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PERFORMANCE EVALUATION

ENGINEERING QUALITY ASSURANCE & LOGISTICAL SUPPORT (EQUALS) PROJECT



JULY 2014

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Activity Signature Page

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Cover photo: New power sub-station for DABS at Breshna Kot, Kandahar, one of the projects for which IRD provided QA services.

Disclaimer:

The views expressed in this report are those of the author and do not necessarily reflect the views of USAID, the Government of the Islamic Republic of Afghanistan, or any other organization or person associated with this project.

TABLE OF CONTENTS

I. Executive Summary.....	1
1. PROJECT BACKGROUND	1
2. EVALUATION METHODOLOGY	2
3. CONTEXT	3
4. STUDY LIMITATIONS.....	3
5. FINDINGS	3
6. CONCLUSIONS.....	4
7. RECOMMENDATIONS.....	5
II. Introduction	7
1. PROJECT BACKGROUND	7
2. EVALUATION STATEMENT OF PURPOSE, OBJECTIVES AND QUESTIONS.....	7
3. EVALUATION METHODOLOGY	9
4. EVALUATION STUDY LIMITATIONS	10
III. Findings	11
IV. Conclusions	25
V. Recommendations	29
VI. Lessons Learned (Evaluation Question 6).....	32
VII. Recommended Corrective Actions (Evaluation Question 7)	34
ANNEX I EVALUATION SCOPE OF WORK	35
ANNEX II EVALUATION WORK PLAN (EVALUATION DESIGN AND METHODOLOGY).....	45
ANNEX III PERSONS AND ORGANIZATIONS CONTACTED (PRIMARY SOURCES)	69
ANNEX IV LIST OF KEY DOCUMENTS REVIEWED (SECONDARY SOURCES).....	74
ANNEX V IRD OBJECTIVE INDICATORS	77
ANNEX VI AO6 RESULTS FRAMEWORK & INDICATORS.....	78
ANNEX VII DETAILED MINUTES OF MEETINGS	82
ANNEX VIII DATA COLLECTION QUESTIONNAIRES (<i>DARI VERSIONS AVAILABLE UPON REQUEST</i>)	97
ANNEX IX EVALUATION ACTIVITIES CALENDAR	103
ANNEX X OVERALL EVALUATION SCHEDULE.....	104
ANNEX XI LOG OF EQUALS PROJECTS & ACTIVITIES	105
ANNEX XII LOG OF EVALUATED PROJECTS' ACTIVITIES.....	108
ANNEX XIII EQUALS JOB ORDER LOG& BUDGET.....	109
ANNEX XIV RESPONSIBILITIES & RELATIONSHIPS ON EVALUATED PROJECTS	110
ANNEX XV FINAL COMPLETION CERTIFICATE - FARYAB PTTC (CHEF).....	111

ANNEX XVII LOG OF TESTS PERFORMED ON GK ROAD.....126
ANNEX XVII EVALUATION TEAM MEMBERS127
ANNEX XIX DISCLOSURE OF ANY CONFLICTS OF INTEREST128

ACRONYMS

A/E	Architect/Engineer; Architecture/Engineering
AESP	Afghanistan Engineering Support Program
AGCHO	Afghan Geodesy and Cartography Head Office
AGS	Afghanistan Geological Survey
AIDC	Afghan Infrastructure Data Center
ANA	Afghan National Army
APPF	Afghanistan Public Protection Force
BoQ	Bills of Quantities
CAB	Crushed Aggregate Base
CHEF	Construction of Health and Education Facilities
CMU	Concrete Masonry Unit
COP	Chief of Party
COR	Contracting Officer's Representative
COTR	Contracting Officer's Technical Representative
DABS	Da Afghanistan Breshna Sherkat (Afghanistan Power Company)
DCP	Dynamic Cone Penetrometer
EQUALS	Engineering Quality Assurance and Logistical Support project
FAA	Federal Aviation Administration
FOHE	Faculty of Higher Education
G2G	Government-to-Government
GIRoA	Government of the Islamic Republic of Afghanistan
GK	Gardez-Khost Road Project
GPS	Global Positioning System
GSB	Granular Sub Base (of a Road)
ICAO	International Civil Aviation Organization
IL	Implementation Letter
IOM	International Organization for Migration
IP	Implementing Partner
IPR	Implementation & Procurement Reform (USAID FORWARD)
IRD	International Relief & Development
IRP	Infrastructure Rehabilitation Program
IWRM	Integrated Water Resource Management
JO	Job Order
KHPP	Kandahar Helmand Power Project
KSP	Kabul Schools Program
LBG	Louis Berger Group
LGCD	Local Governance and Community Development Program
MECC	Mashriq Engineering & Construction Company
M&E	Monitoring and Evaluation

MoEW	Ministry of Energy and Water
MoF	Ministry of Finance
MoHE	Ministry of Higher Education
MoPH	Ministry of Public Health
MoPW	Ministry of Public Works
MoTCA	Ministry of Transportation and Civil Aviation
MoU	Memorandum of Understanding
MoWE	Ministry of Water & Energy
MST	Mobile Security Team
MTC	Midwife Training Center
MTU	Materials Testing Unit
NGO	Non-Governmental Organization
O&M	Operations and Maintenance
OEGI	Office of Economic Growth and Infrastructure (USAID)
OGL	Original Ground Level
OPPD	Office of Program and Project Development (USAID)
PCC	Portland Cement Concrete
PFMRAF	Public Financial Management Risk Assessment Framework
PIU	Project Implementation Unit
PM	Project Manager
PMP	Performance Management Plan / Project Management Professional
PRG	Preliminary Roadway Geometry
PSD	Permanent Security Detail
PTTC	Provincial Teacher Training Center
QA/QC	Quality Assurance/Quality Control
QRF	Quick Reaction Force
RCC	Reinforced Concrete Culvert
REFS	Program Rehabilitation of Economic Facilities and Services Program
RFP	Request for Proposal
RSO	Regional Security Officer
SACCARP	Schools and Clinics Construction and Rehabilitation Program
SCI	Substantial Completion Inspection
SCWAM	Supreme Council on Water Affairs Management
SDTP	Survey and Design Training Program
SIED	Sophisticated Improvised Explosive Device
SOAG	Strategic Objective Grant Agreement
SOW	Statement of Work
SPR	Strategic Provincial Road
SSER	Structural Seismic Evaluation Reports
SSO	Safety and Security Officer
STA	Standing Threat Assessment

SWOT	Strength, Weaknesses, Opportunities and Threats Analysis
TCN	Technical Change Notification/Third Country National
TEC	Technical Evaluating Committee
TST	Technical Services Team
TSU	Technical Support Unit
TT	Tetra Tech
UNOPS	United Nations Office for Project Services
USACE	US Army Corps of Engineers
USAID	United States Agency for International Development
USG	United States Government
VBIED	Vehicle Borne Improvised Explosive Device
VICC	Venco Imtiaz Construction Company
VS	Vertical Structures
WB	World Bank
WO	Work Order

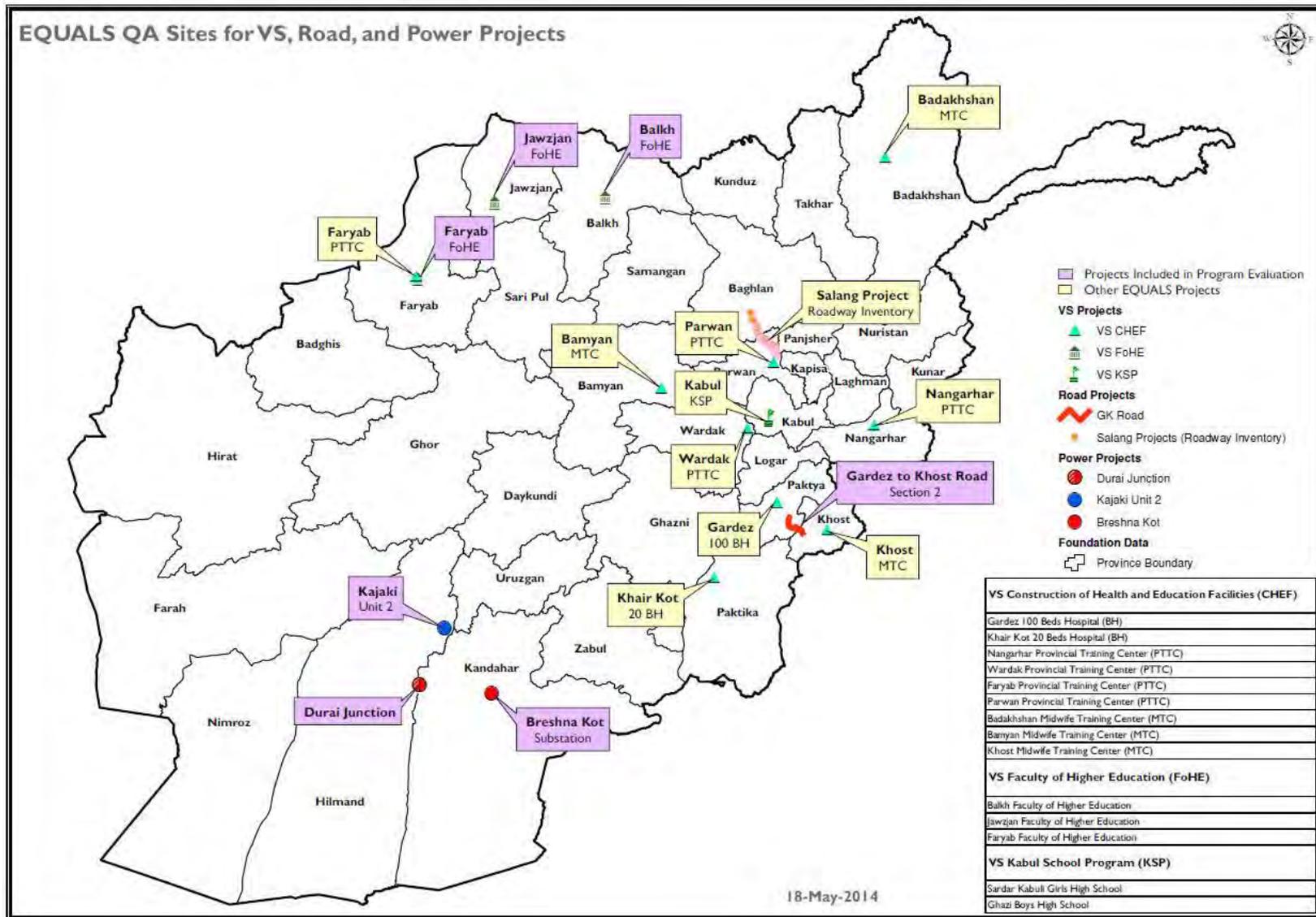


Figure 1: Map of EQUALS Project Locations

I. EXECUTIVE SUMMARY

This report presents the results of a performance evaluation for the Engineering Quality Assurance and Logistical Support (EQUALS) project. The evaluation was carried out between April 26, 2014 and July 29, 2014, at the request of USAID/Afghanistan. This report contains the combined findings from a review of project documentation, interviews, questionnaires, field visit observations and professional judgment.

1. PROJECT BACKGROUND

The purpose of the Engineering Quality Assurance and Logistical Support (EQUALS) contract is to provide USAID's Afghanistan Office of Infrastructure and Economic Growth (OEGI) with an Afghanistan-based team to provide independent quality assurance for ongoing and planned construction, and design and maintenance projects in the four infrastructure areas, namely: transportation, vertical structures, energy and water, and sanitation. The EQUALS project was awarded to International Relief & Development (IRD) in April 2011 with an agreement value of \$96,807,645 (of which \$84,345,493 had been obligated as of November 2013). The planned end date is currently April 2016. OEGI has technical management responsibility for this contract but the services provided benefit a range of USAID/Afghanistan offices that rely on infrastructure to accomplish their development objectives including Agriculture, Health, Democracy and Governance, and Education.

EQUALS complements and reinforces activities and engineering expertise of the OEGI staff. IRD provides a full range of long-term and quick response professional architect and engineering services, quality assurance services, and other logistical and technical support across all sectors (transport, vertical structures, energy, and water and sanitation) for USAID/Afghanistan infrastructure programs. Under EQUALS, IRD is also responsible for providing capacity building support to the key ministries involved in the energy, roads and water sectors. The primary objective is to strengthen the capacity of key ministries,¹ both directly, by increasing the capacity of current government employees, and indirectly by working with university staff and students to provide a more capable pool from which to hire staff. The secondary objective is to provide analytical support to the Government of the Islamic Republic of Afghanistan (GIROA) in all matters dealing with transportation, vertical structures, energy and water and sanitation. IRD works with each ministry to design on-the-job training opportunities. This evaluation was carried out in accordance with the Statement of Work, found in Annex I.

The **purpose** of this evaluation is to collect information about the project's outputs and outcomes in order to identify potential lessons learned that can be applied to other similar projects. In particular, the

¹ EQUALS assists the Ministry of Education, the Ministry of Public Health, the Ministry of Transportation and the Ministry of Water & Energy.

evaluation will examine how much USAID-funded oversight is likely to be needed for similar future construction projects, and the feasibility of identifying related oversight/support costs.

The **objectives** of this evaluation are to:

- a. Determine if the technical assistance provided by USAID, through IRD, was appropriate to overcome the challenges of increasing GIRoA capacity to implement the project.
- b. Validate that infrastructure projects meet international building code through QA/QC performed by a technically proficient third-party entity as required by USAID/Afghanistan Mission Order 302.03 Application of Engineering Standards for Contracts and Grants to Construct Buildings and other Complex Infrastructure.
- c. Develop a concise set of USAID procurement-based recommendations, based on the findings and conclusions of the evaluation, for implementing construction projects as a reference resource for GIRoA.

2. EVALUATION METHODOLOGY

The team used the “Getting to Answers” worksheet in its work plan (Annex II, page 45) as the basis for its methodology. Evaluators used a combination of quantitative and qualitative data collection methods. Data sources included:

- Over 4,000 documents & electronic files received for review (of these, the key documents used are listed in the bibliography)
- 1,675 e-mails received for review
- 19 meetings held with key stakeholders
- 28 written questionnaires returned (out of 42 distributed)
- 71 stakeholders interviewed
- 18 organizations & firms interviewed or responded through questionnaires
- 6 project sites visited

This information was used to triangulate the findings presented. Stakeholders participating in the evaluation included USAID, IRD, the International Organization for Migration (IOM), Mashriq Engineering & Construction Company (MECC) and other implementing partners (IPs), and agencies of the Government of the Islamic Republic of Afghanistan (GIRoA), including the Ministry of Public Works (MOPW), Da Afghanistan Breshna Sherkat (DABS, the Afghanistan Power Company), and the Ministry of Higher Education (MOHE). Annex III provides a list of key people and organizations contacted, and Annex IV provides a list of all documents reviewed.

Data obtained were analyzed in several ways: by comparing and contrasting, content pattern analysis, trend analysis, cross-tabulations and frequency distributions. The specific method(s) used in each case is provided in the relevant findings and recommendations of that question.

The evaluation team consisted of one international and two Afghan consultants, all with an engineering background.

3. CONTEXT

In order to have a meaningful understanding of the project, USAID/Afghanistan picked a representative sample of projects which could be evaluated within the available resources and time allocation. The four selected projects were:

- Power sector – Kandahar Helmand Power Project (KHPP) 7 activities.
- Transportation sector – Gardez to Khost (GK) Road.
- Vertical Structures – Construction of Health and Educational Facilities (CHEF) 9 activities.
- Vertical Structures – Faculty of Higher Education (FOHE) 4 activities.

No project was selected from the water sector as no sizable field activity had occurred in the sector over the period under review.

The detailed evaluation questions are listed in the body of the report and cover the following topics:

- Contractor’s QA services
- Capacity building of GIRoA
- Contractor’s monitoring and inspection services
- Improving the performance of (local) contractors
- Project design and implementation by USAID
- Lessons learned for future projects
- Recommended corrective actions for final year of implementation

4. STUDY LIMITATIONS

Since the evaluation was limited to the four selected projects, some observations and lessons learned from the other EQUALS projects – both positive and negative – may have been missed. None of the four selected projects had a major capacity-building component, and this may have affected the observations and conclusions for Questions 2 and 5. The team was unable to visit the G-K road due to security concerns. Due to personnel changes and scheduling conflicts, the team did not receive input from the U.S. Army Corps of Engineers who were the Implementing Partners (IPs) of the FOHE project. Additionally, the team received no input from the head office representatives of the Ministry of Public Health (MOPH) and the Ministry of Education (MOE) for the CHEF projects.

5. FINDINGS

IRD produced Quality Assurance (QA) plans that were generally extensive and covered most of the QA issues that could have arisen on the projects. IRD also assigned inspectors to all project sites to implement the QA plans. The evaluation team noted repeated complaints concerning technical services

provided on the GK road, and observed that inappropriate electrical conduits continued to be installed on the vertical structures projects even as IRD provided QA oversight.

Among the evaluated projects, only KHPP had a noticeable training and capacity building component. Findings on the KHPP component indicate that there was a significant level of absenteeism at training and capacity building sessions organized for DABS. According to the DABS Director for Kandahar zone, this was mostly due to the workers not being compensated for training on their scheduled days off.

In the performance of monitoring and inspection services, some IRD expatriate staff were praised by USAID and Implementing Partners. The evaluation team however noted short-comings of many local field engineers. While it wasn't clear which staff were involved, in one incident identified by the evaluation team, IRD prematurely issued a certificate of final completion for a CHEF project, allowing for the release of the firm's retention funds while nearly 10% of the required furniture had not been delivered. At the time of writing this report, furniture deliveries had not yet been made.

Overall, USAID staff were actively involved in the implementation of the project in spite of the challenges of supporting the construction of over \$1 billion worth of infrastructure spread throughout Afghanistan's highly dynamic security environment. The design of the EQUALS project, however, was found to have the following deficiencies:

- Inadequate selection of indicators in the Project Monitoring Plan (PMP),
- A failure to sufficiently match IRD's SOW to all project objectives,
- A lack of involvement of GIRoA's technical personnel in project implementation and review of the design, constructability and sustainability of subsequent projects, and
- A failure of the contract or individual work orders to explicitly require IRD to improve performance of local contractors.

6. CONCLUSIONS

IRD prepared the required QA plans and generally performed the specified quantity of monitoring and inspection services. The quality of these services however remains questionable at times, especially on vertical structures, and to some extent on the GK road. In their individual capacities, most IRD expatriate staff performed well and offered advice that was valued by USAID and by some of the IPs, notably MECC and DABS. The problems, in many cases, can be linked to local field engineers without the requisite experience and lacking adequate oversight and/or training from the head office.

Though some GIRoA policy makers and administrators were involved in the project's initial design, the EQUALS project suffered from a lack of early participation by GIRoA engineers, who could have caught some design or sustainability issues early in the project. Through its QA plans, SOWS and other documents, the EQUALS project has adequate procedures for QA inspection and monitoring process. The quality and timeliness of some services were however found to be lacking. Furthermore, IRD staff

on-site at projects were not adequately knowledgeable about, and did not always use the procedures and safeguards outlined in their QA plans.

In terms of capacity building, IRD was not expressly requested in its SOW to improve the performance of local contractors; any such expectations were implied. Minimal training or capacity building was offered by IRD to the contractors. While USAID established the objectives for the EQUALS project, the specified scope and the design that followed at times did not lead to meeting these objectives. This was partly due to IRD's indicators (Annex V) not matching indicators that were proposed for this activity in USAID Afghanistan's Assistance Objective 6 (AO6) – Annex VI. Additionally, the project did not seize all the available opportunities for building local engineering capacity. Absenteeism at DABS training sessions also undermined the capacity building efforts the project was meant to produce.

Given the uniqueness and dynamism of the construction and security environments in Afghanistan, USAID staff has been generally diligent in following up on the implementation of the projects under EQUALS and their interventions have on many occasions been critical in keeping a project this complex on the right course.

The observations in the above section led to the following conclusions in as far as the evaluation objectives are concerned:

Evaluation Objective 1: Determine if the technical assistance provided by USAID, through IRD, was appropriate to overcome the challenges of increasing GIRoA capacity to implement the projects.

While the technical assistance provided by USAID, through IRD was beneficial to GIRoA, USAID did not leverage it enough to maximize the impact the project could have had on increasing GIRoA's ability to implement the projects.

Evaluation Objective 2: Validate that the four infrastructure projects meet international building codes through QA/QC as performed by IRD as required by USAID/Afghanistan Mission Order 302.03 Application of Engineering Standards for Contracts and Grants to Construct Buildings and other Complex Infrastructure.

With the exception of some electrical work on the vertical structures project that has been identified and is in the process of rectification, the projects supervised by IRD meet the appropriate international and, where available, local building codes and standards.

7. RECOMMENDATIONS

The evaluation team recommends the following actions:

- Based on the findings and conclusions on the shortcomings of a noticeable proportion of IRD's field QA personnel, EQUALS should review or revise field QA job requirements. IRD should ensure that field QA engineers have the requisite experience.

- IRD should expand the objective indicators in its PMP to also include the indicators in the Mission's Assistance Objective 6 results framework.
- USAID should review IRD's current job orders and ensure that they will meet the project's capacity building objectives. The Mission should also look at all engineering projects as an opportunity to build the capacity of local Afghan engineers.
- IRD head office staff should increase their oversight and support to their local field personnel.
- EQUALS (and future projects) should designate one key contractor position to be responsible for knowledge transfer, training and the capacity building component.
- Future USAID project designs should provide capacity building prior to equipment installation. Wherever feasible, intended equipment operators can work alongside or observe equipment installation to gain a clearer understanding of that equipment's operation and maintenance needs.
- USAID should design future projects with GIRoA employees embedded as under-studies with each key expatriate who is hired for a skill that is intended to be passed on. The local employee can later act as a trainer to other employees.
- USAID should conduct an independent review (audit) of all completion certificates to ensure accountability for all goods and services procured.
- USAID should conduct a mandatory seminar for all Implementing Partners and other EQUALS stakeholders about contract project close-out requirements.
- Increase communication among IPs and Stakeholders through quarterly review meetings to share lessons learned, communicate updates, and review the project's major outstanding issues.
- Prior to implementation, future projects should undergo an engineering review of their design, constructability and sustainability with the active participation of GIRoA engineers. Involvement of host government officials and end-users helps to ensure that project elements are locally appropriate and acceptable, and is a good way of getting them to buy into the project.

II. INTRODUCTION

1. PROJECT BACKGROUND

The purpose of the Engineering Quality Assurance and Logistical Support (EQUALS) contract is to provide USAID's Afghanistan Office of Infrastructure and Economic Growth (OEGI) with an Afghanistan-based team to provide independent quality assurance for ongoing and planned construction, and design and maintenance projects in the four infrastructure areas: transportation, vertical structures, energy and water, and sanitation. OEGI has technical management responsibility for this contract but the services provided will benefit a range of USAID/Afghanistan offices that rely on infrastructure to accomplish their development objectives including Agriculture, Health, Democracy and Governance, and Education.

EQUALS complements and reinforces activities and engineering expertise of the OEGI staff. International Relief & Development (IRD), the contractor provides a full range of long-term and quick response professional architect and engineering services, quality assurance services, and other logistical and technical support across all sectors (transport, vertical structures, energy, and water and sanitation) for USAID/Afghanistan infrastructure programs.

Under EQUALS, IRD is also responsible for providing capacity building support to the key ministries involved in the energy, roads and water sectors. The primary objective is to strengthen the capacity of key ministries,²both directly, by increasing the capacity of current government employees, and indirectly by working with university staff and students to cultivate a more capable pool from which to hire staff. The secondary objective is to provide analytical support to the Government of the Islamic Republic of Afghanistan (GIROA) in areas such as transportation, vertical structures, energy and water and sanitation. IRD works with each ministry to design on-the-job training opportunities.

EQUALS provides QA services to over \$1 billion worth of infrastructure work across all of Afghanistan. As prime contractor, IRD has more than 70 activities under this project (see location map in figure 1).

2. EVALUATION STATEMENT OF PURPOSE, OBJECTIVES AND QUESTIONS.

The purpose of this performance evaluation is to collect information about EQUALS outputs and outcomes for four sector projects for which EQUALS provided QA/QC services in order to identify potential lessons learned that can be applied to construction/engineering-related activities (see Annex I).

²EQUALS assists the Ministry of Education, the Ministry of Public Health, the Ministry of Transportation and the Ministry of Water & Energy.

In particular, the evaluation will examine how much USAID-funded oversight is likely to be needed for similar future construction projects, and the feasibility of identifying related oversight/support costs. The four sector projects of particular interest to USAID for this performance evaluation are:

- The Kandahar Helmand Power Project (KHPP) implemented under the Energy sector with the Ministry of Water & Energy.
- The Gardez-Khost (GK) Road Project, Phase III implemented under the Transportation sector with the Ministry of Public Works.
- The Construction of Health and Education Facilities(CHEF) project implemented under the Vertical Structures sector with the Ministries of Public Health and of Education.
- The Faculty of Higher Education(FOHE) project implemented under the Vertical Structures sector with the Ministry of Higher Education.

The objectives of this evaluation are to:

1. Determine if the technical assistance including quality assurance, professional architecture and engineering services provided by USAID, through IRD was appropriate to overcome the challenges of increasing GIRoA capacity to implement the projects.
2. Validate that the four infrastructure projects meet international building codes through QA/QC as performed by IRD as required by USAID/Afghanistan Mission Order 302.03 Application of Engineering Standards for Contracts and Grants to Construct Buildings and other Complex Infrastructure.
3. Develop a concise set of USAID procurement-based recommendations, based on the findings and conclusions of the evaluation, for supporting future construction projects as a reference resource for GIRoA.

The following questions are addressed in the report's conclusion and recommendation sections as they pertain to the QA/QC services provided for the above four referenced projects:

- Q1. How well did IRD provide transportation, vertical structures, energy, and water and sanitation technical and logistical support, with principal focus on quality assurance services to help ensure that construction projects of USAID implementing partners, meet prescribed standards and contract specifications?
- Q2. How effective was EQUALS (IRD) at building the capacity of the Afghan government to independently operate and maintain infrastructure, plan and implement policy, manage infrastructure projects, and recover costs of operation and accounting?
- Q3. How effective was EQUALS (IRD) at monitoring the construction projects implemented by other contractors and grantees through site visits by qualified engineers? Monitoring included:
 - a. Regular Inspections

- b. Punch List Verification Inspection
- c. Final Inspection and Acceptance
- d. Final Warranty Inspection

The engineering monitors checked the IPs' work to ensure compliance with the approved Quality Control (QC) Plan, Quality Assurance (QA) Plan, and predetermined technical standards and construction schedules.

- Q4. How effective was EQUALS (IRD) in improving the performance of the construction contractors' on Energy, Transportation and Vertical Structure, programs?
- Q5. Evaluate the EQUALS program's design approach by USAID; the discussion should include an assessment of the project's objectives, approach to implementation, and the sustainability of individual elements after the projects end.
- Q6. Distill lessons learned on program design and implementation to guide the design of future engineering support programming.
- Q7. Identify any corrective actions necessary to guide EQUALS activities over the final year of the performance period.

3. EVALUATION METHODOLOGY

The evaluation team used the following methods to collect the data reflected in this report.

Document reviews: The team used both qualitative and quantitative methods to review over 4,000 documents and 1,600 emails provided by USAID, IRD and other IPs. The principal documents reviewed are listed in the bibliography in Annex IV.

Field trips and observations: The team visited six project sites in five provinces that included the following:

- Kandahar (KHPP) – Breshna Kot sub station
- Faryab Provincial Teacher Training College, (CHEF), Maimana
- Faryab University Faculty of Higher Education, (FOHE), Maimana
- Jawzjan University Faculty of Higher Education, (FOHE), Sheberghan
- Balkh University Faculty of Higher Education, (FOHE), Mazar
- Sardar Kabuli Girls High School, (KHP), Kabul.

Though not part of the four sector projects, the project team visited Sardar Kabuli (under Kabul Schools Program) as an example of a typical construction project in the proximity of Kabul. At each project site,

the evaluation team spoke to and interviewed representatives of IRD, GIRoA, Implementing Partners and when available the local construction contractors and subcontractors.

Meetings and interviews: The team held a total of 19 meetings and face-to-face interviews with representatives of USAID, IRD, GIRoA, IPs and contractors. The team also conducted phone interviews with individuals who were not available for face-to-face meetings or interviews. Interviews consisted of a combination of structured, semi-structured and unstructured (open-ended) questions. More than 70 people representing 18 organizations were interviewed for this evaluation. The individuals and organizations met with and/or interviewed are listed in Annex III. Annex VII shows minutes of meetings with stakeholders.

Questionnaires: Forty-four questionnaires were distributed in English (Annex VIII) and Dari to the projects' stakeholders. Thirty of these were returned completed, representing a 67% response rate. The team eventually conducted phone or face-to-face interviews with eight of the non-respondents and was able to incorporate their feedback into the analysis. Contacts who provided survey input are listed in Annex III.

Annex IX shows all the meetings and field visits conducted, while Annex X shows the overall timeline.

4. EVALUATION STUDY LIMITATIONS

Since the EQUALS project was quite diverse, covering more than seventy activities, the evaluation exercise was limited to four representative activities. Some of the lessons learned on other activities – both positive and negative – may have been missed. None of the four selected projects had a major capacity-building component, which may have affected the observations and conclusions for Questions 2 and 5. Although the team contacted the Ministries of Public Health and of Education for the CHEF projects, they never received responses and as a result did not meet. Additionally, the team could not visit the Gardez-Khost road due to security concerns.

Organizations and individuals that were no longer on the projects (including Black & Veatch, local and regional contractors) were contacted via email and phone. Due to communication and time constraints, follow up on issues respondents raised in their responses was not always feasible. Additionally, personnel changes and scheduling conflicts rendered the Evaluation Team unable to obtain input from the U S Army Corps of Engineers (GK road & FOHE projects).

Respondents had varied understanding of the terms QA and QC, which may have affected some responses. The analysis uses the definitions in Table 1 below.

Table 1: Quality Assurance vs. Quality Control

Quality Assurance vs. Quality Control	
QA is a set of activities focusing on the processes by which products are developed.	QC is a set of activities focusing on identifying & correcting defects in the finished products.
QA is process-oriented, focusing on defects prevention	QC is product-oriented, focusing on defects identification & correction.
<i>Proactive</i>	<i>Reactive</i>

III. FINDINGS

Evaluation Question 1 – Contractor’s Quality Assurance Services

How well did IRD provide transportation, vertical structures, energy, and water and sanitation technical and logistical support, with principal focus on quality assurance services to help ensure that construction projects of USAID implementing partners, meet prescribed standards and contract specifications?

Findings & Observations:

Since its inception in 2011, EQUALS, through IRD, has been providing QA services to over \$1 billion worth of engineering work in more than seventy different activities (see Annex XI). The activities carried out by IRD specific to the four evaluated projects are listed in Annex XII. The work was carried out through Job Orders and their modifications (see Annex XIII). Annex XIV shows the contractual and communication relationships between the project’s stakeholders.

Over the course of this evaluation, this team observed differences in perception between various staff in USAID, IRD, Implementing Partners and lower tier contractors over what is QA versus QC work. The evaluation team posits that QA refers to ensuring quality over the entire process, while QC refers to checking for and ensuring the quality of the end-products (see Table I). Contrary to some expectations, IRD’s QA work was responsible for ensuring the credibility of the IPs overall quality process. Many of the anticipated quality control testing would have been part of capacity building had this been so specified, which was not always the case.

In April 2013, USAID conducted a Contractor Performance Assessment Report (CPAR) which gave IRD satisfactory ratings in quality of product or service and management of key personnel. Additional

observations from the CPAR were that IRD are very thorough with their paperwork, were always responsive and helpful when USAID contacted them and they worked well with the other IPs, and returned all paperwork in a timely manner.

On the QA side, IRD produced a number of QA plans to help guide its provision of services on these projects. The plans covered the Gardez-Khost Road (Draft, April 2013), KHPP (May 2011), and Vertical Structures: CHEF (March 2008). Plans were quite extensive and covered most of the QA issues that could have arisen on the projects. IRD had full-time inspectors stationed at all project sites to implement these QA plans. The inspectors were local Afghan engineers, supported by expatriate engineers from IRD's main office in Kabul through bi-weekly visits.

Below is a summary of the principal findings and observations on IRD's QA performance for each project.

a. Vertical Structures: FOHE & CHEF projects observations

FOHE Herat was completed and handed over to the Ministry of Higher Education by the local contractors in February 2012. The project's warranty period was scheduled to end in February 2013. The contractor for FOHE Balkh, Jawzjan and Faryab, Zafar Khaliq Construction Company (ZKCC) however abandoned the projects when they were between 90 to 95% complete in August 2012 over financial disagreements.

While the local contractors were primarily responsible for most of the still active delays on the FOHE projects (Figure 3), IRD on its part did not always provide the proper oversight or appropriately implement the aspects of their QA plans that could have mitigated some of the problems that caused these delays. For instance:

- (i) In the Vertical Structures QA Plan, Item 3.2g³ and 3.2i⁴ would have mitigated outstanding issues on electrical and plumbing work on projects in Balkh, Jawzjan and Faryab.



Figure 2: FOHE Delay Timeline

³“Section 3.2g: Report to IOM’s project manager on site any unacceptable work in early stages before it develops into an expensive and time consuming operation. This notification will be confirmed in writing where necessary. Notify the IP if any material or portion of the work does not conform to the specifications, explain why it does not conform, and record it in the inspection report. Should the IP and its appointed contractor(s) ignore the notice and continue the operation, the QAE will promptly advise USAID.”

⁴“Section 3.2i: Follow up with the IP daily when defective work is to be corrected by its contractor(s), to prevent necessary corrections from being forgotten or the work covered over.”

- (ii) CHEF QA Plan, Item 3.2h⁵ would have mitigated the outstanding issue of fire doors at Sardar Kabuli Girls School (similar provision from KSP QA plan could be applicable).
- (iii) Field visits identified sustainability and durability problems with the insulation provided on the buildings – ranging from inadequate sealing to prevent water ingress to finish films over the insulation foam that were weak and have several poke marks, even before the buildings are formally occupied (see Figure 3). It is unknown as to how long these will last once the buildings are opened up to hundreds of students. These issues should have been addressed at design review or during construction.



Figure 3: Durability and Sustainability issues on exterior insulation

- (iv) In interviews with the IRD Vertical Structures team lead, he reported that they used no formal submittal review and approval process. The contractor’s QA plans address the role of submittals in quality assurance on a project.
- (v) During a field visit to the Faryab PTTC project, the administration reported that despite the final certificate, there were quality issues including leakage of gutters, peeling paint and poorly sealed insulation joints that had not been resolved prior to certificate being signed and issued (see Annex XV). Certificates of final completion were issued on one CHEF project which still had outstanding issues – see Question 3 observations.

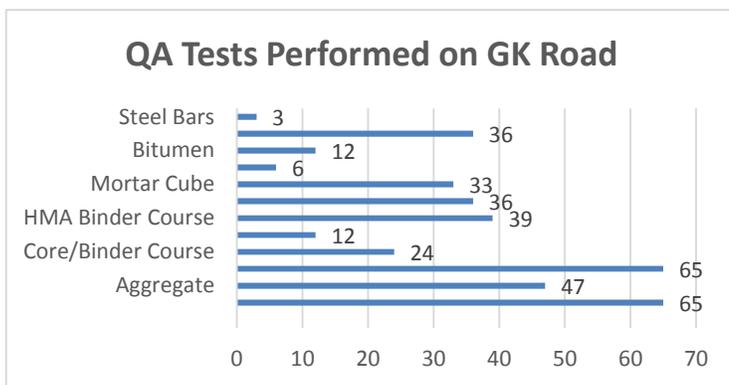


Figure 4: QA Tests Performed on GK Road

b. The Gardez-Khost (GK) Road Project observations

The EQUALS contract and subsequent job orders specified the total number of tests performed as one of the project deliverables. IRD’s progress reports indicate that the firm attained or exceeded the number of tests that were required in the job order scopes of work,

⁵“Section 3.2h: Review submittal register, and check/review/approve items (materials, fittings, fixtures, equipment) to be submitted by IOM and/or its construction contractors for incorporation into the project. Review, check and approve items to be “Pre-selected” by IOM for inclusion in the project.”

thereby meeting this part of the performance requirement (Figure). However, the project's email correspondence and the evaluation team's discussions with USAID engineers identified complaints about how most of the test data were simply reported in their raw form with minimal analysis. This deprived USAID of the opportunity to identify each contract's performance and know in which direction this was trending over the life of the project. Many of the reports provided the facts (or data) but made no clear recommendations for available or preferred USAID actions.

With the time available for the evaluation, the team was not able to verify how many tests were done per individual project. IRD however indicated that over 90% of all EQUALS tests performed were on the GK Road construction.

c. The Kandahar Helmand Power Project (KHPP) observations

IRD monitored the project's performance through daily visits by local engineers and bi-monthly visits from its Kabul-based expatriate engineers. IRD then produced and submitted weekly and other reports to USAID for information and all necessary follow-up. Hiring of qualified Afghan engineers and technicians was a major issue since there is a local human resource shortage and security concerns kept away many qualified people.

In the early stages of the project, IRD input added value to project output through their review of the B&V designs. For instance a design review by IRD caught and corrected a faulty and risky location of battery-storage space in an un-ventilated area at Breshna Kot, contrary to code requirements.

IRD however informed the evaluation team their reviews did not extend to the contractors' shop drawings or workshop fabrication processes, stating that this was not in their scope. Such an assertion by IRD appears contrary to the guidelines in their QA plan and EQUALS SOW. In the field, not reviewing the shop drawings may have contributed to sub-standard products and poor workmanship, as in a tower that collapsed during installation at Durai Junction, resulting in a four months' delay to the project. IRD believes a review of the shop drawings may have been able to identify this shortcoming before tower erection started.

Regarding off-site fabrication, IRD's QA and inspection Scope of Work did not include visiting production facilities outside of Afghanistan for Factory Acceptance Tests (FAT). This rendered it difficult for the contractor to independently verify the manufacturing quality of the project's imported items.

While IRD performed design reviews, there was no provision in the EQUALS contract for constructability, usability and sustainability reviews of the designs. One of such reviews may have been able to show that new designs at Breshna Kot did not provide for a bathroom and rest area for the overnight attendants. These workers are back to using the old facility initially slated for demolition.

The contractor's performance on KHPP was affected by multiple local security incidents. These incidents caused intermittent delays of up to one week each at various locations due to APPF lockdowns.

Evaluation Question 2 - Capacity Building of GIRoA

How effective was EQUALS (IRD) at building the capacity of the Afghan government to independently operate and maintain infrastructure, plan and implement policy, manage infrastructure projects, and recover costs of operation and accounting?

Findings & Observations:

Only one of the four evaluated projects, KHPP, had a training component. Because of this limitation, the evaluation team could not make a determination on the overall effectiveness of the EQUALS project on GIRoA's ability to independently perform as required in the evaluation question. The findings and observations made here therefore refer more to how the four projects contributed to building GIRoA's capacity. It is necessary to mention here that there were other activities under EQUALS that directly addressed the issue of GIRoA capacity building, including training.

"No idea, as we were not involved" – General Director for Operation & Maintenance, Directorate of Public Works (DPW), Gardez-Khost. When asked about EQUALS building the capacity of DPW employees.

During interviews with IRD, the firm observed that there was little project management involvement from GIRoA on the four EQUALS projects, a fact which was confirmed by the team's direct observations during the evaluation, as noted below.

a. Kandahar Helmand Power Project (KHPP) observations

The main beneficiary of the KHPP project was DABS, with its most direct involvement on the EQUALS project being mostly through training. This training was organized for both operators and managers. At the request of USAID, IRD organized additional training to supplement what had been offered to DABS by Black & Veatch. To ensure relevance of the curriculum and topics covered, this training was developed in conjunction with DABS management. DABS selected the course participants and was involved in determining the training curriculum. The training courses in South Korea and India lasted 4 days each, which DABS considered compressed and rushed. Feedback from DABS and EQUALS-IRD staff indicates that partly because of this tempo, trainees did not fully benefit from the training. Even after the training from South Korea and India, DABS operators are reported to have had a hard time switching from the old analog to the new digital equipment, even with the new training. Another constraint that came up during training was language barriers, with IRD noting in our interviews that this greatly impeded trainee participation and the project's effectiveness. Having that training on site would have allowed more employees to participate and made it possible to lower training to a slower and more acceptable pace.

Training on generators was done locally and lasted one week. In this case language was not as big an issue, in part because the instructors had better control of the course's pace. IRD and DABS observed that could easily adapt and pace the local courses to match needs and responses on the ground. Trainees came from the local DABS office and other DABS offices nationwide, including Kabul, Helmand and Uruzgan. DABS has minimal women on its technical staff, hence there were no women among any of the trainees.

Localized training however brought with it another major problem – absenteeism. Running over 50% at times, absenteeism was a major problem on many courses except for those attended by out-of-town employees. DABS attributed this to the training schedule conflicting with the operators' work cycle of one day on duty followed by two days off. Workers were reluctant to incur travel and other related costs on their scheduled days off. Annex XVI shows the two differing attendance scenarios.

DABS staff were not directly involved in the equipment design or installation through EQUALS, only in its commissioning. On the contrary, DABS had been directly involved in the rehabilitation of Kajaki Unit 2 by Siemens in 2006. As a result of which DABS staff were later able to independently rehabilitate Unit 3.

DABS uses about 100,000 liters (about \$150,000) of diesel a day for power generation. Currently USAID and USACE are jointly meeting this cost, but by Sep 2015 DABS should meet the entire cost. The DABS Kandahar zone director doubted this could happen. Of the 33 MW of power generated at Kajaki dam, DABS is only able to collect payment from the Lashkar Gar and Breshna Kot area consumers, representing about 60% of generated power. The organization gets no revenue from the Kajaki dam to Durai Junction consumers because of prevailing security problems and threats.

Project design had both training and spare parts components. Black & Veatch arranged training for DABS employees outside of Afghanistan in India and South Korea. At the request of USAID, IRD organized additional continuation training jointly with DABS, adapted to DABS needs, thus ensuring all topics were relevant. IRD is also focusing on training of trainers, which will have a multiplier effect on knowledge transfer. Language barriers were observed during the training.

Positive impacts of project:

The number of local people employed at Durai Junction increased by 15 since the station was energized and put into operation. The local DABS employees reported that they were now receiving better service with weekly power outages in their homes reducing from five a week to one per week.

Observations from the GK project

USAID, the MOPW and the project's Implementing Partner, MECC, reported minimal involvement from GIRoA's Directorate of Public Works in the implementation of the GK project. MOPW reported that they received reports on the construction from USAID after the fact. The provincial Directorate of Public Works also confirmed that there was little participation at the local level.

All together, the local Afghans working on EQUALS had their capacity built by working on the project. This in itself is a positive contribution to the country's national capacity, though it may not directly contribute to GIRoA's capacity.

MECC staff observed that one of the biggest challenges on the project was dealing with the local community whose leadership continually came up with self-serving demands such as seeking employment in skilled positions for unqualified residents, making demands on hiring and utilizing unsuitable locally owned equipment. One result of such demands is that often times road works had to be inefficiently subdivided and subcontracted based on the local tribe in the immediate vicinity of the section. MECC believes some of the delays arising from such demands could have been averted with more GIRoA involvement, and USAID's pre-conditioning of such involvement. In another show of lack of government involvement, MOPW withdrew a contractor for an already budgeted for and awarded maintenance contract after learning that USAID was awarding a maintenance contract for the same section to MECC.

b. Vertical Structures projects (FOHE and CHEF) observations

While GIRoA was involved in the initial discussions that resulted in the design of the CHEF and FOHE projects, there was minimal involvement of GIRoA engineers in the projects' construction thereafter. The Director of FOHE at Balkh University reported that their engineer participated in some meetings. For both projects, the discussions in which the universities got involved were mostly of an administrative nature with the schools represented by their administration. The Implementing Partner for CHEF, the IOM, stated that they kept their GIRoA counterparts involved in the process through regular updates.

Evaluation Question 3 – Contractor's Monitoring & Inspection Services

How effective was EQUALS (IRD) at monitoring the construction projects implemented by other contractors and grantees through site visits by qualified engineers? Monitoring included:

- a. Regular Inspections*
- b. Punch List Verification Inspection*
- c. Final Inspection and Acceptance*
- d. Final Warranty Inspection*

The engineering monitors checked the IPs' work to ensure compliance with the approved Quality Control (QC) Plan, Quality Assurance (QA) Plan, and predetermined technical standards and construction schedules.

Findings & Observations:

IRD stated in our interviews with them that they had full-time inspectors at all project sites. Interviews with the other Implementing Partners on CHEF and FOHE however indicated that IRD local field staff were not present full time on their projects. These IPs generally had a negative view of IRD's services. On the contrary, the IPs on KHPP and GK road reported that IRD staff on their projects were present most of the time. These IPs generally had a positive view of IRD's services.

The present form of EQUALS' contract requires IRD to report any site issues that may impact on the quality of the work being implemented to USAID. USAID then notifies the Implementing Partner, who in turn follows up with the necessary corrective action(s). Close to all IPs viewed this chain of communication as a major contributor to some of the delays in resolving urgent project implementation issues. The evaluation team however notes that IRD's QA plans give their QA engineers ample authority to advise the construction staff whenever defective work was observed.

a. Gardez-Khost Road (GK) observations

The local GK road contracting firm MECC stated in our interviews that most IRD expat staff that participated in their project were helpful. MECC singled out one IRD QA Manager as an exemplary addition to the team as he imparted a lot of new skills to the MECC staff. The contractor observed, however that while the local IRD staff may have been academically qualified, they were generally less experienced than MECC staff and added minimal value in both QA supervision and knowledge transfer. IRD's QA staff were generally present 5 or more hours every day. While MECC did not do the initial road design (it was done by LBG), they prepared shop drawings which were reviewed by IRD, again to their satisfaction.

USAID's engineers on the other hand expressed major concerns with IRD's services, which was evidenced further by a trail of earlier e-mail communication on the issue. One of USAID's main concerns was that the reporting from IRD was not technically adequate and there were continuing issues with report formatting and analysis of MECC's test results.

GIRoA's provincial Directorate of Public Works (DPW) reported in their questionnaire responses that they were not involved in the project's design or construction, and were not in position to comment on IRD's performance.

“Actually the IRD staff who were appointed as QA in project site had little experience; most of them were newly graduated engineers and it was impossible for them to train or work for capacity building of the project staff” – Contractor, Faryab PTTC

b. Kandahar Helmand Power Project (KHPP) observations

IRD monitored performance through daily visits by local engineers and bi-monthly visits from expatriate engineers and submitted weekly reports to USAID. In general, IRD's input added value to project output through their review of the B&V designs. For instance, IRD's reviews caught and led to the correction of the faulty and risky location of battery-storage space in an un-ventilated area.

When it came to staffing, however, the hiring of qualified engineers and technicians was a major obstacle. There is a local human resource shortage in Afghanistan and security concerns also keep away many qualified applicants. Another obstacle to IRD's monitoring and inspection responsibilities was that the EQUALS QA Scope of Work does not allow for visiting production facilities outside of Afghanistan for Factory Acceptance Tests (FAT). While this may be appropriate for routine brick and mortar construction, it becomes a major obstacle for technologically complex projects of KHPP's nature when the quality of imported items cannot be independently verified. The incident of the defective steel tower has been mentioned elsewhere in this report. IRD's performance on the KHPP project was also impacted by the multiple local security incidents. These caused intermittent delays of up to one week each at various locations due to Afghanistan Public Protection Force (APPF) lockdowns.

c. Construction of Health & Educational Facilities (CHEF) and Faculty of Higher Education (FOHE) project observations

According to the IPs, IRD field engineers monitoring the CHEF and FOHE projects offered little help in QC efforts and developed a "gotcha" attitude. They appeared to focus more on taking pictures for inclusion in their reports than in getting a good product. During a field visit to the Faryab PTTC project, the evaluation team observed that following a warranty inspection made in February 2014, a final certificate was signed by all parties (GIRoA, USAID, IRD, IOM & Contractors) and retention money was released. Despite the signed final certificate, the school administration complained that about 10% of required furniture was never delivered as per the summary below. See Annex XV for details.

The school administration noted that they signed off on the certificate to facilitate project closure requirements as putting together the team for the final inspection had been a challenge and doing it again for an additional inspection would be even more challenging. In their view they had a verbal commitment that would see the project completed. The CHEF IP, IOM, was to look into this incident, but they believed the school may have received credit for these items. The evaluation team did not have the time to fully pursue this issue and makes a recommendation for follow-up. In addition, despite the final certificate, there were unresolved quality issues including leakage of gutters, peeling paint and poorly sealed insulation joints.

Table 2: List of paid off items that are still undelivered - CHEF Faryab PTTC Project

S/N	Item Description	SOW Quantity	Supplied Quantity	Deficit	Location
1	Bed Sheets	104	103	1	Male Dormitory
2	Side table	1	0	1	Guard House
3	Office Table	1	0	1	Admin Building
4	Office Table	1	0	1	Admin Building
5	Rolling Chair	2	0	2	Admin Building
6	Cupboard	2	0	2	Admin Building
7	Chair for table	4	2	2	Female Dormitory
8	Chair	1	0	1	Lab Building
Total		116	105	11	

Evaluation Question 4 – Improving the Performance of Contractors

Question:

How effective was EQUALS (IRD) in improving the performance of the construction contractors on Energy, Transportation and Vertical Structures programs?

Findings & Observations:

There is no explicit requirement in IRD’s contract or job order scopes of work for the organization to build the capacity or improve the performance of (local) contractors. It is therefore not surprising that EQUALS does not specifically make improving contractor performance an objective in any of the four evaluated projects. Providing proper QA oversight would however implicitly improve the performance of these contractors. During the evaluation survey, more than half of the IPs and stakeholders interviewed were not completely satisfied with the quality of work IRD field engineers provided in this respect.

a. Gardez-Khost road project observations

MECC is a local firm that first got involved on G-K Road as sub-contractors to the Louis Berger Group/Black & Veatch joint venture, after the contract to an Indian sub-contracting firm was terminated. In 2012, MECC was hired by USAID to pave sections 2A and 2B of the GK road, totaling 13 km, after USAID terminated LBG’s contract. The firm was also involved in maintenance and snow-removal work directly under a USAID contract starting August 2012.

As far as EQUALS’s improving the performance of contractors is concerned, MECC singled out one IRD QA Manager as an exemplary addition to the roads team who imparted a lot of new skills to the MECC team. But MECC also observed that the local IRD staff were generally less experienced than the

construction contractor staff. Because of this disparity in field experience the MECC staff reportedly received minimal QA knowledge transfer from IRD.

Despite MECC's lack of capacity in contract management, IRD's staff on the GK road did not provide capacity building services to enhance MECC's contract management. The GK road project had a requirement that MECC use Primavera P6 for scheduling monitoring and control, a requirement that the contractor confessed they found very challenging. MECC would have benefited from EQUALS' Primavera training sessions that IRD gave to Ministry personnel as an added opportunity to train local contractors. In the course of the project, MECC made recommendations on building capacity of local contractors to USAID; IRD staff stated they would share a copy of this report with the evaluation team but the team left country before it was obtained.

Close to 90% of all IRD's lab tests were reported to have been on the GK road. Most of IRD's test result data were presented to USAID in raw form, with no analysis that could be used to inform of contractor's changes in performance.

b. KHPP project observations:

Because Black & Veatch was the prime contractor on KHPP, IRD had no interaction with local contractors on the project. There was no feedback from the KHPP project since Black & Veatch had already demobilized by the time this evaluation was conducted.

c. Vertical Structures project observations:

The IPs and contractors on FOHE and CHEF reported that IRD field staff offered little help in QC efforts. According to them, IRD's engineers were more interested in visiting the job sites to take pictures for reporting purposes than to help the contractor deliver a quality product. Based on field work observations, a break-down of the punch-list items, and interviews with IRD vertical structures team, the local FOHE & CHEF contractors lacked skills primarily in plumbing and electrical work.

Evaluation Question 5 – Program Design & Implementation by USAID

Evaluate the EQUALS program's design approach by USAID; the discussion should include an assessment of the project's objectives, approach to implementation, and the sustainability of individual elements after the projects end.

Findings & Observations:

Project design:

The EQUALS project falls under Assistance Objective 6 (AO6) - Expanded sustainable physical infrastructure - of the USAID Afghanistan's Infrastructure, Engineering and Energy Results Framework. The project contributes to the following Intermediate Results:

- IR 6.1: More efficient use of expanded water resources
- IR 6.2: Improved management of an expanded network of roads
- IR 6.3: Better managed supply of electricity to a larger number of consumers
- IR 6.4: An expanded and better managed network of vertical structures to support goals in health care, education, and governance

The EQUALS lower level intermediate results (Sub-IR) are given in Annex VI, page 78. Based on the indicated Intermediate Results, and according to the PAD, USAID designed the EQUALS project to meet the following objectives:

- i. Providing QA services
- ii. Engineering support and technical assistance
- iii. Information management & capacity building
- iv. Logistical support

Since its inception in 2011, EQUALS has supported over \$1 billion worth of engineering work spread out in over seventy different activities. The four specific projects evaluated were designed to contribute to the following AO6 Intermediate Results:

- Gardex-Khost Road project - IR 6.2
- Kandahar Helmand Power Project - IR 6.3
- Vertical Structures: CHEF & FOHE projects - IR 6.4

The following lower tier intermediate results are adequately covered in the EQUALS project design:

- Sub-IR 6.2.1: Expanded construction and rehabilitation
- Sub-IR 6.3.2: Generated supply of electricity increased and maintained (for now)
- Sub-IR 6.3.3: Improved electricity transmission and distribution systems
- Sub-IR 6.4.1: New and rehabilitated facilities to support health care, education and governance

On the other hand, the project design for the evaluated projects did not adequately cater for the following lower tier intermediate results:

- Sub-IR 6.2.2: Better private sector and GIRoA institutional capacity in roads operations and maintenance
- Sub-IR 6.3.1: Enhanced energy sector governance and management
- Sub-IR 6.4.2: Enhanced capacity in public and private sector to build, operate and maintain facilities

EQUALS and all projects supervised under it were off-budget USG assistance, with USAID paying IRD directly. Though USAID expected IRD to perform capacity building, this was not explicitly specified in

the scopes of work for the four evaluated projects. IRD reported that there was no project management involvement from GIRoA on any of the EQUALS projects.

The Project Management Plan developed by IRD uses a combination of output and outcome indicators to track the project’s performance (see Table 3). The complete list of IRD’s indicators appears in Annex V.

Table 3: IRD’s Key Performance Indicators, CHEF project

Key Performance Indicators for JO-04	Task Owner	JO-04 Required Deliverables	JO-04 Completed Deliverables
Construction of Health and Educational Facilities Program	USAID		
Number of review reports on architectural and engineering drawings and specs		0	0
Number of site inspections (monitoring, substantial completion, punch list verification, final, warranty etc.) and reports completed by EQUALS VS engineers		2217	1822 ¹

This list of indicators focuses on criteria such as number of inspections made, number of trips reviewed, etc. The EQUALS-IRD indicators differ from the indicators in the USAID 2011 – 2015 post performance project management plan, which are shown in Annex VI.

Project implementation and sustainability:

When reporting on the performance indicators in the quarterly reports, IRD provides the indicators in isolation with no discussion of trend and how it relates to project objectives. Showing whether the trend is going up or down will let the user know whether the item being monitored is improving or not, and would allow the opportunity to interpret the programmatic significance of trends.

a. Vertical Structures – CHEF & FOHE projects observations

While IRD management believe they do not have the capacity to directly intervene with the contractor when the situation warrants, the project’s QA plans specifically address this condition and gives them that ability. IRD observed that they did not have direct access to the contractors’ contracts, any information they needed was provided to them on as need basis when requested. The faculties of higher education as end-users are quite often not briefed about how issues on their projects are being addressed. While USAID and IRD informed us the order for provision of temporary tents for the students had been abandoned, the Directors in Faryab and Jawzjan were still expecting delivery of the tents, with one of them even grading the lot for erecting the tents. Although a complete evacuation of the buildings was difficult, all schools stated they were ready for a phased handover so the contractors can complete one floor at a time. Subsequent revisions to allow for provision of transformers and change-over switches

have been de-scoped in the completion contracts just awarded to Perez. According to IRD, no constructability or sustainability reviews of any designs was performed prior to construction. Female student enrollment is almost 50% in the FOHE schools visited (45% in Faryab, 48% in Jawzjan, 55% in Balkh).

IRD observed that poor performance of a number of contractors on the USACE/FOHE project led to some contracts getting terminated. Furthermore, incomplete or unclear building designs led to time delays (IRD-EQUALS was not involved in design QA on VS). There were also significant teamwork issues which resulted in poor relations between local and international workers. End-users were not always fully involved in the project's design and implementation.

b. KHPP project observations

There was no end-user participation in constructability and operability assessments prior to implementation. A post-occupancy evaluation report revealed inadequate funding for generator fuel. Faulty or defective materials contributed to project delays, for example: Black & Veatch tower pylons. Moreover, IRD's QA Scope of Work did not include visiting production facilities outside Afghanistan for Factory Acceptance Tests (FAT), hence quality of imported items could not be independently verified.

Observations based on interviews with DABS revealed that DABS' involvement on the EQUALS project was mostly in training for both operators and managers. Furthermore, DABS selected the course participants and was involved in determining the training curriculum. The training courses in South Korea and India lasted 4 days each, which DABS considered too short and rushed. Having that training on site would have allowed more people to attend. DABS staff were not directly involved in the equipment design or installation through EQUALS, only in its commissioning. On the contrary, DABS had been directly involved in the rehabilitation of Kajaki Unit 2 by Siemens in 2006. As a result of this involvement, DABS staff were later able to independently rehabilitate Unit 3. Absenteeism was a major problem on all courses except for those attended by out-of-town employees. Operators had a hard time switching from the old analog gear to the new digital equipment.

Positive impacts of the KHPP project included economic and social benefits from completed projects as well as the KHPP project spare parts program. Training components built capacity of local Afghans. The number of local people employed at Durai Junction has increased by 15 since the station was energized and put into operation. Moreover, all 15 new trainees have received training under EQUALS and local staff confirmed frequency of power outages at their homes reduced from approximately 5 days a week with no power to one day a week.

Observations based on the KHPP project showed that project design had both training and spare parts components and that Black & Veatch arranged training for DABS employees outside of Afghanistan and in Kandahar. At the request of USAID, IRD organized additional continuation training jointly with

DABS, adapted to DABS needs, thus ensuring all topics were relevant. Furthermore, observations showed that IRD is also focusing on training of trainers, which is anticipated to have a multiplier effect on knowledge transfer. The implementing partner, DABS, was involved in commissioning the newly installed equipment. Language barriers were observed during the training. Hiring of qualified engineers and technicians was a major issue – there is a local human resource shortage and security concerns kept away many qualified people. Due to the composition of DABS technical staff, 100% of all people trained under KHPP are men (i.e. no women benefitted from the training). Dependence on the prime contractor B&V for air transport to remote sites at the beginning of the project affected IRD’s efficiency and independence as QA providers. Local Implementing Partner DABS was not fully made part of the design process and played no role in design reviews. Also, new designs did not provide for a bathroom and rest area for the overnight attendants, and they are back to using the old facility which was initially slated to be demolished. Training on new equipment did not start until after it was commissioned. The lack of overlap created a period of uncertainty and confusion in the operating rooms during the switch-over period. Multiple security incidents caused intermittent delays of up to one week each at various locations due to APPF lockdowns. One of the seven new generator units blew during the warranty period and is awaiting the manufacturer’s action. Understanding is that it could be due to adulterated diesel, or being operated by staff that had not been trained by the manufacturer.

b. Gardez-Khost road project observations

Observations based on interviews with the local GK road contracting firm, MECC showed that there was little involvement or interest in the project from GIRoA to save for public events like ribbon-cutting. Furthermore, no engineer from the provincial Directorate of Public Works (DPW) was assigned to the project. MECC believes some of the issues causing delays could have been averted with more GIRoA involvement, and USAID’s pre-conditioning of such involvement. MECC has worked with several donors in the infrastructure sector, and they single out participation by USAID as the most exemplary and helpful “despite our on-site arguments.” MECC observed that they lacked capacity in contract management and IRD’s staff on the GK road did not enhance this in a form of capacity building. Project had a requirement that MECC use Primavera P6 for scheduling monitoring and control, which the contractor found very challenging. MECC would have benefited from EQUALS using the primavera training sessions that IRD gave to Ministry personnel as an opportunity to also train local contractors. In the course of the project, MECC made recommendations on building capacity of local contractors to USAID, a copy of this report was to be shared with the evaluation team (team left before report was obtained).

IV. CONCLUSIONS

Evaluation Question 1 - Contractor’s Quality Assurance Services

IRD provided most of the quality assurance services called for in their scope of work, and there is general satisfaction with input from most of the expatriate personnel. The quality of these services were however at times compromised by a general deficiency – both real and perceived – in the experience and commitment of some of the local field staff.

Test data as presented in the raw form could not easily be used by USAID to inform their decisions. IRD prepared good QA plans, but did not always follow the recommended process guidelines, which contributed to some of the indicated on-going delays on the projects.

The majority opinion of the Implementing Partners and stakeholders interviewed was that the IRD field staff were not always proactive enough and often appeared more interested in photographing defective work for the record than in preventing it from happening in the first case. IRD sometimes made recommendations but did not necessarily follow through to ensure closure.

Evaluation Question 2 - Capacity Building of GIRoA

It is clear from the job order scopes of work that the EQUALS project had a capacity building component. The bulk of this capacity building, however was at the government ministries and departments, which did not fall under the four projects this team was requested to evaluate.

Of the four projects evaluated, only KHPP had a capacity building component as a direct requirement; GK road, CHEF and FOHE have no such requirement. The scope calls for IRD to provide selective training and capacity building for some KHPP staff.

The training offered to DABS could have been more effective if it had taken into consideration that time allotted to the out-of-country training was inadequate given the depth of the desired curriculum. While time for in-country training was adequate, absenteeism of the participants was a factor that negated its effectiveness. Training local staff without the implementing partner addressing trainees' conditions of service was partially responsible for both low attendance and attrition of trainees.

There was inadequate GIRoA technical participation in many of the projects until it came to commissioning or handover. More technical involvement would have provided for smoother and earlier project completions, especially on FOHE and CHEF projects. Participation of GIRoA engineers on the GK road would also have provided a major capacity building opportunity for the Directorate of Public Works.

Evaluation Question 3 – Contractor's Monitoring & Inspection Services

Through its quality assurance plans, scopes of work and other documents, the EQUALS project has in place adequate procedures for inspections and monitoring of the quality assurance process. On the KHPP and GK projects, IRD performed and at times exceeded the number of inspections required in their SOW. They also provided the number of staff called for in the contract.

However, there is room for improvement in the quality and timeliness of their services, especially on the CHEF and FOHE projects. This was demonstrated by the signing off on items that were not delivered on CHEF, other quality incidents on the two projects, and in our discussions with the stakeholders.

The IRD staff on the ground were not adequately knowledgeable about, and did not always implement, the procedures and safeguards outlined in their QA plans. Examples include not using the submittal review and approval process, and lack of knowledge about their responsibility to immediately alert the contractors if they were doing something wrong on the job. One major reason for the perceived low quality of service on EQUALS was the relatively limited field experience of some of IRD's local field staff.

Implementing partners, including IRD, did not always comprehend the contractual implications of their actions in the completion and hand-over of some projects. On at least one occasion the evaluation team noted (with no knowledge of how often this may have occurred elsewhere) that payment was made for goods and services that were not delivered.

Evaluation Question 4 – Improving the Performance of Contractors

IRD was not expressly requested in its SOW to improve the performance of local contractors, any such expectations were only implied. Minimal training or capacity building was offered by IRD to the contractors, especially on the vertical structures projects. One major reason for the perceived low quality of service on EQUALS was the relative field in-experience of many of IRD's field staff, who at times were less experienced than the contractors they were supposed to monitor. In their interaction with the local contractors, there were marked differences in technical know-how between the expatriate and local engineering staff.

Evaluation Question 5 – Program Design & Implementation by USAID

While USAID set the right objectives for the EQUALS project, the scope that was eventually specified and the design that followed did not lead to meeting these objectives. One reason for this short-coming is that IRD's selected project's indicators do not cover all the project's stated objectives. The indicators suggested in USAID's PMP are more appropriate.

Given the uniqueness and dynamism of the construction and security environments in Afghanistan, USAID staff have been generally diligent in following up on the implementation of the several projects under EQUALS. Their interventions have on many occasions been critical in keeping a project this complex on the right course.

Implementing partners and contractors on CHEF misjudged the contractual implications of their actions in signing off on the completion documents, and this may have led to USAID paying for goods and services which were not delivered.

Completion of the FOHE projects has been hampered by inadequate communication between USAID, GIROA and IRD.

Since the issue of student accommodation remains unresolved, the just-awarded contracts for completion of FOHE facilities will likely expire before the projects are completed or, even worse, before contractor Perez can move onto site. Such an occurrence is bound to impact on EQUALS' LOE and budget.

Many of the complaints and short-comings raised about project design and implementation may not have arisen had there been more involvement by GIROA engineers in both design and implementation of the projects (examples: FOHE, CHEF). Sustainability of the QA services is fully dependent on GIROA's involvement. By supporting schools with large female enrollments, the FOHE project is likely to have a major impact on the quality of life of the Afghan women.

Overall Conclusions

Based on the observations and conclusions from all the questions, the team arrived at the below conclusions regarding the stated objectives of this performance evaluation.

Evaluation Objective 1:

Determine if the technical assistance provided by USAID, through IRD, was appropriate to overcome the challenges of increasing GIROA capacity to implement the projects.

While the technical assistance provided through IRD was helpful, USAID did not leverage it enough to maximize the impact the project could have had on increasing GIROA's ability to implement the projects. For example, GIROA could have been required to embed Afghan counter-parts to some of the key positions on the EQUALS projects.

Evaluation Objective 2:

Validate that the four infrastructure projects meet international building codes through QA/QC as performed by IRD as required by USAID/Afghanistan Mission Order 302.03 Application of Engineering Standards for Contracts and Grants to Construct Buildings and other Complex Infrastructure.

Save for some electrical work on the vertical structures project that has been identified and is in the process of rectification, the projects supervised by IRD meet the appropriate international and where available local building codes and standards.

V. RECOMMENDATIONS

The evaluation team makes the following recommendations, organized by evaluation question.

Contractor's Quality Assurance Services

- IRD team leaders should ensure all their field personnel are fully conversant with the QA plans and what is required of them to assure the quality of the construction process. *[IRD action]*
- Test data should be analyzed and presented in a format that enables tracking performance of the QA process on the project and the contractor (e.g. provide pass/fail rate, trends, deviations, etc.). *[IRD action]*
- In light of the performance of the field personnel, review the job descriptions for the technical field positions with emphasis on the appropriate qualifications and experience. *[IRD action, with USAID approval]*
- IRD reviews all existing field positions in line with the above job descriptions review and only retains those that qualify. *[IRD action]*
- Put additional effort into regional recruitment to counter the expressed local shortage of qualified engineers. *[IRD action]*.
- IRD HQs should enforce closer monitoring and supervision of its field staff. *[IRD action]*
- Reporting:
 - Prepare and use standardized templates for the field engineers' daily and weekly field reports, attach the daily reports to the weekly report when submitted to USAID. Modify report formats to suit type of construction. *[IRD action]*
 - Adopt the format used on the GK bi-weekly reports on all VS projects to track the outstanding issue(s). *[IRD action]*
- Review VS insulation for durability and sustainability under the anticipated service conditions i.e. college environment with heavy pedestrian traffic. *[IRD action]*

Capacity Building of GIRoA

- USAID should take every engineering project it implements as an opportunity for building the capacity of local Afghan staff, and integrate this requirement into the project scope. *[USAID action]*
- To allow for ample time to acclimatize to their equipment, project design should place additional effort on providing capacity building prior to or alongside the equipment installation. *[USAID action]* (Comment: USAID has made this adjustment in the design of its upcoming ESP project. A copy of the PAD was provided to the evaluation team).

- In capacity building, on-the-job-training should be preferred over class-room training. *[USAID action] (Comment: USAID has made this adjustment in the design of its upcoming ESP project. A copy of the PAD was provided to the evaluation team).*
- Projects should be designed to have GIRoA employees embedded as under-studies with each expatriate that is hired for a skill that is intended to be passed over – this employee can later act as a trainer to his/her fellow employees. *[USAID & GIRoA action]* (Comment: USAID has made this adjustment in the design of its upcoming Road Sector Sustainability Project).
- USAID should discuss trainee attrition with GIRoA and discuss possible avenues for mandating employees to stay on. Possible scenarios include through letters of commitment or an incentive bonus (funded through contributions by both the trainee and government) only payable to the employee if he/she stays on for a specified period. *[USAID & GIRoA action]*

Contractor’s Monitoring & Inspection Services

- USAID should get an independent review of all completion certificates to ensure all goods and services called for in projects supervised through EQUALS were either delivered, de-scoped or received due credit back from the contractors. *[USAID action]*
- USAID’s contracting office should conduct a seminar for all its implementing partners involved in EQUALS (i.e. IRD, contractors and GIRoA) about close-out procedures for projects and the importance of ensuring that, with the exception of work that may have been de-scoped or properly credited, completion certificates ensure a perfect match the goods and services delivered on the projects to those in the original contract scope. *[USAID action]*
- While IRD does not have the contractual authority to direct work on the project, its staff should in accordance with the QA plans discuss urgent field observations with the contractor immediately and before leaving the site. This is especially important when its engineers observe issues on on-going work that may be later covered up. Both parties must be clear that these observations are not instructions. *[IRD & USAID action]*
- Additional recommendations on this item are covered under Question 1.

Improving the Performance of Contractors

- If USAID plans to have the contractor improve the performance of local contractors the scope of work should clearly state this requirement. *[USAID action]*
- If USAID plans to improve the performance of local contractors it should first call for a needs assessment of these firms. This ensures the project will be planning to impart the skills that are the most critical to the success of the project. *[USAID action]*

- Any training programs drawn up should include the deficient skills identified above in the curriculum. Such programs should feature on-the-job training as opposed to class-based training. *[IRD action]*
- IRD should recalibrate the responsibilities of its engineering staff to enhance training and knowledge transfer to local contractors. This should involve assigning one of the key personnel to specifically take on the training role. *[IRD action, with possible USAID approval]*
- IRD must hire experienced engineers in order for these to be able to train the contractor's - see also Question 1 recommendation. *[IRD action]*
- IRD should be required to copy contractors on any reports to USAID that contain items for which it wants or recommends contractor's urgent action. *[IRD & USAID action]*

Program Design & Implementation by USAID

- To ensure that the project meets primary objectives, the EQUALS project monitoring plan should be revised to include the indicators in the USAID PMP. In accordance with USAID guidelines,⁶ these performance indicators ought to meet seven criteria:
 - a. Direct
 - b. Objective
 - c. Adequate
 - d. Quantitative where possible
 - e. Disaggregated where appropriate
 - f. Practical
 - g. Reliable
- USAID should insist on having both constructability and sustainability reviews of all projects prior to proceeding to procurement. (Comment: In its follow-on programs USAID is already implementing this recommendation as part of its Lessons Learned)
- To ensure project sustainability, the reviews mentioned above must be attended by a competent technocrat from the GIRoA ministries or departments. (Comment: In its follow-on programs USAID is already implementing this recommendation as part of its Lessons Learned)
- Connection to the main grid supply is a major issue on the FOHE projects that USAID and GIRoA need to address as soon as possible. Both parties need to resolve issue of transformers and change-over switches. *[USAID & GIRoA action]*

⁶ADS 203.3.4.2

- To enhance communication, facilitate earlier completion of the projects, and foster a sense of ownership among the end-users, the project should have regular periodic (quarterly) reviews to which all parties are invited and major outstanding problems discussed and resolved. *[USAID & IRD action]*
- USAID’s contracting office should conduct a seminar for all its implementing partners involved in EQUALS (i.e. IRD, contractors and GIROA) about close-out procedures for projects and the importance of ensuring that, with the exception of work that may have been de-scoped or properly credited, completion certificates ensure a perfect match the goods and services delivered on the projects to those in the original contract scope. *[USAID action]*
- USAID has already implemented the following recommendations in the RSS/ESP projects:
 - h. USAID should ensure that projects that are required to build the capacity of local contractors must have this explicitly included in the contractor’s SOW. *[USAID action]*
 - i. Whenever applicable, project designs should select on-the-job training over class-room instruction or workshops/seminars as a form of capacity building. *[USAID action]*
 - j. As much as possible, capacity building on projects should be timed to start before construction, so that equipment operators and managers become part of the installation and testing/commissioning exercises. On top of giving them a better sense of ownership, it will also give them a better ability to run the equipment after it is handed over to them. *[USAID action]*

VI. LESSONS LEARNED (EVALUATION QUESTION 6)

Lessons learned in this section were derived by looking at the entire project cycle, based on the ten knowledge areas⁷ of the EQUALS project.

i. Project Integration

In order to effectively bring together all aspects of the project, i.e. Engineering-Procurement-Construction, USAID made sure that GIROA’s politicians and policy makers were involved in the design and implementation of EQUALS. They however also need to ensure that the host government’s technocrats are brought into the process early so they play an active role in reviews of a project’s design, constructability and sustainability. This has the additional benefit of generating a spirit of ownership in the ultimate end-users. The inclusion of a spare parts program component in the KHPP project design facilitated the program’s sustainability and should be emulated on similar projects.

ii. Management of Project Scope

⁷Ten knowledge areas based on the “Project Management Body of Knowledge” (PMBOK) of the Project Management Institute, PMI.

The standard USAID practice of awarding a general contract then using job orders or their modifications for the specific activities was a strong tool that afforded the Mission the flexibility it needed to manage infrastructure projects under the challenging conditions evident in Afghanistan construction. The process also provided for easy accountability and audits.

iii. Management of Project Schedule

The EQUALS schedule was dependent upon the schedules of the projects for which it provided QA services. At the same time, proper oversight of those projects helps ensure EQUALS stays within its scheduled timeline. This symbiotic relationship will continue to be the case for all future projects and further justifies the importance of selecting a good QA team.

iv. Project Cost

There are many ways, direct and indirect, through which project costs get affected. In the case of EQUALS, non-EQUALS performers like the local contractors caused stretched-out construction periods which have resulted in direct cost increases related to changes in IRD's Level of Effort. All cost control efforts should therefore monitor the immediate project as well as all related activities, including those being run by non-Implementing Partners.

v. Project Quality:

The EQUALS Quality Assurance plans were well written and developed. There however were times when they were not properly implemented, thereby impacting the schedules and cost of projects being executed. Ensuring that QA plans are not only developed but also followed needs to be a key responsibility assigned to the contractor's QA managers. Projects with complex systems (like KHPP was) should provide for the QA contractor to provide independent Factory Acceptance Testing of off-site components.

vi. Human Resources:

Qualified and experienced local talent was scarce. Future projects need to actively look at more thorough capacity building, regional recruitment, and greater oversight of local staff by the expatriate staff. Project needs to have a position dedicated to knowledge transfer, training and capacity building. This is a responsibility that could be assigned to one of the key personnel. Capacity building will be greatly enhanced if GIRoA embeds under-studies with the expatriates, and a mechanism is worked out for technicians to track installation and commissioning of equipment they will be operating.

vii. Communication:

Lapses in sharing information created ill-feelings among some stakeholders and end-users. Ensuring each project gets an open periodic (quarterly or bi-annual) review will give all participants the opportunity to air concerns and work together for their resolution.

viii. Project Risk:

IRD's security plans appropriately planned for and managed the biggest risk on this project – security. There however are other risks that were not adequately anticipated and which end up having pronounced

effects on the successful implementation of the project. A good example of this is the lack of technically qualified engineers locally. The lesson learned is that the risk management plan should explore all risks likely on the project and prepare to mitigate those with the most impact.

ix. Procurement:

IRD provided QA services and had minimal involvement in the procurement of goods and services, including bidding & contracting.

x. Stakeholder Management:

Inadequate involvement of all the stake-holders, especially from GIROA, led to delays in resolving issues during project implementation. The stakeholders' technocrats should have been involved in reviews of the project's design, constructability and sustainability. Not all stakeholders had access to information on key aspects of the project, and this created ill-feelings especially among a number of GIROA officials. It is recommended the project should get a quarterly or bi-annual review session at which all participants are represented and can openly discuss any concerns. This can help in managing and balancing the interests and expectations of all stakeholders.

VII. RECOMMENDED CORRECTIVE ACTIONS (EVALUATION QUESTION 7)

In addition to those recommendations presented above, the following summarizes the principal corrective actions needed for the remainder of the life of EQUALS:

- An independent review of punch lists and final certificates to ensure all goods and services billed on completed works were delivered.
- A strengthening of IRD's cadre of local engineers and QA managers.
- Organization of quarterly (or bi-annual) project review sessions in which all stakeholders participate.
- Sensitize IRD's QA staff to highlight importance of compliance with submittal, close-out and site quality enforcement processes in the plans.
- Conduct a sustainability review of the projects with the participation of GIROA technocrats. Conduct a mandatory seminar on project close-out procedures for all EQUALS implementing partners and stakeholders (i.e. IRD, contractors and GIROA).

ANNEX I EVALUATION SCOPE OF WORK

OFFICE OF ECONOMIC GROWTH AND INFRASTRUCTURE (OEGI) / OFFICE OF PROGRAM AND PROJECT DEVELOPMENT (OPPD)

STATEMENT OF WORK: PERFORMANCE EVALUATION

ENGINEERING QUALITY ASSURANCE AND LOGISTICAL SUPPORT (EQUALS) 308-C-00-11-00512-00

I. PROJECT INFORMATION

Project Name:	Engineering Quality Assurance and Logistical Support
Implementing Partner:	International Relief and Development, Inc.
Contract #:	308-C-00-11-00512-00
Agreement Value:	\$96,807,645 (Obligated as of 2013NOV: US\$84,345,493)
Mechanism:	Contract
Life of Project:	Base: April 2011-12; 4 Options: each year April to April; ends April 2016
Project Sites:	Multiple USAID infrastructure projects

II. INTRODUCTION

The purpose of the Engineering Quality Assurance and Logistical Support (EQUALS) contract is to provide USAID's Afghanistan Office of Infrastructure and Economic Growth (OEGI) with an Afghanistan-based team to provide independent quality assurance for ongoing and planned construction, and design and maintenance projects in the four infrastructure areas, namely: transportation, vertical structures, energy and water, and sanitation. OEGI has technical management responsibility for this contract but the services provided will benefit a range of USAID/Afghanistan offices that rely on infrastructure to accomplish their development objectives including Agriculture, Health, Democracy and Governance, and Education.

EQUALS complements and reinforces activities and engineering expertise of the OEGI staff. International Relief & Development (IRD), the contractor provides a full range of long-term and quick response professional architect and engineering services, quality assurance services, and other logistical and technical support across all sectors (transport, vertical structures, energy, and water and sanitation) for USAID/Afghanistan infrastructure programs.

Under EQUALS, IRD is also responsible for providing capacity building support to the key ministries involved in the energy, roads and water sectors. The primary objective is to strengthen the capacity of key ministries⁸, directly by increasing the capacity of current government employees and indirectly by working with university staff and students to provide a more capable pool from which to hire staff. The secondary objective is to provide analytical support to the Government of the Islamic Republic of Afghanistan (GIROA) in all matters dealing with transportation, vertical structures, energy and water and sanitation. IRD works with each ministry to design on-the-job training opportunities.

Theory of Change

In the infrastructure sector, USAID confronts two major challenges: 1) difficulties associated with the implementation of quality assurance and quality control (QA/QC), and 2) weak technical capacity of partner ministries. QA/QC are forms of monitoring that inspect qualitative elements of materials and construction, as well as adherence to international building code and standards. QA/QC are essential to the success of infrastructure projects as these processes allow USAID to demonstrate the effective use of United State Government (USG) funds and ensures that completed infrastructure works are of high quality. Not only does USAID require QA/QC on all its infrastructure projects, but the current USG focus on accountability in Afghanistan necessitates the rigor that QA inspections provide.

In its experience administering on-budget assistance to GIROA, USAID has noticed common weaknesses with partner ministries' technical capabilities. For example, during the design and procurement phases of several large-scale infrastructure projects, PTEC and KHPP's turbine 2, OEGI staff noted that ministry level access to technical services such as engineering-design were lacking, as well as basic project management skills. Project design, procurement, contracting, communication with beneficiaries and program implementation are areas of increasing need within the ministries. Although USAID's efforts assisting ministry-led revenue generation from infrastructure assets to fund operation and maintenance have been largely successful, the aforementioned areas require additional support. With anticipated reduction in USAID staff, working directly with ministries on project management related activities will be a major challenge.

III. BACKGROUND

While development gains have been made, Afghanistan's infrastructure has not recovered from the devastation of war. The task of securing gains made over the last twelve years still requires support from the donor community. Between 2002 and 2010, the United States Agency for International Development (USAID) invested heavily in large scale infrastructure projects. USAID is currently on track towards completing many of these infrastructure projects. However,

⁸EQUALS assists the Ministry of Education, the Ministry of Public Health, the Ministry of Transportation and the Ministry of Water & Energy.

several major infrastructure projects, with a cost of greater than a billion dollars, such as the Gardez to Khost National Highway (GK Road), Power Transmission Expansion and Connectivity Project (PTEC) and the Kandahar Helmand Power Project (KHPP), will continue to be a priority for USAID and the Government of Afghanistan (GIROA) over the next five years. Ensuring Quality Assurance (QA) and Quality Control (QC) of these three major infrastructure projects remains essential.

Additionally, USAID has learned that when administering funds through on-budget mechanisms, it is often necessary to couple on-budget assistance to GIROA with specialized technical assistance activities. For example, OEGI's projects that have on-budget components have identified a number of common weaknesses in GIROA's technical abilities such as: procurement; linking infrastructure to commercialization and revenue generation; communication with beneficiaries; project design; program implementation; and policy creation and implementation. To address these weaknesses, OEGI has tailored specialized off-budget technical assistance activities to compliment the on-budget activities with partner ministries.

Currently, USAID uses two separate activities to address the aforementioned infrastructure challenges: the Engineering Quality Assurance and Logistical Support (EQUALS) project (\$97 Million); and the Afghanistan Engineering Support Program (AESP) (\$63 Million). These two projects provide a range of field construction monitoring, engineering support services, and capacity building activities. EQUALS specializes in independent quality assurance for construction projects, provides logistical support in areas of need, and provides capacity building for the GIROA Ministries. For example, EQUALS helps to build the capacity of the Ministry of Energy and Water to adequately plan and design infrastructure works. EQUALS is USAID's only support project that ensures infrastructure activities adhere to international code and standards. The project is expected to end in December 2014; however, it may be extended until 2015 or 2016, depending on the available contract ceiling and the pace of expenditures to meet QA/QC program needs. AESP provides engineering support services for the design and construction of new infrastructure activities. The current AESP Task Order will expire in November 2014 and reach its funding ceiling. As both EQUALS and AESP will no longer be available after 2014, USAID is designing a project to enhance the GIROA's ability to govern its infrastructure assets.

IV. PURPOSE, OBJECTIVES, AND USE OF THE EVALUATION

The **purpose** of this evaluation is to collect information about EQUALS outputs and outcomes for four sector projects that EQUALS provided QA/QC services in order to identify potential lessons learned that can be applied to construction/engineering-related activities. In particular, the evaluation will examine how much USAID-funded oversight is likely to be needed for similar future construction projects, and the feasibility of identifying related oversight/support costs. The four sector projects of particular interest to USAID for this performance evaluation include the following:

- The Kandahar Helmand Power Project (KHPP) implemented under the Energy sector with the Ministry of Water & Energy.

- The Gardez-Khost (GK) Road Project, Phase III implemented under the Transportation sector with the Ministry of Public Works.
- The Construction of Health and Education Facilities(CHEF) project implemented under the Vertical Structures sector with the Ministry of Public Health, and
- The Faculty of Higher Education(FOHE) project implemented under the Vertical Structures sector with the Ministry of Education.

The **objectives** of this evaluation are to:

1. Determine if the technical assistance provided by USAID, through IRD, was appropriate to overcome the challenges of increasing GIRoA capacity to implement the projects.
2. Validate that the four infrastructure projects meet international building codes through QA/QC as performed by IRD as required by USAID/Afghanistan Mission Order 302.03 Application of Engineering Standards for Contracts and Grants to Construct Buildings and other Complex Infrastructure.
3. Develop a concise set of USAID procurement-based recommendations, based on the findings and conclusions of the evaluation, for supporting future construction projects as a reference resource for GIRoA.

V. EVALUATION QUESTIONS

The following questions shall be addressed in the final reports' Conclusion Section as they pertain to the QA/QC services provided for the above four referenced projects:

- Q1. How well did IRD provide transportation, vertical structures, energy, and water and sanitation technical and logistical support, with principal focus on quality assurance services to help ensure that construction projects of USAID implementing partners, meet prescribed standards and contract specifications?
- Q2. How effective was EQUALS (IRD) at building the capacity of the Afghan government to independently operate and maintain infrastructure, plan and implement policy, manage infrastructure projects, and recover costs of operation and accounting?
- Q3. How effective was EQUALS (IRD) at monitoring the construction projects implemented by other contractors and grantees through site visits by qualified engineers? Monitoring included:
- a. Regular Inspections
 - b. Punch List Verification Inspection
 - c. Final Inspection and Acceptance
 - d. Final Warranty Inspection

The engineering monitors checked the IPs' work to ensure compliance with the approved Quality Control (QC) Plan, Quality Assurance (QA) Plan, and predetermined technical standards and construction schedules.

Q4. How effective was EQUALS (IRD) in improving the performance of the construction contractors' on Energy, Transportation and Vertical Structure, programs?

Q5. Evaluate the EQUALS program's design approach by USAID; the discussion should include an assessment of the project's objectives, approach to implementation, and the sustainability of individual elements after the projects end.

Q6. Distill lessons learned on program design and implementation to guide the design of future engineering support programming

Q7. Identify any corrective actions necessary to guide EQUALS activities over the final year of the performance period

VI. EVALUATION METHODS

The evaluation team will be responsible for developing an evaluation strategy and methodologies that include a mix of qualitative and quantitative data collection and analysis approaches. The methodology will be presented as part of the draft work plan as outlined in the deliverables below and included in the final report. The evaluation team will have available for their analysis a variety of program implementation documents, and reports, including work orders and other relevant documents. Methodology strengths and weaknesses should be identified as well as measures taken to address those weaknesses. All data collected and presented in the evaluation report must be disaggregated by gender and geography.

VII. EXISTING PERFORMANCE INFORMATION SOURCES

The consultants will review the following documents:

- a) Program Descriptions and Modifications
- b) Work Plan
- c) Quarterly Reports
- d) Annual Reports
- e) PMP and other M&E documents
- f) Project performance data
- g) Project-generated assessments
- h) Relevant external evaluations from other sources (e.g., other donors)

VIII. TEAM COMPOSITION

The evaluation team shall consist of an independent international expert, serving as the Team Leader and primary coordinator with USAID as well as two experienced Afghan consultants, at

least one of whom can also serve as an interpreter. Specific requirements for each position are as follows:

- *Evaluation Team Leader (Expat)*. The Team Leader shall possess strong leadership and management skills and be an evaluation specialist with at least five (5) years of experience conducting and managing performance evaluations, preferably with experience evaluating USAID projects. The Team Leader shall possess at least a Master's degree in, or related discipline. The Team Leader should also have technical knowledge of civil engineering or construction management, including evaluation experience of related projects. Afghanistan experience preferred. English fluency required; Dari or Pashto a plus.
- *Engineer/Construction Specialists (CCN)*. The engineer/construction management specialist shall possess at least a Bachelor's degree in engineering, construction management, or related field. The successful candidate shall have at least five (5) years of experience in designing, implementing, or assessing construction projects in developing countries. Afghanistan or regional country experience is required. Candidates must have Pashto and Dari language as native spoken and written skills. Spoken English language skills are required.
- *Program Specialist (CCN)*. The program specialist shall possess at least a Bachelor's degree in international development, or related field. The successful candidate shall have at least five (5) years of experience in designing, implementing, or assessing development projects; experience in host government technical assistance and capacity building is preferred. Afghanistan or regional country experience is required. Spoken English language skills are required.

Additional requirements for the whole team include:

- Skills in evaluation standards and practices;
- Ability to work effectively and cooperatively under challenging conditions;
- Ability to conduct field visits under challenging conditions;
- Ability to produce a high-quality evaluation report in a timely manner;

The international expert must be fluent in English and have strong writing skills. The Afghan experts should also be proficient in English, Dari, and Pashto. A statement of potential bias or conflict of interest (or lack thereof) is required of each team member.

IX. EVALUATION SCHEDULE

The estimated time period for undertaking this evaluation is 68 working days, of which at least 60 days should be spent in Afghanistan. The arrival date will be finalized between USAID and the organization conducting the evaluation.

The evaluation team is required to work six days a week. The team is not required to travel to the project sites. The evaluation team will prepare an exit briefing and presentation of the findings, which it will deliver to USAID staff before the consultants depart Afghanistan. Also, Checchi SUPPORT will submit a draft report for review and comments by USAID at a date to be agreed upon in the in-briefing and mid-term meetings. Comments from USAID will be incorporated before the submission of the final draft.

Expected Level of Effort (LOE) in Days:

Position	International Travel	In-Country	Report Finalization	Total LOE
Expat Team Leader	4	60	4	68
Afghan Eng/Construction Specialist 1		41		41
Afghan Program Specialist 1		40		40
Totals	4	141	4	149

X. USAID MANAGEMENT

The evaluation team will officially report to SUPPORT II, managed by Checchi and Company Consulting, Inc. SUPPORT II is responsible for all direct coordination with the USAID/Afghanistan Office of Program and Project Development (OPPD), through the Contract Officer’s Representative for SUPPORT II. From a technical management perspective, the evaluation team will work closely with Randal Leek from OEGI. In order to maintain objectivity, all final decisions about the evaluation will be made by OPPD’s M&E Unit.

XI. REPORTING REQUIREMENTS AND DELIVERABLES

a. DESCRIPTION AND TIMELINE OF DELIVERABLES

- 1. In-briefing:** Within 48 hours of arrival in Kabul, the evaluation team, will have an in-brief meeting with USAID/Afghanistan’s OPPD M&E unit and OEGI for introductions; discussion of the team’s understanding of the assignment, initial assumptions, review of the evaluation questions, thoughts about the work plan; and/or adjustment of the SOW if necessary.
- 2. Evaluation Work Plan:** The evaluation team shall provide a detailed initial work plan to OPPD’s M&E unit and OEGI three working days after the in-briefing. USAID will share the revised work plan with GIRoA for comment, as needed, and will revise accordingly. The initial work plan will include (a) the overall evaluation design, including the proposed methodology, data collection and analysis plan, and data collection instruments; (b) a list of the team members indicating their primary contact details while in-country, including the e-mail address and mobile phone number for the team leader; and (c) the team’s proposed schedule for the evaluation. The revised work

plan shall include the draft list of potential interviewees, sites to be visited, and evaluation tools.

3. **Mid-term Briefing and Interim Meetings:** Schedule a mid-term briefing with USAID to review the status of the evaluation's progress, with a particular emphasis on addressing the evaluation's questions and a brief update on potential challenges and emerging opportunities.
4. **PowerPoint and Final Exit Presentation** to USAID that will include a summary of key findings and key conclusions as these relate to the evaluation's questions and recommendations to USAID. To be scheduled as agreed upon during the in-briefing, and five days prior to the evaluation team's departure from Kabul. A copy of the PowerPoint file will be provided to the OPPD M&E unit prior to the final exit presentation.
5. **Draft Evaluation Report:** The content of the draft evaluation report is outlined in Section X.B, below, and all formatting shall be consistent with the USAID branding guidelines. The focus of the report is to answer the evaluation questions and may include factors the team considers to have a bearing on the objectives of the evaluation. Any such factors can be included in the report only after consultation with USAID. **The draft evaluation report will be submitted by Checchi to OPPD's M&E unit at a date agreed upon for review and comments by USAID. USAID's M&E unit and OEGI office will have ten calendar days in which to review and comment and OPPD's M&E unit shall submit all comments to the evaluation team leader.**
6. **Final Evaluation Report will** incorporate final comments provided by the M&E unit. USAID comments are due within ten days after the receipt of the initial final draft. The final report should be submitted to the OPPD M&E unit within three days of receipt of comments by the evaluation team leader. All project data and records will be submitted in full and shall be in electronic form in easily readable format; organized and fully document for use by those not fully familiar with the project or evaluation; and owned by USAID and made available to the public barring rare exceptions.
7. **Briefer** on key findings and conclusions relative to the evaluation questions is included in the evaluation's scope—to be given to the appropriate municipal government, provincial government, and/or GIRoA representative(s), so that they have the opportunity to review evaluation findings and share them with the larger community. Each briefer shall be translated in Dari and/or Pashto. Each briefer will be reviewed by the OPPD M&E unit and OEGI prior to distribution.

b. FINAL REPORT CONTENT

The evaluation report shall include the following:

1. **Title Page**
2. **Table of Contents (including Table of Figures and Table of Charts, if needed)**

3. **List of Acronyms**
4. **Acknowledgements or Preface (optional)**
5. **Executive Summary (3-5 pages)**
6. **Introductory Chapter**
 - a. A description of the project evaluated, including GIRoA and objectives.
 - b. Brief statement on purpose of the evaluation, including a list of the main evaluation questions.
 - c. Brief statement on the methods used in the evaluation such as desk/document review, interviews, site visits, surveys, etc.
 - d. Explanation of any limitations of the evaluation—especially with respect to the methodology (e.g., selection bias, recall bias, unobservable differences between comparator groups, etc.)—and how these limitations affect the findings.
7. **Findings:** This section should include findings relative to the evaluation questions.
8. **Conclusions:** This section must answer the evaluation questions based upon the evidence provided through the Findings section.
9. **Recommendations:** Based on the conclusions, this section must include actionable statements that can be implemented into the existing program or included into future program design. Recommendations are only valid when they specify who does what, and relate to activities over which the USAID program has control. For example, recommendations describing government action is not valid, as USAID has no direct control over government actions. Alternatively, the recommendation may state how USAID resources may be leveraged to initiate change in government behavior and activities. It should also include recommended future objectives and types of specific activities based on lessons learned.
10. **Annex:** The annexes to the final evaluation report should be submitted as separate documents—with appropriate labels in the document file name (e.g., Annex 1 – Evaluation SOW), and headers within the document itself—and may be aggregated in a single zipped folder.
 - a. Evaluation Statement of Work
 - b. Places visited; list of organizations and people interviewed, including contact details.
 - c. Evaluation design and methodology.

- d. Copies of all tools such as survey instruments, questionnaires, discussions guides, checklists.
- e. Bibliography of critical background documents.
- f. Meeting notes of all key meetings with stakeholders.
- g. “Statement of Differences”
- h. Evaluation Team CV’s
- i. Team’s responses to draft report comments

c. REPORTING GUIDELINES

- The evaluation report should represent a thoughtful, well-researched and well- organized effort to objectively evaluate what worked in the project over the given time period, what did not, and why.
- Evaluation reports shall address all evaluation questions included in the statement of work.
- The evaluation report should include the statement of work as an annex. All modifications to the statement of work, whether in technical requirements, evaluation questions, evaluation team composition, methodology, or timeline need to be agreed upon in writing by the OPPD M&E unit.
- Evaluation methodology shall be explained in detail and all tools used in conducting the evaluation such as questionnaires, checklists and discussion guides will be included in an annex in the final report.
- Evaluation findings will assess outcomes and impact on males and females, and data will be disaggregated by gender, age group, and geographic area wherever feasible.
- Limitations to the evaluation shall be disclosed in the report, with particular attention to the limitations associated with the evaluation methodology (selection bias, recall bias, unobservable differences between comparator groups, etc.).
- Evaluation findings should be presented as analyzed facts, evidence, and data and not based on anecdotes, hearsay or the compilation of people’s opinions. Findings should be specific, concise and supported by strong quantitative and/or qualitative evidence.
- Sources of information, including any peer-reviewed or grey literature, will be properly identified and listed in an annex.
- Recommendations will be supported by a specific set of findings. They will also be action-oriented, practical, and specific, with defined responsible parties for each action.

**ANNEX II EVALUATION WORK PLAN (EVALUATION DESIGN AND METHODOLOGY)
PERFORMANCE EVALUATION**

OF THE

**ENGINEERING QUALITY ASSURANCE AND LOGISTICAL
SUPPORT (EQUALS) PROJECT**

CONTRACT NUMBER 308-C-00-11-00512-00

FINAL WORK PLAN

Submitted on:

MAY 6, 2014

Contents

- Location of Projects to be Evaluated 46
- Acronyms **Error! Bookmark not defined.**
- 1 EQUALS Project Information 49
- 2 Introduction 49
- 3 Background..... 50
- 4 Purpose, Objectives, And Use Of The Evaluation 50
- 5 Evaluation Questions 51
- 6 Evaluation Methodology 52
 - 6.1 EXISTING PERFORMANCE SOURCES – DOCUMENT REVIEWS (SECONDARY SOURCES).....52
 - 6.2 EXISTING PERFORMANCE SOURCES – INTERVIEWS & QUESTIONNAIRES (PRIMARY SOURCES)53
 - 6.3 EXPERT JUDGMENT53
- 7 Team Composition 53
- 8 Evaluation Schedule 53
- 9 Anticipated Constraints & Limitations..... 54
- 10 Annexes **Error! Bookmark not defined.**
 - 10.1 ANNEX 1 INDIVIDUAL PROJECT INFORMATION SUMMARY FORM.....55
 - 10.2 ANNEX 2 DATA COLLECTION INSTRUMENTS57
 - a. Getting to answers matrix **Error! Bookmark not defined.**
 - b. Primary sources – List of individuals to be contacted or interviewed64
 - c. Secondary sources – List of project documents to be reviewed65
 - d. Lessons Learned Questionnaire66
 - e. Project Risk Matrix68
 - 10.3 ANNEX 3 PROJECT EVALUATION TIMELINE **ERROR! BOOKMARK NOT DEFINED.**
 - 10.4 ANNEX 4 EQUALS PROJECT SCOPE OF WORK & DELIVERABLES **ERROR! BOOKMARK NOT DEFINED.**

Acronyms

A/E	Architect/Engineer; Architecture/Engineering
AESP	Afghanistan Engineering Support Program
BoQ	Bills of Quantities
CHEF	Construction of Health and Education Facilities
COP	Chief of Party
COR	Contracting Officer's Representative
EQUALS	Engineering Quality Assurance and Logistical Support project
FAA	Federal Aviation Administration
FOHE	Faculty of Higher Educationproject
G2G	Government-to-Government
GK	Gardez-Khost Road Project
GIRoA	Government of the Islamic Republic of Afghanistan
ICAO	International Civil Aviation Organization
IL	ImplementationLetter
IP	Implementing Partner
IPR	Implementation & Procurement Reform (USAID FORWARD)
IRD	International Relief & Development
JO	Job Order
KHPP	Kandahar Helmand Power Project
M&E	Monitoring and Evaluation
MoE	Ministry of Education
MoF	Ministry of Finance
MoPH	Ministry of Public Health
MoPW	Ministry of Public Works
MoTCA	Ministry of Transportation and Civil Aviation
MOU	Memorandum of Understanding
MoWE	Ministry of Water & Energy
N/A	Not Applicable
NGO	Non-Governmental Organization
OEGI	Office of Economic Growth and Infrastructure
OPPD	Office of Program and Project Development
PFMRAF	Public Financial Management Risk Assessment Framework
PIU	Project Implementation Unit
PM	Project Manager
PMP	Performance Management Plan / Project Management Professional
QA	Quality Assurance
QC	Quality Control
RFP	Request for Proposal
SOW	Statement of Work
TT	Tetra Tech
USAID	United States Agency for International Development
USG	United States Government
WB	World Bank
WO	Work Order

EQUALS Project Information

Project Name:	Engineering Quality Assurance and Logistical Support
Implementing Partner:	International Relief and Development, Inc.
Contract #:	308-C-00-11-00512-00
Agreement Value:	\$96,807,645 (Obligated as of 2013NOV: US\$84,345,493)
Mechanism:	Contract
Period of Performance:	Base year: April 2011-2012; 4 Options: each year April to April; ends April 2016
Project Sites:	Multiple USAID infrastructure projects

1. *Introduction*

The purpose of the Engineering Quality Assurance and Logistical Support (EQUALS) contract is to provide USAID's Afghanistan Office of Infrastructure and Economic Growth (OEGI) with an Afghanistan-based team to provide independent quality assurance for ongoing and planned construction, and design and maintenance projects in the four infrastructure areas, namely: transportation, vertical structures, energy and water, and sanitation. OEGI has technical management responsibility for this contract but the services provided will benefit a range of USAID/Afghanistan offices that rely on infrastructure to accomplish their development objectives including Agriculture, Health, Democracy and Governance, and Education.

EQUALS complements and reinforces activities and engineering expertise of the OEGI staff. International Relief & Development (IRD), the contractor provides a full range of long-term and quick response professional architect and engineering services, quality assurance services, and other logistical and technical support across all sectors (transport, vertical structures, energy, and water and sanitation) for USAID/Afghanistan infrastructure programs.

Under EQUALS, IRD is also responsible for providing capacity building support to the key ministries involved in the energy, roads and water sectors. The primary objective is to strengthen the capacity of key ministries⁹, directly by increasing the capacity of current government employees and indirectly by working with university staff and students to provide a more capable pool from which to hire staff. The secondary objective is to provide analytical support to the Government of the Islamic Republic of Afghanistan (GIROA) in all matters dealing with transportation, vertical structures, energy and water and sanitation. IRD works with each ministry to design on-the-job training opportunities.

Theory of Change

In the infrastructure sector, USAID confronts two major challenges: 1) difficulties associated with the implementation of quality assurance and quality control (QA/QC), and 2) weak technical capacity of partner ministries. QA/QC are forms of monitoring that inspect qualitative elements of materials and construction, as well as adherence to international building code and standards. QA/QC are essential to the success of infrastructure projects as these processes allow USAID to demonstrate the effective use of United State Government (USG) funds and ensures that completed infrastructure works are of high quality. Not only does USAID require QA/QC on all its

⁹EQUALS assists the Ministry of Education, the Ministry of Public Health, the Ministry of Transportation and the Ministry of Water & Energy.

infrastructure projects, but the current USG focus on accountability in Afghanistan necessitates the rigor that QA inspections provide.

In its experience administering on-budget assistance to GIRoA, USAID has noticed common weaknesses with partner ministries' technical capabilities. For example, during the design and procurement phases of several large-scale infrastructure projects, PTEC and KHPP's turbine 2, OEGI staff noted that ministry level access to technical services such as engineering-design were lacking, as well as basic project management skills. Project design, procurement, contracting, communication with beneficiaries and program implementation are areas of increasing need within the ministries. Although USAID's efforts assisting ministry-led revenue generation from infrastructure assets to fund operation and maintenance have been largely successful, the aforementioned areas require additional support. With anticipated reduction in USAID staff, working directly with ministries on project management related activities will be a major challenge.

2. Background

While development gains have been made, Afghanistan's infrastructure has not recovered from the devastation of war. The task of securing gains made over the last twelve years still requires support from the donor community. Between 2002 and 2010, the United States Agency for International Development (USAID) invested heavily in large scale infrastructure projects. USAID is currently on track towards completing many of these infrastructure projects. However, several major infrastructure projects, with a cost of greater than a billion dollars, such as the Gardez to Khost National Highway (GK Road), Power Transmission Expansion and Connectivity Project (PTEC) and the Kandahar Helmand Power Project (KHPP), will continue to be a priority for USAID and the Government of Afghanistan (GIRoA) over the next five years. Ensuring Quality Assurance (QA) and Quality Control (QC) of these three major infrastructure projects remains essential.

Additionally, USAID has learned that when administering funds through on-budget mechanisms, it is often necessary to couple on-budget assistance to GIRoA with specialized technical assistance activities. For example, OEGI's projects that have on-budget components have identified a number of common weaknesses in GIRoA's technical abilities such as: procurement; linking infrastructure to commercialization and revenue generation; communication with beneficiaries; project design; program implementation; and policy creation and implementation. To address these weaknesses, OEGI has tailored specialized off-budget technical assistance activities to compliment the on-budget activities with partner ministries.

Currently, USAID uses two separate activities to address the aforementioned infrastructure challenges: the Engineering Quality Assurance and Logistical Support (EQUALS) project (\$97 Million); and the Afghanistan Engineering Support Program (AESP) (\$63 Million). These two projects provide a range of field construction monitoring, engineering support services, and capacity building activities. EQUALS specializes in independent quality assurance for construction projects and provides logistical support in areas of need. For example, EQUALS helps to build the capacity of the Ministry of Energy and Water to adequately plan and design infrastructure works. EQUALS is USAID's only support project that ensures infrastructure activities adhere to international code and standards. The project is expected to end in December 2014; however, it may be extended until 2015 or 2016, depending on the available contract ceiling and the pace of expenditures to meet QA/QC program needs. AESP provides engineering support services for the design and construction of new infrastructure activities. The current AESP Task Order will expire in November 2014 and reach its funding ceiling. As both EQUALS and AESP will no longer be available after 2014, USAID is designing a project to enhance the GIRoA's ability to govern its infrastructure assets.

3. Purpose, Objectives, And Use Of The Evaluation

The **purpose** of this evaluation is to collect information about EQUALS outputs and outcomes for four sector projects that EQUALS provided QA/QC services in order to identify potential lessons learned that can be applied to construction/engineering-related activities. In particular, the evaluation will examine how much USAID-funded oversight is likely to be needed for similar future construction projects, and the feasibility of identifying related oversight/support

COSTS. The four sector projects of particular interest to USAID for this performance evaluation include the following:

- a. The Kandahar Helmand Power Project (KHPP) implemented under the Energy sector with the Ministry of Water & Energy.
- b. The Gardez-Khost (GK) Road Project, Phase III implemented under the Transportation sector with the Ministry of Public Works.
- c. The Construction of Health and Education Facilities(CHEF) project implemented under the Vertical Structures sector with the Ministry of Public Health, and
- d. The Faculty of Higher Education(FOHE) project implemented under the Vertical Structures sector with the Ministry of Education.

The **objectives** of this evaluation are to:

- a. Determine if the technical assistance provided by USAID, through IRD, was appropriate to overcome the challenges of increasing GIRoA capacity to implement the projects.
- b. Validate that the four infrastructure projects meet international building codes through QA/QC as performed by IRD as required by USAID/Afghanistan Mission Order 302.03 Application of Engineering Standards for Contracts and Grants to Construct Buildings and other Complex Infrastructure.
- c. Develop a concise set of USAID procurement-based recommendations, based on the findings and conclusions of the evaluation, for supporting future construction projects as a reference resource for GIRoA.

4. Evaluation Questions

The following questions shall be addressed in the final reports' Conclusion Section as they pertain to the QA/QC services provided for the above four referenced projects:

- Q1. How well did IRD provide transportation, vertical structures, energy, and water and sanitation technical and logistical support, with principal focus on quality assurance services to help ensure that construction projects of USAID implementing partners, meet prescribed standards and contract specifications?
- Q2. How effective was EQUALS (IRD) at building the capacity of the Afghan government to independently operate and maintain infrastructure, plan and implement policy, manage infrastructure projects, and recover costs of operation and accounting?
- Q3. How effective was EQUALS (IRD) at monitoring the construction projects implemented by other contractors and grantees through site visits by qualified engineers? Monitoring included:
 - a. Regular Inspections
 - b. Punch List Verification Inspection
 - c. Final Inspection and Acceptance
 - d. Final Warranty InspectionThe engineering monitors checked the IPs' work to ensure compliance with the approved Quality Control (QC) Plan, Quality Assurance (QA) Plan, and predetermined technical standards and construction schedules.
- Q4. How effective was EQUALS (IRD) in improving the performance of the construction contractors' on Energy, Transportation and Vertical Structure, programs?
- Q5. Evaluate the EQUALS program's design approach by USAID; the discussion should include an assessment of the project's objectives, approach to implementation, and the sustainability of individual elements after the projects end.

- Q6. Distill lessons learned on program design and implementation to guide the design of future engineering support programming
- Q7. Identify any corrective actions necessary to guide EQUALS activities over the final year of the performance period

5. Evaluation Methodology

The evaluation team will employ an evaluation strategy and methodologies that include a mix of qualitative and quantitative data collection and analysis approaches.

The evaluation team has available for their analysis a variety of program implementation documents, and reports, including work orders and other relevant documents.

Methodology strengths and weaknesses as well as measures taken to address those weaknesses are identified in the data instruments (see “**Error! Reference source not found.**” in the Annex). Data collected and presented in the evaluation report will as much as possible be disaggregated by gender and geography.

The methodology for the evaluation of the performance of these projects involves a combination of the following processes.

Existing performance sources – Document reviews (Secondary sources)

The consultants will start with a review of project documentation, which form the secondary sources. This includes the following available reports and other related documents:

1. Activity Development PAD ADD
2. Contract
3. Job Orders
4. Action Memos
4. Budget and Financials
5. Performance Monitoring
6. QAs
7. Infrastructure Data Base
8. EQUALS related teams
9. Personnel CCN Salaries etc.
10. Correspondence
11. Coordination Meetings Admin Tracker
12. GIROA
13. Factsheets, Talking Points and Briefers
14. Audits
15. Reports
16. Internship & Capacity Building
17. Travel
18. Security
19. Taxes
20. Training Participant Requirements

Existing performance sources – Interviews & Questionnaires (Primary sources)

The team will obtain data from the primary sources using surveys, questionnaires and structured interviews with stakeholders, including project managers, engineers and end users. In so-doing the team will be able to obtain the lessons learnt and make recommendations for future projects.

Expert judgment

Expert judgment will take into account both international best practices coupled with prevailing local aspects of project management in Afghanistan. Under this process, the team will look at how the project was managed in the ten project management knowledge areas, i.e.:

- a. Project Integration Management (how all the aspects of the project are brought together)
- b. Project Scope Management
- c. Project Time Management
- d. Project Cost Management
- e. Project Quality Management
- f. Project Human Resource Management
- g. Project Communications Management
- h. Project Risk Management
- i. Project Procurement Management
- j. Project Stakeholder Management

Team Composition

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Evaluation Schedule

The estimated time period for undertaking this evaluation is 68 working days running from April 24, 2014 through July 23, 2014. At least sixty of these days will be spent in the field in Afghanistan.

Position	International Travel	In-Country	Report Finalization	Total LOE
Expat Team Leader	4	60	4	68
Afghan Eng/Construction Specialist 1		41		41
Afghan Eng/Construction Specialist 2		40		40
Totals	4	141	4	149

The evaluation team will work six days a week. The team will travel to some project sites. The evaluation team will prepare an exit briefing and presentation of the findings, which it will deliver to USAID staff before the consultants depart Afghanistan. Also, Checchi SUPPORT will submit a draft report for review and comments by USAID. Comments from USAID will be incorporated before the submission of the final draft.

The detailed timeline of the evaluation is illustrated in Annex **Error! Reference source not found.** on page **Error! Bookmark not defined.**

Anticipated Constraints & Limitations

Possible constraints for this evaluation survey may include:

- Incomplete or missing project management record documents
- The unavailability of some individual members of the project management team for interview and participation in questionnaires.
- Inability to visit some project locations

Work Plan Annex I Individual Project Information Summary Form

Project Name: [Click here to enter text.](#)

Location: [Click here to enter text.](#) Point of contact: [Click here to enter text.](#)

Budgeted cost: [Click here to enter text.](#) Actual cost: [Click here to enter text.](#)

Start date: [Click here to enter text.](#) Planned finish: [Click here to enter text.](#) Actual finish: [Click here to enter text.](#)

Reference contract documents & amendments:-

Document:	Click here to enter text.	Date:	Click here to enter text.	Change:	Click here to enter text.
	Click here to enter text.		Click here to enter text.		Click here to enter text.
	Click here to enter text.		Click here to enter text.		Click here to enter text.
	Click here to enter text.		Click here to enter text.		Click here to enter text.

Summary of major implementation issues or solutions:-

Project integration¹⁰ [Click here to enter text.](#)

Scope: [Click here to enter text.](#)

Schedule: [Click here to enter text.](#)

Budget: [Click here to enter text.](#)

Quality: [Click here to enter text.](#)

Human resources [Click here to enter text.](#)

¹⁰How all project knowledge areas were brought together

Communication *Click here to enter text.*

**Project risk
management** *Click here to enter text.*

Procurement *Click here to enter text.*

Stakeholders *Click here to enter text.*

EQUALS Project Evaluation - Getting to Answers

Evaluation Questions	Type of Answer/Evidence Needed (Check one or more, as appropriate)		Performance Evaluation Design/Specific Methods for Data Collection			Sampling Selection Approach (Random Sample, Success Case)	Data Analysis Methods (e.g., Frequency Distributions, Trend Analysis, Cross-Tabulations, Content Analysis, Regression)
			Data Source(s) (Ministry, Households or Firms, Project Records, Elected Officials)	Evaluation Design (Before & After, Comparison to Norms, Time Series, Panel Study, Case Study, Causal Tracing, Contribution Analysis)	Specific Methods (Existing Data Series, Structured Observation, Key Informants, Mini-Survey, Focus Groups)		
1. How well did IRD provide transportation, vertical structures,	<input type="checkbox"/>	Yes/No	USAID	Before & After, Comparison to Norms, Panel Study, Case Study,	Existing Data Series Structured Observation Key Informants Mini-Survey		Frequency Distributions, Trend Analysis, Cross-
	<input type="checkbox"/>	Description	IRD				
	<input type="checkbox"/>	Comparison	GIROA – Ministries &				
	<input type="checkbox"/>	Explanation	Universities officials,				

Evaluation Questions	Type of Answer/Evidence Needed (Check one or more, as appropriate)		Performance Evaluation Design/Specific Methods for Data Collection			Sampling or Selection Approach (Random Sample, Success Case)	Data Analysis Methods (e.g., Frequency Distributions, Trend Analysis, Cross-Tabulations, Content Analysis, Regression)
			Data Source(s) (Ministry, Households or Firms, Project Records, Elected Officials)	Evaluation Design (Before & After, Comparison to Norms, Time Series, Panel Study, Case Study, Causal Tracing, Contribution Analysis)	Specific Methods (Exiting Data Series, Structured Observation, Key Informants, Mini-Survey, Focus Groups)		
energy, and water and sanitation technical and logistical support, with principal focus on quality assurance services to help ensure that construction projects of USAID implementing partners, meet prescribed standards and contract specifications?			End users, Project Records	Causal Tracing, Contribution Analysis			Tabulations, Content Analysis
2. How effective was EQUALS (IRD) at building the capacity of the Afghan	<input type="checkbox"/>	Yes/No	USAID IRD GIROA – Ministries & Universities officials,	Before & After, Comparison to Norms, Time Series, Panel Study,	Exiting Data Series Structured Observation Key Informants Mini-Survey		Trend Analysis, Cross-Tabulations, Content Analysis
	<input type="checkbox"/>	Description					
	<input type="checkbox"/>	Comparison					
	<input type="checkbox"/>	Explanation					

Evaluation Questions	Type of Answer/Evidence Needed (Check one or more, as appropriate)		Performance Evaluation Design/Specific Methods for Data Collection			Sampling or Selection Approach (Random Sample, Success Case)	Data Analysis Methods (e.g., Frequency Distributions, Trend Analysis, Cross-Tabulations, Content Analysis, Regression)
			Data Source(s) (Ministry, Households or Firms, Project Records, Elected Officials)	Evaluation Design (Before & After, Comparison to Norms, Time Series, Panel Study, Case Study, Causal Tracing, Contribution Analysis)	Specific Methods (Existing Data Series, Structured Observation, Key Informants, Mini-Survey, Focus Groups)		
government to independently operate and maintain infrastructure, plan and implement policy, manage infrastructure projects, and recover costs of operation and accounting?			End users, Project Records	Case Study, Causal Tracing, Contribution Analysis	Focus Groups		
3. How effective was EQUALS (IRD) at monitoring the construction	<input type="checkbox"/>	Yes/No	USAID	Comparison to Norms, Time Series, Panel Study, Causal Tracing,	Existing Data Series Structured Observation Key Informants Mini-Survey		Frequency Distributions, Cross-Tabulations, Content
	<input type="checkbox"/>	Description	IRD				
	<input type="checkbox"/>	Comparison	GIROA – Ministries &				
	<input type="checkbox"/>	Explanation	Universities officials,				

Evaluation Questions	Type of Answer/Evidence Needed (Check one or more, as appropriate)	Performance Evaluation Design/Specific Methods for Data Collection			Sampling or Selection Approach (Random Sample, Success Case)	Data Analysis Methods (e.g., Frequency Distributions, Trend Analysis, Cross-Tabulations, Content Analysis, Regression)
		Data Source(s) (Ministry, Households or Firms, Project Records, Elected Officials)	Evaluation Design (Before & After, Comparison to Norms, Time Series, Panel Study, Case Study, Causal Tracing, Contribution Analysis)	Specific Methods (Exiting Data Series, Structured Observation, Key Informants, Mini-Survey, Focus Groups)		
<p>projects implemented by other contractors and grantees through site visits by qualified engineers? Monitoring included:</p> <ul style="list-style-type: none"> a. Regular Inspections b. Punch List Verification Inspection c. Final Inspection and Acceptance d. Final Warranty Inspection <p>The engineering monitors checked the IPs' work to ensure compliance with the approved Quality Control (QC) Plan, Quality Assurance (QA) Plan, and</p>		End users, Project Records	Contribution Analysis	Focus Groups		Analysis

Evaluation Questions	Type of Answer/Evidence Needed (Check one or more, as appropriate)		Performance Evaluation Design/Specific Methods for Data Collection			Sampling or Selection Approach (Random Sample, Success Case)	Data Analysis Methods (e.g., Frequency Distributions, Trend Analysis, Cross-Tabulations, Content Analysis, Regression)
			Data Source(s) (Ministry, Households or Firms, Project Records, Elected Officials)	Evaluation Design (Before & After, Comparison to Norms, Time Series, Panel Study, Case Study, Causal Tracing, Contribution Analysis)	Specific Methods (Existing Data Series, Structured Observation, Key Informants, Mini-Survey, Focus Groups)		
4. How effective was EQUALS (IRD) in improving the performance of the construction contractors' on Energy, Transportation and Vertical Structure, programs?	<input type="checkbox"/>	Yes/No	USAID IRD GIROA – Ministries & Universities officials, End users, Project Records	Before & After, Panel Study, Case Study, Causal Tracing, Contribution Analysis	Existing Data Series Structured Observation Key Informants Mini-Survey Focus Groups		Frequency Distributions, Trend Analysis, Cross-Tabulations, Content Analysis
	<input type="checkbox"/>	Description					
	<input type="checkbox"/>	Comparison					
	<input type="checkbox"/>	Explanation					
5. Evaluate the EQUALS program design approach by USAID; the	<input type="checkbox"/>	Yes/No	USAID IRD GIROA – Ministries & Universities officials,	Before & After, Comparison to Norms, Time Series, Panel Study,	Existing Data Series Structured Observation Key Informants Mini-Survey		Frequency Distributions, Trend Analysis, Cross-
	<input type="checkbox"/>	Description					
	<input type="checkbox"/>	Comparison					
	<input type="checkbox"/>	Explanation					

Evaluation Questions	Type of Answer/Evidence Needed (Check one or more, as appropriate)		Performance Evaluation Design/Specific Methods for Data Collection			Sampling or Selection Approach (Random Sample, Success Case)	Data Analysis Methods (e.g., Frequency Distributions, Trend Analysis, Cross-Tabulations, Content Analysis, Regression)
			Data Source(s) (Ministry, Households or Firms, Project Records, Elected Officials)	Evaluation Design (Before & After, Comparison to Norms, Time Series, Panel Study, Case Study, Causal Tracing, Contribution Analysis)	Specific Methods (Existing Data Series, Structured Observation, Key Informants, Mini-Survey, Focus Groups)		
discussion should include an assessment of the project's objectives, approach to implementation, and the sustainability of individual elements after the projects end.			End users, Project Records	Case Study, Causal Tracing, Contribution Analysis			Tabulations, Content Analysis
6. Distill lessons learned on program design and implementation to	<input type="checkbox"/>	Yes/No	USAID	Before & After,	Existing Data Series		Frequency Distributions, Trend Analysis, Cross-
	<input type="checkbox"/>	Description	IRD	Comparison to Norms,	Structured Observation		
	<input type="checkbox"/>	Comparison	GIROA – Ministries &	Time Series,	Key Informants		
	<input type="checkbox"/>	Explanation	Universities officials,	Panel Study,	Mini-Survey		

Evaluation Questions	Type of Answer/Evidence Needed (Check one or more, as appropriate)		Performance Evaluation Design/Specific Methods for Data Collection			Sampling or Selection Approach (Random Sample, Success Case)	Data Analysis Methods (e.g., Frequency Distributions, Trend Analysis, Cross-Tabulations, Content Analysis, Regression)
			Data Source(s) (Ministry, Households or Firms, Project Records, Elected Officials)	Evaluation Design (Before & After, Comparison to Norms, Time Series, Panel Study, Case Study, Causal Tracing, Contribution Analysis)	Specific Methods (Existing Data Series, Structured Observation, Key Informants, Mini-Survey, Focus Groups)		
guide the design of future engineering support programming			End users, Project Records	Case Study, Causal Tracing, Contribution Analysis			Tabulations, Content Analysis
7. Identify any corrective actions necessary to guide EQUALS activities over the final year of the performance period	<input type="checkbox"/>	Yes/No	USAID	Before & After, Comparison to Norms, Time Series, Panel Study, Case Study, Causal Tracing, Contribution Analysis	Existing Data Series Structured Observation Key Informants Mini-Survey Focus Groups		Frequency Distributions, Trend Analysis, Cross-Tabulations, Content Analysis
	<input type="checkbox"/>	Description	IRD				
	<input type="checkbox"/>	Comparison	GIROA – Ministries & Universities officials,				
	<input type="checkbox"/>	Explanation	End users, Project Records				

- **Primary sources – List of individuals to be contacted or interviewed¹¹¹**

ORGANIZATION	NAME	TITLE OR POSITION
USAID	Ashaki Guyton-Blanton	
	BelienTadesse	COR
	David Roebuck	
	Thomas Bauhan	
	OryakelRahmatullah	
	SafiullahHoshmand	
	IdreesNoori	
	Randal Leek	
	Rahmatullah Safi Sahin	
International Relief & Development, IRD	BijoyMisra	Acting Chief of Party
	Wayne	Team Leader: Gardez-Khost Road
	Demetre	Team Leader: KHPP
	Asif	TL Vertical Structures (CHEF &FOHE)
Ministry of Energy		
Ministry of Public Works		
Ministry of Health		
Ministry of Higher Education		
<u>GIRoA (Provinces/Institutions):</u>		
DABS (KHPP Project)		
Universities (FOHE Project)		

¹¹¹¹Tentative - Subject to change

U S Army Corps of Engineers (USACE)		
International Office of Migration (IOM)		

- **Secondary sources – List of project documents to be reviewed**

- Project contract documentation:
 - Contracts & Agreements (including all amendments)
 - Job Orders (including all amendments)
- WorkPlans & Schedules – Approved and actual
- Approved PerformanceMonitoringPlans(PMP)
- Approved SecurityPlan
- MonthlyMeeting minutes
- SectorReports
 - Semi-MonthlyInspectionReports
 - SubstantialCompletionInspectionReports
 - Punch List VerificationInspectionReport
 - FinalInspectionReport
 - FinalWarrantyInspectionReport
 - Close-out reports
 - Quarterly/AnnualReports
- ProgressReports:
 - Quarterlyprogressreports,and
 - Combinedquarterly/annualprogressreports
 - FinancialReports: BriefQuarterlyExpenditureReports
- QA/QC reports, including material tests & results
- One-off & issue-related reports (reviews, assessments, evaluations, etc.)
- Trip reports
- Correspondence & communication

- Lessons Learned Questionnaire

Project Title: _____ **Date Prepared:** _____

Project Performance Analysis

Item	What Worked Well	What Can Be Improved
Requirements definition and management		
Scope definition and management		
Schedule development and control		
Cost estimating and control		
Quality planning and control		
Human resource availability, team development, and performance		
Communication management		
Stakeholder management		
Reporting		
Risk management		
Procurement planning and management		
Process improvement information		
Product-specific information		

Other		
-------	--	--

Risks and Issues

Risk or Issue Description	Response	Comments

Quality Defects

Defect Description	Resolution	Comments

Vendor Management

Vendor	Issue	Resolution	Comments

Other

Areas of Exceptional Performance	Areas for Improvement

- Project Risk Matrix

EQUALS Construction Project Risk Management

Risk	Description	Class	Impact	Probability	Proposed Risk Response	Actual Response		
						Y	N	N/A
Site Accident	Construction worker injured on site	HR	H	H	Assign a site safety manager			
					Prepare a safety plan			
					Provide safety supply budget			
Material Delivery Delays	Late material delivery to site	Schedule	H	H	Material delivery schedule			
					Pre purchase materials			
					Verify local supplier inventory			
Weather Delays	Foul Weather delays work	Schedule	H	H	Start construction in April			
					Prepare winterization plans			
					Prepare dewatering systems			
Material Cost Overruns	Underbid by contractor	Cost	H	H	Prepare BoQ			
					Use competitive pricing			
					Check quotations to market			
					Control waste and theft			
Poor Quality	Removal of poured concrete	Cost	H	H	Hire 3rd party QA Site full time			
		Schedule			Develop QC plan i.e. CQC			
					Evaluate contractor QC Resume			
					Evaluate contractor Lead Resume			
					Evaluate contractor equipment			
Workers & subs not paid	Contractor does not pay vendors and workers on time	Schedule	M	M	Establish requirements			
					Request payment receipts			
					Request monthly payment logs			
Contractor not paid	Owner does not pay contractor on time	Schedule	H	M	Establish requirements			
					Request payment receipts			
					Request payment approval logs			

ANNEX III PERSONS AND ORGANIZATIONS CONTACTED (PRIMARY SOURCES)

#	ORGANIZATION	NAME	TITLE OR POSITION	EMAIL
1	Azal Standard Construction Company	Dr. Abdul Salam	Contractor for PTTC Faryab	azalstandard@yahoo.com
2	Balkh University	Khalid Ahmad	Deputy Dean, Faculty of Higher Education	Khalidahmad723@live.com
3	Balkh University	Ghulam Dastgir Dastgir	Dean, Faculty of Higher Education	
4	Balkh University	Ahmad Khalid Mowahed	Assistant Professor	Khalid.mowahed@gmail.com
5	Black & Veatch Special Projects Corp.	Lynn Liikala Seymore	Transmission & Distribution Technical Lead	Liikala@bv.com
6	Da Afghanistan Berishna Sherkat (DABS)	Abdul Bari	Substation Manager	
7	DABS	Shah Mohammad	Technical Assistant	
8	DABS	Assadullah	Assistant Manager	
9	DABS	Merwais	Operator	
10	DABS	Atta Mohammad	Operator	
11	DABS	Noor Mohammad	Operator	
12	DABS	Eng. Rasoul Fayed	Kandahar DABS Director	kajakidam@yahoo.com
13	Faryab University	Kinishka Talash	Deputy Administrator	Talaash2s2007@yahoo.com
14	Faryab University	Shafiq Nazari	Dean, Faculty of Higher Education	Shafiqanazari2008@yahoo.com
15	Faryab Provincial Teacher Training College	Abdul Manan Haqjo	Dean	Manna.haqjo@gmail.com
16	Hayatullah Hamidi Construction Company	Egh. Ajmal Hamidi	Contractor for PTTC Wardak	hayatullah_hamidi@hotmail.com

#	ORGANIZATION	NAME	TITLE OR POSITION	EMAIL
17	International Organization for Migration (IOM)	Richard Danzigne	Chief of Mission	
18	IOM	Tim Kaye	Chief Support Engr. Design Manager	tkaye@iom.net
19	IOM	Mustafa Nouri	Program Manager	mnouri@iom.net
20	IOM	Hamed Samadi	Nat. Project Coordinator	ASAMADI @iom.net
21	IOM	Nikola CUK	Construction Manager	ncuk@iom.net
22	International Relief & Development (IRD)	Paul Wolstenholme	Chief of Party, EQUALS	pwolstenholme@ird-equals.org
23	IRD	Bijoy Misra	Acting COP IRD EQUALS	bmisra@ird-equals.org
24	IRD	Dede Nyler	Program Support IRD	dnyler@ird-equals.org
25	IRD	Elizabeth Muller		emuller@ird-equals.org
26	IRD	Ahmad Najib	Deputy Team Lead, Vertical Structures	
27	IRD	S. Asif Mahmud	Vertical structure Team Lead	amahmud@ird-equals.org
28	IRD	Dr. Demetre Papaioannou	Power QA Team Lead	dpapaioannou@ird-equals.org
29	IRD	Jurist T. Awal	Senior Electrical Hydropower Engineer	jawal@ird-equals.org
30	IRD	Stephen M. Ndili	Power Plant Trainer	sndili@ird-equals.org
31	IRD	Akbar Jan Ahmadzai	Senior Trainer	jahmadzai@ird-equals.org
32	IRD	Akbar Jan Ahmadzai	Senior Trainer	jahmadzai@ird-equals.org
33	IRD	Abdul Wadood Gharsheen	Sr. Substation Trainer	agharsheen@ird-equals.org
34	IRD	Atiqullah Qaderi	Sr. Civil Engineer	atiqullah@ird-equals.org

#	ORGANIZATION	NAME	TITLE OR POSITION	EMAIL
35	IRD	Abdull Wahid Farooqi	Sr. Electrical Engineer	wfarooqi@ird-equals.org
36	IRD	Ezatullah Ulfat	Sr. Trainer Diesel	
37	IRD	Sayed Kamal Hashimi	Sr. Civil Engineer	
38	IRD	Zahir Mohammad	Sr. Civil Engineer	
39	IRD	Eng. Hafizullah Hamid	QA Manager, Sardar Kabuli Girls High School	
40	IRD	Wayne Minchart	Quality Assurance Manager	wminchart@ird-equals.org
41	IRD	Sefatullah Bahadrur	QA Engineer	sbahadur@ird-equals.org
42	IRD	Mohammad Rafiq Arefy	QA Engineer	Rafiq-arefey@ird-equals.org
43	IRD	Mir Zaman	Monitoring Engineer	mzaman@ird-equals.org
44	International Organization of Migration	Hasibullah Junbish	QC Engineer	hjunbish@iom.int
45	Jamshidiyar Construction Company	Mohammad Rafi Bawar	Contractor for FoHE Herat	rafi.bawar@gmail.com
46	Jawzjan University	S. Noorullah Aminyar	Dean, Faculty of Higher Education	aaminyar@yahoo.com
47	Jawzjan University	M. Hashem Sediqi	Vice Chancellor, Faculty of Higher Education	
48	Jawzjan University	Jamshid Ahmadi	Professor	Jamshidahmadi527@yahoo.com
49	KhairZai Builders Engrng& Consulting Co	Zabith Hamdard	Contractor for MTC Bamyan	khairzaikzcc@yahoo.com
50	MECC	Allah Nazar Naqibi	Chief of Party, Gardez-Khost Road	anaqibi@mecc.af
51	Mehraban Noor Construction Company	Eng.Gulab	Contractor for MTC Badakhshan&Khost	mehrabnoor@gmail.com
52	Ministry of Public Works, MOPW	M. Akbar Nabi	Donor Coordinator	Akbarnabi888@gmail.com

#	ORGANIZATION	NAME	TITLE OR POSITION	EMAIL
53	MOPW	Aziz Modabber	Chief of Staff	modabberazizi@gmail.com
54	MOPW	Eng. Mohammad Arif	General Director O&M, Kandahar Province	
55	MOPW	Eng. Sayed Enayatullah Fakhr	Planning Director O&M, Kandahar Province	
56	Perez	Noor Hassan	Project Manager	nhassan@e-perez.com
57	Perez	Hassan Hosseini	SSHO	hhussaini@e-perez.com
58	Perez	Mohammad Basir	Project Manager	mbasir@e-perez.com
59	Perez	Mohammad Naeem	Project Manager	mnaem@e-perez.com
60	Rahman Noor Construction Company	Sharif Shah	Contractor, Paktya&Paktika Hospitals	sharifshah@rncc.com.af
61	USAID	Belien Tadesse	M&E Officer	btadesse@state.gov
62	USAID	Ridi Gul Haqyar	A&A Specialist	HaqyarR@state.gov
63	USAID	Ashaki Guyton-Blanton	Infrastructure Program Officer, EQUALS COR	AGuyton-Blanton@state.gov
64	USAID	A. G. Obitre-Gama	Sr. Program Eng	Gobitre.gama@state.gov
65	USAID	Tom Bauhan	KHPP COR	tbauhaa@state.gov
66	USAID	Randal Leek	PM GK Road	Rleek@state.gov
67	USAID	Idrees A. Noori	Team Leader	IANoori@state.gov
68	USAID	Abdullah Habib	Program Manager	ahabib@state.gov
69	USAID	Rahmatullah Zahin	Project Management Specialist	rzahin@state.gov
70	USAID	Allen Eisendrath	Energy Advisor	aeisendrath@state.gov

#	ORGANIZATION	NAME	TITLE OR POSITION	EMAIL
71	Zafar Khaliq construction Company	Hamayoon Khaliqi	Contractor for FoHEJawzjan , Faryab& Balkh	zco_org@yahoo.com

ANNEX IV LIST OF KEY DOCUMENTS REVIEWED (SECONDARY SOURCES)

#	Publisher or Author	Document Title	Date
1	IRD	<i>Revised Performance Management Plan</i>	March 2014
2	IRD	<i>IRD EQUALS weekly reports for 2011, 2012 and 2013</i>	2011-2013
3	IRD	<i>IRD EQUALS monthly reports - 2011 (May, Jun, Jul, Aug, Sep, Oct, Nov, Dec)</i>	2011 - as indicated
4	IRD	<i>IRD EQUALS monthly reports - 2012 (Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Oct, Nov)</i>	2012 - as indicated
5	IRD	<i>IRD EQUALS monthly reports - 2013 (Jan, Feb, Apr, May, Jul, Aug, Oct, Nov)</i>	2013 - as indicated
6	IRD	<i>IRD EQUALS monthly reports - 2014 (Jan, Feb)</i>	2014 - as indicated
7	IRD	<i>IRD EQUALS Quarterly reports for the second quarter of 2011</i>	July 2011
8	IRD	<i>IRD EQUALS Quarterly reports for the third quarter of 2011</i>	October 2011
9	IRD	<i>IRD EQUALS Quarterly reports for the fourth quarter of 2011</i>	January 2012
10	IRD	<i>IRD EQUALS Quarterly reports for the first quarter of 2012</i>	April 2012
11	IRD	<i>IRD EQUALS Quarterly reports for the second quarter of 2012</i>	July 2012
12	IRD	<i>IRD EQUALS Quarterly reports for the third quarter of 2012</i>	October 2012
13	IRD	<i>IRD EQUALS Quarterly reports for the fourth quarter of 2012</i>	January 2013
14	IRD	<i>IRD EQUALS Quarterly reports for the first quarter of 2013</i>	April 2012
15	IRD	<i>IRD EQUALS Quarterly reports for the second quarter of 2013</i>	July 2013
16	IRD	<i>IRD EQUALS Quarterly reports for the third quarter of 2013</i>	October 2013

#	Publisher or Author	Document Title	Date
17	IRD	<i>Combined 4th Quarter/Annual Report 2013</i>	January 2014
18	IRD	<i>IRD EQUALS Biweekly reports for KHPP from February 2012 to April 2014</i>	
19	IRD	<i>IRD EQUALS Substantial Completion Inspection Reports</i>	
20	IRD	<i>IRD EQUALS Training Plan for KHPP</i>	March 2014
21	IRD	<i>IRD EQUALS weekly Training Reports for KHPP</i>	April 2014
22	USAID/Afghanistan	<i>IRD-EQUALS Job Order 1 with modifications</i>	May 2011
23	USAID/Afghanistan	<i>IRD-EQUALS Job Order 2 with modifications</i>	August 2011
24	USAID/Afghanistan	<i>IRD-EQUALS Job Order 3 with modifications</i>	March 2012
25	USAID/Afghanistan	<i>IRD-EQUALS Job Order 4 with modifications</i>	July 2012
26	USAID/Afghanistan	<i>IRD-EQUALS Job Order 5 with modifications</i>	September 2012
27	USAID/Afghanistan	<i>IRD-EQUALS Job Order 6</i>	October 2013
28	USAID/Afghanistan	<i>IRD EQUALS Contract</i>	August 2009
29	IRD-EQUALS Project	<i>IRD EQUALS Action Memo</i>	September 2009
30	IRD-EQUALS Project	<i>IRD EQUALS KHPP Baseline</i>	April 2011
31	IRD-EQUALS Project	<i>IRD EQUALS KHPP Power Team Work Plan</i>	
32	IRD-EQUALS Project	<i>IRD EQUALS KHPP QA Plan</i>	May 2011
33	IRD-EQUALS Project	<i>IRD EQUALS KHPP Maps</i>	

#	Publisher or Author	Document Title	Date
34	IRD-EQUALS Project	<i>IRD EQUALS Work Plan</i>	February 2014
35	IRD-EQUALS Project	<i>IRD EQUALS GK test results</i>	Various dates
36	IRD-EQUALS Project	<i>IRD EQUALS Final Warranty Inspection for GK</i>	
37	IRD-EQUALS Project	<i>IRD EQUALS Electrical Wiring Issues in FoHE</i>	February 2012
38	IRD-EQUALS Project	<i>IRD EQUALS Quality Assurance Plan for Vertical structures</i>	March 2008
39	IRD-EQUALS Project	<i>IRD EQUALS Status of CHEF FoHE Projects</i>	May 2014
40	IRD-EQUALS Project	<i>IRD EQUALS Drawings for FoHE Projects</i>	August 2010
41	IRD-EQUALS Project	<i>IRD EQUALS Technical Specifications for FoHE Projects</i>	August 2010
42	IRD-EQUALS Project	<i>IRD EQUALS Drawings for CHEF Projects</i>	April 2012
43	IRD-EQUALS Project	<i>IRD EQUALS Technical Specifications for CHEF Projects</i>	April 2012
44	IRD-EQUALS Project	<i>Consolidated POE Report for completed projects under the CHEF Program</i>	May 2014
45	IRD-EQUALS Project	<i>IRD EQUALS Materials Test Results</i>	May 2014
46	USAID	<i>Contractor Performance Assessment report (CPAR) 2011 - 2013</i>	April 2013
47	USAID/Afghanistan	<i>EQUALS Concept Paper</i>	March 2009
48	USAID/Afghanistan	<i>Action memorandum for the Mission Director</i>	September 2009
49	IRD-EQUALS	<i>Final Inspection Report for Durai Junction Substation</i>	September 2013
50	USAID/Afghanistan	<i>2011-4-20 Executed contract 306-C-00-11-00512-00 EQUALS</i>	

ANNEX V IRD OBJECTIVE INDICATORS

EQUALS PERFORMANCE INDICATORS

The Project Management Plan developed by IRD uses the following indicators to track the project's performance

General:

- Number of projects receiving QA/QC monitoring
- Number of inspection reports produced for all projects
- Number of ad-hoc QA/QC reports
- Percentage of satisfactory results where QA testing results were validated
- Number of IQ tests conducted by IP and observed by EQUALS staff
- Percentage of environmental compliance checks where appropriate mitigation measures are in place

G-K road:

- Number of site inspections
- Number of reports completed by the EQUALS Road QA team

KHPP:

- Number of scheduled site inspections completed by engineers
- Number of engineering technical reviews of design packages

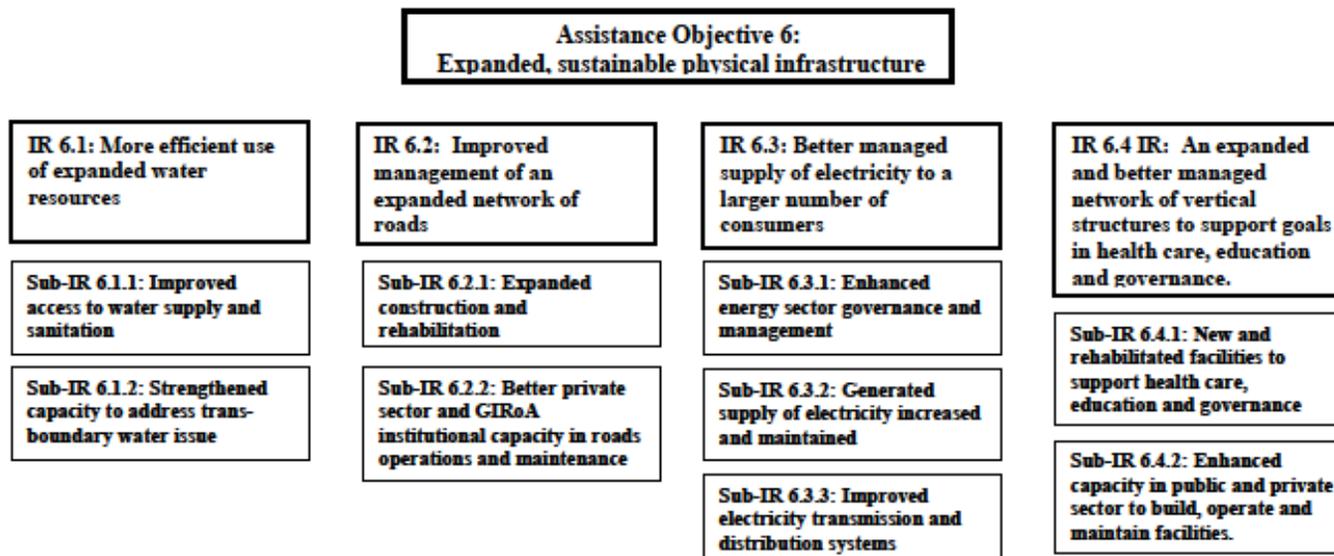
Vertical Structures:

- Number of review reports on architectural and engineering drawings and specifications
- Number of site inspections and reports completed by EQUALS VS engineers

Material Testing Laboratory:

- Number of material tests conducted

V. U.S. MISSION IN AFGHANISTAN INFRASTRUCTURE, ENGINEERING, AND ENERGY RESULTS FRAMEWORK



VI. INDICATORS AT A GLANCE

(* denotes indicators reported in the PPR)

A. ASSISTANCE OBJECTIVE 6: EXPANDED, SUSTAINABLE PHYSICAL INFRASTRUCTURE

- 6a. Perceived availability of clean drinking water
- 6b. Perceived availability of electricity supply
- 6c. Percent of respondents expressing awareness of road projects in their area

B. INTERMEDIATE RESULT 6.1: MORE EFFICIENT USE OF EXPANDED WATER RESOURCES

- 6.1a. Number of people in target areas with access to improved drinking water supply as a result of USG assistance*
- 6.1b. Percentage of water losses from USG-assisted water utilities

SUB-IR 6.1.1: IMPROVED ACCESS TO WATER SUPPLY AND SANITATION

- 6.1.1a. Number of water systems installed or rehabilitated
- 6.1.1b. Number of people in target areas with access to improved sanitation facilities as a result of USG assistance
- 6.1.1c. Number of watershed assessments conducted

SUB-IR 6.1.2: STRENGTHENED CAPACITY TO ADDRESS TRANS-BOUNDARY WATER ISSUES

- 6.1.2a. Number of persons trained in trans-boundary water management fields
- 6.1.2b. Development of policies and procedures to address trans-boundary water issues

C. INTERMEDIATE RESULT 6.2: IMPROVED MANAGEMENT OF AN EXPANDED NETWORK OF ROADS

- 6.2a. Number of people benefitting from USG-sponsored transportation infrastructure*
- 6.2b. Percentage increase in annual average daily traffic count
- 6.2c. Kilometers of maintained roads

SUB-IR 6.2.1: EXPANDED CONSTRUCTION AND REHABILITATION

- 6.2.1a. Kilometers of transportation infrastructure constructed or repaired through USG assistance*

SUB-IR 6.2.2: BETTER PRIVATE SECTOR AND GIRO.A INSTITUTIONAL CAPACITY IN ROADS OPERATIONS AND MAINTENANCE

- 6.2.2a. Progress toward formation of an effective Road Authority
- 6.2.2b. Number of people trained in transport management fields*
- 6.2.2c. Number of people receiving USG supported training in transportation technical fields

D. INTERMEDIATE RESULT 6.3: BETTER MANAGED SUPPLY OF ELECTRICITY TO A LARGER NUMBER OF CONSUMERS

- 6.3a. Annual electricity produced or purchased in MWh by the national electric utility
- 6.3b. Number of people with increased access to modern energy services as a result of USG assistance*
- 6.3c. Number of renewable energy systems installed

SUB-IR 6.3.1: ENHANCED ENERGY SECTOR GOVERNANCE AND MANAGEMENT

- 6.3.1a. Percent reduction in utility technical losses
- 6.3.1b. Percent reduction in utility commercial losses
- 6.3.1c. Milestones toward independent Afghan management of key energy infrastructure
- 6.3.1d. Number of people receiving USG supported training in energy-related business management systems*

SUB-IR 6.3.2: GENERATED SUPPLY OF ELECTRICITY INCREASED AND MAINTAINED

- 6.3.2a. Capacity constructed or rehabilitated as a result of USG assistance*
- 6.3.2b. Weighted average cost of electric energy supplied to the grid
- 6.3.2c. Number of renewable energy systems installed

SUB-IR 6.3.3: IMPROVED ELECTRICITY TRANSMISSION AND DISTRIBUTION SYSTEMS

- 6.3.3a. Number of kms of transmission and distribution lines installed or upgraded as a result of USG assistance
- 6.3.3b. Number of new or upgraded service connections

E. INTERMEDIATE RESULT 6.4: AN EXPANDED NETWORK OF VERTICAL STRUCTURES TO SUPPORT HEALTH CARE, EDUCATION AND GOVERNANCE.

- 6.4a. Number of people with access to new or rehabilitated health facilities.
- 6.4b. Number of people with access to new or rehabilitated educational facilities.
- 6.4c. Number of people served by new or rehabilitated civic or government facilities.

SUB-IR 6.4.1: NEW AND REHABILITATED FACILITIES TO SUPPORT HEALTH CARE, EDUCATION AND GOVERNANCE.

6.4.1a. Number of facilities rehabilitated
6.4.1b. Number of classrooms repaired with USG assistance*

6.4.1c. Number of new facilities constructed
6.4.1d. Number of classrooms constructed with USG assistance*

SUB-IR 6.4.2: ENHANCED CAPACITY IN PUBLIC AND PRIVATE SECTOR TO BUILD, REHABILITATE, OPERATE AND MAINTAIN FACILITIES.

6.4.2a. Number of Afghan workers employed on construction
6.4.2b. Number of Afghan firms under sub-contract for work on



CHECCHI & COMPANY CONSULTING

Performance Evaluation of the USAID EQUALS Project

Meeting Title In-Briefing Meeting
Date: Saturday 26-Apr-2014 **Time:** 4:00 p.m.
Venue: USAID/Kabul Offices

Attendance:

- Ashaki Guyton-Blanton - Program Infrastructure Officer, USAID/Afghanistan
- BelienTadesse - M&E Officer, USAID/Afghanistan
- Hoppy Mazier - COP, Checchi & Company Consulting
- Dr. Charles Balina – Team Lead, Checchi & Company Consulting

MEETING AGENDA

2. Introductions
3. USAID & the team's understanding of the assignment
4. Initial assumptions & limitations (guidelines on meetings & field visits, etc.)
5. Review of the evaluation questions
6. Discussion of initial work plan
7. Adjustment of the SOW (if necessary)
8. Any Other Business (AOB)

Meeting Notes

1. USAID requested evaluation team to focus on the following EQUALS projects for the study:
 - a. Energy: KHPP
 - b. Vertical structures: CHEF Hospitals
 - c. Vertical structures: FOHE schools
 - d. Roads: GK Road project, phases 1 to 3
2. Study will use data available in Kabul as all these projects are in final phases, with minimal need to travel out of town

3. Checchi will make any necessary revisions to the scope of work and submit to USAID
4. USAID will review and streamline the evaluation questions
5. Checchi will submit the draft work-plan by Tuesday morning
6. Mr. Guyton-Blanton will be primary USAID OEGI contact person for the Checchi evaluation team.
7. Dr. Charles Balina will be primary Checchi contact person for the evaluation, with all correspondence copied to Hoppy Mazier, COP & Aimee Rose, M&E
8. USAID will introduce evaluation team to IRD and GIRoA via email
9. Checchi will set up initial meeting with IRD as soon as possible.
10. First USAID/Checchi progress meeting will be held at Checchi offices Thursday 5/1 @ 9:00 a.m. Thereafter, weekly status meetings or conference calls will be held every Monday at 9:00 a.m.

Notes by:

Dr. Charles Balina, Team Lead - Checchi

Please submit corrections or comments within a week of circulation date.



CHECCHI & COMPANY CONSULTING

Performance Evaluation of the USAID EQUALS Project

Meeting Title Introductory Meeting with IRD-EQUALS
Date: Wednesday 30-Apr-2014 **Time:** 10:00a.m.
Venue: IRD Kabul Offices

Attendance:

- BijoyMisra, Acting COP, IRD-EQUALS
- Dede Naylor, Director Program Support, IRD
- Noor Atel, M&E Specialist, Checchi
- Khalid Hoshang, Construction Consultant, Checchi
- Noor Mohammad Farid, Construction Specialist, Checchi
- Dr. Charles Balina, Team Lead, Checchi

MEETING AGENDA

1. Introductions
2. Objectives & scope of the assignment
3. Discussion of assignment timeline
4. Support required by Checchi from IRD team
5. Any Other Business (AOB)

MEETING NOTES

1. The objectives of the evaluation are to
 - a. Determine if the technical assistance provided by USAID, through IRD, was appropriate to overcome the challenges of increasing GIRoA capacity to implement the projects.
 - b. Validate that the four infrastructure projects meet international building codes through QA/QC as performed by IRD and as required by USAID/Afghanistan
 - c. Develop a concise set of USAID procurement-based recommendations, based on the findings and conclusions of the evaluation, for supporting future construction projects as a reference resource for GIRoA.

2. At USAID's request, the evaluation will cover four EQUALS projects i.e.
 - a. Kandahar Helmand Power Project (KHPP)
 - b. Gardez-Khost Road (GK)
 - c. Construction of Health & Educational Facilities (CHEF)
 - d. Faculty of Higher Education (FOHE)
3. IRD-EQUALS clarified that all their projects were off-budget Quality Assurance work
4. There was no project management involvement from GIRoA on any of the IRD-EQUALS projects.
5. If any field visit becomes necessary, IRD-EQUALS can handle the logistics for a trip to KHPP.
6. CHEF is scattered in many locations nationwide while FOHE was delayed and is just starting with erection of tent structures.
7. IRD-EQUALS will make their individual project Team Leaders available to meet with Checchi and provide required project documentation, starting next week. Checchi will provide a schedule for the meetings.
8. IRD-EQUALS recommended document reviews and meetings for vertical structures projects (CHEF & FOHE) be handled together. Separate meetings will be held for KHPP & GK.
9. For each project, IRD-EQUALS will also help identify non-IRD contacts the team may wish to interview e.g. contractors, etc. The representative for Black & Veatch, prime contractors on KHPP, is based in Dubai.
10. Checchi will revise its list of required documents based on meeting discussions and forward to IRD-EQUALS. Some of the documents – like specific meeting minutes - will be with USAID or other parties.

Notes by Dr. Charles Balina, Team Lead

Please provide comments or requests for correction within one week of circulation date.



CHECCHI & COMPANY CONSULTING

Performance Evaluation of the USAID EQUALS Project

Meeting Title Discussion with IRD-EQUALS on Vertical Structures projects

Date: Tuesday 6-May-2014 **Time:** 9:00a.m.

Venue: IRD Kabul Offices

Attendance:

- Bijoy Misra, Acting COP, IRD-EQUALS
- Asif Mahmud, Team Leader – Vertical Structures (VS), IRD-EQUALS
- Elizabeth Muller, IRD-EQUALS
- Najeeb Ahmad,, Deputy Team Leader – Vertical Structures, IRD-EQUALS
- Khalid Hoshang, Construction Consultant, Checchi
- Noor Mohammad Farid, Construction Specialist, Checchi
- Dr. Charles Balina, Team Lead, Checchi

DISCUSSION TOPICS

1. Introductions
2. Overview of evaluation objectives & scope
3. Discussions on CHEF & FOHE projects
4. Any Other Business (AOB)

DISCUSSION HIGHLIGHTS

1. IRD-EQUALS clarified they had no direct construction management role on the project. IRD also observed they had capacity development roles in Water, and AIDC functional areas. The Power team has been engaged in capacity development for DABS (AFG electricity company) since October 2013.
2. IRD-EQUALS provided 2 CD's with some of the requested documents and a map of project locations. Additional documents will be available within 1 week.
3. All EQUALS projects were off-budget, with USAID paying the contractors and IRD directly.
4. The implementing partners were: IOM for CHEF and USACE for FOHE
5. IRD had no access to contractors' contracts. These were availed to them on an as need basis when requested.
6. IRD was not in charge of the construction project meetings (EQUALS only provided QA services), hence -would not be the source for Construction Contractor's project meeting notes.

7. Inspections: IRD-EQUALS have full-time inspectors at the project sites
8. Testing & labs: IRD-EQUALS only performed QA work, contractor was responsible for the QC. EQUALS set up a mobile lab for QA verification of material samples tested by Contractors.. For Vertical Structures IRD-EQUALS witnessed collection and testing of construction materials for CHEF projects; testing of collected materials were conducted in USACE approved labs in coordination with the implementing partner. For FOHE projects however, material tests were conducted by USACE and were not witnessed by IRD.
9. Issues observed to have affected project implementation included the following:
 - a. Poor performance of a number of contractors on the USACE/FOHE project led to some contracts getting terminated
 - b. Incomplete or unclear building designs led to time delays (IRD-EQUALS was not involved in Engineering design, or Procurement QA; instead, was strictly limited to Construction QA)
 - c. Teamwork issues – poor relations between local and international workers
 - d. A number of designs specified non-local materials whose replacement has not been easily available locally when it comes to repairs. This affects the project’s sustainability
 - e. End-users were not always fully involved in the project’s design and implementation. There was no end-user participation in constructability and operability assessments prior to implementation
 - f. Post-occupancy evaluation report revealed inadequate funding for generator fuel.
 - g. Inadequate post-project maintenance funding is a common problem with all EQUALS projects.
 - h. Same report also revealed inadequate integration of local materials in design – leading to delays in replacing items that fail during the facilities use.
 - i. Faulty or defective materials contributed to project delays – example: Black & Veatch tower pylons.
 - j. Training programs were at times inadequate for the locals – (to follow up during KHPP visit).
10. Positive impacts of project:
 - a. Economic and social benefits from completed projects
 - b. KHPP project design included a spare parts program
 - c. Training components built capacity of local Afghanis
11. Unless specifically called for by USAID, IRD-EQUALS reports only provided findings. Recommendations were made in issue-oriented reports
12. While CHEF followed environmental mitigation measures, FOHE IP was instructed by USAID to follow environmental mitigation measures almost two years after commencement of the FOHE projects.

13. IRD recommended Checchi team meets with DABS Project Implementation Unit.
14. IRD recommended Checchi team obtains a report on international best practices from USAID.

Notes by Dr. Charles Balina, Team Lead

Please provide comments or requests for correction within one week of circulation date.



CHECCHI & COMPANY CONSULTING

Performance Evaluation of the USAID EQUALS Project

Notes on Field visit & Discussions with IRD-EQUALS Team on KHPP project

Date: Wednesday 7-May-2014 & Thursday 8-May-2014

Venue: IRD-EQUALS KHPP Kandahar Offices & BreshnaKot Sub-Station

Participating:

- Dr. Demetre Papaioannou, Team Leader – KHPP, IRD-EQUALS
- Jurist Awal, Sr Electrical Hydropower Engineer – KHPP, IRD-EQUALS
- Stephen Ndili, Power Plant Trainer – KHPP, IRD-EQUALS
- Akbar Jan Ahmadzai Senior Trainer – KHPP, IRD-EQUALS
- Noor Mohammad Farid, Construction Specialist, Checchi Evaluation Team
- Dr. Charles Balina, Team Lead, Checchi Evaluation Team

DISCUSSION HIGHLIGHTS

1. Checchi team discussed objectives of the evaluation
2. IRD-EQUALS services provided at KHPP:
 - a. Quality Assurance
 - b. Engineering support & technical assistance
 - c. Testing
3. KHPP scope was covered under Job Orders 1, 2 & 4 and involved following elements:
 - a. BreshnaKot sub station (EQUALS work started 7/2012, energized on October 2013, ongoing support to DABS)
 - b. Shurandam Industrial Park, SIP (started 6/2011, turned over to DABS 12/2012, on-going support to DABS)
 - c. New sub station at Durai Junction (started 11/2011, energized 9/2013, on-going support to DABS)
 - d. 20 kV transmission line refurbishment (EQUALS involvement started 9/2012, DABS finished the refurbishment with USAID parts on 9/2013, ongoing support to DABS for the rest of the refurbishment)
 - e. Work at Kajaki was de-scoped by USAID and placed on-budget through DABS
4. KHPP team lead will prepare a brief (1 – 2 page) overview of the project and forward to Checchi team over the next few days. Additional records can be requested via Kabul offices.

5. Observations:

- i. Project design had both training and spare parts components. Black & Veatch arranged training for DABS employees outside of Afghanistan in India (for transformers, by CGL) and South Korea (for switchgear, by Hyundai). Also training on generators was done in Kandahar, by PGS and lasted about one week.
- ii. At the request of USAID, IRD organized additional continuation training jointly with DABS, adapted to DABS needs, thus ensuring all topics were relevant
- iii. IRD is also focusing on training of trainers, which will have a multiplier effect on knowledge transfer
- iv. Trainees came from the local DABS office and other DABS offices nationwide, including Kabul, Helmand and Uruzgan
- v. IRD and DABS can easily adapt and pace the local courses to match needs and responses on the ground (this is not true for courses given in India, Korea)
- vi. IRD monitored performance through daily visits by local engineers and bi-monthly visits from expatriate engineers
- vii. IRD produced and submitted weekly reports to USAID
- viii. IRD input added value to project output through their review of the B&V designs. Example: reviews caught and corrected the faulty and risky provision for battery-storage in an un-ventilated area
- ix. The implementing partner, DABS, was involved in commissioning the newly installed equipment
- x. DABS employees had trouble adjusting from operating the old analog equipment to the new digital equipment
- xi. The training courses given to introduce DABS staff to the new equipment were too compressed and trainees did not fully benefit from them
- xii. Language barriers were observed during the training
- xiii. Security – a constant problem affecting construction and installation of equipment
- xiv. Hiring of qualified engineers and technicians was a major issue – there is a local human resource shortage and security concerns kept away many qualified people
- xv. Because of composition of DABS technical staff, 100% of all people trained under KHPP are men i.e. NO women benefitted from the training
- xvi. IRD was not able to review the contractors' shop drawings or workshop fabrication processes as this was not in their scope. This resulted in sub-standards products and poor workmanship, including the tower that collapsed during installation at Durai Junction resulting in a 4 months delay
- xvii. Prime contractor Black & Veatch did not pass all their design drawings to USAID for onward transmission to IRD for review in time, and it was common to find here-to-fore unknown or unapproved drawings being used on site.

- xviii. IRD's QA Scope of Work for KHPP also did not include visiting production facilities outside Afghanistan for Factory Acceptance Tests (FAT), hence quality of imported items could not be independently verified
 - xix. Dependence on the prime contractor B&V for air transport to remote sites at the beginning of the project affected IRD's efficiency and independence as QA providers
 - xx. Local Implementing Partner DABS was not fully made part of the design process and had no role in design reviews
 - xxi. New designs did not provide for a bathroom and rest area for the overnight attendants, and they are back to using the old facility which was initially slated to be demolished
 - xxii. Training on new equipment did not start until after it was commissioned. The lack of overlap created a period of uncertainty and confusion in the operating rooms during the switch-over period
 - xxiii. Lockdown of port in Karachi, Pakistan caused an eight month delay
 - xxiv. Multiple security incidents caused intermittent delays of up to one week each at various locations due to APPF lockdowns
 - xxv. One of the seven new generator units blew during the warranty period and is awaiting the manufacturer's action. Belief is that it could be due to adulterated diesel.
 - xxvi. Local staff spoken to said they could barely afford to pay for their domestic power at a tariff rate of approximately 5 Afs per unit, translating to about 2,000 Afs per month (approx.. \$35).
 - xxvii. Current USAID and ADB plans for new generation at Kajaki (under 'Unit 2' DABS project) will improve supply
 - xxviii. There are still issues with power supply, including excessive tripping of equipment
6. Positive impacts of project:
- a. Number of local people employed at Durai Junction has increased by 15 since the station was energized and put into operation, which employees are trained by EQUALS.
 - b. Local staff confirmed frequency of power outages at their homes has reduced from approximately 5 days a week with no power to one day a week
7. Lessons learnt & Recommendations
- a. Off-site training at the manufacturers' locations was very brief and rushed, general consensus was that trainees did not fully benefit from it
 - b. On-site training yields more rewards as it can be better paced to match demand. It also makes it possible to train trainers, which has a multiplier effect and contributes to the project's sustainability
 - c. QA scope should include such off-site services as reviewing shop-drawings, fabrication processes and conducting factory acceptance tests (FATs).
 - d. End-user (DABS) should be made part of the project as early as possible, especially in the planning and design review stages

- e. Capacity building, such as training the operators who will man the equipment, should have happened prior to installation. The operators should then be part of the installation process.

Notes by Dr. Charles Balina, EQUALS Evaluation Team Lead



CHECCHI & COMPANY CONSULTING

Performance Evaluation of the USAID EQUALS Project

Notes on discussions with DABS-Kandahar Zone Director

Date: Friday 9-May-2014

Venue: Checchi Offices, Kabul

Attendance:

- Eng. Rassoul Fayed, Director, DABS Kandahar Zone
- Dr. Charles Balina, Team Lead, EQUALS Evaluation Team

DISCUSSION HIGHLIGHTS

1. Background information

- a) Discussed objectives of the project's evaluation
- b) Kandahar is one of nine DABS zones, and covers 4 provinces
- c) Kajaki hydro-electric dam is the main power source (2 units of 16.5 MW each = 33 MW total)
- d) Additional generation from sub-stations in Sangine, Lashkar Gar and BreshnaKot – all diesel generation
- e) DABS operators work 3-day cycles: one day on duty followed by two days off

2. Observations:

- a. DABS involvement on the EQUALS project was mostly in the training
- b. DABS selected the course participants and was involved in determining the training curriculum.
- c. Training was for both operators and managers
- d. The training courses in S Korea and India lasted 4 days each, which DABS considered too short and rushed. Having that training on site would have allowed more people to attend
- e. DABS feels its staff need training in relay switching
- f. DABS has minimal women on its technical staff, hence there were no women among any of the trainees
- g. DABS staff were not directly involved in the equipment design or installation through EQUALS, only in its commissioning. On the contrary, DABS had been directly involved

in the rehabilitation of Kajaki Unit 2 by Siemens in 2006. As a result of this involvement, DABS staff were later able to independently rehabilitate Unit 3.

- h. Absenteeism was a major problem on all courses except for those attended by out-of-town employees – running up to 80% in some cases. The major reason for the absenteeism was that the training encroached on the employees work cycle (one day on, two days off) without compensating them for their time.
 - i. Out-of-town employees' attendance was near 100%
 - j. Employees were requesting the equivalent of \$5 per day to attend classes on their scheduled days off – to cover transport costs, meals and work they were forfeiting to do in their free time off. DABS request for this allowance was turned down by EQUALS.
 - k. Neither DABS nor EQUALS was in position to carry out factory acceptance tests on equipment before it was shipped
 - l. Operators had a hard time switching from the old analog to the new digital equipment.
 - m. The power system experienced 2,580 trips in (SY 1393).
 - n. DABS uses about 100,000 liters of diesel a day for power generation, translating into about \$150,000 per day (\$54,750,000 a year). Currently USAID and USACE are jointly meeting this cost, but their share of this budget will gradually go down until by Sep 2015 DABS will meet the entire cost.
 - o. Of the 33 MW of power generated at Kajaki dam, DABS is only able to collect payment for 7 MW through Lashkar Gar and 12 MW through BreshnaKot sub stations, representing approximately only 60% of the generated power. The organization can collect from consumers in the Kajaki dam – Durai Junction distribution area (including Sangine sub-station) because of prevailing security problems.
3. Lessons learnt:
- a. Unlike on the 2006 Siemens project, the lack of early involvement of DABS personnel was a missed opportunity in capacity building
 - b. Absenteeism during training is a major bottleneck to capacity building that has to be addressed
 - c. Capacity building efforts are more effective when training is given before equipment is installed. Operators will then be able to maximize its use as soon as it is commissioned.
4. Sustainability
- a. DABS has major concerns about financial sustainability after the USAID/USACE diesel financing arrangement expires.
 - b. DABS has plans but no funding for a hydro power dam and 34 km transmission line from Dahla. This would generate up to 10 MW and enable the diesel generators to provide back-up power during high demand periods. At an estimated construction cost of \$XX million and much lower O&M costs than diesel, this would be a more sustainable option.

Notes by Dr. Charles Balina, EQUALS Evaluation Team Lead

Please provide comments or requests for correction within one week of circulation date.



CHECCHI & COMPANY CONSULTING

Performance Evaluation of the USAID EQUALS Project

Notes on discussions with Mashriq Engineering Construction Company (MECC)

Date: Monday 9-Jun-2014

Venue: Checchi Offices, Kabul

Attendance:

- Eng. Allah NazarNaqibi, MECC COP, Gardez-Khost Road project
- Khalid Hoshang, Construction Consultant, Checchi
- Noor Mohammad Farid, Construction Consultant, Checchi
- Dr. Charles Balina, Team Lead, EQUALS Evaluation Team

DISCUSSION HIGHLIGHTS

1. Background information

- f) Discussed objectives of the project's evaluation
- g) MECC first got involved on G-K Road as sub-contractors to the Louis Berger Group/Black & Veatch joint venture, after a sub-contracting firm from India was terminated
- h) MECC was also involved in maintenance and snow-removal work directly under USAID contract starting August 2012
- i) MECC was hired by USAID to pave sections 2A and 2B, total 13 km, after USAID terminated LBG contract starting July 20XX

2. Observations:

- a. In March 2012, MECC performed a joint assessment of the project with IRD
- b. Most IRD expat staff were helpful. One QA Manager was especially knowledgeable and helpful with paving.
- c. Local IRD staff may have been academically qualified but were generally less experienced than MECC staff and added little to no value in both QA supervision and knowledge transfer
- d. Except for days when there were security incidents, IRD's QA monitoring work on the project was well done, with their staff being present 5 or more hours every day
- e. While MECC did not do the initial road design (it was done by LBG), they prepared shop drawings which were reviewed by IRD again to their satisfaction.

- f. Save for public events like ribbon-cutting, there was little involvement or interest in the project from GIRoA. No engineer from the provincial Directorate of Public Works (DPW) was assigned to the project.
- g. Ministry staff reluctantly agreed to participate in training organized by MECC, but had the session reduced from one week to 3 days, and then attended 2 days. Instructors reported no active participation in the sessions by the ministry staff.
- h. MECC has worked with several donors in the infrastructure sector, and they single out participation by USAID as the most exemplary and helpful “despite our on-site arguments”
- i. MECC lacked capacity in contract management and IRD’s staff on the GK road did not enhance this in a form of capacity building.
- j. Project had a requirement that MECC use Primavera P6 for scheduling monitoring and control, which the contractor found very challenging. MECC wishes EQUALS had used the primavera training sessions that IRD gave to Ministry personnel as an opportunity to also train local contractors.
- k. In the course of the project, MECC made recommendations on building capacity of local contractors to USAID, a copy of this report will be shared with the evaluation team.
- l. One of the biggest challenges on the project was dealing with the local community whose leadership continually came up with self-serving demands e.g. seeking employment in skilled positions for unqualified residents, making demands on hiring and utilizing unsuitable locally owned equipment, etc.
- m. One result of such demands is that often times road works had to be inefficiently subdivided and subcontracted based on the local tribe in the immediate vicinity of the section.
- n. MECC believes some of the delays arising from such demands could have been averted with more GIRoA involvement, and USAID’s pre-conditioning of such involvement
- o. In another show of lack of government involvement, MOPW withdrew a contractor for an already budgeted for and awarded maintenance contract after learning that USAID was awarding a maintenance contract for the same section to MECC.
- p. IRD field engineers monitoring the project offered little help in QC efforts and developed a “gotcha” attitude. They appeared to focus more on taking pictures for inclusion in their reports than in getting a good product.
- q. MECC observed that IRD kept negative issues in their reports long after contractor had rectified them.

Notes by Dr. Charles Balina, EQUALS Evaluation Team Lead

Please provide comments or requests for correction within one week of circulation date.

ANNEX VIII DATA COLLECTION QUESTIONNAIRES (*DARI VERSIONS AVAILABLE UPON REQUEST*)
EQUALS PROJECT PERFORMANCE EVALUATION
LESSONS LEARNED QUESTIONNAIRE

Introduction

Cecchi & Company Consulting, Inc. is carrying out an evaluation of the USAID's EQUALS (Engineering, Quality Assurance and Logistical Support) project with the following objectives:

- a. Determine if the technical assistance provided by USAID, through IRD, was appropriate to overcome the challenges of increasing GIRoA's¹² capacity to independently implement similar projects;
- b. Validate that the infrastructure projects meet international building codes through QA/QC as performed by IRD and as required by USAID/Afghanistan;
- c. Develop a concise set of USAID procurement-based recommendations for supporting future construction projects as a reference resource for GIRoA.

You are receiving this email because you played a role in one or more EQUALS projects. Please help us achieve our objectives by responding to the attached questionnaire.

Please note that, based on your role on the project, you may not have to respond to all questions – so only answer those questions you feel knowledgeable about. You may use the continuation sheet at the end for additional information.

If you opt not to provide your contact information, your responses (other than your project) will be kept anonymous in our final report. Either hand-written or typed responses are okay, whichever you prefer.

Because we have an imposed deadline on this exercise, we request that you provide your responses no later than June 5, 2014. We will greatly appreciate questionnaires returned even earlier.

Please forward completed questionnaires, and any questions, to me at

Dr. Charles Balina
Team Leader, USAID-EQUALS Project Evaluation
Phone: +93-729-001-682
Email: charles.balina@balinaglobal.com

Thank you.

I. Project Identification

¹²GIRoA – Government of the Islamic Republic of Afghanistan

EQUALS Project(s) you are associated with (check all that apply): <input type="checkbox"/> KHPP <input type="checkbox"/> GK Road <input type="checkbox"/> CHEF <input type="checkbox"/> FOHE <input type="checkbox"/> Other: Click here to enter text.			
Organization you represent: <input type="checkbox"/> USAI <input type="checkbox"/> GIRoA: Click here to enter text. <input type="checkbox"/> IR <input type="checkbox"/> Contractor: Click here to enter text. <input type="checkbox"/> Other: Click here to enter text.			
<i>Optional Information – Your contact details:</i>			
<i>Name:</i>	<i>Click here to enter text.</i>	<i>Role on project:</i>	<i>Click here to enter text.</i>
<i>Email:</i>	<i>Click here to enter text.</i>	<i>Phone:</i>	<i>Click here to enter text.</i>

II. Performance of QA contractor – International Relief & Development (IRD)

Evaluation Item <i>(Discuss how the item below was planned or implemented)</i>	What worked well on your project(s)?	What was missing or did not work well? What could be improved?	<i>(Do not use)</i>
a. IRD's efforts to ensure that all the work performed met technical specifications & other contract requirements	Click here to enter text.	Click here to enter text.	1,3
b. IRD's review of the engineering design process	Click here to enter text.	Click here to enter text.	1
c. IRD's review of the contract documents (drawings, technical specifications, contract agreement)	Click here to enter text.	Click here to enter text.	1
d. IRD's review of testing facilities, procedures and results	Click here to enter text.	Click here to enter text.	1
e. IRD's ensuring of compliance with QA & QC plans, technical specifications, construction schedules, safety requirements	Click here to enter text.	Click here to enter text.	1,3
f. IRD's project monitoring: site visits, inspections, testing	Click here to enter text.	Click here to enter text.	3,4
g. IRD's training and capacity building	Click here to enter text.	Click here to enter text.	2,4

h. IRD's engineering support & technical assistance to GIRoA	Click here to enter text.	Click here to enter text.	2
i. IRD's security and logistical support to USAID &GIRoA	Click here to enter text.	Click here to enter text.	2.5

III. Project design

Evaluation Item <i>(Planned vs. implemented)</i>	What worked well on your project(s)?	What was missing or did not work well? What could be improved?	<i>(Do not use)</i>
a. Program's increasing the <u>technical</u> capacity of Afghanistan government employees to <u>independently</u> design, build, operate and maintain similar infrastructure or projects	Click here to enter text.	Click here to enter text.	1, 5
b. Program's building the <u>financial</u> capacity of Afghanistan government ministries and departments to <u>independently</u> design, build, operate and maintain similar infrastructure or projects	Click here to enter text.	Click here to enter text.	2, 5
c. Program's working with university staff and students to provide a more capable pool from which to hire staff	Click here to enter text.	Click here to enter text.	2, 5
d. Program's providing technical support to the Afghanistan government	Click here to enter text.	Click here to enter text.	2,5
e. Program's maximizing the use of local sub-contractors	Click here to enter text.	Click here to enter text.	3, 4
f. Program's improving the performance (building <u>technical</u> capacity) of Afghan contractors to <u>independently</u> design, build, operate and maintain similar infrastructure or projects	Click here to enter text.	Click here to enter text.	4,5,6
g. Post-program sustainability: Knowledge transfer to local contractors	Click here to enter text.	Click here to enter text.	4,5,6
h. Post-program sustainability: Specification and use of appropriate construction materials	Click here to enter text.	Click here to enter text.	5,6
i. Post-program sustainability: Specification and use of appropriate mechanical & electrical equipment and systems	Click here to enter text.	Click here to enter text.	5,6

j. Post-program sustainability: Planning for operation and maintenance of installed materials & equipment <i>(including O&M funding)</i>	Click here to enter text.	Click here to enter text.	5,6
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IV. EQUALS Program management

Project Area <i>(Discussion on how each area was planned, managed or controlled)</i>	What worked well on your project(s)?	What was missing or did not work well? What could be improved?
a. Integration of Engineering-Procurement-Construction <i>How well did all 3 aspects of the project work & fit together?</i>	Click here to enter text.	Click here to enter text.
b. Project Scope <i>Planned scope of work versus actual or as-built work, changes</i>	Click here to enter text.	Click here to enter text.
c. Project Work plan & Schedule <i>Compare planned dates/durations to actual dates/durations</i>	Click here to enter text.	Click here to enter text.
d. Project Cost <i>Compare budgeted cost to actual or final costs</i>	Click here to enter text.	Click here to enter text.
e. Quality – Technical specifications <i>Quality assurance & monitoring, inspections and tests.</i>	Click here to enter text.	Click here to enter text.
f. Human Resources <i>Personnel availability, performance, training. Team development</i>	Click here to enter text.	Click here to enter text.
g. Communication <i>Project documents, meetings, correspondence, reporting, e-mails</i>	Click here to enter text.	Click here to enter text.
h. Project Risk	Click here to enter text.	Click here to enter text.

<i>Risk planning & management, mitigation & avoidance</i>		
<i>i. Procurement (of equipment, materials & services) Comment on bidding, contract negotiation & award</i>	Click here to enter text.	Click here to enter text.
<i>j. Stakeholder Management Dealing with partners - GIRoA, USAID, vendors, end-users, etc.</i>	Click here to enter text.	Click here to enter text.

Continuation sheet – use for any additional information

Project Area <i>(Discussion on how each area was planned, managed or controlled)</i>	What worked well on your project(s)?	What was missing or did not work well? What could be improved?
	Click here to enter text.	Click here to enter text.

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ANNEX IX EVALUATION ACTIVITIES CALENDAR

USAID-EQUALS PROJECT EVALUATION CALENDAR

April 2014

- April 24 Mobilization
- April 25 Mobilization
- April 26 In briefing at USAID
- April 30 Introductory meeting with IRD

May 2014

- May 05 Conference call with USAID-EQUALS COR
- May 06 IRD initial overview briefing- Vertical Structures & KHPP (IRD EQUALS)
- May 07 & 08 EQUALS Evaluation team field visit (KHPP Kandahar)
- May 09 TL meeting with DABS Kandahar Director
- May 12 Conference call with USAID-EQUALS COR and discussion of Gardiz-Khost (GK) road with IRD
- May 19 Conference call with USAID-EQUALS COR and field visit to Sardar Kabuli Girls High School
- May 26 Conference call with USAID-EQUALS COR
- May 27 Field Visit – FOHE Balkh, Mazar-e-Sharif
- May 28 Field Visit – FOHE and CHEF Faryab, Maimana
- May 29 Field Visit – FOHE Jawzjan, Shibirghan
- May 31 EQUALS Program Evaluation discussions at USAID

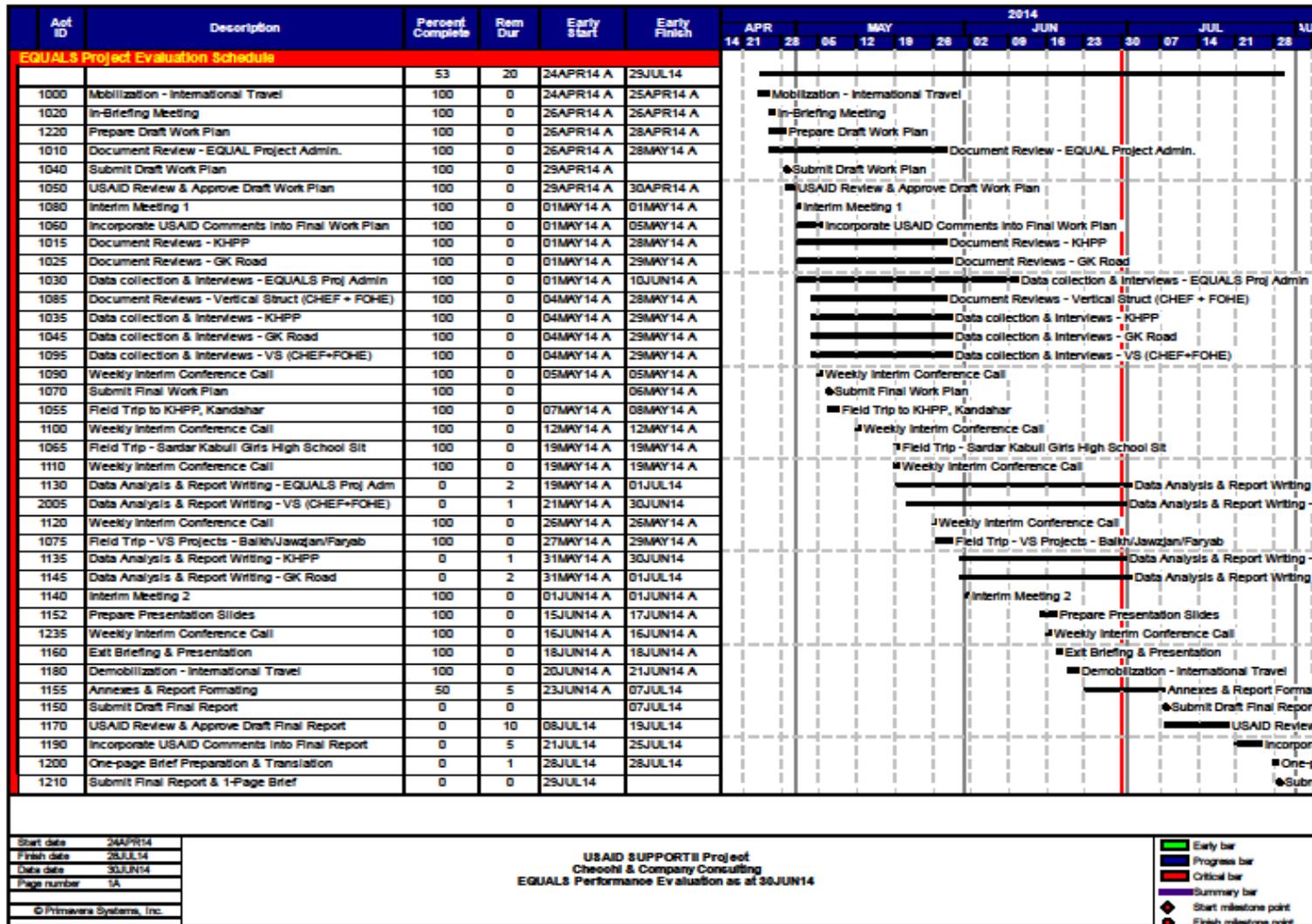
June 2014

- June 01 EQUALS Program Evaluation discussions at USAID and meeting with IOM
- June 02 Conference call with USAID-EQUALS COR
- June 09 Conference call with USAID-EQUALS COR
- June 10 Meeting on G-K road at MoPW
- June 16 Conference call with USAID-EQUALS COR
- June 18 Exit briefing and presentation
- June 20 Demobilization
- June 21 Demobilization
- June 23 Conference call with USAID-EQUALS COR
- June 30 Conference call with USAID-EQUALS COR

July 2014

- July 07 Submit Final draft report
- July 19 USAID comments to evaluation team
- July 29 Submit Final Report

ANNEX X OVERALL EVALUATION SCHEDULE



ALL EQUALS PROJECTS & ACTIVITIES

Power Sector

1. National Load Control Center (TO19) QA monitoring and construction closeout assistance
2. Tarakhil Power Plant O&M Training (TO27) technical assistance and QA monitoring
3. Darunta Hydroelectric Power Plant Restoration technical assistance and QA monitoring
4. Kandahar Helmond Power Initiative technical assistance and QA monitoring

Roads Sector

New Construction/Rehabilitation Monitoring

5. Gardez to Khost Road, Section 2
6. Kabul to Kandahar, Nine Bridges

O&M Monitoring

7. Kandahar to Hirat Road, Sections 2 through 5
8. Farahto Ring Road
9. Lashkargahto Ring Road
10. Kabul to Kandahar Road, Sections B through F
11. Southern Strategy Road
12. Kandahar to Tarinkot Road
13. Ghazni to Sharana Road
14. Pul-e-Alam-Ring Road
15. Kabul to Gardez Road
16. Jalalabad to Asmar Road
17. Charekarto Baharak Road
18. Sheberghanto Sarepol Road
19. Salang Pass Tunnel and Galleries

Vertical Structures Sector

Ghazi Boys High School Monitoring

20. Kabul, Phase II: Utility Works
21. Kabul, Phase III: Multi-Purpose (Admin) Building

Sardar Kabuli Girls High School Monitoring

22. Kabul, Phase I: Main Building
23. Kabul, Phase II: Utility Works

CHEF-Midwife Training Center Monitoring

24. Khost
25. Badakshan
26. Bamyan

CHEF-Provincial Teacher Training Center Monitoring

27. Faryab
28. Parwan
29. Wardak

ALL EQUALS PROJECTS & ACTIVITIES

30. Nangahar

CHEF-20BedHospitalMonitoring

31. KhairKot

CHEF-100BedHospitalMonitoring

32. Gardez

FoHE-FacultyofEducationMonitoring

33. Faryab

34. Balkh

35. Jawzjan

36. Heart

KabulUniversityMen’sDormitoryandCafeteriaMonitoring

37. Kabul

Water and Other Sectors

38. SWSSprojectmonitoring

39. ACEPprojectmonitoring

Afghanistan Infrastructure Data Center

40. RespondtoallUSAID-approveddataqueriesandrequests,forexamplefromUSAIDAfghanistanand Washington,ISAF,USCongress,SIGAR,RIG,GAOandothers

41. SupportEQUALSQAMonitoringTeamswithmapsaswellasdataqueries,QCandmanagement

42. InadditiontoUSAID-fundedinfrastructureprojectdata,collectotherAfghanistaninfrastructureproject data-forexamplefromCERP,USACE,WorldBank,etc.-forinclusioninAISCS

43. TogetherwiththeUSAID/AfghanistanSafetyandSecurityOffice,implementandmaintainasecurity incidenttrackingandreportingapplicationwithinAISCS

44. ContinuetoliasonwithRCs,PRTs,SOICsandotherISAF/USFOR-Apartners,suchasDARPAand USDoDNGA,regardinginfrastructureprojectandotherdatacollectionanddistribution

45. Manage,maintain,andsupportAISCSforallUSAID-approvedusers

46. ImplementrecommendationsfromsecondAISCSsecurityreview

47. CompleteintegrationofdirectfieldreportingtoolsinAISCS

48. AddadditionaldataentryandtoolsinAISCS

49. MaintainandimproveAISCSworkflowsanddashboards

Ministry Technical Support and Capacity Development

Ministry of Mines - Technical Support

50. Facilitate and provide technical support to MoM

51. Develop and distribute Hajigak Iron Tender RFP

52. Assist MoM with Gadakhel Chromite Mine contract

53. Assist MoM with the Hirat Cement Plant contract

54. Develop tender for Jabal Saraj Cement Plant + Mine

ALL EQUALS PROJECTS & ACTIVITIES

55. Develop tender for Vikador Gold deposit
56. Assist MoM with the Aynak Copper Mine contract
57. Assist development of Cultural Resource Study Plan
58. Review Aynak Environmental + Social Impact Study
59. Assist development of mineral laws, policies and regulations
60. Assist implementation of the National Extractive Industries Excellence Program

Ministry of Energy and Water - Technical Support

61. Facilitate and provide technical support to MoEW
62. Facilitate and provide technical support to SCWA
63. Facilitate and moderate the development of annual plans and programs for the TS
64. Facilitate workshops to review and draft drought and flood policies
65. Facilitate weekly meetings of the IWRM Technical Working Group
66. Facilitate monthly meetings between the MoEW and USACE to review USACE projects
67. Prepare MoEW JDs for expatriate and national water resource positions supported by CTAP and monitor and evaluate CTAP effectiveness.

Ministry of Public Works - Capacity Development

68. Work with the MPW to establish a road feasibility study office at RSPD
69. Continue to facilitate the Peer Review of the Feasibility Study Reference Manuals
70. Conduct a detailed gap analysis at the MPW RSPD in the area of road survey and design
71. Recruit staff needed for a road survey and design capacity development program
72. Develop the curriculum and other requirements for a road survey and design capacity development program
73. Identify MoPW trainees for a road survey and design capacity development program

ANNEX XII LOG OF EVALUATED PROJECTS' ACTIVITIES

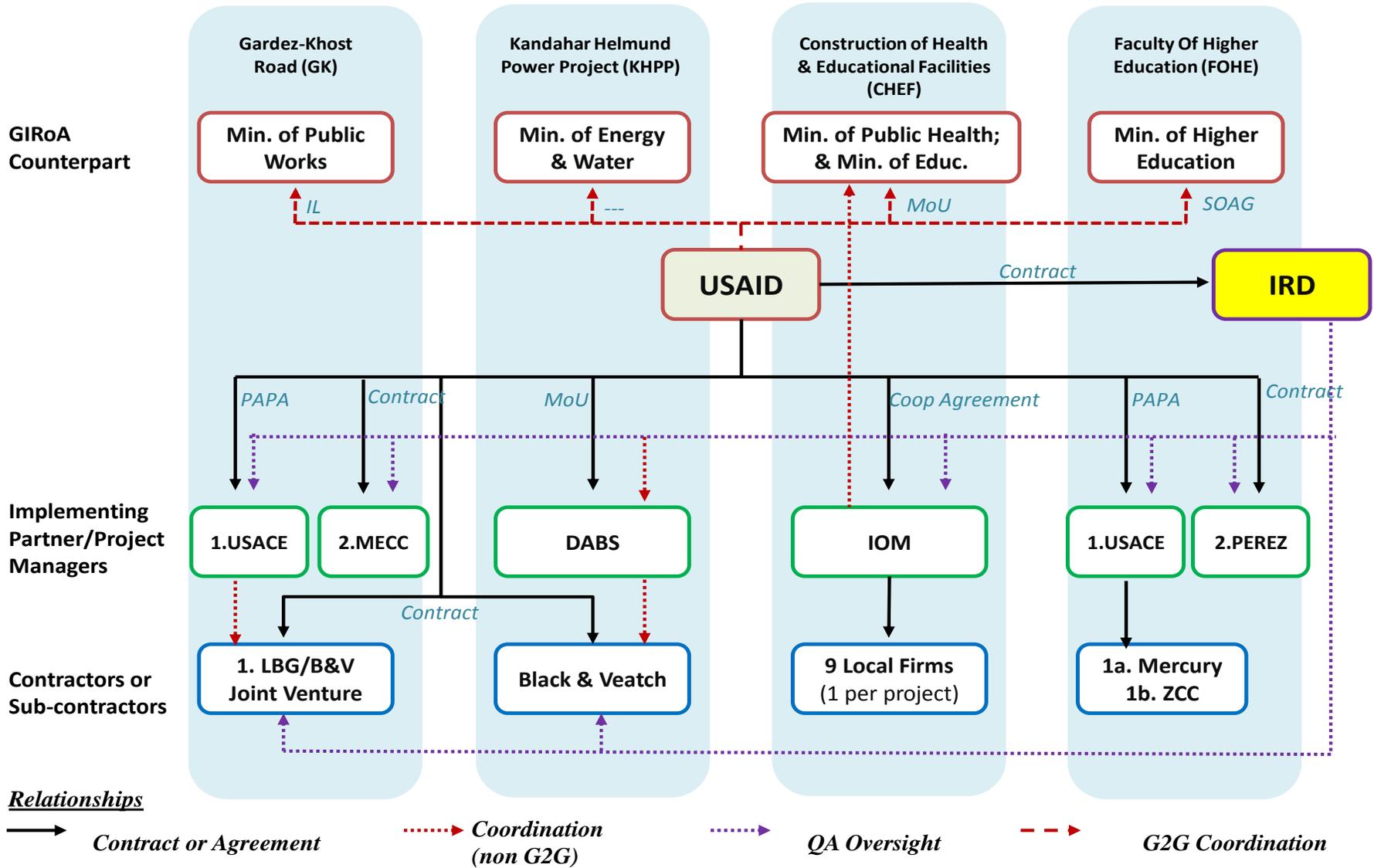
IRD QUALITY ASSURANCE SERVICES - PROJECTS & ACTIVITIES EVALUATED

1. Gardez-Khost Road (GK)
 - 1.1. Phase 1 – Sections 1, 3 & bits of Section 2
 - 1.2. Phase 2 – Road maintenance works
 - 1.3. Phase 3 –Section 2 (Sections 2A & 2B)
 - 1.4. Phase 4 – Section 2 (Upcoming – Not evaluated)
2. Kandahar Helmand Power Project (KHPP)
 - 2.1. BreshnaKot Sub Station
 - 2.2. 20 kV distribution network in Kandahar
 - 2.3. Diesel generation capacity at BreshnaKot
 - 2.4. New sub-station at Durai Junction
 - 2.5. Shorandan Industrial Park Generator Set relocation (SIP)
 - 2.6. Unit 2 installation, @ Kajaki Hydro Power Project
 - 2.7. Training
3. Construction of Health & Educational Facilities (CHEF)
 - 3.1. Paktia 100 Bed Hospital, Gardez
 - 3.2. Paktika 20 Bed Hospital, KhairKot
 - 3.3. Faryab Provincial Teacher Training College (PTTC)
 - 3.4. Nangarhar PTTC
 - 3.5. Wardak PTTC
 - 3.6. Parwan PTTC
 - 3.7. Badakshan Midwife Training Center (MTC)
 - 3.8. Bamyan MTC
 - 3.9. Khost MTC
4. Faculty of Higher Education (FOHE)
 - 4.1. Faryab University FOHE
 - 4.2. Jawzjan University FOHE
 - 4.3. Balkh University FOHE
 - 4.4. Herat University FOHE

ANNEX XIII EQUALS JOB ORDER LOG& BUDGET

Job Order (JO) Number	Modification Number	Ceiling, US\$				Period of Performance		Remarks
		Add	Delete	JO Total	EQUALS Project Cumulative	From	To	
JO 01	-	\$ 6,340,498	\$ -	\$ 6,340,498	\$ 5,375,332	1-May-11	31-Jul-11	New Job Order
	1	\$ 49,397	\$ -	\$ 6,389,895				Revised SOW + Budget
	2	\$ -	\$ -	\$ 6,389,895				Budget re-alignment
	3	0	\$ 1,014,563	\$ 5,375,332				Revised budget
JO 02	-	\$ 24,625,014	\$ -	\$ 24,625,014	\$ 24,075,981	1-Aug-11	30-Apr-12	New Job Order
	1	\$ -	\$ -	\$ 24,625,014				
	2	\$ -	\$ -	\$ 24,625,014			30-Jun-12	Extended performance period
	3	0	\$ 5,924,365	\$ 18,700,649				Revised budget
JO 03	-	\$ 5,164,275	\$ -	\$ 5,164,275	\$ 28,242,823	7-Mar-12	4-Aug-12	New Job Order
	1	\$ -	\$ -	\$ 5,164,275				
	2	\$ -	\$ -	\$ 5,164,275		-	31-Aug-12	Extended performance period
	3	\$ -	\$ -	\$ 5,164,275		-	-	Budget re-alignment
	4	\$ -	\$ 997,433	\$ 4,166,842		7-Mar-12	31-Aug-12	Revised budget
JO 04	-	\$ 30,009,586	\$ -	\$ 30,009,586	\$ 74,246,159	1-Jul-12	17-Apr-13	New Job Order
	1	\$ -	\$ -	\$ 30,009,586		-	15-Jun-13	Extended performance period
	2	\$ -	\$ -	\$ 30,009,586		-	27-Jun-13	Extended performance period
	3	\$ -	\$ -	\$ 30,009,586			4-Jul-13	Extended performance period
	4	\$ 15,993,750	\$ -	\$ 46,003,336		-	17-Apr-14	Extended performance period
	5	\$ -	\$ -	\$ 46,003,336				Revised SOW + Budget re-alignment
	6	\$ -	\$ -	\$ 46,003,336				Revised SOW
	7	\$ -	\$ -	\$ 46,003,336				Revised SOW + Budget re-alignment
	8	\$ -	\$ -	\$ 46,003,336				Revised SOW + Budget re-alignment
JO 05	-	\$ 8,410,200	\$ -	\$ 8,410,200	\$ 93,774,628	1-Sep-12	16-Apr-13	New Job Order
	1	\$ -	\$ -	\$ 8,410,200			15-Jun-13	Extended performance period
	2	\$ 9,290,784	\$ -	\$ 17,700,984			30-Sep-13	Additional SOW, Revised budget + performance period
	3	\$ -	\$ -	\$ 17,700,984			30-Nov-13	Budget re-alignment+Extended performance period
	4	\$ -	\$ 1,316,707	\$ 16,384,277			31-Dec-13	Revised budget + extended performance period
	5	\$ 1,893,039	\$ -	\$ 18,277,316			17-Apr-14	Revised budget + extended performance period
	6	\$ 1,251,153	\$ -	\$ 19,528,469			15-Jun-14	Budget re-alignment+Extended performance period
JO 06	-	\$ 128,672	\$ -	\$ 128,672	\$ 93,903,300	1-Oct-13	17-Apr-14	New Job Order
Total JO Cost					\$ 93,903,300			

ORGANIZATION CHART (for the 4 Evaluated EQUALS Projects)



ANNEX XV FINAL COMPLETION CERTIFICATE - FARYAB PTTC (CHEF)

Translation from Dari by Checchi & Company Consulting



CHEF Quality Control Manual



CHEF/QC/SITE/32
END OF WARRANTY PERIOD RECTIFICATION FORM (FORM B)

Location	Maimana Provincial Teacher Training College	
Contract Number	CHEF-016	
Inspection Date	24 Feb, 2014	
Warranty Period End Date	Dec 27, 2013	
Contractor	ASCC	Phone Number: 0799364495

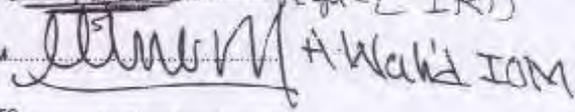
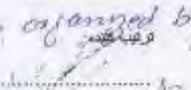
Construction Defects (within BoQ)

This form is to certify that the Contractor has fulfilled its Contractual obligations to the Contract. All defects have been rectified, and end of maintenance period has lapsed. The Contractor and IOM are not liable for any further rectifications.

	Name	Signature
USAID Representative	SaFullah Hashmani	
IRD Representative	Eng. Masood	
IOM Representative	Eng. Hamed Samadi	
MoE / MoPH Representative	Abdul Manan	
Contractor Representative	Dr. Ab. Salam	
		24/02/2014

شرکت ساختمانی ازل استاندارد ASCC
 سجل اجلاس
 پروژه دارالمعلمین ولایت فاریاب

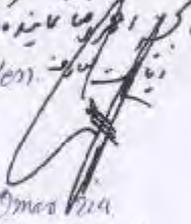
شماره	تفصیل	تعداد اطاق ها	جنس	تعداد	ملاحظه شد
1	الطاق های تدریسی Training center	21	چوبکی تدریسی - Class Chairs سبز پایه فلزی - Table metal legs چوبکی میز - Table Chair تکای سفید - White board	630 21 21 23	✓ ✓ ✓ ✓
2	الطاق IT مرکز دوم IT room in second floor	1	سبز پایه فلزی - Table with metal leg چوبکی - Chair	3 3	✓ ✓
3	الطاق کمپیوتر Computer room	1	سبز کمپیوتر - Computer desk چوبکی کمپیوتر - Computer chairs سبز پایه فلزی - Table with metal leg چوبکی - Chair	15 15 1 1	✓ ✓ ✓ ✓
4	دهال hall	2	فونتن آب - Water fountain چوبکی - Chair	4 6	✓ ✓
	تکای در هر دو طبقه toilet in both floors	2	سینکوی - Sink سطلون دلی - Soap dish آینه مر - مستکوی - Mirror	14 14 14	✓ ✓ ✓

approved by -
 IRD:  Rafiq IRD
 IOM:  A. Wali IOM
 PTTC: 19102113
 organized by
 ASCC:  Khawar
 Khawar

Date = 5/2/192

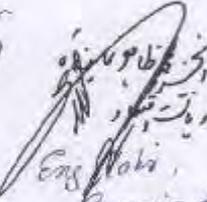
The list above, teaching materials and other equipments has been implemented and as a result.
 مورخ ۲۰۲۰/۰۵/۰۹
 چنانچه لیست فوق الذکر تجهیزات و مواد تدریسی در دسترس قرار گرفته و به اجرا درآمده است و در نتیجه

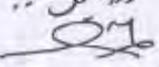
① One computer desk extra and chair is ten.

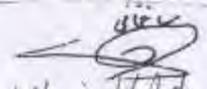

 Eng. Omar
 Education dept


 Eng. Shukur
 Education dept


 Eng. Bait
 governor office


 Eng. Nabi
 Economic dept


 Khawar
 Teachers Training Faryab


 Khawar
 from Company

شرکت ساختمانی ازل مسترد
سجل اجناس
پروژه دار المعلمین ولایت قاریاب

شماره	تفصیل	تعداد اطاق ها	جنس	تعداد	ملاحظه شد
1	طاق های خواب محصلین <i>Students bedrooms</i>	25	تخت خواب - Bed	104	✓
			ماتریس - Matress	104	✓
			بالشت - Pillow	104	✓
			پوشه رومبلی - Bed sheet	104	✓
			گدول - Blanket	104	✓
2	طاق های معلمین اولیه در طبقه اول <i>dormitory teachers room first floor</i>	2	میز فلزی پایه فلزی - Table metal legs	2	✓
			چونکی میز - chair for table	2	✓
3	طاق کافه در طبقه دوم <i>Conference room in second floor</i>	2	کابینت - cupboard	1	✓
			میز چای - tea table	1	✓
4	طاق های لیسن شویی در هر دو طبقه <i>laundry room</i>	2	میز گرد فلزی - Round table	2	✓
			چونکی پلاستیکی - Plastic chair	10	✓
5	طاق غسل خانه <i>bathtub room</i>	2	میز فلزی پایه فلزی - Table metal legs	1	✓
			میز چای فلزی - tea table	2	✓
6	طاقات در هر دو طبقه <i>Toilet in both floors</i>	2	میز چای فلزی - tea table	2	✓
			کابینت - cupboard	2	✓
7	طاقات در هر دو طبقه <i>Toilet in both floors</i>	2	پایز آب - Water heater	6	✓
			سینک لیسن شویی - Sink	8	✓
8	طاقات در هر دو طبقه <i>Toilet in both floors</i>	2	دستکوبی - wash basin	5	✓
			سایون دانه و شامپو - Soap dish	6	✓
9	طاقات در هر دو طبقه <i>Toilet in both floors</i>	2	شامپو پات - shampoo pat	6	✓
			آینه من دستکوبی - Mirror	6	✓
10	طاقات در هر دو طبقه <i>Toilet in both floors</i>	2	دستکوبی - wash basin	8	✓
			سایون دانه - Soap dish	8	✓
11	طاقات در هر دو طبقه <i>Toilet in both floors</i>	2	آینه من دستکوبی - Mirror	8	✓
			سایون دانه - Soap dish	8	✓

تصدیق کننده
IRD: *[Signature]*
IOM: *[Signature]* A. Walid IOM
PTTC: *[Signature]* 19/02/2019
ASCC: *[Signature]*
932605

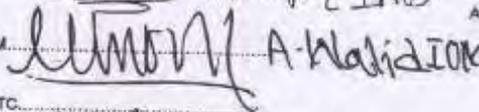
Dated = 5/2/92
The item listed in the chart above are the items used in the building and the result:

۱- روپایی یک شپ بکچود
۲- کوچ اتاق ۶ اصلین بید در طبقه اول و کوچ اتاق نومال در طبقه دوم هر دو نام کوچ برقی بوده مرتکب کیفیت.
[Signatures]

- Scanned by CamScanner
- One set of bed sheets are less.
 - teachers room in dormitory teacher, and conference room couch and are not complete.

شركت ساختمانی ازل مسترد
 سجل اجناس
 پروژه دار المعلمین ولایت فاریاب

تعمیر اطاق محافظین - Guard House				
شماره	تفصیل	تعداد اطاق ها	جنس	تعداد
1		1	جر - Table	1
			چوکر - Chair	2
2			چوکر - Bed	1
			جر (ساید تابل) - Side table	1

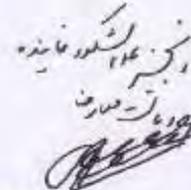
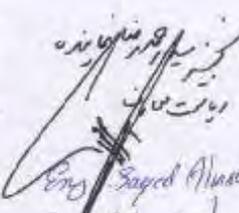
approved by
 تصدیق کننده
 IRD:  Rafiq IRO
 IOM:  A. Malik IOM
 FTTC: 19/02/2013
 ASCC: 

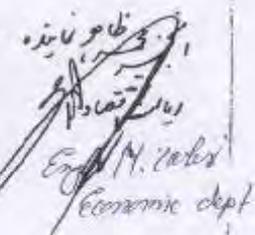
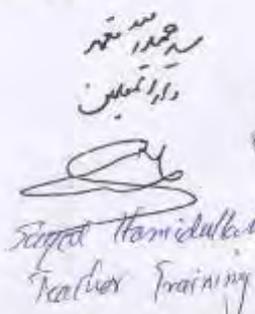
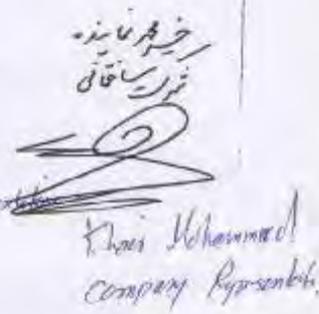
Dated: 5/2/192

The items listed in the chart above are
 the items used in the building as detailed

1 one side table is missing

مورخ ۹۲،۲،۵
 جنس شمع جدول بنده با جزئیات بیان یافته است
 ۱۹ - یک چوکر
 ۲ - یک چوکر (ساید تابل) - یک چوکر

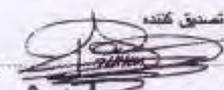
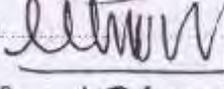

 Ezy. Akht. shakoor
 Education dept.

 Ezy. Sayed Ahmad
 Education dept.

 Ezy. Rabietulhik Bam
 Governor's office

 Ezy. M. Zahed
 Economic dept.

 Nisar
 Teacher Training

 Khair Mohammad
 Company Representative

Checked # of items
 شرکت ساختمانی ازل ستندرد ASCC
 سجل اجلاس
 پروژه دار المعلمین ولایت فاریاب (Faryab Province)

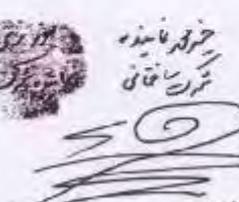
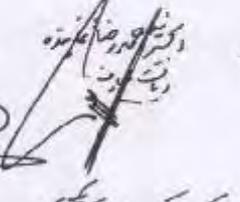
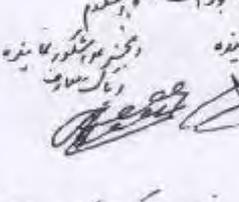
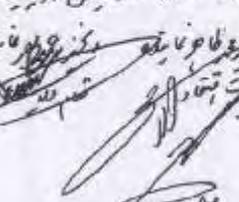
ملاحظه شد	تعداد	جنس Item	تعداد اطاق ها	تفصیل	شماره
X	1	میز دفتری - Office table	# of rooms	طاق رئیس President's office	1
✓	1	چونگی چرخشی - Rolling chair			
✓	1	کروچ - Couch			
✓	4	کابردی - Cupboard			
✓	1	میز پایه فلزی - Table with metal legs	1	طاق سکرت	2
✓	5	چونگی - Chair			
X	1	میز دفتری - Office table	1	طاق اداری	3
✓	1	چونگی چرخشی - Rolling chair			
✓	1	کروچ - Couch			
✓	3	کابردی - Cupboard			
✓	2	میز دفتری - Office table	2	طاق معلمین	4
X	2	چونگی چرخشی - Rolling chair			
✓	3	کروچ - Couch			
✓	3	میز پایه فلزی - Table with metal legs			
✓	7	چونگی - Chair	2	تلف	5
X	2	کابردی - Cupboard			
✓	2	دستکوبی - Sink			
✓	2	سطلون بشویی - Soap dish			
✓	1	دیار آب - Water heater	2		
✓	1	سنگ شامپویی - Sink			
✓	2	آینه مرآتکوبی - Mirror			

Secretary's office
 Admin office
 Teacher's office
 Toilet

Approved by:  Rafiq IRD
 Prepared by:  A. Wabid IOM
 IRD
 IOM
 -TTC
 19/02/2013

See back page for translation:

۱۹۲۵۰
 جنس شامپو، دودن، دبا، چاشنی موجود در سایر ادارات قبلی دوده و در نتیجه:
 ۱- میز دفتری اتاق رئیس کمبود است.
 ۲- میز دفتری اتاق اداری کمبود است.
 ۳- چوک چرخشی اتاق معلمین دو برابر کمبود است.
 ۴- اداری اتاق معلمین دو برابر کمبود است.

 رفیق ایزد
 ا. وابد
 ا. وابد
 ا. وابد
 نوت: کسج شامپو، دودن، دبا، چاشنی موجود در سایر ادارات قبلی دوده و در نتیجه:

The items listed in the chart above are the items used in the building and at the results;

1. Office desk is missing in the president's room.
2. Office desk is missing in the ~~the~~ Administration room.
3. ~~2~~ 2 chairs are missing from the teachers' room.
4. 2 cabinets are missing from teachers' room.

Eng. Zaher
(Signature)

Eng. Bassir
(Signature)

Eng. Shokoor
(Signature)

Eng. Riza
(Signature)

Khar, Mhd
(Signature)

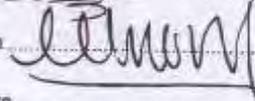
Noor Zai
(Stamp)

Note: Sofas are not part of the set, there was 1 sofa (3 people → size).

شرکت ساختمانی ازل مسترد
 سجل اجناس
 پروژه دار المعلمین ولایت فاریاب Faryab Province

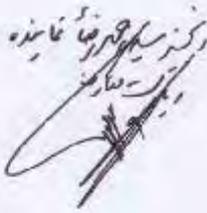
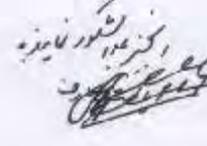
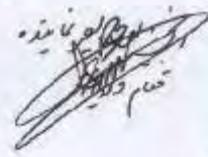
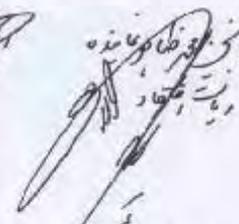
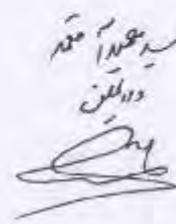
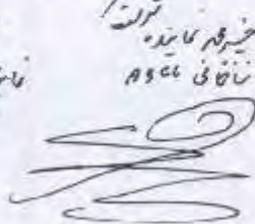
تعداد	ملاحظه شد	ITEM	تعداد اطلاق ها	تفصیل	#
17	✓	Dining table-جرم طعام خوردی	2	طعام خوردی	1
100	✓	Dining chair-جرم طعام خوردی			
1	✓	Table metal legs- میز فلزی پایه فلزی	1	اطلاق کت اولیه	2
1	✓	Table and chair- میز و صندلی			
1	✓	Examination table- تخت معاینه			
2	✓	Dish washer- ظرفشوی برقی			
1	✓	compartment 3- ظرفشوی سه خانه			
1	✓	sink			
2	✓	Kitchen range- سطل نش فلز			
8	✓	Wash basin- دستشویی	3	اطلاق ظرفشویی و آشپزخانه	3
9	✓	shampo pot- کاسه شامپو			
6	✓	Mirror and soap dish- آینه و صابون			
3	✓	water boiler- دیگ آب			
1	✓	1845kg-LPG Tank- تنگ گاز			4

Dining room
 First Aid Room
 Kitchen

تصدیق کننده
 IRD:  IRD
 IOM:  A. Walid IOM
 FTTC: 19/02/2013

تصدیق کننده
 ASCC: 

۹۳،۲،۵
 چنانچه کسب جدول عددی با چنانچه موجود است در این سند تطبیق دارد. تمام چنانچه مسترد موجود بوده و کلی ما شین فرزند شری
 برقی و مشق های گازی به جهت فرزند دارد تا چنانچه
 (Translation at the base)

Items listed on the above list are cross checked with the inventory of the building, and every ~~thing~~ matches.

But the dishwashing machine and gases should be checked again.

Eng. Zahid
(Signature)

Eng. Basir
(Signature)

Eng. Shaker
(Signature)

Eng. Reza
(Signature)

Khair Mohamad
(Signature)

Noorzair
(Finger print)

Hamidullah
(Signature)

شرکت ساختمانی ازل متکورد ASCC

سجل اجناس

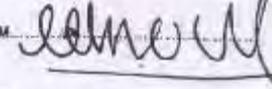
پروژه دارالمعلمین ولایت فاریاب Faryab Province

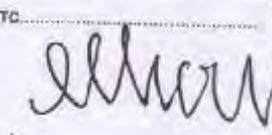
checked	# of items	جنس Items	تعداد اطاق ها	تفصیل Details	شماره No
✓	100	تخت خواب - Bed	25	اتاق خوابی و حمام	1 Student bedrooms
✓	100	پوشاک - Matress			
✓	100	پالت - Pillow			
✓	100	سوت رو بومالی - Bed Sheet			
✓	100	کتان - Blanket			
✓	100	میز ایوان کوبل - Side table			
✓	50	کابینت - Cupboard	2	اتاق های سفین لوله در طبقه اول	2 Floor 1 Teacher's Room
✓	2	میز فلزی پایه فلزی - Table			
✓	4	چونکی - chair for table			
✓	1	کابینت - cupboard			
✓	1	سوت کوبی - couch	2	اتاق کنفرانس در طبقه دوم	3 Floor 2 Conference Room
✓	1	میز وای خوابی - tea table			
✓	2	سوت کوبی - couch			
✓	2	میز چای خوابی - Tea table			
✓	2	چونکی پلاستیک - Plastic chair			
✓	10	میز کنفرانس - conference table			
✓	2	table	2	اتاق های لیس توری در هر دو طبقه	4 Cloth washing rooms at both level
✓	1	میز کتبی - table			
✓	1	تلویزیون 24 اینچ LCD-TV			
✓	6	پایه آب - Water boiler			
✓	8	سنگک آبی - Sink	2	حمام	5 Shower
✓	8	سطل بشویی - wash basin			
✓	8	سطل بشویی - wash basin	2	تختاب در هر دو طبقه	6 Toilets
✓	8	آینه من - Mirror			
✓	8	سطل بشویی - wash basin	2		
✓	8	سطلون دای - Soap dish			
✓	8	آینه من - Mirror	2		
✓	8	سطلون دای - Soap dish			
✓	8	آینه من - Mirror	2		
✓	8	سطلون دای - Soap dish			

تصویب کننده:  Razi IRD

IFG: 

ASCC: 

IOM:  A. Walid IOM

PTTC: 

1392/2/5

چنانچه تمام جدول بنام روزهای احوال و سلامت و اینها را موجود در دست و قبولی -

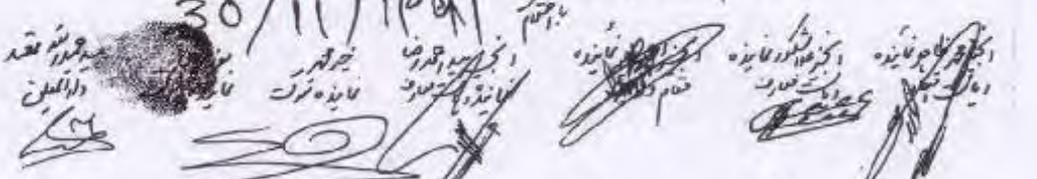
دو طبقه اول و دوم

۱- چکی بر طبقه اول و ای بسین در طبقه اول در موجود و دو طبقه اول

۲- با این ای آی - یکبار چک شود

۳- رت کج ای ای بسین موجود کج رتوی ای ای رت کج نیست

30/11/1391



See translation at the next page

Items listed above have been crossed checked with the inventory: In conclusion:-

1. 2 chairs ~~are~~ have been submitted, two more are missing. These chairs were for the teacher's room.
2. Water heaters should be checked.
3. The sofa set is incomplete, the given sofas are compatible for 3 people.

Eng. Zahir
(Signature)

Eng. Shokor
(Signature)

Eng. Basir
(Signature)

Eng. Reza
(Signature)

Khair Mhd
(Signature)

NoorZai
(Fingerprint)

Hamidullah
(Signature).

Annex XVI Attendance at DABS Training Sessions (KHPP)

1.2.4 Attendance Sheet

USAID | AFGHANISTAN
FROM THE AMERICAN PEOPLE

KHPP TRAINEES' WEEKLY ATTENDANCE SIGN SHEET KHPP File No:

Subject: *Short/Medium Transmission Lines* Instructor Name: Akbar Jan Ahmad

Date: *April 17-2014* Time: 9:00 AM

S/N	Name	Title	Attendance Signature		
			Day1: <i>17</i>	Day2: <i>18</i>	Day3
01	Mohammad Agha	Lineman			<i>Medium Transmission</i>
02	Sayed Ahmad	Lineman			
03	Sayed Shah Agha	Lineman			
04	Noor Ahmad	Junction5 Manager			
05	Aizullah	Lineman			
06	Najeebur Rahmat	Lineman			
07	Abdul Samay	Lineman			
08	Nisar Ahmad	Junction2 Manager	<i>[Signature]</i>	<i>[Signature]</i>	
09	Engr. Mohammad Qasim	Energy Dispatch Manager	<i>[Signature]</i>	<i>[Signature]</i>	
10	Naseer Ahmed	Line Construction Manager			
11					
12					
13					
14					
15					
16					

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L1.4 Attendance Sheet



KHPP TRAINEES' ATTENDANCE SIGN SHEET			KHPP File No#			
Subject: <u>Basic Control Relays</u>			Instructor Name: <u>Abdul Wadood Ghansheer</u>			
Date: <u>13-16 April 2014</u>			Time: <u>9:00 AM</u>			
S/N	Name	Title	Attendance Signature			
			Day 1	Day 2	Day 3	Day 4
01	Abdul Bari	KDBK Substation Manager				
02	Assadullah	Substation Assistant Manager	X	X	X	X
03	Ata Mohammad	Substation Head Operator				
04	Qaseem kerzad	Substation Reporting Manager				
05	Merwais	Substation Operator	X	X	X	
06	Gul Agha	Substation Operator	X	X		
07	Zia-ul-Haq	Substation Operator	X	X	X	X
08	Mohammad Noor	Substation Operator	X	X	X	X
09	Ahmadullah	Substation Operator		X	X	X
10	Engr. Sayed Rasoul	DABS Kandahar Director	X	X	X	X
11	Sardar Ahmed	Substation Operator				
12	Mohammad Neer	Substation Operator				
12	Abdul Khaliq	Substation Operator	X	X	X	X
13	Shah Mohammad	operation Manager	X	X	X	



Image 13: DABS training on overhead valves.



Image 14: DABS training on torque and engine balance.

1.3.4 Attendance Sheet

USAID | AFGHANISTAN
LEARN THE AMERICAN WAY

KHPP TRAINEES' ATTENDANCE SIGN SHEET KHPP File No: 1

Subject: MUJIBULAK 1-3 Instructor Name: Stephen/EzmuUllah

Date: 14 APRIL 2014 - 19 APRIL 2014 Time: 9:00 AM

S/ N	Name	Title	Attendance Signature					
			Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
01	Juma Gul	Operator	[Signature]	[Signature]	[Signature]	[Signature]		
02	Assadullah	Operator	[Signature]	[Signature]	[Signature]	[Signature]		
03	Abdul Jalil	Operator	[Signature]	[Signature]	[Signature]	[Signature]		
04	Khalid Doo	Operator	[Signature]	[Signature]	[Signature]	[Signature]		
05	Hassanmullah	Member of protection system	[Signature]	[Signature]	[Signature]	[Signature]		
06	Jafor Rozai	Monitor of movements of surveillance	[Signature]	[Signature]	[Signature]	[Signature]		
07	Mohammad Najooob	Electrical engineer	[Signature]	[Signature]	[Signature]	[Signature]		
08	Mohammad Hassan	Member of maintenance	[Signature]	[Signature]	[Signature]	[Signature]		
09	Gul Afghani	Member of maintenance	[Signature]	[Signature]	[Signature]	[Signature]		
10	Mohammad Reza	Technical Manager	[Signature]	[Signature]	[Signature]	[Signature]		
11								
12								
13								
14								
15								

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1. Weekly Training Report

1.1 Substation O&M Training

1.1.1 Training Information

Report submitted by: Abdul Wadood Gharsheen

Position title: Senior Substation Trainer

Venue of training: Breshna Kot Substation Kandahar City, Afghanistan

Background

- Training started on January 27, 2014 at KDBK Substation.
- The training center is equipped with a training projector.
- The training schedule is 8:30am to 12:00am, Sunday to Wednesday each week.
- Number of trainees is 10 from the KDBK substation.
- Training on eight modules out of eleven has been completed successfully.

1.1.2 Training Activities and Observations

Day 1: April 13, 2014

On the first day of training on Bay Control Unit (BCU) SEL 451 relay, the following learning objectives were discussed with the DABS trainees at the KDBK substation:

- Introduction to the SEL 451 relay
- Features of SEL 451 relay
- Bay Control
- ACCELERATOR QuickSet Setup
- Login procedure to the SEL 451 relay
- Setting Communication Parameters
- ACCELERATOR QuickSet HMI
- Open the ACCELERATOR QuickSet HMI

Day 2: April 14, 2014

The following learning objectives were explained to the DABS trainees on the second day of the training on Bay Control Unit (BCU) SEL 451 relay:

- ACCELERATOR QuickSet Settings
- Basic procedure of making new settings to the relay
- ACCELERATOR QuickSet Event Analysis
- Reading history and downloading the SER
- Creating event waveforms
- ACCELERATOR QuickSet Settings Database Management
- Checking relay status using ACCELERATOR QuickSet

Day 3: April 15, 2014

The major learning objectives presented on the third day of BCU training consisted of the following learning objectives:

- Configuring the communications port
- Front-Panel Operations
- Front-Panel Layout
- Front-Panel LCD
- Front-Panel Menus and Screens
- One-Line diagram on the relay front panel
- Opening and closing operations of the CBs and DS with SEL 451 relay

ANNEX XVII LOG OF TESTS PERFORMED ON GK ROAD**Number and Type of Tests for G-K Road**

S/N	Type of Material	Number of Test	Date		Remarks
			From	To	
1	Base Course	65	Oct-12	Oct-13	
2	Aggregate	47	Mar-12	Jul-13	
3	Concrete Cylinder	65	Oct-12	Aug-13	
4	Core/Binder Course	24	Feb-13	Sep-13	
5	Embankment	12	Mar-12	Jun-13	
6	HMA Binder Course	39	Nov-12	Oct-13	
7	HMA Wearing Course	36	Aug-13	Sep-13	
8	Mortar Cube	33	Nov-12	Aug-13	
9	Prime Coat/Tack Coat	6	Nov-12	Aug-13	
10	Bitumen	12	Nov-12	Oct-13	
11	Sand	36	Oct-12	Oct-13	
12	Steel Bars	3	Jun-13	Jun-13	
Total		378			

ANNEX XVII EVALUATION TEAM MEMBERS

- **Charles Balina, Team Leader (International Consultant):**

Dr. Charles Balina has a Ph D in civil engineering from the Pennsylvania State University. He is an infrastructure consultant and founder of the Balina Global Group, LLC based in Washington DC. He also teaches at the University of Maryland University College's Graduate School of Management and Technology. He has worked internationally on infrastructure projects for over 30 years. He has served on USAID infrastructure programs as a Contracting Office's Representative (COR), Chief of Party and led or participated in a number of performance evaluations.

- **Khalid Hoshang, Infrastructure Specialist (Local Consultant):**

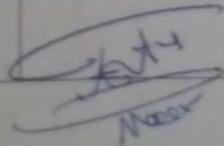
Engineer Khalid Hoshang has a B.Sc. in civil engineering from the Civil Engineering Faculty of Balkh University, Afghanistan. He had been working as an infrastructure/civil engineer managing programs for fourteen years. He has worked with International NGOs, UN Agencies and on USAID-funded projects. He has attended local and international training and workshops on program implementation and evaluation strategies.

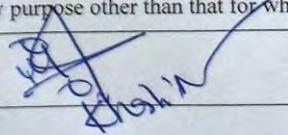
- **Noor Mohammad Farid, Infrastructure Specialist (Local Consultant):**

Engineer Noor Mohammad Farid has a BSc in civil engineering from the Civil Engineering Faculty of Balkh University, Afghanistan. He is a superintending engineer with a United Nations program. He has worked with different international organizations in Afghanistan since 2000. He served as an infrastructure manager and civil engineer with the United Nation Office for Project Support (UNOPS) for six years. Prior to that he worked for more than eight years with NGOs and on USAID infrastructure programs. He was also involved with many small infrastructure projects in Afghanistan.

ANNEX XIX DISCLOSURE OF ANY CONFLICTS OF INTEREST

Name	Dr. Charles Balina		
Title	Team Leader		
Organization	Checchi Consulting Company		
Evaluation Position	<input checked="" type="checkbox"/> Team Leader	<input type="checkbox"/> Team member	
Award Number	308-C-00-11-00512-00		
USAID Project Evaluated	Engineering Quality Assurance and Logistical Support Program (EQUALS)		
I have real or potential conflicts of interest to disclose.	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
<p>If yes answered above, I disclose the following facts: <i>Real or potential conflicts of interest may include, but are not limited to:</i></p> <ol style="list-style-type: none"> 1. Close family member who is an employee of the USAID operating unit managing the project(s) being evaluated or the implementing organization(s) whose project(s) are being evaluated. 2. Financial interest that is direct, or is significant though indirect, in the implementing organization(s) whose projects are being evaluated or in the outcome of the evaluation. 3. Current or previous direct or significant though indirect experience with the project(s) being evaluated, including involvement in the project design or previous iterations of the project. 4. Current or previous work experience or seeking employment with the USAID operating unit managing the evaluation or the implementing organization(s) whose project(s) are being evaluated. 5. Current or previous work experience with an organization that may be seen as an industry competitor with the implementing organization(s) whose project(s) are being evaluated. 6. Preconceived ideas toward individuals, groups, organizations, or objectives of the particular projects and organizations being evaluated that could bias the evaluation. 			
<p>I certify (1) that I have completed this disclosure form fully and to the best of my ability and (2) that I will update this disclosure form promptly if relevant circumstances change. If I gain access to proprietary information of other companies, then I agree to protect their information from unauthorized use or disclosure for as long as it remains proprietary and refrain from using the information for any purpose other than that for which it was furnished.</p>			
SIGNATURE	Charles M. Balina	Date	Jul 4, 2014

Name	Noor Mohammad Farid	
Title	Construction Specialist	
Organization	Checchi Consulting Company	
Evaluation Position	<input type="checkbox"/> Team Leader	<input checked="" type="checkbox"/> Team member
Award Number	308-C-00-11-00512-00	
USAID Project Evaluated	Engineering Quality Assurance and Logistical Support Program (EQUALS)	
I have real or potential conflicts of interest to disclose.	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<p>If yes answered above, I disclose the following facts:</p> <p><i>Real or potential conflicts of interest may include, but are not limited to:</i></p> <ol style="list-style-type: none"> 1. Close family member who is an employee of the USAID operating unit managing the project(s) being evaluated or the implementing organization(s) whose project(s) are being evaluated. 2. Financial interest that is direct, or is significant though indirect, in the implementing organization(s) whose projects are being evaluated or in the outcome of the evaluation. 3. Current or previous direct or significant though indirect experience with the project(s) being evaluated, including involvement in the project design or previous iterations of the project. 4. Current or previous work experience or seeking employment with the USAID operating unit managing the evaluation or the implementing organization(s) whose project(s) are being evaluated. 5. Current or previous work experience with an organization that may be seen as an industry competitor with the implementing organization(s) whose project(s) are being evaluated. 6. Preconceived ideas toward individuals, groups, organizations, or objectives of the particular projects and organizations being evaluated that could bias the evaluation. 		
<p>I certify (1) that I have completed this disclosure form fully and to the best of my ability and (2) that I will update this disclosure form promptly if relevant circumstances change. If I gain access to proprietary information of other companies, then I agree to protect their information from unauthorized use or disclosure for as long as it remains proprietary and refrain from using the information for any purpose other than that for which it was furnished.</p>		
SIGNATURE		Date June 10, 2014

Name	Khalid Hoshang	
Title	Infrastructure Consultant	
Organization	Checchi Consulting Company	
Evaluation Position	<input type="checkbox"/> Team Leader	<input checked="" type="checkbox"/> Team member
Award Number	308-C-00-11-00512-00	
USAID Project Evaluated	Engineering Quality Assurance and Logistical Support Program (EQUALS)	
I have real or potential conflicts of interest to disclose.	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<p>If yes answered above, I disclose the following facts:</p> <p><i>Real or potential conflicts of interest may include, but are not limited to:</i></p> <ol style="list-style-type: none"> 1. Close family member who is an employee of the USAID operating unit managing the project(s) being evaluated or the implementing organization(s) whose project(s) are being evaluated. 2. Financial interest that is direct, or is significant though indirect, in the implementing organization(s) whose projects are being evaluated or in the outcome of the evaluation. 3. Current or previous direct or significant though indirect experience with the project(s) being evaluated, including involvement in the project design or previous iterations of the project. 4. Current or previous work experience or seeking employment with the USAID operating unit managing the evaluation or the implementing organization(s) whose project(s) are being evaluated. 5. Current or previous work experience with an organization that may be seen as an industry competitor with the implementing organization(s) whose project(s) are being evaluated. 6. Preconceived ideas toward individuals, groups, organizations, or objectives of the particular projects and organizations being evaluated that could bias the evaluation. 		
<p>I certify (1) that I have completed this disclosure form fully and to the best of my ability and (2) that I will update this disclosure form promptly if relevant circumstances change. If I gain access to proprietary information of other companies, then I agree to protect their information from unauthorized use or disclosure for as long as it remains proprietary and refrain from using the information for any purpose other than that for which it was furnished.</p>		
SIGNATURE		Date 06/10/14

Cecchi and Company Consulting, Inc.
Afghanistan SUPPORT-II Project
Wazir Akbar Khan
Kabul, Afghanistan