(19)

COUNTY ASSEMBLY OF EMBU

Approved for tabling
CSCA
22/05/2017

EMBU COUNTY GOVERNMENT
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FIRST ASSEMBLY: FIFTH SESSION

REPORT OF THE COMMITTEE ON INFRASTRUCTURE, PUBLIC WORKS, HOUSING AND ENERGY ON THE PROGRESS OF CONSTRUCTION OF KIBUGU ROAD IN EMBU COUNTY.

Hon. Speaker
Kindly approve for tabling
15/5/2017

Clerk's Office
County Assembly of Embu
P.O. BOX 140-60100
EMBU

CLERK TO THE COUNTY ASSEMBLY OF EMBU
Tabledon.....
24 MAY 2017
Sign.....
P.O. Box 140 - 60100 EMBU

CCA
Forwarded Please
Give further direction
PCA-CS
9/05/17

MAY, 2017

ABBREVIATIONS

C.E.C.M.	-	County Executive Committee Member
PPP	-	Public Private Partnership
ACWC	-	Asphalt Concrete Wearing Course
PPDA	-	Public Procurement and Disposal Act, 2008
PPP Act	-	Public Private Partnership ACT, 2013
KM	-	Kilometer
Ltd	-	Limited
ARBMT	-	Appropriate Road Building Materials and Technology
PI	-	Plastic Index

EXECUTIVE SUMMARY

The County Government of Embu has been given a responsibility by the Constitution of Kenya, 2010, Fourth Schedule, Part 2 to ensure that the following areas are well planned and maintained. (a) County roads (b) Street Lighting (c) Traffic and parking (d) Public road transport.

Initially, the committee on Infrastructure, Public Works, Housing and Energy on its own motion decided to inquire into and report on the Kibugu Road Project as matter relating to the mandate and management of the assigned department. Later on, a member of the county assembly through a question in the assembly sought to know several matters regarding the fate of the project after the Principal Secretary ministry of Transport Infrastructure, Housing and Urban Development notified the County Government that probase technology had not been approved for construction of public roads. The response given by the County Executive Committee Member (CECM) Infrastructure on the floor of the house on 8th November 2016 was committed to the Committee for further scrutiny and investigation.

Kibugu Road Project which had been initiated by the executive to improve mobility in the county and covers a stretch of 12.2km being part of the proposed ring road that was to cover about 112km of roads in the entire county. The Kibugu road project was initially targeted to be done under a Public Private Partnership (PPP) arrangement where the contractor, Probase Technology (K) Ltd was expected to design, construct and maintain the road for a period of ten years.

The first part of this report covers the background of the project which explores the fundamentals of probase technology being the hallmark of the project. It was clear from the explanation that probase technology was a new technology which had not widely been used in Kenya. This part also gives insight into the findings by the committee after touring the project and consideration of the presentation by CECM Infrastructure on the project. This section further explores the challenges being faced by the contractor.

In a bid to understand hoe probase technology worked, the committee toured Kianjai-Miathene road in Meru County which was constructed by use of probase technology. The committee witnessed the finished road and learnt vital lessons from the project. Probase technology appeared to be a credible method of road construction following the presentation

by the Meru County Government where several benefits were enumerated which included but not limited to the saving per kilometer from the conventional method.

In the course of interrogation of the issues surrounding Kibugu Road project, the committee was noted from a letter Ref.no. MOTI/I/A.13/02 VOL.1 of 8th September 2016 ***(Annex 1)*** that the Ministry of Transport Infrastructure, Housing and Urban Development had outlawed the use of probase technology for the entire stretch of the road. The reason given was that probase technology had not been approved as a standard for use in construction of public roads in Kenya. Consequently probase technology was to be used in the first 5.8kms as a research trail while conventional methods/standard was to be used in the remaining 6.2kms.

Further the committee observed that the contract for probase technology had mutually been terminated and that the remaining part of the road (6.2kms), had been advertised and awarded to 5no. Contractors who were ready to complete the works.

The committee recommended that the executive should be clear on what technology and funding methods should be used on particular road projects to avoid losses of money and time during implementation and execution of projects. Further that the results of the research trail be provided to the County Government and that the County Government fully adheres to the conditions given by the ministry of transport in the letter.

1.0 BACKGROUND

1.0.1 Mandate of the Committee

The mandate of the Committee on Infrastructure, Public Works, Housing and Energy is as outlined in Standing Order 191(5) of the County Assembly of Embu;

THAT, the functions of a sectoral committee shall be to –

a) *Investigate, inquire into and report on all matters relating to the mandate, management, activities, administration, operations and estimates of the assigned departments;*

b) *Study the programme and policy objectives of the of departments and the effectiveness of the implementation;*

c) *Study and review all County Legislation referred to it;*

d) *Study, access and analyze the relative success of the departments as measured by the results obtained as compared with their stated objectives;*

e) *Investigate and inquire into all matters relating to the assigned departments as they may deem necessary, and as may be referred to them by the County Assembly;*

f) *To vet and report on all appointments where the constitution or any law requires the County Assembly to approve, except those under Standing Order 185 (committee on Appointments) and*

g) *Make reports and recommendations to the County Assembly as often as possible, including recommendations of proposed legislation.*

1.0.2 COMMITTEE MEMBERSHIP

The Committee was formed pursuant to provisions of **Standing Order No. 191** of the County Assembly of Embu as read with Section 14(7) of the County Governments Act, No 17 of 2012.

The committee came into being on 23rd April 2013 following a resolution of the Assembly and it comprises of the following members;

Hon. Silas Nyaki Muria, MCA	-	Chairperson
Hon. Newton Kariuki Ndwiga, MCA	-	Vice Chairperson
Hon. Robert Njiru Ireri, MCA	-	Member
Hon. Agatha Muthoni Mbogo, MCA	-	Member
Hon. John Mwangi Muriuki , MCA	-	Member
Hon. Teresia Njeri Rebiro, MCA	-	Member
Hon. Rose Muthoni Ndwiga, MCA	-	Member

1.1 PROBLEM STATEMENT

This report arose from the need to establish and report on the progress of construction of Kibugu road which was part of a project to tarmac 112 Kilometers of roads in the county. The project, if fully implemented would consume a substantial amount of big percentage of development money in the county and would have positive impact to the majority of the residents from the area in question.

1.2 OBJECTIVES/TERMS OF REFERENCE

1. To establish the current status of construction of Kibugu road
2. To establish the challenges being faced by the contractor.
3. To understand the fundamentals of Probase Technology for road construction.
4. To compile a report and make recommendations to the County Assembly of Embu on the Committee findings and observations.

1.3 METHODOLOGY

The Committee conducted its business by applying the following methods;

(i) Site visits – Kibugu road and Kianjai –Miathene Road in Meru County
(ii) Interviewing the project manager and County Government representatives.
(iii) Presentation by the CECM and his technical team.
(iii) Reviewing of handbook from probase company and also information available on probase technology from their website, *www.probase.com.my*

1.4 TOOLS OF REFERENCE

Reference to the following documents was made:

(i) The Constitution of Kenya, 2010
(ii) County Assembly of Embu, Standing Orders
(iii) Handbook on Probase Technology
(IV) Correspondences to and from County Government, government agencies and Probase Technology (K) Ltd;
(v) Review of information from the internet

1.5 ACKNOWLEDGEMENT

The committee wishes to record its appreciation to the Speaker of the County Assembly for the invaluable assistance given in order to complete this task.

The committee is further indebted to the Clerk of the Assembly for the facilitation and advice, Honorable members for the support and the staff of the County Assembly for the services they rendered to the committee. It is their commitment and dedication to duty that made the work of the committee and production of this report possible.

SIGNED.....DATE.....13/04/2017.....

HON. SILAS NYAKI MURIA,

CHAIRPERSON,

COMMITTEE ON INFRASTRUCTURE, PUBLIC WORKS AND HOUSING

2.0 COMMITTEE DELIBERATIONS

2.1 BACKGROUND- Fundamentals of probase technology

The committee held meetings to familiarize itself with the fundamentals of probase technology and how the County Government was likely to benefit by using it rather than the other conventional methods of road construction. The committee also toured the project site and the committee reviewed the following information obtained from the company's website, ***(http://www.probase.com.my).***

2.2 PROBASE ROAD SYSTEM

- **"PROBASE"** is the road system method for soil road enhancement and maintenance. Soil requires enhancement and maintenance to overcome the problems associated with Soil Roads. **The two major problems associated with soil include;**
  - ✓ **Water.** This is the major cause for the endless problems associated with soil road. During rainy seasons, the road becomes slippery, muddy, soft and weak. While causing environmental problems like erosion, the road becomes uneven, slowing down traffic while the slipperiness may cause frequent accidents. During hot days, the road becomes dirty and dusty, creating a polluted and hazardous living environment in estates and rural areas.
  - ✓ **High Plastic Index (PI).** Presence of PI in clay soil maximizes water absorption, turning soil into mud. Rainwater can easily penetrate the soften soil and acting as a lubricant, it can cause the road to give way especially with heavy traffic passing through. Furthermore, erosion, wear and tear occurs due to the rainwater and traffic. The soft soil becomes lowers the resilience of the road especially if it is unsealed and such roads lack waterproof properties.
- **Probase system aims at overcoming the water problem and increase soil enhancement.**
- ✓ Soil roads can be easily upgraded depending on the properties of its sub grade, existing soil condition, and the traffic and load requirements. The awareness is absolutely essential in determining the necessity of soil stabilization and hardening.

The key component of Probase Road System is the **sealing process,** incorporating the use of an environmentally friendly soil sealant, giving the road a layer of waterproof protection, making it dust and mud free. However the durability of the road is greatly dependent on the pre-sealing works. With good soil surface and proper sealing, the road can be virtually maintenance free.

The Major Advantages of probase technology

- Waterproofing - Soil sealed with Proseal can effectively prevent water penetration compared to unsealed roads.
- Maintaining the Strength - The non-water soluble layer of protection keeps the road dry. Test results show that the strength of the road is maintained even on heavy downpour.
- Erosion Free - Rainwater and traffic can cause erosion of ± 75 mm per year without sealing. Proseal on the other hand prevents erosion, saving cost on resurfacing while protecting the environment.
- Dust Free - The protective layer of Proseal virtually turns the soil road into a dust-free environment.

2.3 MAJOR STEPS IN PROBASE TECHNOLOGY

Step 1: Stabilization

This step can be omitted if the soil meets the standards required for sealing. The common methods of stabilizing soil include stabilization by compaction, mechanical stabilization or by the use of stabilizing additives like cement, lime, bitumen and many other stabilizers available in the market. Alternatively, probase stabilizing products, namely TX-85 SOIL STABILIZER & STRENGTHENER and SH-85 SOIL HARDENER can also be used

Treating unstable soil with TX-85 Soil Stabilizer and SH-85 Soil Hardener:

1 Soil Loosening

2 Laying SH-85 Soil Hardener

3 Spraying TX-85 + Water

4 Mixing & Cambering

5 Compacting

Step 2: Sealing

This step use for waterproofing & dust control. The stabilized soil surface will be sealed with PROBASE PB-65 SOIL SEALANT to provide a waterproof layer to prevent rain water percolate into the soil and keep the road in dry condition at all times. A stabilized soil road in dry condition will perform in its best condition with PROBASE PB-65 SOIL SEALANT covered on soil surface, making it dust free and mud free at all times.

Step 3: Maintenance

Maintenance is simple. Just patch any pothole or depression by mixing soil with TX-85, followed by sealing a layer of PB-65 SOIL SELANT on the affected area. Only minimal manpower is required comprising of 3 workers + 1 truck for a maintenance team. Maintenance can be done as and when required for a long lasting road.

The process:

1 Mixing roadside soil with TX-85
2 Patching potholes
3 Patching depression area
4 Spraying PB-65 Soil Sealant on affected area

Up Grading to Asphalt Road

After sometime, one has the choice to upgrade to Asphalt Road. The road can easily upgraded to an Asphalt Road by laying 50 – 75 mm thick Asphalt Concrete Wearing Course (ACWC) on top existing Probase Road. It depends on the requirements of the road design, with all the soft spots already well-maintained, the consolidated soil becomes a strong sub-base.

Additional gravel to form the sub-base is reduced or may not be required at all. Soil road maintained using Probase Road System and upgraded to Asphalt will minimize the risk of damage on expensive ACWC, and eventually provide cost savings between 40-60% to build an Asphalt Road. **(Source:** *http://www.probase.com.my)*

2.4 TOUR OF THE KIBUGU ROAD PROJECT BY THE COMMITTEE

- The committee on Infrastructure toured the Kibugu Road Project on 9th June 2016 where it had a chance of interacting with the project manager, Mr. Tan and representative of the county executive. Eng. Isaac Mogoi.
- The project manager briefed the committee on the probase technology that the company was using to construct the road.
- He said that probase road design system uses chemicals to stabilise the base of the road which is then compacted to desired levels of stabilisation.
- Then two layers are laid on the road using special chemicals manufactured and imported from Malaysia where the technology is popular in rural roads construction.

2.5 CHALLENGES FACED BY THE PROJECT

The committee learnt that the project was faced by several challenges some of which the contractor had managed to wade through. Some however still remain insurmountable. Mr Tan, the project manager enumerated the following challenges being faced by the contractor:

1) Complaints that the road was interfering with Boundaries of private lands. No documents have been availed by the project proponent (the County Government) on the details of respective beacons for private lands fronting the road.
2) Road reserves have not been made owing to lack of surveying by the County Government officials.
3) Heavy traffic coupled with reckless driving – the drivers have no respect for road signages. The company was concerned about the safety of the drivers and passengers because of the apparent recklessness of drivers.
4) Drainage- this was not part of the contract but the company in some areas has decided to stone pitching to address the glaring areas which cannot be left unattended. This was an additional cost to the company. Some other drainage trenches are draining on private land. The problem of drainage was so much pronounced in Kibugu town and the relevant officer has been informed.

5) Narrow bridges along the road are also a problem. Some bridges are narrow that the road itself.
6) Payments for the completed certificates have not been processed within the required period. This is despite the fact that the inputs for construction of the road are imported from Malaysia and take up to 3 months for delivery to reach the project site.

Eng. Isaac Mogoi observed that the project was being implemented under a public private partnership model where the contractor was expected to **Design, Construct and maintain** the project for the agreed period. Later on the contractor would transfer the project to the County Government.

- The period of maintenance had been agreed as ten years.
- The road was a low volume road and hence the technology being employed appear tenable.
- The contractor had put the layer (1st seal) which was as per the signed contract.

2.6.0 PRESENTATION BY CECM ON KIBUGU ROAD PROJECT

The CECM and his two chief officers were invited to appear before the committee on 28th June 2016 to give further information regarding Kibugu road project. The CECM and his team presented as follows;

Background of the project

The County Government advertised for ***expression of interest*** for construction of the road using appropriate technology on 10th August 2015 and an addendum on the advertisement was made on 14th August 2015 for development of 100KM of roads in Embu County under tender no. EBU/CNT/T/18/2015-2016.

The Bidders

The following 14no. Firms submitted their applications for the ***expression of interest*** to develop the 100KM road using appropriate technology and materials.

No.	BIDDERS
1)	Borm Technologies (K) Ltd
2)	Sportlight General Supplies
3)	Civil Prop Pty Ltd
4)	Simplified Logistics And Construction
5)	Kamuti Building Constructors
6)	Kualam Ltd
7)	Just In Time Research
8)	Probase Kenya Ltd
9)	Pleng Ltd
10)	Katsran Ltd
11)	Runji And Partners Consulting Ltd
12)	Keys Matt Enterprises
13)	Techeleza Africa Solutions
14)	Mantis Logistics Ltd

Prequalified bidders

The following bidders were prequalified after the evaluation of their applications. The prequalification and request for them to submit a tender for execution and completion of the contract was made on 14th October 2015 under separate covers.

1. Mantis Logistics Ltd.
2. Pleng Ltd.
3. Techeleza Africa Solutions
4. Borm Technologies (K) Ltd.

5. Probase Kenya Ltd.

Responsive bidders

Tenders were floated to the 5no. prequalified bidders which were to be received by 29th October 2015 on or before 10:00am

Only two firms namely; ***Pleng Ltd*** and ***Probase Kenya Ltd*** responded to the request to submit tender.

Tender Evaluation and Award

After the technical and financial evaluation, Probase Kenya Ltd was successful. The notification was made vide letter Ref.no. EBU/CNT/T/18/2015-2016 dated 16th November 2015.

At a meeting held on 19th November 2015 between the representative of the County Government and Probase Kenya limited, it was agreed at the request of the County Government that the project be done in two phases. This was after it was realized that the intention of the County Government was to enter into a Public Private Partnership arrangement but the process followed was the one given under the Public Procurement and Disposal Act, 2008 (PPDA). The national treasury then advised the County Government to use the guidelines developed by the National Government under the Public Private Partnership Act,NO.15 of 2013 (PPP Act) if it intended to enter into such an arrangement.

The parties therefore agreed to enter into two contracts as follows

Phase I- The construction of the 12.2 KM Embu Town to Kibugu town road which was to commence immediately. This would be a normal contract where the County Government would provide the funds for the project to be done using the Probase Technology/Road System

Phase II- construction of the remaining 87.8KM - contract for the Design, Build, Maintenance and Transfer (DBMT) of the roads as per the PPP Act as opposed to the provisions under the Public Procurement and Disposal Act,2008 (PPDA).

Consequently, the contract for the first phase was signed on 14th December 2015 between the County Government and Probase Kenya Limited. Some salient features of the contract include:

- **Contract Sum/consideration - KES 389,754106.00**
- **Scheduled completion date - six months** after the commencement date (commencement date means 14 days after the date the contract was signed.)
- **Maintenance period - ten (10) years**

- The CECM said that beaconing was done by the County Government although the survey works were part of design works to be done by the contractor.
- The road in question was a low volume sealed road which does not entail compaction of a new sub-base. That was the major reason why the road was following the existing carriageways which has been compacted with time since it first became operational.
- According to the Chief Officer in charge of Roads, probase technology was not a very new technology and hence not a major departure from the conventional methods of constructing road. Probase technology only involves stabilization of the gravel or the soil as was the case with the conventional method.

Variation of Contract

It was explained that the project required an additional KES 57,000,000 to cater for unforeseen activities that were left out in the contract document. The reasons given for the variation include the following:

- ✓ Construction of a single carriageway bridge across Ruvingaci River
- ✓ Widening of the road as one approaches the river and also to include construction of gabions , retaining walls and stone pitching to prevent soil erosion

- ✓ Fixing of guardrails on the 2no. bridges
- ✓ Construction of road bumps on the stretch approaching the bridges
- ✓ Sealing of the shoulders along the whole length of the road
- ✓ Contingencies including Engineer's supervision fee. ***(See Annex 2)***

The CECM informed the committee that his office had not received any complaint among the challenges raised by the contractor to the committee. He however acknowledged that there was a challenge of payment for the services rendered by the contractor. He was hopeful that with the unlocking of funds through the Supplementary Budget, the challenge would be surmounted.

2.6.3 TOUR OF KIANJAI- MIATHENE ROAD IN MERU COUNTY

In order for the committee to fully appreciate how the road constructed under probase technology appeared when complete, the committee requested for permission to visit Kainjai-Miathene road project in Meru County , which had successfully been completed using the same technology as was being used in Kibugu Road.

- ➢ The committee toured the Kianjai – Miathene Road Project on 20th June 2016 where it had a chance to interact with officers from the Meru County Government who were involved in the road project.
- ➢ The team was received by the following individuals from Meru County Government:
  1. Dorcus Gitari – Roads Inspector (In-charge of the project)
  2. Andrew Muriithi - Roads Inspector
  3. James Mbariu - Roads Inspector
  4. Eng. Renson Kaimenyi
  5. Samwel Waweru
  6. Francis Njiru

  Representatives of the contractor-(Probase Technology (K) Limited

The team responded as follows on the issues raised by the Committee.

- The Kianjai - Miathene Road Project was designed and constructed by the Probase (K) Ltd and covers a stretch of 10 Kilometres. The road was a class 'D' as per the classification given by the National Government. The road was constructed using the probase technology.
- The whole width of the road comprising of 8no. metres has been treated and compacted. Out of these, 6no. meters forms the carriage way (area where the black layer is laid) while one meter on each side of the carriageway forms the shoulders.
- The road was constructed through the probase road technology from Malaysia and was completed within eight (8) months which missed the targeted six (6) months due to reasons which were understood like heavy rains which was experienced in the area.
- The project was wholly funded by the County Government of Meru at a cost of approximately KES 303million. The use of probase technology hence translated to KES 30Million per KM which is no match to the cost of KES 80million per kilometre using conventional methods of road construction.
- The contractor was to maintain the project for five years without any cost to the employer (the County Government of Meru).
- The National Government (Ministry of Transport and Infrastructure) did not raise any issues on the project. Its officers constantly carried material testing although no results were given out. Joint tests were also carried out between the government and the contractor.
- The project has an overwhelming support from the local community. The road was hitherto to development a low volume one but traffic has now started to increase.

2.6.4 CHALLENGES FACED IN THE KIANJAI ROAD PROJECT

1. Delay in releasing of funds by the national treasury which subsequently led to the delay in payment to the contractor
2. Heavy rains which pounded the area affected the project completion date as agreed by almost two months

3. Uncertainties and fear of the unknown technology led to some complaints/politics but with time they subsided when it became clear what the technology was all about.
4. Small depressions occurred on the road due to the use of labour based method to spread the chippings. The chippings could not be spread evenly.

Plans to develop other roads using probase technology in Meru County

- The Meru County Government was currently doing a three (3) KM road stretch in Maua town.
- The Committee gathered that the County Government had principally agreed to develop 300 KM of road network which will cover all the wards in the county. It was not confirmed whether probase technology will be used in the project.

  Other areas where the technology was being used other than in Meru and Embu counties include, Samburu County, Kampala in Uganda and South Africa.

3.0 CURRENT STATUS OF THE ROAD PROJECT

A copy of letter ref no. MOTI/1/A.13/02 VOL.1 of 8th September 2016 was tabled in the Assembly of 21st September 2016 and referred to the committee on Infrastructure for consideration. The committee invited the CECM on 29th September 2016 and again on 17th and 26th January 2017 to shed light on the conditions given by the Ministry of Infrastructure, Transport, Roads and Housing on the construction of Kibugu road and further interrogate his response he gave in the Assembly to a Question sought by Hon. Kanjogu Njiru on the above mentioned letter.

The Committee was able to deduce the following from the presentation by CECM and after analyzing the documents he produced before the committee:

1. That the Principal Secretary ministry of Transport Infrastructure, Housing and Urban Development had advised that the use Probase Technology had not been approved for improvement of public roads. However the ministry had accepted that the first 5.8km of the 12.2km stretch improved on this technology would be monitored as a research trail section. The balance of the 6.4km was recommended to be improved to low volume seal standards using approved standards. (***Annex 1. letter ref no. MOTI/1/A.13/02 Vol.1).***
2. In a letter dated 25th August 2016, the County Government wrote to Probase Technology (K) Limited directing them to cease the use of probase products in construction of the Embu-Kibugu Road or in the alternative obtain approval for the products from the government. He was warned that failure to observe the directives would amount to material breach of contract terms and conditions of the agreement which could lead to termination. (***Annex 3. Letter ref no. CEC/INFRA/T/PWK/VOL.1(60)***

3. In a memo dated 24th January 2017 Refno. *MOPW/EC/PROC4/13/VOL.164),* the CECM for Infrastructure informed the AG. County Secretary that the Kibugu road contract no. EBU/CNT/18/2015/2016/ had mutually been terminated. ***(Annex 4)***

4. Meanwhile the County Government had advertised the Kibugu road project on 7th December 2016 in the *Star Newspaper* where the old project was divided into five (5) namely; four projects for road construction and one for the bridge. ***The following firms were awarded the contracts: (Annex 5 copy of the advertisement and the detailed tender evaluation report).***

TENDER NO.	DESCRIPTION	AWARDED TO	CONTRACT PRICE (KES)
EBU/CNT/T/03 /2016-2017	Construction of Rupingazi Bridge on Road D403 at Chainage 5+ 800	Awarded to M/S Phencon Contractors P.O. Box 1362 **EMBU**	**17, 810,294.56**
EBU/CNT/06/2 016-2017	Rehabilitation of Kibugu Road D403 from Rupingazi Bridge to 7+ 400	Mutahi Engineering Services Ltd P.O. Box 2547 **EMBU**	**46,974,148.10**
EBU/CNT/T/07 /2016-2017	Rehabilitation of Kibugu Road D403 from Rupingazi Bridge to 7+ 400 to Chainage 9+000	Mutahi Engineering Services Ltd P.O. Box 2547 **EMBU**	**45,739,793.00**
EBU/CNT/T/08 /2016-2017	Rehabilitation of Kibugu Road D403 from Rupingazi Bridge to 9+000 to Chainage 10+600	M/S Melly and Lelly Gen. Contractors P.O. Box 1753 **EMBU**	**45,815,715.00**
EBU/CNT/T/09 /2016-2017)	Rehabilitation of Kibugu Road D403 from Rupingazi Bridge to 10+ 600 to Chainage 12+200	M/S Peanco Ltd P.O. Box 970 **EMBU**	**45,962,152.50**
TOTAL			**202,302103.20**

The committee was further informed that the contractors were notified of the offer and were all in agreement and accepted the offer to undertake and execute the terms in the offer letter. The CECM was optimistic that the contractors would be able to work on the stretches they were awarded using the approved standards as provided by the national government.

4.0 COMMITTEE FINDINGS AND OBSERVATIONS

1. The committee observed that in an advertisement dated 10th August 2015 the County Government had requested for expression of interest under tender no. EBU/CNT/01/2015/2016 from interested contractors for the construction of 100KM road network by use of *Appropriate Road Building Materials and Technology (ARBMT).(Annex 6)*
2. Letters inviting prequalified tenderers to submit tender for the execution and completion of the contract were dated 14th October 2015, which specified that the works would comprise ***"development of 100KM of roads to bituminous standards through Finance Design, Build Maintain and Transfer Model Using Modern Technology". The*** Tender No. was given as EBU/CNT/T/18/2015-2016.
3. The tendering of the Embu County roads was done with the intention of following the provisions of the ***Public Private Partnership Act, NO.15 of 2013*** but the award and execution of the contract was done as per the ***Public Procurement and Disposal Act, 2008.*** This after lengthy consultations with relevant national departments.
4. The CEC Member for Infrastructure provided a comfort letter from the Ministry of Infrastructure, Transport, Roads and Housing which indicated that probase technology had not been approved for use in construction of public roads and that the stretch of the road improved on this technology would be used as a research trail section. ***(See Annex 1)***
5. **THAT,** Kibugu road project just like the Kianjai –Miathene road project in Meru County, was a self-financing and a standalone contract signed between the County Government and the Probase Technology (K) Ltd. where the funding was coming from the county kitty.
6. **THAT,** the cost per KM for Kianjai-Miathene Road was put at approximately KES 30 million and the maintenance period by the contractor had been agreed of five (5) years while the estimated cost per km for Kibugu road had been estimated at KES 37million with a maintenance period by the contractor of ten

(10) years without cost to the County Government. The disparity in cost per kilometer could be explained from the fact that the shoulders in the case of Kibugu road had been treated, compacted and could be understood from treated, compacted and sealed to bituminous standards.

7. **THAT**, the project cost had been varied by an additional KES 57,000,000 to cater for unforeseen activities that were left out in the contract document including construction of a bridge across Ruvingaci River, Widening of the road as one approaches the river and to include construction of gabions, retaining walls and stone pitching to prevent soil erosion, Fixing of guardrails on the 2No. Bridges and Engineer's supervision fee (***See Annex 2)***

8. **THAT,** the main Contract for the entire project had been mutually terminated save for first 5.8km stretch that had been done under probase technology as directed by the Ministry of Transport and Infrastructure.

9. The County Government had not complied with the advice given by the ministry of infrastructure in an advertisement in the Daily Nation dated 3rd February 2016 which advised that any agency that was undertaking road works using unapproved standard should revert back to use of approved standards within fourteen (14) days ***(Annex 7)***

10. **THAT,** the County Government had divided the remaining 6.4kms into 5no. Projects including construction of Ndunda bridge and awarded them to contractors who were ready to use the conventional method of construction of the road to low volume seal standards.***(See Annex 5)***

11. **THAT,** construction of Kibugu road was progressing slowly and was way behind the scheduled completion date of June 2016 while the Kianjai project had been completed as per the agreed terms of the contract.
12. **THAT,** the Probase Technology (K) Limited, the contractor had given the various challenges faced by the project chief among them the lack of payment for completed works/certificates raised.
13. **THAT,** the widening of Ndunda Bridge would help in improvement of safety of motorists. The bridge was on a narrow and sharp bend which could compromise the safety of motorists.

14. **THAT,** several roads in the country had been upgraded to higher classes and among them Kibugu road in Embu County had been upgraded to class C from class D. With this upgrading of the road to class C no changes were made to the existing boundaries to have the requisite road reserves provided.
15. **THAT,** in both projects, Embu- Kibugu and Kinjai - Miathene roads, the members of the community had given their full support.
16. **THAT,** the project cost has been estimated at KES **446,754,106.00** being made of KES 389,754,106 contract price as signed14th December 2015 and variation of KES 57,000,000.00)
17. **THAT,** the cost of the new 5no. Projects had been estimated at KES **202,302103.20** as per the tender evaluation documents. **This** amount was part of total project cost estimated at KES 446,754106.00

5.0 PICTORIAL PRESENTATION

Photo 1. *The chairman, Committee on Infrastructure (standing) Hon. Silas Nyaki making a remark at the site office accompanied by other committee members and assembly staff. At the foreground (left) is the town engineer, Isaac Mogoi) and on the right is project manager, mr Tan for Probase Technology* (K) Ltd.

PHOTO 2: *Committee Members and staff of the assembly being shown the special sealant used in the stabilization of the soils under the probase technology road system.*

PHOTO 3: Committee members with project manager and Eng. Mogoi on a tour of built up section of Kibugu road.

Photo *4: The Chairman and Vice Chair to the committee inspect a section where the process of soil stabilization was being undertaken.*

Photo 5: A section of the road being worked on by the contractor. Special Hardener is used to help in compacting the sub base.

Photo 6: Ndunda bridge- it's a narrow and has very sharp bends on both sides.

4.0 RECOMMENDATIONS

After scrutinizing and considering of the various observations made from the presentation by the CECM Infrastructure, review of the visit of the Kianjai- Miathene road project, and the various documents from the CECM the committee came up with the following recommendations:

1. **THAT,** the County Executive Committee Member in charge of Infrastructure, Public Works, Housing and Energy should ensure that the technology and materials used for construction of roads networks in the county are authorized as acceptable standards in Kenya.

2. **THAT,** in future the CECM Infrastructure, Public Works, Housing and Energy, should ensure consistency in the application of the law regarding the financing and execution of road projects in the county as this would ensure the County Government gets value for money by use of acceptable funding methods.
3. **THAT,** the CEC Member for Infrastructure, Public Works, Housing and Energy, should ensure full compliance with the conditions given by the Ministry of Transport, Infrastructure, Roads and Housing in their letter dated 8th September 2016 referenced MOTI/I/A.13/02VOL.1*(Annex 1)*

4. **THAT,** the CEC Member for Infrastructure, Public Works, Housing and Energy requests the Probase Technology (K) Limited, the contractor for the 5.8km stretch to hasten the works to ensure inordinate delays are avoided and any time lost is recovered so that residents could start reaping the benefits of the new project at the earliest opportunity.
5. **THAT,** the CEC Member for Infrastructure, Public Works, Housing and Energy closely supervises the 5no. Contractors doing the 6.4kms divided into 5no. Projects including construction of Ndunda Bridge so that the projects are delivered as agreed. ***(See Annex 3).***

6. **THAT,** the County Government should continue engaging members of the public during the mooting and execution of projects in order for the community to give full support to the projects.

7. **THAT,** the CECM Infrastructure, Public Works, Housing and Energy should within, 60 days after completion of the project provide to the County Assembly a final project report on Kibugu road.

7.0 CONCLUSION

Mr. Speaker Sir,

The recommendations herein were unanimously agreed on by all members.

The Committee therefore urges the members of the County Assembly to adopt the Recommendations herein

Hon. Newton Kariuki Ndwiga, MCA Vice Chair .....

Hon. Robert Njiru Ireri, MCA Member .....

Hon. Agatha Muthoni Mbogo, MCA Member .....

Hon. John Mwangi Muriuki, MCA Member .....

Hon. Teresia Njeri Rebiro, MCA Member .....

Hon. Rose Muthoni Ndwiga, MCA Member .....

SIGNED .....**DATE**.....13/04/2017

HON. SILAS NYAKI MURIA, MCA

CHAIRMAN,

INFRASTRUCTURE, PUBLIC WORKS AND HOUSING COMMITTEE

ANNEX 1

MINISTRY OF TRANSPORT, INFRASTRUCTURE, HOUSING AND URBAN DEVELOPMENT
STATE DEPARTMENT OF INFRASTRUCTURE

Telephone :(020) 2723232
Fax: (020) 2719658
E-mail: ps@infrastructure.go.ke
Website: www.transport.go.ke

When replying please quote:

OFFICE OF THE PRINCIPAL SECRETARY
WORKS BUILDING
NGONG ROAD
P.O. Box 30260 – 00100
NAIROBI

Ref.: MOTI/I/A.13/02 Vol.1

8th September, 2016

Hon. Martin Wambora, CBS
Governor Embu County
P.O. Box 36 – 60100
EMBU

16 SEP 2016

Dear

CONSTRUCTION OF EMBU TOWN-NJUKIRI FOREST ROAD (C403), NJUKIRI FOREST-KIBUGU TOWN ROAD (CLASS D) TO LOW VOLUME SEAL BITUMEN STANDARD

Please refer to the discussions during our consultative meeting on 5th September, 2016 and to the subsequent letter from your Infrastructure County Chief Officer Ref No. CO/INRA/PS/MOTI&I/01 dated 6th September, 2016.

The Ministry fully supports the Embu County Government's development agenda and in particular plans for upgrading of Embu – Kibugu Road to bitumen standards.

In cognizance of section 18(c) of the Fourth Schedule of the Constitution of Kenya, 2010 which assigns National Government the functions and powers of setting standards for the construction and maintenance of all public roads including those under the jurisdiction of the County Governments and as agreed during the above referenced consultative meeting, I hereby confirm:

1. That the Ministry consents to the execution of a memorandum for the construction of the 12.2km Embu – Kibugu Road by the Embu County Government.

2. That the Ministry has not Approved Probase Technology for improvement of public roads.

3. That the Ministry accepts and will monitor the 5.8 km section improved using Probase Technology as a research trail section.

4. That the Embu County Government shall abandon the use of Probase soil stabilization technology and improve the remaining 6.4 km of the road to low volume seal standards using approved standards.

5. That the Ministry's technical representatives shall visit the project as soon as practicable to assess the 3.8km whose stabilization using Probase stabilizers is complete but not sealed before the section is sealed.

6. That the Embu County Government shall liaise with the Ministry on the project implementation for quality assurance and capacity building for county engineers.

Yours

Eng. John K. Mosonik, CBS
PRINCIPAL SECRETARY

Copy to:

Mr. Jim C. Kauma
Clerk of the County Assembly of Embu
P.O. Box 140 – 60100
EMBU

ANNEX 2.

REPUBLIC OF KENYA

COUNTY ASSEMBLY OF EMBU
RECEIVED
23 AUG 2016
P. O. Box 140 - 60100 EMBU

EMBU COUNTY GOVERNMENT

Office of the C. E. C
Infrastructure, Roads, Public Works, Housing & Energy

All Correspondence to be addressed to:
The C.E.C- Infrastructure
Telephone: 068-31174/5
Email: Suleiman.kariuki@embu.go.ke
Infrastructure@embu.go.ke
Info@embu.go.ke

P.O BOX 29-60100
EMBU

Your Ref: EC/INFRA/T/PWKS/FSVA/VOL1/(7)

Date: 22ND August 2016

The Clerk
Embu County Assembly
P.O. Box 140-60100
Embu.

RE: VARIATION ON CONTRACT NO EBU/CNT/T/18/2015/2016
As per the subject matter refers

Attached is an itemized narration on the said variation plus the requisite documentary justifications.

The office does not have any contract with Probase Kenya Limited dated 16th November 2016.

Regards,

22 AUG 2016

SULEIMAN KARIUKI
CECM: Infrastructure Public Works Housing &Energy

Copy
1 County Secretary
2. Chief Officer Infrastructure

Clerk/c-Infrastructure
Be laid upon the
Chair
24/8/2016

Annex 2

REPUBLIC OF KENYA

(14)

EMBU COUNTY GOVERNMENT
Office of the C. E.C
Infrastructure, Public Works & Energy
Department

All Correspondence to be addressed to:
The CE.C - Infrastructure
Telephone: 068-31174/5
Email: Suleiman.Kariuki@embu.go.ke
infrastruct@embu.go.ke
info@embu.go.ke
Your Ref: .....

P.O BOX 36
EMBU

Date: 24TH April 2016

Our Ref: EBU/CNT/T/18/2015/2016

CEC
Finance & Economic Planning
Embu County Government
P.O. Box 36-60100
Embu.

RE: VARIATION ON CONTRACT NO. EBU/CNT/T/18/2015/2016 – EMBU – KIBUGU ROAD CONSTRUCTION

This is to notify you that the Embu-Kibugu Road contract No. **EBU/CNT/T/18/2015/2016** An item to cater for the following was omitted:-

- Construction of a single – Carriageway Bridge across Ruvingaci River.
- Widening of the said road as one approaches the said river including
  -construction of gabions and or retailing walls
  -Stone pitching to prevent erosion
- Fixing of guardrails on the 2 No. bridges
- Construction of road bumps on the approaches of the bridges.
- Sealing of the shoulders along the whole length of the road
- Contingencies including Engineer's supervision fee.

I therefore request for an additional prime cost **kshs. 57,000,000.00** (fifty seven million only for the same.

SULEIMAN NTHIGA KARIUKI
CEC INFRASTRUCTURE, PUBLIC WORKS, HOUSING & ENERGY

Copy:

H.E
Governor
Embu County

County Secretary
P.O. Box 36-60100
Embu.

Chief Officer
Infrastructure

No.	Item	Estimated Amount (Kshs)
1.	• Expansion of the bridge across Ruvingazi River, • Widening of the road • Fixing of guardrails -Construction of gabions and retaining walls -Stone pitching on the expanded section	17,858,622.94
2.	• Sealing of Shoulders	21,237,028.00
3.	• Construction of road bumps on the approaches to the bridge	91,349.06
4.	• Contingencies	6,443,000.00
5.	• Project management and Supervision cost	11,370,000.00
TOTAL		**57,000,000.00**

THE EXTENSION OF RUPINGAZI BRIDGE AT NDUNDA CROSSING ALONG EMBU - KIBUGU ROAD BRIDGE EXTENSION TO A WIDTH OF 7.4M

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT(KSH)
	BILL NO.1 GENERAL				
1.01	Provide provisional sum in Kenya shillings one hundred thousand for supervision and material testing to be expended as directed by the engineer	SUM			100,000.00
1.02	Provide and install a sign post as directed by the engineer	SUM			50,000.00
1.03	Allow for the provision of insurance cover for the workers	SUM			75,000.00
1.04	Allow for construction of a site camp complete office and sanitation facility	SUM			300,000.00
1.05	Provide provisional sum in Kenya shillings two hundred and fifty thousand for relocation of the existing 300 diameter steel water pipe	SUM			250,000.00
1.06	Attendance profit and overhead to the item 1.01 and 1.05 above.	%	25		87,500.00
Total to be carried to page 2					862,500.00

THE EXTENSION OF RUPINGAZI BRIDGE AT NDUNDA CROSSING ALONG EMBU - KIBUGU ROAD BRIDGE EXTENSION TO A WIDTH OF 7.4M

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT(KSH)
	BILL NO.2 SITE CLEARANCE, EXCAVATIONS AND DEMOLITIONS				
2.01	Heavy bush clearing	M^2	2000	10.00	20,000.00
2.02	Tree cutting and stump removal (200-950mm Girth).	NO.	30	1,500.00	45,000.00
2.03	Excavation in soft material for abutment wall bases for the bridge foundations and cart away waste	m^3	40	1,500.00	60,000.00
2.04	Ditto but in hard rock	m^3	20	5,500.00	110,000.00
2.05	Allow for the breaking of existing abutment walls upstream to expose steel bars for a minimum length of 800mm to overlap with bars from the extension	SUM			300,000.00
2.06	Allow for removal of upstream guard rails and Demolition of the guardrail base to expose deck reinforcement to a minimum of 500mm	SUM			200,000.00
Total for Bill No. 2					735,000.00
Brought forward from page 1					862,500.00
Page total to be carried forward to page 3					1,597,500.00

THE EXTENSION OF RUPINGAZI BRIDGE AT NDUNDA CROSSING ALONG EMBU - KIBUGU ROAD BRIDGE EXTENSION TO A WIDTH OF 7.4M

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT(KSH)
	BILL NO. 3				
	CONCRETE WORKS, FORMWORK AND REINFORCEMENTS				
3.01	Provide place and compact class 15/20 concrete for blinding	m^3	8.1	18,000.00	145,800.00
3.02	Class 25/20 structural concrete well vibrated	m^3	113	22,500.00	2,542,500.00
3.03	Class 35/30 structural concrete well vibrated	m^3	8	25,000.00	200,000.00
3.04	Provide, erect and afterwards dismantle all the formwork as specified by the engineer. Vertical formwork Class F1 finish	m^2	353	4,000.00	1,412,000.00
3.05	Ditto but to the soffits of the beams and the bridge deck	m^2	30.8	4,000.00	123,200.00
3.06	Allow for hoisting of precast concrete beams	Sum			250,000.00
	REINFORCEMENT Provide, bend and fix high yield steel bars to BS4461 the following steel reinforcement as directed and shown on the drawings				
3.07	Twisted Y20 bars	Kg	422.00	240.00	101,280.00
3.08	Ditto but Y16 bars	Kg	615.00	220.00	135,300.00
3.09	Ditto but Y12 Bars	Kg	2,555.00	220.00	562,100.00
3.10	Ditto but Y10 Bars	Kg	1,880.00	200.00	376,000.00
3.11	Ditto but R8 Bars for links	Kg	428.00	180.00	77,040.00
Total for Bill No. 3					5,925,220.00
Brought forward from page 2					1,597,500.00
Page total to be carried forward to page 4					7,522,720.00

THE EXTENSION OF RUPINGAZI BRIDGE AT NDUNDA CROSSING ALONG EMBU - KIBUGU ROAD BRIDGE EXTENSION TO A WIDTH OF 7.4M

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT(KSH)
	BILL NO.4				
	ROAD/BRIDGE FURNITURE AND BACKFILLING				
4.01	Provide and place as directed by the Engineer P.V.C pipes of diameter 50mm to form weep-holes	M	22.00	2,500.00	55,000.00
4.02	Provide and fix handrails at the sides of the bridge deck including providing and erecting vertical angle posts	M	22.00	6,000.00	132,000.00
4.03	Install gabion boxes measuring 1x1x2m to stabilize the bridge approaches	No	50.00	8,000.00	400,000.00
4.04	Excavate top soil and unsuitable material and cart away to waste	m3	948.00	2,200.00	2,085,600.00
4.05	Provide, spread water and compact in layers n.e. 300mm in thickness lateritic (natural gravel to specified thickness at 95% M.D.D for battling works) at the bridge approaches	m3	712.00	2,750.00	1,958,000.00
Total for Bill No. 4					4,630,600.00
Brought forward from page 3					7,522,720.00
Page total to be carried forward to collection					12,153,320.00

THE EXTENSION OF RUPINGAZI BRIDGE AT NDUNDA CROSSING ALONG EMBU - KIBUGU ROAD BRIDGE EXTENSION TO A WIDTH OF 7.4M

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT (KSH)
	BILL NO. 5 The nominated Sub-Contractor to provide all plant, Equipment and labour as required to:				
5.00	Installation of TX-85 Soil Stabilizer and SH-85 Soil Hardener (All quantities are Provisional)	M	100	11,760	1,176,000.00
5.01	Installation of TX-85 Soil Stabilizer & Strengthener and 2% SH-85 Soil Hardener				
5.02	Prepare the amount of TX-85 to be used and mix with the required amount of water in the water tanker				
5.03	Temporary camber using a motor grader to ensure the treated area are evenly treat				
5.04	Apply 2% of SH-85 Soil Hardener evenly on the loosened soil (5.1kg/m2) evenly by using motor grader or rotovator				
5.05	Mix the TX-85 solution and soil evenly following behind the water tanker until all the SH-85 and mixed TX-85 solution is completed evenly mixed				
5.06	Form camber using a motor grader to gradient of 1:40 (75mm drop for every 3 m width)				
5.07	Compact the treated soil with the 10 ton vibrating compactor, Compact several passes until in-situ soil density achieved a minimum 95% of maximum dry density by lab and a minimum x CBR of not less than design requirement.				
5.08	Inspect the compacted surface for the following day. If the surface is dry, spray some water on the surface and roll using the compactor to prevent the surface from cracking				
Total for Bill No. 5					1,176,000.00
Brought forward from page 4					12,153,320.00
Page total to be carried forward to collection					13,329,320.00

THE EXTENSION OF RUPINGAZI BRIDGE AT NDUNDA CROSSING ALONG EMBU - KIBUGU ROAD BRIDGE EXTENSION TO A WIDTH OF 7.4M

COLLECTION PAGE

SUB-TOTAL FROM ABOVE	13,329,320.00
ADD 5% CONTIGIENCIES	666,466.00
SUB-TOTAL 1	13,995,786.00
ALLOW 10% MAIN CONTRACTOR'S ATTANDANCE COST	1,399,578.60
SUB-TOTAL 2	15,395,364.60
ADD 16% VAT	2,463,258.34
GRAND TOTAL	17,858,622.94

IN WITNESS WHEREOF the parties have hereunto set their hands.

EMPLOYER

SEALED by
COUNTY GOVERNMENT OF EMBU
THE REPUBLIC OF KENYA
in the presence of:

RAYMOND KINYUA

CONTRACTOR

SEALED by

PROBASE KENYA LIMITED

In the presence of

NOMINATED SUB-CONTRACTOR

SEALED by

For and on behalf of

PHENCON CONTRACTORS LIMITED
In the presence of:

PHENCON CONTRACTORS LTD.
10 JUL 2019
P. O. Box 1362-60100 EMBU.

THE COUNTY GOVERNMENT OF EMBU

OFFICE OF THE COUNTY SECRETARY AND HEAD OF COUNTY PUBLIC SERVICE

Mobile: +254 771 204 003/+254 707 192 924 Tel: 254 68 30686/30656
Address: P. O. Box 36 – 60100 Embu Town House Email: Info@embu.go.keWeb:www.embu.go.ke

Our Ref No: Contract (EBU/CNT/T/18/2015-2016 (LOT ONE) Date: 26TH JULY 2016.

REPORT OF THE EVALUATION COMMITTEE OF THE MEETING HELD ON 26TH JULY 2016.

1. ENG. ISAAC MOGOI — CHAIR PERSON
2. RICHARD NGARI — MEMBER
3. CHRITOPHER NJIRU — MEMBER
4. MR. GEOFFREY I. BIRURI — SECRETARY

BACKGROUND

This contract (EBU/CNT/T/18/2015-2016 – PROPOSED DESIGN, BUILD AND UPGRADE 100 KM UNPAVED SOIL ROADS TO LOW VOLUME SEALED ROADS USING PROBASE TECHNOLOGY) was entered into between the **County Government of Embu** and **Probase Kenya Limited** as the contractor.

Phase one was to consist of Construction of Embu Town-Kibugu Road totaling 12.2km.

This committee was appointed on 22ND July 2016 to undertake the evaluation of additional works which was not captured in the initial contract. The additional works was composed of the following items.

1. Sealing of the road shoulders.
2. Expansion of Ndunda bridge across Rupingazi river including construction of approaches, gabions, backfilling, fixing of guardrails, construction of retaining walls and treatment of road base using TX-85 and SH-85
3. Construction of road bumps approaching the bridge and stone pitching.
4. 3% of the project management / supervision cost.

The committee noted that the above indicated items were not catered for in the initial contract and it was important that they were put as part of the works. The variation amount is about 15% of the initial contract thus less than the legal ceiling of 25%.

Dr. 9

PROBASE [illegible] **LIMITED** [illegible]

[illegible]

Tel: 0729935443, [illegible] Website : www.probase[illegible].my

REF: PKL/EMBU/BAT/GAB/160223-113

Date: 22th February 2016

To: MINISTER SULEIMAN
INFRASTRUCTURE & PUB[illegible]
COUNTY GOVERNMENT OF EMBU
KENYA

EMBU COUNTY GOVERNMENT * P.O. BOX 36 - 60100 EMBU * INFRASTRUCTURE & TRANSPORT 25 APR 2016 CEC MEMBER

Dear Sir,

RE: VARIANCE ORDER FOR ROAD SHOULDER SEALING – EMBU TOWN-KIBUGU TOWN PROJECT - [illegible] No. EBU/[illegible]/T/18/2015-2016

The above-mentioned refer.

We hereby would like to submit the Variance Order for the 1M (both side) road shoulder as per details of calcuations below.

Total area 1st sealing	= 12,200M (L) x 5.4M (W)
	= 65,880M2
Total contract value for 1st sealing	= [illegible],240,000.00
Cost for 1M2	= KBS7,340,000.00 / 65,880M2
	= KBS370.37 per M2
Total area for 1M2 (both side) Road shoulder	= 12,200M (L) x 2M (W) [for each side]
	= 24,400M2.

REF: PKL/SMBR/BAT/GAB/150716-53

Variation Order

Total Variance Order for 1M2 (both sides) = KES870.37 x 24,400M2
Road shoulder
= KES 21,237,[illegible]

Please do not hesitate to contact us if you need any further information or clarification on the above calculation. Your kind assistance and prompt response would be highly appreciated.

Thank you.

Yours faithfully,
for ***PROBASE KENYA LIMITED***

PROBASE KENYA LIMITED
P. O. BOX 28401-00200
NAIROBI

SEOW CHENG SEONG
DIRECTOR

EMBU COUNTY GOVERNMENT
P.O. Box 35 - 60100 EMBU
INFRASTRUCTURE & TRANSPORT
CEC MEMBER
25 APR 2016

Approved By,

.....
Name:
Date:

ANNEX 3

REPUBLIC OF KENYA

EMBU COUNTY GOVERNMENT

Office of the C. E. C

Infrastructure, Roads, Public Works, Housing & Energy

All Correspondence to be addressed to:
The C.E.C- Infrastructure
Telephone: 068-31174/5
Email: Sulelman.kadukl@embu.go.ke
Infrastructure@embu.go.ke
Info@embu.go.ke

P.O BOX 29-60100
EMBU

Our Ref: CEC/INFRA/T/PWK//VOL1.(60)

Date: 25TH August 2016

The Director,
Probase Kenya LTD
P.O. Box 28401-00200
NAIROBI.

RE: CONTRACT NO *EBU/CNT/T/18/2015/2016 CONSTRUCTION OF EMBU KIBUGU ROAD*

USE OF TX-85 SOIL STABILIZER&STRENGTHENER AND SH-85 SOIL HARDENER

While we appreciate our good engagement in the construction works of designing, building and maintaining of Embu –Kibugu road, we wish to refer you to the contract dated 14th December 2015 signed between yourselves and the County Government particularly clause *1(f)* where you are expected to obtain an approval or permit for the to use of the above products. We also make reference to item 18(c) of the fourth schedule of the Constitution of Kenya 2010, which assigns the responsibility of setting standards for the construction and maintenance of County roads to the National Government.

It has been brought to our attention that the above products were introduced to the Ministry of Transport & Infrastructure by your Company on 11th December 2013 and there was need for the Ministry to launch verification trials which were to involve laboratory stabilization trials to confirm efficacy of the products and monitoring of pilot trial sections before they are approved for use in our roads.