



REPUBLIC OF GHANA

DEPARTMENT OF FEEDER ROADS

OF THE

MINISTRY OF ROADS AND HIGHWAYS

FOURTH QUARTER AND ANNUAL REPORT

FOR 2018

JAN, 2019

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Acronyms and Abbreviations

| | | |
|--------|---|---|
| DFR | : | Department of Feeder Roads |
| DFID | : | Department for International Development |
| GOG | : | Government of Ghana |
| GIS | : | Geographical Information System |
| MRH | : | Ministry of Roads and Highways |
| DCRIP | : | District Capital Roads Improvement Project |
| GHA | : | Ghana Highway Authority |
| DUR | : | Department of Urban Roads |
| AFD | : | Agence Francais de Developement |
| SIDA | : | Swedish International Development Agency |
| TSPS | : | Transport Sector Programme Support |
| DANIDA | : | Danish International Development Agency |
| MOFA | : | Ministry of Food and Agriculture |
| KfW | : | Kreditanstalt für Wiederaufbau |
| AfDB | : | African Development Bank |
| EMQAP | : | Export Marketing and Quality Awareness Project |
| TSP | : | Transport Sector Programme |
| IFAD | : | International Federation for Agricultural Development |
| JICA | : | Japan International Cooperation Agency |
| MMDAs | : | Metropolitan, Municipal and District Assemblies |
| MDAs | : | Ministries, Departments and Agencies |
| MoF | : | Ministry of Finance |
| LSDGP | : | Local Service Delivery and Governance Programme |
| LBT | : | Labour Based Technology |
| DWD | : | District Works Department |
| RSDP | : | Road Sector Development Programme |
| VOC | : | Vehicle Operating Cost |
| KNUST | : | Kwame Nkrumah University of Science and Technology |
| KTC | : | Koforidua Training Centre |
| RAI | : | Rural Accessibility Index |

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CHAPTER ONE: EXECUTIVE SUMMARY

1.0 Mission and Vision of DFR

1.0.1 Mission

To ensure the provision of durable safe, all-weather and accessible feeder roads at optimum cost to facilitate the movement of people, goods and services and to promote socio-economic development through the use of committed and motivated staff and advanced technologies.

1.0.2 Vision

To ensure well-developed Feeder Roads network for Accelerated National Growth.

1.1 Road Network and Condition

The total feeder road network as at September, 2017 was 42,045.64km. Comprehensive condition survey on the network is currently in progress to enable the network condition mix to be updated reference to December, 2017. The condition mix as at September, 2017 thus stands as follows:

| | |
|------|-----|
| Good | 37% |
| Fair | 38% |
| Poor | 25% |

Details of the surface types are as follows:

| | | | |
|--------------------|---|--------------------|--------------|
| Bituminous surface | : | 1,928.0 km | (5%) |
| Gravel roads | : | 27,231.0 km | (65%) |
| <u>Earth roads</u> | : | <u>12,886.0 km</u> | <u>(30%)</u> |
| TOTAL | : | 42,045.0km | |

The breakdown of the network is as follows:

| | | | |
|------------------------------|---|-------------------|--------------|
| Engineered network | : | 25,931.0km | (62%) |
| Partially engineered network | : | 6,206.0km | (15%) |
| <u>Un-engineered network</u> | : | <u>9,908.0km</u> | <u>(23%)</u> |
| | | 42,045.0km | |

It is DFR's policy to always keep the engineered and partially engineered feeder roads in good or fair conditions.

DFR's engineered and partially engineered network put together as at September, 2017 stands at 30,289km. Condition survey to update the current network breakdown and condition mix was scheduled

to be completed by end of 2017, however this has not been achieved due to financial challenges which has affected field data collection.

1.2 Historical Overview of Condition Mix

The historical overview of Condition Mix of the feeder road network has changed from 35% good, 37% fair and 28% poor in December 2007 to 30% good, 38% fair and 32% poor at the end of September 2017.

The historical overview of the condition mix is shown below:

| | 2007 | 2008 | 2009 | 2013 | 2014 | 2015 | 2017 |
|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| GOOD | 35% | 38% | 39% | 30% | 30% | 34% | 37% |
| FAIR | 37% | 32% | 30% | 38% | 38% | 34% | 38% |
| POOR | 28% | 30% | 31% | 32% | 32% | 32% | 25% |

The observed trend between 2009 and 2017 shows a fall and rise in the percentage of good surface condition roads with the worst case occurring in 2013 and 2014 which is attributed to a number of factors, major among which is the failure of contractors to execute routine maintenance works as a result of delay in payment for work done.

1.3 Targets and Achievements as at 31st December, 2018

Table 1.1 shows the planned, approved programmes and achievement as at 31st December, 2018 while Table 1.2 shows the financial programme and disbursements by DFR for both GOG and Donor projects as at 31st December, 2018.

Table 1.1: Physical Target and Achievements (January – December, 2018)

| ACTIVITIES | APPROVED ANNUAL PROGRAMME | PHYSICAL ACHIEVEMENT | % ACHIEVED |
|---|---------------------------|----------------------|------------|
| | Km/No | Km/No | |
| Routine Maintenance - (Reshaping) | 22,500.00 | 12,362.47 | 65% |
| Routine Maintenance - (Bituminous Patching) | 143.00 | 114 | 80% |
| Sub-Total | 25,643.00 | 12,476.47 | 65.% |
| Periodic Maintenance | | | |
| Spot Improvement | 914.00 | 123.80 | 14% |
| Minor Improvement | | | |
| Upgrading of Gravel to Bituminous Surface (Town Roads) | 74.92 | 18.22 | 24% |
| Upgrading of Gravel to Bituminous Surface | 2,487.05 | 195.25 | 8% |
| Upgrading of Gravel to Bituminous Surface (COCOBOD & CFRIP) | 437.26 | - | 0% |
| Upgrading of Earth to Gravel Surface (Rehabilitation) | 1,142.65 | 92.20 | 8% |
| Sub-Total | 5,055.88 | 429.47 | 8% |
| Bridge Programme | | | |
| Bridges | 24.00 | 6 | 25% |
| Grand Total | 30,698.88 | 12,905.94 | 42.0% |

Table 1.2: Financial Programme and Disbursement (January - June, 2018)

| ACTIVITY | BUDGET FOR 2018 | | | EXPENDITURE FOR JAN. - DEC, 2018 | | | REMARKS |
|-------------------------------|-----------------|---------------|---------------------|----------------------------------|---------------|---------------------|----------------|
| | TOTAL (GOG) | TOTAL (DONOR) | TOTAL (DONOR & GOG) | TOTAL (GOG) | TOTAL (DONOR) | TOTAL (DONOR & GOG) | |
| | AMOUNT (GH¢m) | AMOUNT (GH¢m) | AMOUNT (GH¢m) | AMOUNT (GH¢m) | AMOUNT (GH¢m) | AMOUNT (GH¢m) | % |
| ROUTINE MAINTENANCE | 15.503 | 0.000 | 15.503 | 6.314 | 0.000 | 6.314 | 40.7% |
| PERIODIC MAINTENANCE | | | | | | | |
| Spot Improvement | 5.200 | 0.000 | 5.200 | 1.287 | 0.000 | 1.287 | 24.75% |
| MINOR IMPROVEMENT | | | | | | | |
| 2 nd Cycle Inst. | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0% |
| Town Roads | 5.175 | 0.000 | 5.175 | 5.425 | 0.000 | 5.425 | 104.83% |
| Surfacing | 22.051 | 0.000 | 22.051 | 27.01 | 0.000 | 27.01 | 122% |
| Rehabilitation | 12.951 | 0.000 | 12.951 | 1.346 | 0.810 | 2.156 | 17% |
| BRIDGES | | | | | | | |
| Bridges | 10.400 | 0.000 | 10.400 | 4.198 | 0.000 | 4.198 | 40% |
| Consultancy services | 1.938 | 1.000 | 2.938 | 0.123 | 0.122 | 0.245 | 13% |
| Institutional supp & Training | 1.938 | 0.234 | 2.172 | 0.484 | 0.122 | 0.606 | 28% |
| GRAND TOTAL | 75.156 | 1.234 | 76.390 | 99.691 | 1.054 | 100.745 | 131.88% |

Table 1.3: Department of Feeder Roads Programme and Achievement (January- December, 2018)

| ACTIVITIES | APPROVED ANNUAL PROGRAMME | | | APPROVED BUDGET | | | FINANCIAL EXPENDITURE | | | PHYSICAL ACHIEVEMENT | | | |
|--|---------------------------|-------------------|-------------------|-----------------|-----------------|-----------------|-----------------------|-----------------|-----------------|----------------------|-------------------|-------------------|---------------|
| | GOG (Km/No.) | DONOR (Km/No.) | TOTAL (KM/No.) | GOG GH¢(M) | DONOR GH¢(M) | TOTAL GH¢(M) | GOG GH¢(M) | DONOR GH¢(M) | TOTAL GH¢(M) | GOG (Km/No.) | DONOR (Km/No.) | TOTAL (KM/No.) | % ACHIEVED |
| Routine Maintenance | 22,500.00 | - | 22,500.00 | 15.503 | 0.000 | 15.503 | 9.263 | 0.000 | 9.263 | 6,960.15 | - | 6,960.15 | 30 |
| | | | | | | | | | | | | | |
| Periodic Maintenance | | | | | | | | | | | | | |
| Spot Improvement | 914.00 | - | 914.00 | 5.200 | 0.000 | 5.200 | 1.287 | 0.000 | 1.287 | 123.80 | - | 123.80 | 13.55 |
| Minor Improvement | | | | | | | | | | | | | |
| Upgrading of Gravel to Bituminous Surface (Town Roads) | 74.92 | - | 74.92 | 5.175 | 0.000 | 5.175 | 5.425 | 0.000 | 5.425 | 18.22 | - | 18.22 | 24.3 |
| Upgrading of Gravel to Bituminous Surface | 100.00 | - | 100.00 | 22.051 | 0.000 | 22.051 | 27.010 | 0.000 | 27.010 | 116.42 | - | 116.42 | 116 |
| Upgrading of Earth to Gravel Surface | 219.00 | - | 219.00 | 12.951 | 0.000 | 12.951 | 1.346 | 0.810 | 2.156 | 92.20 | - | 92.20 | 42.1 |
| Bridge Programme | | | | | | | | | | | | | |
| Bridges | 24.00 | - | 24.00 | 10.400 | 0.000 | 10.400 | 4.198 | 0.000 | 4.198 | 3 | - | 3 | 12.50 |
| Consultancy services | | | | 1.938 | 1.000 | 2.938 | 0.123 | 0.122 | 0.245 | - | - | - | - |
| Institutional support & Training | | | | 1.938 | 0.234 | 2.172 | 0.484 | 0.122 | 0.606 | - | - | - | - |
| Grand Total | 22,280.02 | 0.0 | 21,531.1 | 75.2 | 1.2 | 76.4 | 46.187 | 1.1 | 47.287 | 12,830.11 | 0.0 | 12,830.11 | |

CHAPTER TWO: DEVELOPMENT PARTNERS ASSISTED PROGRAMME

2.1 Transport Sector Programme (TSP)

2.1.1 Introduction

One of the Objectives of Ghana Government for Transport as highlighted in the National Transport Policy is to create a sustainable, accessible, affordable, reliable, effective and efficient transport system that meets user needs. Government's policy objective is therefore to strengthen the provision of infrastructure services and improve the business environments to sustain broad-based growth.

It is in the light of this objective that the Government of Ghana (GOG) and the International Development Association (IDA) of the World Bank have implemented the Transport Sector Project to help (a) increase Ghana's competitiveness in foreign trade by reducing internal transport costs and promoting linkages in domestic markets which are crucial factors for rapid and sustained growth; (b) improve governance through clarifying roles and responsibilities in the transport sector and encouraging wider and more meaningful participation of stakeholders in the decision making processes; and (c) support the decentralized planning, management, finance and regulation of transport infrastructure and services.

The project is being implemented by the Ministry of Roads and Highways (MRH), which has the overall responsibility for its coordination and management.

The Implementing Agencies (IAs) for the project are: Ministry of Roads and Highways (MRH), Ghana Highway Authority (GHA), Department of Feeder Roads (DFR), Department of Urban Roads (DUR) and Ministry of Transport (MOT), Ghana Airports Company Limited (GACL), Ghana Civil Aviation Authority (GCAA), and Ghana Ports and Harbors Authority (GHPA). The Beneficiary Agencies (BAs) for the project are: Driver and Vehicle Licensing Authority (DVLA), Kwame Nkrumah University of Science and Technology (KNUST), Government Technical Training Center (GTTC), National Road Safety Commission (NRSC), Regional Maritime University (RMU), Ghana Maritime Authority (GMA) and Volta Lake Transport Company (VLTC).

2.1.2 Project objectives

The Development Objective for the Transport Sector Project is to improve mobility of goods and passengers through reduction in travel time and vehicle operating cost, and improvement in road safety standards. This objective will be achieved through strengthening the capacity of transport institutions in planning, regulation, operations and maintenance, and through infrastructure investments.

The achievement of the Project Development Objective will be monitored using the following performance indicators to be achieved by the end of the project (EOP):

- (a) Average travel time reduced by at least 20 percent on project-financed roads;
- (b) Average vehicle operating cost (in real terms) reduced by at least 10% percent on project-financed roads;
- (c) Fatality rate reduced from 22 per 10,000 vehicles to 19 per 10,000 vehicles;
- (d) Rural Accessibility Index (RAI) increased from 53 percent to 57 percent; and
- (e) Condition of trunk road network in good and fair condition improved from 83 percent to 88 percent, for urban roads from 36 percent to 50 percent, and for feeder roads from 72 percent to 85 percent

Table 2.1: Key Performance Indicators

| KEY PERFORMANCE INDICATORS | DFR ACTION PLAN |
|--|--|
| 1. Average travel time reduced by at least 20% on project-financed roads | 1. Regional managers have been tasked to come up with the average travel time of projects financed roads after the rains before actual construction works begin. The average travel time will be measured after the completion of the roads works to ascertain whether the 20% reduction has been achieved |
| 2. Average vehicle operating cost (in real terms) reduced by at least 10% on project financed roads. | 2. DFR will liaise with GHA for data to enable the initial VOC on the project financed roads to be determined before actual physical works commence. VOC will again be computed after completion of physical works on projects financed roads |
| 3. Rural Accessibility Index (RAI) increased from 53% to 57%. | 3. The achievement of this indicator will be monitored during the construction period and the target measured after the completion of the project financed roads. |
| 4. Feeder roads network in good and fair condition improved from 72% to 85% | 4. The condition of feeder roads network in good and fair condition will be computed after the completion of works on the project financed roads. |

2.1.3 Project component

The project consists of two components: The first year and the second year components. The first year components involve feeder roads rehabilitation and spot improvement and geared towards consolidating the achievement under the RSDP.

During the first year a total of 462km of spot improvement and 229.8km of minor rehabilitation will be carried out throughout the country at a cost of US\$20.30 million.

The second year component focused on the rehabilitation and bituminous surfacing of roads in selected focus areas to support commercial agriculture around growth poles in collaboration with the Ministry of Agriculture. A total of 12.8km spot improvement, 54.8km rehabilitation and 58.7km of bituminous surfacing of roads were undertaken. This was financed with an additional amount of US\$27.70 million.

A breakdown of total budget allocation for the TSP is as follows:

| | |
|---|-------------------------|
| -Improvement and rehabilitation of feeder roads | |
| -First year | US\$20.00 |
| -Second year | US\$27.50 |
| -Consulting Service | US\$2.50 |
| -Capacity Building | US\$0.50 |
| -Vehicle & Office equipment | US\$0.70 |
| -Operation | US\$0.50 |
| TOTAL | <u>US\$51.70</u> |

The Credit was approved by the Bank's Board on 30th June, 2009 and by the Parliament of Ghana on the 17th July, 2009.

The project effective date: 12th November, 2009.

End of project Implementation period: 31st December, 2014

Expected Credit closing date: 30th June, 2018

2.1.4 Status of Project Implementation and Procurement Management

2.1.4.1 Consultancy Services

WORKS SUPERVISION

FIRST YEAR PROJECT

No objection was given for fourteen (14) Lots out of the fifteen (15).

The fourteen contracts were awarded and signed with the supervision consultants. The supervision contracts are all completed.

Earlier on request by DFR to the Bank to grant an extension of time (EOT) to the supervision contracts were not approved by the Bank. The request was therefore sent to the Ministry of Roads and Highways and was captured in the 2015 budget.

Terms of Reference (TOR) for the procurement of a consultant to carry technical audit of the first year projects was sent to the PT for submission to the Bank for No Objection. The Bank informed DFR that the Technical audit might not be necessary since the Bank has engaged a consultant for that exercise.

SECOND YEAR PROJECTS TRANCHE-1

The Bank gave No Objection for four (4) Supervision consultants to be engaged through sole sourcing. Contract Agreements with the four (4) were signed on the 24th September, 2014. Supervision of works by the four (4) consultants are completed

DFR has engaged the services of a Contract Management Specialist to administer/manage the projects under the TSP. The selection process was by Individual Consultant method. The Bank gave its No Objection for the signing of contract with the Contract management specialist in October 2013.

The Contract Agreement was signed with the Contract Management Specialist on the 24th September, 2014. Contract for the Management Specialist was terminated by the Consultant.

SECOND YEAR PROJECTS TRANCHE-2

Terms of Reference (TOR) and Request for Expression of Interest (EOI) for the procurement of Supervision Consultant for the supervision of civil works were sent to the PT for onward submission to the Bank for No Objection. No Objections have since been received. Request for Expression of Interest (REOI) first appeared in the Ghanaian Times of 31st December, 2014 inviting eligible consultants to express interest to undertake the supervision assignment.

OWA Consult was selected for the supervision assignment at a Final cost of GH¢ 1,027,293.58

Macdons Engineering Consultant was also selected to supervise the Construction of Double 4MX4M Box culvert on the Kpeme-Nkonya-Gbe Wegbe Feeder Road through Direct selection method approved by the World Bank and Public Procurement Authority (PPA)

2.1.4.2 Environmental and Social Management Plan (ESMP)

FIRST YEAR PROJECTS

No objection was received for the Final Environmental and Social Management Plan (ESMP) report from the World Bank. Public Disclosure was published between November and 30th December 2011.

No objection was also received for the Resettlement Action Plan (RAP). The RAP was prepared by environmental engineers from DFR. Public Disclosure was published in December 2012. Compensations were paid to all the one hundred and eighteen (118) Project Affected Persons (PAPs). Total amount paid was GH¢97, 382.38.

SECOND YEAR PROJECTS TRANCHE-1

No objection was received for the Resettlement Action Plan (RAP) and Public Disclosure was published in February, 2013. No objection was also received for the Final Environmental and Social Management Plan (ESMP) report from the World Bank. The ESMP and the RAP cover both the Tranche-1 and Tranche-2 projects.

Public Disclosure was published in the Ghanaian Times on the 29th November 2013. DFR is currently monitoring the implementation of the RAP and other safe guards. The safe guards contained in the ESMP are being implemented on all ongoing contracts.

As at now, compensations totaling GH¢35,454.00 have been paid to the fourteen (14) PAPs.

2.1.4.3 Works Contracts

FIRST YEAR PROJECT

Eighty one (81) out of 84 projects awarded have been completed. In all a total of approximately 680km of feeder roads were completed consisting of 230km of rehabilitation, 450km were spot improvement. Three (3) contracts have been terminated. The outstanding works on the terminated contracts which were awarded under routine maintenance to be funded under Road Fund have since been completed.

Total cost of works amounts to **GH¢32,676,271.23** as against budget allocation of **US\$ 20.0 million**. All the works have been completed.

SECOND YEAR PROJECTS TRANCHE-1

Eighteen (18) Lots totaling 136km have been awarded. This consists of 13km of spot improvement, 65km of rehabilitation and 58km of bitumen surfacing. The project commenced in 2014 after the supervision consultants were appointed. The total cost of the eighteen (18) contracts is **GH¢36,765,230.95**.

STATUS OF SECOND YEAR PROJECTS TRANCHE-1

There are ten (10) contracts in the Central Region and eight (8) contracts in the Volta Region which are on-going. Table 2.4 gives details of progress. All the contracts have been completed and the physical progress is 100%. The total expenditure is **GH¢46,398,871.03**

Table 2.2: Summary of TSP Second Year Tranche 1 Contracts

| TRANSPORT SECTOR PROJECT (TSP) SECOND YEAR PROJECTS, TRANCHE-1 | | | | | | | | | | | | |
|--|-------------------|--------|---|--------------|--------------------------------|-------------------|-----------------|---------------------|-----------------------|-----------------------------|-----------------|---------------------------|
| PROGRESS REPORT | | | | | | | | | | | | |
| Region | District | Lot No | Road name | Length (km) | Name of contractor | Commencement Date | Completion date | Contract Sum (GH¢) | Payment to Date (GH¢) | Planned/ Scheduled progress | Actual Progress | Remarks |
| CR | Awutu Efutu Senya | 1 | Bituminous Surfacing of Sankor-Kweikrom-Ojobi-Akoti Feeder Road Phase 1 (0.0-5.0km) | 5.0 | M/s Soro Construction Ltd. | 4/17/2014 | 4/14/15 | 2,147,734.22 | 3,115,824.16 | 100.0 | 100.0 | Completed and handed over |
| | | 2 | Rehabilitation of Bawjiase-Aponkye Akura Feeder Road | 6.9 | M/s Shamma Rohi Ltd | 4/22/2014 | 12/21/2014 | 550,994.90 | 708,015.07 | 100.0 | 100.0 | Completed and handed over |
| | | 3 | Rehabilitation of Bawjiase-Ayensuako Feeder Road | 5.3 | M/s Tiboura-Taa Enterprise Ltd | 4/22/2014 | 1/13/2015 | 605,418.50 | 716,997.76 | 100.0 | 100.0 | Completed and handed over |
| | | 4 | Rehabilitation of Bawjiase-Amontrom (Congo)-Tetteykura Feeder Road | 3.25 | M/s Skarom Engineering Ltd. | 4/22/2014 | 11/21/2014 | 381,696.20 | 427,265.30 | 100.0 | 100.0 | Completed and handed over |
| | | 5 | Rehabilitation of Ahentia-Busumabra Jn-Kweikrom Feeder Road | 6.0 | M/s Abdul Rahma & Sons Ltd | 4/17/2014 | 11/16/2014 | 515,720.00 | 728,278.51 | 100.0 | 100.0 | Completed and handed over |
| | | 6 | Spot Improvement of Adawukwa-Ofadjator-Honi Feeder Road | 3.45 | M/s Paabadu Construction Ltd | 4/22/2014 | 11/21/2014 | 456,254.91 | 588,760.83 | 100.0 | 100.0 | Completed and handed over |
| | | 7 | Rehabilitation of Bewuanum-Adawukwa Feeder Road | 10.0 | M/s Minak Investment Ltd. | 4/22/2014 | 12/21/2014 | 620,525.89 | 823,308.73 | 100.0 | 100.0 | Completed and handed over |
| | | 8 | Bituminous Surfacing of Bontrase-Desum Feeder Road | 4.7 | M/s Mem-phis Metro-politan Ltd | 4/17/2014 | 4/16/2015 | 1,273,569.82 | 1,910,667.68 | 100.0 | 100.0 | Completed and handed over |
| | | 9 | Spot Improvement of Papaase No. 1 Ododom Feeder Road | 9.4 | M/s Alt Construction Ltd. | 4/17/2014 | 11/16/2014 | 477,155.50 | 608,771.57 | 100.0 | 100.0 | Completed and handed over |
| | | 10 | Rehabilitation of Kwao Bondze-Larbie-Jei Krodua Feeder Road | 3.55 | M/s Lovemak Ventures Ltd. | 4/17/2014 | 12/16/2014 | 562,912.67 | 632,040.06 | 100.0 | 100.0 | Completed and handed over |
| | | | SUB TOTAL | 57.55 | | | | 7,591,982.61 | 10,259,929.67 | | | |

Table 2.3

TRANSPORT SECTOR PROJECT (TSP) SECOND YEAR PROJECTS, TRANCHE-1

PROGRESS REPORT

| Region | District | Lot No | Road name | Length (km) | Name of contractor | Commencement Date | Completion date | Contract Sum (GH¢) | Payment to Date | Planned/ Scheduled progress | Actual Progress | Remarks |
|--------|-------------|--------|---|---------------|----------------------|-------------------|-----------------|----------------------|----------------------|-----------------------------|-----------------|--|
| VR | North Dayi | 1 | Rehabilitation of Kpando-Alavanyo Kpeme-Nkonya-Gbi Wegbe Feeder Road Phase 1 (0.0-8.0km) | 8 | M/s Joe Azar Ltd. | 28/04/2014 | 27/07/2015 | 4,515,580.87 | 6,081,022.39 | 100.0 | 100.0 | Completed. Final retention money released. |
| | | 2 | Rehabilitation of Tafi Atome-Vakpo Fuh-Tafi Abuipe Feeder | 11.2 | M/s C.N.F. Ltd. | 28/04/2014 | 27/12/2014 | 658,184.36 | 860,976.64 | 100.0 | 100.0 | Completed. Final retention money |
| | Hohoe | 3 | Bituminous Surfacing of Aveti-Logba Alakpeti-Anfoega-Akukome-Aveti Feeder Road Phase 1 (0.0-6.0 | 6.0 | M/s Kamsad Ltd. | 22/04/2014 | 21/10/2015 | 5,262,706.05 | 6,368,671.54 | 100.0 | 100.0 | Completed. Final retention money released. |
| | South Tongu | 4 | Rehabilitation of Dabala Jn-Dorkpleame-Tordzinu & others Feeder Roads Phase 1 (0.0-7.0km) | 7.0 | M/s Saa & Sarad Ltd. | 22/04/2014 | 21-04-15 | 1,290,794.70 | 1,326,568.39 | 100.0 | 100.0 | Final release of retention |
| | | 5 | Bituminous Surfacing of Dalive-Agortage Feeder Road Phase 1 (0.0-6.0km) | 6.0 | M/s Jah Nicorf Ltd. | 22/04/2014 | 21/10/2015 | 5,144,891.22 | 6,086,471.74 | 100.0 | 100.0 | Completed. Final retention money released. |
| | North Tongu | 6 | Rehabilitation of Lawekope-Aveyime Jn Feeder Road | 3.6 | M/s Teriwhite | 22/04/2014 | 21/12/2014 | 655,045.09 | 852,518.05 | 100.0 | 100.0 | Final release of retention |
| | | 7 | Bituminous Surfacing of Dove (Atitekpo Jn)-Mepe Feeder Road | 7.0 | M/s Kaddacon Ltd. | 22/04/2014 | 21/10/2015 | 2,956,798.13 | 3,967,470.00 | 100.0 | 100.0 | Completed. Final retention money released. |
| | | 8 | Bituminous Surfacing of Dove Jn-Dove-Aveyime Feeder Road | 19.0 | M/s First Sky Ltd. | 22/04/2014 | 21/04/2016 | 8,689,247.70 | 10,841,935.51 | 100.0 | 100.0 | Completed. Final retention money |
| | | | SUB TOTAL | 67.8 | | | | 29,173,248.12 | 36,385,634.26 | | | |
| | | | GRAND TOTAL | 125.35 | | | | 36,765,230.73 | 46,398,871.03 | | | |

SECOND YEAR PROJECTS TRANCHE-2

The project consists of four (4) roads: one (1) in central region and three (3) in Volta Region totaling 39.3km. The proposed interventions to be carried out include bituminous surfacing (32km) and spot improvement works (7.3km). The status of procurement of works is as follows;

Specific procurement notice first appeared in the Ghanaian Times of 22nd January, 2015 for National Competitive Bidding (NCB). Pre-bid meetings were held at DFR regional offices in Cape Coast and Ho on 13th February, 2015 to give prospective bidders more details about the procurement processes and requirements for project.

The submission and opening date of 27th February, 2015 was extended to 13th September 2015 through an addendum issued on 12th February, 2015. This was done to incorporate comments raised by the Bank on the Bidding Documents.

The five (5) contracts were awarded at a total **Contract Price of GH¢43,390,853.19**. The details have been shown in Table 2.4. The additional contract which brought the total number from four (4) to five (5) was awarded through Restricted Tendering after obtaining the necessary approval from the Bank and PPA.

STATUS OF SECOND YEAR PROJECTS TRANCHE-2

There is (1) contract in the Central Region which is still on-going due to an additional work (variation) approved. This variation addition has also necessitated an extension of the contract completion date to 30th April, 2018. All the three (3) contracts in the Volta Region have however been completed. Table 2.5 gives details of progress. The physical progress of the on-going contract as at 31st December, 2017 is 100% at a total expenditure of **GH¢46,801,402.85**.

Table 2.4: Summary of TSP Second Year Tranche 2 Contracts

| Region | District | Lot No | Road name | Length (km) | Name of contractor | Commence ment Date | Completion date | Revised Completion date | Contract Sum (GH¢) | Revised Contract Sum (GH¢) | Payment to Date (GH¢) | Planned/ Scheduled progress (%) | Actual Progress (%) | Remarks |
|--------|-------------|--------|---|-------------|-------------------------|--------------------|-----------------|-------------------------|----------------------|----------------------------|-----------------------|---------------------------------|---------------------|--|
| CR | Effutu | 1 | Bituminous Surfacing of Sankor-Kweikrom-Ojobi-Akoti Feeder Road Phase II (Km 5.00-18.300km) | 13.3 | M/s Memphis Metro. Ltd. | 7/10/2015 | 6/10/2016 | 4/30/2018 | 8,765,930.07 | 26,342,452.28 | 29,024,667.20 | 100.0 | 100.0 | Completed. Project is in Defect Liability Period. |
| VR | Kpando | 2 | Construction of double 4.0m by 4.0m Box culvert on Kpeme Nkonya Gbe Wegbe Feeder Road | | M/s CNF | 15/03/2018 | 30/05/2018 | 30/05/2018 | 942,954.88 | | 1,348,316.03 | 100.0 | 100.0 | Completed. Project is in Defect Liability Period. |
| | South Tongu | 3 | Rehabilitation of Dabala Jn.-Dorplame-Todzinu (Km 7.00-14.300) Feeder Road | 7.3 | M/s Teriwhite Ltd | 7/10/2015 | 6/10/2016 | 3/31/2017 | 2,731,068.32 | 3,054,249.32 | 3,219,463.56 | 100.0 | 100.0 | Project taken over and final retention monies released |
| | Kpando | 4 | Bituminous Surfacing of Kpeme-Nkonya-Gbi Wegbe Feeder Road Phase II (Km 0.00-12.700) | 12.7 | M/s C.N.F Ltd | 7/10/2015 | 6/10/2016 | 3/31/2017 | 6,694,594.27 | 6,694,594.27 | 6,725,803.94 | 100.0 | 100.0 | Project taken over and final retention monies released |
| | South Tongu | 5 | Bituminous Surfacing of Dalive-Agortaga Feeder Road Phase II (Km 6.00-12.20km) | 6.2 | M/s Jah-Nicorf Ltd | 7/10/2015 | 6/10/2016 | 3/31/2017 | 4,630,654.26 | 6,356,602.44 | 6,483,152.12 | 100.0 | 100.0 | Project taken over and final retention monies released |
| | | | TOTAL | 39.5 | | | | | 23,765,201.80 | 42,447,898.31 | 46,801,402.85 | | | |
| | | | | | | | | | | | | | | |

Table 2.4.1: Summary of TSP Second Year Tranche 2 Consultancy

| <u>TRANSPORT SECTOR PROJECT</u> | | | | | | | | | |
|--|--------------------|-----------------------------|---------------------------|-----------------------------------|------------------------------|--------------------------|--------------------------------|-----------------------------|--|
| YEAR 2 TRANCHE 2 | | | | | | | | | |
| Contract Description | Length (km) | Name of Consultancy | Contract Sum (GH¢) | Revised Contract Sum (GH¢) | Payment to Date (GH¢) | Commencement Date | Revised Completion Date | Remarks | |
| Consulting Services for works supervision of selected roads in the Central and Volta Regions | 13.3 | M/s OWAconsult | 571,114.38 | 1,027,293.58 | 1,074,536.39 | 24/09/2015 | 31/03/2018 | Supervision works completed | |
| Consulting Services for works supervision of double 4m by 4m box culvert on Kpeme Nkonya Gbi Webge Feeder Road | | Macdons Engineering Consult | 101,050.00 | 101,050.00 | 65,048.00 | 15/03/2018 | 30/05/2018 | Supervision works ongoing | |
| GRAND TOTAL | | | 672,164.38 | 1,128,343.58 | 1,139,584.39 | | | | |

2.3 Output and Performance-Based Road Contract (OPRC) under TSIP

The Government of the Republic of Ghana requested financing support from the World Bank towards the cost of road works under the Transport Sector Improvement Project (TSIP). The financing support is to be applied on the implementation of an “**Output and Performance Based Road Contracts (OPRC)**” for selected feeder roads in the Brong-Ahafo, Northern, Upper East, and Upper West Regions covering a total length of 1,360km.

There are eight (8) budget components under the project as follows:

| Sn | Components | Budget Estimate (USD) | Expenditures (USD) | Remarks |
|----|---------------------------------|-----------------------|--------------------|---------------------------|
| 1 | Socio-economic Baseline studies | 615,500.00 | 352,816.02 | Payment is made under TSP |
| 2 | Assessment Studies | 1,500,000.00 | | Payment done at GHA |
| 3 | Monitoring & Supervision | 2,500,000.00 | | Combined with GHA |
| 4 | Civil Works (OPRC) | 15,000,000 | | |
| 5 | Road Safety Activities | 300,000.00 | | |
| 6 | Capacity Development | 500,000.00 | 57,000.00 | |
| 7 | Goods including Vehicles | 1,000,000.00 | 245,000.00 | |
| 8 | Operational Cost | 500,000.00 | | |

Component 1: Socio-economic Baseline Studies

This consultancy assignment involves the establishment of baseline data for the OPRC as against the traditional mode of road maintenance in order to enable comparisons of the two modes of road maintenance in the future. Two more impact evaluation studies will be carried out after the construction and the maintenance periods respectively.

Below are the deliverables and the time schedules:

| Sn | Deliverables | Revised Time schedule | Status |
|----|--|-----------------------|-----------|
| 1 | Inception Report | February, 2017 | Completed |
| 2 | Draft Socio-economic Baseline report | April, 2017 | Completed |
| 3 | Final Socio-economic Assessment report | May, 2017 | Completed |
| 4 | Research Paper | August, 2018 | Completed |
| 5 | Training | August, 2018 | Completed |

Component 2: Consultancy services for the Assessment of OPRC

This involves the preparation of a Road Network prioritization report, Conceptual designs and Confidential cost estimates and Bidding Documents for the feeder roads selected.

| Sn | Deliverables | Revised Time schedule | Status |
|----|--|-----------------------|-----------|
| 1 | Inception Report | May, 2017 | Completed |
| 2 | Feeder Road Prioritization report | July, 2017 | Completed |
| 3 | Draft assessment report including Resettlement Action Plan (RAP), Gender and Poverty report, Grievance redress mechanism, Citizen engagement assessment report | September 2017 | Completed |
| 4 | Final Assessment report and Confidential cost estimate | February, 2019 | On-going |
| 5 | Assistance during procurement of Contracting Entity | June, 2019 | |
| 6 | Final report | July, 2019 | |

Component 3: Monitoring & Supervision Consultancy

This assignment involves the supervision of the ‘Outcomes’ part of the OPRC and the ‘Performance and Maintenance’ part in assessing the level of service that will be rendered to road users.

| Sn | Activities | Time schedule | Status |
|----|---|---------------|-----------|
| 1 | Terms of Reference and Cost estimates | April, 2018 | Completed |
| 2 | Request for Expression of Interest | January, 2019 | On-going |
| 4 | Issue Request for Proposal (RFP) document to shortlisted Consultant | March, 2019 | |
| 5 | Evaluation of Technical Proposals | April, 2019 | |
| 6 | Evaluation of Combined Technical and Financial Proposals | May, 2019 | |
| | Recommendation for award of Contract | June, 2019 | |
| | | | |

Component 4: Civil Works (OPRC) Contract

This involves the engagement of the works contractor (Contracting Entity) for the Design, Build, Operate, Maintain and Transfer of the road network. Ensuring the maintenance of level of service for road users during the contract duration.

| Sn | Activities | Time schedule | Status |
|----|--|----------------|--|
| 1 | Request for Initial Selection | February, 2019 | Bidding Documents to be submitted by consultants |
| 2 | Issue Request for Proposal document to shortlisted firms | June, 2019 | |
| 3 | Request Technical Proposal from Shortlisted firms | July, 2019 | |
| 4 | Recommendation for award of Contract | July, 2019 | |
| 5 | Contract Signature | August, 2019 | |

Component 5: Road Safety Activities

This critical activity will be implemented by the National Road Safety Commission (NRSC) on behalf of DFR.

Component 6: Capacity Development

This activity forms part of Local and International training which started in 2017 and will end in 2020 for staff of DFR.

Component 7: Goods (including Vehicles)

This component involves the purchase of Office equipment and vehicles for use by project staff and the Department.

Component 8: Operating Cost

This component is provided for the maintenance of vehicles and provision of accommodation for staff in the field.

2.4 Bridge Development Programme

The Department of Feeder Roads under its Bridge Development Programme has identified 5,000 water crossing points that hamper the provision of basic access to rural communities. Out of this number 1,200 sites have been classified as critical for the effective functioning of the rural road network.

The Department through the assistance of some development partners including Japan International Corporation Agency (JICA), Department for International Development (DFID) of United Kingdom, Agience Francais de Developement (AFD) of France, ACROW Corporation of United States of America (USA), the Spanish Government and the Government of the Royal

Netherlands have constructed 170 bridges and major box culverts so far out of the 1,200 critical river crossing points identified.

The DFR Bridge Development Programme forms part of the Ministry of Roads and Highways' programme under the Ghana Poverty Reduction Strategy which aims at improving the socio-economic life of the rural dwellers.

The provision of the bridges have facilitated the safe and more economical movement of people, goods and services in the rural communities due to the elimination of long detours and making the network more coherent and interactive. This has also contributed to the reduction of travel times in some instances.

Table 2.5: SUMMARY OF STATE OF BRIDGE PROJECTS AS AT 31ST DECEMBER, 2018

| Description | Dutch Bridges | Acrow Bridges | Spanish Bridges (Phase 1) | Spanish Bridges (Phase 2) | Belgium Bridges |
|---|---|---|--|---|---|
| No. Awarded | 94 | 44 | 21 | 13 | 5 |
| No. completed & opened to traffic | 81 | 31 | 14 | 5 | 0 |
| No. Launched but not opened to traffic | 7 | 6 | 0 | 2 | 0 |
| No. Awarded as Box Culverts | 16 | 3 | 3 | Nil | Nil |
| No. of Culverts completed & opened to Traffic | 16 | 3 | 3 | Nil | Nil |
| REMARKS | 13no. terminated, 1no ongoing. 13no. by direct labour/variation to existing contracts | 12no. terminated, 1no ongoing. 9no. by direct labour/variation to existing contracts. 9no. under emergency situations | 7no. terminated, 6no. by direct labour/variation to existing contracts. 1no to be re-awarded | Funding under Ghana-Spain Debt Swap Programme | Civil works Supervision by Private Consultant. Slow progress partly due to financial challenges |

2.4.1 Ghana/Dutch Bridges Project

2.4.1.1 Background

The Government of Ghana received a credit facility of Euro 16.5 million (with 65% credit and 35% grant) from the Netherlands Government for the supply of steel bridge components for the construction of ninety-two (92) bridges on selected feeder roads in Ghana under the “Ghana/Dutch Bridge Project”.

GOG provided a counterpart fund for the provision of the following:

- i. Construction of reinforced concrete bridge substructure.
- ii. Clearance and transportation of steel bridge components from Tema Port to the bridge sites.
- iii. Assembling and launching of steel bridges.
- iv. Construction of both the approach and access roads to the bridges and
- v. Construction of sixteen (16) major box culverts in tandem with the bridge project.

The project, which is in three phases, is as detailed below:

Phase I – 31 bridges and 14 major box culverts

Phase II – 30 bridges and 1 major box culvert

Phase III – 33 bridges and 1 major box culvert

2.4.1.2 Status

As at 31st December, 2018 the achievement at all the various sites still remains as it was by the end of the 1st quarter, 2018 which includes eighty-seven (87) out of the 94 bridges launched. Eighty (80) out of the 87 bridges launched and opened to traffic. Out of the outstanding 14 bridges, one is on-going while the remaining 13nos. have been terminated. Ten out of the 13nos. are to be installed through direct labour works of which two (2) have been launched. The remaining 3 out of the 13nos are to be re-packaged for re-award.

Sixteen (16) major box culverts were also awarded as part of the bridge programme and have been completed and opened to traffic. The overall progress of work for Phase 1 is 98%, Phase 2 is 86% and that of Phase 3 is 95% respectively.

Table 2.9 shows the regional distribution of the bridges and the number completed as at 31st March, 2018.

Table 2.6: Regional Distribution of Dutch Bridges and Number Launched/Completed

| Region | BRIDGES | | MAJOR BOX CULVERTS | |
|---------------|-------------|----------------------------|--------------------|------------------|
| | No. Awarded | No. Launched/ Completed | No. Awarded | No. Completed |
| Greater Accra | 4 | 4/2 | 2 | 2 |
| Volta | 9 | 9/9 | 0 | 0 |
| Eastern | 8 | 7/7 | 4 | 4 |
| Central | 10 | 10/9 | 1 | 1 |
| Western | 11 | 10/10 | 2 | 2 |
| Ashanti | 13 | 13/13 | 3 | 3 |
| Brong Ahafo | 13 | 13/12 | 1 | 1 |
| Northern | 11 | 9/9 | 0 | 0 |
| Upper East | 8 | 8/7 | 2 | 2 |
| Upper West | 5 | 4/2 | 1 | 1 |
| TOTAL | 94 | 87/80 | 16 | 16 |

2.4.2 Ghana-ACROW Bridges Project

2.4.2.1 Background

The Ghana-ACROW bridge project involved a total amount of US\$47.7 million. This consisted of a loan amount of US\$37.7 million for the supply of bridge components for 100 bridges. A grant amount of US\$7.0 million was also provided as seed money for the cost of the civil works and filling of approach roads to the bridges which is to be funded by GoG.

A contract for the supply of the bridge components was also signed as part of the project. The project was planned to be executed in three phases.

2.4.2.2 Status

A total of forty-seven (47) bridges were awarded under Phase One of the project but three (3) out of that number were redesigned as major box culverts due to the prevailing site conditions. Additional 8nos. bridges were executed under emergency situations which were completed successfully.

As at 31st December, 2018 a total of thirty-nine (39) bridges had been completed and opened to traffic. Three (3) of the box culverts have also been completed. The overall progress of work is about 98%. Twelve contracts (12) have been terminated.

Four (4) out of the terminated bridges will be re-awarded while the remaining ten (8) would be installed by direct labour works. Five (5) of those under direct labour works have been launched. The bridge components are currently stockpiled at DFR Stores in Koforidua and the Koforidua Training Centre (KTC) from where they are transported to the various sites as and when the sites are ready for assembling and launching.

The cost of the civil works for the phase 1 contracts was estimated at **GH¢ 27,981,976.34**.

Table 2.7 shows the regional distribution of the (Phase I) bridges.

Table 2.7: Regional Distribution of ACROW Bridges and Number Launched/Completed

| Region | BRIDGES | | MAJOR BOX CULVERTS | |
|---------------|-------------|----------------------------|--------------------|------------------|
| | No. Awarded | No. Launched/ Completed | No. Awarded | No. Completed |
| Greater Accra | 2 | 2/2 | 0 | 0 |
| Volta | 7 | 6/5 | 2 | 2 |
| Eastern | 4 | 5/4 | 1 | 1 |
| Central | 5 | 3/3 | 0 | 0 |
| Western | 5 | 5/5 | 0 | 0 |
| Ashanti | 6 | 4/3 | 0 | 0 |
| Brong Ahafo | 5 | 4/3 | 0 | 0 |
| Northern | 3 | 3/3 | 0 | 0 |
| Upper East | 3 | 3/3 | 0 | 0 |
| Upper West | 4 | 2/0 | 0 | 0 |
| TOTAL | 44 | 37/31 | 3 | 3 |

2.4.3 Ghana - Spanish Bridges Project

The Spanish bridge programme involves the construction of fifty two (52) bridges throughout the country.

This involves a facility of Euro 10.0 million under the Second Ghana-Spain Protocol for the supply of components. The supply of the components is in two lots of 26 each. The Government of Ghana is to fund the cost of the civil works and filling of approach road to formation level.

2.4.3.1 Status of Supply Contracts

Two supply contracts were awarded to Two (2) Spanish firms for the supply of the bridge components; M/s Makiber for Lot 1 and M/S Schwart-Hautmont for Lot 2.

Lot 1

M/s Makiber supplied twenty-six (26) bridge components which are stockpiled at the DFR Regional Office yard in Koforidua.

Lot 2

Under the Lot 2 supply contract, M/S Schwart-Hautmont also supplied 26 bridge components which are stockpiled at DFR Stores in Accra.

Progress

Phase 1

Contracts for 24 bridges under Phase 1 was awarded at a total cost of GH¢ 15,359,267.33. The design of three (3) out of the 24 bridges under Phase 1 were revised due to the prevailing site conditions and were thus constructed as major box culverts.

Fourteen (14) bridges have been installed and opened to traffic. The remaining seven (7) bridges have been terminated, Five (5) would be installed by direct labour works while the other two (2) would to be re-awarded. The overall progress of work is 94%.

Table 2.8 shows the regional distribution of the (Phase I) bridges.

Table 2.8: Regional Distribution of Spanish Bridges and Number Launched/Completed

| Region | BRIDGES | | MAJOR BOX CULVERTS | |
|---------------|-------------|--------------------------|--------------------|---------------|
| | No. Awarded | No. Launched & Completed | No. Awarded | No. Completed |
| Greater Accra | 0 | 0/0 | 0 | 0 |
| Volta | 1 | 1/1 | 0 | 0 |
| Eastern | 5 | 4/4 | 0 | 0 |
| Central | 2 | 2/2 | 2 | 2 |
| Western | 3 | 0/0 | 0 | 0 |
| Ashanti | 2 | 2/2 | 1 | 1 |
| Brong Ahafo | 2 | 2/2 | 0 | 0 |
| Northern | 2 | 2/2 | 0 | 0 |
| Upper East | 1 | 1/1 | 0 | 0 |
| Upper West | 3 | 0/0 | 0 | 0 |
| TOTAL | 21 | 14/14 | 3 | 3 |

2.4.3.2 Phase 2 Spanish Bridges

Thirteen (13no.) bridges were awarded in the last quarter of 2016 but works commenced in June 2017. They are located in Volta, Central, Eastern and Northern Regions. Seven (11) of the bridges have both abutments constructed to launching level including one (1) 40m multi-span bridges. Out of the eleven (11) bridges, one has been assembled and installed.

Table 2.8b: Regional Distribution of Spanish Bridges and Number to Launching level

| Region | No. Awarded | Both Abutments to launching level |
|--------------|-------------|-----------------------------------|
| Volta | 4 | 2 |
| Eastern | 3 | 3 |
| Central | 3 | 3 |
| Northern | 3 | 3 |
| TOTAL | 13 | 11 |

2.4.4 Belgium Bridges

The supply of the bridge components for a total of 490m span over five (5) water crossing points have been received and stockpiled. They will be supplied to the various sites as and when the sites are ready for assembling and launching.

The physical works of the contracts commenced within the last quarter of 2017. Table 2.13 shows roads, river names and regions within which they are located.

Table 2.9: The Bridge Locations, River Names and Span Lengths

| No. | Road Name | River Name | Span of Bridge (m) | Region | District | Remarks |
|-----|--------------------------------------|--------------------|--------------------|---------|-----------------|-------------------|
| 1 | Kpando Agbenoxoe – Kpando Dafor | Tributary to Volta | 175 | Volta | North Dayi | Works on-going |
| 2 | Galo – Sota – Bomingo | Angor | 70 | Volta | South Tongu | Works in progress |
| 3 | Anlo Jn. – Nsese No. 1 – Nsese No. 2 | Pra | 70 | Eastern | Akyemansa | Works in progress |
| 4 | Mankessim – Suprudo – Amissano | Okyi | 105 | Central | Mfantshima n | Works in progress |
| 5 | Asempaneye – Kushea – Hwidiem | Pra | 70 | Central | Assin North | Works in progress |

Supervision of the works under this bridge programme is being undertaken by a Consultant. The progress of the works during the quarter under review has been affected by the raining season as well as payment challenges for work done.

CHAPTER THREE: GHANA GOVERNMENT PROGRAMME

3.1 Road Fund

3.1.1 Background

A total amount of GH¢70million was approved for DFR in 2018 by the Road Fund Board for routine/recurrent and periodic maintenance projects, training, monitoring and supervision of projects, and vehicle maintenance etc.

| | | |
|------------------------------------|---|-------------------------|
| Routine/Recurrent maintenance | : | GH¢15.50million |
| Periodic Maintenance | : | GH¢19.38 million |
| Arrears | : | GH¢31.24million |
| <u>Ancillary Services (Others)</u> | : | <u>GH¢3.88million</u> |
| Total | : | GH¢70.00 million |

3.2 Status

3.2.1 Routine / Recurrent Maintenance

The routine maintenance was planned to cover 17,859.57km of feeder roads with an approved budget of GH¢15.50million. The total length achieved from January to March, 2018 is 4,196.64km, representing 23% of the total length of roads awarded. Disbursement made including arrears paid as at 31st March, 2018 was GH¢7.87million.

3.2.2 Periodic Maintenance

- (a) An estimated amount of GH¢19.38million was programmed for periodic maintenance for the year 2018.
- (b) Total disbursement made for Road Fund contracts including payments of arrears as at 30th June, 2018 was GH¢72.436million.
- (c) A total of GH¢1.868million was disbursed by the Road Fund to cover payment for old contracts under the COCOBOD Funded Roads Improvement Programme (CFRIP).

3.2.3 Ancillary

Total Disbursement for support services i.e., training, supervision, consultancy, etc. was GH¢0.607million.

3.2.4 Summary of Releases from January to September, 2018

| | | |
|--|----------|--------------------------|
| Routine/Recurrent maintenance | : | GH¢ 62.778million |
| Periodic Maintenance | : | GH¢ 307.516million |
| CFRIP (Paid by Road Fund) | : | GH¢ 1.868million |
| Others (Labour based & Delay Interest) | : | GH¢ 4.562million |
| Total release | : | GH¢376.724million |

3.3 Consolidated Fund (Investment)

3.3.1 Background

The Budgetary allocation under investment for 2018 was **GH¢ 28.899million**.

3.3.2 Status

Assets: GH¢28.899million

A total of **GH¢36.419million** has been disbursed as at the end of September, 2018. The disbursements include payment for work done on on-going and completed contracts. Some of the contracts are substantially completed while others are at various stages of completion. Progress of works at various sites during this quarter under review has been exceptionally low.

3.4 Rural Roads in Cocoa Growing Areas

The Ghana Cocoa Board (COCOBOD) has collaborated with the Department of Feeder Roads since 1985 in the rehabilitation, upgrading and maintenance of roads critical to its operations, particularly, the supply of agro-inputs to cocoa farmers and the haulage of cocoa to the ports for export. These roads are termed Cocoa Roads under the programme. The collaboration was expanded to cover the full mandate of COCOBOD to include coffee and sheanuts cultivation areas.

The Government of Ghana (GoG) is funded the initial programme in two (2) tranches.

3.4.1 Tranche 1 - CRIP

Background

The name of the programme under the Tranche 1 was Cocoa Roads Improvement Project (CRIP). GoG made provision for US\$100million for the surfacing of 600km of cocoa roads in the six cocoa producing regions in the country namely: Eastern, Ashanti, Brong Ahafo, Central, Volta, and Western regions.

The total length of roads covered under the three (3) phases of Tranche 1 are as follows:

| | |
|-----|----------|
| PH1 | 211.60km |
| PH2 | 221.5km |
| PH3 | 252.1km |

A total of 685.2km of roads were to be completed at an estimated cost of US\$100M. Table 3.1 shows the achievement of the programme as at the end of December, 2016. Progress of work after December, 2016 has been affected severely by delay in payment for workdone.

Status

Table 3.1: Summary of Achievements as 31st March, 2018:

| ACTIVITY | TARGET (KM) | ACHIEVEMENT (KM) | PERCENTAGE COMPLETED (%) |
|----------------|--------------|------------------|--------------------------|
| PHASE 1 | 211.6 | 171.95 | 81% |
| PHASE 2 | 221.5 | 227.8 | 103% |
| PHASE 3 | 252.1 | 99.25 | 39% |
| TOTAL | 685.2 | 499 | 73% |

The cumulative length executed since the start of the programme was 499km. Tables 3.2 and 3.3 show the regional distribution of Tranche 1 for the three phases and the physical and financial summaries, respectively.

Table 3.2: Regional Distribution of Projects

| REGION | PH1 | | PH2 | | PH3 | | TOTAL |
|--------------|-----------|--------------|-----------|--------------|-----------|--------------|--------------|
| | LOTS | LENGTH | LOTS | LENGTH | LOTS | LENGTH | LENGTH |
| | (No) | (KM) | (No.) | (KM) | (No) | (KM) | (KM) |
| WR | 5 | 33.3 | 17 | 123.1 | 11 | 91.6 | 248 |
| ASR | 7 | 52.2 | 11 | 67.3 | 8 | 56 | 175.5 |
| ER | 4 | 28 | 2 | 8 | 5 | 29.8 | 65.8 |
| BAR | 6 | 39.2 | 5 | 23.1 | 2 | 26.7 | 89.0 |
| CR | 4 | 33.5 | 0 | 0 | 4 | 40 | 73.5 |
| VR | 5 | 25.4 | 0 | 0 | 2 | 8.0 | 33.4 |
| TOTAL | 31 | 211.6 | 35 | 221.5 | 32 | 252.1 | 685.2 |

Table 3.3: General Summary

| NO. | PHASE | LENGTH (KM) | CONTRACT PRICE (GH¢) |
|--------------|---------|----------------|-------------------------|
| 1 | PHASE 1 | 211.6 | 27,196,508.90 |
| 2 | PHASE 2 | 221.5 | 39,288,210.06 |
| 3 | PHASE 3 | 252.1 | 55,187,573.12 |
| TOTAL | | 685.2 | 121,672,292.08 |

3.4.2 Tranche 2 - CFRIP

Under the Tranche 2 the name of the programme was modified to COCOBOD Funded Roads Improvement Project (CFRIP) because other roads located within the Coffee and Sheanuts growing areas were included. The GoG, through the Ministry of Roads and Highways provided funds for the maintenance, rehabilitation and upgrading of roads in order to augment the achievement of the full mandate of COCOBOD within the cocoa, coffee and sheanuts growing regions of Ghana.

Table 3.4 shows summary of regional distribution of the roads.

Table 3.4: Tranche 2 Regional Summary

| N0 | REGION | SURFACING | | | SPOT IMPROVEMENT | | | REHABILITATION | | |
|--------------|---------------|--------------------|---------------|-----------------------|--------------------|----------------|----------------------|--------------------|------------|---------------------|
| | | NUMBER OF PROJECTS | KM | COST (GH¢) | NUMBER OF PROJECTS | KM | COST | NUMBER OF PROJECTS | KM | COST (GH¢) |
| 1 | EASTERN | 12.00 | 75.19 | 27,339,184.68 | 28 | 87.59 | 5,330,478.98 | 0.00 | 0 | 0.00 |
| 2 | VOLTA | 14.00 | 71.30 | 45,131,192.52 | 21 | 69.70 | 4,919,571.54 | 0.00 | 0 | 0.00 |
| 3 | CENTRAL | 9.00 | 79.45 | 21,078,556.04 | 21 | 127.35 | 6,392,166.83 | 5 | 26.1 | 2,819,354.73 |
| 4 | WESTERN | 14.00 | 130.60 | 62,105,249.81 | 30 | 267.5 | 14,728,440.18 | 3.00 | 55 | 2,545,380.85 |
| 5 | ASHANTI | 14.00 | 75.84 | 24,605,339.84 | 28 | 149.0 | 1,991,734.27 | 0.00 | 0 | 0.00 |
| 6 | BRONG AHAFO | 11.00 | 48.60 | 20,099,818.76 | 46 | 360.10 | 13,705,909.95 | 0.00 | 0 | 0.00 |
| 7 | GREATER ACCRA | 11.00 | 38.60 | 12,741,689.80 | 9 | 57.20 | 3,331,864.37 | 0.00 | 0 | 0.00 |
| 8 | NORTHERN | 3.00 | 15.50 | 5,601,254.12 | 15 | 214.72 | 7,141,572.15 | 5.00 | 34 | 3,489,922.42 |
| 9 | UPPER EAST | 6.00 | 28.00 | 20,392,335.78 | 7 | 58.3 | 2,698,832.74 | 1.00 | 16 | 800,000.00 |
| 10 | UPPER WEST | 5.00 | 17.10 | 8,973,146.85 | 17 | 140.75 | 5,500,220.61 | 1.00 | 7 | 711,933.34 |
| TOTAL | | 99.00 | 580.18 | 248,067,768.20 | 222 | 1532.21 | 65,740,791.62 | 12.00 | 118 | 9,166,386.42 |

The physical achievement of the projects under the Tranche 2 as at end of 2016 is as follows;

Table 3.5: Physical Achievement

| ACTIVITY | TARGET (KM) | ACHIEVEMENT (KM) | % ACHIEVEMENT |
|------------------|--------------------|-------------------------|----------------------|
| Surfacing | 481.69 | 263.57 | 54.7 |
| Spot Improvement | 1,061.14 | 351.74 | 33.1 |
| Rehabilitation | 81.1 | 23.00 | 28.4 |
| Total | 1,623.93 | 638.3 | Average 39.3 |

No significant progress has been observed in respect of the progress of works at site since December, 2016.

TRANCHE 3: COCOBOD FUNDED PROJECTS

The contracts under Tranche 3 were awarded in 9 phases. The total lots and lengths per region is as shown in table 3.6 below whiles the contract costs are indicated in Table 3.7 below.

Table 3.6 Regional Distribution of Projects as at 30th June, 2018

| REGION | PHASE 1 | | PHASE 2 | | PHASE 3 | | PHASE 4 | | PHASE 5 | | PHASE 6 | | PHASE 7 | | PHASE 8 | | PHASE 9A | | PHASE 9B | | TOTAL LEN |
|--------|---------|------|---------|-------|---------|-------|---------|------|---------|------|---------|------|---------|-------|---------|------|----------|------|----------|------|--------------|
| | LOT | LEN | LOT | LEN | LOT | LEN | LOT | LEN | LOT | LEN | LOT | LEN | LOT | LEN | LOT | LEN | LOT | LEN | LOT | LEN | |
| | (NO.) | (KM) | (NO.) | (KM) | (NO.) | (KM) | (NO.) | (KM) | (NO.) | (KM) | (NO.) | (KM) | (NO.) | (KM) | (NO.) | (KM) | (NO.) | (KM) | (NO.) | (KM) | (KM) |
| WR | 3 | 51.2 | 12 | 103.7 | 4 | 23 | 1 | 12.0 | 1 | 11.2 | 1 | 11.3 | 2 | 27.4 | 2 | 33.8 | 0 | 0 | 0 | 0 | 273.6 |
| ASR | 2 | 35.2 | 8 | 87.4 | 7 | 52 | 1 | 29.5 | 4 | 37 | 1 | 7.0 | 3 | 40.09 | 2 | 23 | 2 | 21.1 | 3 | 42.7 | 374.9 |
| ER | 4 | 43.7 | 15 | 100.2 | 4 | 22.4 | 0 | 0 | 1 | 10.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 14.4 | 191.2 |
| BAR | 4 | 44.4 | 6 | 68.9 | 7 | 101.4 | 2 | 24.4 | 0 | 0 | 1 | 10.7 | 2 | 36.5 | 0 | 0 | 0 | 0 | 0 | 0 | 286.3 |
| CR | 5 | 30.3 | 9 | 76.3 | 0 | 0 | 1 | 5.3 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 27.5 | 0 | 0 | 0 | 0 | 218.9 |
| VR | 4 | 37.3 | 0 | 0 | 1 | 1.8 | 1 | 15.9 | 2 | 39.5 | 0 | 0 | 3 | 24.3 | 1 | 8.0 | 1 | 12.5 | 1 | 20 | 159.3 |
| TOTAL | 22 | 24.2 | 50 | 436.5 | 22 | 200.6 | 6 | 87.1 | 8 | 98.2 | 3 | 29 | 10 | 128.3 | 7 | 92.3 | 3 | 33.6 | 5 | 77.1 | 1,424.8 |

Table 3.7 phase, length and estimated contract price as at March, 2018

| NO | PHASE | LENGTH (KM) | CONTRACT PRICE (GHC) |
|-------|----------|-------------|----------------------|
| 1 | PHASE 1 | 242.1 | 240,149,634.16 |
| 2 | PHASE 2 | 436.5 | 317,683,167.07 |
| 3 | PHASE 3 | 200.6 | 335,688,468.86 |
| 4 | PHASE 4 | 87.10 | 141,228,814.77 |
| 5 | PHASE 5 | 98.2 | 147,347,374.25 |
| 6 | PHASE 6 | 29 | 29,682,161.82 |
| 7 | PHASE 7 | 128.3 | 85,292,305.47 |
| 8 | PHASE 8 | 92.3 | 176,516,705.11 |
| 9 | PHASE 9A | 33.6 | 54,103,873.83 |
| 10 | PHASE 9B | 77.1 | 85,069,830.69 |
| TOTAL | | 1,424.8 | 1,612,762,336.03 |

3.5 Revamping of Labour Based Technology for Road Construction and Maintenance

Background

The Labour-Based Technology (LBT) for road construction has been identified as a cost-effective and one of the appropriate alternative method of improving rural transportation and accessibility whilst addressing issues of economic development and poverty reduction.

The Ministry of Roads and Highways decided to revamp the LBT not only as a cost effective means to provide and maintain rural transport infrastructure but also as a means to improve upon the livelihood of rural Ghanaians by creating employment opportunities and facilitating rural socio-economic development. The ultimate aim is to provide easy access to marketing centers by engendering access to goods and services.

This is in furtherance to the Government policy on job creation. A total of 382km of feeder roads were across the ten regions of Ghana for rehabilitation or spot improvement under the LBT programme. The total regional performance as at 30th June, 2018 are is presented on the table below:

Table 3.8: Summary of On-going LBT Contracts

| REGION | TOTAL LENGTH AWARDED (KM) | TOTAL LENGTH COMPLETED (KM) | LENGTH OUTSTANDING (KM) | % ACHIEVEMENT | REMARKS |
|---------------|---------------------------|-----------------------------|-------------------------|---------------|------------------------------|
| GREATER ACCRA | 28.40 | 18.20 | 10.20 | 64.08 | Outstanding to be terminated |
| VOLTA | 30.70 | 30.70 | 0.00 | 100.00 | 100% completed |
| EASTERN | 60.95 | 18.70 | 42.25 | 30.68 | Outstanding to be terminated |
| CENTRAL | 29.60 | 22.90 | 6.70 | 77.36 | Outstanding to be terminated |
| WESTERN | 33.20 | 0.00 | 33.00 | 0.00 | Outstanding to be terminated |
| ASHANTI | 23.90 | 23.90 | 0.00 | 100.00 | 100% completed |
| BRONG AHAFO | 49.90 | 35.90 | 14.00 | 71.94 | Outstanding to be terminated |
| NORTHERN | 37.15 | 22.95 | 14.20 | 61.78 | Outstanding to be terminated |
| UPPER EAST | 58.30 | 34.60 | 23.70 | 59.35 | Outstanding to be terminated |
| UPPER WEST | 29.90 | 10.00 | 19.90 | 33.44 | Outstanding to be terminated |
| TOTAL | 382.00 | 251.05 | 130.95 | 65.72 | |

Status of Labour Based Contracts

It is observed from table 3.6 above that only Ashanti and Volta Regions achieved 100% contractor performance. Greater Accra, Central, Brong Ahafo and Northern Regions contractor performance is between

61% and 77%. Upper East, Upper West and Eastern Regions had performance of between 30% - 59% whilst the Western Region had a rather disappointing contractor performance of 0%. That means not a single contract was completed. All the outstanding contracts are earmarked for termination in 2018.

Possible Factors Affecting Contractor Performance

1. The long period of dormancy in the application of LBT in feeder road construction has led to loss of skill and interest as most previously trained LBT contractors have migrated unto capital based classification
2. Most of the skilled labour and artisans have been lost to under disciplines in the construction industry
3. Lack of interest due to long payment regime which is perceived to be treated similar to the capital based contracts leading to loss of capital

Way Forward for LBT

The prospects for adopting LBT in support of rural accessibility and employment generation is still very promising. There is however the need for a conscious Ministerial and Departmental direction in developing a strategy for training new LBT contractors and Engineers with a long term view of establishing LBT as a well-documented and acceptable alternative to feeder road access development and maintenance.

CHAPTER FOUR: COLLABORATIVE PROGRAMMES

4.1 WESTERN CORRIDOR INFRASTRUCTURE PROJECT

4.1.1 Introduction

The Atuabo Gas Processing Plant in the Western Region is being constructed to produce Liquefied Petroleum Gas (LPG) in commercial quantities as part of the natural gas prospecting activities for the nation. The initial design proposal was to transport the LPG via subsea through Camp Buoy but due to time constraint, it is desired that the LPGs be transported by road.

However, in view of the general poor condition of the selected LPG transporting road corridor in the Western Region, the Ministry of Energy and Petroleum arranged with the Jubilee Partners to solicit financial support to facilitate the construction of the road network in the gas production zone.

A feasibility assessment was therefore carried out to ascertain the conditions of the existing road network within the corridor and proposed a suitable route that will enable the safe transportation of LPG with limited impact on the environment.

To this effect, the Department of Feeder Roads (DFR) was contacted to assist in the upgrading of part of the road network to facilitate the transportation of the LPG. A total of 34.00km of the road network was seeded to the department to supervise. Due to the urgency of the work, the road was divided into two phases and awarded to two construction firms. The total cost of the two (2) contracts is GH¢24.368m.

The two phases commenced in April and May, 2014 respectively under the supervision of a team of DFR personnel selected from four (4) regions of the country and were expected to be completed in February 2016. However, there has been additional works as a result of which the Contract durations have been extended. The scope of additional works include additional roads or additional quantity of some work items.

4.2.2 Status

The physical progress of work for the Lot 1 and lot 2 contracts are 91% and 72% respectively. The total certified amount of work done as at 30th June, 2018 is GH¢71.60million. Table 4.3 shows the detailed progress data on the two contracts.

Table 4.3: Western Corridor Gas Infrastructure ProjectDepartment of Feeder RoadsWestern Corridor Gas Infrastructure Project

| Progress Report- June, 2018 | | | | | | | | | | | | | | |
|------------------------------------|-------------------|---------------|---|--------------------|------------------------------|-------------------|--------------------------|--------------------------------|---------------------------|-----------------------------------|------------------------|--|----------------------------|-------------------|
| Region | District | Lot No | Road name | Length (km) | Name of contractor | Award Date | Commencement Date | Revised Completion Date | Contract Sum (GH¢) | Revised Contract Sum (GH¢) | Payment to Date | Planned/ Scheduled progress (%) | Actual Progress (%) | REMARKS |
| Western | Ellembele/ Jomoro | 1 | Bituminous Surfacing of Alabokazo-Ekwei-Tikobo No.1 Ph.1 (12.90 KM) | 24.7 | M/s Memphis Metropolitan Ltd | 21/5/2014 | 05/08/2014 | 04/02/2018 | 12,539,950.22 | 34,450,680.13 | 36,405,357.91 | 94 | 91 | Works in progress |
| Western | Ellembele/ Jomoro | 2 | Bituminous Surfacing of Alabokazo-Ekwei-Tikobo No.1 Ph.2 (19.80 KM) | 41.4 | M/s Kingspok Company Limited | 21/5/2014 | 04/08m/2014 | 02/08/2018 | 11,827,619.17 | 42,349,714.04 | 35,194,234.17 | 72 | 72 | Works in progress |
| | | | TOTAL | 66.1 | | | | | 24,367,569.39 | 76,800,394.17 | 71,599,592.08 | | | |

All the contracts are currently on-going and are expected to be completed by the revised completion date.

CHAPTER FIVE Financial Implication in the Implementation of DFR Planned Programmes and Activities for 2018 Fiscal Year

5.1 Summary Estimates of DFR's activities for the 2018 Fiscal Year

The summary of estimates for the 2018 fiscal year is shown in Table 5.1. The total amount approved for DFR programmes and activities for 2018 is GH¢123.182million. Out of this GH¢36.886million (according to March 2018 revision) representing 30% is from the Consolidated Fund for wholly GOG projects, matching fund and other administrative expenses. Donor support is estimated at GH¢15.78million which also represents 12.8% of the total budget. In addition the Road Fund Board approved a total budget of GH¢70.000million representing 56.8% of the total GOG budget approved for DFR for 2018

Total disbursement for the period January – September, 2018 was GH¢141,249.70 including payment of some road arrears.

Table 5.1: SUMMARY OF BUDGETTED AND DISBURSEMENTS AS AT 31ST DECEMBER, 2018

| Item | TOTAL 2018 BUDGET (GH¢'000) | DISBURSEMENT AS AT 31ST DEC, 2018 (GH¢'000) | % APPROVED |
|---|-----------------------------------|---|---------------|
| Compensation | 7,637.12 | 8,242.38 | 107.93 |
| Use of Goods & Services | 351.02 | 228.09 | 64.98 |
| Assets | 28,898.59 | 38,044.31 | 131.65 |
| <i>ØMatching funds</i> | 2,898.59 | 122.73 | 4.20 |
| <i>Supervision Consultancy</i> | | | |
| <i>Design Consultancy</i> | | | |
| <i>Civil Works</i> | | | |
| <i>ØPreparation and Monitoring of EIA/SIA and RAP</i> | | | 0.00 |
| <i>ØRoad Safety Infrastructure and Management</i> | 1,280.00 | 0.00 | 0.00 |
| <i>ØNon-Development (Building, Equipment and Vehicle)</i> | | | 0.00 |
| <i>ØOn-going Projects (Preceeding 2017)</i> | 18,200.00 | 37,921.58 | 209.36 |
| <i>Periodic Maintenance</i> | 3,640.00 | 1,287.30 | 35.37 |
| <i>Development/Minor Rehab</i> | 11,830.00 | 32,436.71 | 274.19 |
| <i>Bridges</i> | 2,730.00 | 4,197.57 | 153.76 |
| <i>ØOn-going Projects (Committed in 2018)</i> | 6,520.00 | 0.00 | 0.00 |
| <i>Periodic Maintenance</i> | 1,170.00 | 0.00 | 0.00 |
| <i>Development/Minor Rehab</i> | 6,630.00 | 0.00 | 0.00 |
| <i>ØTaxes & Duties</i> | 0.00 | 0.00 | |
| <i>ØArrears</i> | 0.00 | 0.00 | 0.00 |
| TOTAL GOG | 36,886.73 | 46,514.78 | 126.10 |
| ROAD FUND | 70,000.00 | 145,322.24 | 207.60 |
| <i>Arrears (Actual)</i> | | | |
| <i>Projected Expenditure (Dec. '17)</i> | | | |
| <i>Works in fiscal yr (2018)</i> | | | |
| DONOR | 15,780.02 | 13,921.08 | 88.22 |
| IGF | 515.40 | 199.66 | 23.22 |
| Others (Ghana Gas, GASIP, etc) | 0.00 | 0.00 | |
| GRAND TOTAL | 123,182.15 | 205,877.76 | 167.13 |

CHAPTER SIX: CROSS CUTTING ISSUES

6.1 Road Safety

6.1.1 Action Plan

As part of the National Road Safety Strategy III (NRSS III) covering 2011-2020, DFR submitted its Safety Implementation Status as well as its Road Safety Actions Plan to the National Road Safety Commission. The main objective for the NRSS III is to halt the unacceptable levels of road traffic fatalities and injuries by 2015 and thereafter reduce accidents by 50% by the end of 2020.

The action plan submitted by DFR took the form of outlining some road safety strategies to be implemented on feeder roads which will address safety problems at bridge approaches as well as safety problems at intersections and curves. Additionally a Road Safety Desk unit/desk has been created at DFR Head office.

These strategies have been set to enhance safety on feeder roads for all road users especially the vulnerable road users like pedestrians, cyclists and motorcyclist (pillion riders).

Some of the safety activities to be carried out included:

- Undertaking safety audit on heavily trafficked feeder roads;
- Erection of warning signs at intersections and dangerous sharp curves as well as at bridge approaches.
- Provision of pedestrian crossings/ speed humps/ rumble strips within communities traversed by bituminous surfaced feeder roads.

The department plans to undertake the following additional action plans subject to availability of funds:

- Erection of informative signs in towns and villages;
- More than 1 frequency of Vegetation control to improve sight distance on feeder road especially in sharp curves; and
- Undertaking road line markings on all bituminous surfaced feeder roads.

6.1.2 *Targets set for 2018 - 2020 action plans*

As part of the continual effort to reduce road crashes fatalities on feeder roads, the following action plans have been developed for the period 2018 to 2020. The achievement of this targets however will depend on the following;

- Availability of adequate funding for road safety activities within the period
- Ensuring safety consciousness among road engineers
- Community education on the importance of road safety (such as pedestrian crossings, road line markings and warning signs)
- Driver education at community level on the importance of safety consciousness whiles behind the wheel.

ISSUES

| NATIONAL ROAD SAFETY ACTION PLAN 2018-2020 - 2nd Quarter (2018) | | | | | | | |
|--|--------|--|-------------------------------------|--|---------------|---|------------------|
| SPECIFIC OBJECTIVE : SAFER ROADS AND MOBILITY | | | | | | | |
| TASK: ENHANCE THE SAFETY OF ALL ROAD USERS, ESPECIALLY VULNERABLE ROAD USERS LIKE PEDESTRIAN, CYCLIST, MOTORIST, ETC | | | | | | | |
| MAIN ACTIVITY : TRAFFIC CALMING MEASURES | | | | | | | |
| PLANNED | | | ACHIEVEMENTS | | | | |
| ACTIVITY | TARGET | VARIABLE INDICATOR | STATE OF IMPLEMENTATION (2018-2020) | EVIDENCE OF IMPLEMENTATION (2018-2020) | CHALLENGES | WAY FORWARD | COMMENTS |
| Ensure Vegetation Control | 1500km | Length of Vegetation Control | 800km | Progress Report | None | Activity to be continued | Work in progress |
| Improvement of Junction Design | 150km | No. of junctions improved | 60km | Progress Report | None | Activity to be continued | Work in progress |
| Undertake road line marking of 400km bituminous surfaced road | 400 km | No. of km marked | 150km | Progress Report | None | Activity to be continued | Work in progress |
| Erection of warning signs | 500No. | No. of warning signs erected | 200No. | Progress report | None | Activity to be continued | Work in progress |
| Undertake road line marking of 400km bituminous surfaced road | 450km | No. of town roads and bridge approaches tarred | 150km | Progress Report | None | Activity to be continued | Work in progress |
| Provide town roads with pedestrian crossing/speed humps/rumble strips | 300No. | No. of towns with pedestrian crossing | 100No | Progress Report | Funds needed | Activity to be continued extra funding | Work in progress |
| Sensitization on Road Safety | 250km | Length of Road sensitized | 60km | Progress Report | Lack of funds | Activity to be continued with extra funding | Work in progress |
| Training of DFR staff and consultants in road safety audit at all stages of project | 50 | No. of staff and consultants trained | Nil | N/A | Lack of funds | Activity not done due to lack of funding | Work in progress |

ISSUES

| NATIONAL ROAD SAFETY ACTION PLAN 2018-2020 - 1st Quarter (2018) | | | | | | | |
|--|--------|--|-------------------------------------|--|--|---|------------------|
| SPECIFIC OBJECTIVE : SAFER ROADS AND MOBILITY | | | | | | | |
| TASK: ENHANCE THE SAFETY OF ALL ROAD USERS, ESPECIALLY VULNERABLE ROAD USERS LIKE PEDESTRIAN, CYCLIST, MOTORIST, ETC | | | | | | | |
| MAIN ACTIVITY : TRAFFIC CALMING MEASURES | | | | | | | |
| PLANNED | | | ACHIEVEMENTS | | | | |
| ACTIVITY | TARGET | VARIABLE INDICATOR | STATE OF IMPLEMENTATION (2018-2020) | EVIDENCE OF IMPLEMENTATION (2018-2020) | CHALLENGES | WAY FORWARD | COMMENTS |
| Ensure Vegetation Control | 1500km | Length of Vegetation Control | 300km | Progress Report | None | Activity to be continued | Work in progress |
| Improvement of Junction Design | 150km | No. of junctions improved | 20km | Progress Report | None | Activity to be continued | Work in progress |
| Undertake road line marking of 400km bituminous surfaced road | 400 km | No. of km marked | 80km | Progress Report | None | Activity to be continued | Work in progress |
| Erection of warning signs | 500No. | No. of warning signs erected | 100No. | Progress report | None | Activity to be continued | Work in progress |
| Undertake road line marking of 400km bituminous surfaced road | 450km | No. of town roads and bridge approaches tarred | 150km | Progress Report | None | Activity to be continued | Work in progress |
| Provide town roads with pedestrian crossing/speed humps/rumble strips | 300No. | No. of towns with pedestrian crossing | 50No | Progress Report | More funds needed | Activity to be continued extra funding | Work in progress |
| Sensitization on Road Safety | 250km | Length of Road sensitized | 60km | Progress Report | Slow progress on on-going progress due to slow payment of progress | Activity to be continued with extra funding | Work in progress |
| Training of DFR staff and consultants in road safety audit at all stages of project | 50 | No. of staff and consultants trained | Nil | N/A | Lack of funds | Activity not done due to lack of funding | Work in progress |

CHAPTER SEVEN: HUMAN RESOURCE ISSUES

7.1 Staffing

The Department of Feeder Roads has total staff strength of Three Hundred and Twenty three (323) both at the Head Office and the Regions as at 1st July, 2018. This is made up of both technical and non-technical staff of various professional backgrounds.

The Department is headed by a Director with three Deputy Directors in charge of Planning, Development and Maintenance.

The Department operates in all the ten (10) regions of Ghana and provides technical support to the District works Department of the MMDAs through the regional offices.

7.1.1 Gender Ratio

The gender distribution of staff of the Department is as follows;

| Staff Categorization | | | | | |
|----------------------|--------|--------|--------|--------|-------|
| Gender | Male | | Female | | Total |
| Staff Levels | Senior | Junior | Senior | Junior | |
| | 104 | 148 | 27 | 44 | 323 |

7.1.2 Age Distribution

The age distribution of the Staff of the Department is shown in the Table below.

| Age Distribution | | | | | | | |
|------------------|-----------|----------|----------|----------|----------|--------|-------|
| Gender | Age Range | 20-30yrs | 30-40yrs | 41-50yrs | 51-60yrs | 60yrs+ | TOTAL |
| MALE | | 14 | 68 | 62 | 108 | 0 | 252 |
| FEMALE | | 6 | 21 | 24 | 20 | 0 | 71 |
| SUB - TOTAL | | 20 | 89 | 86 | 128 | 0 | 323 |

7.1.3 Training and Development

The Training needs and Programmes for the Staff of DFR for the year 2018 is presented below with indication of achievement as at June 2018. This is to ensure adequate capacity building to enhance efficiency and effectiveness in the execution of the core mandate of the department.

| S/N O | COURSE NAME | TARGET GROUP | ORGANISE RS / VENUE | NO. OF PARTICIPA NTS | PROGR AM PERIOD | DURATI ON | FUNDIN G SOURCE | ACHIEVEM ENT |
|----------|---|-------------------------|-------------------------|----------------------------|----------------------------|--------------|-----------------------|-----------------|
| 1 | MSc Road and Transportation Engineering | Senior Engineer | KNUST | 1 | Sept 2016- Sept 2018 | 2 years | Road Fund | YES |
| 2 | Construction Law | Senior Engineer | King's College, UK | 1 | Sept 2016, June, 2018 | 2 Years | GETFUND | YES |
| 3 | Records Management (Effective Filing Systems) | Adm/Records Officers | CBM Consult | 7 | 12th - 14th February, 2018 | 3 Days | Road Fund | NO |
| 4 | Accelerated Scheme of Service for Promotion | Selected Staff | CSTC/KTC | 48 | 19th - 23rd February, 2018 | 5 Days | Road Fund | YES |
| 5 | Construction Management | Engineers/Qty Surveyors | GHIE | 3 | 20th - 21st February, 2018 | 2 Days | Road Fund | YES |
| 6 | Accelerated Scheme of Service for Promotion | Selected Staff | CSTC | 14 | 26th Feb- 2nd March, 2018 | 5 Days | Road Fund | YES |
| 7 | Effective Supervisory Skills | Selected Staff | CBM Consult | 10 | 26th - 28th March, 2018 | 3 Days | Road Fund | NO |
| 8 | Information Security & Standards | IT/IM Officers | OHCS/CS TC | 3 | 27th - 28th February, 2018 | 2 Days | Road Fund | YES |
| 9 | Advances in Project Management | Prin. Qty Surveyor | TensTep | 1 | 1st- 3rd March, 2018 | 3 Days | Road Fund | YES |
| 10 | Performance Based Contracts | Principal Engineers | IRF, Washington DC, USA | 4 | 5th - 16th March, 2018 | 2 Weeks | World Bank | YES |

| | | | | | | | | |
|----|---|--------------------------|-----------------------------------|-----|--------------------------------|----------|------------|-----|
| 11 | Public Financial Mgt Act 2016 (Act 921) | All Staff | In-House | 320 | 12th March-20th April, 2018 | 6 Weeks | Road Fund | YES |
| 12 | Certificate in Public Administration | Assistant Engineers | GIMPA | 2 | 12th March-4th May, 2018 | 2 Months | Road Fund | NO |
| 13 | Knowledge Exchange Conference | Assistant Engineer | UWP Consulting , Jonnnesburg, S.A | 1 | 19th - 23rd March, 2018 | 5 Days | World Bank | YES |
| 14 | Construction Tech. of Highway & Housing for | Senior Engineer | ECCO, China | 1 | 10th April, - 30th April, 2018 | 3 Weeks | China Govt | YES |
| 15 | Devt of Alternative Surfacing for Low Vol Roads | Engineers/ Qty Surveyors | AFCAP | 10 | 17 April, 2018 | 1 Day | Road Fund | YES |
| 16 | Secretarial Examination Training | Stenographer GD II | Government Secretarial School | 1 | 7th May-29th June, 2018 | 2 Months | Road Fund | |
| 17 | Workshop on Climate Adaptation in Ghana | Engineers/ Qty Surveyors | AFCAP | 10 | 15th - 17th May, 2018 | 3 Days | Road Fund | |
| 18 | Cabinet Memorandum | Chief Engineers | CSTC | 10 | 21st - 24th May, 2018 | 3 Days | Road Fund | |
| 19 | Standard Specifications for Road & Bridge Works | Engineers/ Qty Surveyors | KTC | 20 | 21st May-1st June, 2018 | 2 Weeks | Road Fund | |
| 20 | Technical Report Writing | Engineers/ Qty Surveyors | Total Growth Consultancy | 20 | 5th -7th June, 2018 | 3 Days | Road Fund | |
| 21 | Contract Management & Tendering Procedures | Asst Engrs/Asst Qty Surv | In-House | 20 | 18th - 22nd June, 2018 | 5 Days | Road Fund | |
| 22 | Corporate Governance for Org & Business Success | Deputy Dir & Chief Engrs | GIMPA | 4 | 19th - 21st June, 2018 | 3 Days | Road Fund | |

| | | | | | | | | |
|----|---|---------------------------|-----------------------------|----|------------------------------|---------|------------|--|
| 23 | The Mgt of Contract Claims & Resolution of | Engineers/Qty Surveyors | Ghana Consulting Engineers | 10 | 20th - 21st June, 2018 | 2 Days | Road Fund | |
| 24 | Total Quality Management | Laboratory Technicians | Knowledge Tree Technologies | 20 | 20th - 22nd June, 2018 | 3 Days | Road Fund | |
| 25 | Succession Planning | Selected Staff | Advantage Consult Ltd | | 25th - 27th June, 2018 | 3 Days | Road Fund | |
| 26 | Devt of Low Volume Roads Design Manuals | Engineers/Qty Surveyors | AFCAP | 10 | 27th - 28th June, 2018 | 2 Days | Road Fund | |
| 27 | Governance of Enterprise IT-Ethics | IT/IM Officers | OHCS/CS TC | 3 | 27th - 28th June, 2018 | 2 Days | Road Fund | |
| 28 | Planning Your Retirement | Selected Staff | Advantage Consult Ltd | 20 | 4th -6th July, 2018 | 3 Days | Road Fund | |
| 29 | Works Procurement Management Course | Engineers/Qty Surveyors | GIMPA | 4 | 9th - 27th July, 2018 | 3 Weeks | Road Fund | |
| 30 | Tyre Safety Training | Drivers | Punturesea l W/A Ltd | 20 | 16th - 17th July, 2018 | 2 Days | Road Fund | |
| 31 | Consultants Services Workshop | Engineers/Qty Surveyors | GIMPA | 5 | 30th July- 1st August, 2018 | 5 Days | Road Fund | |
| 32 | Leadership, Change & Organisational Renewal | Deputy Dir & Chief Engrs | GIMPA | 4 | 1st -3rd August, 2018 | 3 Days | Road Fund | |
| 33 | Infrastructure Planning & Construction | Engineer | ECCO, China | 1 | 21st August- 10th Sept, 2018 | 3 Weeks | China Govt | |
| 34 | The Practice of Supervision | Engineers/Qty Surveyors | Total Growth Consultancy | 20 | 22nd - 24th August, 2018 | 3 Days | Road Fund | |
| 35 | Project Monitoring and Evaluation | Chief/Principal Engineers | TensTep | 20 | 28th - 30th August, 2018 | 3 Days | Road Fund | |
| 36 | Effective Frontline Management | Secretaries | Knowledge Tree Technologies | 30 | 10th - 12th Septem | 3 Days | Road Fund | |

| | | | | | | | | |
|----|---|-------------------------|-----------------------------|----|------------------------------|----------|-----------|--|
| | | | | | ber, 2018 | | | |
| 37 | Public Speaking and Presentation Skills | Selected Staff | Knowledge Tree Technologies | 20 | 18th - 19th September, 2018 | 3 Days | Road Fund | |
| 38 | Certificate in Public Administration | Assistant Engineers | GIMPA | 2 | 2nd October - 30th Nov, 2018 | 2 Months | Road Fund | |
| 39 | Stores and Inventory Management | Stores officers | Knowledge Tree Technologies | 10 | 8th - 10th October, 2018 | 3 Days | Road Fund | |
| 40 | Project Planning and Management | Engineers/Qty Surveyors | GIMPA | 10 | 15th - 26th October, 2018 | 2 Weeks | Road Fund | |
| 41 | Leading and Managing People | Chief Training Officer | GIMPA | 1 | 16th - 18th October, 2018 | 3 Days | Road Fund | |
| 42 | Risk Management | IT/IM Officers | OHCS/CS TC | 3 | 30th - 31st October, 2018 | 2 Days | Road Fund | |

CHAPTER EIGHT: AFCAP AND RECAP PROGRAMMES IN GHANA

8.1 Overview

8.1.1 AFCAP

The Research for Community Access Partnership (ReCAP) is a six-year programme of applied research and knowledge dissemination funded by a grant from the UK Government through the Department for International Development (DFID). The overall aim is to promote safe and sustainable rural access in Africa and Asia through research and knowledge sharing between participating countries and the wider community.

There are two components under ReCAP; Africa Community Access Partnership (AfCAP) and Asia Community Access Partnership (AsCAP).

The first phase of AfCAP was implemented from June 2008 to July 2014 in some African countries excluding Ghana. The second phase of the programme commenced in 2014 and will cover a period of 6 years. Ghana is a beneficiary of the second phase programme.

The AfCAP programme in Ghana involves a support to the Department of Feeder Road to develop a cost effective road design methods for low volume roads through research. The ultimate aim is to transfer knowledge and develop appropriate skills as well as manuals for the design and maintenance of low volume roads in rural Ghana.

On 2nd December, 2015, a Memorandum of Understanding (MoU) was signed between the Ministry of Roads and Highways (MRH) and Research for Community Access Partnership (ReCAP) to contribute information on low volume roads and transport services which are related to national and regional policies and strategies with the aim of establishing high quality research in low volume road and transport services in Ghana. The Department of Feeder Roads was selected by the MRH as the Agency to collaborate with AfCAP on the research and knowledge sharing programme.

8.1.2 Progress of Activities

DFR and the West African Regional Manager of ReCAP in consultation with other stakeholders within the transport sector scoped and selected twenty one (21) research needs for the country. Out of this, as at the end of March 2018, five (5) projects had been successfully completed and Eight (8) are ongoing as shown in Table 8.1.1 and Table 8.1.2, respectively.

Table 8.1.1: Completed Project

| No. | Project | Objectives | Start Date | End Date | Outcomes | Comments |
|------------|---|--|-------------------------------|--------------------------------|--|---|
| 1. | DCP-DN training | <p>To build on existing knowledge and expand the appropriate use of the DCP DN method in the design of low volume rural roads in Ghana</p> <p>To introduce and integrate local content in the application of the DCP method in Ghana for cost effectiveness and ease of accessibility to the DCP equipment to facilitate the use of the proposed method.</p> | 8 th February 2016 | 19 th February 2016 | The Trainees had a good grasp of the DCP-DN design method and use of the software for producing an environmentally optimised pavement design | Recommended the need for ToT for selected engineers |
| 2. | Alternative surfacing for steep hill section phase 1 | <p>To identify the factors that have impact on steep sections of Feeder Roads</p> <p>To identify options for mitigating factors in terms of pavement surfacing and/or effective drainage that can provide an acceptable level of service</p> <p>Propose a programme to demonstrate and try out suitable range of the identified pavement surfacing and drainage options on steep hill sections of feeder roads in Ghana.</p> | 15 th January 2016 | 15 th May 2016 | Eighteen (18) pavement options comprising three alternative surfacing and two base/sub-base materials were recommended for steep hill sections | Recommended the need for field trials which was approved for phase II |
| 3. | Identification of Hazardous Spots and Recommendation of remedial measures | To develop an Accident Blackspot Management System (ABMS) which will form the basis of a coordinated | 6 th June 2016 | 20 th January 2017 | Costs Effectiveness of remedial measures on the basis of FYRR | DFR now has two dedicated computers with iMAAP software for the analysis of |

| No. | Project | Objectives | Start Date | End Date | Outcomes | Comments |
|-----|---|---|----------------------------|---------------------------|--|--|
| | on Selected rural roads | approach to road safety on the rural road network | | | | accident blackspots and all hazardous sites identified by the pilot study have been mitigated and expanded to an additional region |
| 4. | Rural Transport Diagnostic Study | To explore the current state of rural transport in Ghana in light of the changing rural environment, identify gaps in our understanding of current rural transport practices and highlight opportunities for evidence-gathering, policy and practical efforts to improve the rural access experience of Ghanaians | 15 th Dec. 2016 | 22 nd May 2017 | Improved rural transport services and identified new areas for further research | A forum has been held by the Ministry of Transport to integrate the findings into the ongoing review of the National Transport Policy |
| 5. | The use of appropriate high-tech solutions for road network and condition analysis, with a focus on satellite imagery | To develop a methodology for using satellite imagery to assess road condition To explore other high-tech solutions for network assessment, such as big data, mobile phones, UAVs (drones) etc | April 2016 | March, 2017 | This project is handled at the regional level A framework for the application of satellite imagery from road inventory and others have been developed for Ghana | Demonstrations on validation of the results from the use of satellite imagery was validated with a ground routing process using two demonstrations sites in two regions in Ghana |

Table 8.1.2: Status of ongoing Research Projects

| No. | Project | Objectives | Start Date | Anticipated Completion Date | Progress/Comments |
|-----|---|--|---------------------------|-----------------------------|--|
| 1. | Climate Adaptation: Risk Management and Resilience Optimisation for Vulnerable Road Access | <p>Deliver research programme on activities relevant to climate adaptation and resilience strategies to enable national governments to take both short and longer term, policy-making action</p> <p>Develop an appreciation and awareness within African Road and Transport ministries, departments and agencies of current and future challenges associated with the effects of climate change on rural access, and increase ability to deal with more unpredictable and extreme climate effects</p> <p>Trial and optimize best cost-benefit and return-on-investment approaches to demonstrate optimal resilient rural access and minimal impact on national economic progress</p> <p>Produce Climate Adaptation guidelines</p> <p>Implement a knowledge dissemination and capacity building programme</p> | April 2016 | March 2018 | <p>This project is handled at the regional level</p> <p>Demonstration sites selected. Approval Processes for the construction of demonstration site ongoing.</p> <p>2nd Regional Training Workshop was conducted in Ghana in February 2018.</p> <p>A third training workshop is to be conducted by end of May, 2018</p> |
| 2. | | | | | |
| 3. | Investigation into the suitability of Roller Compacted Concrete as pavement material in Ghana | <p>To develop a suitable mix design for RCC with optimal compressive strength suitable for road pavement construction in Ghana making use of local materials;</p> <p>To monitor and evaluate its performance over time to enable standard specifications to be developed</p> | 7 th July 2016 | 15 th July 2018 | The construction phase of the study study has been merged with the study on steep hills for cost effectiveness |

| No. | Project | Objectives | Start Date | Anticipated Completion Date | Progress/Comments |
|-----|--|---|--------------------------------|-----------------------------|--|
| 4. | Training of Trainers and Trial Sites for DCP DN in Ghana | <p>To train six (6) trainers from Ghana and two (2) from Sierra Leone to an advanced level to allow for widespread training in the DCP-DN design method throughout Ghana and Sierra Leone using the AfCAP LVR DCP-DN design software</p> <p>To allow current trainers (who were also involved in the development of the software) to standardise training interventions and ensure consistency for further roll-out of the method and software.</p> | 12 th Sept. 2016 | 10 th April 2017 | <p>3rd Training session completed</p> <p>Additional training on simple laboratory testing to support the implementation of the DCP-DN method completed for about 21 laboratory technicians from the ten regions.</p> <p>Field demonstration ongoing; moisture sensors installed and data collection ongoing. Contractor is yet to complete base construction.</p> |
| 5. | Alternative Surfacing for Steep Hill Sections in Ghana-Phase 2 | <p>To define and demonstrate appropriate surfacing options as alternatives to the current gravel wearing courses on the steep hill sections of feeder roads in Ghana, and</p> <p>To offer sustainable solutions to address drainage and erosion problems experienced by those steep sections.</p> | 24 th January, 2017 | 29 th June, 2020 | <p>Designs and estimates completed</p> <p>VO for works on demonstration Site Approved</p> <p>Contractor has commenced preliminary activities on demonstration site</p> |

| No. | Project | Objectives | Start Date | Anticipated Completion Date | Progress/Comments |
|-----|--|--|---------------------------------|-------------------------------|--|
| 6. | Development of Low Volume Roads Design Manuals and update of Standard Specifications and detailed drawings for the three AfCAP member countries in West Africa | The purpose of this project is to prepare similar design manuals for LVRs for three AfCAP member countries in the West African sub-region, namely Ghana, Sierra Leone and Liberia. | July, 2017 | March, 2019 | First Workshop completed Second workshop completed Manuals currently under review |
| 7. | Development and Recommendations for alternative surfacing for low volume roads in Ghana, Sierra Leone and Liberia | To recommend alternative surfacing technologies that may be viable for low volume roads in terms of lifecycle cost savings compared to traditional gravel surfacing in AfCAP countries in the West African Sub Region. | October, 2017 | March, 2019 | First Workshop completed Second workshop completed |
| 8 | Enhancing understanding on safe motorcycle and three-wheeler use for rural transport | The overall aim of the project is to improve knowledge and understanding concerning effective ways of enabling rural people to benefit from the safe use of motorcycles and three-wheelers, with emphasis on rural motorcycle taxis, rider training, appropriate regulatory frameworks and realistic enforcement methods | 18 th September 2017 | 31 st October 2018 | A first project workshop was held in Ghana in November 2017. An Inception report has been submitted. Preparations are under for the project implementation phase to commence |

8.1.3 Research Uptake and Embedment

1. A workshop was held in May 2017 with 70 participants from stakeholder entities including affiliated transport agencies, research institutions, the academia, the institution of engineers, donor representatives and the CSIR South Africa to discuss ways of applying the outcomes of the research findings.

From the workshop, a framework for research application was developed with positive donor response to the support to the expansion and application of the research outcomes.

2. Two of the trainers of trainers trained in the use of the DCP DN method have qualified as key trainers to train as international trainers in the DCP DN method
3. The Koforidua Training Centre has officially adopted the DCP DN as one of their training programmes and two training sessions for both local and international engineers, consultants and contractors are earmarked to be implemented this year.
4. Ghana has also hosted both Liberia and Sierra Leone in the training in the DCP DN method
5. Liberia has proposed to join in the demonstration phase of the steep hills project
6. Ghana is due to host the annual AfCAP Steering Committee Meeting for 2018 from the 15th to 17th may 2018

8.1.4 Conclusions and Recommendations

The AfCAP programme in Ghana has so far been successful, the Department of Feeder Roads has also effectively spearheaded all the projects directly under its purview and all the collaborative agencies have been supportive where necessary. These notwithstanding, the programme has also brought significant fiscal and logistical commitment to the Department, specifically, workshops and counterpart funding are all financed by DFR. Consequently, the Department has introduced a line item in its Road Fund budget to meet these obligations. Furthermore, approval of variation of works on existing contracts to accommodate research demonstration has been generally slow and contractors working on the only approved demonstration site has been slow due to delay in payment.

It is therefore recommended that MRH earmark special funding for the payment of works executed under the demonstration sites.

It is also recommended that some of the outcomes of the AfCAP research findings be integrated into new projects such as the TSPI. E.g. the application of the DCP DN method should be

considered for implementation on the improvement of some of the low volume roads alongside the conventional design methods.

Furthermore, following the workshop held on 22nd August, 2017 in conference room of MRH to disseminate and solicit opinions on strategies for the uptake and embedment of AfCAP research findings, it is recommended that MRH develop a comprehensive implementation strategy of the entire research programme.

CHAPTER NINE: LABOUR-BASED BITUMINOUS SURFACING TECHNOLOGY STUDIES

9.1 The Importance of the Technology

In order to address the problem of low durability of unpaved feeder roads, the Department of Feeder Roads (DFR) under the Ministry of Roads and Highways has solicited support from Japan International Cooperation Agency (JICA) to assist in the development of Labour-Based Bituminous Surfacing technology (LBST) for feeder roads. This concept has become critical to DFR because it will be the means by which the DFR can support the Government of Ghana in its fight against the increasing rate of unemployment among the youth.

The method also has the advantage of using cold bitumen since heating of bitumen in the conventional bitumen preparation for hot spraying has its own associated risks and cost.

JICA has been requested to assist in a pilot project to establish methodology and application of the LBST through field trials in the Eastern Region of Ghana. When the field trials is successful then the technology will be replicated nationwide by DFR as a tool to protect the easily erodible surfaces of gravel roads at cheaper costs.

9.2 Memorandum of Understanding (MoU)

In a MoU, DFR is supposed to make available a road that has been constructed up to subbase with all the needed concrete structures in place using labour-based technology. JICA on the other hand will provide funds for the cost of laying of base material, provisions of bitumen and chippings, provision of a set of simple bituminous surfacing equipment, cost of labour, and the provision of Japanese experts to assist in the project. At the end of the pilot project JICA will develop a Guideline (manual) to be used as a working document on the technology for future use.

9.3 Status of the Project

The preparatory stage of the project started in 2015 and spilled into 2016. The JICA Team has so far been working closely with the management of DFR as well as the Koforidua Training Centre (KTC). In order to ensure the success of the Project, a Steering Committee and a Technical Working Group was formed for that purpose.

The selected Project Site is Obomofodensua - Akote – Asiedu feeder road (5.55km). The project is being executed in two (2) phases

The phase 1 covered the length from Obomofodensua to Akote (km 0.00 – 2.700) which was further divided into sections where cold asphalt and chip seal were applied at different spray rates. The Phase 1 trial has successfully been completed.

The Phase 2, which covers a length of 2.85km from Obomofodensua towards Akote (i.e km 2.70 – 4.40) commenced in January, 2018 and was completed by December, 2018. The Government of Ghana (GoG) funded the project up to the sub-base whiles JICA provided funding for the base and sealing works. An operational manual was produced as part of the final outcome of the trials. This is to provide the necessary guidelines for future expansion and replication.

The remaining length from km 4.40 – 5.55 is expected to be executed fully under GoG funding from clearing through to final sealing using the manual as a guide

CHAPTER TEN: MONITORING OF DFR PROJECTS IN 2018

The annual monitoring of site activities in the Regions by Teams from the Head Office has been the norm to ensure that projects are executed in accordance with specifications in order to achieve value for money. The Monitoring Teams are headed by Chief Engineers from the Head Office.

The monitoring of projects in 2018 was expected to continue as previous years. However the physical movement to sites was contingent on contractors being active at site. Not much site activities were observed so much as to encourage visits by monitoring teams. It is therefore proposed that at least sample sites be visited in all the regions during 2019 to ascertain the level of activeness.

CHAPTER ELEVEN: CHALLENGES AND THE WAY FORWARD

The Department performed creditably during the year under review. However, it faces internal and external challenges. Some of the challenges and proffered solutions are as follows:

10.1 Challenges

- Inadequate budget for road works
- Delay in the payment of works done
- LBT Contracts not getting the needed support to revamp the technology
- Inadequate consultants' capacity
- Difficulty of contractors in accessing credit and high cost of capital
- Inadequate project preparation, supervision and monitoring of contracts due to low staffing levels and logistical support, especially, supervision vehicles and staff training
- Threat posed to the maintenance of the network as a result of the decentralization since the technical staff in the Assemblies are of inadequate capacity.

10.2 Way Forward

- Decentralization

The realignment of the department to conform to the decentralization process is in progress. Under the realignment DFR's district staff have become part of the Local Government Service. DFR will then be responsible for planning, monitoring and provision of technical services for the MMDAs.

There is the need for the following to ensure effective and enhanced performance of DFR

- Capacity building for Contractors/Consultants and DFR Staff
- Strategic increase in the use of Labour Based Technology for road works
- Alternate source of funding to improve the payment regime
- Timely payment for works done
- Adequate time to be given to project preparation, supervision and monitoring with improved logistical support
- Stringent enforcement of contract conditions

- Introduction of sanctions (e.g. punitive measures, blacklisting, etc.) for non-performing contractors and consultants
- Limit overloading of contractors
- Use of the Road Prioritization Methodology in road selection for development