

Acrow Bridge Selected for Permanent Crossing at Remote Mining Site in Liberia

Extractive industries critically important to the country's economy



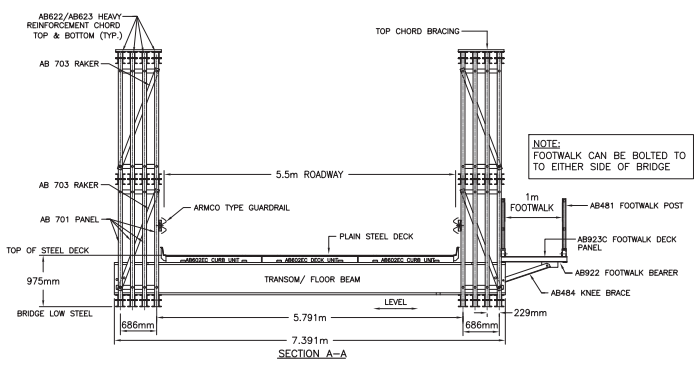
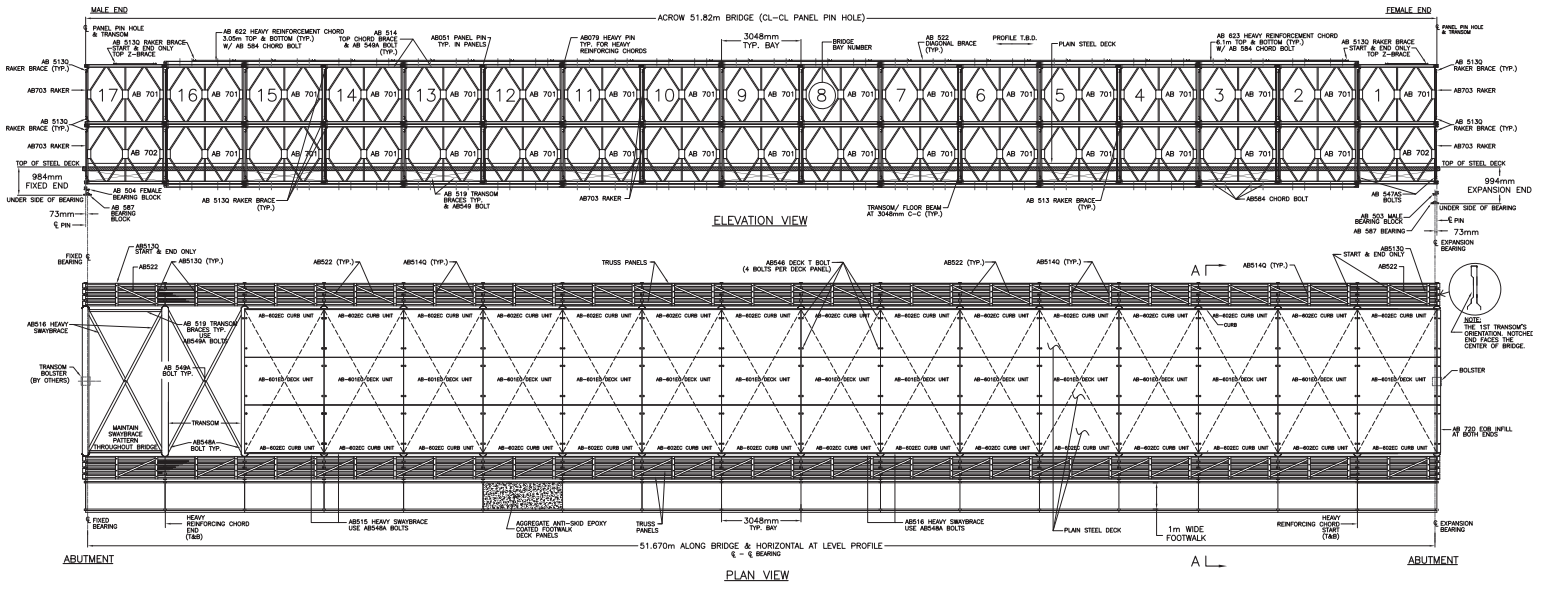
The extractive industries have long been an important part of the economy of Liberia, a country rich in natural resources. From mining to offshore oil exploration, recent foreign investment has aided in the revitalization of many industry sectors hard hit by both the global slump in commodity prices and the outbreak of the Ebola Virus.

One of Liberia's chief exports is iron ore used in the production of steel. When a privately-owned mine far inland near the borders with the Republic of Côte d'Ivoire and the Republic of Guinea needed a permanent bridge in order to commence operations, it was an Acrow structure that was chosen to provide access for both vehicles and pedestrians at the economically important site.

The Acrow bridge is 51.8 meters (170 feet) long by 5.5 meters (18 feet) wide curb-to-curb, with a "Eurocode" epoxy aggregate orthotropic deck. The one-lane structure was designed to support extremely heavy loads such as FMX or heavy-haul Mine Transporter Trucks, and took into account both wind and spillage considerations to ensure a long design life.

Acrow bridges are well suited to meet the specialized needs of many industries, including mining, with on-site technicians Mine Safety and Health Administration (MSHA) trained and certified. The modular design of Acrow's steel bridging system makes installation easy and cost-effective, and ideal for remote locations such as this, where installation of a other bridging solutions would be difficult or impossible. Requiring only minimal construction equipment, the bridge was completed using local labor in three weeks, despite heavy daily rain.

Whether used for permanent or temporary installations, all Acrow bridges are built to last, with fully hot-dipped zinc galvanized steel components engineered to exceed a 75-year life span even in the most challenging environments.



Specifications

Bridge length:

51.82 meters

Bridge width:

5.50 meters curb-to-curb

Live load:

- 1 Lane of (2) FMX Truck at 10m apart or
- 1 Lane of a Mine Transporter Truck
- Pedestrian Load (2.39 kPa)
- AASHTO Wind Loading (6.567 kN/m)
- 50 mm of Overburden @3000 kg/m3 (1.532 kPa)

Deck surface:

Epoxy Aggregate (note: the deck system for the panel bridge is comprised of special, "Eurocode," orthotropic units that bolt to the bridge during assembly.)

Bridge finish:

- All major components galvanized to AASHTO M111 – ASTM A 123
- All bolts are hot dipped galvanized
- All pins are electro galvanized

Bridge erection:

Full cantilever launch

Bridge design:

- (A) Panel chords, diagonals, verticals, panel reinforcing chords, rakers to AASHTO M223 GD 65
- (B) Raker brace, transom, top chord brace, swaybrace, transom brace, diagonal chord brace to AASHTO GD 50
- (C) Panel pins to ASTM A 193 GD b7
- (D) Bolts to AASHTO M164M – A325



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