

MWD plus

Vehicles designed to measure both pavement deflection and pavement characteristics

MWD plus

Véhicule conçu pour mesurer simultanément la déformation et les caractéristiques de la chaussée



MWD plus is a measurement vehicle that can simultaneously measure **pavement deflection** and **pavement characteristics** while providing a comprehensive diagnosis of pavement health without the need for restricting traffic.

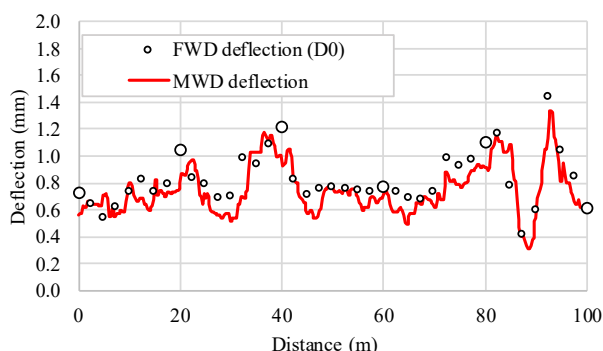
MWD plus is a minibus-sized vehicle, which means it can also be used to measure narrow roads.

Deflection

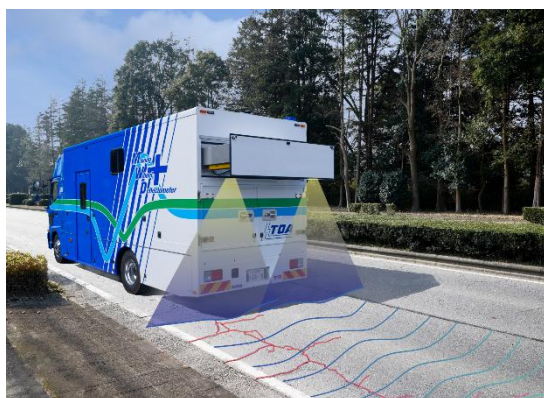
Three Laser Doppler Vibrometers mounted near the rear wheels of the vehicle measure the **deflection velocity** of the pavement caused by the weight of the vehicle as it travels on the road, which is then converted into **pavement deflection**.

Measurements can be taken without imposing traffic restrictions, and a 1-km route can be completed in just a few minutes. In addition, compared to FWD measurements, continuous data makes it possible to detect localized areas of reduced bearing capacity and other anomalies.

The deflections obtained with MWD Plus has been found to have a **high correlation with the FWD central deflection (D_0)** at the same location.



Comparison of MWD plus and FWD deflection

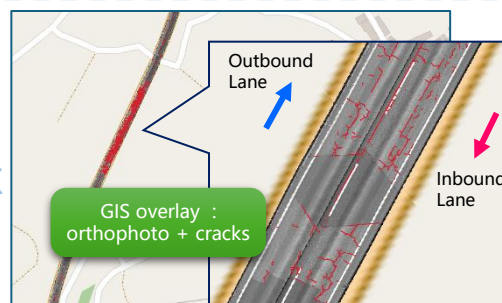


Two 3D camera units mounted at the rear of the vehicle capture continuous cross-sectional road surface profiles and luminance information.

From this information, the amount of **cracking** and **rutting** is automatically calculated.

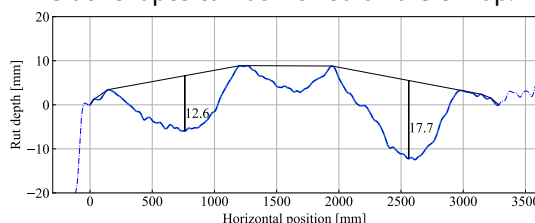
IRI is calculated using a laser displacement meter installed under the vehicle.

Crack



Crack shapes can be viewed on a GIS map.

Rut



IRI

