

Supplementary Materials

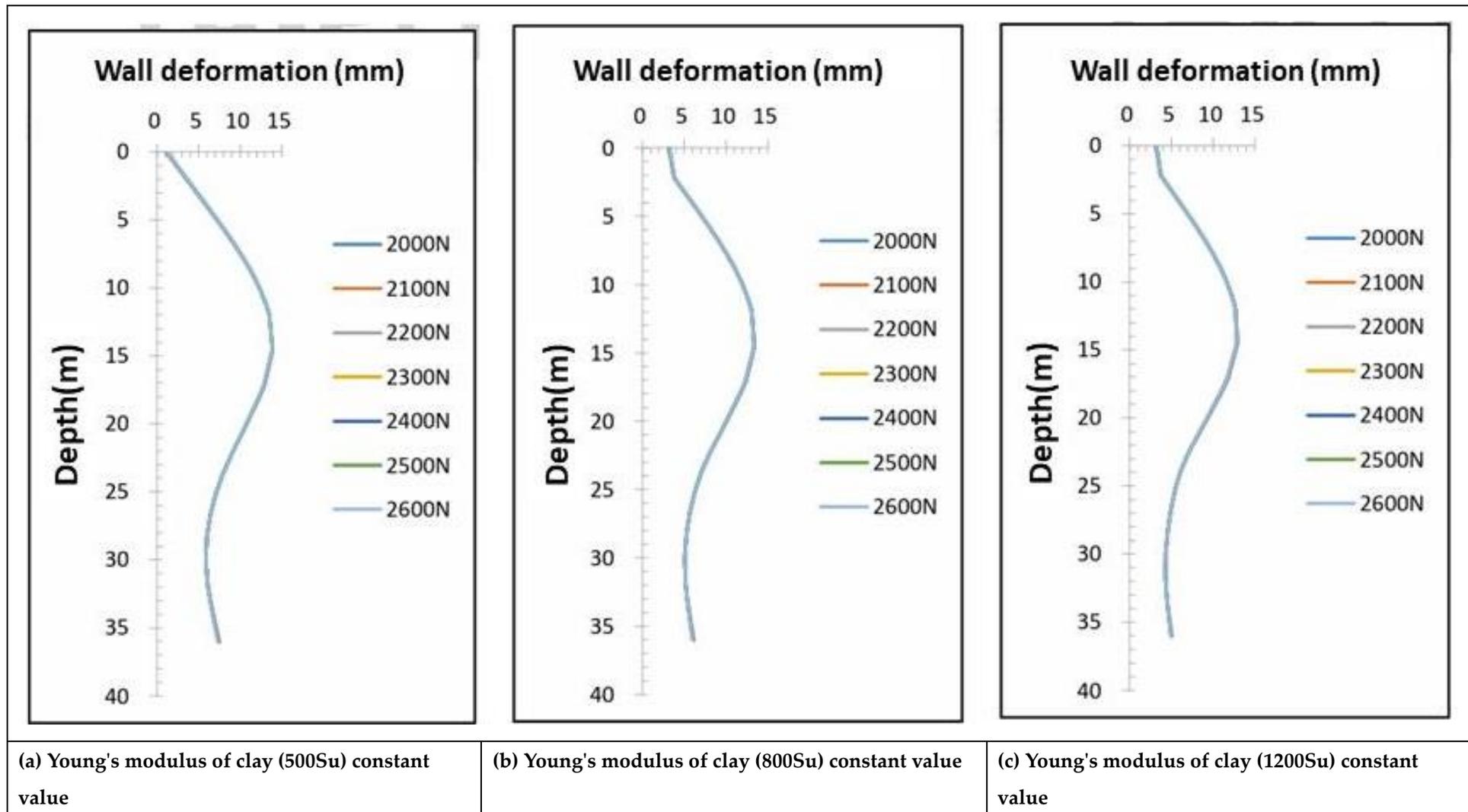


Figure S1 MC model, comparison of results with changes in sand's Young's modulus

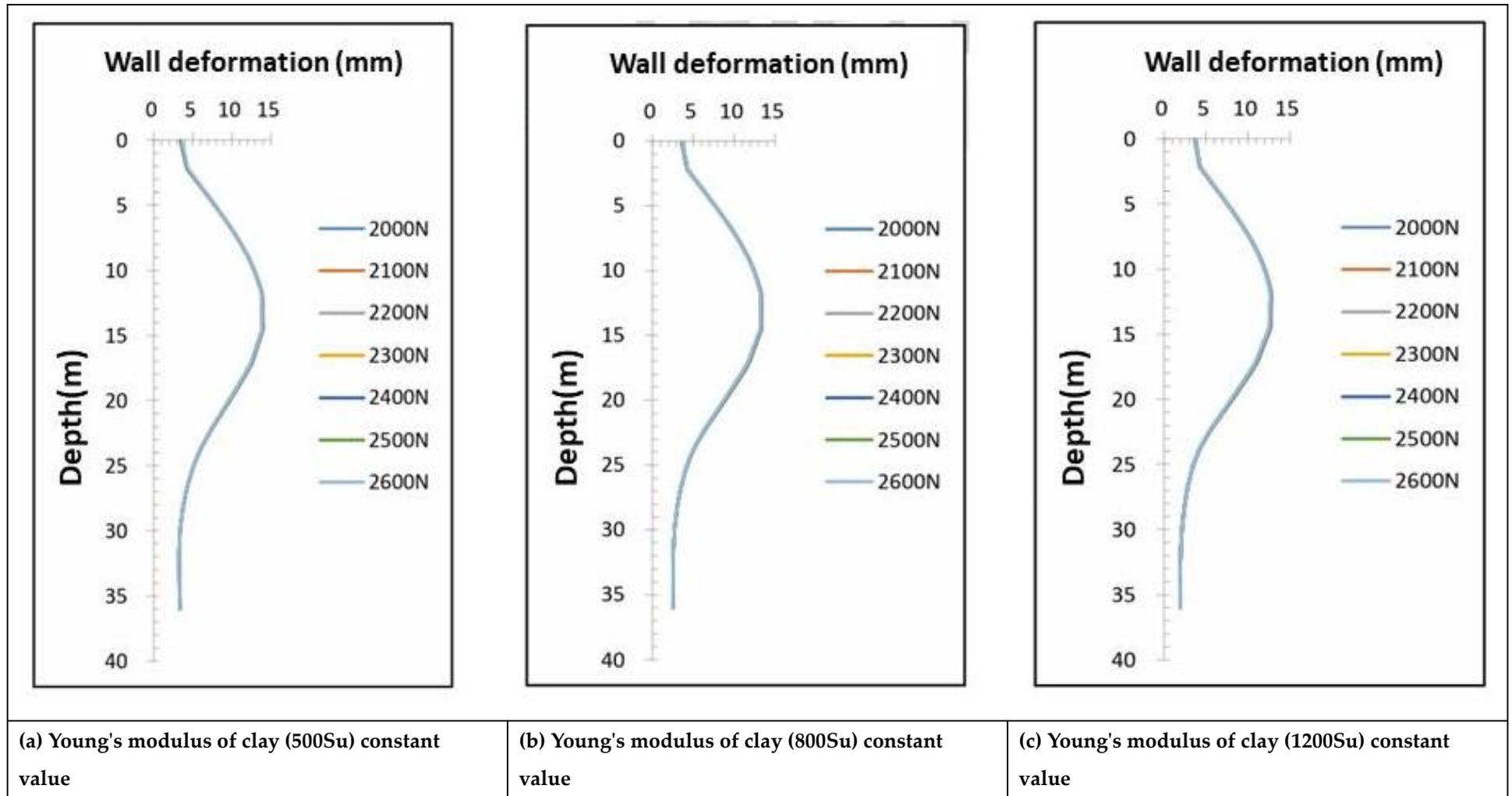


Figure S2 HS model, comparison of results with changes in sand's Young's modulus

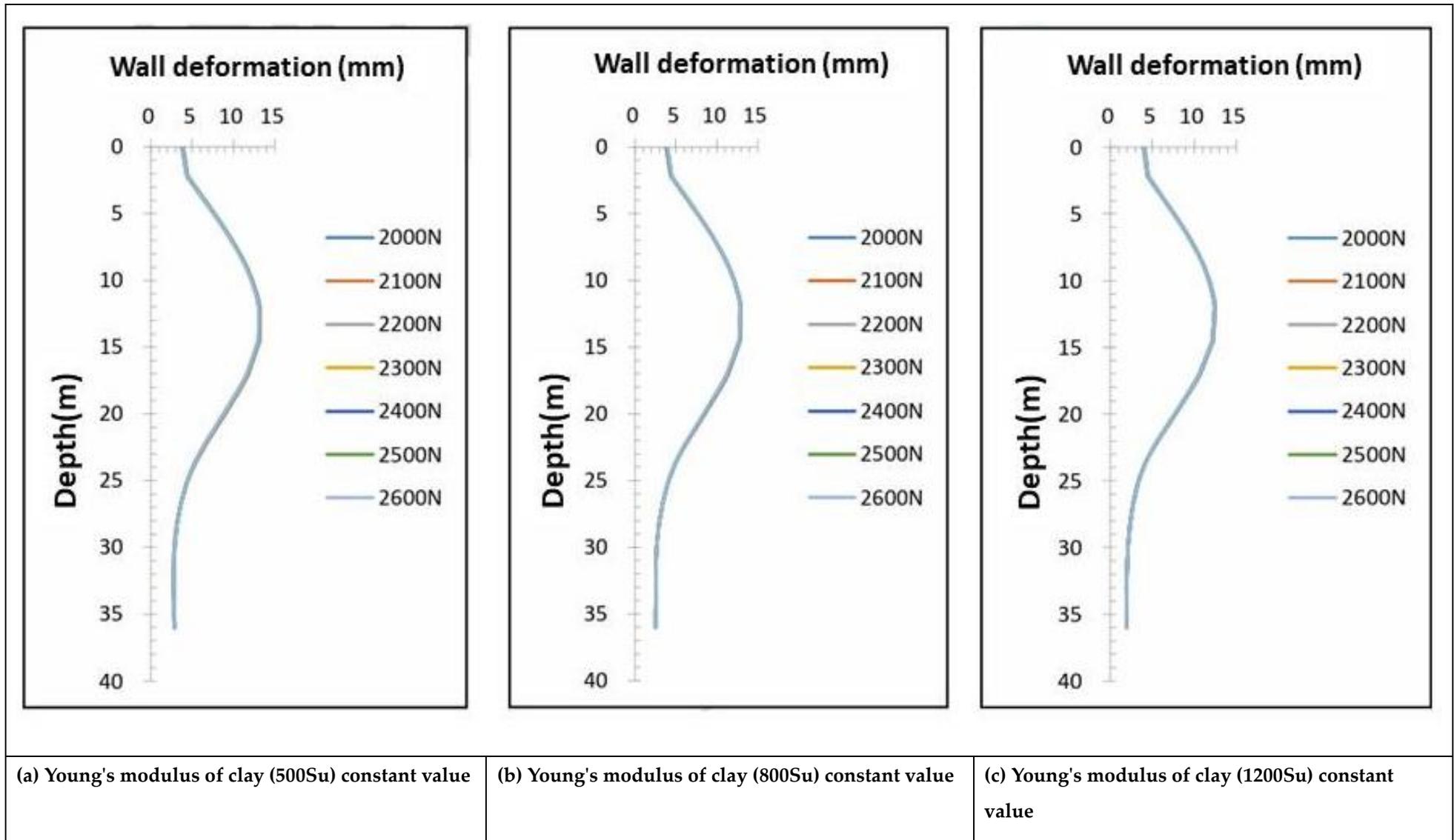


Figure S3 HSS model, comparison of results with changes in sand's Young's modulus

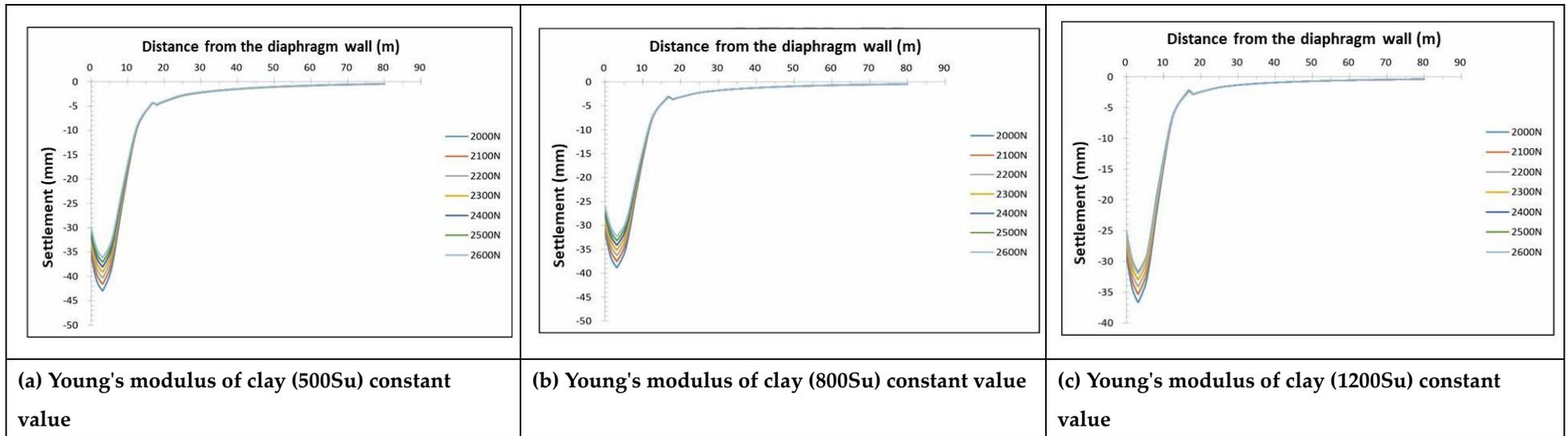


Figure S4 MC model, comparison of results with changes in sand's Young's modulus

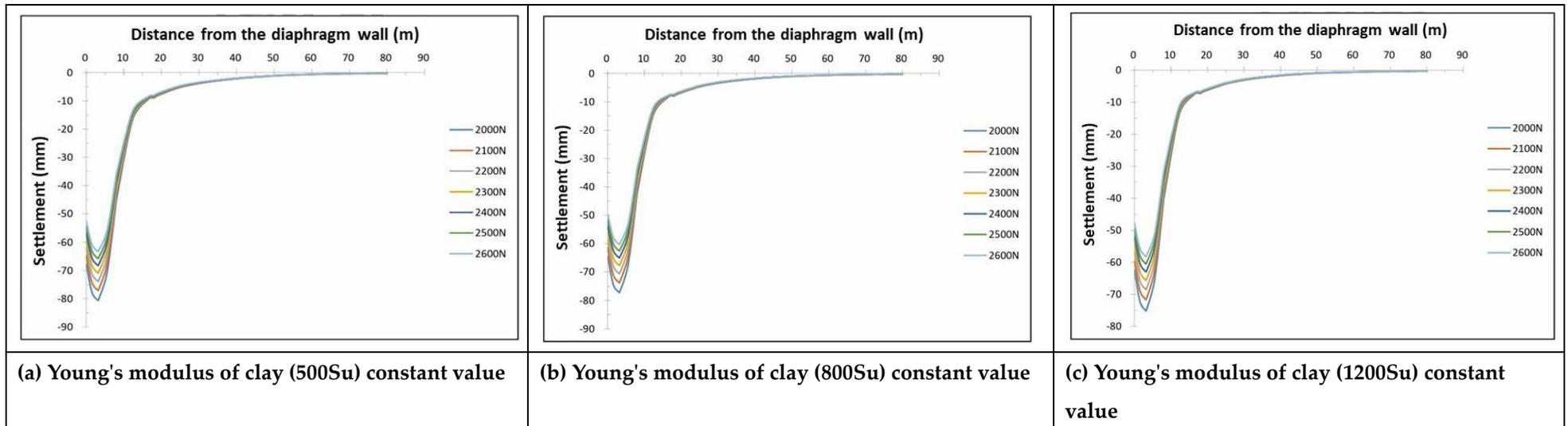


Figure S5 HS model, comparison of results with changes in sand's Young's modulus

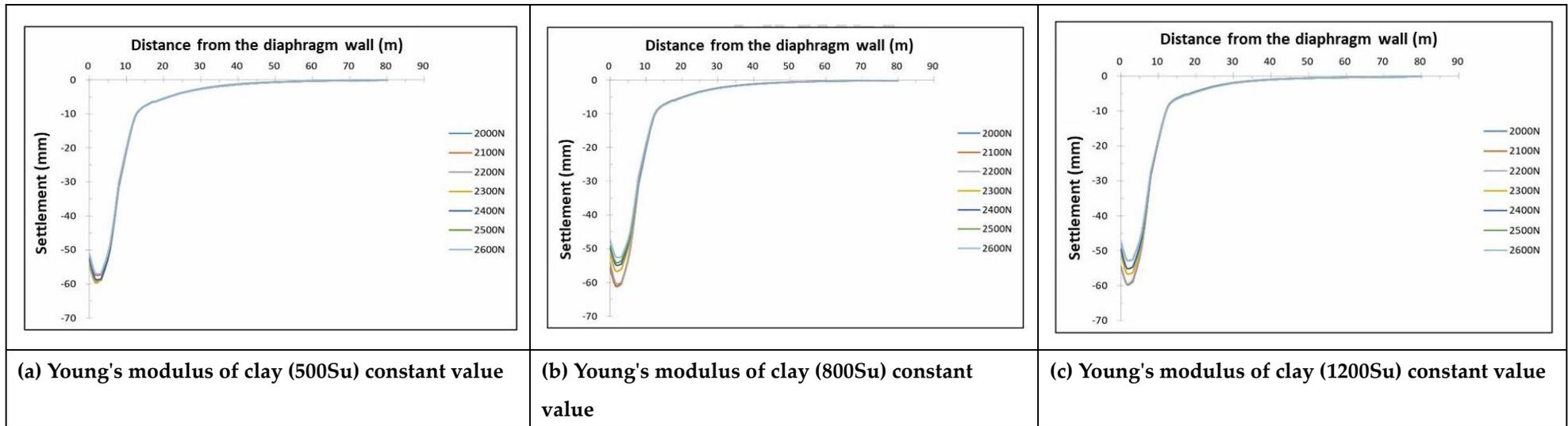


Figure S6 HSS model, comparison of results with changes in sand's Young's modulus