



# PROFILE

FOCUSING ON SAFETY FOR MORE THAN 10 YEARS...

# MESSAGE FROM THE CHAIRMAN



As the chairman of the company, I am honored to serve EIMS along with our outstanding leaders and dedicated staffs.

EIMS is celebrating more than 10 years of successful efforts. Despite the remarkable pace of change in the world around us, we have demonstrated our ability to face challenges and remain focused on what we do best — Natural Resources management, Environmental, Climate change & Disaster Management studies, Topographical Survey & Hydrological analysis, Structural Vulnerability and Integrity Assessments, Seismic Analysis and Retrofitting Construction.

At EIMS, we value integrity, hard work, accountability, respect, client satisfaction and personal dedication. These values are embedded within our slogan, 'we are for your safety'.

I trust you will appreciate our services and dedication.

Sincerely,

Ahmadul Hassan, PhD

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# VISION

EIMS envisions safe and sustainable infrastructure across the world as a technical think tank.

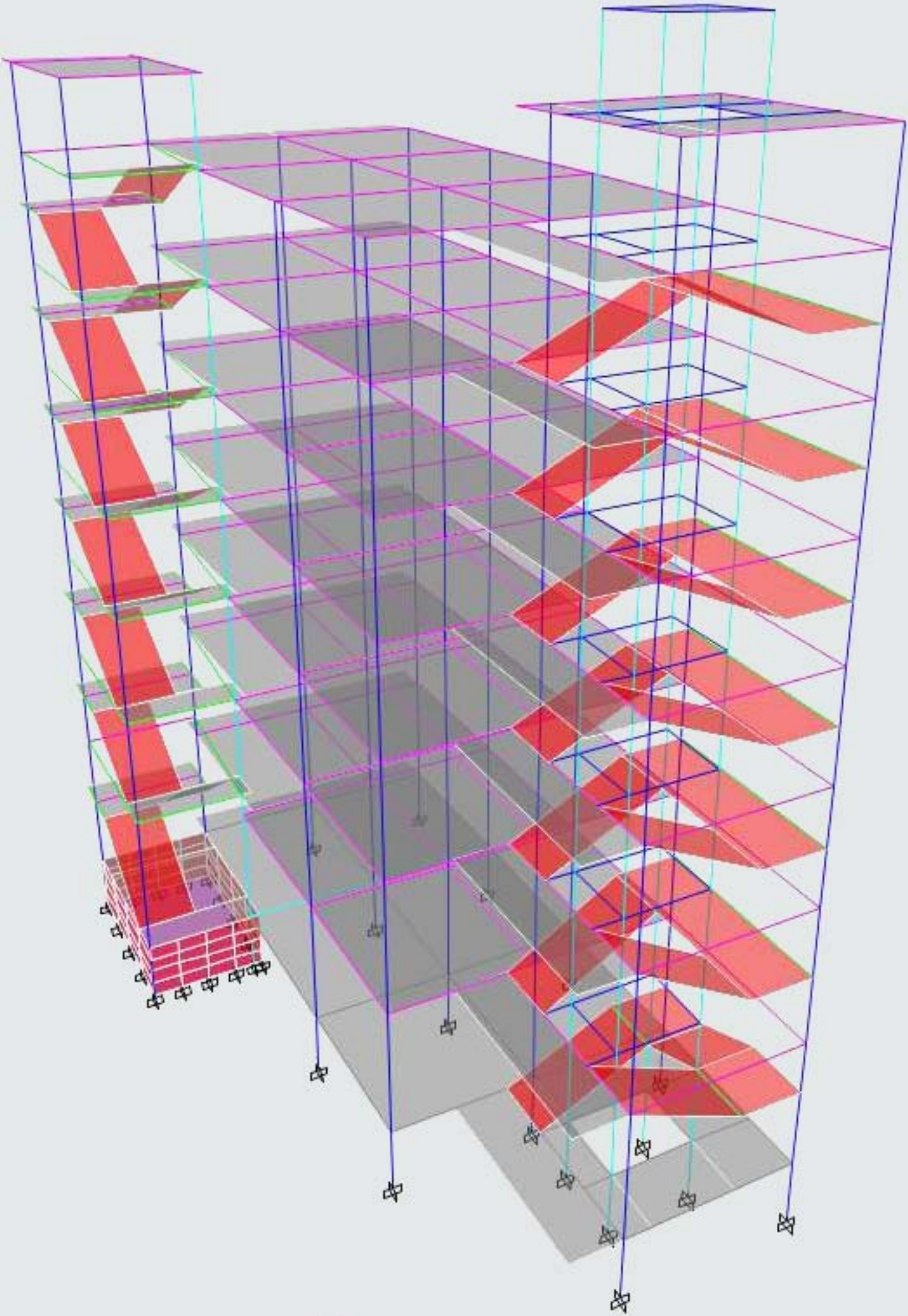
# VALUES

Our core values are at the heart of our business because they define who we are, how we work, what we believe in, and what we stand for. Our values set out how we act and how we expect to be treated as part of EIMS and provide a sound basis to make decisions.

# MISSION

- The innovation of new technologies for creating a safe and sustainable infrastructure.
- Adoption of evolving technologies to act as a leading technical think tank.
- Ensuring quality of service by complying with internationally recognized codes and standards of practices.
- Developing resilient infrastructure by harmonizing technological solutions, societal needs, and environmental safeguard through a participatory approach.





# CONTENTS

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## Company Introduction..... 1

## Environmental Services..... 3

- Environmental and Social Management
- Rural Piped Water System Design & Construction
- Social Management Framework
- Renewable Energy Project
- Environmental and Social Management Plan
- Basin Modeling of the Brahmaputra River
- IEE of Coal Based Power Plant
- Environmental Management Framework
- Open Cities Dhaka Project
- Hydro-morphological Study
- Provision of life-saving WASH Service
- Hydro Morphological Investigation
- Supporting and Monitoring of Investigation
- Design and Supervise the Construction
- Slope Stability Assessment and Side Slope

## Design and Planning..... 19

- Consultancy Services
- Buriganga (Phase 2) Project, BIWTA
- Jhilmil Residential Area Apartment Project
- Learning Center
- Vulnerability Assessment
- Initial Structural Integrity Assessment
- Destructive Non-destructive Test Facilities
- Ultrasonic Concrete Testing
- Detail Engineering Assessment
- Concrete Core Test
- Detail Engineering Assessment
- Retrofitting Design
- Computer Simulated FEM 3D Model

## Construction..... 37

- Services We Provide
- Construction of Gym cum Office at UNHCR
- Retrofitting Construction WASH Extension Building
- Retrofitting Construction of 3D Building
- Retrofitting Construction of WASH Steel Building
- Construction of Surma Garments
- Retrofitting Construction of TSL Extension Building
- Retrofitting Construction of Unreinforced Masonry Wall
- Retrofitting Construction of Univogue Garments Co. Ltd.

## Geotechnical Engineering and Engineering Equipment..... 43

- Geotechnical Investigation & Analysis

## The Focus of Our Company is Our People..... 49

- Environmental Division
- Design Division
- Construction Division


## Clients..... 62



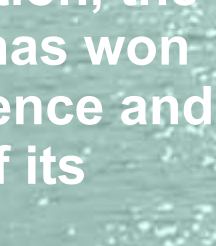
# COMPANY INTRODUCTION

Environment and Infrastructure Management Solution (EIMS) Limited, a fast-growing multidisciplinary organization, aims to provide solution across a wide spectrum of Natural Resources Management, Environmental/Climate Change & Disaster Management Studies, Structural Engineering, Structural Vulnerability and Integrity Assessments, Retrofitting Design & Construction, Geotechnical Engineering. EIMS started its journey in 2005 and finally was registered as a limited company on 17th October 2011 with the vision "we are for your safety" lead by employees who are determined in providing first-rate services.

From its very inception, the company has won the confidence and goodwill of its clients for more than 10 years with dedicated professionals. During the last decade, EIMS has been working to ensure enabling environmental through EIA/SIA, ESMP, urban planning, disaster risk management through identifying issues, its impacts, possible and realistic mitigation plans in combination of GIS/Remote sensing application on different thematic areas through participatory approach. EIMS also focuses on developing resilient infrastructure by harmonizing state-of-the-art structural engineering, vulnerability assessments, geotechnical engineering and investigations with societal needs and environmental safeguard for both Government and Private sectors. Aimed at creating safe and sustainable infrastructure,



EIMS has enjoyed an immaculate reputation for over 10 years. From its very inception, the company has won the confidence and goodwill of its clients.



EIMS construction division is one of the leading companies in country to perform retrofitting construction works after the “Rana Plaza” for increasing resistance of low-performing structures with safety against vulnerabilities.

EIMS has successfully completed seismic vulnerability assessment of more than 200 buildings, retrofitting works for more than 20 buildings in Dhaka and Chittagong EPZ along with UN office premises. Due to its professional and reliable performances, EIMS has enlisted itself in Bangladesh Economic Zones Authority (BEZA) and Department of Inspection for Factories and Establishments (DIFE), has a Long-term Agreement with UNICEF and WFP and enlisted as Qualified Assessment Firm (QAF) of Alliance for Bangladesh Workers' Safety. EIMS in its lifetime was involved with one of the biggest residential infrastructure development projects in this country. In renewable energy sector, EIMS supports international renewable energy firms through conducting the feasibility study including topographical survey, hydrological survey and GIS analysis. Also in water and sanitation program, EIMS has been

working closely with UNICEF and DPHE in rural piped water system design under the Arsenic Safe Union Project, Provision of life-saving WASH services to the Rohingya refugee, and Supporting and Monitoring of Implementation of WASH Services at Host Community, Cox's Bazar since 2017. Besides that EIMS experts giving consultancy services to several other projects of multinational agencies like Social Management Framework (SMF), Environmental Management Framework (EMF) and vulnerability assessment using intense survey and GIS technologies for World Bank. It has also conducted soil investigation, foundation design and feasibility study of Jhilmil Residential Area Apartments project and Risk Sensitive Land use planning and Vulnerability Assessment of Critical structure for RAJUK, Detail Engineering Assessment (DEA) and retrofitting assessment of 10 PTI Buildings in ten different district for LGED and retrofitting design support for Dhaka City Corporation. With the continued support and good will of our customers, and the dedication of our staff who are key to the success of EIMS, we look forward to embrace the challenges of the future with renewed vigor.



A photograph of a field of tall grasses with white, feathery seed heads. In the background, there are large green banana leaves. The sky is overcast and grey. The text 'ENVIRONMENTAL SERVICES' is overlaid at the bottom in a bold, black, sans-serif font.

**ENVIRONMENTAL  
SERVICES**





# ENVIRONMENTAL AND SOCIAL MANAGEMENT

Since its founding, EIMS has consistently provided high quality environmental services to a growing list of clients. EIMS is entrusted for its increasingly complex and challenging projects. We provide services with scientifically valid, environmentally sound, technical excellence, highest quality outcomes, and diversity of skills in a timely, cost-effective manner. We also look for the solution to environmental problems and issues, social and health related activities including sustainable development, social development and advancement of women. We have qualified and experienced Environmentalist, Hydrologist, Groundwater-hydrologist, Ecologist, Economist and Sociologist. Few project of EIMS is summarized below:

- EIA** Environmental Impact Assessment
- IEA** Initial Environmental Assessment
- EMF** Environmental Management Framework
- SVA** Social Vulnerability Assessment
- ESMP** Environmental & Social Management Plan
- CCI** Climate Change Impacts

## RURAL PIPED WATER SYSTEM DESIGN & CONSTRUCTION MONITORING UNDER THE ARSENIC SAFE UNION PROJECT IN THREE DISTRICTS OF BANGLADESH

“DPHE-UNICEF WASH Project” is implementing the arsenic safe union approach in three severely arsenic-affected Upazilas of Sylhet, Satkhira and Comilla districts. For validate quality of construction and water quality monitoring UNICEF engaged EIMS for providing an Engineering and Technical Services related to 3rd party Water Quality Assurance and monitoring of Construction/rehabilitation of Water Supply Facilities to access to safe drinking water.

Field demonstration for water sample collection with digital data recording at Daudkandi, Comilla



## SOCIAL MANAGEMENT FRAMEWORK

EIMS was engaged in the project of Social Management Framework (SMF) of Bangladesh Urban Resilience Project (URP) of the World Bank. The Social Management Framework (SMF) intended to implement the URP in two cities, Dhaka (DNCC, DSCC) and Sylhet (SCC). The SMF was submitted to the World Bank for review and clearance by the designated regional safeguard unit of the bank and formally agreed with the Government of Bangladesh. Following activities have been carried out for the preparation of this framework.

- Stakeholder Analysis.
- Analysis of legal and regulatory framework relevant to the URP
- Identification of Social Issues
- Identification of different social groups
- Making of resettlement policy framework

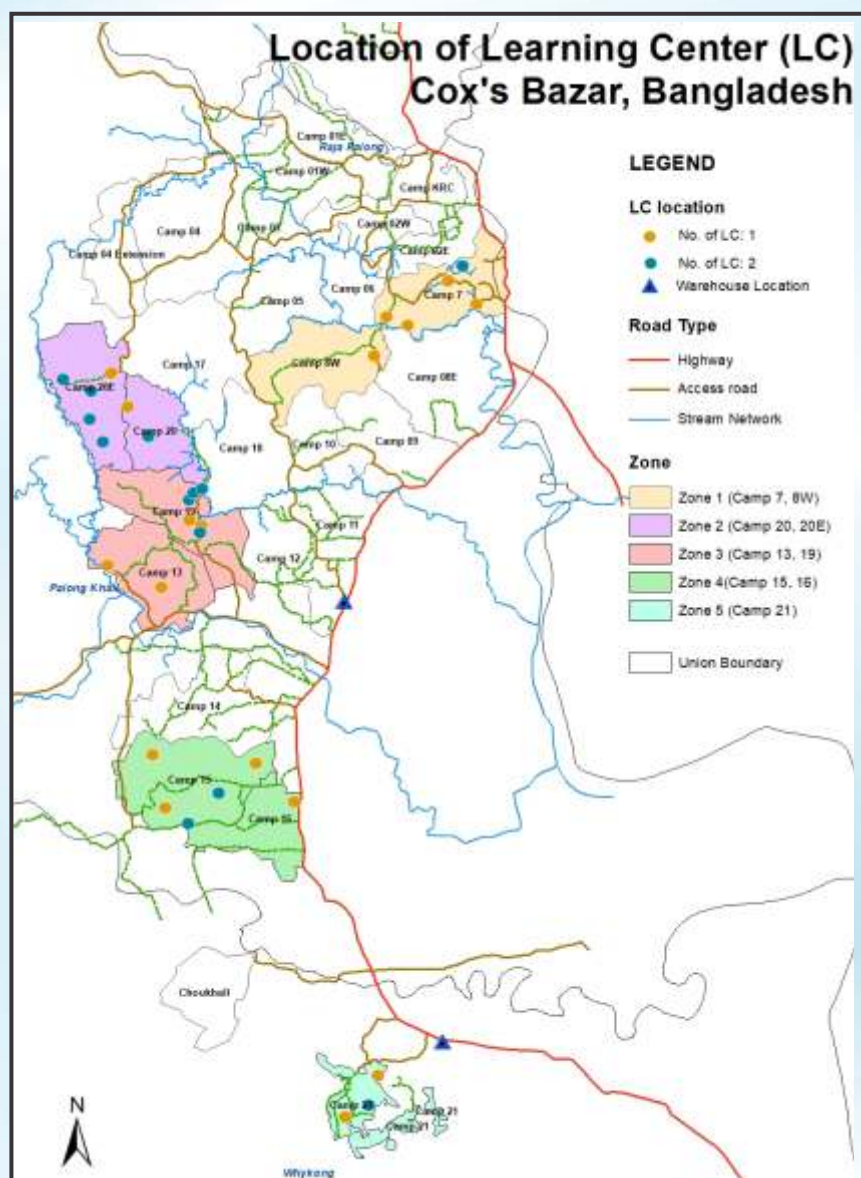


## RENEWABLE ENERGY PROJECT

In renewable energy sector EIMS support international renewable energy firms through conducting the feasibility study of 200/100/50MW solar power plant project with topographical survey, hydrological survey and GIS analysis.

EIMS conducted Environmental & Social Impact Assessment, Soil Investigation, Hydrological Analysis and Topographic Survey for the feasibility study of proposed Ground-mount Photovoltaic Solar Power Plant Project at seven different locations in Bangladesh. EIMS also identified measures to reduce risks from floods, DEM, Contour Map, Volume calculation and Soil Investigation to explore soil texture bearing capacity and sharing strength (the total borehole is 150), etc. for the seven sites. Besides EIMS produced an environmental impact assessment report based on Department of Environmental (DOE) guidelines and local ecological methods of social conditions.

## ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP) FOR CONSTRUCTION OF LEARNING CENTERS (LC) IN ROHINGYA CAMP, COX'S BAZAR, BANGLADESH



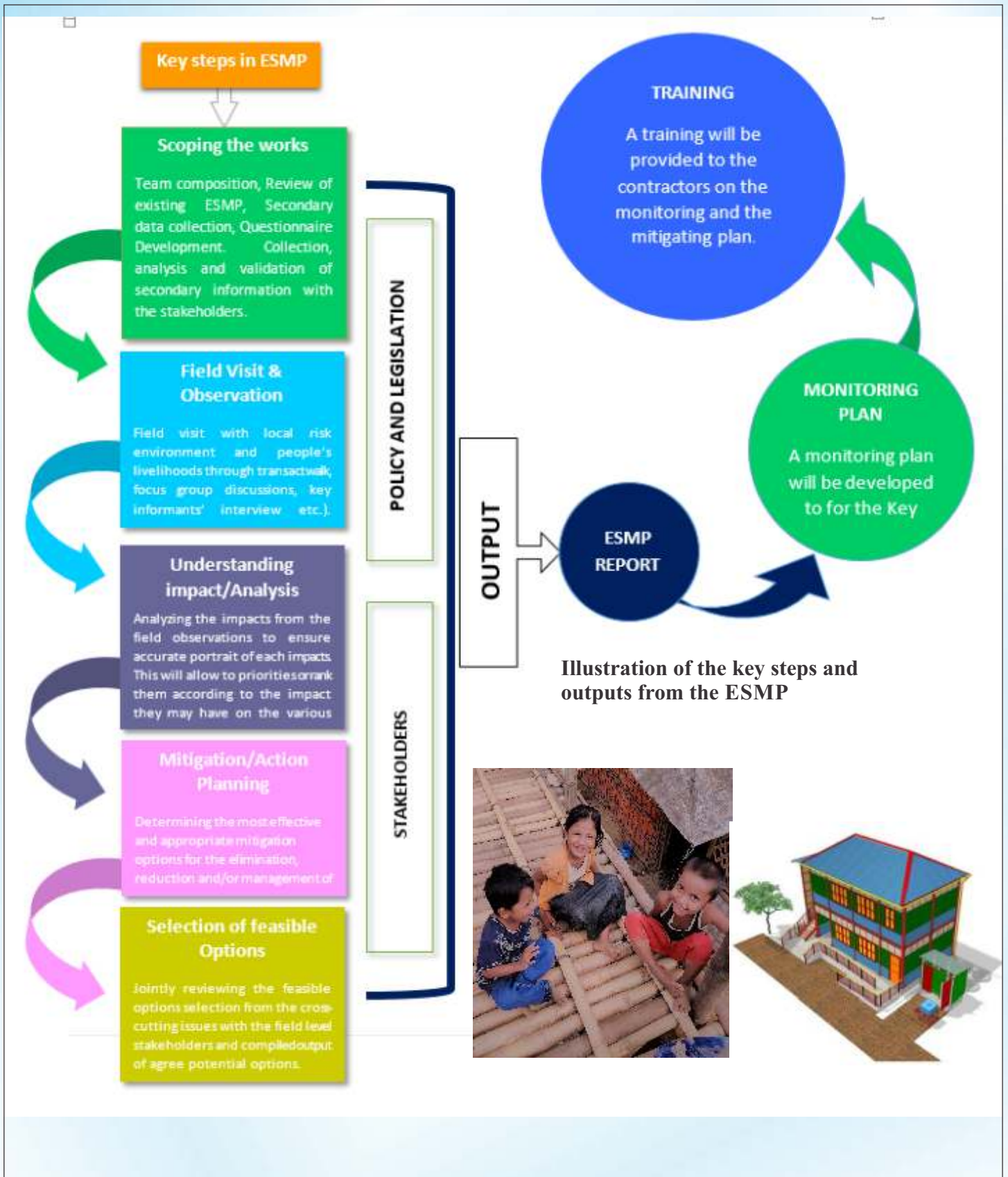
The humanitarian situation for Rohingya refugees in Bangladesh has become more severe with 1.2 million of which around 60% are children. To address the issues of humanitarian education Sector UNICEF Bangladesh is going to improve these temporary structures to a more durable and semi-permanent structure and has undertaken a project of upgradation by constructing 150 new learning centers at different phases where a ESMP guidelines and monitoring plan is required to ensure environmental sustainability & social safety standards. In this regard EIMS has been engaged to conduct a study on Environment and Social Management Plan (ESMP) to make it more specific with the field condition of refugee camps for construction of the new learning centers.

EIMS developed a framework document that summarizes all environmental and social measures and checks the environmental and safety aspects of the learning centers where all the Rohingya children will be facilitated through education. A detailed field investigation has been conducted in all five zones covering eight learning centers as sample

representing these five different camps and also two warehouse locations to understand the existing environmental state, socio economic condition, construction & safety, hydrological and climatic condition in combination of reviewing the existing law, policies and regulatory frameworks.

Environmental monitoring and testing have been done to understand the baseline condition and what will be the possible changes by interventions to the environment by a systematic sampling of air, water, noise, and traffic condition. Based on the field observations and different analytical data, different issues and its possible impacts related to implication of learning on different sectors like socio economic aspect, surrounding environment, hydrology & climate and construction and safety has been identified. Total nine (09) possible issues associated to socio economic aspect, nine (09) issues associated with environment, five (05) issues associated with hydrology & climate and eight (08) issues associated with construction and safety are identified and described.

After identifying these issues and its impacts, possible and realistic mitigation plans are suggested through a procedure with proper information. Based on the suggested mitigation plans, a detailed monitoring plans has also been developed to execute the ESMP during the construction phase to mitigate the adverse impact. EIMS also developed different report along with this study like Code of conduct, Grievance mechanism, Incident report and Land Acquisition.



# Basin Modeling of The Brahmaputra River System in Bangladesh

This project was taken up by the World Bank's South Asia Water Initiative (SAWI) as part of its multi-country effort aimed at increasing regional cooperation in the management of the Himalayan river systems to deliver sustainable, fair, and inclusive development and climate resilience. It follows SAWI's principle of the Brahmaputra Focus Area (FA) Strategy, which is that a shared vision of transboundary water resources development and management in the basin could be achieved when countries have a greater understanding of the Brahmaputra, and subsequently realize the potential economic benefits of transboundary cooperation.

The project's goal is to support the strategic and basin-wide management of the basin. It aims to build capacity to better understand the dynamics of the basin, enabling prioritization of development alternatives, and identify models and tools to evaluate their impacts.

This will be achieved by:

- (i) Inventory of the knowledge base for the entire Brahmaputra river basin to assess the water resources and support strategic planning
- (ii) Establishing a multi-stakeholder consultation process to identify and prioritize basin development issues
- (iii) Identifying and assessing alternative basin models and analytical tools to analyze the development issues and the associated impacts
- (iv) Building capacity through training and sharing of the knowledge inventory, and collaborative development of basin modeling rationale, plans and design, including easy and wide access to the analyses, model results, reporting, and supporting documentation.







## IEE of Coal based Power Plant

Prefeasibility Study and Initial Environmental Examination (IEE) of 600-800 MW Coal Based Power Plant at Munshiganj. The scope of consultancy services given to EIMS is following:

- Hydraulic and Hydrodynamic modeling.
- Structural Design of the Plant
- Geotechnical Engineering service
- Legal advice regards Environmental Laws



## ENVIRONMENTAL MANAGEMENT FRAMEWORK

This project has been awarded to EIMS by the World Bank in which an environmental framework has been adopted to ensure screening and assessing of all the activities for the environmental issues and to prepare site-specific Environmental Management Plan (EMP). Initially, the project was intended for the Dhaka city area. The objective of the EMF is to ensure the activities of the proposed operation in the report. This project is intended for the Bangladesh Urban Earthquake Resilience Project (URP) of the World Bank. This project seeks to create an enabling environment for coordinated, locally managed Disaster Risk Management (DRM). The following steps have been carried out for the preparation of this framework.

- Review of Existing Document.
- Field Visit and Consultation
- Drafting the Framework
- Bengali Translation of the Framework



# OPEN CITIES DHAKA PROJECT

EIMS has been contracted by the World Bank to participate in the Open Cities Dhaka Project by assessing the vulnerability of the buildings in the old part of Dhaka. Through this project, EIMS has surveyed over 8,500 buildings in Old Dhaka in three wards (Ward 67, 68, and 69) and collected in-depth critical infrastructural information such as the number of stories, construction type, and vertical

irregularity which can be used to inform scientific risk modeling and vulnerability assessment of the building. From the surveyed buildings, it was found that 8.3% of the buildings are soft storied and 26.6% of the buildings have vertical irregularity, both of which are very important factors in seismic modeling and make the structure more vulnerable to earthquake.

EIMS's extensive survey also identified buildings that are important to Bangladesh's cultural heritage, possible evacuation centers in case of emergency. The survey also examined the existing water and sanitation network of old Dhaka. The following table shows building conditions in these three wards identified using the Rapid Visual Screening (RVS) method.

**Table showing building conditions**

Visible Physical Condition	Total No. of Buildings	Poor (%)	Average (%)	Good (%)
Ward 67	2027	21	56	20
Ward 68	3018	21	58	19
Ward 69	3496	28	51	18



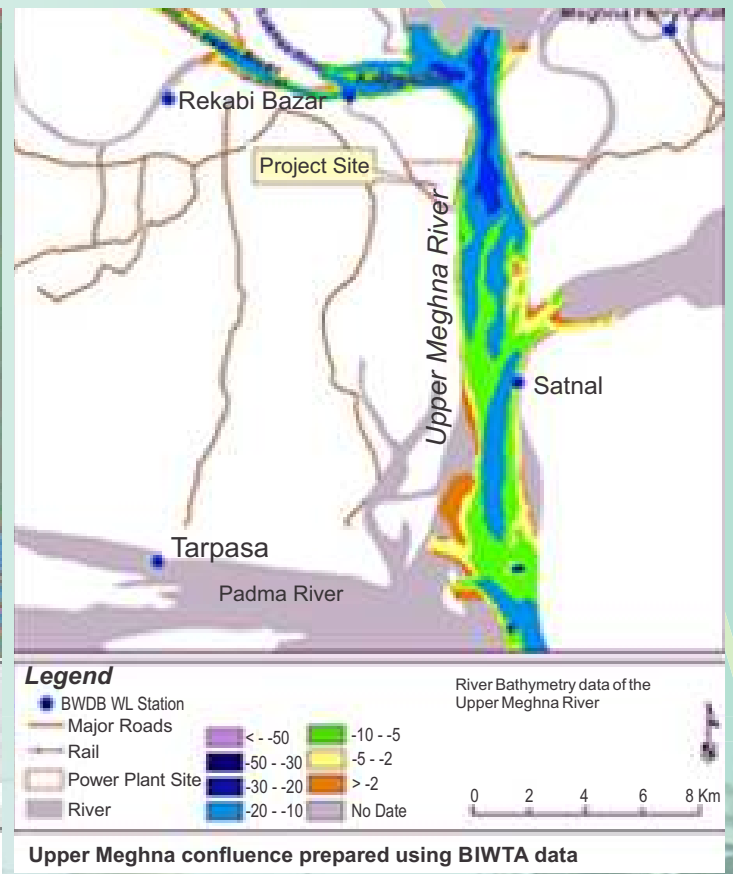
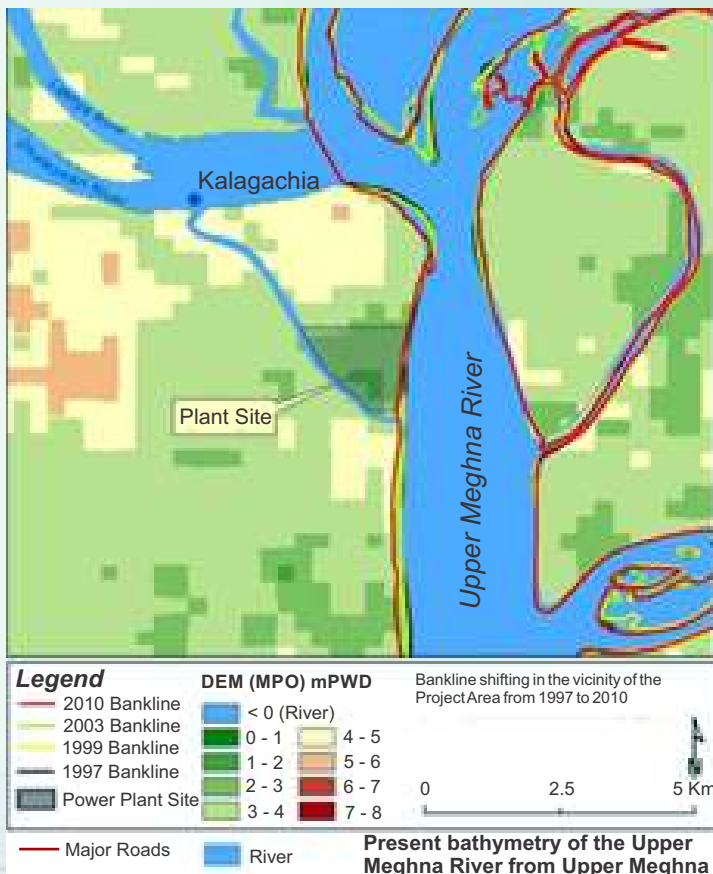
**INNOVATING FOR OPEN CITIES**

# HYDRO-MORPHOLOGICAL STUDY FOR THE PROPOSED MUNSHIGANJ COAL FIRED POWER PLANT

EIMS was contracted to carry out a hydro-morphological study for the proposed Munshiganj coal-fired power plant located immediately downstream of the confluence of Meghna-Dhaleswari River and at the right bank of the Upper Meghna River. The proposed site location was Char Mosura and Char Ramzan Begh in Munshiganj Sadar and Gazaria Upazila of Munshiganj district. The proposed power plant was to produce 600-800 MW of electricity. Before proceeding with the detailed engineering design of such a large power plant, a hydro-meteorological, hydrological, hydro-geological, and morphological study was needed to demonstrate the feasibility of the project site.

The study involved a hydrological study of the rivers in the vicinity of the proposed power plant site to investigate the hydrodynamic characteristics such as water level, discharge, flooding, etc., and a morphological study to assess the sedimentation potential, erosion deposition pattern, bank erosion and stability, planform change and navigability of the rivers in and around the project site.

Relevant hydrometric, bathymetric, topographic, meteorological, sediment, and satellite image data were collected from government and non-government agencies such as BWDB, BIWTA, IWM, CEGIS, IWFM, and then processed and analyzed. A one-dimensional hydrodynamic model was developed in HEC-RAS modeling software to investigate the hydrodynamic characteristics (e.g. water level, discharge, and velocity, etc.) of the Upper Meghna River in the vicinity of the plant site. In addition, a conveyance analysis of the Upper Meghna River at the project site was also carried out using the model's cross-section database. The analyses included the extreme value analysis of water level to find out the highest water level for 100 years return period, flood level and a maximum flow of water for average, 1 in 5, 10, 20 and 100 years return period (equivalent to 43, 20, 10, 5 and 1% frequency, respectively), seasonal water availability, etc. A water level-discharge curve (rating curve) was established for the Upper Meghna River at the proposed site and the consistency and reliability of the water supply from the intake point, monthly minimum, and maximum water level, etc., were examined.



## PROVISION OF LIFE-SAVING WASH SERVICE TO THE ROHINGYA REFUGEE POPULATION IN UKHIA AND TEKNAF UPAZILA, COX'S BAZAR DISTRICT.

The main purpose of the project is the monitoring and reporting of UNICEF's WASH emergency response activities and result at Rohingya refugee camps in Ukhia & Teknaf Upazila under Cox'sbazar district.

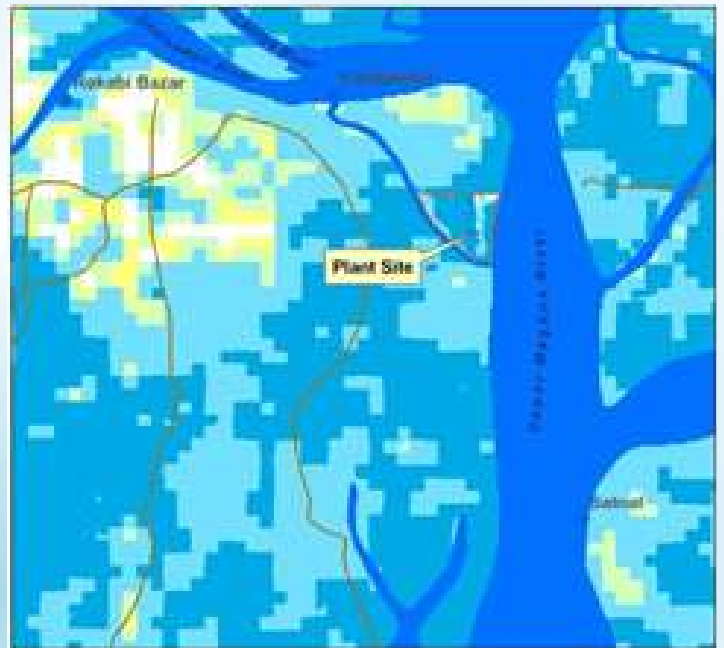
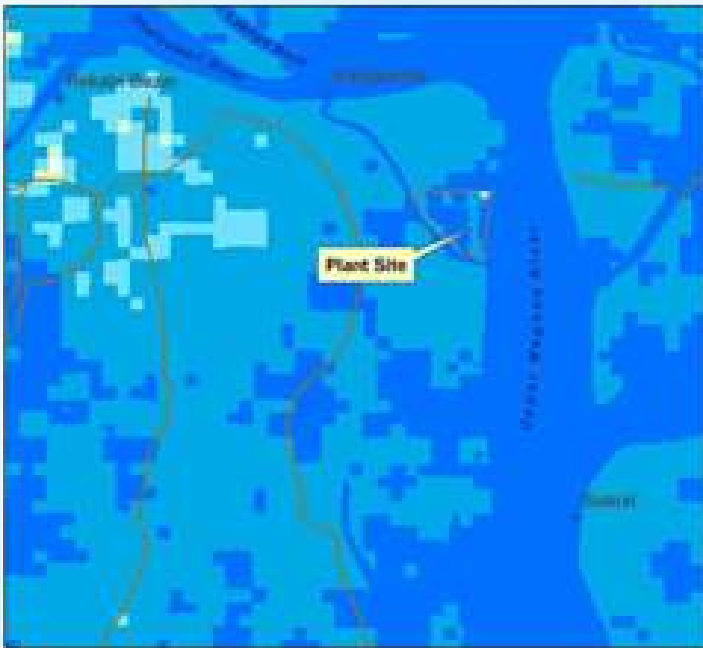


EIMS design appropriate and effective Monitoring Plan to follow up on the implementation of UNICEF's response in the WASH sector. The WASH infrastructures site was selected through a proper site assessment considering the risks of landslides, drainage network, ground conditions and ease of access. The team performs daily field visits to monitor the construction of UNICEF supported WASH infrastructure and services, including provision of water, water quality construction of water points, latrines, bathing units, fecal sludge management sites. The team also inspect the progress, quality of materials and adherence to agreed designs, and agreed on location, Prepare defects lists and follow up to ensure that all defects listed are corrected within the agreed time to an acceptable standard. Monitor functionality and status of latrines and bathing units, specifying any remedial works required. Analysis of WASH-related household data and develop and submit a report on a monthly basis. Data collection are done through online KOBO format by using Tab. Develop an analytical report on a monthly basis for WASH infrastructure and services from the data collected by field monitors.

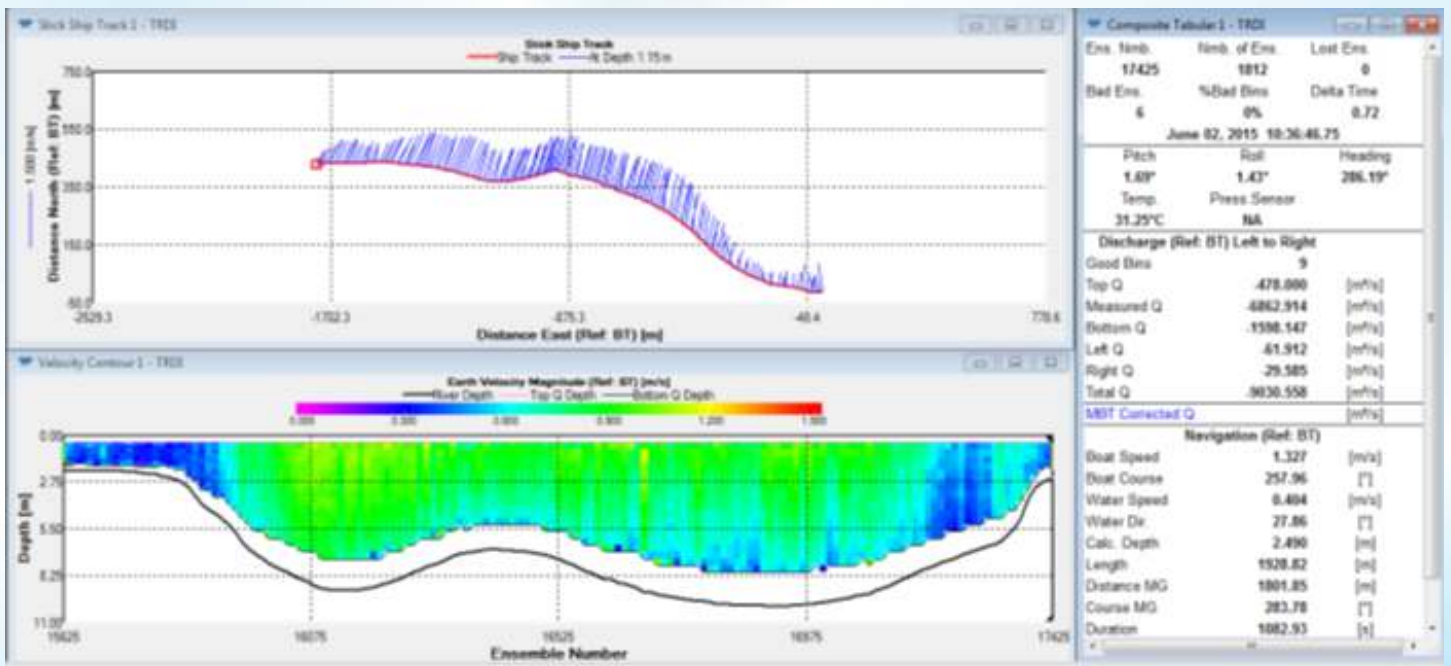


# HYDRO-MORPHOLOGICAL INVESTIGATION FOR THE FEASIBILITY STUDY OF RPCL 1320 MW POWER PLANT IN KHEPUPARA

Study the tidal discharge, sediment load, and river bathymetry of both rivers for hydrological and morphological modeling. The study identifies the stable bank and flow regime for navigation. And propose a stable feasible jetty location with design parameters and design 0.5 km river protection work. Find snapshots of the work.



Flood maps prepared from model water level data Digital Elevation Model (DEM) (a & b);



Snapshots from the project (Hydro-morphological investigation for the feasibility study of RPCL 1320 MW Power Plant in Khepupara)

## SUPPORTING AND MONITORING OF IMPLEMENTATION OF WASH SERVICES AT HOST COMMUNITY, COX'S BAZAR.

The main objectives of the assignment are to monitor and report the implementation of UNICEF WASH activities and results at the host community and ensure WASH related visibilities at both camps and host communities under Cox's Bazar district.

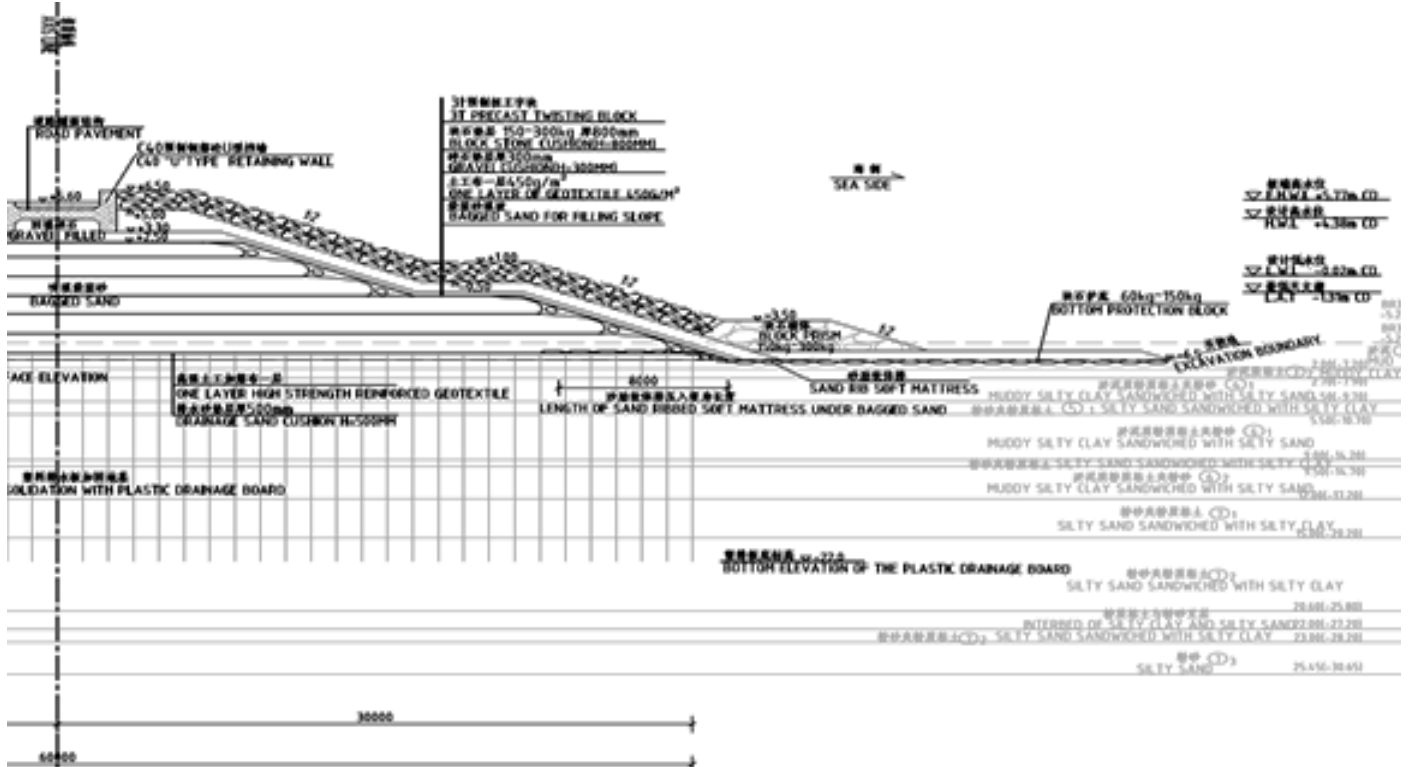
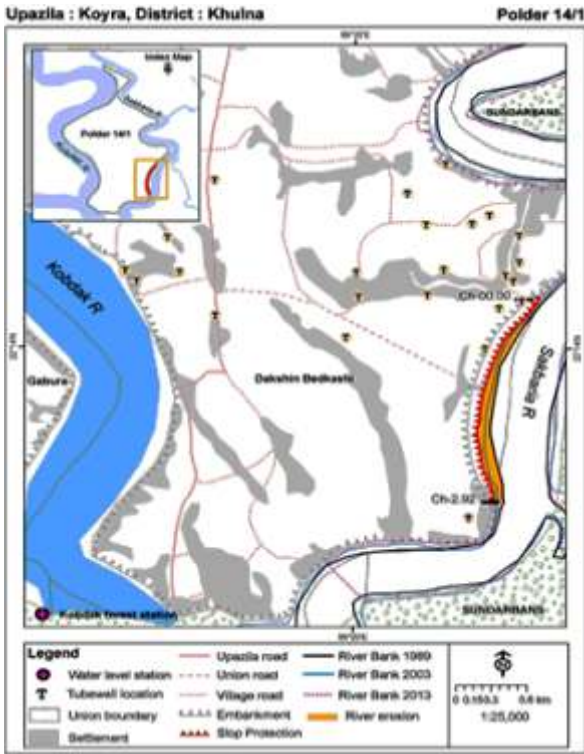


- Oversee the planning and coordination with implementing partners to ensure that action is proceeding as per schedule.
- Conduct regular site visits to all production centers for slabs and rings for latrines to inspect the progress of works, materials quality, and production compliance with design.
- Conduct daily field visits to monitor the construction of UNICEF supported WASH infrastructure to inspect the progress, quality of materials, and adherence to agreed designs and agreed on location.
- Carry out visits to households to assess their access and satisfaction with established facilities
- Meet UNICEF focal person weekly/bi-weekly to review progress, challenges, and way forward.
- Support and ensure WASH-related visibilities at both camps and host communities.
- Support UNICEF's CATS, Host Community PD & Sanitation Marketing project documentation, to prepare online all UNICEF KOBO documentation, etc.
- Ensure people's satisfaction in hygiene materials use.
- Ensure COVID-19 awareness messages at the household level.
- Monitor hand washing device, awareness miking for COVID-19, distribute leaflet, etc.
- Submit comprehensive report weekly/monthly/quarterly/six monthly/yearly capturing progress, challenges, cases, and relevant knowledge created through implementation.

# DESIGN AND SUPERVISE THE CONSTRUCTION OF EMBANKMENT FOR PROTECTION FROM TIDAL FLOOD AND RIVERBANK EROSION POLDER 14/1 IN KOYRA UPAZILA OF KHULNA DISTRICT

Dr. Hassan, as an individual consultant of UNDP, design and supervise the construction of embankment for protection from tidal flood and riverbank erosion Polder 14/1 in Koyra Upazila of Khulna District. Koyra is surrounding by the estuarian river of Bay of Bengal and people are at risk from tidal flooding, river erosion, cyclone, and tidal surge.

UNDP with financial assistance from the Netherland government to construct river protection work - embankment with erosion protection.



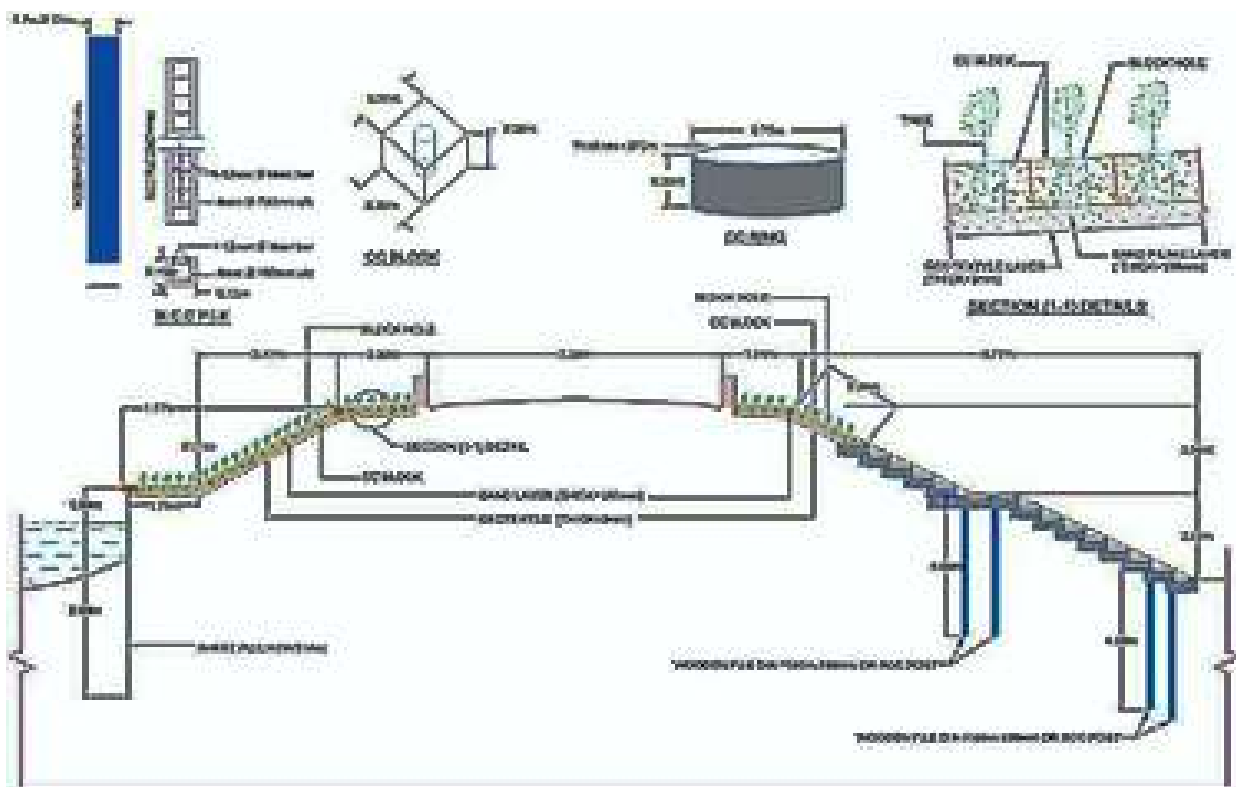
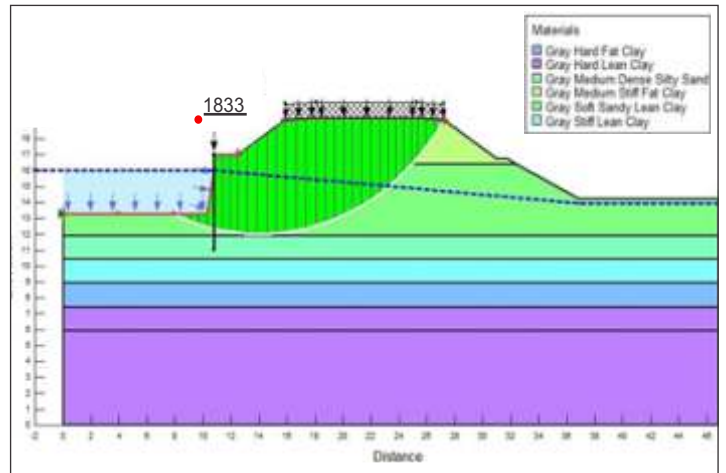
Design and supervise the erosion vulnerable area, embankment with concrete block and riverbank protection works.

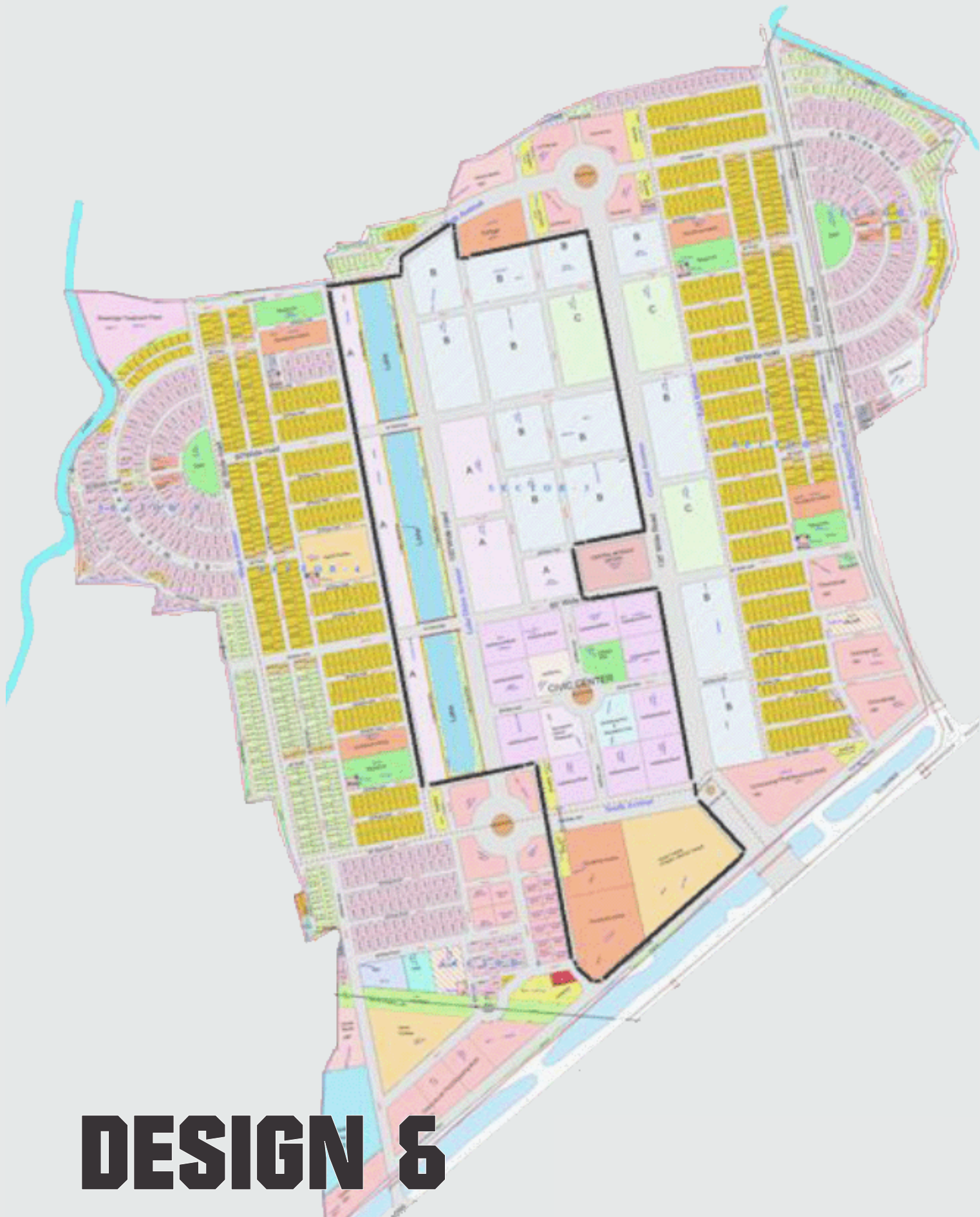
# SLOPE STABILITY ASSESSMENT AND SIDE SLOPE PROTECTION OF DAM CONSTRUCTED IN REFUGEE CAMP 20 EXTENSION, IN COX'S BAZAR BY WORLD FOOD PROGRAM (WFP)

EIMS has carried out slope stability assessment and side slope protection of dam constructed in Camp 20 extension, Kutapalong refugee camp in Cox's Bazar by World Food Program (WFP). The dam was initially constructed in 2018 to create an artificial lake a dam itself used as a road of 6 m in width.

Stability analyses of the slopes of the dam were carried out using the Morgenstern-Price method of stability analysis, based on the Cross-section of different locations of the dam and sub-soil conditions at the same locations. EIMS did geotechnical investigation using the Standard Penetration Test (SPT) followed by laboratory testing of the collected soil samples as an essential part of the assessment of Dam Stability. The calculation for

Factor of Safety (FoS) of slope for both lake side and countryside slope considering and without considering rigid inclusions at toe and berm was done. 6 m long sheet piles were driven 5 m inside the soil as an emergency action taken by WFP when they observe instability. These sheet piles are serving two purposes; one is an increasing factor of safety of slope at lake side and most important one is preventing the seepage through dam. After the installation of these sheet piles, the FoS of the side slope at the lake is  $1.83 > 1.52$ . FoS of side slope in the countryside is  $1.13 < 1.52$ . So, the dam is stable, but the safety margin is not enough in the countryside. Regarding this EIMS provides a Slope stability design using rigid inclusions at toe and berm level.



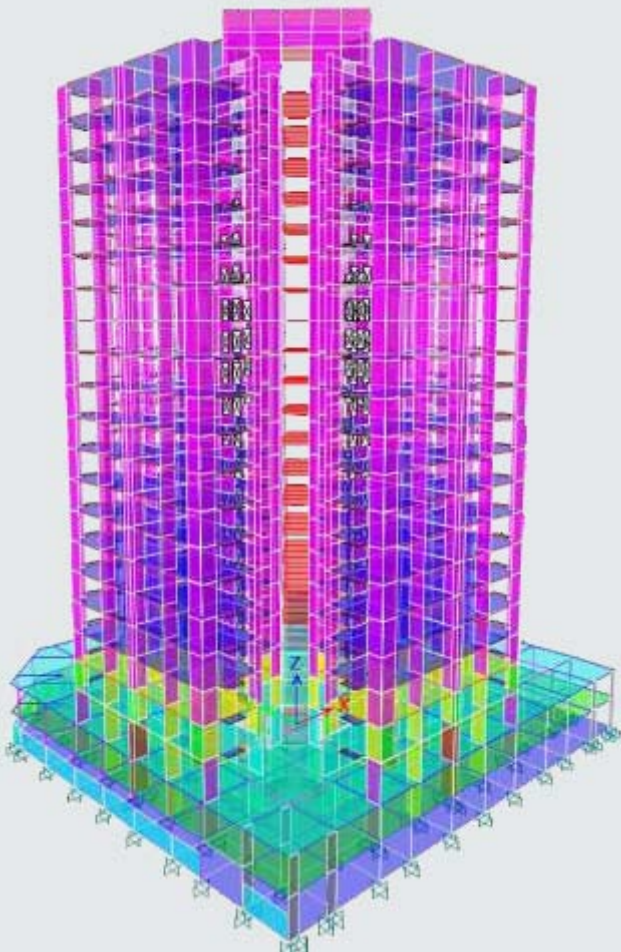


# DESIGN & PLANNING



## CONSULTANCY SERVICES

Each project has different approaches depending on the demands. In the design and planning, the engineers and architects comply with the minimum requirements on the building codes. In addition, EIMS undertakes the retrofitting design as being a part of seismic vulnerability assessment. EIMS also assists the clients to get approvals/permissions from respective government departments. Summary of the consultancy services are mentioned below:



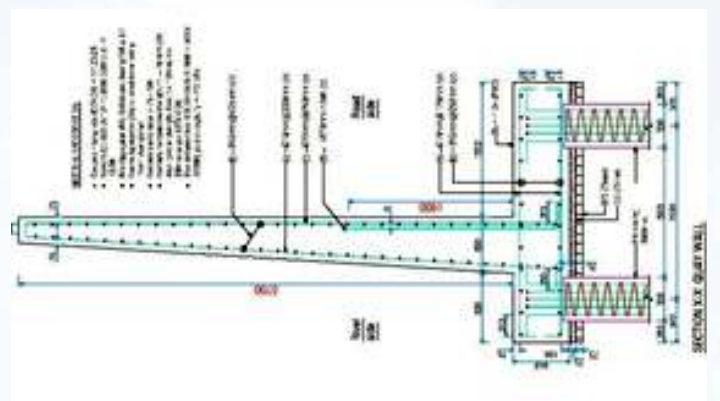
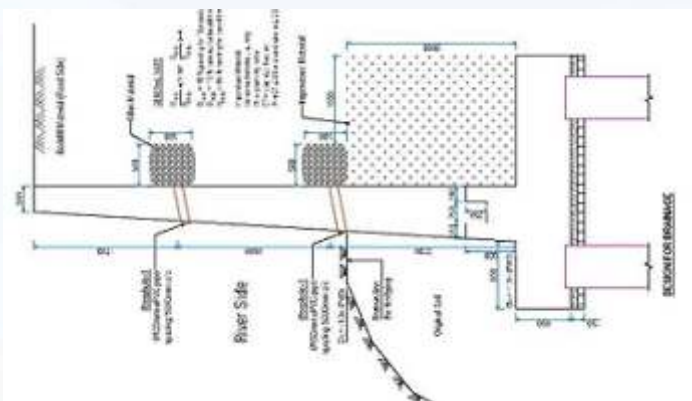
- Structural design and seismic detailing of new developments and tall buildings.
- Architectural and interior design services.
- Topographical surveys.
- Design supervision.
- Fire safety assessment.
- MEP design services.

# Buriganga (Phase 2) Project, BIWTA

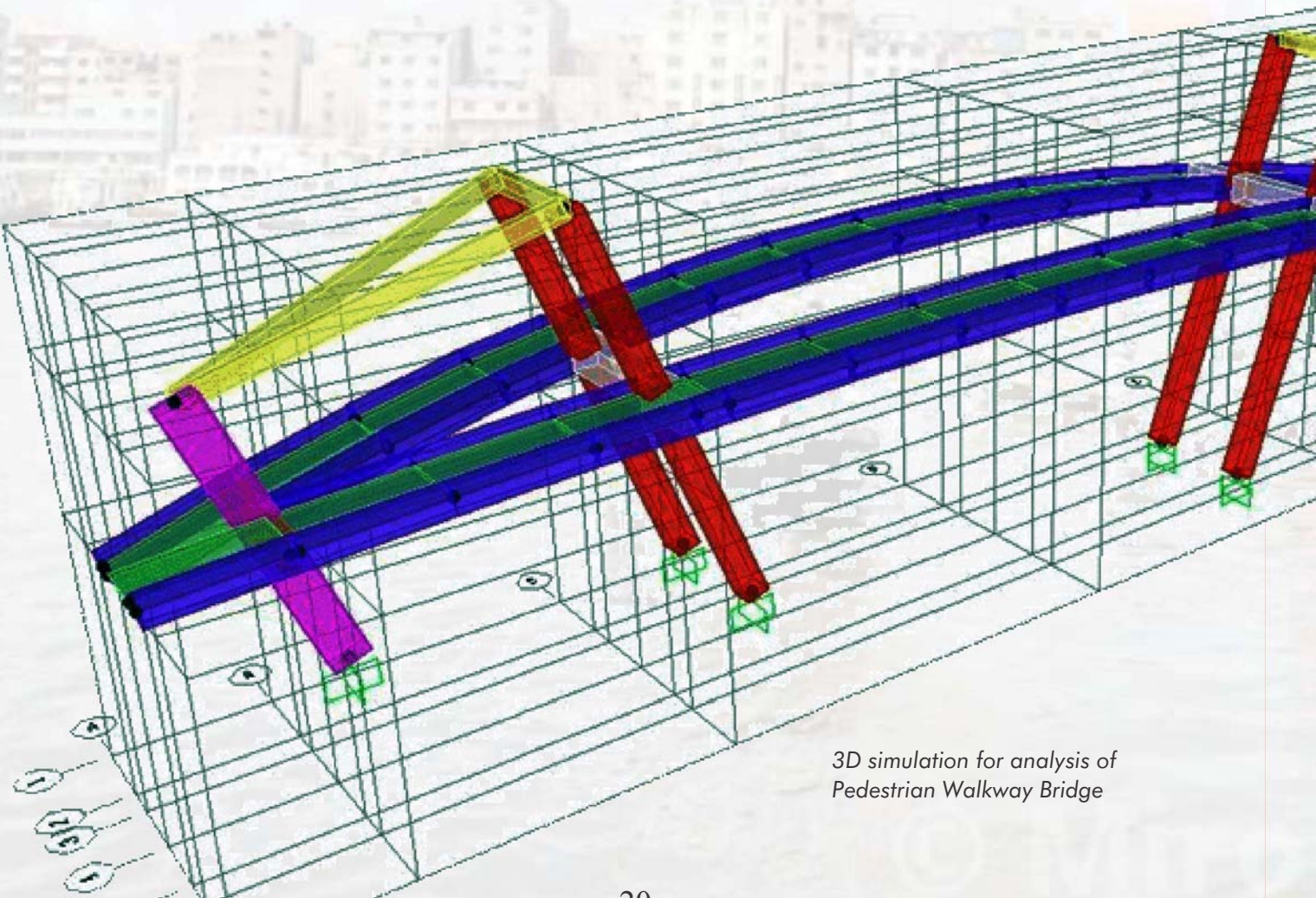
Recently EIMS is involved in the Buriganga Development Project (Phase 2) under the Bangladesh Inland Water Transport Authority (BIWTA) as a Consultant to plan and design of river bank demarcation pillar, a pedestrian walkway along the river bank line, facilities, and structural design of jetty along with work on evicted foreshore land, quay wall for bank protection and pedestrian walkway bridge.

In this project, a total 52 km length of the pedestrian walkway and quay wall along the bank of the Buriganga River will be constructed in the 1st phase of this project to protect the riverbank against the river erosion and beautification of river

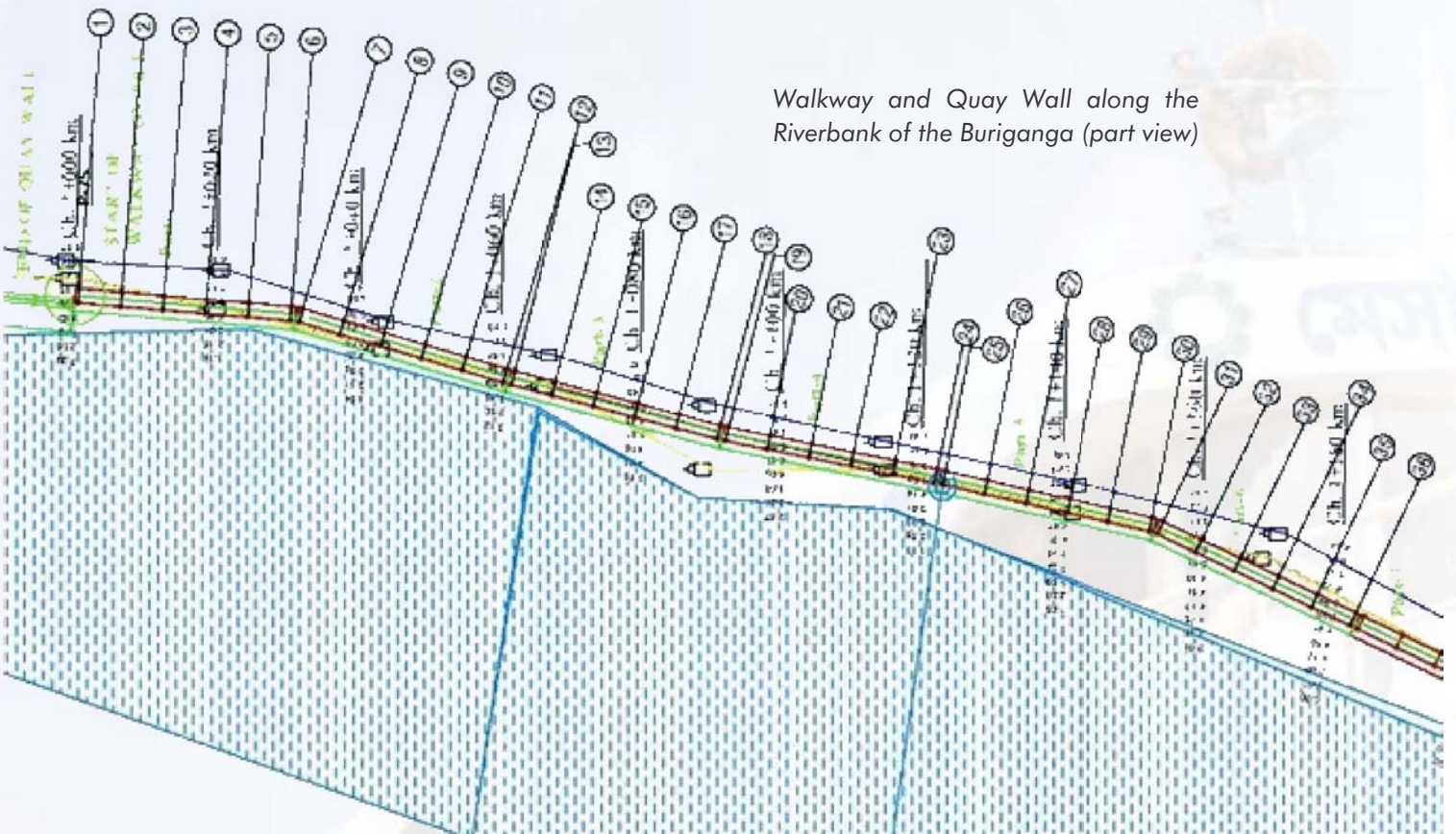
side. Later on, the quay wall and pedestrian walkway will be extended for the Turag, Balu, and Shitalakya Rivers. To demarcate the riverbank against the illegal land acquiring at the riverside around 10800 demarcation pillars will be constructed. Currently, the layout and marking up of the pillar location is in progress. To enhance the beauty of the riverbank and continuation of the walkway a pedestrian bridge and 3 eco-parks will also be constructed. Moreover, a total of 11 jetties will be planned and design to facilitate the loading and unloading of river transportation vessels. To understand the project some of the project layouts are shown in the following figures.



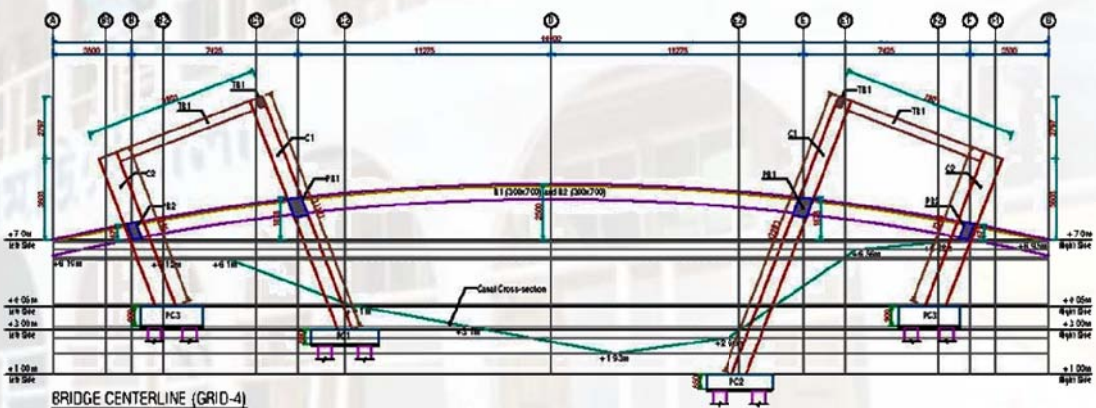
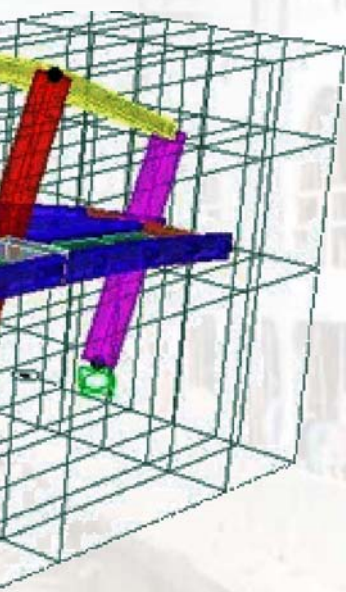
*Design and Drawing of Quay Wall (Section View)*



*3D simulation for analysis of Pedestrian Walkway Bridge*



Walkway and Quay Wall along the Riverbank of the Buriganga (part view)



BRIDGE CENTERLINE (GRID-4)  
Scale: 1:120

Elevation View of Pedestrian Walkway Bridge



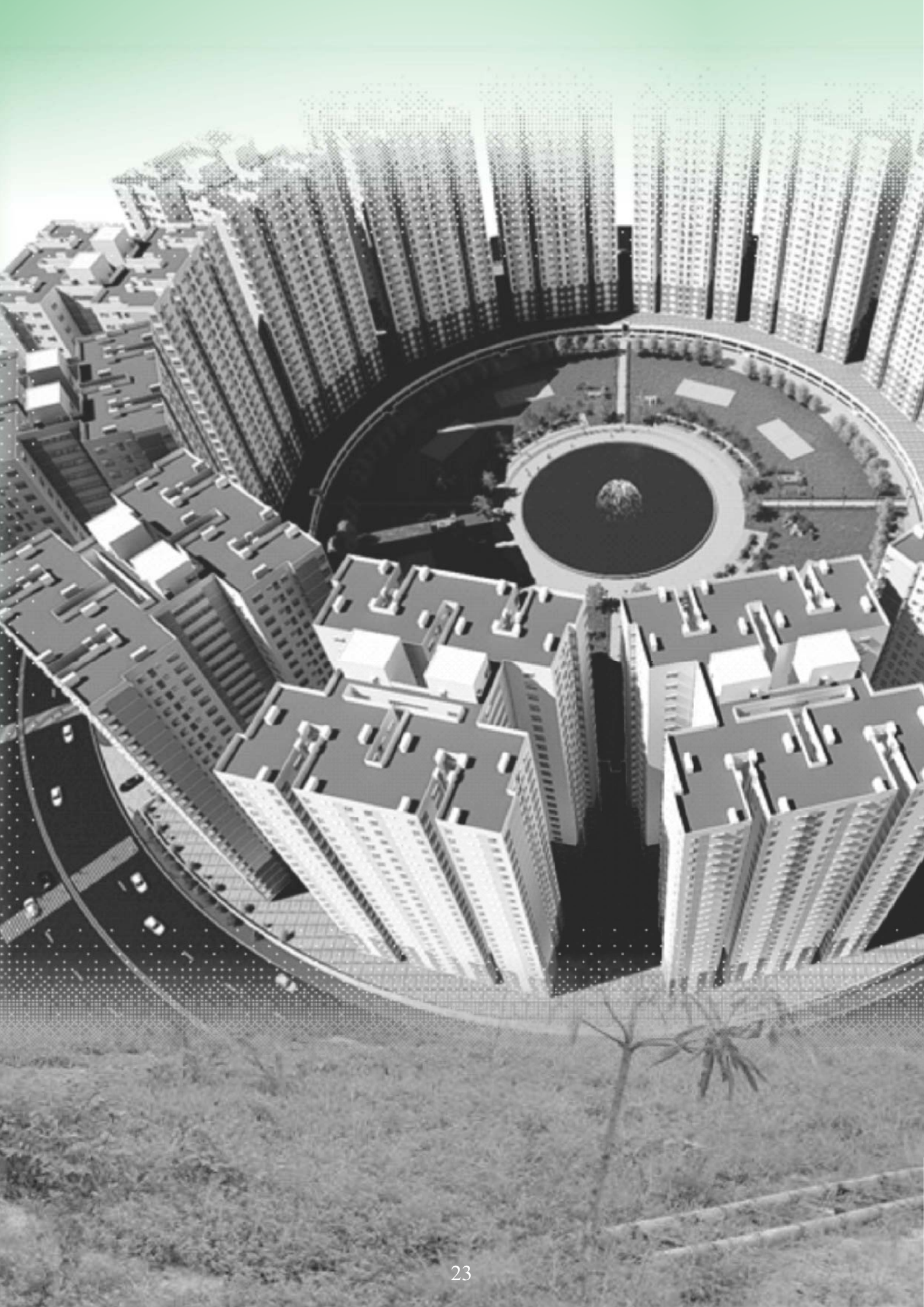
# Jhilmil Residential Area Apartment Project

Jhilmil Residential Park is the prodigious residential project is under Public Privet Partnership (PPP). Environment & Infrastructure Management Solution (EIMS) Limited was assigned as structural and geotechnical design consultant. The purpose of this project is to reduce the acute problem of housing in Dhaka by buildings 71 nos. twenty (20) storied buildings and 14 nos. twenty-five (25) storied buildings inside the Jhilmil Residential Park Project area.

The lateral-force-resisting system consists of ordinary reinforced concrete shear walls. All the components of

the structure have been designed to achieve economy and constructability that provide adequacy against hazards and ultimate human comfort conforming the code provisions of Bangladesh National Building Code (BNBC) 2020.

The construction method for this project is Industrial Building System (IBS) which is a new-fangled technology in the context of Bangladesh's engineering practice. This system offers economy by the taking advantage of the repetitive use of the formworks that results in least time cost.



# LEARNING CENTER



**D**uring the second half of 2017 an estimated 687,000 Rohingya across the Myanmar border drove into Cox's Bazar, Bangladesh. The Education sector response plan estimated that over 450,000 children aged between 4-18 years old in Cox's Bazar need access to education services. UNICEF aims to have built a total of 1,453 LCs by 2018. However, the areas of Cox's Bazar are experiencing lots of natural disasters such as Earthquake, cyclones, flood due to heavy rainfall etc. which are a great threat for the existing structures. That's why the education sector wants to have more safe, durable and disaster resilience structures as well as structures those are feasible for different topography in Cox's Bazar for learning centres.



**T**eam EIMS took this challenging job in getting alternative learning centre designs in existing camps and new camps in Cox's Bazar district. The main challenge was to select material for low-cost and easy construction along the climatic challenge it must withstand in that area. Team EIMS proposed low to high hazard design options in terms of durability, topography and location considerations.



Tozammel Residence is a recently completed apartment building in the Rangpur city. It's a six storied building designed on 303.53 SQM land.







EIMS is now working in the development of residential projects. One of the ongoing Projects is 9storied apartment building at G block,Bashundhara Residential Area. The land area is 5 katha. EIMS also provides its clients with relevant approval drawings such RAJUK sheet.



## VULNERIBILITY ASSESSMENT

EIMS offers building vulnerability assessment of existing structures with experienced assessors and modern tools & techniques. Within a short period, EIMS has conducted initial integrity assessment over 200 buildings and conducted detailed structural vulnerability assessment of over 100 buildings. Besides this, EIMS has been selected as "Qualified Structural Assessment Firm for the Alliance for Bangladesh Workers' Safety", Department of Inspection for Factories and

Establishments (DIFE). Quality assessments provided by EIMS are:

- Preliminary vulnerability assessment as national and international standards (ASCE 41, FEMA 154).
- Non-linear analysis (ASCE 41 Tier 3) and retrofitting design of existing structures for seismic vulnerability assessment.



## INITIAL STRUCTURAL INTEGRITY ASSESSMENT

- I. EIMS has successfully completed Initial Structural Integrity Assessment of thirty-Seven (37) factory buildings under ALLIANCE for Bangladesh Worker Safety.
- II. Structural integrity assessment by Visual inspection (Type-C) on three garments building (FS-SFB#3, FS-SFB#5, FS-SFB#6) of Hop Lun (BD) Ltd. at DEPZ, Ganakbari, Savar, Dhaka.(Detail Structural Analysis is recommended for the garments buildings).

Initial Structural Engineering Assessment for structural adequacy for vertical & horizontal extension of proposed multistoried building for United Surgical Ltd. at Islampur, Kadda, Gazipur, Bangladesh.



# DESTRUCTIVE NON-DESTRUCTIVE TEST FACILITIES TO ASSESS STRUCTURAL ADEQUACY OF THE BUILDING COMPONENTS

## Rebar Scan using Ferro Scan



Rebar Scanning Using Ferro Scan in Column, Beam & Slab respectively

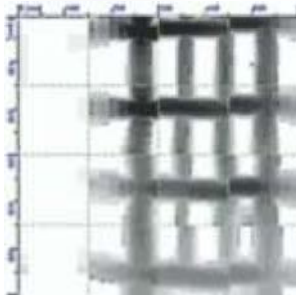
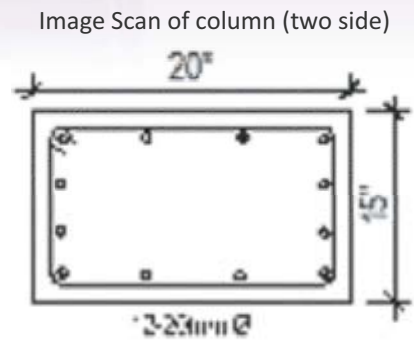
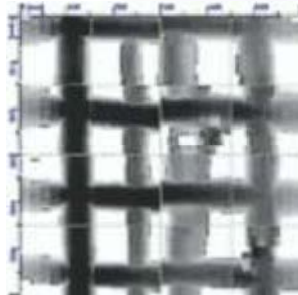


Image Scan of column (two side)



Cross section of Column

Sample Result of A ferro-scan

## ULTRASONIC CONCRETE TESTING: (Ultrasonic Pulse Velocity Test)

The Ultrasonic Instrument can be used for several applications including the following:

- 1 Pulse velocity measurement
- 2 Path length measurement
- 3 Uniformity assessment
- 4 Surface velocity measurement
- 5 Crack depth measurement
- 6 Estimating the dynamic elastic modulus of samples (with the shear wave transducers)
- 7 Ultrasonic Instrument only. Estimating compressive strength using pulse velocity alone or in combination with a rebound hammer

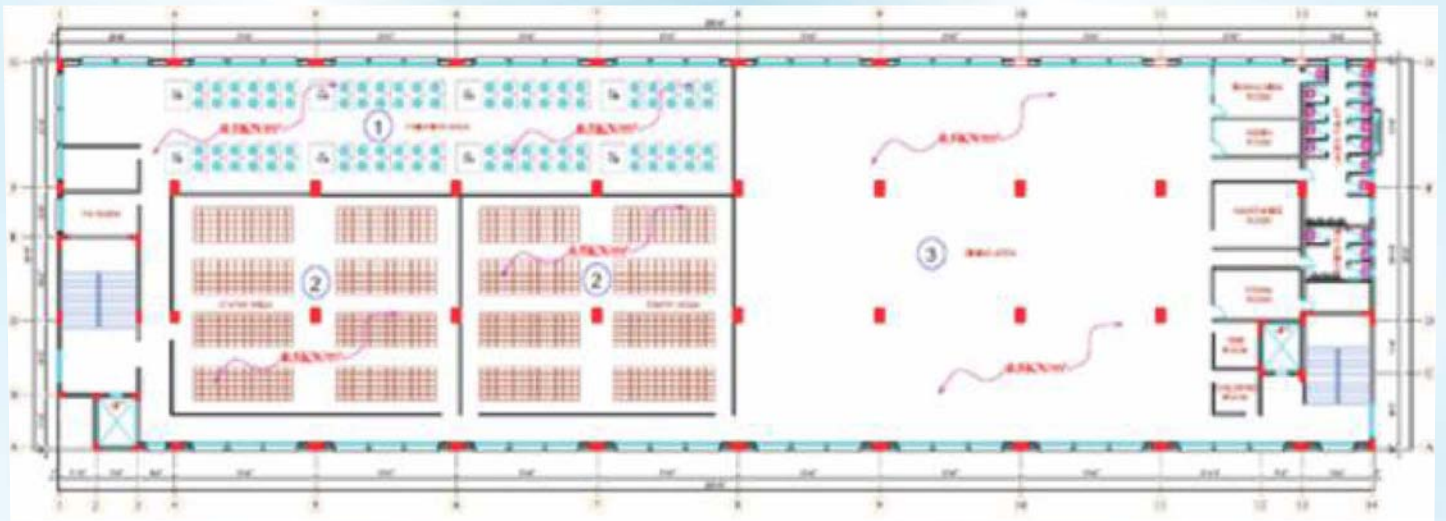


Ultrasonic Pulse Velocity Testing in Column & Beam respectively

# Detail Engineering Assessment

## Detail Engineering Assessment (DEA) of Factories Preliminary Assessed by Levi's:

- Two buildings of MBM Garments Ltd at M-19 & M-14, Section-14, Mirpur, Bangladesh.
  - Unique Washing & Dyeing Ltd at Kalemeshar, KB Bazar, Gazipur.
  - Three buildings of Medlar Apparels Ltd at East Narsinghapur, Ashulia, Savar Dhaka, Bangladesh.
  - Eight buildings of Opex Fashions Ltd at Kanchpur, Sonargaon, Narayanganj.
  - Five buildings of Youngone Bangladesh Ltd, Three buildings of Kenpark-1 BD Apparel Ltd and Three buildings of Kenpark-3 BD Apparel Ltd at CEPZ, Chittagong.
- i. Detail Engineering Assessment (DEA) of Factories Preliminary Assessed by ACCORD:
- 4A Yarn Dyeing Ltd at Savar, Dhaka.
  - Brother Fashions Ltd at Kawranbazar.
- ii. Detail Engineering Assessment (DEA) of Padma Pictures Limited. Approximate Floor areas 80,000 square feet. The scope of consultancy services given to EIMS is as following:
- Sub-soil Investigation.
  - Core Test.
  - Ferro-Scanning in Column, Beam and Slab.
  - UPV (Ultrasonic Pulse Velocity) Test.
  - Checking of structural stability and geometry.
  - Checking adequacy of foundation i.e. pile & pile cap or footing/raft.
  - Checking of lateral load resistance capacity of the Building.
  - Design check for soft story & Dynamic Load.



(1) FINISHING AREA



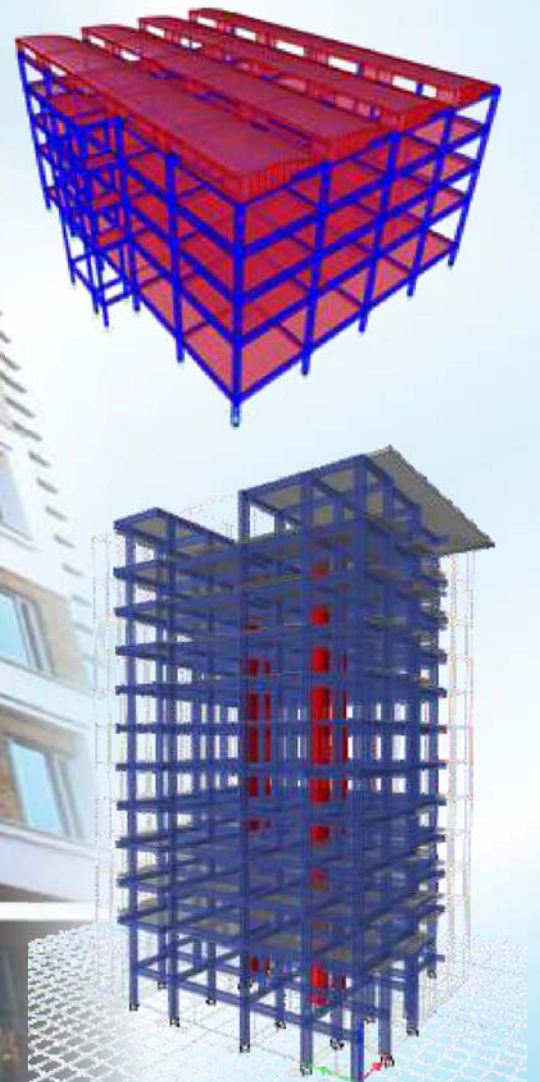
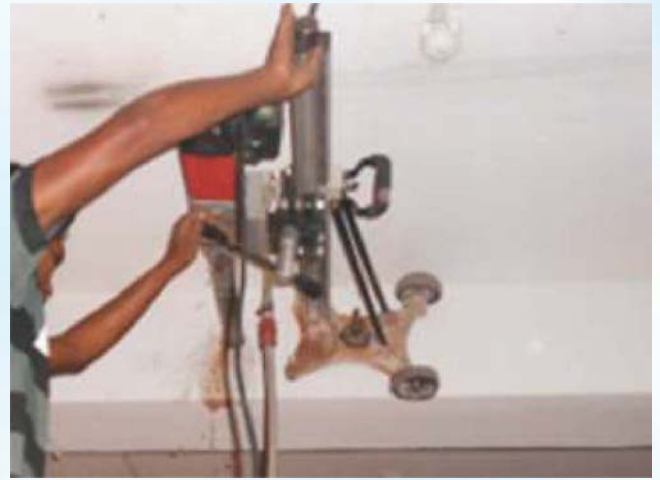
(2) CT-PAT AREA



(3) DINING AREA

# CONCRETE CORE TEST

- This is one of the very reliable tests adopted for checking the compressive strength of the 'In situ concrete'.
- Other physical properties such as density, water absorption can also be measured from the core concrete.
- In addition, chemical properties of concrete specimen for its cement content, carbonation depth, chloride and sulphate content may be measured.

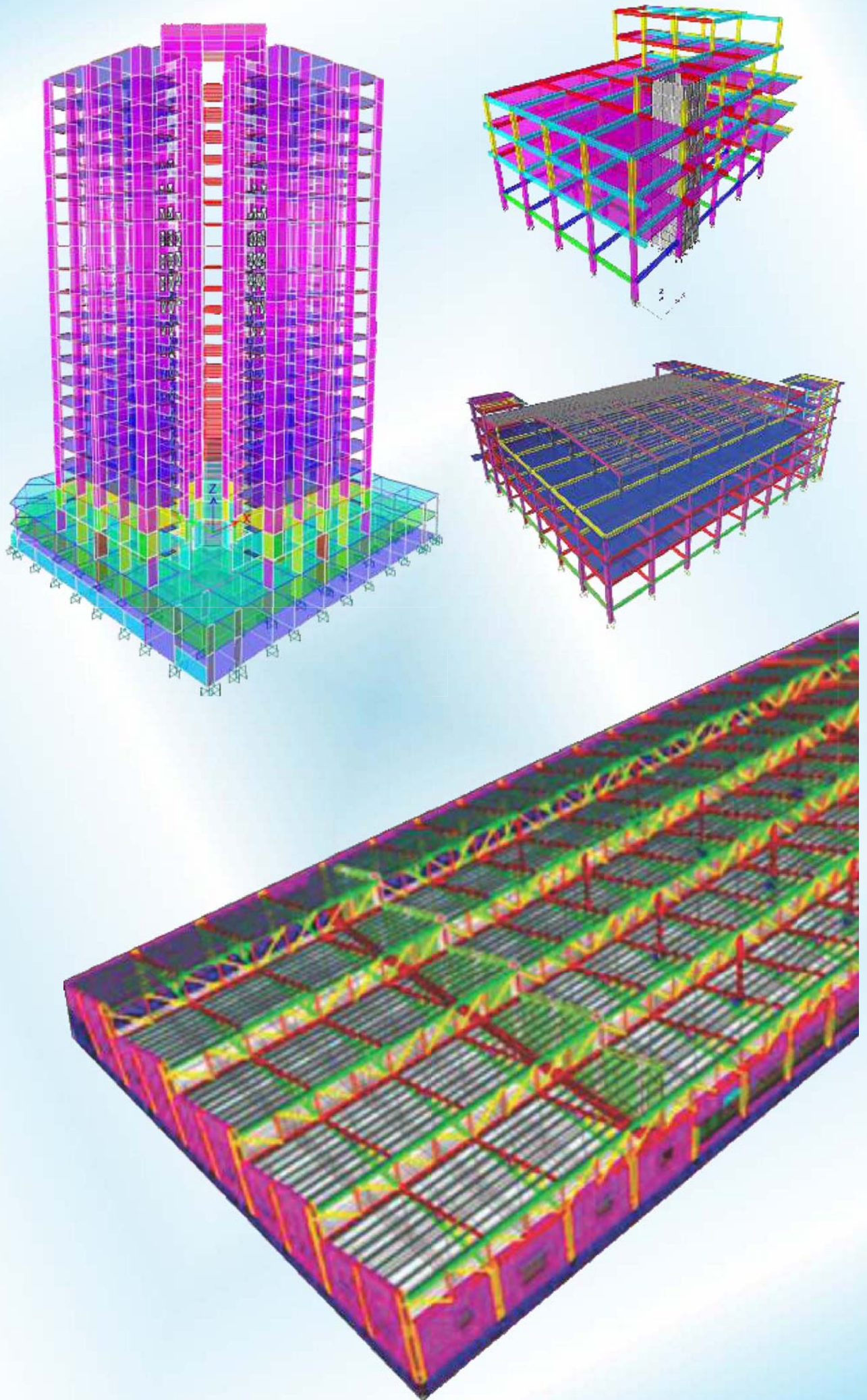


# Retrofitting Design



- Retrofitting Design of two buildings of Medlar Apparels Ltd at Ashulia,
- 4A Yarn Dyeing Ltd at Savar, Dhaka.
- Retrofitting of Academic Building of American International School, Dhaka.
- Retrofitting of Brothers Fashions Ltd, Karwan Bazar, Dhaka.
- Three buildings of Kenpark-1, BD Apparel Ltd at CEPZ, Chittagong.
- Eight factory buildings of Opex and Sinha Textiles Ltd, Dhaka.
- Three buildings of Kenpark-3, BD Apparel Ltd at CEPZ, Chittagong.

# Computer Simulated FEM 3D Model





# CONSTRUCTION





# SERVICES WE PROVIDE

Over the years EIMS has undertaken many challenging construction projects. Our objective is to provide our client with a “we are for your safety” experience when we are awarded to execute their projects. We have completed a lot of construction projects all over Bangladesh.

Since 2011, we have been strongly committed to providing our customers with the highest level of service in construction markets. Building and maintaining relationships with our customers is at the heart of our business and we have a planning and management style that is consultative and systematic.

We believe in a proactive approach to all aspects of our business, but in particular to quality, safety, and delivery. By getting this right, we give our customers confidence and peace of mind during the process of planning, design and construction. The hands-on responsibilities and team approach of company director's in our organization with a powerful and proven synergy.

We directly employ the largest and most experienced construction team and we have the ability to deliver any scale of a construction project.



Because we employ our own qualified tradesmen and apprentices we are better able to maintain high standards of quality, safety, and delivery. To support these staff we have a team of construction management professionals that includes experienced and qualified quantity surveyors, project managers, and dedicated full-time health & safety professional.

We are committed to the future of our industry and training is regularly undertaken externally and within our business activities.

For undertaking construction of any building we are considering following methods:

1. New Building construction
2. RCC retrofitting (footing, beam, column)
3. Steel retrofitting
4. URM wall retrofitting

## Construction of Gym cum office at UNHCR Coxsbazar



### Project Description:

Total objectives are to construct two storied gym cum office steel building inside the UNHCR sub office at Cox's Bazar.

**Component A:** Supply of the quality materials in all stage of the construction work as per scope

**Component B:** Project Scheduling and implement as per drawing with the proper allocation of the workers.

**Component C:** Handed over as per revised decision of Client including testing and commissioning of all required items.



### Services:

- Task-1: Completion of foundation work including pedestal column construction.
- Task-2: Soil refilling, compaction including GB construction and anchor bolt setting for steel column foundation.
- Task 3: Total steel framing work (beam, column) deck bond slab and roofing including necessary painting.
- Task 4: Concreting of three floor including all false slab, lintel and patent stone casting at roof.
- Task 5: All the brick wall and plastering work as per drawing, curing, fire stair and door setting.
- Task 6: All electrical line installation including supply of AC, lights, fan, all required to complete the work.
- Task 7: Wall mounted and floor mounted IT network installation for 180 points and necessary equipment.
- Task 8: Total plumbing network of water supply and disposal line including supply of all necessary materials.
- Task 9: All finishing work (tiles work, painting, window setting false ceiling with wooden framing) under the scope.

## Retrofitting Construction - Wash Extension Building

The Wash extension building of Kenpark Bangladesh (Pvt.) Limited (K-1) is located at Plot No. 31-42, Sector No. 08, CEPZ, Chittagong. The total area of the building is about 730.8 m<sup>2</sup>. The structural system of the building is RCC beam-column on the first & second floor and rafter with purlin in the roof. The building is

constructed on a column individual foundation as per drawing and during construction, it was verified. The factory building has one stair, one fire stair, and one lift core. Shear wall in the lift core is found in the building framing system. Therefore, the building can be classified as an ordinary moment-resisting frame

(OMRF). BUET technical team conducted a visual inspection of the building. Based on visual inspection, the BUET team recommended conducting a Detail Engineering Assessment of the building. So retrofitting design was prepared.



## Retrofitting Construction of 3D Building

The Wash extension building of Kenpark Bangladesh (Pvt.) Limited (K-1) is located at Plot No. 31-42, Sector No. 8, CEPZ, Chittagong. The total area of the building is about 1098.68m<sup>2</sup>. The 3D building is a three (3) storied RC beam slab structure. The building is constructed on a spread footing foundation as per drawing and during construction, it was verified. Shear wall in the lift core is found in the building framing system. This building is having an Ordinary Moment Resisting Frame (OMRF). BUET technical team conducted a visual inspection of the building. Based on visual inspection, the BUET team recommended conducting a Detail Engineering Assessment of the building. After the assessment, it was found that 18 nos. of foundations, 16 nos. of grade beams, 120 nos. of columns, and 38 nos. of floor beams were inadequate. So retrofitting design was prepared.



## Retrofitting Construction of WASH Steel Building

The WASH steel building of Kenpark Bangladesh (Pvt.) Limited (K-1) is located at Plot #31-42, Sector#08, CEPZ, Chittagong. The total area of the building is about 1818.0 m<sup>2</sup>. The structural system of the Wash steel building is a multi-gable framed structure. The factory building has one story. BUET technical team conducted a visual inspection of the building. Based on visual inspection, the BUET team recommended conducting a Detail Engineering Assessment of the building. After the assessment, it was found that 33 nos of the pedestal, 33 nos of steel column, and 28 nos of rafter were inadequate. So retrofitting design was prepared by EIMS.



## Construction of Surma Garments Washing and Finishing Co. Ltd.



Surma Garments Washing and Finishing Building of Youngone Group (CEPZ) Limited is a two-storied concrete moment resisting frame structure with a mezzanine above the ground floor in two blocks of the building. This structural system is a (beam-column framing) Ordinary Moment Resisting Frame (OMRF) system. BUET technical team conducted a visual inspection of the building. Based on a visual inspection of the BUET team, it was recommended to conduct a Detail Engineering Assessment (DEA) of the building. After conducting the detailed engineering assessment some beams, columns, and foundations were found inadequate. Therefore, the retrofitting design was conducted, and the implementation of the proposed design had been done accordingly.

## Retrofitting Construction of TSL Extension Building

TSL Extension Building of Youngone Group (CEPZ) Ltd is a six storied concrete moment resisting frame structure. BUET technical team conducted a visual inspection of the building. Based on a visual inspection of the BUET team, it was recommended to conduct a Detail Engineering Assessment (DEA) of the building. After conducting the detailed engineering assessment some beams, columns, and foundations were found inadequate incapacity. Therefore, the retrofitting design was conducted, and the implementation of the proposed design had been done accordingly.



## Retrofitting Construction of Unreinforced Masonry Wall

The factory building of Univogue Garments Co. Limited (Unit-4, Shed-1) is a single-storied steel structure with a mezzanine floor. It is a structure having an area of about 69800 sft. approximately. As per BUET recommendation, the URM wall located at the exit way of the Quality Control Room on the ground floor of this building has to be retrofitted to avoid out-of-plane failure during an earthquake. So retrofitting design was required as per recommendation. The wall has been retrofitted to protect the out of plane failure during an earthquake.



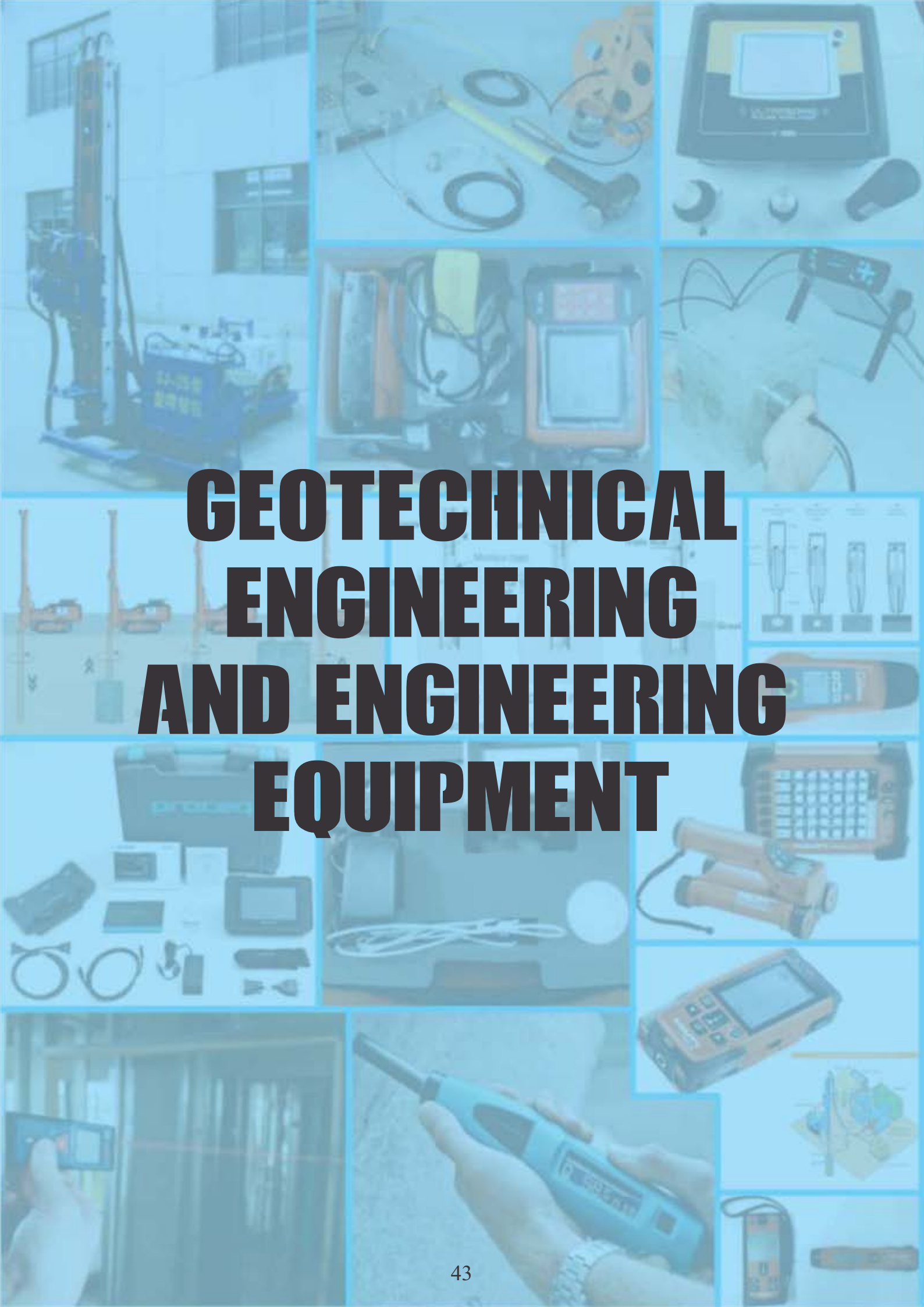
## Retrofitting Construction of Univogue Garments Co. Ltd.

The factory building of Univogue Garments Co. Limited (Unit-2) is a multiple-gable framed steel structure. It is a single-storied structure having an area of about 28,000 square feet. BUET technical team conducted a visual inspection of the building. Based on a visual inspection of the BUET team, it was recommended to conduct a Detail Engineering Assessment (DEA) of the building. After conducting the detailed engineering assessment some RCC pedestals, steel columns, and rafters were found inadequate.









# **GEO TECHNICAL ENGINEERING AND ENGINEERING EQUIPMENT**

# Geotechnical Investigation & Analysis

For any type of heavy construction work and other purposes, the geotechnical investigation is a prerequisite. EIMS provides various geotechnical facilities as follows:

## 1. Field Tests



SPT (ASTM D1586/D1586M)



Downhole Seismic Test ASTM D7400



SCPT ASTM D7400

## 2. Geotechnical Laboratory Tests



Moisture content (ASTM D 2216)



Grain size analysis (ASTM D 1140)



Liquid limit and Plastic limit (ASTM D 4318)



Shrinkage limit (ASTM D4943)



Specific gravity (ASTM D 854)



Unconfined compression test (ASTM D2166/D2166M)



Consolidated drained direct shear test (ASTM D3080/D3080M)



One dimensional consolidation test (ASTM D2435/D2435M)

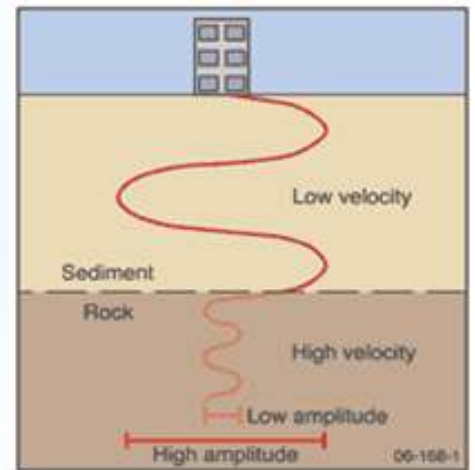
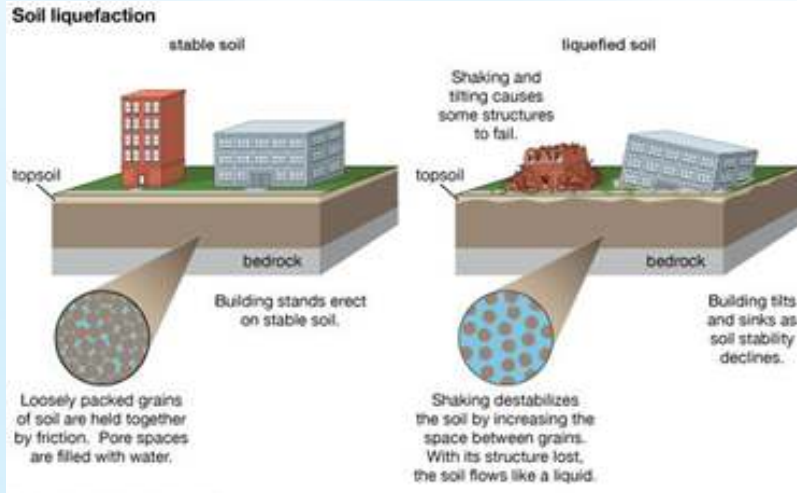
### 3. Geotechnical Seismic Risk Analysis

#### Liquefaction & Amplification Analysis

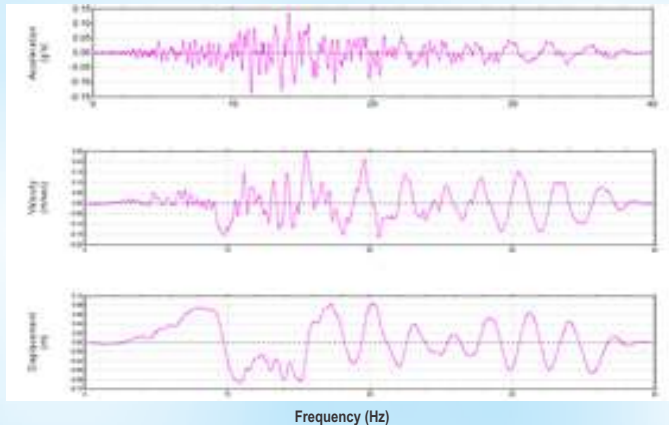
Liquefaction is a phenomenon in which a saturated or partially saturated soil substantially loses strength and stiffness in response to an applied stress such as shaking during an earthquake or other sudden change in stress condition. When liquefaction occurs, the soil or material that is ordinarily a solid behaves like a liquid. Liquefaction has been responsible for tremendous amounts of damage in historical earthquakes

around the world. So it is very essential to assess the liquefaction potential prior construction of any high rise structures with weak soil profile.

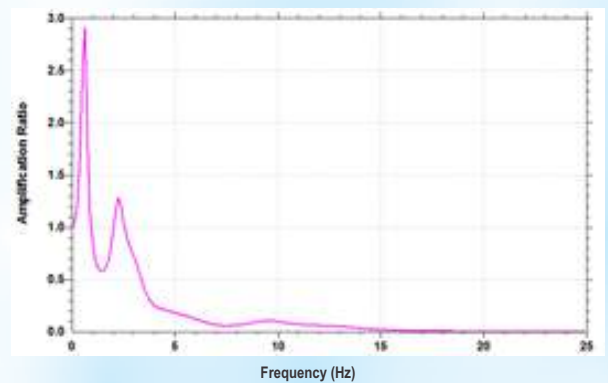
Moreover, to understand the soil structure interaction, site specific amplification becomes a very important information during design of a heavy structure for many sites. EIMS offers a sophisticated analysis for liquefaction and amplification.



TAIWAN SMART1 (45) 11/14/86, SMART1 O12, EW



Bore Hole 2 - Amplification Spectrum at Surface Compared to Bedrock



### 4. Soil improvement



#### Jet Grout

Jet Grouting is a technique characterized using the pressurized fluid jet to hydraulically either before or concurrent with the addition of the grout material to form a solidified in situ element known as Soilcrete (specialized cementitious slurry mixture designed specifically for soil stabilization/modification). Jet grouting as a soil improvement technique is currently utilized throughout the world.

It is one of the effective solutions against liquefaction which occurs due to an earthquake in liquefiable sandy soil. So, it is a great technology for building a safe structure in earthquake prone country like Bangladesh.

## Parallel Seismic Instrument (PSI)

It occasionally happens that doubts about the integrity and length of concrete and sheet piling arise only after the structure is complete. The pile heads are no longer accessible and other non-destructive test methods are of little use. The Parallel Seismic test has been developed as a test that can be used when the pile is still connected to the superstructure. Applications include:

- Determining the embedded depth of sheet piling
- Confirming the depth of piles underneath caps and structures
- Checking the depth of masonry and footings

This Instrument can be used to assess the continuity of foundations below buildings and pile caps.

- Testing can be carried out through a pile cap.
- Equipment is light, portable, and suitable for remote locations.
- Software is user friendly and windows based.
- Testing requires a tube to be installed and grouted in place alongside the pile.



This Parallel Seismic instrument checks the integrity of structures below ground and under buildings:

- Measurement of foundation depth
- Can be used on pre-cast concrete, cast in place concrete, and timber piles
- Depth of sheet steel piling
- Assessment of masonry foundations
- Locating breaks and discontinuities in foundations

## Ferro Scanner



Reinforcement of concrete is an important part for RCC buildings. To evaluate the existing embedded reinforcement for assessing any RCC structure scanning is very important test. It is a non destructive test and also used for checking the concrete clear cover. The mechanism of ferro scanning is almost like X-ray of human body.

- Scans large areas of concrete quickly and easily
- Provides accurate depth of cover measurements for reinforcement at depths of up to 100 mm
- Displays a clear 2D image of the reinforcement on the monitor for on-the-spot structural analysis and depth of cover assessment
- Records scan data automatically over lengths of up to 30 meters and up to 9 Image scans

It's also used for Rebar verification and analysis and checking concrete cover over large areas for structural repair work. It is also used for Building acceptance inspections and quality control and helps avoid costly rebar hits and damage caused by cutting through structurally significant reinforcement when coring and hammer drilling.



## Schmidt Test Hammer

The Schmidt test hammer has been redesigned to provide unmatched accuracy, repeatability and easy, intuitive operation. The Silver Schmidt

- Digital scope, 2 MHz sampling rate, 12 bit resolution
- Advanced picking algorithm providing the real arriving time of the pulse
- Signal processing by FFT method (Fast Fourier Transform)
- Assessment of concrete strength with combined method Ultrasonic velocity/Rebound index (SonReb)
- 7 selectable pre-amplifier gains (impulse amplitude)
- Transmitter pulse 2500 V
- Transit time up to 16 ms with 0.1  $\mu$ s resolution
- Slot for memory card to save data (2 GB=30000 tests)
- 6" Multifunctional touch screen display

## Ultrasonic Pulse Analyzer

CONCRETE TESTING EQUIPMENT, CONTROLS



## Levelling Instruments



An Auto Level is a Professional Leveling Tool used by Contractors, Builders, Land Surveying Professionals, or the Engineer who demands accurate leveling every time. Auto Levels set up fast, are easy to use, and save time and money on every job.







**THE FOCUS OF OUR  
COMPANY IS OUR  
PEOPLE**

# Environment Division



## **Syed Ahsanul Haque**

*Head of Business Development / Environment Division*

Syed Ahsanul Haque Rubel, BSc in civil engineering and MSc in Disaster Management from the University of Dhaka, having more than Twenty (20) years of working experience in the field of Disaster Management and Climate change related projects with combination of GIS/RS application. He has been working as a head of Environment division of EIMS since November 2015 mainly involved in different projects like Solar power plant feasibility study, Water and sanitation related Projects in different parts of Bangladesh. He has widespread expertise on Hydrology, Integrated Water Resources Management Project (IWRM), topographic survey with good knowledge on different kinds of survey equipment like DGPS, RTK, Total station, Leveling instrument etc.

During this long and glorious period he worked in EGIS-II, CEGIS, Swiss Red Cross in many Government and donor funded projects. He has great achievement in developing and set up Community based Flood Early warning Dissemination system for both Riverine and Flash flood, Strong hydrological and meteorological data analysis capacity and developing multi-hazard maps, Risk and resource maps, tool development for different project through GIS and Remote sensing technology.



## **Iffat Huque**

*Environmental Specialist*

Ms. Iffat obtained her MSC degree in Environmental Assessment from Concordia University, Montreal, where her specialization was in EIA- Concepts, Principles and Practice, Data Collection and Analysis, Environmental Economics, Environmental Law, GIS and Remote Sensing application for EIA. She has more than thirty year's working experiences in Bangladesh in the field of Water and Environmental Sector and she is considered one of the pioneers of Remote Sensing application in many development projects since 1988 through which she possesses profound knowledge on GIS/Remote Sensing. She worked in many projects of the trust organization under the Ministry of Water Resources of Bangladesh and also UNDP/Dutch funded projects.



## **Md. Hasibuzzaman**

*WASH Specialist*

Md. Hasibuzzaman is working as Civil & Environment Engineer for about 4 years. He is working as a team leader for field work supervision, data collection and formatting, team co-ordination in various projects run by EIMS. He is interested in soil investigation, civil construction, environment and WASH facilities improvement and so on. He is mainly expert in construction monitoring, SPT test of soil and WASH facilities with water quality monitoring.



# Environment Division



## **Tanjiba**

### *Urban Planner/GIS Specialist*

Ms. Tanjiba Rahman has been working in different projects of environment and disaster management for about 8 years. In her professional life she has been involved in different projects related to water resource management, vulnerability and risk assessment, disaster risk reduction and so on. She has also good knowledge in different tools of GIS and is expert at applying GIS tools and techniques for different types of analysis. She has also publications in national and international journals.



## **Md. Rownak Islam**

### *Water Resources Engineer*

Md. Rownak Islam is a promising water resources engineer. He has experiences in working different water resources related projects in Bangladesh. Mr Islam has worked in the JICA funded Small Scale Water Resources Development Project (SSWRDP-Phase 2) as a water resources engineer for LGED. Moreover, he was involved with the morphological and environmental study of the proposed LNG terminal at Moheshkhali, Chittagong, River training work at Sheikh Hasina Cantonment, Lebukhali, Patuakhali and Feasibility assessment of Dhaka Metro Rail Project. He is mainly expert in different hydrological and morphological analysis, hydraulic structure design, feasibility study and environmental assessment.



## **Aliya Zaman**

### *Economist*

Ms. Aliya Zaman has done her M.Sc. in Economics. She has been working in different projects of environment and social management for 4 years. In her professional life she has been involved in different projects related to economic analysis and so on.



## **Muhammad Tarek Mahmud**

### *Environment Engineer / WASH Specialist*

Muhammad Tarek Mahmud obtained his B. Sc. Degree in Civil and Environmental Engineering from Shahjalal University of Science and Technology, Sylhet. He have 9 year experience in WASH and construction. Currently he operate UNICEF Life Saving WASH program in refugee camp and host community, Cox's Bazar. Also he perform WASH gap analysis in camp, GIS, construction supervision.

# Environment Division



## **Abdulla Al Mamun**

### *Environment Engineer / WASH Specialist*

He completed his B. Sc. Degree in Civil and Environmental Engineering from Shahjalal University of Science and Technology, Sylhet. He working on WASH and construction since 8 years. Currently he leads UNICEF host community project, Cox's Bazar.



## **Md. Johirul Islam**

### *Civil Engineer/WASH Specialist*

Md. Johirul Islam completed his B. Sc. Degree in Civil Engineering from University of Information Technology & Sciences (UITS), Dhaka. He have 4 year experience in WASH and construction. Now he leads UNICEF Life Saving WASH program in refugee camp, Cox's Bazar.



## **Sadia Rahman**

### *WASH Officer*

Sadia Rahman completed her BBA from North South University, Dhaka. She worked as research assistant in Strengthening Health Outcomes for Women and Children. She got training on family planning, child protection and GBV.



## **Jannatara Mousumi**

### *Hygiene Officer*

Jannatara Mousumi completed her BBA from National University. She have 5 year experience in hygiene promotion, child protection and women empowerment. Now she working in UNICEF Lifesaving WASH program at refugee camp as hygiene officer and also analyze hygiene assessment need in Rohingya camp, Cox's Bazar.

# Environment Division



## **Tahera Begum**

### *Hygiene Officer*

Tahera Begum completed her Masters of Social Science from University of Chittagong. She have 4 year experience in hygiene promotion, child protection and women empowerment. Now she working in UNICEF Lifesaving WASH program at refugee camp as hygiene officer and also analyze hygiene assessment need in Rohynga camp, Cox's Bazar.



## **Md. Rafiqul Islam**

### *Civil Engineer*

Md. Rafiqul Islam completed his B. Sc. In Civil Engineering from Stamford University Dhaka. He have 4 year experience in WASH infrastructure construction design and supervision. He successfully completed UNICEF and Bangladesh ARMY project, DPHE-UNICEF water distribution network project in Rohynga refugee camp, Cox's Bazar Now he working in UNICEF host community project in Chakoria.

## **Project area:**

We also have more than 20 professionals who are working to improve the environment in the project sites.



# Design Division



## **Dr. Monjur Hossain**

### *Advisor (Structural Design)*

Md. Monjur Hossain, PhD in Civil Engineering has a long experience in detail structural engineering for over 45 years. He has also profound knowledge in geotechnical engineering and is expert in risk sensitive structural design as well as foundation design. He has also in-depth knowledge in national and international code compliance in structural design, construction and maintenance. He has experience in conducting large civil engineering projects which includes the structural and foundation design of tall buildings. He has a long experience in teaching profession and has a good number of research works. He has also many publications in different national and international journals. Along with his technical expertise, he is very proficient in project management. He has an excellent interpersonal communication skill and he is very efficient in co-ordination with the working team as well as the client.



## **Abdul Siddiq Hossain**

### *Sr. Structural Engineer*

Abdul Siddik Hossain is working as Structural Engineer for about 8 years. He has experience in structural analysis, seismic retrofitting of existing buildings through structural integrity assessment. He was a qualified structural lead assessor of Alliance for Bangladesh Worker Safety, worked for improving worker safety and upgrading RMG factories. He successfully conducted Initial Structural Integrity Assessment of several RMG factories all over Bangladesh. He is interested in earthquake resistant building design for both RCC and Steel Structures. He has sound knowledge in some finite element software such as Csi ETABS, SAP 2000, SAFE, ABAQUS 6.13, PLAXIS 2D, etc. He has also a good command in drafting using AutoCAD.



## **Md. Shajal Khan**

### *Coordinator-Civil Engineer*

Md. Shajal Khan is working as Structural Engineer for about 8 years. He is working for structural analysis, structural integrity assessment of RMG buildings, seismic retrofitting of existing structures. He is interested in earthquake resistant building design of both RCC and Steel Structures, soil liquefaction due to earthquake and so on. He is mainly expert in some finite element software such as Csi ETABS, SAP 2000, and SAFE. He also has good hand in drafting using AutoCAD for any critical drawing. Recently he has completed a training on Geotechnical Engineering Simulation Software named PLAXIS 3D from Singapore. He is also capable to understand and apply several International Codes such as ASCE 41-13, ATC-40 and ACI for seismic vulnerability assessment and retrofitting.



## **Md. Mominul Islam Chowdhury**

### *Quality Control Engineer*

Md. Mominul Islam Chowdhury, BSc & MSc in Civil Engg. (MIST), MIEB is working in EIMS as Coordinator cum Structural Engineer who has experience of more than 8 years. Here, he is responsible for planning and managing different civil engineering projects from the tendering stage to handover. He has knowledge on structural analysis, structural integrity assessment of industrial buildings, seismic retrofitting of existing structures. He is expert in budgeting, preparing BOQ, cost control, scheduling and all the inspection work related to QC of civil engineering works specially building construction, geotechnical work etc. He worked on contractor firm, real estate sector, embassy building construction and international hotel chain's Civil, structure, Fit out and landscape work as a PMC staff. More precisely, he is mainly expert in project management of different geotechnical, construction of different types of building.

# Design Division



## Hamidul Ahsan

### *Geotechnical Engineer*

Hamidul Ahsan is a skillful professional Structural Engineer with comprehensive knowledge in Geotechnical Engineering. His professional experience is more than 6.5 years. He gained his knowledge and experience mainly in the sector of Structural design and Geotechnical Engineering. Designing of high-rise building structure in several projects with success shows his capabilities in structural design. Some of the high-rise building was design for retrofit. Besides he has gain expertise in designing of RCC and Steel Frame structure (low to medium height), Gable Frame roof shed, Brick Structure, Shear Wall Structure etc. His experience in designing pedestrian bridge and design vetting of existing vehicular bridge over small river is also worth mentioning. Apart from new structural design, his experience in assessing and evaluating performance of Existing Structure and Retrofitting Design is comprehensive. He also has very good understanding and knowledge of Building Code such as BNBC, ASCE, ACI, AISC etc.



## Syed Shakib Al Mueiz

### *Structural Engineer*

Syed Shakib Al Mueiz is a high performing Structural Engineer having 7 years of diverse experience in Civil and Geotechnical Projects. He has major exposure in Detail Engineering Assessment (DEA) including retrofitting design, Initial Structural Integrity Assessment, Seismic vulnerability assessment, building and material testing, structural engineering, lifeline engineering, and cost estimation.

He is expert in several Finite Element Modelling software such as CSI ETABS, SAP 2000, SAFE etc. He completed a training on Geotechnical Engineering Simulation Software named PLAXIS 3D from Singapore. He has in-depth knowledge on International Codes such as ASCE 41-13, ATC-40, FEMA and ACI for seismic vulnerability assessment and retrofitting design.



## Khandaker Mahedi Hasan

### *Structural Engineer*

Khandaker Mahedi Hasan is a skillful professional Structural engineer. He has the professional experience for six years and he has gained a vast knowledge and work experience on Assessment of Factory Buildings, Retrofitting design with complete detailing and feasibility analysis of multi storied buildings, Detail Engineering Assessment of Single Storey Steel Roof Shed, Seismic Risk Mitigation through Retrofitting of Civil Infrastructure, tructural and Fire Safety Assessment of Ready-Made Garments and so on.

He is mainly expert in some finite element software such as CSI ETABS, SAP 2000, STAAD.Pro, CSI SAFE. He also has a good hand in drafting using AutoCAD for any critical drawing. He has good knowledge of the Microsoft Office Software Package.



## Aminur Rahman

### *Quality Control Engineer*

Md. Aminur Rahman is a professional Structural engineer. He has a professional experience of more than six years (6.25 Years) and he has gained a vast knowledge and work experience on Construction Management and Site supervision on quality control, construction works. He has also vast experience on physical and topographical survey of different government organization premises, assessment of Factory Buildings, retrofitting design with complete detailing and feasibility analysis of multi storied buildings, Detail Engineering Assessment of Civil Infrastructure, Structural of Ready-Made Garments and so on. He has successfully handed over a remarkable number of projects with International and National clients satisfactorily.

# Design Division



## **Zahidul Islam**

### *Quality Control Engineer*

Md. Zahidul Islam is currently working in Environment and Infrastructure Management Solution (EIMS) Limited as Structural Engineer from April 2017. Mr. Md. Zahidul Islam has completed B.Sc. in Civil Engineering from Ahsanullah University of Science and Technology (AUST) on April 2014. He is working for Structural Analysis, Design, BOQ, Construction Project Supervision, Quality Assurance of Materials, project Implement & coordinating with his seniors & subordinates for solving critical problems of civil engineering projects.

He has already completed a High-Rise Building Construction project successfully with his team of subordinates for the construction phases in Tanaka Group. He is interested to work in Construction Project Safety Analysis. He is mainly expert in some finite element software such as CSI ETABS, SAP 2000, STAAD.Pro, Safe. He also has a good hand in drafting using AutoCAD for any critical drawing.



## **Shaikh Mahfuzur Rahman**

### *Structural Engineer*

Shaikh Mahfuzur Rahman is a skillful professional Structural Engineer with more than six years' experience in the field of structural analysis, design, detail engineering assessment & retrofitting design. He worked mainly in the field of structural design of heavily loaded Industrial building, Electrical Substation Building & Machine Foundation Design for some of the reputed organizations in Bangladesh. He was associated with Detail Engineering Assessment work on the RMG sector regarding ACCORD / ALLIANCE / DIFE compliance issue. He worked as a structural engineer of twelve heavily loaded Tannery industries at BSCIC Tannery Industrial Estate, Savar, Dhaka. He also worked for several UNICEF-Bangladesh projects as Structural Engineer. He is experienced in the application of ASCE\_SEI 41-13, FEMA-154, & AISC 360-05 besides Bangladesh National Building Code.



## **Mohon Ali**

### *Structural Engineer*

Md. Mohan Ali is a professional Structural engineer. He has the professional experience for 5 years and he has work experience on Assessment of Factory Buildings, Retrofitting design with complete detailing and analysis of multi storied buildings, Detail Engineering Assessment, Static and Dynamic Analysis and Design of Reinforced Concrete Structure, Structural Safety Assessment of Ready Made Garments (RMG). He has conducted researches on the comparison of three version of BNBC 1993, 2006 & 2014; Structural Response of Coastal Wooden Infrastructure to Cyclonic Wind And Surge Induced Thrust Force. He can perform well both as an individual and as a group member.



## **Atiqur Rahman**

### *Structural Engineer*

Working within a fast-paced and thought-provoking sphere for five years as a structural engineer, he has excelled in fine-tuning his expertise in synergy with the organization's goals. He has worked diligently towards timely, under-budget completion of multiple projects within a variety of sectors, including government, RMG, industrial, residential, and NGOs. As a structural engineer, he has experience in design and detailing of multistoried buildings up to 25 stories, one story steel shed buildings and seismic evaluation and retrofit of existing buildings using Rapid Visual Assessment (RVA) checklists like FEMA-154, ASCE 41-13 (Tier1) and Detail Engineering Assessment(DEA) checklist complying the Bangladesh National Building Code (BNBC), ASCE 41-13.

# Design Division



## **Asif Amir**

### *Electrical Engineer*

Asif Amir is a qualified, efficient and self-motivated Electrical Engineer. He has a professional experience for more than five years. He has a wide range of experience in erection, commissioning of refinery plants, and inspection of electrical works as per international standards and drawing of electrical layout. He is working for preparing electrical layout drawing of factory buildings with the collaboration of EIMS design team. He is expert in drafting software such as AutoCAD (2D and 3D), PPM using Microsoft Project etc. He has the capability to do any erection, commissioning, inspection, drawing and simulation work under pressure.



## **Nowshin Tabassum**

### *Architect*

Experience on Visual appearance of the buildings and structures before final structural design with respect to building laws and the regulations. Good knowledge on methodological Analysis on Implementation of Housing and Architecture for Green Living in combination with Auto Cad, Sketch up pro, Photoshop and Corel draw software.



## **Rafjany Yasar**

### *Assistant Structural Engineer*

Rafjany Yasar is a structural engineer with considerable theoretical knowledge in the field of structural design of RCC, steel and composite members. He has teaching experience over three and a half years in the field of civil engineering at bachelor level. He has designed some residential buildings under supervision of senior engineers within his short career in teaching. Besides, he was involved in the DEA of some garment factory buildings. He is skilled in the analysis and design of RCC walls subjected to blast loading.



## **Nur -E- Jannat**

### *Assistant Architect*

Experience of taking part in the architectural designing process with respect to building laws and regulations for construction of infrastructure. Having knowledge about sustainable green architecture, good command over Autocad, Sketch up , Photoshop, Coreldraw, Lumion software.

# Design Division



## **Md. Zamirul Islam**

### *BIM Engineer*

Md. Zamirul Islam could be a profoundly spurred and enthusiastic BIM modeling designer. He has the professional involvement for over one years and he has gained a vast information and work involvement on BIM modelling (Green Building). He has conducted critical investigates on Green Building energy optimization, Sustainable Building design and performing in Building Information Modeling (BIM), Autodesk Revit Architecture, Structure, MEP, MS project (Costing & Scheduling) Checking and Controlling of Construction management, AutoCAD 2D & 3D, ETABS Structural Analysis, Autodesk Robot Structural Analysis, Autodesk Navisworks Manage. He has already submitted BIM implementation, 3D demonstrating, Plan making, Cost estimation of JHILMIL Project by BIM Modeling (Revit) and different report for Site Supervision, Site Detailing of UNICEF Project.



## **Samiya Siddique**

### *Assistant Structural Engineer*

Samiya Siddique is a visionary Structural Engineer with a robust understanding of the technical elements of Civil Engineering. With a strong academic background and research experience, she has performed several tasks in her recently started professional career. She has contributed to different structural design, structural analysis, Integrity Analysis along with Detail Engineering Analysis of RMG buildings. Her undergrad thesis was based on highway pavement materials which have been later published at an international conference of ASCE. With profound skills in Software like AutoCAD, ETABS, she is eager to learn and explore more in the professional engineering sector. She has attended several workshops and seminars to enhance her technical understanding.



## **Shamim Uddin**

### *Sr. Draughtsman*

Md Shamim Uddin, Diploma in Architecture, is a reliable professional having more than 19 years of working experience on Drafting Architectural, structural, electrical & plumbing drawings, preparing as built drawings, visit site and coordination with all kind of works with the higher authority, Drafting for overseas projects, Design of Product as per requirement of customer, Site management, Drawing Details, Finishing or Ornamental Works, Data management etc. He has participated in IDB-BISEW IT Scholarship training in different topic like Adobe Photoshop, Microsoft Office Project (PPM/CPM), Computer Fundamental, AutoCAD 2D & 3D, 3Ds MAX, Revit Architecture etc. He is now working in EIMS as a Draftsman (Structural) performing the duties like Drafting all structural drawings, cad details, preparing as built drawings, visit site and coordination with all kind of works with the higher authority.



## **Zahir Iraj**

### *Sr. Draughtsman*

Zahir Iraj is currently working in Environment and Infrastructure Management Solution (EIMS) Limited as Senior Draughtsman/CAD Operator from October, 2016. Mr. Zahir completed Diploma in Civil Engineering from Sylhet Polytechnic Institute on 2008. He is working for preparing the as-built drawing of factory buildings, retrofitting working drawing with the collaboration of EIMS design team. He is expert in drafting software such as AutoCAD (2D and 3D), Revit Architecture, 3D Studio Max, PPM using Microsoft Project, etc. He has the capability to do any drawing and simulation work under pressure. He has almost eight years of experience in the field of drafting and the assessment of building construction to collect the as-built condition.



# Design Division



## **Sharif Uddin**

### *Draughtsman*

Md. Sharif Uddin is currently working in Environment and Infrastructure Management Solution (EIMS) Limited as Junior Draughtsman/CAD Operator from November 2016. Mr. Sharif has completed Diploma in Civil Engineering from Chittagong Polytechnic Institute on October 2012. He is working for preparing the Architectural, Structural drawing, as-built drawing of factory buildings, retrofitting working drawing with the collaboration of EIMS design team. He is expert in drafting software such as AutoCAD (2D and 3D), Revit Architecture, 3D Studio Max, and PPM using Microsoft Project.



## **Mizanur Rahman**

### *Junior Draughtsman*

Mizanur Rahman is currently working in Environment and Infrastructure Management Solution (EIMS) Limited as Junior Draughtsman/CAD Operator from November 2016. Mr. Mizanur has completed Diploma in Civil Engineering from Palashbari Polytechnic Institute Gaibandha on October 2014. He is working for preparing the as-built drawing of factory buildings, retrofitting working drawing with the collaboration of EIMS design team. He is expert in drafting software such as AutoCAD (2D and 3D), 3D Studio Max, PPM using Microsoft Project, etc.

## **Geotechnical lab:**

We have 6 geotechnical lab engineers and 10+ lab technicians ensuring quality testing.



# Construction Division



## **A.T.M. Zaheedul Islam**

*Head of Construction Division*

A.T. M Zaheedul Islam is a professional Construction Engineer in the field of Civil Construction work having more than twenty-nine years' experience in home and abroad. He was engaged in the construction of various projects like Highrise Building(City Centre,37 storied Commercial Building at Motijheel),International standard Hospital(Square Hospital at Panthapath), Hotel extension project(Hotel Sheraton at Mintoo Road),Power Plant (100MW power Plant at keraniganj of Sikder Group),High quality Apartments at Gulshan and Banani (made by Comfort Living Ltd.), Large quantity Water reservoir(in Makkah,KSA),Service Apartment with 4 basement and Doreen Tower (made by Doreen Group at Gulshan-2),Commercial High rise Platinum rated Green Building Saiham Tower (made by Saiham Group at Gulshan-1).



## **Md. Saiful Haq**

*Senior Construction Engineer*

Md. Saiful Haque is currently working in Environment and Infrastructure Management Solution (EIMS) Limited as Project Manager from June 2015. Md. Saiful Haque completed B.Sc. in Civil Engineering from Stamford University Bangladesh on December 2008. He is working for both RCC and Steel retrofitting construction management BOQ, cost estimation, coordinating with clients and his subordinates for solving critical problems of civil engineering projects, jet grouting work. Also, he has experience on new building construction work from 2009 to 2015. He has already completed several projects successfully with his team of subordinates for both management and construction phases in EIMS. He has also expertise in some software such as Auto-Cad, Google Sketch Up, ETABS. He also has good hand in drafting using AutoCAD for any critical drawing.



## **Md. Kamrul Hasan**

*Senior Construction Engineer*

Kamrul Hasan has 15 years' experience as a Construction Engineer. He is experienced on bridge retrofitting work by anchor beam and pile cap extension. He also worked on Anchor pile and Jet-grout piling work. He has a grade experience on factory building retrofitting work of RCC & STEEL work. As well as monitoring all the activities of project operation according to design, plan schedule and BOQ. Estimate and Bill check. Quality control of workmanship and materials. Monitoring all subcontractors works closely to ensure that the quality for the works as per specification and complete on time. Site management, Labor Management and co-ordination with BEZA & CCECC.



## **Md. Eleus Hossain**

*Procurement / inventory Incharge*

Mr. Md Eleus Hossain is a skillful professional Store & Procurement Manager. He has a professional experience of Sixteen years and he has gained a vast knowledge and work experience on Store Management Store Inventory Monthly Store Materials Statement, Store Stock Register Maintain & Construction Materials Purchasing work & Site Accounts Maintain Head office to Site office Store Inventory.

# Construction Division



## **Md. Ashraful Islam (Ashraf)**

*Estimator & BoQ Engineer*

Md Ashraful Islam working in this organization as a BoQ & Estimate Engineer, Construction Division. He is experienced for more than ten years on Detail Engineering Assessment of multi storied garments factory & residential buildings, new construction supervision, and BoQ & Estimation works. Recently he has completed Detail Engineering Assessment of UNICEF-05 project, and which BoQ work is ongoing. Also some large retrofitting RCC & Steel BoQ are submitted among them. Delta Marriott, Sikder center bridge, LGED Kamalnagar Upozila Complex, Laxmipur, Anowara Cotton Ltd, ICONIC TOWER SIKDER piling, Kwun Tong, Unicef WTP pipe project, UNICEF-05 project, are remarkable.



## **Md. Imran Hossain**

*Mechanical Engineer*

Md. Imran Hossain is a skillful professional Mechanical Engineer with vast knowledge. His has been working for 7 years on his profession and he has gained knowledge and work experience on maintenance, servicing, operation of all mechanical heavy equipment particularly hydraulic machinery, mechanical drawing using solid works software as well. He has been working for 4 years on jet grouting system with other mechanical and minor electrical trouble shooting solution. Before joining this company he has worked at Anon Tex group (power generation section) and shohag group (Automobile section).



## **Mohammad Nizam Uddin**

*Site Engineer (Civil)*

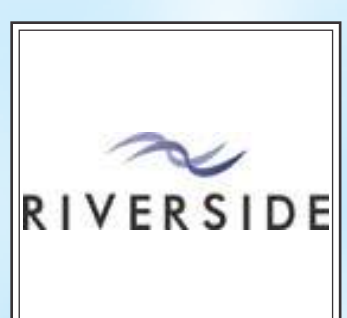
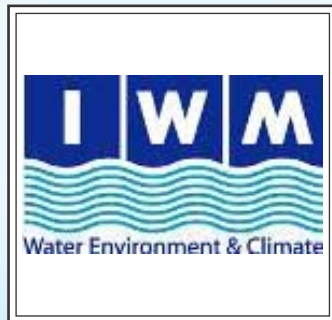
Mohammad Nizam Uddin is a skillful professional Civil Engineer with vast knowledge. He has been working for 6.5 years on his profession and he has gained knowledge and work experience on maintenance. He also attained knowledge in collecting soil test sample and works in geotechnical arena.

## **Construction sites:**

We also have more than 20 professionals working to improve the environment in the project sites.



# CLIENTS





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