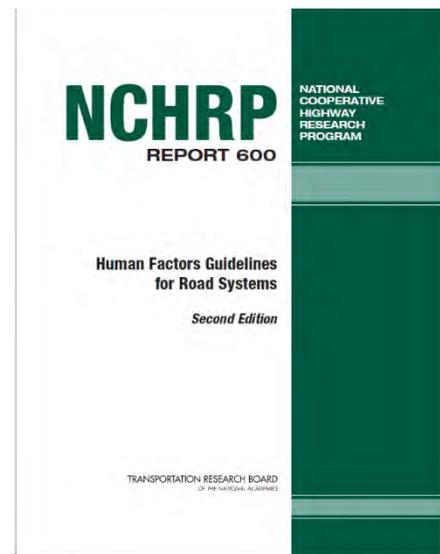


# Updates to NCHRP Report 600: Human Factors Guidelines for Road Systems

Human factors is the scientific discipline concerned with the understanding of interactions among humans and other elements of a system, and the profession that applies theory, principles, data and methods to design in order to optimize human well-being and overall system performance. The Human Factors Guidelines for Road Systems (HFG) provides the best factual information and insight on the characteristics of road users to facilitate safe roadway design and operational decisions. Highway designers and traffic engineers are often not fully aware of the human factors issues (e.g., high workload, driver confusion) on their roadways or they do not always get the opportunity to consider the human performance implications of their facility design. Understanding the relationships between human factors, roadway design, and traffic safety can help practitioners: gain insights to driver behaviors that contribute to crashes, understand why existing roadway designs might be causing errors, and design better/safer roads. The HFG can be used in a variety of ways, for example, to enhance initial roadway planning and design activities; conduct diagnostic assessments of safety concerns and incidents; support road safety audits; identify and select safety countermeasures; and educate traffic engineers and designers on user needs, capabilities, and limitations. The HFG can be used as a complement to existing design and operations standards and manuals such as the *Manual on Uniform Traffic Control* and the *AASHTO Policy on Geometric Design of Highways and Streets* (“Green Book”) and *Highway Safety Manual*.



The 2<sup>nd</sup> Edition of the HFG ([www.trb.org/Main/Blurbs/167909.aspx](http://www.trb.org/Main/Blurbs/167909.aspx)) contains 87 data-driven guidelines and 6 tutorials, supported by nearly 500 citations, and includes the following:

- Introduction (Why human factors guidelines and how to use the document)
- Bringing road user capabilities to highway and traffic engineering practice
- Human factors guidance for roadway location elements (2-page guidelines related to geometric elements)
- Human factors guidance for traffic engineering elements (2-page guidelines related to signs, markings, etc.).
- Tutorials (free-form, detailed discussions about selected topics)
- Back matter (references, glossary, index, abbreviations, and equations)

The recently completed update to the 2<sup>nd</sup> Edition of the HFG, *NCHRP Web-Only Document 316: Human Factors Guidelines for Road Systems 2021 Update, Volume 1: Updated and New Chapters*, includes 23 new guidelines across three new chapters on pedestrians, bicycles, and roundabouts. It also provides three new tutorials and other important updates to the 2<sup>nd</sup> Edition. These updated and new chapters can be found on the TRB website ([www.TRB.org](http://www.TRB.org)) by searching for *NCHRP Web-Only Document 316*.