

Construction Sector Transparency Initiative (CoST)

Pilot Study by the Assurance Team

Report on Information Provided

By

The Ethiopian Roads Authority

On the

**Gedo-Nekempte Road Rehabilitation Project,
Contract2: Bako-Nekempte Road Upgrading Project**

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LIST OF ACRONYMS (ABBREVIATIONS)

AC	Asphalt Concrete
AT	Assurance Team
CoST	Construction Sector Transparency
CWCE	Civil Works Consulting Engineers
DBST	Double Surface Treatment
EIA	Environmental Impact Assessment
EOI	Expression of Interest
ERA	Ethiopian Roads Authority
ETB	Ethiopian Birr (Currency)
EIRR	Economic Internal Rate of Return
FEACC	Federal Ethics and Anticorruption Commission
FDRE	Federal Democratic Republic of Ethiopia
FYRR	First Year Rate of Return
ICB	International Competitive Bidding
IDA	International Development Association
MPI	Material Project Information
MOFED	Ministry of Finance and Economic Development
NMSG	National Multi-sector Group
NMSGEC	National Multi-sector Group Executive Committee
PE	Procuring Entity
PEs	Procuring Entities
RE	Resident Engineer
RFP	Request for Proposal
RUP	Road Upgrading Project
RSDP	Road Sector Development Programme
RAP	Resettlement Action Plan
SPN	Specific Procurement Notice
TOR	Terms of Reference

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1. Summary

- 1.1 The Bako-Nekemte road is part of the trunk road that connects the city of Addis Ababa via Gedo with Nekemte town and extends to Assosa, the capital of Benishangul – Gumuz National Regional State. The road is located in Western Ethiopia, particularly in West Shewa and East Wollega administrative zones of Oromia National Regional State. The road is about 65 km in length with six meters carriageway and double surface asphalt dressing. The road was first constructed in the 1930s, during the Italian occupation with asphalt surface treatment and Telford base. In the late 1980s and early 1990s, it was rehabilitated and upgraded to asphalt road by Ethiopian Road Authority's (ERA's) own task force. But recent studies and inspections showed that the road was unable to withstand the increasing traffic volume. Therefore, a decision was made to upgrade the Bako – Nekemte road into asphalt concrete because of the observed failures on the road due to increasing traffic volume following the increased economic activities in the areas traversed. It is also to be noted that upgrading major economic routes into asphalt concrete, of which Addis – Nekemte – Assosa is one, has been one of the efforts of ERA since the launch of the Road Sector Development Program.
- 1.2 The aim of the aforementioned decision is to rehabilitate and upgrade the existing road to AC level including widening of the road carriageway. The typical cross section for rural sections has a 7.0 meter wide carriageway and shoulders of 1.50 meter each, resulting in a total roadway width of 10.0 meters. As per the ERA Road Functional Classification System the Gedo – Nekemte road, which is part of the Addis – Nekemte - Assosa trunk road, is also classified as trunk road.
- 1.3 The Government of the Federal Democratic Republic of Ethiopia (FDRE) has received a credit from International Development Association (IDA) towards the cost of consultancy services for the Review of Feasibility Study, Environmental Impact Assessment (EIA), Preparation of Resettlement Action Plan (RAP), Detailed Engineering Design and Preparation of Tender Documents for the Gedo – Nekemte road project and for construction of the same road. The construction of the road is to be in two lots: Contract 1, Gedo – Bako and Contract 2, Bako – Nekemte. As stated in item section 1.1 above this pilot study of assurance process is on contract 2.
- 1.4 The construction work is carried out by China Hyway Group Limited of China and construction supervision service is performing Mouchel Limited of United Kingdom in association with CWCE of Ethiopia.
- 1.5 During the preparation of this report, the project was already under construction, with a physical progress of 2.76% though the planned amount was 20.26%. The project's commencement date is October 2009 and is planned to be completed on 9th April, 2012.
- 1.6 It was noted that ERA was under going re-organizing its structure at the time of this study, subdividing the contract implementation department into five regions, each responsible for projects falling under that region. This specific project falls on the central region. For this reason, some of the documents required for the assurance process were collected from the Central Region's Office.

- 1.7 This study focuses on the over all process of procurement, from feasibility to design and construction stages. Since the project is currently under construction, all matters concerning the completion stage are not applicable to this study.
- 1.8 The Feasibility Study had been conducted in 2003 by SYSTRA Consult in association with SPT and PANAF. However consultancy services for the Review of Feasibility Study, Environmental Impact Assessment (EIA), Detailed Engineering Design and Preparation of Tender Documents was required in the year 2005. Five bidders were shortlisted for competition; the tender was on the basis of ICB. Accordingly, the contract was awarded to SABA Engineering, a local consulting firm, after going a though evaluation of technical capacity and financial offer basing on qualification criteria set for this purpose. The consultant prepared designs to meet the ERA requirements based on ERA's Design Manual, 2002.
- 1.9 The procurement process of supervision and construction work was also based on ICB, through prequalification criteria and through the process of technical and financial evaluation. The evaluation process was clear and transparent and all the documents concerning the evaluation process are complete and available at the employer's office.
- 1.10 The works procurement process was based on post qualification in accordance to Word Bank's procedure.
- 1.11 The procurement of design, construction supervision and construction work services were conducted at different stages, hence there was no any conflict of interest seen on the processes. The tender evaluation for all services, both technical and financial, was done independently and hence there was no difficulty in verifying the completeness and accuracy of material project information.
- 1.12 With the exception of documents related to tender process and feasibility study, all other available documents have been verified against other sources, the consultant for supervision work. The Assurance Team is convinced that the disclosure of information is complete.
- 1,13 The procurement of engineering services and works were fair and transparent.

2. Introduction

2.1 Background

- 1.1.1 The Construction Sector Transparency Initiative (CoST) is an international multi-stakeholder program designed to increase transparency and accountability of Procuring Entities (PEs) in public sector construction projects. It will do this by disclosing information at all stages of the construction project cycle, from the initial identification of the project to the final completion.
- 1.1.2 To ensure that the information that is released is available, complete and accurate in a form that can easily be understood by stakeholders it is necessary to verify, analyse and interpret by experts appointed for this purpose called the assurance team.
- 1.1.3 The Bako – Nekempte RUP is one of the 25 projects selected for the pilot study by the national Multi-Stakeholder Group Executive Committee. The selection comprises road, building and water works projects.
- 1.1.4 An assurance team appointed by the NMSGEC for this project comprises two highway engineers, working together to obtain and assess information and provide reports.
- 1.1.5 The procurement of this specific project is based on International Competitive Bidding.
- 1.1.6 A glossary of terms used in the report, for terms which have particular technical meanings in relation to this project, is included at Appendix 1.

2.2 Objectives of the pilot study

- 1.1.7 The National Multi-Stakeholder Group has identified four objectives for the pilot study:
- To learn lessons to inform the design of CoST internationally.
 - To learn lessons that improves transparency internationally through the disclosure of project information.
 - An enhanced understanding of construction project costs amongst public sector clients, industry and wider society.
 - To learn and share lessons on publicly-funded construction project governance.
- 1.1.8 On the pilot study of this project , the assurance team has been appointed to carry out the following tasks:
- To collect the information from the Procuring Entities (PEs) of CoST projects to ensure the publication of the relevant Material Project Information (MPI).

- To verify the accuracy and completeness of MPI disclosures on CoST Projects.
- To produce reports that are clearly intelligible to the non-specialist, outlining the extent and accuracy of information release for the selected CoST projects.
- To analyse disclosed and verified data in order to make informed judgements about the cost and quality of the built infrastructure on CoST Projects.
- To produce reports that are clearly intelligible to the non-specialist, outlining the findings regarding the cost and quality of the infrastructure and highlighting any cause for concern that analysed information reveals on CoST Project

2.3 Study Approach

- 1.1.9 The sphere of activity given to the assurance team was to study projects from feasibility stage up to completion of the work. In phase 1 of the report, the assurance team is expected to verify the completeness and accuracy of the material project information (MPI). In phase 2, detail analysis of same shall be conducted.
- 1.1.10 Memorandum of understanding was signed between ERA and FEACC on behalf of CoST Ethiopia to disclose project information. Accordingly, ERA instructed its concerned bodies in house and made official communication with consultants and contractors in charge of specific projects to cooperate with the assurance teams.
- 1.1.11 Immediately after the appointment of the assurance team, an induction workshop prepared by NMSG was arranged on July 29, 2010 to all assurance team members and stakeholders of the construction industry to explain the objectives and procedures for this pilot study. Subsequently, a discussion between all team members and the person responsible for monitoring and evaluation of the pilot study was held. The discussion was arranged by the Country Coordinator of CoST-Ethiopia.
- 1.1.12 The National Multi-Stakeholder Group Executive Committee had supplied us with a standard list of material project information to be used on all pilot projects, so that we could adapt this into a set of schedules to suit the individual pilot projects. The completed MPI for Bako – Nekempte RUP is set out in Appendix 2.
- 1.1.13 The AT verified the information collected from ERA regarding the Bako – Nekempte RUP with Mouchel Ltd., the consultant responsible for construction supervision of this specific project. The documents concerning the construction such as contract agreement, progress reports, work programmes both for consultancy service and construction work was available with the supervision consultant. Correspondence letters among all parties, client, consultant and contractor were found included in the progress reports. The AT also checked whether the documents available in ERA were of one and the same with documents from other sources to verify the accuracy and completeness of information. As a result the AT concludes that sufficient and related information was availed to make this report complete and balanced.
- 1.1.14 The AT made a recommendation about the procedures of this pilot study on matters related how to check the quality of work, procedure on collection of MPI and regarding the induction workshop.

1.1.15 List of the information disclosed is listed in Appendix 3.

2.4 Bako-Nekempte Road Upgrading Project

- 1.1.16 Bako-Nekempte RUP is part of the Gedo-Nekempte road rehabilitation project aimed to upgrade and rehabilitate the existing road to a better standard based on the feasibility study made upon it in compliance with the government's road sector development programme (RSDP). The principal objective of the Gedo-Nekempte road project is to improve and expand the basic transport infrastructure in order to enhance economic and social developments of the nation, in general, and the western region, in particular. The road upgrading also contributes to poverty reduction through improved freight and passenger transport, vehicle operating cost savings, time savings and through the facilitation of public services such as: education, healthcare, water and sanitation, and family planning.
- 1.1.17 The project road begins at a point 66.1km from the exit of the road from Gedo town towards Nekemte, and runs generally in a westerly direction, passing through the small towns of Ano, Sire, Cheri, Chingi and Gute ending at Nekempte. This road joins the recently upgraded Nekemte–Gimbi-Assosa road at Nekempte. The project road is 64.814 km long with carriageway width of 7 m and 1.5 m wide shoulder on either side. In large towns like Nekempte the carriageway width is designed for 14m and there will be a 2.5m wide walkway on either side, while in the smaller towns the carriageway width will be 13 m with shoulder width of 2 m.
- 1.1.18 The initial feasibility study and EIA had been carried out by SYSTRA Consult in association with SPT and PANAF in 2003. KOCKs GMBH in association with Metaferia Consulting Engineers and Galander Engineering Consultants has prepared the Detailed Engineering Design and Tender Documents for the Project road.
- 1.1.19 Review of Feasibility Study, Environmental Impact Assessment (EIA), Preparation of Resettlement Action Plan (RAP), Detailed Engineering Design and Preparation of Tender Documents for the Gedo – Nekemte road project on the Second Phase of the RSDP was conducted by a consultant, named Saba Engineering, in the period from 2005 to 2006. The study was undertaken between December 2005 and April 2006 and all other subsequent works carried out in the remaining months. The consultant, after analyzing the options of upgrading the existing road either to DBST or AC, recommended upgrading to asphalt concrete standard (AC) in order to enhance the economy of the country.
- 1.1.20 Construction work of the Bako – Nekempte RUP is carried out by China Hyway Group Limited. The construction supervision service is undertaken by Mouchel Limited in association with Civil Works Consulting Engineers (CWCE).
- 1.1.21 The World Bank finances the project through Credit No. 43150-ET in support of the Ethiopian Government's Road Sector Development Program III.
- 1.1.22 The project's progress up to the end of June 2010 is 2.76% although the corresponding elapsed time is 29%. The initial contract price was ETB 391,047,637.57 and due to a variation in the beginning of construction the amount was raised to ETB 391,160,814.07.

3. Verification of documents

3.1 Ethiopian Roads Authority procedures

- 1.1.23 It is necessary to set out the ERA procedures for awarding and managing contracts in order to understand the status of documents disclosed by them.
- 1.1.24 The Bako-Nekempte Road Upgrading contract is awarded on the basis of the World Bank's Standard Bidding Document, May 2006 revised March and April 2007. These Standard Bidding Documents for Procurement of Works (SBDW) have been prepared by the World Bank to be used for the procurement of admeasurements' (unit price or rate) type of works through International Competitive Bidding (ICB) in projects that are financed in whole or in part by the World Bank.
- 1.1.25 The Ethiopian Roads Authority pursues the Standard Bid Evaluation form for procurement of works and goods published by the Bank in April 1996 herein referred as Completed Standard Forms. Qualification of Bidders in this project is post qualification type.
- 1.1.26 The basis for this specific project inception is the Ethiopian government emphasis on the policy of long term Road Sector Development Programme (RSDP). RSDP recognizes the importance of improved roads in supporting social and economic developments and in meeting poverty reduction objectives. The feasibility stage and related works of this specific project lie in the second phase of the RSDP, 2002 to 2007, while the construction stage lies in the third phase, from 2007 to 2010. The programme has received significant donor support with its focus on creating adequate capacity in the sector and facilitating the economic recovery process through the restoration of the essential road network.
- 1.1.27 After the completion of the evaluation process the Ethiopian Roads Authority, presents to the World Bank, a bid evaluation report setting out the process by which the Bid Evaluation Committee evaluated the bids received in response to the procurement process.
- 1.1.28 Based on the government's program and the creditor's (World Bank's) no-objection on the short listed firms, five short-listed consulting firms have been invited to submit their technical and financial proposals for the feasibility study and related works. Consultants for construction supervision and contractors for the construction work were selected on the basis of ICB and going through tender evaluation process.
- 1.1.29 Awarding the contract to the successful winner is done through standard letter of acceptance by letting known to all bidders under consideration through a copy of the same letter.
- 1.1.30 Following the award of contract the consultant or contractor is invited to sign contract agreement on the basis of its offer with minor corrections and amendments if there are errors in calculation and unit prices. The contract document is usually stand format with the exception of items pertaining to a particular project. Contract signing is followed by submission of performance guarantee.
- 1.1.31 Site hand over to the contractor and instruction to commence the construction work is done by using standard formats.

- 1.1.32 Immediately after commencement of construction, the contractor is instructed by the consultant to prepare and submit detailed work programme in compliance with the terms and condition on the contract agreement for approval. The consultant manages the time and resources based on the approved work programme.
- 1.1.33 Regardless of the ERA's commitment to follow World Bank's procedure, the post qualification procedure is partially violated. The procedure calls for considering the least bidder's offer first and proceeding to others if the least bidder did not qualify. Instead, ERA considered the least three financial offers for technical analysis.

3.2 Project identification and budget

- 1.1.34 The schedule of material project information which was expected to be disclosed under the pilot study is set out in Appendix 2. The schedule was completed by verifying the information from ERA against those obtained from Mouchel Limited – the supervision consultant. These were done by referring and counter checking all relevant documents. For this purpose the AT obtained a copy of each relevant document to scrutinize in a calm manner to identify the specific document which contained the information required. We have added opinions “Not yet applicable”, “Not applicable” and “Not yet known” where appropriate.
- 1.1.35 A detailed schedule of the documents disclosed, with a description of their purpose, is included at Appendix 3.
- 1.1.36 The following documents have been provided in relation to the project financing.
1. The financing agreement between the government of the FDRE and International Development Association (IDA) dated 8 June 2007.
 2. A letter to IDA from Government of Ethiopia, dated April 17, 2007, describing a program designed to improve reliability of access to road transport infrastructure in Ethiopia with a view to removing constraints to economic growth, thus contributing to poverty alleviation through improvements in rural and urban connectivity, market integration, accessibility to basic social services and trade facilitation
 3. In its letter, the Government of Ethiopia requested the support of IDA in execution of its programme through a series of credits or grants to be utilized in the implementation of the programme. The Government of Ethiopia, satisfied with the feasibility study and prioritization of the project, requested IDA to assist in the financing of the project.
 4. The IDA agreed to extend to the Government of Ethiopia, on the terms and conditions set forth or referred to mutual agreement, a credit to assist in financing four projects out of which one being Gedo-Nekempte Road Rehabilitation.

3.3 Appointment of Saba Engineering

- 1.1.37 The following documents have been provided in relation to the appointment of Saba Engineering for the Review of Feasibility Study, Environmental Impact Assessment, Preparation of Resettlement Action Plan, Detailed Engineering Design and Preparation of Tender Documents.
5. Letter of Invitation dated 22 March 2005 to submit proposals intended for the Review of Feasibility Study, Review of Environmental Impact Assessment,

Preparation of Resettlement Action Plan, Review of Detailed Engineering Design and Preparation of Tender Documents based on Terms of Reference (ToR) and other pertinent standard documents attached with the invitation later.

6. Minutes of Pre-Proposal Meeting dated 19 April 2005 intended to make clarification on items questioned by participants of the bidding and to discuss avoidance of fraudulent practice with respect to submissions of proposals by bidders referring ERA's experience of such repeated exercises in the past.
 7. Addendum to Request for Proposals (RFP) that includes modification, replacement of some clauses, deletion and detailing of some items (Addendum No. 1)
 8. Addendum to Request for Proposals (RFP) that include replacement of phrases in two clauses, and addition of phrase in one clause (Addendum No. 2)
 9. Tender Evaluation Report-Technical proposal. The proposal was opened on the 1st of June 2005 in the presence of all bidders and ERA Contract Award Committee (CAC). Summary of technical proposal evaluation scores are attached in a clear manner to make the evaluation transparent. The committee recommended opening the financial proposal of these firms, who has scored, in technical evaluations, above the specified minimum qualifying mark.
 10. Tender Evaluation Report - Financial proposal. The financial proposal was opened on the 11th of August 2005 in the presence of bidders who passed the technical evaluation. After making corrections on arithmetic errors of the financial proposals, the Evaluation Team of ERA determined financial scores and total scores in a meeting held on August 19, 2005, the CAC recommended awarding the contract to the highest scoring firm in aggregate score. The ERA Director General approved the recommendation on the 24th august 2005.
 11. Minutes of Pre-Contract Award Discussion dated 6 September, 2005, pointing out the concern on the timely completion of the project. Specific issues on contract data have also been discussed and agreed on the meeting, including the split of the total contract price into costs for Phase I and Phase II services.
 12. Contract Agreement between ERA and Saba was signed on 27 October 2005.
- 1.1.38 The Employer (ERA) commented on the draft review of feasibility study report prepared by Saba in June 2006. The comments were on 13 items...
- 1.1.39 The Consultant (Saba) responded to the comments given by the Employer elaborating some items and agreeing to address those comments on the final report.
- 1.1.40 The documents that describe the appointment of Saba Engineering for the Review of Feasibility Study, Review of Environmental Impact Assessment, Preparation of Resettlement Action Plan, Review of Detailed Engineering Design and Preparation of Tender Documents were fully disclosed and are in our opinion accurate and complete.

3.4 Appointment of Mouchel Ltd.

- 1.1.41 The following documents were provided in relation to the appointment and selection of Mouchel Limited for the Construction Supervision work.
13. Description of the service, objective of the service and scope of service is plainly shown so as to make the service without any ambiguity.
 14. Notice to request for expression of interest (EOI)
 15. Letter of RFP
 16. Documents related to verification and evaluation of tender plus the over all procuring process.
 17. Contract Agreement between ERA and Mouchel Limited signed on September 2, 2009, on the basis of standard contract data for such service.
 18. General conditions of contract.
 19. Special conditions of contract prepared specifically for this particular project that comprises: amendments and supplements to clauses in the General Condition of Contract.
- 1.1.42 The Notice to request for EOI was posted online on UN Development Business website on May 29, 2007, and subsequently the notice was issued on the Ethiopian Herald for three consecutive days with a deadline for submission on June 12, 2007.
- 1.1.43 IDA's (The Financer) no-objection letter were written to ERA on the EOI and on the six short listed firms, dated November 19, 2007, and December 25, 2007, respectively.
- 1.1.44 After the Bank's no-objection on the six short listed firms and the RFP, the firms were invited through ERA's letter dated December 31, 2007, to submit their Technical and Financial Proposals on or before February 28, 2008.
- 1.1.45 Pre-proposal meeting was held on January 30, 2008 to discuss on items that require clarification based on the queries raised by bidders. The minutes of this meeting with clarification note to queries was issued on February 19, 2008.
- 1.1.46 Subsequently, Addendum to Request for Proposals (RFP) was made that include modification, replacement of some clauses, deletion and detailing of some items (Addendum No. 1).
- 1.1.47 Tender Evaluation Report-Technical Evaluation: Technical proposals were opened on the 6th of March, 2008, in the presence of bidders and ERA Contract Award Committee (CAC). Summary of technical proposal evaluation scores were presented to a CAC meeting held on the 30th of April, 2008. CAC recommended opening the financial proposal of those firms who were found responsive: CAC's recommendation was approved by the Director General of ERA. The report was sent to IDA for further approval.
- 1.1.48 After IDA's no-objection letter dated October 24, 2008 on the draft technical evaluation report, the financial proposals, of these firms attaining the minimum score-75% and above was opened.
- 1.1.49 Tender Evaluation Report-Financial Proposal is also prepared diligently. The financial proposal of technically qualified firms was opened on the 4th of November 2008 in the presence of technically qualified firms and CAC members.

Simultaneously, the firms whose technical proposals declared as non responsive were notified that its financial proposal will be returned unopened after completion of the evaluation process.

- 1.1.50 After examining whether the proposals are in compliance with the forms and instruction provided and making corrections on arithmetic errors, the TAC determined financial scores. Total score was determined on the basis of RFP then the Tender Analysis Committee (TAC) recommended the firm with highest score-Mouchel. The Contract Award Committee (CAC) in its meeting held on November 14, 2008 endorsed the recommendation by TAC awarding the contract to the highest scoring firm in aggregate score. The ERA Director General approved the recommendation on the 18th of Nov. 2008.
- 1.1.51 The documents related to selection and appointment of Mouchel Limited for the consultancy services of construction supervision work were complete.

3.5 Appointment of China Hyway Group

- 1.1.52 The following documents have been provided in relation to the appointment of China Hyway Group Limited for the construction work.
20. Letter of acceptance dated July 1, 2009, informing the contractor that it was the winner of the bid and that its offer had been accepted by ERA subject to the conditions of contract for an amount of ETB 391,047,637.57
 21. Contract agreement made between ERA and China Hyway Group signed on July 29, 2009.
 22. The Letter of Tender submitted by China Hyway Group to ERA as Bid Submission Sheet attachment dated January 8, 2009.
 23. General Conditions of Contract.
 24. The Particular Conditions of Contract –Part A: (Contract Data) and Part B: (Specific Provision).
 25. ERA Standard Technical Specifications 2002.
 26. Particular Technical Specifications.
 27. The Drawings.
 28. The Priced Bill of Quantities.
- 1.1.53 The Specific Procurement Notice (SPN) for tendering was posted on UNDP site on-line and on local news paper for three consecutive days.
- 1.1.54 Twenty three contractors purchased the bidding document from ERA according to the advertisement (SPN).
- 1.1.55 Pre-bid meeting was held on July 18, 2008 as scheduled in the Bidding Document; nevertheless only five firms attended the meeting.
- 1.1.56 Up to the revised and final deadline for submission of bids, January 8, 2009, nine bidders have submitted their bids. ERA requested by letter all firms who purchased

the bidding document but not submitted their bids, to give their reasons, but only two firms responded.

- 1.1.57 The bids were opened on January 8, 2009 in the presence of ERA's Contract Award Committee and representatives of bidders who chose to attend the opening ceremony.
- 1.1.58 Preliminary examination of bids was conducted in to verify eligibility of bidders and bid securities, completeness of bids and substantial responsiveness. Accordingly one firm was rejected for not passing the preliminary requirements and eight firms remained to be evaluated.
- 1.1.59 The financial offer of the remaining eight bidders were opened and analysed same. Out of these three least bidders were selected for technical analysis.
- 1.1.60 The TAC compared the financial proposal of all the eight firms with the Engineer's Estimate, which was ETB 700,682,236.18.
- 1.1.61 The TAC also made a comparison of the Least Bidder's Financial Offer with the Engineer's Estimate, current market price and with recently awarded contract prices of similar nature.
- 1.1.62 The TAC's recommendation concluded that the least bidder had sufficient experience and qualification to perform the work. Although its financial proposal was low in comparison with the Engineer's Estimate, the then market prices and prices of awarded contracts at the period of the evaluation, the TAC assumed the reason to such lower price to be the firm's intention to enter Ethiopia's market by winning this contract and to establish base for future exploitation of the market.
- 1.1.63 The Contract Award Committee (CAC) in its meeting held on February 5, 2009 and March 5, 2009 reviewed the TAC report and endorsed the recommendation of TAC to award the contract to China Hyway Group Limited.
- 1.1.64 The documents disclosed describe the appointment of China Hyway Group for construction work fully and accurately.

4. Data Analysis

4.1 General Approach to Awarding Contracts

- 1.1.65 With regard to this project, ERA followed the procedures of World Bank's Standard Bidding Document as all IDA financed projects are required to follow the Bank's procedures. The approach is transparent and cost effective and ultimately enables the public to get what it pays for. The AT has observed that ERA was consistent with this procurement approach through out the process of awarding contracts for this project.
- 1.1.66 During the feasibility study, it was assumed that the design and tendering of the project will be completed by the end of year 2007 and that construction will be carried out from 2008 to 2010. The road was planned to be opened for traffic by 2011. However, the construction period was actually planned to cover from 2009 to 2012. The time taken to award the construction contract was by far more than the planned period.
- 1.1.67 Preparing Engineer's Estimate before the awarding process of construction works has a positive effect in the awarding process. To know the estimate before hand greatly helped the evaluation process in minimizing complexity and hence saving evaluation time.

4.2 Feasibility Study

- 1.1.68 In the documents provided by the employer regarding the appointment of Saba for review of feasibility study, EIA, PAP and design, the need for the review was explained without stating why the former consultant's study needed review. The former feasibility study was done in 2003. Therefore, unless explained, the time span between the initial study and review of same two years is short to observe physical alterations.
- 1.1.69 The feasibility study based on the survey conducted by the consultant shows the traffic composition, freight carried and traffic originating and attracting centres along the project road. In addition the survey revealed an average of 56 vehicles per day travelling in two directions from Addis via Jimma to Bedele, Metu and Gambela. The study assumed that 70 percent of these vehicles will be diverted to the project road when the Gedo – Nekemte road is upgraded. Moreover, a conservative assumption of a generated traffic of about 15 percent for the first three years, 30 percent for the next ten years and 10 percent for the last seven years of the project life is adopted to perform the economic analysis.
- 1.1.70 Two options of upgrading (construction) of the road were considered in the review of feasibility study: upgrading to DBST or upgrading to AC. For rehabilitating the existing surface to DBST, ETB 3.856 million (financial cost) and 3.201 million (economic cost) per km has been used in the economic analysis; while upgrading to AC, ETB 4.206 million (financial cost) and 3.491 million (economic cost) per km has been used. In order to convert financial (construction) costs into economic costs, the MOFED conversion factors have been used for the above components.

Considering the different conversion factors of the above components, an overall factor of 83 percent has been arrived at to convert financial into economic costs.

- 1.1.71 The economic evaluation gives both improvement options are economically viable and would offer an acceptable return on investment. An Economic Internal Rate of Return (EIRR) of 21.1 percent and 18.5 percent for AC and DBST, respectively, and First Year Rate of Return (FYRR) 11.30 percent and 10.70 percent for AC and DBST, respectively, is calculated. Accordingly, the AC option yields higher net present value and return on the investment than DBST. Thus upgrading to Asphalt Concrete was recommended for the project road.
- 1.1.72 The works done by Saba and the information provided concerning the feasibility review of the project is detail. Detail works have been done from the point of view of economic and social development aspect and engineering characteristics. Therefore, from the works done regarding economic and social development of this area it can be concluded that the feasibility of the project is clearly defined.

4.3 Tender Process for Design Review Consultant

- 1.1.73 The procedure in selecting the consultant for feasibility study and related service was by short listing. After the Bank's no objection on the short listed firms and the RFP, the listed below firms have been invited to submit their Technical and Financial proposals:

- C.LOTTI and ASSOCATI (Italy)
- Gauff Ingenieour GMBH & Co. KG.JBG (Germany)
- Ital Consult S.P.A (Italy)
- SABA Engineering Plc (Ethiopia)
- SNC LAVALIN International Inc. in ass. With Sheladia (Canada/India)
- Scott Wilson in Ass. With DANA (UK/Ethiopia)

In the information provided by ERA the short listing procedure is not disclosed and hence it is difficult to say that this procedure was transparent or not.

- 1.1.74 Out of the six invited one firm, Scott Wilson, declined to submit proposal expressing the reason for declining being unable to complete its proposal due time and its request for extension of time not considered.

Only three firms: Gauff Ingnieure, SABA and SNC LAVALIN submitted their proposals.

- 1.1.75 The Technical Proposal was opened and evaluated by TAC. Accordingly one firm, SNC LAVALIN was rejected from further evaluation due to not providing methodology in undertaking the assignment and not submitting the required work plan and generally due to its irresponsiveness to the TOR.

- 1.1.76 The Technical Proposal of the remaining two firms, Gauff Ingnieure and SABA were analysed in detail and scored 92.5% and 96.4% respectively. The TAC recommended opening the Financial Proposals of these two firms and the CAC endorsed the recommendation and consequently the Director General approved it.

1.1.77 The TAC evaluated the Financial Proposal and determined financial scores as 51.9% and 100% for Gauff Ingenieure and SABA respectively. Consequently the total score was determined and found to be 84.4% and 97.1% for Gauff Ingenieure and SABA, respectively.

Based on the score attained on the final evaluation, the TAC recommended SABA as winner and the CAC endorsed the recommendation which was followed by approval of ERA's Director General.

1.1.78 The mode of payment in the financial proposal of the consultant was in lump sum basis subdivided in phases and this was agreed by the client. Moreover, an agreement was made to pay up to 30% of the contract (the agreed lump sum) if redoing of field survey is needed. It is to be noted that the survey data was already collected by the former consultant. Since this type of auxiliary service is conditional depending on the actual site situation, such lump sum percentage is difficult to ascertain transparency and accountability. It would have been better addressed by defining the amount in relation to the time spent in the field by assigned professionals.

1.1.79 In compliance with the agreement, the consultant's periodic report that was submitted to the client was also directed to the financier – IDA – at the same time. By doing so, ERA has an advantage of saving time required for checking and reviews by the financier. The financier demanded minimum of one month to check and respond the periodic report in all stages, and, therefore, parallel checking of the required reports save time.

4.4 Tender Process for Construction Supervision

1.1.80 The consultancy for supervision work is needed to control the quality of the construction work and the time allotted to it on behalf of ERA, throughout the entire construction period, including the defects liability period. The employment of Mouchel was, therefore, to ensure that the road is constructed in accordance to the General and Particular Conditions of Contract, Technical Specifications and Engineering Drawings, to optimize use of available resources, to control costs incurred and to ensure that the road is constructed within the contract completion period.

1.1.81 Six firms have been short listed and after the Bank's no objection letter on the short listing, the firms were invited by letter to submit their Technical and Financial Proposals. Out of the six firms, only five firms submitted their proposals.

One firm, TAHAL group JV with SABA didn't submit its proposal and informed through his letter its decision not to participate in the proposals.

1.1.82 The detail evaluation of Technical Proposal was conducted in accordance to the instruction for Consultants and RFP giving maximum weight to the assignment of key personnel.

1.1.83 During preliminary examination of technical proposals the TAC found that one firm's proposal was substantially non-responsive as per the requirements set in the Instruction to Bidders. Moreover, another firm's proposal was found non-responsive due to submission of improper methodology of conducting the service.

Only three firms named: Mouchel Ltd., Grontmij/Carl Bro and COSULTING ENGINEERING SERVICES remained for detail technical evaluation and scored 91.1%, 91.2% and 77.6% respectively. Since all the three firms scored above the minimum requirement in the RFP-75%, the TAC recommended opening of financial proposal of those three firms. The CAC endorsed the recommendation. Finally, it was approved by ERA's Director General.

Following the Bank's no objection, the Financial Proposals of the technically qualified firms were opened and evaluated by the TAC.

The financial score was determined and consequently the total score was determined by giving weight of 80% and 20% to the technical and financial respectively. Mouchel Ltd emerged as winner by attaining the highest score 87.1%.

- 1.1.84 The information provided by ERA regarding the procurement of construction supervision service is satisfactory.

4.5 Project Implementation-Construction Supervision Service

- 1.1.85 The contract between ERA and Mouchel was made on a monthly payment basis.

As per Appendix C of the RFP the estimated time of the service of the Resident Engineer (RE) is 32 months, from the beginning up to the end of construction work plus additional four months during the defects liability (maintenance) period. In the tender evaluation of technical proposals 60% of the weight was given to staff qualification and competence, out of which the maximum point was given to the RE.

- 1.1.86 Although ten months of the contract period have elapsed, the RE was not posted until the preparation of this report. The absence of the RE will have its negative impact on the supervision work and accountability of the consultant. This is of concern to quality assurance and timely completion of the project.

4.6 Tender Process for Works Contract

- 1.1.87 The procurement procedure for selecting the firm that undertakes the construction work begins with the SPN posted on January 21, 2008, inviting bidders to submit their offer until August 28, 2008.

- 1.1.88 The date of submission and opening of bid proposals was postponed six times, up to January 8, 2009. This was a little over four months but no defined reasons were availed in the addendums disclosed to the AT.

- 1.1.89 The appointment of China Hyway Group was made following the analysis of technical and financial proposals offered by nine tenderers. During preliminary examination of bids, one firm named: Pavement Company for Roads and Bridges was rejected due to submission of bid which was not substantially responsive to the preliminary requirement;

- The total price of the bid is not indicated in the bid submission sheet
- The weighting table not submitted
- Bidder Information Sheet Form ELI-1.1 not filled and submitted
- Work schedule and method statement not submitted

- 1.1.90 Therefore, out of the nine firms who submitted their proposals, eight firms named: Alemayehu-Homan JV, AYDENIZ-KMC JV, BSC-C&C JV, CGC OVERSEAS, ECIDI-ECCEGC Consortium, China Hyway Group Limited, MAM and Sino hydro passed the preliminary examination.
- 1.1.91 The TAC evaluated the financial offers of the eight firms for arithmetic error, correction of provisional sums, consideration of discounts and adjustment of currency and put rank based on the Evaluated Bid Price. Then the committee considered the first three least bidders named: China Hyway Group Limited, MAM and CGC OVERSEAS for detail examination of their qualification and technical proposals.
- 1.1.92 After making thorough technical examinations, scores were given to the assessment of bidders' provision of major equipment, work schedule, methodology and proposed key personnel. China Hyway Group, with the least financial offer, won the bid and was awarded the contract at a price of ETB 391, 047,637.57.
- 1.1.93 The financial offer of China Hyway Group was lower than the Engineer's Estimate by 43%. It was also lower than the second least offer by 16%. ERA's assumption for the offer of such low price was the contractor's intention to penetrate into Ethiopian market. However, such big difference between the Engineer's Estimate and the bidder's offer may question the validity of the Engineer's Estimate.

4.7 Project Implementation-Works Contract

- 1.1.94 The first variation was anticipated at the moment of consultant's work commencement; the work owing to the provision of temporary facilities to the consultant by the contractor during the contractor's mobilization period. A variation amount ETB 403,814.50 was forwarded by the consultant on October 27, 2009, to the Employer. However, only an amount of ETB 113, 176.50 was approved by the Employer on November 11, 2009.
- 1.1.95 The consultant reviewed and improved the design of the road in order to suit the design to the actual site condition, which had been overlooked and/or underestimated during the design phase. Accordingly, an estimated variation amount ETB 482,950.67 was encountered due to an additional town section length requirement. The claim was forwarded to the Employer for approval in April 2010. It has not been approved until the preparation of this report.
- 1.1.96 The contractor submitted and got approval of the first interim payment certificate. The second interim payment request was also approved by the consultant and delivered to ERA for payment, which was under process at the period of this study.
- 1.1.97 It is the contractor's obligation to prepare and submit a detailed work programme in accordance to the provision of the contract. Although such programme is a vital tool in monitoring the duration of the project, there was no approved programme from October 2009, beginning of work, up to February 2010. A considerable draw-back is already reflected in the contract time for only 2.76% of the project is accomplished while the time elapsed is 29% of the total contract time. It is very difficult to compensate such slippage, about 26%, unless serious measures are taken with this respect. If such considerable slippage is kept unresolved, the contractor might enter into damages and the Employer may not benefit according to its expectation.

- 1.1.98 The contractor was advised by the consultant to improve the project's management system in order to compensate the delay. The major shortcoming that contributed to the delay is the contractor's intention to manage this project and another adjacent project by a single management team. Late mobilization of plant and equipment and late deployment of competent staff also had hampered the progress of work.
- 1.1.99 Although the quality of work is being performed in accordance with good practice according to progress reports, the delay in construction progress is of concern unless remedial actions are taken by the contractor.

Appendix 1: Material Project Information

Stage of project cycle	List of MPI to be disclosed	Project name
Design & Procurement		Gedo – Nekempte RUP Contract 2, Bako - Nekempte Procuring Entity Ethiopian Roads Authority
Project identification	Project purpose	To improve and expand the basic transport infrastructure
	Location	in Western Ethiopia in Oromia National Regional State, West Shewa and East Wolega Zones
	Intended Beneficiaries	The nation in general and the western region in particular,
	Specification	Rehabilitating and upgrading the existing road
Funding	Credit agreement made with IDA	Credit No 43150 – ET
Tender process (project design)	Tender procedure	By inviting short listed consultants
	Number expressing interest	Not applicable
	Number shortlisted	6
	Number submitting tender	3
	List of tenderers	3
	Tender evaluation report	Yes
Tender process (project supervision)	Tender procedure	Notice posted online on UN Development website and The Ethiopian Herald
	Number expressing interest	Not applicable
	Number shortlisted	6
	Number submitting tender	5
	List of tenderers	5
	Tender evaluation report	Yes
Tender process (main contract for works)	Tender procedure	SPN was posted on UNDP on-line, dgmarket website and The Ethiopian Herald
	Number expressing interest	23
	Number shortlisted	Not applicable
	Number submitting tender	9
	List of tenderers	8
	Tender evaluation report	Yes

Stage of project cycle	List of MPI to be disclosed	Project name
Design & Procurement		Gedo – Nekempte RUP
		Contract 2, Bako - Nekempte
		Procuring Entity Ethiopian Roads Authority
Contract award (project design)	Name of main consultant	SABA Engineering PLC
	Contract price	ETB 3,921,269.00
	Contract scope of work	consultancy services for the Review of Feasibility Study, Review of EIA, Preparation of RAP, Review of Detailed Engineering Design and Preparation of Tender Documents
	Contract programme	October 2005 – September 2006
Contract award (project supervision)	Name of consultant	Mouchel Limited in association with CWCE
	Contract price	ETB 7,360,640.00 + GBP 312,780
	Contract scope of work	Construction supervision of the specified project as set out in Contract Data
	Contract programme	October 2009 – March 2012
Contract award (main contract for works)	Name of main contractor	China Hyway Group Limited
	Contract price	ETB 391,047,637.57
	Contract scope of work	Construction works of the specified project as set out in Contract Data
	Contract programme	October 2009 – April 2012

Documents to be disclosed	Disclosure status
Feasibility study	Yes
Financing agreement	Yes
Tender evaluation report	Yes
Project evaluation report	Not yet applicable
Audit report	Not yet applicable

Documents Required for Data Analysis	Disclosure status
Contract document	Yes
Approved extension of time	Not applicable
Rejected extension of time	Not applicable
Approved cost claims	Yes
Rejected cost claims	Yes
Variation orders	Yes
Payment Certificate	Yes

Appendix 2: Schedule of Documents Disclosed

Document title	Subject of document
Contract for feasibility study detail engineering design (SABA Engineering PLC)	
Tender evaluation report	Detail analysis of technical and financial proposals to make the process sound and transparent plus cost benefit to the employer
Contract document	Comprises the Contract Agreement based on lump-sum remuneration, and defining the General and Special Conditions of Contract
Review of feasibility study	Feasibility report using various parameters to promote the client's decision on the intended project
Environmental Impact assessment	Review of the route assessment and its social impact on the surrounding society and all over the country
Preparation of Resettlement Action Plan	Resettlement of the society within the road prism due to widening of the road plus modification of the existing route and study of compensation cost related to it
Detail engineering design	Making a design review of this specific route basing on its practicability and economic and social impact
Preparation of Tender Document	Making ready before hand for the upcoming construction work for the easiness of selection the supervision service consultant
Contract for construction supervision	
Tender evaluation report	Detail analysis of technical and financial proposals to make the process sound and transparent. Can help to make a value judgment on the evaluation process
Contract document	Comprises the Contract Agreement, General and Special Conditions of Contract
Progress report	Works accomplished in the reporting month and its presiding months. Problems encountered and remedial solutions
Correspondence letters	Important contractual matters disclosed by communicating using official letters concerning all stake-holders of the project.

Document title	Subject of document
Certificate of Payment	Interim Certificate showing that the payment is processed in accordance to contract & budget
Contract for main works	
Tender evaluation report	Detail analysis of technical and financial proposals to make the process sound and transparent. Can help to make a value judgment on the evaluation process
Contract document	Comprises the Contract Agreement, General and Special Conditions of Contract, Completed Schedules, Technical Specification and Engineering Drawings
Progress report	Works accomplished in the reporting month and its presiding months. Problems encountered and remedial solutions
Contractor's work programme	Detail work programme prepared by the Contractor and approved by the Consultant important in managing the time, resources and cash flow.
Certificate of Payment	Interim Certificate showing that the payment is processed in accordance to contract & budget

Annex 1: Table of project changes (variation orders and claims)

	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
1.	11 Nov. 2009	Additional transportation facilities to the consultant during Contractor's mobilization	Not applicable	+113,176.50	No	No Applicable
2.						
3.						
4.						
5.						
	Date of claim	Reasons for claim		Amount claimed	Sum agreed by client	Date of agreement
6.						
7.						
8.						
9.						
10.						
11.						

Summary and Findings of the Pilot Study on Bako-Nekemte Project

The Bako-Nekemte road is part of the trunk road that connects the city of Addis Ababa via Gedo with Nekemte town and extends to Assosa, the capital of Benishangul – Gumuz National Regional State. The road is located in Western Ethiopia, particularly in West Shewa and East Wollega administrative zones of Oromia National Regional State. The road is about 65 km in length with six meters carriageway and double surface asphalt dressing. The road was first constructed in the 1930s, during the Italian occupation with asphalt surface treatment and Telford base. In the late 1980s and early 1990s, it was rehabilitated and upgraded to asphalt road by Ethiopian Roads Authority's (ERA's) own task force. But recent studies and inspections showed that the road was unable to withstand the increasing traffic volume. Therefore, a decision was made to upgrade the Bako – Nekemte road into asphalt concrete because of the observed failures on the road due to increasing traffic volume following the increased economic activities in the areas traversed. It is also to be noted that upgrading major economic routes into asphalt concrete, of which Addis – Nekemte – Assosa is one, has been one of the efforts of ERA since the launch of the Road Sector Development Program.

The aim of the aforementioned decision is to rehabilitate and upgrade the existing road to AC level including widening of the road carriageway. The typical cross section for rural sections has a 7.0 meter wide carriageway and shoulders of 1.50 meter each, resulting in a total roadway width of 10.0 meters. As per the ERA Road Functional Classification System the Gedo – Nekemte road, which is part of the Addis – Nekemte - Assosa trunk road, is also classified as trunk road.

The Government of the Federal Democratic Republic of Ethiopia (FDRE) has received a credit from International Development Association (IDA) towards the cost of consultancy services for the Review of Feasibility Study, Environmental Impact Assessment (EIA), Preparation of Resettlement Action Plan (RAP), Detailed Engineering Design and Preparation of Tender Documents for the Gedo – Nekemte road project and for construction of the same road. The construction of the road is to be in two lots: Contract 1, Gedo – Bako and Contract 2, Bako – Nekemte. This pilot study of assurance process is on contract 2.

The construction work is carried out by China Hyway Group Limited of China and construction supervision service is performed by Mouchel Limited of United Kingdom in association with CWCE of Ethiopia.

During the preparation of this report, the project was already under construction, with a physical progress of 2.76% though the planned amount was 20.26%. The project commenced in October 2009 and is planned to be completed on 9th April, 2012.

It was noted that ERA was under going re-organizing its structure at the time of this study, subdividing the contract implementation department into five

regions, each responsible for projects falling under that region. This specific project falls on the central region. For this reason, some of the documents required for the assurance process were collected from the Central Region's Office.

The Feasibility Study had been conducted in 2003 by SYSTRA Consult in association with SPT and PANAF. However consultancy services for the Review of Feasibility Study, Environmental Impact Assessment (EIA), Detailed Engineering Design and Preparation of Tender Documents was required in the year 2005. Five bidders were shortlisted for competition; the tender was on the basis of ICB. Accordingly, the contract was awarded to SABA Engineering, a local consulting firm, after going through a thorough evaluation of technical capacity and financial offer based on qualification criteria set for this purpose. The consultant prepared designs to meet the ERA requirements based on ERA's Design Manual, 2002.

The procurement process of supervision work was also based on ICB, through prequalification criteria and through the process of technical and financial evaluation. The evaluation process was clear and transparent and all the documents concerning the evaluation process are complete and available at the employer's office.

The works procurement process was based on post qualification in accordance to World Bank's procedure.

The procurement of design, construction supervision and construction work services were conducted at different stages, hence there was no any conflict of interest seen on the processes. The tender evaluation for all services, both technical and financial, was done independently and hence there was no difficulty in verifying the completeness and accuracy of material project information.

With the exception of documents related to tender process and feasibility study, all other available documents have been verified against other sources, the consultant for supervision work. The Assurance Team is convinced that the disclosure of information is complete.

The procurement of engineering services and works were fair and transparent.