



# CIVIL WORKS FOR THE REHABILITATION OF THE TORORO-GULU RAILWAY

### TENDER DOSSIER FOR CIVIL WORKS

#### EUROPEAID/139549/IH/WKS/UG

### Volume 4.3

4.3.1 — Introduction

4.3.2 — Bill of Quantities

4.3.3 — Price Schedule

4.3.4 — Daily works Schedule

4.3.5 — Detailed Breakdown of Prices

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### **VOLUME 4.3**

#### **FINANCIAL OFFER TEMPLATES**

#### **UNIT PRICE CONTRACTS**

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Vol.4

#### **VOLUME 4.3.1 — INTRODUCTION**

#### 1. General

1.1 The Bill of Quantities (<u>Volume 4.3.2</u>) is the document containing an itemised breakdown of the works to be carried out in a unit price contract, indicating a quantity for each item and the corresponding unit price. The quantities set out in the Bill of Quantities are estimated quantities. Each price for each item of the Bill of Quantities is detailed in the Price Schedule (Volume 4.3.3).

The amounts due will be calculated by measuring the actual quantities of the works executed and by applying the unit rates to the quantities actually executed for each item.

1.2 The Detailed Breakdown of Prices (<u>Volume 4.3.5</u>) is the list containing the basic costs, net costs and mark-ups from which each price on the Bill of Quantities and the Price Schedule and on the Daywork Schedule results.

The Detailed Breakdown of Prices provides the coefficients for applying the price revision formula referred to in Article 48.2 of the Special Conditions and can provide the basis for valuation of additional work ordered referred to in article 37.5 of the General Conditions.

1.3 Provisional sums for use when works are to be executed on a daily work basis (<u>Volume 4.3.4</u>) can only be executed by administrative order of the Supervisor in accordance with the terms of the Contract.

#### 2. Specific to Volumes 4.3.2, 4.3.3 and 4.3.4

- 2.1 The prices inserted in the Bill of Quantities and Price Schedule are to be the full inclusive values of the works described under the items, including all costs and expenses that may be required in and for the construction of the works described, together with any temporary works and installations which may be necessary and all general risks, liabilities and obligations specified or implied in the documents on which the tender is based. It will be assumed that establishment charges, profit and allowances for all obligations are spread evenly over all unit rates.
- 2.2 Save where the technical specifications or the Bill of Quantities and the Price Schedule specifically and expressly state otherwise, only permanent works are to be measured.
- 2.3 No allowance will be made for loss of materials or volume thereof during transport or compaction.
- 2.4 The prices of the bill of quantities, price schedule and daily work schedule are all-inclusive and include any non-exonerated tax or fiscal duty.
- 2.5 The Unit prices in Volumes 4.3.2 and 4.3.4 are obtained by multiplying the Net cost of Volume 4.3.5 Table D, on the one hand, with the coefficient K, on the other hand.

The coefficient K represents the proportions between the Site costs (Fc) of Volume 4.3.5 - Table E and the Total net costs (Ps) and between the General costs (Fg) of Volume 4.3.5 - Table F and the Contract price (Pv): K = (1+A)/(1-B) whereby

A= Fc/Ps

B = Fg/Pv

2.5 The units of measurement used in the annexed technical documentation are those of the International System of Units (SI). No other units may be used for measurements, pricing, detail drawings etc. (Any units not mentioned in the technical documentation must also be expressed in terms of the SI.) Abbreviations used in the bill of quantities are to be interpreted as follows:

means	<b>Provisional Sum</b>
means	millimetre
means	metre
means	Kilometre
means	square millimetre
means	square metre
means	cubic metre
means	kilogram
means	tonne (1000 kg)
means	pieces
means	hour
means	Lump sum
means	kilometre
means	litre
means	per cent
means	nominal diametre
means	man-month
means	man-day
means	Number
means	Hectare
	means

#### **VOLUME 4.3.2 — BILL OF QUANTITIES**

	VOLUME 4.5		F QUANTITIES		
PRICE No	TITLE	UNIT	UNIT PRICE	ESTIMATED QUANTITIES	AMOUNT
(a)	(b)	(c)	(d)	(e)	(f = d * e)
(-/	GENERAL REQUIREMENTS	(-/	(2)	(-)	(* 5. 5)
	AND PROVISIONS				
12.02	Relocation of services				
	(a) Arrange and pay for removal and / or alteration to services provided by agencies for electricity supply, water supply or telecommunication services	P.S.		1	
	(b) Allow for contractor's overheads & profits as a percentage of item 12.02(a)	%		16%	
	CONTRACTOR'S				
	ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS				
13.01	Contractor's Preliminary and General Obligations				
	(a) Fixed obligations	L.S.		1	
	(b) Value-related obligations	L.S.		1	
	(c ) Time-related obligations	Months		36	
	ENGINEER'S ACCOMMODATION AND ATTENDANCE UPON THE ENGINEER				
14.02	Offices for the Engineer				
	(b) Maintain and pay all rents and municipal services for fully furnished and equipped offices for the Engineer	Months		36	
14.03	Wash house for the Engineer				
	(b) Maintain and pay all rents and municipal services for fully furnished and equipped wash house for the Engineer	Months		36	
14.04	Site cabin / office for the Engineer				
	(b) Maintain and pay all rents and municipal services for fully furnished and equipped site cabin / office for the Engineer	Months		36	
14.05	Vehicles for the Engineer				-
14.05	Four wheel drive station wagon for the Engineer				
	(b) Operate and maintain vehicle (min 3000cc) for an average of 3.000 km per month	vehicle x months		72	
	(c) Operate and maintain vehicles for travel distance in excess of average 3.000 km per month per	km		100,000	

	vehicle			
14.06	Four wheel drive pick-up for			
	the Engineer			
	(b) Operate and maintain vehicles	vehicle x		
	(Double Cabin min. 3000cc) for an	months	36	
	average of 3.000 km per month  (c) Operate vehicles for travel		100,000	
	distance in excess of average	km	100,000	
	3.000 km per month	KIII		
	(d) Operate and maintain vehicles	vehicle x		
	(Single Cabin min. 3000cc) for an	months	36	
	average of 2.000 km per month	HOHEIS		
	(e) Operate vehicles for travel distance in excess of average	km	100,000	
	2.000 km per month	KIII		
14.06.1	Motorcycles for the Engineer			
	(b) Operate and maintain	. 1. 1 . 1 .		
	motorcycle (min. 150cc) for an	vehicle x	72	
	average of 2.000 km per month	months		
	(c) Operate and maintain			
	motorcycles for travel distance in	km	72	
	excess of average 2.000 km per month			
14.07	Survey equipment for the			
	Engineer			
	(b) Maintain specified survey	Months	36	
	equipment for the Engineer			
14.08	Laboratory for the Engineer			
	(b) Maintain laboratory fully	Months	36	
	furnished for the Engineer			
14.09	Laboratory equipment for the			
	Engineer			
	(b) Maintain specified laboratory	Months	36	
	equipment for the Engineer			
	ENVIRONMENTAL			
	PROTECTION AND WASTE			
	DISPOSAL			
17.01	Environmental action plan,		1	
	decommissioning plans and	L.S.		
	reporting			
	OCCUPATIONAL HEALTH			
	AND SAFETY, HIV/AIDS			
	AND GENDER			
18.01	Provide qualified safety officer	Months	36	
	to deal with OHS, HIV/AIDSM			
	and gender management,			
	including transport			
18.02	HIV/AIDS and STD prevention			
	and counselling			
	(a) Information, education and consultation campaigns including	Months	36	
	regular distribution of condoms to			
	workforce			
	(b) Provide, maintain and operate	Months	36	
	STD and HIV/AIDS clinic or make			
	alternative arrangements with			
	existing local clinic			

18.03	Gender			
	(a) Gender sensitisation and	No.	3	
	awareness raising meeting/workshops			
	(b) Gender Sensitive monitoring	Months	36	
	and reporting	IVIOTICIS	30	
	Total 12.02-18.03			
	DRAINS			
21.01	Excavation for open drains			
	(a) Excavating soft material			
	situated within the following			
	depth ranges below the surface level: (Not side ditches where			
	volumes are included Earthwork			
	excavations)			
	(i) 0.0 m up to 1.5m	m³	1,000.00	
21.02	Clearing and shaping existing	m	1,000.00	
	drains  PREFABRICATED CULVERTS			
22.01	Excavation			
22.01	(a) Excavating soft material			
	situated within the following			
	depth ranges below the surface			
	level:	3	665.00	
	(i) Up to 1.5m	m³	665.00	
	(ii) Exceeding 1.5 m and up to 3.0 m	m³	285.00	
22.02	Backfilling			
	(a) Using excavated material	m³	50.00	
	(b) Using imported selected	m³	350.00	
22.02	material		330.00	
22.03	Concrete pipes culverts  (a) Reinforced concrete pipe			
	culverts on class B bedding			
	(i) 600 mm diametre	m	50.00	
	(ii) 900 mm diametre	m	250.00	
	(iiI) 1200 mm diametre	m	20.00	
22.07	Cast in-situ concrete and			
	formwork			
	(a) Concrete Class 15 for bedding	m³	650.00	
	(c) Concrete Class 30 in inlet and outlet structures, excluding	m³		
	formwork, but including Class U2		200.00	
	surface finish			
	(d) Formwork of concrete under	m²	450.00	
22.10	subitem 22.07 (c )  Steel reinforcement			
22.1U	(b) High-tensite steel bars	to	17.50	
22.12	Removing existing concrete		17.50	
<b>44.14</b>	and masonry			
	(a) Plain concrete and masonry	m³	487.50	
	(b) Reinforced concrete	m³	150.00	
22.14	Removing and stacking	m		
	existing prefabricated pipes		320.00	
1	(all sizes)			

	BIOENGINEERING		
20.04	MEASURES	2	
28.01n	Planting rooted grass slips (Vetiver or equivalent) on	m²	
	slopes 45-60º including		40,000.00
	preparation of slips on site		
28.02n	Reed chump planting, reed	m	
20.0211	rhizome and shoot planting	""	
	including all preparation and		30,000.00
	materials		
28.03n	Reed roll constructions	m	
	(swamp sod rolls) including all		
	preparation and materials		10,000.00
	(wire mesh and medium		
	gravel and plants)		
	Total 21.01-28.03n		
	CLEARING, GRUBBING AND		
	REMOVAL OF TOPSOIL		
31.01	Clearing, grubbing and removal of topsoil		
	(a) Clearing and grubbing	ha	375.00
	(b) Removal of topsoil for re-use,	m³	
	including stockpiling and all		75,000
31.02	haulage  Removal and grubbing of		
31.02	large trees and tree stumps		
	(a) Girth exceeding 1.0m up to	No.	10
	and including 2.0m		
	REMOVAL OF EXISTING		
	STRUCTURES		
32.01	REMOVAL OF EXISTING		
	STRUCTURES		
	(a) Removal of existing pipe	m	320.00
	culverts of any size (b) Removal of reinforced	3	
	concrete in bridges, box culverts	m³	
	and slabs including wingwalls and		150.00
	apron		
	BREAKING UP EXISTING		
	PAVEMENT LAYERS		
33.01	Excavate materials from an		
	(a) Granular materials	m³	350.00
			350.00
22.04	(b) Bituminous material	m³	265.00
33.04	Scarification and recompacting of existing	m³	
	pavement layers to 150mm		250.00
	depth		
	EARTHWORKS		
36.01	Excavations		
	(a) Common excavation for re-	m³	
	use, including stockpiling and all		283,500
	haulage		10155
	(b) Swamps wetlands to spoil	m³	121,500

	(c ) Rock excavation (PROVISIONAL)	m³	1,000
36.02	Fill and improved subgrade		
30.02	layers		
	(c) Fill to require minimum G3	m³	170,000
	quality material	****	170,000
	(f) Side fill compacted by dozers or	m³	6,000
	as specified		
36.03	Roadbed preparation and		
	compaction of material	2	
	(b) Compaction to 95% of BS- Heavy density	m²	750,000
37.05	Maintenance of existing		
	gravel roads		
	(c) Ripping and processing existing	m²	250.00
	gravel roads  Total 31.01-37.05		
67.04	STRUCTURAL STEELWORK		
67.01	Rehabitiation of existing		
	bridges	No	1
	(a) Kapiri Bridge repair by providing and installing a 5ft	No.	
	stringer		
67.03	Corrosion protection		
	(a) Sprayed on metal	m²	3,750
67.04n	Fabrication and Installation of	•••	3,733
0710-111	steel pedestrian walkway on		
	one side of the following		
	(a) Bridge with length 12.2m	m	35.00
	(Nankwasi & Achuna rivers)		25.00
	(b) Bridge with length 18.3m	m	38.00
	(Manafwa and Namatala rivers)		
	(c ) Kapiri Bridge	m	147.00
	Total 67.01-67.04n		
	NEW TRACK MATERIAL		
70.01	Supply of new rails, 60 lbs/yd,	No.	1,700
	12m long		,
70.02	Supply of new padrol type	No.	40,000
70.04	steel sleepers (60lbs)  Supply of "Mpewere" or equal		
70.04	approved hardwood timber	m	
	sleepers size 250mm wide *		2,353
	125mm thick		
70.05	Supply of new turnouts (1-8	No.	
. 0.03	1/2 type)	140.	2.00
	TRACK COMPONENTS FOR		
	CHECKED-IN-CONCRETE		
	LEVEL CROSSINGS		
71.01	All necessary supply of track	No.	14.00
- <del></del>	components for checked-in-		17.00
	concrete level crossings (stock		
	and Check Rails, sleepers,		
	check blocks and tie plates,		
	rail clips, tie rods, aligning		
	plates etc.)		
	TRACK COMPONENTS FOR		

	GRAVEL ROAD LEVEL		
72.01	CROSSINGS  All necessary supply of track components for gravel road level crossings (Stock and	No.	43.00
	Check Rails, check blocks and bolts, plates etc.)		
	Total 70.01-72.01		
	OPEN TRACK WORKS		
	Refurbishment of existing rail		
	track material		
81.01	Refurbishment of existing damaged 43, 45 and 50lbs rails	No.	1,000.00
81.02	Refurbishment of existing dented or otherwise damaged sleepers to restore their shape and principal dimensions	No.	65,000
81.03	Recover and refurbish disused turnout skeletons (including any necessary loading, offloading, metal replacement and transportation)	No.	12.00
	Track construction		
82.01	Supply only of stone ballast according to specifications	m³	200,000.00
82.03	Installation of turnouts	No.	12.00
82.04	Ballasting, laying, lining and Levelling of railway track including Packing, boxing and dressing (tamping) ready for traffic. (Measured over level track - URC to provide tamping machine)	km	375.00
	Asphalt Road Level Crossings		
83.01	Laying and assembling checked in concrete level crossing track. Refer to Drawings. Includes and levelling track ready for concreting.	No.	14.00
	Gravel Road Level Crossings		
84.01	Laying and assembling conventional gravel road level crossing track.	No.	14.00
	RAILWAY TRACK SUNDRIES		
	Railway track signs supply and installation		
85.01	Level Crossing Marking Board" signs for PERMANENT level Crossings.	No.	100.00
85.02	"Level Crossing Marking Board" signs for TEMPORARY Level Crossings .	No.	100.00
85.03	"Whistle Board" Signs.	No.	100.00
	Total 81.01-85.03		

Total amoun dayworks	t of the works, outside		
Dayworks			
Total			

Note: the numbering of prices under (a) and titles under (b) correspond to the numbering in the Price Schedule

#### **VOLUME 4.3.3 — PRICE SCHEDULE**

#### **GENERAL REQUIREMENTS AND PROVISIONS**

#### **PRICE No 12.02 (a)**

#### **Title: Relocation of services**

Arrange and pay for removal and / or alteration to services provided by agencies for electricity supply, water supply or telecommunication services

The Provisional Sum shall be for reimbursement of the net cost for arranging the removal or alteration of all existing services, such as drains, underground and overhead telephone and electricity lines, ducts, poles, water mains, fittings, railway lines, etc. before any excavation or other work likely to affect the existing services is commenced.

Any work required to be undertaken by the Contractor in protecting or moving and relocation of public services for which no provision is made in the Contract Documents, will be classified and paid for at Day work Rates, or if no applicable Day work Rates exist, the Contractor shall submit a quotation for the Engineer's approval.

Payment is subject to the agreement of the Engineer, and upon production of receipts.

PRICE No 12.02 (a) — TITLE: Arrange and pay for removal and / or alteration to services provided by agencies for electricity supply, water supply or telecommunication services		
Price in words:	Price in numbers:	
PRICE No 12.02 (b)		
Title: Relocati Allow for contractor's overheads & pr	on of services of item 12.02(a)	
The percentage inserted by the Contractor shall be for the Contractor's costs and overheads in making the arrangement and for coordinating the work and effecting payment.		
PRICE No 12.02 (b) — TITLE: Allow for contractor's overheads & profits as a percentage of item 12.02(a)		
Price in words:	Price in numbers:	

#### PRICE No 13.01 (a)

# Title: Contractor's establishment on site and general obligations Fixed Obligations

Payment of the lump sums tendered under SUBITEMS (a), (b) and (c) shall, for the three SUBITEMS together, include full compensation for all the Contractor's charges in respect of the following items, collectively termed the "Contractor's General Obligations".

This lump sum shall represent full compensation for the fixed part of the Contractor's general obligations (i.e. that part which is substantially fixed and is not a function of the time required for the completion of the Contract) or of the value of the work. This lump sum shall not be subject to variation. Payment of the lump sum tendered under SUBITEM 13.01(a) will be made in three instalments, as follows:

- i. The first instalment, 50% of the lump sum, will be paid in the first payment certificate after the Contractor has met all his/her obligations under this Section and has made a substantial start with construction in accordance with the approved programme.
- ii. The second instalment, 35% of the lump sum, will be paid when the value of the work done reaches one half of the tendered amount, excluding contingencies and price adjustments in terms of the General Conditions of Contract.
- iii. The third and final instalment, 15% of the lump sum, will be paid when the Works have been completed and the Contractor has fulfilled all the requirements of this Section.

Before any payment is made under this Sub item, the Contractor shall satisfy the Engineer that he/she has provided camps and constructional plant of good quality on the site, the value of which exceeds that of the first instalment.

The Contractor may also be required to furnish documentary proof that he/she owns the camps and constructional plant on the site, the value of which shall exceed that of the first instalment.

In the event of the Contractor not being able to satisfy the Engineer as to the ownership of the camps and constructional plant, the Engineer shall have the right to withhold parts of any payments to be made under this Subitem, until the Works have been completed.

PRICE No 13.01 (a) — TITLE: Contractor's establishment on site and general obligations - Fixed Obligations	
Price in words:	Price in numbers:

#### PRICE No 13.01 (b)

# Title: Contractor's establishment on site and general obligations Value-related obligations

This lump sum shall represent full compensation for that part of the Contractor's general obligations, which are a function of only the value of the work, but not of the period of completion. Should the final value of the work (excluding any payments in terms of the General Conditions of Contract) increase or decrease by 20% or less in relation to the tendered amount (less any allowances, if any, in the tender for price adjustments in terms of the General Conditions of Contract), the lump sum tendered for SUBITEM 13.01(b) will be increased or decreased pro rata in full settlement of any difference in value-related general obligations resulting from an increased or decreased value of the work.

However, should the said increase or decrease in the final value of the work exceed 20% of the tendered amount, the above-mentioned pro rata increase or decrease in the lump sum tendered under SUBITEM 13.01(b) shall apply up to the limit of 20%, and the provisions of the General Conditions of Contract shall apply to that portion of the said increase or decrease which is in excess of the said limit of 20% of the tendered amount.

The lump sum tendered in SUBITEM 13.01(b) will be payable monthly in instalments in relation to the value of work done (excluding the value of any price adjustments in terms of the General Conditions of Contract).

PRICE No 13.01 (b) — TITLE: Contractor's establishment on site and general obligations – Value related Obligations	
Price in words:	Price in numbers:

#### PRICE No 13.01 (c)

# Title: Contractor's establishment on site and general obligations Time-related obligations

The tendered rate per represents full compensation for that part of the Contractor's general obligations, which are mainly a function of construction time. The tendered sum will be paid monthly, pro rata for parts of a month, from the date on which the Contractor has received a written instruction, in terms of the General Conditions of Contract, to start the work until the end of the period for completion of the Works, plus any extension thereof as provided for in the General Conditions of Contract, provided that:

- i. should the works be certified as having been completed before the contractual date for completion of the Works, the Contractor will then be entitled to payments in regard to the unexpired period for completion;
- ii. should the progress of the Contractor in terms of the value of work done be in arrears in regard to his/her approved original programme, payments in respect of this item may be limited to payments for that period, which, in this original programme (after suitable adjustments in respect of the extension of time granted) agree with the actual value of work done.

PRICE No 13.01 (c) — TITLE: Contractor's establishment on site and general obligations – Time related Obligations	
Price in words	Price in numbers:

#### PRICE No 14.02 (b)

Title: Maintain and pay all rents and municipal services for fully furnished and equipped offices for the Engineer

The Contractor shall provide, furnish and maintain office accommodation for the Engineer as detailed in the Technical Specifications. The Contractor shall provide the buildings with potable water, electricity, sanitary installations, sewage disposal arrangements, air-conditioning, furniture and equipment, and shall maintain them, all to the satisfaction of the Engineer 24 hours of the day during the Contract Period. The Contractor shall also provide an adequate stock of all expendable items, such as light bulbs, light tubes, kitchenware, soap, towels, toilet paper, paper towels, drinking cups, materials and accessories and at all times ensure proper and continuing functioning of all components and parts of the Engineer's office. The Contractor shall pay all charges associated with the Engineer's electricity supply and telephone/fax including toll calls lawfully demanded by the electricity authority and the telecommunication service throughout the Contract Period.

The office shall be erected and handed over to the Engineer fully furnished and equipped, within three months from the date of the Engineers order to commence work.

Payment shall be made monthly and is subject to the agreement of the Engineer, upon production of receipts or relevant documentation.

PRICE No 14.02 (b) — TITLE: Maintain and pay all rents and municipal services for fully furnished and equipped offices for the Engineer	
Price in words:	Price in numbers:

#### PRICE No 14.03 (b)

# Title: Maintain and pay all rents and municipal services for fully furnished and equipped wash house for the Engineer

The Contractor shall provide a Washhouse comprising two rooms of 20 m² each with electricity, water, waste water outlet and water borne sewage disposal and equipped with two automatic washing machines, two stainless steel tubs with hot and cold running water and automatic electric water heater, all to the approval of the Engineer.

The cost of providing the house, furnishing, equipment, water, electrical supply and maintenance during the whole period of the Contract shall be deemed to be included in the price.

Payment shall be made monthly and is subject to the agreement of the Engineer, upon production of receipts or relevant documentation.

PRICE No 14.03 (b) — TITLE: Maintain and pay all rents and municipal services for fully furnished and equipped wash house for the Engineer	
Price in words:	Price in numbers:

#### PRICE No 14.04 (b)

Title: Maintain and pay all rents and municipal services for fully furnished and equipped site cabin

/ office for the Engineer

The Contractor shall, if so instructed by the Engineer, provide and maintain during the duration of the Contract portable site cabins. Each site cabin shall have a floor area of at least 10 m2 and shall be equipped with one bedstead including mattress, blankets, pillows, bed sheets, one wardrobe, one desk with drawers, one metal cabinet, shelves, two chairs and a small gas refrigerator These units shall be positioned always close to the Work and moved from one location to another by the Contractor as may be directed by the Engineer. The Contractor shall supply the units with light, potable water if possible and sanitary facilities. The cost of providing the Site Cabins furnishing, equipment, water, electrical supply (where available), moving the site cabins to different locations and maintenance during the whole period of the Contract shall be deemed to be included in the price.

When the stipulated accommodation is not yet available the Contractor shall provide hotel accommodation.

Payment shall be made monthly and is subject to the agreement of the Engineer, upon production of receipts or relevant documentation.

PRICE No 14.04 (b) — TITLE: Maintain and pay all rents and municipal services for fully furnished and equipped site cabin / office for the Engineer

Price in words:	Price in numbers:
PRICE No 14.05  Title: Vehicles for the Engineer	
The Contractor shall provide a new right-hand drive diesel powered station wagon car for the exclusive use of the Engineer and his staff. The vehicles shall have four wheel drive capability, and an engine capacity of not less than 3000 c.c. The Contractor shall comprehensively insure the vehicle, maintain and service it in accordance with the maker's instructions and conditions of warranty. The driver shall be available during all normal Site working hours and, when specifically required by the Engineer, outside those hours.  Payment shall be made monthly and is subject to the agreement of the Engineer, upon production of receipts or relevant documentation.	
PRICE No 14.05 (b) — TITLE: Operate and maintain vehicle (min 3000cc) for an average of 3.000 km per month	
Price in words:	Price in numbers:
PRICE No 14.05 (c) — TITLE: Operate and maintain vehicles for travel distance in excess of average 3.000 km per month per vehicle	
Price in words:	Price in numbers:

#### **PRICE No 14.06**

Title: Four-wheel drive pick-up for the Engineer, (b) Operate and maintain vehicles (Double Cabin min. 3000cc) for an average of 3.000 km per month, (c) Operate vehicles for travel distance in excess of average 3.000 km per month

The Contractor shall provide 1new right-hand drive double cabin diesel powered pickup for the exclusive use of the Engineer and his staff. The Contractor shall comprehensively insure the vehicle, maintain and service it in accordance with the maker's instructions and conditions of warranty. Payment shall be made monthly and is subject to the agreement of the Engineer, upon production of receipts or relevant documentation.

PRICE No 14.06 (b) — TITLE: Operate and maintain vehicles (Double Cabin min. 3000cc) for an average of 3.000 km per month	
Price in words:	Price in numbers:
PRICE No 14.06 (c) — TITLE: Operate vehicles for travel distance in excess of average 3.000 km per month	
Price in words:	Price in numbers:

#### **PRICE No 14.06**

Title: Four-wheel drive pick-up for the Engineer, (d) Operate and maintain vehicles (Single Cabin min. 3000cc) for an average of 2.000 km per month, (e) Operate vehicles for travel distance in excess of average 2.000 km per month

The Contractor shall provide 1new right-hand single cabin diesel powered pickup for the exclusive use of the Engineer and his staff. The Contractor shall comprehensively insure the vehicle, maintain and service it in accordance with the maker's instructions and conditions of warranty.

Payment shall be made monthly and is subject to the agreement of the Engineer, upon production of receipts or relevant documentation.

PRICE No 14.06 (d) — TITLE: Operate and maintain vehicles (Single Cabin min. 3000cc) for an average of 2.000 km per month

Price in words:	Price in numbers:
PRICE No 14.06 (e) — TITLE: Operate vehicles for travel distance in excess of average 2.000 km per month	
Price in words:	Price in numbers:
PRICE No 14.06.1	
Title: Motorcycles for the Engineer	

The Contractor shall provide two (2) manual motorcycles for the exclusive use of the Engineer and his staff. The motorcycles shall have an engine capacity of not less than 150 c.c.

Payment shall be made monthly and is subject to the agreement of the Engineer, upon production of receipts or relevant documentation.

PRICE No 14.06.1 (b) — TITLE: Operate and maintain motorcycles for travel distance in excess of average 2.000 km per month	
Price in words:	Price in numbers:
PRICE No 14.06.1 (c) — TITLE: Operate and maintain motorcycles for travel distance in excess of average 2.000 km per month	
Price in words:	Price in numbers:

#### PRICE No 14.07 (b)

Title: Maintain specified survey equipment for the Engineer

The Contractor shall provide at all times during the period of the Contract all such workforce and instruments for the exclusive use of the Engineer as he/she may deem to be necessary for carrying

out his/her duties in connection with the Contract. The instruments to be provided are included at the Technical Specifications. Upon completion of the Contract, the Engineer's survey equipment specified herein shall revert to the Contractor.

Payment shall be as per the tendered rates per month and is subject to the agreement of the Engineer.

PRICE No 14.07 (b) — TITLE: Maintain specified survey equipment for the Engineer

Price in words:

Price in numbers:

#### PRICE No 14.08 (b)

Title: Maintain laboratory fully furnished for the Engineer

The Contractor shall provide, erect and maintain for the duration of the Contract a laboratory adjacent to the Engineers Representative's office or where directed by the Engineer, with dimensions, equipment and facilities as in detail described in the Technical Specifications, included in the price.

Payment for maintaining the laboratorybshall be as per the tendered rates per month and is subject to the agreement of the Engineer.

PRICE No 14.08 (b) — TITLE: Maintain laboratory fully furnished for the Engineer

Price in words: Price in numbers:

#### PRICE No 14.09 (b)

#### Title: Maintain specified laboratory equipment for the Engineer

The Contractor shall provide and install in the laboratory 2 stainless steel fan-circulated drying ovens, minimum 70 litre capacity, and all the necessary apparatus and materials for the performance of all tests required for the testing and control of the works and materials.

The Contractor shall supply one new copy of the latest edition of the Specifications for all referred material standards and testing standards used for the Contract.

All the laboratory equipment, including air conditioners, shall be new and of a make approved by the Engineer.

The Contractor shall immediately after the award of the Contract prepare and submit for the approval of then Engineer a list showing all instruments and apparatus to be purchased.

Payment for maintaining the equipment shall be as per the tendered rates per month and is subject to the agreement of the Engineer.

PRICE No 14.09 (b) — TITLE: Maintain specified laboratory equipment for the Engineer	
Price in words:	Price in numbers:

#### **PRICE No 17.01**

Title: Environmental action plan, decommissioning plans and reporting

#### The price includes:

- Environmental Management Plan,
- Environmental study for quarries and material sites,
- Decommissioning Plan(s),
- Environmental reporting,
- Environmental measures defined in the Technical Specifications

Payment for the above will be made at the lump sum on the following basis:

- (i) 50% of the lump sum will be paid upon approval of the Contractor's Environmental Management Plan; and
- (ii) 50% of the lump sum will be paid upon approval of the Contractor's final environmental management report.

No separate payment will be made for any work included in this Section of the Technical Specifications. The costs of complying with these requirements shall be included in the Contractor's rates for other items of work

PRICE No 17.01— TITLE: Environmental action plan, decommissioning plans and reporting

Price in words:	Price in numbers:	
PRICE N	lo 18.01	
Title: Provide qualified safety officer to deal with OHS, HIV/AIDSM and gender management, including transport		
The tendered sum will be paid monthly, pro rata for parts of a month, subject to the agreement of the Engineer, to the Safety Officer from the date of commencement of Works until the completion of the Works or demobilisation of the local workforce, whichever comes first.  All works and responsibilities under this item are provided in the Technical Specifications.		
PRICE No 18.01— TITLE: Provide qualified safety officer to deal with OHS, HIV/AIDSM and gender management, including transport		
Price in words:	Price in numbers:	
DRICE No.	. 10 02 (b)	
PRICE No 18.02 (b)  Title: Provide, maintain and operate STD and HIV/AIDS clinic or make alternative arrangements with existing local clinic		
The tendered rates per month represent full compensation for these parts of the Contractor's obligations, which are mainly a function of time. The tendered sum will be paid monthly, pro rata for parts of a month, from the date of commencement of Works until the completion of the Works or demobilisation of the local workforce, whichever comes first, subject to the agreement of the Engineer.		
PRICE No 18.02 (b) — TITLE: Provide, maintain and operate STD and HIV/AIDS clinic or make alternative arrangements with existing local clinic		
Price in words:	Price in numbers:	

#### PRICE No 18.03 (a)

#### Title: Gender sensitisation and awareness raising meeting/workshops

The tendered rate per number of meetings/workshops represents full compensation for production and distribution of awareness raising material and conduction of the meetings/workshops, including venue and making all arrangements. The tendered sum will be paid upon submission to the Engineer of an acceptable meeting/workshop report.

PRICE No 18.03 (a) — TITLE: Gender sensitisation and awareness raising meeting/workshops	
Price in words:	Price in numbers:

#### PRICE No 18.03 (b)

Title: Gender Sensitive monitoring and reporting

The tendered rate per month represents full compensation for this part of the Contractor's obligations, which is mainly a function of time. The tendered sum will be paid monthly, pro rata for parts of a month, from the date of commencement of Works until the completion of the Works or demobilisation of the local workforce, whichever comes first, subject to the agreement of the Engineer.

PRICE No 18.03 (b) — TITLE: Gender Sensitive monitoring and reporting	
Price in words:	Price in numbers:

#### **DRAINAGE**

#### PRICE No 21.01 (a)

#### Title: Excavation for open drains

Excavating soft material situated within the following depth ranges below the surface level: 0.0m – 1.50m

The unit of measurement shall be the cubic metre of material excavated in accordance with the authorized dimensions, measured in place before excavation. Irrespective of the total depth of the excavation, the quantity of material in each depth range shall be measured and paid for separately.

The bid rates shall include full compensation for the excavation of the material to the required lines, levels and grades and the disposal of the material as directed, including all haulage.

PRICE No 21.01 (a) — TITLE: Excavating soft material situated within the following depth ranges below the surface level: 0.0m – 1.50m	
Price in words:	Price in numbers:

#### **PRICE No 21.02**

Title: Clearing and shaping existing drains

The unit of measurement shall be the cubic metre of material excavated in accordance with the authorized dimensions, measured in place before excavation.

The bid rates shall include full compensation for excavating the material to the required lines, levels and grades, protecting the existing drainage structure, trimming the sides and floors of the open drains and the disposal of the material as directed, including all haulage.

PRICE No 21.02 — TITLE: Clearing and shaping existing drains	
Price in words:	Price in numbers:

#### PRICE No 22.01 (a)

Title: Excavating soft material situated within the following depth ranges below the surface level:
(i) Up to 1.5m, (ii) Exceeding 1.5 m and up to 3.0 m

The unit of measurement shall be the cubic metre of material excavated within the specified widths over the

lengths and depths authorised by the Engineer in each case. Excavation in excess of the widths specified or authorised by the Engineer shall not be measured for payment. The quantity of material within each depth range shall be measured and paid for separately.

When measuring excavation for the removal of existing culverts, the volume occupied by the culvert shall not be subtracted from the calculated volume of excavation. In the case of manholes, catch pits and inlet and outlet structures, the dimensions for determining the volume of excavation shall be the neat outside dimensions of the structure, plus an allowance of 0.5 m of working space around the structure.

The bid rates shall include full compensation for all excavation, temporary timbering, shoring and strutting, for preparing the bottom of the excavation for the culvert beds, the disposal of excavated material unsuitable for backfilling, keeping excavations safe, dealing with any surface or subsurface water, and for any other operations necessary for completing the work as specified.

No haulage will be paid.

PRICE No 22.01 (a), (i) — TITLE: Excavating soft material situated within the following depth ranges below the surface level: (i) Up to 1.5m	
Price in words:	Price in numbers:
PRICE No 22.01 (a), (ii) — TITLE: Excavating soft material situated within the following depth ranges below the surface level: (ii) Exceeding 1.5 m and up to 3.0 m	
Price in words:	Price in numbers:

#### PRICE No 22.02 (a)

Title: Backfilling using excavated material

The unit of measurement shall be the cubic metre of material in place after compaction. The quantity shall be calculated from the leading dimensions of the backfilling as specified or as authorised by the Engineer. If excavations were carried out in excess of the dimensions authorised by the Engineer, the quantity of backfilling will nevertheless be based on the authorised dimensions. The volume occupied by the culvert shall be subtracted when calculating the volume of backfilling.

The bid rates shall include full compensation for backfilling under, alongside and over conduits, for watering, and for compacting the backfill material to the specified density.

PRICE No 22.02 (a) — TITLE: Backfilling using excavated material	
Price in words:	Price in numbers:

#### PRICE No 22.03 (b)

Title: Reinforced condi**èles paektillivegtssongclesp@testlstingct(i)) 600tenia l**diametre, (ii) 900 mm diametre, and (iii) 1200 mm diametre

The unit of measurement shall be the cubic metre of material in place after compaction. The quantity shall be tale whated from the meating composition be taken as the macro the mean and the composition of the compositi excentives by the targine autine target of the dimensioner authorized by the triging reache quantity of backfilling wild dry entering the dated from the perspective to discoverings. It from the date of the perspective the date of the perspective the date of the perspective the perspective the perspective the perspective the perspective the perspective that the perspective the perspective that th That high content is a state of the content of the Hut, abulaning aitibba, air, llanta pater ibid, antianah peripadi pata etakararan Mithanda eta pata antiang anan ബ്ലേറ്റെ പ്രാവര്യ വേട്ടായ പ്രാവര്യ വേട്ടായ വേട്ടായ വേട്ടായ പ്രവര്ശ് വേട്ടായ പ്രവര്ശ് വേട്ടായ പ്രവര്ശ് വേട്ടായ പ്രവര്ശ് വേട്ടായ പ്രവര്ശ് വേട്ടായ പ്രവര്ശ് പ്രവ് പ്രവര്ശ് പ്രവ്ശ് പ്രവര്ശ് പ്രവര്ശ് പ്രവ്ശ് പ്രവ്യവ് പ്രവ്ശ് പ്രവ്യവ് വ്യവ്ദ് പ്രവ്യാര്യവ് വ്യവ്ദ് പ്രവ് Specification in a concrete pipe unit of standard length, the full standard length of the unit shall be measured for payment. No additional compensation for cutting and disposing of such section will be paid. Uprion we 22.02f (b) ntia Title EnaBack filling besingen the various types and sizes of culverts and between the culverts plaquaportedesentates an afertabing. PrREIGENOraz: 031 (a), (i) — TITLE: Reinforced Price in numbers: concrete pipe culverts on class B bedding: (i) 600 mm diametre, Price in words: Price in numbers: PRICE No 22.03 (a), (ii) — TITLE: Reinforced concrete pipe culverts on class B bedding: (ii) 900 mm diametre. Price in words: Price in numbers: PRICE No 22.03 (a), (iii) — TITLE: Reinforced concrete pipe culverts on class B bedding: (iii) 1200 mm diametre, Price in words: Price in numbers:

PRICE No 22.07 (a)

Title: Cast in-situ concrete and formwork - (a) Concrete Class 15 for bedding

The unit of measurement for cast in situ concrete shall be the cubic metre of concrete in place. Quantities shall be calculated from the dimensions shown on the Drawings or as authorised. No deduction in volume measured for payment shall be made for the volume of any reinforcing steel, inserts and pipes or conduits under 150 mm in diametre embedded in the concrete.

The bid rate for cast in situ concrete shall include full compensation for procuring and furnishing all the materials, storing the materials, providing all plant, mixing, transporting, placing and compacting the concrete, forming the inserts, construction of joints, curing and protecting the concrete, repairing defective surfaces, and finishing the concrete surfaces as specified.

No separate payment shall be made for any formwork required for concreting and the Contractor's rates for concrete shall include full compensation for formwork.

No separate payment shall be made for the construction of joints in culvert floor slabs or at inlet and outlet structures, and the bid rates for concrete shall include full compensation for forming the joints complete in accordance with the details shown on the Drawings.

PRICE No 22.07 (a) — TITLE: Cast in-situ concrete and formwork - (a) Concrete Class 15 for bedding	
Price in words:	Price in numbers:

#### PRICE No 22.07 (c)

Title: Cast in-situ concrete and formwork - (c) Concrete Class 30 in inlet and outlet structures, excluding formwork, but including Class U2 surface finish

The unit of measurement for cast in situ concrete shall be the cubic metre of concrete in place. Quantities shall be calculated from the dimensions shown on the Drawings or as authorised. No deduction in volume measured for payment shall be made for the volume of any reinforcing steel, inserts and pipes or conduits under 150 mm in diametre embedded in the concrete.

The bid rate for cast in situ concrete shall include full compensation for procuring and furnishing all the materials, storing the materials, providing all plant, mixing, transporting, placing and compacting the concrete, forming the inserts, construction of joints, curing and protecting the concrete, repairing defective surfaces, and finishing the concrete surfaces as specified.

No separate payment shall be made for the construction of joints in culvert floor slabs or at inlet and outlet structures, and the bid rates for concrete shall include full compensation for forming the joints complete in accordance with the details shown on the Drawings.

PRICE No 22.07 (c) — TITLE: Cast in-situ concrete and formwork - (c) Concrete Class 30 in inlet and outlet structures, excluding formwork, but including Class U2 surface finish	
Price in words:	Price in numbers:

#### **PRICE No 22.07 (d)**

Title: Cast in-situ concrete and formwork - (d) Formwork of concrete under subitem 22.07 (c)

The unit of measurement shall be the square metre, and only the actual area of formwork in contact with the finished face of the concrete shall be measured. Only formwork for mandatory construction joints shall be measured for payment.

The bid rates shall include full compensation for procuring and furnishing all materials required, erecting the falsework and formwork, constructing the forms, forming the grooves, fillets, chamfers and stop-ends for construction joints, treating and preparing the forms, all bolts, nuts, ties, struts and stays, stripping and removing the formwork after completion of the work, all labour, equipment and incidentals, and rubbing and surface treatment.

Payment of 80% of the amount due for formwork will be made when the formwork has been removed, and payment of the remaining 20% will be made on approval of the concrete surface finish.

PRICE No 22.07 (d) — TITLE: Cast in-situ concrete and formwork - (d) Formwork of concrete under subitem 22.07 (c)	
Price in words:	Price in numbers:

#### PRICE No 22.10 (b)

Title: Steel reinforcement - High-tensile steel bars

The unit of measurement for steel bars shall be the tonne of reinforcing steel in place in accordance with the Drawings or as authorised.

The bid rates shall include full compensation for supplying, delivering, cutting, bending, welding, trial weld joints, placing and fixing the steel reinforcement, including all tying wire, spacers and waste.

PRICE No 22.10 (b) — TITLE: Steel reinforcement - High-tensile steel bars	
Price in words:	Price in numbers:

#### **PRICE No 22.12**

Title: Removing existing concrete and masonry

The unit of measurement shall be the cubic metre of existing concrete removed.

The bid rates shall include full compensation for all demolition and for loading, transporting and disposing of

the products of demolition, including haul. The bid rates shall also include full compensation for cutting straight grooves of the specified depth at joint positions where shown on the Drawings.

Payment shall distinguish between plain and reinforced concrete. For the purpose of this item, reinforced concrete shall be defined as concrete containing at least 0.2% of steel reinforcement measured by volume. Plain concrete shall, for the purpose of this item, be deemed to include stone masonry and brickwork.

PRICE No 22.12 (a) — TITLE: Removing existing concrete and masonry – (a) Plain concrete and masonry	
Price in words:	Price in numbers:
PRICE No 22.12 — TITLE: Removing existing concrete and masonry - (b) Reinforced concrete	
Price in words:	Price in numbers:

#### **PRICE No 22.14**

Title: Removing and stacking existing prefabricated pipes (all sizes)

The unit of measurement shall be the metre of existing prefabricated culverts removed and stacked.

The bid rate shall include full compensation for lifting, loading, transporting to stack, off-loading, and stacking the prefabricated culverts.

Payment for any excavation and backfilling required for removing, transporting and stacking the existing prefabricated culverts shall be made separately under ITEMS 22.01 and 22.02. No haulage will be paid.

PRICE No 22.14 — TITLE: Removing and stacking existing prefabricated pipes (all sizes)	
Price in words:	Price in numbers:

#### PRICE No 28.01n

Title: Planting rooted grass slips (Vetiver or equivalent) on slopes 45-60º including preparation of slips on site

The unit of measurement shall be the squire metre of planted area including preparation of slips on site (digging trenches, adding fertile soil/manure, covering roots, watering), acquiring and planting grass and materials used.

PRICE No 28.01n — TITLE: Planting rooted grass slips (Vetiver or equivalent) on slopes 45-60º including preparation of slips on site		
Price in words:	Price in numbers:	
PRICE No 28.02n  Title: Reed chump planting, reed rhizome and shoot planting including all preparation and materials		
The unit of measurement shall be length in metres measured along the foot of embankment will include preparation (digging trenches, planting) and materials used (stumps, plants, stakes).		
PRICE No 28.02n — TITLE: Reed chump planting, reed rhizome and shoot planting including all preparation and materials		
Price in words:	Price in numbers:	
PRICE No 28.03n  Title: Reed roll constructions (swamp sod rolls) including all preparation and materials (wire mesh and medium gravel and plants)		
The unit of measurement shall be length in metres measured along the foot of embankment will include preparation and materials used, as per the Technical Specifications.		
PRICE No 28.03n — TITLE: Reed roll constructions (swamp sod rolls) including all preparation and materials (wire mesh and medium gravel and plants)		
Price in words:	Price in numbers:	

#### **EARTHWORKS AND PAVEMENT LAYERS OF GRAVEL**

#### **PRICE No 31.01**

#### Title: Clearing, grubbing and removal of topsoil

The unit of measurement for SUBITEM 31.01(a), clearing and grubbing, shall be the hectare (to the nearest 0.1 ha) designated by the Engineer and cleared of the vegetation cover and grubbed and in accordance with these Specifications, all to the satisfaction of the Engineer. The unit of measurement for SUBITEM 31.01(b), removal of topsoil as specified or instructed by the Engineer, shall be the cubic metre measured in place at the depth and width specified.

The bid rate shall include full compensation for all work necessary for the clearing of the surface, any necessary de-watering, removal of topsoil to the depth as specified or as instructed by the Engineer after removal of the vegetation cover, the removal and grubbing of trees and tree stumps (except large trees and stumps as defined in Item 31.02), cutting of branches, backfilling of cavities, demolishing and disposal of buildings and structures (except for removal of drainage structures as provided above), and the removal, transporting and disposal or conservation of material all as specified in the Technical Specifications.

No additional payment will be made for stockpiling or re-handling topsoil. The cost of stripping and disposal of topsoil shall be included in the price bid for clearing, grubbing and removal of topsoil.

Clearing, grubbing and removal of topsoil required for quarries, borrow areas and any other natural material sources, for haul roads and all temporary construction will not be measured for payment.

PRICE No 31.01 (a) — TITLE: Clearing, grubbing and removal of topsoil – (a) Clearing and grubbing	
Price in words:	Price in numbers:
PRICE No 31.01 — TITLE: Clearing, grubbing and removal of topsoil - (b) Removal of topsoil for re-use, including stockpiling and all haulage	
Price in words:	Price in numbers:

#### PRICE No 31.02 (a)

Title: Removal and grubbing of large trees and tree stumps, (a) Girth exceeding 1.0m up to and including 2.0m

Trees and stumps with a girth exceeding 1.0 m shall be measured individually.

The bid rates shall include full compensation for all work necessary for the clearing and grubbing of trees and stumps with girth exceeding 1.0 metre, the backfilling of holes, the removal and disposal of material and any necessary hauling.

PRICE No 31.02 (a) — TITLE: Removal and grubbing of large trees and tree stumps, (a) Girth exceeding 1.0m up to and including 2.0m		
Price in words:	Price in numbers:	
PRICE No 32.01 (a)  Title: Removal of existing pipe culverts of any size		
The unit of measurement for removal of existing pipe culverts shall be the linear metre of pipe acceptably removed, as directed by the Engineer.  The bid rates shall include all necessary works for the removal, storage and transport from/to site.		
PRICE No 32.01 (a) — TITLE: Removal of existing pipe culverts of any size		
Price in words:	Price in numbers:	
PRICE No	32.01 (b)	
Title: Removal of reinforced concrete in bridges, box culverts and slabs including wingwalls and apron		
The unit of measurement for removal of reinforced or plain concrete in bridges and culverts shall be the cubic metre of concrete acceptably removed, as directed by the Engineer.  The bid rates shall include all necessary works for the preparation, removal, storage and transport from/to site of the materials.		
PRICE No 32.01 (b) — TITLE: Removal of reinforced concrete in bridges, box culverts and slabs including wingwalls and apron		
Price in words:	Price in numbers:	

**PRICE No 33.01** 

Title: Excavate materials from an existing pavement	
The unit of measurement shall be the cubic metre of material excavated or milled from the existing pavement using approved equipment and methodology.  The bid rate shall include full compensation for excavating or milling the material from the existing pavement irrespective of layer thickness, for loading, transporting, off-loading, and placing the material in approved spoil dumps or stockpiles as directed by the Engineer. Payment will not be made for sawing or cutting work where the existing layer requires removal by milling.	
PRICE No 33.01 (a) — TITLE: Excavate materials from an existing pavement – (a) Granular material	
Price in words:	Price in numbers:
PRICE No 33.01 (b) — TITLE: Excavate materials from an existing pavement - (b) Bituminous material	
Price in words:	Price in numbers:

#### **PRICE No 33.04**

#### Title: Scarification and recompacting of existing pavement layers to 150mm depth

The unit of measurement shall be the cubic metre of existing pavement materials scarified to the specified depth using approved equipment and methodology.

The bid rate shall include full compensation for scarification of the existing pavement materials to specified depth irrespective of individual pavement layer thicknesses, mixing with imported materials if required, shaping, and compacting the material as specified.

PRICE No 33.04 — TITLE: Scarification and recompacting of existing pavement layers to 150mm depth	
Price in words:	Price in numbers:

#### PRICE No 36.01 (a)

Title: Common excavation for re-use, including stockpiling and all haulage

The unit of measurement shall be the cubic metre of material removed as specified on the instruction of the Engineer, measured in its original position and computed by the method of average end areas from levelled cross-sections taken prior to excavating the cut, measured along the ground line. Measurements of common excavation shall exclude materials already paid for as removal of topsoil.

The bid rate shall include full compensation for all work necessary for excavation as classified, any necessary de-watering, loading, off-loading, transporting and disposal or conservation of material all as specified in the Technical Specifications. No overhaul will be paid for transporting away the excavated material.

No additional payment will be made for stockpiling or re-handling excavation material.

PRICE No 36.01 (a) — TITLE: Common excavation for re-use, including stockpiling and all haulage	
Price in words:	Price in numbers:

#### PRICE No 36.01 (b)

Title: Excavations - Swamps wetlands to spoil

The unit of measurement shall be the cubic metre of material removed as specified on the instruction of the Engineer, measured in its original position and computed by the method of average end areas from levelled cross-sections taken prior to excavating the cut, measured along the ground line. Final levels after

excavation/displacement shall be determined either by levelling or the approved profile established by the auger measurements, as directed by the Engineer

The bid rate shall include full compensation for all work necessary for excavation as classified, any necessary de-watering, loading, off-loading, transporting and disposal or conservation of material all as specified in the Technical Specifications. No overhaul will be paid for transporting away the excavated material.

PRICE No 36.01 (b) — TITLE: Excavations - Swamps wetlands to spoil	
Price in words:	Price in numbers:

#### **PRICE No 36.01 (d)**

Title: Rock excavation (PROVISIONAL)

The unit of measurement shall be the cubic metre of material removed as specified on the instruction of the Engineer, measured in its original position and computed by the method of average end areas from levelled cross-sections taken prior to excavating the cut, measured along the ground line. Final levels after excavation/displacement shall be determined either by levelling or the approved profile established by the auger measurements, as directed by the Engineer

The bid rate shall include full compensation for all work necessary for excavation and the removal, transporting and disposal of material all as specified in the Technical Specifications. No overhaul will be paid for transporting away the excavated material.

No additional payment will be made for stockpiling or re-handling excavation material for use as fill material for embankment construction.

PRICE No 36.01 (d) — TITLE: Rock excavation (PROVISIONAL)	
Price in words:	Price in numbers:

#### **PRICE No 36.02**

Title: Fill and improved subgrade layers

The unit of measurement shall be the cubic metre of material measured in the compacted fill according to the Drawings or as directed by the Engineer. The quantity measured shall be computed by the method of average end areas from levelled cross-sections.

The bid rates shall include full compensation for procuring, excavating, any necessary de-watering, loading, furnishing, placing, preparing, processing, shaping, watering, mixing, and compaction of the materials to the densities according to the Specifications.

Measurement and payment of fill shall not distinguish between alternative methods of processing and compaction of the materials.

Price in numbers:	
Price in numbers:	
Price in numbers:	
PRICE No 36.03 (b)  Title: Roadbed preparation and compaction of material, (b) Compaction to 95% of BS-Heavy density  The unit of measurement shall be the square metre of roadbed material prepared and compacted as specified in the Technical Specifications. The quantity shall be computed in accordance with the authorized dimensions of the completed layer.  The bid rates shall include full compensation for shaping, scarifying, mixing of in-situ and imported material if	
compaction of the material as specified.	
Price in numbers:	

PRICE NO 37.05 (	C
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Title: Maintenance of existing gravel roads, (c) Ripping and processing existing gravel roads	
Specifications.  The bid rates shall include full compensation for ripping lumps, removal of oversize particles and watering as remoisture content at or around the optimum moisture content.	
PRICE No 37.05 (c) — TITLE: Maintenance of existing gravel roads, (c) Ripping and processing existing gravel roads	
Price in words:	Price in numbers:

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#### **STRUCTURES**

#### PRICE No 67.01 (a)

Title: Kapiri Bridge repair by providing and installing a 5ft stringer

The unit of measurement shall be Lump Sum.

The bid rates shall include full compensation for preparing shop details, where not provided on the Drawings, the supply of all the required materials, fabrication, process control, loading, transporting to the site, off-loading, and erecting. It shall also include full compensation for all nuts, bolts, washers, rivets, cutting, waste, and any temporary bracing necessary for transporting and erecting.

The bid rate shall also include full compensation for procuring and supplying all the necessary labour, equipment, tools and materials, as well as waste, necessary formwork and finishing to obtain the required surface.

PRICE No 67.01 (a) — TITLE: Kapiri Bridge repair by providing and installing a 5ft stringer	
Price in words:	Price in numbers:

#### PRICE No 67.03 (a)

Title: Corrosion protection sprayed on metal

The unit of measurement shall be square metres of metal surface to be sprayed.

The bid rates shall include full compensation for preparing shop details, where not provided on the Drawings, the supply of all the required materials, fabrication, process control, and for applying the specified corrosion protection, including surface preparation, materials, labour, tools, equipment and all incidentals required.

PRICE No 67.03 (a) — TITLE: Corrosion protection sprayed on metal	
Price in words:	Price in numbers:

#### PRICE No 67.04n

Title: Fabrication and Installation of steel pedestrian walkway on one side of bridges

The unit of measurement shall be in linear meters of pedestrian walkway constructed.

The bid rates shall include full compensation for preparing shop details, where not provided on the Drawings,

loading, and erecting. It shall also include full compensation for all nuts, bolts, washers, rivets, cutting, waste, and any temporary bracing necessary for transporting and erecting.  The bid rate shall also include full compensation for procuring and supplying all the necessary labour, equipment, tools and materials, as well as waste, necessary formwork and finishing.	
PRICE No 67.04n (a) — TITLE: Fabrication and Installation of steel pedestrian walkway on one side of (a) Bridge with length 12.2m (Nankwasi & Achuna rivers)	
Price in words:	Price in numbers:
PRICE No 67.04n (b) — TITLE: Fabrication and Installation of steel pedestrian walkway on one side of (b) Bridge with length 18.3m (Manafwa and Namatala rivers)	
Price in words:	Price in numbers:
PRICE No 67.04n (c) — TITLE: Fabrication and Installation of steel pedestrian walkway on one side of (c) Kapiri Bridge	

**Price in numbers:** 

the supply of all the required materials, fabrication, process control, loading, transporting to the site, off-

Price in words:

#### **NEW TRACK MATERIAL**

## **PRICE No 70.01** Title: Supply of new rails, 60 lbs/yd, 12m long The unit of measurement shall be the number of new rails (60lbs/yd, 12m long) supplied. The bid rates include the supply of material, transport, loading/off-loading, stacking and handling. The bid rates also include all necessary drilling of holes, fishplates, bolts, nuts and washers required for the installation. PRICE No 70.01— TITLE: Supply of new rails, 60 lbs/yd, 12m long Price in words: **Price in numbers: PRICE No 70.02** Title: Supply of new padrol type steel sleepers (60lbs) The unit of measurement shall be the number of new padrol type steel sleepers. The bid rates include the supply of material, transport, loading/off-loading, stacking and handling. The bid rates also include all necessary punching of holes, clips, base plates, level plates, bolts and fittings. PRICE No 70.02— TITLE: Supply of new padrol type steel sleepers (60lbs) Price in words: Price in numbers:

#### **PRICE No 70.04**

Title: Supply of "Mpewere" or equal approved hardwood timber sleepers size 250mm wide \* 125mm thick

The unit of measurement shall be running meters of timber sleepers.

The bid rates include the Supply"Mpewere" or equal approved hardword timber sleepers size 250mm wide x 125mm thick, preserved in accordance with EAR&H/URC Manual Volume I, Annexures 35 for timber sleeper specification and all necessary transport, loading/off-loading, stacking and handling.

The bid rates also include all necessary punching of holes, clips, base plates, level plates, bolts, nuts, wahsers

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and fittings.	
PRICE No 70.04— TITLE: Supply of "Mpewere" or equal approved hardwood timber sleepers size 250mm wide * 125mm thick	
Price in words:	Price in numbers:
	lo 70.05 urnouts (1-8 1/2 type)
The unit of measurement shall be the number of new turnouts supplied.  The bid rates include the supply of material, transport, loading/off-loading, stacking and handling. The bid rates also include all necessary rails, check rails, sleepers, punching of holes, clips, base plates, level plates, bolts and fittings, as per the EARH manual and drawings.	
PRICE No 70.04— TITLE: Supply of new turnouts (1-8 1/2 type)	
Price in words:	Price in numbers:
PRICE N	lo 71.01
Title: All necessary supply of track components for checked-in-concrete level crossings (stock and Check Rails, sleepers, check blocks and tie plates, rail clips, tie rods, aligning plates etc.)	
The unit of measurement shall be the number of full level crossing components supplied.  The bid rates include the supply of material, transport, loading/off-loading, stacking and handling. The bid rates also include all necessary concrete, steel reinforcement, rails, check rails, sleepers, punching/drilling of holes, clips, base plates, level plates, tie plates, bolts nuts, washers, rods and fittings, as per the EARH manual and drawings.	
PRICE No 71.01— TITLE: All necessary supply of track components for checked-in-concrete level crossings (stock and Check Rails, sleepers, check blocks and tie plates, rail clips, tie rods, aligning plates etc.)	

Price in words:	Price in numbers:
PRICE No 72.01	
Title: All necessary supply of track components for gravel road level crossings (Stock and Check Rails, check blocks and bolts, plates etc.)	
The unit of measurement shall be the number of full level crossing components supplied.  The bid rates include the supply of material, transport, loading/off-loading, stacking and handling. The bid rates also include all necessary rails, check rails, sleepers, punching/drilling of holes, clips, base plates, level plates, tie plates, bolts nuts, washers, rods and fittings, as per the EARH manual and drawings.	
PRICE No 72.01— TITLE: All necessary supply of track components for gravel road level crossings (Stock and Check Rails, check blocks and bolts, plates etc.)	
Price in words:	Price in numbers:

#### **OPEN TRACK WORKS**

#### **PRICE No 81.01**

Title: Refurbishment of existing damaged 43, 45 and 50lbs rails

The unit of measurement shall be the number of rails (irrespective of length) refurbished to condition acceptable by the Engineer, independent of refurbishment methodology.

The bid rates include the recovery of material, transport, loading/off-loading, stacking and handling. The bid rates also include all necessary reconditioning, boring, bending and cutting to restore original shape and dimensions of existing damaged rails.

PRICE No 81.01— TITLE: Refurbishment of existing damaged 43, 45 and 50lbs rails	
Price in words:	Price in numbers:

#### **PRICE No 81.02**

Title: Refurbishment of existing dented or otherwise damaged sleepers to restore their shape and principal dimensions

The unit of measurement shall be the number of steel sleepers refurbished to condition acceptable by the Engineer, independent of refurbishment methodology.

The bid rates include the recovery of material, transport, loading/off-loading, stacking and handling. The bid rates also include all necessary reconditioning by hot pressing and/or bending and cutting to restore original shape and dimensions of existing dented or otherwise damaged steel sleepers.

PRICE No 81.02— TITLE: Refurbishment of existing dented or otherwise damaged sleepers to restore their shape and principal dimensions	
Price in words:	Price in numbers:

#### **PRICE No 81.03**

Title: Recover and refurbish disused turnout skeletons (including any necessary loading, offloading, metal replacement and transportation)

The unit of measurement shall be the number of turnout skeletons recovered and refurbished to condition acceptable by the Engineer, independent of refurbishment methodology. The bid rates include the recovery of material, replacement of missing or material, transport, loading/offloading, stacking and handling. The bid rates also include all necessary reconditioning of turnout components, such as rails, check rails, sleepers, etc. PRICE No 81.03— TITLE: Recover and refurbish disused turnout skeletons (including any necessary loading, offloading, metal replacement and transportation) Price in words: **Price in numbers: PRICE No 82.01** Title: Supply only of stone ballast according to specifications The unit of measurement shall be Cubic Metres of Stone Ballast supplied. The bid rates include the supply of material (samples and waste included), transport to the nearest station or storage area indicated by the Engineer, loading/off-loading, storing and handling. PRICE No 82.01— TITLE: Supply only of stone ballast according to specifications Price in words: **Price in numbers: PRICE No 82.03** Title: Installation of turnouts The unit of measurement shall be the number of Turnouts successfully installed, to the specifications of the drawings and EARH manual. The bid rates include all necessary works and materials in addition to those provided by Items 70.04 and 81.03, to ensure the construction of a fully functional turnout. The bid rate shall also include full compensation for procuring and supplying all the necessary labour, equipment and tools. PRICE No 82.03— TITLE: Installation of turnouts Price in words: Price in numbers:

PRICE N  Title: Ballasting, laying, lining and Levelling of rail  (tamping) ready for traffic. (Measured over le	way track including Packing, boxing and dressing
The unit of measurement shall be kilometres of railway tracks, measured over level track.  The bid rates include all necessary dismantling, transporting, handling, loading/off-loading, stacking and storing of the existing railway track. The bid rates also include the necessary ballasting, laying, lining, levelling packing, boxing and dressing (tamping) of railway track to be made ready for traffic.  Tamping machine and hopper wagons for the transport of the ballast will be provided by URC, following discussions with the Contractor and Engineer.	
PRICE No 82.04— TITLE: Ballasting, laying, lining and Levelling of railway track including Packing, boxing and dressing (tamping) ready for traffic.  (Measured over level track - URC to provide tamping machine)	
Price in words:	Price in numbers:
PRICE N	lo 83.01
Title: Laying and assembling checked in concrete level crossing track. Refer to Drawings. Includes and levelling track ready for concreting.	
The unit of measurement shall be the number of Asphalt Road Level Crossings successfully installed, to the specifications of the drawings and EARH manual.  The bid rates include all necessary works and materials in addition to those provided by Item 71.01, to ensure the construction of a fully functional level crossing. The bid rate shall also include full compensation for procuring and supplying all the necessary labour, equipment and tools.	
PRICE No 83.01— TITLE: Laying and assembling checked in concrete level crossing track. Refer to Drawings. Includes and levelling track ready for concreting.	
Price in words:	Price in numbers:

#### **PRICE No 84.01**

Title: Laying and assembling conventional gravel road level crossing track.

The unit of measurement shall be the number of gravel Road Level Crossings successfully installed, to the specifications of the drawings and EARH manual.

The bid rates include all necessary works and materials in addition to those provided by Item 72.01, to ensure the construction of a fully functional level crossing. The bid rate shall also include full compensation for procuring and supplying all the necessary labour, equipment and tools.

PRICE No 84.01— TITLE: Laying and assembling conventional gravel road level crossing track.	
Price in words:	Price in numbers:

#### **PRICE No 85.01**

Title: "Level Crossing Marking Board" signs for PERMANENT level Crossings

The unit of measurement shall be the number of Board Signs supplied and installed to the specifications of the drawings and EARH manual.

The bid rates include the supply of material, transport, loading/off-loading, stacking and handling. The bid rate shall also include full compensation for procuring and supplying all the necessary labour, equipment and tools for the installation.

PRICE No 85.01— TITLE: "Level Crossing Marking Board" signs for PERMANENT level Crossings.	
Price in words:	Price in numbers:

#### **PRICE No 85.02**

Title: "Level Crossing Marking Board" signs for TEMPORARY Level Crossings

The unit of measurement shall be the number of Board Signs supplied and installed to the specifications of the drawings and EARH manual.

The bid rates include the supply of material, transport, loading/off-loading, stacking and handling. The bid rate shall also include full compensation for procuring and supplying all the necessary labour, equipment and tools

for the installation.						
PRICE No 85.02— TITLE: "Level Crossing Marking Board" signs for TEMPORARY Level Crossings						
Price in words:	Price in numbers:					
PRICE N	lo 85.03					
Title: "Whistle	Board" Signs.					
The unit of measurement shall be the number of whistle Board Signs supplied and installed to the specifications of the drawings and EARH manual.  The bid rates include the supply of material, transport, loading/off-loading, stacking and handling. The bid rate shall also include full compensation for procuring and supplying all the necessary labour, equipment and tools for the installation.						
PRICE No 85.03— TITLE: "Whistle Board" Signs.						
Price in words:	Price in numbers:					

### **VOLUME 4.3.4 – DAYWORKS SCHEDULE**

Item	Description	Unit	Unit price	Estimated quantities	Provisional sums EUR
A1	Unskilled worker	hr		100	
A2	Skilled worker, Cat. 3	hr		100	
A3	Skilled worker, Cat. 5	hr		100	
A4	Foreman	hr		100	
A5	Site manager	hr		100	
A6	HGV driver	hr		100	
A7	Heavy plant driver	hr		100	
A8	Land surveyor	hr		100	
B1	D8N bulldozer	hr		100	
B2	CAT-type crawler excavator	hr		100	
В3	CAT wheeled excavator	hr		100	
B4	Vibrating Plate Compactor	hr		100	
B5	Generator 15 KW	hr		100	
B5	Pump	hr		100	
В6	Backhoe loader	hr		100	
C1	Diesel (Gas, oil)	L		50	
C2	Crushed stone aggregates	$m^3$		50	
C3	Fine aggregate (Sand)	m <sup>3</sup>		50	
C4	Steel for reinforced concrete	Kg		50	
C5	Timber formwork	m <sup>2</sup>		50	
Total D	ayworks				

#### **VOLUME 4.3.5 — DETAILED BREAKDOWN OF PRICES**

# A) Breakdown of the basic prices for labour (converted into local currency or €/hour)

NO	Qualification	Monthly pay (1)	Hourly pay (2)	Overtime (3)	Soc. security contributions (4)	Travel time (5)	Hourly total (6)
A1	Labourer, Cat 1						
A2	Skilled worker, Cat. 3						
А3	Skilled worker, Cat. 5						
A4	Foreman, Cat. 7						
A5	Site manager						
A6	HGV driver						
A7	Heavy plant driver						
A8	Clerk of works						
A9	Mechanic, Cat. 7						
A9	Land surveyor						
A10	Planning draughtsman						
A11							

The above list is given by way of example and is not exhaustive.

- (1) Salary if the employee is paid monthly.
- (2) Hourly pay if the employee is paid hourly, otherwise monthly salary divided by the legal working hours (... hours/month).
- (3) Average cost of overtime, i.e. hourly pay times the overtime coefficient.

  Average coefficient to be applied to the salary to take account of overtime...... (= total gross salary/gross salary without overtime).
- (4) Percentage of the social security contributions (including social welfare, leave, etc.) times the gross salary (this percentage may vary according to the category of employee).
- (5) Average monthly or daily travel time divided by the number of daily or monthly legal working hours.
- (6) = (2) + (3) + (4) + (5).

Done at	
---------	--

# B) Breakdown of basic supply prices for materials and consumables (in local currency or €/unit)

			Outsta	Unit price	Transport	Tax, duties and other	L	osses	Total
NO	Description	Unit	Origin (1)	origin (2)	to site (3)	charges (4)	%	Value (5)	Total (6)
C1	Gasoil	L							
C2	Aggregates for concrete	m <sup>3</sup>							
C3	Sand for concrete 2/4	m <sup>3</sup>							
C4	Cement	Т							
C5	Steel for reinforced concrete	Kg							
C6	Annealed wire	Kg							
C7	Timber formwork	m <sup>2</sup>							
C8	Plywood	m <sup>2</sup>							
C9	Plasticisers	Kg							
C10	Concrete coating	Kg							
C11	Asphalt concrete	Т							
C13	Inspection ladders	U							
C14	Fencing	ml							
C15	Traffic signs	U							
C16									

This list is not exhaustive.

- (1) Geographical location of the supplier or quarry.
- (2) Supply or cost price at the quarry or on delivery in the country.
- (3) Cost price of transport from the quarry or delivery in the country to the site.
- (4) To be borne by the firm.
- (5) Any losses or breakages to be determined by the tenderer.
- (6) Basic prices for supply of materials: (6) = (2) + (3) + (4) + (5).

Done at	
The tenderer (signature)	

## C) Breakdown of basic hourly prices for equipment (in local currency or €/hour)

No	Description	Purchase date of equipmen t	Replacement value (RV) (1)	Duties Taxes (2)	RV + taxes (3)	nb days useful life (4)	Depreciation /day (5)	Fuel cost/ day (6)	Lubricant cost/day (7)	Spare parts (SP) cost /day (8)	Lubricant & SP taxes/day (9)	Labour cost/day (10)	Total /day (11)	Average daily working time (12)	Total /hour (13)
В1	D8N bulldozer														
В2	14G grader														
B3	CAT-type crawler excavator CAT wheeled														
B5	Trencher type														
B5	Pump														
В6	Concrete vibrating poker														
В7															

- (1) Estimated purchase price (excl. tax) of a piece of equipment of same kind, but new, purchased in the country's capital at the end of machine life span.
- (2) Duties and taxes charged to the contractor at the purchase date.
- (3) = (1)+(2)
- (4) Number of depreciation years by number of days worked per year.
- (5) Daily depreciation = (3)/(4).
- (6) Average daily fuel consumption; the cost of the fuel is given with tax.
- (7) Daily cost of lubricants (excl. tax).
- (8) Daily cost of spare parts (excl. tax).
- (9) Duties and taxes charged to the contractor on lubricants and spare parts.
- (10) Manpower price (man/day).
- (11) Daily basic prices of piece of equipment = (5)+(6)+(7)+(8)+(9)+(10)..
- (12) Hours of operations (average).
- (13) Hourly operational price of piece of equipment = (11)/(12)

Done at
The Tenderer (signature)

## <u>D)</u> Breakdown of unit prices in the price schedule (in local currency or €)

No of the unit price:

Designation of the unit price:

Estimated quantities:

Output per day: m³/day

COMPONENTS OF THE PRICE COMPONENT Quantity				EQUIPM	LABO				
EQUIPMENT, SUPPLIES AND SUBCONTRACTED WORKS DESIGNATION	or time using h/day (Q)	U	DEPRECIATION €/h (1)	MAINTENANCE €/h <b>(2)</b>	FUEL- LUBRICANTS €/h (3)	TOTAL €/day <b>Qx(1+2+3)</b>	Unit price	TOTAL €/day	TOTALS €/day
EQUIPMENT		h							
		h							
MATERIALS									
		h							
LABOUR		h							
		h							
				TOTAL	€/day				
				Net cos	t €/m³				

# E) Detailed breakdown of site costs (Fc) (in local currency or €)

Means deployed	Number (1)	Basic price (2)	Total net cost (3)=(1)+(2)
Labour			
A1 Site supervisor			-
A2 Engineer			
A3 Clerk of works			
A4 Secretary			
A5 Drivers			
A6 Orderlies			
A7			
Subtot	al labour		
Equipment			
B1 4x4 vehicle			
B2 Saloon car			
B3 Van-type people carrier			
B4			
Subtotal	equipment		
Materials			
C1 Gasoil			
C2			
Subtotal	materials		
Other			
D1 Rentals			
D2 Telephone			
D3			
Subtot			
GENERA			

## F) Detailed breakdown of the general costs (Fg) (general overheads and profits)

No		% of the bid
1	Financial charges	
2	Insurance premiums	
3	Guarantee costs	
4	Price revision	
5	Direct taxes	
6	Other expenses	
7	Penalties	
8	Contingencies	
9	Office and agency expenses	
10	Net profits	
11	Corporation taxes	
	GENERAL TOTAL	

- 1. Financial charges are expenses incurred outside the production process (project start-up, overdrafts, etc.).
- 2. Insurance is the insurance described in Article 16 of the General Conditions for works contracts.
- 3. Guarantee costs are the bank charges for issuing the guarantee (advance, performance, retention guarantee, etc.).
- 4. Firms may or may not make provision under this heading, depending on their judgment concerning the quality of the price revision formula.
- 5. This involves VAT in the country of works, customs duties on the imported materials, etc.
- 7. If firms think there may be a delay in the works, they can take out cover against it.
- 8. Contingencies here are related to uncertainties concerning tender documents, lack of knowledge of the country, etc.
- 9. General and administrative expenses are made up of firms' fixed overheads such as accounts and quality control, management, various departments and office buildings and are common to all the firm's works contracts. Agency expenses are expenses common to all the works in the agency's area of responsibility.
- 11. These are taxes paid in the country of the works or in the country where the firm has its place of business (for international companies).