

## Dipstick® Capabilities

Dipstick® was invented and developed specifically for measuring the flatness and levelness of floors. However, because of its inherent ability to measure elevation differences very precisely, the Dipstick has been found to have other uses that can be very valuable. Here is a short list of some of the possible uses of the Dipstick:

1. Measuring the flatness and levelness of floors using the ASTM E-1155 F-Number system ( $F_F$  and  $F_L$ ). The Dipstick is the fastest and by far the most accurate way to measure floor flatness and levelness.
2. Measuring the elevations of concrete forms before placement of concrete. It has been shown that concrete is never flatter nor more level than when it is first struck off from the forms, so the levelness of the forms can be the limiting factor in how level the concrete floor can be.
3. Measuring the straightness or "trueness" of any tools used to strike off or float wet concrete, such as screeds, highway straightedges, floats, and the like. It has been shown that the finish flatness and levelness of cured concrete is directly affected by any bends, "kinks", or dents in these tools.
4. Making precise elevation surveys within a limited area for specialized reasons, such as the mounting of certain types of industrial or laboratory-type equipment.
5. A similar but more detailed elevation survey that produces a 3-D picture of the surface can be very useful in certain applications.
6. Setting the elevations of bridge-deck rails. It has been shown that the finished bridge deck surface follows the contours of the temporary rail upon which the bridge deck screeds ride. The smoothness of the finished curved surface depends substantially on the smoothness of the curve of the rails. The Dipstick can provide a table of corrections, either visible on the screen of the Dipstick's computer, or printed out, for the crew to make to bring the rail to the desired curve.



7. Measuring the thickness of fills and coatings, such as skim coats and asphalt overlays. Since the Dipstick® is capable of calculating and displaying the difference between any two lines, if one line is run on the subgrade before the skim coat or filler is applied, and one line is run at the same location afterwards, the difference between the two is equal to the thickness of the overlay. The high degree of precision and accuracy of the Dipstick (to within 0.001") and the fact that the difference or thickness is calculated and displayed every 1 foot along the measurement line, makes the Dipstick a useful tool for this purpose.
8. Measuring the difference in elevation across construction joints, where the two slabs are supposed to be at the same plane.
9. Measuring the motion of a slab as a piece of heavy equipment passes over a joint. If the Dipstick is placed so that each end of the Dipstick is resting on a different slab, across a construction joint, and a heavy fork lift is driven across the joint nearby, the Dipstick can measure the deflection of the slabs at the joint in real time.
10. Measuring the actual as-built slope of a tilted surface such as a ramp or drain.
11. Measuring the camber of girders and beams both before and after loading. The difference between them is the amount of bending the beam has undergone.
12. Actually, the Dipstick excels at just about any application where very precise elevation differences are desired.
13. In addition to measuring at a precise 12" interval, all new model Dipsticks can also measure at 300mm and 250 mm spacing without any mods or attachments, and a variable foot spacer bar (standard with the Road model Dipstick) is available that will allow measurement at any spacing between 3" or 75 mm and 12" or 300mm. An additional adapter can be used to measure at 24" or 500mm intervals.
14. The Dipstick's built-in software will provide a report in text form and a graph of the profile(s), either of which can be displayed on the Dipstick computer's screen or printed. Tables of elevations and elevation differences can be viewed on the Dipstick computer's screen, printed, or an ASCII text file can be created from the data which can be read into any spreadsheet, word processor, or other ancillary program.

