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FINAL CLOSEOUT REPORT TO 25 – Design and Construction of Two Bridges in Uruzgon

AFGHANISTAN INFRASTRUCTURE REHABILITATION PROGRAM (AIRP)
CONTRACT NUMBER 306-I-00-06-00517-00



Finished Regat Bridge

Project Start Date: 1 October 2009

Project Finish Date: 31 December 2011

DISCLAIMER

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FINAL CLOSE OUT REPORT FOR TO 25 DESIGN & CONSTRUCTION OF TWO BRIDGES IN URUZGAN

I TASK ORDER OVERVIEW

1.1 Background and Summary of Scope of Work

For more than 25 years, Afghanistan's transportation infrastructure deteriorated significantly due to lack of maintenance and limited new construction. The US Military units from the Combined Forces Special Operations Component Command Afghanistan at Fob Tinsley / Cobra have designated this Bridge Project in Uruzgon Province as essential to improving the region.

The objective of this project is to help improve regional and local access to services by developing a usable / serviceable ACROW Bridge. This work includes crushed aggregate base and compacted earth approaches, channel protection, and a reinforced concrete substructure, to carry the panel bridge over the Shakur River.



Aerial view of Complete Bridge

When completed, the new bridge will provide the Islamic Republic of Afghanistan as well as the Combined Forces Special Operations Component Command with improved access, which will increase regional and local access within the Province. It will also facilitate access to social services, health and education, as well as provide new regional trade opportunities and easy access for farm to market activities.

1.2 Task Order Objectives and Deliverables

LBG/B&V JV provided survey, design, planning, construction and quality control of the works. Since this was a Quick Response Project, the survey, planning, and initial (30%) design were done under Task Order 21.3.

Deliverables include the following:

- 60% Design
- Final Bid Documents (90% Design)
- Security Plan for the project activities including the subcontractor's security plan(s). These plans shall include security posture, relationships with the Coalition Forces, site security drawings, and other pertinent security aspects
- Quality Assurance (QA) and Quality Control (QC) plans for project. The Contractor shall keep a Log of Submittals and Tests for COTR review/monitoring, upon request. These plans shall include the subcontractor's QC plan
- Monthly Progress Reports, including financial and physical (with graphs indicating actual vs. projected percent schedules relative to financial and physical aspects including reason for any delays and the plan of action for bringing project back on schedule) for each of the two Road Segments. All potential claim issues should be identified monthly, and existing claims related activities reported on a monthly basis
- Daily Security/Incident Reports
- Construction Procedures Manual
- Construction Risk Management Plan
- Construction Schedule using the Critical Path Method (CPM) for each of the two Bridge and Road Segments: Resource and Cost loaded schedule
- Safety Plan



- Monitoring and Evaluation (M&E) Program initial parameters
- De-mining plan(s)
- Tracker of Claims and Potential Claims – monthly, included with the Monthly Progress Reports;
- As-built Documentation (four sets) such as: plan drawings and revised calculations in hard copies, as well as in electronic form on CDs
- Bid evaluation report; Selection Process Documentation and request for CO's consent to subcontract on the selected subcontractor
- Awarded Construction Subcontract
- Construction access road, abutments, and piers for temporary military bridge at the Regak site
- Fully completed construction of bridge at Regak site as detailed above, including demobilization from the worksite by all parties and documentation for the one year warranty period

1.3 Milestones

The period of performance for this task order was from 1 October 2009 to 31 December 2011. The following is a listing of major milestones scheduled and achieved for the work required by this task order:

Milestone	Achieved Date
Start clearing the Chamrak Pass	Dec 2010
LBG/B&V Camp Cobra is physically complete and the majority of remaining camp staff has been mobilized; Chamrak Pass opened; Procon-Fayz-VKS JV (PFV JV) has completed laying out the bridge and approaches; PFV JV has completed preliminary grading and foundation work	Jan 2011
PFV JV is processing technical submittals for material and methodologies including cold weather concrete procedures, cofferdams, dewatering, and concrete mix design methodology.	Feb 2011
PFV JV performs boring operations / subsurface investigation at the Oshay Bridge. PFV JV starts excavation of Abutment / Spread Footer North Side.	March 2011
Starts Cofferdam Construction for Abutment 1.	April 2011
Spread Footer for Abutment 2 is completed. PFV JV completes boring operations at Oshay Bridge.	May 2011
Spread Footer for Abutment 1 completed. PFV JV starts excavation of Pier 1 Spread Footer South Side.	June 2011
Abutment 2 has been completed; Pier 1 Spread Footer has been completed.	July 2011
PFV JV starts rebar and formwork for Pier 1	August 2011
PFV JV has completed Pier No.1, started Pier No.2, started box culvert, and completed retaining walls at Abutment	September 2011



Nos.1 and 2; Cofferdam construction completed	
PFV JV has completed pier number 1, pier number 2, box culvert, Stonemasonry works are in progress; Started Bridge Launching; Started River Training	October 2011
Completed Bridge Launching; Working on Approaches	November 2011
Substantial Completion	10 December 2011

1.4 Task Order Modification History

The table below summarizes these modifications. LBG/B&V anticipates one (1) final modification to reflect the final cost and work performed.

TO Modification Number	Date Issued	Reason
Original	1 October 2009	Issuance of Task Order to provide the final design and construction of two bridges in Uruzgon Province
1	8 August 2010	The purpose of this modification is to extend the period of performance of the task order from December 31, 2010 to May 31, 2011 at no additional cost to USAID
2	19 May 2011	The purpose of this modification is to 1) extend the period of performance from May 31, 2011 to August 31, 2011 at no additional cost to USAID, 2) realign the budget, 3) revise the original scope of work to provide the design and construction of Regak Bridge and the design of Oshay Bridge; provide USAID with a temporary pedestrian bridge to span across broken bridge at Regak
3	29 August 2011	The purpose of this modification is to extend the period of performance of the task order from August 31 to November 30, 2011 at no additional cost to USAID
No Cost Time Extension	12 November 2011	USAID grants an extension of Task Order 25 for 31 days from November 30, 2011 through December 31, 2011 at no additional cost to the budget ceiling of this task order or other associated task orders.

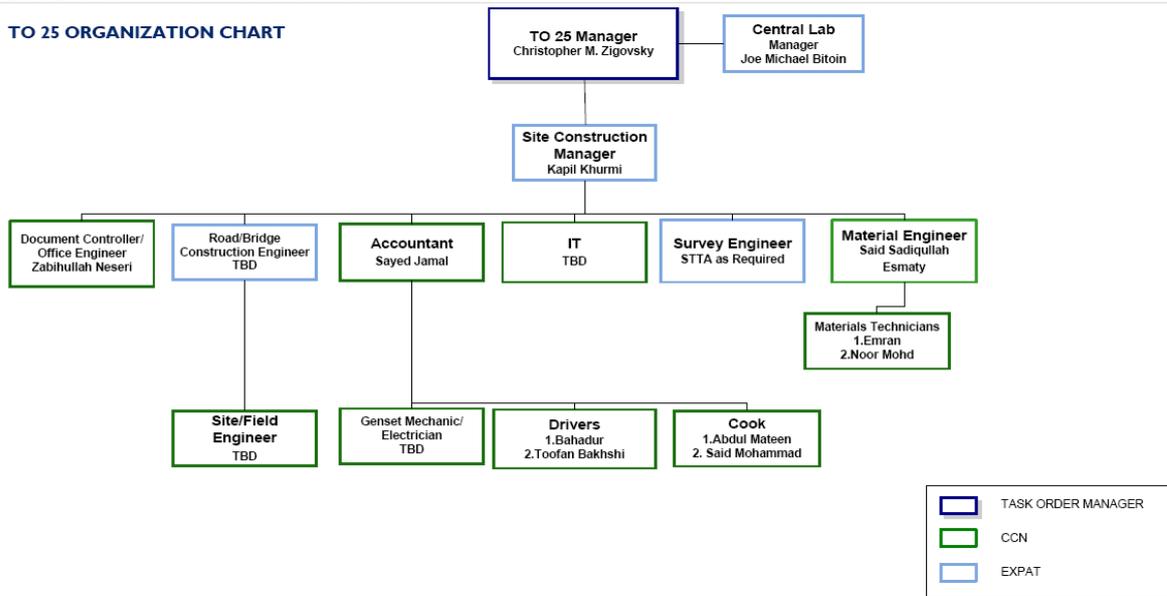
2 TASK ORDER EXECUTION

2.1 Task Order Organizational Structure and Management Details

An organizational chart of LBG/B&V staff for this Task Order is provided below:



TO 25 ORGANIZATION CHART



2.1.1 Management

IQC Manager and Chief of Party responsibilities remained per other Task Orders. The Task Order Manager’s primary responsibility was the management and supervision of this Task Order.

2.1.2 Task Order Manager

The Task Order Manager split 50 percent of his time between Kabul and the construction camp. The Site Construction Manager and site verification team was based at the construction camp located at Camp Cobra, in the Uruzgon Province. There were financial, logistical and IT support staff based at the camp with additional logistic, financial, IT, and design support based in Kabul. The Task Order Manager was the overall authority for this task order implementation and was responsible for all related contract management, client coordination, correspondence, invoicing, mobilization of personnel and other project management activities in coordination with the Site Construction Manager. He served as the project manager for all phases of implementation to include planning, design and construction. The Task Order Manager was the Contractor’s key point of contact for the Employer on all contractual, administrative and technical matters related specifically to this task order. Accordingly, he was split based between Kabul and the site to provide immediate and full-time access to the Employer and subcontractors.

2.1.3 Site Construction Manager

The Site Construction Manager was the primary point-of-contact for the day-to-day execution of this task order at the site and had onsite supervisory responsibility to implement and enforce the technical requirements of subcontract(s) including adherence to the quality performance standards specified in the design, plans and specifications. He was located full-time at the Uruzgon site to coordinate construction supervision, quality assurance, subcontractor oversight and documentation. The Site Construction Manager reported directly to the Task Order Manager.

2.1.4 Project Office

The Contractor established a Project Office in LBG/B&V JV Kabul office and a field office in Camp Cobra in Uruzgon Province to provide project management, administration, and sustainability support for the site construction team.

2.1.5 Home Office Resources

The IQC Manager and contractual support staff was based in the Louis Berger Group Washington, DC Headquarters. The preparation of invoices and cost reporting functions for the Task Order was also performed by staff at the Louis Berger Group offices in Washington, DC and Morristown, NJ. Other home office support included technical reviews and guidance, coordination of specialized technical expertise, engineering support and proposal/modification development.

2.2 Execution of Work

2.2.1 Project Location

The Contractor’s primary project office was located in Kabul, Wazir Akbar Khan with a supporting site office at Camp Cobra in Uruzgon Province. All project management and administrative support was provided from the Kabul project office with construction management and oversight activities provided from the Uruzgon site office.

The project location is shown in Figure 1 below.

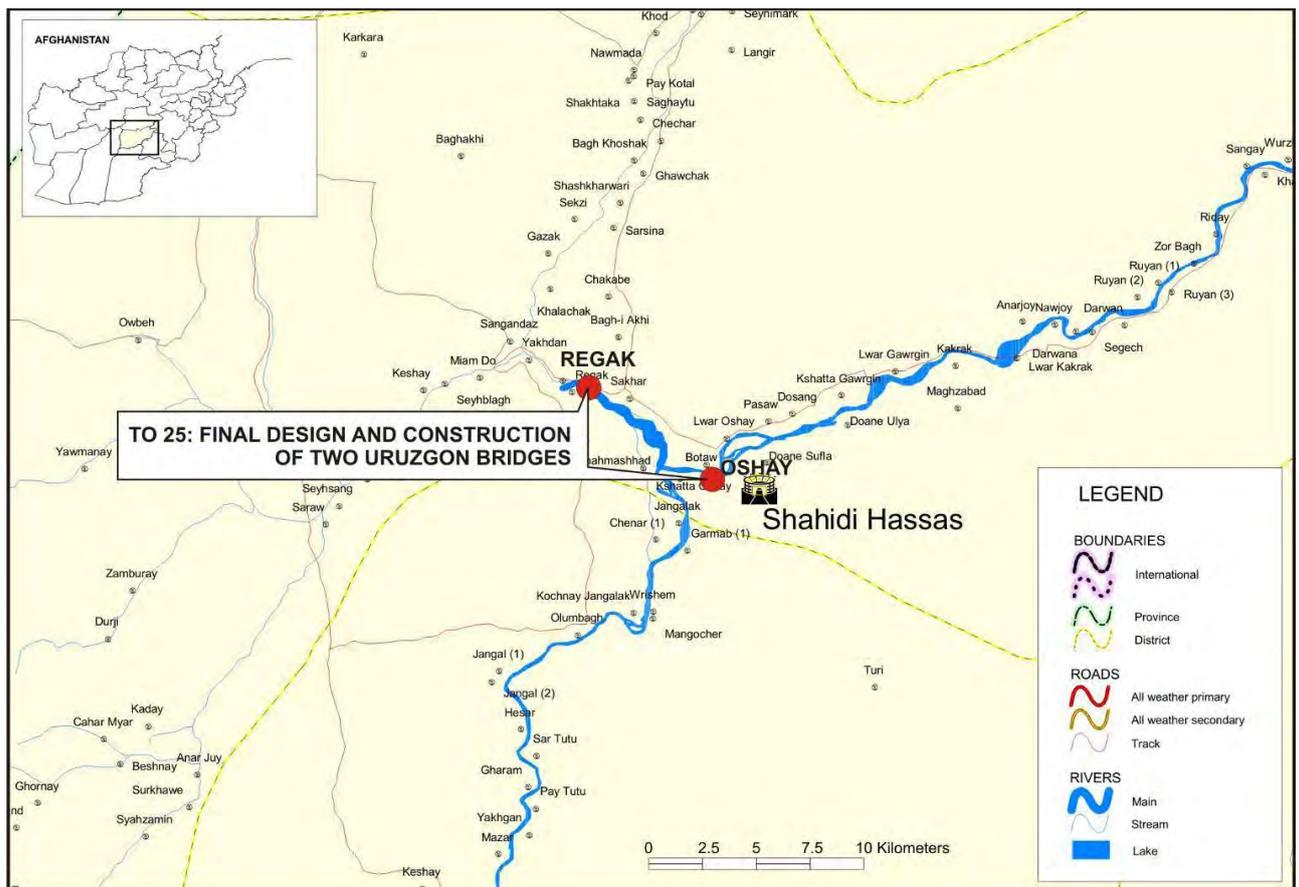


Figure 1 – Location

2.2.2 Planning

The bulk of the planning activities were done in conjunction with the initial design being completed prior to the issuing of the Task Order 25 under the Quick Response Task Order 21.3.

2.2.3 Design

The initial design was completed by LBG / B & V JV operating under a separate Quick Response Task Order 21.3 prior to the issuance of this Task Order. Subsequent design changes to accommodate site access conditions and materials options were made under TO 25.

2.2.4 Construction

LBG / B & V JV provided (self performed or through subcontractors) all superintendence, labor, materials, plant, equipment, and all other requirements, whether of a temporary or permanent nature, required to execute and complete the bridge project in accordance with the approved design. This included construction of the necessary bridge, culvert, guard walls, approaches, and slope protection, to ensure that the bridge is passable year round. LBG / B & V JV was responsible for the following:



Stonemasonry work is in progress

- All procurement required for the bridge
- Construction of permanent works
- Provision of temporary works and facilities
- Contractor Quality Control
- Independent Quality Assurance
- Material Testing
- Warranty of the completed works, one year after handover to USAID.

2.2.5 Construction Inspection

LBG/B&V JV established a core group of experienced Afghan engineers, most of who worked on similar projects under REFS for LBG and supplemented this core group with new hires and students from the Afghan universities on internships. This assisted in developing qualified senior professional Afghan engineers while ensuring a steady supply of new personnel in developmental roles. The Afghan staff worked under the guidance and direction of our experienced international staff. A total of 4 engineering interns, some returning over multiple breaks from their studies, gained valuable engineering experience. Several of those who completed their educating during the construction period were hired as full time employees.

2.3 Subcontracts and Major Procurements

2.3.1 Subcontracts

The major subcontracted work elements for this Task Order were as follows:



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- Construction Services were subcontracted to Procon-Fayz-VKS JV of Afghanistan. Procon-Fayz-VKS JV provided all material, equipment, and labor necessary to construct the bridge, roadway and sub-structures.
- Security Services were subcontracted to the South African based ISS-Safenet Security. Camp and life support (food services, laundry etc) were self-performed by LBG/B&V JV personnel.
- LBG/B&V subcontracted ASIX Communications to provide VSAT internet services.

2.3.2 Major Procurements

- Fabrication and assembly of Camp Cobra accommodation units by Lana Construction Company \$74,000.00
- Fabrication of Superstructure for Foot Crossing by City Security Company \$61,000.00

The bulk of the procurement of goods and services required for the execution of this task order was obtained through the subcontracts described above. Only minor support items were directly procured from commercial sources by LBG/B&V JV.



Original Site Conditions



Final Bridge

2.4 Task Order Budget and Expenditures

The Task Order budget, actual costs billed to USAID through invoice number 35, and remaining budget amount are summarized in Table 1 below.

Table 1 –Budget and Cost Summary



Description	Budget Amount	Billed Thru Invoice #35*	Estimate at Complete
<u>A. Program Support Costs</u>	\$2,063,481.00	\$2,183,707.33	\$2,263,707.33
<u>B. Subcontractors</u>	\$11,734,338.00	\$9,258,468.37	\$11,359,217.82
<u>C. G&A</u>	\$936,484.00	\$861,846.85	\$1,111,062.63
TOTAL PROGRAM COSTS	\$14,734,303.99	\$12,304,022.55	\$14,733,987.78
<u>Fixed Fee</u>	\$589,372.16	\$492,160.91	\$589,359.51
TOTAL COST-PLUS-FIXED-FEE	\$15,323,676.15	\$12,796,183.45	\$15,323,347.29

**The amount billed through invoice number 35 does not represent LBG/B&V's estimate at completion. LBG/B&V submitted an estimate at completion to USAID that is pending approval. The estimate at completion column above reflects the proposed final cost of the task order to include; late subcontractor invoices, adjustments for final indirect rates, subcontractor claims, and legal / support costs.*

2.5 Government Property Summary

A portion of the property from camp Cobra was conveyed to the district sub-governor to be used at the local district center. The remaining property was abandoned in place in accordance with USAID's property disposition instructions. Of note is that Camp Cobra was built within the confines of FOB-Tinsley's inner/outer perimeter. The projected cost to relocate the camp for use elsewhere was more than the camp's value, thus abandoning in place was determined and accepted by USAID to be the best option at the time.

3 SECURITY

3.1 Security Providers

The Uruzgon Province is an area of medium to high Anti-Government Element activity. There were minimal security incidents and no significant property damage, injury or death to any individual involved on the project due to criminal or anti-government activity that impacted this project, although violent activity was common in the region.

Security of the site and equipment during construction was the responsibility of the Southern Regional Security subcontractor (ISS / Safenet Security), procured under an IQC contract with LBG/B&V. ISS / Safenet was responsible for the protection of LBG/B&V and Procon-Fayz-VKS JV personnel, as well as subcontractor equipment from damage and theft during the mobilization period at the site while the regional security subcontract was being implemented. PFV JV was responsible for their own security to and from their camp from outside the province, at their camp, and for selected functions vicinity of the construction site.

The security profile for this project included several Personal Security Duty teams for transport of LBG/B&V and Procon-Fayz-VKS JV personnel and equipment to and from the site, security checkpoints



at strategic sections of the existing and on-going construction sections of the roadway, and support of the Tactical Operations Centre (TOC), located in the Camp.

3.2 Security Operations

Delivery Orders were issued against the Southern Security subcontract for the following:

- Security services for the Contractor’s Engineer and staff
- Tactical Operations Center (TOC) with the Security subcontractor
- Physical security of the project office
- Escort security to and from the project work sites
- Escort services for LBG/B&V JV staff off the project work site
- Security services for the construction subcontractor within the project limits
- Physical security for camp facility and night equipment caches
- Physical security for work sites
- Escort security for engineering and survey teams
- Escort security as needed for equipment and material movements.

3.3 Demining

ISS-Safenet conducted a Battle Area Clearance (BAC) of the approaches for both Regak and Oshay bridge sites in Uruzgon Province, Afghanistan. Physical demining was included in the main construction subcontract. This was done in this manner because of a lesson learned under the REFS program. Having the construction subcontractor responsible for demining eliminated the need to coordinate demining and the possibility of delay claims from the construction subcontractor due to demining issues.

4 SAFETY PROGRAMS/PLANS

LBG/B&V was operating under an infrastructure program-wide general safety program. A site-specific plan was developed for the construction phase of the work. The implementation of a safety program at this site was the responsibility of the construction subcontractor (Procon-Fayz-VKS JV) with oversight and guidance provided by qualified LBG/B&V professionals.

5 QUALITY CONTROL PROGRAM/PLAN

LBG/B&V was operating under an IRP-wide general quality assurance/quality control program. A site-specific plan was developed for the construction phase of the work. The implementation of a QC program at this site was the responsibility of the construction subcontractor (Procon-Fayz-VKS JV) with oversight and guidance provided by qualified LBG/B&V professionals. LBG/B&V JV provided a QA program with on site personnel supported by our central lab in Kabul. In addition to the in-country design capabilities existing to support this and other IRP task orders the Task Order periodically engaged LBG’s domestic home offices to provide engineering and technical support for quality assurance design reviews and geotechnical engineering.

6 STATEMENT OF NO PATENTS, ROYALTIES OR CLASSIFIED MATERIALS

There were no patents, royalties or classified materials obtained or generated under the activities of this task order.

7 LESSONS LEARNED

Issue	Lesson	Recommendations
Local Contractors inexperienced	Be prepared to mentor and lead local subcontractor and their subcontractors from cradle to grave	To thoroughly review subcontractor schedule and to consider experience vs. schedule



Not being able to clear customs	Be prepared to have a minimum 60 day wait for materials to clear customs. This includes from border to final destination	Long-lead items need to be ordered four months prior to desired installation date
Movement of materials/equipment to remote locations	Be prepared to either fly in as much equipment in as you can; to clear the roadway for travel; expect delays due to road conditions	Review travel routes to have a better understanding of what it takes to transport equipment, labor, materials, etc.
Local contractors inexperienced with purchasing required materials per the contract	Local subcontractor staff need to be mentored in procuring local materials that meet contract requirements as a majority of the time, the contractor finds the materials for them locally	Work with contractor and his staff to ensure materials that can be purchased locally are, and any other items be purchased elsewhere

8 OUTSTANDING ISSUES

8.1 Project Handover to GIRoA

Due to the remote location of this bridge and the lack of national level government ministry presence in Uruzgon Province, the completed bridge has not been handed over to a national ministry. As of this writing, USAID continues discussions with potential ministerial takers, but as yet has not found an office to take possession of the bridge, with associated operations and maintenance responsibilities.

8.2 Claims

Procon Fayz VKS JV Claim – PFV JV submitted a claim for approximately \$20 million dollars in February 2012. As of this writing, the Engineer’s Determination was issued, with LBG/B&V requesting additional information prior to issuing an Engineer’s Decision. The Procon-Fayz-VKS JV declined the offer to provide additional information and instead submitted their intent to seek resolution via arbitration.

8.3 Warranty

Under the terms of the FIDIC contract between LBG/B&V JV and Procon-Fayz-VKS JV, the start of the warranty period is the date of the taking over certificate issued under Clause 48.1. This Taking Over Certificate, commonly known as the substantial completion certificate, was issued by the Engineer on 29 January 2012. The warranty defects liability period starts that date and ends 365 days later on 29 January 2013.

During this period, the construction subcontractor will be responsible for rectifying all defects discovered at the taking over inspection and must complete the “punch list” of outstanding uncompleted items. Procon-Fayz-VKS JV completed the punch list work on January 15, 2012. Final inspection of the bridge for warrantee issues will take place in December 2012.

9 CONCLUSION

In conclusion the entire AIRP and TO 25 staff would like to express its gratitude to the professionals who for two years dedicated themselves to the completion of this challenging project, especially the Afghan Engineers and Technicians who grew in capacity and professionalism throughout this project, and who now are available to fulfill the construction needs of Afghanistan in many other programs. Also our gratitude goes out to USAID’s OIEE and OAA for their professional oversight and directions as our client, to the military units at FOB Cobra who provided much support, encouragement, and hospitality, and a special thanks to the government and people of Uruzgon Province, without whose support the construction of this bridge would not have been possible.