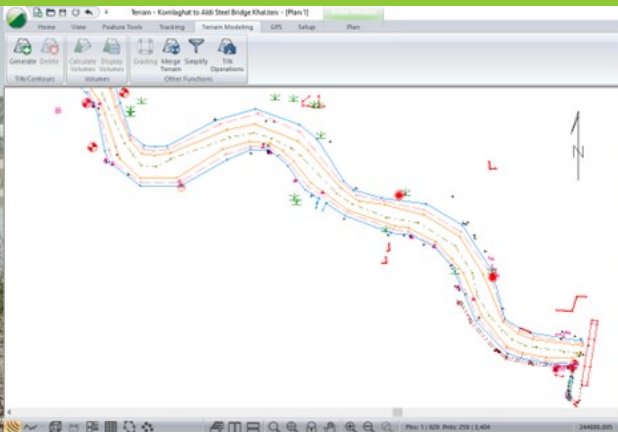


Case Study: Leveraging RoadEng Civil Engineer for Water Resource Revitalization in Bangladesh



The Improvement of Ponds, Canals Across the Country Project (IPCP), led by the Local Government Engineering Department (LGED) in Bangladesh, sought to revitalize ponds and canals using modern civil engineering techniques.

LOCATION

Dhaka, Bangladesh

SOFTWARE

RoadEng Civil Engineer

SCOPE

2,000 KM of canals

Challenges Faced:

Rural Bangladesh faced significant challenges related to the deterioration of water bodies such as ponds and canals due to reduced water flow, siltation, and encroachment. Addressing these issues was crucial to sustain agriculture, support rural livelihoods, and manage environmental concerns.

Role of RoadEng Software:

The IPCP project adopted innovative methodologies employing RoadEng Civil Engineering software. This software facilitated precise engineering estimates, detailed design preparations, and crucial data analysis for the revitalization of **2,000 km of canals** and 5,206 (number) of institutional ponds/dighi.

RoadEng's functionalities enabled:

- **Survey Data Processing:** Integration of topo survey data with geospatial information, ensuring accurate location verification and pre/post-work data analysis.
- **Detailed Design and Planning:** Preparation of Plan, Profile, Cross-section, and Volume data sheets, optimizing the excavation and refurbishment of water bodies.

- **Earthwork Calculations:** Ensuring transparency in earthwork calculations from pre-work surveys to post-implementation evaluations, enhancing project accuracy and efficiency.

Project Implementation:

- **Technical Training:** Capacity building for staff involved in survey data processing and design.
- **Surveying and Construction:** During construction, digital spatial information from the designs completed in RoadEng were exported and uploaded into survey equipment for construction staking. During and following construction, progress was surveyed and survey data was modelled in RoadEng to ensure compliance and quantify pay volumes.

Results:

The success of the IPCP project in restoring rural water bodies hinged on advanced civil engineering methodologies and breadth of the technical training program. The integration of modern surveying technologies, meticulous planning, and the use of specialized software like RoadEng contributed to accurate data analysis and efficient implementation on a substantial scale, resulting in the revitalization of crucial water resources in Bangladesh.

BEFORE



AFTER



Photo Credit: LGED

