

Geoguide 1
Guide to Retaining Wall Design

The Geoguide 1 – Guide to Retaining Wall Design published by the Geotechnical Engineering Office recommends a standard of good practice for the design of permanent retaining walls in Hong Kong. It covers common retaining walls including conventional reinforced concrete walls, gravity walls (such as crib walls, gabion walls and mass concrete walls) and cantilevered retaining walls.

2. The first edition of Geoguide 1 published in 1982 advocated limit state analysis with global factors of safety. The second edition published in 1993 has introduced a major change in the design approach and recommends limit state analysis with partial factors of safety. This approach is more rational and can accommodate uncertainties in major parameters, thereby achieving more cost-effective designs in general. In addition, the second edition provides detailed guidance to the selection of geotechnical parameters and groundwater pressures for design and to the interrelation between design and construction. A continuously updated version of the second edition of Geoguide 1 incorporating amendments is available from the website of Civil Engineering and Development Department at www.cedd.gov.hk.

3. Permanent retaining walls designed in their entirety in accordance with the standards and provisions of the first edition or the second edition of Geoguide 1 will be acceptable to the Building Authority. Designs based on a **mixture** of the guidance given in the two editions are **not acceptable**. Design submissions must clearly state which edition of Geoguide 1 has been used. It is strongly recommended that designs should be based on the second edition rather than on the first edition.

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