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**ROAD RESOURCES MANAGEMENT PROJECT
PAKISTAN**

**ROAD RESOURCES MANAGEMENT
PROJECT TERMINATION REPORT
OCTOBER 19, 1991**

CONSTRUCTION CONTROL SERVICES CORPORATION

USAID CONSULTANTS FOR ROAD RESOURCES MANAGEMENT PROJECT

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ASSOCIATED CONSULTING ENGINEERS

KARACHI-8, PAKISTAN



ROAD RESOURCES MANAGEMENT

PROJECT TERMINATION REPORT

OCTOBER 19, 1991

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CHAPTER 1

INTRODUCTION

1.1 PROJECT AUTHORIZATION

In pursuance of Section 531 of the Foreign Assistance Act of 1961, the Road Resources Management Project for the Islamic Republic of Pakistan (Cooperating Country) was authorized by the USAID mission to Pakistan in April 1987.

The project envisaged investment of US \$ 43 million, in grant funds over a six year period from the date of authorization to help in financing foreign exchange and local currency cost for the project. The planned life of the project was originally scheduled to be completed by December 31, 1992.

USAID mission appointed Construction Control Services Corporation (CCSC) of USA as over all Project Consultant with Louis Berger International Inc. (LBII) and M/S Associated Consulting Engineers (ACE) as their subcontractors. The consultants commenced the work on the project in 1987.

In September, 1991 under directives from the USAID mission the Project had to be concluded by October 19, 1991 and it was decided that all deliverable, completed works and related documents be compiled as of that date and submitted to the mission in compliance with contract termination order issued for convenience of the mission. This completion report is therefore aimed at providing a brief description of the project accomplishments with respect to the objectives and goals covered under the scope of work set forth in the Project Paper of February 1987.

1.2 PROJECT GOAL AND PURPOSE

1. PROJECT GOAL:

To raise the productivity of public sector capital in the road sector, both physical and financial, so as to provide a maintainable system of roads and support services within the available resource limit. This system will, in turn promote the more rapid and equitable growth of national income in Pakistan, especially in rural areas.

2. PROJECT PURPOSE:

To lay the ground work for putting the national road network on a sound financial, organizational and technical basis by establishing a maintainable rural road system in one province i.e Sindh and identifying the policy, management, and financial reforms needed in the system, nation wide.

At the end of the project, the rural road system in participating districts will be characterized by three key features:

- o Physical system of paved rural/district roads built to maintainable standards, being managed and maintained by the district councils. This system will provide an economically sustainable level of all-weather service consistent with the financial and other resources of the district.
- o Maintenance Management System
- o Allocation of district financial resources to maintenance.

1.3 PROJECT OUTPUTS

The basic outputs of the Road Resources Management Project were designed to provide the Sindh districts with Technical Assistance and Services to:

- o Establish Maintenance Management Systems by setting up Rural Road Maintenance Units (RMU's) in each district to assume responsibility for the maintenance of presently maintainable roads.
- o Rehabilitate and/or construct a core network of maintainable all weather roads.
- o Design and build experimental roads
- o Upgrade Katcha roads
- o Build new Katcha roads to serve villages as yet unserved.
- o Improve the current system for operation and management of financial resources.
- o Conduct road financing, management and maintenance policy analysis to assist in the development of an effective provincial and federal road development strategy; and
- o Provide relevant training to support the above activities in the transport sector at the National, Provincial and District levels.

1.4 PROJECT IMPLEMENTATION PROGRAM

The Road Resources Management: Project was to be implemented in two phases:

PHASE I

The first phase was to be devoted solely to planning, analysis and initial training for district, provincial and federal level personnel.

By improving planning and analytical skills districts would be able to determine their maintenance needs, to establish a Road Maintenance Unit and to allocate adequate financial resources to meet these needs. The districts would also be able to define more precisely the priorities for expanding and upgrading the roads system under their jurisdiction.

PHASE II

At the end of phase one, districts were to opt to remain in the program and implement their maintenance plans in the second phase. These participating districts were to receive:

- a. road maintenance equipment;
- b. technical and management assistance;
- c. additional training; and
- d. construction services to upgrade, rehabilitate, and expand the district road network.

If districts opted not to participate, assistance would have been limited to training.

The program, was divided into six components to facilitate implementation:

- o Project Management
- o Road Maintenance Program (ROMMS)
- o Road Maintenance Management System (ROMMS)
- o Road System Improvement (ROSI)
- o Financial Management Program (FMP)
- o Training Program

1.5

THIS REPORT

In accordance with the terms of Reference this completion report

presents an over all summary of what has been achieved during the project life with respect to desired goals.

The report is organized on the decimal system of chapter headings and sub headings.

The report is divided into comprises of six chapters:

CHAPTER 1: Introduces the project, i.e authorization, main purpose and goal of the project, main outputs and the implementation plan as laid out in the Project Paper.

CHAPTER 2: PROJECT MANAGEMENT briefly describes the position of the local and CCN staff as it stands to date and the organization of the office.

CHAPTER 3: DISTRICT MAINTENANCE high lights the achievements in the implementation of the road management system, both in the maintenance program and the implementation of Maintenance Management System. This chapter also gives the consultant's recommendation for the implementation of the District Maintenance Program.

CHAPTER 4: ROAD SYSTEM IMPROVEMENT. This chapter gives the accomplishments of the rehabilitation program of the project. It also contains the consultants recommendations for the future rehabilitating programs.

CHAPTER 5: FINANCIAL MANAGEMENT PROGRAM. This chapter highlights the objectives of the Financial Management component of the RRMP and the overview of all the reports and seminars held by the RRMP team.

CHAPTER 6: TRAINING PROGRAM. All the achievements of the training program component of the RRM project will be summarized. This chapter also includes the consultant's recommendation to carry out the future training program.

Following the final chapter are the appendices. These contain material that either is too extensive to incorporate in a chapter or else is inappropriate in the text. Appendices are also numbered with a decimal system, the first digit indicates the chapter to which the appendix refers, and the second digit are numbered sequentially for that chapters' appendices.

CHAPTER 2

PROJECT MANAGEMENT

2.1 INTRODUCTION

This chapter encompasses an overview of the mechanics of managing the entire project, covering the organizational aspects, description of responsibilities at various functional levels, details of logistics involved in project office management and related activities. Major characteristics of general management techniques applied in the over all management of the project have also been highlighted.

2.2 PROJECT ORGANIZATION

The over all administration of the Road Resources Management Project had been divided into 2 levels:

- Federal
- Provincial

2.2.1 FEDERAL

The project was established as a federal project within the Federal Rural Development Engineering Cell (FRDEC), of the ministry of Local Government and Rural Development, Islamabad. FRDEC had the primary responsibility for supervising and coordinating implementation of the project with other parts of the federal Government and with the provincial departments and districts of Sindh.

Implementation of the national road policy component was to be coordinated by the National Transport Research Center (NTRC) in the Planning Commission.

2.2.2 PROVINCIAL

With federal supervision and coordination, the day to day implementation of the rural roads components rested with the participating district councils and Sindh Department of Local Government and Rural Development, particularly the Divisional Offices in Hyderabad and Sukkur.

Responsibility for project implementation in each of the division rested on the Divisional Coordination Committee, chaired by the

representative of the LGRD of Sindh. The Divisional Committee served as the focal point for coordinating the activities of the divisional office of the Department of Local Government and Rural Development and the participating district councils.

The Technical Assistance and implementation of the project was managed by the Technical Services team headed by the Chief of Party (COP), reporting indirectly to the GOP Project Director through the USAID Mission Project Officer.

The project organization is presented in chart 2-1 on the following page

2.3 ORGANIZATION OF TECHNICAL SERVICES TEAM (TST)

As stated earlier the Technical Services Team was managed by the Chief of Party based in Karachi. The Road Planner, also an expatriate, a Local Government Finance Specialist, Construction (Road) Specialist, a Training Advisor and one General Manager, reported directly to the Chief of Party.

The existing organization chart of the TST is presented on the following page as chart 2-2

A list of CCSC staff is attached as Appendix 2-1

2.4 JOB DESCRIPTION OF KEY PERSONNEL

- THE CHIEF OF PARTY (COP) was responsible for overall management of technical services associated with all of projects components, including the maintenance planning, maintenance management, road rehabilitation and highway policy program.
- ROAD PLANNER had three primary responsibilities
 - o Analysis of highway policy and financing
 - o Working with COP to establish and carry out the rural roads training and inventory component.
 - o Road Rehabilitation Program.
- LOCAL FINANCE SPECIALIST worked with the provincial and district council staff to improve the management of local resource generation activities, as well as the financial and managerial aspects of local government contracting for road works.

2.5 PROJECT OFFICE LOGISTICS

In order to facilitate coordination and control between Karachi and the districts, besides the head office in Karachi, the RRMP had two field offices, one in Hyderabad and the other in Sukkur.

2.5.1 OFFICE EQUIPMENT

The status of office equipment such as computers and printers is given in the appendix 2-2 of this report.

2.5.2 VEHICLES

The distribution of vehicles through the project is also shown in the Appendix 2-2 of this report to give an idea of the logistical demands of supervising project implementation in each of the fifteen districts of the Sindh.

2.6 MONITORING AND CONTROL MECHANISM

A Senior Engineer was incharge of each Divisional office (field Office). He reported directly to the COP using telephone, fax and the TCS courier service. To assure insistence, interpretation and application of USAID Handbook II requirements, the progress of work was reported weekly by the field Engineers (both construction and maintenance) and a review of progress and goals was conducted frequently between field offices and Karachi office.

Review of progress meetings were also held at individual field offices, between Project management team, USAID project Officer stationed in Karachi and the other field officers of Technical Services Team and Government of Sindh.

All the manuals and reports were prepared in the Head Office under supervision of the COP and in consultation with concerned authorities..

2.7 METHODOLOGY OF SELECTION OF ROADS FOR MAINTENANCE AND REHABILITATION

Different steps involved in selection of roads for maintenance and rehabilitation works are as under:

- Inventories of all district council roads were received from each district council. These inventories were checked by performing reconciliation surveys by the RRMP team.
- Traffic Count surveys and road condition surveys were conducted on each road. (The road condition surveys are described in detail in appendix 3-1).
- After eliminating roads that did not meet the criteria for population served, lack of alternate service, inadequate benefits for cost, road condition surveys were used to select roads for maintenance and rehabilitation works.
- The selected roads were sent to the District Councils, from where these roads were sent for approval to Divisional Coordinating Committee. This Divisional Coordinating Committee then approved the number of roads for maintenance purposes and rehabilitation works on priority or requirement basis.

TABLE 1-1
COMPUTERS AND PRINTERS POSITION

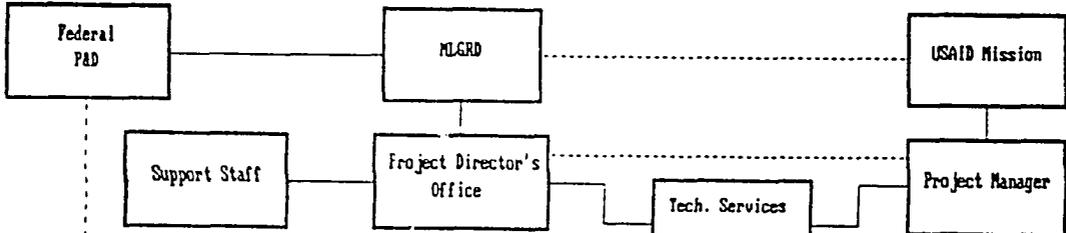
OFFICE	COMPUTERS	PRINTERS
Karachi	7	7
Hyderabad	1	1
Sukkur	1	1

TABLE 2-2
VEHICLE POSITION

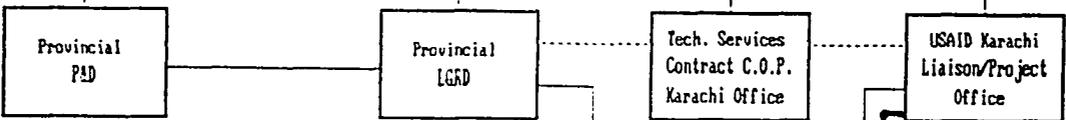
OFFICE	DESCRIPTION	REGISTRATION NO.
Karachi	Isuzu Troopers	AD 64-484
	Isuzu Troopers	AD 64-538
	Isuzu Troopers	AD 64-539
	Suziki Jeep	AD 64-577
	Suziki Jeep	AD 64-578
Hydrabad	Toyota Pickup	AD 64-344
	Toyota Pickup	AD 64-529
	Toyota Pickup	AD 64-530
	Toyota Pickup	AD 64-534
	Suziki Jeep	AD 64-571
	Suziki Jeep	AD 64-580
Sukkur	Toyota Pickup	AD 64-345
	Toyota Pickup	AD 64-531
	Toyota Pickup	AD 64-535
	Toyota Pickup	AD 64-536
	Isuzu Trooper	AD 64-537
	Suziki Jeep	AD 64-579

Level of Government

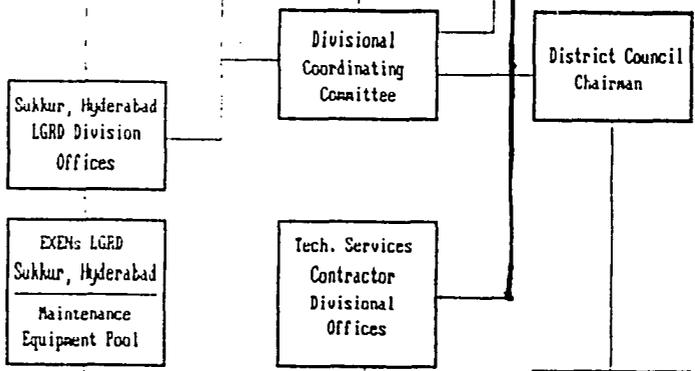
A) Federal Level



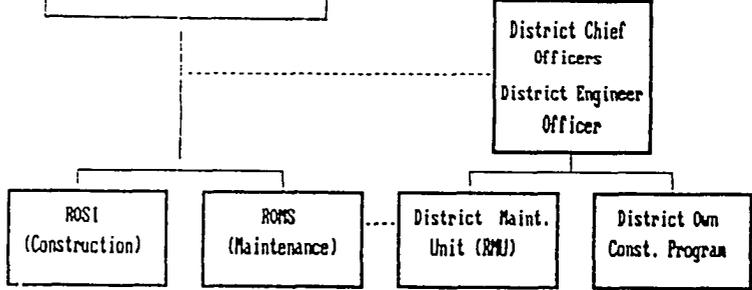
B) Provincial Level



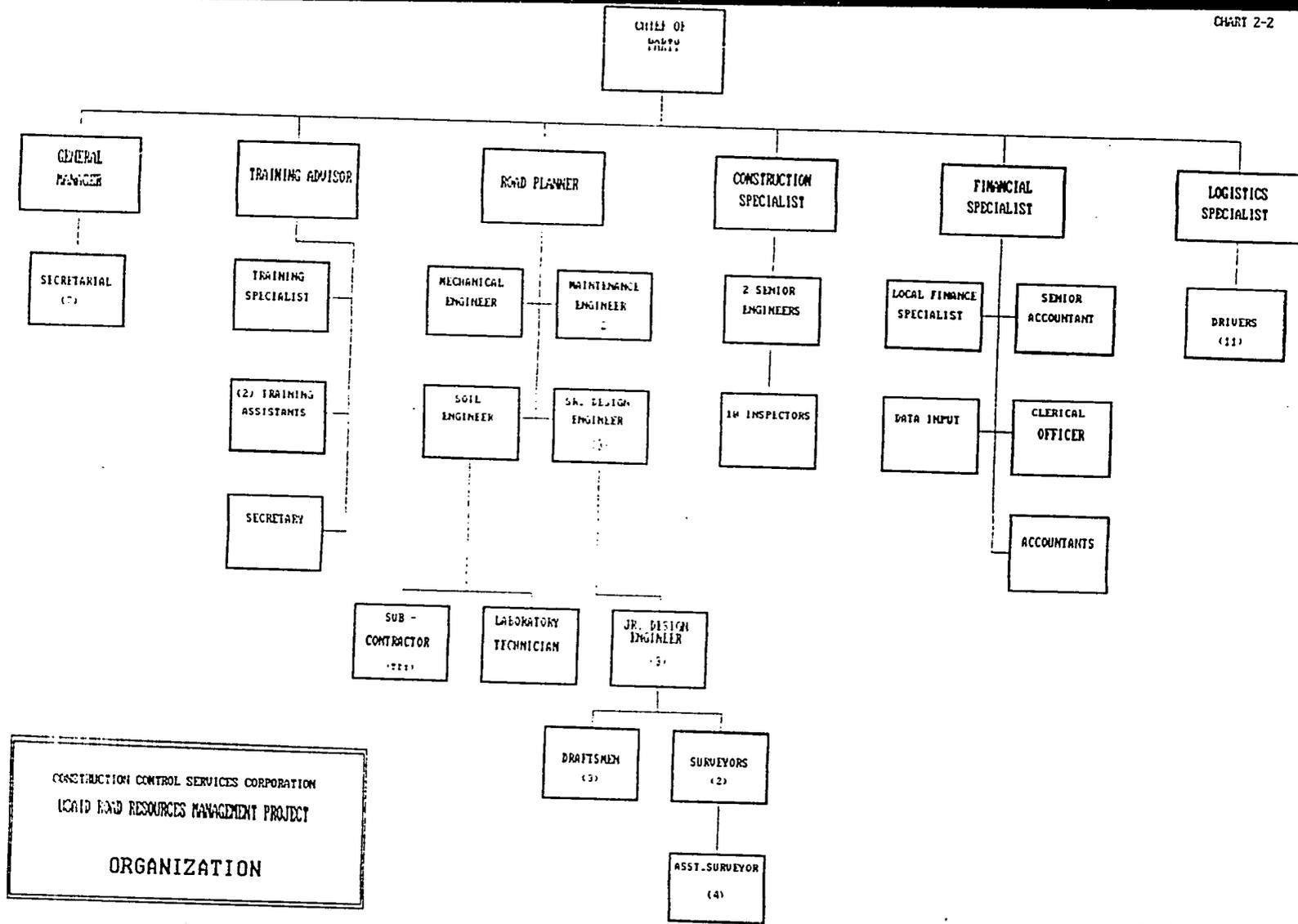
C) Divisional Level



PROJECT ORGANIZATION
USAID ROAD RESOURCES MANAGEMENT PROJECT



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CONSTRUCTION CONTROL SERVICES CORPORATION
 LOCAL ROAD RESOURCES MANAGEMENT PROJECT
 ORGANIZATION

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LIST OF CCSC EMPLOYEES

S.No.	Employee's Name	Position Title	Location
1.	Mr. Jahangir Alam	Data Entry Asstt.	Karachi
2.	Mr. Najeeb Iqbal	Data Entry Asstt.	Karachi
3.	Mr. Ghulam Qadir	Driver	Hyderabad
4.	Mr. Mohd. Siddique	Driver	Karachi
5.	Mr. Aijaz M.K. Rajput	Clerical Officer	Hyderabad
6.	Mr. Saeed Ahmad	General Manager	Karachi
7.	Mr. Jawed Yaqoob	Driver	Karachi
8.	Mr. Amir Ali Naem	Secretary	Karachi
9.	Mr. S.M. Imam Shah	Accountant	Sukkur
10.	Mr. Ahmed Mahmood Baig	Log. Specialist	Karachi
11.	Ms. Iqbal Ara Husain	Training Asstt.	Karachi
12.	Mr. Manzoor H. Khan	Driver	Sukkur
13.	Mr. M. Sohaib Monami	Soil Engineer	Karachi
14.	Ms. Rukhsana Rabbani	Fin. Specialist	Karachi
15.	Mr. Mohammad Aslam	Cost Estimator	Karachi
16.	Mr. M. Rafique Soomro	Clerk/Typist	Sukkur
17.	Mr. Zahoor Ahmed	Driver	Hyderabad
18.	Mr. Rab Nawaz	Driver	Sukkur
19.	Mr. M. Mahmood Khan	Office Aide	Karachi
20.	Mr. Nasser Mohammad	Driver	Sukkur
21.	Mr. Shahab Ahmad	Const. Engineer	Hyderabad
22.	Mr. S. Maqbool Shah	Const. Engineer	Sukkur
23.	Mr. Mohammad Waris	Inspector	Hyderabad
24.	Mr. Zaheer Asim Bhutta	Inspector	Hyderabad
25.	Mr. Mumtaz H. Sahito	Inspector	Sukkur
26.	Mr. Aqeel Anwar	Inspector	Hyderabad
27.	Mr. Mustajab Husain	Inspector	Sukkur
28.	Mr. Tanveer Ahmad	Typist/Clerk	Karachi
29.	Mr. Nadeem Qureshi	Accountant	Hyderabad
30.	Mr. Younus Paul	Driver	Karachi
31.	Mr. Mohammad Shabir	Driver	Sukkur
32.	Mr. Javid Qureshi	Train. Specialist	Karachi
33.	Mr. Mohd. Hayat Pasha	Inspector	Sukkur
34.	Mr. Ayaz Khan	Driver	Hyderabad
35.	Mr. Akhtar Ali	Data E. Operator	Hyderabad
36.	Mr. Irshad Khan	Inspector	Sukkur
37.	Mr. Zia-ur-Rashid S.	Inspector	Sukkur
38.	Mr. Sadiq Ali	Driver	Hyderabad
39.	Mr. Shakeel Ahmad	Inspector	Hyderabad
40.	Mr. Sohail Ahmad	Comp. Anaylst	Karachi
41.	Mr. John Joseph	Accounts Asstt.	Karachi

CHAPTER 3

DISTRICT ROADS MAINTENANCE

3.1 INTRODUCTION

The Road Resources Management Project (RRMP) was conceived in part because of a growing awareness that local district councils greatly needed to implement a "maintenance first policy" utilizing a systematic and programmed road maintenance management system. Since virtually no routine or periodic maintenance was done prior to 1989, project implementation required a broad based institutional development approach and a training program to create local awareness of the need to maintain public infra structure and the enormous capital investment it represents. The magnitude of the maintenance back log created by years of neglect had been compounded by the very real limits on financial resources with which the districts were able to respond to the crisis.

3.2 INITIAL PROGRAM OF MAINTENANCE MANAGEMENT SYSTEM

Initially the Road Resources Management Project aimed at establishing Road Maintenance Units (RMU's) with trained personnel and other necessary resources in all fifteen Sindh District Council offices (DCO'S). The implementation of the RMU concept was designed to recognize that the size of the maintenance organization, arrangement of road maintenance units, locations of depots and requirements for plant vary according to the type of maintenance needed and the lengths of the roads which must be maintained. Therefore in April 1990 the Road Resources Management Project team presented a "Road Maintenance Manual for District Roads" which amplified and improved upon the original draft manual which the team developed in 1989. This manual describes in detail the objectives of the road maintenance units of the D.C.O's. This manual also describes the proposed organization and details of equipment of RMU for each district.

In July of 1990 the Road Resources Management Project team held a seminar on "District Road Maintenance.". This seminar convincingly presented the technical importance and positive economic benefits of properly programmed road maintenance intervention at the district level. During the seminar the participants (who represented all the districts of Sindh as well as the Provincial Government) agreed to set up their RMUS. A copy of hand outs of this seminar containing

complete course material was distributed among all the participating District Engineers, which is now considered to be an important reference document. Subsequently a detailed report namely the "Seminar on District Road Maintenance", was submitted which encompassed all aspects of the Maintenance Management Training Program.

3.3 MAINTENANCE MANAGEMENT SYSTEM IN PRACTICE - AN OVERVIEW

In early 1991 USAID reviewed possible alternative responses to an anticipated funding reduction for this project. It was agreed with the Government of Pakistan (GOP) to drop equipment procurement for the RMU's as local contractors had access to the equipment needed for the maintenance activities. It was also decided that the objectives of road maintenance could be more effectively achieved if road maintenance is done using private sector resources. Thus, as a matter of policy, all the road maintenance work, with the exception of modest jungle clearing, shoulder maintenance and emergencies, would be awarded to contractors. This required the consultants to prepare a " Model Maintenance Contract." This document was completed and a copy sent to each District Council in July 1991.

The present Maintenance Management System consist of encouraging and assisting all the districts in the development and performance of the following activities:

- o Periodic Road Condition Surveys
- o Setting up priorities from these condition surveys.
- o Routine scheduling
- o Maintenance Contract Management and related activities.

Periodic Condition surveys being the nucleus activity form the basis of the entire Maintenance Management System. Its details are highlighted in Appendix 3-1.

3.4 MODEL MAINTENANCE CONTRACT

Since all the maintenance work is to be carried out through contracts, RRMP team developed a Model Maintenance contract. The Model Maintenance Contract describes in detail the terms needed to be agreed upon between the contractor and the District Council. This contract (in English, Sindhi and Urdu translations) has

been delivered to all the District Councils. All district Engineers have expressed willingness to implement the management procedures which this contract requires. Use of this contract will be required for the implementation of the 1991-92 program. Several meetings were held with District Engineers to explain the details of administering and interpreting these contracts. All District Engineers recognized the benefits to be derived from the new contract clauses and agreed to participate in the province-wide implementation.

This model maintenance contract lays down all the maintenance management procedures to be followed by the District Councils including:

- Terms to be agreed upon before signing of the contract by both the parties i.e District Councils and the contractor.
- Notification of the Housing, Town Planning, Local Government and Rural Development Department, informing the Sindh Council (Contract) Rules 1980
- Construction procedures and supplemental Specification for maintenance.
- Area of Applicability of this contract.
- B.O.Q for maintenance.

3.5 MAINTENANCE TARGETS AND ACHIEVEMENTS

Maintenance targets and achievements against these targets have been summarized in table 3-1 on the following page.

TABLE 3 - 1

SUMMARY OF MAINTENANCE TARGETS AND ACHIEVEMENTS

SR.NO.	YEAR	MAINTENANCE TARGETS	ACHIEVEMENTS
1	1989-90	10% of maintainable paved road net work.	Achieved
2	1990-91	35% of maintainable paved road net work	Details are given in table 3-2
3	1991-92	65% of maintainable paved road net work	Roads are being identified. It is hoped that the target will be achieved as all work has to be done through contracts.
4	1992-93	100% of maintainable paved road net work	
5	1993-94	100% of maintainable paved road net work	

Table 3-2 on the following page summarizes the maintenance targets designated and achieved by District Councils of Sindh for the fiscal year 1990-91 (All achievements upto Sept. 1991)

TABLE 3 - 2

SUMMARY OF MAINTENANCE TARGETS
DESIGNATED AND ACCOMPLISHED
DISTRICT COUNCIL OF SINDH
FISCAL YEAR 1990-91
& UPTO SEPT, 1991

SR.NO.	DISTRICT COUNCIL	MAINTENANCE TARGET PLANNED (KM)	MAINTENANCE ACCOMPLISHED (KM)	ACCOMPLISH %	VARIANCE
1	Dadu	3.36	4.00	35%	-0.64
2	Khairpur	11.56	11.76	35%	-0.20
3	Larkana	9.44	7.95	29%	1.49
4	Shikarpur	6.87	5.50	28%	1.37
5	Sukkur	4.45	4.45	35%	0.00
6	Jacobabad	3.63	3.63	35%	0.00
7	Mashehra Feroz	16.34	14.30	30%	2.04
8	Hyderabad	63.00	0.00	0%	63.00
9	Mirpur	24.00	6.03	6.4%	17.97
10	Thatta	15.00	0.00	0%	15.00
11	Badin	13.00	0.00	0%	13.00
12	Tharparkar	22.50	1.70	2.6%	20.80
13	Sanghar	23.00	3.40	12.7%	14.60
14	Hawabshah	23.00	1.60	2.4%	21.40
	Total	246.65	67.82		178.83

Due to law and order situation in Sindh the District Councils were given extension to complete the road maintenance work till October 1991.

PROGRESS OF ROAD MAINTENANCE - 1970-91 PROGRAM
SEPTEMBER 1991

Page 1 of 2

DISTRICT	TARGET MAINTENANCE (PK)	TARGET ACHIEVED (PK)	MEETING TARGET DATE	AMOUNT SPENT (RS)	NAME OF ROAD WITH LENGTH (KM)	%	WORK ACTIVITIES	VERIFICATION BY CCSC DATE	REMARKS
1. Dadu	3.34	4.00	30-06-91	50,000	DA-05 = 0.38, DA-07 = 0.62, DA-01 = 0.2	352	P-1, P-2, P-3, P-4, P-7	26-8-1991	Maintained
2. Khairpur	11.56	11.76	30-06-91	111,794	K-2 = 0.96, K-12 = 1.10 K-13 = 3.00, G-8 = 1.00, K-14 = 3.3 K-19 = 0.70, Khal Sakh = 1.00	352	-00-	21-8-1991	Maintained
3. Larkana	9.44	7.95	30-06-91	103,000	LA-2 = 1.2, LA-14 = 1.3, LA-22 = 1.15 LA-13 = 1.70, LA-9 = 1.05 LA-15 = 3.90, LA-23 = 0.80, LA-18 = 0.70 LA-14 = 0.50	352	-00-	15-9-1991	Maintained
4. Shikarpur	6.87	5.50	30-06-91		SH-2 = 1, SH-37 = 2.00, SH-3 = 1.2, SH-7 = 0.4, SH-13 = 0.7 SH-47 = 0.7	352	-00-	15-9-1991	Maintained
5. Sukkur	4.45	4.45	30-06-91	17,800	SU-2 = 1.00, SU-3 = 1.2, SU-42	352	-00-	26-8-1991	Maintained
6. Jacobabad	3.63	3.63	30-06-91	120,000	JAIN19 = 0.6, JAIN15 = 0.4, JAIN16 = 0.3 JAIN10 = 0.5, JAIN11 = 2.2	352	-00-	27-8-1991	
7. Naushero Feroz	16.84	14.80	30-06-91	417,000	NA-11 = 1.6, NA-18 = 2.70, NA-17 = 1.20 M.H.W. to V. Narapur = 2 Km M.F. V. Tal Narapur = 1 Km, NA-13 = 6.70	352	-00-	24-9-1991	Maintained

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PROGRESS OF ROAD MAINTENANCE - 1990-91 PROGRAM
SEPTEMBER 1991

8. Hyderabad	63.00	0.00	30-06-91		HY-HL-43 = 11.8, HY-TA-7 = 5.2, HY-TA-1 = 5.0, HY-HY-11 = 0.5; HY-TA-5 = 3.9, HY-HL-9 = 4.4, HY-HY-10 = 2.15, HY-HL-4 = 0.2; HY-HL-2 = 0.8, HY-HL-3 = 3.1, HY-HL-6 = 0.8, HY-HL-8 = 3.2; HY-HL-13 = 0.6, HY-HL-14 = 1.0, HY-HL-15 = 3.0, HY-HL-16 = 2.2; HY-HL-18 = 1.7, HY-HL-19 = 1.2, HY-HL-20 = 1.6, HY-HL-21 = 0.5; HY-HL-22 = 1.6, HY-HL-25 = 1.4, HY-HL-27 = 3.2, HY-HY-13 = 2.8; HY-HY-15 = 2.5, HY-HY-16 = 1.7, HY-HY-17 = 0.5, HY-HY-19 = 2.2; HY-HY-20 = 0.7, HY-HY-27 = 1.3, HY-HY-34 = 0.5, HY-HY-42 = 0.2; HY-TA-3 = 0.3, HY-TA-4 = 3.0, HY-TA-10 = 3.8	0.002	-	18-9-1991	Works has been started on roads. HY-HY-27, HY-HY-19 HY-HY-34, HY-HY-13 HY-HY-16. Work orders for the rest of the roads will be issued on the availability of funds with the D.E.
9. Karachi	34.00	6.03	30-06-91	350,149	KA-12 = 4.2, KA-3K = 0.2, KA-7N = 2.5, KA-5N = 2.1 KA-10N = 3.2, KA-11N = 2.0, KA-14N = 1.6, KA-15N = 1.7 KA-19N = 1.1, KA-B27 = 1.0, KA-11 = 4.7, KA-13 = 13.25 Inter Road Ibrahim Hydara = 14.56	6.42	P-1,P-2,P-3,P-4,P-7	20-8-1991	Work is completed on roads KA-11N and KA-5N and work on KA-12, and KA-7N is in progress
10. Thatta	15.00	0.00	30-06-91			0.002	-	25-09-1991	Chairman has promised that the work will be started soon, but no progress so far.
11. Badin	10.00	0.00	30-06-91		EA 1 = 0.8 Moa Phalokara to Haffi Phalokara = 1.7 Shaikh Bhirkio to Chandio Village = 4.3 km Mir Zaffar to Mir Dahn = 4.0 km	0.002	-	18-9-1991	No Progress
12. Tharparkar	22.50	1.70	30-06-91	150,000	THR-21 = 6.0, THP-WP-35 = 1.5, THP-6 = 1.35, THP-9 = 1.65 THP-10 = 3.2, THP-11 = 1.6, THP-16 = 0.95, THP-20 = 0.35 THR-24 = 0.8, THP-25 = 1.0	2.62	P-1,P-2,P-3,P-4,P-7	24-9-1991	Work is completed on THR-24 and work on THP-17, THP-WP-21 and THP-9 is in progress.
13. Sanghar	23.00	8.40	30-06-91	400,000	SA-4 = 0.5, SA-12 = 0.8, SA-27M = 6.0, SA-27 = 1.0, SA-24M = 1.3, SA-2M = 0.44, SA-15M = 7, SA-19M = 0.30 SA-7 = 2.1, SA-10 = 6, SA-17M = 0.6, SA-5M = 1.0	142	-10-	25-9-1991	Work completed on SA-10, SA-7, SA-8M, SA-19M, SA-3M. Work orders for the rest of the roads will be placed after D.E. is allocated the funds by the Council.
14. Nawabshah	23.00	1.60	30-06-91	600,000	NA-2 = 2.6, NA-6M = 0.9, NA-11 = 1.0, NA-27M = 1.1 NA-16 = 1.3, NA-4 = 2.3, NA-1 = 1.6 Without No. = 22.34	2.42	-80-	25-9-1991	Work has been completed on NA-16; work is in progress on NA-4 and two other roads without numbers.

A more detailed table attached as exhibit 1, indicates compliance and identifies roads for each district. A cost is also indicated for each district. These cost figures were supplied by the District Councils and are included for reference purpose only. This Exhibit also states the work activity required for maintenance and the consultants's remarks.

3.6 BOTTLE NECKS AND HURDLES

During implementation of the maintenance management program the RRMP team faced a number of hurdles and bottlenecks which adversely affected the implementation program. Given time, it is believed that the existing MMS should be able to provide the District Engineers with practical maintenance management experience.

Some of the hurdles and bottle necks faced were:

- Severe lack of district resources for conserving the infra structure.
- The implementation program required that the roads actually be in maintainable condition. In addition to the technical assistance and training provided under the RRMP, therefore, considerable project resources were dedicated to rehabilitating these roads which were not in maintainable condition.
- Destructive user practices which needlessly accelerate road deterioration.
- D.C. continue to allocate funds towards maintenance arbitrarily, instead of preparing realistic program budgets thereby making the funds insufficient to meet even the minimal anticipated needs.
- Evacuation of expatriate staff during the War of Gulf (i.e Jan. to April 1991)
- Due to cut in USAID budget the equipment required for the maintenance program could not be procured.
- Identification of roads even for maintenance is a political process and it required considerable effort just to finalize designation of roads.
- Poor law and order situation.

RECOMMENDATIONS

1. Improper use of roads results in premature road distress. This requires educating the road users in:
 - Driving of the farm machinery making sure that all the attachments are properly fitted and they do not drag onto the roads to destroy or damage the pavement.
 - Steel wheeled animal carts should be restricted to shoulder only
 - Animal cart drivers should be encouraged to convert to rubber wheel tyres.
 - Educate the public through improved communications and press involvement to properly utilize their rural roads.
2. Allocated Maintenance Budget by the District Councils should be pre planned and funds allocated accordingly.
3. The implementation of the new model maintenance contract, restricting the B.O.Q to routine maintenance activities, demonstrations of the benefits of a modest maintenance program should generate the necessary political support and allocation of local funds to perpetuate a proper maintenance program.
4. Most important equipment for the districts to acquire are small compactors suitable for compacting small pothole patches, repairs of narrow shoulders and slopes of embankments. Plate compactors and one ton vibratory walk behind rollers should be procured for the district councils. This equipment should significantly enhance maintenance capability.

PERIODIC ROAD CONDITION SURVEYS

In September 1989 the Road Resources Management Project team submitted a report on "Road Maintenance Program For District Paved Roads". This report describes in detail the methodology of preparation of district road maintenance program, periodic road condition surveys and its performance budget. (Report already submitted. See deliverable submittal list). These surveys take into account five different levels of condition for each of six features affecting road maintenance.

The six features, which are covered in PAVED ROAD INVENTORY REQUIREMENTS (PRIR) form are:

- Surface Condition
- Shoulder Condition
- Road Side Drainage Ditch Condition
- Culvert Condition
- Road Side Vegetation Condition
- Bridge/Structure Condition

To assess the maintainability of roads provision for five levels of condition for the most important feature, Surface Condition have been made. These are:

- | | | | |
|----|-----------|---|---|
| 5. | Excellent | - | New road condition |
| 4. | Good | - | Paved roads substantially free of defects and requiring only routine maintenance. |
| 3. | Fair | - | Paved roads having significant defects and requiring resurfacing or strengthening. |
| 2. | Poor | - | Paved roads with extensive defects and requiring rehabilitating or reconstruction. |
| 1. | Bad | - | Road surface generally broken, general base failure requiring immediate rehabilitation. |

In this system, only roads in categories 5, 4 and 3 are considered maintainable. Roads in categories 2 and 1 are not maintainable and must be rehabilitated. Routine or periodic maintenance would be waste of money, except to the extent that is necessary to avoid danger to the public.

These conditions and six road features to be surveyed are described in detail in the report of seminar on District Road Maintenance

KEY STEPS IN ROAD CONDITION SURVEY

The field survey comprises of the following steps:

- Step 1. Complete the Field Survey Sheets - Sample sheet attached as Appendix 3 - 1 A.
- Step 2. Complete the Bridge Survey Forms - Sample form attached as Appendix 3 - 1 B.
- Step 3. Consolidation of above survey result into a Paved Road Inventory Requirements form (PRIR form one per road) sample form attached as Appendix 3 - 1 C
- Step 4. Conducting a Traffic Count Survey in addition to Road Condition Survey.

SUBSEQUENT STEPS

The PRIR form provides the field data from which estimates of cost of maintaining roads is developed.

The estimates and the ranking of importance are then analyzed to produce a Maintenance Program for each district. (This maintenance program is described in detail in " Road maintenance Program for District Paved Roads")

THE PLANNED SERVICE LEVEL GOALS

The planned service level goals are a combination of each activity and inventory road rating conditions. These service levels are based on the average needs of estimation per unit of measure relative to the needed adjustments annually. Appendix 3 - 1 D reproduced from the report of seminar on District Road Maintenance. This table form the basis of the District Council's estimate for road maintenance.

PERFORMANCE STANDARDS

In order to compare actual accomplishments performance standards were formed. These forms are the description of each activity with work criteria and work methods broken down to labor, equipment and material needs per day. The supportive data shown on this form is the estimated resources needed in a crew day to accomplish desired units of work. It should be emphasized that this is standard for comparison with measured daily accomplishments. The quantities in the standard are subjective and need to be revised based on real life data. (Sample forms attached as appendix 3 - 1 E).

ROAD PAVEMENT DISTRESSES

In order to lay down maintenance Quality Standard, for different types of surface depression, these forms are designed to describe the road condition, evaluation and the maintenance action recommended for each type of surface depression. (For details see report of seminar on District Road Maintenance, sample form attached as appendix 3 - 1 F)

MAINTENANCE NEEDED REPORT

The "Maintenance Needed Report" is an important tool to assist the DE or Maintenance Scheduler in keeping an accurate record of the maintenance back log and setting work priorities of the maintenance gang. This form supplements the road condition surveys by providing specific estimates of maintenance required, by activity and by estimating the number of work days and the resources required thereof. (For details see the report of seminar on District Road Maintenance, (Sample form attached as appendix 3 - 1 G)

DAILY MAINTENANCE WORK ORDER/REPORT

This form is divided into two parts:

- WORK ORDER: This work order is the authorization for a road maintenance gang to do one day of maintenance. It should be prepared by the district engineer, the assistant engineer or the sub-engineer responsible for road maintenance scheduling. (for details refer the report of seminar on Road District Maintenance.
- WORK REPORT: This work report is the record of resources used and work accomplished. It is the basic document for the maintenance management information system to be prepared very carefully, by the Darogha of the work. (Sample form attached as appendix 3 - 1 H)

FORT NIGHTLY SCHEDULE

This form is prepared in triplicate by the District Engineer. Original copy to be kept by him. The Darogha will keep one copy the third copy sent to the Project Manager (CCSC Office). (Details in the report of seminar on Road District Maintenance. Sample form attached as appendix 3 - 1 I).

MONTHLY PRODUCTION REPORT

The monthly production report is prepared by the District Accountant, taking the information directly from the daily report. The information is to be recorded on a daily basis as it is received. This report summarizes the monthly production and resource for each maintenance activity performed in the district. (Detail see report of Seminar on District Road Maintenance. Sample forms attached as appendix 3 - 1 J)

DISTRICT: _____ SURVEYORS: _____ DATE: _____
 ROAD NAME: FROM _____ TO _____ ROAD NUMBER: _____
 PAVEMENT TYPE: _____ FILE NUMBER: _____ TO _____

	0	100	200	300	400	500	600	700	800	900	1000	REMARKS
ROADSIDE DITCH												
SHOULDER WIDTH												
SHOULDER CONDITION												
VEGETATION												
PAVEMENT WIDTH												
PAVEMENT CONDITION												
SHOULDER WIDTH												
SHOULDER CONDITION												
VEGETATION												
ROADSIDE DITCH												
CULVERTS												
BRIDGES												

BRIDGE SURVEY
FORM

District: _____ Surveyors: _____ Date: _____

Road Name: _____ Road Number: _____

Km of near (first) abutment: _____

Structure Type: _____

Number of Spans: _____

Deck length, by Span: _____

Deck width: _____

Structure condition (check one)

- 5. Excellent - As built: _____
- 4. Good - Structurally sound, needs minor superficial repairs: _____
- 3. Fair - Structure sound, but structure maintenance required: _____
- 2. Poor - Structure in use, causing restricted loading: _____
- 1. Bad - Structure damaged, precluding use: _____

Flow Condition, whether or not there is any actual flow (check one)

Free flow condition: _____

Partial obstruction to flow: _____

Serious obstruction to flow: _____

General Comments: _____

PAVED ROAD INVENTORY REQUIREMENTS

Date: _____

By: _____

Road Identification:

District: _____ Road No. (if any): _____ ADT: _____

From: _____ To: _____

Length: _____ KM Ave. Bit. Surface Width: _____ M

1) Surface Condition (KM by Condition Rating):

- 5) Excellent: As Built Condition: _____
- 4) Good : Minor Routine Work only - Patching \leq 5% Area: _____ KM
- 3) Fair : Moderate Patching (10-100) Base Generally Good: _____ KM
- 2) Poor : Significant Patching (10-25%)
Due to General Base Failure: _____ KM
- 1) Bad : Surface Generally Broken (> 25%)
General Base Failure : _____ KM

2) Shoulder Condition (KM of Shoulder by Condition):

- 5) Excellent: As Built = Drop Off $<$ 3cm - Smooth: _____ KM
- 4) Good : Drop Off $<$ 5cm - Only Smoothing Req'd: _____ KM
- 3) Fair : Drop Off \leq 5cm - Added Material Req'd: _____ KM
- 2) Poor : Drop Off $>$ 5cm - Significant Material Req'd: _____ KM
- 1) Bad : Shoulder Rebuilding Req'd: _____ KM

3) Roadside Drainage Ditch Condition (KM of ditch by condition):

- 5) Excellent: As Built = clean of debris and vegetation: _____ KM
- 4) Good : Flow line good - Minor cleaning only: _____ KM

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- 3) Fair : Ditch generally functioning - some flow blockage: _____ RM
- 2) Poor : Ditch visible but with significant obstructions: _____ RM
- 1) Bad : Ditch abandoned and/or not functioning: _____ RM

4) Culvert Condition (Number by Condition Rating):

- 5) Excellent: As built with no obstructions: _____ Ea
- 4) Good : Structure Sound: Minor cleaning only: _____ Ea
- 3) Fair : Structure Sound: Flow obstructed: _____ Ea
- 2) Poor : Minor structure damage - flow possible: _____ Ea
- 1) Bad : Structure failure to preclude/restrict flow: _____ Ra

5) Roadside Vegetation Condition (RM of Shoulder by Condition Rating):

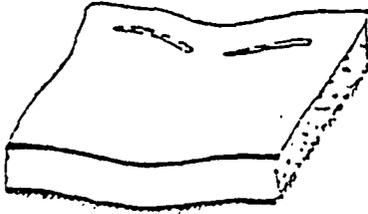
- 5) Excellent: No vegetation > 5cm on shoulder for 2m: _____ RM
- 4) Good : No vegetation > 10cm on shoulder for 2m: _____
- 3) Fair : Vegetation > 10cm, < 1 meter of
1 year grown for 2m : _____ RM
- 2) Poor : Vegetation heavy - Poor sight distance
and little room : _____ RM
- 1) Bad : Vegetation heavy - Poor sight
distance - Woody plants : _____ RM

6) * Bridge/Structure Condition - Structures > 1 Meter span:

- 5) Excellent: As built: _____ Ea
- 4) Good : Structurally sound - Minor superficial repairs: _____ Ea
- 3) Fair : Structurally sound but structure maintenance
required : _____ Ea
- 2) Poor : Structure damage causing restricted loading: _____ Ea
- 1) Bad : Structure damage precluding use: _____ Rs

* Complete Bridge Survey form for each structure

LABOR INTENSIVE PERFORMANCE STANDARD		
WORK ACTIVITY	NUMBER	WORK UNIT
Patching Pothole (Paved Surface) with D.B.S.T application	P-1-A	Cubic Meter
<p>DESCRIPTION: Cleaning out and patching areas of severe alligator cracking, and superficial potholes and edge failures, ranging in depth from top of paved surface to the level of the base course using alternate applications of hot liquid asphalt cement and crushed stone. This activity also includes skin patching of minor depressions.</p>		
<p>PURPOSE</p> <p>a) To correct minor surface irregularities such as shallow potholes, raveling and alligator cracking to prevent the entry of water and to restore the wearing course to its original strength and smoothness.</p> <p>b) To eliminate surface depressions that might permit the ponding of water and which, if left untreated would eventually deteriorate, into surface cracks and potholes.</p>		
<p>CRITERIA:</p> <p>For roads condition 3, 4 & 5 - This activity will be performed when open potholes appear over undisturbed or otherwise sound base material, when severe alligator cracking is observed and surface material can easily be removed by pick and shovel to permit repair, or when pavement depressions exceed 1.5 cm, allowing for ponding of water, even though no cracks may have appeared. For road sections in condition 1 and 2 on roads that are being maintained this activity will be performed only when open potholes exist.</p>		
<p>CREW REQUIREMENTS</p>		
<p>LABOR:</p> <p>1 - Barogna 1 - Driver 3 - Baldars</p>	<p>EQUIPMENT:</p> <p>1 - Pick up 1 - Asphalt Sprayer or 6 hand tools 2 - Wheel barrows 6 - Picks</p>	<p>6 - Shovels 6 - Hand tempers 8 - Brooms barrel to heat asphalt</p>
<p>MATERIALS:</p> <p>- 100 Liters Liquid Bitumen - 1.5 Cu.M Crushed Aggregate - 25 Kg Fire Wood - 4 Liters Diesel (For cleaning tools)</p>	<p>AVERAGE PRODUCTION</p> <p>1.5 Cubic Meters</p> <p>DATE</p>	



SURFACE DEPRESSION

Depression or sinking of the pavement surface

CONDITION EVALUATION		MAINTENANCE ACTION RECOMMENDED
Severity	Area coverage	
Low	Isolated	No maintenance to be scheduled
	Numerous	No maintenance to be scheduled
Moderate	Isolated	If no other defects are observed in the area, no maintenance is required. If the surface is cracking or a patching crew is scheduled to work in the area, schedule P-IA. Skin patching will usually be satisfactory, without removing existing material.
	Numerous	Skin patching (P-IA) may be schedule to level the pavement after determination of the cause if the distress has been made and it is believed that structural deterioration will not continue.
High	Isolated	Schedule P-IA.
	Numerous	Evaluate the pavement for possible rehabilitation.

RRM PROJECT
PROVINCE OF SINDH
PAKISTAN

MAINTENANCE NEEDED REPORT

ROAD IDENTIFICATION

REQUIRED MAINTENANCE

ACTIVITY	ESTIMATED QUANTITY A	AVG. DAILY PRODUCTION B	ESTIMATED CREW DAYS $A \div B$	PRIORITY

COMMENTS:

CHAPTER 4

ROAD SYSTEM IMPROVEMENT

4.1 INTRODUCTION

The Road Resources Management Project is an integrated approach to solving the problems of a deteriorating transportation infra structure in rural Sindh. One of the primary project objectives was to rehabilitate non-maintainable paved roads to establish a fully maintainable road system. Meeting this objective was within the purview of the Road System Improvement Component (ROSI) of the project. Within ROSI there were three goals:

- Rehabilitation of existing paved roads which have deteriorated to the point where they can no longer be economically maintained.
- Upgrading Katcha roads to paved condition.
- Construction of minimal access, low maintenance katcha roads in areas not served by the present network.

4.2 REHABILITATION WORK PROGRAM

As part of rehabilitation work a number of documents, guides and manuals have been prepared. The most important of these are:

- Design Manual;
- Field Construction Manual; and
- Model Rehabilitation Contract.

4.2.1 DESIGN MANUAL

The purpose of the design Manual is to provide general guidelines to engineering staff of District Councils of Sindh for the on-going works of rehabilitation of roads being carried out under the Road Resources Management Project and to improve and standardize district engineering practices in rehabilitating severely deteriorated paved roads which are under the jurisdiction of the District Councils. It documents the appropriate design procedures to be followed for rehabilitation of paved rural roads for the different conditions of traffic, soil, water etc. which are most likely to be encountered on paved rural roads in the Sindh.

The manual takes into account all the required design components and it is imperative that the manual user must follow all the steps enumerated in the design procedure before taking the final decision to adopt a particular design.

As the scope of this manual is limited to the rehabilitation of existing roads only, the construction of new roads is not included amongst the proposed design alternatives. Therefore, the longitudinal geometric design aspects required for the construction of new roads are not considered in this manual. Although the design manual was prepared as part of the Road Resources Management Project, it is hoped that District Council Engineers will utilize the design concepts presented therein, wherever similar type of rehabilitation work is required and that the standard typical cross-sections presented in this manual will be utilized in the design of new roads and the upgrading of existing roads, whenever possible.

4.2.2 FIELD CONSTRUCTION MANUAL

The Field Construction Manual was prepared to provide general contract management guidelines to the engineering and administrative staff of the district councils of Sindh. It encompasses the basic construction management and contracting practices which must be followed to assure proper quality construction, efficient project administration and, when applicable, compliance with the special procedures required on projects funded by international funding agencies. References to consultant staff in this manual are specific to consultant responsibility under the Road Resources Management project, but may be adopted by the District Councils to apply to any project where outside technical assistance may be desirable or required. The manual elaborates the significant role which is played by the district/provincial level construction and administrative personnel.

The scope of this manual includes a systematic overview of rehabilitation activities on paved rural roads in Sindh. The manual user needs to make sure that all the general and specific technical details and contractual obligations of the projects are taken into consideration, executed and properly documented. All the inspection and reporting procedures must be performed and/or presented in a neat, correct, coherent and timely manner to facilitate rapid project progress and a high standard of workmanship. For this reason, considerable efforts were devoted to record keeping requirements in the development of this manual and clear instructions have been provided for preparation of all project documentation.

TABLE 4 - 1

SUMMARY OF RWP STATUS UPTO SEPTEMBER 1991

	TOTAL LENGTH CONDITION SURVEY (km) (1)	TOTAL LENGTH FR. REHAB (km) (2)	ELIGIBLE FROM Eco. Appraisal (km) (3)	APPROVED BY DCC (km) (4)	TOTAL REHABS COMPLETED LENGTH (km) (5)	DESIGN * COMPLETED LENGTH (km) (6)
HYDERABAD DIVISION						
Thatta	42.31	9.13	6.90	2.15	---	2.15
Badin	19.90	9.90	8.90	8.90	1.05	3.05
Mirpurkhas	54.92	14.90	10.33	6.79	3.19	6.79
Tharparkar	9.08	0.53	---	---	---	---
Dadu	11.13	4.23	2.64	2.64	2.64	2.64
Hyderabad	179.49	48.00	44.69	15.13	6.50	15.13
Sanghar	65.18	23.70	21.60	7.60	2.10	5.10
Karachi	96.70	41.72	39.62	3.85	2.20	3.85
TOTAL	478.71	152.11	134.68	47.06	17.68	38.71
SUKKUR DIVISION						
Sukkur	35.80	12.60	4.50	4.52	---	4.52
Jacobabad	12.75	5.35	2.28	2.28	1.08	2.28
Larkana	53.90	18.65	4.10	4.10	2.10	4.10
Shikarpur	19.10	2.80	7.50	3.70	0.60	3.70
Nawabshah	65.89	19.99	3.00	3.00	---	3.00
Mausheero Feroz	43.10	15.20	13.10	8.72	3.70	8.72
Khairpur	38.64	2.22	2.04	2.04	---	2.04
TOTAL	269.18	76.81	36.52	28.36	7.48	28.36
GRAND TOTAL	747.89	228.92	171.2	75.42	25.16	67.07

* All the above mentioned roads are in different stages of waiting for go ahead signal for construction.

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The Construction Manual encompasses inspection and reporting procedures for all B.O.Q. items currently being used in the standard construction documents for asphalt paved rural roads. Unit cost estimates were developed to help evaluate the efficiency of the construction program. For evaluating progress, and to control costs, these unit cost estimates are applied. The latest 1991 unit cost estimates are being attached as appendix 4 - 1 to this report. District Councils are encouraged to update these costs periodically to help detect or avoid bid rigging.

4.2.3 CONTRACT FOR REHABILITATION

This document contains the conditions of contract for rehabilitation works to be awarded. It documents in detail all the responsibilities of the District Councils and the contractor.

4.3 REHABILITATION WORK PROGRAM STATUS

Table 4 - 1 gives a summary of rehabilitation work program status upto September 1991.

A complete list of the status of this program is attached as
Appendix 4 - 2

4.4 TENDER DOCUMENTS AND TENDER SPECIFICATIONS

Tender documents, tender specifications, construction drawings, cost estimates, B.O.Q's and construction notes have been prepared for all the roads selected for rehabilitation work and have been delivered to USAID as required during the execution of the project.

4.5. EXPERIMENTAL ROADS AND ACCESS ROADS

The experimental roads program was a sub component of the Road System Improvement component of the Road Resources Management Project. The purpose of this program was to:

1. Address technical difficulties of road design in the Sindh caused by:
 - difficult soil and water conditions, especially water logging;
 - Accelerated pavement deterioration caused by inadequate design and construction standards; and
 - limited availability of high quality, standard material.

2. Experiment with alternative road surface designs and materials.
3. Provide sufficient follow up and statistical data base to determine the most economical pavement designs using materials and procedures to minimize the life cycle cost of future road projects.

The experimental roads component attempted to contribute to the solution of the life-cycle cost problem in particular, by finding appropriate low cost construction alternatives and encouraging implementation of the concept of stage construction at the earliest point of road network expansion.

At the initial phases of Road Resources Management Project, it was thought that the experimental roads would be limited to higher standard Katcha or gravel roads. However, by 1989 it was recognized that this component should address problems of rehabilitation of existing paved roads also.

To achieve the above mentioned purposes of the experimental road construction component of the Road Resources Management Project, soil tests from samples of roads selected for experimental construction were made and a 'Report on Soil Sample Testing' was submitted in May 1991. Later another report on 'Experimental roads, Status December 1990' was submitted. The purpose of the "status" report was to highlight different methods for upgrading Katcha Roads, causes of road pavement distress and methods of road rehabilitation. This report also presented a list of roads recommended for experimental construction.

In the later phases of the Road Resources Management Project, the cuts in the USAID budget made funding of new construction impossible. Government of Pakistan, when approached, asked new construction to be deleted from the Road Resources Management Project. As such, new experimental roads could not be constructed. A list of the Experimental roads submitted to USAID is attached as Appendix 4 - 3.

4.6. BOTTLE NECKS AND HURDLES

4.6.1 POLITICAL SITUATION OF SINDH

The decision making process of the Local Government calls for the senior most position i.e that of the Chairman of the District Council to be selected from the already elected District Council members. During the execution of the RRMP, award of contracts or payment of contractor invoices was occasionally delayed by unavailability of the District Chairman.

4.6.2 NON QUALIFIED STAFF

Most of the engineering staff of District Council Offices are non qualified. Out of the fifteen districts covered under the project, it was found that only three District Engineers are qualified engineers. The rest have risen through the ranks over the years. Most of the District Engineers and Sub Engineers have little knowledge of civil engineering. Consultant engineers made a concerted effort to explain important technical points and provide on-the-job training to the district engineering staff throughout the project in order to assure that quality control procedures will be understood and enforced on all future projects.

4.6.3 GRATIFICATION

Reportedly contractors have had rebate the controlling officers to approximately twenty to twenty seven per cent of the contract amount to receive a contract and for receiving favors. It appears that the poor quality which typified district council construction is a result of the loose vigilance by the controlling officers due to above. All bids and all contract work under the RRMP were carefully reviewed and supervised to avoid any possibility of continuation of this practice.

4.6.4 TENDERING PRACTICES

Proper tendering practices had not been practiced in awarding contracts. Favored contractors were chosen for awards. For the execution of the RRMP, the consultants trained District Engineers and Officers to follow all the procedure of Handbook 11 for tendering . The consultants and the USAID Project Officer strictly enforced the observance of these proper tendering and awarding practices.

4.6.5 REPORTING AND FILING

There had been no reporting for the quality and quantity of work done on a daily basis. District Engineers provided for measuring of quantities only when a payment invoice is prepared. During the execution of the RRMP, the consultant emphasized the importance of frequent and proper measuring of quantities to avoid errors in payments and disputes with contractors.

4.7 RECOMMENDATIONS

1. A comprehensive training program should be developed and implemented to provide sub-engineers with basic engineering concepts they need to perform their job. Specific training is also necessary in methods of construction and simple quality control.
2. District Engineers should also be trained in the basics of Project Management, project supervision and keeping of records and reports. A formal and permanent training program should be developed and administered periodically by the GOS, through the Academy at Tando Jam.
3. Prescribed report forms and instruction books should be distributed among the District Council offices to be duly prepared by field supervisors and clerical officers involved in recording, or accounting for, construction works and materials.
4. Booklets describing construction procedures, methods of quality control based on experiences gained in previous projects, methods and procedures of field tests with the definitions of basic terms should also be distributed. These booklets should be kept at the field offices for easy reference.
5. Proforma of payment invoices, with simpler, straight forward methods for entering quantities should also be distributed among the District Council Offices.
6. All the District Council Offices should have direct access to the following apparatus
 - Hand driven Vibratory Compactors;
 - A Bitumen Heating Machine with a Thermometers;
 - A Sand Cone Density test apparatus;

- Few molds of concrete cubes;
- Camber Plates;
- Screens, sieves; and
- other frequently used small equipments for testing and materials handling.

The cut in USAID funding resulted in drastic reductions of RRMP 1991-92 allocations for all components of the project. Since the GOP and GOS have elected to eliminate the experimental roads program, the Project Officer has recommended that the Rs. 10.58 million experimental roads funds, which have already been distributed, be utilized for the roads rehabilitation program. The consultant agrees with this recommendation, which will reduce the funds required for the 1991-92 program as indicated in the following table 4-2.

TABLE 4-2

ROAD RESOURCES MANAGEMENT PROJECT

PROPOSED CONSTRUCTION BUDGET
FOR FY 1991-92

DISTRICT	PAVED ROAD NETWORK (KM)	POPULATION	COMMUNICATION EXPENDITURE (Rs)	ALLOCATION		EXPERIMENTAL ROADS FUNDS (Rs)	FUNDS REQUIRED IN FY 91/92 (Rs)
				% OF TOTAL	TOTAL (Rs.)		
BADIN	18.20	687,000	5,324,110	6.23	1,913,753	2,200,000	0
DADU	9.63	924,000	2,107,881	4.63	1,423,538	1,650,000	0
HYDERABAD	179.49	1,125,000	16,402,351	21.67	6,657,049	0	6,657,049
JACCBABAD	12.75	854,000	506,510	3.53	1,100,203	1,650,000	0
KARACHI	109.30	236,000	1,804,506	6.33	2,097,863	0	2,097,863
KHAIRPUR	33.04	735,000	2,210,137	5.16	1,526,113	1,650,000	0
LARKANA	53.90	385,000	2,100,000	6.52	2,002,049	2,200,000	0
NAWABSHAH	57.70	543,400	2,674,029	5.98	1,335,944	0	1,335,994
NAUSHERO FEROZ	36.60	822,600	1,696,175	5.29	1,624,760	0	1,624,760
SANCHAR	65.13	724,000	3,373,391	7.30	2,241,136	0	2,241,136
SHIKARPUR	19.10	505,000	1,136,000	3.13	977,449	1,650,000	0
SUKKUR	24.35	300,000	6,433,959	7.54	2,316,283	0	2,316,283
THARPARKAR	64.00	1,245,000	4,215,460	9.40	2,886,345	0	2,886,347
THATTA	42.71	684,000	4,274,005	6.70	2,056,863	0	2,056,863
TOTAL	726.45	10,775,000	54,309,064	100.01	30,719,998	11,000,000	21,716,845

- Budget allocates on the basis of 33% Paved Road KM, 34% Population and 33% of Communication Expenditure.
- Communication Expenditures have been revised along the guidelines set forth in Vol. 1 of the Preliminary Financial Assessment Report.

CCSC UNIT COST ESTIMATES

Unit prices for the different contract items were initially developed from estimated material, labor and equipment costs. These costs and the method of development were compared with the district schedules of rates, as well as C&W official rates and rate schedules used by other consultants.

The variation between the unit costs used by these different agencies was extreme. The scheduled rate were much lower than those used by C&W and other consultants or those which the consultant developed.

The consultant reviewed and discussed the apparent price anomalies with some of the District Engineers. Most District Engineers stated that they had been using fixed scheduled rates for years as the basis for costing and tendering. They claimed that the contractors had been able to perform the work and realize a reasonable profit.

The Consultant developed new rates based on the Schedule of Rates increased for inflation, which were considerably higher than those used by the Districts but much lower than C&W or other consultants. It was also determined that costs should be higher than previously used by the Districts because more rigorous inspection would be performed for projects financed under the RRMP and strict adherence to specifications would be required on all BOQ items.

Tendered prices were recorded for the 1989-90 program and compared with CCSC estimates for the major items of earth work, base and surfacing (Figure 4-1). Eleven of the eighteen tenders fell within 20% of the Consultant estimate.

Six of the eighteen tenders for earth work, were above the Consultant estimate and eleven were below. Three, were more than 10% above estimate; while five were more than 10% below. Three exceeded the estimate by more than 20% and three were more than 20% below.

Of the tenders for base, nine were above the estimate and nine below. All but three were within 20% of the consultant estimate. One tender was more than 20% above estimate and two were more than 20% below.

Of the tenders for surface treatment six were above the estimate. Four were more than 10% above and six were more than 10% below. One tender was more than 20% above estimate and five were below.

The tenders received during the first year for these major items were on average slightly below estimate. Those that substantially exceeded the Consultant estimate were still less than the rates used by C&W and others and were recommend by the District as being reasonable. In these cases the

Consultant did not recommend that such bids be rejected, because, at that time there was no record available, nor direct consultant experience with tender prices and actual project cost data. There was not sufficient documentation to validate the CCSC estimates at that time. It was therefore prudent not to reject the lowest competitive bids which the District Engineer considered reasonable.

As the above data on tenders became available the Consultant was able to document unit cost estimates with sufficient tender data to justify rejection of a "lowest responsive tender" with excessively high prices.

During construction, CCSC inspectors kept daily records of manpower and equipment usage and obtained material and hourly costs of manpower and equipment from the contractors. With this detailed information it was possible to determine actual costs for the different items of work to compare with initial estimated rates (Figure 4-5 through 4-8). It is extremely important that this valuable analytical function be continuously updated and utilized by the District Councils for all future rehabilitation and construction activities. Savings of over 20% have been documented on some projects without any sacrifice in quality.

PROJECT FOR 1989-90
EARTHWORK FOR EMBANKMENT

S.NO.	ROAD NUMBER	CONSULTANT RATES			TENDER RATES	% OF CONSULTANT ESTIMATES
		BASIC	LEAD	TOTAL		
1	HY-HL-1	850.00	0.00	850.00	1328.00	156.24
2	HY-HL-24	850.00	0.00	850.00	1321.40	155.46
3	DA-D6	850.00	0.00	850.00	1167.36	137.34
4	HY-HL-7	850.00	354.00	1204.00	1328.00	110.30
5	NA-23	641.60	1088.20	1729.80	1902.72	110.00
6	BA-M5	1000.00	1345.00	2345.00	2375.00	101.28
7	THR-15	1000.00	0.00	1000.00	1000.00	100.00
8	LA-1	1000.00	1902.00	2902.00	2892.00	99.66
9	THR-13	850.00	124.40	974.40	970.00	99.55
10	THR-2	1000.00	3372.80	4372.80	4300.00	98.34
11	SU-163	850.00	0.00	850.00	902.00	94.35
12	SH-1	850.00	481.52	1331.52	1244.00	93.43
13	KA-6	850.00	258.25	1108.25	1000.00	90.23
14	SA-SH-24M	850.00	0.00	850.00	750.00	88.24
15	JA(N)8	1000.00	163.00	1163.00	999.00	85.90
16	JA(N)5	1000.00	163.00	1163.00	800.00	68.79
17	JA(N)6	1000.00	163.00	1163.00	800.00	68.79
18	SA-7M	850.00	1274.00	2124.00	1090.72	51.35

PROJECT FOR 1989-90

BASE COURSE

S.NO.	ROAD NUMBER	CONSULTANT RATES			TENDER RATES	% OF CONSULTANT ESTIMATES
		BASIC	LEAD	TOTAL		
1	BA-M5	400.00	1429.00	1829.00	2560.00	139.97
2	HY-HL-7	400.00	1080.21	1480.21	1742.00	117.69
3	HY-HL-1	400.00	718.43	1118.43	1296.00	115.88
4	HY-HL-24	400.00	1080.21	1480.21	1680.30	113.52
5	SU-163	400.00	563.39	963.39	1052.76	109.28
6	NA-23	280.15	807.56	1087.71	1141.70	104.96
7	SA-7M	400.00	1450.00	1850.00	1738.52	104.78
8	SA-SH-24M	400.00	1180.25	1580.25	1500.00	101.25
9	LA-1	400.00	1135.36	1535.36	1537.00	100.24
10	JA(N)8	400.00	851.63	1251.63	1251.25	99.97
11	DA-06	400.00	741.62	1141.62	1140.00	99.88
12	THR-15	400.00	1622.86	2022.86	2020.00	99.86
13	THR-2	400.00	1144.81	1544.81	1540.00	99.69
14	THR-13	400.00	1233.61	1633.61	1605.00	98.25
15	SH-1	400.00	483.25	883.25	814.00	92.16
16	JA(N)6	400.00	1209.42	1609.42	1300.00	80.77
17	KA-6	400.00	185.23	585.23	450.00	76.89
18	JA(N)5	400.00	1316.62	1716.62	1200.00	69.90

PROJECT FOR 1989-90
SURFACE TREATMENT (1ST COAT)

S.NO.	ROAD NUMBER	CONSULTANT RATES			TENDER RATES	% OF CONSULTANT ESTIMATES
		BASIC	LEAD	TOTAL		
1	THR-15	80.00	150.54	230.54	270.00	117.12
2	HY-HL-1	80.00	113.34	193.34	226.00	116.89
3	HY-HL-7	80.00	128.82	208.82	241.60	115.70
4	BA-M5	80.00	141.00	221.00	265.00	119.91
5	HY-HL-24	80.00	114.11	194.11	210.25	108.31
6	JU-163	80.00	118.11	198.11	209.81	105.91
7	NA-23	61.75	120.07	181.82	190.82	104.95
8	LA-1	80.00	254.18	334.18	334.10	99.98
9	JA(N)8	80.00	127.90	207.90	207.75	99.93
10	THR-2	80.00	130.64	210.64	209.00	99.22
11	THR-13	80.00	108.56	188.56	182.00	96.52
12	SA-SH-24M	80.00	128.54	208.54	201.20	96.48
13	KA-6	80.00	56.31	136.31	105.00	77.03
14	DA-D6	80.00	140.17	220.17	168.80	76.67
15	JA(N)5	80.00	145.46	225.46	170.40	75.58
16	JA(N)6	80.00	142.80	222.80	160.00	71.81
17	SA-7M	80.00	160.00	240.00	141.56	58.98
18	SH-1	80.00	108.60	188.60	102.00	54.08

APPENDIX 4-4

PROJECT FOR 1989-90
SURFACE TREATMENT (2ND COAT)

S.NO.	ROAD NUMBER	CONSULTANT RATES			TENDER RATES	% OF CONSULTANT ESTIMATES
		BASIC	LEAD	TOTAL		
1	THR-15	67.00	86.54	153.54	194.00	126.35
2	HY-HL-7	67.00	74.87	141.87	162.70	114.68
3	HY-HL-1	67.00	67.50	134.50	153.75	114.31
4	BA-M5	67.00	87.00	154.00	170.00	110.39
5	NA-23	38.65	71.36	110.01	115.50	104.99
6	LA-1	67.00	145.2	212.20	212.00	99.91
7	JA(N)3	67.00	76.00	143.00	142.50	99.65
8	THR-2	67.00	76.33	143.33	142.50	99.42
9	THR-13	67.00	44.40	254.73	109.00	97.85
10	HY-HL-24	67.00	66.30	244.70	125.10	94.60
11	KA-6	67.00	17.02	217.32	80.00	95.22
12	SU-163	67.00	71.20	222.22	127.95	92.58
13	SA-SH-24M	67.00	75.08	280.28	115.00	80.94
14	DA-D6	67.00	81.20	290.28	110.14	74.32
15	JA(N)6	67.00	83.64	298.84	110.00	73.02
16	JA(N)5	67.00	85.00	302.64	100.00	65.79
17	SA-7M	67.00	106.00	325.00	95.26	55.06
18	SH-1	67.00	66.05	306.05	62.50	46.97

REHABILITATION STATUS OF PROJECTS
UPTO SEPTEMBER 1991

NO.	ROAD NUMBER	ROAD NAME	PROJECT YEAR	STATUS
1	SA-7M	Jamrao Head to Chak no. 4 Sanghar	1989-90	Complete
2	SA-SH-24M	Sanghar-Shahdadpur road to Khairo Kalori Bridge (Sanghar)	1989-90	Complete
3	THR-13	Mirwah Kot Ghulam Mohammad to Mohammad Hashim Bhurgri (Mirpurkhas)	1989-90	Complete
4	THR-2	Mirpur Khas to Sher Mohammad Village (Mirpurkhas)	1989-90	Complete
5	THR-15	Umerkot Road to Khero-Syed Village (Mirpurkhas)	1989-90	Complete
6	BA-M5	Haji Sawan Bus Stand to Sami Ji Kaber Road (Badin)	1989-90	Complete
7	HY-HL-1	Tando Adam Road to Sher Mohd. (Hyderabad)	1989-90	Complete
8	HY-HL-7	Hala Shahdadpur Road Chawdogi to Karan Khan Nazamani (Hyderabad)	1989-90	Complete
9	HY-HL-24	National Highway to Ilyas Abrejo (Hyderabad)	1989-90	Complete
10	KA-6	Internal Road Ibrahim Hyderi (Karachi)	1989-90	Complete
11	DA-D6	Dadu Maunder Naka to Dadu Canal (Dadu)	1989-90	Complete
12	NA-23	Kandiaro to Kaman Mehasar via Kamal Dero (Kandiaro)	1989-90	Complete
13	JA(N)5	Busapur Octroi-Post to Dembki Rice Mill (Jacobabad)	1989-90	Complete
14	JA(N)6	Kandhkot-Kasurar Road to Village Rano (Jacobabad)	1989-90	Complete
15	JA(N)8	Thull Hamayoon Road to Village Chandar (Jacobabad)	1989-90	Complete

REHABILITATION STATUS OF PROJECTS
UPTO SEPTEMBER 1991

NO.	ROAD NUMBER	ROAD NAME	PROJECT YEAR	STATUS
16	LA-1	Hatti to Mud Bahu (Larkana)	1989-90	Complete
17	KA-8N	Razzakabad to Lashari Village (Karachi)	1989-90	Under Const.
18	KA-1	Pakistan Hotel to Sammo Goth (Karachi)	1989-90	Invitation to tender awaited
19	SH-1	Lakhi to Wazirabad Road (Shikarpur)	1989-90	Under Const.
20	SU-163	National Highway to Sardar Mohd. Khan Goth (Sukkur)	1989-90	Under Const.
21	KH-6-4N	Hingorja-Sajyoon Road to Nar Goth (Khairpur)	1989-90	Under Const.
22	ED-108	National Highway to Husainabad (Khairpur)	1989-90	Design Submitted to USAID
23	HY-3N	Sheikh Birkio to Husain Khan Thora Village (Hyderabad)	1990-91	Bid evaluation awaited
24	HY-6N	Ehanoth to Miranpur (Hyderabad)	1990-91	Bid evaluation awaited
25	HY-HY-8	Tando Mohd. Khan to Norai Sharif (Hyderabad)	1990-91	Bid evaluation awaited
26	HY-HY-9	Railway Station Khatian to Village Taj Mohammad Junejo (Hyderabad)	1990-91	Bid evaluation awaited
27	BA-M5	Haji Sawan Bus Stand to Sami Ji Kabar (Badin)	1990-91	PIL awaited
28	SA-SH-24M	Sanghar Shabdadpur road to Khairo Kaloi Bridge (Sanghar)	1990-91	PIL awaited
29	NA-20	Kazi Ahmad Road to Bucheri Via K.K.Oil Mill (Nawabshah)	1990-91	PIL awaited
30	THR-MP-21	Mirpur Khas to Patayoon (Mirpurkhas)	1990-91	PIL awaited
31	LA-1	Hatti to Mud Bahu (Larkana)	1990-91	PIL awaited

REHABILITATION STATUS OF PROJECTS
UPTO SEPTEMBER 1991

NO.	ROAD NUMBER	ROAD NAME	PROJECT YEAR	STATUS
32	JA(N)2	Jacobabad-Shikarpur Road to Village Adam Khan Panhwar (Jacobabad)	1990-91	PIL awaited
33	SH-69	Shikarpur to Booja Napar via Jano(Shikarpur)	1990-91	PIL awaited
34	SU-1	National Highway to Dad Loi (Sukkur)	1990-91	Bid evaluation awaited
35	SU-38	Kandhra Village to Begnagi Station (Sukkur)	1990-91	Bid evaluation awaited
36	WA-23	Kandiarao to Kaman Mehaser via Kamal Dero (Kandiarao)	1990-91	Invitation to tender awaited

PAGE 3

* PIL Project Implementation Letter

Data\Status.wk1
BR/91

EXPERIMENTAL ROADS
PROJECTS SUBMITTED TO USAIDCONSTRUCTION NOT YET STARTED

- KH-E-1 Rehabilitation of West Feeder to Fatahulla Ghumro Road (Khairpur)
- SH-69 Rehabilitation of Shikarpur to Booja Napar via Jano (Shikarpur)
- DA-E-1 Rehabilitation of Indus Highway to Sher Mohammed Punjabi (Dadu)
- BA-M5 Rehabilitation of Haji Sawan Bus Stand to Sami Ji Kabar (Badin)
- JA-E-1 Rehabilitation of Village Sikandarabad Khoso Road (Jacobabad)
- LA-2 Rehabilitation of Bakrani to Mud Bahu Road (Larkana)

CHAPTER 5

FINANCIAL MANAGEMENT PROGRAM

5.1 OBJECTIVE

The RRM project has, in addition to the Road Construction, Maintenance and Training Components, a Financial Management Component. As set forth in the PC-I, the Financial Component will assist the District Councils and the Government of Sindh by providing:

- BETTER GUIDANCE ON CONSTRUCTION COSTS AND PROCEDURES. This included cost guidance that permit high construction standards to be followed and encourage maximum development of the private sector.
- BUDGETARY AND POLICY GUIDANCE to the district councils regarding appropriate resource allocations for rural roads.
- IMPROVED SYSTEMS TO MONITOR DISTRICT COUNCIL PERFORMANCE in resource generation, maintenance, construction, and provision of services.
- RECOMMENDATIONS REGARDING TAX POLICIES AND PROCEDURES that encourage districts to increase revenue generation and ensure that districts receive their allotted share of taxes collected by the Province on their behalf.
- ADMINISTRATIVE GUIDANCE to encourage districts to establish accounting and disbursement procedures to control costs and ensure adequate safeguarding of public resources.

The above mentioned assistance had to be provided directly to the provincial government as well as to the District Councils. Thus the consultant worked directly with the officials responsible for these activities.

The district councils must follow the accounting and budgeting guidelines that are developed and promulgated by the Provincial Government through Sindh Local Government Ordinances, Sindh Budget Rules and Sindh Accounting Rules. The PC-I called for examination of

the current accounting and budgeting systems, as developed and enforced by the provincial authorities, and as they are actually observed in the districts. The successful completion of this phase of the project entailed close coordination and cooperation between the Consultant, the Department of Local Government and Rural Development and the Director of Local Funds Audit. Additionally, any changes at the district level required cooperation and approval by the Provincial Authorities. by working closely with the officials responsible for these functions and conducting follow-up training and workshop sessions, CCSC staff was able to develop a clear understanding of current operations, procedural deficiencies and assess employee training needs. On the basis of these assessments, the consultant developed a series of reports, training seminars and workshops sessions to present effective recommendations for improvements in district financial management. In the areas of revenue generation, changes will take place within the existing framework which require in-depth understanding of the current system and approval of Provincial authorities.

It is believed that recommended changes in several areas show substantial promise for increasing revenues with little or no change in the tax burden of district citizens. These recommendations are incorporated in the following summaries of reports presented.

5.2 OVERVIEW OF PREVIOUS REPORTS AND SEMINARS

5.2.1 INCEPTION REPORT JUNE 1989

The inception report was prepared by the technical services team from the most current information available. This report compiled statistical data from the Sindh Province, desegregated at the individual district level. The purpose of this report was to provide baseline data such as socio-economic indicators and road statistics. It identified the demographic and socio-economic status (baseline) of the districts. It also described economic and database analysis methodologies itemized throughout the project.

5.2.2 PRELIMINARY FINANCIAL ASSESSMENT NOV.89

The Preliminary Financial Assessment was an important element of Phase I of the Road Resources Management (RRMP) Project's Rural Road Component. The purpose of this assessment has to "identify the financial and

self-help resources available to the district on the basis of current local revenues, development grants from provincial and federal authorities, past self-help mobilization, and the potential for tapping additional sources of revenue". Target maintenance budgets, year one construction budgets, and the ESSL were presented in this important document.

5.3.2 EXPORT TAX REPORT

This report presented a very thorough analyses of the Export Tax as a revenue tool in District Council Financing. One of the major roles of District Council governments is to promote the economic development role as one of building road, clinics, schools, and other infrastructure projects.

his report demonstrated that the positive effect of spending programs can be offset by the manner in which the money is raised. Documentation presented in this report supported the consultant conclusion that the export tax, a major source of district council funds, is an extremely inefficient, anti-growth revenue mechanism and that District councils are well advised to reduce their dependence on this tax in order to encourage economic development.

5.3. REVENUE ENHANCEMENT AND GENERATION REPORT AUGUST 1990.

This report focussed on increasing revenues with the existing legal frame work. It pointed out that district development activities are an important element in any revenue enhancement program. Important observations were made about using human resources more effectively and the interrelationship between changing financial procedures to increase efficiency and the use of "freed-up" funds as a potential generator of revenues. An analysis of five major revenues sources was presented along with recommendations for improving their economic efficiency. These sources were selected based on the significant returns that would be available to districts willing to make a modest effort at reform.

It was demonstrated that district council finances are too heavily dependent upon the export tax and that diversification is beneficial.

Each revenue instrument was analyzed separately using the economic criteria of efficiency and equity. It was essential that, if implemented, consultant recommendations could result in Rs. 203 millions of additional revenue and cost savings.

5.3.1 REVENUE ENHANCEMENT SEMINAR - 7 NOVEMBER 1990

The purpose of this seminar was to provide upper-level District Accounts Officer, Taxation Officers and Chief Officers with an overview of the importance, need and procedures necessary to administer revenue collection regulations. These funds and other potential sources of increased income include: the recovery of lease monies; the production of Bank Guarantees; the Execution of Agreement; the Recovery of Income Taxes; and the Recovery of Salaries and Pension Contributions.

The seminar analyzed budgetary guidelines from the Sindh Government and recommended uniform systems for comparing collection procedures and comparing the budgetary controls from one district with those of another District. This Financial Management Seminar provided an opportunity for those key personnel within each district to participate and work on some uniform and appropriate guidelines, based on sound financial and accounting principles and practices crucial for District Personnel.

SEMINAR TOPICS INCLUDED:

1. Recovery of Export Taxes
2. Recovery of Export Taxes
3. Recovery of Lease Monies.
4. Production of Bank Guarantees.
5. Execution of Agreements.
6. Recovery of Income Taxes.
7. Recovery of Salary & Pension Contributions.

CHAPTER 6

TRAINING PROGRAM

6.1 STATEMENT OF WORK

The statement of work for CCSC on the Road Resources Management Project (RRMP) emphasized training as a key activity of both the Rural Roads and Highway Policy Components of the project. The overall goal of the CCSC-RRMP Training Plan was to ensure that all Government of Pakistan (GOP) and Government of Sindh (GOS) personnel involved in RRMP receive complete and adequate training in order to prepare them for implementing and sustaining the program and policies of RRMP. It also specified that an overall training program should be developed to identify appropriate training activities, primarily in country. The implementation and associated training was to be done jointly by the Technical Assistance Team, supported by qualified local training contractors and associate agencies of GOP and GOS.

6.2 OBJECTIVES

The Technical Assistance Team was mandated to:

- o Identify training needs at the district, provincial and federal levels and develop an overall Training Plan to meet these needs.
- o Identify in-country training sub contractors, stimulate competitiveness and qualify of this local resource and complete related contracting formalities to integrate them into the RRMP training component so that they could remain as useful , professional resource to the Government of Sindh and Government of Pakistan in sustaining Project training goals after 1994.
- o Work with the identified in-country training subcontractors in the design development and implementation of seventeen different in-country training courses as identified in the Training Plan.
- o Coordinate activities related to short duration out of country training programs.

- o Assist other components of the project in training related activities in order to assure total integration of the project components and maintain long term susceptibility of the project achievements.

6.3

ACCOMPLISHMENT

- o Training Plan: A complete study of training needs for RRMP was conducted and a formal Training Plan was proposed Program in May 1989. After detailed review in consultation with GOP/GOS and USAID officials, this effort was finalized and presented in the Training Program-Final Report in 1990.
- o Development of seventeen In-Country training courses curricula was recommended and terms of references and complete bidding documents were prepared and published in September 1990 requesting proposals from qualified and experienced professional training firms. Nine Pakistani firms responded to this RFP. After detailed evaluation against a very comprehensive statement of evaluation criteria two subcontractors were selected. Contracts were awarded and signed in April 1991. The delay between the issuance of RFP and signing on subcontractors was due to the gulf war which resulted in the evacuation of expatriate members of the Technical Assistance Team. and suspension of all subcontracting activities.
- o Design/Development/Implementation of In-Country Training Courses: Initial design of all seventeen proposed courses was completed and issued as a part of RFP for the development and implementation of in-country training courses. It was planned to have five training courses designed, developed and Implemented in the year 1991, beginning immediately after the signing on of training subcontractors in April 1991. The subcontractor completed on the design of this first group of courses and the deliver order was being prepared for signature hold on award decision taken in the first week of May 1991. CCSC was directed by the project Officer to suspend the issuance of this first delivery order until further instructions. This suspension was in effect until the termination of CCSC contract in October 1991.
- o Short Duration Out of Country Training Program: A program of four to six weeks on road maintenance management at the Asian Institute Technology (AIT) in Bangkok Thailand was identified as a suitable short duration out-of-country training program for the concerned officials of the participating district councils. Eighteen Government of Pakistan, Government of Sindh and District Council officials were sent to AIT in September/October 1990. Another similar program had been scheduled for March/April 1991 but could not be undertaken due to non completion of participant nominations from the concerned GOS/GOP agencies.

- o Assist Other Components of Project: Five different seminars and workshops were developed and implemented during the tenure of this contract using in house project resources. Details such as type of activities, topics and number of participants are given in Table 6-1 on the following page. It was planned to conduct formal training of activities more frequently as the project moved further into the active implementation phase and specific training needs became apparent. The Technical Assistance Team also conducted a computer training program using its own resources for the support staff of Director General, Rural Development, Government of Sindh.

RECOMMENDATIONS

1. District Council officials/staff should be provided formal class training at the least on the following topics for meeting the objectives of Road Resources Management.
 - a. Road Engineering/Maintenance
 - b. Contract Evaluation/Monitoring/Administration.
 - c. Public Accounting/Finance.
 - d. General Management Skills.
2. Short duration workshop/seminars should be arranged for the employees/staff of contractors working with District Councils using district council engineers/staff in order to develop a better knowledge base among contractors.
3. Government of Sindh should use all material developed on this project and implement recommendations using the resources and facilities of Tando Jam Academy.

TABLE 6 - 1

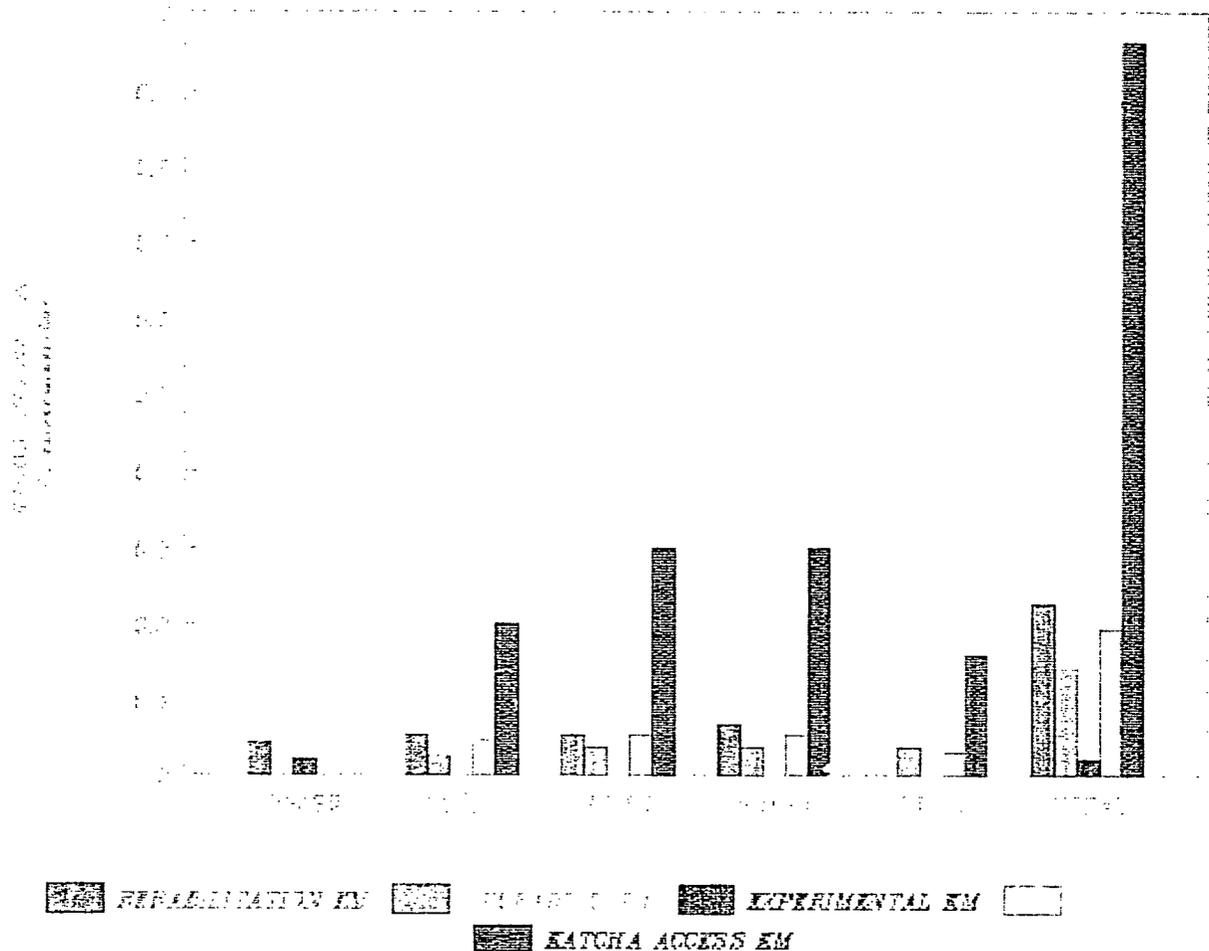
IN COUNTRY TRAINING SEMINAR/WORKSHOPS

TYPE/TOPIC OF ACTIVITY	ACTIVITY CATEGORY	ACTIVITY PERIOD		HOUR OF CONTACT (TOTAL)	TOTAL NO. TRAINED		NO. OF INSTRUCTORS	
		BEGIN	END		FEMALE	MALE	PAKISTANI	EXPAT
1. SEMINAR: District Road Maintenance	Engineering	July 11 (1990)	July 11 (1990)	8		28	3	2
2. SEMINAR: Financial Management Training	Finance	Nov. 7 (1990)	Nov. 7 (1990)	8		39	3	
3. WORKSHOP: Road Construction Inspection	Engineering	Feb. 20 (1991)	Feb. 21 (1991)	16		10	5	
4. SEMINAR: (Sukkur) Budgetary Procedure Improvement	Finance	May. 30 (1991)	May. 30 (1991)	8		24	2	
5. SEMINAR: (Hyderabad) Budgetary Procedure Improvement	Finance	June. 6 (1991)	June. 6 (1991)	8		21	2	1
TOTAL				48	0	122	15	3

PLM.WK1
BH/1991

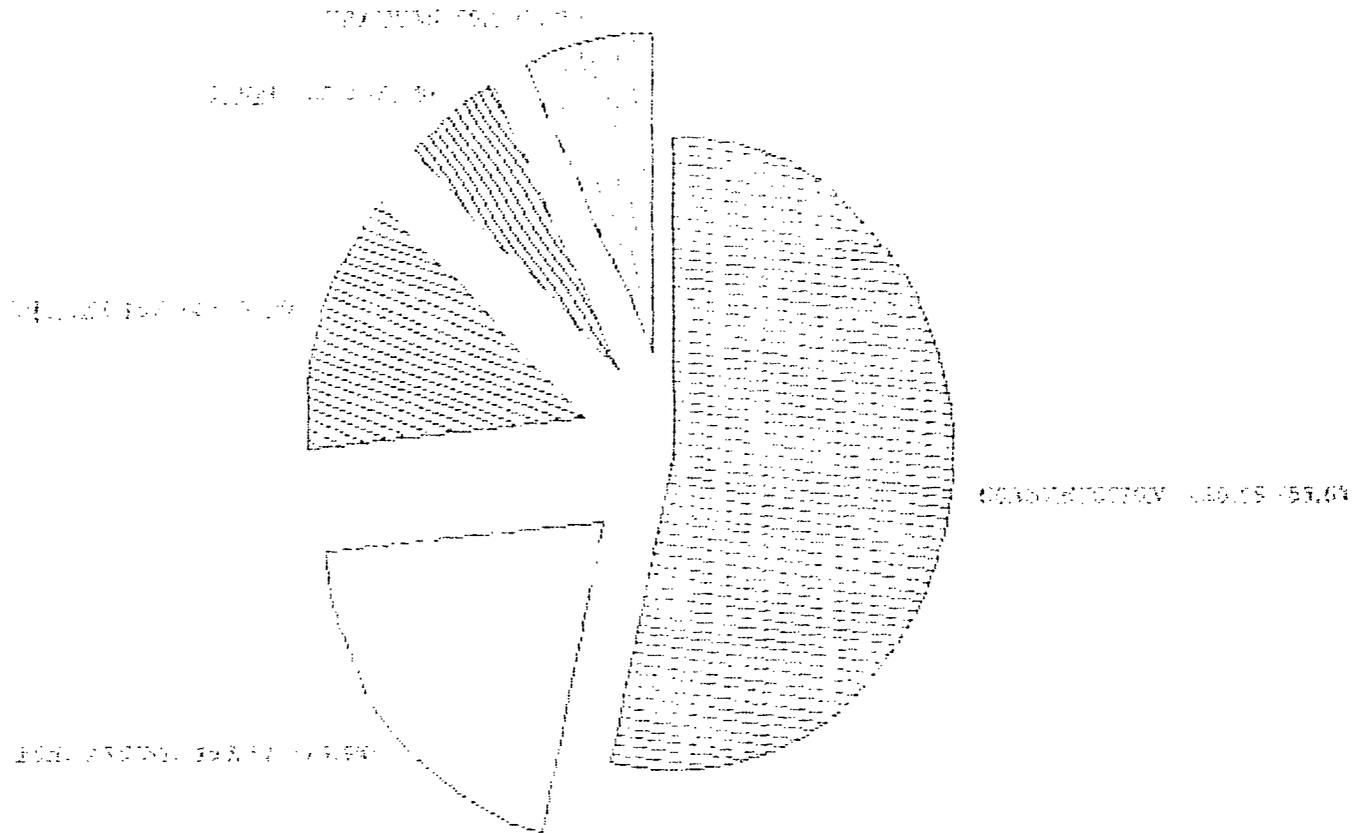
WALD HEAVY METALS MANAGEMENT PROJECT

FIELD MONITORING



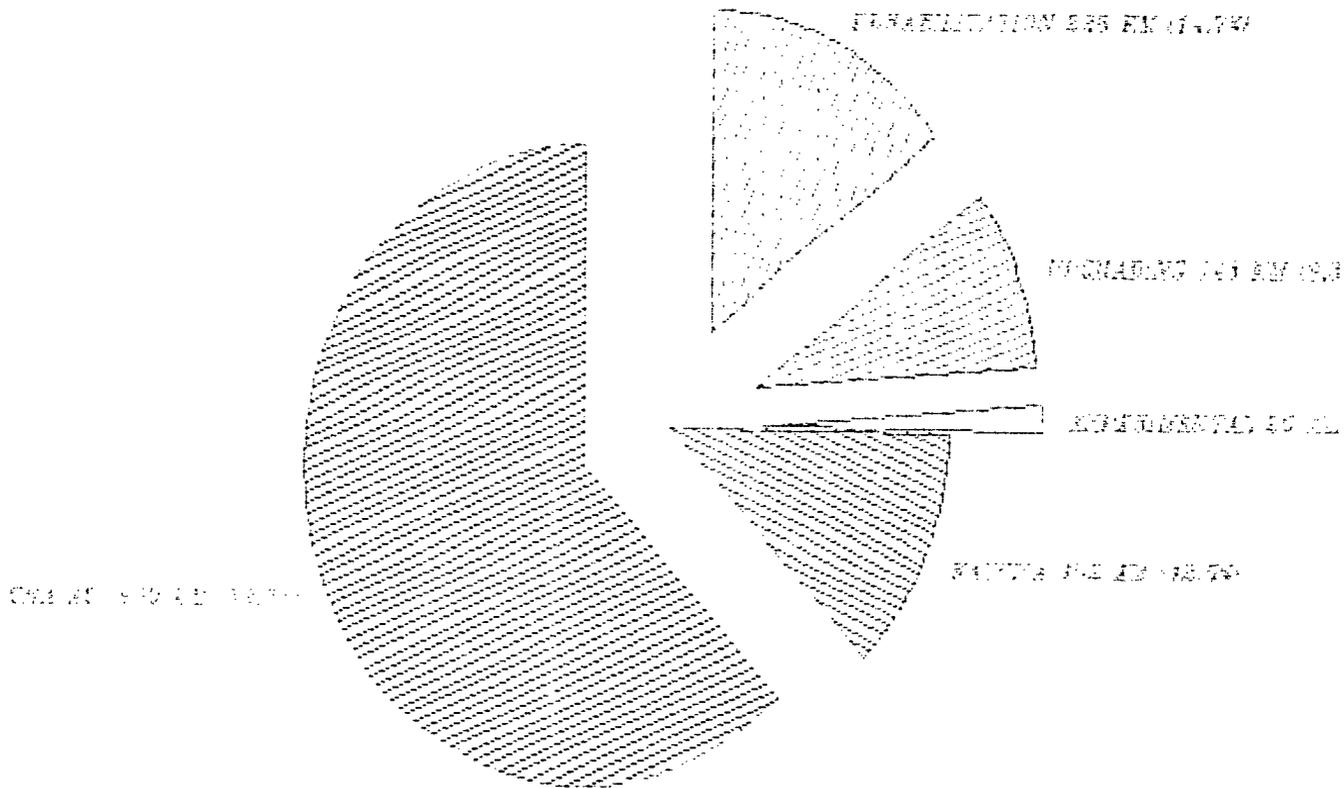
BOARD OF COUNTY MANAGERS' PROJECTS

EXPENSES



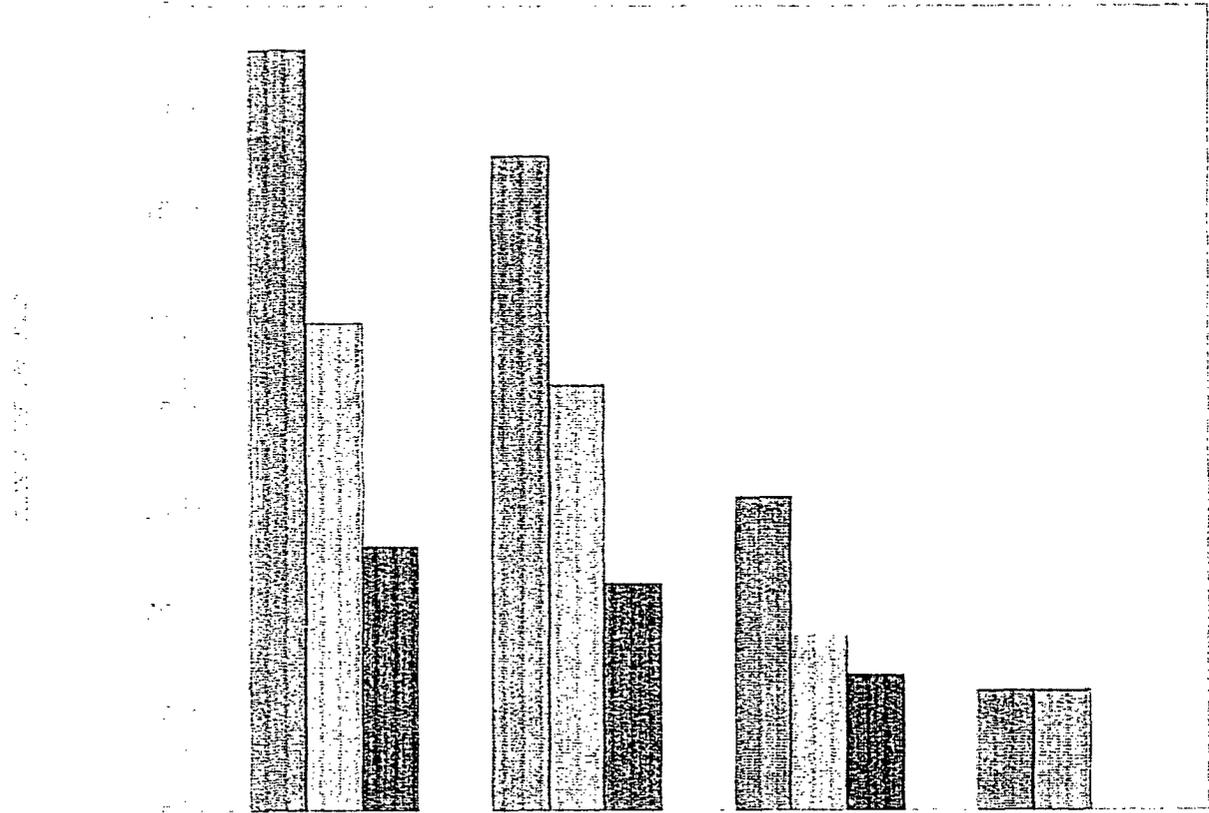
THE UNIVERSITY OF MICHIGAN PROJECT

RESEARCH AND DEVELOPMENT STUDY



ADMINISTRATIVE EXPENSES

1974 - 1975

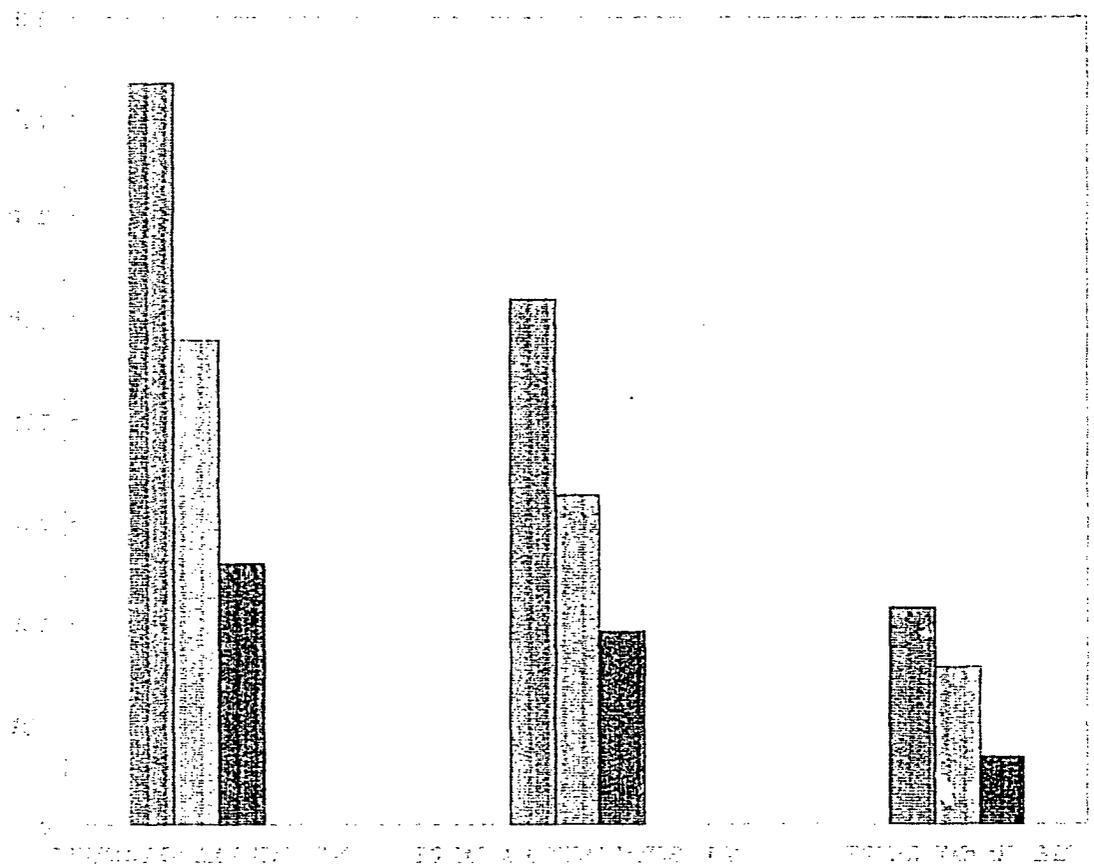


PERSONNEL MATERIALS TRAVEL OTHER

SANDY JAMES DIVISION SUKSOR DIVISION

PERFORMANCE OF DISTRICT ROADS

1972

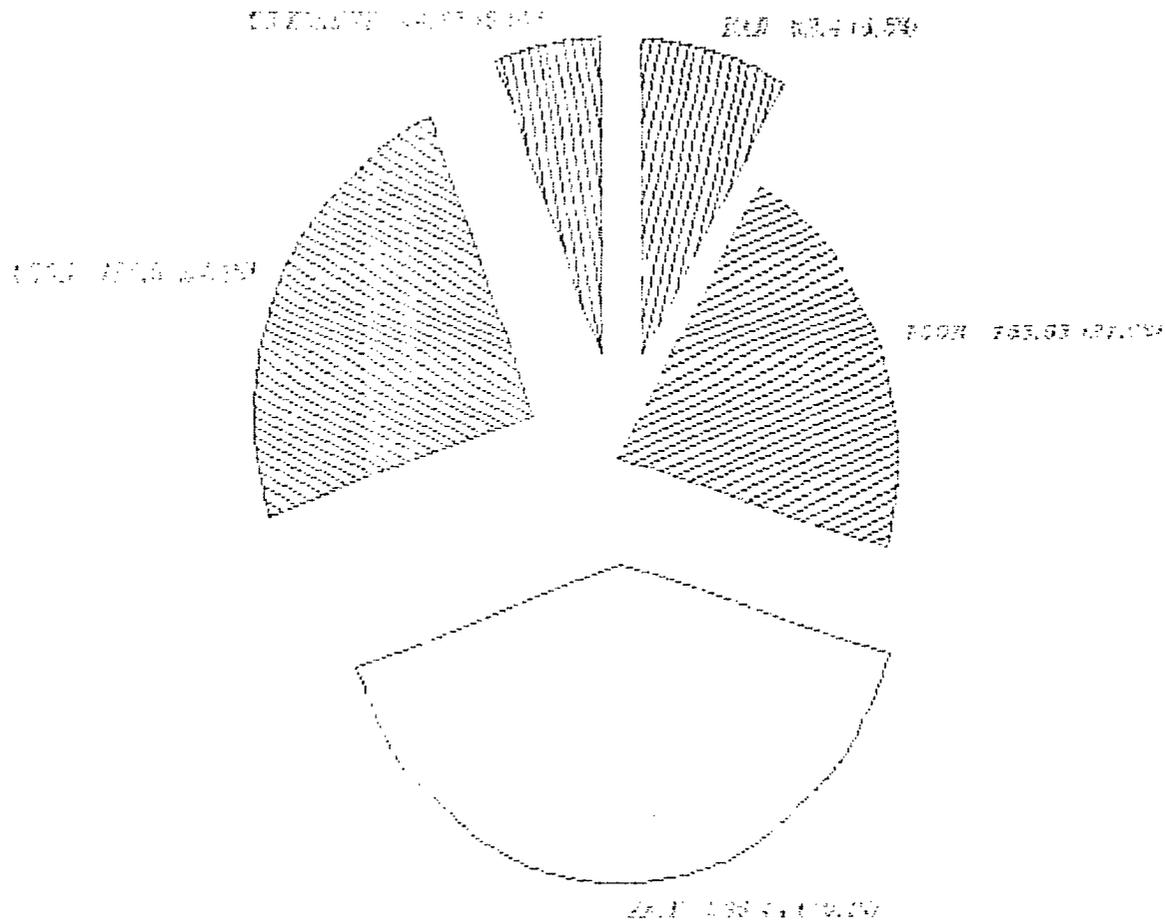


TOTAL SINGH
 COMMAND DIVISION
 SUPERIOR DIVISION

11

BOAT CONDITION SURVEY

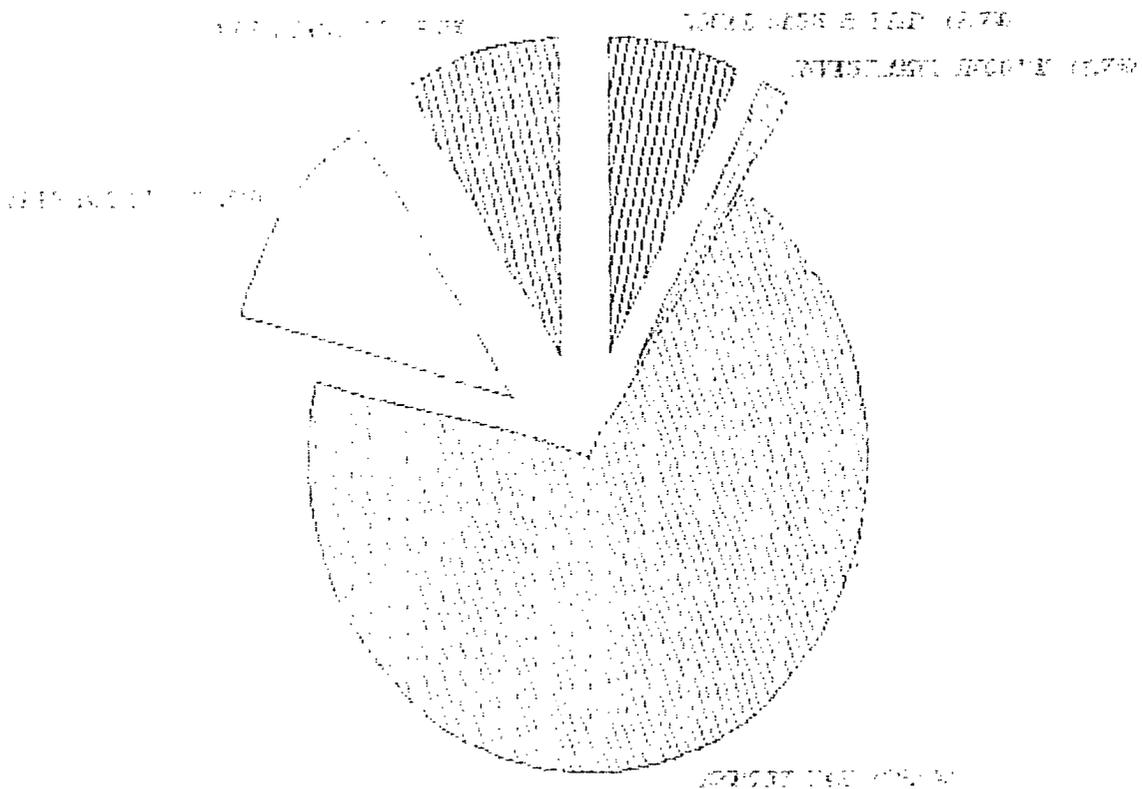
WYOMING BOAT CLUB FIELD



W.

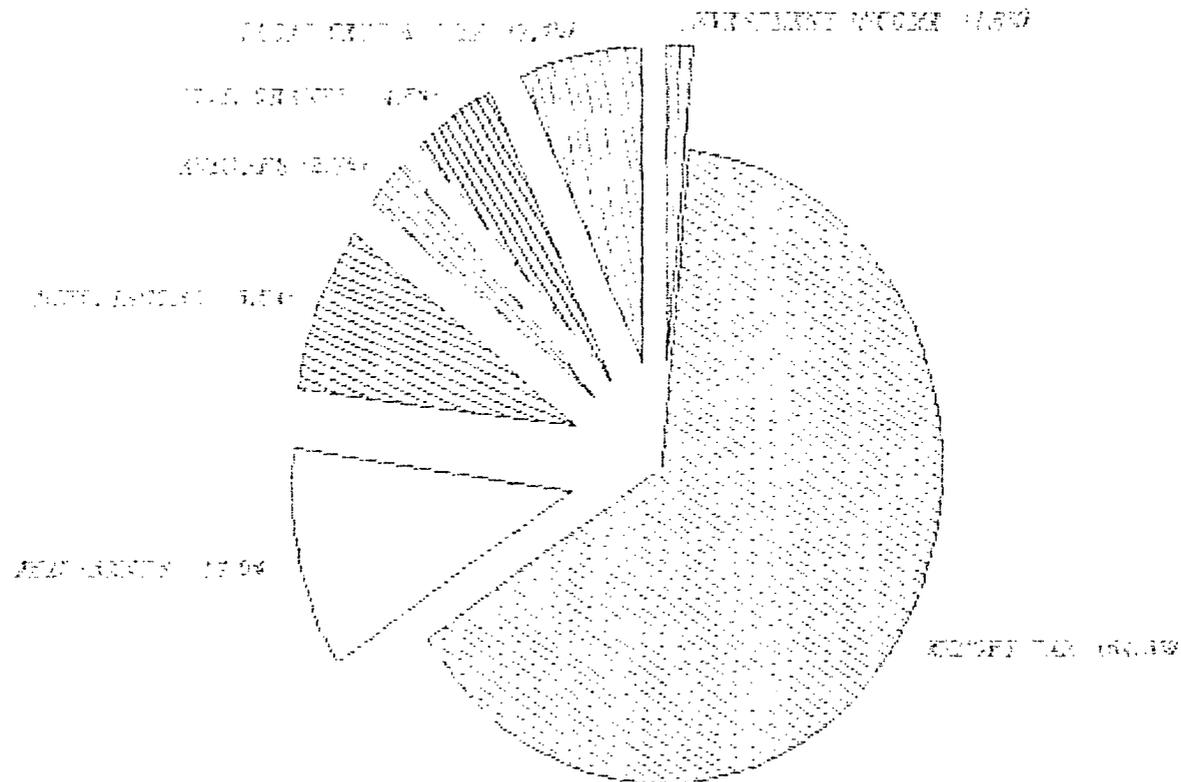
DISTRIBUTION OF REVENUES

IN THE UNITED STATES AND TERRITORIES



DISTRIBUTION OF INVE. ALIEN

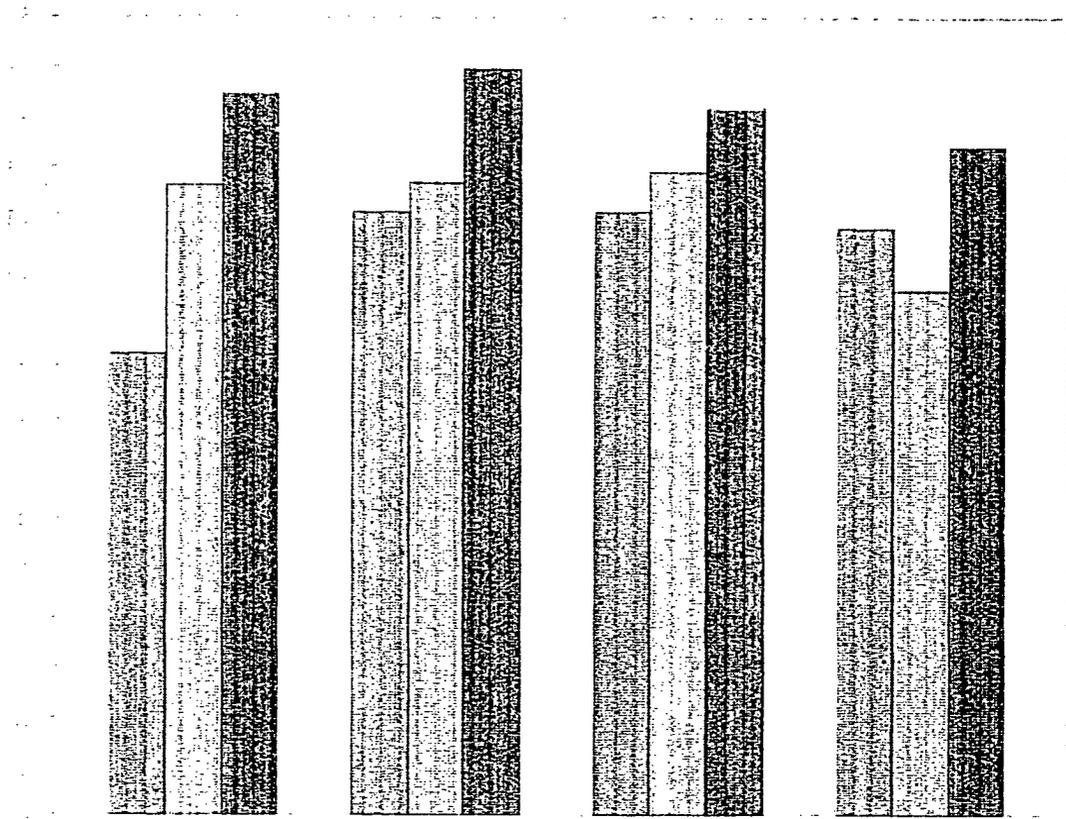
IN FEDERAL COUNTRIES OF TURKEY



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REVENUE FROM LEGAL CLASS

PERCENT OF TOTAL REVENUE



ACTUAL TARGET DEMAND

NS

PERCENTAGE OF EMPLOYMENT IN AGRICULTURE

1950-1960

