

View and analyze 2D/3D pavement profiles

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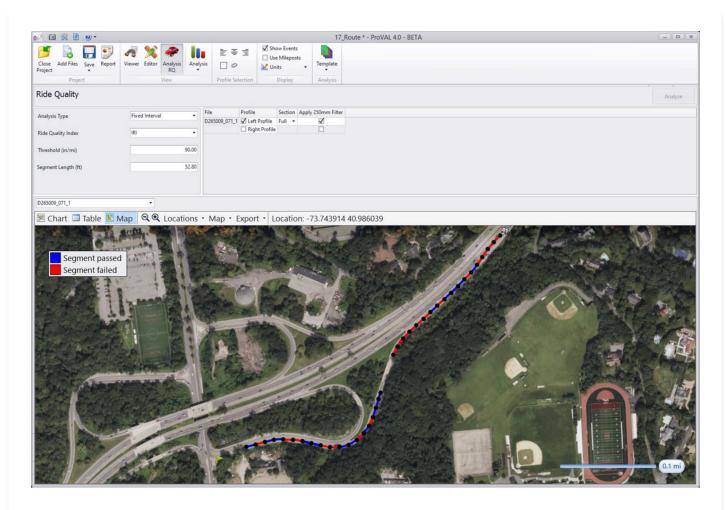
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# **ProVAL Overview**



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#### What is ProVAL?

ProVAL (<u>Profile Viewing and AnaLysis</u>) is an engineering software application that allows users to view and analyze pavement profiles in many different ways. It is easy to use yet powerful, capable of performing various types of profile analyses.

### Who sponsors ProVAL?

Between 2017 and 2024, ProVAL Support has been sponsored by the Pooled Fund Study TPF-5(354) Improving the Quality of Highway Profile Measurement! Starting in August 2024, ProVAL Support is managed by TPF-5(537) Improving the Quality of Highway Profile Measurement.

\*\*\* Please help keep ProVAL alive and free to all users by contacting your US DOT's Research Department to participate in this new TPF-5(537) pooled fund study! \*\*\*

#### What does ProVAL do?

Users can import profiles from various file formats and save them in the Pavement Profile standard file type. Entire analysis projects can be saved, which preserves user information and analysis inputs. After analyses have been performed, the user can print a report of the original profiles and the results of any analyses that have been performed. ProVAL has been adopted by numerous agencies worldwide.

### What types of analyses can ProVAL perform?

Profile Editing: Manipulate profile data in various aspects, including cropping, filtering, and identifying JCP joint locations.



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- Profilograph Simulation: simulate Profilograph traces, report Profilograph Indices, etc;
- Rolling Straightedge Simulation: Simulate rolling Straightedge traces.
- Profile Synchronization: synchronize profiles and determine their repeatability/accuracy based on cross-correlation;
- Profiler Certification: produce repeatability tests and accuracy tests for profiler certification programs;
- Precision and Bias: classify profilers based on the old ASTM E950-98 standard.
- Smoothness Assurance Module (SAM): Provides ride quality reports and improves smoothness through pavement grinding simulation.
- Profile Screener: Automatically detects various issues with profiles.
- Automated Fault Measurement (AFM): automatically estimates joint faulting from profile data after the joint locations are identified using Editor/Joint Locations.
- Curling and Warping: automatically calculate the JCP curling/warping index from profile data after the joint locations are identified using Editor/Joint Locations.
- Optimal WIM Locator (OWL): evaluate Weight-in-Motion measurement errors based on profile data.

# What is the pavement profile standard file format that ProVAL uses?

The Pavement Profile Standard File format (filename extension "ppf") is a binary-based file format created for ProVAL. It is efficient, portable, stable, and upgradeable. The ASTM International profile data file specification, E2560, is based on this format.

# Can I import files in other formats into ProVAL?

Yes! You can import the following files: UMTRI (.erd, .bin); TxDOT (.txt, .dat, .pro); Dynatest (.rsp), and Ames (.ard, .ldf, .adf). Once you save a "project" in ProVAL, the imported files will be automatically converted to the ASTM ppf format. The converted files are usually much more compact and efficient than the old formats, especially when the old formats are in text (ASCII).

# Where can I get ProVAL?

You can easily download the latest ProVAL from www.RoadProfile.com! This website contains all updated information about ProVAL.

### What is the current version of ProVAL?

The current version of ProVAL is 4.0. Updates are posted on the ProVAL website. Continuous development and improvement of ProVAL is underway.

# How can I get technical support?

There are several ways to get help with ProVAL: Online Help Desk, Email/Phone, Technical Documents, and Issue/Feedback Reports. Check out the ProVAL website Support page for details.

# When and where are the ProVAL workshops?

We conduct workshops around the world. As features in ProVAL continue to be added or enhanced through various upgrades, and as agencies and contractors increasingly utilize the software, there is a growing need for customized ProVAL workshops that provide training for users at various levels. We therefore offer workshops that focus on:

- Familiarizing users with the current version of ProVAL,
- Refreshing users with key fundamentals of profiling and analysis methods,
- Sharing knowledge on the advantages, limitations, and pitfalls related to analyzing and interpreting pavement profiles and
- Providing an interactive and hands-on approach to learning ProVAL.

# Where can I get more Information?

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