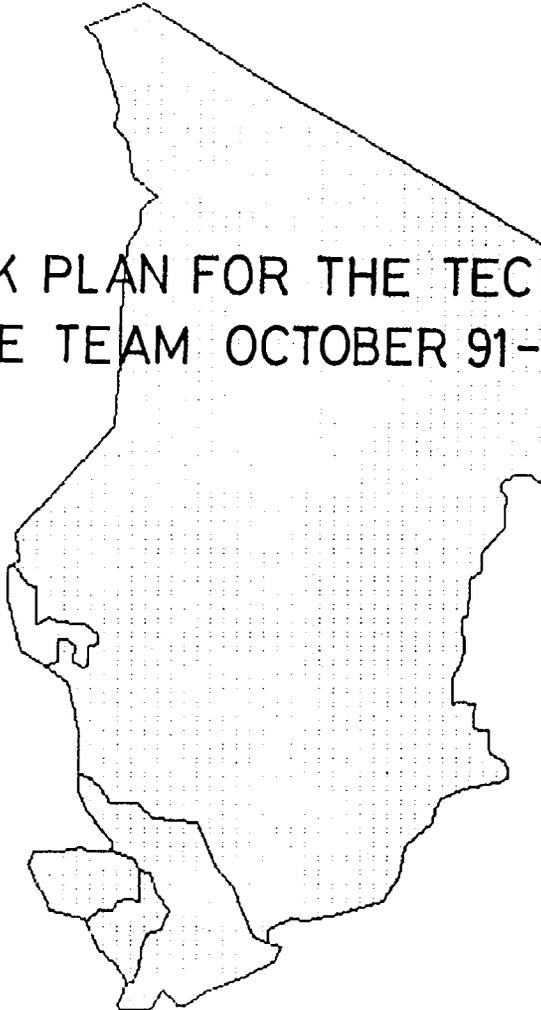


U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT
N'DJAMENA, CHAD

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STRENGTHENING ROAD MAINTENANCE PROJECT
CONTRACT N° 677-0050-C-00-0010-00

**WORK PLAN FOR THE TECHNICAL
ASSISTANCE TEAM OCTOBER 91-SEPTEMBER 92**



Louis Berger International, INC
100 Halsted St
East Orange, N.J. 07010



WORKPLAN FOR TECHNICAL ASSISTANCE

OCTOBER 1991 - SEPTEMBER 1992

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OCTOBER 1991 - SEPTEMBER 1992

II - SUMMARY OF MILESTONES FOR TECHNICAL ASSISTANCE WORK

OCTOBER 1991 - SEPTEMBER 1992

WORKPLAN FOR TECHNICAL ASSISTANCE

OCTOBER 1991 - SEPTEMBER 1992

1 - GENERAL OBJECTIVES OF WORKPLAN

The workplan for the technical assistance provided by LOUIS BERGER INTERNATIONAL, Inc. during the seventh year of Phase 1 of the Chad Strengthening Road Maintenance Project has been designed so as to continue the achievement of the objectives described in the contract scope of work and to address the main problems which were identified during the first year of the assignment. Without reducing the ongoing role in assisting, guiding and training OFNAR personnel, a special focus will be given by the Consultant to the development of a solution to these problems.

In this respect the three main issues which will receive special attention from the Consultant during this period will be :

- The improvement of the management and maintenance of the equipment at the central workshop level and at the N'Djamena Agency level.
- The improvement of the N'Djamena Agency work efficiency in terms of administration, equipment maintenance and road works.
- The development of the involvement of the private sector in road maintenance activities.

These objectives shall be achieved through reorganization of the structures, introduction of improved management methods and training of OFNAR personnel.

The Consultant will also continue his action in :

- improvement of the general OFNAR management, particularly in the financial and accounting fields.
- development of the computerized management system.
- training of the OFNAR personnel.
- liaison with the Ministry of Works in the pursuit of other PASET objectives.

2 - PRESENTATION OF WORKPLAN

In order to make of this workplan a tool to monitor the progress of the work of the technical assistance team and to measure the results obtained, the present document describes below the individual workplans of each member of the team. A general schedule presented at the end of this text summarizes these tasks and gives their completion dates and the main milestones.

It should be emphasized that this workplan intentionally avoids paraphrasing the job descriptions clearly defined in the contract scope of work. The workplan will focus on the most important tasks to be accomplished by each team member during the second year of this assignment. The tasks listed in the contract scope of work and not specially mentioned in the workplan are to be considered as implicitly included.

3 - WORKPLAN OF CHIEF OF PARTY

During the second year of the project the Chief of Party will give priority to :

- The direction of the TA activities so as to accomplish the work described in the present workplan.
- The coordination of TA work with other PASET components.
- The advice to OFNAR Direction on management and organization issues.

In terms of management of this contract and of reporting he will also :

- Organize monthly coordination meetings with OFNAR, USAID and the Consultant's team representatives, and as appropriate, Ministry of Works and FASET Management Unit representatives.
- Submit quarterly progress reports.

4 - WORKPLAN OF ROAD MAINTENANCE ENGINEER

4.1 Development of the road maintenance management system at N'Djamena Agency

At present the development process for the annual work program, budget and work schedule of the N'Djamena Agencies consists of a simplistic repetition of programs from prior years. Methods for accumulation of cost data are centralized, and poorly identify specific activity cost, planned versus actual task accomplishment, or equipment operation costs. Personnel costs are predicated upon static manning levels throughout the year. Overhead costs for OFNAR administration, and services provided by the Central Garage do not enter into the budget process at the Agency level. In the programming and budget development process, no differentiation is made between the activities and costs for routine road maintenance operations and those for periodic rehabilitations. One of the objectives of the Road Maintenance Engineer workplan for the next twelve months is to put the elements of a road maintenance management system in place in gradually increasing levels of sophistication.

4.2 Improve the reporting system

Improved monthly accomplishment reports are a specific task for the TA road maintenance engineer. The present reporting system does relate to the annual work program. Accomplishment reporting follows established procedures in which data is difficult to extract for various maintenance operations, or to correlate with the requirements of the OFNAR Directorate des Travaux for the purpose of monitoring and refinement of unit costs throughout the OFNAR Agencies.

Quarterly reports are mandatory to describe both consultant workplan progress and N'Djamena Agency accomplishments and the various problems encountered by all concerned. The road maintenance engineer is responsible for consolidating reports from the field operations supervisor and the service foreman / field mechanic as well as for Agency activity.

4.3 Road inventory and condition

Road inventory and condition status reports are essential to a road maintenance management system. An inventory consists of a catalog of every road element to be maintained by the Agency. When combined with a periodic road status survey which contrasts desired and actual level of service (operating condition), this report summarizes the status of the Agency's road network. A quarterly update by the road maintenance engineer may be too ambitious for 538 kilometers of priority roads, especially with the eventual need to expand the report to include secondary roads. Time constraints may result in such reports being updated three times each year.

4.4 Development of private sector involvement

Implementation of private sector road maintenance within the N'Djamena system necessitates recommendations from the road maintenance engineer describing appropriate areas for these activities, work descriptions, and estimated quantities and costs. A general preliminary report is scheduled for mid-November and is to be followed by planning specifics and documents as required.

The necessity for the Agency to assume maintenance responsibilities for 188 kilometers of paved road upon "hand-over" from the construction contractors provides a good opportunity for private sector contracts to maintain initially road shoulders and embankment slopes as labor intensive activities requiring a minimum of equipment and financial capability.

4.5 Assistance and training of N'Djamena Agency Personnel

Technical support and administrative support for Agency operations is the responsibility of the road maintenance engineer as is for the supervision of other TA staff assigned directly to operations, including the field operations advisor and the field mechanic. Input is daily at the level of the Agency Chief (direct counterpart), department heads and the heads of mechanized brigades. The engineer advises, monitors and certifies Agency activities on a daily basis.

4.6 N'Djamena Agency Equipment

The road engineer will coordinate scheduled equipment repair and rehabilitation on the basis of equipment status reports, the requirements of the road maintenance plan, and the timely availability of replacement components and repair parts. Schedules will be prepared well in advance of the end of the road maintenance season and requirements for parts and components reviewed in mid-maintenance season.

A report with recommendations and specifications for new equipment procurement funded under the Consultant's contract is scheduled prior to the end of December. An analysis of conditions within the existing Agency fleet will be the basis for new equipment recommendations.

5 - WORKPLAN OF FINANCIAL AND PROCUREMENT ADVISOR

5.1 Finance

5.1.1 Implementation of Accounting System at the N'Djamena Agency.

The Consultant is in the process of initiating new records and procedures, based on the "OCAM" system of accounting records/documents which is currently being used by OFNAR. Current OFNAR account numbers and OCAM procedures will remain the same. A manual system will be prepared to include the following :

- a. Accounting
 - a.1. Accounting Records
 - Cash disbursement Journal
 - Check Register
 - Accounts Payable Register
 - Asset Register

a.2. Accounting Procedures

- Internal Control
- Petty Cash
- Depreciation
- Inventory

b. Budget

b.1. General

b.2. Budget Performance

c. Reports

OFNAR is still entering the various accounts in the SARRI Program. This is proceeding very slowly due primarily to the loss of the data during electrical failures.

Once the Agency manual system is functioning effectively and OFNAR is ready to implement the SARRI (Software General Accounting) Program, plans will be made to implement the automated system at the N'Djamena Agency. It is anticipated that the implementation of the "SARRI" Program at the Agency will begin in approximately nine months.

5.1.2 Monitor Project Inventory Records at N'Djamena Agency.

The computer Hardware necessary to enter the inventory records in an automated data file has not yet been installed at the Agency. However, an inventory was taken in July and efforts are underway to complete the entry of the inventory data at the Material Director's Office.

When operational, the parts inventory system will provide a permanent record of issues and procurement of all spare parts stocked. The reports produced by this system should include a periodic listing of parts and inventory on-hand and unit prices. Determining and maintaining an economic inventory level for spare parts and ensuring their replenishment are integral parts of this inventory system. In order to maintain and update the inventory, the issues and incoming stock will be systematically recorded.

5.1.3 Supervise Maintenance of the OFNAR Project-Related Accounts.

Procedures will continue to be implemented to insure that OFNAR receives and records in a timely manner copies of all Project transactions including disbursements made directly by USAID. Currently, some of the direct USAID payments are not being properly recorded and therefore increased supervision is planned to insure proper recording of these transactions.

Also, a review is underway to insure Accounting Procedures are still being followed to fully report all N'Djamena Agency recurrent costs at the Central Workshop.

5.1.4 Prepare Project Disbursements

A revised procedure is in place to insure a more rapid and efficient disbursement procedure for the Project funds. With the disbanding of the "Contrôle d'Etat", the elapsed time required for approving disbursements as well as receiving and paying for purchases has been greatly reduced. A key factor in the procedure is to insure that the disbursements, including documentation are being tracked and recorded/maintained by OFNAR.

5.1.5 Prepare Project Financial Reports

The following reports will continue to be prepared and submitted to USAID and OFNAR :

- Financial report on OFNAR/USAID Project funds disbursements.
- Status of Recurrent Costs

A review of outstanding disallowances for the OFNAR/USAID account since the inception of the Project is planned. Future reports will include N'Djamena Agency financial reports to OFNAR.

5.1.6 Follow-up of OFNAR General Accounting

The inclusion on a short term basis of an expatriate General Accountant working at the OFNAR "Direction Administrative et Financière" will require the follow-up of his work by the Consultant. His activity will also be reported to USAID in the quarterly progress reports.

5.2 Procurement

5.2.1 Monitor Procurement of Parts, Tools etc. for Project

Procurement of parts, tools, equipment, office furniture as well as appropriate N'Djamena Agency operating expenses will be closely monitored. Method of payments for the above include :

- OFNAR/USAID Project funds
- Louis Berger Procurement funds
- Direct USAID Payments

5.2.2 Advise OFNAR on Procurement Procedures

Revised procurement procedures are being implemented. The disbanding of the "Contrôle d'Etat" has significantly simplified the procurement process. This Government of Chad entity was directly involved in approving, at various stages of the procurement process, all purchases. A major effort will be made to continue the improvements in the tracking and control of the documents throughout the procurement process.

5.2.3 Implement New Procedures for Handling project Procurement Funds through the Technical Assistance Contract.

The Amendment to the Technical Assistance Contract covering additional funding for Project Procurement has been approved. Procedures will continue to be implemented to insure rapid, efficient purchase of parts, tools equipment, office supplies, etc. with USAID regulations. This procurement procedure replaces the Blanket Orders.

6 - WORKPLAN OF FIELD OPERATIONS ADVISOR

The 91/92 road maintenance program for the N'Djamena Agency has been prepared by the OFNAR Direction des Travaux and developed by the Consultant's Road Maintenance Engineer. The Field Operations Advisor will assist the Agency road brigades to implement the program. The work to be carried out includes:

- a) on the Djermaya-Bokoro Road (274 km).
 - overall road grading and compacting to reopen the road to traffic after the rainy season.
 - reconstruction of the roadway on poor quality sections particularly on 12 km around Moito.
 - cleaning of the ditches.
 - construction or repair of drainage culverts.

- b) on the Guelengdeng - Bongor - Lai Road (279 km)

The heavy maintenance work is similar to the above.

The construction of new drainage culverts is scheduled to be contracted to the private sector.

- c) on the N'Djamena - Massenya Road (169 km)

Between N'Djamena and Linia (30 km) maintenance works similar to the above are planned. Beyond Linia to Massenya the road has to be reconstructed as it is currently only an earth track.

- d) improvement of road access to the ferries.

The rehabilitation of the road access to the Bongor and Eré ferries will be done by the mobile brigade or by the other brigades working on the adjacent roads, depending on availability of equipment.

7 - WORKPLAN OF SERVICE FOREMAN / FIELD MECHANIC

During this year the Service Foreman / Field Mechanic will have to catch up on preparation of the mobilization of equipment for the two brigades of the N'Djamena Agency and in the follow-up of the maintenance of this equipment in the field.

He will have a major role in the supervision of the repair and maintenance of the equipment in the field and particularly in guiding and training the OFNAR field mechanics and equipment operators. For this he will work in close collaboration with the Field Operations Advisor.

The Service Foreman / Field Mechanic will also assist and train the N'Djamena Agency workshop mechanics, although this task will be only his second priority this year.

During this year he will spend at least half of his time in the field to improve the availability and the productivity rates of the brigade equipment observed last year.

8 - WORKPLAN OF SHOP SUPERINTENDENT

The workshop Superintendent is to work in close coordination with OFNAR's "Direction du Matériel". This Direction will be responsible for the development of the OFNAR equipment management policy and procedures. The Superintendent will contribute to the more practical aspects of the definition of these policies and procedures, to their testing and to their implementation in the Central Workshop and in the regional workshops.

He will have a major role in the continuation of the development of the Inspection/Diagnosis and quality control departments. He will particularly assist in the training of equipment inspectors in diagnostic procedures and in the use of testing equipment. He will be responsible for the organization of training sessions on these subjects to be held by outside specialists, such as those presented by Caterpillar Technicians coming from Cameroon.

Based on the inspection carried out, he will assist in developing the annual equipment budget including the spare parts procurement program, and outline the annual work program for the Central workshop.

The Workshop Superintendent is also to assist and guide his Chadian counterpart in the planning, scheduling and operation of the central workshop activities. He will routinely advise and assist the foreman of the main workshop departments (light vehicles, trucks, engine, plants, electricity...) in the repair and maintenance activities they are carrying out.

The Workshop Superintendent will review as appropriate, the adequacy of the shop installations and make proposals on possible improvements for them. His primary concern should be the routine maintenance installations. He will also review the tyre shop the electrical shop, the injection shop and the engine testing facilities.

The Shop Superintendent will support the OFNAR regional workshops and the field mechanic teams. He will contribute to the rehabilitation of their facilities and equipment.

Depending on the level of development of the computerized cost accounting system he will also contribute to the collection of the required data and to the analysis of the outputs provided.

As is the case for all other team members he will produce a quarterly progress report on his work.

9 - WORKPLAN OF THE EQUIPMENT AND ENGINE FOREMAN

This year's workplan for the Equipment and Engine Foreman is a continuation of the activities undertaken during the first year of the assignment. They include :

- assistance to the Shop Section Heads on repairs of engines and of plants.
- training of Shop Section Heads in management and programming of repairs, diagnostics, utilization of testing equipment and repair manuals, ordering of spare parts, preparation of daily activity reports, repairwork quality control, personal safety...
- training of Mechanics in repair techniques, utilization of special tools, quality control.
- monitoring and supervision of work done by the private sector (injection pumps).

- as needed support to the N'Djamena Agency workshop, mainly when the Service Foreman / Field Mechanic is in the field.
- submission of quarterly progress reports.

TASKS OF EACH TEAM MEMBER	1991			1992								
	October	November	December	January	February	March	April	May	June	July	August	September
1 - CHIEF OF PARTY -----												
Manage and coordinate TA team activities	■	■	■	■	■	■	■	■	■	■	■	■
Advise OPNAR and team on management issues	■	■	■	■	■	■	■	■	■	■	■	■
Coordination with other PASET components	■	■	■	■	■	■	■	■	■	■	■	■
Supervise project budgeting process	■			■			■			■		■
Hold monthly coordination meetings with OPNAR/AID and others as appropriate	■	■	■	■	■	■	■	■	■	■	■	■
Submit quarterly progress reports	■			■			■			■		■
2 - ROAD MAINTENANCE ENGINEER -----												
Prepare annual road maintenance programme Schedule and budget	■										■	■
Prepare Programme for private sector work	■	■	■									
Supervision and assistance to maintenance brigades	■	■	■	■	■	■	■	■	■	■	■	■
Report monthly or accomplishment, equipment usage and condition manning levels			■	■	■	■	■	■	■	■	■	■
Prepare quarterly progress reports			■	■		■	■		■	■		■
Report road condition status and road inventory update			■	■		■	■		■	■		■
Assistance and training to Agence Director	■	■	■	■	■	■	■	■	■	■	■	■
Supervision of equipment repair and maintenance	■	■	■	■	■	■	■	■	■	■	■	■

BEST AVAILABLE DOCUMENT

TASKS OF EACH TEAM MEMBER	1991			1992								
	October	November	December	January	February	March	April	May	June	July	August	September
3 - FINANCIAL AND PROCUREMENT ADVISOR												

A - Finance												

Implementation of accounting system including a budget at N'Djamena Agency	█	█	█	█	█	█	█	█	█	█	█	█
Monitor project inventory records	█	█	█	█	█	█	█	█	█	█	█	█
Supervise maintenance of OFNAR project accounts	█	█	█	█	█	█	█	█	█	█	█	█
Supervise OFNAR general accounting	█	█	█	█	█	█	█	█	█	█	█	█
Advise and train accounting staff at Agency	█	█	█	█	█	█	█	█	█	█	█	█
Prepare project disbursements	█	█	█	█	█	█	█	█	█	█	█	█
Prepare project financial reports		█	█	█	█	█	█	█	█	█	█	█
B - Procurement												

Monitor procurement of project equipment	█	█	█	█	█	█	█	█	█	█	█	█
Advise OFNAR on procurement procedures	█	█	█	█	█	█	█	█	█	█	█	█
Implement new procedures for procurement through technical assistance contract	█	█	█	█	█	█	█	█	█	█	█	█
Report on project procurement		█	█	█	█	█	█	█	█	█	█	█

TASKS OF EACH TEAM MEMBER	1991			1992								
	October	November	December	January	February	March	April	May	June	July	August	September
4 - FIELD OPERATIONS ADVISOR -----												
Organize mobilization of equipment	█											
Supervise and assist road maintenance activities												
DJERMAYA-BOKORO (274 km)		█	█	█	█	█	█	█	█			
GUELENDENG-BONGOR-LAI (229 km)					█	█	█	█	█	█		
N'DJAMENA-LINIA (30 km)									█	█		
Supervision of construction of structures to be done by the private sector					█	█	█	█	█	█		
Advise and train brigade foremen and other personnel	█	█	█	█	█	█	█	█	█	█	█	█
Keep records and submit monthly reports on work progress		█	█	█	█	█	█	█	█	█		
Submit quarterly progress reports				█			█			█		█
5 - SERVICE FOREMAN / FIELD MECHANIC -----												
Assist in mobilization of equipment for first brigade	█											
Follow up and training of field mechanics in equipment maintenance		█	█	█	█	█	█	█	█	█	█	█
Assist in repair and mobilization of equipment for second brigade	█	█	█	█								
Follow up and training of N'Djamena Agency mechanics in equipment repair	█	█	█	█	█	█	█	█	█	█	█	█
Submit quarterly progress reports				█			█			█		█

TASKS OF EACH TEAM MEMBER	1991			1992								
	October	November	December	January	February	March	April	May	June	July	August	September
6 - SHOP SUPERINTENDENT -----												
Assist in the planning scheduling, and operation of the central workshop activities	█	█	█	█	█	█	█	█	█	█	█	█
Develop the inspection/Diagnosis and quality control departments - Prepare procedures and train personnel		█	█	█	█	█	█	█	█	█	█	█
Hold training sessions on diagnostics and special repairs		█			█			█				
Advise and assist foremen in the repair and maintenance activities	█	█	█	█	█	█	█	█	█	█	█	█
Assist in the planning of procurement of spare parts and equipment			█	█	█	█	█	█	█	█	█	█
Assist in the implementation of other months of the equipment management system				█	█	█	█	█	█	█	█	█
Propose workshop installation improvements	█	█										
Submit quarterly reports on work done				█			█			█		█
7 - EQUIPMENT AND ENGINE FOREMAN -----												
Assist and train section foremen	█	█	█	█	█	█	█	█	█	█	█	█
Train Mechanics	█	█	█	█	█	█	█	█	█	█	█	█
Supervision of work done by private sector	█	█	█	█	█	█	█	█	█	█	█	█
Support to N'Djamena agency workshop	█	█	█	█	█	█	█	█	█	█	█	█
Provide monthly activity reports		█	█	█	█	█	█	█	█	█	█	█

SUMMARY OF MILESTONES FOR TECHNICAL ASSISTANCE

WORK OCTOBER 1991 - SEPTEMBER 1992

TASK	DATE OF COMPLETION
Programme for private sector work on road maintenance	November 15, 1991
Revise OFNAR procurement procedures	December 31, 1991
Mobilize 1st N'Djamena Agency road brigade	November 1991
Mobilize 2nd N'Djamena Agency road brigade	January 1992
Complete rehabilitation of 533 km of roads as programmed for the N'Djamena Agency	July 31, 1992
Finalize procedures on equipment inspection/ diagnosis and repair quality control	January 31, 1992
Hold training sessions on diagnostics and special repairs	November 01/February and May 1992
Complete inspection of N'Djamena Agency equipment	August 15, 1992
Submit equipment preparation programme for next campaign	August 31, 1992
Submit road rehabilitation programme for 1992/1993 campaign	September 30, 1992
Submit quarterly progress reports	December 31, 1991 March 31, 1992 June 30, 1992 September 30, 1992
Hold monthly coordination meetings OFNAR/USAID/ Ministry of Works/Consultant	Tentatively on the 15th of each calendar month.