



CoST – ETHIOPIA, First Pilot Study

Assurance Team Report

Butajira – Gubre Road Upgrading Project

Pilot Study on Road Sector

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Preface

This report has been written following the verification and analysis of the information provided by the employer, Ethiopian Roads Authority, by an independent Assurance Team consultant. The information has further been verified from the consultant and the contractor data for the completeness and accuracy in accordance with the construction sector transparency initiative guidelines.

The report consists of five chapters and six appendices. The first chapter summarises the findings of the study followed by chapter two that explains the background and objective of the study together with the study approach and specific project descriptions. Chapter three provides the verification part of the disclosed information whether the disclosure made by the procuring entity is complete and accurate as verified by the Assurance Team. In this chapter, all the core information related to the tendering and implementation stages of the project are discussed without adding any subjective interpretation as it will provide some basis for the analysis part of the report. It is then followed by chapter four that is dedicated to the analysis and discussion of the information verified in chapter three. This chapter describes the shortcomings observed on the procurement and implementation phases of the project. The interpretations and self-reflection by the Assurance Team on the procurement and contract management of the project are included in this chapter. The analysis has been made based on the facts verified in chapter three together with the standards and provisions of the procurement and contract requirements. The last chapter, chapter five, highlights the causes of concern as found in the study and recommends ways of addressing the problems and improving the system.

Abbreviations used throughout the study report have been shown in the next pages. Some words that need definitions and explanations have been provided in the form of glossary in order to improve the understanding of audiences on technical terminologies. Tables are referred to with numbers under each chapter, as for example, Table 3.1 refers to the first table in chapter three. The study teams would also like to note that words indicating one gender while referring to a contractor, engineer, or employer include all genders. Moreover, the word “engineer” used in the report stands for an entity engaged for supervision and contract administration of the project and includes all related professional teams for supervision and contract administration services.

Finally, the Assurance Team would like to express its gratitude and acknowledgements for all participants that directly or indirectly contribute to this study.

Abbreviations

AADT	Annual Average Daily Traffic
AC	Asphalt Concrete
AT	Assurance Team
APL	Adapted Programme Lending
ARE	Acting Resident Engineer
BoQ	Bill of Quantities
BPR	Business Process Reengineering
CAC	Contract Award Committee
CoST	Construction Sector Transparency Initiative
CRBC	China Road and Bridge Corporation
CV	Curriculum Vitae
DBSD/DBST	Double Bituminous Surface Dressing/Treatment
DFID	Department for International Development
DS3	Design Standard Three
DS4	Design Standard Four
EIA	Environmental Impact Assessment
EI	Engineer's Instruction
EIRR	Economic Internal Rate of Return
EOI	Expression of Interest
ERA	Ethiopian Roads Authority
ETB	Ethiopian Birr
FEACC	Federal Ethics and Anticorruption Commission
GoE	Government of Ethiopia
ICB	International Competitive Bidding
IDA	International Development Association
JV	Joint Venture
MSG	Multi Stakeholder Group
MPI	Material Project Information
MoU	Memorandum of Understanding
NPV	Net Present Value
PE	Procuring Entity
RAP	Resettlement Action Plan
RC	Reinforced Concrete
RFP	Request of Proposal
SBD	Standard Bidding Document

SEMP	Site Environmental Management Plan
STD	Sexually Transmitted Disease
TAC	Tender Analysis Committee
TOR	Terms of Reference
UK	(the) United Kingdom
USD	United States' Dollar
VAT	Value Added Tax
VO	Variation Order
WB	(the) World Bank

Table of Contents

1. Executive Summary	5
2. Introduction	
2.1 Background.....	6
2.2 Objectives of the Pilot Study	6
2.3 Study Approach	7
2.4 The Gondar - Debark road upgrading Project	8
3. Verification of Documents - Opinion on Accuracy and Completeness	
3.1 ERA's Tendering Procedure	9
3.2 Feasibility Study, Project Identification, and Budget	9
3.3 Tender Process for Consulting Services of Design and Supervision	10
3.4 Tender Process for Works Contract	12
3.5 Project Implementation - Works Contract	15
3.6 Project Implementation - Consulting Service Contract	19
4. Data Analysis	
4.1 Tendering Procedure	20
4.2 Feasibility Study, Engineering Estimate, and Budget	20
4.3 Tender Process for Design and Supervision Consultant	21
4.4 Tender Process for Works Contract	22
4.5 Project Implementation - Works Contract	24
4.6 Project Implementation - Consulting Service Contract	25
4.7 General Remarks	25
5. Recommendations	26
Annex 1 – Glossary	29
Annex 2 – Material Project Information (MPI)	31
Annex 3 – Summary of Causes for Concern	33
Annex 4 – Schedule of Variation Orders	34
Annex 5 – Summary of Claims	35
Annex 6 – Schedule of Disclosed Documents	36

1. **Executive Summary**

- 1.1 The Butajira-Gubre road upgrading project is located in the South People National and Nationalities Regional State in the southern part of Ethiopia. The road was initially constructed with gravel surfaced road where it was deteriorated for insufficient maintenance.
- 1.2 The project consists of upgrading of about 81.7 km two lane single carriageway gravel road to a two lane single carriageway of DS4 standard (ERA's Design Standard 4 Road Classification) double bitumen surface treatment (DBST) asphalt road. The road is designed to a 2x3.5m=7.0m carriageway with variable shoulder of maximum 1.5m on each side for rural section and 14m asphalt carriageway with 2.5m footpath on both sides of the road in town section.
- 1.3 M/s Sunshine Construction PLC is constructing the project and supervision and contract administration services are being carried out by Highway Engineers and Consultants (HEC) in Joint Venture (JV) with HAMDA and PANAF.
- 1.4 Up to July 2010, the project progress is reported to be around 34% and about its 75% of the initial completion period has elapsed. The initial contract price of the project is ETB 637,497,172.45 with an initial completion period of 1278 calendar days including mobilization period.
- 1.5 The focus of this study includes review of the procurement procedures for design review service, supervision service, and works with further focus on the implementation of the project with respect to the works and supervision service contracts. The coverage on the procurement review might be wider than the coverage on the implementation phase and the reason for this is that the project has only been accomplished to its 34% of the total works activities at the time of this study.
- 1.6 From the findings of the study, the procuring entity is advised to increase the completion levels on the procurement of both services and works contracts in order to get what is paid on the investment. It is also further advised to compare the financial offers obtained through the tenders that it is reasonable and adequate economic returns would be obtained from the investment. This requires closely analysing the costs considered in the feasibility study rather than comparing a forecasted engineering cost estimate with the offers of the competing firms. The Assurance Team observes major discrepancies in the procurement of the design and supervision service contract whereby the procuring entity needs to revise the procurement system.
- 1.7 The project is under delay by 15.1% on the permanent works and 75% of the contract time has elapsed where both parties to the contract and the Engineer are required to solve the problems hindering the progress of the works and the contractor is expected to accelerate the project in order that it would be completed within the contract completion period.
- 1.8 Both parties to the contract and the Engineer are required to exhaust all possible options to address social and environmental aspects of the contract which seems to be overlooked in the project execution.
- 1.9 Except for some documents, the disclosure of the information by the procuring entity has been verified from other sources of the consultant and the Assurance Team believes that the disclosure is complete and correct.

2. Introduction

2.1 Background

- 1.1.1 Public sector infrastructure projects make a major contribution to the economic growth and poverty reduction of a nation. However, mismanagement and corruption during the planning and implementation of construction projects can undermine the expected social and economic benefits.
- 1.1.2 The Construction Sector Transparency Initiative (CoST) is a multi-stakeholder initiative designed to increase transparency and accountability in the construction sector. It is funded by the Department for International Development (DFID) of the UK and the World Bank and is currently being piloted in seven countries; i.e. in Ethiopia, Malawi, the Philippines, Tanzania, the United Kingdom (UK), Vietnam, and Zambia.
- 1.1.3 The aim of the CoST initiative is to enhance the accountability of procuring bodies and construction companies for the cost and quality of public sector construction projects. It achieves this aim through the public disclosure of key project information at all stages of the construction project cycle, with specific focus on the period from the award of the main contract for construction until the final build (implementation phase).
- 1.1.4 It is, however, recognized that the disclosure of this information on its own may not be sufficient to achieve greater accountability. This is because some of the information is likely to be complex and not easily intelligible to the general public. An independent assurance team (AT) is therefore appointed by the Multi Stakeholder Group (MSG) who will be responsible for assessing the adequacy and reliability of disclosed project information and audit processes highlighting any causes for concern that the information reveals. Through periodic reporting, the assurance team will provide an interpretative role in helping to make data disclosures intelligible to the stakeholders.
- 1.1.5 A number of projects from building, water, and road sectors have been identified by the MSG of CoST-Ethiopia following the base line study. This report is prepared for one of road sector project, the Butajira-Gubre Road upgrading project and it is prepared by the Assurance Team Member, Kasiem Seid, under the supervision of the Assurance Team Leader, Assefa Beyene.

2.2 Objectives of the Pilot Study

- 1.1.6 The main objectives of the pilot study include:
- ✚ improving governance of infrastructure/construction projects through a more transparent procurement and contract administration process
 - ✚ generating an improved understanding of project costs amongst public sector clients
 - ✚ supporting an improvement in the quality and management of public construction projects
 - ✚ gaining Government and industry acceptance of the concept of greater transparency in procurement through the disclosure of project information, and
 - ✚ learning lessons to help the development of CoST

It is anticipated that achieving these objectives will lead to improved public confidence in the delivery of publicly funded infrastructure projects.

1.1.7 On the project, the assurance team has been appointed to carry out the following tasks:

- ✚ to collect the project information, Material Project Information (MPI)
- ✚ to verify the accuracy and completeness of the information
- ✚ to report the extent and accuracy of the information which has been released
- ✚ to analyse the information and make informed Judgments about the cost and quality of the project, and
- ✚ to report on the findings regarding the cost and quality of the project highlighting outstanding matters.

2.3 Study Approach

1.1.8 CoST-Ethiopia has signed a memorandum of understanding (MoU) with different sector offices to identify projects for disclosure of the Assurance Process. One of these MoU is signed between the Ethiopian Road Authority (ERA) and the Federal Ethics and Anticorruption Commission (FEACC), on behalf of CoST- Ethiopia.

1.1.9 Following the appointment of the Assurance Teams, CoST-Ethiopia has carried out its second induction on the transparency initiative on 29 July 2010 for all stakeholders. ERA has then availed some documents such as letter of acceptance, annual progress report, financial bid evaluation report for works, and draft material project information (MPI) prepared by ERA on the same day.

1.1.10 On 30 July 2010, FEACC had addressed an introduction letter on the appointment of assurance teams to ERA. However, the required documents could not be availed by ERA as the authority was implementing BPR and the staffs being overloaded by the process. For this reason, each assurance team was required to contact all responsible staffs from procurement and contract implementation divisions for the collection of copies of the required documents. Moreover, as the photocopy machine of ERA was not functional, the assurance teams were required to collect documents from ERA; make photocopies and return the documents the same day the documents were availed. In between 02-05 August 2010, technical bid evaluation report for works contract and technical & financial evaluation reports for service contract has been collected.

1.1.11 As the required documents could not be availed sufficiently, CoST- Ethiopia held meetings with the Deputy Director General of ERA on 10 August 2010, and the next day (11 August 2010), including all responsible regional directors and procurement division head with the aim of coordinating the document disclosure process. Following this meeting, the technical and financial bid evaluation reports for design & supervision consultant have been availed within the next few days. On 12 August 2010, the Assurance Team has collected form Alemgena District Office (some 20kms far from Addis Ababa) the other documents such as; contract documents for works contract, contract document for service contract, latest monthly progress report (July 2010), latest payment certificate for works, latest invoice for service, variation order no 1, and other outstanding correspondences on cost revisions. The consultant has also availed verification documents and outstanding correspondences form the project site on 26 August 2010. A detailed schedule for documents disclosure with descriptions is annexed as Annex 6 in this report.

1.1.12 The Assurance Team has been reviewing the information availed with a view to assess the feasibility, cost, and benefit of the project at the initial identification during the planning stage; compliance with procurement procedures during tendering stage; and compliance with contract administration of works and consulting services during implementation phase.

Documentation was then carried out to record, assess, analyse, and report findings with recommendations obtained from the study.

2.4 The Butajira – Gubre Road Upgrading Project

- 1.1.13 The Butajira–Gubre road upgrading project is located in the South People National and Nationalities (SPNN) Regional State in the southern part of Ethiopia. The route lays in two physiographic divisions of Ethiopia, namely in the main Ethiopian Rift Valley and the western Ethiopian Highlands. In between the two divisions, there is a transitional zone known as the Western escarpment which delineates the two divisions. The road was initially constructed as two lane single carriage way gravel road.
- 1.1.14 As part of the Ethiopian Government Programme towards the expansion and improvement of the nation road networks, several road constructions projects have been completed and a number of road projects are also under the process of implementation.
- 1.1.15 The project consists of upgrading of about 81.7 km two lane single carriageway gravel road to a two lane single carriageway of DS4 standard (ERA's Design Standard 4 Road Classification) double bitumen surface treatment (DBST) asphalt road. The road is designed to a 2x3.5m=7.0m carriageway with variable shoulder of maximum 1.5m on each side for rural section and 14m asphalt carriageway with 2.5m footpath on both sides of the road in town section.
- 1.1.16 M/s Sunshine Construction PLC is constructing the project and supervision and contract administration services are being carried out by Highway Engineers and Consultants (HEC) in Joint Venture (JV) with HAMDA and PANAF.

Up to July 2010, the project progress is reported to be around 34% and about its 75% of the initial completion period has elapsed. The initial contract price of the project is ETB 637,497,172.45 with an initial completion period of 1278 calendar days including mobilization period.

3. Verification of Documents – Opinion on Accuracy and Completeness

3.1 ERA's Tendering Procedure

- 1.1.17 The Butajira-Gubre road upgrading project is financed by the Government of Ethiopia (GoE). A Standard Bidding Documents (SBD) and procedures have been prepared by ERA to be used for the procurement of admeasurements (unit rate) type of works through National Competitive Bidding (NCB) in projects that are financed in whole by the GoE.
- 1.1.18 There are two optional procurement procedures: bidding following prequalification (two-stage bidding) and bidding without prequalification. Prequalification is followed by a competitive bidding procedures in which only those firms meeting specified prequalification criteria are invited to submit a bid.
- 1.1.19 The process of prequalification and the bidding process in general is required to follow the procedure indicated in the Standard Procurement Document for road work contracts. Hence, for the above reasons, the Ethiopian Roads Authority (ERA) follows this approach for the procurement of this project.

3.2 Feasibility Study, Project Identification, and Budget

- 1.1.20 Some reports indicate that feasibility study has been conducted for the project and the road upgrading investment has been found economically viable. However, ERA doesn't disclose the Feasibility Study (Economic Viability Report), Environmental Impact Assessment (EIA), and other related information related to the project appraisal.
- 1.1.21 However, the design consultant has provided the Assurance Team the final Preliminary Alignment Report (October 2005) while finalising this analysis report. In this report, the preliminary alternative routes were compared with their economic viability assessment and the Ziway-Butajira-Bozhobar-Agena-[Gubre]-Imdibir route had been selected for design and construction. Environmental impact assessment and socio-economic analysis has been covered to some extent in this report.
- The Engineering Cost Estimate used for this route economic analysis was ETB 368,270,000.00 where the length to be considered in this contract was 120.40kms, according to this Preliminary Alignment Report. It was also assumed in the economic analysis that the upgrading of the road would commence in the year 2006 and the construction would be completed in three years.
- 1.1.22 The subject project, contract 2: Butajira-Bozhobar-Agena-Gubre road, starts after some 55kms at Butajira town and ends at Gubre town some 10kms back to the last town, Imdibir. It covers a total net length of about 82kms from Butajira to Gubre towns.
- 1.1.23 Engineering cost estimate for double bituminous surface treatment asphalt road of the subject project [Butajira-Bozhobar-Agena-Gubre] is ETB 621,268,397.39, according to the Financial Bid Evaluation Report (October 2007). There was no explicit disclosure on engineering cost estimate by ERA where such information is extracted from the Bid Evaluation Reports. In the same report, this engineering estimate was reported to be for the other road upgrading projects; contract 1: Ziway–Butajira Road of approximately 55kms road length where the subject project is an extension to this contract, contract 2: Butajira–Gubre road project.
- 1.1.24 The Procuring Entity (PE), namely ERA, doesn't disclose tender process for consulting service of the Feasibility and EIA studies, if any.

1.1.25 The disclosure on this subject is seen as incomplete and inadequate for the necessary information was not provided by the procuring entity.

3.3 Tender Process for Consultancy Service for the Detailed Engineering Designs, Tender Document Preparation, and Construction Supervision

1.1.26 According to the disclosed Technical and Financial Evaluation Reports, the services for both the design (phase I) and supervision (phase II) has been tendered in one package. The Assurance Team understands from the minute of pre-proposal meetings that the project was an urgent one and the decision to tender the two services in one package was to shorten the procurement duration.

1.1.27 This service has been tendered for Ziway–Butajira–Imdibir (Gubre) road upgrading project in one contract where it was divided into two for construction works contract: contract 1 being the first Ziway-Butajira road project and contract 2, the subject contract of Butajira-Gubre road project.

1.1.28 From the minute of the review and endorsement of the technical evaluation of the consultancy service by the Contract Award Committee (CAC) of ERA, AT observed that invitation was made on the Ethiopian Herald Newspaper on 11, 12, and 13 January 2005 to submit proposals for the construction supervision of the project on or before 21 February 2005.

1.1.29 Following this invitation, sixteen (16) local consulting firms listed below purchased the Request for Proposals (RFP) prepared for the service contract. These firms include:

1. Metaferia Consulting Engineers
2. MH Engineering
3. United Consulting Engineers (UNICONE)
4. National Engineers
5. HEC
6. Pan African Consultants (PANAF)
7. HAMDA
8. Beza Consulting Engineers
9. Core (Core-DANA JV)
10. SABA Engineering
11. TCDSCo
12. AEC
13. Best Consulting Engineers
14. Towers
15. Civil Works Consulting Engineers
16. Eng. Zewde Eskindir & Co.

From the above listed consulting firms, HEC, PANAF, and HAMDA formed a joint venture and submitted their proposals accordingly. For this reason, the proposal submitted by PANAF and HAMDA was not considered separately.

Among these sixteen (16) firms, three (3) firms did not submit their proposals and ten (10) of them submitted their proposals in accordance with the tender submission requirements. The other three (3) firms has been rejected for two (2) of them submitted their proposals in JV with one firm [PANAF and HAMDA] and the other one submitting its proposal in association with another firm.

- 1.1.30 A two – stage procedure was adopted for the selection of the consultant, with technical proposal evaluation first and financial proposal evaluation of the technically responsive firms next. Financial evaluation will be carried out for the technically responsive firms with technical score of 70% and above. The technical and financial scores weigh 80% and 20% of the total score respectively.
- 1.1.31 The Tender Analysis Committee (TAC) of ERA comprising of three members accepted all ten (10) firms who fulfilled the preliminary requirements of the technical proposal. For detailed examination of the technical proposals, each of the three members of TAC independently examined the technical proposal of each firm and rated in accordance with the predetermined evaluation criteria, allotted points, and incompliance with the evaluation procedures and practice used by ERA for service contracts. Then, following discussion between member’s findings, average points would be considered for final technical evaluation score of the firms.
- 1.1.32 Two (2) firms had been further rejected during the detailed examination of the proposals on the basis of fraudulent practice. One of the rejected firms [MH Engineering] has misrepresented past employment record of a proposed personnel and the firm has notified ERA admitting the same while the detailed examination was underway. The other firm [Beza Consulting Engineers] was similarly rejected for misrepresentation of submitting Curriculum Vitae’s (CV’s) of proposed professional that were not signed by the respective key professionals.
- 1.1.33 The other eight (8) firms scored from 74.0% to 91.4% and were qualified for their financial proposals to be opened where the comments recorded by TAC for each firm pre-contract negotiation, if the firm is found successful with the overall evaluation of the proposals, i.e. for contract award.

Table 3.1 – Corrected financial proposals and aggregate score of consultants

Item No	Name of Consulting Firm	Financial Offer (ETB)	Technical Score out of 100	Total Score (80% tech. score & 20% financial score)
1	SABA Engineering	6,218,731.95	91.4%	87.6% [3 rd rank]
2	TCDSCo	7,351,765.23	89.9%	84.2% [4 th rank]
3	AEC	5,336,656.57	89.3%	88.3% [2 nd rank]
4	HEC-Pan African Consultants- HAMDA (JV)	4,801,638.70	89.0%	90.0 % [1st rank]
5	Unite Consulting Engineers (UNICONE)	5,820,115.50	84.2%	83.7% [5 th rank]
6	Core-DANA (JV)	6,159,256.25	83.3%	82.1% [6 th rank]
7	Metaferia Consulting Engineers	4,511,979.00	76.9%	76.2% [8 th rank]
8	National Engineers	5,529,925.65	74.0%	79.2% [7 th rank]

- 1.1.34 Following CAC’s endorsement to open the financial proposals of the technically responsive firms, the financial proposals had been opened and examined in accordance with the procedures. After adjusting some computational errors on the financial proposals and based on aggregate score of technical and financial scores, i.e. total score, Messrs HEC–Pan Africa Consultants–Hamda (JV) was recommended for award of the service contract with remarks noted for negotiation before award.

- 1.1.35 The total cost for this service (Detailed Engineering Design, Tender Document Preparation, and Construction Supervision of the two works contract; Contract 1: Ziway–Butajira and Contract 2: Butajira–Gubre road works contract) is ETB 4,801,638.70 **including local taxes**.
- 1.1.36 The disclosure on this subject has been verified by the Assurance Team to be complete and accurate except for clarifications on how the three firms had been rejected.

3.4 Tender Process for Works Contract

- 1.1.37 Pursuant to the specific procurement notice posted on the Ethiopian Herald Newspaper on 28 and 29 July 2007 for the construction works of Butajira–Gubre Road upgrading project, nine (9) applicants, listed in Table 3.2 below, collected the tender document before the deadline for submission of the applications, on 27 September 2007.

Table 3.2 – List of applicants who had collected the bidding documents

Item No	Name of contractor	Country of Registration
1	Yenkomad Inc plc	Ethiopia
2	Sunshine Construction plc	Ethiopia
3	DMC Construction plc	Ethiopia
4	Midroc Construction plc	Ethiopia
5	Blue Nile Construction Share Company	Ethiopia
6	Keangnam Enterprise Ltd.	Korea
7	Alemayehu Ketema GC	Ethiopia
8	Sinohydro Corporation	China
9	China Road and Bridge Corporation	China

- 1.1.38 Among the nine (9) applicants who collected their applications for the tender, only five (5) applicants, listed in Table 3.3 below, submitted their qualification documents and financial offer in separate sealed envelope before the deadline for the submission of bids. Pre-bid meeting has been conducted on 24 August 2007 and 42 queries had been attended by ERA that necessitates modifications to the Bill of Quantities (BoQ) and issue of two addenda of a wider coverage.
- 1.1.39 The evaluation of the bids follow a two-stage process, the first stage being post qualification and the second stage, financial evaluation. In the first stage, the qualification documents will thoroughly be checked whether they comply with the criteria set out in the qualification document. And financial offers of those bidders whose post qualifications have been found responsive will be opened and examined in the second stage of the evaluation procedure.

Table 3.3 – List of applicants who have submitted their bids

Item No	Name of contractor	Country of Registration
1	Yenkomad Inc plc	Ethiopia
2	Sunshine Construction plc	Ethiopia
3	DMC Construction plc	Ethiopia
4	Midroc Construction plc	Ethiopia
5	Alemayehu Ketema GC	Ethiopia

1.1.40 All the five (5) firms, who submitted their bids, passed the preliminary examination as they have complied with the submission of information required in the tender document. During the detailed examination of the qualification documents, however, TAC found that all bidders have failed to satisfy one or more qualification criteria where the Contract Award Committee (CAC) advised relaxing some of the restrictive requirements based on its previous practice, as listed below:

- ✚ The requirement of ETB 85 million Average Annual Construction Turnover during the last five (5) years has been amended to ETB 85 million Peak Annual Construction Turnover during the last five (5) years.
- ✚ The requirement for key activity of rock excavation has been omitted.

CAC's measure in this regard was to consider a preferable option rather than opting for retendering that might result "in a remarkable effect on the overall goal of the project".

1.1.41 In view of the above amendments made on the qualification requirements, TAC accepted all the five (5) bidders as fulfilling the financial requirements. Yenkomad Inc plc fulfilled only 90% of the above amended requirement of ETB 85 Million Peak Annual Construction Turnover during the last five (5) years.

1.1.42 Similarly, all these bidders have fulfilled the general construction experience that calls for the bidder to have at least two (2) years of construction experience in the role of the contractor, subcontractor, or management contractor prior to the deadline for submission of the tender and in at least nine (9) months activity each year.

1.1.43 However, two (2) of these bidders have been rejected for not fulfilling the specific construction experience that calls for the bidders to execute **at least one project with a contract amount of ETB 150 million or 50km length gravel surface road.**

- ✚ According to the discussion part of the Post Qualification Evaluation Report (Oct. 2007), one of the rejected bidders [Midroc Construction plc] had several short length town (asphalt) road projects that did not satisfy the contract amount or the length requirements. Moreover, the firm had one asphalt road project with a contract amount of ETB 158 million, but only 23% completed during the tender time. TAC rejected this bidder for not fulfilling both the length and contract amount requirement on the specific experience of the tender document.
- ✚ The other rejected bidder [DMC Construction plc] had also two specific experiences; one with 18.2km town arterial asphalt road with a contract amount of ETB 111.4 million and another 25km road with a contract amount of ETB 12.96 million, according to the above evaluation report. TAC rejected this bidder on the ground that neither the length nor the contract amount did not fulfil the specific experience requirement, *at least ETB 150 million or 50km gravel surface road.*

- ✚ In reviewing the Post Qualification Evaluation Report (Oct. 2007), the assurance Team observed that supplementary tables (2C1 & 2C2) for the Assessment of General Construction Experience and Assessment of Specific Construction Experience are not annexed in the report while it was annexed for the other three bidders who survived from these requirements.
- 1.1.44 Sunshine Construction Plc did not satisfy the minimum requirement set for specific key activity of rock excavation. However, following CAC's recommendation to waive this requirement and considering "the fact that the bidder could have sufficient experience of rock excavation while executing other similar activities such as crushed stone base course, crushing of rock for aggregate production, etc", TAC accepted the bidder's application for further evaluation.
- 1.1.45 Some deficiencies on fulfilling of key personnel, construction equipment, and construction methodology requirements had been sorted out for these three left bidders for their clarifications and confirmation in case they become successful on their financial offers. Then, following TAC's recommendation for the prequalification of the three bidders, the Contract Award Committee (CAC) endorsed the prequalification of the three bidders and the opening of their financial offers.
- 1.1.46 After adjusting for some computational errors on the financial bids and the engineering estimate, the least evaluated bidder's offer become ETB 637,497,172.45 offered by Messer's **Sunshine Construction PLC**. This offer is found to be 2.61% higher than the engineer's estimate, and TAC calculated in the Bid Evaluation Report (October 2007) that "92% of this bid amount is equal to 101.9% of the bid amount for Ziway-Butajira road project (contract 1)". The latter statement together with the engineering estimate comparison led TAC to conclude the bid offer as acceptable. The financial offer of the three contractors is shown in Table 3.4 below.

Table 3.4 – Adjusted financial offer

Item No	Name of Contractor	Financial Offer (ETB)	Percentage of the offer to the Engineering Cost Estimate	Remarks
1	Alemayehu Ketema GC	720,787,572.30	116.0%	Adjusted Engineering cost estimate used for this comparison was ETB 621,268,397.39
2	Sunshine Construction plc	637,497,172.45	102.6%	
3	Yenkomad Inc plc	676,360,669.56	108.9%	

- 1.1.47 ERA'S Contract Award Committee (CAC), endorsed to award the contract to Sunshine Construction with a ceiling contract amount stated above, including a specified provisional sum of ETB 960,000.00, 10% contingency of ETB 50,307,760.67, and 15% VAT of ETB 83,151,805.10. It was then approved by the Director General of ERA on 31 October 2007.
- 1.1.48 The disclosure on this subject has been verified to be complete and accurate except for the Assessment of General Construction Experience and Assessment of Specific Construction Experience for two firms that is not annexed in the Post Qualification Evaluation Report (October 2007).

3.5 Project Implementation – Works Contract

- 1.1.49 In November 2007, ERA awarded the contract for the construction works of the 81.7km long Butajira–Gubre road upgrading project to the firm of Messrs Sunshine Construction PLC.

The start date of the works was 11 December 2007 and the construction period is 1278 calendar days including a mobilization period. The completion date was therefore 11 June 2011. No time extension has been granted to date.

- 1.1.50 Considering the above completion period of the contract, 75.35% of its time has elapsed up to the end of July, 2010 since the commencement of the project works. There is a critical time slippage of 527.74 calendar days, i.e. 38.65%.

- 1.1.51 The work programme has been revised for a second time and based on this revised programme, the contractor's overall accomplishment of the project amounts to ETB 160,337,767.44 (34.06%) whereas the overall target work plan was 49.26% (ETB 231,923,227.86). The contractor's accomplishment with regard to the permanent works to date is 27.18% (ETB 127,943,833.05) where the planned target for the permanent works was 42.27% (ETB 198,998,337.91).

During the 2002 E.C. budget year, the contractor planned to execute asphalt pavement work for first 12kms of the road. However, the asphalt material and asphalt machines are not yet purchased and deployed to the site despite the time in the budget year has elapsed. The contractor is conducting preliminary tests on sample bituminous material that is a prerequisite to order the material.

Based on the second work programme, there is **a delay of 15.2% on the overall work and 15.09% on the permanent works including pavement works**. Overall per cent accomplishment up to July, 2010 is 69.14% of the programme and actual work performance for all activities is behind the revised work programme.

- 1.1.52 During the course of the project, the first variation, Variation Order No.1, has been issued on 14 May 2010. The variation was to extend the design standard of Butajira town by 770 meters in addition to the original design provision of 900 meters length of town section. The variation was initiated by the request of Butajira City Administration Office and it was verified that this additional road section is incorporated in the town's master plan which was approved a year before. The variation incurs an additional cost to the employer with the amount of ETB 2,347,013.89 and there is a possible right of way (ROW) obstruction that may require ROW compensation payments.

However, prior to this variation order, there was a change of excavated materials from rock excavation to normal common excavation that resulted in differences on the executed volume of works from the original volume of works estimated in the contract (BoQ). This in turn resulted in a cost saving of ETB 33,425,598.19 to the employer whereby first revised contract price become ETB 594,109,790.00.

Similarly, this saving has been reduced to about ETB 19 million because of a revision proposed to shift the centreline of some part of the road where the fill slope will not reach the natural ground. This revision includes construction of retaining walls in some spots of the road according to the Monthly Progress Report No 32 and the Annual Progress Report No 3. These saving variations are treated as increase/decrease of the volume of works and either summary to the savings or variation order has not been issued by the Engineer.

There are also the following variations to the contract that are not formalised in the variation order form:

- ✚ On 18 December 2009, ERA notified the Engineer for its “No Objection” or approval of a design revision in connection with line shift of the road in order to alleviate the right of way obstruction. The line shift is required due to the existence

of six inch (6") galvanised water pipe line which could not easily be replaced for its unavailability of the material on local market. The importation process could also take longer period of time. This revision resulted in a cost saving of ETB 881,544.63 in addition to the reduction of the estimated compensation payment by ETB 4 million.

- ✚ On 21 December 2009, the Engineer notified ERA about different summarised major and minor design revisions that resulted in a change of contract price and determined the second revised contract price to be ETB 615,828,105.43 which is not yet approved by the employer. This revised project cost II has been derived from cost changes on item number 4000 (Earth Works) from ETB 259,171,100.37 to ETB 198,822,537.24 and on item number 8000 (Structures) from ETB 7,149,725.84 to ETB 50,368,590.92.
- ✚ The contractor requested the Engineer for replacement of cutback bitumen type asphalt material with penetration grade bitumen on technical grounds stating that the replacement will not have any time implication to the project and that it has some financial benefit to the employer of about ETB 520,335.00 net saving from the contract price. The contractor further advised the Engineer that this saving of the employer could be settled by price adjustment provision of the contract considering the basic prices of both materials in order to avoid contractual complications, i.e. treating as price fall of the basic input construction materials.

The Engineer requested ERA for the approval of the replacement for the first 12kms of the road as the temperature in this road section is high and the available aggregate in all quarry sites do not meet the requirements to suit with the original cutback bitumen type asphalt material. The employer has approved the change of the materials only for the first 12kms of the road and noted that a separate investigation will be carried out for the other section of the road. The employer also stressed the contractor's confirmation that there will not be any time implication as the result of this change.

The Engineer then addressed a letter for its approval of the replacement of the material as long as it satisfies the penetration rest requirement of the specification. This letter referred the contractor's request for replacement that would bind the contractor for its offer on cost saving and no time implication despite the missing of these basic information in Engineer's approval letter.

1.1.53 There are no approved claims by the Engineer to date. However, the contractor submitted a claim for extension of time (EOT) on the basis of exceptionally adverse climatic conditions on 09 February 2010. The Engineer investigated the claim and requested the contractor to submit past meteorological record from nearby meteorology station in order to prove that the rain is unusual by comparing it with the jointly recorded data on the project site. There are no financial claims both from the contractor and the employer sides.

1.1.54 The contractor has been paid a total of ETB 20,807,389.87 for price adjustment in accordance with the contract provision up to July 2010 while the contractor executed 27.18% of the permanent works [ETB 127,943,833.05].

Also, the contractor has been paid a total of ETB 266,460,119.70 including the advance payment of ETB 100,612,521.30. The contractor was supposed to construct, furnish, and provide Engineer's housing and accommodations within three months of receiving land for camp. According to the Monthly Progress Report No 32, these facilities were supposed to be completed in April 2008 while it was 99% complete in September 2008.

1.1.55 The proposed road project would have both positive and negative impacts in terms of social and environmental issues. The positive impacts of the project include; creation of job opportunity to the local people including employment for women; creation of

easy access to educational and health facilities and market access; lowering the cost of motorized transport that enables a more steady supply of goods/services in to the area and facilitating the movement of agricultural products to market; reducing vehicle maintenance/operational costs; reducing travel time there by increasing the economy of the people contributing its share to the overall economic improvement of the country; and reduction of mud and dust emission associated with health impacts.

However, unless appropriate mitigation measures are taken, the road construction project would cause negative impacts on physical, social, and biological environment. The major identified and expected impacts that require mitigation measures include;

- ✚ Impact on settlement – several houses, fences, and agricultural lands would be affected in the process of road widening.
- ✚ Impact in water resources – changing flow regime, blocking of natural flow, by passing the runoff from the micro water shades etc. would occur during road and culvert construction. Also there will be water quality pollution problems mainly associated with oil and fuel spills, machinery wash and dumping of wastes from camp sites. The other related impact is exploitation of community water for road construction purpose that may create shortage of water for the local community.
- ✚ Impact on social infrastructure – the road construction may impose on the existing road side infrastructures such as power lines, telephone lines, water points, hand dug wells and water distribution lines. Therefore, some minor works such as shifting of telephone, water, and power lines have to be done in some places, especially in township areas.
- ✚ Impact on human health – specific health impacts on the residents living close to the road construction include dust born, water related, and communicable diseases. Dust and smoke emerging from the road construction process may cause Pneumonia, tuberculosis, cough, and irritation of throat & eye. Sexually transmitted disease (STD) including HIV/AIDS can be increased as the work force come from other areas for job. Different accidents due to explosives and other construction activities may also occur during the construction process. Lack of adequate sanitation facilities in construction camps can also expose the work force for various diseases

The works contract allocates a budget of ETB 574,080.00 for STD and HIV/AIDS alleviation measures including the contractor's charges and profit associated with the administration of the activity, both for completion period and Defects Liability Period. An organization that have experience in the sector need to be subcontracted in the alleviation scheme to give the services of creating awareness, distributing condoms, supporting people living with the virus, and others. For more than two years, there was no organization neither subcontracted by the contractor nor nominated by the employer.

The contractor only provides a clinic with a nurse for distributing about 250 condoms each month. The Engineer stated in its Monthly Progress Report No 32 and Annual Progress Report No 3 that the contractor has been instructed and advised repeatedly for the implementation of this service.

The supervision contract between the employer and the consultant does not provide an environmentalist supervisory service who could check the environmental compliance of the contractor's activities and necessary measures to be taken. According to the Monthly Progress Report No 32 and Annual Progress Report No 3, all the borrow pits and quarries are treated in so far the construction progresses and the Engineer stated in these reports that regular supervisions have been made with the consultant's supervisory team. The following are also reported to be undertaken concerning environmental mitigation measures:

- i. Dry wastes from the contractor's camp areas are disposed off into a dug well prepared for this purpose
- ii. Lubrication wastes and oils are collected in barrels
- iii. Waste water is disposed into septic tanks separately prepared for the consultant and the contractor staffs

The following problems are also stated in these reports:

- i. The contractor does not assign environmental engineer for supervision of environmental mitigation measures
- ii. The contractor does not assign flag men who could indicate diversion roads and required proper signs are not provided.

1.1.56 The performance security & advance payment guarantee submitted by the contractor are valid as per the contract requirement. However, as the contractor did not submit insurance policies for works as per the contract requirement during the commencement of the works and the Engineer requested the contractor for the submittal of the same on 25 March 2008. The contractor submitted insurance of works specimen for approval on 22 April 2008 where the Engineer has gone through the submitted contractor's All Risk Insurance policies and returned to the contractor with comments to be incorporated in the insurance policies on 22 May 2008. The contractor does not yet submit appropriate insurance policies based on the Engineer's comments to date.

1.1.57 The contractor was supposed to submit a work programme within 42 days of receipt of letter of acceptance, i.e. on 31 December 2007. However, the contractor submitted its master work programme on 20 February 2008 and the Engineer investigated, commented, and recommended some adjustments on 10 March 2008. The contractor then resubmitted the master work programme on 03 June 2008 where the Engineer thoroughly investigated and approved it.

However, as the project work performance was not going as per this approved master work programme when evaluated for consecutive monthly progress reports, the Engineer instructs/requests the contractor to revise the programme on 14 December 2008 where the contractor submitted the first revised work programme on 11 February 2009. The Engineer accepted this programme for monitoring purpose and advised the contractor simultaneously to make some corrections observed in the work load and financial distributions.

Since February 2009, the contractor's work performance was evaluated based on this first revised work programme where for the second time the contractor's work progress could not follow the programme that forced revision again. The Engineer then requested the contractor to submit the second revised work programme on 03 September 2009 and this second revised work programme was approved in March 2010 conditionally for monitoring purpose.

1.1.58 The Assurance Team has verified from other sources of the consultant and discussion with the contractor representative that the disclosure on this subject is complete and accurate.

3.6 Project Implementation – Consulting Service Contract

- 1.1.59 The construction supervision consultancy service has commenced on 24 January 2008 following the agreement between ERA and the consultant HEC-PANAF-HAMDA JV with a contract price of ETB 3,890,608.70. The period of service is 1278 calendar days and 12 months of Defects Liability Period.
- 1.1.60 There is no variation order to date. However, the works may not be completed within the contract completion period where this may necessitate additional man-month input of the consultancy service beyond the contract completion period.
- 1.1.61 The consultant has not been provided with advance payment and the service fee up to end of July 2010 for the service rendered by the Engineer is ETB 2,041,987.72. All the requested payment up to June 2010 with an amount of ETB 1,969,481.89 has already been paid to the consultant.
- 1.1.62 The Assurance Team has verified from other sources of the consultant and discussion with the contractor representative that the disclosure on this subject is complete and accurate.

4. **Data Analysis**

4.1 **Tendering Procedure**

- 1.1.63 The tendering procedure adopted for procuring the services and works contract follows the National Competitive Bidding (NCB) procedures. This procedure is followed for projects that are financed in whole by the Government of Ethiopia. The approach in the tendering of design & supervision service and the works contract generally fulfils the requirements of the standard procurement procedures, both for the technical and financial bids.
- 1.1.64 In general, the procurement of the above services and works contract is found to be acceptable within the framework of the national competitive bidding procedures.

4.2 **Feasibility Study, Engineering Estimate, and Budget**

- 1.1.65 The Engineering cost estimate [construction cost + maintenance cost + Bridges or structures cost] used for economic viability analysis was ETB 368,270,000.00 that derived a net present value (NPV) of ETB 43.8 million. This cost was estimated for a total length of 120.40km road to be considered in the contract, i.e. Ziway-Butajira-Bozhobar-Agena-[Gubre]-Imdibir road while the actual length of the road is around 147kms (~55km+82km+~10km=~147kms).
- 1.1.66 The design consultant collected recent contract prices of similar road construction projects such as Alemgena-Butajira road (ETB 1.98 million/km), Butajira-Hossana road (ETB 2.28 million/km), Hossana-Sodo road (ETB 2.28 million/km), etc all of a double bituminous surface treatment asphalt road upgrading projects for its estimation of the project cost. The consultant further classified terrains of the above mentioned projects and exercised the proportion of average cost per kilometre of road for different train types as: ETB 2 million/km for flat terrain; ETB 2.5 million/km for rolling terrain; ETB 3.3 million/km for hilly terrain; and ETB 4.5 million/km for mountainous terrain.
- 1.1.67 The engineering cost estimate for Butajira-Gubre road project (82km long) has been reported to be ETB 621,268,397.39 [ETB 7.58 million/km] in the Financial Bid Evaluation Report and the contract was awarded with ETB 637,478,666.40 [ETB 7.77million/km]. The assurance team believes that the project may not be economically feasible with the cost the project is being constructed considering the costs assumed in the economic analysis of the road project.
- 1.1.68 Major roads to be constructed in any country have mainly economic functions and investment on such roads require huge sum of capital. In countries like Ethiopia, where there is severe shortage of budget to implement all required roads, it is fully or partly financed by donors in the form of credit, loan, and grants. Therefore, the responsible body for implementing the programme need to be committed and assure that there would be adequate return from the investment on such major roads in terms of benefit to the country which in turn requires adopting proper planning procedures during rehabilitation, upgrading, and construction of roads in the country.
- 1.1.69 When looking the above costs of the construction with respect to the economic analysis, it requires the implementing body to devise mechanisms in that these roads would really be economically viable; in order the public gets what is paid on the investment.

4.3 Tender Process for Design and Supervision Service

1.1.70 While invitation to submit proposals had been advertised on 11, 12, and 13 January 2005, an updated latest version of RFP had been issued on 24 January 2005 to be submitted on or before 21 February 2005. The design period of the whole road length, Ziway-Butajira-Gubre road, was eight (8) months including mobilization period. Pre-proposal meeting was held on 01 February 2005 and those consulting firms raised queries related to the proposal submission some of which are stated as follows:

- ✚ As the updated RFP was addressed very lately, the date of submission is unusually short in comparison with ERA's practice for submission of similar proposals and they requested to extend the submission date of the proposals.
- ✚ The information to consultants (data sheet) indicates that the assignment is expected to commence in June 2005 where considering the coordination & mobilization of the service, the field work could overlap with the consequent three or four months rainy season that would make the field work very difficult or impossible. Then, ERA was requested to consider this in relation to the short allotted duration of the design period.

ERA had indicated in its response to the above queries that since the project is very urgent, the submission date would not be changed and the procurement of the service would be facilitated to commence the assignment before June 2005 and confirmed that the design period would not be changed. ERA's CAC endorsed the technical and financial evaluation of the proposal on 22 March 2005 and 16 April 2005 respectively where contract negotiation had been held on 13 May 2005.

This may indicate that the procurement of service and works might be attended in a reasonably shorter duration if ERA exhausts such evaluation step-ups. Such short time of procurement could also be adopted for other proposals/tenders to be retendered when the financial quotations/offers of the some services/works are beyond a reasonable limit such as an accurate forecasted price or engineer's estimate.

- 1.1.71 The proposals of three firms were rejected before the start of preliminary examination of the submitted proposals. The reason for the rejection of one of these firms is stated to be submitting its proposal in association with another firm where the ground for rejecting these firms is not clear for the Assurance Team.
- 1.1.72 The minimum technical requirement for passing the technical responsiveness of the proposals was 70% which is found reasonable in increasing the financial competition levels. For this reason, eight firms had been considered in the financial evaluation where the other three firms had been rejected for forming associations in the submission of the proposals and the other two for fraudulent practice, i.e. no firm has been rejected for being technically non-responsive.
- 1.1.73 The Assurance Team has observed that a relatively good technical score has been registered in this procurement. Four of the technically responsive firms scored from 89.0% to 91.4% and the other four firms scored 84.2%, 83.3%, 76.9%, and 74% successively. This may indicate that the requirements of the RFP and TOR have reasonably addressed the professional expertise required for the service and the capacities of the local consulting firms in rendering such services.
- 1.1.74 As described in 3.3.10 of this report, the total cost of the whole service was ETB 4,801,638.70 as indicated in the CAC minute where this figure was amended in the contract agreement between ERA and the consultant to be ETB 4,770,588.70. This was because TAC adjusted the price from ETB 4,770,588.70 to ETB 4,801,638.70 for the proposed man-months of each of the surveyors to six while the consultant ETB considered only three. TAC advised the Contract Award Committee to request clarification on the adequacy of the methodology to finish the task in three man-

months or to request the firm to finish the task by the estimated period set in the RFP in case the firm became successful. However, this was not raised during pre-contract negotiation and unlike the CAC minute, the price was corrected in the contract agreement.

1.1.75 The Assurance Team has observed major discrepancies in the evaluation of the technical and financial scores based on the requirements. The following anomalies are observed in the Technical and Financial Evaluation Reports:

- ✚ The same key professionals for highway engineer/team leader, for pavement/material engineer, and for structural engineer proposed for phase one (design phase) were re-evaluated in for the second phase (supervision and contract administration phase) and the scores given by the TAC members are also different. For example, the same highway engineer has been given a technical score of 0.00 out of the allotted 7.00 points in phase one while it was given a technical score of 4.00 out of the allotted 4.00 points in phase two. However, the proposed personnel could have at least some points for phase one in relation to general qualification, i.e. education and general experience.

- ✚ Two of the ten firms were rejected for misrepresenting the CVs of professionals. However, one highway engineer has been proposed by two other firms; one pavement/material engineer has been proposed by two other firms; one structural engineer has been proposed by two other firms; one transport economist engineer has been proposed by two other firms; one traffic engineer has been proposed by two other firms; and one resident engineer has been proposed by two other firms. All these personnel proposals have been evaluated *without requesting “clarifications and confirmations” as was observed for the rejected firms for the same reason.*

Moreover, the technical scores given by the TAC members for these same personnel proposals were different from one firm to the other.

- ✚ Also, one of the proposed CV by this firm was not supported by a “Declaration of Interest” and was given 3.8 out of the allotted 4.0 points. However, for another firm, where the CV was not supported by a “Declaration of Interest” and the proposed person resigned from the firm, was given no score out of the allotted 4.0 points.

- ✚ One other firm proposed a single key professional for the positions of traffic engineer and transport economist and TAC reduced the man-months of the two positions to 1.5 in spite of the consultant proposal for financial evaluation. However, TAC doesn’t adjust similar key personnel proposal by another firm for structural engineer and traffic engineer positions.

In general, the technical proposal evaluation was not consistent, especially for key personnel evaluation that comprises of 60% of the technical score and the general procedure of evaluating the technical proposal is not satisfactory.

4.4 Tender Process for Works Contract

1.1.76 The time allowed for preparation and submission of the bid document is found sufficient to gather all the information required, more than the minimum six weeks requirement.

1.1.77 Pre-bid meeting was held on 27 August 2005 and bidders raised 42 queries related to the bid some of which are stated as follows:

- ✚ In the bill of quantities (BoQ), no retaining wall was stated while the drawings indicate stations in which the embankment slope does not intersect the natural

ground and there are also sharp curves where the back slope of the road intersect each other, i.e. both require the provision of retaining walls. ERA indicated that there is a given quantity in the BoQ for retaining and end walls.

- ✚ The minimum amount of Average Annual Construction Turnover of ETB 85 million is exaggerated and the bidders requested ERA for reconsideration. ERA, however, stated that it is reasonable proposal and remains unchanged.
- ✚ The bidders also requested ERA whether performance evaluation would be considered in post qualification of the tenders and ERA confirmed that it would be considered.
- ✚ The particular technical specification states that housing, office and lab for the engineer's accommodation would be made ready in three months and further provides a penalty of ETB 500.00 per day for delay of the facility. The bidders requested ERA to reconsider the penalty as the construction could not be completed within three months and whether the time would be counted from the date of handover of the camp site. ERA confirmed that the date would be counted after the camp site was handover and the time is sufficient where by the penalty would not be changed.

1.1.78 Four applicants do not submit their tenders where one of the reasons might be the exaggerated amount of average annual construction turn over and other similar requirements as they have been informed that performance evaluation would be considered. As described in item No 3.4.4 of this report, all five bidders have failed to satisfy one or more qualification criteria and some restrictive criteria were amended. This amendment includes omitting the rock excavation requirement from the specific key activity and changing the average annual construction turnover into peak annual construction turnover.

Had this amendment been made following the bidders request during the pre-bid meeting, some more bidders might have submitted their bids realising that they would qualify for the works. The procuring entity is advised to consider some of the reasonable queries of the bidders during pre-bid/pre-proposal meetings.

The procuring entity added in its comments that it is setting standard qualification report has prepared a qualification criteria framework for setting standard qualification report for the works contract and approved by the ERA Board.

1.1.79 Also, as described in item No 3.5.4 of this report, there was a change of excavated materials from rock excavation to normal common excavation that resulted in a cost saving of ETB 33,425,598.19. But, this expected cost saving has been reduced to ETB 21,669,067.92 owing to a revision to change the centreline of the road that requires construction of retaining walls along the road, *i.e. expected additional cost for this activity is ETB 11,756,531.17*. This might be resulted from incomplete design and tender/contract document preparation due to the short design period and the rainy time of the survey works. The bidders for the works contract, however, requested ERA of this situation where it was not properly addressed by the employer during the pre-bid meeting.

Moreover, the rock excavation key activity requirement did not reflect the actual situation where some potential bidders may not be getting opportunities because of such restrictive requirements that may not necessarily be executed during the course of the project.

1.1.80 One of the three survived bidders did not fulfil the requirement of amended peak annual construction turnover. TAC, however, accepted this bidder for it satisfied 90% of the amended requirement and similar reconsiderations and justification was given for another bidder as described in item No 3.4.8.

But, such reconsiderations or justification are not observed for the other two rejected bidders. One of the rejected bidders had several short length *town asphalt road* which could sum up to the required ETB 150 million or 40kms length gravel surfaced road. The other rejected bidder had also ETB 124.36 million (ETB 111.4 million+12.96 million) or 31.16kms (18.2kms+12.96kms) *town arterial asphalt roads*. Considering town asphalt road projects are (more) complicated than highway roads in relation to right of way obstructions that require good project management, ERA could compare their financial offers and decide based on the results as was allowed for the other bidders rather than rejecting these bidders.

The Assurance Team would also like to note that supplementary tables (2C1 & 2C2) for the assessment of general and specific construction experiences are not annexed for these two rejected bidders while the same was annexed for the three survived bidders in the Post Qualification Evaluation Report provided to the Assurance Team.

- 1.1.81 The least bidder's offer includes a provisional sum of ETB 960,000.00 from which ETB 574,080.00 is allocated for STD and HIV/AIDS alleviation measures. From a discussion with one of the project participant, AT understands that ERA was trying to nominate a specialised subcontractor for this service where the budget was found insufficient for this and similar other projects. Hence, it would be advisable for the procuring entity to check the sufficiency of the provisional sums before the award of the contract is decided or before contract agreement is signed.
- 1.1.82 The Assurance Team believes that ERA need to exhaust all possible mechanisms including the observed relaxing of some of the restrictive requirement that might not necessarily reflect the actual project activity and increase the competence level through adoption of a realistic and guided prequalification requirements with reliable and transparent evaluation procedures. This will help in reducing the prices of road construction projects to a reasonable and workable price thereby assuring public funds are utilised effectively. Furthermore, the TAC and CAC members of ERA need to evaluate tenders consistently with the objective of getting a reasonable price to the employer (public) and in a transparent way.

4.5 Project Implementation – Works Contract

- 1.1.83 As described in 3.5.2 and 3.5.3 of this report, the project is under delay by 15.2% on the total work programme and by 15.1% on the permanent works programme including pavement works based on the second revised work programme. Actual work performance for all activities including pavement works is behind the schedule of the second revised programme. Up to the end of June 2005, 75% of the completion period has elapsed in which a critical time slippage of 527 calendar days is registered in up to date progress report. Considering this critical slippage of time (41% of the contract period including the mobilization period), the project would be subjected to a delay of substantial time unless the project is accelerated sufficiently. Those parties to the contract and the Engineer are required to exhaust all possible mechanisms in order to **catch** the project progress of the works to the programme.
- 1.1.84 The variations discussed in item No 3.5.4 of this report and ordered by the Engineer constitute variation to the contract in accordance to clause 51 of the conditions of the contract, additional cost and cost savings. The Engineer need to formalise the instruction for the variations in relation to line shift due to 6" water pipeline and replacement of cutback bitumen asphalt material. The estimated cost saving due to change of rock excavation and additional cost due to revision for the construction of retaining walls and other related works need also be formalised in the form of variation where the payment to the contractor could be valued based on the actual volume of works. Moreover, the Engineer is advised to explicitly state the time and

cost implications of variation orders while instruction for variation is issued. The Engineer doesn't state the time implications and cost savings on the change of cutback bitumen with penetration grade bitumen while both the contractor and employer indicate the implication on the cost and time of the variation. However, as the Engineer referred the contractor's letter in issuing the approval of the change order, it would not have a different interpretation to the contractor's offer.

- 1.1.85 The total amount of price adjustment (ETB 20,807,389.87) made to date seems to be unproportional to the executed volume of permanent works, ETB 127,943,833.05, where pavement works are not yet started.
- 1.1.86 The minute of contract negotiation indicates that the task of EIA proposed in the methodology part of the proposal has not been assigned to any personnel. The consultant following ERA's request for clarification confirmed that this task and other tasks not specifically assigned to any personnel would be covered by the head office support and ERA accepted the proposal on this ground. Hence, the Engineer is required to discharge its responsibility as per the contract. The contractor is also required by the contract to discharge its responsibility in relation to the social and environmental aspects of the contract.
- 1.1.87 The contractor is expected to submit a work programme that could be used for monitoring the performance of the activities both for the employer and the Engineer. Besides, this will assist the contractor staffs in order to plan and execute the works in accordance with a practicable work programme. However, while executing 34% of the project works with 75% of the elapsed time, the master work programmes has been revised for the second time where the Engineer is requesting the contractor for the third time of revision. The time of submission and approval of the work programmes shown in the project correspondences and progress reports indicates that the programme is not taken as one of the contractor's contractual responsibilities.
- 1.1.88 The contractor is also required to maintain all kinds of insurance covers that the contract prescribes and the Engineer and employer need to take proper actions such as insuring for all required items of the contract and deduct the premium of the insurance and related costs from the contractor's payment in accordance with the contract provisions. This is advised as the contractor doesn't maintain the insurance cover since the commencement of the project to date where the time elapsed is 75% of the contract completion time.
- 1.1.89 From the project correspondences reviewed, the assurance team understands that the project participants are working in a team spirit discharging their contractual responsibilities within their capacity. However, the project participants need to have a monthly project meeting on site with the objective of solving project problems and enhancing the progress of the works.

4.6 Project Implementation – Consulting Service Contract

- 1.1.90 The Assurance Team believes that the Engineer is undertaking his contractual service with the required professional standards and contractual requirements, the comments given in 4.5 of this report being taken into account.

4.7 General Remarks

- 1.1.91 The assurance team believes that except for the comments, discrepancies, and other matters discussed in the report, the disclosure of the required information is adequate and the public can generally get what is paid for. However, the points covered in the

body of this report, if considered for futures projects, could increase the value of the investment.

5. **Recommendations**

- 5.1 The Engineering Cost Estimate that is extracted from the Evaluation Reports supplied by ERA doesn't reflect the construction costs adopted for the economic analysis of the investment. The Procuring Entity needs to consider the viability of the road investment during the procurement and implementation of the projects.

The procuring entity is recommended to get a well-studied feasibility analysis that incorporates all possible scenarios and improvement options in assuring the economic viability of the project. In relation to this, the procuring entity needs to check the correctness and completeness of the feasibility study (including economic viability analysis) and the engineering cost estimate during its submission for the compliance and correlation with each other.

- 5.2 The tendering process for the design and supervision consultant is fairly reasonable. However, the Assurance Team observes that there was some consistency problem in evaluating the proposals in accordance with the requirements. There were sufficient applications for the service and eight (8) firms had been considered for financial opening and competition. The minimum technical score requirement was also 70% which assisted these firms to compete financially.

Hence, ERA is recommended to allow such participations for other similar projects without sacrificing the scope of the service to be rendered by them.

- 5.3 The period allowed for design and its timing (rainy season) might not allow the selected consulting firm to conduct proper site survey and other design requirements. Excessive rock excavation and lack of reliable retaining wall design might result from such short period of time allocated for design. During pre-bid meeting for works contract, these queries had been forwarded to ERA where the response given was not addressing the reality.
- 5.4 The procuring entity is then recommended to allow sufficient and realistic period for design; to thoroughly check the compliance of design submissions with the available standards; and to give attention for queries forwarded by the applicants during pre-proposal and pre-bid meeting. This will help in reducing variation works that are required for the completeness of the project facility during the construction phase of the project.
- 5.5 The procuring entity is also recommended to thoroughly check the compliance of design submissions with available standards. This will help in reducing variation works that are required for the completeness of the project facility during the construction phase of the project.

The employer is recommended to devise mechanisms that would reduce variation orders in as far as possible as some of the exercises in "design improvement" would be subjected to public fund wastages. The employer has paid for the first design consultant together with associated or related studies and the reviewed by a second design review consultant. As the duration between the design review and the works implementation is relatively short, all the design modifications and variations by the supervision consultant might not justify good design submission by the first design consultant and the second design review consultant. Moreover, the procuring entity is paying three times for "design improvement" which calls for mechanisms to reduce the same.

As alternative mechanism for this problem, the procuring entity may appoint construction management consultants to administer and follow up the projects from its initial identifications stage of the project to the final completion. Moreover, inviting new and competent consultants other than those consultants, who underperform in their service, could solve the recurrent problems observed on design services by increasing the completion level.

- 5.6 Tender process for works contract requires ERA's attention as most of the technical requirements are unreasonably exaggerated without considering the actual volume of works to be executed. The number of competing firms was only three for financial opening.
- 5.7 Before signing a contract for works contract, ERA is advised to consider the sufficiency of provisional sums and request the contractor for the same in the execution of the services that provisional sum is allocated for.
- 5.8 The project's accomplishment at the time of this study requires special follow-up and coordination of both parties and the Engineer. The contractor is expected to enhance the progress of the execution of the works in order to achieve the planned works programme. The Engineer and employer are also required to take proper contractual measures for completing the project as per the project completion period and for the social and environmental aspects of the contract.
- 5.9 The procuring entity is also required for the timely approval/disapproval of the Engineer's requests or advices with respect to proposed variation works.
- 5.10 In general, the reviewed correspondences reveal that ERA is exhausting with all efforts to complete the project in time with mutual helping of the contractor.

Annexes

- 1. Glossary**
- 2. Material Project Information [MPI]**
- 3. Summary of Causes for Concern**
- 4. Summary of Variation Orders**
- 5. Summary of Claims**
- 6. Schedule of Documents Disclosed**

Annex 1: Glossary

Accountability: CoST's aim is to enhance the accountability of procuring bodies and construction companies for the cost and quality of public-sector construction projects. The core accountability concept is to 'get what you pay for'. The 'you' in this context applies equally to national governments, affected stakeholders and to the wider public.

Budget: an amount of money allocated to a project or scheme

Compensation event/Claim: An event at the risk of the Employer, which may change the programme or price for the project if it occurs.

Competitive Tendering: Awarding contracts by the process of seeking competing bids from more than one contractor.

Construction Sector Transparency (CoST) Initiative: An international multi-stakeholder initiative designed to increase transparency and accountability in the construction sector.

Consultant: An organisation or individual who has made a contract to provide services.

Contract: A binding agreement made between two or more parties, which is intended to be legally enforceable.

Contract Documents: Documents incorporated in the enforceable agreement between the Procuring Entity and the contractor, including contract conditions, specification, pricing document, form of tender and the successful tenderers' responses (including method statements), and other relevant documents expressed to be contract documents (such as correspondence, etc.)

Contractor: An organisation or individual who has made a contract to undertake works, supply goods or provide services.

Contract period: An arrangement for the supply of works, goods or services established for a fixed period of time.

Engineering cost estimate: A cost estimate prepared by the buyer of works, goods or services which provides a benchmark or a basis for evaluation and/or negotiation when tenders/offers are received from tenderers. It also serves as an instrument of project planning and budgeting.

Employer: In the context of the CoST initiative, the Procuring Entity awarding construction and consultancy contracts for the project.

Feasibility study: An evaluation of a proposed project to determine the difficulty and likely success and benefits of implementing the project.

Material Project Information (MPI): MPI in this context is intended to indicate that information disclosed on a project is sufficient to enable stakeholders to make informed judgements about the cost and quality of the infrastructure concerned.

Offer: An offer can be the positive answer issued by a tenderer in response to a tender invitation, or an announcement to deliver goods, carry out works and/or services to every or a specific buyer without a specific request or invitation to tender. Also refers to an expression of readiness by a tenderer to enter into a contract.

Procurement: The process of acquiring goods, works and services, covering acquisition from third parties and from in-house providers. The process spans the whole life cycle from identification of needs, through to the end of a services contract or the end of the useful life of an asset.

Procuring Entities (PEs – also referred as clients/employer and contracting authorities): The State, regional or local authorities, bodies governed by public law or associations formed by one or several of such authorities that procure works, goods and services with full or part public funding.

Programme: The projected timing of activities required under the contract.

Supervision contract: A contract with a consultant to oversee the performance of the contractor on the construction work, to give a level of reassurance to the Employer about the quality of the work.

Tender: An official written offer to an invitation that contains a cost proposal to perform the works, services or supplies required, and is provided in response to a tendering exercise. This normally involves the submission of the offer in a sealed envelope to a specified address by a specified time and date

Tender Documents: Documents provided to prospective tenderers when they are invited to tender and that form the basis on which tenders are submitted, including instructions to tenderers, contract conditions, specification, pricing document, form of tender and tenderers responses

Tender Evaluation: Detailed assessment and comparison of contractor, supplier or service provider offers, against lowest cost or most economically advantageous (cost and quality based) criteria.

Transparency: In the context of the CoST initiative transparency relates to the disclosure of material project information on construction projects.

Value for Money: The optimum combination of whole-life cost and quality to meet the PEs and user's requirement.

Annex 2 – Material Project Information [MPI]

Project identification	Project Specification	Construction of 81.7 Km long Butajira-Gubre Road Upgrading project to DS4 Asphalt Concrete Road (Double Bituminous Asphalt Treatment)
	Project purpose	To improve the efficiency of transport operation through the reduction of road transport costs, the provision of accessibility to rural areas, & the development of institutional capacity of the road sub-sector at central and regional levels
	Location	Western part of South People National and Nationalities (SPNN) Regional State
	Intended Beneficiaries	People living along the project road corridor, road users because of the improvement, and the Nation as a whole
	Feasibility Study	Not disclosed by PE
Funding	Budget	✓ ETB 637,497,172.45, covered by GOE.
	QS's estimate	✓ ETB 621,268,397.39 (Financial Bid Evaluation Report, October 2007)
Tender Process (for Design Supervision Service Consultant)	Tender procedure	Quality and Cost based Selection
	Number expressing interest	16
	Number shortlisted	-
	Number submitting tender	13, 3 of them rejected and the proposals not opened
Tender Process (Main Contract for Works)	Tender procedure	Open Tender, NCB with Prequalification
	Number expressing interest	✓ 9 [Post qualification Evaluation report]
	Number shortlisted	-
	Number submitting tender	5
Contract Award (Project Supervision)	Name of main consultant	HEC-PANAF-HAMDA JV
	Contract price	ETB 4,801,638.70 including local taxes
	Contract scope of work	To fulfil, to the highest professional standard, the role of the Engineer as defined under the works and services contracts, and to supervise the construction works on behalf of ERA.
	Contract programme	1278 calendar days since 11 December 2007 plus 12 months Defects Liability period
Contract Award (Main Contract for Works)	Contractor name	Sunshine Construction PLC
	Contract price	ETB 637,497,172.45

Works)	Contract scope of work	Upgrading of the road from its present condition to asphalt concrete (double bituminous surface treatment) with improvement in vertical & horizontal alignment, and rehabilitation & construction of structures. It includes 2x3.50m=7.00m wide carriage way with 1.50m shoulder width rural section and 14m carriageway with 2.5m footpath on both sides in town sections in general.
	Contract programme	1278 calendar days, 11 December 2007 – 11 June 2011 plus one year DLP
Contract Execution (contract for Project Supervision)	Changes to contract price, with reasons	Nil, but it is expected that the project may not be completed within the contract period that may necessitate additional man-month input of the consultancy service
	Changes to programme, with reasons	Nil
	Changes to scope of work, with reasons	Nil
Contract Execution (Main Contract for Works)	Individual changes to the contract which affect the contract price, with reasons	There is ETB 20,807,389.87 to date paid to the contractor for price adjustment in accordance to the contract provision
	Individual changes to the contract which affect the programme, with reasons	Nil
	Variation Orders (VO's)	<ol style="list-style-type: none"> 1. There is one issued Variation Order with a total amount of ETB 2,347,013.00 additional cost. 2. There are also other variations to the contract that are not formalised in the form of variation orders such as; a saving of ETB 33,425,598.19 (reduced to ETB 19 million recently), a saving of ETB 881,544.63 in project cost with a saving of ETB 4 million for compensation payment, and a saving of ETB 520,335.00. Please refer 3.5.4 of this report for details.
	Claims, Notice to Claims	<ol style="list-style-type: none"> 1. The contractor submitted one claim for EOT, not yet settled. 2. No other claim from both the Employer and the Contractor
	Payment certificates	<ul style="list-style-type: none"> ✓ 12 payments were certified by the engineer to date at monthly intervals ✓ The contractor has been paid a total amount of ETB 266,460,119.70 including advance payments.
	Details of any re-award of main contract	None

Annex 3 - Summary of Causes for Concern

Stage in Project cycle	List of Disclosers	Causes for Concern
Project identification	Project Specification	
	Project purpose	
	Location	
	Intended Beneficiaries	
	Feasibility Study	
Project Funding	Financial agreement	
	Budget	
	Engineer's estimate	
Tender Process (Main Contract for Works)	Tender procedure	
	Number expressing interest	
	Number shortlisted	
	Number submitting tender	
Contract Award (Project Supervision)	Name of main consultant	
	Contract price	
	Contract programme	
	Contractor name	
Contract Award (Main Contract for Works)	Contract price	
	Contract scope of work	
	Contract programme	
Contract Execution (contract for Project Supervision)	Significant changes to contract price, programme, scope with reasons	
Contract Execution (Main Contract for Works)	Individual changes to the contract which affect the price, with reasons	
	Individual changes to the contract which affect the programme, with reasons	

Annex 4 – Summary of Variation Orders

No	Date of issue of Variation Order	Reason for Variation	Work required to implement the Variation	Effect on Cost	Effect on Programme/Time	Effect on Quality	Remarks
1.	14 May 2010	Extending the design standard of Butajira town by 770 meters		Additional cost of ETB 2,347,013.89 [there is also a possible ROW obstruction that may require ROW compensation payments]		It is extending the road standard by 770 meters in addition to the original 900 meters town section	
2.	Ongoing	Cost saving for the change of excavation material type from rock excavation to common soil excavation		Expected cost saving of ETB 33,425,598.19			<i>Not yet approved, final saving not yet known. The saving is treated as increase/decrease in quantity</i>
3.	Ongoing	Revision of construction of retaining walls in some spots of the road		Expected additional cost of ETB 11,756,531.17			<i>Not yet approved, final saving not yet known. The saving is treated as increase/decrease in quantity</i>
4.	18 Dec 2009	Design revision for line shift required due to existing 6" galvanized water pipe		Cost saving of ETB 881,544.63 & reduction of compensation payment by ETB 4 million			ERA notified the Engineer its "No Objection" – <i>not formalized as VO</i>
5.	Additional cost saving is expected for replacement of cut back bitumen type asphalt material to penetration grade asphalt material where the employer agreed the change of materials for the first 12 kms of the road section. Not formalized as VO, but instruction for the contractor was addressed by the Engineer.						

Annex 5 – Summary of Claims

No	Date of Claim	Reasons for Claim	Amount Claimed	Sum agreed by Employer	Date of Agreement	Effect on Cost	Effect on Programme /Time	Effect on Quality	Remark
1.	09 Feb 2010	Extension of time request for exceptionally adverse climatic condition	-	-	-	-	Not yet substantiated	None	Notice to claim was submitted and the Engineer requested the contractor to submit past meteorological records
2.		Cost and Time related claim notice for cement shortage	-	-	-	-	-	None	Notice to claim, not substantiated
3.									
4.									
5.									
6.									

Annex 6 – Schedule of Disclosed Documents

Title of Document or Report	Date Requested	Date Supplied	Remark
Documents Required During Project Planning Stage			
Feasibility Study	Before 29 July 2010	-	Not disclosed by ERA
Financing agreement	Before 29 July 2010	N/A	Financed by the Government of Ethiopia
Tender Evaluation Report [Design & Supervision] 1. Technical Evaluation 2. Financial Evaluation	Before 29 July 2010	13 August 2010 13 August 2010	
Tender Evaluation Report [Works] 1. Technical Evaluation 2. Financial Evaluation	Before 29 July 2010	04 August 2010 29 July 2010	
Documents Required During Project Implementation Stage			
Project Evaluation Report	Before 29 July 2010	N/A	
Audit Report	Before 29 July 2010	N/A	No information was availed whether technical/financial audit is performed
Letter of Acceptance	Before 29 July 2010	29 July 2010	
Contract Document for Supervision Service	Before 29 July 2010	12 August 2010	
Contract Document for Works	Before 29 July 2010	12 August 2010	
Approved Extension Of Time	Before 29 July 2010	12 & 26 August 2010	The RE (consultant) brought outstanding correspondences on claims, variations, and other outstanding issues from the project site on 26 August 2010
Rejected Extension of Time	Before 29 July 2010	12 & 26 August 2010	“ “
Approved Cost Claims	Before 29 July 2010	N/A	No cost claims submitted to date
Rejected Cost Claims	Before 29 July 2010	N/A	“ “
Variation Orders	Before 29 July 2010	12 & 26 August 2010	First date is the date ERA availed the document & the second date is for the consultant
Payment Certificate	Before 29 July 2010	12 August 2010	
Latest Invoice	Before 29 July 2010	12 August 2010	
Annual Progress Report	Before 29 July 2010	29 July 2010	
Latest Monthly Report	Before 29 July 2010	12 August 2010	