



District Road Works

VOLUME

2

Contract Documentation Manuals

Manual B:

Contract Documentation & Procedures for Labour-Based Routine Maintenance



ACKNOWLEDGEMENTS

These manuals have been prepared by the Ministry of Works, Housing and Communications, Uganda.

The aim of the manuals is to complement the Ministry's effort in providing guidance and building capacity of Local Governments to enable them handle their mandated roles in planning and management of the road sector development.

This manual is part of a set titled District Road Works. The set consists of 5 Volumes, each volume comprising a series of manuals covering varying aspects under the following headings:

- Volume 1 Planning Manuals
- Volume 2 Contract Management Manuals
- Volume 3 Implementation and Monitoring Manuals
- Volume 4 Technical Manuals
- Volume 5 District Administrative and Operational Guidelines

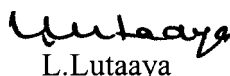
The Manuals describe in detail the organization and techniques for planning, implementation and administration of a district road network. The manuals support Government strategies on sustainable maintenance of district roads; they encourage community participation, promote use of labour based methods and gender balance, ensure protection of the environment, foster work place safety and health in implementation of road works by adopting appropriate contracting practices and support the local construction industry.

They are primarily aimed at Road Engineers, Planners and Managers involved in the planning and management of district road works.

In line with the topics covered in these manuals, related training modules have been designed and are incorporated in the curriculum of the Mount Elgon Labour Based Training Centre.

The manuals are the property of the Ministry of Works, Housing and Communications, but copying and local distribution is not restricted.

We wish to acknowledge the efforts of COWI Consulting Engineers and Planners AS who assisted in the compilation of the Drafts and the invaluable support of the Danish International Development Agency for the financial assistance extended to the Ministry in preparing the manuals.



L.Lutaaya

Engineer in Chief / DE

Volume 2 Manual B
Contract Documentation & Procedures
for Labour-Based Routine Maintenance

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General Information

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Section B1

General Information

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General Information

PREAMBLE

This Manual, read together with the following documents;

- PAF General Guidelines for the Planning and Operation of Conditional Grants issued by the Ministry of Finance Planning and Economic Development (MFPED), (Reference I)
- Sector Specific Guidelines for the Planning and Operation of District Road Maintenance & Rehabilitation Programmes issued by the MoWHC-DUR Desk, (Reference II)

provide guidelines for the preparation of documentation and implementation procedures for undertaking Labour-Based Routine Maintenance works on District Roads.

With regard to the above Guidelines, the most important considerations to be taken into account include -

- Conditional Grant funds for district road maintenance shall be restricted to labour-based routine maintenance expenditures only
- Conditional Grant funds may be used for the following activities -
 - a) Labour-based routine maintenance operations
 - b) Payments to labour-based routine maintenance Contractors
 - c) Allowances for maintenance works supervision staff
 - d) Costs associated with fuel, servicing and minor repairs to supervision vehicles/motor bikes
 - e) Costs of labour-based routine maintenance contractor pre-qualification, tendering, contract documentation, certification and subsequent reporting
- Priority for routine maintenance shall be given to all those district road links determined during ADRICS to be in maintainable condition; refer Volume 1, Manuals B and C
- Priority for routine maintenance operations shall be those activities related to conservation of the drainage system and removing standing water from the roadway (carriageway and shoulders) surface

RESPECTIVE ROLES/RESPONSIBILITIES OF THE MoWHC AND THE DISTRICT LOCAL GOVERNMENTS

THE MoWHC

The principal role of the MoWHC is to exercise its inspection and monitoring mandate including -

- Determination of performance status of maintenance and the effectiveness of operations
- Review contract documentation, expenditures and accounts
- Ensure that the procurement procedures detailed in the District Local Government Tender Board Regulations, 1999, (Reference III) are followed
- Advise the Ministry of Financial Planning and Economic Development (MFPED) regarding performance of maintenance operations and satisfactory accounting for Conditional Grant funds

THE DISTRICT LOCAL GOVERNMENT (DLG)

The principal roles of the DLG include -

- Utilisation of Conditional Grant maintenance funds solely for undertaking labour-based routine maintenance operations on district roads determined during ADRICS to be in maintainable condition
- Undertaking appropriate and effective labour-based routine maintenance operations on all those district road links determined during ADRICS to be in maintainable condition
- Undertaking annual pre-qualification and transparent selection of suitable local domestic contractors for implementation of labour-based routine maintenance operations
- Undertaking labour-based routine maintenance operations using pre-qualified local domestic contractors living within the immediate vicinity of their respective district road links
- Undertaking an openly advertised and transparent tendering and award of contract process that fully complies with the District Local Government Tender Board Regulations, 1999
- Compliance by the Chief Administrative Officer and other concerned district officials, including the DLG Engineer, with the Local Governments Financial and Accounting Regulations, 1998, including the quarterly accounting for Conditional Grant funds as required by the MFPED
- Making available for inspection by the MoWHC all maintenance work sites, contract documentation, records of expenditures and statements of accounts, plant, equipment, supervision transport, stores, workshops and offices
- Applying to the Permanent Secretary for authorisation, during times of emergency, for the utilisation of working methods other than labour-based techniques for implementation of routine maintenance works

Section B1 : General Information

Section B2

Pre-qualification Documentation

Section B3 : Labour-Based Routine Maintenance Contract Documents

Section B4 : Procedures for Labour-Based Routine Maintenance

Annexes :

1. Cotractor Pre-Qualification Form
2. Documents Comprising the Labour-Based Routine Maintenance Contract
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Pre-qualification Documentation

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Pre-qualification Documentation

PREAMBLE

In compliance with the Local Government Act 1997, the Local Governments Financial and Accounting Regulations 1998, and the District Local Government Tender Board Regulations 1999, pre-qualification of local domestic contractors shall be undertaken annually.

The requirements regarding pre-qualification are set out in the District Local Government Tender Board Regulations 1999, Clause 20 and extracts therefrom follow -

- Clause 20 (1) - "The Secretary of the Local Government Tender Board shall maintain a list of approved suppliers and contractors including transporters which list shall be kept under constant review by the Board and renewed annually....."
- Clause 20 (2) - "Applications from suppliers, contractors, transporters and other companies and firms for inclusion on the approved list shall be considered and approved by the Local Government Tender Board which may qualify or disqualify a company, firm or individual seeking to supply goods, services or works to the Council and give reasons for its action"

TIMING FOR PRE-QUALIFICATION OF CONTRACTORS

The pre-qualification of local domestic is best undertaken during the period May/June preceding the commencement of the next financial year enabling the award of contracts for routine maintenance operations to pre-qualified contractors immediately funds become available.

PRE-QUALIFICATION DOCUMENTATION

Annex 1 hereto provides a standard 'Application for Pre-qualification' format, including a system for scoring applications recommended for use when undertaking annual pre-qualification and selection of local domestic contractors suitable for implementation of labour-based routine maintenance operations on district roads.

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Labour-Based Routine Maintenance Contract Documents

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Annexes :

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Labour-Based Routine Maintenance Contract Documents

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Labour-Based Routine Maintenance Contract Documents

DOCUMENTS COMPRISING THE CONTRACT

Contract documents for labour-based routine maintenance operations on district road links shall comprise the following -

- **Contract Agreement** (including the four Annexes mentioned below) - includes the legal framework for administration of the Contract, obligations of the Employer and the Contractor, frequency of inspection, certification and payments and other relevant information
- **Contract Data** - Appendix 1 to the Contract Agreement summarising the most salient points in the Contract Agreement including the agreed Contract Price
- **Maintenance Activity Schedule** - Appendix 2 to the Contract Agreement listing all routine maintenance Work Items included in the Contract
- **Technical Specifications** - Appendix 3 to the Contract Agreement defining the scope and quality requirements for all Work Items included in the Maintenance Activity Schedule together with their methods of measurement
- **Drawings** - Appendix 4 to the Contract Agreement (where required) of scour checks, scope and limits for grass cutting, bush clearing, clearing of water ways, etc.

CERTIFICATION DOCUMENTATION

Certification documentation related to certification and payment for Works performed under a Contract for labour-based routine maintenance operations include the following -

- Monthly Site Inspection Report / Measurement Sheet
- Payment Certificate

Typical formats for all these documents are included in **Annex 2** hereto.

WORK ITEMS INCLUDED IN THE MAINTENANCE ACTIVITY SCHEDULE - APPENDIX 2

Contracts for labour-based routine maintenance operations on district roads shall provide for undertaking the following activities as Work Items in the Maintenance Activity Schedule -

- RM1** 'Inspection and Removal of Obstructions' - inspection of the entire road formation width, identification and removal of all obstructions (dead animals, anthills, stones, earth slips, fallen trees, etc..)
- RM2** 'De-silting Culverts and Clearing Culvert Inlets and Outlets' - clear silted culverts including their inlets and outlets
- RM3** 'Clean Side, Catch-Water and Mitre Drains' - clear road side drains, catch-water drains and mitre drains of all vegetation, silt and debris, restore to their original dimensions and remove all debris
- RM4** 'Repair Erosion on Shoulders and Drains' - repair eroded shoulders and all drains with suitable and approved material
- RM5** 'Repair Scour Checks' - repair / replace scour checks, and where instructed, install new scour checks

- RM6** 'Grub Roadway' - weed all vegetation from the carriageway and road shoulders
- RM7** 'Clear Structures and their Waterways' - clear drifts, vented drifts, bridges and other structures including their inlet and outlet channels and clear stream channels both upstream and downstream of all vegetation and debris to safely facilitate the flow of water
- RM8** 'Fill Potholes and Ruts on the Carriageway' - fill potholes and ruts in the road carriageway with suitable and approved material
- RM9** 'Cut Grass and Bush' - Cut grass and bush on the road shoulders, in the road side drains and on the road side drain back-slopes to the height and width required and remove all debris
- RM10** 'Other Activities as Instructed' - including the planting of grass and trees and other activities as may be required by the Employer and included in the Contract Agreement

TECHNICAL SPECIFICATIONS FOR ROUTINE MAINTENANCE WORK ITEMS - APPENDIX 3

Technical Specifications define the scope, preferred working method and quality requirements, and methods of measurement for all Work Items included in the Maintenance Activity Schedule.

Technical Specifications for all the Work Items listed in 'Work Items included in the Maintenance Activity Schedule' above are provided in **Annex 2** hereto.

The Technical Specifications also provide Guidelines for the identification of priority routine maintenance activities and the time of year in which the activities are best performed to ensure efficient and cost effective district road maintenance.

Compliance by the Contractor with these Technical Specifications is mandatory.

Failure by the Contractor to fully comply with these Technical Specification shall, during preparation of the Monthly Site Inspection Report / Measurement Sheet, result in rejection of those poorly performed Work Items, with subsequent adjustment of the Measurement Sheet and reduced payment to the Contractor.

DRAWINGS - APPENDIX 4

Appendix 4 of the Contract provides a list of terms commonly used in routine maintenance contract documentation together with two standard drawings including;

- typical district road cross-section, and
- typical drainage system schematic

Additional drawings of scour checks, scope and limits for clearing of water ways, etc. may be provided where the Employer considers it to be necessary.

In the event additional drawing are provided, they shall form part of the Contract and shall be strictly complied with by the Contractor during his/her performance of the Works.

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Procedures for Labour-Based Routine Maintenance

Annexes :

1. Cotractor Pre-Qualification Form
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Procedures for Labour-Based Routine Maintenance

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Procedures for Labour-Based Routine Maintenance

PREAMBLE

Efficient and cost effective routine maintenance can only be achieved where an enabling working environment including simple and transparent procedures exists.

Such an environment must have the following elements -

- a) sufficient number of local domestic trained contractors for implementation of maintenance works
- b) sufficient number of trained district staff to manage and administer contracted maintenance works
- c) transparent procedure for contractor pre-qualification; refer Annex 1 hereto.
- d) simplicity of routine maintenance contract documentation; refer Annex 2 hereto
- e) transparent procedure for contract award; refer Reference III
- f) efficient working methods, and clear, simple and precise technical specifications and guidelines; refer Appendixes 2, 3 and 4 to the contract documentation provided in Annex 2 hereto
- g) adequate profit margins to encourage active participation and achievement of performance standards
- h) transparent system for frequent (monthly) inspections of contractors work sites, to report on works undertaken and prepare programmes for future works; refer Annex 2 hereto
- i) transparent and simple system for the measurement of works performed and certification for payment; refer Annex 2 hereto
- j) efficient system for making frequent payments to contractors for works performed; refer Annex 2 hereto
- k) adequate and timely provision of funding for meeting the costs of maintenance management and administration, and payments to contractors

Components a) and b) involve extensive training programmes for both contractors and district staff.

These programmes are available through the MoWHC's Mount Elgon Labour-Based Training Centre, located some 15 kilometres north of Mbale town.

Component k) involves the MoWHC and the MFPED who rely on district administrations for the provision of accurate and timely reports including accountability for Conditional Grant funds.

The principle instrument for such reporting is the Quarterly Progress Report; refer **Volume 3, Manual B** for guidelines regarding the preparation of Quarterly Progress Reports (QPRs).

Where district administrations conform to the PAF General and Sector Specific Guidelines (References I and II respectively) and submit accurate and timely QPRs, there is every likelihood that the MFPED will be in a position to release funds in the full amounts and at the times requested.

Components c) to j) are the domain of the district administrations.

To assist district administrations in enhancing their performance to efficiently and cost effectively implement district road routine maintenance operations, the following procedural guidelines have been prepared.

PROCEDURES FOR LABOUR BASED ROUTINE MAINTENANCE

The tendering process should favour local communities. Advertising for routine maintenance contractors shall include copies posted at the headquarters of those sub-counties in which routine maintenance works are to be performed thereby informing and encouraging local communities or individuals from those communities to submit expressions of interest (Annex 1) for the works.

Once routine maintenance contracts are awarded, the Chairpersons of the Parish Development Committees and/or the Sub-county Chiefs shall be provided a copy of the contract in order to undertake adequate monitoring of the maintenance works.

Sub-county representatives including the Chairpersons of the Parish Development Committees and the Sub-county Chiefs shall be involved during the recruitment of workers by contractors to ensure fairness, transparency and equal opportunity for men and women in employment.

Sub-county representatives including the Chairpersons of the Parish Development Committees and the Sub-county Chiefs should take a greater interest in the performance of the maintenance works and their signatures shall be attached to Expressions of Interest for communities/individuals who apply to undertake such works.

Sub-county representatives including the Chairpersons of the Parish Development Committees and the Sub-county Chiefs should immediately be informed in cases where workers are not paid/under paid for works performed. There is a provision in the contract documentation (Annex 2) for the withholding of payments to contractors in the event of such failure to pay workers.

Sub-county representatives including the Chairpersons of the Parish Development Committees and the Sub-county Chiefs should also monitor the use of suitable and appropriate hand tools for undertaking routine maintenance works. Where the contractor is failing to provide such hand tools, the relevant staff in the office of the DLG Engineer should be informed in order that action can be taken.

Further, where routine maintenance works are delayed resulting in deterioration of the road(s), the Sub-county representatives including the Chairpersons of the Parish Development Committees and the Sub-county Chiefs shall inform the relevant staff in the office of the DLG Engineer.

OUTPUTS FOR IMPLEMENTATION OF ROUTINE MAINTENANCE WORKS

Routine maintenance works on district roads are, by definition, undertaken using labour-based methods.

The list of routine maintenance activities appropriate for district roads in Uganda is provided in Appendix 2 'MAINTENANCE ACTIVITY SCHEDULE' of the contract documentation attached hereto as Annex 2.

To effectively assign work tasks for implementation, by labour, for each of the routine maintenance activities listed in the 'MAINTENANCE ACTIVITY SCHEDULE', a set of proven work norms or 'Outputs' are required which are acceptable and fair to the workers, the Contractor(s) and the Employer; i.e. to all parties concerned with the Contract.

An important reference for both district technical staff and contractors involved with implementation of routine maintenance activities including determination and agreement of maintenance activity outputs, is Table 8.2 in TRRL Overseas Road Note Number 1 - Maintenance Management for District Engineers; Reference IV hereto.

The following Table provides such a summary of routine maintenance activity 'Outputs', which fully conform with past and current experience both within Uganda and internationally.

The Outputs quoted are in Units allowing for transparency and simplicity during monthly site inspections and preparation of the Monthly Site Inspection Report / Measurement Sheet; refer Section 3 below.

Summary of Routine Maintenance Activity Outputs

Work Item	Description of Routine Maintenance Activity	Unit of Measurement	Routine Maintenance Activity Outputs - Average Output of One Worker per Day a)
RM1	Inspection and Removal of Obstructions	km	Entire Road Section length every day
RM2	De-silting Culverts and Clearing Culvert Inlets and Outlets	no	1 no culvert line per worker per day
RM3	Clean Side, Catch-water and Mitre Drains	km	Partly Silted - 0.050 km per worker per day Fully Silted - 0.025 km per worker per day
RM4	Repair Erosion on Shoulders and Drains	km	0.020 km per worker per day
RM5	Repair Scour Checks	no	5 no per worker per day
RM6	Grub Roadway	km	0.020 km per worker per day
RM7	Clear Structures and their Waterways	no	< 3 metres wide - 1 no per worker per day > 3 metres wide - on agreement with Employer
RM8	Fill Potholes and Ruts on the Carriageway	km	10 square metres per worker per day
RM9	Cut Grass and Bush	km	0.020 km per worker per day
RM10	Other Activities as Instructed by the Employer	-	Only following instruction by and agreement with the Employer

Note: a) TRRL Overseas Road Note Number 1 - Table 8.2, Maintenance Management for District Engineers

MONTHLY SITE INSPECTION REPORT / MEASUREMENT SHEET

The Monthly Site Inspection Report / Measurement Sheet is the key instrument for effective management and administration of contracted routine maintenance works.

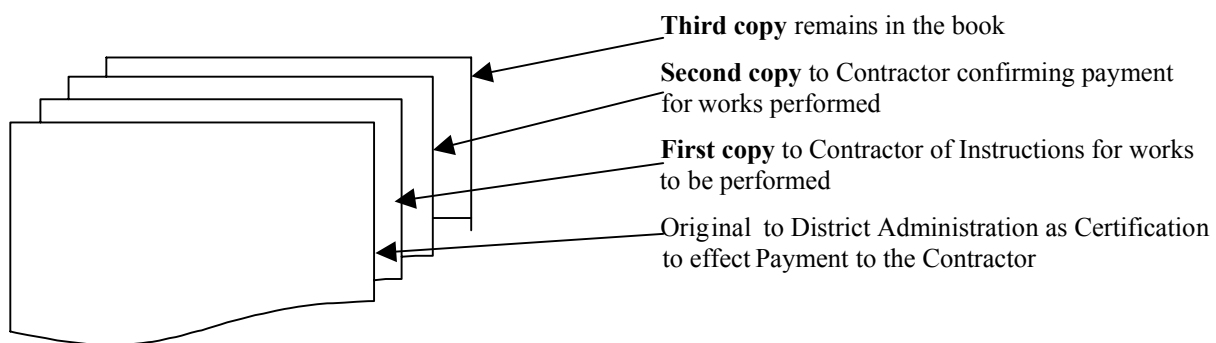
The Monthly Site Inspection Report / Measurement Sheet serves a number of very important functions (refer Clause 2.5 of the Contract Agreement; Annex 2 hereto) including -

- a record of inspection of all works performed by the Contractor during the month preceding the site inspection to ensure compliance with all those instructions given to the Contractor during the previous site inspection,
- a record of those assigned works which were 100 % performed that month to the full satisfaction of the Employer (refer Clauses 3.1 and 3.3 of the Contract Agreement; Annex 2 hereto), and which are thereby certified for payment to the Contractor by the district administration, and
- a record of the instructions given to the Contractor detailing those works to be performed by the Contractor in the month immediately following the site inspection.

In order to facilitate site inspection activities and ensure efficiency and transparency of the procedure, the Monthly Site Inspection Report / Measurement Sheet is produced as a pre-printed A4 size book in which each set of four pages comprises an individual Site Inspection Report; refer example below.

Each of these four pages has a dedicated purpose as follows -

- **Original**, which lists those maintenance activities to be performed on particular sections of the road during a specific month, and when certified by the Employer's Representative, serves as the supporting document by the Employer for preparation of the Contractor's Payment Certificate and cheque
- **First copy**, provided by the Employer's Representative to the Contractor on the same day as the site inspection, and serves as a record of the maintenance activities to be performed on particular sections of the road during the month immediately following the site inspection, and subsequently used by the Contractor to plan and implement the listed maintenance activities
- **Second copy**, provided by the Employer's Representative to the Contractor on the day of the very next site inspection, and serves (together with the Original and the Third copy) as a record of those works that have been certified as 100% performed on the particular sections of the road to the full satisfaction of the Employer, and subsequently used by the Contractor to claim payment from the Employer
- **Third copy**, remains in the book as a permanent record and future reference as may be required for audit and other purposes and for monitoring and updating planning data including activity output work norms



When the Employer's Representative visits an ongoing work site, he/she undertakes, together with the Contractor and/or his/her representative, two specific activities:

a) Inspection/measurement of previous months maintenance activity plan

Referring to the Monthly Site Inspection Report / Measurement Sheet prepared during the previous site inspection, carries out a detailed inspection to measure and determine if all those maintenance activities listed and on the specified road sections have been 100% performed to the full satisfaction of the Employer, and, where the works have been satisfactorily performed, certification of the work recorded on the **Original, Second copy** and **Third copy** of that Monthly Site Inspection Report / Measurement Sheet.

The **Second copy** of the Monthly Site Inspection Report / Measurement Sheet is then removed from the book and provided to the Contractor for his/her records and use when claiming payment from the Employer.

Immediately on return to the district office, the Employer's Representative removes the **Original** of the Monthly Site Inspection Report / Measurement Sheet and hands this over to the Employer, who within five (5) working days, shall prepare the Payment Certificate; refer Clause 2.6 of the Contract Agreement.

b) Preparation of next months maintenance activity plan

Carry out a detailed site inspection and prepare a new Monthly Site Inspection Report / Measurement Sheet listing those maintenance activities to be performed and specifying the road sections on which they are to be performed during the month immediately following this site inspection.

The **First copy** of this new Monthly Site Inspection Report / Measurement Sheet is then removed from the book and provided to the Contractor for his/her records and use for planning and implementation of the listed maintenance activities.

The **Original, Second copy** and **Third copy** of this Monthly Site Inspection Report / Measurement Sheet remain in the book until the next site inspection; refer a) above.

An example of the Monthly Site Inspection Report / Measurement Sheet is provided below together with a worked example to assist the Employer's Representative in preparing the list of maintenance activities to be performed and determination of those sections of the road on which they are to be performed.

Notes regarding completion of the Monthly Site Inspection Report / Measurement Sheet follow -

- One form (in quadruplicate) to be used for each individual Road Section included in a Contract; refer Appendix 1 to the Contract Agreement, Contract Data, Item 11
- All details regarding the contract number, road section, site inspection date, etc., must be filled in
- **Road Section Length - Km** or **(a)** is that detailed for each individual Road Section included in a Contract; refer Appendix 1 to the Contract Agreement, Contract Data, Item 11
- **ADRICS Degree of Difficulty - Total Worker-days / Km / Year** or **(b)** is that detailed for each individual Road Section included in a Contract; refer Appendix 1 to the Contract Agreement
- **Total Worker-days Available during the Month** or **(c)** is the calculation $(a) \times (b) / 12$
- **Instruction & Calculation Table** is used to a) list those maintenance activities (**Work Item**) to be performed during the month following the site inspection and b) detail those road sections on which the activities are to be undertaken during the same month (**Maintenance Length This Month**)
- Typical examples of each **Calculation** using a combination of the **Activity Output** and the **Maintenance Length This Month** are provided in the worked example below
- **Worker-days** are the number of worker-days (**WD**) calculated as being required to perform each and every one of the listed activities; the total of which shall be equal to the **Total Worker-days in Month** or **(c)** available in the month; note, always round down as shown in the worked example below
- **Certification of Work** is used for signing-off those maintenance activities or **Work Items** that were performed 100% to the full satisfaction of the Employer and for which the Contractor shall be paid

Monthly Site Inspection Report / Measurement Sheet

Contract No: **Dated:** / / 20

District:..... **Road No:** **Road Name:** **Road Section from** **Km to** **Km**

Site Inspection Date: / / 20..... **Name of Inspecting Officer/Employer's Representative:**

Road Section Length - Km (a)	ADRICS Degree of Difficulty - Total Worker-days / Km / Year (b)	Total Worker-days Available during the Month - (c) = (a) x (b) / 12 = (say)
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Instruction & Calculation Table - Activities and Locations for Period: / / 20..... **to** / / 20

Work Item *	Activity Output	Maintenance Length This Month		Calculation	Worker-days (WD)	Certification of Work
		From (km)	To (km)			
RM1	Entire Road Section length every day					
RM2	1 no culvert line per worker per day					
RM3	Partly silted - 0.050 km per worker per day					
	Fully silted - 0.025 km per worker per day					
RM4	0.020 km per worker per day					
RM5	5 no per worker per day					
RM6	0.020 km per worker per day					
RM7	< 3 metres wide - 1 no per worker per day					
	> 3 metres wide - agreement with Employer					
RM8	10 square metres per worker per day					
RM9	0.020 km per worker per day					
RM10	On Instruction by Employer					

* Refer Appendixes 2 and 3 respectively for Activity Descriptions and Technical Specifications

Total Worker-days in Month = (c)	
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Agreed and Signed on behalf of the Contractor by (name) (signature) **Date** / / 20

Agreed and Signed on behalf of the Employer by (name) (signature) **Date** / / 20

Monthly Site Inspection Report / Measurement Sheet - *Worked Example*

Contract No: LDLG / 02.03 / 02

Dated: 15 / August / 20 02

District: Lira

Road No: 2210

Road Name: Kilak - Lira Corner

Road Section from 0 + 000 Km to 21 + 500 Km

Site Inspection Date: 21 / November / 20 02

Name of Inspecting Officer/Employer's Representative: Albert Ongia Adoch

Road Section Length - 21 + 500 Km (a)	ADRICS Degree of Difficulty - 185 Total Worker-days / Km / Year (b)	Total Worker-days Available during the Month - (c) = (a) x (b) / 12 = 21.500 x 185 = 331.46 (say 331)
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Instruction & Calculation Table - Activities and Locations for Period: 21 / November / 20 02 to 21 / December / 20 02

Work Item *	Activity Output	Maintenance Length This Month		Calculation	Worker-days (WD)	Certification of Work
		From (km)	To (km)			
RM1	Entire Road Section length every day	0 + 000	21 + 500	1 WD for road every day for one month	30	
RM2	1 no culvert line per worker per day	0 + 000	21 + 500	47 no culverts @ 1 line each / 1 WD per	47	
RM3	Partly silted - 0.050 km per worker per day	10 + 000	12 + 000	2.0 km x 2 sides / 0.050 km per WD	80	
	Fully silted - 0.025 km per worker per day	-	-	-	-	
RM4	0.020 km per worker per day	13 + 000	14 + 000	1.0 km / 0.020 km per WD	50	
RM5	5 no per worker per day	13 + 000	14 + 000	25 no scour checks / 5 per WD	5	
RM6	0.020 km per worker per day	14 + 000	14 + 700	0.70 km / 0.020 km per WD	35	
RM7	< 3 metres wide - 1 no per worker per day	14 + 000	21 + 500	15 no / 1 per WD	15	
	> 3 metres wide - agreement with Employer	14 + 000	21 + 500	2 no / 0.25 per WD	8	
RM8	10 square metres per worker per day	17 + 000	19 + 000	80 square metres / 10 per WD	8	
RM9	0.020 km per worker per day	18 + 000	19 + 000	1.0 / 0.020 km per WD	50	
RM10	On Instruction by Employer	-	Misc.....		3	
* Refer Appendixes 2 and 3 respectively for Activity Descriptions and Technical Specifications					Total Worker-days in Month = (c)	331

Agreed and Signed on behalf of the Contractor by (name) **John Bosco Okidi**

(signature) Date 21 / November / 2002

Agreed and Signed on behalf of the Employer by (name) **Albert Ongia Adoch**

(signature) Date 21 / November / 2002

Annex 1

Contractor Pre-qualification Form

..... **District Local Government**

**Application for Pre-qualification for Undertaking Labour-Based
Routine Maintenance Operations on District Road Links**

A Application Particulars:

A1 Name of Applicant/Company

A2 Home Address of Applicant/Company

.....

A3 Parish(s) **Sub-County**

A4 Age years **Sex**

A5 Education background

.....

B District Road Link Applied for:

B1 Road Link Number

B2 Road Link Name

B3 Road Link Section **From** **To**

B4 Total Length of Section kilometres

B5 Distance of Home Address from Section kilometres

C Local Councils Confirmation:

C1 Chairperson, Parish Development Committee(s) - Recommendation

.....
.....

C2 Sub-County Chief - Recommendation

.....
.....

D Details of Previous Relevant Experience:

.....
.....
.....
.....
.....
.....

E Details of any Relevant Training; attach copies of Certificates:

.....
.....
.....

F Details of the Workforce:

Name of Worker	Sex of Worker	Experience
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		

G Details of Hand-tools Available:

Hand-tool Type	Number	Condition
1		
2		
3		
4		
5		
6		
7		

H Financial Capacity; attach original Bank Statements for the past three months:

Demonstrate the financial capacity of the Company/Individual by attaching to this Application, original bank statements of the Company/Individual for the past three months.

I Declaration:

On behalf of the above detailed Company/Individual, I declare all information contained herein to be true.

If the above detailed Company/Individual is selected for pre-qualification, I declare that;

- the Company/Individual shall provide the financial resources necessary to employ a minimum of one full-time supervisor (Gangleader), who shall represent the Company/Individual for the entire duration of any Contract awarded to this Company/Individual,
- the name of the full-time and responsible Gangleader is
- the Company/Individual shall provide the financial resources necessary to employ a minimum number of full-time workers for undertaking the road maintenance works included in the Contract,
- the Company/Individual shall, where ever possible, give preference to the employment of women for undertaking the works included in the Contract,
- the Company/Individual shall, at their own cost, participate in any and all relevant training programmes provided by the Council to enhance the performance of the works included in the Contract,
- The Bank Account details for payment of Certificates follows

Bank, Branch, Account No

NAME:

SIGNATURE:

DATE : / / 200

Total Scored Points of 60 Points

To be Completed by the Evaluation Committee

Detailed Analysis Result –

Recommended for / Not Recommended for Pre-qualification

Signed by
(DLGEngineer)

Signed by
(Chairperson DLG Evaluation Committee)

Approved by
(Secretary, DLGTB)

Suggested Scoring System - Maximum Score 60 Points

Part A - Maximum Score 15 Points

- A3** If Applicant lives in the Parish/Sub-county through which the Road Section applied for passes, the Score is five (5) points; if not, the Score should be zero (0) points.
- A4** If the Applicant is female, Score is five (5) points; if male then two (2) points only.
- A5** If the Applicant has a technical education including A Level or better, the Score is five (5) points. If O Level, the Score is three (4) points, if only P7 level or below then the Score is two (2) points only.

Part B - Maximum Score 5 Points

- B5** If the Applicant lives within five (5) kilometres of the Road Section applied for the Score is five (5) points. If greater than five (5) but less than ten (10) kilometres the Score is three (3) points. If greater than ten (10) kilometres the Score is zero (0) points.

Part C - Maximum Score 5 Points

C1 & C2

Where the Applicant is confirmed/recommended by both the LC1 and LC3 Councils, the Application should continue to be Scored.

Where no confirmation is received by either or both local councils, the Application should be ignored and the Applicant NOT pre-qualified.

Part D - Maximum Score 5 Points

Where Applicant has relevant and recent experience undertaking road maintenance works Score five (5) points.

Where Applicant has some experience only but includes road maintenance works Score three (3) points.

Where Applicant has little or no experience Score one (1) point only.

Part E - Maximum Score 5 Points

Where Applicant has attended relevant and recent training for undertaking road maintenance works Score five (5) points.

Where Applicant has received some training related to road maintenance works Score three (3) points.

Where Applicant has had little or no training Score one (1) point only.

Part F - Maximum Score 10 Points

Where Applicant has a total work force greater than 50% female Score ten (10) points.

Where Applicant has between 15% and 50% female workers Score is seven (7) points.

Where Applicant has up to 15% female workers Score is three (3) points.

Where Applicant has no female workers Score should be zero (0) points.

Part G - Maximum Score 5 Points

Where Applicant has sufficient range and number of hand tools in good condition Score is five (5) points.

Where Applicant has inadequate range and number of hand tools in any condition Score is zero (0) points.

Part H - Maximum Score 10 Points

Where the average of the three monthly Bank Statements is; greater than UGX 3.0 million, Score is ten (10) points, greater than UGX 2.0 million, Score is six (6) points, and greater than UGX 1.0 million, Score is three (3) points.

Annex 2

Documents Comprising the Labour-Based Routine Maintenance Contract

**CONTRACT AGREEMENT FOR LABOUR-BASED ROUTINE
MAINTENANCE WORKS ON DISTRICT ROADS**

BETWEEN

..... **DISTRICT LOCAL GOVERNMENT**

AND

.....
CONTRACT No **DATED** / / **20**

This Contract is made of this day of, 20
between.....District Local Government (hereinafter referred to as the
Employer) acting through its representative the Chief Administrative Officer (CAO),
P.O. Box, District of the one part, and

.....
being the name of the Contractor, who may be an individual, company, local association,
community group, etc.. (hereinafter referred to as the Contractor) of the other part.

WHEREAS the Employer is desirous of maintaining its district road network and has
requested the Contractor to execute certain routine road maintenance Works as defined
hereinafter.

AND WHEREAS the Contractor as represented to the Employer that he has the required
capacity and ability to undertake the same and has agreed to execute the Works on the
terms and conditions set forth in this contract;

NOW THEREFORE the parties hereto hereby agree as follow:

1.0 OBLIGATIONS OF THE CONTRACTOR

- 1.1 The contractor shall carry out routine road maintenance Works on a daily basis from the start of this Contract and for the duration of this Contract period on district road section(s) described in Clauses 8, 9, 10 and 11 of the Contract Data (Appendix 1 hereto).
- 1.2 The Contractor shall in carrying out the routine road maintenance Works use labour-based methods and perform all those Works included in the Maintenance Activity Schedule (Appendix 2 hereto) and in accordance with the Technical Specifications (Appendix 3 hereto) and the Drawings, if any (Appendix 4 hereto).

- 1.3 The Contractor shall employ an adequate number of workers to carry out the routine maintenance Works in order to conserve the road in good condition at all times.
- 1.4 The Contractor shall abide by the Uganda Labour Laws, in particular the Contractor shall pay his/her workers the minimum wage as stipulated in Clause 19 of the Contract Data. The Contractor shall, for inspection by the Employer, prepare monthly payrolls including all workers names, total days worked and payment amounts, and the payrolls shall be signed by the workers and the Contractor.
- 1.5 The Contractor shall provide and maintain all necessary hand tools required to carry out all routine maintenance Works included in the Maintenance Activity Schedule.
- 1.6 The Contractor shall employ at least one full-time supervisor (Gangler) who will act as his/her site representative. The Contractor shall notify the Employer's Representative as named in Clause 4 of the Contract Data in writing of the name of his/her site representative before commencing the Works and inform the Employer's Representative accordingly any time there is a change. The Contractor's site representative shall be familiar with the use of labour-based methods for routine maintenance Works and shall be acceptable to the Employer's Representative.
- 1.7 The Contractor shall be responsible for the safety of the Works, and of the general public on the Works site(s) and the health and safety of his/her workers. The Contractor shall provide and maintain all warning and traffic control signs and measures required for the safety of the Works, his/her workers and the public.
- 1.8 The Contractor shall provide and keep in force an insurance to cover any accident or injury to his/her workers and such insurance shall indemnify the Employer against all claims for any damages as a result of an accident or injury to any worker or other person in the employment of the Contractor; refer Clauses 12 and 13 of the Contract Data.
- 1.9 The Contractor shall abide by all Instructions given to him/her by the Employer's Representative. The Employer's Representative will give the Contractor reasonable notice of intended site inspections and the Contractor shall make every effort to be present on site during inspections.
- 1.10 The Contractor shall specify a Bank Account for use to facilitate payments under this Contract.

2. OBLIGATIONS OF THE EMPLOYER

- 2.1 The Employer shall be represented by the Chief Administrative Officer (CAO) who shall have overall responsibility for this Contract. The CAO, acting through the District Local Government Engineer (DLGE), shall appoint a Roads Inspector (RI) who shall be responsible for supervision of the Works performed by the Contractor under this Contract. The appointed RI shall be the Employer's Representative and named in Clause 4 of the Contract Data.
- 2.2 The CAO through the DLGE shall notify the Contractor in writing in the event there is a change in the Employer's Representative during the period of this Contract.
- 2.3 The appointed RI acting as the Employer's Representative shall, together with the Contractor and on a monthly basis, prepare the Contractor's Monthly Site Inspection Report / Measurement Sheet and ensure that the Contractor performs the Works while maintaining the Technical Standards.
- 2.4 The RI shall issue all necessary written Instructions to the Contractor using the Monthly Site Inspection Report / Measurement Sheet forms which shall be signed by both the RI and the Contractor, and be in triplicate; original for the DLGE as the supporting document for preparation of the Payment Certificate, first copy for the Contractor and second copy retained by the RI.
- 2.5 The Monthly Site Inspection Report / Measurement Sheet shall be completed jointly by the RI and the Contractor and used to –
 - 2.5.1 measure and certify the Works performed during the month immediately preceding the monthly site visit by the RI, and
 - 2.5.2 identify those Works to be performed the following month.
- 2.6 The RI, immediately upon completion of the monthly site visit, shall return the original copy of the certified Monthly Site Inspection Report / Measurement Sheet to the DLGE who will, within five (5) working days, prepare the Payment Certificate a copy of which shall be provided to the Contractor.
- 2.7 If it comes to the attention of the RI that the Contractor has failed to pay the workers wages and/or failed to pay the minimum wage, as stipulated in the Contract Data, the RI shall be entitled to demand from the Contractor reasonable proof of payment of wages to his/her employees including inspection of monthly payrolls; refer Clause 1.4 above. In the event that it is proved that the Contractor has failed to pay workers wages, the Employer shall be entitled to make direct payment to the workers and deduct the equivalent sum due to the Contractor. The Employer shall also be entitled to recover any costs associated with the making of such direct payments to the Contractor's workers.

3. CONTRACT PRICE AND MODE OF PAYMENT

- 3.1 The Employer shall pay to the Contractor the sum given in Clause 20 of the Contract Data and hereinafter referred to as the Contract Price for performing the Works included in the Maintenance Activity Schedule in accordance with the Technical Specifications and the Drawings, if any; which shall be paid as an agreed monthly sum, also given in Clause 20 of the Contract Data, when all the monthly assigned Works have been 100% satisfactorily completed for routinely maintaining the district road sections(s) to standards acceptable to the Employer.
- 3.2 This agreed monthly sum shall be based fully on the certified Monthly Site Inspection Report / Measurement Sheet completed jointly by the RI and the Contractor.
- 3.3 Where Works have not been 100% satisfactorily completed to the standards acceptable to the Employer, payment to the Contractor shall be deferred until such time as 100% satisfactory completion of the Works is achieved. Under no circumstances shall part payments be made for Works which have not been 100% satisfactorily completed to standards acceptable to the Employer.
- 3.4 Payment for certified Works shall be effected by the DLGE within twenty (20) working days of receipt of the certified Monthly Site Inspection Report / Measurement Sheet.
- 3.5 In the event of failure by the Employer to make payment within the times stated in Clause 3.4 above, the Employer will pay to the Contractor interest at a monthly compounded rate of 20% upon such sums unpaid and from the date by which the same should have been paid.

4. COMMENCEMENT, DURATION AND TERMINATION

- 4.1 This Contract shall commence and terminate in accordance with the dates stipulated in Clauses 8 and 10 of the Contract Data and shall be renewable thereafter by agreement of the parties.
- 4.2 This Contract will terminate at the end of the Contract period as stated in the Contract Data or by either party giving one month's notice to the other party.
- 4.3 Upon termination the Employer shall settle all pending payments in accordance with Clause 3.4 above.
- 4.4 If the Contractor shall be guilty of any serious misconduct including persistently failing to perform the Works in accordance with the Technical Specifications or working behind schedule, any act of dishonesty or any serious breach or non-observance of any of the conditions of this Contract or shall fail or refuse to carry out duties assigned to him/her hereunder, the Employer shall be entitled to

summarily terminate his/her engagement hereunder without any payment in lieu of notice.

5. MODIFICATIONS

- 5.1 Modification of the terms and conditions of this Contract, including any modification of the scope of the Works shall be by written agreement between the parties.

6. SETTLEMENT OF DISPUTES

- 6.1 The parties shall use their best efforts to settle amicably all disputes arising out of or in connection with this Contract.

- 6.1 An Arbitrator shall be nominated and agreed by the parties and his/her name and contact address shall be stipulated in Clause 14 of the Contract Data.

- 6.3 All disputes or difference whatsoever that shall at any time hereafter, whether during the continuance of this Contract or upon or after its discharge or termination, arise between the parties hereto touching or concerning this Contract or its construction or effect or the right duties or liabilities of the parties hereto which cannot be settled amicably shall be referred to a single Arbitrator to be agreed between the parties, or, failing such agreement, to be appointed by the permanent secretary, Ministry of Local Government immediately upon the application of either party who shall operate in accordance with and subject to the provisions of the Arbitration Act of Uganda or any statutory modification of the enactment thereof for the time being in force. The decision of this single Arbitrator shall be final and binding upon both parties.

7 APPENDIXES

- 7.1 It is hereby understood that the Appendixes to this Contract shall be read together with this Contract and shall form a legally binding and integral part thereof.

- 7.2 The Appendixes to this Contract include -

- 7.2.1 Appendix 1 - Contract Data
- 7.2.2 Appendix 2 - Maintenance Activity Schedule
- 7.2.3 Appendix 3 - Technical Specifications
- 7.2.4 Appendix 4 - Drawings, where required

In witness whereof the duly authorized representatives of the parties hereto have signed this Contract the day and the year first above written at Uganda.

Name
Signature

For and on behalf of the
Contractor

Witness Name
Signature

..... **District Local Government**

Name
Address
Designation
Signature

Witness Name
Signature

CONTRACT DATA

Contract No **Dated** / / **20**

Note: The Contractor shall comply with the following Contract Data which shall be read together with the Contract Agreement

1. The following Documents form part of the Contract Agreement;
 - (a) Form of Contract Agreement
 - (b) Contract Data (Appendix 1)
 - (c) Maintenance Activity Schedule (Appendix 2)
 - (d) Technical Specifications inc. the Method of Measurement (Appendix 3)
 - (e) Drawings (Appendix 4)
2. The Funding Agency is
3. The Employer is
At the following address
Telephone, Fax, e-mail
4. The Employer’s Representative is
At the following address
Telephone, Fax, e-mail
5. The language of the Contract is the English language.
6. The Law that applies to the Contract is the Law of the Republic of Uganda.
7. The Currency of the Contract is the Uganda Shilling (UGX).
8. The Start Date of the Contract is / /20
9. The Contract Period is for months
10. The Termination Date is / / 20
11. The District Road Section(s) to be routinely maintained include -

Road No	Road Name	Section Details (from Km - to Km)		ADRICS Degree of Difficulty - Total Worker- days per Km per Year

12. The maximum liability of the Contractor for property and personal loss and damage under the Contract is UGX
13. The minimum insurance cover for physical property, injury and death is UGX.....
14. The Adjudicator is
The Adjudicator's address is
.....
Telephone, Fax, e-mail
15. Arbitration shall take place in accordance with the Arbitration Act and the Laws of the Republic of Uganda.
16. Arbitration procedures will take place in the Courts in Uganda
17. The Following Events are Compensation Events -
(a) Correction of Defects which are not the fault of the Contractor.
(b) Late Payment of Contractor's Certificates by the Employer.
18. This Contract is not subject to adjustments in prices.
19. The Minimum Wage for locally employed general workers shall be UGX per working day inclusive of all allowances for food, medical, transport and other as appropriate.
20. The Contract Price for this Contract shall be UGX
(UGX),
.....),
and paid in monthly installments of UGX
in accordance with Clause 3.1 of the Contract Agreement.
21. These Contract Data have been read and fully understood by the Contractor.

Signature of Contractor:

Date: day of, 20

Specified Bank Account (refer Clause 1.10 of the Contract Agreement)

Name of Bank
Branch
Account Name
Account Number

MAINTENANCE ACTIVITY SCHEDULE

Contract No Dated / / 20

The Contractor shall perform all Works described in this Maintenance Activity Schedule in accordance with the Technical Specifications.

A Maintenance Activity Schedule for each district road Section included for routine maintenance under this Contract follow; refer Clause 11 of the Contract Data.

Road No Section - from Km to Km

Summary of Routine Maintenance Activities & Outputs

Work Item	Description of Routine Maintenance Activity	Unit of Measurement	Routine Maintenance Activity Outputs - Average Output of One Worker per Day a)
RM1	Inspection and Removal of Obstructions	km	Entire Road Section length every day
RM2	De-silting Culverts and Clearing Culvert Inlets and Outlets	no	1 no culvert line per worker per day
RM3	Clean Side, Catch-water and Mitre Drains	km	Partly Silted - 0.050 km per worker per day Fully Silted - 0.025 km per worker per day
RM4	Repair Erosion on Shoulders and Drains	km	0.020 km per worker per day
RM5	Repair Scour Checks	no	5 no per worker per day
RM6	Grub Roadway	km	0.020 km per worker per day
RM7	Clear Structures and their Waterways	no	< 3 metres wide - 1 no per worker per day > 3 metres wide - on agreement with Employer
RM8	Fill Potholes and Ruts on the Carriageway	km	10 square metres per worker per day
RM9	Cut Grass and Bush	km	0.010 km per worker per day
RM10	Other Activities as Instructed by the Employer	-	Only following instruction by and agreement with the Employer

Note: a) TRRL Overseas Road Note Number 1 - Table 8.2, Maintenance Management for District Engineers

Degree of Difficulty of the Routine Maintenance Work as determined during the Current Financial Year ADRICS; refer District Road Manual, Volume 1, Manual B

ADRICS Degree of Difficulty	Average Number of Workers Per Km	Total Worker-days per Km / Year	Total Cost per Km / Year	Tick as Appropriate
1.0 - 1.5	0.8 Worker / Km	170	450,000	
1.5 - 2.0	0.9 Worker / Km	185	510,000	
2.0 - 2.5	1.0 Worker / Km	200	580,000	

Note: Where more than two District Road Sections are included in Clause 11 of this Contract, use additional pages similar to this page for the Maintenance Activity Schedule and associated Degree of Difficulty determination.

Road No Section - from Km to Km

Summary of Routine Maintenance Activities & Outputs

Work Item	Description of Routine Maintenance Activity	Unit of Measurement	Routine Maintenance Activity Outputs - Average Output of One Worker per Day a)
RM1	Inspection and Removal of Obstructions	km	Entire Road Section length every day
RM2	De-silting Culverts and Clearing Culvert Inlets and Outlets	no	1 no culvert line per worker per day
RM3	Clean Side, Catch-water and Mitre Drains	km	Partly Silted - 0.050 km per worker per day Fully Silted - 0.025 km per worker per day
RM4	Repair Erosion on Shoulders and Drains	km	0.020 km per worker per day
RM5	Repair Scour Checks	no	5 no per worker per day
RM6	Grub Roadway	km	0.020 km per worker per day
RM7	Clear Structures and their Waterways	no	< 3 metres wide - 1 no per worker per day > 3 metres wide - on agreement with Employer
RM8	Fill Potholes and Ruts on the Carriageway	km	10 square metres per worker per day
RM9	Cut Grass and Bush	km	0.010 km per worker per day
RM10	Other Activities as Instructed by the Employer	-	Only following instruction by and agreement with the Employer

Note: a) TRRL Overseas Road Note Number 1 - Table 8.2, Maintenance Management for District Engineers

Degree of Difficulty of the Routine Maintenance Work as determined during the Current Financial Year ADRICS; refer District Road Manual, Volume 1, Manual B

ADRICS Degree of Difficulty	Average Number of Workers Per Km	Total Worker-days per Km / Year	Total Cost per Km / Year	Tick as Appropriate
1.0 - 1.5	0.8 Worker / Km	170	450,000	
1.5 - 2.0	0.9 Worker / Km	185	510,000	
2.0 - 2.5	1.0 Worker / Km	200	580,000	

TECHNICAL SPECIFICATIONS FOR ROUTINE ROAD MAINTENANCE WORK ITEMS

Contract No **Dated** / / 20

The Contractor shall perform all the Works described in the Maintenance Activity Schedule in accordance with these Technical Specifications which include the Works Performance Standards required and the Methods of Measurement to be applied during preparation of the Monthly Site Inspection Report / Measurement Sheet.

Item No RM 1 - Inspection and Removal of Obstructions

Includes daily inspection of the whole of the road section(s) included in the Contract, including identification and removal of all obstructions from the roadway, road side drains, mitre and other drains, inlets and outlets of drifts, culverts and other structures, including their waterways, and the safe disposal thereof outside the road formation width.

The performance standard required shall be that all obstructions are continuously removed.

The method of measurement on the day of site inspection shall be that all obstructions are removed from the whole of the road section(s).

Item No RM 2 - De-silting Culverts and Clearing Culvert Inlets and Outlets

Includes clearing all culverts of all debris, silt and vegetation together with the safe disposal thereof outside the formation width and to maintain the culverts in a clean and free-draining condition at all times. This work also includes the clearing from all culvert inlets and outlets of all debris, silt and vegetation together with the safe disposal thereof outside the formation width.

The performance standard required shall be culverts including their inlets and outlets are cleared and free-draining at all times.

The method of measurement on the day of site inspection shall be that all those culverts included for clearing during the month preceding the site inspection are cleared and free-draining.

Item No RM 3 - Clear Side, Catch-Water and Mitre Drains

Includes clearing all road side drains, catch-water drains and mitre drains of all debris, silt and vegetation together with the safe disposal thereof outside the formation width and to maintain all the drains in a clean and free-draining condition at all times. This work includes maintaining the drains to their original dimensions of width and depth.

The performance standard required shall be drains cleared and free-draining at all times.

The method of measurement on the day of site inspection shall be that all those drains included for clearing during the month preceding the site inspection are clear and free-draining.

Item No RM 4 - Repair Erosion of Shoulders and Drains

Includes the repair of eroded shoulders to their original shape and cross fall and the repair of drain floors and side slopes to their original shape and grades with compacted suitable materials from locations approved during Inspections.

The performance standard required shall be shoulders repaired to their original shape and cross fall and drains repaired to their original shape and grades using approved material and free-draining at all times.

The method of measurement on the day of site inspection shall be that all those shoulders and drains included for repair during the month preceding the site inspection are repaired to their original shape, cross falls and slopes using approved material and free-draining.

Item No RM 5 - Repair Scour Checks

Includes repairing / replacing existing scour checks to the correct shape and size as directed during monthly Inspections. This activity may also include installing new scour checks if so directed during monthly Inspections.

The performance standard required shall be that scour checks are repaired/replaced/installed to the correct shape and size.

The method of measurement on the day of site inspection shall be that all those scour checks included for repair/replacement/installation during the month preceding the site inspection are repaired/ replaced/installed.

Item No RM 6 - Grub Roadway

Vegetation growth, particularly on slopes (shoulders, drain side slopes, etc.) acts as a natural stabilizing medium that protect slopes from run-off during rain, human and animal traffic, etc.. Under no circumstances shall vegetation growth on slopes be disturbed without the specific instruction of the Employers' Representative. In most cases, it is only necessary to cut this vegetation to an acceptable height without disturbing the roots; refer Items 14 and 15 below.

In circumstances where the Contractor is specifically instructed by the Employer's representative to perform grubbing (also referred to as weeding) of the roadway, this work shall be closely supervised and the grubbing limits of length, width and depth strictly observed with waste materials safely disposed outside the formation width.

The performance standard required shall be grubbing in strict accordance with the instructions of the Employers' Representative including limits and disposal.

The method of measurement on the day of site inspection shall be that all that grubbing instructed to be performed by the Employers' Representative has been undertaken in accordance with the limits of length, width and depth, and waste materials suitably disposed.

Item No RM 7 - Clear Structures and their Waterways

Includes clearing all drifts, vented drifts, bridges and other structures (not culverts, Item No RM 2 above) including their inlets and outlets of all debris, silt and vegetation together with the safe disposal thereof outside the road formation width and to maintain the structures and their inlets and outlets in a clean and free-draining condition at all times.

This work also includes the clearing of all waterways, for a distance not less than 25 metres upstream and downstream from the roadway centre-line, of all debris, silt and vegetation together with the safe disposal thereof.

The performance standard required shall be all structures including their inlets and outlets and waterways are cleared and free-draining at all times.

The method of measurement on the day of site inspection shall be that all those structures included for clearing during the month preceding the site inspection are cleared and the waterways free-draining.

Item No RM 8 - Fill Potholes and Ruts on the Carriageway

Includes the excavation of all unsuitable/degraded material to a minimum depth of 8 cm and subsequent filling with suitable materials from locations approved during inspections. The work includes compaction of the fill materials to a finished level about 2 cm above the original road surface (to allow water to run off and for further settlement under traffic) and disposal of unsuitable/degraded materials outside the formation width.

The performance standard required shall be that potholes and ruts have been filled with suitable approved materials and are free-draining and unsuitable/degraded materials disposed.

The method of measurement on the day of site inspection shall be that all those pot holes and ruts included for filling during the month preceding the site inspection are filled with suitable approved materials which have been fully compacted, are free-draining and unsuitable/degraded materials disposed.

Item No RM 9 - Cut Grass and Bush

Grass and/or Bush growing on the carriageway, shoulders, drain slopes and drain floor shall be cut (not grubbed) to a height not exceeding 7 cm and for a width of not less than 5 metres each side of the road centre-line. On curves, the width may be increased to improve 'sight-distance' on the instruction of the Employers' Representative.

Where the width limits require trees to be cut, this work shall only be undertaken following approval by the local community and on instruction from the Employers' Representative.

The performance standard required shall be grass and/or bush cut to the height and width limits as instructed by the Employers' Representative.

The method of measurement on the day of site inspection shall be that the grass is cut to the height and width limits as instructed by the Employers' Representative.

Item No RM 10 - Other Activities as Instructed

These activities shall be clearly defined and performed by the Contractor only as and when instructed to do so by the Employers' Representative.

Suggested Priorities for Routine Maintenance Activities

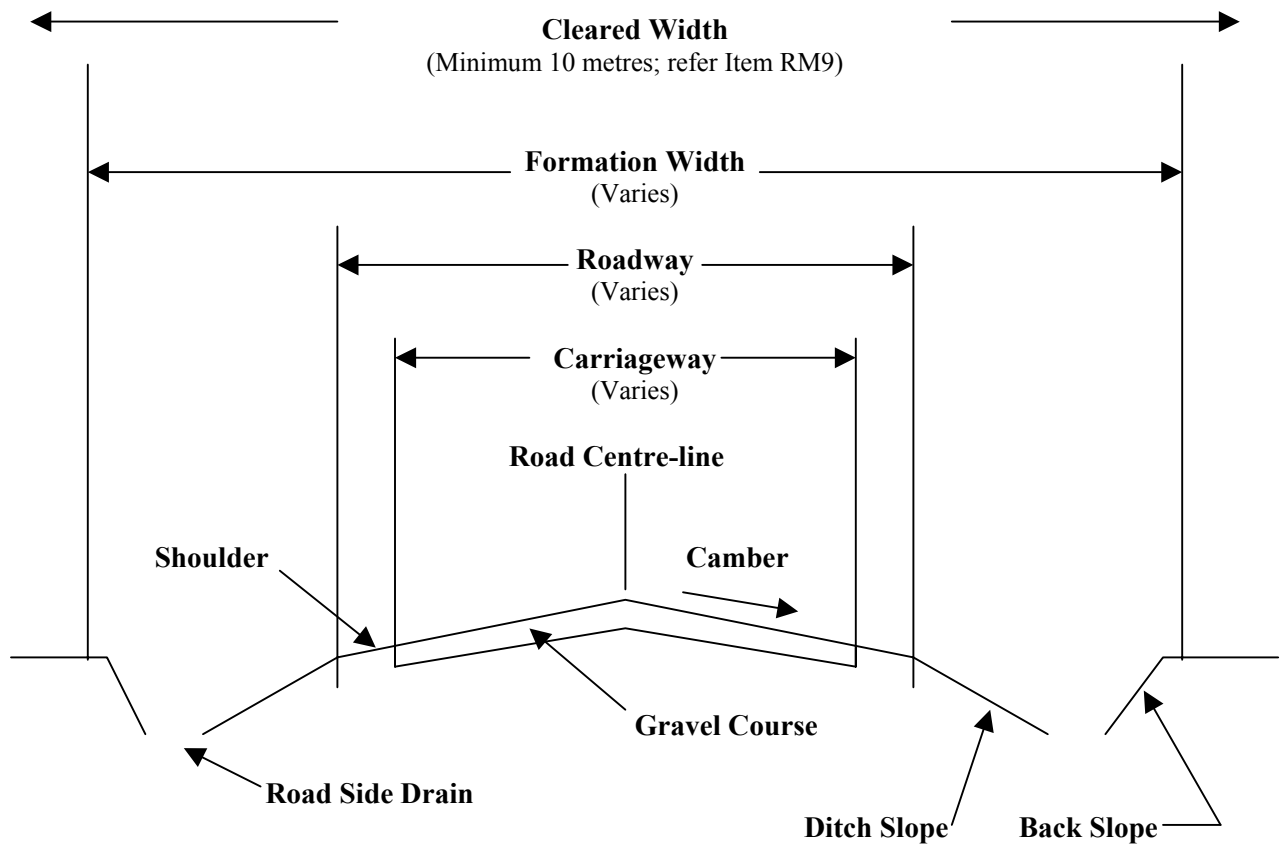
Season	Priority Item Nos	General Activity Description
Before the Rains Start	RM1, RM2, RM3, RM4, RM5 and RM7	The entire drainage system inc. all drains, structures, water- ways, etc..
During the Wet Weather	RM1, RM2, RM3, RM4, RM5and RM7	The entire drainage system inc. all drains, structures, water- ways, repairs of shoulders and slopes, and draining standing water from the carriageway
At the End of the Wet Season	RM1, RM2, RM3, RM4, RM5, RM6, RM7, RM8 and RM9	Repair all eroded shoulders, slopes and drains, fill potholes and cut/clear all vegetation
During the Dry Season	RM1, RM4, RM5, RM6, RM8 and RM9	Repair all components of the drainage system, fill potholes and cut/clear all vegetation.

DRAWINGS

Contract No Dated / / 20

The Contractor shall perform all the Works described in the Maintenance Activity Schedule in accordance with the Technical Specifications and these Drawings.

Definitions of District Road Routine Maintenance Terminology is provided below.



Standard District Road Cross-Section

District Road Routine Maintenance Terminology

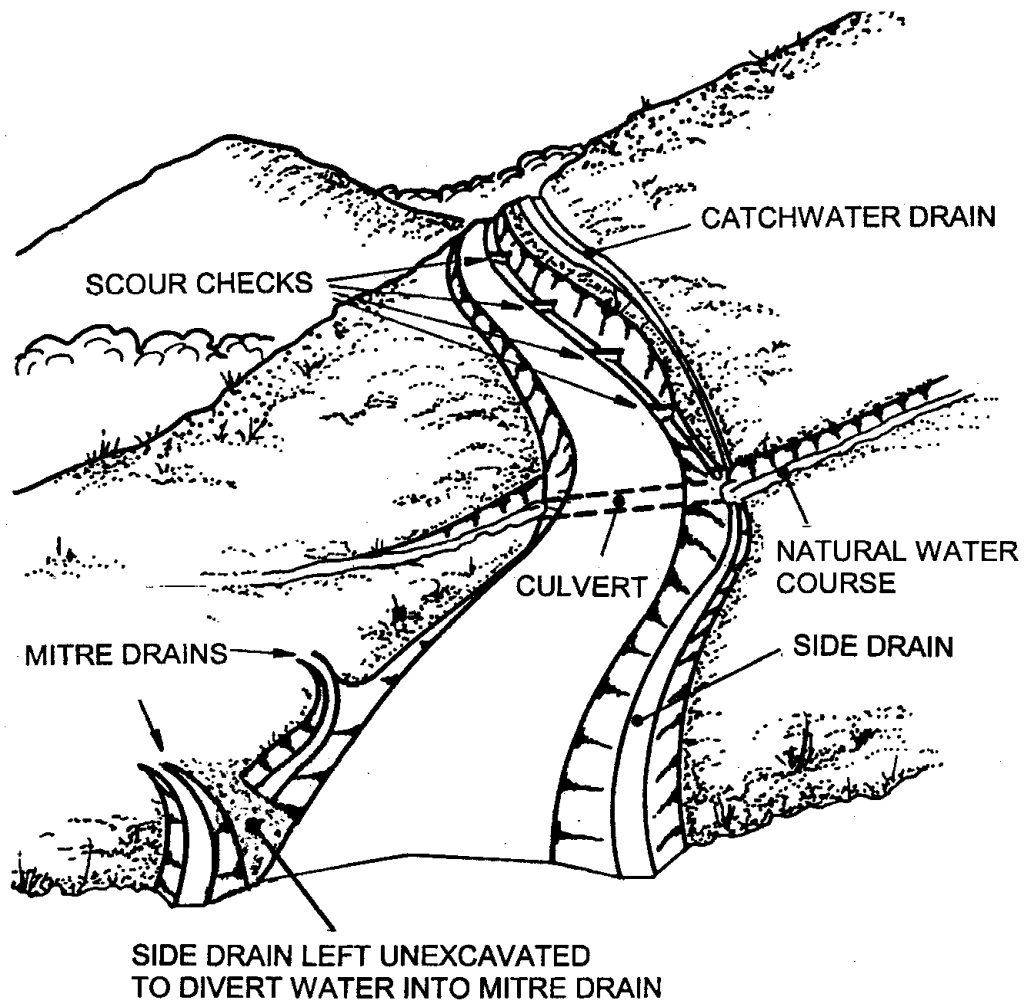
1. Road Terms –

Cleared Width -	the fully cleared width of the road as required in Item RM9 of the Technical Specifications
Formation Width -	full width of the road including side drains and embankments
Roadway -	full width of the road including the shoulders
Carriageway -	paved / gravelled width of the road
Road Centre-line -	the centre-line of the roadway
Shoulders -	paved / unpaved width of road between the edge of the carriageway and the edge of the ditch / embankment slope
Camber -	cross-fall of the carriageway and shoulders facilitating efficient drainage of rainfall from the roadway into the road side drains
Gravel Course -	layer of compacted gravel forming the surface of the carriageway
Road Side Drains -	drains running alongside and parallel to the roadway to collect water running off from the roadway
Ditch Slope -	inside slope from the shoulder to the road side drain
Back Slope -	outer slope of the road side drain
Mitre Drains -	drains leading water away from the road side drains to areas of safe dispersal
Catch-water Drain -	additional drains running parallel to the road side drains to collect water running off from areas adjacent to the road
Scour checks -	dam-like structures, built with timber or hand-packed stone to slow down the flow of water in road side drains, mitre drains and catch-water drains

2. Drainage Terms –

Drift -	low-level drainage structure allowing water from natural streams, roads side drains and catch -water drains to safely cross the roadway
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- Vented Drift -** medium-level drainage structure combining both the features of a standard drift and those of a multiple pipe culvert allowing provision for the normal seasonal flow of water to pass safely under the roadway, yet at the same time allowing for un-seasonal flows during periods of heavy rain to pass safely under and over the structure
- Culvert -** medium-level drainage structure built under the roadway to collect and drain water from the road side drains to areas of safe dispersal; the culvert opening(s) may be single or multiple lines of concrete pipes, steel pipes or concrete boxes
- Inlet/Outlet -** openings in a culvert that safely direct water into and out of the structure
- Bridge -** medium to high-level drainage structure allowing large volumes of water to pass safely under the roadway



Annex 3

List of References

List of References

1. PAF General Guidelines for the Planning and Operation of Conditional Grants, MEPEC, May 2001
2. Sector Specific Guidelines for the Planning and Operation of District Road Maintenance & Rehabilitation Programmes, MoMHC, November, 2001
3. District Local Government Tender Board Regulations, 1999
4. Maintenance Management for District Engineers, TRRL Overseas Road Note Number 1, Second Edition, Crowthorn 1995

