



Bangladesh Bridge Authority: An Overview

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Content

- Transport Sector in Bangladesh
- Functions of Bangladesh Bridge Authority (BBA)
- Organogram
- Major Completed Projects
- Major Ongoing Projects
- Potential Projects
- Working Relation with Korea

A photograph of a long bridge at night, illuminated by a series of streetlights along its length. The bridge has a dark metal railing and is supported by large concrete pillars. The sky is dark blue, and the water below is dark. The bridge extends from the foreground into the distance, creating a sense of depth.

Transport Sector in Bangladesh

Since Bangladesh independence in 1971, the transportation sector has grown rapidly. Among the various modes of transport, road transport system has been playing a significant role in transporting passengers and goods. Roads & Highways Department, Local Government Engineering Department and Bangladesh Bridge Authority are managing several categories of road & bridges in Bangladesh. The vision and mission of Transport Sector in Bangladesh is to establish integrated & uninterrupted transportation link throughout the country by implementing several transport infrastructure projects.

Bangladesh Bridge Authority (BBA)

Bangladesh Bridge Authority (BBA)
Establish in 1985

All matters relating to Planning
(including Feasibility Study),
implementation, monitoring and
evaluation having length of 1500m or
over Bridges, Elevated Expressways,
Tunnels and related causeway,
flyover, ring road etc.

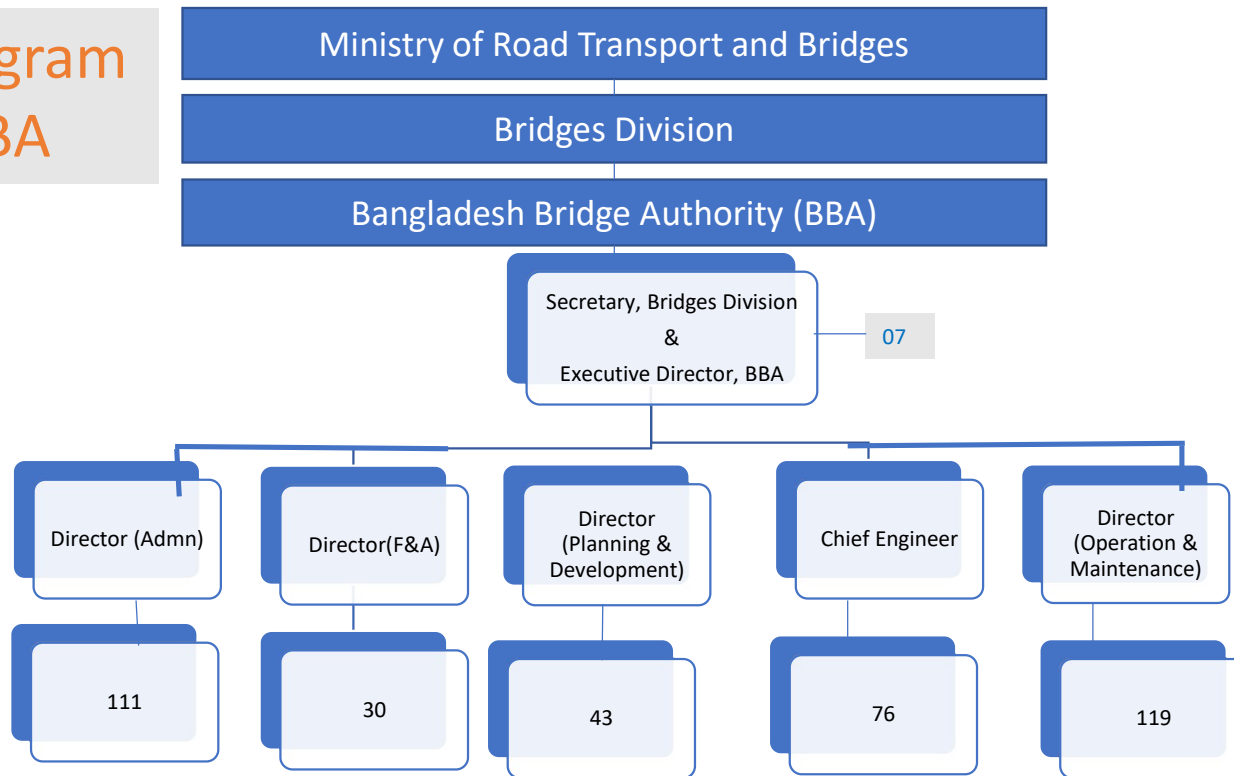
Operation and maintenance of the
multipurpose bridges and other
infrastructures.

Determine and collect tolls for
various classes of traffic using the
Multipurpose Bridges, Tunnels and
other infrastructures.

Total Manpower of BBA is 386 nos.

Executive Director (ED) is the head of
BBA. There are 5 section/Wing under
the ED, i.e.; Technical, Administration,
Planning & Development, Finance &
Accounts and Operation &
Maintenance.

Organogram of BBA



Total Manpower: 386



Major Completed Projects



Bangabandhu Bridge (Jamuna Multipurpose Bridge)

Project Cost **USD 936.40 m**

Time Duration **1994-1998**

Component

- Main Bridge-4.8 km
- Viaduct-256m
- East Guide Bund-3.07km
- West Guide Bund-3.26km
- East Approach Road-14.76km
- West Approach Road-16.93km

Contractor

- Main Bridge-Hyundai Engineering & Construction Co. Ltd - South Korea
- Guide Bunds-HamVan Oord JV - Netherlands
- Approach Roads-Samwhan Corporation - South Korea

Impact

- Established direct road and rail link between the North-West and Eastern zone of the country

Mukterpur (6th Bangladesh-China Friendship) Bridge

Project Cost	USD 30 m
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Time Duration	2004-2008
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Component	<ul style="list-style-type: none">• Bridge-1.521 km• Guide Bund-700m• Approach Road-673.23 m
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Contractor	<ul style="list-style-type: none">• China Road and Bridge Corporation (CRBC)
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Impact	<ul style="list-style-type: none">• Established a transportation link between the Dhaka city and Munshigong & nearby areas
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3 world records of Padma Bridge

- Longest Steel Tubular Pile driving (122m)
- Largest Double Curvature Friction Pendulum Bearing (Capacity 98725KN)
- Largest Single Contract of River Training Works (USD 1.1 Billion)

Padma Bridge

Total Project Cost	USD 3.05 billion
Bridge Cost	USD 1.28 billion
Time Duration	Nov 2014-June 2022
Component	Main Bridge-6.15 km Roadway Viaduct-3.148km Railway Viaduct-532m Total=9.83km
Contractor	China Railway Major Bridge Engineering Group Co. Ltd (MBEC)
Impact	Established direct road and rail communication of South-west region with capital city Dhaka & other parts of the country.

Other Completed Projects

Feasibility Study for Construction of tunnel under the river Karnaphuli: completed in April 2013 with cost USD 1.54 million

Feasibility Study for Construction of Dhaka-Ashulia Elevated Expressway and Dhaka East-West Elevated Expressway: Completed in August 2017 with cost of USD 1.95 million

Feasibility Study for Construction of Subway in Dhaka City: Completed in June 2022 with cost USD 38 million

Feasibility Study for construction of Elevated Expressway from Mithamain to Karimgonj of Kishoregonj district: Completed in June 2022 with cost USD 2.5 million

Feasibility Study for Construction of new Bridges at 5 locations: Completed in March 2020 with Cost USD 9 million



Major Ongoing Projects



Dhaka Elevated Expressway PPP Project

Project cost	USD 1.13 billion
Investor	First Dhaka Elevated Expressway Company Ltd.
Length	Main Lane-19.73km Ramp-27 km Total=46.73 km
Time Duration	December 2013-June 2024
Construction period	42 months
Concession Period	21.5 years (excluding construction period)
Physical Progress	<ul style="list-style-type: none">• 11.5 km completed and became operational.• Overall physical progress-64.44%



Construction of Tunnel under the river Karnaphuli

Project Cost USD 1.27 billion

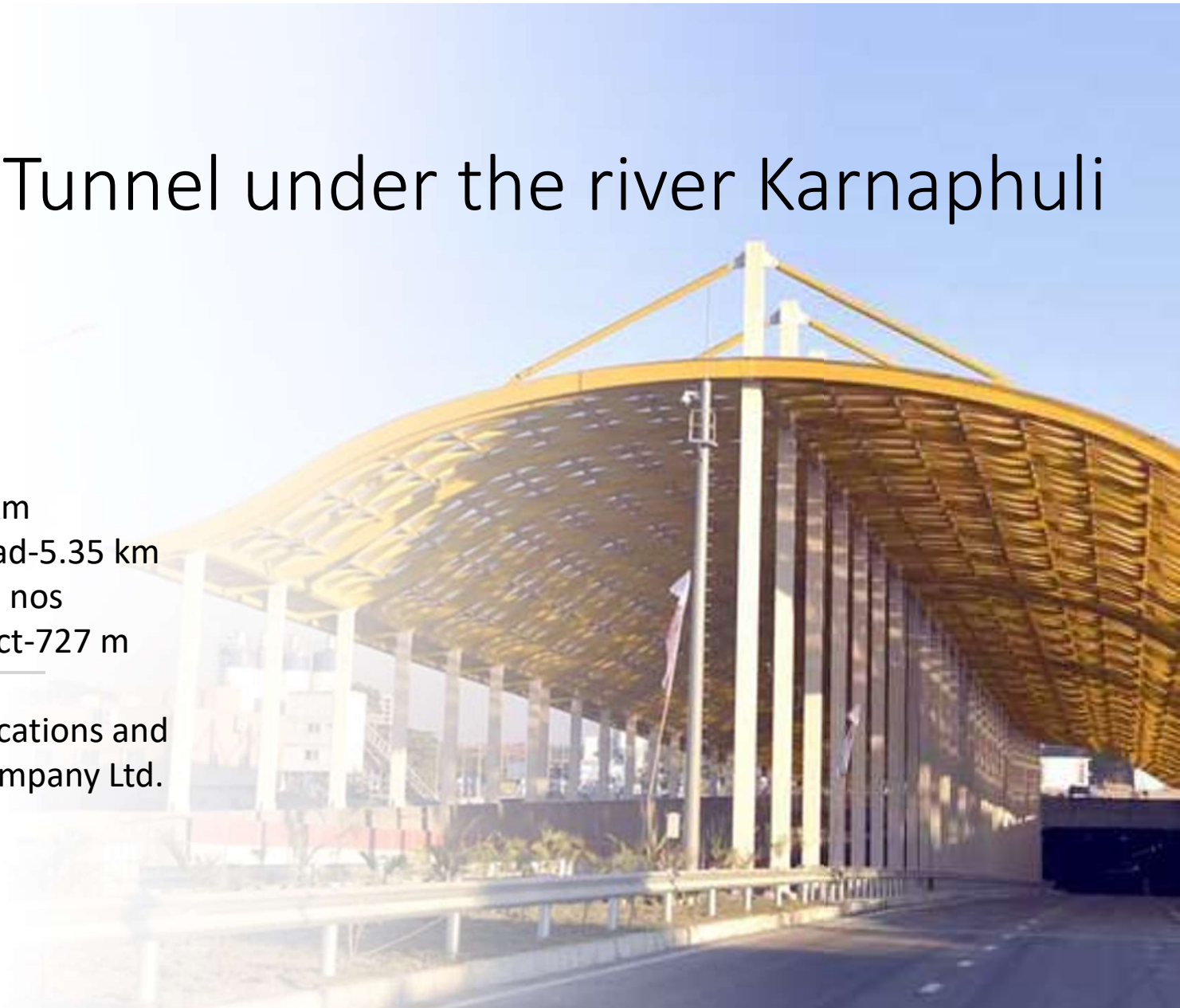
Time Duration 2015-2023

Component

- Tunnel-3.32 km
- Approach Road-5.35 km
- No. of Tube-2 nos
- Bridge/Viaduct-727 m

Contractor China Communications and Construction Company Ltd. (CCCC)

Physical Progress 98.25%



Construction of Dhaka-Ashulia Elevated Expressway

Project Cost

USD 2.18 billion

Time Duration

2017-2026

Component

- Main Lane-24 km
- Ramp-10.84 km
- Flyover-1.92 km
- Bridge-2.72 km

Contractor-

China National Machinery Import & Export Corporation (CMC)

Physical Progress

5.5%



Widening of existing road and Construction of Elevated road from Panchabati-Mukterpur Bridge

Project Cost USD 263.85 million

Time Duration 2021-2025

Component

- Elevated Expressway-6.26 km
- Ramp-2.80 km
- Bridge-151 m
- Road Widening-1075 km

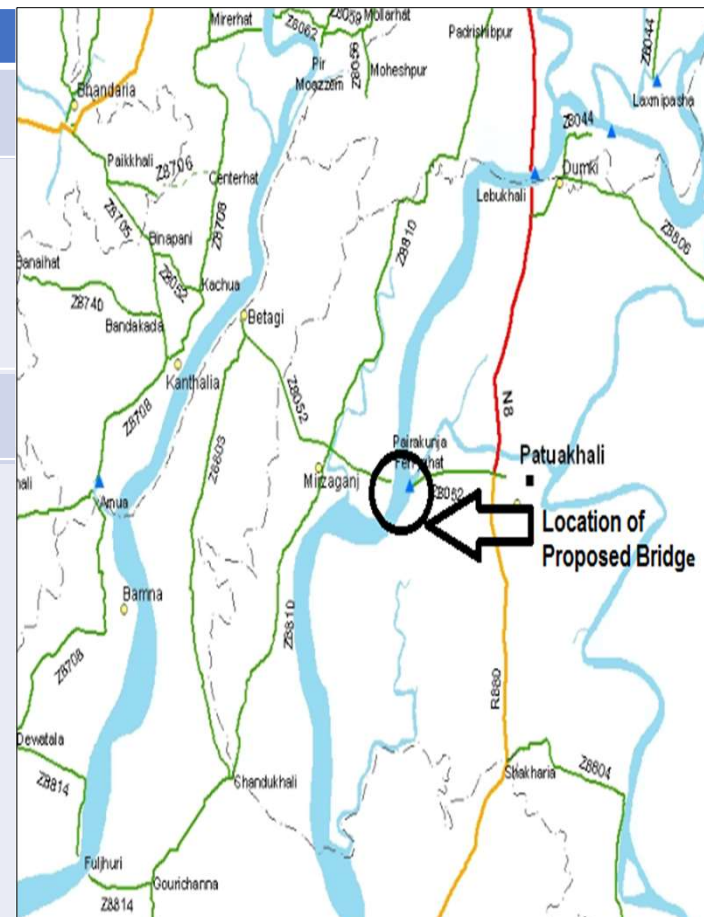
Contractor Shandong Luqiao Group Corporation-China Shandon International Economic & Technical Cooperation Group JV

Physical progress 8%



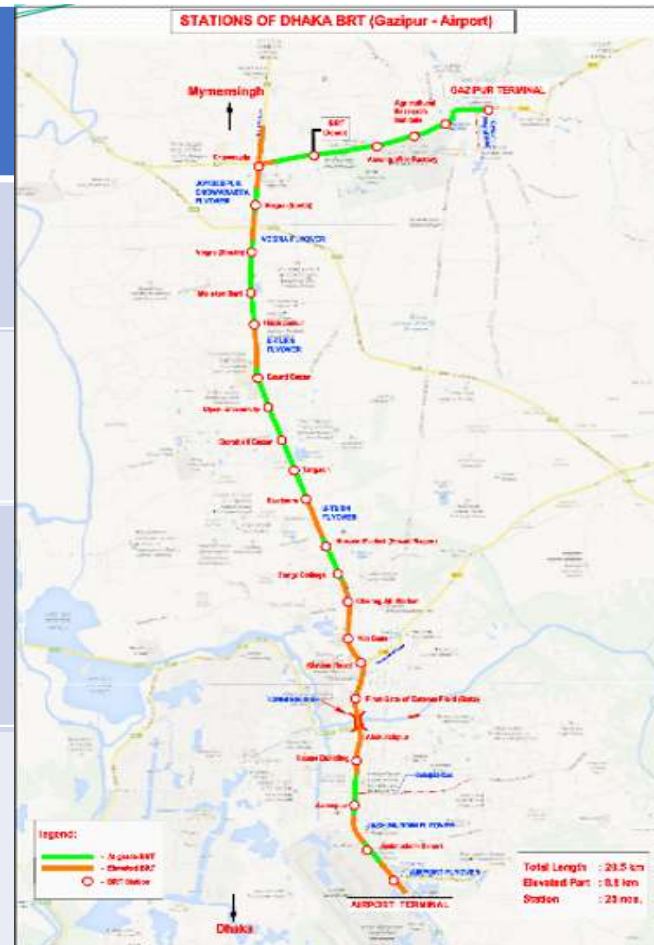
Construction of Bridge on Kachua-Betagi-Patuakhali road over the river Paira

Project Cost	USD 123.30 mullion
Time Duration	2020-2025
Component	<ul style="list-style-type: none"> • Bridge-1.69 km • Approach Road-600 m • Guide Bund-1 km
Contractor	Samwhan-Mir Akhter JV
Physical progress	2%



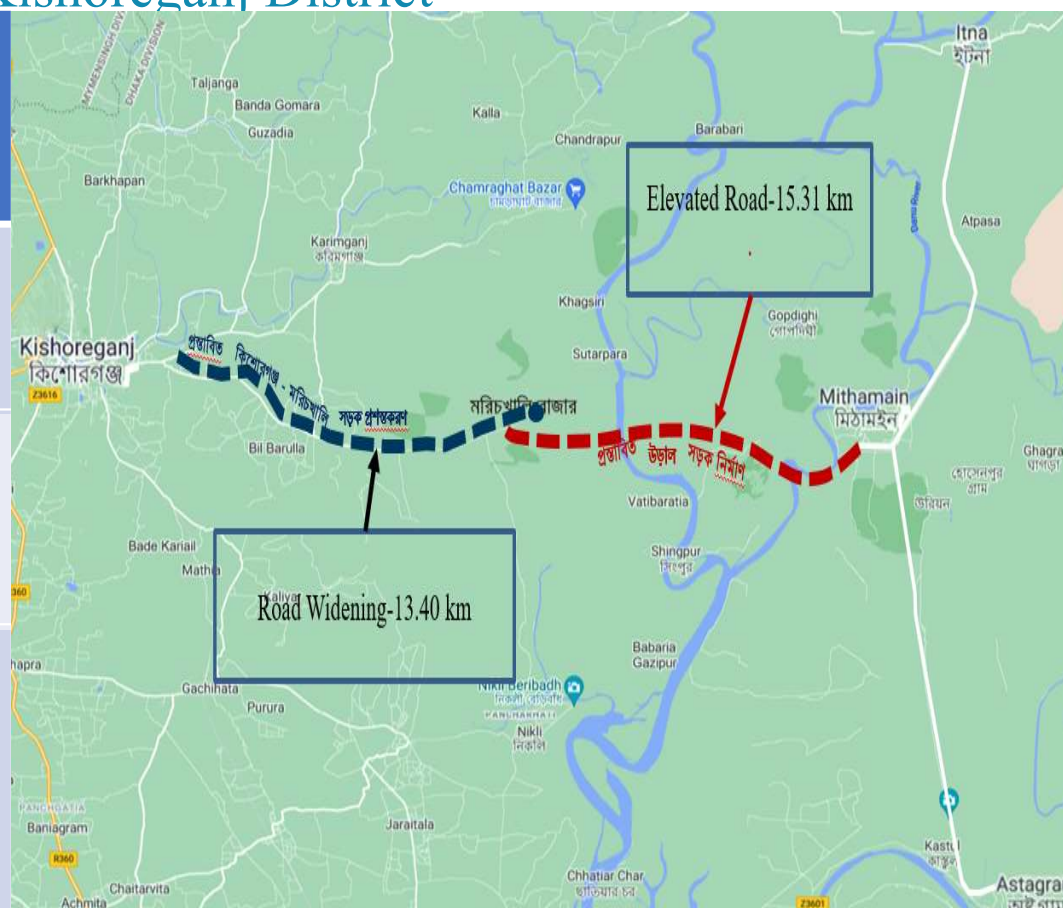
Greater Dhaka Sustainable Urban Transport Project (BRT, Gazipur-Airport)

Project Cost	Total USD 544.43 million Elevated Part-USD 157 m (BBA)
Time Duration	2012-2024
Length	Total-20 km Elevated-4.5 km (BBA)
Contractor	Jiangsu Provincial Transportation Engineering Group (JTEG)
Physical Progress	Elevated Part-95.56% Overall-91% (Elevated+At grade)



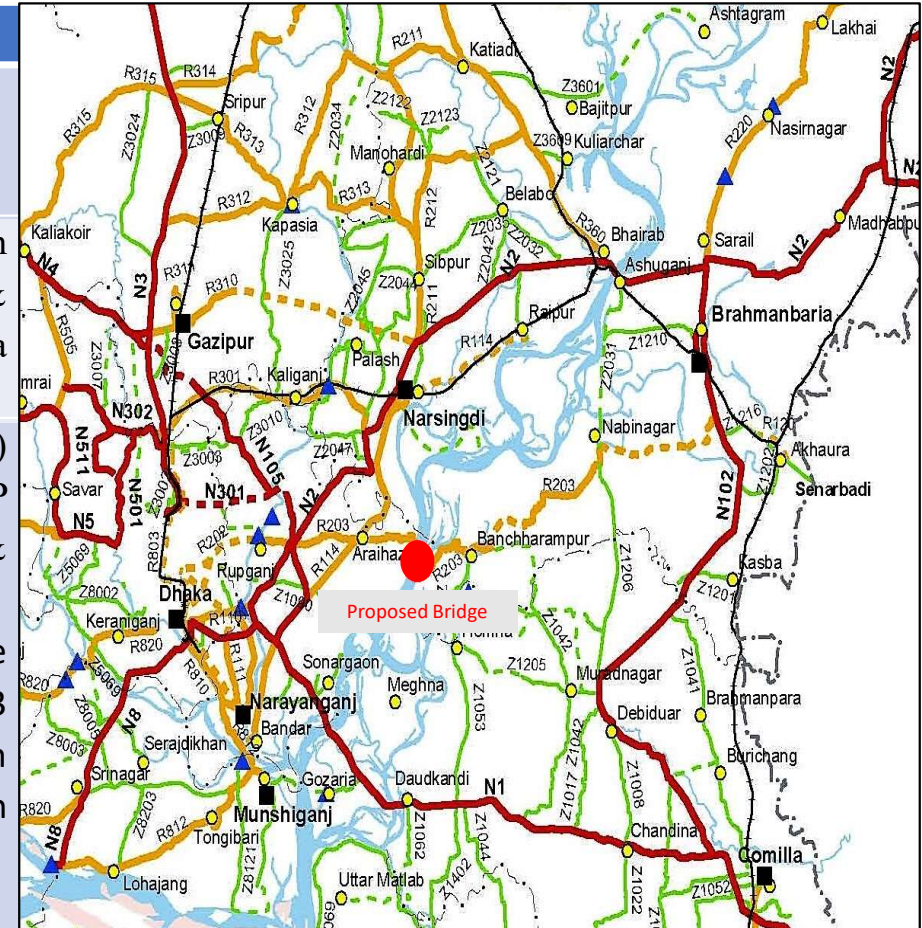
Bridge on Bhulta-Araihaazar-Bancharampur Construction of an Elevated Road from Mithamain Sadar Upazila to Morickhali of Karimganj Upazila in Kishoreganj District

Project Cost	Total USD 533 million
Time Duration	2023-2028
Length	<ul style="list-style-type: none"> Road widening-13.40 km Elevated road-15.31km
Contractor	Tender document under preparation and expected to invitation of tender in September/October 2023



Construction of Bridge on Bhulta-Araihasar-Bancharampur Road over the river Meghna PPP Project (G2G Partnership with Korea)

Project Cost	USD 833
Length	<ul style="list-style-type: none"> • Bridge-3.31km • Approach Road-4.21 km • RTW-2.5km
Investor	Daewoo Engineering and Construction Company Ltd, Hyundai Engineering & Construction Company Ltd and Korea Expressway Corporation (KEC)
Progress	<ul style="list-style-type: none"> • Project Assessment Committee (PAC) meetings on Feasibility Study report, RFP & PPP Contract were held on 2.8.2023 & 7.8.2023 respectively. • RFP & PPP Contract are expected to be issued to the Investor in September 2023 after getting approval of VGF proposal from the Finance Division and Concession Agreement to be signed in July 2024;



Feasibility Study for Construction of Bridges over the river Shariatpur-Chandpur road & Gazaria-Munshiganj road and Preparation of Master Plan for Bangladesh Bridge Authority

Project Cost	USD 35 million
Time Duration	2020-2024
Consultant	TYPSA and association with Nippon Koei, Dohwa, BCL, DDC & Devcon
Physical Progress	67%





Potential Projects

Name of the Project	:	Detailed Design and Construction of Subway Route- O: Tongi Junction to Jhilmil via Mohakhali and Sadarghat
Sponsoring Ministry/Division	:	Bridges Division Ministry of Road Transport and Bridges
Executing Agency	:	Bangladesh Bridge Authority (BBA)
Detailed Design	:	July 2023 to June 2025 (24 months)
Construction	:	July 2025 to June 2030 (60 months)
Route Alignment	:	Tongi Junction, TSS, Machimpur, Uttara Sector-10, Uttara Sector-13, Uttara Sector-14, North Bawnia, Uttara Sector-17, Shagufta New Road, Kalshi Mor, Palash Nagar, Vashantek Govt High School, Kochukhet, Rajanigodha Market, Raowa, Mohakhali, BG Press, Hatirjeel, Ramna, Kakrail, Press Club, Gulistan, Naya Bazar, Sadarghat, Khejur Bagh, Muslim Nagar, Teghoria Bazar, Jhilmil (Location of Depot)
Total Length	:	29.26 km
Number of Stations		27
Land Acquisition	:	45 ha, Including depot (Tentative)
Status	:	Feasibility Study & Preliminary design completed in June 2022

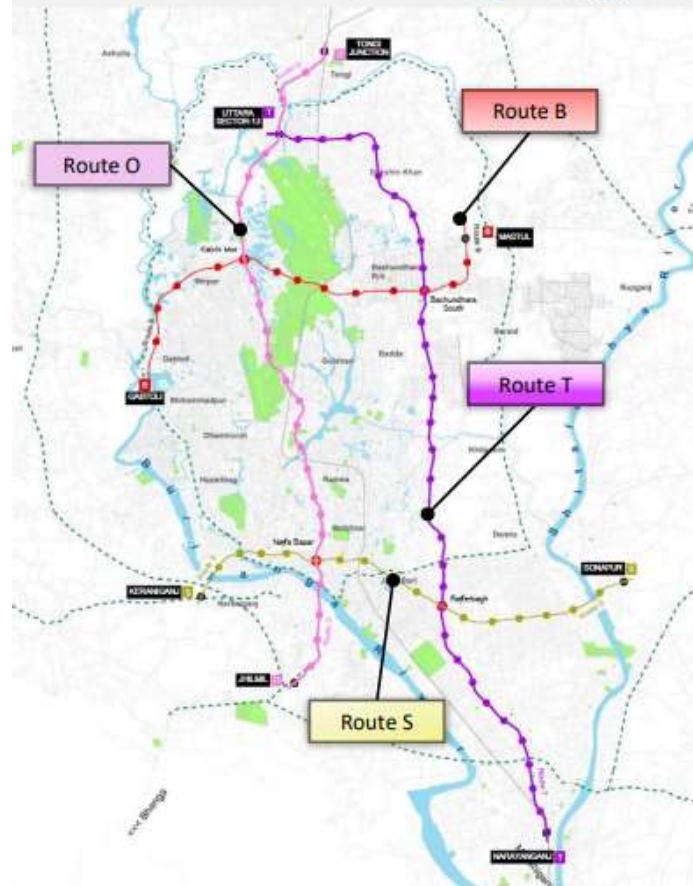
Dhaka Subway Implementation Program

Network 2030	Length 2030 (km)
Subway	105
Line O	29
Line S	19
Line T (part)	38
Line B (part)	19

Network 2040	Length 2040 (km)
Subway	190
Line O	29
Line S	19
Line T (part)	38
Line B (part)	19
Line P	24
Line J	28
Line G	17
Line D	16

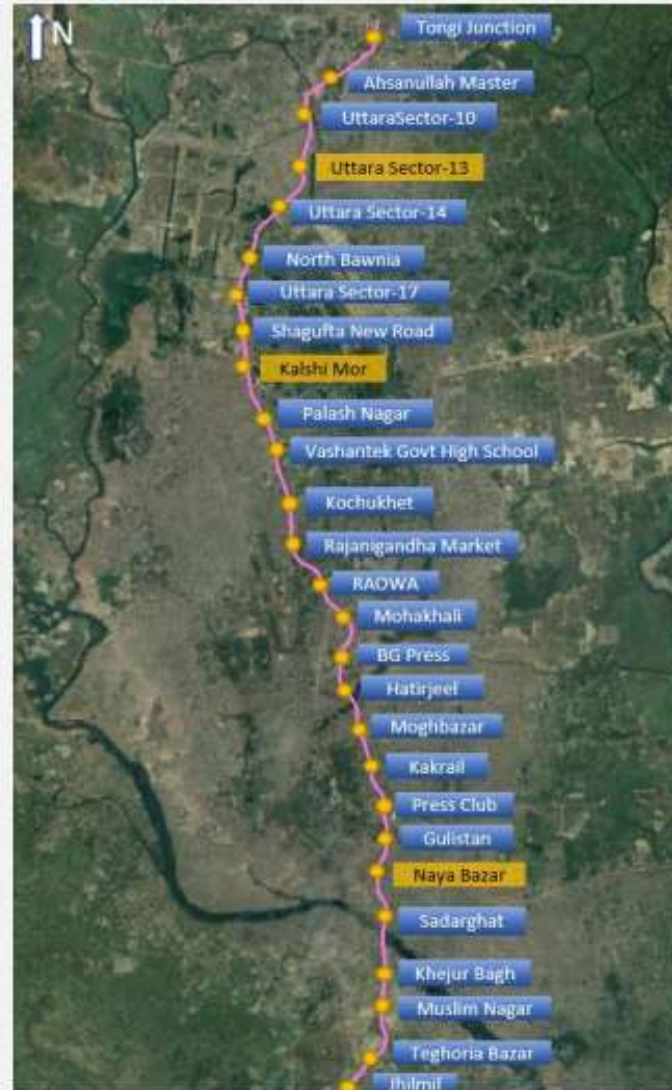
Network 2050	Length 2050 (km)
Subway	258
Line O	29
Line S	19
Line T+Tx	47
Line B	29
Line P	24
Line J	28
Line G	17
Line D	16
Line V	18
Line U	14
Line W	16

Preliminary Design: Routes B, O, S and T (Year 2030)



Routes	Stations
Route B 19.009 km, 15 Stations	Gabtol, Golartek, Turag City, National Zoo, Mirpur-11, Kalshi Mor, Matikata Road, Air Head Quarter, Baridhara DOHS, Future Park, Bashundhara Block E, Bashundhara South, Bashundhara Block M, Bashundhara Block N, Mastul
Route O 29.260 km, 27 Stations	Tongi Junction, Ahsanullah Master, Uttara Sector-10, Uttara Sector-13, Uttara Sector-14, North Bawnia, Uttara Sector-17, Shagufta New Road, Kalshi Mor, Palash Nagar, Vashantek Govt High School, Kochukhet, Rajanigandha Market, RAOWA, Mohakhali, BG Press, Hatirjeel, Moghbazar, Kakrail, Press Club, Gulistan, Naya Bazar, Sadarghat, Khejur Bagh, Muslim Nagar, Teghoria Bazar, Jhilmil
Route S 19.841 km, 18 Stations	Keraniganj, Kamrangichar, Shahid Nagar, Lalbagh, Chawk Bazar, Naya Bazar, Dayaganj, Sayedabad, Jatra Bari, Dania, Rayerbagh, Matuail, Sign Board, Sanarpar, Mouchak, Chittagong Road, Kanchpur, Sonapur
Route T 35.234 km, 33 stations	Narayanganj, Chashara, DC Office New Court, Sibul Market, Fatulla Stadium, DPDC Substation, Nandalalpur, Deulpara, Adarsha Nagar, East Mohammadbag, Rayerbagh, Shonir Akhra, Matuail Uttarpara, Matuail Uttarbandh, Green Model Town, East Nandipara, West Nandipara, Aftab Nagar East, Aftab Nagar North, Sunvalley North, Merul Bridge, United International University, Bashundhara South, Bashundhara Block K & L, POHS, Borua South, Borua North, Naddapara (Dakshinkhan), Nowapara (Dakshinkhan), Shah Kabir Mazar Road, Azampur Kancha Bazar, Azampur Mor, Uttara Sector-13

Route O –Tongi Junction to Jhilmil (29.26km, 27 Stations)



Background & Objectives

- The lack of adequate transportation network in Dhaka City (with a population 20 million) and the concomitant severe and persistent traffic congestion has been well-known for a long time.
- This adversely affects trade, economic activity, educational and social life in Dhaka.
- Thus, it is necessary to develop a new high-capacity mass rapid transport system that will be safe, fast, and environmental friendly.
- After the findings of the Feasibility Study of the Dhaka Subway, Route 'O' has been prioritized in order to improve the people's mobility from Northern Dhaka to Southern Dhaka.

Background & Objectives

- To establish a new high-capacity transport system (ultimate capacity up to 60,000 pph) between Tongi Junction and Sadarghat.
- The 28.9km Route 'O' will connect Tongi and Jilmil via the River Port Sadarghat
- Route 'O' will connect Sadarghat to Mohakhali, neither of which will be served by any MRT lines.
- The proposed 'O' line will connect two business hubs Sadarghat and Tongi Junction.

Project Cost

Consultancy (Detail Design, Supervision, Survey & investigation etc)	:	BDT 65357.52 million (USD 771.18 million)
Construction	:	BDT 700715.69 million (USD 8268.03 million)
Land Acquisition & Resettlement	:	BDT 79629.28 million (USD 939.58 million)
Trains/Rolling Stock Vehicles	:	BDT 79622.40 million (USD 939.50 million)
Contingency	:	BDT 46266.24 million (USD 545.91 million)
Total	:	BDT 971591.13 million (USD 11464.20 million)

Name of the Project	:	Detailed Design and Construction of Subway Route- S: Keraniganj to Sonapur via Sayedabad-Kanchpur
Sponsoring Ministry/Division	:	Bridges Division Ministry of Road Transport and Bridges
Executing Agency	:	Bangladesh Bridge Authority (BBA)
Detailed Design	:	July 2023 to June 2025 (24 months)
Construction	:	July 2025 to December 2029 (54) months
Route Alignment	:	Keraniganj-Kamrangichar-Shahid Nagar- Lalbagh-Chawk Bazar-Naya Bazar-Dayaganj- Sayedabad-Jatra Bari-Dania-Rayerbagh- Matuail-Sign Board-Sanarpar-Mouchak- Chittagong Road-Kanchpur-Sonapur
Total Length	:	19.84 km
Number of Stations	:	18
Land Acquisition	:	29 ha
Status	:	Feasibility Study & Preliminary design completed in June 2022

Route S – Keraniganj to Sonapur (19.84km, 18 Stations)



Background & Objectives

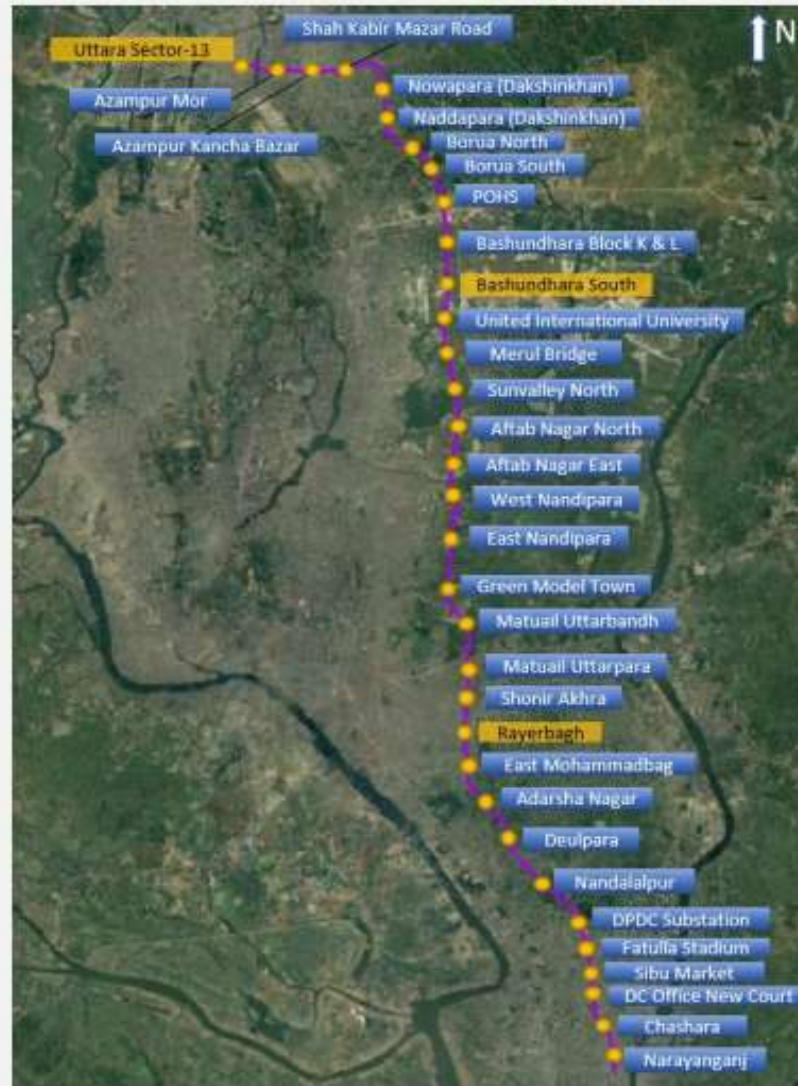
- After the findings of the Feasibility Study of the Dhaka Subway, Route 'S' is of great importance because it will enhance the people's mobility from Eastern Dhaka to Western Dhaka.
- The Route-'S' will establish a new high-capacity transport system (ultimate capacity up to 60000 pph) between Keraniganj and Sonapur.
- The impact of the proposed Dhaka Subway Route 'S' on the mobility of the citizens will be outstanding, connecting Keraniganj and Old Dhaka with the Syedabad Bus terminus.
- The benefits of the MRT-6 and MRT-2 would be further enhanced if the proposed Dhaka Subway Route 'S' can be constructed.

Project Cost

Consultancy (Detail Design, Supervision, Survey & investigation etc)	:	BDT 41836.06 million (USD 493.64 million)
Construction	:	BDT 477806.42 million (USD 5637.83 million)
Land Acquisition & Resettlement		BDT 29794.44 million (USD 351.56 million)
Trains/Rolling Stock Vehicles	:	BDT 42873.60 million (USD 505.88 million)
Contingency		BDT 29615.52 million (USD 349.45 million)
Total		BDT 621926.04 million (USD 7338.36 million)

Name of the Project	:	Detailed Design and Construction of Subway Route T: Narayanganj to Uttara Sector-13 via Rayerbagh-Bashundhara
Sponsoring Ministry/Division	:	Bridges Division Ministry of Road Transport and Bridges
Executing Agency	:	Bangladesh Bridge Authority (BBA)
Detailed Design	:	July 2023 to June 2025 (24 months)
Construction	:	July 2025 to December 2030 (66 months)
Route Alignment	:	Narayanganj- Chashara- Fatulla Stadium- Nandalalpur-Adarsha Nagar- Rayerbagh- Shonir Akhra-Matuail -Green Model Town- Nandipara- Aftab Nagar- Merul-Bashundhara- Noddapara (Dakshinkhan)- Shah Kabir Mazar Road- Azampur -Uttara Sector-13.
Total Length	:	35.23 km
Number of Stations	:	33
Land Acquisition	:	53 ha
Status	:	Feasibility Study & Preliminary design completed in June 2022

Route T – Uttara Sector-13 to Narayanganj (35.23km, 33 Stations)



Background & Objectives

- After the findings of the Feasibility Study of the Dhaka Subway, Route Route 'T' has been prioritized in order to improve the people's mobility from Northern Dhaka to Southern Dhaka.
- The Route-'T' will establish a new high-capacity transport system (ultimate capacity up to 60000 pph) between Narayanganj and Uttara Sector-13.
- Route 'T' will significantly increase the mobility from the southern Dhaka to Northern Dhaka with a significant number of connections to both Dhaka Subway and MRT Lines.
- Route 'T' will connect significant residential and economic areas such as Aftab Nagar, Sun valley, Green Model Town.

Project Cost

Consultancy (Detail Design, Supervision, Survey & investigation etc)	:	BDT 81852.14 million (USD 965.81 million)
Construction	:	BDT 877522.38 million (USD 10354.25 million)
Land Acquisition & Resettlement		BDT 81577.04 million (USD 962.56million)
Trains/Rolling Stock Vehicles	:	BDT 117902.40 million (USD 1391.18 million)
Contingency		BDT 57942.70 million (USD 683.69 million)
Total		BDT 1216796.66 million (USD 14357.49 million)

Name of the Project	:	Detailed Design and Construction of Subway Route B, from Gabtoli to Mastul via Baridhara-Bashundhara
Sponsoring Ministry/Division	:	Bridges Division Ministry of Road Transport and Bridges
Executing Agency	:	Bangladesh Bridge Authority (BBA)
Detailed Design	:	July 2023 to June 2025 (24 months)
Construction	:	July 2025 to September 2029 (51 months)
Route Alignment	:	Gabtoli, Golartek, Turag City, National Zoo, Mirpur-11, Kalshi Mor, Matikata Road, Air Head Quarter, Baridhara DOHS, Future Park, Bashundhara Block E, Bashundhara South, Bashundhara Block M, Bashundhara Block N, Mastul
Total Length	:	19 km
Number of Stations	:	15
Land Acquisition	:	26 ha
Status	:	Feasibility Study & Preliminary design completed in June 2022

Route B – From Gabtoli to Mastul (19.01km, 15 Stations)



Background & Objectives

- After the findings of the Feasibility Study of the Dhaka Subway, Route B has been prioritized in order to improve the people's mobility from Western Dhaka to Eastern Dhaka and with special focus on connectivity to both MRT Lines and Dhaka Subway Routes.
- Route B will provide a direct connection between Sadarghat and Mohakhali and the MRT-1 and MRT-6 stations at Kamalapur, allowing for passenger interchange at this location.
- Route B will connect the Bashundhara residential area which has limited access to the city with other significant areas, either residential or commercial such as Future Park or Mirpur-11.
- The facility will provide West to East connectivity through Dhaka .

Project Cost

Consultancy (Detail Design, Supervision, Survey & investigation etc)	:	BDT 37856.98 (USD 446.69 million)
Construction	:	BDT 422999.29 million (USD 4991.14 million)
Land Acquisition & Resettlement		BDT 30714.09 million (USD 362.41 million)
Trains/Rolling Stock Vehicles	:	BDT 44404.8 (USD 523.95 million)
Contingency		BDT 26798.76 (USD 316.21 million)
Total		BDT 562773.92 million (USD 6640.40 million)

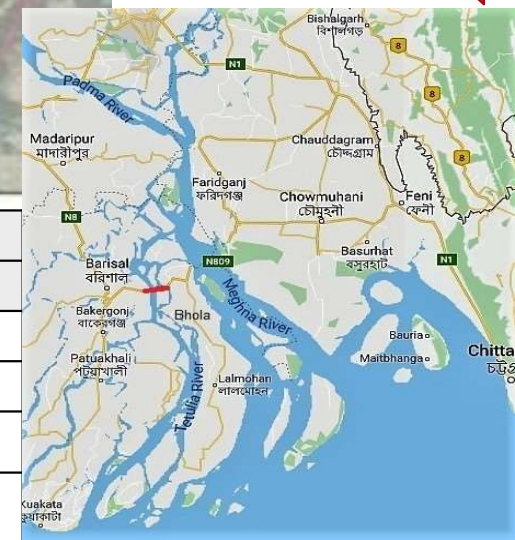
KEY CHALLENGES

- Construction under the deep pile of buildings
- Settlement of buildings due to improper tunnels depth or ground treatment
- Traffic management during construction work at Station area.

Construction of Bhola Bridge on Bhola-Barisal Road over Tentulia & Kalabador River

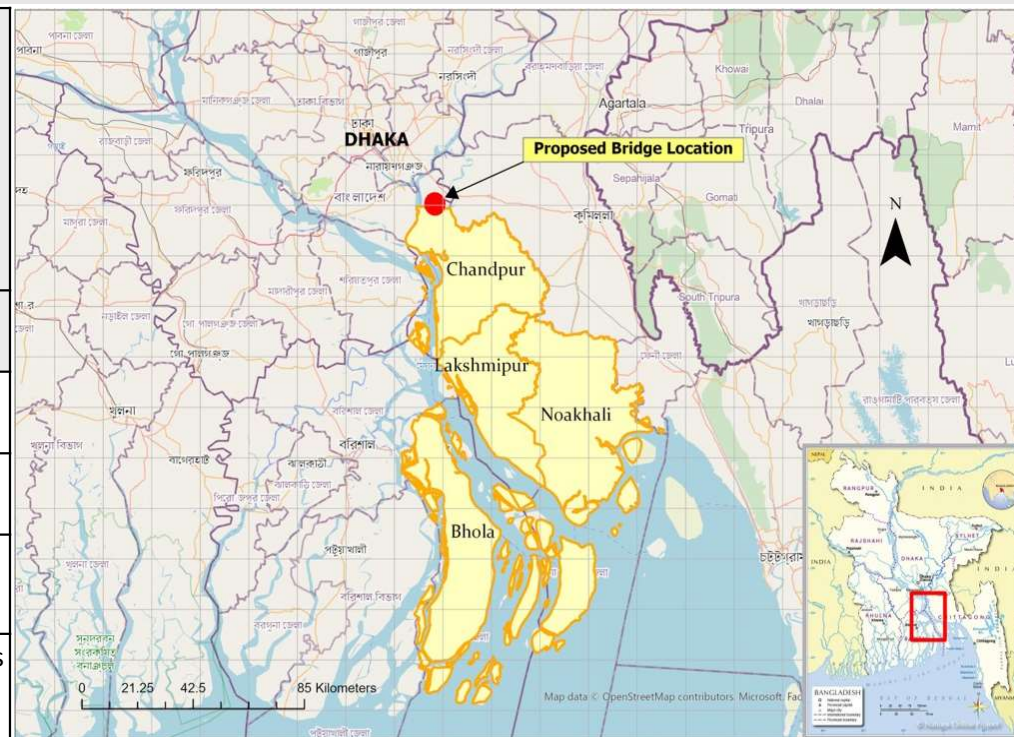


Objectives	To establish direct road connectivity between main land Barisal and Bhola
Length of Bridge & Approaches	11.52km
Total Land to be Acquired	495.56 Hectare
Project cost	USD 1513 million
Cost of LAP & RAP	USD 109 million
Status	The previous feasibility study is reviewing as per instruction by the Hon'able Prime Minister of Bangladesh



Construction of Bridge on Matlab Uttar- Gazaria road over the river Meghna-Dhonagoda

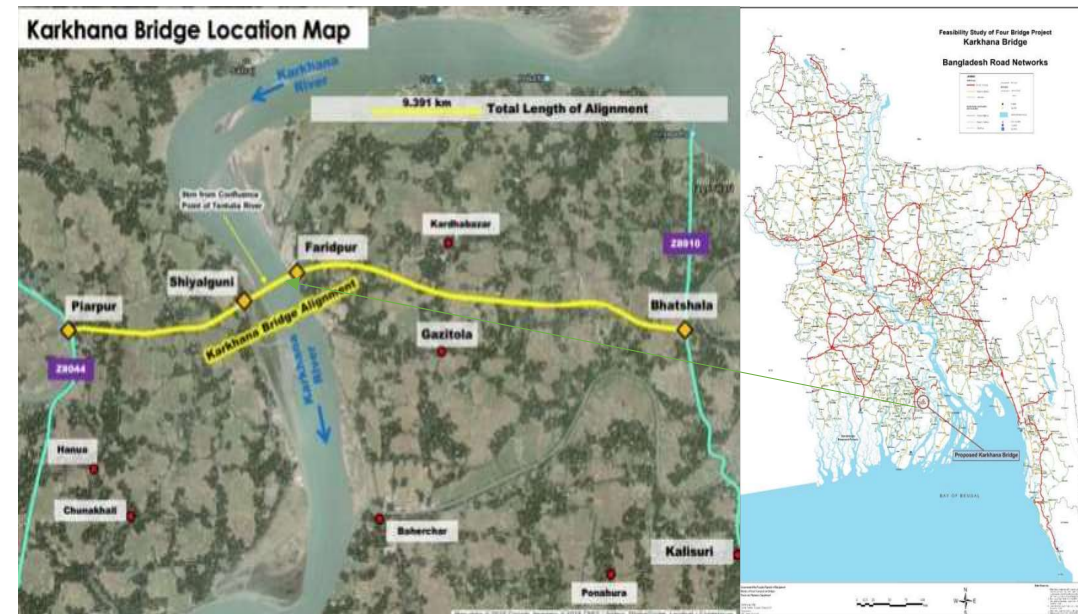
Objectives	To establish direct road connectivity of Chandpur, Lakshmipur and west part of Noakhali district with the capital city Dhaka
Length of Bridge & Approaches	1.85 km
Total Land to be Acquired	180.83 acre
Project cost	USD 400.53 million
Cost of LAP & RAP	USD 51.37 million
Status	Feasibility Study done. EDCF is expected to provide loan for the project



Construction of Bridge on Bakerganj-Bauphal road over the river Karkhana

- ❑ Length: 1.86 km
- ❑ Estimated cost: BDT **30480** million (USD 362.85 million)
- ❑ Objectives: To establish direct road connectivity of Bakerganj upazila of Barisal district with Bauphal upazila of Patuakhali district

Bridge	1.86 km
Approach Road	8 km
Bank Protection work	2.06 km
Land acquisition	180.29 acre



Construction of Bridge on Barguna-Kakchira road (R 880) over Bishkhali river

- ❑ Length: 2.50 km
- ❑ Estimated cost: BDT 54533.10 million (USD 649.20 million)
- ❑ Objectives: To establish direct road connectivity of Barguna district with Barishal, Patuakhali and capital Dhaka city

Bridge	2.50 km
Approach Road	16 km
Bank Protection work	4.6 km
Land acquisition	370.26 acre



Construction of Bridge on Patuakhali-Amtali-Barguna road (R 880) over Paira river.

- ❑ Length: 2.48 km
- ❑ Estimated cost: BDT 34077.40 million (USD 405.68 million)
- ❑ Objectives: To establish direct road connectivity of Barguna district with Barishal, Patuakhali and capital Dhaka city

Bridge	2.48 km
Approach Road	2.5 km
Bank Protection work	4 km
Land acquisition	127.79 acre



Working Relation with Korea

- The construction work of Bangabandhu bridge commenced in October, 1994 and completed in June, 1998. Korean Companies Hyundai Engineering & Construction JV and Samwhan Corporation were involved as Contractors of 4.8 km long main bridge and 32 km long approach road respectively;
- Korean Company Korea Expressway Corporation (KEC) is working as Construction Supervision Consultant of Padma Bridge and also Operation & Maintenance Operator of that Bridge;
- Korean Consortium comprising Daewoo Engineering & Construction Company, Hyundai Engineering & Construction and Korea Expressway Corporation is the Investor for construction of 3.31 km long Meghna Bridge through PPP on G2G Partnership basis;

- Under the visionary leadership of Hon'ble Prime Minister Sheikh Hasina, Bangladesh Bridge Authority is committed for ensuring integrated and uninterrupted as well as low cost and time-saving transportation and to contribute in achieving Sustainable Development Goals by 2030 and in making vision 2041 a reality through construction and maintenance of large bridges, tunnels, elevated expressways, subways etc.



Thank you

