

# SIGAR

**Special Inspector General for  
Afghanistan Reconstruction**

## OFFICE OF SPECIAL PROJECTS

BRIDGES IN BAGHLAN PROVINCE,  
AFGHANISTAN: SIX OF EIGHT BRIDGES  
CONSTRUCTED OR REHABILITATED BY DOD  
REMAIN IN GENERALLY GOOD, USABLE  
CONDITION; TWO APPEARED TO HAVE  
STRUCTURAL ISSUES NEEDING ATTENTION

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**SEPTEMBER 2018**

SIGAR 18-70-SP



**SIGAR**

Office of the Special Inspector General  
for Afghanistan Reconstruction

September 7, 2018

The Honorable Jim Mattis  
Secretary of Defense

General Austin Scott Miller  
Commander, U.S. Forces–Afghanistan and Commander, Resolute Support

Dear Secretary Mattis and General Miller:

I am writing to inform you of the results of site inspections to verify the locations and conditions of eight DOD-funded bridge projects in Baghlan province, Afghanistan. These eight bridges were constructed or rehabilitated using funds from the Commander's Emergency Response Program (CERP) between 2008 and 2013.

We found that the location information maintained in DOD systems was generally accurate, and seven of the eight bridges were within one kilometer of their recorded coordinates. One bridge was more than 18 kilometers from its recorded coordinates. We also found that six of the eight bridges were in generally good, usable condition and all eight were identified as "very useful" by community members and an Afghan government official we interviewed. Two of the bridges appeared to have significant structural issues that could pose a risk to people using the bridge. As a result, we issued two alert letters to DOD and informed the Afghan government of our concerns.<sup>1</sup>

SIGAR provided a draft of this report to the Department of Defense for comment on July 31, 2018. The Department of Defense provided technical comments on August 23, 2018, which we have incorporated as appropriate.

SIGAR conducted this special project in Washington, D.C. and Baghlan, Afghanistan from December 2017 to July 2018 and in accordance with the Council of the Inspectors General on Integrity and Efficiency (CIGIE) Quality Standards for Inspection and Evaluation.

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<sup>1</sup> SIGAR, Alert Letter: Structural Damage at Baghlan Bridge 2, SIGAR 18-50-SP, May 22, 2018; SIGAR, Alert Letter: Structural Damage at Baghlan Bridge 1, SIGAR 18-39-SP, April 3, 2018.

SIGAR performed this special project under the authority of Public Law No. 110-181 and the Inspector General Act of 1978, as amended. Should you or your staff have any questions about t this project, please contact Ms. Nomi Taslitt, Acting Director of Special Projects, at (703) 545-6062 or nomi.r.taslitt.civ@mail.mil.

Sincerely,

A handwritten signature in black ink, appearing to read 'J. F. Sopko', with a long horizontal flourish extending to the right.

John F. Sopko  
Special Inspector General for  
Afghanistan Reconstruction

## BACKGROUND

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DOD established the commander's emergency response program (CERP) in fiscal year 2004, to enable military commanders to respond to urgent humanitarian relief and reconstruction requirements in Iraq and Afghanistan.<sup>2</sup> In Afghanistan, CERP funds were used to implement projects in all 34 provinces to support projects in diverse sectors, including transportation, education, agriculture/irrigation, healthcare, and water and sanitation. CERP was intended for small projects generally estimated to cost less than \$500,000. CERP projects that cost more than \$500,000 were also authorized when approved at the appropriate level within DOD.

Projects that supported Afghanistan's transportation sector were among the more common and costliest CERP project categories. One component of CERP-funded transportation projects included the construction, repair, and replacement of pedestrian and vehicle bridge infrastructure throughout Afghanistan. Bridges are important because they help link communities and provide access to markets—both of which aid in economic development and promote stability. However, Afghanistan's mountainous terrain, seasonal snow melt, and tectonic activity, coupled with its tenuous security environment and extreme budgetary constraints, pose challenges for the maintenance and longevity of CERP-funded bridges.

This is the first in a series of reports examining bridges in provinces throughout Afghanistan that were constructed or rehabilitated using CERP funds. This report includes our observations from eight such bridges in Baghlan province.<sup>3</sup> The eight projects received approximately \$1.3 million in total CERP funding.

We worked jointly with an Afghan civil society organization to perform limited inspections of the bridges in December 2017. At each site inspection, our team took time-, date-, and location-stamped photographs.<sup>4</sup> Where possible, the following activities were also completed during each inspection:

- An overall assessment of the bridge, recording, among other information, the geospatial coordinates of the project, whether the bridge appeared to be open to the public, structurally sound, and safe to use.
- An interview with a community member.
- An interview with a Ministry of Rural Rehabilitation and Development engineer

We conducted our work from December 2017 to August 2018. Our site inspections did not include comprehensive engineering evaluations of all structures.

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<sup>2</sup>Emergency Supplemental Appropriations Act for Defense for the Reconstruction of Iraq and Afghanistan, 2004, Pub. L. No. 108-106, § 1110, 117 Stat. 1209, 1215 (2003).

<sup>3</sup>One bridge project included funding for the rehabilitation of two bridges in close proximity to one another. Thus, there were seven CERP projects, which provided funding for the construction or rehabilitation of eight bridges. In addition, two of we noted structural damage in two of the bridges, which were the subject of two alert letters issued in April and May, 2018.

<sup>4</sup>Nearly all photographs contained time, date, and location stamps; however, at some locations, there were individual photographs that did not contain geospatial stamping.

## SIX OF EIGHT BRIDGES WERE IN GENERALLY GOOD, USABLE CONDITION; TWO BRIDGES APPEARED TO HAVE STRUCTURAL ISSUES NEEDING ATTENTION

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Using the province, district, bridge project name, and geospatial coordinates for each project as a starting point, we confirmed the existence of all eight projects. We found that the actual location for seven of the bridges were less than one kilometer from the geospatial coordinates contained in DOD files, and one bridge was more than 18 kilometers from the coordinates found in DOD files.

Our site inspections of the eight bridges, including six that spanned rivers ranging from 10 to 90 meters in width, found that all the bridges were in use but two of the eight had structural damage and posed a potential safety concern to people using the bridge. We issued alert letters to DOD describing the condition of the bridges. Afghan government officials were notified about the safety concerns we identified.<sup>5</sup> The other six bridges appeared to be in generally good, usable condition. Enclosure 1 provides detailed location information about each bridge, and will not be publicly released due to security concerns.

According to an Afghan Ministry of Rural Rehabilitation and Development (MRRD) official responsible for maintaining the structures, the bridges are very important to the province and are heavily relied upon to cross rivers. Similarly, community members we spoke with near each bridge rated the structures as “very useful” and heavily relied upon by travelers. However, the MRRD official we spoke with stated that there was no budget for maintenance or needed repairs.

### Two Bridges Appeared to Have Significant Structural Issues

Two of the bridges we visited appeared to have significant structural issues and inadequately maintained, which could pose a potential safety hazard. The two bridges were constructed or rehabilitated in 2010 and 2012, respectively, at a combined cost of \$568,329.

#### Bridge 1

Bridge 1 was one of the more costly CERP bridge projects in Baghlan province. This beam-style, 70-meter concrete vehicle bridge was completed in early 2010 for a cost of \$554,825. It replaced an existing, deteriorating bridge at the same location.<sup>6</sup> When we visited the site, we observed vehicle traffic. A local MRRD official stated that the local communities relied on the bridge to facilitate local commerce and it connected the village to major metropolitan areas. However, we found that the bridge’s embankment wall had deteriorated significantly, and its retaining walls had structural damage, which may be a potential safety hazard.

These structural issues—possibly compounded by inadequate maintenance, seismic events, strong river currents, and continuous stress on the approach road—created safety concerns for users on or

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<sup>5</sup>SIGAR, Alert Letter: Structural Damage at Baghlan Bridge 2, SIGAR 18-50-SP, May 22, 2018; SIGAR, Alert Letter: Structural Damage at Baghlan Bridge 1, SIGAR 18-39-SP, April 3, 2018.

<sup>6</sup>Images taken by site inspectors indicated that what remains of the old bridge that stands nearby has deteriorated to an unsafe and unusable condition.

near the bridge. SIGAR notified the Afghan government about the poor condition of the bridge.<sup>78</sup> Photo 1a shows the span of the bridge and Photo 1b shows one of the structural concerns we observed at the embankment wall.

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Photo 1a: Bridge Spanning a Wide River.



Source: SIGAR December 12, 2017.

Photo 1b: Significant Cracks along Embankment Wall



Source: SIGAR December 12, 2017.

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## Bridge 2

Bridge project 2 included the rehabilitation of an existing, damaged bridge. In October 2011, USFOR-A awarded a CERP-funded contract for \$16,180 to make limited repairs to the bridge to maintain a major supply route and to ensure the local population's access to services and markets. According to project records, USFOR-A terminated the project in early 2012, due to issues with the local population. Available documentation showed that the repairs were 82% complete when the project was terminated and \$13,267.60 was paid to the contractor for work completed. During our visit in December 2017, the bridge's superstructure, approach, retaining walls, and traffic safety rails showed a lack of maintenance, potentially pose a danger to users, unless needed maintenance is undertaken by the Afghan government. Given the condition of the bridge, we issued an alert letter to DOD and notified the Afghan government regarding the need for repairs to ensure the safety of people on or near the structure.<sup>9</sup> Photo 2 shows the unmaintained, eroding approach. Photo 2b shows a freight truck leaving the bridge.

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<sup>78</sup>SIGAR, Alert Letter: Structural Damage at Baghlan Bridge 2, SIGAR 18-50-SP, May 22, 2018.

<sup>8</sup>According to DOD's response to SIGAR's May 22, 2018 alert letter, a preliminary analysis of project documents by DOD engineers indicated that the reinforced concrete bridge and the wing walls are independent structures that meet at the bridge abutment. Erosion of soil from behind the wing walls could negatively impact the approach road and cause it to settle, but will not impact the bridge itself. However, to avoid further erosion, DOD's engineers agreed that the wing walls should be repaired. U.S. Forces-Afghanistan (USFOR-A) agreed to notify the Afghan government of the safety concern raised in the alert letter.

<sup>9</sup>SIGAR, Alert Letter: Structural Damage at Baghlan Bridge 1, SIGAR 18-39-SP, April 3, 2018.

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Photo 2a: Eroding Bridge Approach



Source: SIGAR December 19, 2017

Photo 2b: Freight Truck Leaving the Bridge



Source: SIGAR December 19, 2017

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### Six Bridges Appeared to be in Good, Usable Condition

The remaining six bridges were constructed or rehabilitated by DOD using CERP funds between 2008 and 2013, at a total cost of \$714,898. Each of the six bridges appeared to be in generally good, usable condition.

#### Bridge 3

Bridge 3 was constructed in June 2012 for \$66,446, and allows foot and vehicular traffic access to and from local markets. When we visited the bridge, we found the metal truss bridge to be in generally good condition, showing no visible indication of damage. Individuals we spoke with, including a local government official with responsibility for infrastructure maintenance, stated that the bridge was very useful and had a positive impact on local commerce. Photos 3a and 3b show the condition of Bridge 3.

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Photo 3a: Bridge Project 2 Spanning a River



Source: SIGAR December 18, 2017

Photo 3b: Bridge Project 2 from Other Bank



Source: SIGAR December 18, 2017

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#### Bridge 4

According to CERP documents, rain and snow runoff in early 2012 caused the collapse of a rural pedestrian bridge in Doshi district of Baghlan province. In response, USFOR-A provided \$124,629 in CERP funding to build a new, 100-meter suspension style pedestrian bridge to replace the collapsed structure. When we visited the bridge in December 2017, we found the bridge to be in good condition overall and regularly used by the local community. We did not observe any significant structural concerns on the bridge, the embankment walls, or the bridge cables and their housing blocks. Photos 4a and 4b show Bridge 4.

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Photo 4a: Bridge Project 4



Source: SIGAR December 19, 2017

Photo 4b: Pedestrians Crossing the Bridge



Source: SIGAR December 19, 2017

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#### Bridge 5

The fifth CERP bridge project we inspected was completed in June 2012 and cost \$65,608. The project funded emergency repairs on an urban throughway's overpass. The Afghans relied on the

bridge for freight traffic and local community access. Afghan and coalition forces also used the bridge to move combat vehicles. At the time, the existing bridge had been deemed unsafe for vehicular traffic. This is the only bridge we inspected in Baghlan that did not span a river or large body of water, but rather a drainage ditch. We found the bridge to be in heavy use, and in generally good condition with no major structural concerns. Photos 5a and 5b show the condition of Bridge 5.

Photo 5a: Heavy Freight and Personal Vehicles Using the Bridge



Source: SIGAR December 20, 2017

Photo 5b: Livestock Crossing Underneath the Bridge.



Source: SIGAR December 20, 2017

### Bridges 6 and 7

CERP bridges 6 and 7 were funded by a single CERP project that called for the construction of two beam-style vehicle bridges in close proximity to each other in an urban location in Pol-i Khumri district in Baghlan. The bridge projects, one 80-meter bridge and one 28-meter bridge, were completed in December 2013 for a total of \$449,274.<sup>10</sup> When we visited the bridges in December 2017, we found them both to be open and in generally good condition. We also observed significant vehicle, bicycle, and pedestrian traffic crossing both bridges. The bridge pictured in photo 6 is the 80 meter vehicle bridge that crosses a river, and the bridge in photo 7 is the 28 meter vehicle bridge that spans an adjacent canal.

<sup>10</sup> In addition to the two bridges, the project included 40 meters of roller compacted concrete connecting both structures

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Photo 6: Vehicle Crossing the 80 Meter Vehicle Bridge



Source: SIGAR December 27, 2017

Photo 7: Vehicle Crossing the 28 Meter Vehicle Bridge



Source: SIGAR December 27, 2017

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### Bridge 8

The final CERP bridge project we inspected was completed in November 2012, at a total cost of 8,940. The project rehabilitated an existing bridge that had been damaged by ISAF vehicles. At the time of our December 2017, inspection, the bridge was closed to vehicle traffic due to security concerns and its proximity to a government installation, but was open to pedestrians. We observed pedestrians crossing the bridge, and the bridge appeared to be in generally safe, usable condition. Photos 8a and 8b show the condition of the eighth bridge project.

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Photo 8a: Bridge Project 7



Source: SIGAR December 20, 2017

Photo 8b: Bridge Project 7 From Far Bank



Source: SIGAR December 20, 2017

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## CONCLUSION

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The location information maintained in DOD files for the eight CERP-funded bridges was generally accurate, with seven located within one kilometer of their recorded coordinates. We also found that all eight bridges remain standing, and benefited the surrounding communities. Two of the bridges appeared to be inadequately maintained, in need of repair, and potentially pose a safety hazard. SIGAR and DOD have already taken steps to notify the Afghan government of the bridge issues; therefore, we are not making any additional recommendations for DOD action in this report.

## SIGAR's Mission

The mission of the Special Inspector General for Afghanistan Reconstruction (SIGAR) is to enhance oversight of programs for the reconstruction of Afghanistan by conducting independent and objective audits, inspections, and investigations on the use of taxpayer dollars and related funds. SIGAR works to provide accurate and balanced information, evaluations, analysis, and recommendations to help the U.S. Congress, U.S. agencies, and other decision-makers to make informed oversight, policy, and funding decisions to:

- improve effectiveness of the overall reconstruction strategy and its component programs;
- improve management and accountability over funds administered by U.S. and Afghan agencies and their contractors;
- improve contracting and contract management processes;
- prevent fraud, waste, and abuse; and
- advance U.S. interests in reconstructing Afghanistan.

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