

KOTOKA INTERNATIONAL AIRPORT PROJECT UPDATES

ING. LESLIE ALEX AYEH, PRESIDENT GhIE

1. **Afia to Ing. Ayeh: Is this project a design-built project? How was the designer and contractor selected? How does the Government generally procure such major projects? Is it a public process?**

- a. This Contract awarded to AMANDi Holdings is a design build Contract and the Consultant to review the design and to supervise the works of the Contractor is Ayeh & Ayeh.
- b. The basis for choosing the Contractor was that the Contractor provided the funding for the project. The Consultancy was single sourced because Aviation is a specialized area and the procurement laws of Ghana give's authority to the Entity / Agency to single source for specialized areas where the open tender would not be competitive due to the fact that the expertise cannot be easily procured. But the entity needs to needs to demonstrate that the Consultant chosen has the expertise.

2. **Ken Tutu to Ing Ayeh: could you please share with us major geotechnical challenges encountered at the project site, and how these challenges were addressed?**

The topography of the area is such that, the average height of the embarkment to be constructed for the New Apron and the taxi way is 10 meters high and this would require about 830,000 m³ of fill to be procured from borrow pits within reasonable haulage.

The Contractor then proposed the use of rockfill and that seemed plausible as this would reduce the construction time considerably and minimal adverse impact on the environment.

The rockfill of granite had an angle of friction ϕ of over 45° which made the slope of the embarkment reasonable.

The ***Ghana Infrastructure Conference (GIC 2020) Virtual Edition*** was organized by the Ghana Transportation Professionals (GTPF - <http://gtpf.org/>), ACE -Regional Transport Research and Education Centre Kumasi (TRECK - <https://treck.knust.edu.gh/>) and the Ghana Institution of Engineering (GhIE - <https://ghie.org.gh/>) in partnership with the following ministries of the Republic of Ghana – Aviation, Transport, Roads & Highways, Railways Development



3. Patrick Bekoe to Ing Ayeh: drainage problems on the airport have been reported in the dailies. Can you shed more light on the drainage design?
4. Francis to Ing Ayeh: Pls I learnt airport got flooded when its rain. What are the possible causes and solutions. Thanks.

- i) We reviewed the hydrological and the drainage studies and we found the recommendation to be adequate. The drainage designs were done in accordance with AC – 5320 – 5D. Our findings was that, this should adequately cater for anticipated run – off.
- ii) Part of the drainage itinerary includes a 135m, 1m X 2 box culvert and a 95m, 1m x 2m box culvert.
- iii) INLET INTERCEPTION CAPACITY AND EFFICIENCY
The interception capacity of all inlet configurations increases with increasing flow rates, and inlet efficiency generally decreases with increasing flow rates.
The interception capacity of a grate inlet depends on the amount of water flowing over the grate, the size and configuration of the grate, and the velocity of the flow of the gutter.
Consequently, along the taxi way and Apron, covers have been proposed as per AC – 150 – 5230 – 5D

5. Falasi to Ing. Ayeh: how can agile project management methodologies be used in the construction field, Please?

I am unaware of the appropriateness of the Agile project management methodology in highway or Airport Construction.

The **Ghana Infrastructure Conference (GIC 2020) Virtual Edition** was organized by the Ghana Transportation Professionals (GTPF - <http://gtpf.org/>), ACE -Regional Transport Research and Education Centre Kumasi (TRECK - <https://treck.knust.edu.gh/>) and the Ghana Institution of Engineering (GhIE - <https://ghie.org.gh/>) in partnership with the following ministries of the Republic of Ghana – Aviation, Transport, Roads & Highways, Railways Development



6. Falasi to Ing AYEh: what is the difference between design and build and collaborative delivery?

The conditions of contract used in transportation works are under FIDIC.

They are 4 major types;

- i) Red Book
- ii) Silver book
- iii) Yellow book
- iv) Green book

THE RED BOOK

- i) The construction Contract is designed by the employer or his representative (Consultant). And the contractor executes the work as per the employers design.

THE YELLOW

The yellow book, the conditions are written for a design and build and the design will be reviewed by the client.

The Silver Book is for turnkey projects.

Green Book is for relatively small or repetitive works.

7. Anthony Selassie Dzixose - Davor to Ing. Ayeh: I would want to find out what plans are in place to develop the old terminals i.e. Terminal 1 and 2 to have jet bridges like Terminal 3 has?

Proposals have been received by the clients for the operationalization of Terminal 2.

The **Ghana Infrastructure Conference (GIC 2020) Virtual Edition** was organized by the Ghana Transportation Professionals (GTPF - <http://gtpf.org/>), ACE -Regional Transport Research and Education Centre Kumasi (TRECK - <https://treck.knust.edu.gh/>) and the Ghana Institution of Engineering (GhIE - <https://ghie.org.gh/>) in partnership with the following ministries of the Republic of Ghana – Aviation, Transport, Roads & Highways, Railways Development



Terminal 1 is currently being leased to McDan Aviation.

The **Ghana Infrastructure Conference (GIC 2020) Virtual Edition** was organized by the Ghana Transportation Professionals (GTPF - <http://gtpf.org/>), ACE -Regional Transport Research and Education Centre Kumasi (TRECK - <https://treck.knust.edu.gh/>) and the Ghana Institution of Engineering (GhIE - <https://ghie.org.gh/>) in partnership with the following ministries of the Republic of Ghana – Aviation, Transport, Roads & Highways, Railways Development

