[原文：土木設計コンサルタントの報告書]

建築基準法の通り擁壁の検討を行うのであれば、直接基礎の場合、地盤反力が許容支持力以下にすることになっている。「宅地防災マニュアル」P357 でも、改良地盤上の直接基礎についての記載があり、軟弱層の一部を改良する場合についての記載があるが、2m 改良位置で計算上、支持力を満たすことが確認できていない。

If a retaining wall is to be checked per the Building Standards Act and the retaining wall is built on a spread foundation, the requirement is that the loads from the retaining wall plus the foundation must be smaller than the allowable bearing capacity of the ground. The “Housing Area Disaster Prevention Manual” specifies on p.357 the requirements for spread foundations on improved grounds including the requirements for improving part of a soft soil layer. In our calculations in accordance with the Manual, the bearing capacity requirement was not satisfied at the depth of 2m in your improved soil.

「擁壁工指針」によると、斜面上に擁壁を設置する場合、全体での法面の安定を確認しておく必要があり(擁壁工指針 P138～141)、計算によって安全性を確認した(「道路土工盛土工指針」P108～111)(一番危険なところで Fs＝1.93＞1.5)
安定計算の式は、建築および土木共、同じだが、安全率 Fs は建築が 1.5 以上、土木が 1.2 以上となっている。

The “Retaining Wall Construction Guidelines” require that, when constructing a retaining wall on a sloped ground, the overall slope stability must be checked in advance (pp.138-141). We checked the stability through calculations in accordance with the “Road Earthwork - Filling Guidelines” (pp.108-111). The safety factor (Fs) calculated for the most unsafe part of the slope was 1.93, which is larger than the required 1.5. The stability calculation formula used in architecture and that used in civil engineering are the same, except that the calculated safety factor must be 1.5 or larger in the case of the former and 1.2 or larger in the case of the latter.

「宅地防災マニュアル」では、垂直土壁は 盛土と擁壁と両方の記載があり、扱いが不明。
垂直土壁としての擁壁扱いの場合、「災害の防止上支障がないと認められる土地」としての判断と、将来にわたっての管理者の必要性を求められる可能性がある。

In the “Housing Area Disaster Prevention Manual,” requirements for vertical reinforced soil walls are specified in both the filling section and retaining wall section, which means that it is unclear whether your vertical reinforced soil wall will be handled as a retaining wall or fill.
If your vertical reinforced soil wall is handled as a retaining wall, you may be required to prove that your vertical reinforced soil wall is built in “a plot of land that is deemed not to be a problem from the standpoint of disaster prevention” and bear the responsibility of long-term maintenance of the land plot.