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Zila Roads Maintenance and Improvement Project

(USAID PROJECT NO. 388-0056)

PROGRESS REPORT

FOR THE MONTH OF SEPTEMBER'84

By

Wilbur Smith and Associates

In association with

Bangladesh Consultants Ltd.

and

Public Administration Service

ZILA ROADS MAINTENANCE AND IMPROVEMENT PROJECT

USAID PROJECT No. 388-0056

PROGRESS REPORT

September 1984

TABLE OF CONTENTS

	Subject	Page No.
	List Of Exhibits	iv
	List Of Appendices	iv
1.0	<u>GENERAL</u>	1
2.0	<u>ORGANIZATION AND MANAGEMENT</u>	2
3.0	<u>MAINTENANCE SYSTEM AND SUPERVISION</u>	2
3.1	<u>General</u>	2
3.2	<u>Sylhet District</u>	2
	3.2.1 Hatimganj - Dhakadakshin Road (Earth Road)	2
	3.2.2 Badarghat - Bariberbazar Road (Paved And Earth Road)	6
3.3	<u>Rangpur District</u>	6
	3.3.1 Rangpur - Mahiganj Road	6
	3.3.2 Rangpur - Badarganj Road	6
3.4	<u>Faridpur District</u>	6
	3.4.1 General	6
	3.4.2 Authorization Of Emergency Works	7
	3.4.3 Evaluation Of Maintenance Costs	7
	3.4.4 Rajbari - Baliskandi Road	9
	3.4.5 Talma - Nagarkanda Road	9
	3.4.6 Fukuria - Sadarpur Road	10
4.0	<u>PREPARATION OF TECHNICAL SPECIFICATIONS</u>	10
4.1	<u>Bridges</u>	10
4.2	<u>Revision Of Specifications</u>	10
5.0	<u>TRAINING</u>	10
5.1	<u>General</u>	10
5.2	<u>On-The-Job Training</u>	10
5.3	<u>Domestic (In-Country) Training</u>	12
	5.3.1 System Assessment	12
	5.3.2 System Design	12
	5.3.3 System Implementation	12

TABLE OF CONTENTS (Cont.)

	Subject	Page No.
	<u>U.S.A./Third-Country Training</u>	13
	5.4.1 Program Preparation	13
	5.4.2 Program Implementation	13
5.5	<u>Report Preparation</u>	14
	5.5.1 Project Training Report	14
	5.5.2 Audio-Visual Presentations	14
6.0	<u>CONSTRUCTION SYSTEM AND SUPERVISION</u>	14
6.1	<u>General</u>	14
6.2	<u>Sylhet District</u>	14
	6.2.1 Shahbonder - Shamsherganj Road	14
	6.2.2 Atgram - Zakigranj Road	15
	6.2.3 Sylhet - Kamalbazar Road	16
	6.2.4 Tajpur - Goalabazar Road	16
	6.2.5 Fenchuganj - Chilachara Road	17
	6.2.6 Dhakadakshin - Beanibazar Road	18
	6.2.7 Bahubal - Putijuri - Bijnaghat Road	18
	6.2.8 Nabiganj - Bariyachung Road	20
6.3	<u>Rangpur District</u>	20
	6.3.1 Gaibandha - Kamarjani Road	20
	6.3.2 Mirganj - Jalchaka Road	20
	6.3.3 Chatra - Khalashpir - Dhendabari Road	20
	6.3.4 Kamdia - Ghoraghat Road	20
	6.3.5 Rajarhat - Ullaghata Road	20
	6.3.6 Gaibandha - Kamarjani Road	21
	6.3.7 Mirganj - Jalchaka Road	21
	6.3.8 Chatra - Khalashpir - Dhendabari Road	21
	6.3.9 Kamdia - Ghoroghat Road	21
6.4	<u>Faridpur District</u>	22
	6.4.1 Badarpur - Salta Road	22
	6.4.2 Madhukhali - Baliakandi Road	22
	6.4.3 Hatkrishnapur - Pajkhal Road	24
7.0	<u>PROCUREMENT OF EQUIPMENT</u>	24
	7.1 <u>Local Procurement</u>	24
	7.2 <u>International Procurement</u>	24
8.0	<u>PERSONNEL</u>	24

TABLE OF CONTENTS (Cont.)

	Subject	Page No.
9.0	<u>PROBLEMS AND PROPOSED SOLUTIONS</u>	25
9.1	<u>General</u>	25
	9.1.1 Abnormal weather Conditions	25
9.2	<u>Organization And Management</u>	25
9.3	<u>Maintenance System And Supervision</u>	25
	9.3.1 Inappropriate Scheduling	25
	9.3.2 Inadequate Revolving Fund	26
	9.3.3 Confusion In Specifications	26
	9.3.4 Shortage Of Materials And Transportation	26
9.4	<u>Preparation Of Technical Specifications</u>	26
9.5	<u>Training</u>	27
	9.5.1 Third-Country Training	27
	9.5.2 U.S.A. Training	27
9.6	<u>Construction System And Supervision</u>	27
	9.6.1 General	27
	9.6.2 Quality Control	27
	9.6.3 Contract Management	28
9.7	<u>Procurement Of Equipment</u>	28
9.8	<u>Personnel</u>	28
9.9	<u>Miscellaneous</u>	29
10.0	<u>MISCELLANEOUS</u>	29
10.1	<u>Monthly Financial Statement</u>	29
	<u>APPENDICES</u>	

ZILA ROADS MAINTENANCE AND IMPROVEMENT PROJECT

USAID PROJECT No. 388-0056

PROGRESS REPORT

September 1984

LISTS OF EXHIBITS AND APPENDICES

Subject	Page No.
<u>List Of Exhibits</u>	
Exhibit I - Map, Sylhet District	3
Exhibit II - Map, Rangpur District	4
Exhibit III - Map, Faridpur District	5
Exhibit IV - Summary Of Maintenance Unit Costs	8
Exhibit V - ZRMI Project Training Program Schedule And Current Status	11
<u>List Of Appendices</u>	
Appendix A - Photos Of Maintenance Activities, Faridpur District ...	30
Appendix B - Laboratory Activities, Rangpur District	38
Appendix C - Photos Of Construction Activities, Sylhet District	41
Appendix D - Photos Of Construction Activities, Faridpur District ..	51
Appendix E - Status Of Project Activities, Rangpur District	57
Appendix F - Status Of Project Activities, Faridpur District	62
Appendix G - Current Status Of Personnel	65
Appendix H - Monthly Financial Statement, September 1984	67

ZILA ROADS MAINTENANCE AND IMPROVEMENT PROJECT

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PROGRESS REPORT

September 1984

1.0 GENERAL

Some progress was achieved during the first week of this reporting period. However, the Eid-ul Azha holidays, followed by extremely heavy rainfall and flooding in all three Districts, brought work to a practical standstill for the balance of the month.

A shortage of bituminous material effectively halted most of the maintenance work in Faridpur District. An evaluation of the maintenance system revealed three additional weak points that must be corrected before the maintenance system can be fully operative. These points include :

- o The revolving fund is too small and the reimbursement cycle is too long,
- o Effective force account maintenance work will require both the stockpiling of small amounts of materials at strategic locations within the District and the development of an efficient system to transport the materials to the spot where they may be needed, and
- o Routine maintenance work is most effective if planned and scheduled for execution during the dry season.

In general, the completion of the 82-83 construction schemes was proceeding in a satisfactory manner. However, in some cases, reimbursement was delayed for lack of change orders and/or other substantiating documents. In all three Districts, the RE's reported some problems with contractors attempting to circumvent the delays caused by the wet weather by working with wet aggregates and poor preparation of saturated potholes. This practice was corrected by the supervisors.

The second-cycle, in-country training sessions were launched in Sylhet on 23 September. There were 41 participants divided among three training modules -- surveying, rural road maintenance, and soils. A list of 15 recommended participants for the second AIT training program was submitted to WPW for approval and precessing through the relevant BDG agencies. The first group of three WPW officials returned from a two-month training/observation course in the U.S.A.

Some of the additional improvements in reporting techniques planned for introduction in this report were not completed on time. It is hoped that these will all be ready for the October report.

2.0 ORGANIZATION AND MANAGEMENT

No new developments to report at this time.

3.0 MAINTENANCE SYSTEM AND SUPERVISION

3.1 General

The ZRMI Project maintenance work is currently being handled under the concept of a Pilot Maintenance Schemes, initiated early in 1984, which has a separate and independent component in each of the three Districts. The locations of the roads involved in the individual maintenance schemes are shown on the respective District maps, which have been identified as follows :

Exhibit I	-	Sylhet District
Exhibit II	-	Rangpur District
Exhibit III	-	Faridpur District

Photos of maintenance work underway in Faridpur District may be found in Appendix A.

None of the three Districts has yet prepared the schedule and progress charts for the maintenance projects. It is hoped that this essential information will be supplied for the October report.

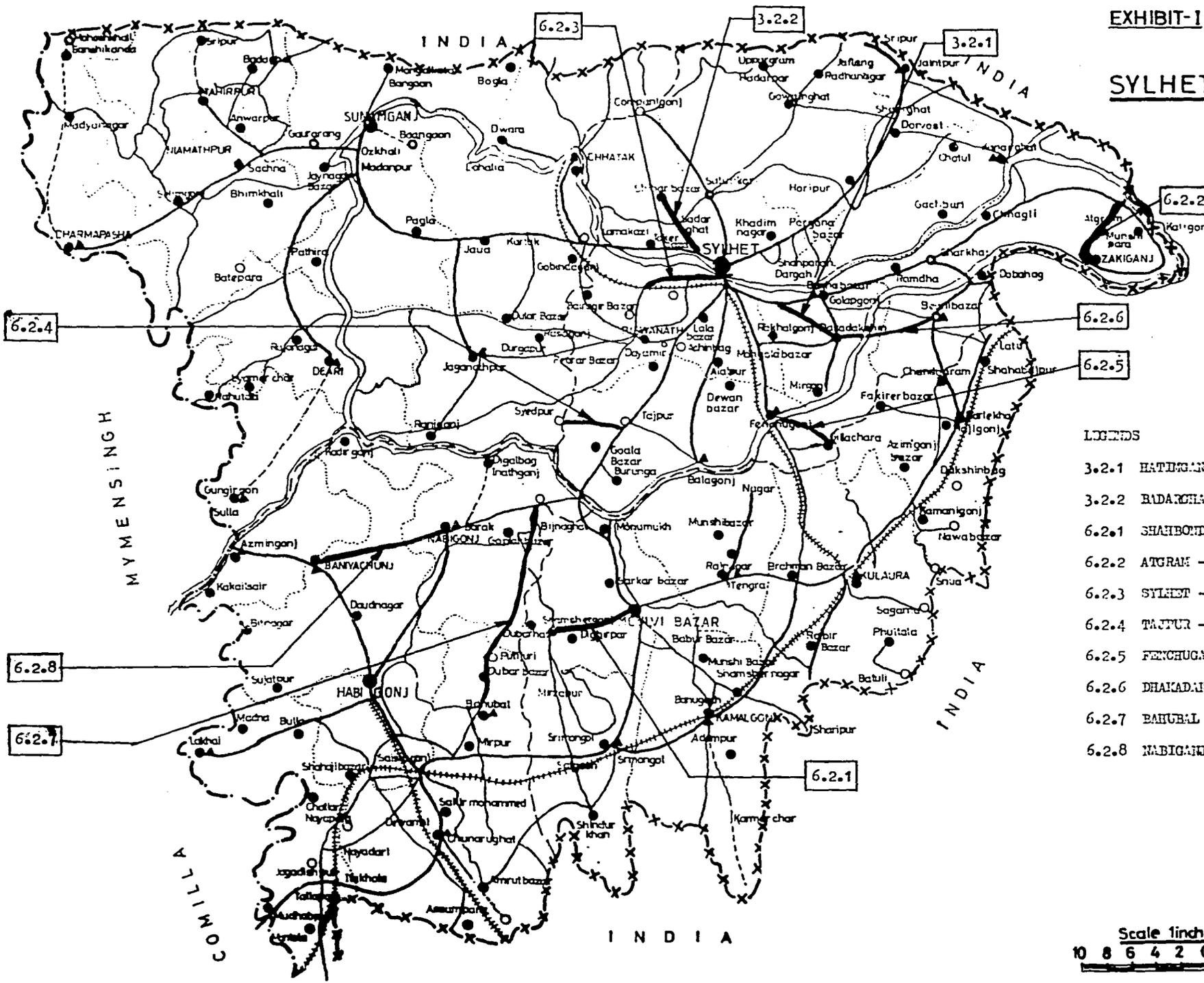
The unseasonably heavy rainfall and uncompanioning flooding conditions continued to plague work progress in all three Districts.

3.2 Sylhet District

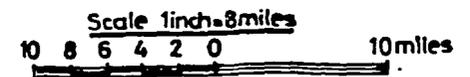
3.2.1 Hatimganj - Dhakadakshin Road (Earth Road)

Until the Eid Holidays in the early part of September, maintenance work had been progressing in a relatively satisfactory manner. Proper sites for two pipe culvert to alleviate continuous deterioration of the road embankment were selected. Monitoring to assure proper execution of the work continues.

SYLHET DISTRICT



- LEGENDS**
- 3.2.1 HATIBGANJ - DHAKADAKSHIN ROAD
 - 3.2.2 BADA GHAT - BARIBERBAZAR ROAD
 - 6.2.1 SHAHABONDAR - SHAMSHERGANJ ROAD
 - 6.2.2 ATGRAM - ZAKIGANJ ROAD
 - 6.2.3 SYLHET - KUMALBAZAR ROAD
 - 6.2.4 TAJPUR - GOLLABAZAR - SYEDPUR ROAD
 - 6.2.5 FENCHUGANJ - GHILACHARA ROAD
 - 6.2.6 DHAKADAKSHIN - BEANIBAZAR ROAD
 - 6.2.7 BARUBAL - PUTIJURI - BIJNAGHAT ROAD
 - 6.2.8 NABIGANJ - BANLACHUNG ROAD

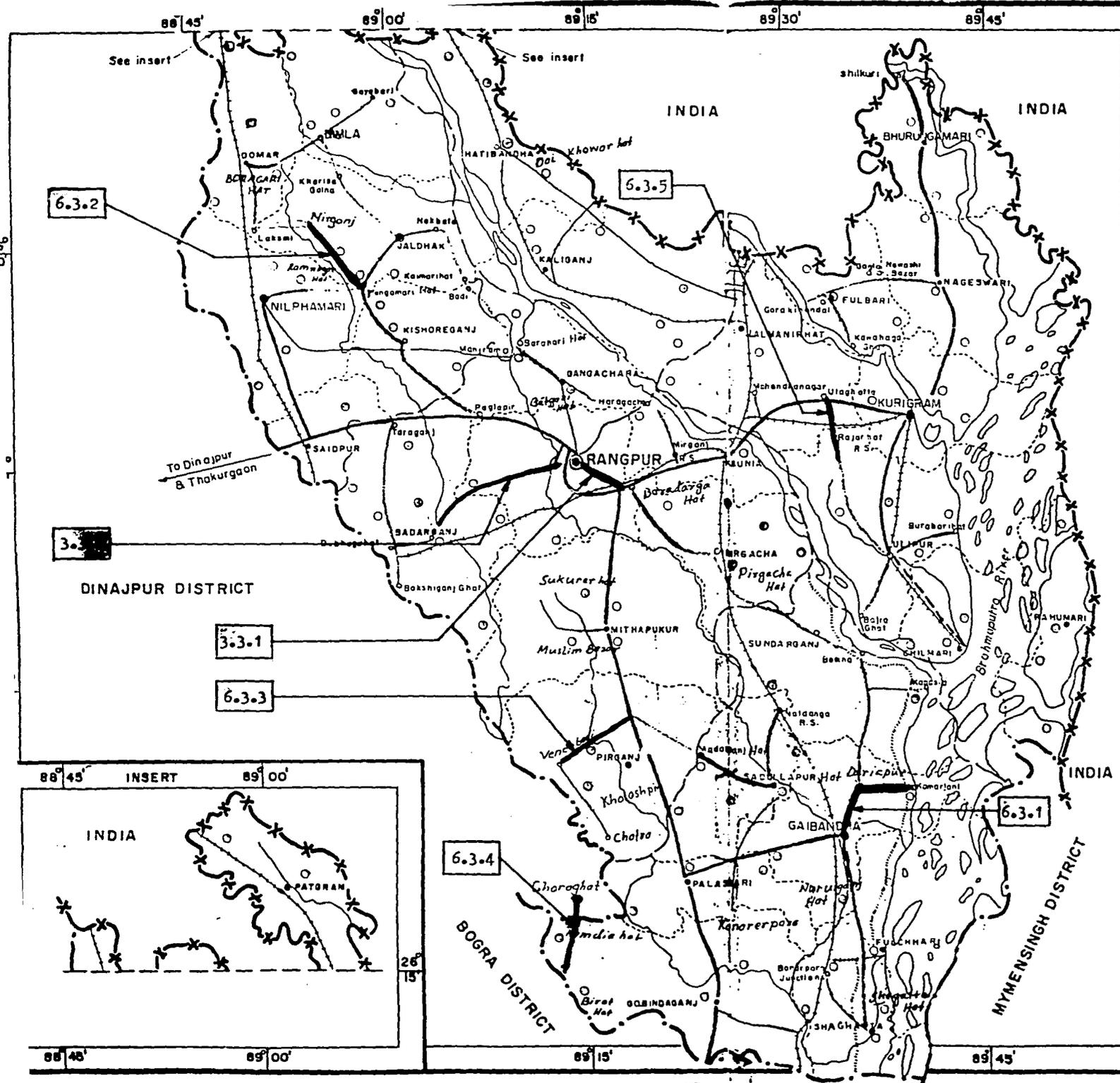


RANGPUR DISTRICT



LEGEND:

- 3.3.1 RANGPUR - HAIGANJ ROAD
- 3.3.2 RANGPUR - BADARGANJ ROAD
- 6.3.1 GAIBANDIA - KAMARJANI ROAD
- 6.3.2 MIRGANJ - JALDHAKA ROAD
- 6.3.3 CHATRA - KHALASHPIR - BEENDABARI ROAD
- 6.3.4 KANDIA - GHORAGHAT ROAD
- 6.3.5 RAJARHAT - ULLAGHATA ROAD

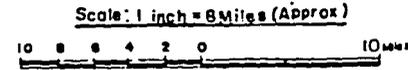


26° 00'

25° 45'

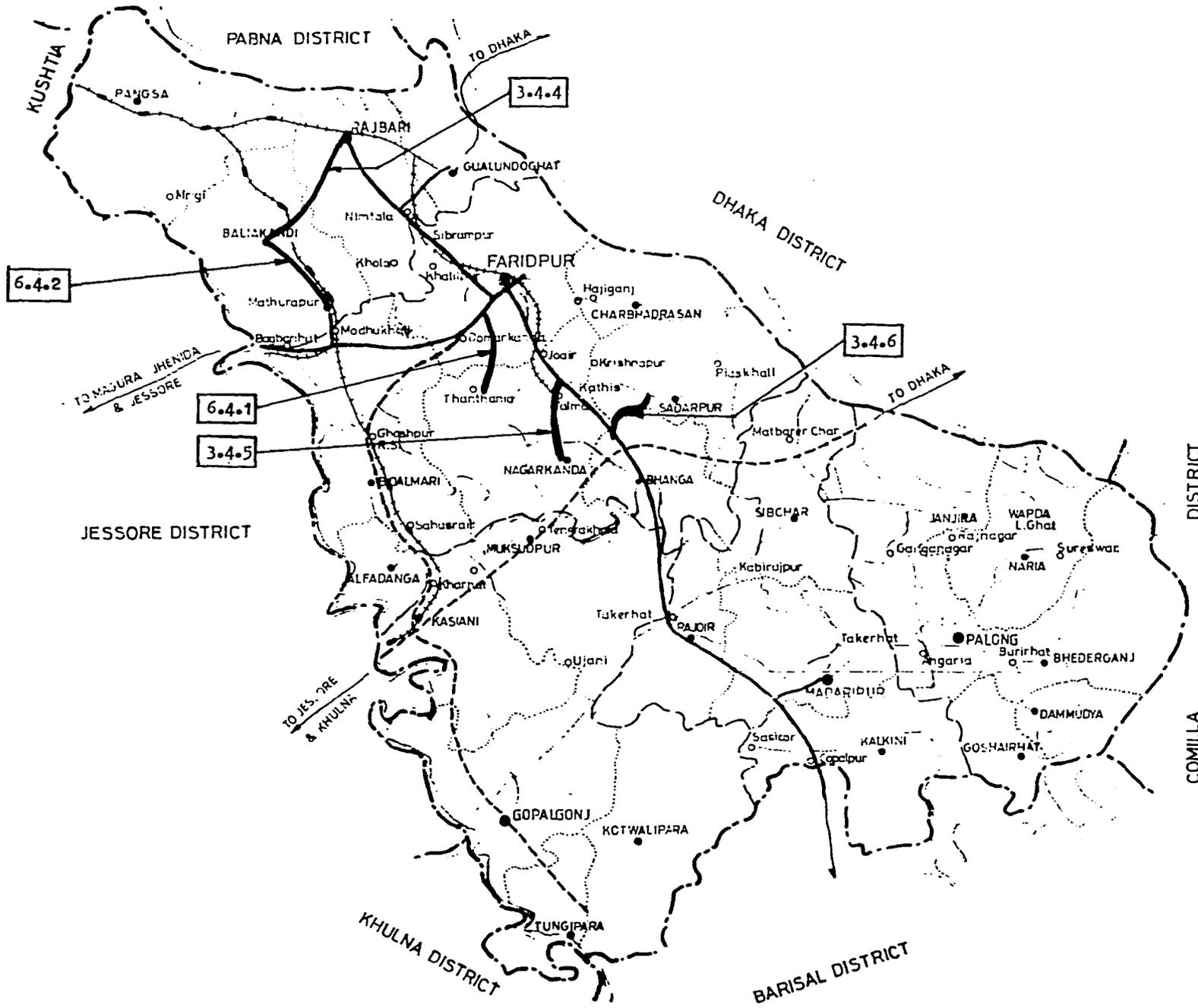
25° 30'

25° 15'

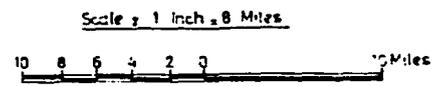


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EXHIBIT-III
FARIDPUR DISTRICT



- LEGENDS**
- 3.4.4 RAJBARI - BALLAKANDI ROAD
 - 3.4.5 TALMA - NAGARKANDA ROAD
 - 3.4.6 FUKURIA - SADARPUR ROAD
 - 6.4.1 BADAIPUR - SALTHA ROAD
 - 6.4.2 MADHUKHALI - BALLAKANDI ROAD



3.2.2 Badarghat - Bariberbazar Road (Paved And Earth Road)

Because of delays in the tendering for, and the stock-piling of, aggregates and bitumen, along with the heavy rainfall, maintenance work on the paved section did not show any significant progress during this reporting period. As soon as conditions permit, the Consultant will undertake on-the-job training for the in-house staff to teach them proper procedures to be followed. It is also planned that the participants in the maintenance module of the second-cycle training sessions will also take part in this practical training.

3.3 Rangpur District

3.3.1 Rangpur - Mahiganj Road

The heavy rains caused additional erosion damage to the recently rehabilitated shoulders. Additional pot-holes have also appeared, the repair of which will require an adjustment in the estimates of work effort. Overall progress remains at about 70 percent.

3.3.2 Rangpur - Badarganj Road

Work on this road is still limited to shoulder repair, and that work which has been accomplished to date has been damaged by the heavy rains. Material for pot-hole repair has still not been supplied, and there is no indication of intentions to continue the maintenance work on this scheme.

3.4 Faridpur District

3.4.1 General

A shortage of bituminous material has halted most of the maintenance activities in this District. A shipment of 60 mt is expected by 01 October, but the major part is earmarked for shipment to the contractors on the Madhukhali - Baliakandi Road.

It is rapidly becoming apparent that response to emergency maintenance needs is severely hampered by both the lack of transport and the inadequacy of the revolving fund. Transport is not readily available

for such materials as bricks, shingles, and bitumen for use in emergency repairs to prevent a deteriorating road from being completely put out of service. All transport must be done by contract, which is a time-consuming operation, and meanwhile the road condition worsens.

The revolving fund of Tk. 50,000, as set forth in the Guide Lines, is inadequate for several reasons : in an extensive maintenance project, the fund will be immediately depleted just by the purchase of materials, and, since the fund apparently revolves on a quarterly basis, it is always overexpended so that no funds are available for unforeseen emergency repairs

3.4.2 Authorization of Emergency Works

On 19 September, a letter confirming USAID participation in certain emergency projects was sent to the XEN, Faridpur.

Talma Nagarkanda Road - Awaiting the tendering process for following works :

- o Repair wingwall and roadway of bridge at Km 2.7
- o Repair 100m embankment failure at Nagarkanda

Pukuria - Sadarpur Road - Awaiting the tendering process for the following work :

- o Repair 5 embankment failures

Madukhali - Baliakandi Road - Following repairs performed by in-house forces :

- o Repair bridge deck in Group J

3.4.3 Evaluation of Maintenance Costs

An evaluation of maintenance costs for six tasks is shown on Exhibit IV.

EXHIBIT - IV.

SUMMARY OF MAINTENANCE UNIT COST.

TALMA - NAGARKANDA ROAD

<u>Code.</u>	<u>T a s k.</u>	<u>Quantity.</u>	<u>Labor.</u>	<u>Material.</u>	<u>Equipment.</u>	<u>Unit cost.</u>
60.01.	Trim weeds. ...	795,600 S.F.	5570.	0	1000.	0.0083.
30.01.	Regrade shoulder.	11,124 S.F.	3955.	0	3000.	0.625.
22.02.	Patch Bit Pavement	7,724 S.F.	12,970.	63,970.	23,283.	12.97.

RAJBARI - BALIAKANDI ROAD

<u>Code.</u>	<u>T a s k.</u>	<u>Quantity.</u>	<u>Labor.</u>	<u>Material.</u>	<u>Equipment.</u>	<u>Unit cost.</u>
60.01.	Trim weeds.	274,000 S.F.	1690.	0	0	0.0062.
30.01.	Regrade shoulder.	92,400 S.F.	13,600.	0	3000.	0.18.
45.02.	Regrade Dirt Road.	4,090 S.F.	520.	0	1000.	0.37.
25.03.	Replace H.B.B.	14,530 S.F.	6,330.	88,633.	0	6.53.
25.04.	Bit. Grouting.	21,261 S.F.	6,560.	151,445.	19,429.	13.64.

3.4.4 Rajbari - Baliakandi Road

All maintenance work on this road stopped on 10 September because of the shortage of bitumen. On 17 September, 6 laborers were found to be performing shoulder maintenance. Work should resume when the bitumen is received on 01 October.

3.4.5 Talma - Nagarkanda Road

Lack of materials has caused all maintenance work to be suspended. Two areas of this road require emergency repairs; tenders for this work are being evaluated.

Recent heavy showers and floods have caused the overall condition of the road to worsen at various locations near Nagarkanda, and the embankment failures have seriously damaged the pavement. It was previously suggested that all pavement failure areas be filled with brick bats, but it has been observed that only a few holes have been filled with brick chips, while the major part of the damaged areas remain untouched. Emergency repairs of the failed areas should be undertaken as soon as possible.

The approach to the 50 ft RCC bridge at Talma village, near the house of the late Ali Uddin, has been seriously affected by the recent rains and flooding. The south west wingwall has been totally washed out, and the approach on that side has been partially washed away. The pavement at the bridge site has been seriously damaged. Necessary remedial action should be taken at once to avoid total loss of the bridge approach. The roadway has already been closed to heavy traffic.

The approach of another RCC bridge is also in very bad condition. The erosion of the fill has seriously damaged the pavement. This repair work should also be started as quickly as possible.

Ruts which had been previously reported were found to be in even worse condition. The condition of the road especially near Nagarkanda, is becoming worse; about 100m was found to be practically submerged by flood waters. WPW maintenance teams were found to be idle. The WA reported that the teams could not work because of the lack of bricks and other construction materials.

3.4.6 Pukuria - Sadarpur Road

This road has been proposed for inclusion in the maintenance scheme. An inventory and cost estimate has been submitted, but no work has yet been done. The monthly inspection disclosed further deterioration, with the pavement seriously damaged by embankment failure at five locations. Emergency repairs should be undertaken immediately in order to keep the road open for traffic.

4.0 PREPARATION OF TECHNICAL SPECIFICATIONS

4.1 Bridges

Work is almost completed on the preparation of typical plan and superstructure and foundation sections for bridges of 40-ft. span, or less. The draftsman was diverted from this work to the preparation of progress charts and other drawings, so that the scheduled completion of the bridge drawings by the end of September could not be achieved. However, completion of these plans is now expected by the end of October.

4.2 Revision of Specifications

Some revision to the proposed construction specifications are being prepared as time permits.

5.0 TRAINING

5.1 General

5.1.1. As shown on Exhibit V, the overall progress of the ZRMI Project Training Program at the end of September 1984 was about 58 percent, compared to a scheduled progress of 60 percent.

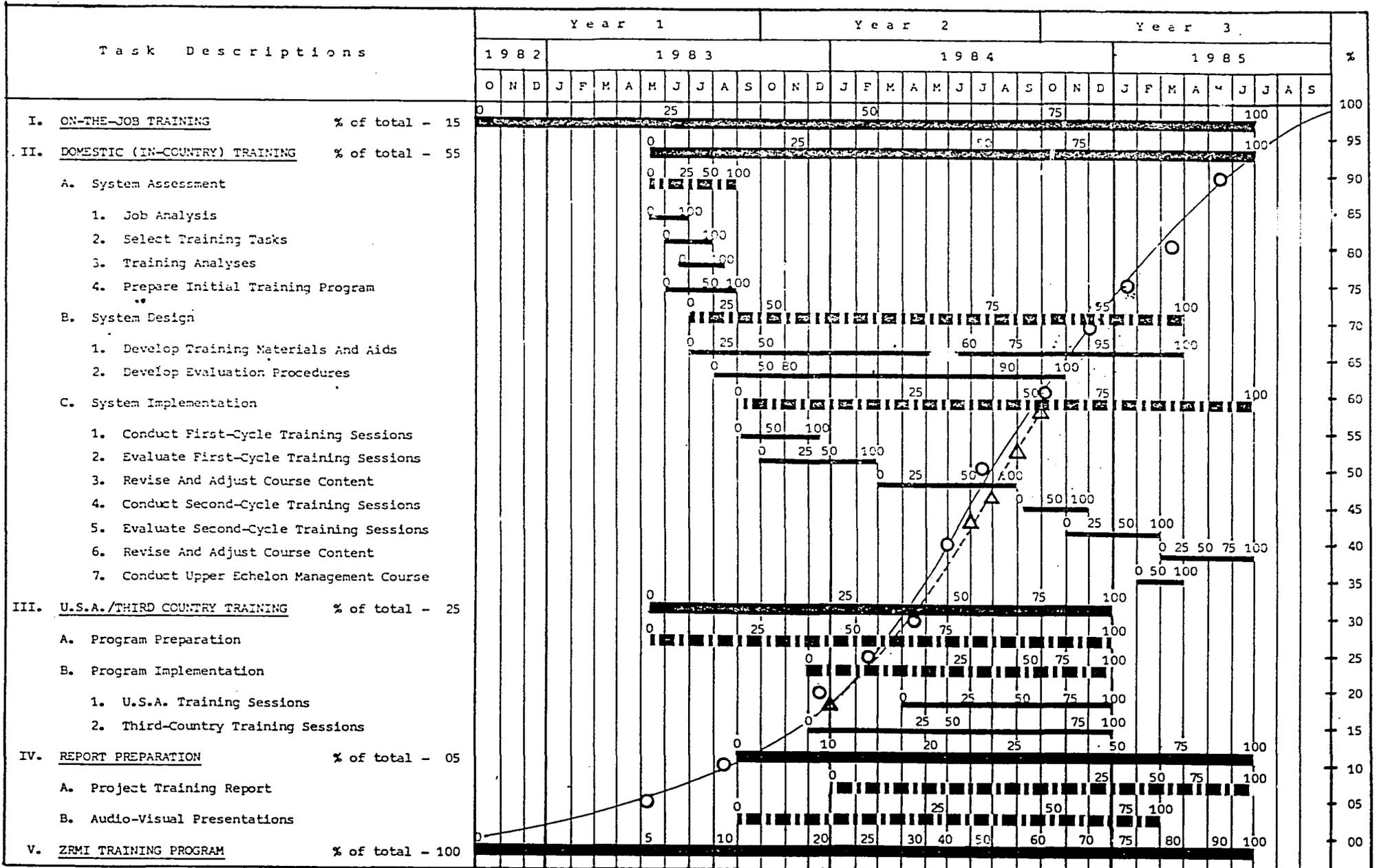
5.2 On-The-Job Training

5.2.1 Material Sampling And Testing

The Rangpur Soil Laboratory Report is attached as Appendix B. It is indicative of the type of activities performed monthly in each District soil laboratory.

Exhibit V.

ZRMI PROJECT TRAINING PROGRAM SCHEDULE AND CURRENT STATUS



5.2.2 The Sylhet RE and his staff have been working closely with the XEN, Sylhet, in the development of standard plans and bills of materials for RCC box culverts and bridges and typical rural road cross sections and flexible pavement designs. This is an excellent example of on-the-job training.

5.2.3 Since on-the-job training is considered to be an on-going and continuous effort on the part of each RE and the individual members of his staff, it is treated as a straight-line function on the progress chart. At the end of this reporting period, it is estimated that this activity is about 73 percent complete.

5.3 Domestic (In-Country) Training

5.3.1 System Assessment

This secondary activity is 100 percent complete.

5.3.2 System Design

This secondary activity is about 83 percent complete. No further activity of any consequence will take place until after the completion of the second-cycle sessions.

5.3.3 System Implementation

First-Cycle Training Sessions -100 percent complete
 First-Cycle Evaluations - 100 percent complete
 Course Revision And Adjustment - 100 percent complete
 Second-Cycle Training Sessions - 33 percent complete.
 The Sylhet sessions started on 23 September and were completed on 03 October 1984. There were 41 participants.

Second - Cycle Evaluation - No significant progress to report.

Course Revision And Adjustment - There will be no significant activity until the second-cycle sessions have been completed and evaluated.

Upper Echelon Management Course - Scheduled to be presented during the first quarter of 1985.

5.4 U.S.A./Third Country Training

5.4.1 Program Preparation

This phase is about 85 percent complete. The second AIT training course has been approved as proposed, but there has been no further action on the scope and venue of any subsequent U.S.A training/observation sessions.

5.4.2 Program Implementation

First U.S.A Session - The first group of three high level WPW officials returned from the U.S.A. on 09 September 1984. No trip reports have yet been received, so this segment is considered to be about 98 percent complete.

Second U.S.A Session - As stated previously, there has been no decision concerning U.S.A training trips subsequent to the first session, so there is no progress to report on this segment of the program.

First AIT Session - All 15 participants have returned from Bangkok. However, to date, only one participant report has been received (from the DE, Rangpur), so this segment is considered to be about 98 percent complete.

Second AIT Session - The Selection Committee met on 12 September as scheduled. Out of a total of 28 candidates, 15 were selected as possessing the necessary qualifications required for attendance at this course. The list of 15 recommended participants has been forwarded to WPW for appropriate action. It is imperative that all BDG clearances be obtained by the end of October so that USAID clearance procedures may be undertaken, visas obtained, and travel arrangements completed at least three days prior to 18 November (the date set for the travel to Bangkok). This segment is considered to be about 20 percent complete.

5.5 Report Preparation

5.5.1 Project Training Report

This secondary activity is about 22 percent complete. However, no major progress is expected until after the end of 1984.

5.5.2 Audio-Visual Presentations

Slide/Cassette Preparation - Orders were placed in July for the materials required to continue work on this task. To date, neither have the materials arrived, nor has the shipping date been advised.

Overhead Projector Transparencies - Materials required for completion of this work were also ordered in July, but as yet there is no indication of when they will be shipped.

6.0 CONSTRUCTION SYSTEM AND SUPERVISION

6.1 General

In all three Districts, progress on this program element continued to be hampered by the unseasonable heavy rains and floods. Photos of typical site situations for Sylhet and Faridpur in Appendix C and Appendix D, respectively. Maps displaying the locations of the individual projects in Sylhet, Rangpur, and Faridpur Districts are shown as Exhibits I, II, and III, respectively. Bar charts showing scheduled and achieved progress for Rangpur and Faridpur may be found in Appendix E and Appendix F, respectively. Sylhet District has not yet completed their charts. It is hoped that charts for all projects in all Districts will be available by the end of October.

6.2 Sylhet District

6.2.1 Shahbonder - Shamsheganj Road

ZRMI/17/82-83 - Pavement

The sporadic work progress accomplished by the contractor on this project was halted completely by the Eid-ul Azha holidays and the heavy rains which followed. The contractor has shown no interest,

nor proclivity for executing the work in a proper manner, or for completing the work within a reasonable time frame. At the time of the last inspection, the embankment shoulders had not been built up as required, and there still remained 800 m of carpeting to be completed. Progress since June 1984 has been limited to less than 100 m of carpeting (poorly executed), and nothing more.

6.2.2 Atgram - Zakiganj Road

ZRMI/18/82-83 - Pavement

With the completion of carpeting to the highway intersection, this contract was nominally complete. Final inspection revealed that the shoulders had not been leveled or dressed and the contractor's materials were still piled there. Also, there still remains the initial 700 m of boulder soling and pavement, where are found many uncorrected violations of the specifications. The Consultant has repeatedly advised both the Contractor and Zila Parishad that this section is not certifiable for payment if it is not corrected. The observation is made, however, that the security deposit should cover necessary repair work during the coming year if this repair work requirement is enforced.

ZRMI/9/83-84 - Box Culvert

The structure site is in an area that is presently flooded. Since the work order was issued too late for the contractor to get work underway before the onslaught of adverse weather, there has been no progress, and none is expected until the dry season.

ZRMI/10/83-84 - Pavement

The lack of an adequate roller continues to be an obstacle to progress on this job. The contractor has been well organized and has executed much of the shoulder improvement and the collection of construction materials. He has been leveling and cambering the subgrade, filling depressions and potholes, and providing subgrade drainage. However, much of this work was nullified by the lack of a roller and the damage wrought by the heavy rains of the monsoon season.

ZRMI/11/83-84 - Leveling Course

This project has been troublesome from the outset. The design and specifications require leveling, cambering, and compaction of the subgrade prior to the application of the leveling course (sub-base). However, the contractor first tried to apply the leveling course over the uncompacted subgrade. After he was forced to use the roller which was then available, some acceptable progress was achieved. When the Zila Parishad abruptly transferred the roller to another job site, the contractor was advised to level and camber the subgrade for the length of the project until a roller was again available, but he was not to place any leveling course material on the uncompacted subgrade. In spite of these orders, the contractor placed the leveling course material over a large part of the project with no attempt at compaction. Hence, any progress to date cannot be considered to be acceptable.

6.2.3 Sylhet - Kamalbazar RoadZRMI/19/82-83 - Pavement

In general, the quality of work on this project rates it as one of the better of the on-going projects, although progress has been very slow. Carpeting was progressing satisfactorily until interrupted by the Eid-ul-Azha holidays and the heavy rains. The contractor had to be monitored closely on his carpeting because of non-uniform and sub-standard thickness being applied. However, after some trials and errors, the carpeting has been placed in an acceptable manner. The substitution of the two-wheeled vibratory roller for the 3-wheeled, 10-Ton, Chinese roller has resulted in a much better and acceptable surfacing. If weather permits, it is hoped that this project will be finished by the end of October.

6.2.4 Tajpur - Goalabazar - Syedpur RoadZRMI/20/82-83 - 13 nos RCC Pipe Culverts (Revised)

The original work order for this project was canceled for poor performance. A second work order was issued early in 1984, and to date, 10 of the 13 culverts (including headwalls and channel excavation) have been completed. The three remaining culverts will be placed as soon as weather and access road conditions permit.

ZRMI/21/82-83 - Box Culvert

This work has been completed and application made for reimbursement.

ZRMI/12/83-84 - Pavement (Revised)

All materials for this project have been gathered and processed. WBM has been placed on the existing boulder soling. Shoulder work has been halted by the Eid-ul Azha holidays and the heavy rainfall.

ZRMI/13/83-84 - Box Culvert

Flooding of the site continues to delay progress on this project.

6.2.5 Fenchuganj - Ghilachara Road

ZRMI/22/82-83 - Pavement

This project has been the slowest and most poorly executed of all the 82-83 schemes. There has been no observable organization, nor any indication of desire to execute the work. Recommendations to improve the quality of the work and rate of progress (given to the Zila Parishad personnel because no contractor's representative could ever be found) have been ignored. The WBM, placed over the entire length of the project, has been badly eroded for lack of adequate side drainage and shoulder work that should have been executed prior to the placing of the WBM. In spite of this, the contractor has started stockpiling shingles for the carpeting phase. Because of all the inadequacies mentioned, the Consultant will not certify any of the work on this project.

ZRMI/23/82-83 - 6 nos. RCC Pipe Culverts

The original work order of 30 June 1983 was canceled for non-performance, and then replaced with a work order issued 30 July 1984. As of the date of this report, the XEN is again considering cancelation for non-performance.

6.2.6 Dhakadakshin - Beanibazar Road

ZRMI/24/82-83 - Earthwork And Pavement (Revised)

The shoulder and embankment work that had been completed has been badly eroded by the heavy rainfall, and no corrective measures have as yet been undertaken. No additional progress noted for this reporting period.

ZRMI/24(?) /82-83 - 5 nos RCC Pipe Culverts (Revised)

The culverts have been placed and completed. However, the Consultant has received no documents to substantiate or support the contract revision, so no further action has been taken.

ZRMI/16/83-84 - Earthwork And Pavement (Revised)

The contractor has placed WBM over the length of the project with little consideration given to the need for shoulder or side drainage work. The Eid-ul Azha holidays and the heavy rainfall halted work in September. As soon as weather permits, remedial work should be undertaken to correct the existing damage.

6.2.7 Bahubal - Putijuri - Bijnaghat Road

All 82-83 project schemes on this road have been completed and certified for reimbursement.

ZRMI/1/83-84 - Pavement

This project consists of 280 m of pavement to connect an unfinished section left when the Zila Parishad took over responsibility for the road from R & H. The contractor has completed stockpiling and processing of aggregates, but due to lack of space, the materials have been stockpiled over half the width of the existing roadbed. At the outset, Zila Parishad personnel were advised that the sub-grade had to first be built up to grade, leveled, cambered, and compacted before sub-grade materials could be applied. This recommendation was made in an effort to eliminate the large potholes in the center of the roadbed which were serving as sinks for rain water which subsequently percolated into the embankment instead of being drained

off the road. No attempt was made to comply with this recommendation other than to fill the holes with sand. Since this material is permeable, it has not corrected the problem. Recent heavy rains have served to exacerbate the situation.

ZRMI/2/83-84 - Box Culvert

Heavy rains are still impeding progress on this project.

ZRMI/3/83-84 - 2 nos Box Culverts

Both of these drainage structures have been nominally completed in a satisfactory manner. However, tests on concrete specimens indicated a strength that did not meet specifications. With only the approaches, channel cleaning, and final clean-up remaining, these projects are considered to be 95 percent complete.

ZRMI/4/83-84 - 2 nos Box Culverts (Revised)

This contract has been revised to substitute 4 nos. box culverts of a smaller size for the 2 nos. of the original contract. However, no change order has yet been received. Construction of the first two culverts, located at Fultale and Kandigaon, respectively, was underway at the beginning of the month. However, the Eid-ul Azha holidays followed by the heavy rainfall, precluded any further progress.

ZRMI/5/83-84 - Box Culvert

This culvert has been completed in a satisfactory manner. Completion of approach, channel clearing, and clean-up work still remains.

ZRMI/6/83-84 - 4 nos. Box Culverts

Work is underway on this project, but there was no significant additional progress during this reporting period.

ZRMI/7/83-84 - 13 nos RCC Pipe Culverts

Three pipe culvert installations, and their respective headwalls, have been completed. Inlet and outlet channel excavation still remains to be done. Fabrication of the

additional pipe is in progress at a central casting yard. It is expected that culvert installation will be resumed as quickly as weather and receding flood waters permit.

6.2.8 Nabiganj - Baniyachung Road

ZRMI/7/83-84 - Box Culvert

No progress because site was still flooded.

6.3 Rangpur District

1982-1983 Schemes

6.3.1 Gaibandha - Kamarjani Road - HBB

This work has been completed since April, but the recent heavy rainfall has caused additional damage to the shoulders. Such damages should be repaired as quickly as possible.

6.3.2 Mirganj - Jaldhaka Road - Bituminous Carpeting

The work of Groups A, B, and C is complete. Work progress for Group D remains at 35 percent, because the heavy rainfall prevented any significant progress during this reporting period.

6.3.3 Chatra - Khalashpir - Bhendabari Road - Bituminous Carpeting

Groups A and B completed their work some time ago, and reimbursement will be recommended as soon as the damaged shoulders have been repaired. No additional progress to report for the other groups.

6.3.4 Kamdia - Ghoraghat Road - HBB

Groups A, C, and D have completed their work. Group B has completed about 30 percent of their task.

6.3.5 Rajarhat - Ullaghata Road - HBB

Poor condition of the approach road prevents access to this project site. No progress to report for this reporting period.

1983-1984 Schemes6.3.6 Gaibandha - Kamarjani Road - HBB

The heavy rains and the difficult river crossing at Gaibandha have prevented the transportation of the road roller to the job site. The XEN has proposed the use of a vibratory roller, which is easier to transport. A test section of HBB will first be compacted with the vibratory roller and an "in situ" density test will be performed. If satisfactory results are obtained, use of the vibratory roller to compact HBB will be authorized.

6.3.7 Mirganj - Jaldhaka Road - Bituminous Carpeting

No new contractors have been appointed for Groups A and C-1, which had been canceled. Group B is 34 percent complete, Group C-2 is 31 percent complete, and Group D, which has the poorest progress to date, is 6 percent complete. Progress for the entire scheme is about 22 percent.

6.3.8 Chatra - Khalashpir - Bhendabari Road - Bituminous Carpeting

Some additional progress was achieved during the closing days of the month. However, it was observed that a significant amount of the material used was lowest quality bricks. It was proposed that the XEN arrange an inspection trip with the DC, so that the latter official could see for himself the low quality of bricks being supplied by the contractors and for which they are demanding a high price. Such a trip could not be arranged, but the XEN did manage to get a part of the unacceptable material removed from the site.

To-date, Group A has completed 18 percent, Group B has completed 25 percent, Group C has completed 17 percent, Group D and E a little less than 4 percent each, and Group F has completed less than one percent. Overall scheme progress is about 12 percent.

6.3.9 Kamdia - Ghoraghat Road - HBB

Progress on this scheme during the reporting period was acceptable. However, in some cases, the contractors were found to be using low-quality material. Some of

this sub-standard material has been removed and replaced with acceptable material.

The original contracts for Groups A and D were canceled and have not yet been replaced. Therefore, these two groups show no progress. Progress for Group B is about 44 percent, while for Group C it is 85 percent. If only the two working groups are considered, the overall scheme progress is about 64 percent, but if all four groups are considered, the progress drops to 30 percent.

6.4 Faridpur District

6.4.1 Badarpur - Salta Road

The work on this project is complete; Group A was an 82-83 scheme, while Groups B and C were 83-84 schemes. The XEN has submitted payment vouchers for Groups A and B, and has proposed that Groups B and C be transferred to the 82-83 program to utilize remaining unobligated funds. The proposal is being studied.

The Group C portion of this work was built using a cross section which eliminated the brick soling. The contractor has complained that this procedure required the use of about 50 percent more WBM material. Two test holes were dug in this section to verify the pavement structure. A compromise payment scheme is being discussed.

6.4.2 Madhukhali - Baliakandi Road

Groups A, B, C, and D are 82-83 schemes and are complete. Payment vouchers have been submitted by the XEN. Group E was completed on 10 September and inspected on 18 September. The road was found to be satisfactory and the final payment voucher has been submitted for verification. A few erosion cuts and unfilled fire pits were observed. It was suggested that these be repaired as quickly as possible.

Group F carpeting is in progress. To date, some 150 l.m have been completed. One WA from WPW was found to be supervising the work. In general, the work was found to be satisfactory.

During a subsequent inspection, it was found that the work was being supervised by two SAE's. One roller driver and 46 laborers were working on the laying of premix bituminous

carpeting and seal coat. The temperature of the heated bitumen was checked and found to be 335°F. The settled portions of the WBM had been repaired prior to the placing of the carpeting. Some of the stone chips were oversize and about 10 percent were found to be very soft, which caused them to crush during the rolling operation.

By the time of the last inspection of the month, the total progress had increased to 2500 l.ft of premix carpet and sealcoat. The temperature of the bitumen was found to be 345° F and, in general, the quality of the work was satisfactory. At this inspection, one SAE and the contractor's representative were supervising the work. At this point, there were only 23 barrels of bitumin in stock, which is not enough to finish the assigned work. Immediate steps must be taken to supply the balance of the required bitumin so that the contractor will not be forced to suspend operations.

Group H bituminous carpeting is in progress. No supervisor was found at the site. The bituminous material was being overheated, and there was no thermometer at the site for temperature control. Stone chips were being used in the premix without prior washing and removal of extraneous material. The patching of the existing WBM surface was not being done properly (the surface was not brushed and scarified prior to placing the khoa, and brick bats of any size were being used in place of well-graded khoa; all with no compactive effort). The contractor's representative was asked to do the work in the proper manner. About 200 l. ft of carpeting had been completed when the shortage of bitumin halted the work on 20 September.

Group G and I have completed the WBM, and paving aggregates are stockpiled on the shoulder preparatory to resuming operations when the bituminous material is available.

Group J has also completed the WBM and has paving aggregates stockpiled on the shoulder.

Early in the month, a 3' x 3' portion of the deck slab of an existing bridge was damaged. The concrete slab had dropped away and left only the exposed reinforcing bars. It was suggested that the unsound concrete around the hole should be removed back to sound concrete and the surfaces scarified and covered with rich mortar. Then formwork should be placed under the hole and new concrete poured.

A crack was also found in the deck girder, which lends further urgency to the need for immediate repair. The bridge was repaired in a satisfactory manner by the end of the month.

6.4.3 Hatkrishnapur - Piajkhali Road

Group A has completed 1950 l ft of HBB. Because of lack of compaction of the subgrade and sand blanket, the quality is poor. No work currently in progress.

Group D has completed their work, but a washout occurred about 1200 ft from Sadarpur for lack of a culvert. The local residents originally objected to the installation of a culvert, but the XEN has now convinced them that it is necessary. A change order is being negotiated for the culvert installation and the repair of the roadway. Some shoulder repair is also required.

Group F has also completed their work. Some shoulder repair and correction of settled HBB remains to be done as soon as weather permits.

7.0 PROCUREMENT OF EQUIPMENT

7.1 Local Procurement

7.1.1 Trailer-Mounted Water Tanks

The prototype model promised for delivery in August by the manufacturer has not yet been delivered.

7.2 International Procurement

No new developments to report for this period.

8.0 PERSONNEL

8.1 General

The current status of all personnel (WSA/BCL/PAS) is shown in tabular form in Appendix G.

9.0 PROBLEMS AND PROPOSED SOLUTIONS

9.1 General

9.1.1 Abnormal Weather Conditions

As reported in the last few monthly reports, the unseasonably long monsoon season (May through September) has had a definite adverse affect on progress achieved in all three Districts. The prolonged heavy rainfall and accompanying flooding conditions have caused much more damage to that work which had been completed than would normally be anticipated. As a result, contractors appear loathe to comply with their contractual maintenance obligations and are inclined to proceed with subsequent phases of their work without first correcting the damage to the "completed" work. The end result is poor quality control and sub-standard work. The XEN's and the RE's of the respective Districts have been working together to resolve this problem.

One measure taken to alleviate this problem is the extension of the completion date of the affected contractors. However, this relief must be granted with caution, for it also provides a convenient escape for the inefficient contractor.

9.2 Organization And Management

No specific problems to mention at this time.

9.3 Maintenance System And Supervision

9.3.1 Inappropriate Scheduling

The Pilot Maintenance Schemes in all three Districts have been in difficulties from their inception, principally because they were initiated too late in the dry season. This late start, complicated by the early onset of the heavy rains, has hampered progress to date. All concerned recognize that emergency maintenance may be required at any time. However, routine maintenance should be planned and scheduled to obtain optimum results for minimum expenditures.

The District RE's have been working with the respective XEN's to improve the planning and scheduling of the maintenance system. This cooperative effort should be reflected in better maintenance results during this present dry season.

9.3.2 Inadequate Revolving Fund

It appears that the revolving fund set up to finance maintenance work suffers from two major deficiencies; it is too small and the reimbursement cycle is too long. A shortening of the reimbursement cycle could help to alleviate the problem of size of the fund. Negotiations are underway to resolve this problem.

9.3.3 Confusion In Specifications

Apparently there is a great variation in quantities specified in "Standard Specifications For Road Construction" and "Maintenance Management For Zila Roads". The amounts of bitumin and sand specified in the latter are much smaller, and the resulting seal coat is inadequate.

The general problem of specifications and the oft-repeated complaint that much of the work does not meet specifications is being studied. This problem must be resolved not only for maintenance, but for construction as well. It is obvious that an approved maintenance manual is required.

9.3.4 Shortage of Materials And Transportation

If maintenance is to be done by "force account", then the individual Districts must not only have small work forces at strategic points, but they must also have small stocks of aggregates and bitumen, and the means of transporting them to the job site. The object is not to amass a large inventory of materials and sophisticated equipment to move them, but rather to find a way to accelerate the maintenance process by direct negotiation for small amounts of materials and emergency transportation. These possibilities are being discussed.

9.4 Preparation of Technical Specifications

No specific problems to mention at this time.

9.5 Training

9.5.1 Third -Country Training

The biggest problem facing this phase of the training program is one of logistics. The list of selected candidates has been sent to WPW for processing by BDG. It is imperative that approval be obtained by the first week in November so that USAID processing, tickets, visas, etc. may be completed well before 18 November, the day scheduled for the group's departure for Bangkok. All concerned are reminded daily of the urgency of this deadline.

9.5.2 U.S.A Training

Again, the major problem is one of logistics. The selection and preparation of candidates for this type of training is much more time consuming than for Third Country training. Therefore, agreement on scope and extent of any additional U.S.A . training programs must be reached as quickly as possible.

9.6 Construction System And Supervision

9.6.1 General

Many of the problems discussed under "Maintenance" also apply to "Construction", especially the problems regarding scheduling and specifications.

9.6.2 Quality Control

The problem of achieving and maintaining adequate quality control is common to all three Districts. The previously discussed factors of inclement weather and poor project scheduling undoubtedly have had an adverse effect on this activity. Little can be done about the weather except to improve the scheduling improvements to reduce its adverse impact as much as possible.

In the early stages of the project's life, shortages of both supervisory personnel and transportation contributed to the problem. An increase in the Consultant's staff and the provision of motorcycles for both the XEN's and the Consultant's staffs alleviated these problems.

There still remains the problem of the attitude of the Contractor (and his representatives) and, to a very limited extent, of a few of the WPW supervisors. The training program, both on-the-job and the in-country courses, has produced a noticeable improvement in the attitude of the supervisors.

The adverse attitude of contractors is not universal; there are some who strive to do an acceptable job. There are a variety of reasons why other contractors fail to meet specifications: they have been accustomed to doing work in a manner not now considered to be acceptable under the ZRMI Project concept, some have little or no prior contracting experience, unit price ceilings are not realistically compatible with construction costs prevailing in Bangladesh today, contractor payments are not made in a dependable manner, and contract penalty provisions are not enforced. The Consultant can do little about the selection of contractors, nor the unit price ceilings which are often imposed. A considerable amount of progress has been made in teaching the contractors how to meet ZRMI Project specifications. Negotiations are underway to improve the method of paying the contractor. The question of enforcing contract penalty provisions is a subject constantly discussed between the XEN and the RE of each District.

9.6.3 Contract Management

Perhaps the major problem in this aspect of the work involves "change orders", or the lack of them. There are many instances where the XEN and the RE have agreed verbally to a change in scope or detail of a contract, but no change order has been presented to confirm the changes. A request for reimbursement cannot be honored until the adjustments to the original contract have been validated by an approved change order. The District RE's are in constant dialogue with the XEN's concerning this vital requirement.

9.7 Procurement of Equipment

No specific problems to mention at this time.

9.8 Personnel

No specific problems to mention at this time.

9.9 Miscellaneous

No specific problems to mention at this time

10.0 MISCELLANEOUS

10.1 Monthly Financial Statement

The Monthly Financial Statement may be found in Appendix H.

A handwritten signature in cursive script, appearing to read "F. L. Barnes", is written above a horizontal line.

FRED L. BARNES
CHIEF OF PARTY

APPENDIX 'A'

PHOTOS OF MAINTENANCE ACTIVITIES

FARIDPUR DISTRICT

ZILA ROADS MAINTENANCE AND IMPROVEMENT PROJECT

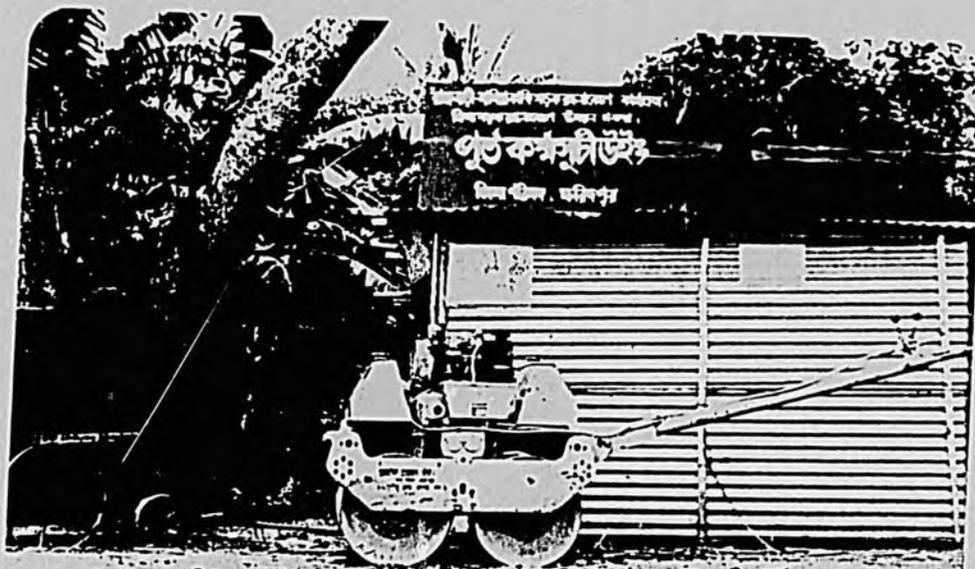
FARIDPUR DISTRICTRAJBARI - BALIAKANDI ROAD

Fig-1.
Equipments were in idle condition due to shortage of bitumen at Site.



Fig-2.
Completed maintenance section.

FARIDPUR DISTRICT
TALMA - HAGARIKANDA ROAD



Fig-3.

Wing wall of a RCC bridge has been washed out due to heavy rain and flood near Talma village.



Fig-4.

Failure of wing wall causes the damage of the approach road seriously of the said bridge.

FARIDPUR DISTRICT

TAJMA- HAGARKANDA ROAD



Fig-5.

Pavement at damage portion has been repaired.



Fig-6.

Pavement failure portion has been repaired temporarily to keep the road open.

FARIDPUR DISTRICTTALMA- NAGARIANDA ROAD

Fig-7.

Erosion from approach of another RCC bridge affected the pavement seriously.



Fig-8.

Shoulder erosion already affected the pavement.

FARIDPUR DISTRICT

TALMA - NAGARKANDA ROAD



Fig-9.

Embankment failure.



Fig-10.

Embankment failure causes serious distress on pavement.

FARIDPUR DISTRICT

TALMA - NAGARKANDA ROAD



Fig-11.

Road has been closed down for heavy vehicle due to failure of King wall of a bridge

FARIDPUR DISTRICT
(84-85 Scheme).

PUKURIA - SADARPUR ROAD



Fig-12.

Pavement failure due to heavy rain and flood.



Fig-13.

Embankment failure shows serious distress on pavement.

APPENDIX - 'B'

PHOTOS OF LABORATORY ACTIVITIES

RANGPUR DISTRICT

ZILLA ROADS MAINTENANCE AND IMPROVEMENT PROJECT

LABORATORY ACTIVITIES OF RANGPUR DISTRICT FOR THE
MONTH OF SEPT.'84

Name of road/khal and location.	Test Result	Sieve /Hydro-meter analysis.			Atterberg limits.			Field density.		Compaction test.		% Compaction.		C.B.R. (%)		Remarks.	
		Sand (%)	Silt (%)	Clay (%)	L.L. (%)	P.L. (%)	P.I. (%)	Yd kg/m ³	W (%)	M.D.D. (kg/m ³)	O.M.C (%)	Modified.	Standard.	Unsoaked.	Soaked.		
Jaldhaka-Mirganj Road. (Sub-base). .70 km. from the starting point. Village of Khutamara (New work in 1984-1985).	Sp.gr. =2.70.	30.	68.	2.	Non plastic.			-	-	-	-	-	-	-	-	-	
Right Side Shoulder.	Sp.gr. =2.72.	33.	62.	5.	-do-			-	-	-	-	-	-	-	-	-	
Left Side Parrowpit.	Sp.gr. =2.70.	40.	59.	1.	-do-			-	-	-	-	-	-	-	-	-	
Jaldhaka-Mirganj Road. (Sub-base). 1.00 km. from the starting point. Village of Khutamara (New work in 1984-1985).	Sp.gr. =2.72.	47.	52.	1.	-do-			-	-	-	-	-	-	-	-	-	
Right Side Shoulder.	Sp.gr. =2.71.	53,	46.	1.	-do-			-	-	-	-	-	-	-	-	-	

Yd = Dry density.
W = Water content.
MDD = Max dry density.
CMC = Optimum water content.

LABORATORY ACTIVITIES OF RANGPUR DISTRICT FOR THE
MONTH OF SEPT.'84

Name of road/khal and location.	Test Result	Sieve /Hydro-meter analysis.			Atterberg limits.			Field density.		Compaction test.		% Compaction.		C.B.R. (%)		Remarks.
		Sand (%)	Silt (%)	Clay (%)	L.L. (%)	P.L. (%)	P.I. (%)	γ_d kg/m ³	W (%)	M.D.D. (kg/m ³)	O.M.C (%)	Modified.	Standard.	Unsoaked.	Soaked.	
Jaldhaka-Mirganj Road. (Sub-base). .10 km. from starting point. Village of Khutamara (New work in '84-85').	Sp.gr. =2.71	62.	37.	1.	Non Plastic.			-	-	-	-	-	-	-	-	
Right Side Shoulder.	Sp.gr. =2.74	51.	44.	5.	-do-			-	-	-	-	-	-	-	-	
Jaldhaka-Mirganj Road. (Sub-base). .30 km. from starting point. Village of Khutamara (New work in '84-85').	Sp.gr. =2.71	50.	45.	5.	-do-			-	-	-	-	-	-	-	-	
Right Side Shoulder.	Sp.gr. =2.73	59.	39.	2.	-do-			-	-	-	-	-	-	-	-	
Left Side Shoulder.	Sp.gr. =2.70	53.	45.	2.	-do-			-	-	-	-	-	-	-	-	

γ_d = Dry density.
W = Water content.
MDD = Max dry density.
C/C = Optimum water content.

APPENDIX - 'C'

PHOTOS OF CONSTRUCTION ACTIVITIES

SYLHET DISTRICT

ZILA ROADS MAINTENANCE AND IMPROVEMENT PROJECT

SYLHET DISTRICT
ATGRAM - ZAKIGANJ ROAD



Fig-14.

A view of the oversized material utilized as select material to level and dress the Sub-grade and potholes. This Project is awaiting the arrival of a Roller in order to place sub-base material.



Fig-15.

A view of the completed pavement section after being subject to the Monsoon rains. No defect observed yet.

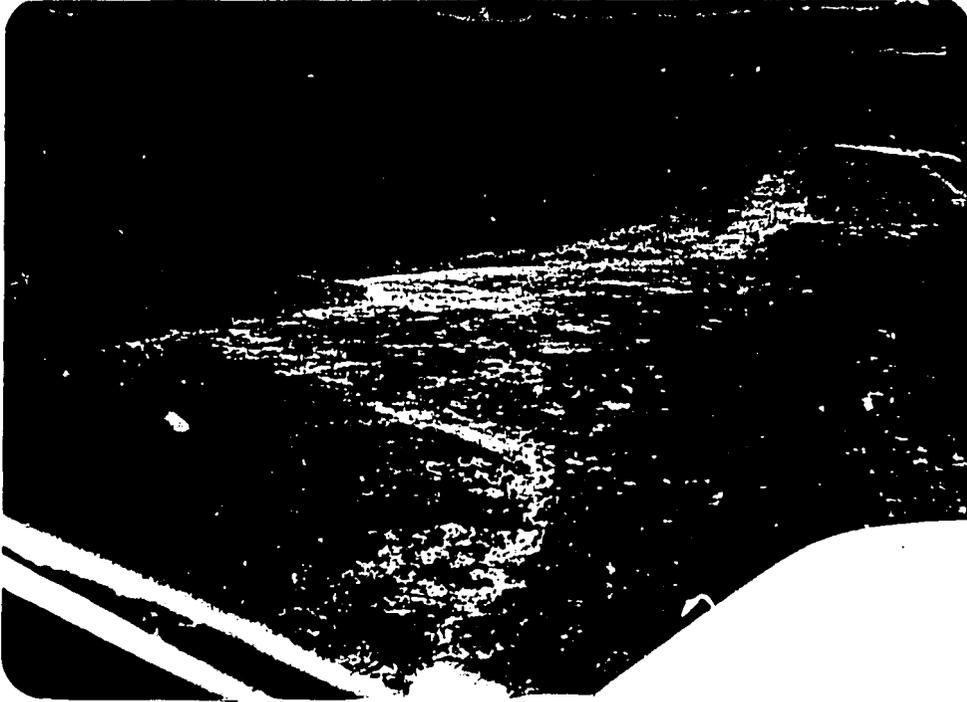
SYLHET DISTRICTATGRAM - ZAKIGANJ ROAD

Fig-16.

A view of the inter-section treatment recommended and executed. This treatment diminishes pavement deterioration by traffic leaving or entering the main road.

FENCHUGANJ- GHILACHARA ROAD

Fig-17.

A view of the beginning of the Project just after the installation of signboard by the Contractor.

SYLHET DISTRICT
BAIUBAL - PUTIJURI - BIJNAGHAT ROAD



Fig-18.

A view of recently completed Box-culvert of Kandigaon and precarious type of detour utilized during construction. Workmanship was good, but strength of concrete-mix utilized is doubtful.

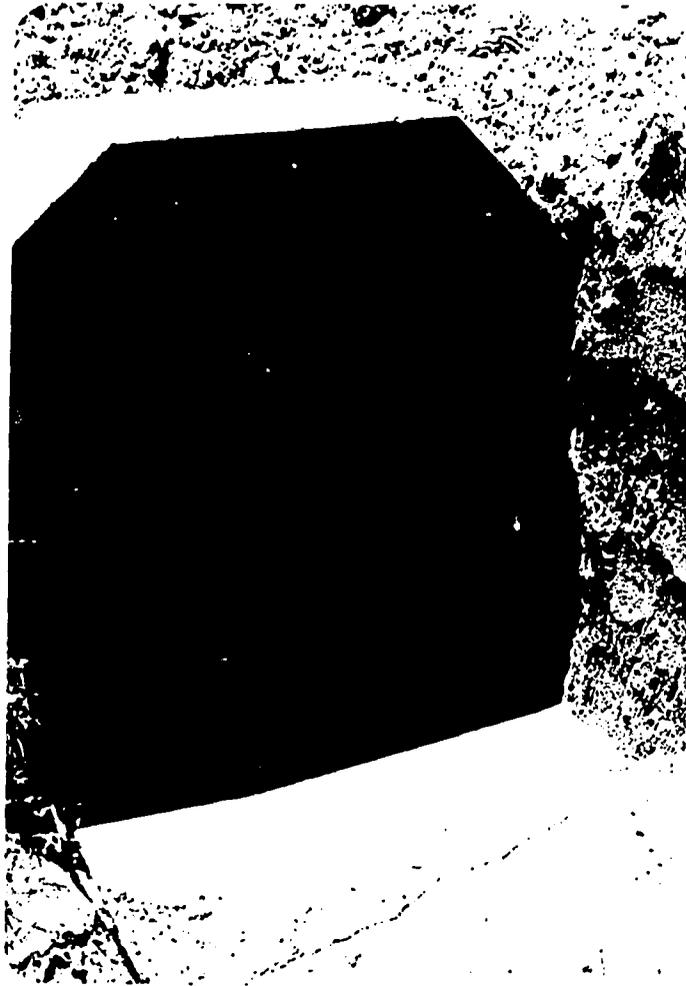
SYLHET DISTRICTBAHUBAL - PUTIJURI - BIJNAGHAT ROAD

Fig-19.

The inlet and outlet of the recently constructed pipe culvert must be cleaned in order to allow free flow of drainage water.

SYLHET DISTRICTSYLHET - KAMAL BAZAR ROAD

Fig-20.

A view of the bituminous carpeted section compacted by 3-wheeled 8-10 ton Chinese roller. Later use of a small 2-wheeled vibrator; roller resulted in uniform and better compaction.

SYLHET DISTRICTDLAKADAKSHIN - BEANI BAZAR ROAD

Fig-21.

A view of the badly eroded and damaged shoulder and embankment which is general throughout this Project. Despite repeated recommendations, the Contractor continues to execute this pavement or carpeting over WBM in this areas, without first correcting and repairing the damage.

APPENDIX - 'D'

PHOTOS OF CONSTRUCTION ACTIVITIES

FARIDPUR DISTRICT

ZILA ROADS MAINTENANCE AND IMPROVEMENT PROJECT

FARIDPUR DISTRICT

BADARFUR - SALTHIA ROAD

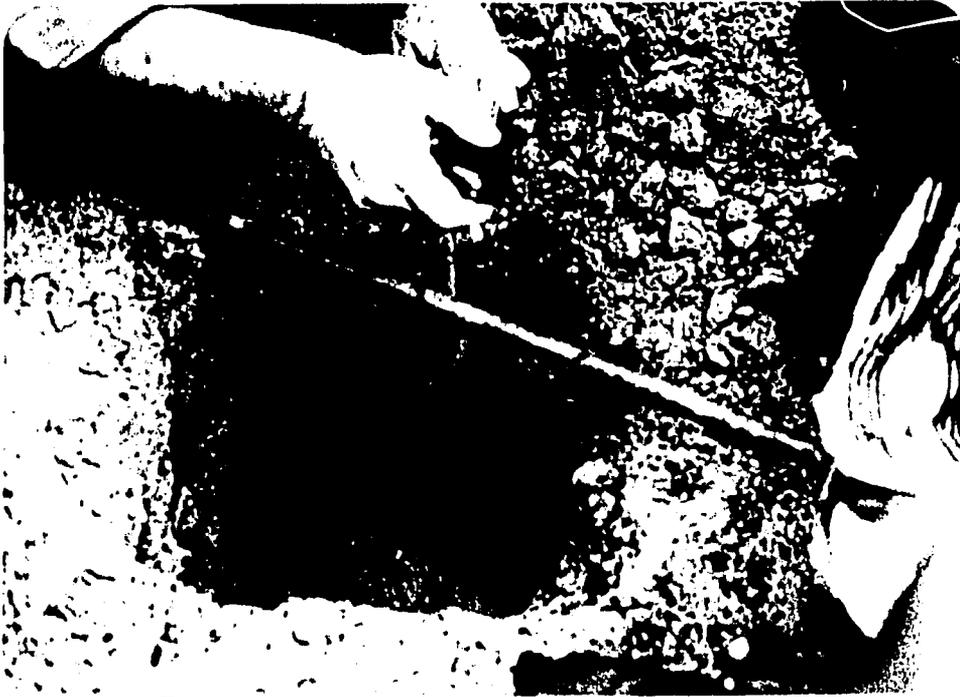


Fig-22.

Checking of total thickness of pavement of Group 'C'.



Fig-23.

Thickness of pavement being measured for final pavement.

FARIDPUR DISTRICT

BADARPUR - SALTIA ROAD



Fig-24.

Thickness of each layer of the pavement being measured.
(Group 'C').

FARIDPUR DISTRICTMADHUKHALI - BALIAKANDI ROAD

Fig-25.

Cleaning of WBM surface and spraying of bitumen as primer being observed at Site (Group 'F').



Fig-26.

Heating and mixing of pre-mix being observed at Site - (Group 'F').



Fig-27.

Temperature of heated bitumen being checked-
(Group 'F').



Fig-28.

Bituminous carpeting was in progress.

FARIDPUR DISTRICTMADHUKHALI - BALIAKANDI ROAD

Fig-29.

Compaction from the edge of the pre-mix being advised at Site. - (Group 'F').



Fig-30.

Rolling of seal coat being observed at Site - (Group 'F').

FARIDPUR DISTRICT

MADHUKIALI - BALIAKENDI ROAD



Fig-31.

Completed section. (Group 'F').



Fig-32.

Heating of bitumen was in progress at Site -
(Group 'H').

FARIDPUR DISTRICTMADHUKHIALI - BALIAKANDI ROAD

Fig-33.

Bituminous carpeting was in progress -
(Group 'H').

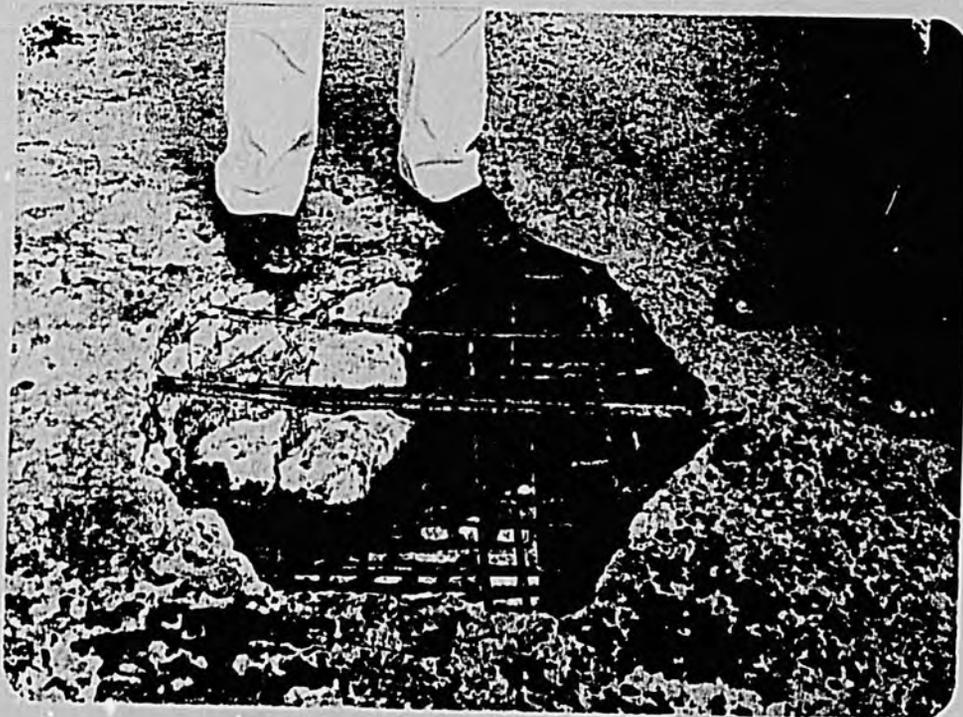


Fig-34.

Deck slab of a RCC bridge has been damaged seriously.
(Group 'J').

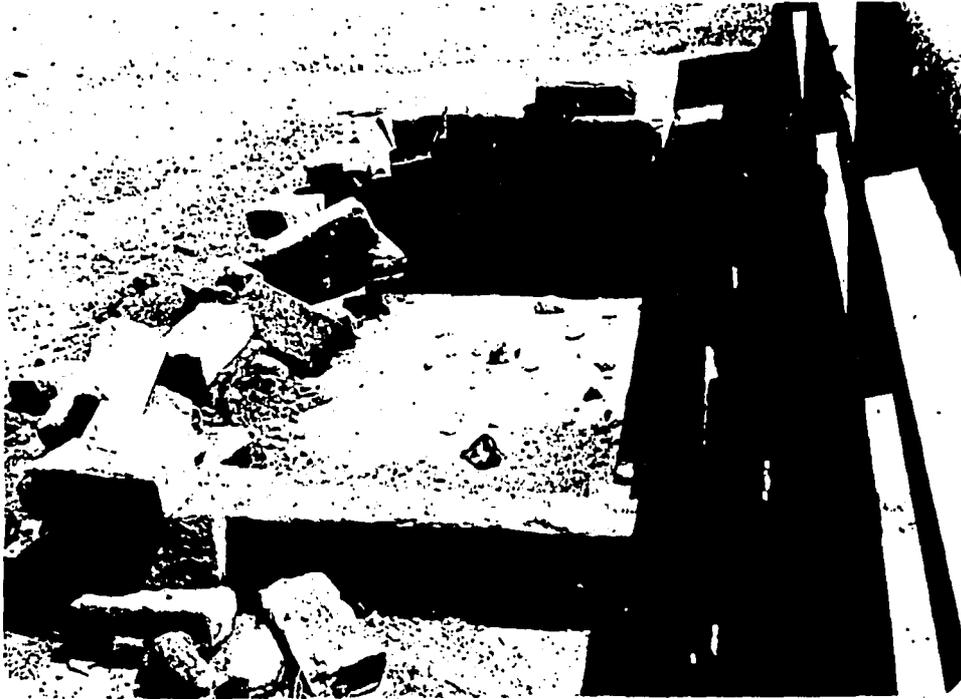


Fig-35.

Damaged deck slab has been repaired on 22.9.84. -
(Group 'J').



Fig-36.

Cracks have been observed in girder of the same bridge-
(Group 'J').

APPENDIX 'E'

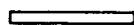
STATUS OF PROJECT ACTIVITIES

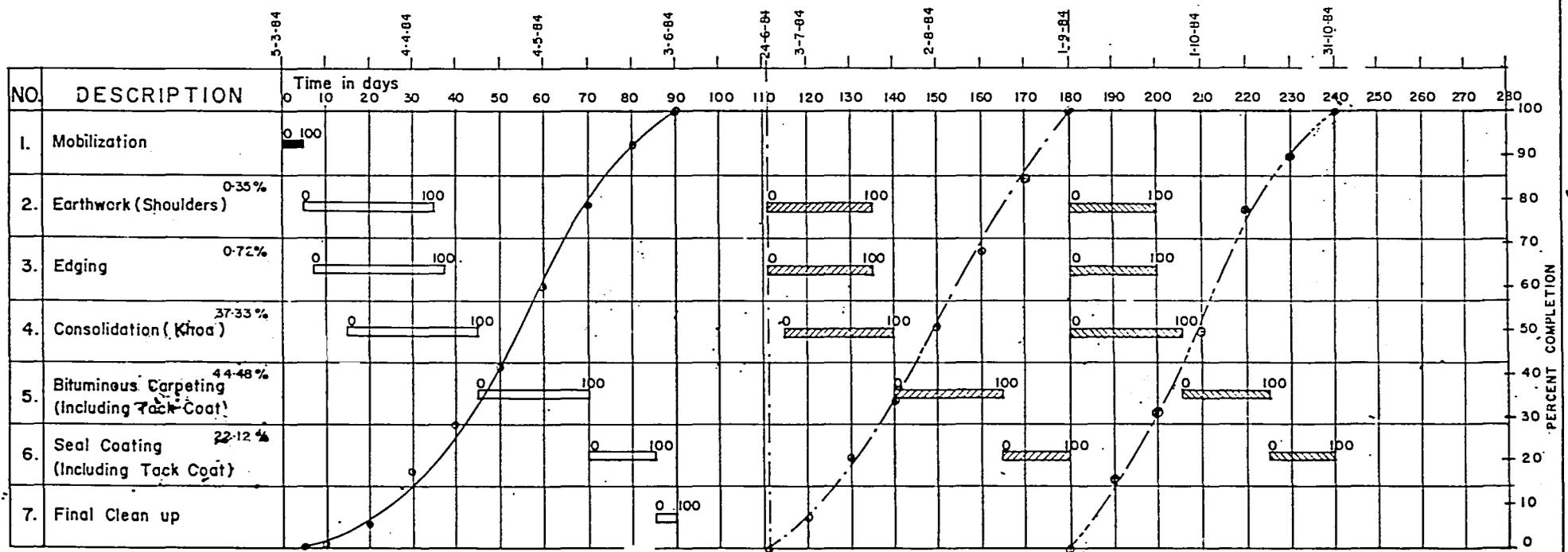
RANGPUR DISTRICT

ZILLA ROADS MAINTENANCE AND IMPROVEMENT PROJECT

RANGPUR
IMPROVEMENT OF GAIBANDHA KAMARJANI ROAD-1983-84
KHOA CONSOLIDATION AND BITUMINOUS CARPETING
ON EXISTING H.B.B

Estimated Cost : Tk=16,90,000
 Contracted Cost : Tk=17,57,598
 Scheduled Starting Date : March 5, 1984
 Actual Starting Date : —
 Scheduled Completion Date : June 5, 1984
 Revised Completion Date : August 31, 1984
 Second revision : October 31, 1984
 Dates of revision : Jun 24, 1984
 Sept. 1, 1984
 Total Length Scheduled : 9180 feet
 Total Length Contracted : 9180 feet

 Scheduled Progress
 Revised Progress
 Second revision
 Actual Progress

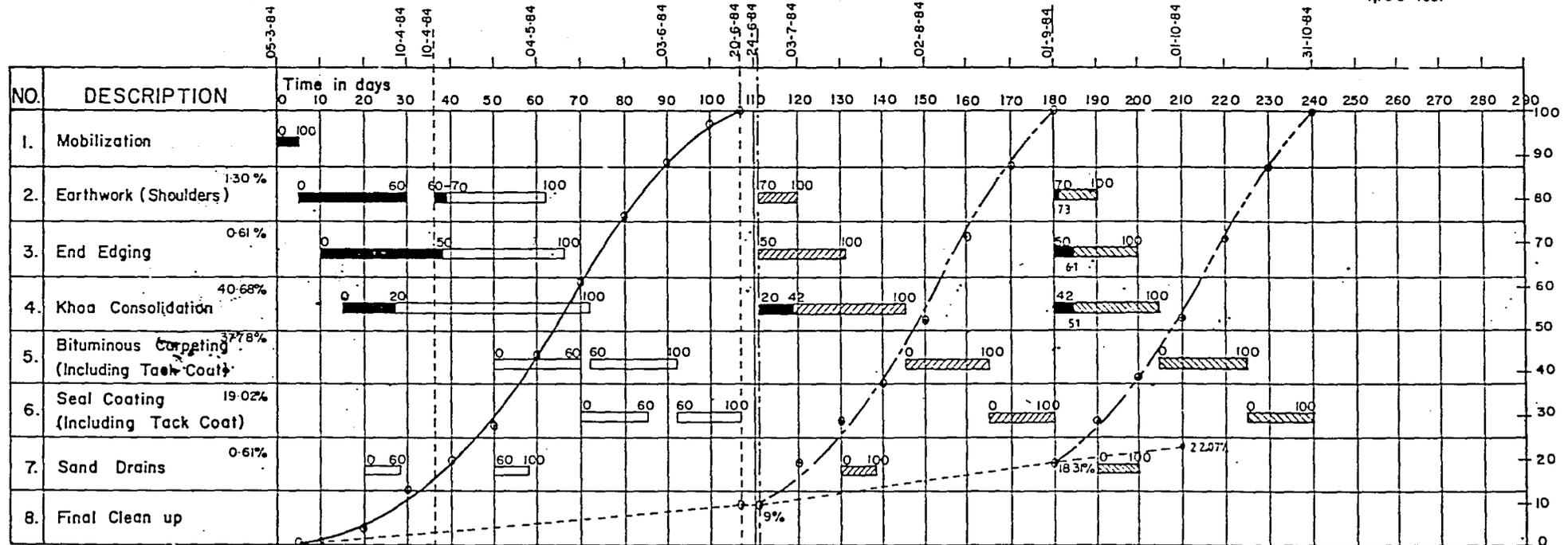
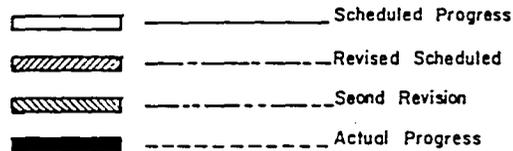


NOTE:- Except for some materials collected and some amount of bricks broken for khoa, no actual work has been performed by any group. Lack of a road Roller is hampering progress of this road and the Contractors could not actually perform any work. Actual progress therefore is zero. If any credit is given to the material collection and khoa preparation, then an actual 5% could be assigned to this scheme.

Alauddin (SAE)

RANGPUR IMPROVEMENT OF MIRGONJ-JOLDHAKA ROAD-1983-84 BITUMINOUS CARPETING

Estimated Cost :	Tk=1563,492 (3 Groups)
Contracted Cost :	Tk= 15,74,044
Scheduled Starting Date :	
Group C2 & D	March 3, 1984
Group B	April 7, 1984
Actual Starting Date :	
Group C2 & D	March 10, 1984
Group B	April 10, 1984
Scheduled Completion Date :	
Group C2 & D	June 5, 1984
Group B	April 10, 1984
Revised Completion Date (all) :	August 31, 1984
Second Revision for completion :	October 31, 1984
Dates of revision :	June 24, 1984 September 1, 1984
Total Length :	7,100 feet



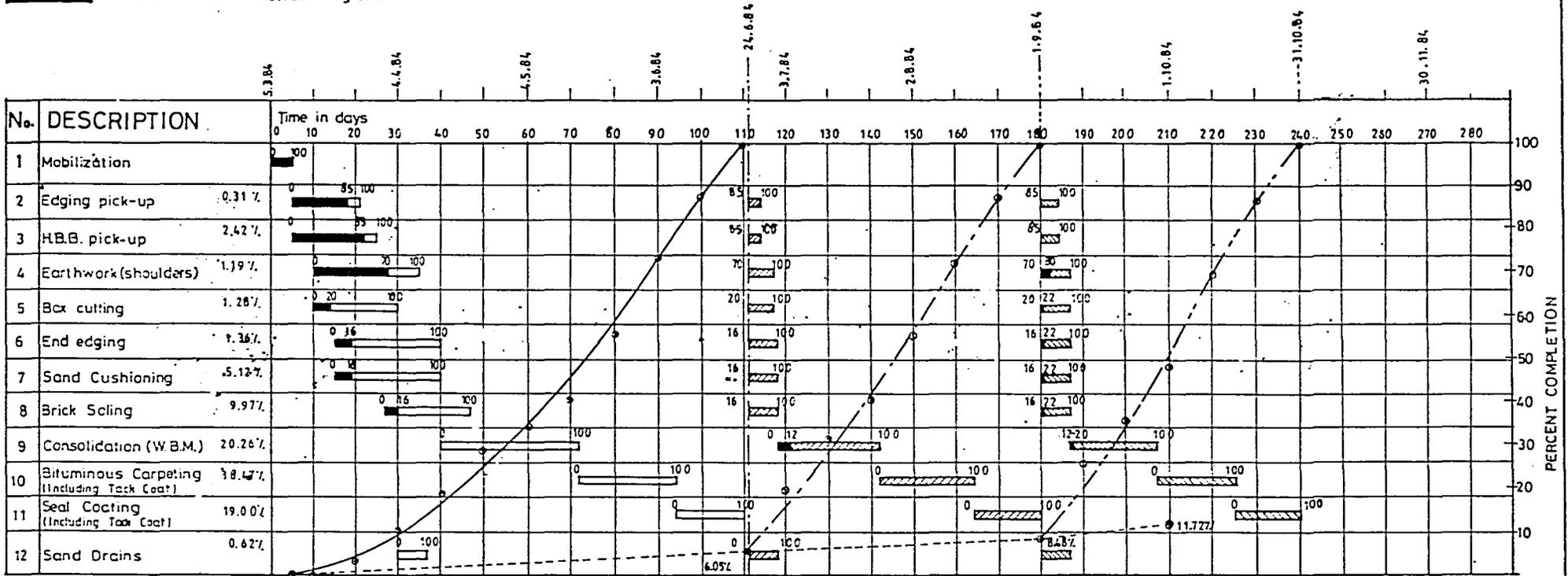
NOTE:- Curves and percent progress shown are for Groups B, C2 and D only, since the work order for Groups A and C have been cancelled by the Z.P.

Alauddin(S.A.E)

RANGPUR IMPROVEMENT OF BARODARGA-BHENDABARI ROAD 1983-1984 BITUMINOUS CARPETING

Estimated Cost: Tk 4995621
 Original Contracted Cost: Tk 4201990
 Revised Contracted Cost: Tk 4699186
 Scheduled Starting Date: 5 March, 1984
 Actual Starting Date: 16 March, 1984
 Scheduled Completion Date: 5 June, 1984
 Revised Completion Date: 31 August, 1984
 Second Revised Date: 31 October, 1984
 Dates of Revision: 24 June, 1984
 1st. Sept., 1984
 Total Length: 15000 feet

Scheduled Progress
 Revised Schedule
 Second Revision
 Actual Progress



Note: Time for construction according to the Work Order, was 90 days. However, the minimum time required is 110 days. The Scheduled Progress shown has been prepared on the basis of 110 days.

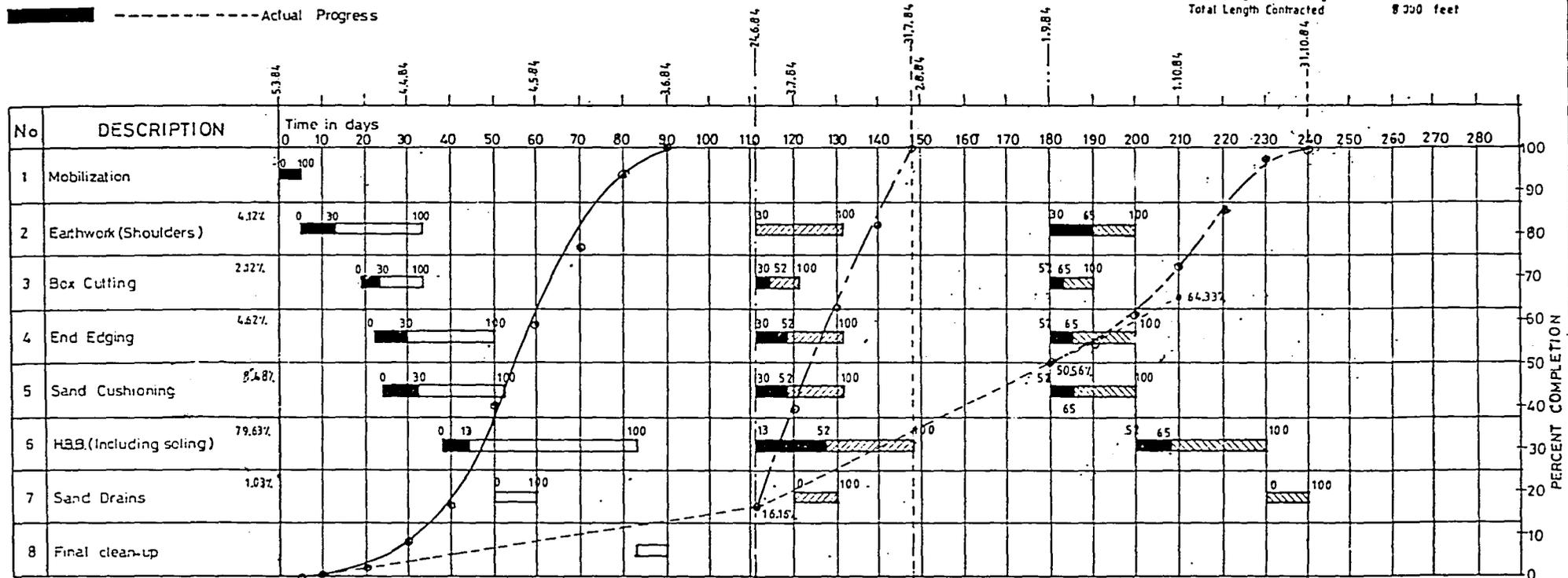
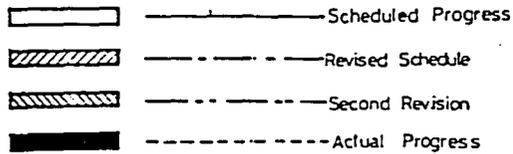
Alauddin (S.A.E.)

RANGPUR

IMPROVEMENT OF KAMDIA-GHORAGHAT ROAD 1983-1984

H.R.B. WORK

Estimated Cost	Tk 14,45,820
Contracted Cost	Tk 10,89,608 (no tender for Group A)
Scheduled Starting Date	5 March, 1984
Actual Starting Date	10 March, 1984
Scheduled Completion Date	5 June, 1984
Revised Completion Date	31 July, 1984
2nd. Revised Completion Date	31 October, 1984
Dates of revision	24 June, 1984
	1st. September, 1984
Total Length Scheduled	11,000 feet
Total Length Contracted	8,300 feet



Notes: No tender has been submitted for Group A, and Work Order for Group D has been cancelled by the Chairman of the Zilla Parishad. Consequently, the curves and percentage of progress shown are for two groups only: Group B and Group C. After cancellation of Work Order for Group D, the total contracted cost became Tk 6,70,870, and the total length 5,000 feet.

APPENDIX 'F'

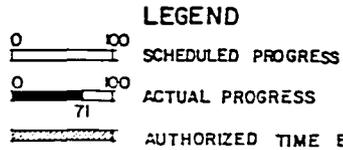
STATUS OF PROJECT ACTIVITIES

FARIDPUR DISTRICT

ZILA ROADS MAINTENANCE AND IMPROVEMENT PROJECT

FARIDPUR
MADHUKHALI - BALIAKANDI
ROAD
ALL GROUPS
83-84 SCHEMES

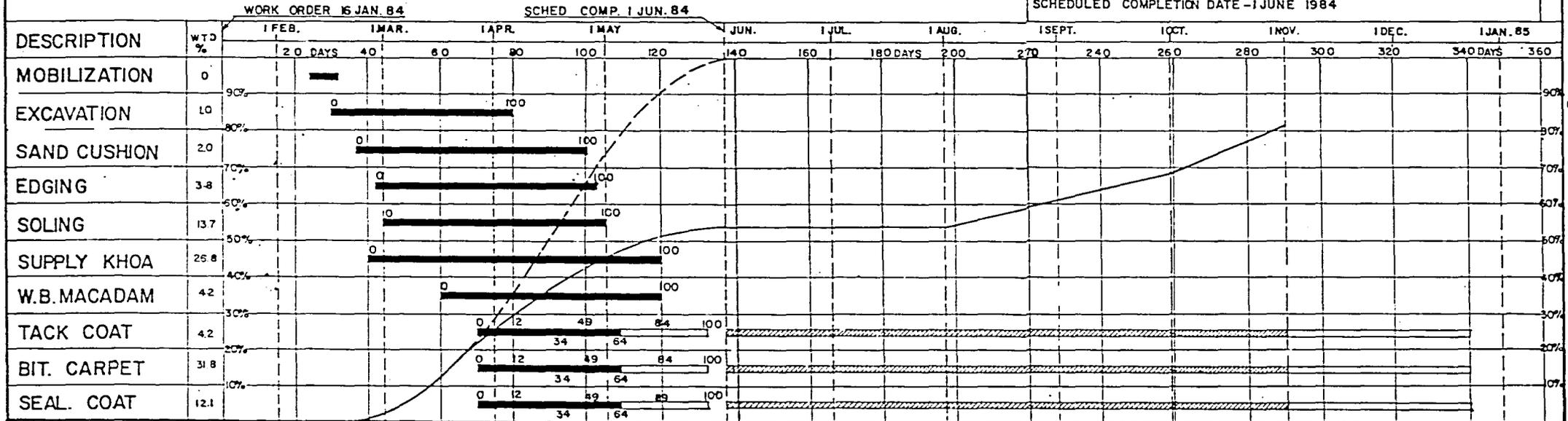
DATE: 31 OCT. '84
 % COMPLETION:
 SCHEDULED = 100%
 ACTUAL = 82.3%



NOTES:
 1. ACTUAL COMPLETION DATE IS DEPENDENT
 UPON THE AVAILABILITY OF BITUMEN

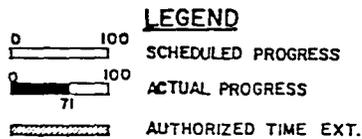
		CONTRACT DATA					
GROUP		E	F	G	H	I	J
LENGTH		5280 L.F.	5280 L.F.	5280 L.F.	5280 L.F.	5280 L.F.	3455 L.F.
COST (TK)		16,51,869	16,51,869	16,51,869	16,29,604	16,51,869	11,91,967
COMPLETE		10 SEPT. 84	10 OCT. 84		27 OCT. 84		

TOTAL LENGTH = 29855 L.F. = 5654 MILES
 TOTAL COST = TK. 94,29,047
 WORK ORDER DATE - 16 JAN. 1984
 ACTUAL STARTING DATE - 17 FEB. 1984
 SCHEDULED COMPLETION DATE - 1 JUNE 1984



FARIDPUR
HATKRISHNAPUR-SADARPUR-PIAJKHALI
ROAD
GROUPS-A, D & E
83-84 SCHEMES

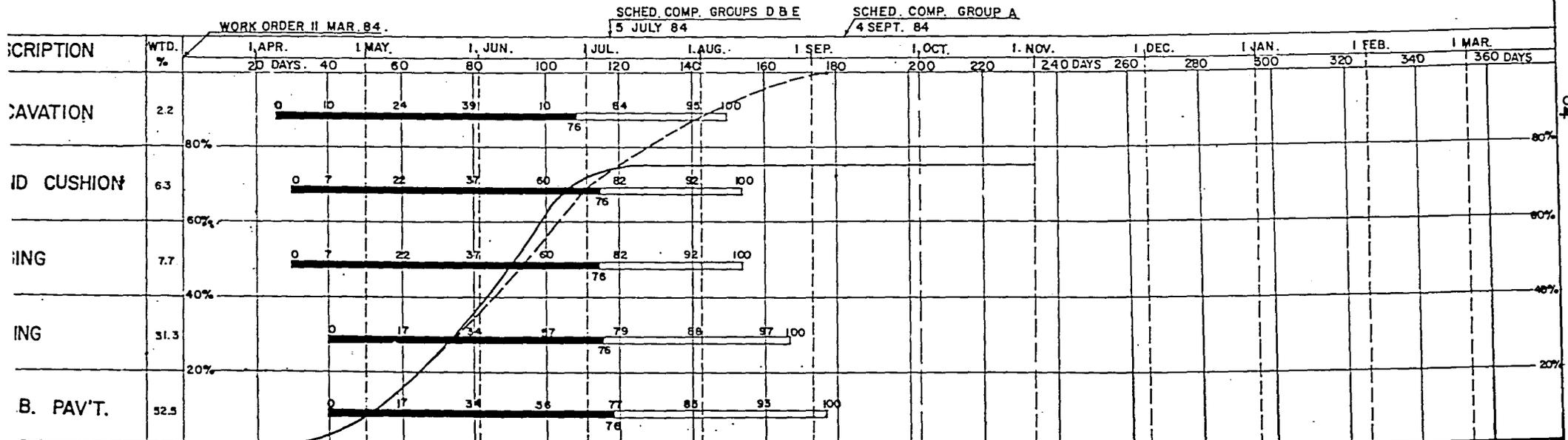
DATE
 % COMPLETION: 31 OCT. 84
 SCHEDULED = 100%
 ACTUAL = 76.0%



NOTES:

1. GROUPS D & E REQUIRE WARANTEE MAINTENANCE DURING THE DRY SEASON.
2. WITH LOCAL APPROVAL, A MULTIPLE CULVERT MUST BE INSTALLED TO REPAIR A WASHOUT IN GROUP D.
3. GROUP A SHUT DOWN IN MID JULY BECAUSE OF RAINS.

CONTRACT		DATA		
TOTAL	GROUP	A	D	E
21,580 L.F.	LENGTH	7700 L.F.	3700 L.F.	10,180 L.F.
309,994	COST (TK)	112,2950	53,5018	147,2026
WORK ORDER DATE		12/5/84	11/3/84	11/3/84
BEGIN WORK	"	6/6/84	6/4/84	6/4/84
SCHED COMP.	"	4/9/84	5/7/84	5/7/84
ACTUAL COMP.	"		15/6/84	25/6/84



APPENDIX G - CURRENT STATUS OF PERSONNEL.

Sheet 1 of 2.

Title	Name.	Status.	Comments.
D H A K A O F F I C E.			
Chief of Party.	Fred L. Barnes.	On duty, 01/09- 30/09.	-
Training Advisor.	Gifford E. Rogers.	On duty, 01/09- 30/09.	-
Associate C.O.P.	K.M. Huque.	On duty, 01/09- 30/09.	Total 08 working days.
Soil/Materials Lab. Training Specialist.	M. Majid.	On duty, 01/09- 30/09.	Total 16 working days.
Structural Engineer.	M.A. Aziz.	On duty, 01/09- 30/09.	Total 8 working days.
Project Engineer/ Training Co-ordinator.	A.H.M. Abdullah.	On duty, 01/09- 30/09.	-
Office Engineer.	G.S.H. Habibur Rahman.	On duty, 01/09- 30/09.	-
Asstt. Design Engineer.	A. Rashid.	On duty, 01/09- 30/09.	-
Laboratory Engineer.	S. Arefin.	On duty, 01/09- 30/09.	-
Draftsman.	Mizanur Rahman.	On duty, 01/09- 30/09.	-
Draftsman.	Nazimuddin Ahmed.	On duty, 01/09- 30/09.	-
Administrative Asstt.	Md. Harun.	On duty, 01/09- 30/09.	-
Accountant.	A.K.M.A. Taher.	On duty, 01/09- 30/09.	-
Secretary.	Fahmida Chowdhury.	On duty, 01/09- 30/09.	-
Typist.	Andre Sarker.	On duty, 01/09- 30/09.	-
Driver.	E. Hossain.	On duty, 01/09- 30/09.	-
Driver.	F. Rahman.	On duty, 01/09- 30/09.	-
Messenger.	A. Majid.	On duty, 01/09- 30/09.	-
Guard.	S.A. Khalifa.	On duty, 01/09- 30/09.	-
Guard.	A. Rashid.	On duty, 01/09- 30/09.	-
Caretaker.	Mokfaruddin Skr.	On duty, 01/09- 30/09.	-
Cleaner.	Anwara.	On duty, 01/09- 30/09.	-
Gardener.	N. Zaman.	On duty, 01/09- 30/09.	-
F A R I D P U R.			
Resident Engineer.	N. Ziegler.	On duty, 01/09- 30/09.	-
Asstt. Resident Engineer.	A.H.M.R. Habib.	On duty, 01/09- 30/09.	-
Asstt. Engineer.	A.Z.M. Amirul Islam.	On duty, 01/09- 30/09.	-
Inventory Engineer.	Shah A. Nowaz.	On duty, 01/09- 30/09.	-
Laboratory Technician.	Mizanur Rahman.	On duty, 01/09- 30/09.	-
Surveyor.	Tajul Islam.	On duty, 01/09- 30/09.	-
Sub-Asstt. Engineer.	S. Afrad.	On duty, 01/09- 30/09.	-
Office Manager/ Accountant.	A.B.M. Kamaluddin.	On duty, 01/09- 30/09.	-
Secretary/Typist.	R.F. Khalifa.	On duty, 01/09- 30/09.	-
Driver.	B.A. Mollah.	On duty, 01/09- 30/09.	-
Driver.	N. Ali.	On duty, 01/09- 30/09.	-
Messenger.	S. Alam.	On duty, 01/09- 30/09.	-
Gardener.	J.K. Shill.	On duty, 01/09- 30/09.	-
Guard.	N. Khan.	On duty, 01/09- 30/09.	-
Guard.	I. Ali.	On duty, 01/09- 30/09.	-

contd...

APPENDIX C - CURRENT STATUS OF PERSONNEL.

Title.	Name.	Status.	Comments.
R A N G P U R.			
Resident Engineer.	R.Andros Tavel.	On duty, 01/09- 30/09.	-
Assistant Resident Engineer.	S.A.Ahmed.	On duty, 01/09- 30/09.	-
Assistant Engineer.	M.A.Samad.	On duty, 01/09- 30/09.	-
Inventory Engineer.	Animul Islam.	On duty, 01/09- 30/09.	-
Sub-Asstt.Engineer.	H.K.Das.	On duty, 01/09- 30/09.	-
Sub-Asstt.Engineer.	A.B.M.Zahiruddin.	On duty, 01/09- 30/09.	-
Sub-Asstt.Engineer.	Allauddin.	On duty, 01/09- 30/09.	-
Laboratory Technician.	B.Hossain.	On duty, 01/09- 30/09.	-
Surveyor.	J.Abedin.	On duty, 01/09- 30/09.	-
Office Manager/ Accountant.	A.H.Majumdar.	On duty, 01/09- 30/09.	-
Typist.	R.Kabir.	On duty, 01/09- 30/09.	-
Messenger.	A.F.M.M.Haque.	On duty, 01/09- 30/09.	-
Driver.	Mahbubur Rahman.	On duty, 01/09- 30/09.	-
Guard.	A.Rahman.	On duty, 01/09- 30/09.	-
Guard.	M.Hossain.	On duty, 01/09- 30/09.	-
Caretaker.	G.C.Das.	On duty, 01/09- 30/09.	-
Cleaner.	Rashida Begum.	On duty, 01/09- 30/09.	-
S Y L H E T.			
Resident Engineer.	Alex E. Nielson.	On duty, 01/09- 30/09.	-
Asstt.Resident Engineer.	K.M.Hasan.	On duty, 01/09- 30/09.	-
Sub-Assistant Engineer.	H. Nabi.	On duty, 01/09- 30/09.	-
Sub-Assistant Engineer.	K.S.Ahmed.	On duty, 01/09- 30/09.	-
Surveyor.	Aminul Karim.	On duty, 01/09- 30/09.	-
Surveyor.	Abu Musa Mia.	On duty, 01/09- 30/09.	-
Laboratory Technician.	N.M.Siddique.	On duty, 01/09- 30/09.	-
Laboratory Technician.	Amjadul Haque.	On duty, 01/09- 30/09.	-
Draftsman.	M.Giasuddin.	On duty, 01/09- 30/09.	-
Office Manager/ Accountant.	Azizul Haque.	On duty, 01/09- 30/09.	-
Typist.	A.K.M. Munir Ahmed.	On duty, 01/09- 30/09.	-
Driver.	Fakrul Islam.	On duty, 01/09- 30/09.	-
Messenger.	Elias Ali.	On duty, 01/09- 30/09.	-
Guard.	A.A.Jamadar.	On duty, 01/09- 30/09.	-
Guard.	S.Alam.	On duty, 01/09- 30/09.	-
Cleaner/Gardener/ Caretaker.	Ahmed Miah.	On duty, 01/09- 30/09.	-

APPENDIX 'E'

SUMMARY FISCAL REPORT.

Wilbur Smith And Associates, Inc.
Zilla Roads Maintenance And Improvement Project
US-AID CONTRACT NO. 388-0056-02-HCC.

Project components.	Budget amounts.		Previous expenditures.		Expenditures- Current reporting/September'84.		Cumulative expenditures.	
	\$.	Taka.	\$.	Taka.	\$.	Taka.	\$.	Taka.
1. Technical assistance.	2,709,030.00.	22,715,634.00.	1,703,321.00.	10,997,502.00.	55,312.00.	570,354.00.	1,758,633.00.	11,567,856.00.
2. Equipment.	674,299.00.	-	56,295.00.	-	-	-	56,295.00.	-
3. Training US-AID. BDG.	300,000.00.	1,110,850.00. 394,500.00.	55,867.00.	406,373.00.	-	62,681.00.	55,867.00.	469,059.00.
4. Road Maintenance. Financed by BDG.	-	23,095,800.00.	-	-	-	-	-	-
5. Road Development Fund. US-AID. BDG.	3,949,182.00. -	- 35,629,050.00.	- -	16,423,379.00. -	- -	3,149,106.00. -	- -	19,572,485.00. -