



CONSULTANCY SERVICES

FOR

INDEPENDENT ASSESSMENT

OF THE

APPLICATION OF THE

ADJUSTMENT FOR CHANGES IN COST FIDIC CLAUSE

IN

KENHA DEVELOPMENT PROJECTS.

**INDIVIDUAL CONSULTANT**

DRAFT TOR SUBJECT TO UPDATE BEFORE ISSUANCE TO SHORTLISTED CONSULTANTS



**Consultancy Services for Independent Assessment of the Application of the Adjustments for Changes in Cost FIDIC Clause in KeNHA Development Projects.**

**1.0 Terms of Reference.**

*Note: This is a draft Terms of Reference (TOR) Subject to review and update before issuance to the shortlisted consultants.*

**1.1. Background**

The Kenya National Highways Authority (KeNHA) is a statutory body established under the Kenya Roads Act of 2007 and inaugurated in September 2008 with a mandate to develop, rehabilitate, manage and maintain all National Trunk Roads comprising of Class S, A, and B roads.

In order to execute its mandate, KeNHA engages in various development projects through formal contracts with eligible engineering consultants and road contractors. FIDIC forms of Contracts being the major contract framework used. Below is a summary of some of the currently ongoing development projects;

S/No.	Contract Name	Total Road Length (KM)	Percentage Complete (%)
1.	Lot 1; Mombasa – Kwa Jomvu Section	12	91.26%
2.	Lot 1: Mombasa – Mtwapa (A7) Road Section	13.5	3.5%
3.	Lot 2: Dualling and Upgrading of Lot 2: Mtwapa – Kwa Kadzengo - Kilifi (A7) Road Section	40.4	39.0%
4.	Lot 2: Kisii - Ahero (A1) Section (Feeder & Access roads)	106.8	94.98%
5.	Dualling of Lot 1: Kenol - Sagana	48	92.83%
6.	Dualling of Lot 2: Sagana - Marua	36	79.70%
7.	LOT 1: West Pokot, Turkana South, Turkana East and Turkana Central sub-counties (14 Sub-projects)		19.44%
8.	LOT 2: Loima, Turkana North and Turkana West Sub-Counties (12 Sub-projects)		19.44%
9.	Rehabilitation of Kakamega – Webuye Road (A1)	40	93.00%
10.	New Contract for Completion of Remaining Works at Kisumu Boys-Mamboleo	4.7	96.60%
11.	New Contract for Completion of Remaining Works at Ahero and		90.60%



S/No.	Contract Name	Total Road Length (KM)	Percentage Complete (%)
	Kericho Interchanges		
12.	Duelling of Athi-River Machakos Turnoff	21	90.30%
13.	Lot 1: Barpello (Moru) – Tot Junction	44	7.90%
14.	Lot 2: Tot Junction – Cheseгон – Kopasi River	46	4.00%
15.	Lot 3: Kopasi River – Lomut – Sigor – MarichPass	32.4	34.00%
16.	Lot 1: Mamboleo Junction (A12) – Miwani	33.9	12.96%
17.	Lot 2: Miwani – Chemelil Road	43.4	11.40%
18.	Lot 3: Chemelil – Kipsitet Road	42.5	9.14%
19.	Construction of Kwale - Kinango (B92) Road	29	4.50%
20.	Section 3 (Segel- Marsabit	23.5	84.62%
21.	Marsabit Segel – Section 2	74.3	15%
22.	Mau Mau Road Project Lot 1A: Kiambu County Section	105	45.00%
23.	Mau Mau Road Project Lot 1B: Kiambu County Section	112.6	51.50%
24.	Mau Mau Road Project Lot 2: Murang'a County Section	153.8	53.23%
25.	Mau Mau Road Project - Lot 3: Nyeri County Section	100.65	54.20%
26.	Kinyona - Gatura – Njabini Road (B20)	68.8	40.50%
27.	Rehabilitation and Improvement of Uplands – Githunguri - Ruiru	47	63.60%
28.	Rehabilitation and Improvement of Thika-Magumu (B20/D1315)	68.	58.10%
29.	Lamu-Ijara-Garissa(A10) Road & Associated Spur /roads to /all Weather Gravel Standards	453	Section I = 74.89% Section II = 3.94% Section III = 5.00%
30.	Garissa -Isiolo Road & Associated Spur /roads to /all Weather Gravel Standards.	150	26.70%
31.	Upgrading and Landscaping of Kenyatta Road (C565) EPC Turnkey Commercial Contract	21	23.56%
32.	Mpard - Package 2: Mwache -Tsunza – Mteza (Dongo Kundu)	8.96	87.18%
33.	Upgrading of Isiolo – Kulamawe (A10/B84) Road And Civil Works	77	7.41%

S/No.	Contract Name	Total Road Length (KM)	Percentage Complete (%)
	Associated With Installing A Fibre Optic Cable Along This Road Section		
34.	Upgrading of Kulamawe – Modogashe Road and Garbatulla Spur Road (128 Km) And Civil Works Associated With Installing A Fibre Optic Cable Along Kulamawe – Modogashe – Samatar Road Section	128	5.00%
35.	Dualling Of Magongo (A109l) Road Phase II	23.1	86.44%
36.	Capacity Enhancement of James Gichuru-Rironi	315.2	71.00%

The FIDIC forms of Contracts provide for price adjustments for changes in labour, goods and other inputs to the works costs (FIDIC 1987 – Clause 70.1 of the GCC, FIDIC 1999 – Clause 13.8 of the GCC, FIDIC 2010 – Clause 13.8 of the GCC & FIDIC 2017 – Clause 13.7 of the GCC). The adjustment is based on a formulae. The formulae are usually incorporated into the bidding documents and are designed to ensure equitable adjustments during the contract period.

Generally the **FIDIC Formula:**

$$P_n = a + b \frac{L_n}{L_o} + c \frac{E_n}{E_o} + d \frac{M_n}{M_o} + \dots$$

- $P_n$  is the adjusted price for period  $n$ .
- $a, b, c, d, \dots$  are coefficients reflecting the weighting of different cost elements.
- $L_n, E_n, M_n, \dots$  are the indices for the relevant cost elements at period  $n$ .
- $L_o, E_o, M_o, \dots$  are indices for the relevant cost elements as at the Base Date.

The Variation of Price adjustment is expected to shield the parties to the Contract from changes in prices, and provide for a fair mechanism for risk sharing. However in the recent past, the Authority has experienced unprecedented escalation of Variation of Prices (VOP) in ongoing Development contracts making projects expensive and giving rise to budgetary challenges. This has in some instances negatively impacted project delivery. This has resulted in uncertainties in budgeting due to huge variations in some ongoing projects. Preliminary investigations points to wrong design of the Contract Price Adjustment (CPA), unbalanced weightings, changes in applicable indices



management, wrong application of the formulae and poor documentation at the project level amongst others.

In addition, the Kenya National Bureau of Statistics have rebased the civil engineering cost index from 1972 to December, 2019. In the revision, KNBS justified the process by stating that the economies by nature are dynamic. They stated that changes are necessary to give a more current and better understanding of the economy. Further, revision and rebasing are done so as to primarily reflect structural changes in the economy, adopt new compilation methods, take advantage of emergence of new or improved data sources. It further indicated that that more specifically, national accounts are revised: when new datasets become available e.g. updated benchmark surveys/censuses; to adopt methodological and classification changes to conform to international guidelines/manuals; when there are revisions in source data; to correct for any anomalies/errors that may have been missed or would have otherwise distorted the time series and disorient policy makers, were they introduced when they were discovered.

Due to the experienced unprecedented escalation of Variation of Prices (VOP) in ongoing Development contracts within the Authority, there's need to evaluate equitability of the price adjustments made during the contract period.

The Government of the Republic of Kenya (GoK) has received loans from Africa Development Bank towards the cost of improvement of Mombasa - Kwa Jomvu Highway project.

The Kenya National Highways Authority (KeNHA), being the implementing agency now wishes to engage an Individual Consultant to carry out a detailed analysis of the Variation of Price application within the Authority's projects and provide a policy statement and procedure guidelines for application of the VOP within the Authority projects across all the financiers.

## **1.2. Objective of the Assignment**

The overall objective of the assignment is to carry out a detailed analysis of the Adjustments for Changes in Cost/ Variation of Price application within the Authority's projects and provide a policy statement and procedure guidelines for application of the VOP within the Authority projects across all the financiers.

The specific objectives are to;

- (i) Carry out a comprehensive independent review on the application of the price adjustment formula (including assessment of the credibility and acceptability of the indices applied) for sample road contracts.
- (ii) Carry out an independent review of the provision of the Price Adjustment formula in the KENHA bidding documents to ensure consistency with best practice.
- (iii) Prepare a Policy Statement and Procedure Guidelines for application of the VOP within the Authority projects across all the financiers.

## **1.3. Scope of the assignment**



The scope of the assignment shall entail

- A. Detailed audit including but not limited to:
1. Audit of the Variation of Price clause drafting within the new and ongoing contracts and Contract under preparation;
  2. Audit of indices and weightings management within the selected contracts including the source of indices management;
  3. Audit of the Interpretation of the indices, weightings balance and applicable currencies within the Contracts;
  4. Audit of the quality and relevance of documentation and record keeping within the ongoing contracts;
  5. Audit of the documentation requirement specifications in the various standard tender document used by KeNHA;
  6. Provide an analysis of the correlation of the indices, weightings, Contractor program of works management and mobilization of equipment and materials schedule and application in the VOP calculations;
  7. Establish trends or lack of in application of VOP within the KeNHA programs including deviations, variances and mergers;
  8. Impact of rebasing of indices across the project life cycle and recommendations for enhancement of the relevant VOP clause in the Tender documents;
  9. VOP and unit price adjustments within contracts including Provisional Sum, new rates and dayworks
  10. Undertake detailed analysis and audit of the application of the VOP in sampled projects including;
    - i. Review of the identified contracts to fully identify the CPA provision (formulae, indices, weightings) and compare with Bid;
    - ii. Verification of the Index values from relevant websites and/or value series provided as part of the review;
    - iii. Recalculate the CPA formulae using an Excel spreadsheet available on the WB website, to confirm the IPC figures for CPA
    - iv. Identification of any abnormal CPA factors originated
    - v. Cross Contract comparison of currency split, bitumen and fuel weightings to identify discrepancies
    - vi. Comparison of US LBS index values for asphalt with the same from RSA.

The audit shall include the following sampled projects;

- a. Kapchorwa-Suam-Kitale and Eldoret Town Bypass Roads Project;
- b. Kenol – Sagana –Marua Highway Improvement Project;
- c. Mombasa – Mariakani Highway Project;
- d. Sirari Corridor Accessibility and Road Safety Improvement Project;
- e. Mombasa – Mtwapa – Kilifi Road Project;
- f. Horn of Africa Isiolo – Manderu Corridor El Wak – Rhamu Road Upgrading project; and



- g. Lesseru – Kitale and Morpus –Lokichar Road Upgrading Project.
- h. At least two program (One ongoing and one completed) from each of the following financiers including Government of Kenya, Middle East Banks, KFW, World Bank, Exim Bank, European Union, JICA, and Trademark East Africa.

- B. Prepare a Policy Statement and Procedure Guidelines for application of the VOP within the Authority projects across all the financiers.
  - a. In preparation of this, stakeholder engagement would be critical. The stakeholders shall include but not limited to, ACEK, RACCECA, KNBS, KENHA, KERRA, KURA, and National Treasury.
  - b. A desktop study of other practices within the region (minimum of one) and other best practices outside the region.

**1.4. Duration of the Assignment:**

The assignment shall be for a period not exceeding 7 Months, with maximum of 4 person-months input requirement spread across the contract duration.

**1.5. Expected Output/ Schedule of Deliverables**

- 1. Inception Report detailing approach to the assignment and methodology
- 2. Detailed report of the methodology used, audit findings and recommendations. The reports shall include but not limited to:
  - a) Executive summary stand-alone report for the whole exercise detailing trends, deviations, and variances across the audited projects; and recommendations;
  - b) Audit report for projects under preparation detailing the VOP clause drafting across the various standard tender documents (based on the various project financiers) used within the Authority and recommendations from the audit findings;
  - c) Audit report for VOP general application on ongoing projects and recommendations from the audit findings
  - d) Audit and detailed analysis report for the sampled projects separate for each project and recommendations from audit findings.
- 3. A draft Policy Statement and Procedure Guidelines for application of the VOP within KENHA projects across all the financiers.

Summary of Schedule of Deliverables	
Deliverable	Due Date
Inception Report	M+1 Weeks
Draft Detailed Assessment report for priority projects	M+2 weeks



Draft Detailed Assessment Reports	M+16 weeks
Detailed Assessment Report	M+20 weeks
Draft VOP Policy document	M+27weeks
Final VOP Policy document	M+28weeks

**Note: Priority Projects:**

1. Detailed analysis and audit of the application of the VOP for the sampled projects list. Delivery Priority should be given to Kenol – Sagana –Marua Highway Improvement Project and Mombasa – Mariakani Highway Project with desired Priority Consideration within the first one month of engagement.
2. The Consultant should allow in his program for a minimum of one and a maximum of two weeks for presentation of the report findings to the client and Client’s review.

**1.6. Services to be provided by the Client:**

The client shall provide the following to facilitate the Consultant undertake the assignment;

1. Access to project documents and records relevant to the assignment
2. Access to project sites and site offices

**1.7. Qualification of the Consultant**

1. Bsc. Engineering, Construction Project management, Project monitoring and Evaluation or its equivalent.
2. Registered Consulting Engineer with Engineers Board of Kenya or its equivalent
3. Minimum of 20years general experience in FIDIC infrastructure Construction Contract Administration. With at least one project experience in FIDIC Bank Harmonized Edition of the Conditions of Contract for Construction.
4. Minimum 10years General experience in road infrastructure Construction project auditing
5. Minimum 8years experience in Road Construction project FIDIC Variation of price application either as a Contract Administrator, trainer (evidence of training certification shall be required) or arbitrator (evidence of accreditation shall be required) or Projects Monitoring & Evaluation Expert.
6. Undertaken at least one variation of Price audit assignment or related contract management analysis