Name of Test **Rapid Shear Rutting Test (IDEAL-RT)**	Developer(s) Zhou and Co-workers Texas A&M Transportation Institute
Test Method(s) Draft ASTM Work Item (WK 71466)	Adoption by Agencies None
Description The IDEAL-RT is a rapid rutting test for specimens pre-conditioned at a high test temperature. Specimens are loaded monotonically at 50 mm/min using a shear fixture, which loads the specimen at 3 points (one upper and two lower supporting strips) creating two shear planes. The peak load from the load frame is used to calculate the rutting tolerance index, RT_{Index}.	Photographs/Illustrations
Test Results RT_{Index} (scaled and thickness corrected peak load)	Test Temperature(s) May be selected based off LTPPBind or local climate data. Typically 50 +/- 15°C (per ASTM WK 71466)
Equipment & Approximate Cost Load Frame	$10,000 to $20,000
Specimen Fabrication Gyratory specimen	Number of Replicate Specimens At least 3 specimens per mixture
Specimen Conditioning Conditioning for 2 hours at the test temperature	Testing Time 1 minute per specimen
Data Analysis Complexity Simple	Test Variability Low (Less than 10% COV)
Field Validations Good (MnROAD, WesTrack and Texas Test Sections).	Overall Practicality for Mix Design and QA Good for Mix Design Good for QA

Key References

• Zhou, F., Crockford, B., Zhang, J., Sheng, H., Epps, J., & Sun, L. (2019). Development and Validation of an Ideal Shear Rutting Test for Asphalt Mix Design QC/QA. Journal of the Association of Asphalt Paving Technologists, 719-750.
• Yin, F., Taylor, A. J., & Tran, N. (2020). Performance Testing for Quality Control and Acceptance of Balanced Mix Design. Auburn, AL: NCAT Report 20-02.