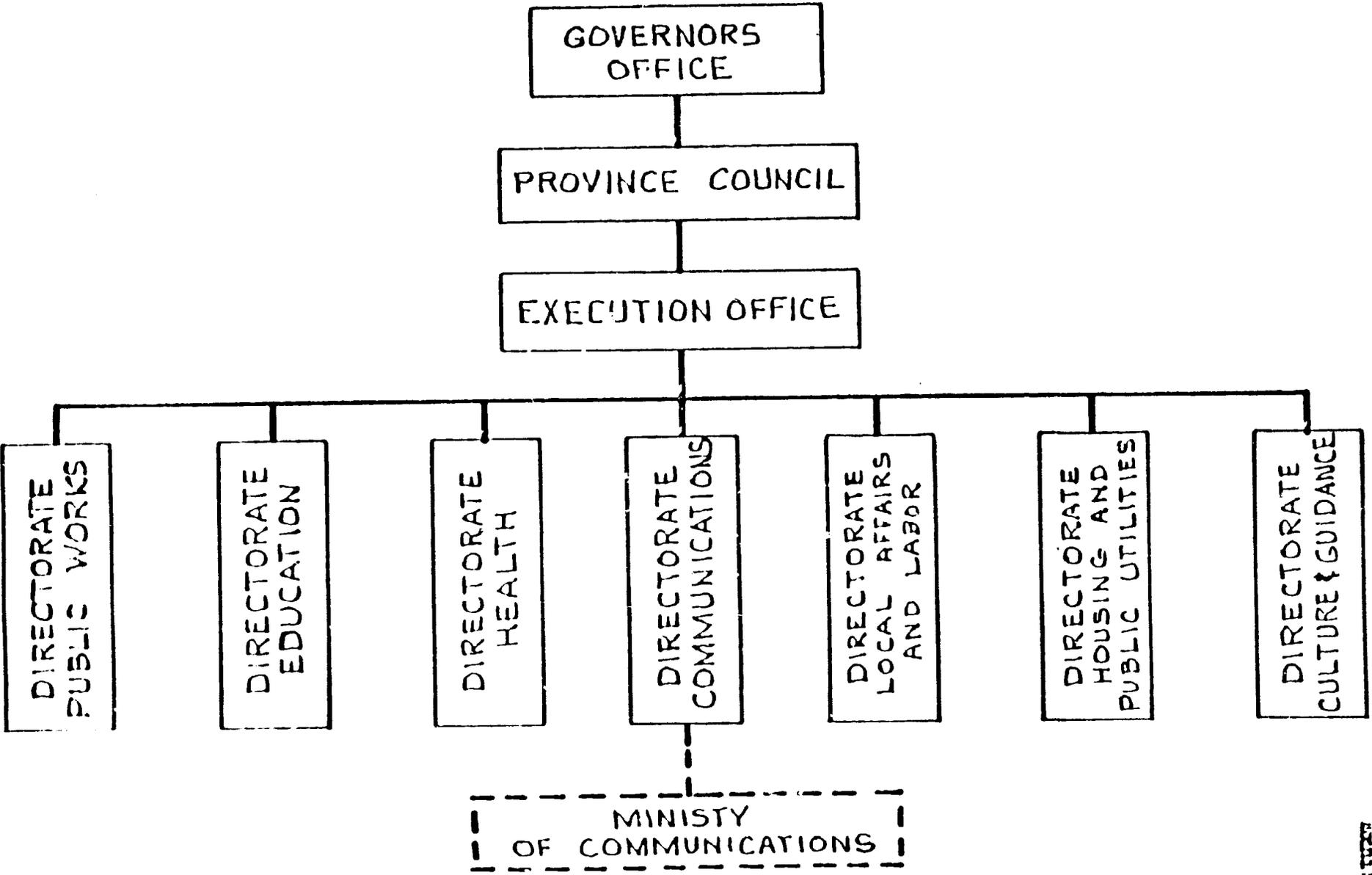
PROJECT DISBURSEMENT SCHEDULE



SYRIAN ARAB REPUBLIC
ORGANIZATION of the MINISTRY of LOCAL ADMINISTRATION

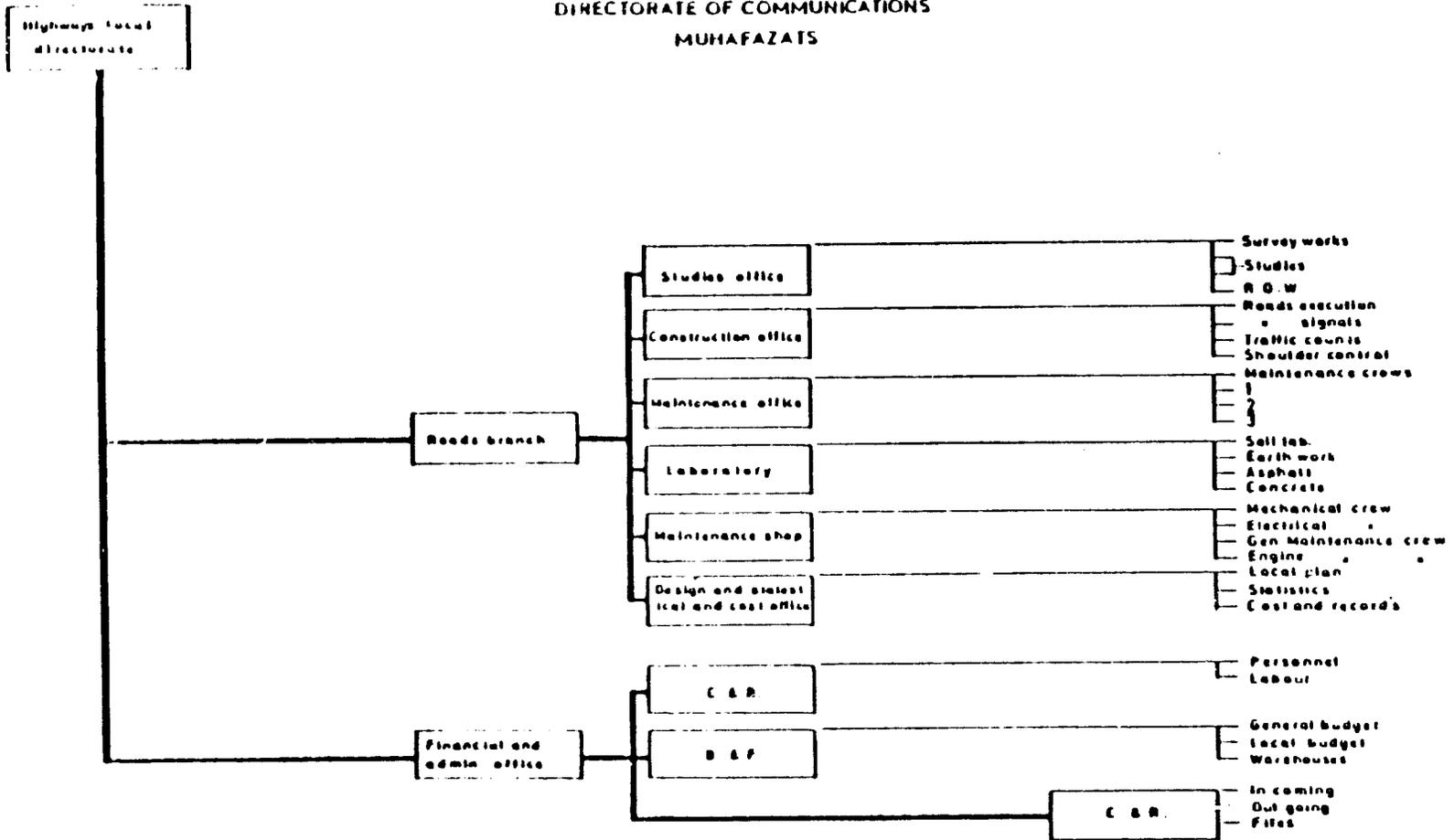


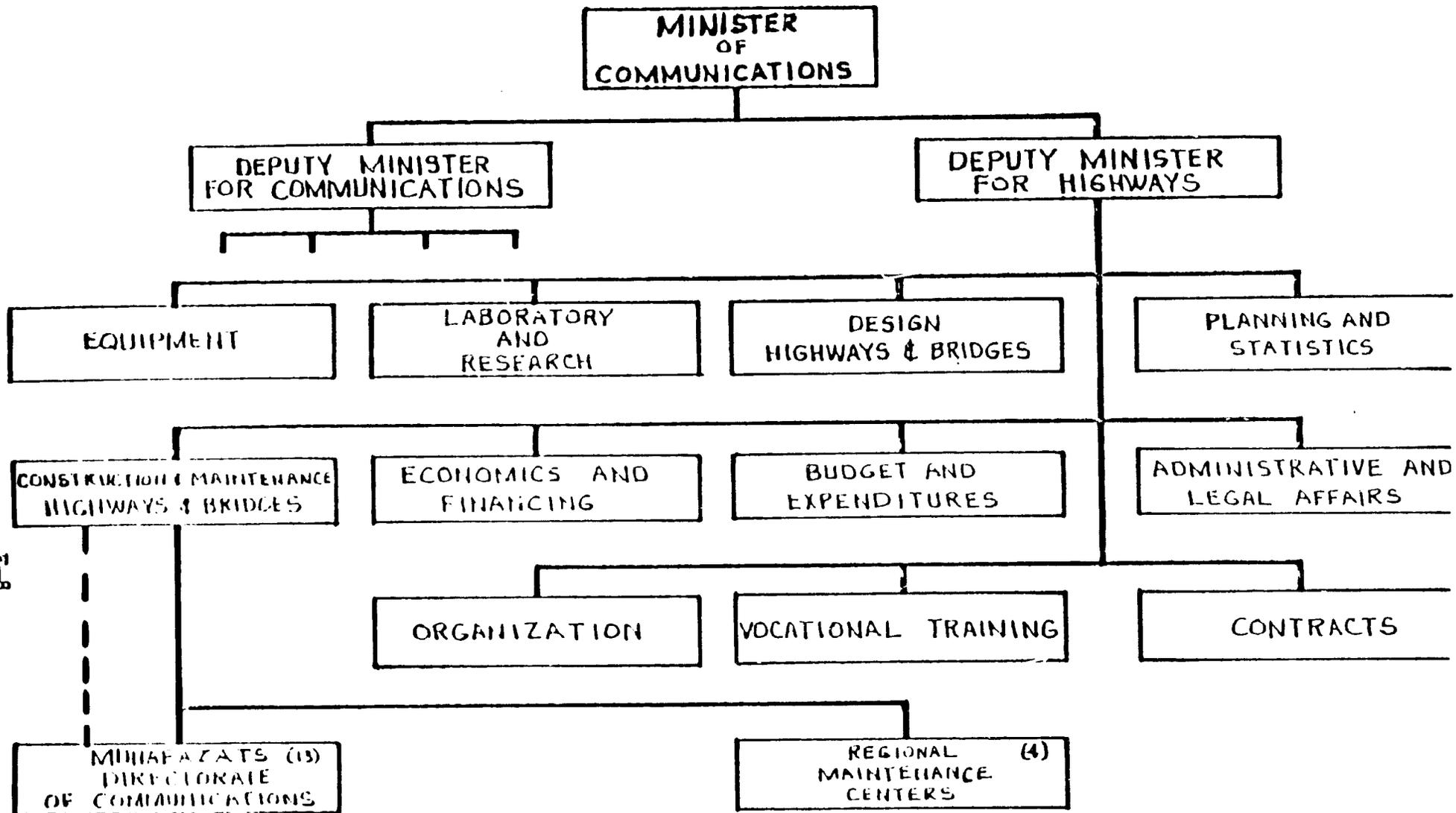
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ORGANIZATION CHART

DIRECTORATE OF COMMUNICATIONS MUHAFAZATS



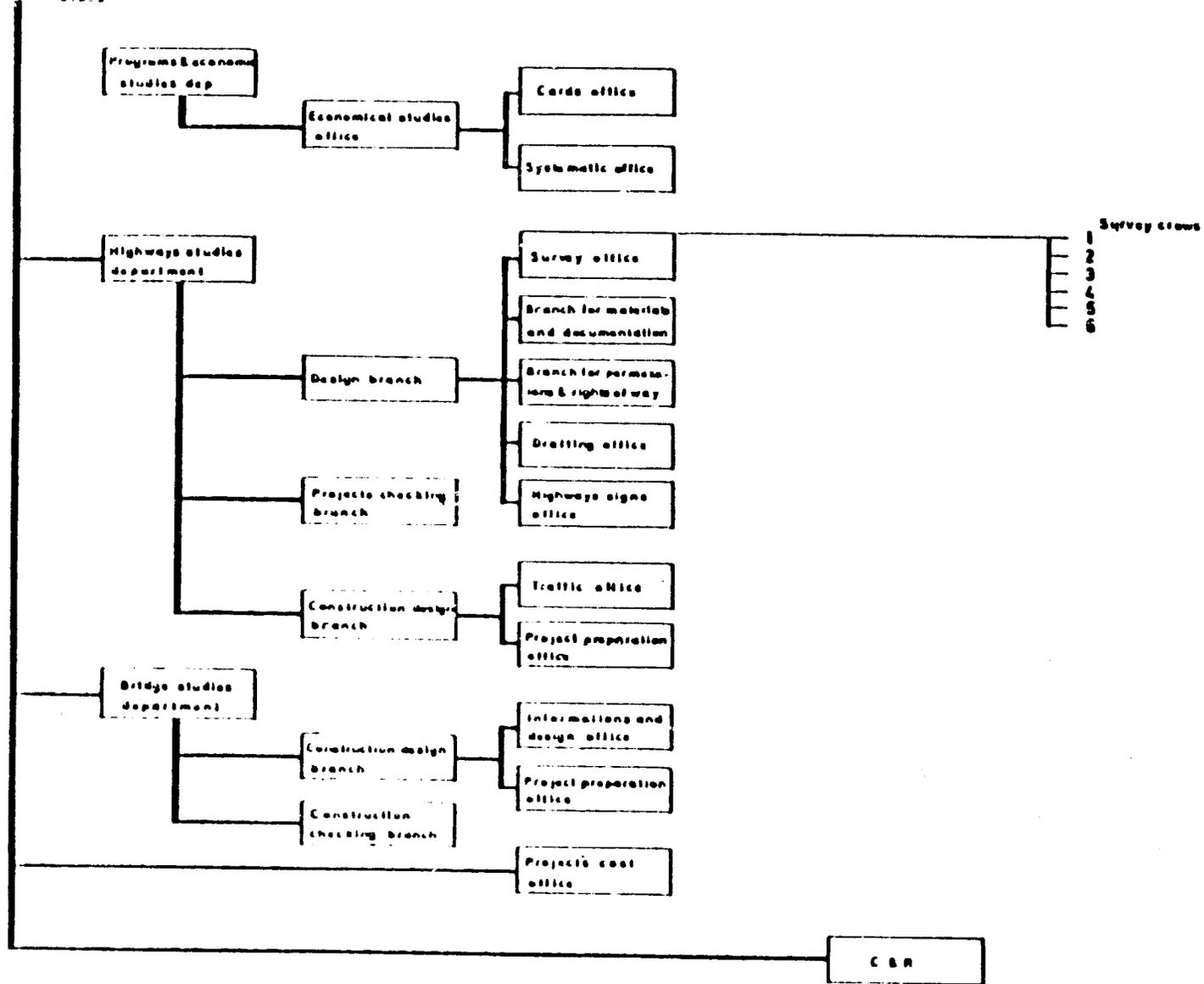


SYRIAN ARAB REPUBLIC
ORGANIZATION OF THE MINISTRY OF COMMUNICATIONS

ORGANIZATION CHART

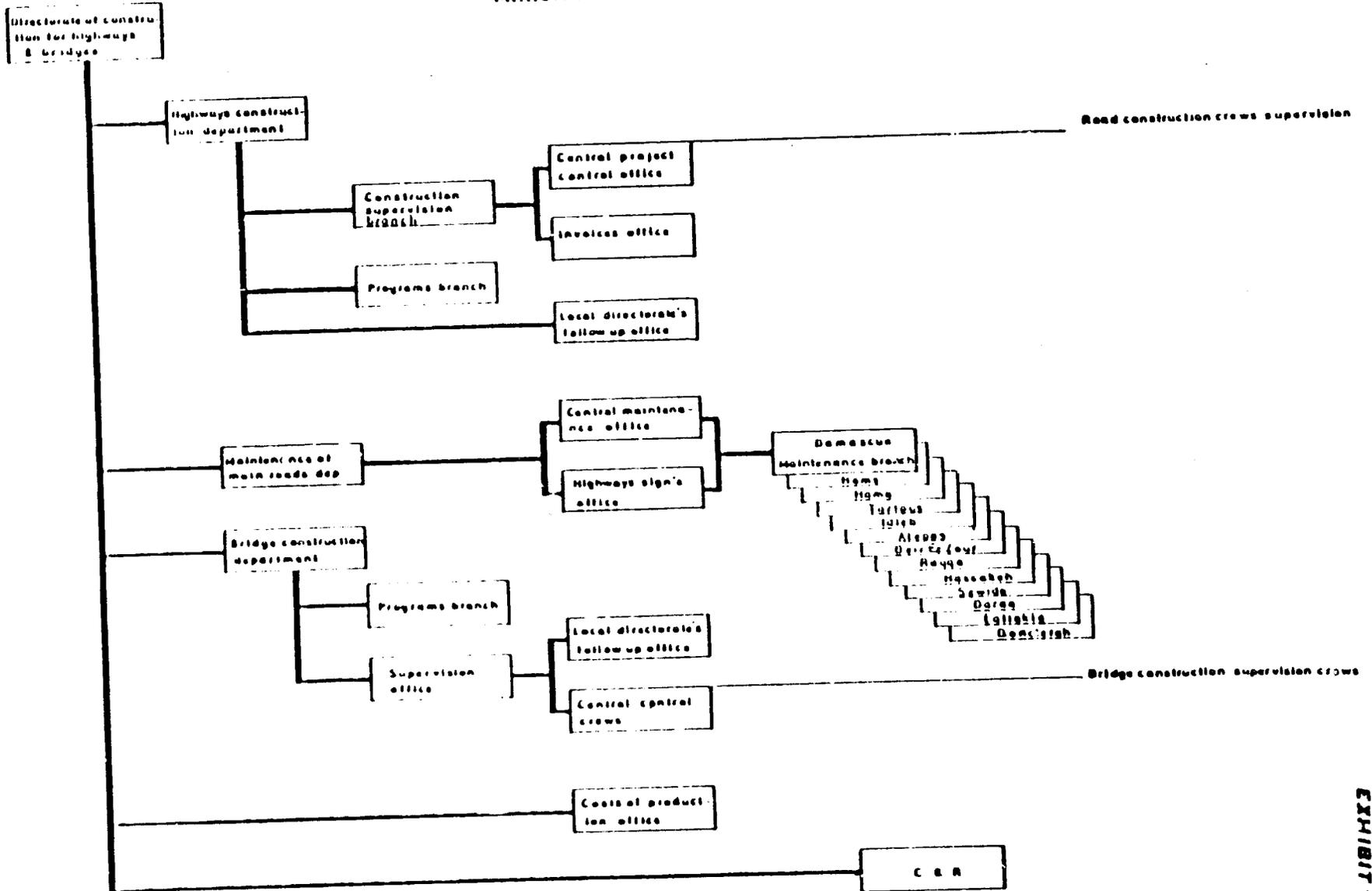
MINISTRY OF COMMUNICATIONS

Institute of studies for highways & bridges



ORGANIZATION CHART

MINISTRY OF COMMUNICATIONS





EMBASSY OF THE
UNITED STATES OF AMERICA
AGENCY FOR INTERNATIONAL DEVELOPMENT
DAMASCUS, S.A.R.

RURAL ROADS

PROJECT NO. 276-0033

CERTIFICATION PURSUANT TO SECTION 611(e) OF THE
FOREIGN ASSISTANCE ACT OF 1961, AS AMENDED

I, Miles G. Wedeman, Director of the Agency for International Development in Syria, having taken into account, among other things, the maintenance and utilization of projects in Syria previously financed or assisted by the United States, do hereby certify that in my judgement Syria has both the financial capability and the human resources capability to effectively maintain and utilize the Rural Roads capital assistance project.

This judgement is based upon general considerations discussed in the project paper to which this certification is attached.

A handwritten signature in cursive script, reading "Miles G. Wedeman", written in dark ink. The signature is positioned above a horizontal line.

Miles G. Wedeman
Director

EVALUATION INDICATORS

A. Evaluation Objective

The overall objective of socio-economic evaluations of the project is to assess the actual contribution of road improvements to improving rural welfare. Specifically, the activity is to establish the following:

1. the relationship between transport savings and improved access, and localized economic changes
2. who specifically are beneficiaries and how?
3. what role did road improvement actually play in bringing about wider changes?
4. if no benefits occurred, what factors served as constraints?

Traditional analyses of road projects which measure transport savings and surplus production begin with baseline data collected prior to road influence. Insofar as no such baseline data were collected for these projects, evaluation efforts should focus on measuring changes by contrasting before and after conditions through interviews of key community and transporter informants and records of quantitative economic activities. In short, structured interviews with key individuals and first-hand observations would constitute a series of judgements on probable road impacts or lack thereof.

The following table is illustrative of the probable categories for which change indicators can be collected.

3. Table of Socio-Economic Indicators: See the following table for the socio-economic indicators to be used in the final evaluation.

TABLE

SUGGESTED SOCIO/ECONOMIC CHANGE INDICATORS FOR EVALUATION OF RURAL ROADS PROJECT

<u>Change Indicator</u>	<u>Means of Verification</u>	<u>Constrain Assumptions</u>
1. Agricultural production:		
- contrast costs of inputs (both government controlled and private sector)	interviews with cultivators and government officials	factors setting price controls and level of subsidies
- contrast levels of outputs of crops and livestock (increased consumption/increased marketable surplus; also sample non road influenced area)	interviews with cultivators review of official production data	factor determining ex farm prices also new patterns of marketing of non-controlled crops
- complementary agricultural investments (changes in agricultural extension, levels of credit, cooperative membership, mechanization, etc.)	interviews with cultivators, heads of cooperatives, and review of records concerning extension activities	low capacity to absorb accelerated delivery of services, incentives determined by pricing mechanisms
2. Character of transport:		
- changes in the costs, periodicity, efficiency, and speed of all categories of transport (road use savings)	traffic surveys, interviews with merchants, cultivators, mechanics, government officials	operations costs will increase significantly due to inflation
- changes in the competitiveness of the transport sector (elasticity of supply and demand for services)		mix in increase in vehicles will favor light transport
- changes in commodity mix of items imported into region		

<u>Change Indicator</u>	<u>Means of Verification</u>	<u>Constrain Assumptions</u>
<p>3. Access to services, facilities, goods: - changes in usage of (a) social services (schools, health, public utilities recreational, religious) (b) business (markets, shops, banking, cooperatives) (c) governmental (local government, tax offices), (d) financial (banks, credit outlets) changes in community services, facilities, commercial outlets</p>	<p>household interviews, traffic survey, trade survey, interviews with transporters, record of clinics, schools.</p> <p>inventory new activities in communities, along new roads, and in market centers</p>	<p>ability of government to provide personnel and management structure of or new activities</p> <p>urban influences on rural development limited by lack of comprehensive regional planning</p>
<p>4. Access to off-farm employment - Increase in ex-community employment opportunities (farm labor, casual urban unskilled labor, permanent migration)</p>	<p>interviews with knowledgeable villagers, provincial town employees, population office in provincial capital</p>	<p>low level manufacturing, construction and other employment markets limits off-farm opportunities</p> <p>increasing mechanization except for cotton displaces rural labor</p>
<p>5. Employment generation from road construction and maintenance</p>	<p>interviews with ex road laborers, road construction companies, local directorate of roads, examination of capital/labor mix records of construction companies</p>	<p>roads will not be labor intensive due to high price of labor and construction techniques decided upon</p> <p>labor crews might be hired elsewhere and brought onto job</p>
<p>6. Household income and expenditures</p>	<p>household survey, trades survey</p>	<p>slow incremented growth of production due to agricultural constraints, low incentive to shift to higher value crops inflation erodes real net disposable income</p>

DEPARTMENT OF STATE
AGENCY FOR INTERNATIONAL DEVELOPMENT
WASHINGTON, D. C. 20523

THE ADMINISTRATOR

PROJECT AUTHORIZATION
AND REQUEST FOR ALLOTMENT OF FUNDS

PART II

Name of Country: Syria

Name of Project: Rural Roads

Number of Project: 276-0033

Pursuant to Part II, Chapter 4, Section 531 of the Foreign Assistance Act of 1961, as amended, I hereby authorize a Loan to Syria (the "Cooperating Country") of not to exceed Twenty Six Million Four Hundred Thousand United States Dollars (\$26,400,000) (the "Authorized Amount") to help in financing the foreign exchange and local currency costs of goods and services required for the project as described in the following paragraph.

The project consists of about 1126 kms of roads which will provide the rural population with all weather access to agricultural inputs and markets and to the Government's social services such as education and health care. The project will provide 60 roads to villages located in four northeastern provinces of Syria (hereinafter referred to as the "Project").

The entire amount of the A.I.D. financing herein authorized for the Project will be obligated when the Project Agreement is executed.

I hereby authorize the initiation and negotiation of the Project Agreement by the officer to whom such authority has been delegated in accordance with A.I.D. regulations and Delegations of Authority subject to the following terms and covenants and major conditions as A.I.D. may deem appropriate:

- 2 -

a. Interest Rate and Terms of Repayment

The Cooperating Country shall repay the Loan to A.I.D. in United States Dollars within forty (40) years from the date of first disbursement of the Loan, including a grace period of not to exceed ten (10) years from such date. The Cooperating Country shall pay interest to A.I.D. in United States Dollars, from the date of first disbursement of the Loan at the rate of (a) two percent (2%) per annum during the first ten (10) years, and three percent (3%) per annum thereafter, on the outstanding balance of the Loan and on any due and unpaid interest accrued thereon.

b. Source and Origin of Goods

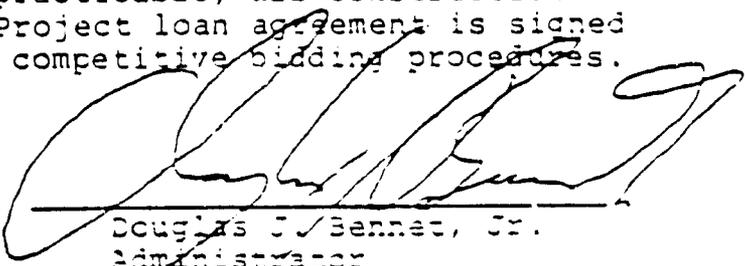
Goods and services financed by A.I.D. under the Project shall have their source and origin in the United States or in the Cooperating Country except as A.I.D. may otherwise agree in writing.

c. Conditions Precedent

(1) Prior to any disbursement to finance construction costs of a sub-project, or the issuance of any commitment documents under the Project Agreement for such disbursement, the Cooperating Country, shall, except as A.I.D. may otherwise agree in writing, submit, in form and substance satisfactory to A.I.D., designs and cost estimates for that sub-project.

d. Covenants

(1) The Cooperating Country further warrants that, to the maximum extent practicable, all construction contracts awarded after the Project loan agreement is signed will be made on the basis of competitive bidding procedures.



Douglas J. Bennet, Jr.
Administrator

Aug 14, 1975

Date

ANNEX

Life of project:
 From FY 79 to FY 82
 Total U.S. Funding \$26,400,000
 Date Prepared: 3-16-79

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Project Title & Number: RURAL ROADS

Page 1 of 4

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Program or Sector Goal: The broader objective to which this project contributes:</p>	<p>Measures of Goal Achievement:</p>	<p>1. Ministry of Rural Administration records.</p>	<p>Assumptions for achieving goal targets:</p>
<p>1. Improve the relative welfare of the rural poor</p>	<p>2. Improve access to health and education facilities and to consumer goods.</p>	<p>2. Records of Ministries of Health and Education.</p>	<p>1. Improved agricultural technology and irrigation where possible are made available to target farmers.</p>
<p>2. Sub-goal: Provide all-weather access to agricultural marketing and social service centers.</p>	<p>1. Reduce transportation costs.</p>	<p>1. Ministry of Communications records.</p>	<p>2. Weather conditions are favorable.</p>
	<p>2. Increase agricultural productivity.</p>	<p>2. Ministry of Rural Administration records.</p>	
	<p>3. Induce changes in cropping patterns from lower value crops to increased amounts of higher value perishables.</p>	<p>3. Same.</p>	<p>3. Quality of service provided by Ministries of Health and Education holds constant or improves</p>

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

From FY 79 to FY 82
Total U.S. Funding \$26,400,000
Date Prepared: 3-16-79

Project Title & Number: RURAL ROADS

Page 2 of 4

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Project Purposes:	Conditions that will indicate purpose has been achieved: End of project Status.		Assumptions for achieving purpose:
1. Construct and improve rural roads.	1. Approximately 1126 kms of roads improved to all-weather standard, providing access to the existing all-weather transportation network for 212,800 rural population. 2. Roads improved under the Project are kept in satisfactory condition, providing all-weather service for 10 or more years.	1. Ministry of Communications records. 2. Ministry of Communications records	1. (a) SARG revenues for road improvements are not reduced. (b) Inflation rate for rural road construction costs does not exceed the expected rate of 15% year for the next 3 years.

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

From FY 79 to FY 82
Total U.S. Funding: \$26,400,000
Date Prepared: 3-16-79

Project Title & Number: RURAL ROADS

Page 4 of 4

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Inputs:</p> <p><u>ATD:</u></p> <p>1. US \$ 26,350,000 for construction of Rural Roads.</p> <p>2. US \$ 50,000 for Technical Services.</p>	<p>Implementation Target (Type and Quantity)</p> <p>1. Construction of Approximately 1126 kms of Rural Roads</p> <p>a. Earthwork b. Drainage c. Sub-base & Base d. Bituminous Surfacing</p>	<p>1. SARG REPORTS</p> <p>2. AID Reports</p>	<p>Assumptions for providing inputs:</p> <p>1. AID loan will be made available on a timely basis</p> <p>2. SARG Financing will be made available on a timely basis</p> <p>3. Adequate contracting capability exist in each of the Muhafazats</p> <p>4. Directorate of Communications in each Muhafazat is adequately staffed to implement project.</p>
<p><u>SARG:</u> (Equivalent US \$)</p> <p>1. US \$ 1,037,000 for Design of Rural Roads</p> <p>2. US \$ 1,779,000 for construction supervision of Rural Roads</p> <p>3. US \$ 8,704,000 for construction of Rural Roads.</p>			

Project Design Summary
Logical Framework

Life of Project:
From FY 79 to FY 82
Total U.S. Funding \$26,400,000
Date Prepared: 3-16-79

Project Title & Number: RURAL ROADS

Page 3 of 4

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Outputs:	Magnitude of Outputs		Assumptions for achieving purpose
1. Road improvement activity on selected priority rural roads.	1. Upgrading to all-weather paved standard of 1126 kms. of rural roads.	1. Ministry of Communications inspections and records. 2. Monitoring by either Direct Hire Syrian Engineers or Syrian Consulting Engineering Firm.	1. SARG personnel assigned as planned. 2. AFD will Hire 4 Highway Engineers or contract for monitoring services

3. Other AID Projects:

FY 1975 - FY 1979

U.S. - Syria Economic Cooperation Program

(\$million)

	<u>FY 75</u>	<u>FY 76</u> (Incl. T.Q.)	<u>FY 77</u>	<u>FY 78</u>	<u>FY 79</u>
<u>Loans:</u>					
<u>Agricultural Development</u>					
(Agricultural Machinery & Production Inputs)	30.0		40.0	-	-
Basic Imports & Production Development Imports Loan		15.0		20.0	20.0 ²⁾
Euphrates Basin Maintenance		17.6			
Damascus Water Supply I	48.0	-	-	-	-
Damascus Water Supply II	-	14.5	-	-	-
Rural Electrification	-	-	34.7	-	-
Damascus - Dera'a Highway	-	45.9	-	60.0	-
Lattakia-Tartous Highway	-	-	-	-	26.4
Rural Roads	-	-	-	-	17.6
Provincial Water	-	-	-	-	11.0
Rural Schools	-	-	-	-	75.0
Sub Total	<u>78.0</u>	<u>93.0</u>	<u>74.7</u>	<u>80.0</u>	
<u>Grants</u>					
<u>Technical Services/</u>					
Feasibility Studies	4.000	-	3.500	2.000	
General Participant Training	1.000	1.250	0.983	0.850	3.025 ³⁾
Development of Health Services	-	0.400	0.335	0.340	-
Technical Health Institute	-	-	-	4.050	1.5
English Language Training	-	0.350	0.432	0.560	.975 ²⁾
Soils & Land Classification	-	-	-	2.200	
Ag Research & Production	-	-	-	-	6.0
Remote Sensing	-	-	-	-	3.5
Sub Total	<u>5.000¹⁾</u>	<u>2.000</u>	<u>5.300</u>	<u>10.000</u>	<u>15.000</u>
<u>AID Total</u>	<u>83.000</u>	<u>95.000</u>	<u>80.000</u>	<u>90.000</u>	<u>90.000</u>
PL 480, Title I	21.4	19.2	16.0	14.0	12.1
PL 480, Title II (WFP)	0.2	0.2	3.3	3.2	5.3
Total PL 480	<u>21.6</u>	<u>19.4</u>	<u>19.3</u>	<u>17.2</u>	<u>17.4</u>
<u>Total U.S. Economic Assistance</u>	<u>104.6</u>	<u>114.4</u>	<u>99.3</u>	<u>107.2</u>	<u>107.4</u>

- 1) Funded from Middle East Special Requirements Fund.
- 2) Already obligated in FY 79
- 3) \$350 million already obligated in FY 79

4. Other Donor Activity

a. General: Foreign AID commitments to Syria for the years 1976, 1977 and 1978 were approximately U.S.\$2,795 million. Much of this assistance is politically motivated, making its continued availability very uncertain and the dependence of the entire investment program upon it risky. However, the large number of donors as listed below and the variety of political views they represent spreads the risk somewhat. The major donors in recent years have been Kuwait, Saudi Arabia and the U.A.E. With the notable exception of Russian assistance for construction of the Euphrates River Dams, earlier foreign assistance went mainly into transportation and power infrastructure (even in the case of the dam, power generation has been its major function to date) and industry. More recently, with AID, the IBRD and the West Germans leading the way, there have been attempts to channel more aid funds into agriculture and social services. However, this effort has been severely hampered by a lack of projects ready for financing. The following table lists the aid donors and approximate amounts:

Foreign Aid Commitments to Syria 1976-1978
(US \$ Million)

	<u>1976</u>	<u>1977</u>	<u>1978</u>
Kuwait	0	182	150-200
Qatar	10	60	40
Saudi Arabia	245	420	200-400
U.A.E.	201	114	100
Arab Multilateral	66	1	0
Iran	<u>150</u>	<u>25</u>	<u>0</u>
Total OPEC	672	802	490-740
U.S.S.R.	50	0	0
East Germany	1	1	0
Other Eastern Europe	<u>1</u>	<u>1</u>	<u>1</u>
Total Communist Bloc	52	2	1
France	41	0	0
West Germany	40	53	60
Other DAC	<u>1</u>	<u>1</u>	<u>1</u>
Total DAC	82	54	61
World Bank	30	70	119
World Food Program	9	19	21
Other UN	<u>1</u>	<u>-</u>	<u>-</u>
Total Multilateral	92	99	140
Grand Total (Excluding U.S.)	898	931	690-940

b. Project Area: The following is a description of projects in the project, area:

<u>Description</u>	<u>Estimated Cost</u> U.S. \$ 00	<u>Donor</u>
<u>Transportation</u>		
1. Aleppo - Tall Kojak		
a. Aleppo - Qarazozak	26,600	Kuwait
b. Qarazozak - Ain Issa	12,000	Saudi Arabia
c. Qantary - Tall Tamir	19,000	World Bank
d. Tall Tamir - Tall Alo	27,000	EEC
2. Rural Highway Feasibility	1,000	World Bank
3. Palmyra - Deir Ezzor Highway	12,200	Kuwait
<u>Agriculture</u>		
1. Euphrates Basin Land Reclamation	10,000	Qatar
2. Balikh Basin Irrigation Project	73,000	World Bank
3. Meskaneh Irrigation Project		Russians
4. Meskaneh Irrigation Project	30,000	Japan
5. Qamishly Integrated Project for Agricultural Intensification	500	Arab Fund
6. Sugar Plant at Raqqa	46,100	U.A.E.
7. Sugar Plant at Meskaneh	46,100	U.A.E.
8. Oilseed Processing Mill Aleppo	10,500	World Bank
9. Oilseed Processing Mill Deir Ezzor	10,500	World Bank
10. Lower Euphrates Irrigation Project		Romania
11. Euphrates Irrigation Project	50,000	Iran
<u>Other Projects</u>		
1. Paper Mill at Deir Ezzor		U.A.E.
2. Euphrates Dam		Russia
3. Aleppo Water Supply Project	50,000	World Bank

c. In Syria: The following is a description of development projects in Syria outside the project area:

<u>Transportation</u>		
1. Tartous Port Development	25,500	Saudi Arabia
2. Lattakia Port Development	24,100	Saudi Arabia
3. Damascus-Lebanon Highway	21,700	Saudi Arabia
4. Damascus Airport Terminal	14,500	Saudi Arabia
<u>Agriculture</u>		
1. Super Phosphate Plant Homs		Romania
2. Agriculture Projects	14,200	Saudi Arabia
3. Sugar Plant at Ghaz	46,000	U.A.E.
4. Agricultural Studies	1,500	West Germany

Agriculture (continued)

	<u>Estimated Cost</u>	<u>Donor</u>
5. Potato Cold Storage Plant	8,500	West Germany
6. Ghab Development Project	32,500	West Germany
7. Fruit Trees	17,200	West Germany
8. World Food Program	49,000	
9. Agricultural Development Program	2,000	UNDP

Other Projects

1. Tishrin Military Hospital	14,200	Saudi Arabia
2. Telecommunications Cable Tartous-Crete	14,900	Saudi Arabia
3. Baniyas Electricity Station	21,300	Saudi Arabia
4. Tishrin University	35,500	Saudi Arabia
5. Damascus Hospital		Abu Dhabi
6. Baniyas Power Station	14,000	Arab Fund
7. Damascus Water Supply	41,500	Russia
8. Electric Power lines		Russia
9. Railroad Construction		Russia
10. Petroleum Development		Romania
11. Petroleum Refinery at Baniyas		East Germany
12. Grain Storage		France
13. Mehardeh Power Station	27,000	France
14. Telecommunications	13,000	West Germany
15. Baniyas Power Generation	70,000	West Germany
16. Busses	10,000	Japan
17. Baniyas Refinery	90,000	World Bank
18. Telecommunications	28,000	World Bank
19. Livestock Development	17,500	World Bank
20. Damascus Water Supply	35,000	World Bank
21. Vocational Education	20,000	World Bank
22. Rural Electrification	40,000	World Bank

INFO OCT-81 NEA-27 EB-28 CES-29 L-33 /852 R

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TAGS:

SUBJECT: RURAL ROADS PID REVIEW

1. ON DECEMBER 21, 1978 NEAC REVIEWED AND APPROVED SUBJECT PID. FOLLOWING POINTS/ISSUES WERE RAISED BY NEAC WHICH SHOULD BE ADDRESSED/RESOLVED IN PROJECT PAPER (PP).

...A) PP SHOULD OUTLINE STRIAN STRATEGY FOR RURAL DEVELOPMENT IN THE NORTHEAST PROVINCES, SARG RATIONALE FOR CONCENTRATING RESOURCES IN THIS AREA AND HOW THESE CORRESPOND TO AID'S PROGRAM OBJECTIVES. PP SHOULD ALSO DISCUSS THE PROBABLE BENEFICIAL IMPACT OF RURAL INFRASTRUCTURE SUCH AS ROADS, WATER AND SCHOOL FACILITIES ON THE GEOGRAPHIC AREA. SUCH AN ECONOMIC AND SOCIAL OVERVIEW COULD BE USED FOR THIS PROJECT AND FOR OTHER INFRASTRUCTURE PROJECTS ANTICIPATED DURING FY 79 FUNDING.

...B) SIMILARLY THE ENVIRONMENTAL ANALYSES FOR ONE PROJECT IN THE TARGET AREA, PROBABLY WOULD BE APPLICABLE TO THE OTHER PROPOSED PROJECTS AS WELL. WITH REGARDS TO RURAL ROADS, THE PP SHOULD OUTLINE THE ENVIRONMENTAL CRITERIA TO BE USED BY THE SARG IN ROAD DESIGN AND CONSTRUCTION FOR THE RURAL ROAD SUB-PROJECTS AS WELL AS AN ASSESSMENT OF THE ENVIRONMENTAL IMPACT OF THE PROJECT OVERALL.

...C) PID INDICATES PROJECT WILL INCLUDE INPUTS OF EQUIPMENT AND OTHER COMPONENTS. THESE REQUIREMENTS SHOULD BE DEVELOPED IN DETAIL IN PP AND TIED TO A CAREFUL ASSESSMENT OF THE TECHNICAL AND FINANCIAL CAPABILITIES OF THE PROVINCIAL OFFICES TO OPERATE AND MAINTAIN EQUIPMENT AND TO CARRY OUT THE ROAD ENGINEERING FUNCTIONS. FINANCING THESE PROJECT ELEMENTS MIGHT REQUIRE INVESTIGATION OF PROVINCIAL AND NATIONAL ROAD MAINTENANCE INSTITUTIONS, AND MIGHT JUSTIFY LARGER THAN ANTICIPATED INSTITUTION BUILDING ELEMENTS.

2. THE FOLLOWING COMMENTS ADDRESS ISSUES RAISED IN PID PARAGRAPHS ARE NUMBERED AS IN PID PAGE 5).

...A AND B). THE PERCENTAGE OF AID FUNDING OF ANY ONE SUB-PROJECT OR GROUP OF SUB-PROJECTS, IN GENERAL, SHOULD NOT EXCEED 75 PERCENT. THE EXACT PERCENTAGE MIGHT VARY

FROM SUB-PROJECT TO SUB-PROJECT, DEPENDING ON SUB-PROJECT COMPONENTS AND THE DISBURSEMENT PROCEDURE USED. THE CONTRACTOR IN SOME CASES COULD BE A PRIVATE OR STATE-OWNED FIRM OR MAY BE CARRIED OUT BY FORCE ACCOUNT. ALL MODES COULD EFFECT THE PERCENTAGE FINANCING. IN THE EVENT THAT WORK IS PERFORMED BY STATE-OWNED FIRM WHICH NOW USES U.S. EQUIPMENT PROCURED UNDER THE DEVELOPMENT IMPORTS LOAN, SOME ADJUSTMENT IN PROJECT/SUB-PROJECT FINANCING MAY BE NECESSARY TO AVOID AID'S FINANCING THE SAME TRANSACTION TWICE. WE WOULD EXPECT THAT THE TYPE OF FAR PROCEDURES WILL LARGELY DEPEND UPON THE PRESENT SARG PAYMENT AND CONTRACT AWARD PROCEDURES. SARG PROCEDURES FOR PROCUREMENT OF EQUIPMENT, CONTRACTING AND DISBURSEMENT SHOULD BE REVIEWED IN THE PP. GIVEN THE NUMBER OF SUB-PROJECTS ANTICIPATED, THE PROCEDURES SHOULD BE AS SIMPLE AS POSSIBLE AND THE NUMBER OF REIMBURSEMENTS KEPT TO A MINIMUM. THE FIXED AMOUNT REIMBURSEMENT PROCEDURE SHOULD BE DISCUSSED AND AGREED WITH SARG DURING PROJECT DESIGN.

...C) THE NEAC WAS NOT ADVERSE TO AID'S PARTICIPATION IN ONGOING ROAD IMPROVEMENT PROJECTS FOR WHICH CONSTRUCTION IS UNDERWAY AS LONG AS SUCH PROJECTS MEET CRITERIA AGREED TO FOR AID FINANCED NEW CONSTRUCTION PROJECTS.

...D) BECAUSE OF SMALL AMOUNTS OF FUNDS REQUIRED AND FOR AID'S ADMINISTRATIVE CONVENIENCE, NEAC RECOMMENDED THAT TA BE LOAN FUNDED.

...E) NEAC ALSO RECOMMENDED THAT TA BE IMPLEMENTED UNDER MOST COUNTRY CONTRACT.

3. OTHER ISSUES RAISED BY THE AID/V PROJECT COMMITTEE WERE:

...A) PID PAGE 3 DESCRIBED A SOMEWHAT BURDENSOME APPROVAL PROCESS FOR INDIVIDUAL SUB-PROJECTS. IT IS SUGGESTED THAT THE SARG STANDARDIZED PROCESS OF APPROVING DESIGN CRITERIA, CONTRACT FORMAT, AND PROCUREMENT PROCEDURES, BE APPLIED AND REVIEWED AND ACCEPTED BY AID. THIS APPROACH CONSISTENT WITH FAR PROCEDURE. SUBSEQUENT APPROVALS WOULD NOT BE NECESSARY UNLESS CRITERIA, CONTRACT FORMAT, OR PROCEDURES ARE CHANGED SIGNIFICANTLY. AFTER MUTUAL AGREEMENT ON THESE DOCUMENTS AND PROCEDURES, AID MONITORING OF SUB-PROJECT ROADS WOULD BE LIMITED TO COHERENCE TO ENGINEERING DESIGN, CONSTRUCTION AND ENVIRONMENTAL STANDARDS, TIMELY PERFORMANCE, AND REVIEW OF PAYMENT DOCUMENTATION. USAID MAY WISH TO ENGAGE LOCAL A AND S FIRM INDIVIDUALS TO ASSIST USAID IN MONITORING FAR CONSTRUCTION TO ASSURE THAT WORK COMPLETED IS IN ACCORDANCE WITH AGREED UPON DESIGN PRIOR TO FINAL AID FAR PAYMENT.

...B) PP SHOULD EXPLAIN THE ORGANIZATION AND FINANCIAL CAPACITY OF THE PROVINCIAL OFFICES TO MANAGE CONSTRUCTION, OPERATE LAB AND TESTING EQUIPMENT, TRAIN STAFF AND BUDGET ON A CONTINUING BASIS THE FUNDS REQUIRED TO OPERATE, MAINTAIN AND REPLACE ROAD MAINTENANCE EQUIPMENT.

...C) THE PROJECT PURPOSE IS DEFINED BY THE PID IDENTIFIED INSTITUTION BUILDING WHICH IS NOT SUPPORTED BY THE PROJECT'S JUSTIFICATION (SEE PARA 10 ABOVE). INSTITUTION BUILDING IS EXPECTED IT SHOULD BE DISCUSSED AND SUPPORTED IN PP. PROJECT GOAL SHOULD FOCUS ON SARG PLANS AND EFFORTS TO BRING SOCIAL SERVICES TO THE TARGET PROVINCES IN THE NORTHEAST REGION. AS DISCUSSED IN PARA 1A ABOVE PURPOSE OF SUCH ASSISTANCE MIGHT BE SUPPORTED BY ANTICIPATED BENEFITS IN TERMS OF ECONOMIC AND SOCIAL IMPACTS.

...D) EQUIPPING FOUR SOILS LABS AS PROPOSED IN PID WAS

QUESTIONED BY NEAC, PARTICULARLY AS THEY WOULD REQUIRE SIMILAR STAFFING AND BUDGETARY SUPPORT BY ALL FOUR PROVINCES. CONSIDERATION SHOULD BE GIVEN TO A REGIONAL LAB AND ARRANGEMENTS FOR SHARING FACILITIES, IF POSSIBLE.

8. A PROPOSED PLAN FOR PROJECT DESIGN AND PP PREPARATION WAS SET FORTH IN STATE 000434. SEPTEL WILL ADDRESS MISSION VIEWS (DAMASCUS 0002) FINALIZING PLANS FOR DEVELOPING PP FOR THIS PROJECT AS WELL AS TWO OTHER RURAL SERVICES PROJECTS. WILL ALSO ADVISE ETA AID/W STAFF TO ASSIST PP PREPARATION. VANCE

UNCLASSIFIED

SYRIAN ARAB REPUBLIC

Chairmanship of the Council of Ministers
State Planning Commission

Directorate of Planning for Economic
Scientific and Technical Relations

2441/F2/3756

To: U.S.AID/Damascus, Director

Referring to the several discussions we had with your
responsibles concerning the preparation of Rural Development
projects (Rural Roads) to be financed under U.S.AID Loans
for the year 1979; and;

Supporting these discussions, we hereby agree in principle
with the project, to be financed under a F.A.R. process. Acting
on behalf of the Syrian Arab Republic we hereby request U.S.AID,
to provide a \$ 26,4 million Loan. from the 1979 Loans program,
to finance the Rural Roads project in the Rural region under
the above mentioned procedure (F.A.R.)

Thanking you for your cooperation

Damascus 4/23/1979

Minister of State for Planning
Affairs

Dr. George Horaniyah

cc:

- Office of Deputy Prime Minister for Economic Affairs
- " " " " " " for services Affairs
- " " the Minister
- " " " Deputy Minister
- " " " Adviser
- Ministry of Foreign Affairs (Economic Directorate)
- Directorate for Local Planning and Services
- Directorate for Planning Economic U.S. Affairs
- J & R

رئاسة مجلس الوزراء
خيمة تخطيط الدولة
مديرية تخطيط العلاقات الاقتصادية
والعلمية والتنمية
١٩٧٩ / ٢

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USA

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السيد مدير وكالة الانماء الدولية الامريكية

بدمشق

تحية طيبة وبعد .

اشارة الى المناقشات العديدة التي جرت مع المختصين لديكم
بشأن الامداد لتشارج التنمية الرينية (الطرق الرينية) المطلوب تمويلها
من طريق برنامج المساعدات العامة الامريكية المنوطة لعام ١٩٧٩ .

واشنادا الى تلك المناقشات فاننا نواتق من حيث المبدأ على
السير في تنفيذ هذا المشروع ، وان تكون الترتيبات التمويلية مستدة على السحب

اللاحق من المبالغ الصرونية (F.A.R) لذا فاننا نابة من الحكومة نطلب من وكالة الانماء الدولية
الامريكية تأمين قرض يبلغ ٢٦٥ مليون دولار امريكي من مخصصات برنامج
المساعدات العامة لعام ١٩٧٩ لتمويل مشروع الطرق الرينية للنشاط الرينية
وبما الاكبر انشار اليه ، شاكرين لكم حسن تعاونكم .

دمشق في ٤ / ٤ / ١٩٧٩
١٩٧٩ ٤ ٢٣

وزير الدولة لشؤون التخطيط

الدكتور جبرون حويش

صورة الى :

- السيد نائب رئيس مجلس الوزراء لشؤون الاقتصادية
- السيد نائب رئيس مجلس الوزراء لشؤون الخدمات
- السيد مدير
- السيد معاون مدير مكتب السيد المستشار
- وزارة الخارجية (الإدارة الاقتصادية)
- مديرية التخطيط الاقتصادي والخدمات - تخطيط العلاقات الاقتصادية (الامريكية)
-