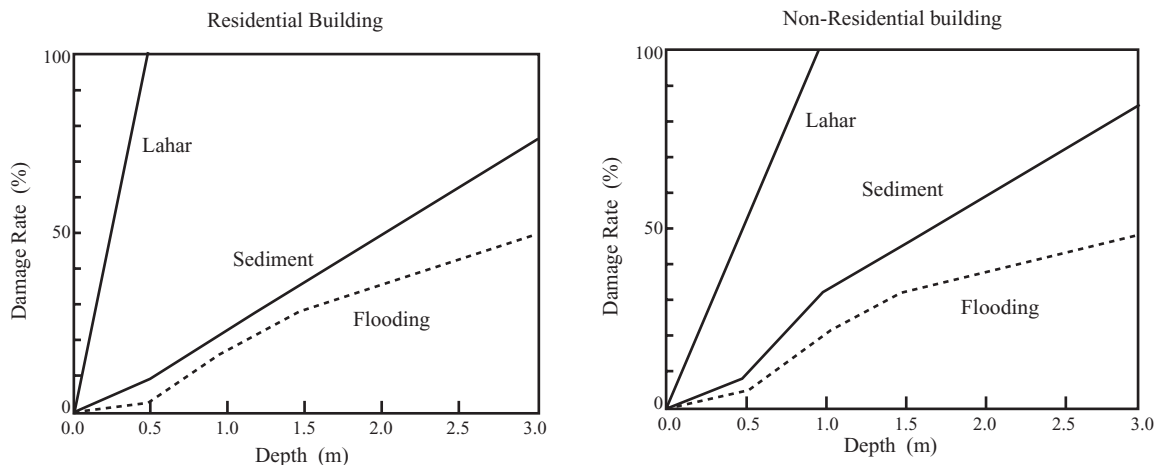
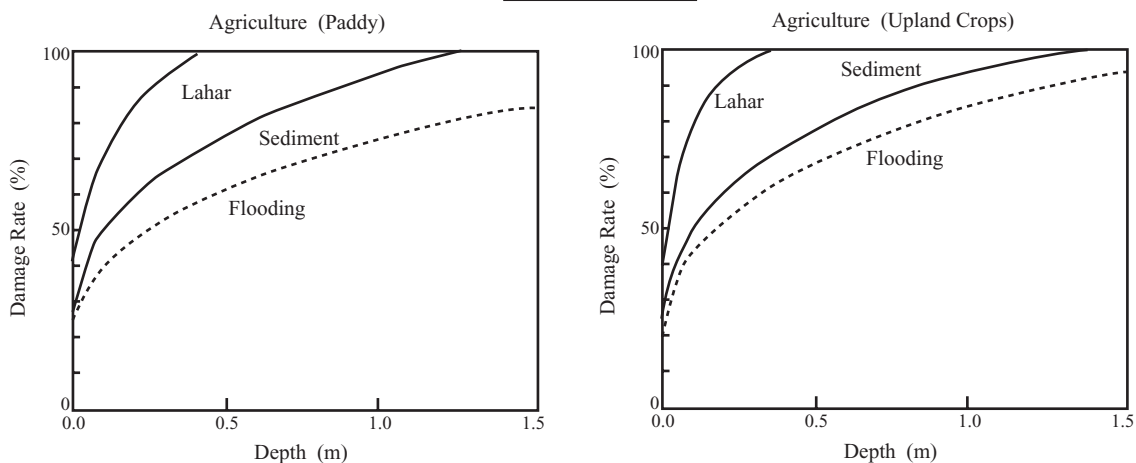


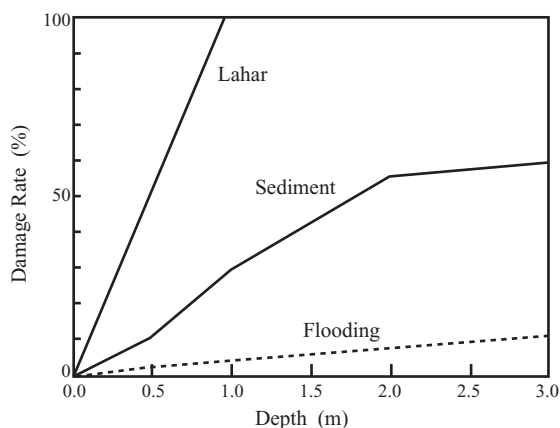
Building



Agriculture



Infrastructure



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Figure 12.1.1
Damage Curves for Properties

A. During Flood



B. After Flood



Inundated area / building were fully buried by sediment more than 1 m depth.
House and farm land are no longer available after flood

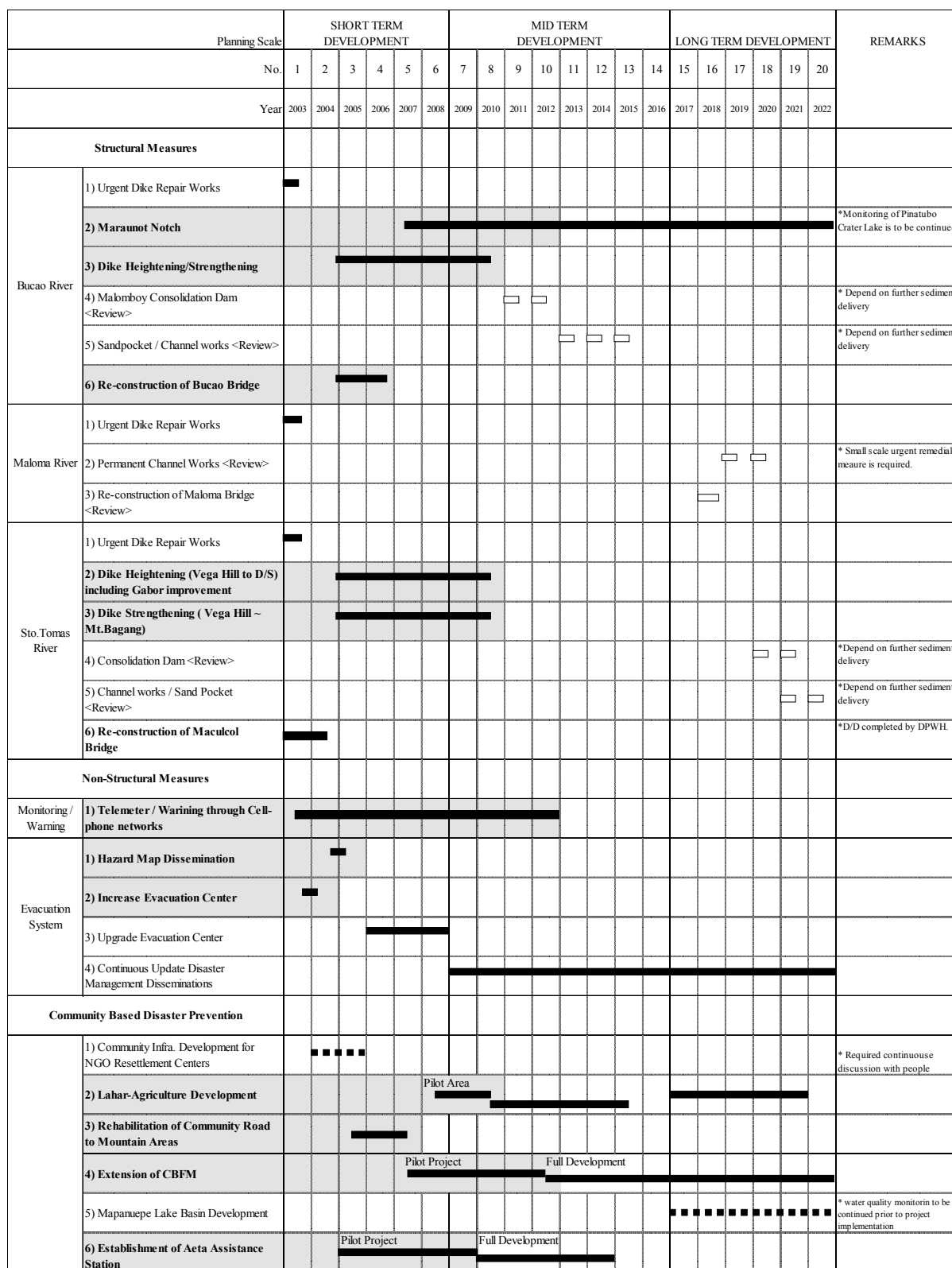
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Figure 12.1.2

**Actual Flood Damage Condition due to Dike
Breach in July 2002 in the Sto. Tomas River**



Notes: 1) ■ : Proposed priority projects
2) Measures proposed in 2003 are those scheduled to be initiated by GOP.
3) □ means the projects for which reviews and/or further studies are recommended based on the monitoring results of sediment, sociological conditions, and so forth
4) ■■■■■ means the programs for which discussion with people, monitoring of water quality and studies are required.

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Figure 13.1.1

**Proposed Implementation Schedule for
Master Plan**

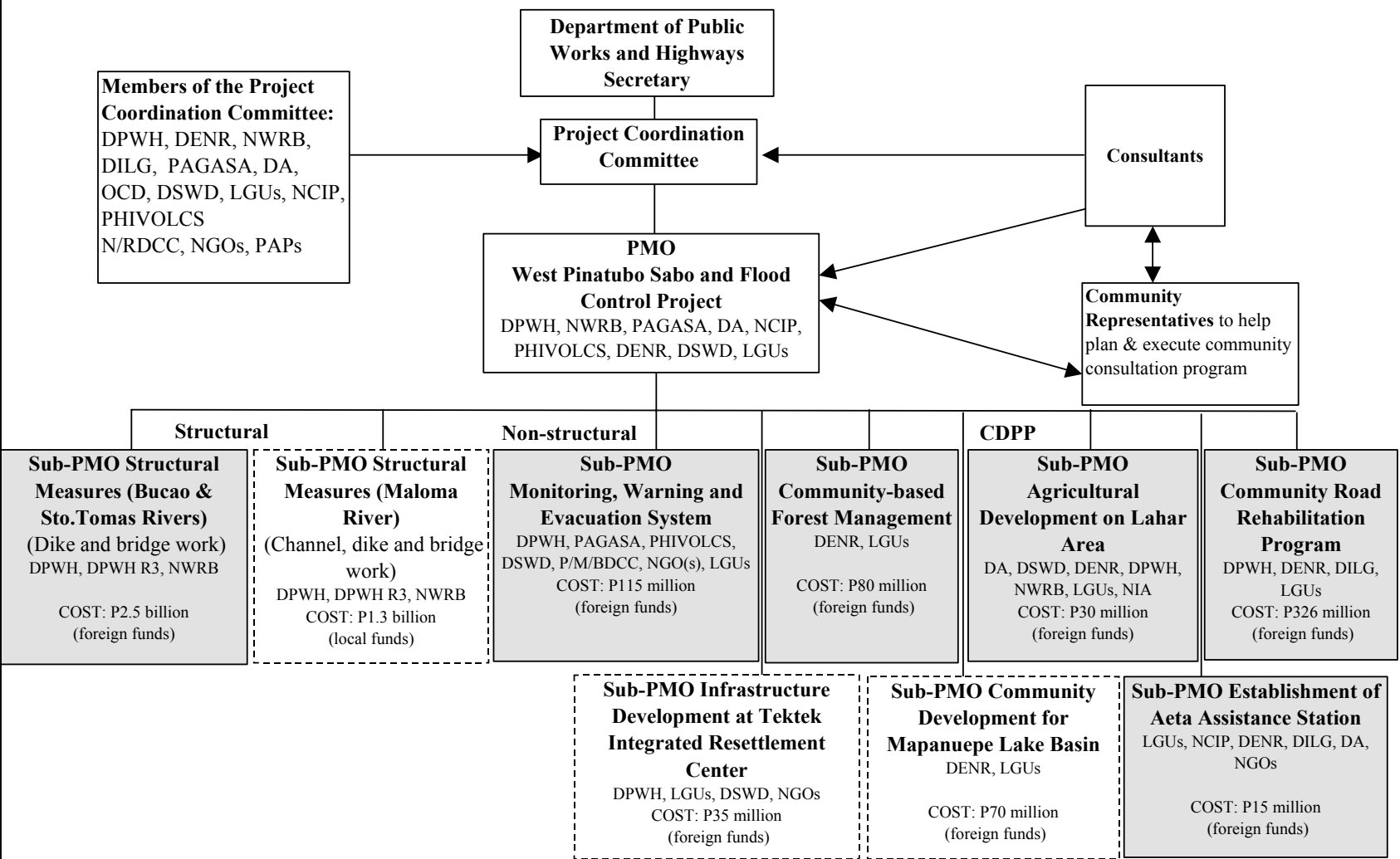
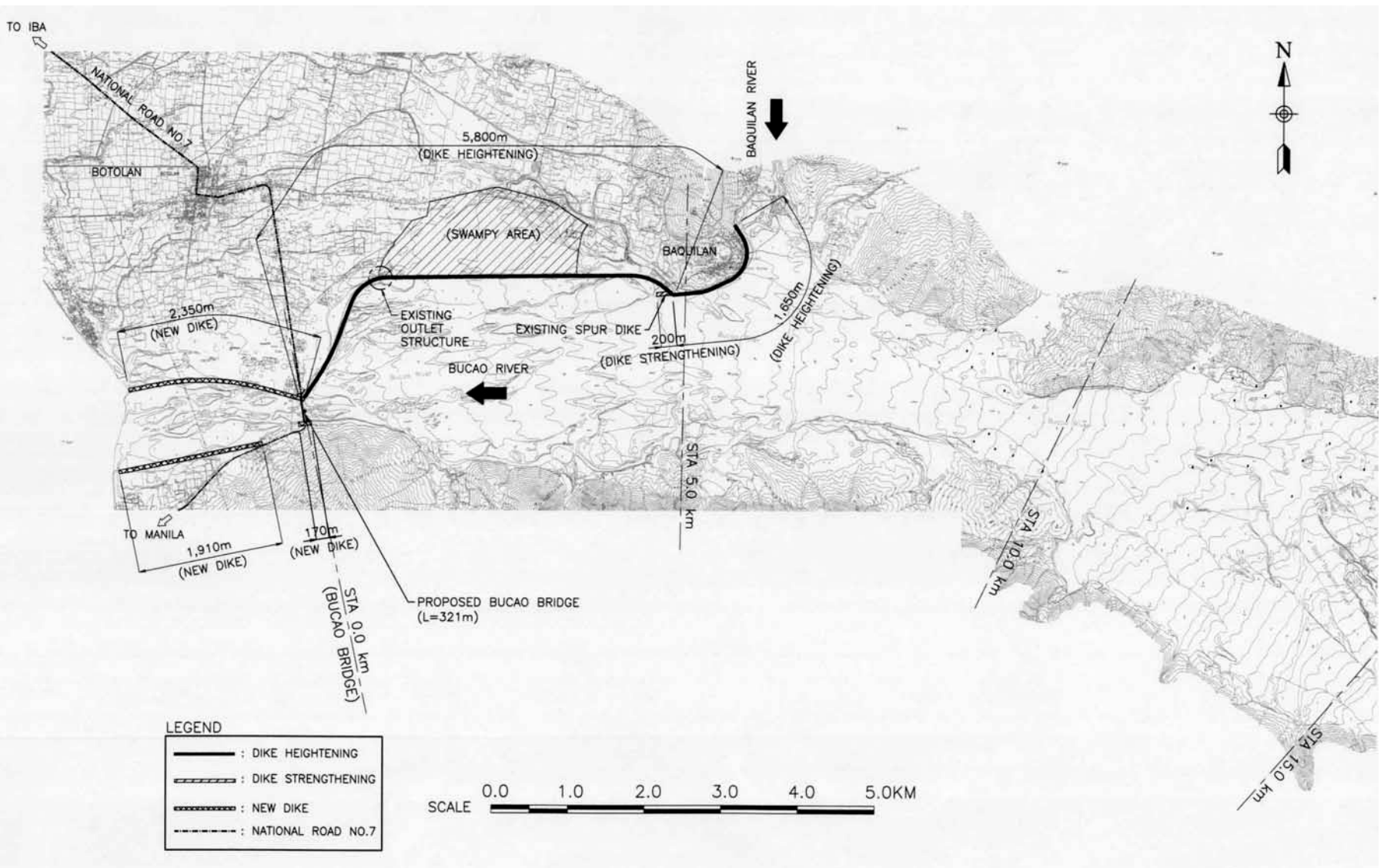


Figure 13.2.1

Proposed Organization for Implementing Water Plan Projects (For Future Vision)



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Figure 15.1.1

**General Plan of Proposed River Improvement
in the Bucao River**

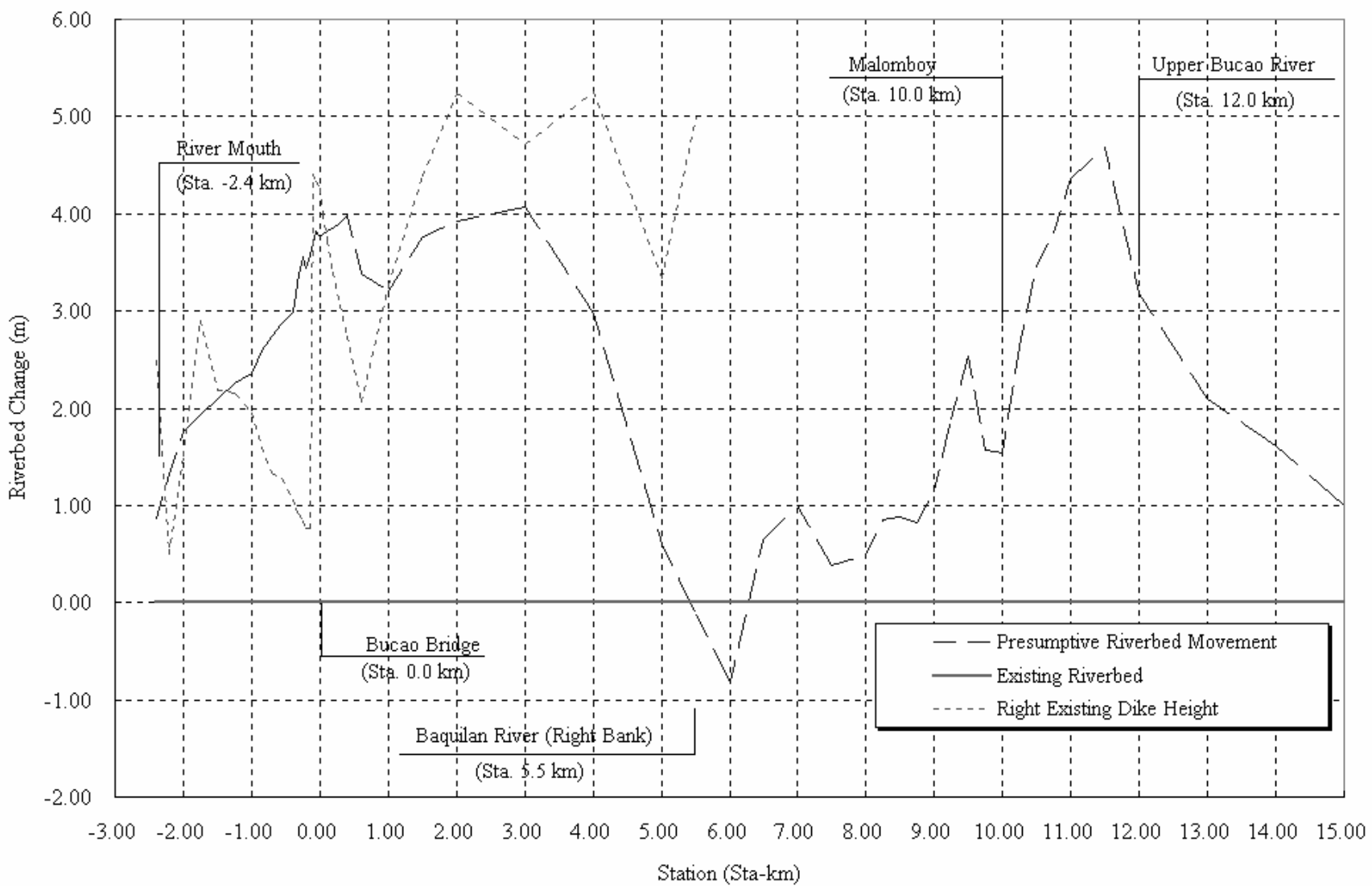


Figure 15.1.2

Presumptive Riverbed Change after 20 years
in the Bucao River

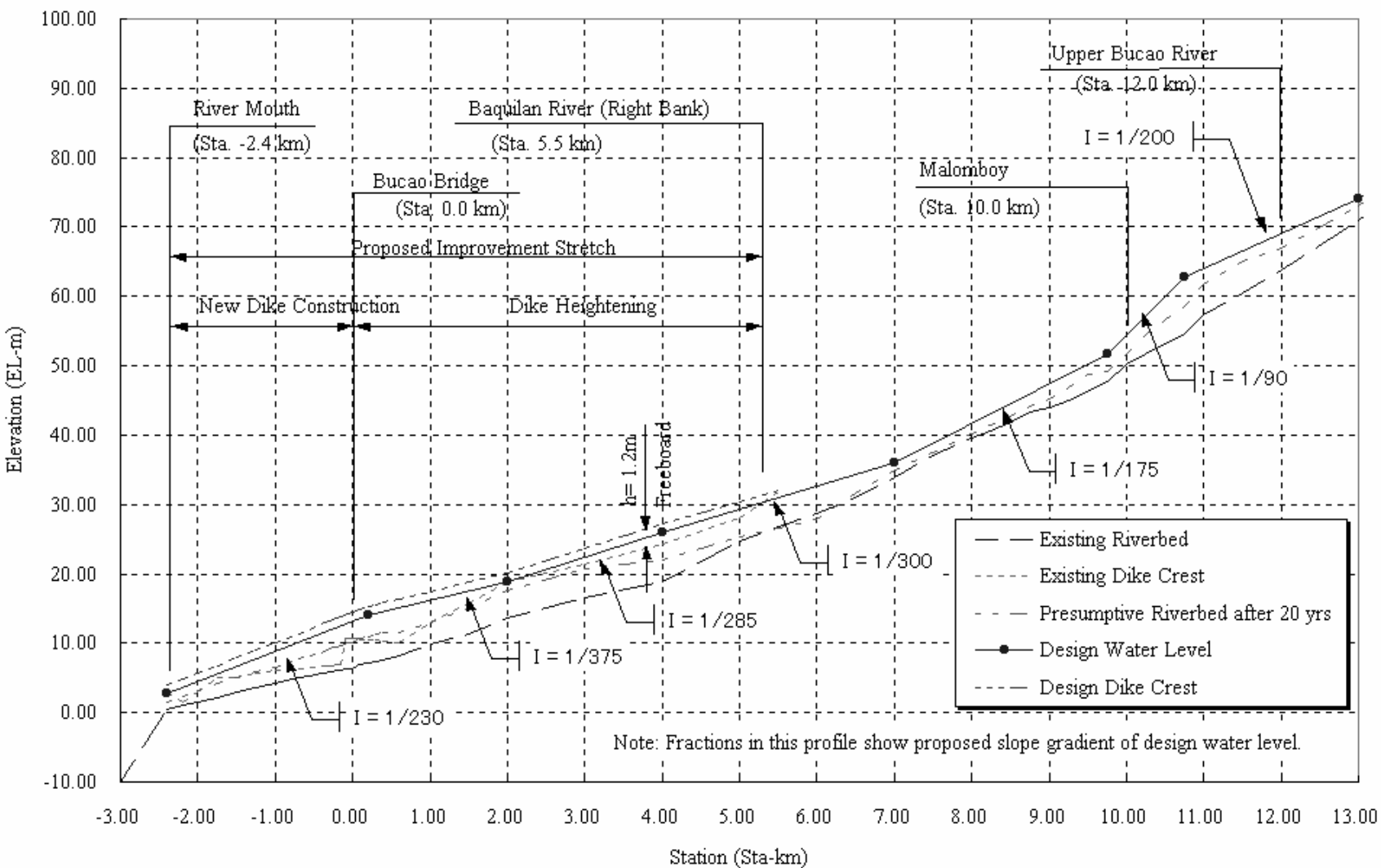
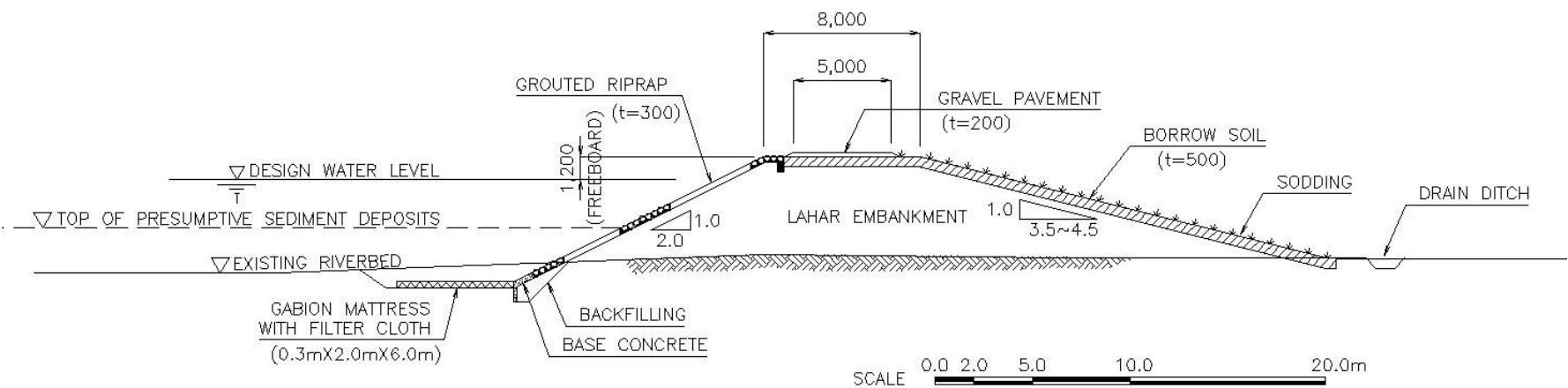
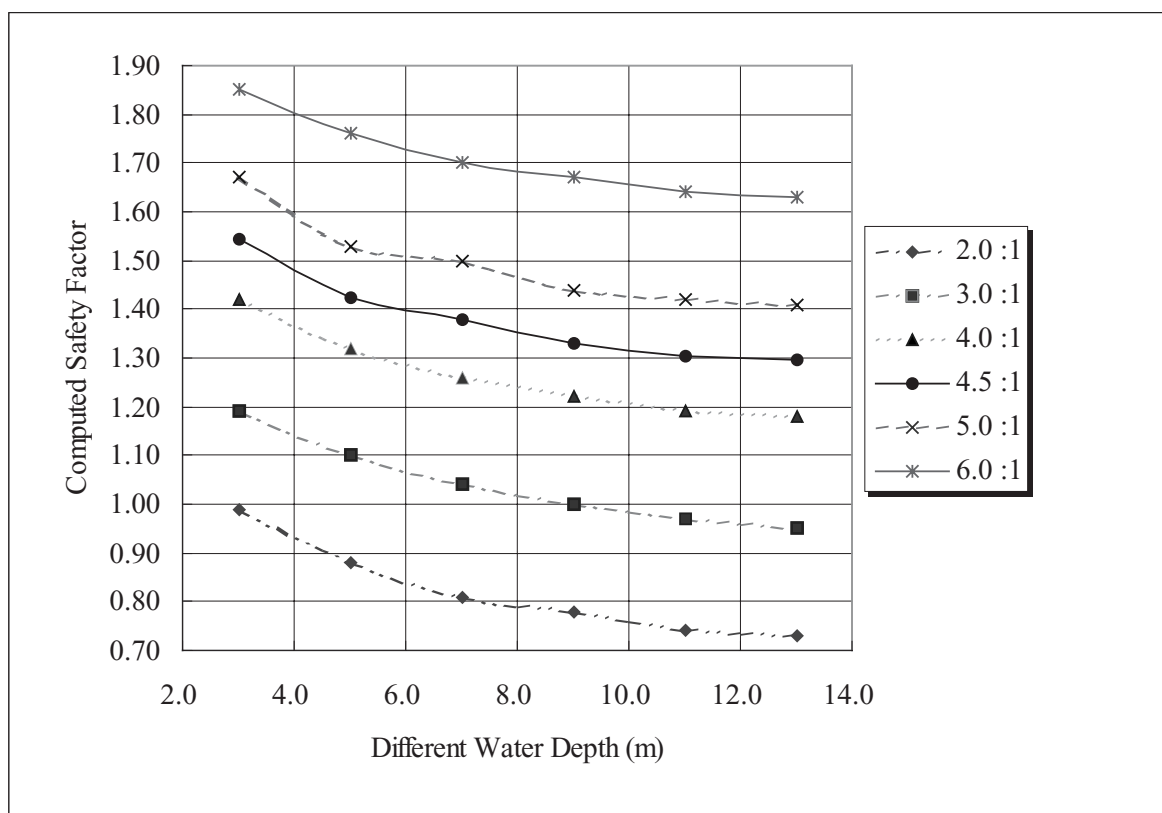
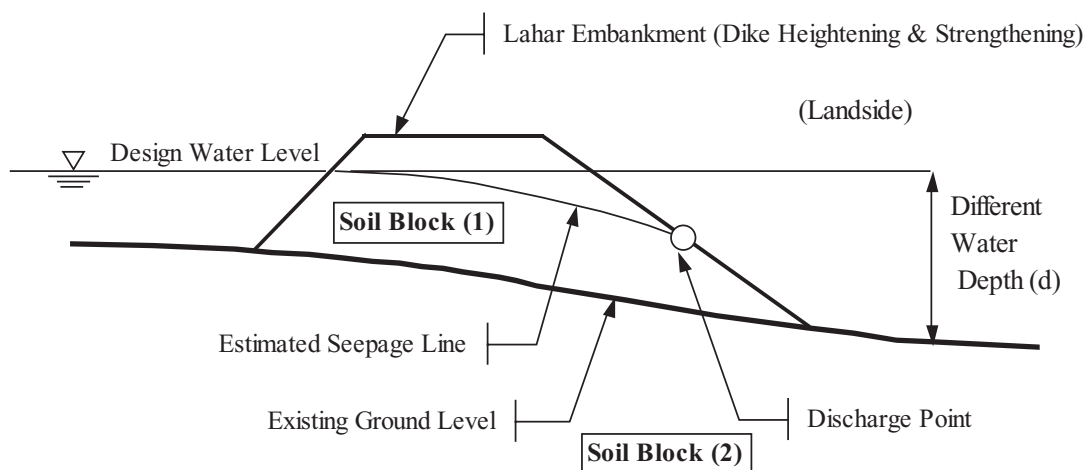


Figure 15.1.3

Longitudinal Profile of Proposed River
Improvement in the Bucao River





Relation Between Different Water Depth and Computed Landside Slope Failure

Estimated Soil Properties

Soil Block	Average N-Value	Unit Wet Density	Unit Saturated Density	Unit Submergible Density	Internal Friction Angle	Cohesion
Unit	N	γ_t (kN/m ³)	γ_{sat} (kN/m ³)	γ' (kN/m ³)	ϕ	C (kN/m ²)
(1)	15	17.0	19.0	7.0	30.0	0.0
(2)	9	16.0	18.0	6.0	27.0	0.0

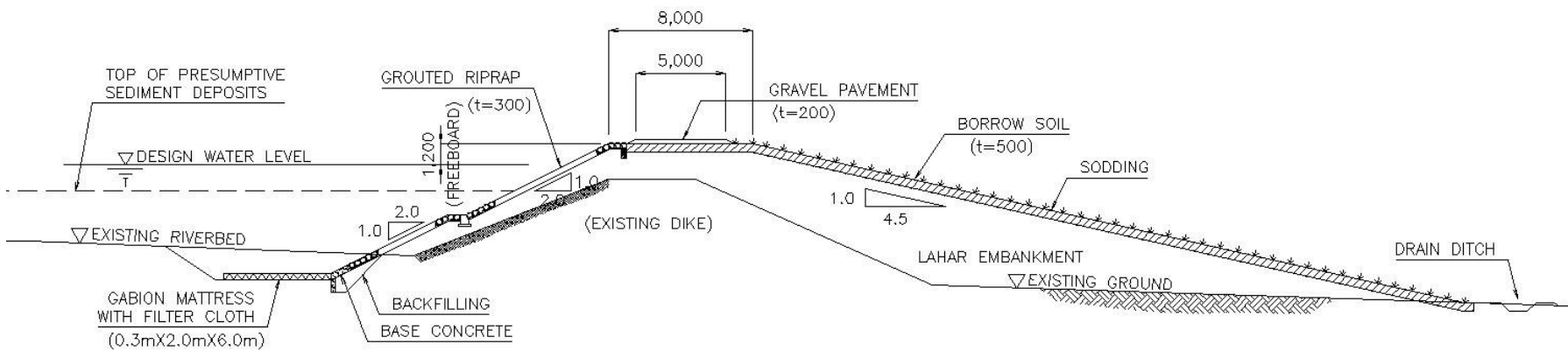
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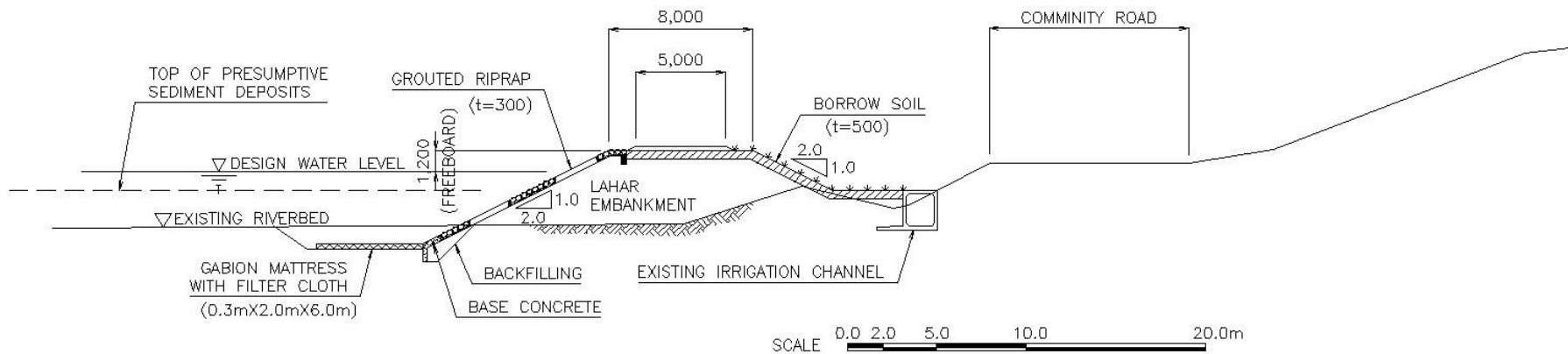
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Figure 15.15

Results of Computed Landside Slope Failure



BUCAO BRIDGE TO STA.+4.8 KM



STA.+4.8 KM UPSTREAM

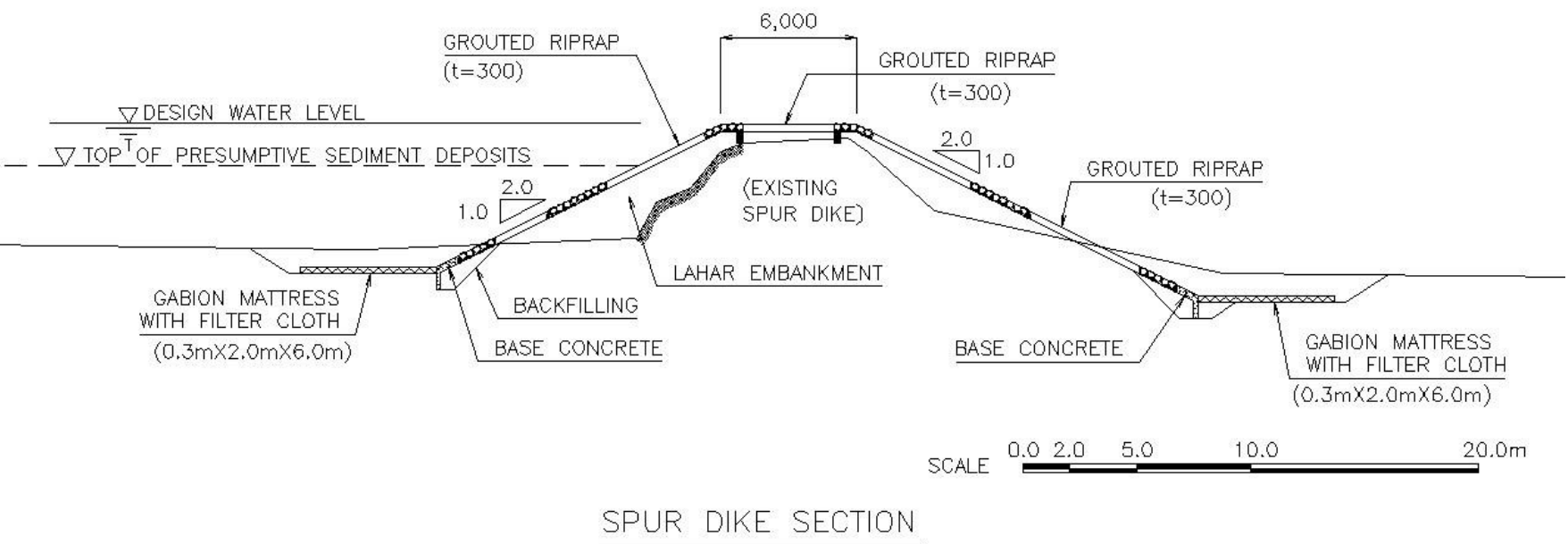
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Figure 15.1.6

Typical Cross Sections of Proposed Dike
Heightening in the Bucao River



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Figure 15.1.7

**Typical Cross Section of Proposed Spur Dike
Strengthening in the Bucao River**