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16. Abstract The state of Michigan is geographically located within the wet-freeze zone identified by the American Association of States and Highway Transportation Officials (AASHTO). The frost depth in the State ranges from 2.5 feet near the Ohio and Indiana borders to about 5.0 feet in parts of the Upper Peninsula. To minimize the impact of freeze-thaw cycles on pavement performance, granular subbase (typically sand) and base (typically gravel) layers are conventionally used to provide protection to the roadbed soils from the detrimental effects of freezing and to minimize the stresses delivered to the roadbed soils. In general, the strengths of the granular layers are lower than that of the asphalt or concrete surface layer and, in most cases, higher than the strength of the roadbed soils. The most common and available aggregate types used by the Michigan Department of Transportation (MDOT) in pavement construction include natural gravel, limestone/dolomite, slag, and crushed concrete. In this study, the value of the resilient modulus of commonly used granular materials were backcalculated using two- and three-layer systems and Nondestructive Deflection Test (NDT) data obtained by MDOT. The backcalculated resilient modulus values of the unbound granular layers were subjected to various to determine the most appropriate values to be used in the pavement design process. This final report provides details of the analyses and the resulting outcomes.			
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