



GENERAL GUIDELINES

Rip Rap Erosion Protection for New and Existing dikes

To ensure that the proposed works meet provincial standards the following documentation, as appropriate, should be included in an application for *Dike Maintenance Act* approval¹

Design Brief

1.0 Design Brief

The design brief provides a summary of the proposed project along with a summary of the civil, hydrologic, hydraulic and geotechnical aspects of the works. These aspects of the works may also be supported by work carried out Professional Engineers suitably qualified in their field of expertise. All diking related aspects of the project should be addressed as per the following Ministry of Environment documents;

- “Dike Design and Construction Guide: Best Management Practices for British Columbia”²
- “Rip Rap Design and Construction Guide”³

2.0 Project Drawings

- A drawing showing the dike and all proposed improvements in plan view including; adjacent property lines, limits of proposed or existing rights of way (the details of property ownership should be clearly indicated), adjacent utilities, turnarounds, access ramps, and all other relevant features.

¹ Please refer to our website http://www.env.gov.bc.ca/wsd/public_safety/flood/structural.html for an up to date copy of the Dike Maintenance Act, general information on the *Dike Maintenance Act* approval process and a *Dike Maintenance Act* approval application form.

² http://www.env.gov.bc.ca/wsd/public_safety/flood/pdfs_word/aug03_dike_des_cons_guide.pdf

³ http://www.env.gov.bc.ca/wsd/public_safety/flood/pdfs_word/riprap_guide.pdf

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- A longitudinal profile of the dike showing existing crest elevations, proposed crest elevations, and a line showing the 1 in 200 year design dike crest elevation including free board

 - Representative cross sections (at natural scale) through the dike at each improvement location showing;
 1. existing and proposed sideslopes,
 2. Existing and proposed crest width,
 3. existing and/or proposed measures for control of seepage under and through the dike (refer to As-built drawings)
 4. proposed rip rap, filter layer (including thickness)

The project drawings should include material specifications including; gradation limits for filter materials, drainage materials and general fill materials to be placed within the foot print of the dike (for soils, the limits should include the percent passing the #200/0.075mm sieve). The drawings should include a size distribution for proposed rip rap materials. Stationing for the dike should be clearly shown and the stationing for the dike should correspond to any existing as-built drawings⁴. The drawings for the DMA application must be signed and sealed by a qualified Professional Engineer. A condition of the written approval will require the applicant to also obtain approval for the works from the Diking Authority. As a condition of approval under the Dike Maintenance Act we would require that you submit (at the completion of works) as-built drawings certified by a professional engineer and an updated Operations and Maintenance Manual.

⁴ See the following website for as-built drawings of dikes in the Lower Mainland area
http://www.env.gov.bc.ca/wsd/public_safety/flood/structural.html