

PD BAX 107

AGENCY FOR INTERNATIONAL DEVELOPMENT
PROJECT DATA SHEET

1. TRANSACTION CODE
 A = Add
 C = Change
 D = Delete
Amendment Number 2

DOCUMENT CODE 3

2. COUNTRY/ENTITY MAURITANIA
Official File Copy

3. PROJECT NUMBER 682-0214

4. BUREAU/OFFICE AFRICA 06

5. PROJECT TITLE (maximum 40 characters) RURAL ROADS IMPROVEMENT

6. PROJECT ASSISTANCE COMPLETION DATE (PACD)
MM DD YY
09 30 89

7. ESTIMATED DATE OF OBLIGATION (Under 'B.' below, enter 1, 2, 3, or 4)
A. Initial FY 82 B. Quarter 4 C. Final FY 85

8. COSTS (\$000 OR EQUIVALENT \$1 =)						
A. FUNDING SOURCE	FIRST FY			LIFE OF PROJECT		
	B. FX	C. L/C	D. Total	E. FX	F. L/C	G. Total
AID Appropriated Total	3384	333	3717	7161	4130	11,291
(Grant)	(3384)	(333)	(3717)	(7161)	(4130)	(11,291)
(Loan)	()	()	()	()	()	()
Other US						
1. PL 480 SEC 206						1,992
2.						
Host Country						2,800
Other Donor(s) UNSO						200
TOTALS						16,283

9. SCHEDULE OF AID FUNDING (\$000)									
A. APPROPRIATION	B. PRIMARY PURPOSE CODE	C. PRIMARY TECH CODE		D. OBLIGATIONS TO DATE		E. AMOUNT APPROVED THIS ACTION		F. LIFE OF PROJECT	
		1. Grant	2. Loan	1. Grant	2. Loan	1. Grant	2. Loan	1. Grant	2. Loan
(1) SH	130	821		5,291		6,000		11,291	
(2)									
(3)									
(4)									
TOTALS									

10. SECONDARY TECHNICAL CODES (maximum 6 codes of 3 positions each)

12. SPECIAL CONCERNS CODES (maximum 7 codes of 4 positions each)
A. Code BR BL BS
B. Amount

13. PROJECT PURPOSE (maximum 480 characters)
TO FACILITATE ACCESS TO MARKETS AND THE MOVEMENT OF SOCIAL SERVICES AND AGRICULTURAL INPUTS INTO POTENTIALLY HIGH FOOD-PRODUCTION AREAS.

14. SCHEDULED EVALUATIONS
Interim MM YY 01 86 Final MM YY 09 89
15. SOURCE/ORIGIN OF GOODS AND SERVICES
 000 941 Local Other (Specify)

16. AMENDMENTS/NATURE OF CHANGE PROPOSED (This is page 1 of a page PP Amendment)
INCREASES FUNDING TO COMPLETE CONSTRUCTION OF 233 KM OF RURAL ROAD BETWEEN KAEDI-M'BOUT-SELIBABY AND TO PARTICIPATE IN A POST-CONSTRUCTION MAINTENANCE PROGRAM.

17. APPROVED BY
Signature: [Signature]
Title: MISSION DIRECTOR
Date Signed: MM DD YY 05 29 85
18. DATE DOCUMENT RECEIVED IN AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION
MM DD YY

Sub Controller

MEMORANDUM FOR THE MISSION DIRECTOR, USAID/MAURITANIA

FROM: William D. Jones, *WDJ*

SUBJECT: Mauritania Rural Roads Improvement Project (682-0214);
Project Authorization Amendment II

DATE: May 29, 1985

I. ACTION

You are requested to amend the Project Authorization dated August 30, 1984 for the Rural Roads Improvement Project (682-0214). The amended authorization will add \$6,000,000 to the existing life-of project A.I.D. funding level of \$5,291,000, for a new total of \$11,291,000 and, as described below, calls for two conditions to disbursements and three covenants to be incorporated in the Amendment to the Project Grant Agreement. You are also requested to authorize a 27-month extension of the Project Assistance Completion Date (PACD), from June 30, 1987, to September 30, 1989.

II. DISCUSSION

The purpose of this amendment ^{is} to provide the additional time and funding required to complete project activities. On August 30, 1984 you authorized \$481,000 in bridge funding so that there would be adequate time and funds to ensure the uninterrupted services of the Morrison-Mairele technical assistance team, while also covering the costs of project management under personal services contracts. Since then, Morrison-Mairele has prepared revised cost estimates and an associated Project Work Plan and Schedule. On the basis of these documents, as reviewed and agreed upon by Mission staff and an AID/W project design officer, the Mission submitted Project Paper Supplement II (PPS II) to AID/W on March 1, 1985. The Supplement proposed a \$13.5 million increase to A.I.D. LOP funding to cover higher design standards than those planned in the original Project Paper. PPS-II also proposed USAID participation in an ambitious 3-year post-construction maintenance program and a contribution to construction of the Bogue-Kaedi road. The Bogue-Kaedi link was substituted for the Selibaby-Goraye segment at AID/W's suggestion as being of higher priority.

The PPS-II was criticized by the Regional Inspector General on the grounds that the project was not economically justified, that there was no assurance of post-project maintenance, and that the absence of an all-weather road from Bogue to Kaedi would not meet the project objective of linking the Gorgol and Guidimaka regions with Nouakchott.

The Africa Bureau ECPR, chaired by the DAA/AFR Jay Johnson, met on March 20, 1985 and identified three major issues: (a) total project cost and economic viability; (b) recurrent cost for

road maintenance, and (c) construction of the Bogue-Kaedi Road. Because of these issues AA/AFR Mark Edelman did not approve the PFS-II as submitted, and the ECPR was suspended for further consultation with you and the Mission engineer.

On the basis of those consultations and an intensive review of the various options for completing the project, agreement was reached on a modified project design which would require \$6,000,000. The modified project design recognizes the essentially rural aspect of the road and the relatively low traffic projections over the near term. It thus allows for lower design standards and correspondingly lower costs than those proposed by the Morrison-Mairele team. Instead of the road being open throughout the year, there may be occasional ruptures after especially heavy rains. Nevertheless, by providing an additional \$6,000,000, except for the Selibaby-Goraye link, upon completion of construction the project objectives of the original Project Paper will have been essentially achieved.

In addition, the road built by the United Nations and which forms the first 70 kilometers between M'Bout and Selibaby will be rebuilt to standards similar to those of the rest of the road.

The \$6,000,000 add-on also includes the provision of \$400,000 for USAID participation in a post-construction maintenance program. The scaled-back maintenance program similarly reflects a more conservative estimate of traffic use and of resurfacing requirements. It also anticipates the possibility of making greater use of village participation and possibly a Food-for-Work program where food relief is now given freely. The GIRM has agreed that the equipment presently used for construction of the road will be available for maintenance of the road. Moreover, the GIRM has initiated a 5-year road maintenance study financed by the Kuwait fund under the IBRD Fourth Highway Project. The results of the study will be available toward the end of CY85 for review at the Consultative Group meeting planned for November 1985.

The Arab Fund (FADES) has agreed to provide \$5 million for the Bogue-Kaedi road. The GIRM expects to award a contract within the next several months to an engineering firm for the economic feasibility study and engineering design of the road. It is expected that the Consultative Group will review the need for additional funding.

As indicated in State 140724 (Attachment 2), on the basis of the design modifications and GIRM and other donor actions, and contingent on the Amendment to the Grant Agreement containing appropriate covenants and conditions precedent to disbursement for assuring diligent efforts leading to ultimate construction of the Bogue-Kaedi Road and adequate road maintenance after the construction phase, the Africa Bureau approved the \$6,000,000 supplement on May 4, 1985. These requirements and the GIRM's obligation to provide a site representative are specified in the Amendment to the Project Authorization.

The Bureau's decision to approve the additional \$6,000,000 recognizes that the modified project design is responsive to the issues noted by the ECPR in the March 20 meeting and the criticisms raised by the auditors in their draft audit report.

The \$6,000,000 authorized under this amendment is presently budgeted for the following categories of inputs:

A. Technical Assistance	\$1,600,000
B. Commodities	\$1,200,000
C. Local Costs	\$2,700,000
D. Future Road Maintenance	\$ 400,000
E. Contingencies	\$ 100,000

Finally, the PACD needs to be extended to September 30, 1989 to allow sufficient time to complete the construction (estimated date September 30, 1986) and for the GIRM to take over the full maintenance responsibility of the road within the three-year period after the construction is completed.

AID/W has notified us in State 162680 that they have completed the Congressional Notification process and have received no objection from the Congress to add the additional \$6,000,000 to the project and to this year's aid level to Mauritania, and that obligation may now occur. Also, Attachment 2 records the ad hoc delegation of authority to you from the Acting AA/APR to amend the project as described above.

Recommendation: That you sign the attached Project Authorization Amendment, thereby increasing the authorized A.I.D. life-of-project funding from \$5,291,000 to \$11,291,000, and authorizing extension of the PACD from June 30, 1987 to September 30, 1989.

Attachments:

1. Project Authorization Amendment II
2. State 140724, May 8, 1985
3. State 162680, May 28, 1985

Clearances:

K. Rikard, ENR *KR*
JWButler, CONT *for 5/29*
WBoehm, AD *5/29*

Drafted

JCGuardiano *JCG* 5/29/85

PROJECT AUTHORIZATION AMENDMENT

AMENDMENT NO. 2

Name of Country : Islamic Republic of Mauritania

Name of Project : Rural Roads Improvement

Number of Project : 682-0214

1. Pursuant to Section 121 of the Foreign Assistance Act of 1961, as amended, the Rural Roads Improvement Project was authorized on September 14, 1982 by the Assistant Administrator for Africa, and subsequently was amended on August 30, 1984. That authorization is amended further as follows:

a. Paragraph 1 is amended by deleting "\$5,291,000" and substituting therefor "\$11,291,000 (Eleven million, two hundred ninety-one thousand dollars)".

2. The Grant Agreement Amendment will contain, in substance, the following conditions and covenants:

a. Conditions Precedent

1. Prior to the disbursement of funds after December 1, 1985, the GIRM will provide evidence to USAID that a contract has been executed with a consulting firm for the preparation of economic analyses, engineering design and bid documents for the rehabilitation of the Boghe-Kaedi road.

2. Prior to disbursing funds after October 1, 1986, in order to maintain the Kaedi-Selibaby road, the GIRM will provide evidence to USAID that the GIRM has in place a staffed and funded road maintenance system.

b. Covenants

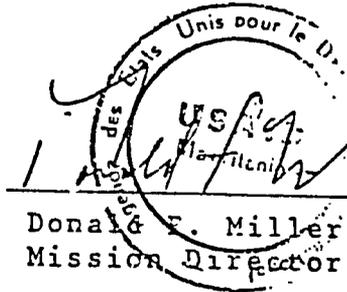
1. The GIRM shall keep USAID informed on a regular basis of the progress made in initiating the rehabilitation of the Boghe-Kaedi road.

2. The GIRM shall keep USAID advised on a regular basis of progress made in implementing and financing of a roads maintenance system in Mauritania.

3. The GIRM agrees to provide a Ministry of Equipment and Transport representative at the Project site to supervise the Mauritanian construction brigade and to conduct liaison activities with the local communities in the Project area.

3. The Project Assistance completion date is changed from the date, June 30, 1987, to the date, September 30, 1989.
4. The Authorization cited above, as amended, remains in force except as amended further hereby.

Date: 29 May 1985


[Handwritten Signature]
Donald F. Miller
Mission Director

Clearances:
ENGR: KRIKARD KRB
PDO: WJONES WJ
ADIR/P: WBOEHM WBO
CONT: JWBUTLER JWB

6

MAURITANIA RURAL ROADS IMPROVEMENT PROJECT
(6B2-0214)

TABLE OF CONTENTS

PROJECT DATA SHEET

Action Memorandum and Project Authorization
Table of Contents

Map

Glossary

Part I

SUMMARY AND RECOMMENDATIONS

PAGE

5

Part II

PROJECT BACKGROUND AND DESCRIPTION

9

A. General Background

9

1. Transportation Sector Overview

9

2. GIRM Development Priorities

10

3. Relation to other AID activities

10

4. Other donor activities

11

5. Project Rationale

13

B. Project Background and Detailed Project
Description

13

1. Background

13

2. Current Status

15

3. Detailed Project Description

16

4. Budget Summary

19

PART III PROJECT ANALYSES

A. Technical Update	20
1. Design Standards	20
2. Current Description of Road Segments	23
3. Construction Methods	23
4. Road Maintenance	24
5. TA performance	26
6. Environmental Update	28
B. <u>Economic Analysis Update</u>	28
C. <u>Social Analysis Update</u>	35
D. <u>Implementation Update</u>	36
1. Administrative Arrangements and Analysis	36
2. Implementation Schedule	40
3. Procurement Plans	41
4. Contracting Arrangements/Alternatives	41
5. Monitoring and Evaluation Plan	43
6. Audits	44
E. <u>Detailed Cost Estimates and Financing Plan</u>	44
1. AID Costs	44
2. GIRM Contribution	44
3. Disbursement/Payment Procedure	45
4. Section 121 (d) Requirements	45

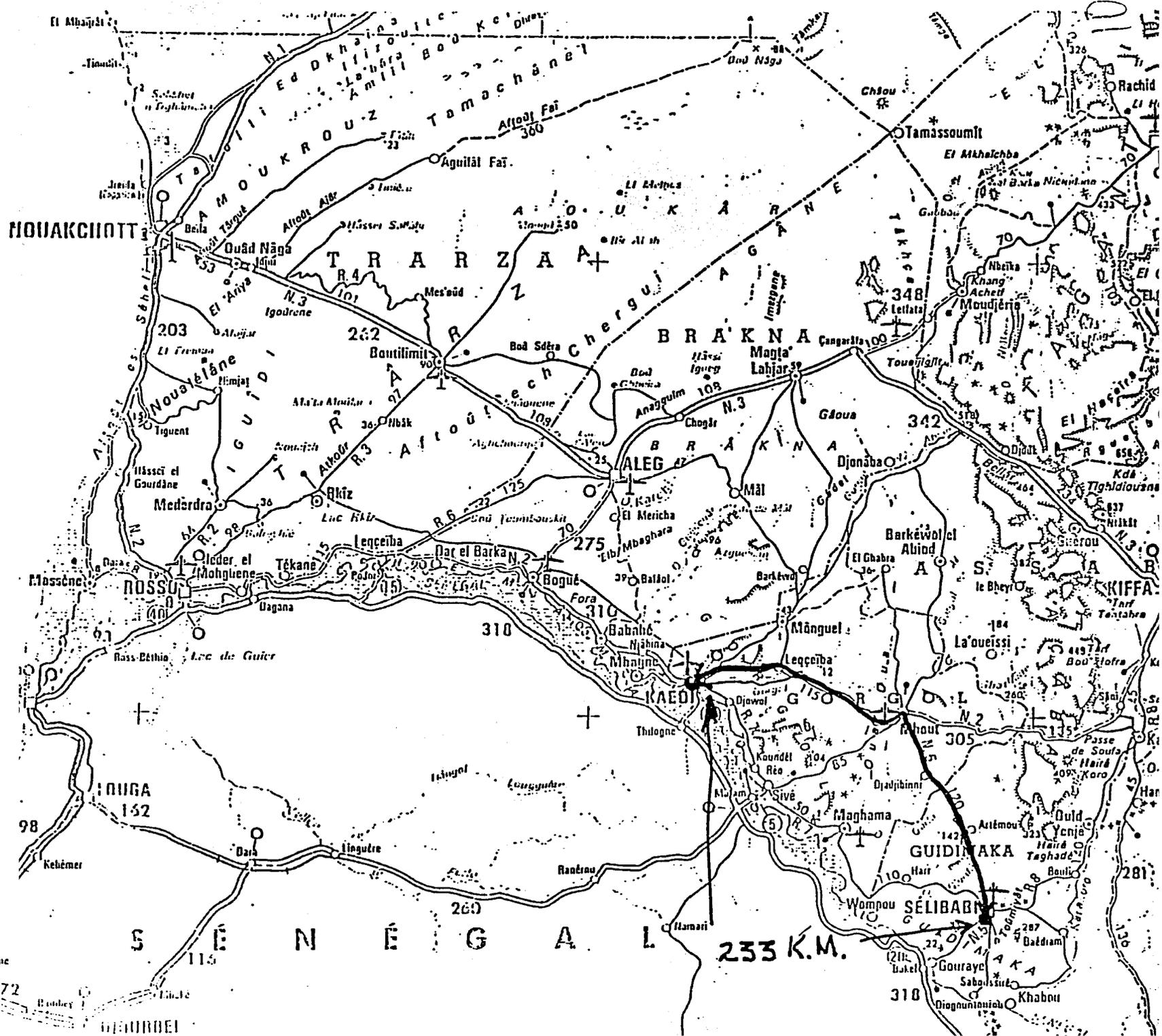
PART IV

ANNEXES

A.- Revised Logframe

B.- Statutory Checklist

C.- 611(e) Certification



GLOSSARY

CBD	Commerce Business Daily
CIDA	Canadian International Development Agency
EOPS	End of Project Status
FAC	Fonds d'Aide et Cooperation (French)
FADES	Arab Fund for Economic and Social Development
Force Account	Construction by public sector organizations such as the Department of Public Works. As used in this PPS "modified force account" means that the construction organization is not strictly under the control of Public Works.
FX	Foreign Exchange
GIRM	Government of the Islamic Republic of Mauritania
IDA	International Bank for Reconstruction and Development
KM	Kilometer
LC	Local Cost
M, M3	Meter, Cubic Meter
PACD	Project Assistance Completion Date
PP	Project Paper
PPS	Project Paper Supplement
PW	Public Works: Ministry of Equipment, Transport and Telecommunications.
UM	Mauritania Ouguiya Av. UM 60 = \$1 prior to 11/84 Av. UM 65 = \$1 after 11/84
UNSO	United Nations Sudano-Sahelian Office

Part I - SUMMARY AND RECOMMENDATIONS

This Project Paper Supplement (PPS) proposes to increase AID life of project (LOP) funding by \$ 6.0 million from \$ 5.3 million to \$11.3 million and to extend the Project Assistance Completion Date (PACD) by 27 months from June 30, 1987 to September 30, 1989, thereby allowing: a) complete construction or renovation of a 233 km all-weather road from Kaedi to Selibaby and b) three years of post-construction maintenance.

--- Program Goal: To improve the social and economic well-being of the rural population of the Buidimaka and Gorgol Regions. The goal is unchanged from the original project design.

--- Project Purpose: To facilitate access to markets and the means of moving social services and agricultural inputs into potentially high food production areas. The project purpose is unchanged from the original project design.

--- Revised Project Outputs:

1. 233 km of all-weather roads constructed and maintained:
 - a. Kaedi-M'Bout 117 km
 - b. M'Bout-Selibaby 116 km
 - Total 233 km
2. Rural road maintenance organization/facilities strengthened to maintain rural roads improved under the project.

These revised outputs reflect: a) recognition that autonomous brigades are not currently building roads in Mauritania and that that method may not be recommended as a general practice; b) more realistic expectations for the short-term financial and institutional development of the Department of Public Works (PW); c) the addition of construction/reconstruction responsibility for the first 70 km of road from M'Bout to Selibaby originally constructed by the United Nations Sudano-Sahelian Office (UNSO); d) the deletion of the furthest 46 km segment of road from Selibaby to Gouraye; e) the addition of limited operational expense funding for three years of road maintenance after road construction; and f) a recognition that maintainable all-weather roads are roads built to significantly higher standards than those originally contemplated under this project.

--- Revised Project Inputs - (See Financial Plan)

- AID DA funding \$11.3 million
- PL 480 Title II, Section 206 \$ 1.6 million equivalent
- GIRM \$ 1.800 million (in-kind)
- UNSO \$200,000.

The higher project inputs reflect the addition of new project elements, the higher estimated cost of elements originally included, the financial inability of the GIRM to meet originally contemplated salary expenses and an inflation and contingency factor.

--- Technical Analysis - The technical analysis recognizes that the road design standards proposed in the original PP required substantial upgrading based on additional data, observations and experience gained on the 70 km of completed road financed by the U.N. This PPS draws heavily on the costs and recommendations provided by the T.A. contractor, Morrison-Maierle, in its updated work plan and schedule of December 1984. AFR/TR/ENG has reviewed the revised design standards, construction work plan and cost estimates and confirms that the cost estimates are reasonably firm as required under Section 611(a) of the FAA. Environmental considerations remain essentially unchanged and the "negative determination" finding continues.

--- Economic Analysis: The proposed road will provide critical access to the most agriculturally productive region of Mauritania, facilitating the supply of agricultural inputs and increasing the value and marketability of agricultural production. The quantifiable short-term economic assessment of the project shows a high positive Internal Rate of Return.

--- Social Analysis: The social analysis and benefits in the original project design still apply and are perhaps enhanced by the migration to the basin and other hardships associated with the current drought situation.

--- Implementation Update: This PPS recognizes and discusses past problems with project implementation and proposes improvements including strengthened technical assistance, and stricter project monitoring and supervision all of which will help assure a much improved product. The modified force account method of construction is not ideal but is the most efficient and cost effective construction option, given project circumstances.

A. Project Issues

1. Boghe-Kaedi Road - At the time the original project paper was prepared, AID and the GIRM Department of Public Works anticipated that the Arab Fund for Economic Development (FADES) would, as part of the Fourth Highway Project study and build drainage structures and earthworks on the Boghe-Kaedi road, bringing it up to all weather standards. AID was also seen as a supporter during the early stages of the Senegal River Basin Integrated Development Project. Up to now AID has made minor emergency repairs on this road because (a) there has not been enough money for adequate maintenance/restoration and (b) the road is not a part of AID's project commitment.

The engineering studies financed by the Kuwait/FADES Fund are expected to begin in mid-1985 with construction beginning in 1986. After completion of the Kaedi-Selibaby Road, access to Kaedi will be assured even during the rainy season, from the east and southeast. Nevertheless, without improvement of the Boghe-Kaedi road access to Kaedi from the west would ^{not} be improved, but the economic and social benefits of this project would be reduced. This PPS includes a Condition Precedent to Disbursement and Covenants recommended by AID/W for inclusion in the amended Grant Agreement to assure GIRM diligence in realizing improvement of the Bogue-Kaedi Road.

2. Crossing At Selibaby - The Minister of Transport has requested that USAID include funding for a bridge in this project to link the city of Selibaby to a Hospital just north of the city along that project route. Currently the road is closed for 2-3 days at a time several times each year by flood waters in the Oued Amague. It is estimated that a bridge large enough to cross the Oued (approximately 75 m) and strong enough to withstand the annual flood waters would cost as much as \$1 million. Other options discussed have ranged from an elevated foot bridge to an amphibious vehicle or a small hand or cable operated barge. Most of the options have been discarded either because of the expense or the technical complexity. USAID/Mauritania will continue to explore low cost solutions with the GIRM.

3. Contractor Performance - The project paper discusses concerns raised by the Mission and the PPS design team regarding the performance of the TA contractor, Morrison-Maierle. These concerns include maintenance of financial records, commodity management, the quality of equipment maintenance and the quality of overall project planning and management. Many of these problems could have been overcome earlier had M-M been able to field a capable long-term Chief of Party. Because the project audit carried out in early 1985 was reasonably satisfactory in its findings, the USAID proposed that, consistent with contracting regulations, AID advertise its intent to extend the current contract with a modified scope of work.

4. Post Construction Road Maintenance - The original project agreement made the GIRM responsible for establishing a plan for maintaining the roads after completion of the project. Public Works has provided USAID and the TA contractor with its routine maintenance plan for all roads in Mauritania but no project-specific plan. It has, however, begun the contracting process of a firm to develop a national road maintenance plan for 10 years, and a detailed program for the next 5 years. This project includes \$400,000 for USAID participation in the national program, with specific reference to the Kaedi-Selibaby Road. In addition, and in accordance with a recommendation by AID/W, the amended Grant Agreement includes a Condition Precedent to Disbursement and a Covenant to assure establishment of such a plan and an appropriate maintenance organization prior to AID participation in the post-construction maintenance program. The USAID also anticipates development of a PL480 Food-for Work

program in support of the maintenance effort.

5. USAID Administrative Capability - Project implementation to date has suffered from inadequate USAID project management and monitoring and a high turnover of project managers. With the addition of both a direct hire engineer and a direct hire project development officer USAID administrative capability will be sufficient to manage this activity.

B. Conditions, Covenants and Waivers: The Grant Agreement is to contain the following Conditions Precedent to Disbursement and Covenants:

CONDITIONS PRECEDENT

1. Prior to disbursing funds after December 1, 1985, the GIRM will provide evidence to USAID that a contract has been signed with a consulting firm for preparing the economic analysis, engineering design and bid documents for rehabilitation of the Bogue-Kaedi Road.

2. Prior to disbursing funds after October 1, 1986, to maintain the Kaedi-Selibaby Road, the GIRM will provide evidence to USAID that the GIRM has in place a staffed and funded road maintenance system.

COVENANTS

1. The GIRM shall keep the USAID informed on a regular basis of the progress made in initiating the rehabilitation of the Bogue-Kaedi Road.

2. The GIRM shall keep the USAID advised on a regular basis of progress made in implementing and financing of the roads maintenance system in Mauritania.

3. The GIRM agrees to provide a Ministry of Equipment and Transport representative at the Project site to supervise the Mauritanian construction brigade and to conduct liaison activities with the local communities in the Project area.

PART II BACKGROUND AND PRESENT STATUS

A. General Background

1. The Transportation Sector Overview

In general the transport system in Mauritania can be divided into three main regional sub-systems:

-- The first sub-system is a 675 km railway which permits the export of iron ore from the mining center at Zouerate in the north through the port of Nouadhibou. The Nouadhibou port also serves the main offshore commercial fishing fleet.

-- In the central region, the second sub-system is a network of three main paved roads (totalling approximately 1,700 km) which emanate from the capital city of Nouakchott. The northern road is paved from Nouakchott to Akjoujt (256 km) and serves the copper mine near Akjoujt. Beyond Akjoujt an earth track in extremely poor condition proceeds northeast for 150 km to the village of Oued Seguelil, from where a gravel road in fair condition proceeds 45 km to Atar. The road continues northeast 100 km to Choum and the railway line to Zouerate. The road-rail link constitutes the only surface transport link between Nouakchott and Nouadhibou. The road continues north to Fderik-Zouerate, Bir Mogrein and the Moroccan and Algerian borders. The "Route de l'Espoir" runs east from Nouakchott nearly 1,200 km through the cities of Aleg, Kiffa and Ayoun to Nema in the far east of Mauritania. A short, high quality spur road runs south from this route and joins Aleg and Eoghe. The heaviest travelled road in the network runs south from Nouakchott, 203 km to Rosso and the Senegal border. This is an important link for the importation of goods from and through Senegal.

-- The third transportation sub-system and the one which also includes this project, is a network of earth and gravel roads totalling approximately 4,000 km and primarily serving the region south of the Nouakchott-Nema road and east of the Nouakchott-Rosso road. This area includes the agricultural production areas along the Senegal River and the higher rainfall regions of Gorgol and Guidimaka.

The country is also served by two international airports (Nouakchott and Nouadhibou) and a series of regional airports.

The existing and inadequate port facility at Nouakchott will be replaced by a deep water port currently being built by the Chinese just south of the city and scheduled to open in 1987. A good deep-water port does exist in Nouadhibou, but because of the lack of surface connections between Nouakchott and Nouadhibou, and the inadequacies of the Nouakchott port, a large percentage of Mauritanian imports come through the Port of Dakar and enter Mauritania at Rosso. Coastal and inland water transportation is

insignificant.

The motor transport industry is dominated by owner-operators, although several quasi-public sector institutions operate their own fleets. On balance, the industry is relatively competitive and the degree of regulatory restrictions is light.

For road users the cost of transportation in Mauritania is relatively high. Problems include high cost of imported vehicles, high cost and limited availability of spare parts, difficult operating conditions due to the lack of uniform road standards and surface quality/conditions, the long distance between population centers, etc. For those responsible for building and maintaining roads the costs are also very high: during most of the year blowing sand covers many sections of road; costly washouts are common during the short rainy season; a rapid growth of heavy duty and over-loaded trucks has been particularly damaging; and insufficient maintenance results in little repairs becoming expensive problems. Where economically justified and where financing can be found, the GIRM is therefore building higher standard asphalt roads which require vastly reduced maintenance.

The GIRM clearly recognizes the need for regular and periodic maintenance on all roads. As long as the funding constraints continue most maintenance funds will be channeled to the main paved roads which naturally have much higher priority.

2. GIRM Development Priorities

Mauritania's current economic situation could be described in the following terms: declining per capita income; dependency upon foreign food sources; serious structural and budgeting problems and poor economic integration between regions.

The current drought has had devastating impacts on food production in the rural areas. The rains in 1983-1984 have been about 30% of normal and crop losses are estimated as high as 80%. The evasive goal of self-sufficiency in food production is still the primary objective of the Fourth Development Plan. But, due to the crisis, the GIRM has shifted its priorities and is now focusing on the "Plan d'Action d'Urgence": Emergency Action Plan. This emergency plan is directed towards replenishing food stocks and seed reserves and rehabilitating grazing lands. It also emphasizes public health care to help those most seriously affected by the drought.

This project will help overcome the logistical difficulties of the emergency plan. It is also a necessary (though not sufficient) pre-requisite for progress towards increased food production which must be concentrated in regions of highest rainfall - Gorgol, Guidimaka and the Senegal River Valley. Without an improved road between Rosso and Boghe and the improvements included in this project Mauritania will continue to

have inadequate access to these areas making its efforts to feed itself even more difficult.

3. Relation to Other AID Activities

Like the GIRM, AID's development strategy in Mauritania focuses on enhanced food security. Of immediate importance is the provision of food aid to combat the threats to life and health posed by the persistent drought. Once those emergency needs are addressed, USAID will aim its program towards increasing food production in the project area, the area of Mauritania with the greatest potential for agricultural development. As noted in the original PP, the Rural Roads Improvement Project will help achieve the objective of higher food production in the area by improving the linkages between Mauritanian markets and the potentially productive but isolated regions of Gorgol and Guidimaka.

The road will complement the Rural Health Services Project (682-0230) which may expand into the Guidimaka region in 1985. In the agricultural sector, the Agricultural Research II Project (682-0957) just getting underway will also concentrate on the right bank of the Senegal River. Finally, other project concepts are now being explored for a range of agricultural interventions in the project area beginning in FY 1986 or FY 1987.

The PL 480 Program, a major part of USAID's portfolio, has a symbiotic relationship with this project. On the one hand, counterpart funds generated by sales of PL 480 commodities help meet critical local currency requirements of this project. On the other hand, improvements to the road network in Gorgol and Guidimaka should help the PL 480 program achieve some of its primary objectives: (a) get emergency relief to beneficiaries faster and cheaper; (b) reduce the price of agricultural inputs; and (c) speed the produce to market and increase the market value and official consumer price of food grown in the project area, therefore, encouraging an increase in producer prices.

All counterpart generations intended for the roads project under the current PL 480, Title II, Section 206 program have been allocated to it.

4. Other Donor Activities

a. The World Bank (IDA), the Kuwait Fund and the Arab Fund for Economic Development (FADES) have joined forces to finance the \$13.8 million Fourth Highway Project. The primary components of their program include:

196

1) The study and partial work on the repair and reinforcement of paved roads from Nouakchott to Rosso and from Nouakchott to Akjoujt. The studies were completed in August 1984 and discussions are now underway between the GIRM and the World Bank to determine the funding still available and priorities for construction.

2) The study and reconstruction of the Boghe-Kaedi road including drainage structures. This element totals nearly \$15 million and is particularly important to this AID funded project. Improved drainage structures on this road will raise it to all-weather standards, greatly increase the socio-economic benefits of this project and significantly reduce the costs of road maintenance. A 30-year loan agreement was signed with the FADES in 1982, and an engineering contractor will be chosen in mid-1985 to update a 1965 feasibility study, redesign drainage structures, and prepare final plans and specifications.

3) A general road maintenance program. A study will begin in mid-1985 and is expected to cost up to \$300,000. It is expected to develop a nationwide maintenance plan for gravel as well as paved roads. Funds remaining from this \$4.8 million component will finance maintenance equipment and operating expenses, most of which will be earmarked for the major paved roads of Mauritania.

b. The French Fonds d'Aide et de Cooperation (FAC) has earmarked approximately \$375,000 to study the alignment and feasibility of a new road between Nouakchott and Nouadhibou, in order to greatly reduce the time and surface distance separating those two cities. France has also financed (for over 30 years) continuing technical advisory and operating personnel for Public Works.

c. The United Nations Sudano-Sahelian Office (UNSO)

UNSO built the first 70 km of road from M'Bout towards Selibabi and has been assisting in procurement and local currency accounting for this AID funded project. Given the condition of the U.N. constructed road, the GIRM requested additional assistance from UNSO to finance a new alignment, resurfacing and drainage structures. UNSO has responded that its funds for this project are exhausted but that it is studying a Sahel-wide road maintenance program. Should funds be found for that program, UNSO may be able to apply some of them to resurfacing the U.N. road. The U.N. will continue to provide local procurement and accounting services.

d. There are also a number of agricultural projects in the Gorgol/Guidimaka regions which will benefit from this road. Among those are several large irrigated perimeter projects in the Kaedi/Gorgol area, a \$73 million multidonor irrigation and resettlement project at Gorgol-Noire near M'Bout and a new \$12 million farm-based small perimeter irrigation project between Kaedi and Gouraye, jointly financed by IDA and IFAD.

5. Project Rationale

When project implementation first began, USAID soon discovered that the original project budget was significantly underestimated. The "design-as-you-build" methodology did not allow a reasonable estimate of costs before beginning implementation. "Low-Cost" construction turned out to be "hidden-cost" construction. Improved drainage studies, designs and cost estimates, as well as post-construction maintenance requirements indicate that total project costs under an optimum design would now be more than three times the original estimate.

Nevertheless, the basic justification for building this road remains simple and unchanged from the original PP. The Gorgol/Guidimaka regions of Mauritania have the nation's highest rainfall and offer the highest potential for increased agricultural production (rainfed and irrigated) in Mauritania.

The current road system is grossly inadequate during most of the year and impassable during much of the rainy season. If the Gorgol/Guidimaka regions are to be opened up for development, opened up for economic and political integration into the country as a whole, completion of the Kaedi-M'Bout-Selibabi road is a precondition.

With improved roads the inputs required for agriculture such as seeds, fertilizer, implements, extension services, etc. can reach these areas more easily. Agricultural production from the area can reach the larger national market at lower prices, and the people of the area will have improved access to social services including health, education and private transport. Without this project the road network in the area will continue to deteriorate further, the area will be unable to improve its economic and social situation as quickly and it will become more isolated from the central government and other regions of Mauritania.

B. Project Background and Detailed Description

1. Background: The Rural Roads Improvement Project was authorized September 14, 1982. Its purpose was and continues to be to facilitate access to the only area in Mauritania with significant potential for agricultural production. The project outputs are repair or construction and maintenance of 233 kilometers of new or improved gravel road:

Kaedi to M'bout	117 km	
M'bout to Km-70	70 km	Drainage and some restoration.
Km-70 to Selibabi	46 km	

The original project concept was that AID would continue the road program started by the UNSO, using the same low-cost design standards and essentially the same equipment and Mauritanian labor force. At the time, AID viewed this project as being a technical assistance activity, with a U.S. contractor employed to train Mauritanian officials and to oversee the work of the labor force brigade in road construction and maintenance.

To finance the program, AID provided \$4,810,000, which was fully obligated in FY 1982. The GIRM agreed to the use of \$1,207,000 equivalent in counterpart funds generated from PL480 commodity sales, plus an in-kind contribution of \$1,300,000 in local salaries and government-furnished equipment. The UNSO agreed to continue providing administrative services, with an estimated cost of \$200,000. Thus total contributions from all sources were about \$ 7.5 million.

On-site activities began in late May 1983, with the arrival of a four-man team from the U.S. engineering firm, Morrison-Maierle. This was shortly after the UNSO had completed its 70-kilometer segment. Construction and training were expected to take about 2 years, with all work being completed by July 1985. It soon became apparent, however, that project plans and assumptions were deficient in several respects, arising generally from undue reliance on UNSO methodology in its 70 km road building effort.

The USAID carried out a project evaluation in early 1984, and reported on the project's deficiencies. These can be summarized as follows:

-- The UNSO road design standards were inappropriate for the area. During the first rainy season the UN road suffered severe damage because of inadequate drainage structures and insufficient depth of the road embankment. The U.S. team has had to spend considerable and unexpected resources in maintaining the UN road to permit access to the AID road segments leading to Selibaby. The amendment includes money to finance restoration of the road, including construction of drainage structures needed to assure passage for at least 90% of the time, and for post-construction maintenance.

-- AID's project design assumed that the UN equipment mix was appropriate, and that the equipment inherited from the UNSO contractor would have been well-maintained and ready to go. Despite its having been used for only one year, the UNSO equipment was generally in poor shape and not ready for use; nor was the mix entirely appropriate or sufficient for the construction effort. Even after 18 months on the job, the U.S. TA team has not been able to make all salvageable units fully operational. The GIRM has had to provide approximately \$1.8 million worth of additional earth-moving equipment from its Public Works equipment pool; and AID has spent an additional and unplanned amount of approximately \$500,000 to put the UNSO and

GIRM equipment into shape.

-- The project paper technical analyses did not include a center-line profile or drainage studies. Therefore, high water levels, and hence the designs for excavation/embankment and drainage structures, were based on the experience and on site judgment of the design engineer. Hydrological judgments made without detailed drainage analysis were underestimated by the UN engineers, by the project design team, and even by the M-M short-term hydrological engineer until he had completed his drainage studies. Because of the unusual drainage problems, technical specifications had to be redesigned, resulting in a requirement to increase the embankment to raise the roadway above demonstrated flood levels and to make a large increase in provisions for drainage.

The UNSO model assumed only temporary, mobile base facilities for constructing the road. Several simple trailers for living accommodations and a mobile maintenance vehicle might have been sufficient if the U.S. TA team and the Mauritanian brigade had had all new equipment and if the number of drainage structures needed had been low as originally estimated. As it turned out, the variety of equipment and vehicles, their operational status, the complexity of maintenance in the very harsh environment, and the greatly increased number of drainage structures over those planned under the UNSO model dictated the need for a more permanent base camp in addition to temporary mobile construction camps. In line with this approach several trailers were procured for housing and mess facilities; a workshop-garage was constructed; a warehouse was erected for storage of spare and replacement parts; and ancillary structures were installed at M'Bout to support the overall operation. The U.S. team and the Mauritanian brigade now have a "hardened" base from which to operate. But it was all obtained at a cost not anticipated in the original PP. Temporary storage facilities and mobile trailers were placed at KM 70 for construction and maintenance of the roadway further south. One other temporary camp will also be established when construction nears Leqceiba in the west.

2. Current Status: As of late May 1985, about 45 km of embankment and of surface course had been built from M'bout to Kaedi, and 36 km and 11 km, respectively, from K70 to Selibaby. Because of damage during the rainy seasons, approximately 10 km of embankment on both the UN road and the Km 70 to Selibaby segment require reconstruction and resurfacing.

In regard to equipment maintenance, the U.S. team has been hard-pressed to keep most items in full operation. Lack of spare parts was the initial problem. Even with over 5000 different items of spares in inventory, the contractor is often "playing catch-up." The problems appear to have been inadequate equipment management and procurement planning and insufficient breadth and depth of maintenance capability. The U.S. contractor has dispatched extra TDY support and now seems to be overcoming these

difficulties. In addition, the USAID has enlisted the periodic support of the Mack truck and Caterpillar equipment organizations for advice and equipment repair services. Although the bulk of the equipment is no longer new and is subjected to especially harsh conditions in Mauritania's hot and dusty environment, continued training of the local brigade in operating and maintaining it should result in progressively reduced down time. The brigade has constituted a fairly permanent group of about 100 employees, of whom about 14 are mechanics and mechanic helpers. Most of the brigade have been on the job since the U.S. team arrived, and perhaps half or more had also been part of the UN work force in 1982-83. At completion of the project some dozen may be re-employed by the GIRM Public Works organizations, while the remainder will have to be absorbed back into the private sector.

As regards design work, in 1983 an M-M engineer completed the drainage studies and initial cost estimates for the first 115 km from M'Bout to Selibaby. From August 1984 through May 1985 a second TDY engineer worked on the remaining segments. He also designed site-specific radiers and pipe culverts, based on those analyses and on the alignment and profile studies.

In October-December 1984 M-M reviewed its designs, plans, and costs and submitted for AID consideration an optimum program with new estimates and a draft Project Workplan and Schedule. These were used as the bases for a variety of options discussed in AID/W. The subsequent decision was to finance construction of a road from Kaedi to M,Bout to Selibaby which would be open for at least 90% of the year. The final decision also included a three year maintenance program, but at a reduced level of effort than proposed by the M-M team. Construction is now expected to be complete by October 1986.

3. Detailed Project Description

a. Construction: This PP supplement will enable a 233 km all weather road to be completed from Kaedi to Selibaby. With the modifications to construction specifications and methodology described elsewhere in this paper, this project will: complete the surveys and designs for road alignment, profile and drainage structures; lay and compact embankment courses; install culverts and construct radiers made of compacted materials, protected by rip-rap and/or gabions, and lay a final surface course of gravel. Specific construction still to be completed includes the following:

M'Bout-Kaedi: (117 km) Embankment construction- 72 km; Surface construction - 87 km; Radier construction - 7,450 meters at 53 sites; No culverts.

M'Bout - Km 70 (U.N. Road): (70 km) Embankment construction - 10 km; Surface construction - 10 km; Radier construction - 2,692 meters at 22 sites; Culverts installation - 216 meters at 18 sites.

Km 70 - Selibaby (46 km) Embankment construction - 10 km; Surface construction - 35 km; Radier construction - 1,856 meters at 18 sites; Culverts installation - 2,940 meters at 216 sites.

Selibaby-Gouraye-(46 km) Construction of this road was originally included in this project but has since been dropped because of low daily traffic counts, budgeting shortages, and the logistical complexities of construction in that remote area. This resulted in a savings of approximately \$2.6 million.

b. Training: The original project design contemplated that at the end of this project there would be a trained nucleus of at least 24 people from Public Works capable of planning and implementing "force account" construction or maintenance projects. While acceptable in theory, that plan turned out to be neither possible nor desirable. First, as is done in the U.S., Public Works normally contracts out major construction and repair projects. This helps maintain already-high personnel constraints. Public Works has been unable to second the requested number of people to the project for training. Of the approximately 100 Mauritians working on the brigade, approximately 13 come from and can be expected to be reabsorbed by it. Among those will be several equipment operators, 5 mechanics, one highway maintenance specialist and 2 construction supervisors. The remainder will seek work in the private sector after the project finishes.

Under this PPS, the training objective will continue to be to have a trained cadre of craftsmen in place at the completion of the project to work on post-construction maintenance. Training will have a practical, hands-on focus supplemented by limited classroom training conducted at the M'Bout workshop. In addition, USAID's new Human Resources Development Project (682-0230) will offer long-term highway management and/or maintenance training for two Public Works employees. A formalized training plan will be negotiated among PW, USAID and M-M by the end of 1985.

Training will continue to be practical and valuable and will develop skills of use to Mauritania, whether the people are reemployed by PW or absorbed into the private sector.

c) Road Maintenance: The TA contractor, M-M will assure that project roads are adequately maintained during construction, ie. through October 1986. Those costs are included in the construction budget. This amendment also includes \$400,000 to fund commodities and operating expenses to assure adequate maintenance of project roads for three years after construction is completed. At that time, Public Works will have a regional maintenance capability in place, but future maintenance financing will have to be found elsewhere. USAID will consider the requirement for maintenance in its future program planning and discussions with the GIRM. The USAID will also consider a PL480

Food-For-Work program to supplement the dollar effort and in lieu of the present donations of free food under an emergency relief activity.

79

TABLE II.B.1.

4. BUDGET SUMMARY (\$000)

INPUTS	PREVIOUSLY	OBLIGATED		NEW FUNDING REQUIRED		PROJECT TOTAL
	DA	PL480 COUNTERPART	0	DA	0	
1. Technical Assistance	2,111	-	0	1,600	0	3,711
3. P.O.L.	106	341	0	1,800	0	2,247
2. Commodities	2,568	649	0	1,200	0	4,417
4. Local Personnel/Travel/Cont.	433	600	0	1,300	0	2,333
5. Contingencies/other	73	32	0	100	0	205
BOGHE-KAEDI EARMARK						
Total	5,291	1,622 (1)		6,000		12,913

Note: Total Project cost include a \$1.9 million contribution of construction equipment from the Department of Public Works and a \$200,000 contribution of administrative services from the U.N. Total project cost from all sources is \$22.5 million.

(1) Total generations from sale of PL 480 commodities allocated to the project are UM 99,662,000. Average exchange rate of UM 61.4 = \$ 1 reflects different rates at time contributions were made.

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PART III - PROJECT ANALYSES

A. Technical Update

1. Design Standards:

The existing road network in the project area consists mainly of ordinary tracks without drainage structures, making it largely impassable during the rainy season from July through October and difficult even during the dry season. During the rainy season, the lack of drainage structures blocks traffic either because the road is washed out or because of water accumulation in low spots causing vehicles to get trapped in the mud. During the dry season, vehicles frequently get stuck in soft sandy areas. In consideration of these conditions, a design standard was selected that theoretically provided, at a minimum cost, year-round passage allowing for delays of up to one or two days during heavy rainstorms in which the ford crossings would be inundated.

The original P.F. design standards and specifications were the same as those used for the UN road construction from M'Bout to Km 70.

The main assumption in the PP Logical Framework was that "Standards selected for improvements of rural roads would meet technical, social and economical requirements of the region." The "standards selected" were based upon the UNSO model: build low-cost rural roads thru a system of design-as-you-build at a set cost per kilometer. The model used a consulting firm for management and technical assistance and a fully equipped autonomous road brigade to do the construction. UNSO coordinated procurement and project management. In a sense it is a process somewhere between force account or government managed day labor construction and construction by contract. This system has met with varying degrees of success depending mainly on whether the technical construction requirements of the region in which the road was to be built could be met with the funds available. As has been documented many times over, there is no such thing as a low cost road. In general, the less the road costs to build, the more it will cost to maintain. And below a certain minimum standard, a road is in effect no longer "maintainable." The amount of money available for the UNSO-built first 70 km from M'Bout to Selibaby was insufficient to attain that minimum. In the even more difficult terrain of the AID roads, the amount proposed in the original PP would not have come close to building a "maintainable" road.

The Project Paper technical analysis did not include a center-line profile nor drainage study. Therefore, the estimated high water level and hence the fill and drainage structure estimates, both part of the detailed calculations, were based upon the experience and quick on-site judgement of the design engineer. The original strategy of reliance on low cost roadwork has not proven to be sound. Hydrological judgements without drainage analysis, were underestimated by the project design team, by the

UN engineers, the field engineers, the USAID/Mauritania engineers, and even a short-term hydrological engineer until after he completed his drainage analysis. As an example, the estimated linear meters of radiers and culverts now required is ten times the estimates in the original project paper.

When the technical assistance contract was awarded for implementation of the AID-financed road project, the design standard was only slightly modified. Those standards too proved inadequate.

ORIGINAL DESIGN CRITERIA: (As contained in original PP)

ALL-WEATHER USE: except for minor interruptions at fords during high water flow.

WIDTH OF ROADWAY: 5.5 m.

MINIMUM HORIZONTAL RADIUS OF CURVATURE: 500/1000m

DESIGN SPEED: 80 km (where economically feasible).

NO SHOULDERS

MAXIMUM CENTER LINE GRADIENT: 5%

MINIMUM BASE COURSE WHERE REQUIRED: 30 cm., 75 cm above high water.

SELECTION OF EMBANKMENT MATERIAL: Responsibility of engineer in charge of construction.

NO SURFACING EXCEPT WHERE DETERMINED NECESSARY.

COMPACTION: 95% dry compaction (Optimum Modified Proctor Test)

DRAINAGE STRUCTURES: Fords paved with concrete and protected by gabions. Culverts 80-100 cm protected with concrete headwalls. Existing structures to be rehabilitated wherever possible.

As a result of experience, on the job discussions with AID engineers and recommendations from AID/W, agreement has been reached on a "Revised Design Standard" to be responsive to the actual drainage problems. These revised standards include increased embankment and more drainage structures. The estimated quantities and costs in this PP supplement are therefore based on the standards listed in Table III.A.1. These standards should permit passage for at least 90 % of the year.

TABLE III.A.1.

REVISED DESIGN STANDARDS

Classification	:	Modified Ordinary Earth Road, All Weather			
Design Speed	:	40 Km/Hr - Mountainous Terrain 60 Km/Hr - Rolling Terrain 80 Km/Hr - Flat Terrain			
Width of Embankment	:	5.5 Meters Minimum			
Width of Surface Course	:	5.5 Meters Minimum			
Surface Course Thickness	:	15 Centimeters Minimum (Gravel)			
Minimum Radius of Horizontal Curve	:	100 Meters, Mountainous Terrain 200 Meters, Rolling and Flat Terrain			
Vertical Gradient	:	10% Maximum, 6% Desirable			
Crown Slope	:	3%			
Superelevation	:	Per GIRM Standards			
Fill Slope	:	3:1 Minimum			
Back Slope	:	3:1 Desirable, natural angle of repose in rolling or mountainous terrain			
Drainage Structures	:	Gravel/rock fords. Culverts protected with concrete or masonry headwalls. Existing structures to be rehabilitated wherever possible. Side and Lateral drainage ditches as required.			
Design Axle Load	:	13 Metric Tons			
Fill Height	:	Finished grade 60 cm minimum above natural terrain, 75 cm minimum above high water level			
Compaction	:	90% dry density, by Standard Proctor			
Min. Length of Vertical Curve	:	Design Speed	Stopping Sight Distance	Min. K Crest V.C.	Min. K Sag V.C.
		40 Km/Hr	60 M	9	11
		60 Km/Hr	80 M	17	17
		80 Km/Hr	105 M	23	23

74

2. Current Description of Road Segments

Kaedi-M'Bout

This road, built in the late seventies, is 117 km long. The road has deteriorated from flood damage and a lack of maintenance to the point of being only a track that is barely recognizable. No surfacing is left. It crosses generally flat, sparsely vegetated terrain and parallels the Gorgol River from Kaedi to Leqceiba, crossing many drainage channels enroute. Near M'Bout the road cuts through a range of hills approximately 100 m. high. Several existing multiple box culverts and pipe culverts are still in use. During the rainy seasons, however, they become blocked with brush, debris, and sand, causing the drain water to overflow the roadway and wash it away.

M'Bout-Km 70 (UN Road)

This road section, 70 km, was constructed by the UNSD and completed in early 1983. Leaving M'Bout, the road crosses a broad plain, areas of rock, gravel and no vegetation, some gently rolling hills and a large stream. The road was constructed to a very low standard with the embankment generally too low. Where the road passes over a long rolling, hilly section, the road was placed to take advantage of the higher ridges and thus has a snake-like alignment with many sharp curves. The drainage is inadequate and there are about 43 points where the road has eroded and needs repairs. The entire length of the road is heavily washboarded with deep, longitudinal ruts. The surfacing material has no binder and has been sprayed off the side of the road. Along much of its length traffic travels on tracks parallel to but beside the road. Under the revised project twenty-two radiers and some culverts will be constructed on this section to correct drainage deficiencies.

3. Construction Methods

Roadway embankment has been constructed using 621-B scrapers, a push-dozer, blade and rollers. This procedure will be continued. The use of the dry compaction method will also be continued. Experience to date indicates that these methods can provide an adequate base for the roadway. The projected embankment equipment mix will include the following minimum items:

- 3 621-B Cat scrapers
- 1 TD-20 dozer pusher
- 1 Vibratory roller
- 1 Rubber-tired roller
- 1 M6120 Cat Grader

Surface course construction has been and will continue to be constructed using Mack trucks, a loader, and either a D-7 Cat or a TD-20 dozer.

Radiers will be constructed using natural rock fill and rock rip-rap or gabion baskets, whichever is available. Design details have been completed and are available for use. Some or all of this work might be done under host-country contracts. Similarly, culvert installation might also be done under host country contracts. Specifications and details are being completed by M-M

4. Road Maintenance

A persistent lack of funding has prevented Public Works from doing the type of regular and periodic maintenance its road network requires. In recent years allocations have been sufficient to permit only a fraction of the maintenance planned and budgeted for to actually be accomplished. Where possible, therefore, the GIRM has encouraged donors to finance higher quality paved roads which require a significantly higher initial investment but less maintenance.

The maintenance needs of the earth and gravel roads in the project are different from those of the paved roads to the north and west. Paved road maintenance consists of removing sand, patching potholes and keeping culverts and radiers clean. Clearing sand is the major expense.

Earth and gravel roads are more equipment intensive. In addition to keeping drainage structures clean, they require periodic blading and shaping, replacement of surfacing and more frequent repair of washouts at culverts and radiers.

During project construction, roads will be bladed approximately once each month and surface material will be added as necessary. Washouts will be repaired as they occur and debris and sand will be cleared from the drainage structures. Maintenance and repairs will be completed relatively easily using the men and equipment now available and under the direction of the technical assistance team. Incremental cost will be relatively small and will be considered incidental to the construction operation.

No definitive post construction maintenance plan has yet been agreed upon with the Department of Public Works. This PFS proposes that the ProAg amendment include conditions precedent and covenants that AID and the GIRM will agree upon a plan and that the Department of Public Works will provide a permanent regional road maintenance manager prior to the end of 1986. While the final plan will be negotiated with the USAID engineer discussions to date do set up a framework within which a final plan can be built. The prerequisites: minimal organization, equipment and recurrent cost requirements.

Any subsequent work plan for road maintenance will consist of the following generic components:

A. Annual Work Program: This program describes the work to be done for different road classifications, it inventories road lengths and assesses current condition and requirements, it establishes service and work performance standards for the different road classifications and schedules periodic field inspections. It also establishes maintenance priorities.

B. An Implementation Plan: This plan for post-construction road maintenance determines the most effective way of performing the Work Program including organizational structure and composition, techniques to be employed and scheduling. It may provide both an optimum and minimal work levels.

C. Resource Allocation: This component estimates the equipment, personnel and materials requirement for each element of post-construction road maintenance work and directs how and where those resources are spent.

The TA contractor, Morrison-Maierle has developed a preliminary post-construction maintenance plan for the 233 km of road as outlined in the Table II.A.4.a. It is based upon performance criteria contained in Table III.A.4.b.

The M&M plan is predicated on retaining the field camp at M'Bout for a maintenance facility and upgrading both the personnel and equipment in the Kaedi and Salibaby regional offices. The Director of Public Works is considering a simplification and decentralization of the national maintenance system. One proposal might be to reduce the regional offices from 14 to 3 or 4 larger facilities each of which would have more equipment and people. He has proposed that the main work camp at M'Bout become the regional maintenance center for the Senegal River basin road network.

The camp at M'Bout is well located for such a regional maintenance facility. It comprises a garage and enclosed shops, a warehouse, grease pit, storage containers, fuel and water storage capability, housing and office facilities and electric generation capability. But the facility itself is only one element making up maintenance capability. A feasible plan must include experienced technical and management personnel, spare parts inventories and procurement capability and access to fuel and material.

The maintenance plan and budget recommended by M&M is the optimum alternative. If the M'Bout regional plan and the more sustainable minimum standards are followed, a maintenance savings of about 25% over 3 years might be expected. This estimated project budget incorporates those savings and provides funding to finance operating costs, materials and spare parts for three years after construction is completed. An official from Public Works is to be designated responsible for post-construction maintenance and assigned to continue to work on the project roads after construction is completed.

The original project paper suggested that ways be explored to involve villages along the route in simple maintenance tasks such as the cleaning of drainage structures. The Department of Public Works has not been entirely in favor of such a proposal and has not done any research on it. Similarly no studies or investigations have been undertaken by AID or the TA contractor. Wanting to avoid further complicating this project and wanting to assure some maintenance of the roadways, the PPS team opted for maintenance by Public Works. Nevertheless, the team sees conceptual merit in the village maintenance proposal and has included questions regarding village interest in the socio-economic baseline study. The initial response appears to be both positive and encouraging.

Finally, as noted in the section on the other donor activities, the World Bank/FADES/Kuwaiti sponsored Fourth Highway Project will examine the road maintenance problem on a national level and recommend other appropriate mechanisms for planning and implementing a realistic road maintenance program in Mauritania. The detailed post-construction program will, therefore, be developed in 1986, after the GIRM has established its national plan and program, and agreement reached with the USAID engineer on how the \$400,000 will be used.

5. Technical Assistance Performance

The technical assistance contractor chosen for this project is the engineering firm of Morrison-Maierle. M-M has provided an engineer Chief of Party, a road construction field superintendent, and an assortment of TDY personnel such as road and radier design and drainage engineers. M-M, in turn has subcontracted with Overseas Construction Services for provision of a shop mechanic, a field mechanic, and a warehouse parts person. Both companies have also dispatched short-term administrative/supervisory personnel to the work site to cover temporary vacancies and to help solve operational problems. The permanent field staff comprises the COP, the field superintendent, and the two mechanics.

Since the team arrived in late May 1983, there has been a very high turnover rate in personnel including two COPs, a shop mechanic and a field superintendent.

The isolation of the field site, the relative monotony of the work and the lack of recreational facilities and diversions has made it difficult for M-M to recruit quality people. This has contributed to some of the project problems, including inadequate planning, inadequate adherence to contract requirements, equipment and machinery maintenance problems and inadequate inventory management. These problems, discussed below, are now being given more attention by the contractor.

Planning: The inadequate planning has been reflected in the COPs' monthly reports which characteristically have been submitted late and which have insufficiently compared real and planned activities, progress and expenditures. In general, the project has suffered from inadequate thought being given during early project implementation about specifically how, when and at what cost the project would be completed. Revision of drainage requirements and the related procurement is one example where comprehensive project planning was weak. In addition, the lack of a procurement plan resulted in unnecessary friction with USAID and delays in obtaining spare parts.

Compliance with Contract Provisions: One of the most obvious deviations from the contract has been meeting the construction specifications. Instead of a 5.5 meter road width, on the basis of oral agreements with AID personnel, the contractor proceeded to widen the road to 7 meters. Compaction tests, required in the contract were not made until October 1984. Whereas the contract calls for the contractor to prepare detailed studies and plans prior to construction, including types of soils, construction materials, water availability and horizontal and vertical alignment, such detailed plans had not been prepared during the first phase of the contract. The contract also requires that the contractor provide management services including cost accounting covering all phases of the work. This was not done and there was some evidence that the contractor did not feel responsible to meet this requirement because he did not have direct procurement responsibility for the bulk of commodity purchases.

Maintenance and Inventory Management: The contractor inherited a fleet of Mack trucks and assorted equipment and vehicles of differing makes and models. In addition, USAID helped acquire an even wider variety by obtaining several pieces of Caterpillar earth-moving equipment from U.S. excess property. The status of these items ranged from brand new to ready-for-scrap. While it is understandably difficult for mechanics to keep such disparate equipment operational, it appears that the level of maintenance provided and inadequate maintenance planning aggravated a bad situation. Spare and repair parts sent to the encampment have only recently been systematically inventoried, stored and controlled. A September 1984 report by a REDSO engineer criticized and focused attention on the quality of the maintenance operation. That resulted in a chain of visits and attention from the home office and intensive reviews of the entire operation.

Conclusion: The above discussion is critical of the performance to date of the Morrison-Maierle contract team. It should be mentioned, however, that both the original project design and AID project management share in that responsibility because the project has changed and expanded considerably from what was originally intended in the M-M contract, and USAID personnel shortages and changes had not until recently forced contractor accountability and conformance to the contract. Nevertheless, it

is fair to expect that the contractor should have been more aware and vocal about the problems of project implementation. The arrival of an experienced rural road engineer project officer in the USAID and the designation of an experienced and qualified CGP at the site should assure smoother project implementation.

6. Environmental Update

The Initial Environmental Examination, included in the original project paper, recommended a negative determination because the negative environmental consequences are limited in scope and duration while the socio-economic benefits are considerable. This determination was accepted on the condition that a covenant be included in the Project Agreement to assure that proper environmental procedures appropriate to road building activities will be followed during project implementation.

During the remaining construction work, the project elements will remain nearly the same as in the original PP. It has been found necessary:

a) to upgrade the road standards by raising the roadway embankment to allow more freeboard above the high water levels encountered during the rainy season; and

b) to install more culverts and drainage structures to accommodate rain runoff.

Otherwise, all conditions and impacts discussed in the IEE remain unchanged. The Africa Bureau Environmental Officer has, therefore, approved the USAID recommendation that the original negative determination be continued.

B. Economic Analysis Update

1. Macroeconomic Context

Two interrelated factors have continued to influence the economic environment of this project since it was approved in 1982. These factors are the continuing structural evolution of the Mauritanian economy away from the agricultural production in the rural areas toward services, and the worsening drought which has added greater impetus to that trend. Table III.B 1, below indicates that as agricultural production fell from 78,000 tons in 1981 to 15,000 in 1983, agriculture's share of GDP declined from 4 percent to 1 percent. The livestock sector was similarly affected, declining from 33 percent of GDP in 1981 to 8 percent in 1983. At the same time, the share of GDP attributed to services rose from 44 to 59 percent.

**Table III B.1: Cereal Production and GDP Shares for
Agricultural Livestock and Services**

	<u>1981</u>	<u>1982</u>	<u>1983</u>
Cereal Production (T)	78,000	20,000	15,000
Agriculture GDP Share (%)	4	3	1
Livestock GDP Share (%)	33	22	8
Rural Sector GDP Share (%)	37	25	9
Services GDP Share (%)	44	49	59

The on going droughts severely affected almost the entire country, triggering substantial migration both to Nouakchott and to the Guidimaka and Gorgol regions, where some pasture remained and some rain had fallen. In 1984, however, flood recession cereal production was almost nil and the agricultural and nutritional situation was considered to have been worse than in 1972/73.

These events have made more urgent than ever the need to provide Mauritania with a measure of food security -- clearly the most important yet elusive public policy objective of the country. This effort requires that agricultural production be stimulated in those areas of greatest agricultural potential, notably Guidimaka, the only region with reliable, agriculturally exploitable rainfall, and Gorgol, where considerable investment in irrigated crop production is being made.

The main economic objective of the Rural Roads Improvement Project is to provide Mauritania with a network of all-weather roads that link the productive agricultural regions of Guidimaka and Gorgol to food deficient areas and urban markets. Therefore, the project now more than ever, addresses an important constraint to a critical sector in Mauritania's troubled economy.

AID/W/SFWA Economist, M. Francis Urban, provided the following information and analysis specific to the Gorgol-Guidimaka Region.

Economic Potential of Gorgol and Guidimaka Regions

The two regions contain 2.3 percent of the total area of Mauritania and 18 percent of the country's population. This proportion is increasing as the successive prolonged droughts displace large numbers of nomadic population in the north most of whom move south.

The two regions contain 37 percent of the country's cropland of some 180,000 ha. and a third of the area under irrigation of 5,400 ha. (1984). Most of the cropland, however, is in Gorgol-- 31 percent--which is accessible only by an unimproved track

36

leading from M'bout to Selibaby and Gouraye, and is, therefore, one of the least developed areas in the country. Nevertheless, the two regions during the last ten years have produced 51 percent of the country's grain production that has averaged 42,000 tons annually, ranging from 74,000 tons in 1981 to the low of 15,000 tons in 1983.

Assuming average yields of 450 kgs per ha. on rainfed and flood recession lands and 3,500 kgs on controlled irrigation lands, and the expansion of controlled irrigation from the current 5,400 ha. to 62,500 ha. by the year 2000 as projected-- 55 percent of it in the Gorgol-Guidimaka area-- Mauritania's grain production could be increased from the current annual average of 42,000 tons to 258,000 tons. Such an increase would reduce the country grain deficit by more than half, or from 215,000 tons in 1984 to some 95,000 tons in the year 2000, allowing for population growth. (See attached table.) To achieve this result, however, would imply providing an adequate road network for the area to bring in agricultural inputs at reasonable prices and to open new markets for the potential farm production.

In the past Mauritania's agricultural price policies effectively discouraged marketing the area's production in the country as farmers found prices in Senegal more attractive. This policy is being revised and Nouakchott has recently increased rice farm prices to world parity. Price are now equal on both sides of the river. Thus, there should no longer be any incentive to market Mauritanian production in Senegal. Such price adjustments are expected to be made for other grains as well to encourage farm production.

MAURITANIA RURAL ROADS PROJECT

Basic Data for Gorgol and Guidimaka Regions

1. AREA	<u>1000 KM2</u>	<u>PERCENT</u>		
Mauritania total	1,031	100		
Guidimaka	10	2		
Gorgol	14	6		
Brakna	33			
2. POPULATION (1985)	<u>1000</u>			
Country total	1,656	100		
Guidimaka	100	18		
Gorgol	182	28		
Brakna	180			
3. POPULATION DENSITY	<u>People per km2</u>			
Country total	1.6			
Guidimaka	9.7			
Gorgol	13.4			
Brakna	5.5			
4. PRECIPITATION	<u>Mm/year</u>			
Country average	110			
Senegal Valley:				
Rosso (Trarza)	320			
Selibabi (Guidimaka)	690			
Kaedi (gorgol)	480			
5. AGRICULTURE Country total	<u>1000 ha</u>			
Total estimated cropland in Mauritania	180 ha			
Current land use:				
Rainfed agriculture	148 ha			
Flood recession agriculture	25			
Controlled irrigation	7			
6. CONTROLLED IRRIGATION	<u>1984</u>	<u>Planned 1)</u>	<u>1984</u>	<u>Planned</u>
	<u>1000 ha</u>	<u>Expansion</u>	<u>percent</u>	<u>Expansion</u>
Country total	3.5	62.5	100	100
Guidimaka	0	7.9	35	55
Gorgol	.9	26.6		
Rest of Senegal Right Bank Valley	2.6	28.0	65	45

1) planned expansion within the framework of OMVS/Manantali Dam construction

28

7. GRAIN PRODUCTION IN MAURITANIA

	1975	1980	1981	1984	2000
	<u>1000 TONS</u>				
Rice paddy	4.0	4.0	7.0	.6	
Maize	3.0	5.0	5.0	1.4	
Sorghum & Millet	44.0	19.0	32.0	18.0	
	-----	-----	-----	-----	-----
Total	51.0	28.0	44.0	20.0	138.0
(Guidimaka & Gorgol, percent of total	51	51	54	51)

Total annual grain requirement: 288,000 tons

Most of future expansion in production will have to come from the Gorgol and Guidimaka regions. At present, however, they are among the most isolated. And because of a lack of transport and distribution network, deficits in other parts of the country often coincide with surpluses in these two regions.

2. Cost-Benefit Analysis

The economic assessments in the original PF and the Cost/Benefit Analysis done by David Atwood and updated by John Brondolo in June 1984 clearly indicate that there are four quantifiable benefits to be gained from the project. These benefits include:

- a) Road user savings from existing and generated traffic along the road two links (Kaedi-M'Bout and M'Bout-Selibaby);
- b) Road user savings from traffic diverted from other roads to the project road;
- c) Storage and inventory savings gained by making M'Bout and Selibaby accessible year round; and
- d) Value added from additional crop production induced by (a) lower farm to market transportation costs and (b) guaranteed sources of agricultural inputs.

Internal Rate of Return

The Internal Rate of Return (IRR) for this project has been computed to be 24 %. This IRR calculation is based on a total addition of \$6.0 million of which \$4.32 million is charged to direct construction. The benefits are computed to be the same as the June 1984 analysis but reduced by 10 % because the road will possibly be useable only 90 % of time. All previous investments are considered to be sunk costs and no provisions are included (in the \$4.32 million) for inflation or contingency. The actual computations for the estimated 20 year life are as follows:

29

IRR for Mauritania Rural Roads Project

Alternative No. 1: Total additional construction and Maintenance cost \$6.0
 Actual construction cost \$4,320,000 (excluding contingency and Infl.) and
 benefits same as the June 1984 analysis but reduced by 10 percent as the road
 will be usable 90 % of time.

Year	1	2	3	4	5	6	7	8	9	10
Benefits		529	1157	1233	1370	1384	1456	1519	1578	1646
90% benefits		476.1	1041.	1109.	1233	1245.	1310.	1367.	1420.	1481.
Cost Const	2160	2160	200	200	200	200	200	200	200	200
Net Benefit	-2160	-1683	841.3	909.7	1033	1045.	1110.	1167.	1220.	1281.
IRR	0.240 or 24%									
Year	11	12	13	14	15	16	17	18	19	20
Benefits	1716	1735	1749	1756	1770	1783	1795	1808	1818	1830
90% benefits	1544.	1561.	1574.	1580.	1593	1604.	1615.	1627.	1636.	1647
Cost Const	200	200	200	200	200	200	200	200	200	200
Net Benefit	1344.	1361.	1374.	1380.	1393	1404.	1415.	1427.	1436.	1447
IRR										

YD

3. Additional Considerations

In interpreting past cost-benefit analyses for their relevance to the current project design and conditions, two additional issues must be taken into account. First, there is the impact of the current drought.

The drought is likely to affect the project area fundamentally in two ways. First, a rapid influx of displaced people from the arid regions to the north has already begun to raise the populations of the two target regions. These people, unable to continue the nomadic or extensive herding they had been practicing, are now obliged to engage in agriculture, agriculturally related industries or other services. This phenomenon could stimulate increased road use in the target area. A second effect of the drought is that it has severely reduced the productive potential of rainfed and recessional farmland in other, more severely drought-stricken, parts of the country. Both in terms of overall food availability and in order to reduce dependence on food imports, this loss of domestic agricultural potential in other areas of Mauritania has made the relatively advantaged agricultural areas of Gorgol and Guidimaka more important than ever. If this situation is translated into slightly higher producer prices for cereals and increased demand around Mauritania for food from these areas, then the benefits ascribed to the road must be increased accordingly.

The second issue to be considered is the influence exerted on realization of project benefits by price policy reform in the agricultural sector. Recently, the GIRM raised the producer price of traditional grains by 60 percent, from UM 13 to UM 21. Some progress has therefore, been made in increasing price incentive to farmers.

Although price policy reform is essential to stimulating food production in the project area, it may not be sufficient or even the most important change required to realize significant gains. In a USAID funded national food price policy assessment conducted in July and August 1984, it was noted that "The normal expectations are that there will be substantial increases in domestic production of food grains. Whether this is so will depend on the ability of grain producers to attract additional land, labor (water ed.) and capital and the productive capacity of Mauritanian agriculture as a whole." The especially critical need for improved farmer access to agricultural inputs and markets in Mauritania (as opposed to other Sahelian countries) must be accounted for in estimating the economic benefits derived from road improvements. In any future calculation, an effort should be made to adjust the value of improved input supply accordingly.

It is difficult in a country as sparsely populated and as harsh as Mauritania to justify most projects on strict financial and economic grounds. In the case of the Rural Roads Improvement Project, however, the analysis should also take into account the fundamental need for transport infrastructure as a precondition for virtually all other forms of development in the area.

C. Social Soundness Update

1. The Original Assessment

The original social soundness analysis in the project paper has withstood the test of time. Its detailed description of the ethnic groups in the Guidimaka and Gorgol regions and their economic activities holds true today. Although the analysis may appear to emphasize Guidimaka more than Gorgol, in fact the portions of Gorgol in which the project is operating bear a close ethnic and cultural resemblance to Guidimaka.

The underlying assumptions of the project paper social soundness assessment are also still valid. Year round access to Selibaby and M'Bout are still crucial to economic growth in the area. Another statement in the original analysis which has been borne out by experience is that people will settle near a road. This phenomenon has occurred both on the main east/west highway and the Aleg/Boghe road. Therefore, the fundamental approach of building a road, not where people already are, but rather where they should be economically, is a justified approach for this project. It is safe to expect in the coming years that new settlements will spring up at various spots along the road. Finally, the original assessment pointed out the seasonal migrating pattern of pastoralists from the north to the south in search of pastureland. This trend has continued. The drought has however, added a new element to this migration which is perhaps the single most important change affecting the roads project since the PP was written.

2. Recent Trends

Since the 1982/83, agricultural season, there has been an unprecedented migration of northern pastoralists to the river area. These are people who can no longer maintain their livestock based lifestyle and are forced to move their herds and families south in search of alternative modes of living. Although this demographic trend has yet to be fully documented it has been the subject of extensive discussion at the highest levels of government during meetings of the National Council on Drought Relief (CNAPES).

This trend has affected the ethnic composition of the project area by increasing the number of Moors settling in the Gorgol/Guidimaka area. At this time, it is difficult to speculate how the changing ethnic composition of the area will affect the

political power structure in the Gorgol/Guidimaka regions. One could postulate that increased population density and the increasing proportion of Moors in the area could attract more favorable central government attention to the regions' problems. Already the DNAPES has channelled major health and water resource development funds to these regions as part of the national drought relief program.

A final side effect of the drought influencing the project is the drain on the region's male working age population. As rainfed agricultural and livestock activities decline men tend to migrate to urban centers to join the ever growing service sector. This means that labor will be increasingly short in the target area. Any maintenance scheme developed under this project supplement should take this important constraint into account.

D. Implementation Update

1. Administrative Analysis

As already noted, the project will continue to be executed through a modified force account method with AID, the technical assistance contractor and UNSD serving as the primary actors. Public Works is the client and beneficiary.

a. Department of Public Works: The U.N. construction model described in the original project paper contemplated a modified "force account" system whereby AID would finance technical assistance, material and operating costs for construction brigades under the control of the Ministry of Equipment, Transport and Communications, Department of Public Works. Public Works was to provide and finance the salaries of project counterparts and other personnel to be trained under the project.

In practice, Public Works has considered this an AID/Contractor project. While it has provided 12-13 of the 100 brigade people, budgetary constraints have kept it from directly fulfilling its financial commitments. Local salaries and other expenses have been funded by PL 480 counterpart funds and dollar conversions. While relations with the Department of Public Works have been most cordial and cooperative, the GIRM generally perceives of this as a turn-key construction project and is interested in its being completed as smoothly and expeditiously as possible.

Since the original project paper, the capacity of Public Works to participate in the AID project has not increased. Its mandate covers a wide range of responsibilities including: study, construction and maintenance of roads, bridges and drainage structures, ports, airports and railroads. In addition, it is responsible for marine management, navigation lights and traffic signals.

Yet the organization has neither the personnel nor budgetary resources required to carry out that mandate without assistance. Public Works is headed by a Director and a Deputy Director. Within the entire Ministry of Equipment, Transport and Telecommunications there are 192 people including 16 engineers, 6 field engineers, 22 engineering assistants, 10 construction supervisors, and 6 inspectors. Slightly less than half of these people work in Public Works.

The budget for the entire Ministry totalled approximately \$13 million in 1984, two-thirds of which goes for employee salaries. Of its \$13 million, approximately \$8.4 million is for Public Works (\$3 million in general operating expenses, \$5.2 million for road construction and maintenance, and \$200,000 for special maintenance). Almost three fourths of that total is for personnel salaries.

To help put those numbers into perspective, if the entire PW budget (including personnel expenditures) were applied directly to the paved roads, that would result in an annual allocation of approximately \$5,000/km. If allocations are made to all roads evenly, paved and gravel, the number shrinks to \$1,500/km. If only those funds remaining after salaries are paid are calculated, the figures become approximately \$1,250/km and \$375/km respectively. By comparison, one mile of fourlane interstate highway construction in the rural U.S. costs approximately \$8 million to construct and \$16,000 per year to maintain. Costs of minimal maintenance on roads constructed under this project are approximately \$3,000/km per year.

b. USAID

USAID/Mauritania has had one expatriate project manager, one technician and two local hire support personnel working full time on this project and being paid out of project funds. In addition to general project monitoring and management, USAID has budgeted for, reviewed requisitions and processed almost all project PID/Cs and purchase orders. While USAID has performed this responsibility well, particularly in the absence of any procurement plan, this split responsibility for procurement has afforded the contractor additional excuses on contract performance and perhaps complicated implementation.

Were this project to be starting from scratch, USAID would now recommend that the road be built under the standard approach for a capital project, i.e. an A.I.D.-financed construction contract and an A.I.D. financed construction supervision contract. Accordingly, the contractor would be responsible for commodity procurement. However, the project is close to being half completed and the Mission concluded that changing to a construction contract, with a lengthy IFB and bidding process, would produce undue delays and dislocation. Moreover, since an effective procurement system is already in place and operating,

and since a large amount of procurement has already taken place, USAID should retain its procurement responsibilities for processing procurement. Under the M-M contract revision, however, USAID has proposed that M-M have emergency procurement responsibility when the USAID is unable to issue a purchase order for an urgently needed item within 5 days of M-M's making its request, and with the concurrence of the project officer.

Based on the design team's observations, USAID project monitoring and management has improved markedly over the past few months. Nevertheless, it recognizes the need for increased on-site monitoring and inspection of construction quality and progress, for increased enforcement of compliance with the TA contract and for improved communications with both M-M and the GIRM. With the arrival of a direct-hire engineer and direct-hire project development officer in March 1985, USAID should have adequate capacity to perform these tasks.

c. UNDP/OPE

The United Nations Development Program Office of Project Execution financed the first 70 km of road constructed from M'Bout towards Selibaby. Under this project, as an in-kind contribution estimated at \$200,000, the U.N. has handled the purchasing and accounting for local procurement, itself funded primarily from PL 480 counterpart generations. Since it is not proposed at this time to make the contractor responsible for project procurement, the project planning anticipates that UNDP/OPE will retain its local procurement function which it is carrying out smoothly and effectively.

D. TA Contractor

The current contract with Morrison-Maierle calls for them to perform the following functions: project planning, survey and design, organization of construction, inspection and monitoring, equipment maintenance, reporting, cost accounting, personnel supervision, and training. Except for project procurement, M-M is responsible for providing or managing virtually all project inputs. They are technical assistance contractors in theory, but in practice they are design engineers and construction managers and supervisors.

In sum, both the work to be accomplished and the level of effort needed to accomplish it were drastically underestimated in the original project design and contract. As project plans and designs became more complete, the level of effort required to carry out contract responsibilities has increased as shown in Table III D.1.d. Initially, the total level TA estimated as necessary to complete the road was 125.5 person-months. The revised estimate is now 218.5 person-months. Their responsibilities will be unchanged from the original contract but compliance will be closely monitored.

Table III D.I.d.

Technical Assistance (person-months)

	Original planned	Additional 11/1/84	New LOP LOP-TA
Project Manager	24	18	42
Const. Superintendent #1	24	12	36
Shop Mechanic	24	18	42
Field Mechanic	24	12	36
Equipment Super/Warehouseman		12	12
Const. Superintendent #2			
Field Mechanic #2			
Nouakchott Manager			
Road Maintenance Advisor			
Subtotal Long-Term TA	96		
Short-term	11.5	12	23.5
Home Office Mgt. & Support	18	9	27
TOTAL TECHNICAL ASSISTANCE	125.5	93	218.5

Contractor performance will be monitored regularly, through a series of instruments. First, USAID will be responsible for carefully reviewing the monthly reports to assure that they are prepared in accordance with the contract and including accurate summaries of actual versus planned progress, expenditures, project problems and recommended solutions. Second, requests to depart from the approved construction standards must be requested and approved in writing. On-site monitoring and inspection by USAID will be stepped up to review construction progress and quality and to enforce compliance with acceptable performance standards and adherence to the contract. Such standards could include such things as the timely submission of project work plans, monthly reports or other documents; deadlined equipment being in the shop, diagnosed and action under way within a reasonable period of time; and a professional attitude toward sticking to an agreed-upon work schedule.

During design of the PPS the design team discussed the possibility of a radical change to the contracting mechanism making the M-M contract a prime construction contract. M-M was not interested in that option since they did not have total control over all project inputs. M-M's prior experience with AID and its desire to continue to work with AID is an additional incentive for continued improved performance.

At this point, USAID firmly believes that the delays, costs and risks involved with changing the TA contractor are not justified. M-M management has given the project sustained high level attention over the past few months, and continued close cooperation with the USAID should ensure maintenance of professional standards.

As can be seen from the above description a problem with the original plan and its implementation was that this was viewed as a technical assistance project and no single entity has had overall responsibility for getting the road built. Rather, each of the several entities has been responsible for separate parts of the operation. Mission management has decided that radical change in the mode of implementation would be counterproductive at this stage. Rather, it was concluded that the present system can be made to work, with modifications and improvements. If the system, as modified, does not work in the near term, major changes may be necessary, e.g. contracting out all or portions of the work.

2. Implementation Schedule - Major Actions

Date		
May 1985	Sign Project Agreement	USAID/GIRM
May 1985	Issue PID/T for Technical asst.	USAID
June 1985	Mauritania Counterpart issue New Labor Contract	GIRM
July 1985	Issue "Invitation for Bids" for drainage structures	USAID/GIRM
September 1985	Award Contract for culvert Instal.	USAID/GIRM
September 1985	Preliminary Assessment of Project Progress	USAID/GIRM
October 1985	Host Country Contractor starts construction of selected drainage works	USAID/GIRM TA TEAM
January 1986	Complete Earth work Kaedi-M'bout	TA TEAM
April 1986	Host Country Contractor completes drainage structures	Country Contract
May 1986	Evaluation	USAID/GIRM/REDSO
June 1986	Complete Roadway Construction Kaedi-Selibaby	TA TEAM
June 1986	Initiate maintenance (Resurfacing portions of U.N. Road and adding Rip-Rap as needed	TA TEAM
October 1986	GIRM provides evidence of road maintenance program	
December 1986	Finish Construction Requirements and maintenance agreements	USAID/GIRM TA TEAM

Jan. '86-Sep. '89 Carry out post construction maintenance GIRM

September 30, 1989 Project Assistance Completion Date USAID/GIRM

3. Project Procurement Plan

a. Narrative

The actual procurement of project commodities will continue to be handled under A.I.D. direct contracts for U.S. or foreign procurement and by the UNDP Office of Project Execution for local procurement, until the USAID and GIRM agree otherwise.

b. Source and Origin - As in the original project paper the authorized source and origin for the remaining procurement will be the U.S. and Mauritania. Virtually all capital equipment and some construction materials will be imported from the U.S. Other commodities including diesel fuel and gasoline, cement and reinforcing steel will be purchased "off-the-shelf" in Mauritania. The cement comes from Las Palmas and the reinforcing steel from Senegal.

c. Waivers - Through October 1984, the Rural Roads Improvement Project had financed approximately \$630,000 in local costs from DA funds. An additional \$984,000 in local costs have been paid from counterpart funds generated under the PL 480 Section 206 program. The counterpart funds are not subject to the same limitations on imported shelf items of Code 899 origin as are DA funds since by their nature, PL 480 funds can only be spent locally. \$432,000 of the dollar-financed local currency has been used to finance local salaries and travel as agreed to in the amended ProAg. The remaining \$198,000 was used to procure urgently needed spare parts and repair services using parts of U.S. origin. Therefore, no waiver of imported shelf item limitation has yet been required.

4. Contracting Arrangements and Alternatives

As noted elsewhere in this paper initial project design contributed to many of the cost increases and implementation problems that have been experienced by the project. Affixing clear lines of responsibility for such things as procurement, cost accounting and budget management, personnel recruitment and management, property and equipment ownership has been difficult. In an effort to improve upon that fragmented situation, USAID and the PPS design team have examined a number of alternatives which might improve the pace and quality of construction and concurrently reduce costs. While there were a number and variety of options, they were essentially modifications of contractual arrangements under two different modes of implementing this project: as a construction project or as a technical assistance/construction management project.

In order to complete construction of the road as soon as possible and to establish construction responsibility in a single contractor, consideration was given to awarding a contract to a construction firm and a separate contract to an A & E firm for structural supervision, either one or both of which could be under host country or direct AID procedures. However, there was little reason to believe that host country contracting procedures could be followed easily without significant USAID involvement. It seemed preferable, instead, to consider host country contracting on portions of the road, if at all, rather than for the entire remainder project. This might include, for example, installation of culverts and, possibly, construction of radiers.

It was also recognized that, in shifting to a construction contract, for the entire project, whether under host country or direct A.I.D. procedures, at least eight to twelve months would be needed to complete the process for the competitive award of the supervision and construction contracts. Award would have to be presented by the preparation of the supervision RFP and the receipt and analysis of proposals and then by the preparation of an IFB and receipt and analysis of bids. Mobilization might require an additional six months. Even if the time required could be shortened by as much as 50% by the use of non-competitive procedures, a risky approach, there would still be a substantial hiatus in the work, a loss of momentum, and a need to organize a task force to secure and maintain the equipment, materials and sites. The protracted adjustment period would place in jeopardy the benefits to be obtained from the significant amount of GIRM equipment now available, the facilities established at M'bout for managing the project and maintaining equipment, and the experience of the principal entities involved. Moreover, it could by no means be assured that the shift to a construction contract mode would not result in still greater cost escalation.

The other major method of implementation - as a technical assistance/construction management project - is essentially the project as originally conceived. In discussing the alternatives Mission management recognized that continuation of the project under this alternative would be reasonable only if it resolved the problems of host country participation, M&M field site personnel, and USAID project management. With the arrival of a newly-assigned Mission engineer with significant rural road construction experience, the other knotty implementation aspects were untied. The GIRM agreed to participate directly in the project and at all stages: planning, execution, and evaluation. The GIRM counterpart would henceforth be responsible for the construction brigade, and the brigade would indeed be a Ministry construction team rather than a local labor force responsible to M&M. For its part, M&M would provide responsible leadership and qualified technical personnel who could ensure compliance with an agreed-upon work plan and construction progress schedule. M&M would also have emergency procurement authority so as to avoid maintenance delays where USAID parts procurement might be too slow.

with this combination of improvements, rather than through basic changes, the decision was made to continue the implementation mode essentially as conceived and to maintain the momentum already established.

5. Monitoring and Evaluation Plans

Although this project is not technically complex in that its outputs are clearly defined and achievable, it has suffered numerous delays. Problems have arisen during implementation that were neither recognized nor resolved in a timely manner.

The PFS design team attributed these difficulties in large part to the absence of a satisfactory and agreed-upon implementation/work plan which clearly set out action priorities and schedules and which would permit comparison between what was planned and what was actually accomplished. The TA contract made Morrison and Maierle responsible for preparation of such a plan and a draft was submitted within the required period. But until recently USAID had not insisted that the plan be revised and finalized.

Part of the problem also stems from a lack of USAID management continuity which prevented effective and consistent monitoring/assessment of the project's progress. (There have been four short-term project managers over the 18 month TA contract.) The USAID personnel situation has been rectified by the arrival of a USAID engineer and project development officer in early 1985. The presence of a GIRM representative on-site should also improve coordination and communication between the three agencies involved and contribute to the achievement of project outputs.

For the remainder of the project emphasis should be placed on close and regular monitoring of the contractor's achievement of implementation targets in accordance with the revised workplan. Consequently, the project monitoring and evaluation plans stress monitoring by encouraging frequent on-site inspection visits, and tighter control over the quality of the contractor's monthly reports and periodic assessments of fulfillment of TA contract provisions.

Beginning in September 1985, and at approximately 6 month intervals through the construction period, a REDSU engineer should join the USAID engineer for periodic site visits and reviews of contractor performance. Participation by a REDSU engineer would provide an outside perspective which is difficult to maintain when caught up in daily implementation problems.

Approximately three months prior to completion of road construction, USAID and the GIRM/Public Works will conduct a joint evaluation of project construction, identifying specific corrections which should be made before the TA team leaves.

During the three year post-construction maintenance period, an AID engineer will continue on-site inspections of maintenance performance. Midway through the maintenance period REDSO/ENG will assist in a maintenance review. The end of project evaluation will take place in late 1989 and assess the road condition at that time and GIRM maintenance capability. The 3 person month. socio-economic survey, was conducted in the second quarter of 1985, and the project budget covers consulting services for baseline and end-of-project evaluations.

6. Audits

An audit of this project was conducted in early 1985 and another is planned one year later in early 1986. The scope of work and the contract for the audit will be approved by the U.S Auditor General's staff in Dakar and the audit findings reviewed by the same office.

E. Detailed Cost Estimates and Financing Plan

1. AID Costs - The additional project proposals are as follow:

AID COSTS

I. Technical Assistance (\$1.6 million)

M&M	\$1,100,000
Procurement Services	140,000
Equipment / Eng. Specialist	30,000
T.D.Y., Evaluation	330,000

	\$1,600,000

II. Commodities (\$1.2 million)

Culverts	\$ 300,000
spare parts	330,000
cement, steel, etc	300,000
equipment, supplies, etc.	220,000
gabions	50,000

	\$1,200,000

III. Local Costs (\$2.7 million)

Brigade	\$ 500,000
Contract for culverts & Radiers	400,000
P.O.L. Equip, Local Repair, Mtnc, etc.	1,800,000

	\$2,700,000

IV. Future Road Maintenance 400,000

V. Contingencies 100,000

\$6,000,000

51

2. GIRM Contribution and Recurrent Costs- The GIRM participation in this project has been constrained by severe budgetary and staffing limitations which made it impossible for them to provide all the Public Works personnel, salaries and benefits called for in the original project documents. GIRM personnel, working within the project, had to be seconded and funded under the Government's PL 480 Counterpart Fund budget. In addition to the original commitment of \$1.2 million from the fund, the GIRM recently released \$429,000, equivalent. Also, the GIRM contributed several major pieces of caterpillar equipment from its Public Works pool. The estimated value was \$1.8 million. At an exchange rate of approximately 65 Ouguiya to the dollar, GIRM contributions (including PL 480 generations) now total \$3.4 million. As of mid-May 1985 approximately \$100,000 equivalent remained available for expenditure.

Under this revised project, several former PW personnel will continue to receive on-the-job and limited formal training in road construction and maintenance and in equipment maintenance. The financial commitments requested are reduced to two: (a) the provision of a regional highway maintenance manager to begin work with the project during the final year of construction and to continue in that capacity after construction is completed; and (b) the recurrent costs of road maintenance once AID financing ceases.

Again, the GIRM's ability to meet those commitments will be governed by its ability to make the funding available.

3. Project Disbursement and Payment Plans- All project payments will continue to be made as they have been to date and in accordance with USAID/Mauritania Financing Policies and Procedures. All disbursements are either direct payments made by USAID or advances made to the UNSO for payment in local currency. All checks are issued from Paris.

Morrisson-Maierle, the TA contractor is paid directly by USAID as are PSC project support people working out of USAID. All U.S. procurements have been handled by the USAID Supply Management Office issuance of PID/Cs and Purchase Orders and are paid directly. Some local purchases of goods or services are handled directly by the USAID and paid directly in Ouguiya or dollars. Most local expenses are paid in Ouguiyas with checks drawn on a local bank account of the UN Sudano-Sahelian Office. That account is fed either with advances directly from USAID or with PL 480 counterpart funds released by the Commissariat de la Securite Alimentaire (CSA).

4. Section 121(d) Requirements - As noted, Sahel Development Program Funds will be advanced to the UNSO. As such the project is subject to certification under Section 121(d) of the FAA. The Mission Director, based on advice from the USAID Controller, has

determined that the UNSO system of accounts provides adequate identification and control over the receipt and expenditure of those funds. This project is already certified and UNSO accounts are reviewed monthly by USAID/Controller's Office.

Counterpart funds generated under the PL 480 Title II Section 206 program are managed by a GIRM agency, the CSA, and released to the UNSO for local currency expenses upon the recommendation of a joint USAID/GIRM committee. While Section 121 (d) requirements do not apply to PL 480 programs and funds, those funds are accounted for and controlled in the same manner. The USAID Controller has also reviewed the CSA accounting system and found it to be satisfactory.

PROJECT DESIGN SUMMARY - LOGICAL FRAMEWORK

PROJECT TITLE & NUMBER: RURAL ROADS IMPROVEMENT (682-0214)

DATE PREPARED: 5/85

LIFE OF PROJECT: From FY 82 thru FY 89

TOTAL U.S. FUNDING: \$ 11,291,000

NARRATIVE	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Program Goal: the broader objective to which this project contributes:</p> <p>To improve the social and economic well-being of the rural population of the Guidimaka and Gorgol Regions.</p>	<p>Measurements of Goal Achievement:</p> <ul style="list-style-type: none"> - increased income as a result of improved marketing opportunities and increased availability & lower costs of inputs and services. - improved quality of life by improving access to government services in health, education and other areas. 	<p>National accounts and statistics indicating social and economic activity by impact area in the Gorgol and Guidimaka Regions.</p>	<ul style="list-style-type: none"> - After project GIRM finds sufficient budgetary and human resources to permit the continued improvement and maintenance of rural roads in the Gorgol and Guidimaka Regions. - Project will stimulate increased investments and services in the Guidimaka & Gorgol Regions.
<p>Project Purpose:</p> <p>To facilitate access to markets and the means of moving social services and agricultural inputs into potentially high food production areas.</p>	<ul style="list-style-type: none"> - increased number of health, education and other related governmental inputs/services delivered to area. - increase of commercial activities (transportation and marketing of consumer goods, local crafts) in project area. - agricultural production in region increases and the increased volume reaches national/regional markets. 	<ul style="list-style-type: none"> - Data collection by GIRM national and regional authorities on agricultural production, health and education. - Baseline & follow-up socio-economic survey. 	<ul style="list-style-type: none"> - Completion of project will provide improved access to Gorgol and Guidimaka and will generate increased investments and services in the region. - Prices of agricultural inputs and produce are responsive to costs of transportation and to market prices. - other requirements for agricultural production do not deteriorate.

NARRATIVE

OBJECTIVELY VERIFIABLE INDICATORS

MEANS OF VERIFICATION

IMPORTANT ASSUMPTIONS

- travel time and travel expense reduced, both within Gorgol/Guidimaka Regions and with other regions.

OUTPUTS

MAGNITUDE OF OUTPUTS

1. Near All-weather Rural Roads constructed/repared and maintained:
 a) Kaedi-M'Bout
 b) M'Bout-Selibaby

1. a) 117 km
 b) 116 km
 233 km

1. On site inspections by GIRM, USAID and REDSO/WA Engrs.

- Near "all weather" assumes possible delays up to several days following heavy rain storms.

2. Rural Road Maintenance organization/facilities strengthened to maintain rural roads improved under project.

2. Construction Camp at M'Bout operational and in good condition.

- Equipment left by project is suitable for maintenance activities.

- P.W. personnel in place capable of carrying out maintenance activities, repairing equipment and obtaining spare parts.

- Rural Road Maintenance Plan developed.

2. Contractor's monthly and end of Project Reports.

- Formal training completed

- Project Evaluation

- standards for improvements of rural roads meet technical, social and economic requirements of region.

- that GIRM Ministry of Equipment & Transport assume control of facilities and equipment and employs personnel trained under project.

5C(1) - COUNTRY CHECKLIST

ANNEX B

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

A. GENERAL CRITERIA FOR COUNTRY ELIGIBILITY

1. FAA Sec. 481; FY 1985 Continuing Resolution Sec. 528. Has it been determined or certified to the Congress by the President that the government of the recipient country has failed to take adequate measures or steps to prevent narcotic and psychotropic drugs or other controlled substances (as listed in the schedules in section 202 of the Comprehensive Drug Abuse and Prevention Control Act of 1971) which are cultivated, produced or processed illicitly, in whole or in part, in such country or transported through such country, from being sold illegally within the jurisdiction of such country to United States Government personnel or their dependents or from entering the United States unlawfully?

NO

2. 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) the debt is not denied or contested by such government?

NO

56

3. FAA Sec. 620(e)(1). If assistance is to a government, has it (including government agencies or subdivisions) taken any action which has the effect of nationalizing, expropriating, or otherwise seizing ownership or control of property of U.S. citizens or entities beneficially owned by them without taking steps to discharge its obligations toward such citizens or entities? NO
4. FAA Sec. 620(a), 620(f), 620(D); FY 1985 Continuing Resolution Sec. 512 and 513. Is recipient country a Communist country? Will assistance be provided to Angola, Cambodia, Cuba, Laos, Syria, Vietnam, Libya, or South Yemen? Will assistance be provided to Afghanistan or Mozambique without a waiver? NO
5. FAA Sec. 620(j). Has the country permitted, or failed to take adequate measures to prevent, the damage or destruction by mob action, of U.S. property?
6. FAA Sec. 620(1). Has the country failed to enter into an agreement with OPIC? NO
7. FAA Sec. 620(o); Fishermen's Protective Act of 1967, as amended, Sec. 5. (a) Has the country seized, or imposed any penalty or sanction against, any U.S. fishing activities in international waters? NO
- (b) If so, has any deduction required by the Fishermen's Protective Act been made? N/A

8. FAA Sec. 620(q); FY 1985 Continuing Resolution Sec. 518. (a) Has the government of the recipient country been in default for more than six months on interest or principal of any AID loan to the country? (b) Has the country been in default for more than one year on interest or principal on any U.S. loan under a program for which the appropriation bill (or continuing resolution) appropriates funds?

(a) N/A

(b) NO

9. FAA SEC. 620(s). If contemplated assistance is development loan or from Economic Support Fund, has the Administrator taken into account the amount of foreign exchange or other resources which the country has spent on military equipment? (Reference may be made to the annual "Taking Into Consideration" memo: "Yes, taken into account by the Administrator at time of approval of Agency OYB." This approval by the Administrator of the Operational Year Budget can be the basis for an affirmative answer during the fiscal year unless significant changes in circumstances occur.)

N/A

10. 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?

(a) Yes

(b) Diplomatic relations have been resumed and (c) bilateral assistance agreement is currently under negotiation.

11. 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? (Reference may be made to the Taking into Consideration memo.)

While Mauritania is in arrears on its obligation to the U.N., such arrearages were taken into account by the administrator in determining the current OYB.

12. FAA Sec. 620A; FY 1985 Continuing Resolution Sec. 521. Has the country aided or abetted, by granting sanctuary from prosecution to, any individual group which has committed an act of international terrorism? Has the country aided or abetted, by granting sanctuary from prosecution to, any individual or group which has committed a war crime?

NO

13. FAA Sec. 666. Does the country object, on the basis of race, religion, national origin or sex, to the presence of any officer or employee of the U.S. who is present in such country to carry out economic development programs under the FAA?

NO

14. 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 transferred a nuclear explosive device to a non-nuclear weapon state, or if such a state, either received or detonated a nuclear explosive device? (FAA Sec. 620E permits a special waiver of Sec. 669 for Pakistan.)

NO

15. ISDCA of 1981 Sec. 720. Was the country represented at the Meeting of Ministers of Foreign Affairs and Heads of Delegations of the Non-Aligned Countries to the 36th General Assembly of the U.N. of Sept. 25 and 28, 1981, and failed to disassociate itself from the communique issued? If so, has the President taken it into account? (Reference may be made to the Taking into Consideration memo.)

Yes, such action has been taken into account.

15. FY 1985 Continuing Resolution. If assistance is from the population functional account, does the country (or organization) include as part of its population planning programs involuntary abortion?

N/A

16. FY 1985 Continuing Resolution Sec. 530. Has the recipient country been determined by the President to have engaged in a consistent pattern of opposition to the foreign policy of the United States?

No

B. FUNDING SOURCE CRITERIA FOR COUNTRY ELIGIBILITY

I. Development Assistance Country Criteria

FAA Sec. 116. Has the Department of State determined that this government has engaged in a consistent pattern of gross violations of internationally recognized human rights? If so, can it be demonstrated that contemplated assistance will directly benefit the needy?

NO

60

2. Economic Support fund
Country Criteria

FAA Sec. 502B. Has it been determined that the country has engaged in a consistent pattern of gross violations of internationally recognized human rights? If so, has the country made such significant improvements in its human rights record that furnishing such assistance is in the national interest?

NO

5C(2) PROJECT CHECKLIST

Listed below are statutory criteria applicable to projects. This section is divided into two parts. Part A. includes criteria applicable to all projects. Part B. applies to projects funded from specific sources only:
B.1. applies to all projects funded with Development Assistance loans, and
B.3. applies to projects funded from ESF.

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

A. GENERAL CRITERIA FOR PROJECT

1. FY 1985 Continuing Resolution Sec. 525; FAA Sec. 634A; Sec. 653(b).

(a) Describe how authorizing and appropriations committees 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 amount)?

(a) Advise of Program change will be submitted

(b) Yes

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

(a) Yes

(b) Yes

3. 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?

N/A

4. FAA Sec. 611(b); FY 1985 Continuing Resolution Sec. 501. If for water or water-related land resource construction, has project met the standards and criteria as set forth in the Principles and Standards for Planning Water and Related Land Resources, dated October 25, 1973, or the Water Resources Planning Act (42 U.S.C. 1962, et seq.)? (See AID Handbook 3 for new guidelines.)

N/A

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

6. FAA Sec. 209. Is project susceptible to 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.

NO

63

7. FAA Sec. 601(a). Information and conclusions whether projects will encourage efforts of the country to: (a) increase the flow of international trade; (b) foster private initiative and competition; and (c) encourage development and use of cooperatives, and 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.

(a) The project will encourage the flow of international trade between Senegal and Mauritania by improving the roads from the Senegal River Basin area into the interior of Mauritania; (b) private initiative to engage in increased agricultural and food production should be stimulated as a result of improved transportation links and subsequent reduced transport costs; (c) the technical efficiency of agriculture in the Guidimaka Region should be improved as a result of increased technical advice and improved agricultural inputs from the extension services which will be better able to reach rural farmers on the improved roads.

8. FAA Sec. 601(b). Information and conclusions 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 will finance technical assistance services and project commodities from private firms in the U.S.

9. FAA Sec. 612(b), 636(h); FY 1985 Continuing Resolution Sec. 507. 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 in lieu of dollars.

Mauritania's contribution represents the maximum that it can manage, given that it is one of the poorest countries in Africa.

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?

NO

651

11. FAA Sec. 601(e). Will the project utilize competitive selection procedures for the awarding of contracts, except where applicable procurement rules allow otherwise? YES
12. FY 1985 Continuing Resolution Sec. 522. 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? N/A
13. FAA 118(c) and (d). Does the project comply with the environmental procedures set forth in AID Regulation 16. Does the project or program take into consideration the problem of the destruction of tropical forests? YES
14. FAA 121(d). If a Sahel project, has a determination been made that the host government has an adequate system for accounting for and controlling receipt and expenditure of project funds (dollars or local currency generated therefrom)? YES

65

15. FY 1985 Continuing Resolution Sec. 536. Is disbursement of the assistance conditioned solely on the basis of the policies of any multilateral institution?

NO

B. FUNDING CRITERIA FOR PROJECT

1. Development Assistance Project Criteria

- a. FAA Sec. 102(b), 111, 113, 281(a). Extent to which activity will (a) effectively involve the poor in development, by extending access to economy at local level, increasing labor-intensive production and the use of appropriate technology, spreading investment out from cities to small towns and rural areas, and insuring wide participation of the poor in the benefits development on a sustained basis, using the appropriate U.S. institutions; (b) help develop cooperatives, especially by technical assistance, to assist rural and urban poor to help themselves toward better life, and otherwise encourage democratic private and local governmental institutions; (c) support the self-help efforts of developing countries.

The project will facilitate access to markets on all weather road all year round and will provide the means of moving social services and agricultural inputs into potentially high food production areas.

lb

the participation of women in the national economies of developing countries and the improvement of women's status, (e) utilize and encourage regional cooperation by developing countries?

- b. FAA Sec. 103, 103A, 104, 105, 106. Does the project fit the criteria for the type of funds (functional account) being used? YES
- c. FAA Sec. 107. Is emphasis on use of appropriate technology (relatively smaller, cost-saving, labor-using technologies that are generally most appropriate for the small farms, small businesses, and small incomes of the poor)? YES
- d. FAA Sec. 110(a). Will the recipient country provide at least 25% of the costs of the program, project, or activity with respect to which the assistance is to be furnished (or is the latter cost-sharing requirement being waived for a "relatively least developed country)? Adherence to the 25% rate is not required of SDP funded projects or of project amendments.
- e. FAA Sec. 110(b). Will grant capital assistance be disbursed for project for more than 3 years? If so, has justification satisfactory to Congress been made, and efforts for other financing, or is the recipient country YES, YES

67

"relatively least developed"? (M.O. 1232.1 defined a capital project as "the construction, expansion, equipping or alteration of a physical facility or facilities financed by AID dollar assistance of not less than \$100,000, including related advisory, managerial and training services, and not undertaken as part of a project of a predominantly technical assistance character."

- f. FAA Sec. 122(b). Does the activity give reasonable promise of contributing to the development of economic resources, or to the increase of productive capacities and self-sustaining economic growth?

YES

- g. FAA Sec. 281(b). Describe extent to which program recognizes the particular needs, desires, and capacities of the people of the country; utilizes the country's intellectual resources to encourage institutional development; and supports civil education and training in skills required for effective participation in governmental processes essential to self-government.

The project responds to the wishes of the people to have year-round transportation access between the Guidimaka Region, potentially Mauritania's most productive area, and the rest of the country.

68

2. Development Assistance Project
Criteria (Loans Only)

a. FAA Sec. 122(b).
Information and conclusion on
capacity of the country to
repay the loan, at a
reasonable rate of interest.

N/A

b. FAA Sec. 620(d). If
assistance is for any
productive enterprise which
will compete with U.S.
enterprises, is there an
agreement by the recipient
country to prevent export to
the U.S. of more than 20% of
the enterprise's annual
production during the life
of the loan?

N/A

3. Economic Support Fund Project
Criteria

a. FAA Sec. 531(a). Will this
assistance promote economic
and political stability? To
the extent possible, does it
reflect the policy
directions of FAA Section
102?

N/A

b. FAA Sec. 531(c). Will
assistance under this
chapter be used for
military, or paramilitary
activities?

N/A

c. FAA Sec. 534. Will ESF
funds be used to finance the
construction of, or the
operation or maintenance of,
or the supplying of fuel
for, a nuclear facility? If
so, has the President
certified that such use of
funds is indispensable to
nonproliferation objectives?

N/A

- d. 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?

YES

70

5C(3) - STANDARD ITEM CHECKLIST

Listed below are the statutory items which normally will be covered routinely in those provisions of an assistance agreement dealing with its implementation, or covered in the agreement by imposing limits on certain uses of funds.

These items are arranged under the general headings of (A) Procurement, (B) Construction, and (C) Other Restrictions.

A. Procurement

1. FAA Sec. 602. Are there arrangements to permit U.S. small business to participate equitably in the furnishing of commodities and services financed? YE.

2. FAA Sec. 604(a). Will all procurement be from the U.S. except as otherwise determined by the President or under delegation from him?? YES

3. FAA Sec. 604(d). If the cooperating country discriminates against marine insurance companies authorized to do business in the U.S., will commodities be insured in the United States against marine risk with such a company? N/A

4. FAA Sec. 604(e); ISDCA of 1980 Sec. 705(a). If offshore procurement of agricultural commodity or product is to be financed, is there provision against such procurement when the domestic price of such commodity is less than parity? (Exception where commodity financed could not reasonably be procured in U.S.)

N/A

5. FAA Sec. 604(g). Will construction or engineering services be procured from firms of countries which are direct aid recipients and which are otherwise eligible under Code 941, but which have attained a competitive capability in international markets in one of these areas? Do these countries permit United States firms to compete for construction or engineering services financed from assistance programs of these countries?

NO
N/A

6. FAA Sec. 603. Is the shipping excluded from compliance with requirement in section 901(b) of the Merchant Marine Act of 1936, as amended, that at least 50 per centum of the gross tonnage of commodities (computed separately for dry bulk carriers, dry cargo liners, and tankers) financed shall be transported on privately owned U.S. flag commercial vessels to the extent such vessels are available at fair and reasonable rates?

NO

7. FAA Sec. 621. If technical assistance is financed, will such assistance be furnished by private enterprise on a contract basis to the fullest extent practicable? If the facilities of other Federal agencies will be utilized, are they particularly suitable, not competitive with private enterprise, and made available without undue interference with domestic programs?

YES

8. International Air Transportation Fair Competitive Practices Act, 1974. If air transportation of persons or property is financed on grant basis, will U.S. carriers be used to the extent such service is available?

YES

9. FY 1985 Continuing Resolution Sec. 504. If the U.S. Government is a party to a contract for procurement, does the contract contain a provision authorizing termination of such contract for the convenience of the United States?

YES

B. Construction

1. FAA Sec. 601(d). If capital (e.g., construction) project, will U.S. engineering and professional services be used?

YES

2. FAA Sec. 611(c). If contracts for construction are to be financed, will they be let on a competitive basis to maximum extent practicable?

N/A

3. FAA Sec. 620(k). If for construction of productive enterprise, will aggregate value of assistance to be furnished by the U.S. not exceed \$100 million (except for productive enterprises in Egypt that were described in the CP)?

YES

C. Other Restrictions

1. FAA Sec. 122(b). If development loan, is interest rate at least 2% per annum during grace period and at least 3% per annum thereafter?

N/A

2. FAA Sec. 301(d). If fund is established solely by U.S. contributions and administered by an international organization, does Comptroller General have audit rights?

N/A

3. FAA Sec. 620(h). Do arrangements exist to insure that United States foreign aid is not used in a manner which, contrary to the best interests of the United States, promotes or assists the foreign aid projects or activities of the Communist-bloc countries?

YES

4. Will arrangements preclude use of financing:

- a. FAA Sec. 104(f); FY 1985 Continuing Resolution Sec. 527. (1) To pay for performance of abortions as a method of family planning or to motivate or coerce persons to practice

YES

abortions; (2) to pay for performance of involuntary sterilization as method of family planning, or to coerce or provide financial incentive to any person to undergo sterilization; (3) to pay for any biomedical research which relates, in whole or part, to methods or the performance of abortions or involuntary sterilizations as a means of family planning; (4) to lobby for abortion?

- b. FAA Sec. 620(g). To compensate owners for expropriated nationalized property?
- c. FAA Sec. 660. To provide training or advice or provide any financial support for police, prisons, or other law enforcement forces, except for narcotics programs?
- d. FAA Sec. 662. For CIA activities?
- e. FAA Sec. 636(i). For purchase, sale, long-term lease, exchange or guaranty of the sale of motor vehicles manufactured outside U.S., unless a waiver is obtained?
- f. FY 1985 Continuing Resolution, Sec. 503. To pay pensions, annuities, retirement pay, or adjusted service compensation for military personnel?

YES

YES

YES

YES

YES

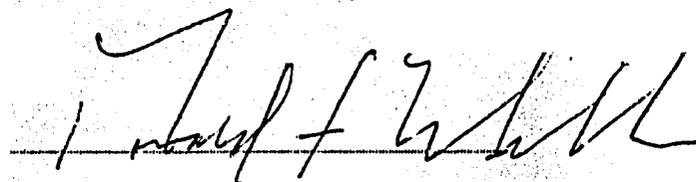
- g. FY 1985 Continuing Resolution, Sec. 505.
To pay U.N. assessments, arrearages or dues? YES
- h. FY 1985 Continuing Resolution, Sec. 506.
To carry cut provisions of FAA section 209(d) (Transfer of FAA funds to multilateral organizations for lending)? YES
- i. FY 1985 Continuing Resolution, Sec. 510.
To finance the export of nuclear equipment, fuel, or technology or to train foreign nationals in nuclear fields? YES
- j. FY 1985 Continuing Resolution, Sec. 511.
Will assistance be provided for the purpose of aiding 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
- k. FY 1985 Continuing Resolution, Sec. 516.
To be used for publicity or propaganda purposes within U.S. not authorized by Congress? YES

Certification Pursuant to Section 611 (e) of the Foreign Assistance
Act of 1961, as Amended

Subject: Mauritania - Rural Roads Improvement Project 682-0214

I, Donald F. Miller, Director of the United States AID Mission to Mauritania, having taken into account inter alia, the maintenance and utilization of projects in Mauritania, previously financed or assisted by the United States, do hereby certify that, in my judgement, Mauritania has both the financial capability and the human resources to maintain and utilize effectively the grant funds for the Rural Roads Improvements Project.

This judgement is based primarily on the facts developed in the project paper for the proposed grant of \$6.000 million and A.I.D.'s review of the financial assistance previously provided to Mauritania.



Donald F. Miller
Director

29 May 1985

Date