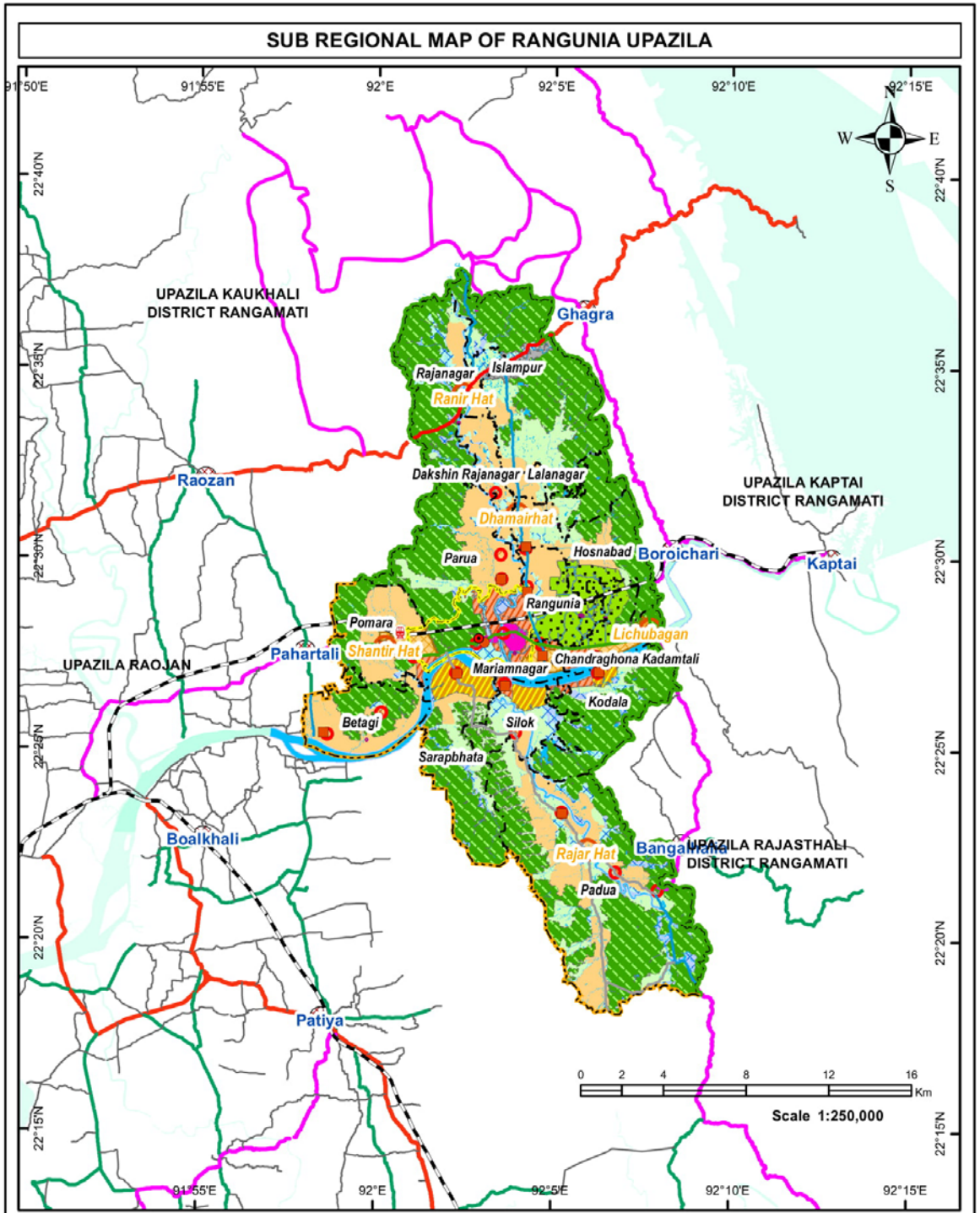
Rangunia Upazila

Sub Regional Plan

Waterbody



Structure Plan

Wholesale Trade Zone

Wild Life Sanctuary

Structure Plan

Zoning

Agriculture Suitability

Circulation Network

Core Urban

Eco Sensitive, Agriculture, Water Retention Zone

Fringe Urban

Grey Zone

Main Flood Flow Zone

Potential Urban

Restricted Special

Rural Settlement

Sub Flood Flow Zone

Urban Deferred

Water Suppy Protection Zone

Waterbody

Industrial Zone

Monument

Overhead Tank

Poultry and Fish Processing Zone

Retail Trade Zone

Sludge Treatment Plant

Solar Park

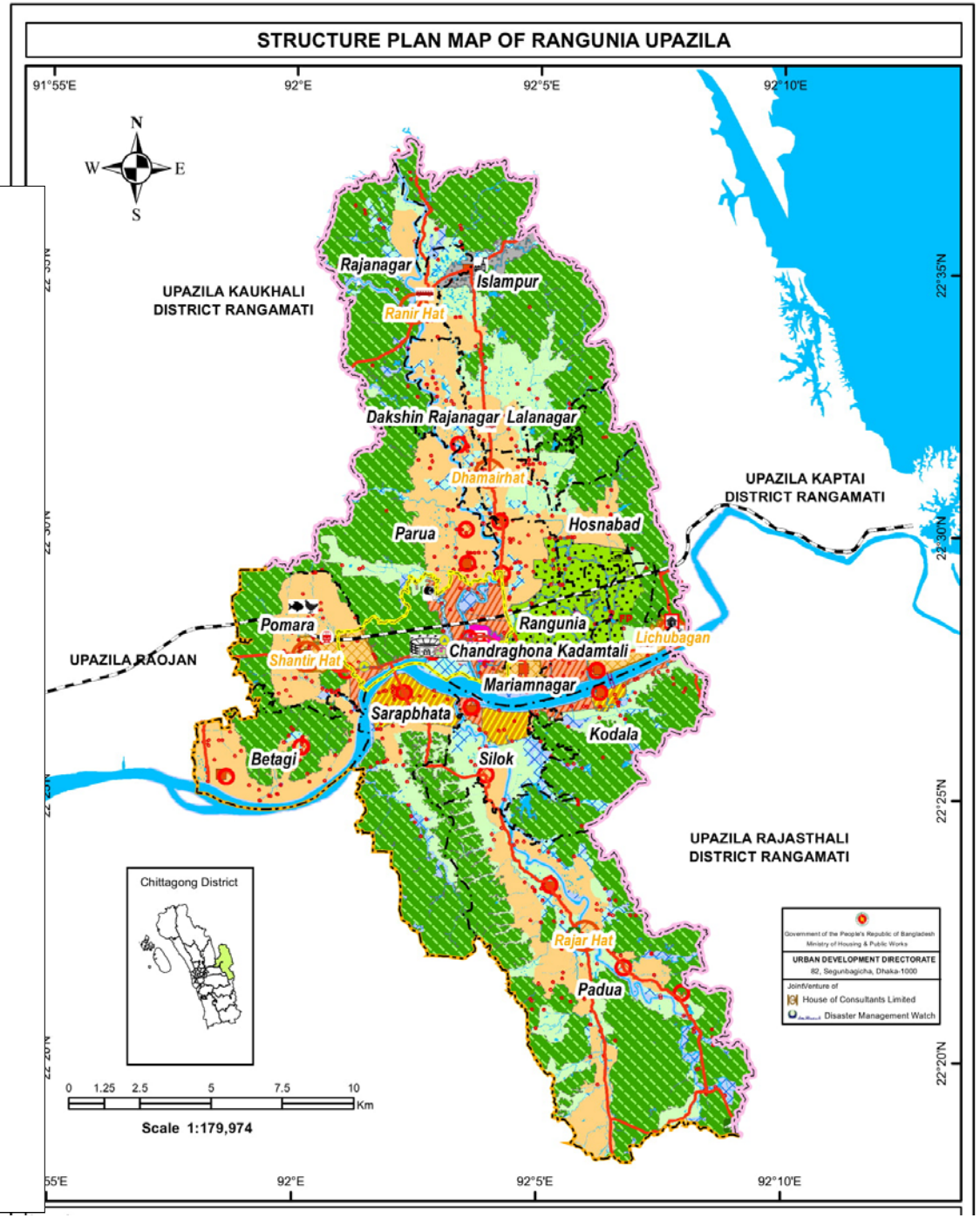
Solid Waste Treatment Plant

Truck Stand

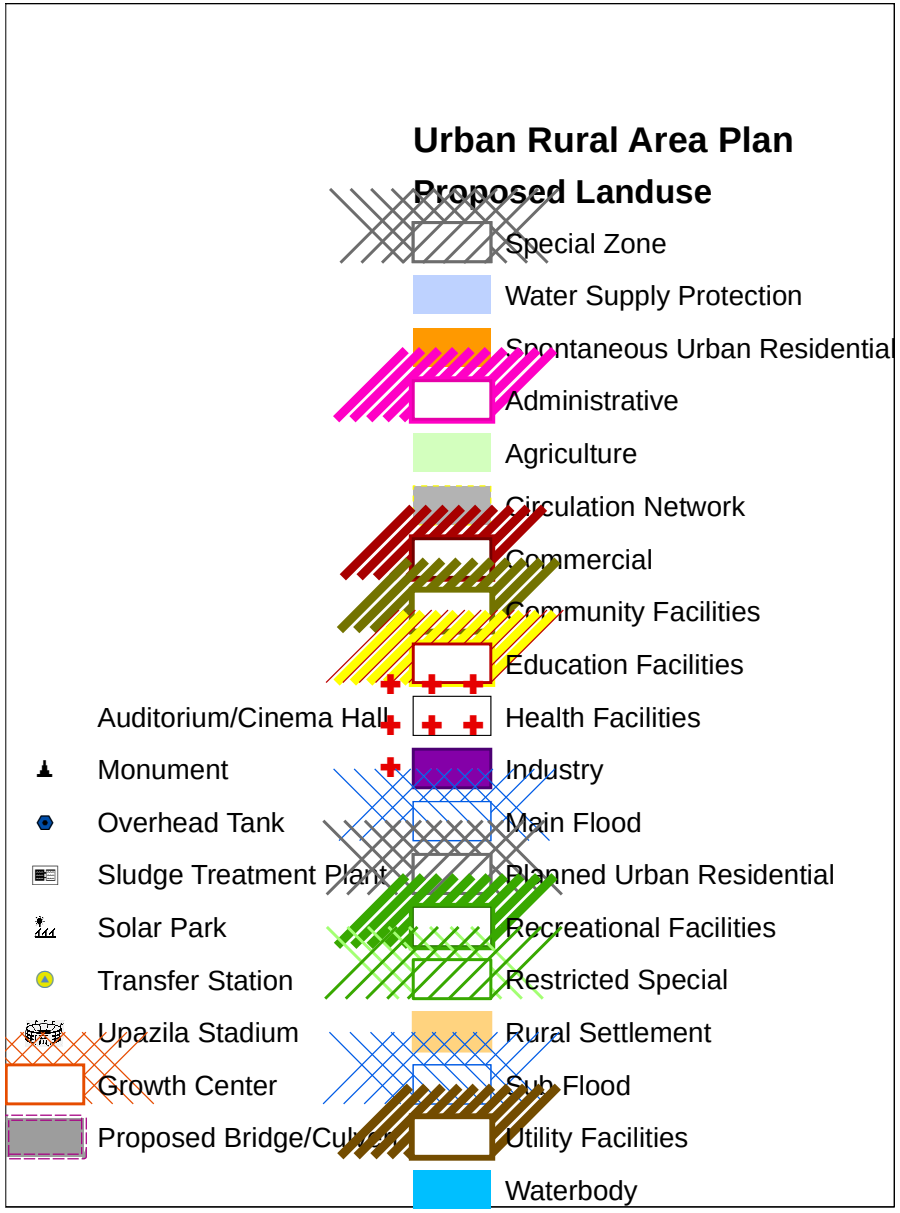
Truck Terminal

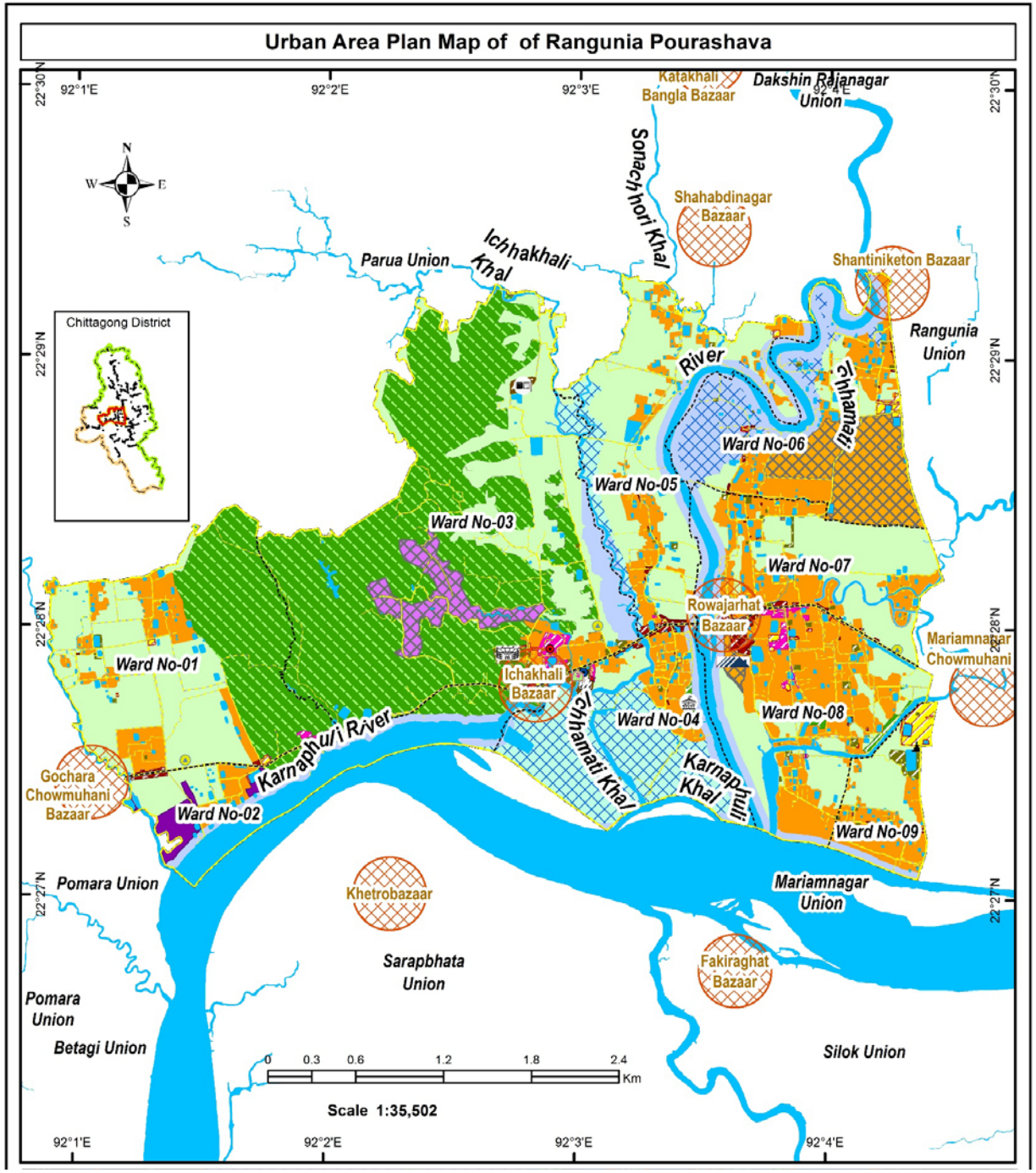
Upazila Stadium

Water Treatment Plant

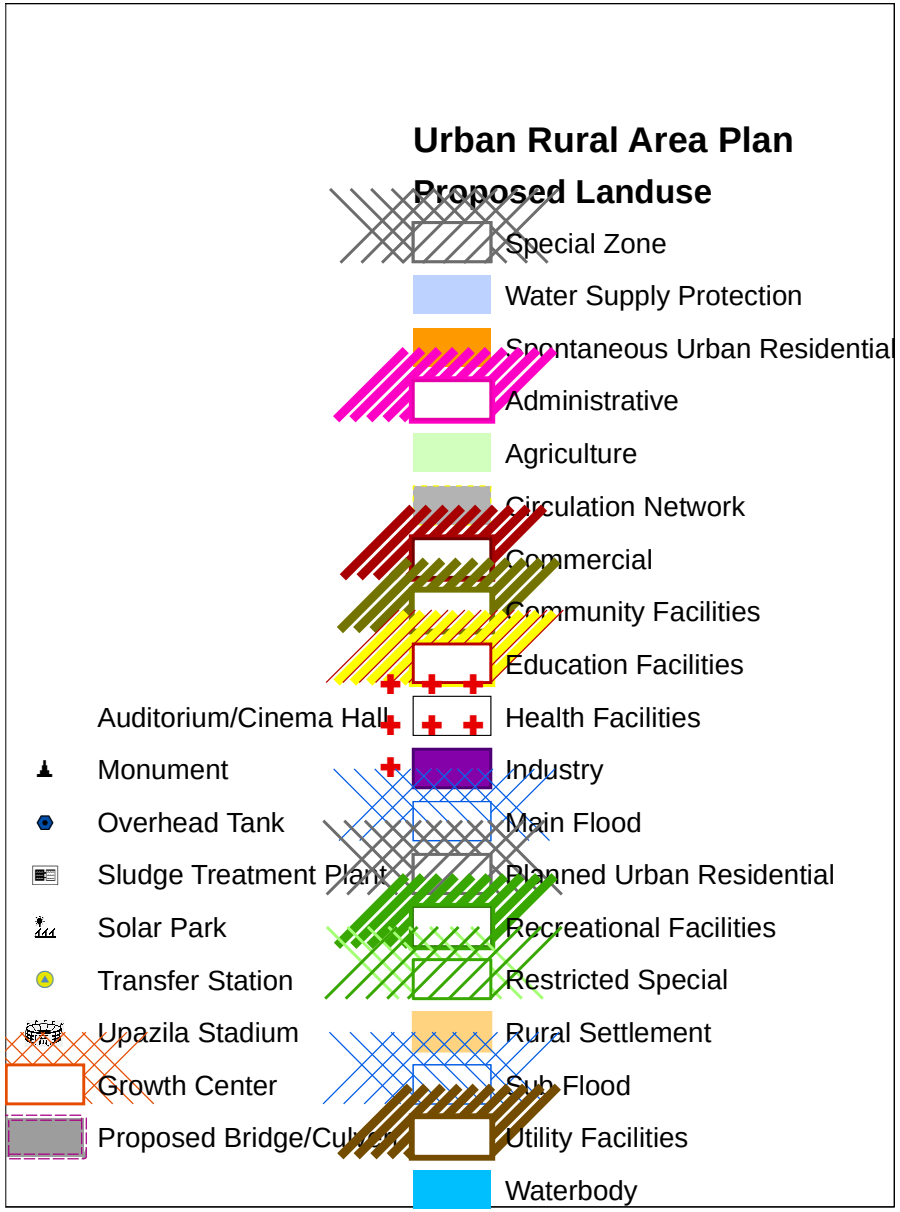


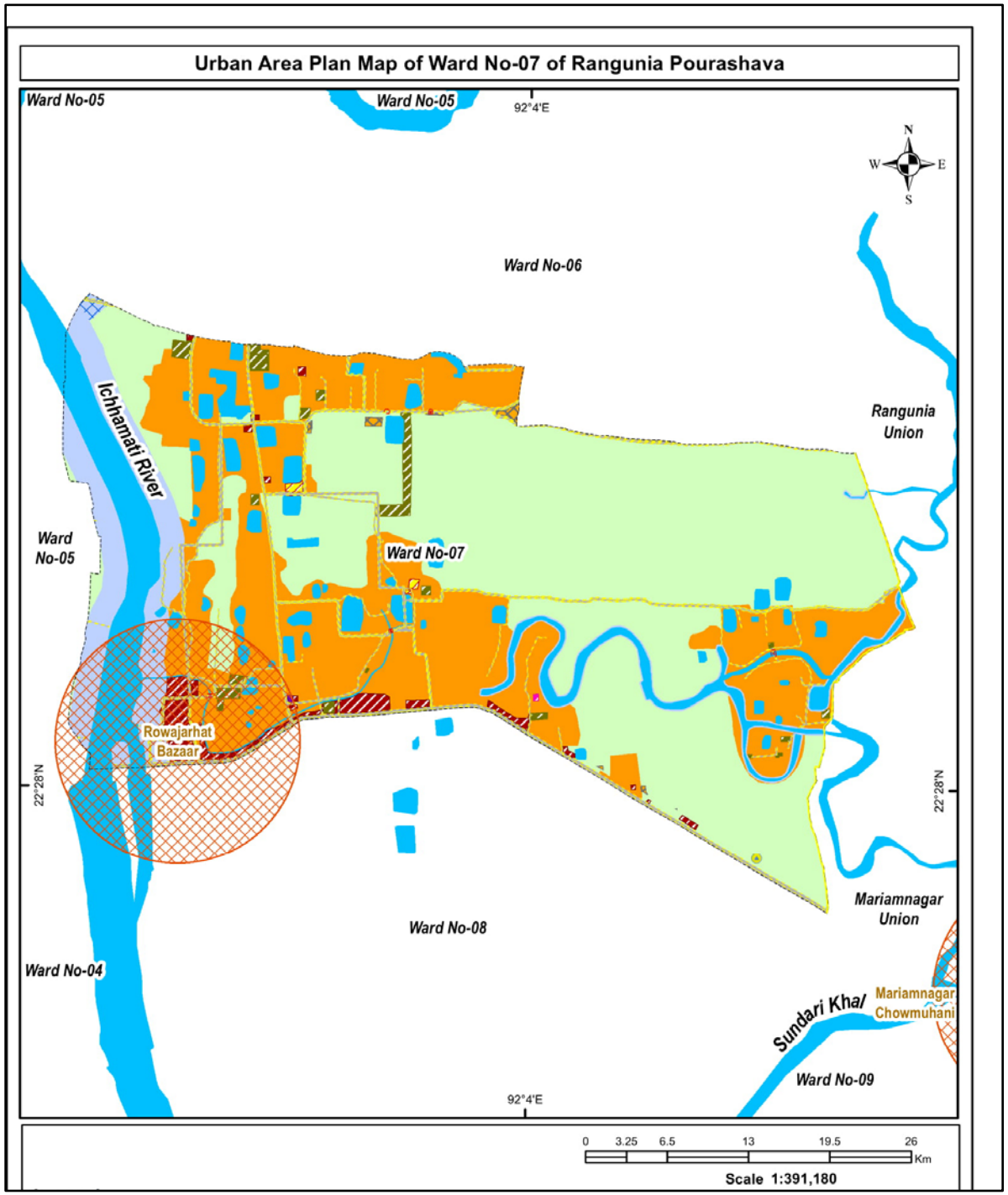
Urban Area Plan



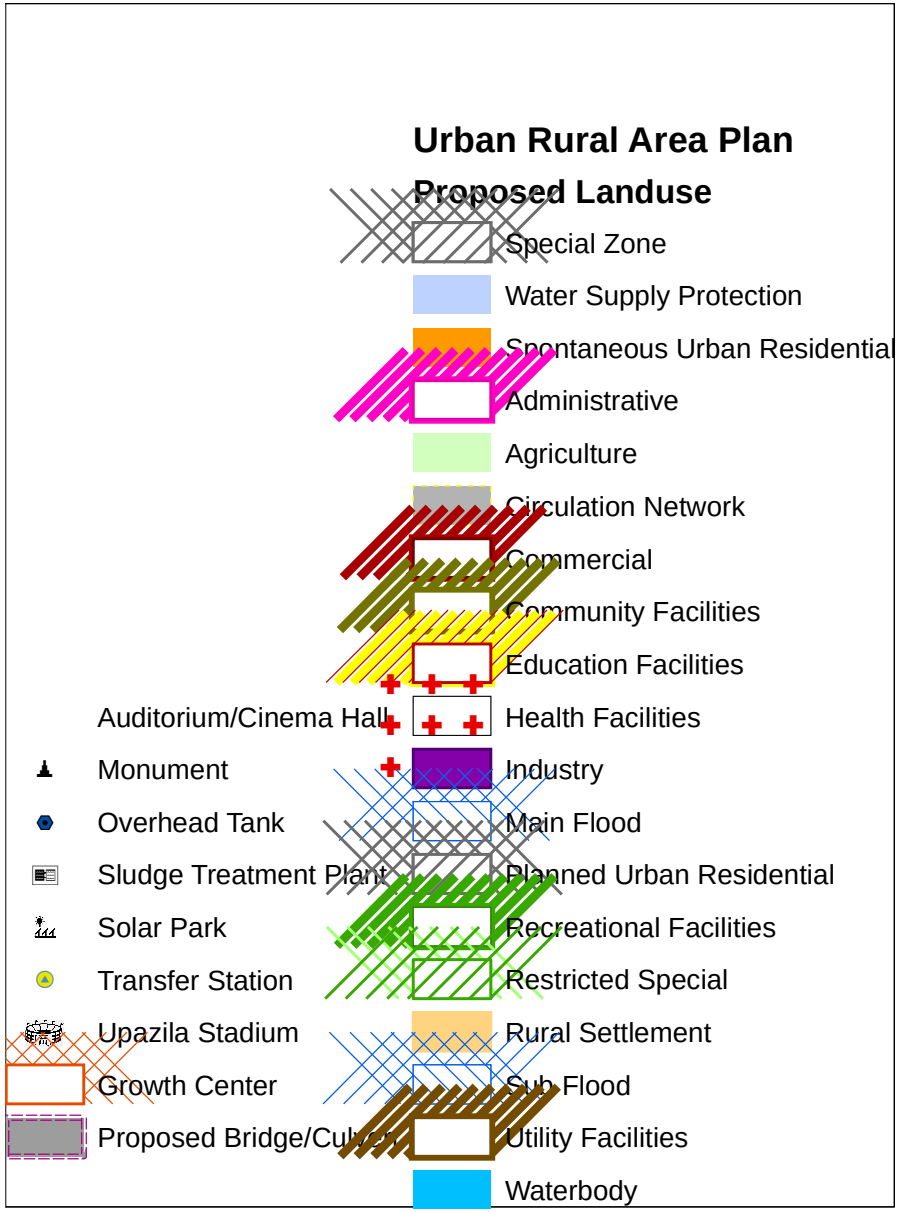


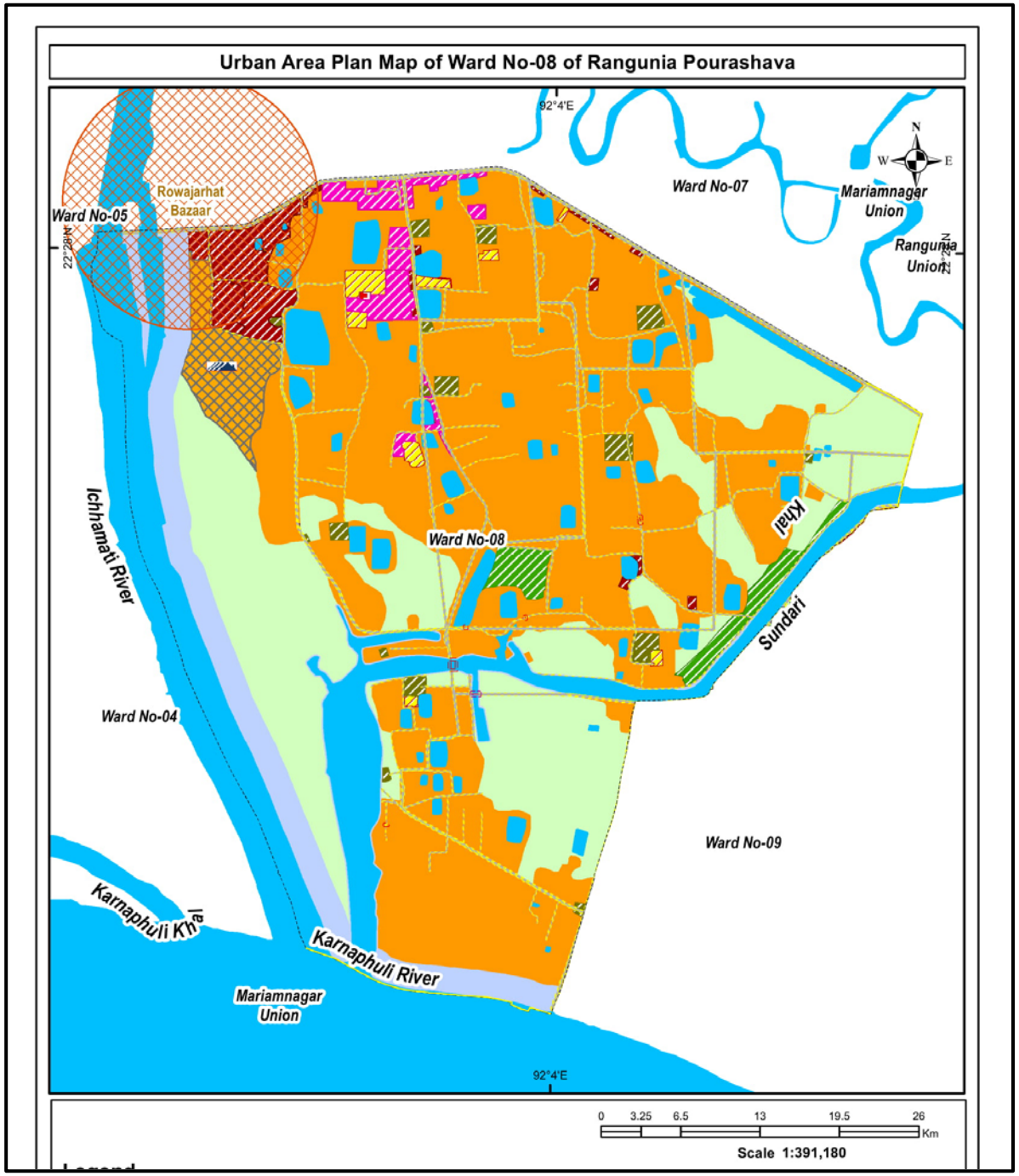
Urban Area Plan





Urban Area Plan





Rural Area Plan

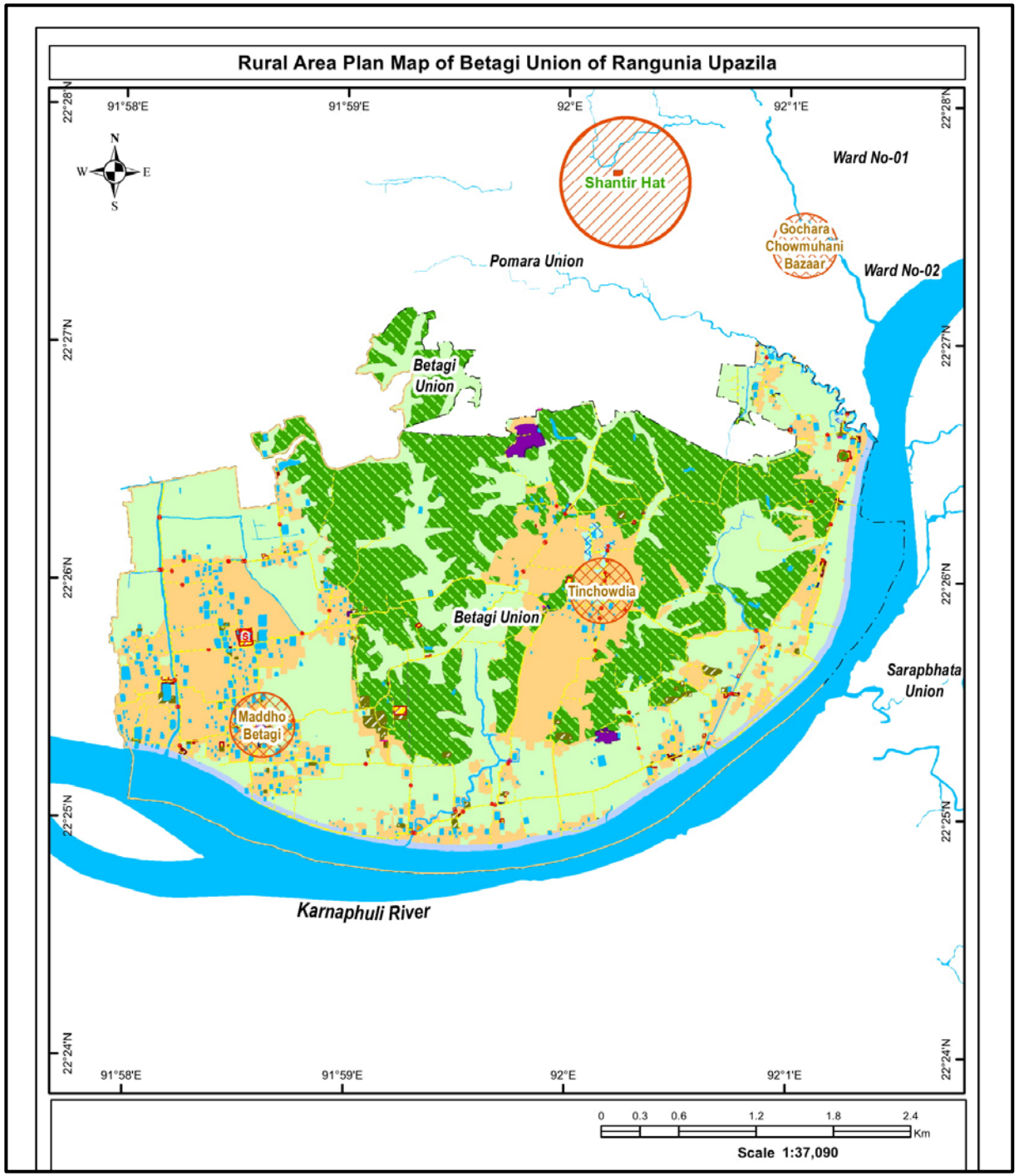
Agriculture
Circulation Network
Commercial
Community Facilities
Education Facilities
Health Facilities
Industry
Main Flood
Mixed Use
Restricted Special
Rural Settlement
Sub Flood
Waterbody

Proposed Primary School
Proposed RSSC
Proposed Tempo CNG Stand
Potential Growth Center
Growth Center
Bridge Culvert
Proposed Bridge/Culvert

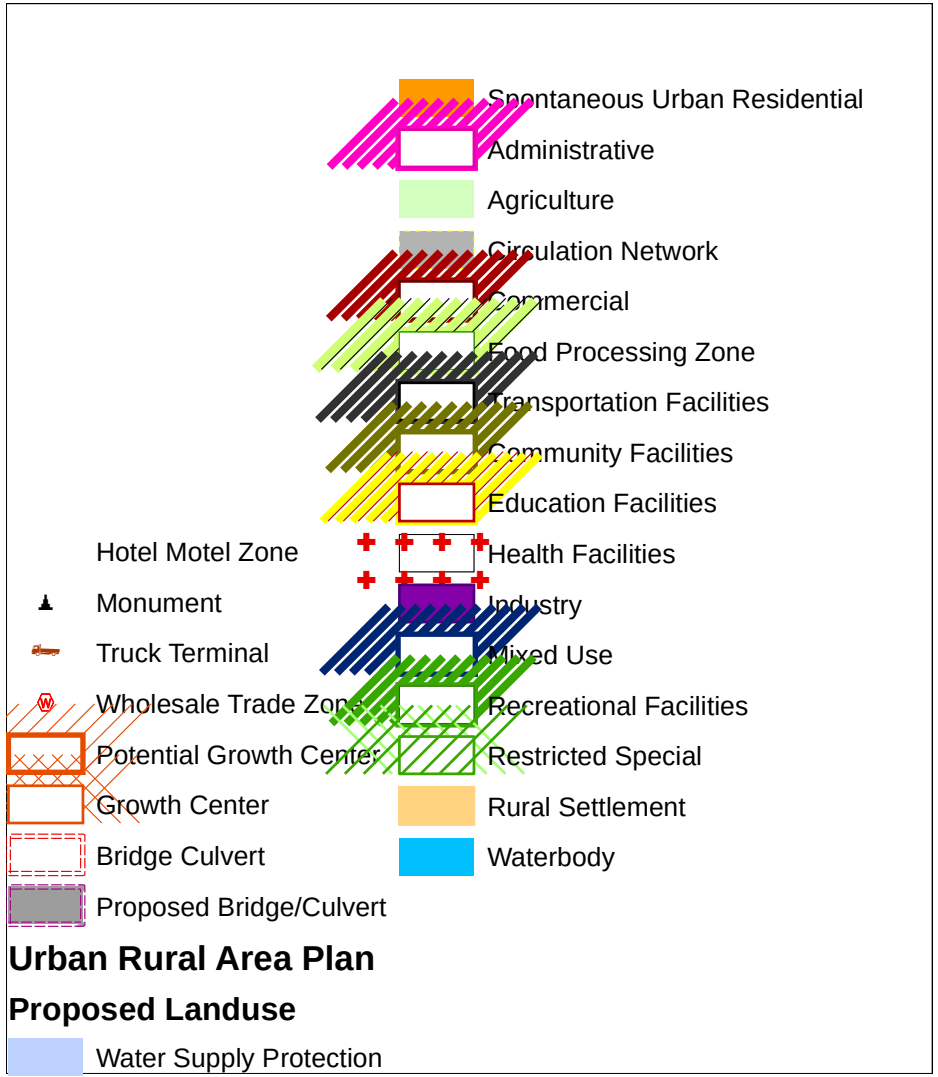
Urban Rural Area Plan

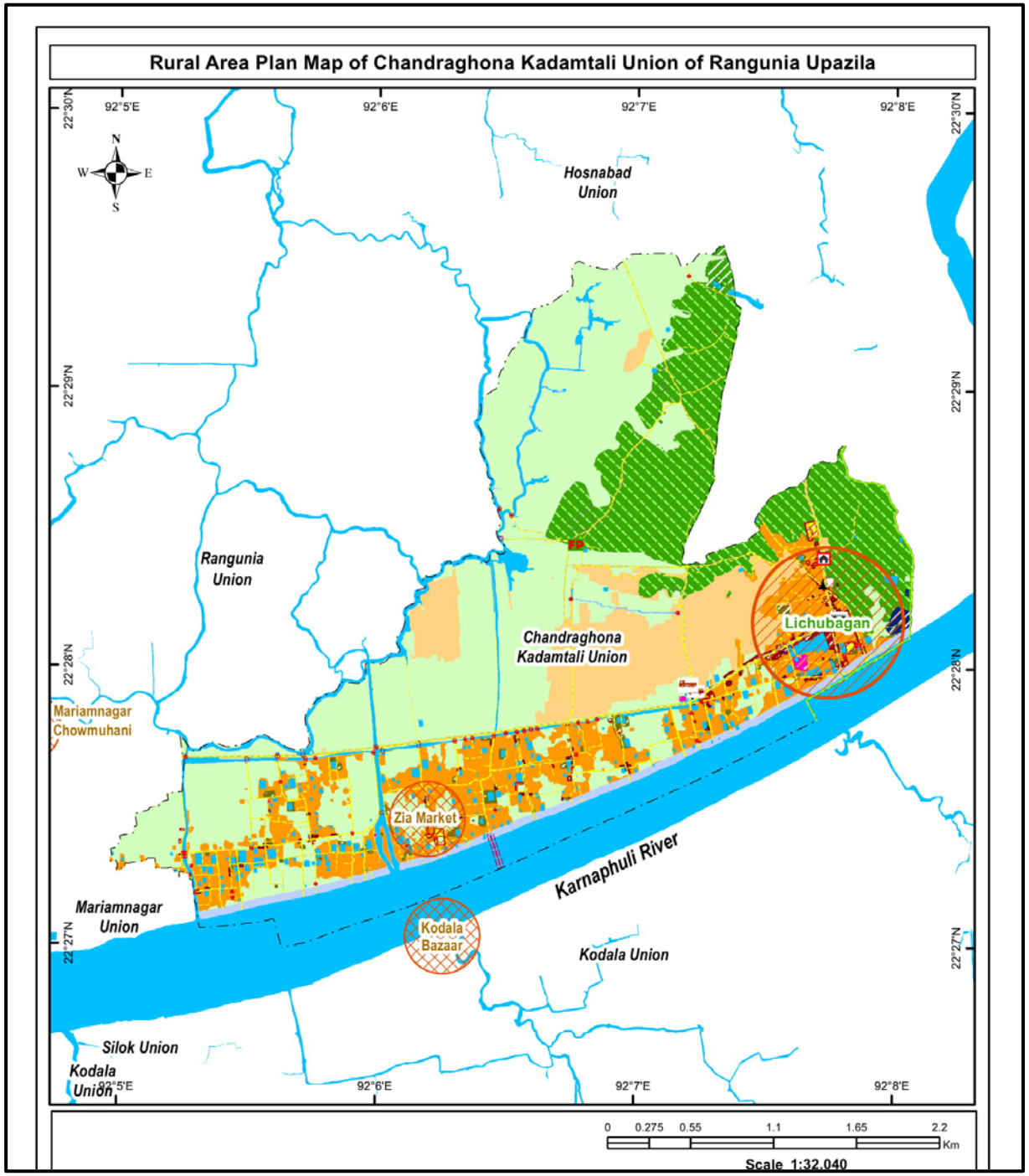
Proposed Landuse

Water Supply Protection
Spontaneous Urban Residential
Administrative



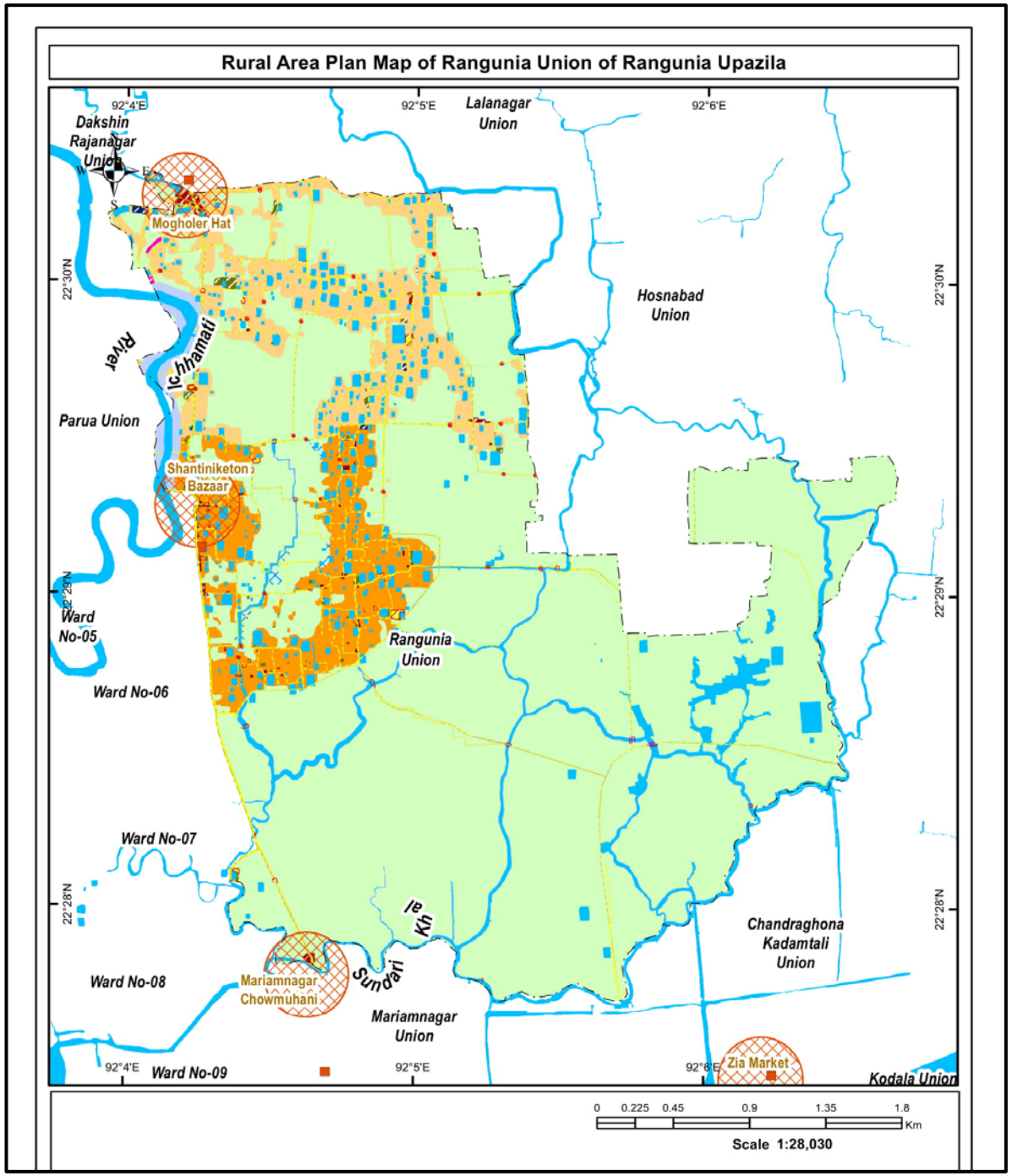
Rural Area Plan



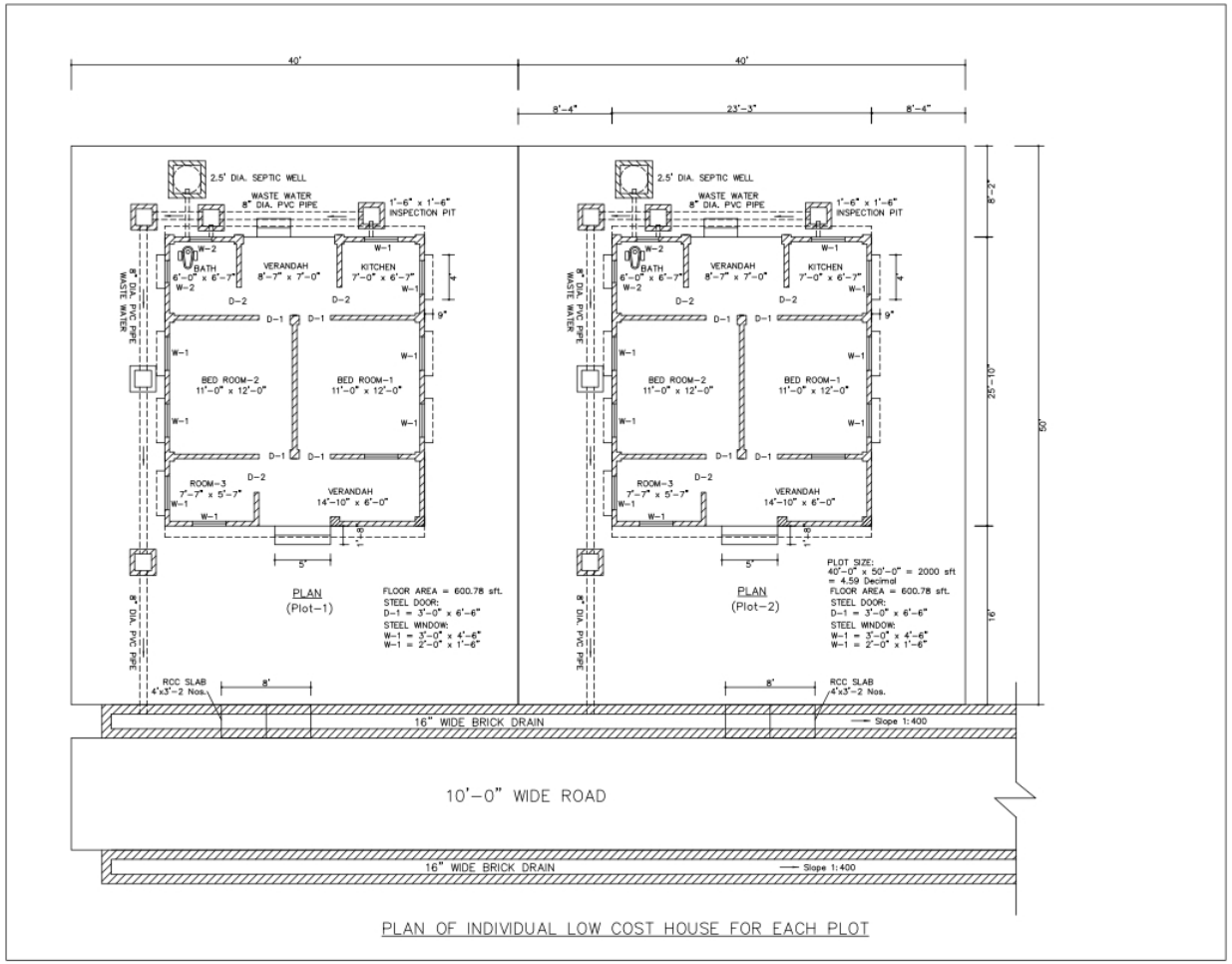


Rural Area Plan

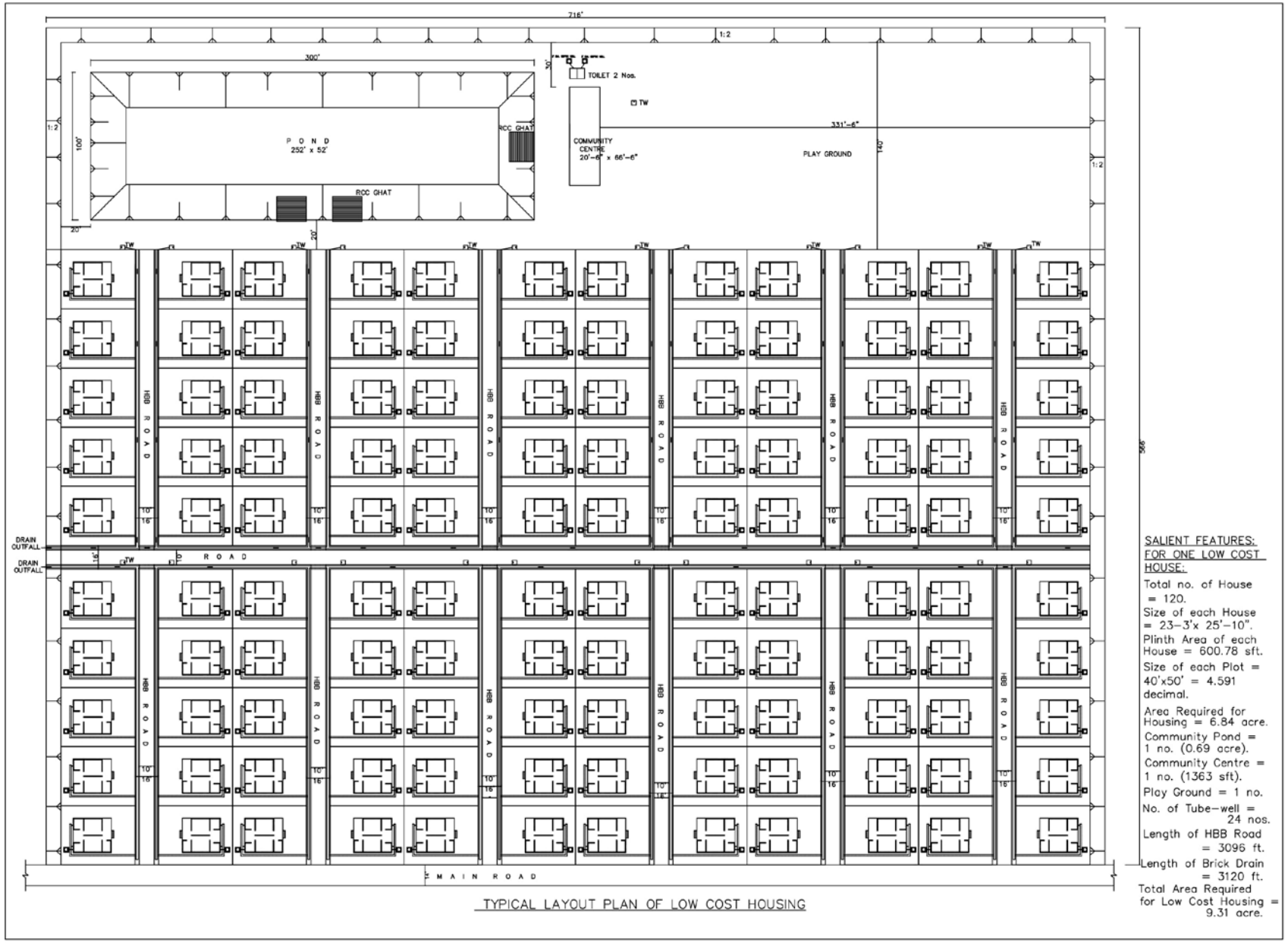
Waterbody



Action Area Plan

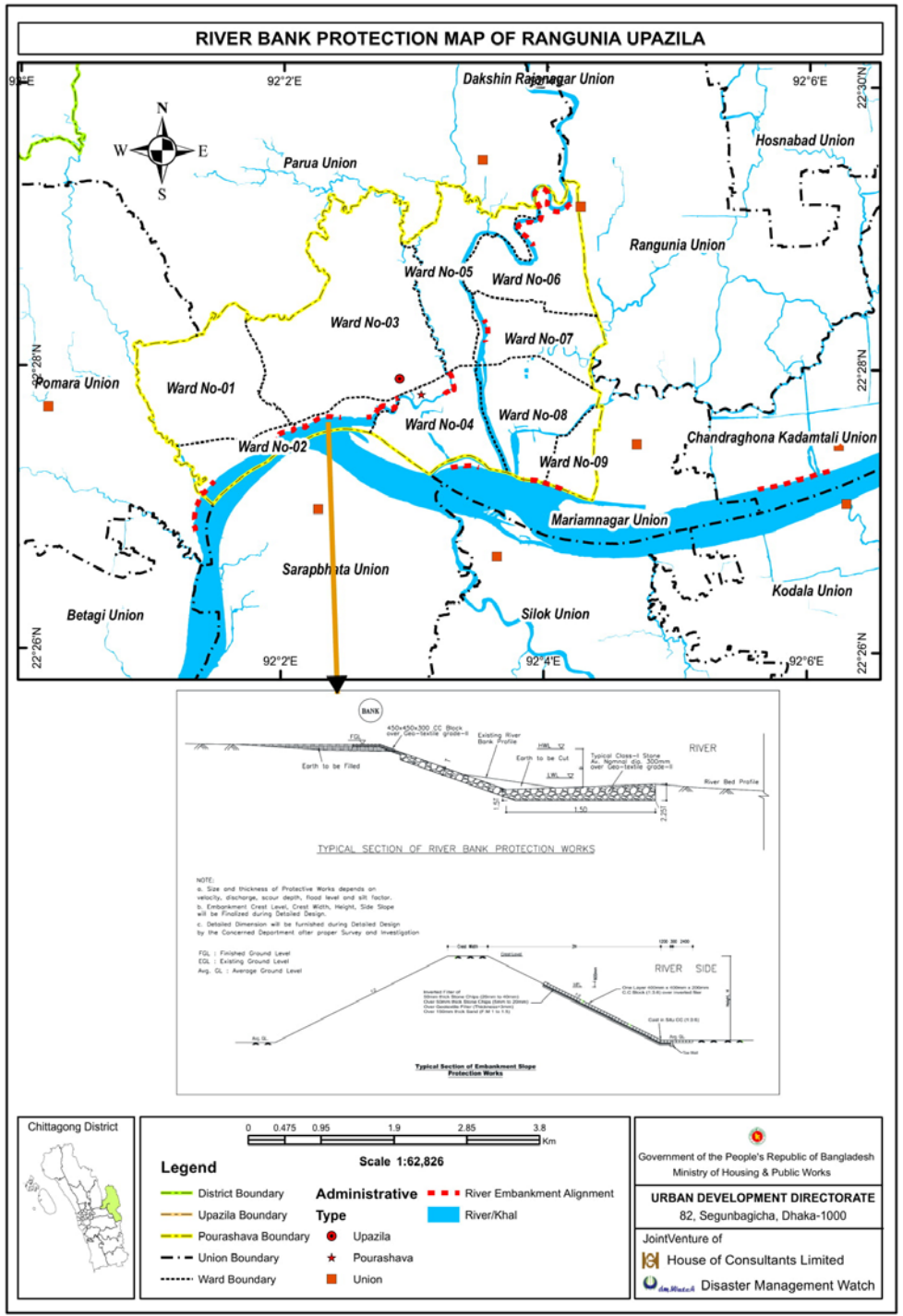


Action Area Plan

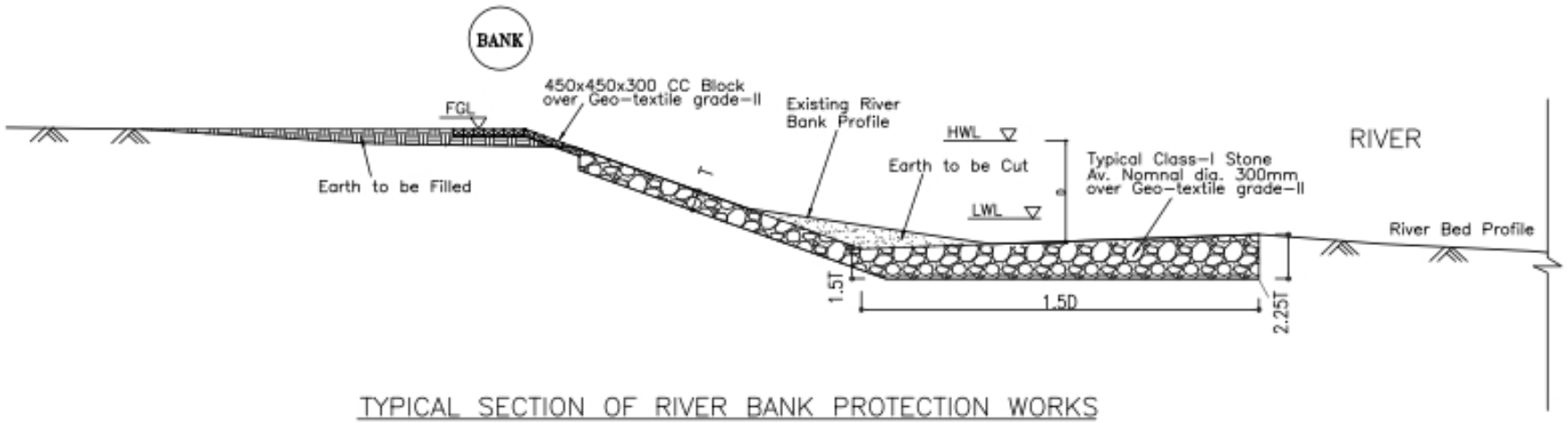


TYPICAL LAYOUT PLAN OF LOW COST HOUSING

Action Area Plan



Action Area Plan



TYPICAL SECTION OF RIVER BANK PROTECTION WORKS

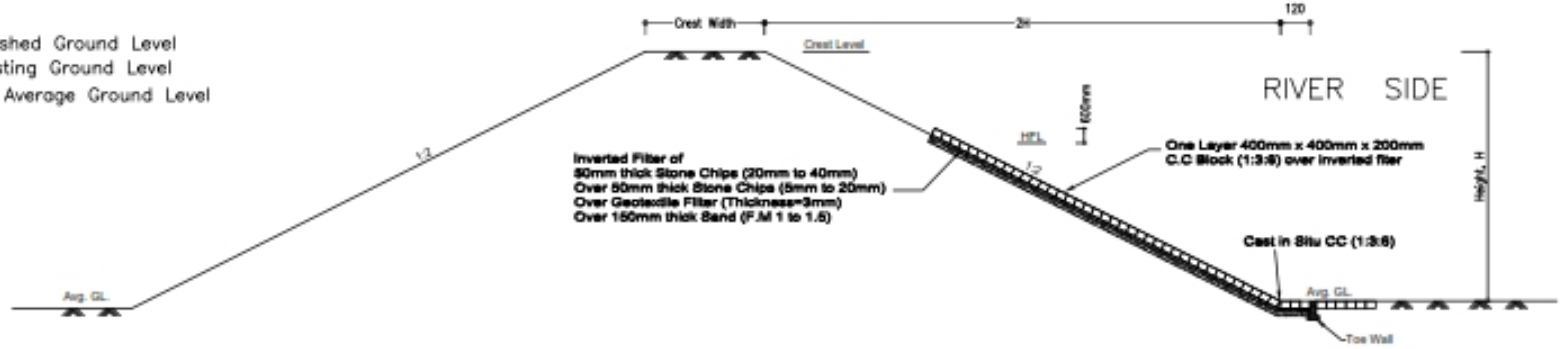
NOTE:

a. Size and thickness of Protective Works depends on velocity, discharge, scour depth, flood level and silt factor.

b. Embankment Crest Level, Crest Width, Height, Side Slope will be Finalized during Detailed Design.

c. Detailed Dimension will be furnished during Detailed Design by the Concerned Department after proper Survey and Investigation

FGL : Finished Ground Level
EGL : Existing Ground Level
Avg. GL : Average Ground Level



Typical Section of Embankment Slope Protection Works

Ramu Upazila

Sub Regional Plan

Upazila Road
Chittagong Cox's Bazar Railway Link
Sub Regional Growth Center
Waterbody
Growth Center

Structure Plan

Union
Air Port
Bus Terminal
Railway Station

Roads Connected

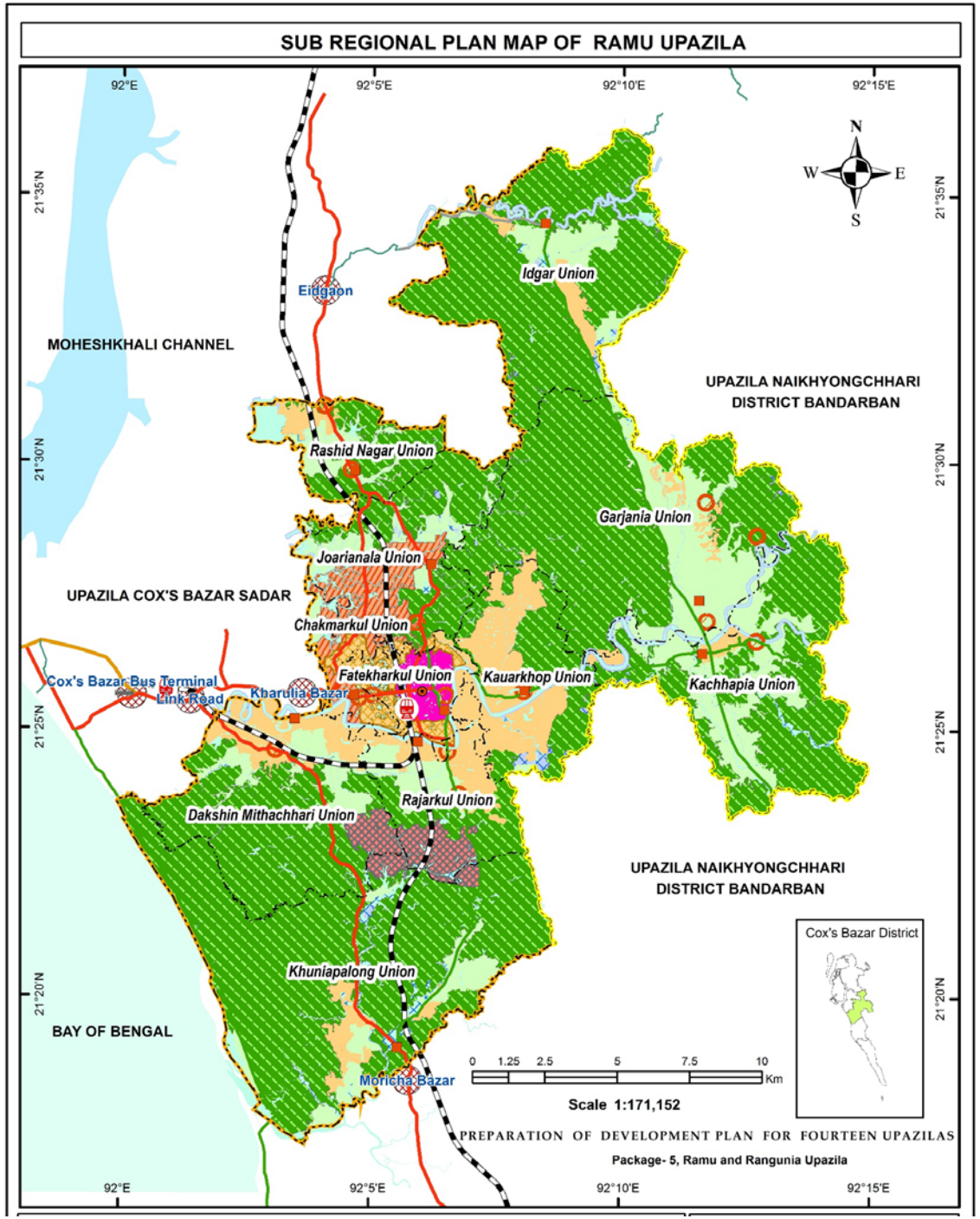
National Highway
Regional Highway
Zilla Road
Other Agency Road

Major Road

National Highway
Zila Road

Zoning

Agriculture Suitability
Circulation Network
Core Urban
Fringe Urban
Main Flood Flow Zone
Restricted Special
Restricted Special-Military
Rural Settlement
Sub Flood Flow Zone
Urban Deferred
Water Supply Protection Zone
Waterbody



Structure Plan

Stadium

Tourist Spot

Truck Stand & Frieght Zone

Water Treatment Plant

Wholesale Trade Zone

Zoning

Agriculture Suitability

Circulation Network

Core Urban

Fringe Urban

Main Flood Flow Zone

Restricted Special

Restricted Special-Military

Rural Settlement

Sub Flood Flow Zone

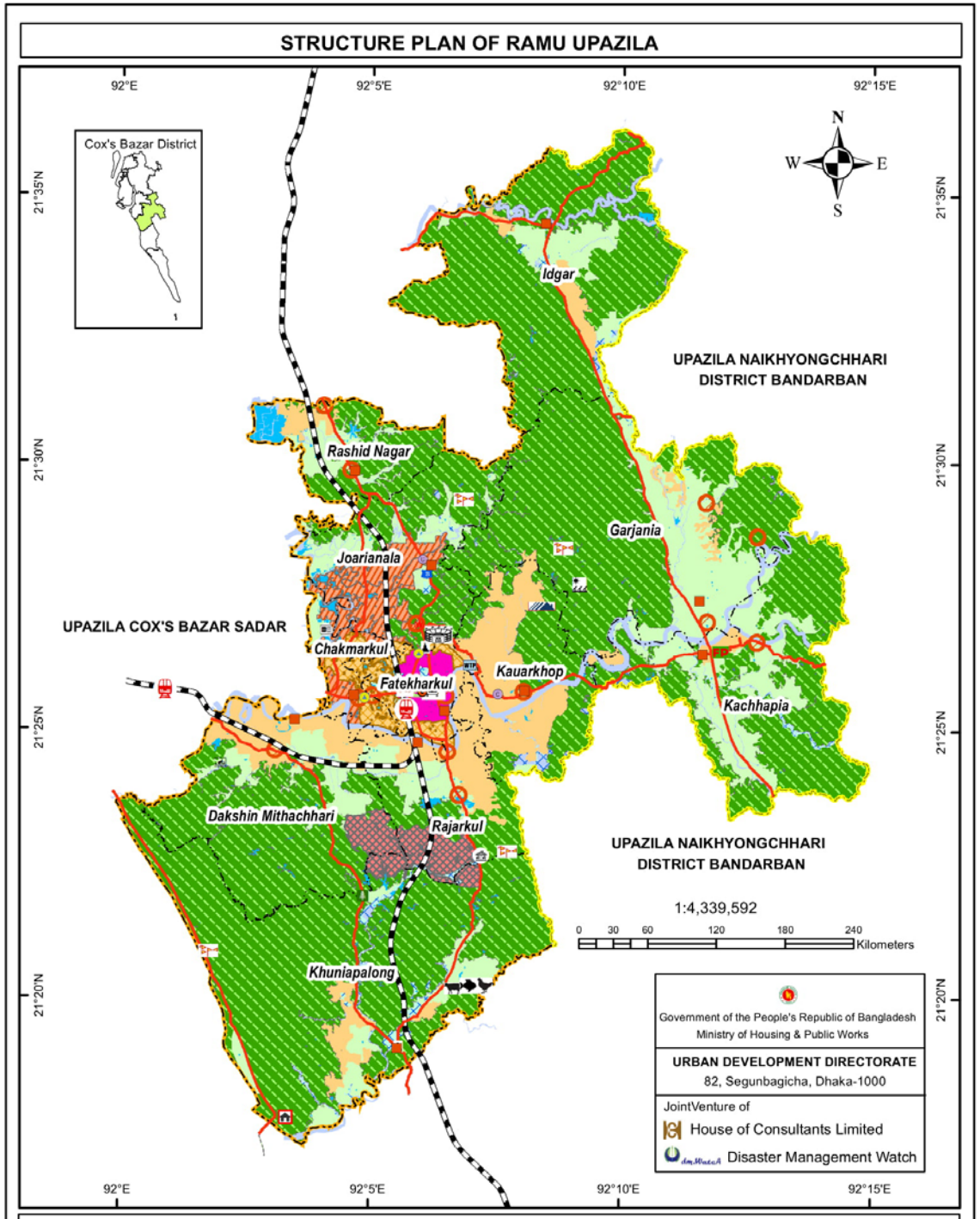
Urban Deferred

Water Supply Protection Zone

Waterbody

Solar Park

Solid Waste Disposal Site



Type

- Filling Station

Features

- Economic Zone
- Sludge Treatment Plant
- Transfer Station

Proposed Facilities

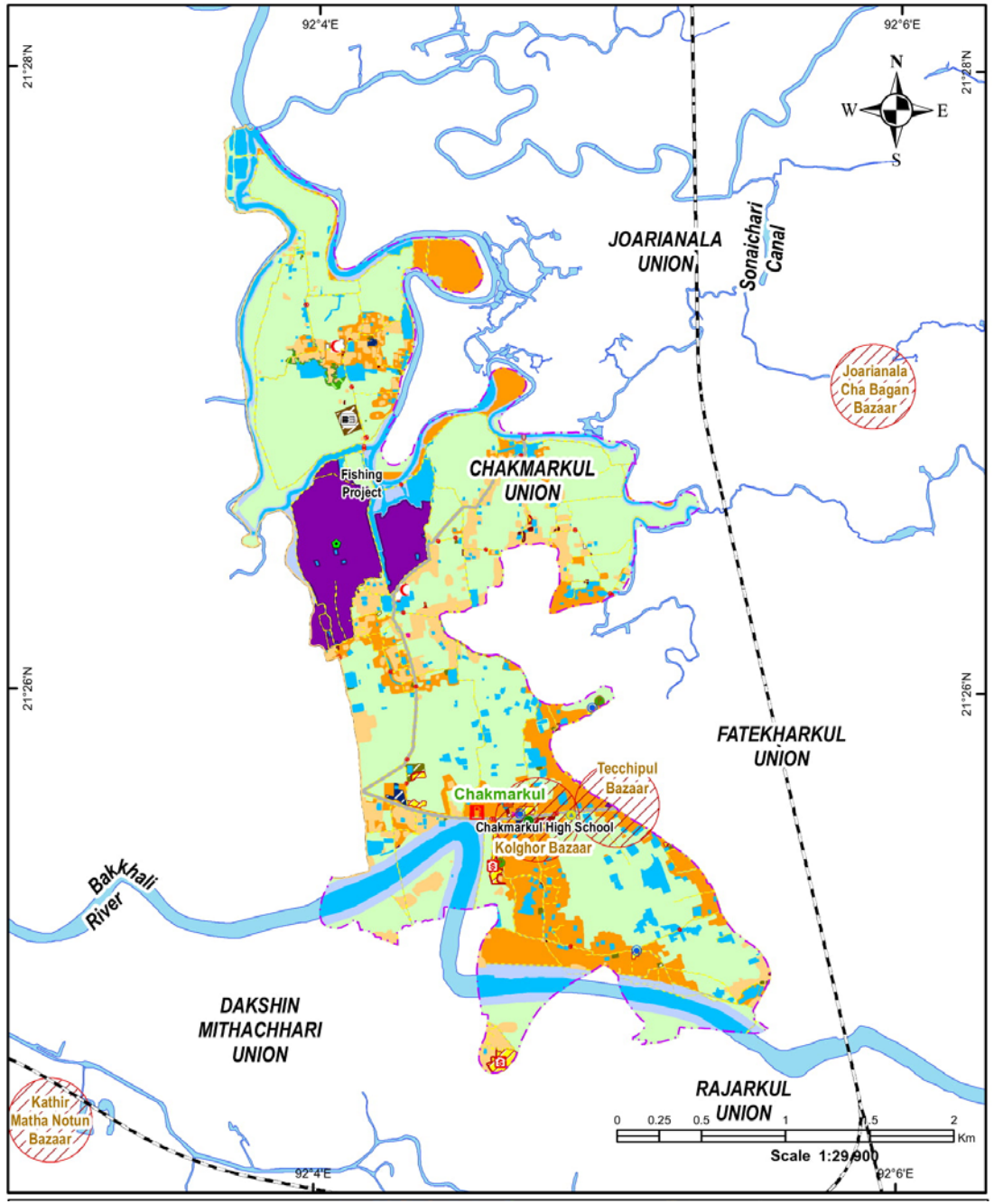
- High School
- Primary School
- Health Centre / Clinic
- Neighborhood Market
- CNG Stand
- Rail Line
- Existing Bridge/Culvert

- Growth Center

Proposed Landuse

- Administrative
- Agriculture
- Circulation Network
- Commercial
- Community Facilities
- Education Facilities
- Health Facilities
- Industry
- Main Flood
- Mixed Use
- Planned Urban Residential
- Recreational Facilities
- Restricted Special
- Rural Settlement
- Spontaneous Urban Residential
- Utility Facilities
- Water Supply Protection
- Waterbody

Urban Area Plan Map of Chakmarkul Union of Ramu Upazila



Growth Center

Proposed Landuse

- Administrative
- Agriculture
- Circulation Network
- Commercial
- Community Facilities
- Education Facilities
- Health Facilities
- Industry
- Main Flood
- Mixed Use
- Planned Urban Residential
- Recreational Facilities
- Restricted Special
- Rural Settlement
- Spontaneous Urban Residential
- Utility Facilities
- Water Supply Protection
- Waterbody

Type

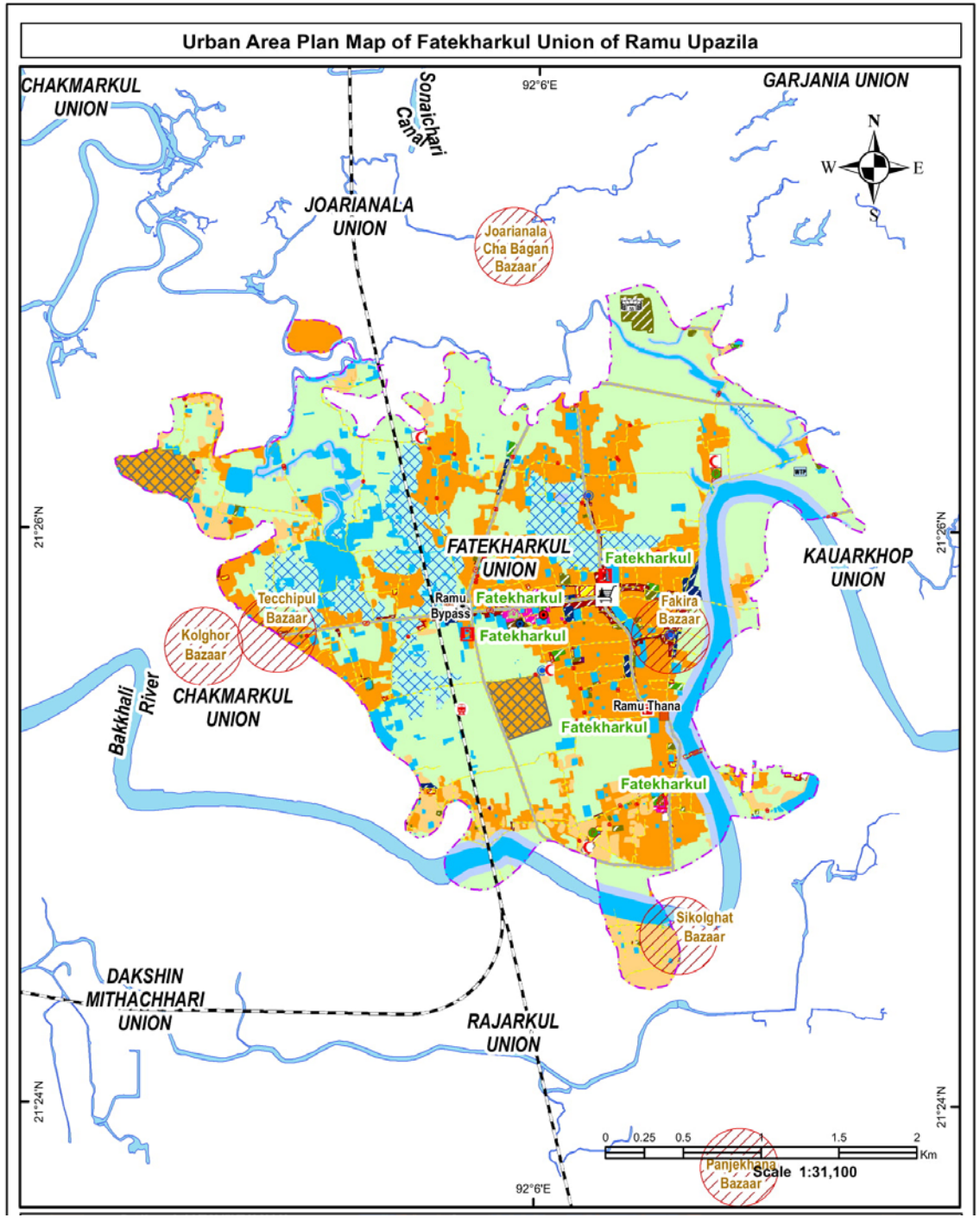
- Filling Station

Features

- Economic Zone
- Sludge Treatment Plant
- Transfer Station

Proposed Facilities

- High School
- Primary School
- Health Centre / Clinic
- Neighborhood Market
- CNG Stand
- Rail Line
- Existing Bridge/Culvert

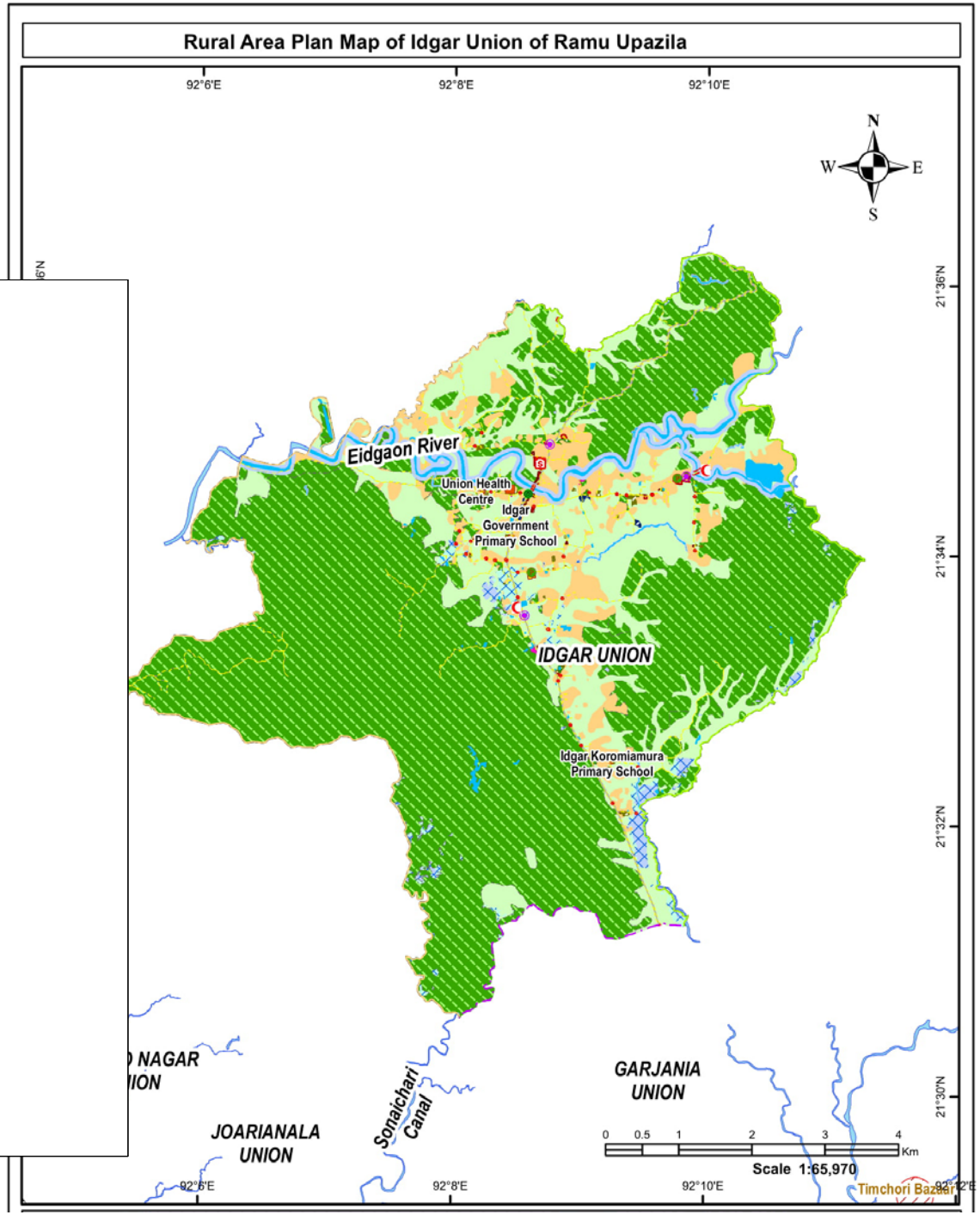


Rural Area Plan

- Circulation Network
- Commercial
- Community Facilities
- Education Facilities
- Health Facilities
- Main Flood
- Mixed Use
- Recreational Facilities
- Restricted Special
- Rural Settlement
- Sub Flood
- Water Supply Protection
- Waterbody
- Health Centre / Clinic
- Rural Sales Service Center
- CNG Stand
- Rail Line
- Existing Bridge/Culvert
- Growth Center

Proposed Landuse

- Administrative
- Agriculture



Rural Area Plan

Type
- Filling Station
- Fire Service
- Hospital

Features
- BKSP
- College
- Monument
- Tourist Spot
- Transfer Station
- Wholesale Trade Zone

Proposed Facilities
- High School
- Primary School
- Health Centre / Clinic
- Neighborhood Market
- Rural Sales Service Center
- CNG Stand
- Rail Line
- Existing Bridge/Culvert
- Growth Center

Proposed Landuse
- Administrative
- Agriculture
- Circulation Network
- Commercial
- Community Facilities
- Education Facilities
- Health Facilities
- Industry
- Main Flood
- Mixed Use
- Recreational Facilities
- Restricted Special
- Rural Settlement
- Spontaneous Urban Residential
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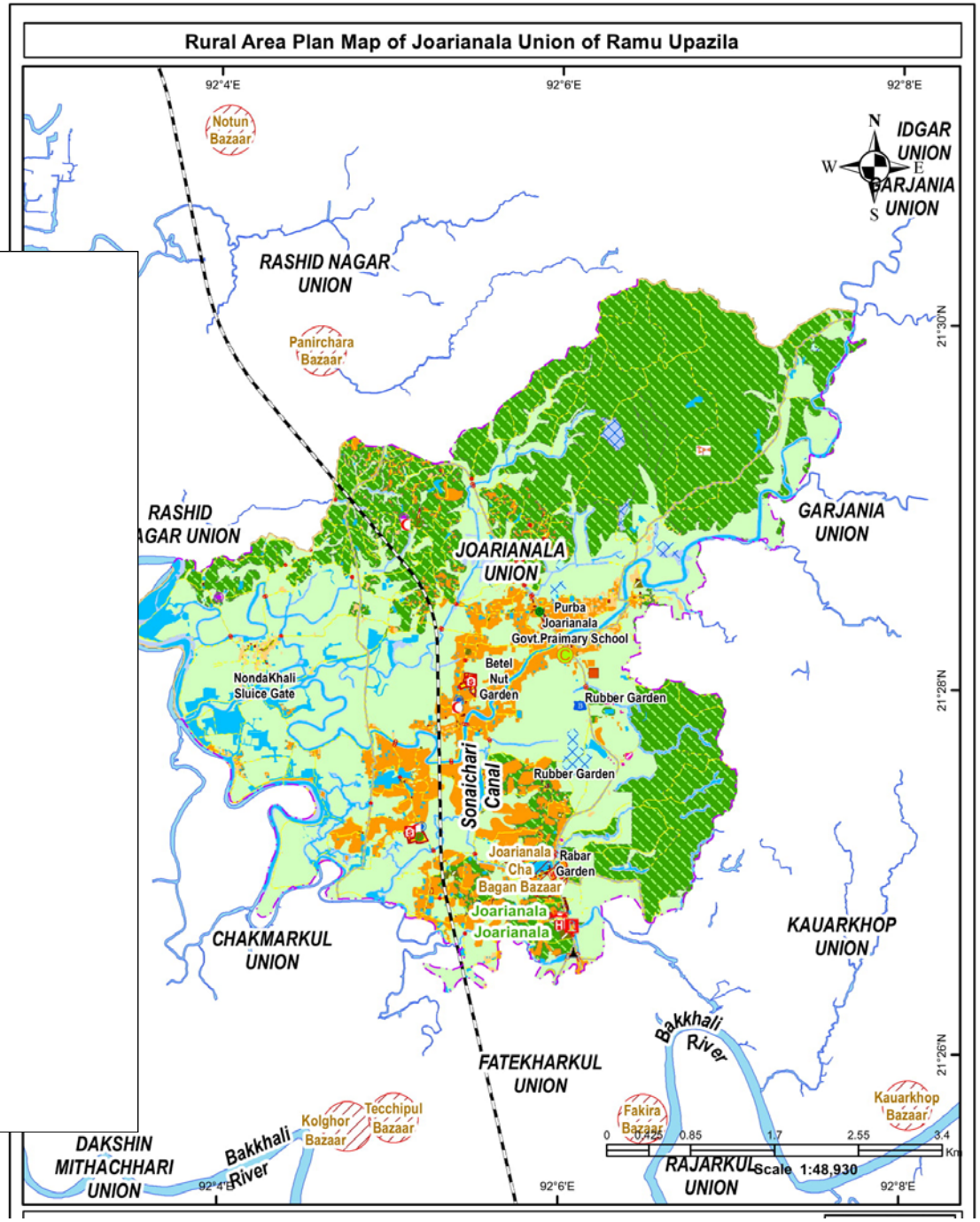
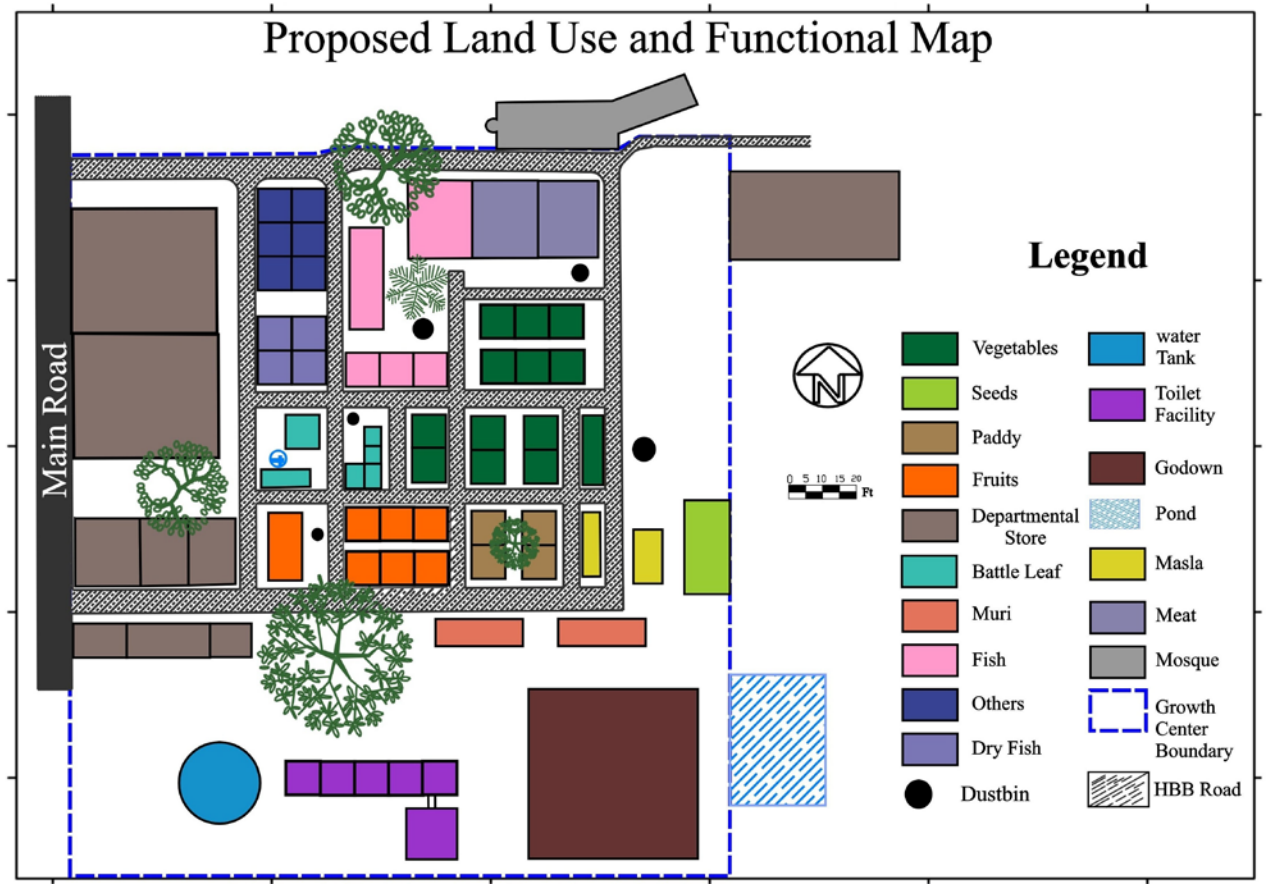
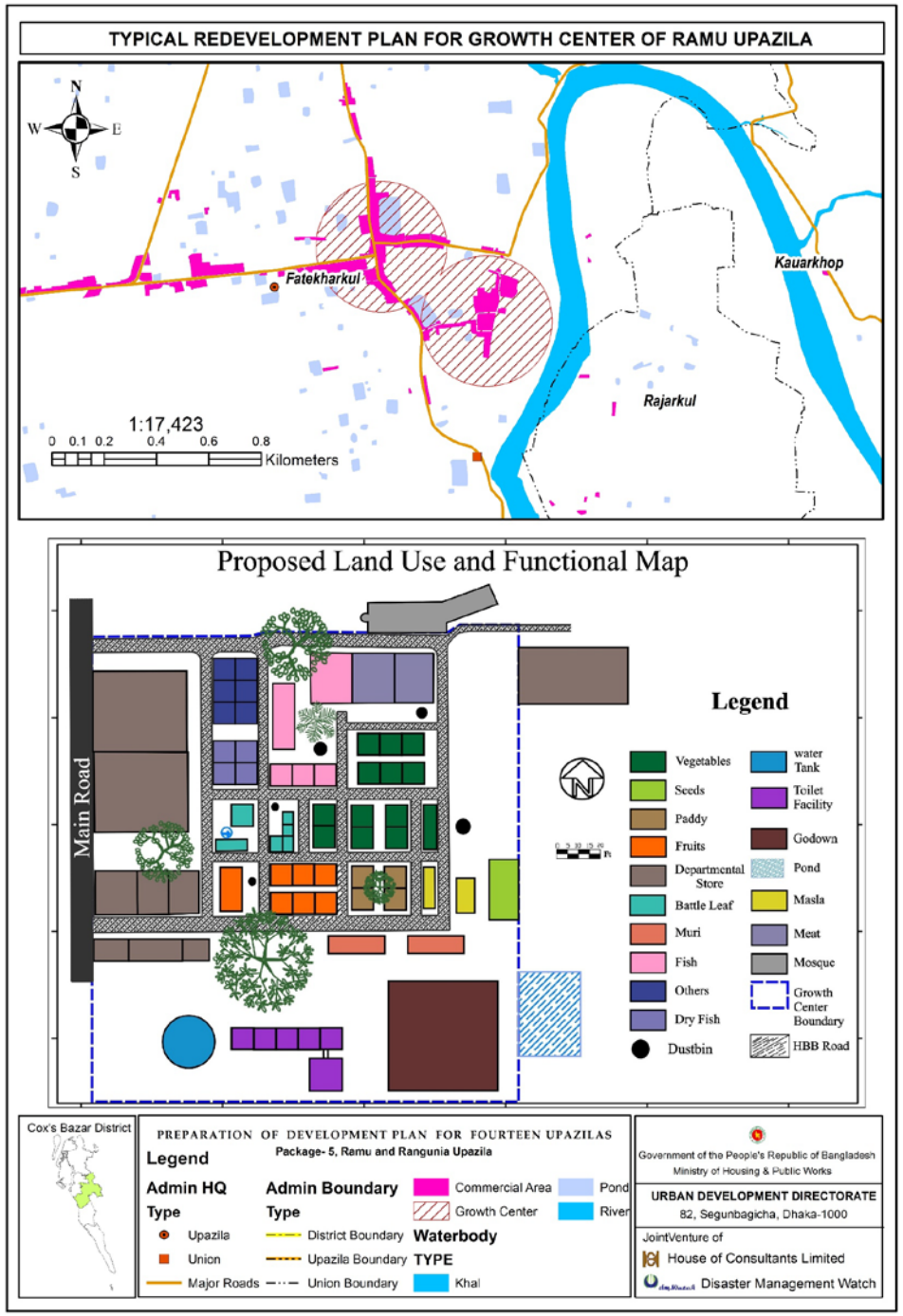
- Water Supply Protection
- Waterbody

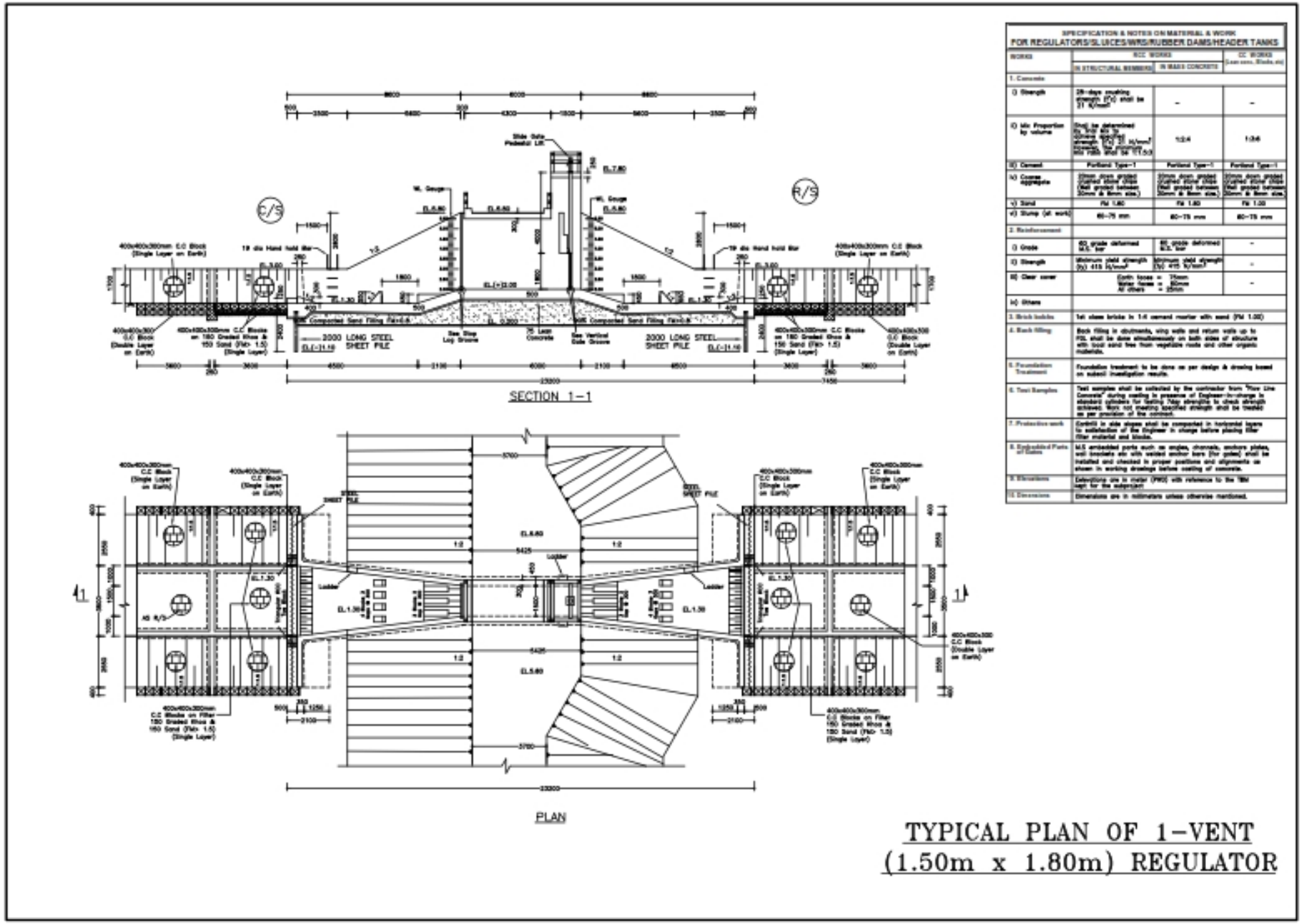


Action Area Plan

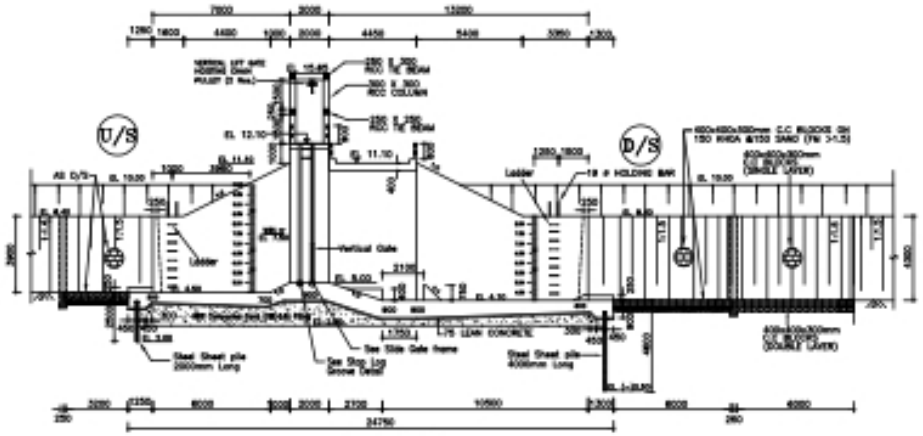




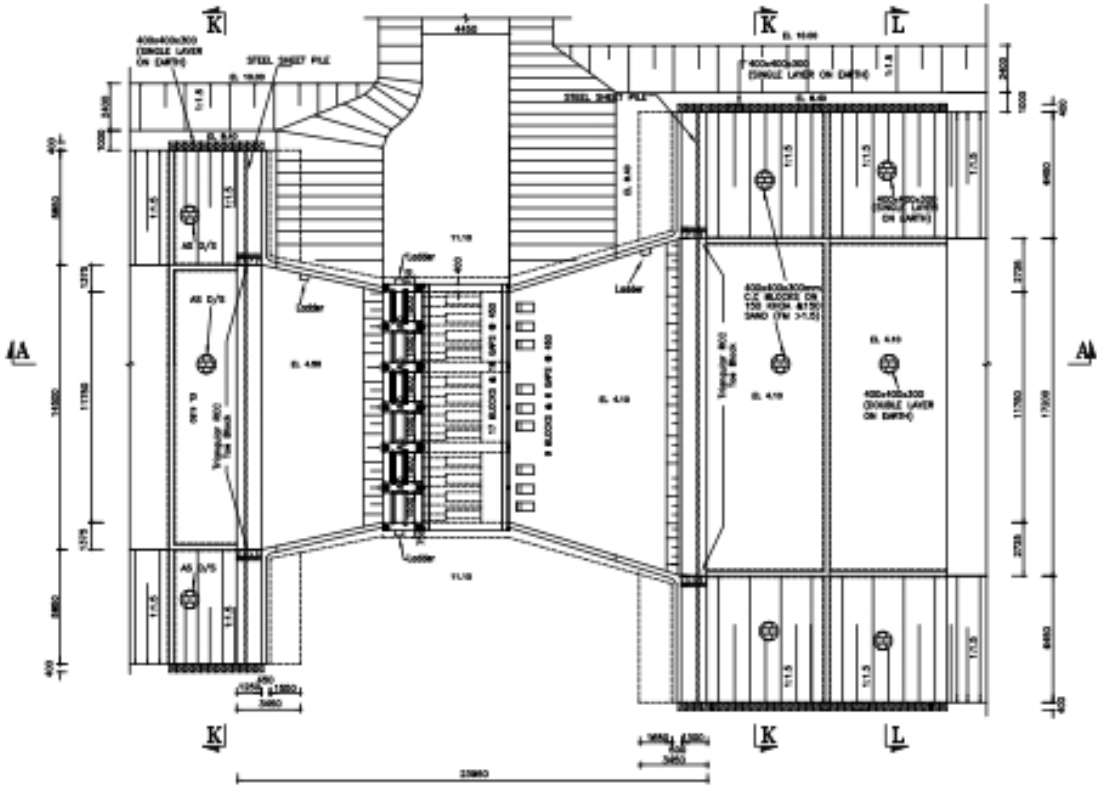
Action Area Plan



Action Area Plan



SECTION A–A



PLAN

SPECIFICATION & NOTES ON MATERIAL & WORK FOR REGULATORS/SLUICES/WRS/RUBBER DAMS/HEADER TANKS			
WORKS	RCC WORKS		CC WORKS (Lean conc., Blocks, etc)
	IN STRUCTURAL MEMBERS	IN MASS CONCRETE	
1. Concrete			
i) Strength	28–days crushing strength (f'c) shall be 21 N/mm²	–	–
ii) Mix Proportion by volume	Shall be determined by Trial Mix to achieve specified strength (f'c) 21 N/mm². However, the minimum mix ratio shall be 1:1.5:3	1:2:4	1:3:6
iii) Cement	Portland Type–1	Portland Type–1	Portland Type–1
iv) Coarse aggregate	20mm down graded crushed stone chips (Well graded between 20mm & 8mm size.)	20mm down graded crushed stone chips (Well graded between 20mm & 8mm size.)	20mm down graded crushed stone chips (Well graded between 20mm & 8mm size.)
v) Sand	FM 1.80	FM 1.80	FM 1.00
vi) Slump (at work)	60–75 mm	60–75 mm	60–75 mm
2. Reinforcement			
i) Grade	60 grade deformed M.S. bar	60 grade deformed M.S. bar	–
ii) Strength	Minimum yield strength (fy) 415 N/mm²	Minimum yield strength (fy) 415 N/mm²	–
iii) Clear cover	Earth faces = 75mm Water faces = 50mm All others = 25mm		–
iv) Others			
3. Brick bolcks	1st class bricks in 1:4 cement mortar with sand (FM 1.00)		
4. Back filling	Back filling in abutments, wing walls and return walls up to FGL shall be done simultaneously on both sides of structure with local sand free from vegetable roots and other organic materials.		
5. Foundation Treatment	No Foundation treatment is to be required as per subsoil investigation results.		
6. Test Samples	Test samples shall be collected by the contractor from "Flow Line Concrete" during casting in presence of Engineer–in–charge in standard cylinders for testing 7day strengths to check strength achieved. Work not meeting specified strength shall be treated as per provision of the contract.		
7. Protective work	Earthfill in side slopes shall be compacted in horizontal layers to satisfaction of the Engineer in charge before placing filter filter material and blocks.		
8. Embedded Parts of Gates	M.S embedded parts such as angles, channels, anchors plates, wall brackets etc with welded anchor bars (for gates) shall be installed and checked in proper positions and alignments as shown in working drawings before casting of concrete.		
9. Elevations	Elevations are in meter (PWD) with reference to the TBM kept for the subproject		
10. Dimensions	Dimensions are in millimeters unless otherwise mentioned.		

NOTE :–

1. U/S & D/S TRANSITION FROM WRS TO CANAL ARE 1:7

TYPICAL PLAN OF 6–VENT (1.50m x 1.80m) DRAINAGE CUM CUM WATER RENTION STRUCTURE

Thank You.....