## THE UNITED REPUBLIC OF TANZANIA



# PRIME MINISTER'S OFFICE REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT (PMO-RALG)

## **MINISTRY OF WORKS**

**JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)** 



Operational Guidelines for District Roads Maintenance

ANNEX

December 2014

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# **Organization of Annex**

The Annex has two sections: Table and Form. The tables are the standards to be referred, and the forms are the standard forms to be used. All the forms listed in this Annex are downloadable at: http://www.pmoralg.go.tz/.

 Table 1
 Road Condition Classification

S/N	CONDITION	SURFACE CONDITION
1	Good	Roughness < 8 m/km; good shape, smooth running surface
2	Fair	Roughness 8 – 14 m/km; reasonable shape, corrugations and potholes up to 10cm deep
3	Poor	Roughness > 14 m/km; Poor shape, frequent depressions, rutting and potholes > 10cm deep.

 Table 2
 Contractor's Performance Capacity Check List

S/N	ITEM	CHECK POINT
		Submission of working schedules as per Terms of contract
1	Execution system	If works schedule reflect specifications and actual site conditions
		If execution procedures are following the working program
2	Equipment mobilization and management	If equipment are effectively mobilized and maintained throughout the contract period
3	Contractors staff	If qualified staff are assigned as per contract Terms and have high understanding of work process and schedules and are able to direct and guide workers timely and properly
4	Personnel employment	If recruitment is done according to working schedules /labour histogram and equitable remuneration is observed
5	Site base facilities	If office and stock yard prepared according to works schedules and maintained throughout the contract period
6	Quality and quantity management	If material testing, structural examination and measurements are routinely done and are based on specifications and works schedules
7	Works scheduling	If contractor understands critical path and its effects and is able to compare periodically planned and actual schedules and ensure all works are completed within time
8	Works safety management	Contractor ensures no accident occurs, observes workers safety, shifts risks to third parties and checks temporary facilities regularly
9	Environmental and social management	Environmental and social effects are properly mitigated

 Table 3
 Supervising Engineers' Performance Capacity Check List

		<u> </u>
S/N	ITEM	CHECK POINT
1	Communication, requests, consent and notices between Parties	If done in writing and timely
2	Fulfilment of supervisory tasks	If done according to contract conditions and Terms of Contract
3	Taxes and duties in case of employed Consultants	If paid as per Government laws
4	Holding Employer's interest	If decisions and strategies made are within the interest of the Employer
5	Professional Ethics	If professional ethics are properly observed and for case of employed consultant without having future considerations
6	Experience and knowledge	If Supervising Engineer have knowledge and experience in contract administration and management
7	Reporting requirements	If reports and documents required are submitted as per Terms of contract

Table 4 Minimum Requirement: Establishment Level of Road Management Technical Staff at Council Level

		Minimum Requirement Size			
S/N	Technical Staff	District Council	Municipal Council	City Council	
1	Professional Engineers	2	2	3	
2	Technician (FTC)	6	4	6	
	TOTAL	8	6	9	

Note: The number will also depend on the work load of the respective Council

# **General Quality Control Checklist for Road Construction/Rehabilitation Works**

Table 5 Quality Control Checklist for Road Construction

Item	Description	Test/Q. Control	Responsible
Gravel at source	Grading PI, MDD and CBR tests for each identified	Laboratory tests	DE, Project Supervisor and TANROADs Laboratories
Sand at Source	Grading and cleanliness	Visual and sieving	DE and Project Supervisor
Aggregate (Ballast) at Source	Cleanliness	Visual and Laboratory tests for hardness	DE, Project Supervisor and TANROADs/RE Laboratories.
Cement	Supply from approved manufactures	Approved manufactures	DE and Project Supervisor
Emulsion Bitumen	Supply from approved manufactures	Approved manufactures	DE and Project Supervisor
Stone (for cobblestone pavements)	Compression strength, water absorption rate and specific gravity	Laboratory test.  Plus simple field tests for site assurance  Hardness	DE, Project Supervisor and TANROADs/ RE Laboratories.
Soil Alignment Tests	CBR in-situ, centreline, every 500m	Soil alignment tests	DE, Project Supervisor and TANROADs/ RE Laboratories.

Table 6 Section (Bill) Earthworks

Item	Description and Required Quality	Test / Q. Control	Responsible
Re -Establishment of the vertical Alignment	Levels of slots and longitudinal alignment:  - Levels of slots, tolerance + / - 50mm  - Longitudinal profile every 3rd slot, tolerance + / - 50mm	Check by measuring using straight edge and boning rods or travellers and approval	DE and Project Supervisor
Side-drain Excavation (Soft Material)	Dimensions and gradients:  - Dimensions at 50m intervals, tolerance + / - 50mm  - Longitudinal profile at 30m intervals, tolerance + / - 50mm	Check by measuring using ditch template and boning rods or travellers and approval	DE and Project Supervisor
Side-drain Excavation (Hard material)	Dimensions and gradients:  - Dimensions at 50m intervals, tolerance + / - 50mm  - Longitudinal profile at 30m intervals, tolerance + / - 50mm	Check by measuring using ditch template and boning rods or travellers and approval	DE and Project Supervisor

Table 6 Section (Bill) Earthworks (Cont. 2/3)

Item	Description and Required Quality	Test / Q. Control	Responsible
Excavation to Level and Compaction	Excavation and Compaction:		DE and Project Supervisor
	<ul> <li>Width of platform at 50m</li> <li>Intervals, tolerance + / - 50mm</li> <li>Level of the platform, + / - 15mm under 2 meter straight edge</li> <li>Longitudinal profile at 30m intervals,</li> </ul>	a. Check by measuring using tape measure, straight edge and boning rods or travellers and approval	a. Engineer instructs Contractor to carry out initial laboratory and possible occasional lab tests at TANROADs/RE Laboratories and calibrate DCP.
	tolerance + / - 50mm  -Compaction density test at 100m intervals! 95% MDD (AASHTO T99)	b. DCP test, confirmed by initial and occasional lab tests (sand replacement) with written approval to continue formation works	b. Engineer requests the TANROADs/RE Laboratories to carry out DCP tests. Checked and confirmed by DE and Project Supervisor.  Written approval by Engineer to continue with formation works

Table 6 Section (Bill) Earthworks (Cont. 3/3)

Table 6	Section (Bill) Earthworks	(CONt. 3/3)	<u>,                                      </u>
Item	Description and Required Quality	Test / Q. Control	Responsible
Spreading and Compaction for Camber Formation	Spreading and Compaction:		DE and Project Supervisor
	-Width of platform at 50m intervals, tolerance + / - 50mm  - Camber of 5% at 50m intervals, tolerance +/- 1%  - Compaction density test at 100m intervals! 95% MDD (AASHTO T180)	a. Check by measuring using tape measure and camber-board and approval	a. Engineer instructs Contractor to carry out initial laboratory and possible occasional lab tests at TANROADs/RE Laboratories and calibrate DCP.
		b. DCP test, confirmed by initial and occasional lab tests (sand replacement) with written approval to continue formation works	b. Engineer requests the TANROADs/RE Laboratories to carry out DCP tests. Checked and confirmed by DE and Project Supervisor.
			Written approval by Engineer to continue with formation Grading and Gravelling works

 Table 7
 Section (Bill) Excavation and Filling for Structures

Item	Description and Required Quality	Test / Q. Control	Responsible
Excavation for Drainage Structures	Excavation for Structures:  - Dimensions of excavations, tolerance + / - 50mm  - Invert level, tolerance + / - 50mm	Check by measuring using tape measure, straight edge and boning rods and approval	DE and Project Supervisor  Written approval by
	- Gradient, tolerance + / - 20mm over length of trench		Engineer to continue with  Culvert and Drainage works.

Table 8 Section (Bill): Culvert and Drainage Works (1/3)

Item	Description and Required Quality	Test / Q. Control	Responsible
Ditch Cleaning (Manual)	Dimensions and gradients:  - Dimensions at 50m intervals, tolerance + / - 50mm  - Longitudinal profile at: 30m intervals, tolerance + / - 50mm	Check by measuring using ditch template and boning rods or travellers and approval	DE and Project Supervisor
Mitre Drains/Catch water Drains Excavation	Dimensions, and gradients (and location of mitredrains):  - Dimensions of the mitredrains, tolerances of + / - 20mm  - Longitudinal profile with gradient of maximum 4%  - Location of mitre drains to be approved by Engineer	Check by measuring using ditch template and boning rods or travellers and approval	DE and Project Supervisor

Table8 Section (Bill): Culvert and Drainage Works (2/3)

Item	Description and Required Quality	Test / Q. Control	Responsible			
Culvert Cleaning (partially blocked)	Clean and free draining culvert	Visual check and approval	DE and Project Supervisor			
Culvert Cleaning (Fully blocked)	Clean and free draining culvert	Visual check and approval	DE and Project Supervisor			
Concrete Pipe Culverts	Material, mixture, gradient and strength:					
	a. Aggregate, sand, cement and water	a. Material approval     visual check	DE and Project Supervisor			
	b. Concrete mixture test	b. Slump test	DE and Project Supervisor			
	c. Final quality; no cracks and honey combing, joints etc	c. Visual quality check and Approval	DE and Project Supervisor			
	d. Gradient of bedding not less than 2%	d. Gradient check using straightedge or boning rods with line level	DE and Project Supervisor			
	e. Compressive concrete crush test to specified strength as per specifications	e. Concrete strength test (cube)	Engineer instructs Contractor to carry out crush tests at TANROADs/RE Laboratories and later checks with Schmidt hammer, confirmed by DE and RE.			
Head Wall Repair Masonry	Stability and pointing as per specifications	Visual check and approval	DE and Project Supervisor			
Minor Drainage Structures – Masonry	Stability as per specifications	Visual check and approval	DE and Project Supervisor			

Table8 Section (Bill): Culvert and Drainage Works (3/3)

Item	Description and Required Quality	Test / Q. Control	Responsible			
Minor Drainage Structures – Concrete	Dimensions, gradient, levels and mortar joints with tolerances as per specifications  - Dimensions, tolerance + / - 10mm  - Levels, tolerance + / - 10mm  - Joints flash to wall	Check by measuring using tape measure, boning rods with line level and/or straight edge with spirit level	DE and Project Supervisor			
Stone Pitching		a. Material approval:     visual check	DE and Project Supervisor			
		b. Slump test				
		c. Visual quality check and Approval				
		d. Gradient check using straight edge or boning rods with line level				
		e. Concrete strength test cube crushing method or Schmidt hammer				
Stone Pitching Repair	To satisfaction of the Engineer	Check by measuring using tape measure and visual check	DE and Project Supervisor			
Gabion Installation	Placing and tying	Visual check	DE and Project Supervisor			
Rock fill to Gabion	Filling and compaction to satisfaction of the Engineer	Visual check	DE and Project Supervisor			

Table 9 Section (Bill) Grading and Gravelling (1/2)

Item	Description and Required Quality	Test / Q. Control	Responsible
Carriageway Grading – Heavy Grading	<ul> <li>Heavy Grading:</li> <li>Width of carriageway at 50m intervals, tolerance 20 to 50mm</li> <li>Camber at 25m intervals, tolerance + / - 1%</li> <li>Loose rocks, debris, roots and grass removed well clear of drains</li> </ul>	Check by measuring using tape measure, camber board with spirit level and visual check	DE and Project Supervisor
Carriageway Grading – Light Grading	Light Grading:  - Width of carriageway at 50m intervals, tolerance 20 to 50mm  - Camber at 25m intervals, tolerance + / - 1%  - Loose rocks, debris, roots and grass removed well clear of drains	Check by measuring using tape measure, camber board with spirit level and visual check	DE and Project Supervisor
Excavation, Free Haul, Spreading and Compaction of Gravel – Labour/ Equipment	Gravelling Works:  Excavation and haulage of material  a. Material as per specifications  b. Haulage using approved equipment  c. Dumping distances	Material tests of actual delivered gravel to site:     a. Grading, PI and CBR check specifications for appropriate requirements     b. Visual checks     c. Visual checks	1. Material Tests  DE and Project Supervisor  If necessary PI and CBR by Material Department's Lab (CML)  After approval of the material by the Engineer, the contractor is allowed to continue with actual gravelling works

Table 9 Section (Bill) Grading and Gravelling (2/2)

Item	Description and Required	Test / Q. Control	Responsible
Excavation, Free Haul, Spreading and Compaction of Gravel – Labour/ Equipment	Quality  Spreading and Compaction for final layer:  a. Placing of shutters  b. Width of gravel surface at 100m intervals, tolerance + / -50mm  c. Camber of 5% at 50m intervals, tolerance +/- 1%  d. Thickness of compacted layer at 100m intervals, tolerance +/- 10mm  e. Longitudinal profile  f. Compaction density test at 100m .95% MDD (AASHTO T180)	Final gravel layer  a. Visual check  b. Tape measure)  c. Camber board with level  d. Trial holes and measuring  e. Boning rods  f. DCP test, confirmed by initial and occasional lab tests (sand replacement) with written approval to continue formation	2. Final Gravel Layer Tests  DE and Project Supervisor  Engineer instructs Contractor to carry out initial lab and possible occasional lab tests and calibrate DCP.  Written approval by Engineer to commence finishing works
Overhaul (beyond 10 km	Haulage:  a. Material as per specifications  b. Haulage using approved equipment  c. Dumping distances	Material tests of actual delivered gravel to site and haulage:  a. Grading, PI and CBR "check specifications for appropriate requirements  b. Visual checks	DE and Project Supervisor
Removal of Overburden	Removal of Overburden by labour/ equipment a. Thickness of overburden b. Location of overburden material		DE and Project Supervisor
Restoration of Quarries and Borrow Pits	Restoration of Quarries: levelling of ground and return of topsoil uniformly spread over entire quarry areas	Determined from trial pits of 30m grid as instructed and approved by Engineer	DE and Project Supervisor
Restoration of Quarries and Borrow Pits	Restoration of Quarries: Levelling of ground and return of topsoil uniformly spread over entire quarry areas	Visual checks	DE and Project Supervisor

Table 10 Characteristic of EBT and LBT

I	tems	Mechanical Method	Labour based Method
	Soil	Does not depend on soil type	Where soil not hard is desirable.
	Terrain	Does not depend on terrain	Moderate terrain is more desirable
	Speed	Much faster than LBT. So, good at where rapid construction requires such as heavy traffic section, urban area, etc	To do same length, needs more construction period than Mechanical Method
Condition of the	Quantity	Able to cope with large quantity contract	In periodic maintenance maximum up to 10 km per contract
Construction	Labour	Does not depend of the use of roadside and season. However, dry season is more preferable to do earth works.	Needs labour at site, so near village is more disable. Difficulty found in urban area due to high daily payment to the labours. Have to choose seasons.
	Machinery	Have to procure and haul large scale machinery to site as well as fuel	Minimum scales of machineries such as compactor, watering and tow grader are required.
Manual &	Key Factors	Depends on the calibration/maintenance of the machinery and operator's skill as well as engineering knowledge of manager/foreman.	Depends on the engineering knowledge of the manager/foreman
Guideline	Manual/ Guideline	Highly structures & authorized M/G established	Authorized M/G exists, however currently relying more on personal engineering skills & experience at site
	Unit Price	Construction price per km is higher than LBT. The result of the Pilot Project shows that machinery based was 20mil. Tsh/km where LBT was 13mil Tsh/km	Construction price per km is lower than Machinery based. The result of the Pilot Project shows that machinery based was 20mil. Tsh/km where LBT was 13mil Tsh/km
Economic		At where traffic heavy, it generates economic benefit on time, travel & environment due to fast construction speed	Difficult to generate type of benefit as mentioned in left
/Indirect effect	Benefit	60 to 70% of the construction price, as machine, spare parts, materials (tar) & fuel, goes out from Tanzania.	60 to 70% of the construction price dropped at the community and will directly contribute to local economy
	Job Creation	Creates job but not as LBT	Creates job than machinery base and contribute increasing the direct income to local economy
	Others	Can expect the effect in wide area since the scale of the construction is huge than LBT generally	Can expect high ownership awareness to the constructed road

# **General Forms**

Form 1 Road Condition Assessment Form

FOITH I	Road Co	idition	A2262	SHICH	t i Uill	· ·	 		 	 
Section breaks required at: Any change in road condition Ward boundary Intersection with other roads	Comments (particularly concerning Bottle Necks)	(xvi)								
	Bottle Neck Yes/No	(xv)								
	Surface Cond. Factor	(xiv)								nereof.
k	Shoulder Cond. Factor left right	(xiii)								details th
	Shor Cond.	(xii)								ge and c
Road Name:	Drainage Cond. Factor left right	(xi)								ons. chaina
Road Name: Road Length		×								Definition Their
	Traffic Group Factor	(ix)								Jing and includ
	Material Proximity Factor	(viii)								actor Coc umn xvi
d Number: d Link Number	Surface Material I Factor	(vii)								for Fa
Road Number:	Year East Rufaced	(vi)								Refer to "Look-Up" Tables in <b>Form</b> for Factor Coding and Definitions. Bottle Necks must be fully described in column <b>xvi</b> including their chainage and details thereof.
	Road Surface Type S	2								Tables
	Rd Sect. Length (km)	(iv)								Look-Up cks mus
:: ৩ ৩		(iii)						$\parallel$		Refer to "
District Name & No.:	Road Road Link Section Sect. Chainages (km) No Start End	(ii)								
District Assess	Road Rc Sect. C	(i)								Notes:

Form 2 Structure Inventory Form

Distri	ct Name 8	No.:		Road Nun	ber:				Road Nar	me:					
sses	sed by:			Asse ssme	nt Date:				Road Ler	ngth:			km		
struct.	Structure	Location	No of	Width	Longth	No of	Size of	Hood	Structure	Time of		Dataila a	f Work to be	Dona / Car	mmonto
No No	Type	(chainage)	Spans	(m)	Length (m)	openings	openings	Head walls	Condition	Type of Bottleneck		Details of	I WOIK IO DE	Done / Col	nments
140	(see below)	(criamage)		ges only	(11)	, ,	rt only	(Y/N)	(see below)	If any					
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)				(xi	)	
.,	, ,	, ,	. ,		, ,	, ,	, ,	, ,						,	
									<u> </u>						
					S <sup>-</sup>	TRUCTURE	TYPES								
Α	R/C bridge	Э	D	Steel Truss	bridge	G	Concrete pi	ipe culve	ert Ø		J	Vented	ford		
В	Composit	e bridge	Е	Timber brid	lge	Н	Steel pipe	culvert @	)		K	Drift			
С	Bailey bri	dge	F	Other Bridg	ge type	I	Concrete be	ox culve	rt WxH		L	Other s	tructure t	уре	
							CONDITIO								
1	Good - no	work req'd	2	Fair - mino	r work req'd	3	Poor - majo	or work r	eq'd		4	Bad - i	n danger	of failure	already fa
	* Colum	(v) width of t	he deck ac	ross the road	lway	*Colum (vi	of for bridges,	total len	gt incl.all sp	pans.For cu	lverts,	the length	of structu	re across	the roadwa

Form 3 Strip Map form

REGION: IRINGA				ROAL	O NAME:										<u>n</u>	PREPARED BY:		DE'S OFFICE	JCE JCE	
ROAD AREA:	PAWAGA	IGA		DISTRIC	RICT											DATE:			PAGE:	_
STRIP MAP:																				
ZZZZ VILLAGE	MKT	MARKET																		
■ HOUSE/HUT		SCHOOL																		
BRIDGE		CLINIC																		
CULVERT		СНИВСН																		
ROAD/TRACK	ᇤ	PETROL STATION																		
- FOOTPATH	Ā	WATER POST																		
o ROAD SIGN		GRAVEL PIT																		
		QUARRY			L	L		F	L											
CHAINAGE	Ξ																			
ACTIVITY		METRES	0km	m 200	H	400	009	800	Ę.	200	400		009	800	2km	200	400	009	800	3km
Site Gearance																				
Heavy grading																				
Form up Road Formation (light)	nation (ligh:								L											
Form up Road Formation (heavy)	nation (hea	vy)						L	_				L							
Fill Sections									_											
Cut Sections - Common Excavation	nmon Excar	ration							_				L						L	
Cut Sections - Rock Excavation	k Excavati	u.																		
Gravel Compacted Thickness	Thickness																			
Mitre Drains (left hand side)	and side)																			
Mitre Drains (right hand side)	hand side)																			
Catch Water Drains (left hand side)	s (left hand	(side)																		
Catch Water Drains (right hand side)	s (right har	d side)																		
Erosion Checks (left hand side)	ft hand sig	(e																		
Erosion Checks (right hand side)	ght hand si	de)																		
Drainage Structures - Repair Existing	es - Repair	Existing																		
Drainage Structures - New Construct	es - New C	onstruct																		
Ditch re- excavation	nc																			
Re excavate catch w ater	w ater																			
Pothole filling using gravel materials	g gravel m	iterials																		
Culvert repar																				
					+			+	+	$\downarrow$		+			+					
					H	$\coprod$		Ħ	$oxed{+}$	$\parallel$					Ħ	H		H	$\parallel$	П
					H		-					$\prod$	_						$\coprod$	Ц
CLR: CLEARING		REP: REPAIR			REMOVE	SÖ				BITUMEN		CONTRETEPIPE	PIPE		BOX CULVERT	Ë	HEAD WALL		토	
CLN: CLEANING		RPL: REPLACE		iii 6	BF: BACKFILL	9			GR: GRAVEL	Z KE		ASBESTOS PIPE			TIMBER CULVERT	W G	WW: WING WALL	ÿ ,	WIDHT	
EXC: EXCAVATION	Т	EXI: EXIEND	Ļ	. d	SI CNE PIL	S S	$\rightarrow$			GRASS		MEIAL PIPE	Т	_	,	A S	APK APKON	T	HCKNESS	n H
REX: REEXCAVALION		CON: CONSTRUCT		ğ	SABION	3	CHLINING		Š	S S S	≥  ¥	MEIAL ARCH	2		,,			צ		_

Form 4 Mid and Long Term Plan

Prioritization	2016/17 2017/18	R S P B/C								TOTAL FY 2016/17 TOTAL FY 2017/18						
	2015/16	P B/C								TOTAL FY 2015/16						
		<u>α</u>								TOTALF			•		/16	
	Condition/	Deterioratio n/ Inventory													ial year 2015,	
		Evaluation/ Comments							TOTAL (ML TSH)	Routine	Spot	Periodic	B/C	supervision 5%	Annual budget for financial year 2015/16	
		Value priority									r PRICE	(MIL TSH/KM)				
	La										S	(MI				
	% 9	Others										level				
ydex	%	Road Networ Popul Economy Others Class k ation Activity								ecision		Input by Engineer's dicision in 5 level				
Value Index	%	Popul								Input by Engineer's decision		eer's di				
	%	Networ k								λy Engir		y Engin				
	%									Input b	_	Input b	_			
		Length (km)														
		Road No./ Name														
		S	-	2	4	2	9	7								

Form 5 Road Maintenance Budget Summary /Annual Estimate (Form BULG-2A)

PRIME'S MINISTER		ONAL ADMINISTI GET SUMMARY FOR	S OFFICE REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT MAINTENANCE BUDGET SUMMARY FOR ROAD FUND (F.Y 2012/13)	L GOVERNMEN 13)	-
COUNCIL				FORM BULG-2A	LG-2A
REGION					
VIVITOR		ANNUAL	ANNUAL ESTIMATES		SOLINGE OFOTHER
					FUNDS
	TARGET	ROAD FUND	OTHER SOURCE	TOTAL	
	(KM)	(TSHS)	(TSHS)	TSHS	
1 ROUNTINE MAINTENANCE					
2 SPOT IMPROVEMENT/					
EMERGENCY REPAIR					
3 PERIODIC MAINTENANCE					
4 MAINTENANCE OF BRIDGES/CUI	JLVERTS				
5 SUPERVISION COSTS					
ALLOWANCE VEHICLE MAINTENANCE					
6 DEVELOPMENT PROJECTS					
NOTE: Supervision costsis 5% of the	the work costs.				

Form 6 Budget Summaries (Form BULG-2B)

	PRIME MINISTER	'S OFF	ICE RE	GIONAL	ADMIN	ISTRAT	ON AN	D LO	CAL GO	VERNI	MENT F	ROADI	MAINTE	NANCI	Ē
			l	BUDGE1	SUMN	IARY FO	R RO	4D FU	ND FOI	R THE	YEAR :	2014/20	)15		
NΔN	ME OF COUNCIL :														
	NEON COUNCIE.													FORM F	BULG. 2E
T.L.O	1011.		ROAD	SURFACE										I OINII L	TOLO: 20
No.	Activity/Road Name		CLASS	TYPE		Estim ate	1st C	uarter	2nd C	uarter	3rd Q	uarter	4th Q	uarter	Mode
	, , , , , ,	Road				Cost		Cost		Cost		Cost		Cost	of
Α	ROUTINE MAINTENANCE	Numbe	D/U/F	P/G/E	Target	Tshs.	hy (km	Tshs.	Phy (km)	Tshs.	Phy (km	Tshs.	Phy (km)	Tshs.	Execut
		r			(km)	(Mio)		(Mio)		(Mio)		(Mio)	-	(Mio)	on
_															
	SUB TOTAL 1												-		
В	SPOT IMPROVEMENT														
	SUB TOTAL 1														
С	PERIODIC MAINTENANCE								+						
	PENODIC MAINTENANCE														
															<del>                                     </del>
															<del>                                     </del>
									<u> </u>				1		
													1		
	SUB TOTAL 1														<u> </u>
_	BRIDGE AND CULVERTS														
	SUB TOTAL 1														
	SUB TOTAL 2														
	SUPERVISION 5%														
	TOTAL														
	D- [	District	U-Ul	oan	F- Feed	der	Р	- Pave	d	G - Gr	avel	E- E	arth		

Form 7 Road Maintenance Budget Summary/ Road Maintenance Activities (Form BULG-2C)

PRIME	PRIME MINISTER'S OFFICE ROAD MA	S OFFIC ROAD		IONAL JANCE BI	ADMIN UDGET S	DFFICE REGIONAL ADMINISTRATION AND LOCAL GC ROAD MAINTENANCE BUDGET SUMMARY FOR FUNDS F.Y 2013/14	ION ANI FOR FUN	DS F.Y 2	L GOVI	REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT INTENANCE BUDGET SUMMARY FOR FUNDS F.Y 2013/14		
										Form - BULG - 2C	SC	
Name of council	onncil											
Name of Region	Region											
					ROAD MAI	ROAD MAINTENANCE ACTIVITIES	ACTIVITIES	o				
S/O RC	ROAD NAME	ROAD									REHABILITATION/	'ATION'
		LENGTH	ROUTIN	OUTINE MTCE SPOT IMP	SPOT IMP	SPOT IMPROVEMENT PERIODIC MTCE	PERIODIC	-	REPAIR OF	REPAIR OF BRIDGE/CULV. UPGRADING	UPGRADIN	ភ្ន
			KM	Tshs(mio		Tshs(mio)	KM	Tshs(mio) no/line(s)	no/line(s)	Tshs(mio)		
1												
2												
င												
4												
5												
9												
7												
8												
6												
10												
11												
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15												
16												
17												
18												
19												
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21												
22												
23												
	IOIAL											

Form 8 Road surface types with its condition (Form BULG-2D)

Form 9 Summary of committed and uncommitted action plan (Form RALG-1A)

OHH 9	Juliii	ııdı	y '	UI	CU	1111	mue		ia uncomin	mu	tu	aul	IUI	ı þi	all	ורנ	<i>ו</i> וות	ı K	AL	ا - ق	H)		
								REMARKS															
FORM RALG - 1	FY:								UNCOMMITED FUND (Tshs.)														
									Balance Committe d														
SUMMARY OF COMMITTED AND UNCOMMITTED ACTION PLANS								ND DETAILS	Amount Paid														e as of today.
	REGION		T.Shs	T.Shs	T.Shs	T.Shs	T.Shs	COMMITTED FUND DETAILS	Contract Amount (Commitment) Sum (Tshs)														Committed fund balance + Uncommitted fund = Bank balance as of today.
SUMMARY OF COMMITTED AND UNCOMMITTED ACTION PLANS			S. <del>L</del>	S.T	Z.T	F.S. ⊢	S:T		Contract No.													TOTAL	Uncommitted fur
UNCOMMITTE								LEMENTATION STATUS	Completion Date														d fund balance +
OMMITTED AND								IMPLEMENTA	Start Date														NB. Committee
MMARY OF C									Approved Budget														
NS S	COUNCIL:		Budge	todate	ved todate	as at.	(5) Uncommitted Funds as at	ROAD NAME															
	COUNCIL		(I) Total Approved Budge	(2) Fund received todate	(3) Fund not received todate	Bank balance as at.	Incommitted	SN. MAINTENANCE	Activity														
		1	) (=)	(2) F	(3) F	(4) E	(5) U	SN.															

Form 10 Quarterly Progress Report (Form RALG-2A)

Proceed	RYO																
Annual Plan  Actual Road Maintenance Performance  Actual Road Maintenance Performance  Miles Information Phycal Financial Phycal Financial Phycal Financial (FAC)  Km. Tshs(mio), Km. Tshs		F QUARTER	LY RO	ΔD MA	INTEN	ANCE W	ORKS IM	PLEME	NTATION	I REPO	TA _						
Length   Annual Plan   Actual Road Maintenance Performance   Implement   Length   Length   Actual Status   A	COUNCIL:								REGION:								
Annual Plan Annual Plan Actual Road Maintenance Performance Technol Status Technol Mr. Tehs(mio) Tensemio)											1						
Actual studenter Actual Studenter Actual Studenter Actual Studenter Actual Studenter Actual Studenter Actual Financial Phreal Financial Phreal Financial (FAC)  Km. Tshis(mio), No. Tshis(mio)	_		Total		nual Plar			•	Actual R	toad Main	ntenance Pe	rforman	9 3		-	Implemen	tation
No. Tshs(mio). No. Tshs(mio). No. Tshs(mio). No.	ftce		(km)	Phy. Km.	inancial Shs(mio)		StQuarter Financial Tshs(mio).	Actual Ph'cal. Km.	2nd Quarte Financial Tshs(mio).	Ph'cal	3rd Quarter Financial Tshs(mio).	Ph'cal. Km.	4th Quarte Financial Tshs(mio).	Ph'cal.	Cumulative Financial Tshs(mio).	Status (FA/C)	
No. Tshs(mio). No. Tshs(mio). No. Tshs(mio). No.																	
No. Tshs(mio). No. Tshs(mio). No. Tshs(mio). No. Tshs(mio). No.		Sub Total:															
No. Tshs(mio). No. Tshs(mio). No. Tshs(mio). No.	1																
No. Tshs(mio). No. Tshs(mio). No. Tshs(mio). No.	ent.																
No. Tshs(mio). No. Tshs(mio). No. Tshs(mio). No.		Sub Total:															
No. Tshs(mio). No. Tshs(mio). No. Tshs(mio). No. Tshs(mio). No.																	
No. Tshs(mio). No. Tshs(mio). No. Tshs(mio). No. Tshs(mio). No.	2																
No. Tshs(mio). No. Tshs(mio). No. Tshs(mio). No. Tshs(mio). No.	1	Sub Total:															
No. Tshs(mio). No. Tshs(mio). No. Tshs(mio). No.		TOTAL															
Sub Total:	nage	B/C/D and road	name		[shs(mio	No.	Tshs(mio).	No.	Tshs(mio).		Tshs(mio).	No.	Tshs(mio).				
Sub Total:   Sub Total:																	
Sub Total:   Sub Total:																	
SION SION SION SION SION SION SION SION	0,	Sub Total:															
SION SION SION SION SION SION SION SION																	
DTAL:	NOIS																
	JTAL													1			

Form 11 Contract Execution Report (Forms RALG-1B)

	PRIME MINISTER'S O	TER'S OFFI	CE REGIO	ONAL ADN	MINISTRA	TION AN	ID LOCAL	FFICE REGIONAL ADMINISTRATION AND LOCAL GOVERNMENTS	ENTS	
	QUARTERLY		RY OF ROA	D MAINTEN	ANCE CON	FRACTS E	SUMMARY OF ROAD MAINTENANCE CONTRACTS EXECUTION REPORTS	EPORTS		
	COUNCIL:						REGION:		Form RALG	LG - 1B
	FY:									
Date	Road name/Project	Project	Contract	Contract	Commen. Compl.	Compl.	Contractors Payment	Payment	Balance	Progress
award award	description	Length(Km)	Deg En	Sus J English	nate The second	Date of the state	e E E	made todate		(in%ge).
	TOTAL					ı				
	1									

# **Contract Related Forms**

Form 12 Contract Agreement Form

	<u>Form of</u>	Contract A	greement
--	----------------	------------	----------

This Agreement, made on this day of
Whereas the Employer is desirous that certain works should be carried out, viz:
by the letter of Acceptance with ref. No
NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:
1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Bid Submission Form hereinafter referred to and;
2. The following documents shall be deemed to form and be read and construed as part of this Agreement, viz: -
Contract Agreement;
Letter of Acceptance;
Bid submission form
Contract data
General condition of contract
Special Condition of Contract
Specifications  Descriptions
Drawings Priced Bill of Quantities
Any other document forming part of the contract (CVs of key Personnel, Power of attorney,
Method statement, Work program)

All the aforesaid documents are hereinafter referred to as 'the Contract' and shall be taken as complementary and mutually explanatory of one another but in case of ambiguities or discrepancies shall take precedence in the order set out above.

In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute and complete the works in conformity, in all respects, with the provisions of the Contract.

The Employer hereby covenants to pay the Cocompletion of the works at the duration of  (	
IN WITNESS where of, the parties hereto have first above written.	e set their hands and seals on the day and year
SIGNED FOR AND ON BEHALF OF THE EMPLOYER	ON BEHALF OF THE CONTRACTOR:
Signature	Signature
NAME	DISTRICT COUNCIL.
Signature	Signature
NAME	(Name)
DISTRICT EXECUTIVE DIRECTOR (Occupation)(Address)	
P.O. BOX	

# Form 13 Letters for the Appointment of the Project Supervisor and other Stakeholders & Measurement Sheets

**Example of** Letter of appointment of Project supervisor (Technician/Engineer) on behalf of Project manager (DE/ME)

# NAME OF THE DISTRICT COUNCIL

District I P.O. Box.		COUNCIL'S LOGO	Telephone, General Line: +255. Direct Line: +255 Fax: +255	
Our Refer Your Ref	rence No . No:		Date	201
C S  Y	name, HEO L.P  AH: KUTEULIWA KUSI		VA MATENGENEZO Y	
Tafadha	li husika na kichwa cha	a habari hapo juu		
korofi,Mi ambao <b>0.00</b> we	eua kusimamia mradi uda maalum) Barabara utafanywa na Mkandar nye mkataba No hadi tarehe	a yaasi <b>M/S</b>		., kwa Tshs.
(i)	nu yako yatakuwa kam Kusimamia kwa karib	a liuatavyo. u mradi huu kwa	ı kufuata taratibu zaı	mkataba.
(ii)	Kusimamia ubora na mkataba.	a viwango kazi v	navyokubalika kwa	mujibu wa
(iii)	Kusimamia utekeleza programme" ya mkan kazi.	ıji wa mradi kw darasi kama zipo	a kufuata mpango o dalili za kutotekelez	kazi "work eka mpango
(iv)	Kuandaa malipo ki kulipwa kwa uhalisia n			

- (v) Kuandaa vikao vya maeneo ya kazi "Site meetings" zitakazo wahusisha, Mwajiri, PMU, viongozi wa Serikali za Vijiji/Kata waliopo karibu na eneo la mradi pamoja na Mkandarasi kila mwezi.
- (vi) Kusimamia upimaji na ubora wa kazi inayofanywa na Mkandarasi ukishirikiana na TANROADS.
- (vii) Kushirikisha Wananchi walio karibu na eneo la mradi katika utekelezaji wa mradi ikiwa ni pamoja na kuwapa taarifa juu ya maendeleo ya mradi.
- (viii) Kumsimamia Mkandarasi kuhusu masuala mtambuka katika eneo la mradi huu ikiwa ni pamoja na ushiriki wa sawa wa kijinsia (wanawake na wanaume) katika kuajiri vibarua , ugawaji wa vipeperushi na "condom" katika maeneo ya mradi ili kupunguza maambukizi ya VVU.
- (ix) Kusimamia kwa karibu rasilimali zilizopo barabarani (existing road structures and Furnitures) ili zisiharibiwe wakati wa utekelezaji wa mradi huu ili kupunguza gharama za kurudia kazi.
- (x) Kumshauri Mhandisi wa ujenzi *pale inapobidi* juu ya kuongeza na kupunguza kazi kulingana na mkataba.
- (xi) Kutoa mapendekezo kwa maandishi na vitendo juu ya Wananchi wanaofanya shuguhuli zozote katika eneo la barabara (yaani, umbali usiozidi mita 15 kila upande wa barabara.

Hakikisha unatekeleza majukumu yote hayo kwa umakini na kuhakikisha utekelezaji wa mradi huu unakamilika kama ulivyo katika mkataba. Iwapo mradi huu utatekelezwa chini ya kiwango utawajibishwa kwa mujibu wa sheria na taratibu za kiutumishi.

Nakutakia kazi njema.

JINA..... MKURUGENZI MTENDAJI (W)

Nakala 1. Mhandisi wa Ujenzi (W)

2. Afisa ugavi (W)

# **Example of MEASUREMENT SHEET**

		DISTRICT COUNCIL	
Project		DAD FUND Financial Year	
-	of Contractor		
		MEASUREMENT SHEET	1
S/NO	Chainage	Description of work and measurement	Quantity
For	. District Cour	ncil	Contractor
Sign Sign		····	
Name.	 C OF WORKS T		SITE

## Form 14 Letter to Stakeholders

# NAME OF THE DISTRICT COUNCIL

		COUNCIL'S LOGO	Telephone, General Line Direct Line Tanzania
	ference Noeference No:		Date:
KWA MH.	MBUNGE – JIMBO LA WAH. MADIWANI, WATENDAJI WA KATA, WATENDAJI NA WENYEVITI		JIKA.
			BARABARA YA
	MKANDARASI		
Wilaya Mkand kwa  Kazi a kumwa	Somo hapo juu lahusika, ntambulisha kwenu mkandarasi taja kupitia kikao kilichofanyika darasi huyo ndiye atakayefanya M jumla ya shilingi	baada ya fatengenezo ya b(Insert abara, kutengenez, kuw	va ameteuliwa na bodi ya zabuni ya taratibu za utoaji zabuni kukamilika varabara ambayo imetajwa hapo juu figure) kwa muda wa siku za tuta la barabara km, reka makalvati mistari, na kuchimba mifereji ya kutoa maji
ya Wi	3	oni au ushauri n	ikiano katika pande zote kwa maana nnatakiwa kuwasiliana na ofisi ya a mapendekezo yatakayo tolewa.
Tunaa mradi		mapema iwezeka	anavyo ilikufanikisha utekelezaji wa
Nawat	akieni kazi njema		
Nakala		misemi Dodoma Indisi Ujenzi [W]	I

## Form 15 Prequalification of the Contractor

### 1.0 POST-QUALIFICATION INFORMATION – PENDING LITIGATION

M/S ...... (Insert name of contractor)

Sub-Factor	Requirement	Qualification of the Bidder	Remarks
History of non- performing contracts	Non-performance of a contract did not occur within the last five (2) years prior to the deadline for application submission.	If Submitted a declaration of having no unperformed contract (Comply otherwise not comply)	Comply/ Not Comply
Pending Litigation	All pending litigation not exceed than fifty percent (50%) of the Bidder's net worth.	If Submitted a declaration of having no pending litigation (Comply otherwise not comply)	Comply/ Not Comply
Ov	erall Remarks		Comply/ Not Comply

Note: For Contractors Class VI and below the Prequalification is not applicable

#### 2.0 POST-QUALIFICATION INFORMATION -FINANCIAL SITUATION

M/S ..... (Insert name of contractor)

Sub- Factor	Requirements	Qualification of the Bidder	Remarks
Historical Financial Performa nce	Audited Financial statements of the last two (2) years up to December	If submitted reports for two (2) consecutive years ending  December(Comply otherwise not comply)	Comply
	Current Ratio (≥1.2)	=(3,636,219,758/762,028,761.3)=4. 77 (≥1.2)	Comply
	Return of Equity (≥5%)	=(1,304,721,914/32,278,600) =40% (≥5%)	Comply
Average Annual Turnover	Minimum average annual turnover within last Three (3) years TShs. 2,000, 000,000.00	TShs 3,636,219,758	Comply
Financial Resource s	Overall cash flow requirements for this contract and its current works commitments TShs 1,000,000,000.00	Financial analysis indicated that the bidder has a fuel credit of TShs 400,000,000.00, cash in bank TShs 600,258,638.04 and extra new equipment credit of TShs 1,003,568,610.59,  The company is financially capable	Comply
Overall R	emarks	ı	Comply

Note: Red part is just example; it should have to be customized according to size of the Project

### 3.0 POST-QUALIFICATION INFORMATION – EXPERIENCE

NA/C					
1VI/3	 	 	 	 	

Sub- Factor	Requirements	Qualification of the Bidder	Remarks
General Experience	Minimum FIVE [Number] Years	More than five (5) years	Comply
Specific	Minimum THREE [3] similar projects within the last THREE [3] Years each with a value of at least TShs. 800,000,000.00.	Has 13 projects each has more 800,000,000.00 and have been completed of the same nature	Comply
Experience	Construction of reinforced concrete bridges of spans 10m and above.	Has not submitted any bridge project	Comply*
	Construction of fully Engineering designed gravel road of minimum length 30km.	Has more than 5 projects with the more than the 30 km	Comply
Overall Rem			Comply

<sup>\*</sup>The Evaluation Team considers this as an irrelevant requirement for lot I & II which are road bids. The inserted figure is just for example and shall be customized according to size of the project.

# 4.0 POST-QUALIFICATION INFORMATION – PERSONNEL M/S .....

	Require	em ents	Prov	ided	
Key Position	T.W.E.	S. E.	T.W.E.	S. E.	Remark
	(in years)	(in years)	(in years)	(in years)	
A Project Manager with academic qualifications of at least Diploma in Civil Engineering or Equivalent Qualifications					
Site Engineer with academic qualifications of at least Degree in Civil Engineering/ or Equivalent Qualifications and registered with Engineers Registration Board (T).					
Chief Foreman with at least ordinary Diploma in Civil Engineering or Equivalent Qualifications					
Overali Remarks					

T.W.E.: Total Work Experience S.E.: Specific Work Experience

### **POST-QUALIFICATION INFORMATION - EQUIPMENT**

M/S .....

No.	Equipment Type and Characteristics	Minimum Number required	Submitted by the Bidder	Remarks
1	Self-propelled vibrating rollers, 10 T	2	2	
2	Motor graders, 120hp	2	2	
3	Excavators,75hp	1	2	
4	Bulldozers,140hp	1	1	
5	Dumpers / tipper trucks, 4.6m <sup>3</sup>	10	12	
6	Water bowser, 10,000 liter	4	5	
7	Concrete mixer, vibrator set, 1m <sup>3</sup>	2	4	
8	Poker Vibrator	2	4	
9	Supervision vehicles, 4WD	1	1	
	Overall Rema	arks		

The bidder has submitted additional equipment which will be hired from a hiring pool to serve as standby. The evaluation team considers this as extra strength and an added advantage

# **Other Forms**

Form 16 Supervision Checklist (1/2)

			Superv	Supervision Check List (1/2)			
	Project Title:				Date The Engineer's Representative	Name Signature	
	Contractor:				(Project Engineer/Supervision)		
1. Thi 2. Fill 3. Put	1. This check list is for Resident Engineer to check co 2. Fill in date of checking as (day/month), mark as indi 3. Put this check list in the Monthly Progress Report.	sident En ts (day/n Monthly	1. This check list is for Resident Engineer to check contractor's work execution process.  2. Fill in date of checking as (day/month), mark as indicated in Filling Example, and state remarks.  3. Put this check list in the Monthly Progress Report.		Resident Engineer/ Site Clerk		
				befor During execution	ıtion after	Remarks	
	Item		Check Point	Date Date Date Date Date Date	Date Date Date Date	Reason for unsatisfactory performance (Site diary No.)  Corrective order by authority (Date)  Excellent point to be specified	
-	Execution system in general	1-1	Works Execution Programme (including its revised version if any) is submitted before the date specified in contract document				
	•	1-2	Works Execution Programme properly reflects the given specifications and site conditions				
		1-3	Execution procedures are in accordance with Works Execution Programme				
2	Equipment holding	2-1	All equipment used are properly mobilized in accordance with Works Execution Programme				
		2-2	All equipment used is well maintained during the execution of works				
3	Contractor's in- house staff	3-1	Qualified technical staff of contractor are properly assigned as specified in Works Execution Programme				
		3-2	Contractor's in-house key staff understand work process and schedule properly				
		3-3	Contractor's in-house staff give technical guidance and direction to workers and operators properly and timely				
		3-4	Communications with authority in writing is properly and timely				
4	Personnel employment	4-1	Workers and operators are deployed in accordance with Works Execution Programme				
		4-2	Wage payment is properly made on time				
5	Site base facilities	5-1	Office and stockyard are prepared in accordance with Works Execution Programme				
		5-2	Site is well maintained during the work execution and cleared on completion				
		5-3	Material stored on site is properly managed during the work execution				
9	Quality and quantity management	6-1	Material testing, structural examination, and measurements are properly and routinely conducted based on specifications and Works Execution Programme				i
			Filling Example :   Check point is satisfactory		Check point is unsatisfactory N/	N/A Not applicable	

# Supervision Checklist (2/2)

Supervision Check List (2/2)

						Giomofress
	Project Title:				The Engineer's	olgnature
	Contractor:				Representative (Project Engineer)	
1. Th 2. Fill 3. Pu	1. This check list is for Resident Engineer to C. Fill in date of checking as (day/month.), man 3. Put this check list in the Monthly Progress	sident Eng is (day/m	I. This check list is for Resident Engineer to check contractor's work execution process.  2. Fill in date of checking as (day/month), mark as indicated in Filling Example, and state remarks.  3. Part this check list in the Monthly Progress Report.		Resident Engineer	
				before During execution after	Remarks	
	Item		Check Point	Date Date Date Date Date Date Date Date	Reason for unsatis factory performance (Site diary No.) Corrective order by authority (Date) Excellent point to be specified	(Site diary No.) (Date) Fod
9		6-2	Results of material testing, structural examination and measurements are within the specifications.			
	management	6-3	Results of material testing, structural examination, and measurements are properly compiled as reports for confirmation			
7	Work scheduling	7-1	Understanding of critical path and its reflection on scheduling are proper			
		7-2	Actual proceedings are periodically compared to the planned schedule described in Works Execution Programme			
		7-3	Changes caused by site conditions are properly handled to keep Works on schedule			
		4.	All works are completed within the contract term or within the extended term as allowed			
∞	Work safety management	8-1	No accident occurs to workers, operators, or third-parties.			
		8-2	Safety of workers and operators is considered			
		8-3	Accident prevention efforts for third-parties are proper			
		4.	Traffic and site safety devices are property installed and managed			
		8-5	Temporary facilities (e.g. scaffolding) are constantly checked			
6		9-1	Environmental and social mitgation efforts (e.g. against noise, vibration, emission, and dust ) are conducted			
	management	9-2	Waste material from site is properly disposed			
		9-3	Damage to existing roads, works and services is avoided or are repaired when it occurs			
		9-4	Transportation by vehic les is properly done with no overloading, and neither material falling, leakage, nor spillage.			
			Filling Example : ✓ Check point is satisfactory	ctory Check point is unsatisfactory	N/A Not applicable	

# Form 17 Quality Assurance Form (1/2)

			DISTRICT	COUNCIL			
QU	ALITY ASSURAN	ICE	FORM FOR ROAD WO	RKS			
				AS	SESSMEN	IT (Mark 0	up to 100)
No	Maintenance activity		Parameter of quality	Contractor's marks	Supervisor's marks	Engineer's marks	Remarks
1	Dood formation/ and disc	i	Alignment of road section				
	Road formation/ grading	ii	Defined side drains				
		iii	Backslope provision				
		iv	Chamber and center line				
		٧	Watering and proof rolling				
2	Gravelling	i	is good quality gravel used?				
		ii	Dimensions of placed gravel (m)				
			Width Depth Length				
		iii	Camber to centerline (8%)				
		iv	Compaction (95%MMD)				
		V	Laboratory test results				
3	Concrete work	i	Size and neatness of Sand				
3							
	(small structure)	ii 	Size and neatness of Aggregates				
		iii	Water and cement ratio (0.5)				
		iv v	Quality of finished concrete  Laboratory test results				
		·	Laboratory test results				
4		i	Size of open drains				
-	Open drains excavation	ii	Alignment of open drains				
		iii	Appropriate discharge of water				
		iv	Beginning and end of drains				
5	Culvert installation	i	Setting out				
	(small structure)	ii	Trench, blinding and concrete base				
		iii	Laying, aligning and jointing pipes				
		iv	Concrete surrounding quality & size				
		v	Upstream and downstream approns				
		vi	Headwalls and Wingwalls				
		vii	Backfilling and compaction				
		viii	Outfalls and infalls				
Ger	neral Remarks :						
	ntractor's Name			Sign :			Date :
Cor		1			I		
	hnician's Name			Sign :			Date :

Quality Assurance Form (2/2)

#### DISTRICT COUNCIL QUALITY ASSURANCE FORM FOR CONCRETE WORKS ASSESSMENT (Mark 0 up to 100) Contractor's Supervisor's Engineer's Maintenance activity Parameter of quality No Remarks marks marks marks i Alignment of road section Formwork ii Defined side drains iii Backslope provision Camber and center line Watering and proof rolling 2 Gravelling is good quality gravel used? Dimensions of placed gravel (m) Width... Depth... Length... Camber to centerline (8%) Compaction (95%MMD) Laboratory test results 3 Concrete work i Formwork ii Steel reinforcement class &size iii Steel reinforcement spacing & tying (Steel reiforced structure) iv Cover thickness Slump test (workability and mix) Quality of concrete vi Quality of finished concrete viii Laboratory test results 4 Open drains excavation Size of open drains ii Alignment of open drains Appropriate discharge of water Beginning and end of drains 5 Culvert installation Excavation and compact foundation (Box culvert) Concrete blinding and floor slab iii Stone masonry wall/concrete wall Concrete top slab Upstream and downstream approns Headwalls and Wingwalls νi Backfilling and compaction viii Installation of gabion box General Remarks: Contractor's Name Date: Sign: Supervisor's Name Sign: Date: Engineer's Name Date: Sign:

Form 18 Value for Money Form (VFM)

			· · ·					
			VALUE FOR MONEY (VFM) FORM					
		Agency:		Contract I	Price:			
		Project:		Project Le	ength			
		Contract Number:		Contract I	Period:			
		Supervising Engineer:		Start Date	: ::			
		Contractor:		Actual Co	mpletion	Date:		
		Audit Date:			<u>.</u>			
				E'	VALUAT	ON SCOR	E	
	NO.		ASPECT	Poor	Fair	Good	INA	
	Accord a	    nroject implementation	on aspects listed under stages A1-A4 below and rate them as poor, fair or good. If the aspect lacks the					COMMENTS
			tion score should be zero (under "INA" column)					COMMENTS
_	i i		·				_	
Α	Planning	, Design and Tender Do	cumentation	1	2	3	0	
	1	Compliance of project	planning with requirements of the Performance Agreement, particularly with respect to:					
			eting alternatives based on updated road inventory and condition survey					
			based on appropriate road maintenance software (such as HDM 4, DROMAS, or RMMS)					
	1		of independent design professional or Consultant ness of design calculations and technical drawings					
			ess and completeness of technical specifications					
			ess and compreteness or technical specifications s of the design in terms of economy and function (fitness for purpose)					
	4	Overall appropriateries	s of the design in terms of economy and function (indiess for purpose)					
			ness of BOQs for the works and their consistency with the drawings and technical specifications					
		Accuracy of the Engine						
	7	Accuracy and complete	ness of tender documents					
			Average Performance: Planning, Design and Tender Documentation			_	#DIV/0!	#DIV/0!
В		nent Stage	and of an analysis	1	2	3	0	
	1	Appropriateness of the	method of procurement					
	2	Compliance of the proc	curement process with PPA 2004 and its Regulations (GN 97 of 2005), particularly with respect to:					
		- Use of standard tende	er and contract documents [Reg. 83 of G.N. No. 97]					
		- The tender notice [se	ction 61 (2)]					
		- The selection method	d (section 59)					
		- Prequalification and	shortlisting (section 47)					
		- Time for submitting b	ids					
		- Communication of cla	rification to bidders					
	3	Evaluation process and						
		·	er evaluation committee (section 37)					
		- Members of evalautic No. 98]	on team signing code of ethcis [section 37(6) of PPA 2004; Reg. 9091) of GN. No. 97 & Reg. 5892) of GN.					
			r the evaluation criteria contained in the tender dossier or Request for Proposal					
		·i	stion results to unsuccessful bidders [Regulation 97(11)] of G.N. No. 97					
			[Regulations 21 and 97(12)] of G.N. No. 97					
			nsiveness of the tender evaluation report					
	4		es quoted for major items of construction when compared with prevailing market prices					
	5		ss of the most economic tender when compared with prevailing market prices in both private and					
		<u> </u>	ce of the selected contractor in relation to project size and complexity					
	U	oupdoing and competer	Average Performance: Procurement Stage				#DIV/0!	#DIV/0!
		I	Average i enformance i rocurement stage			I		11014/Vi

	_						
С	Construc	tion Stage	1	2	3	0	COMMENTS
	1	Timeliness of site possession	,	`	,		
	2	Quality of project programme (schedule of work)					
	3	Adherence to project programme					
	4	Quality of contractor's site organization and staff					
	5	Quality of supervising engineer's site staff					
	6	Quality of quality assurance programme					
	7	Adherence to quality assurance programme					
	8	Quality of Environmental Management Plan (EMP)					
	9	Management of contractual documents, including surety and insurances bonds					
	10	Quality and management of project documentation with respect to:					
		- general correspondence					
		- site instructions					
		- minutes of site meetings					
		- progress reports					
		- works measurement and inspection records					
		- material testing records					
		- interim and final payment certificates					
		- variation orders					
		- claims					
	11	Assessment (including validity) of variations					
	12	Assessment (including validity) of claims and related cost overruns					
	13	Assessment (including validity) of project delays and extensions of time					
	-13	Average Performance: Construction Supervision and Contract Adminstration				#DIV/0!	#DIV/0!
D	Project (	Completion and Closure Stage					11514/0;
U	1	Quality and completeness of as-built-drawings					
	2	Compilation and Management of snag list					
	3	Timely issuance of Substantial Completion Certificate, Final Certificate and settlement of Final Account			ļ	<b></b>	
	4	Management of the defects liability period					
	5	Quality and adequacy of the final project report					
	6	Compliance of final quantities paid for with those reflected by the actual investment as per as-built-drawings					
	7	Compliance of project cost as per final account with accepted tender price					
	8	Compliance of actual project completion time with the contract period				#50.401	
		Average Performance: Project Completion and Closure Stage				#DIV/0!	#DIV/0!
Ε			_	_			
	Executed	d Works	1	2	3	0	COMMENTS
			1	2	3	0	COMMENTS
	Based or	n visual assessment, determine whether the completed works are satisfactory in terms of:	1	2	3	0	COMMENTS
	Based or	n visual assessment, determine whether the completed works are satisfactory in terms of: Il quality of workmanship	1	2	3	0	COMMENTS
	Based or Overa	n visual assessment, determine whether the completed works are satisfactory in terms of: Il quality of workmanship Il quality of materials used	1	2	3	0	COMMENTS
	Overa     Overa     Overa     Overa	n visual assessment, determine whether the completed works are satisfactory in terms of: Il quality of workmanship Il quality of materials used Il quality of riding surface	1	2	3	0	COMMENTS
	Based or Overa Overa Overa Abser	n visual assessment, determine whether the completed works are satisfactory in terms of: Il quality of workmanship Il quality of materials used Il quality of riding surface Ice of defects, such as cracks, ruts and localized potholes	1	2	3	0	COMMENTS
	Based or Overa Overa Overa Absen	n visual assessment, determine whether the completed works are satisfactory in terms of: Il quality of workmanship Il quality of materials used Il quality of riding surface	1	2	3	0	COMMENTS
	Based or Overa Overa Overa Absen	n visual assessment, determine whether the completed works are satisfactory in terms of: Il quality of workmanship Il quality of materials used Il quality of riding surface Ice of defects, such as cracks, ruts and localized potholes	1	2	3	0	COMMENTS
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	Based or Overa Overa Overa Abser Camb	n visual assessment, determine whether the completed works are satisfactory in terms of: Il quality of workmanship Il quality of materials used Il quality of riding surface Ice of defects, such as cracks, ruts and localized potholes	1	2	3	0	COMMENTS
1	Based or Overa Overa Abser Camb	n visual assessment, determine whether the completed works are satisfactory in terms of:  Ill quality of workmanship  Ill quality of materials used  Ill quality of riding surface  nce of defects, such as cracks, ruts and localized potholes  er and/or super-elevation  In physical site measurements, determine whether dimensions of the following major items of construction of the completed   Imply with the drawings and technical specifications:	1	2	3	0	COMMENTS
1	Based or Overa Overa Overa Abser Cambo Based or works co	n visual assessment, determine whether the completed works are satisfactory in terms of:  Ill quality of workmanship  Ill quality of materials used  Ill quality of riding surface  nce of defects, such as cracks, ruts and localized potholes  er and/or super-elevation  In physical site measurements, determine whether dimensions of the following major items of construction of the completed imply with the drawings and technical specifications:  ment structure	1	2	3	0	COMMENTS
1	Based or Overa Overa Overa Abser Camb Based or works co Paver	n visual assessment, determine whether the completed works are satisfactory in terms of:  Ill quality of workmanship  Ill quality of materials used  Ill quality of riding surface  nce of defects, such as cracks, ruts and localized potholes  er and/or super-elevation  In physical site measurements, determine whether dimensions of the following major items of construction of the completed imply with the drawings and technical specifications:  ment structure  carriageway	1	2	3	0	COMMENTS
1	Based or Overa Overa Overa Abser Cambb Based or works co Paver Road	n visual assessment, determine whether the completed works are satisfactory in terms of:  Ill quality of workmanship  Ill quality of materials used  Ill quality of riding surface  nce of defects, such as cracks, ruts and localized potholes  er and/or super-elevation  In physical site measurements, determine whether dimensions of the following major items of construction of the completed  imply with the drawings and technical specifications:  ment structure  carriageway  paths	1	2	3	0	COMMENTS
1	Based or Overa Overa Overa Abser Camb Based or works co Paver Road Foot	n visual assessment, determine whether the completed works are satisfactory in terms of:  Ill quality of workmanship  Ill quality of materials used  Ill quality of riding surface  nce of defects, such as cracks, ruts and localized potholes  er and/or super-elevation  In physical site measurements, determine whether dimensions of the following major items of construction of the completed  imply with the drawings and technical specifications:  ment structure  carriageway  paths  side drains	1	2	3	0	COMMENTS
1	Based or Overa Overa Abser Camb Based or Works co Paver Road Foot Road Mitre	n visual assessment, determine whether the completed works are satisfactory in terms of:  Ill quality of workmanship  Ill quality of materials used  Ill quality of riding surface  Ince of defects, such as cracks, ruts and localized potholes  In physical site measurements, determine whether dimensions of the following major items of construction of the completed  In physical site measurements, determine whether dimensions of the following major items of construction of the completed  In physical site measurements, determine whether dimensions of the following major items of construction of the completed  In physical site measurements, determine whether dimensions of the following major items of construction of the completed  In physical site measurements, determine whether dimensions of the following major items of construction of the completed  In physical site measurements, determine whether dimensions of the following major items of construction of the completed  In physical site measurements, determine whether dimensions of the following major items of construction of the completed  In physical site measurements, determine whether dimensions of the following major items of construction of the completed  In physical site measurements, determine whether dimensions of the following major items of construction of the completed  In physical site measurements, determine whether dimensions of the following major items of construction of the completed  In physical site measurements, determine whether dimensions of the following major items of construction of the completed  In physical site measurements, determine whether dimensions of the following major items of construction of the completed  In physical site measurements, determine whether dimensions of the following major items of construction of the completed  In physical site measurements, determine whether dimensions of the following major items of construction of the completed  In physical site measurements of the following major items of construction of the	1	2	3	0	COMMENTS
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1	Based or Overa Overa Overa Abser Camb Based or works co Paver Road Foot Road Mitre Road	n visual assessment, determine whether the completed works are satisfactory in terms of:  Ill quality of workmanship  Ill quality of materials used  Ill quality of riding surface  Ince of defects, such as cracks, ruts and localized potholes  In physical site measurements, determine whether dimensions of the following major items of construction of the completed  In physical site measurements, determine whether dimensions of the following major items of construction of the completed  In physical site measurements, determine whether dimensions of the following major items of construction of the completed  In physical site measurements, determine whether dimensions of the following major items of construction of the completed  In physical site measurements, determine whether dimensions of the following major items of construction of the completed  In physical site measurements, determine whether dimensions of the following major items of construction of the completed  In physical site measurements, determine whether dimensions of the following major items of construction of the completed  In physical site measurements, determine whether dimensions of the following major items of construction of the completed  In physical site measurements, determine whether dimensions of the following major items of construction of the completed  In physical site measurements, determine whether dimensions of the following major items of construction of the completed  In physical site measurements, determine whether dimensions of the following major items of construction of the completed  In physical site measurements, determine whether dimensions of the following major items of construction of the completed  In physical site measurements, determine whether dimensions of the following major items of construction of the completed  In physical site measurements, determine whether dimensions of the following major items of construction of the completed  In physical site measurements, determine whether dimensions of the following major	1	2	3		COMMENTS
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2 3 4	Based or or overal and of the second of the	n visual assessment, determine whether the completed works are satisfactory in terms of:  Ill quality of workmanship  Ill quality of materials used  Ill quality of riding surface  tice of defects, such as cracks, ruts and localized potholes  er and/or super-elevation  In physical site measurements, determine whether dimensions of the following major items of construction of the completed  imply with the drawings and technical specifications:  ment structure  carriageway  paths  side drains  drains  signs  In site measurements, determine whether dimensions of culverts and bridges ccomply with the technical drawings and  titions  In sample field tests determine whether the quality of materials used in the pavement structure comply with the technical		2	3		COMMENTS
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2 3 4	Based or Vera Vera Vera Vera Vera Vera Vera Ver	n visual assessment, determine whether the completed works are satisfactory in terms of:  Ill quality of workmanship  Ill quality of materials used  Ill quality of riding surface  Ince of defects, such as cracks, ruts and localized potholes  In physical site measurements, determine whether dimensions of the following major items of construction of the completed  Imply with the drawings and technical specifications:  In physical site measurements, determine whether dimensions of the following major items of construction of the completed  In physical site measurements, determine whether dimensions of the following major items of construction of the completed  In physical site measurements, determine whether dimensions:  In site measurements, determine whether dimensions of culverts and bridges ccomply with the technical drawings and  It it is the measurements, determine whether the quality of materials used in the pavement structure comply with the technical  It is a sample field tests determine whether the quality of materials used in concrete and masonry works comply with the		2	3		COMMENTS
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1 2 3 4 5	Based or Vera Abser Abse	Il quality of workmanship Il quality of workmanship Il quality of materials used Il quality of materials used Il quality of riding surface tice of defects, such as cracks, ruts and localized potholes er and/or super-elevation In physical site measurements, determine whether dimensions of the following major items of construction of the completed imply with the drawings and technical specifications: ment structure carriageway paths side drains drains signs In site measurements, determine whether dimensions of culverts and bridges ccomply with the technical drawings and titions In sample field tests determine whether the quality of materials used in the pavement structure comply with the technical titions In sample field tests determine whether the quality of materials used in concrete and masonry works comply with the Il specification Il quality of workmanship Il quality of materials used in concrete and masonry works comply with the Il specification Il quality of materials used in concrete and masonry works comply with the Il specification		2	3	#DIV/0!	COMMENTS  #DIV/0!
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1 2 3 4 5	Based or Povera Abser Ab	Il quality of workmanship Il quality of workmanship Il quality of workmanship Il quality of workmanship Il quality of materials used Il quality of riding surface Ice of defects, such as cracks, ruts and localized potholes er and/or super-elevation In physical site measurements, determine whether dimensions of the following major items of construction of the completed imply with the drawings and technical specifications: In the structure carriageway paths In site measurements, determine whether dimensions of culverts and bridges ccomply with the technical drawings and titions In sample field tests determine whether the quality of materials used in the pavement structure comply with the technical titions In sample field tests determine whether the quality of materials used in concrete and masonry works comply with the lapseification In sample field tests determine whether the quality of materials used in concrete and masonry works comply with the lapseification In sample field tests determine whether the quality of materials used in concrete and masonry works comply with the lapseification In sample field tests determine whether the quality of materials used in concrete and masonry works comply with the lapseification In sample field tests determine whether the quality of materials used in concrete and masonry works comply with the lapseification In sample field tests determine whether the quality of materials used in concrete and masonry works comply with the lapseification In sample field tests determine whether the quality of materials used in concrete and masonry works comply with the lapseification In sample field tests determine whether the quality of materials used in the pavement structure comply with the technical drawings and the pavement structure comply with the technical drawings and the pavement structure comply with the technical drawings and the pavement structure comply with the technical drawings and the pavement structure comply with the technical drawings and the pavement structure comply with					
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