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江苏盱眙特殊软土的工程地质特性研究 [点此下载全文](#)

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摘要:

根据在苏北某高速公路工程地质调查发现, 江苏盱眙南部丘陵山地向平原地区过渡地带, 地貌上为典型的封闭式岗地—洼地, 在低洼地带发育一种与一般沿海软土有较大区别的特殊软土, 具有较特殊的工程地质性质。本文针对盱眙特殊软土的成因特点和分布规律进行探讨, 对其矿物化学成分、物理力学性质、胀缩特性及其击实后的膨胀性和承载强度等进行了试验研究。研究结果表明盱眙软土除了具有一般软土的特征外, 还具有粘土矿物、粘粒含量高, 收缩性明显, 而粘粒主要呈团聚状态, 其原状样的膨胀性并不明显、压实后却具有显著膨胀性的特征。这类特殊软土, 若处理不当易造成路堤边坡失稳、地基不均匀变形和路面因膨胀而开裂等问题, 需要特别关注。

关键词: [特殊软土](#) [工程地质特性](#) [胀缩性](#) [CBR \(加州承载力, California Bearing Ratio\)](#)

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Fund Project: Study on Engineering Geological Characteristics of the Special Soft soil in Xuyi area, Jiangsu Province

Abstract:

According to the engineering geological investigation in the north of Jiangsu province, the southern transition zone in Xuyi that is between the foothill and the plain shows the typical close hill billabong physiognomy. In the billabong, the special soft soil is founded and differentiates from the common coastal soft soil. And its engineering geological properties are comparatively special. In this paper, the formation characteristics and the distribution rules are discussed. Meanwhile the mineral and chemical components, physical and mechanical properties, swelling—shrinkage properties, the swelling properties and the CBR values of the compacted soil are all analyzed. It is indicated that besides the characteristics of the common soft soil, its clay mineral and particle contents are high, and its shrinkage is evident. Because the majority of the clay particles aggregate, the swelling property of its undisturbed specimens is not very evident. But when Xuyi soft soil is compacted, it has the prominent swelling property. If this special soft soil can not be treated correctly, it would bring the stability lost of the embankment, the asymmetric settlement and the craze cracking of the road surface. So it should be concerned.

Keywords: [special soft soil](#) [engineering geological characteristics](#) [swelling—shrinkage properties](#) [CBR \(California Bearing Ratio\)](#)

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