

# “Elevated Expressway should be a futuristic and flawless project”

Interview with Dr. Md. Shamsul Hoque, Professor, Civil Engineering Department, BUET



Dr. Md. Shamsul Hoque

The construction of the first ever elevated expressway project in Dhaka officially commenced on April 11, 2018. The main objective of this project is to bypass Dhaka vertically in the fastest possible way, which would significantly reduce the traffic load inside the capital. The Daily Star talks to eminent transportation and safety expert Dr. Md. Shamsul Hoque on various aspects of the project including its unique features, implementation challenges and most importantly, the lessons needed to be learnt from such a mega construction project.

Dr Hoque starts with a brief background of the project. He informs that the idea of Dhaka Elevated Expressway (DEE) was conceived in the STP (Strategic Transport Plan) 2005. In 2010, the Awami League led government resumed the project, targeting the elections in 2014. Dr Hoque joined the expert committee of DEE at that time.

Initially, a pre-feasibility study of DEE was conducted by AECOM, Australia. Although according to STP, the Dhaka Elevated Expressway was supposed to pass through Dhaka, AECOM suggested three alternative routes, all of which fell on the eastern fringe onward Pragati Sarani. The investors, particularly Italian-Thai, urged to take the project through Dhaka to make it lucrative for investment. Two designs (Alignment 4 and Alignment 5) were then proposed, keeping the DEE alignment within Dhaka. The most lucrative design was thought to be Alignment 5 along the existing railway line inside Dhaka, as it would save land and the project could be implemented faster. But it excluded the people-friendly MRT (Mass Rapid Transit) 4. The expert committee, comprised of Dr Jamilur Reza Chowdhury, Dr Mohammad Rahmatullah and Dr Md.

Shamsul Hoque, seriously objected to this plan. The government addressed the expert committee's concern by including MRT4 in the DEE plan. Later, two elevated links were added to the DEE connecting Manik Mia Avenue and Old Dhaka, and Alignment 5A was finalized for tender. Italian-Thai Development Public Company Ltd won the bidding.

The implementation modality of DEE is Public Private Partnership (PPP). “The beauty of PPP is its time-boundedness. Unlike government projects, PPP projects must be completed within its stipulated time. Regular maintenance of the infrastructure is also an in-built feature of PPP, which government-run projects seriously lack,” says Dr Hoque.

## Unique features of DEE

“We designed DEE as a suspended terminus, which means both ends of the project will not touch down, and further extension of the expressway can be done in the future. Work on the Dhaka-Ashulia elevated expressway will begin from the airport end of DEE and reach Bipile, Savar. There, again, it will be kept suspended. If necessary, we can extend it to the northern areas of the country,” Professor Shamsul Hoque adds.

Safety audit is an in-built feature of the project. Before construction of any section of DEE a safety audit will be conducted by a third-party organisation. A weighbridge will be constructed at the mouth of every ramp to check overloaded vehicles, thereby ensuring longevity of the construction.

Along the DEE corridor, starting after Banani-Mohakhali to Khilgaon Flyover, portal piers will be used instead of single piers. “Although the



cost of construction would rise, I managed to convince Italian-Thai Company to use portal piers so that the project can be saved from derailment related hazards, and right of way for future rail projects such as MRT4 can be retained,” shares Dr

Hoque.

Minimum traffic is part of the sovereign guarantees given by the host government, which stipulates that if on a single day a certain number of cars doesn't pass over an infrastructure, the government will

compensate the private partner. In the case of Mayor Hanif Flyover, for example, the minimum guaranteed traffic is 42,000 cars per day, a target that is not being met. “Based on a background study conducted by BUET, we fixed 14,500 cars per day as the minimum guaranteed traffic for DEE,” informs the expert.

He further adds that one percent of the project cost will be kept aside for establishing the Institute of Civil Engineering and Management, which will create human resources for all the ongoing and future mega structures, including a deep seaport, nuclear plant and so on.

An incentive clause is added in the concessionaire agreement which stipulates that if the contractor completes the construction work before 42 months, they will be able to open the structure for public use and collect toll from it. “Contractors should be treated as the partner, and not the villain, of a project. We often formulate clauses to check contractors, but the reality is that after the beginning of a construction, a contractor cannot be terminated without it impacting the project,” says Dr Hoque. In our present culture, a contractor often takes benefit of any delay, such as a delay in land acquisition, of a project caused by the government. But if they were given the incentive for early completion, contractors would help the government to solve the land crisis. It would also drive growth of advanced construction technologies and high performing construction equipment, adds the expert.

## Challenges and concerns

Professor Hoque highlights land acquisition as the main challenge for implementation of the DEE project.

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