



**Request for Proposals: NCHRP 20-6
Study Topic 21-01**

Dear Attorney:

The Transportation Research Board (TRB), as part of its work with the National Cooperative Highway Research Program (NCHRP), plans to award contracts for the above studies. TRB anticipates an estimated level of effort and compensation as indicated in the Problem Statement for each study topic. Research reports sponsored by this project are published in TRB's Legal Research Digests (LRD) series or in electronic format. Publications are made available to some libraries and to transportation lawyers and officials through the TRB publication and electronic distribution network. The research Problem Statements are enclosed for your consideration.

After reviewing the enclosed statement, if you are interested in being considered as the researcher and author for any of these study topics, you should reply by email on or before March 19, 2014 to:

James B. McDaniel, Esq.
Counsel for Legal Research Projects
Transportation Research Board
500 5th Street, NW, 4th Floor
Washington, DC 20001

Tel: (202) 334-3209
Fax: (202) 334-2003
Email: jmcdaniel@nas.edu

Your reply should indicate which topic you seek to be designated the consultant: a statement of interest; a resume; a list of your prior publications (you may enclose one or two publications); a statement of resources you will allocate to this project; any additions, deletions, or changes you may wish to suggest for undertaking the work; and your requested compensation. Your proposal should not exceed 25 pages.

Offerors are evaluated by Project Panel members and NCHRP staff consisting of individuals collectively knowledgeable in the problem area. Evaluations are based upon the offerors': 1) experience in the subject area; 2) experience in research writing; 3) prior relevant publications; 4) understanding nature and scope of Problem Statement; 5) quality and commitment of staff and other resources assigned to the project; 6) schedule for completing the work; and 7) price.

Feel free to call me at (202) 334-3209 if you have questions.

Sincerely,

James B. McDaniel
Counsel for Legal Research Projects

NCHRP 20-06, Study Topic 21-01
A Look at the Legal Environment for Driverless Vehicles
Problem Statement

The concept of a driverless car has been around for decades but until recently it has been more a dream than reality. At present, research by technology companies as well as traditional car manufacturers on how to achieve this goal is on-going and rapidly evolving. One major carmaker has announced recently it plans to introduce driverless vehicles for general sale by 2020 and others are sure to follow.

Changes in transportation modes have historically been catalysts for legal change. The Interstate Commerce Commission was the first federal regulatory agency created and it was established to provide oversight over the rail industry. Railroad operation and safety depended on a new form of communication: the telegraph.

Railroads were a leading factor in changing the law of torts from a strict liability standard to one based on fault. William Prosser in his *Handbook of the Law of Torts* observed that negligence began to be recognized as a separate tort by 1825 and that “its rise coincided in a marked degree with the Industrial Revolution ...”

The introduction of automobiles in the 20th century brought profound changes to law in such areas as how to regulate new technology, licensing of drivers, reciprocity amongst states, and traffic control. All of these developments expanded the police power of the states far beyond what existed in the 19th century. See, *Euclid v. Ambler*, (United States Supreme Court 1920)

In the 21st century, with the introduction of driverless vehicles, there is a high probability that we will experience similar technology driven changes to our legal system. Cutting edge developments in driverless vehicles; vehicle to vehicle; and vehicle to roadway communications are expected to have a similar transformative impact on the legal environment. Technology in this field is developing rapidly and there is a need to identify the legal and regulatory framework necessary for its implementation. This research paper should provide an overview of the legal issues generated by these technology advances.

The paper should include a brief review of the legal changes posed by the advent of new technologies (e.g. rail, automobile, aviation, and information technologies), in order to lay a framework as to how change occurs and what lessons may be learned from past developments.

The research paper should also provide transportation officials with basic information as to how driverless and connected vehicle technologies may operate.

In addition, the paper should review the nascent rules and protocols being developed by the National Highway Traffic Safety Administration and states such as California, Nevada, and Florida (to the extent they are available); analyze the challenges these agencies are experiencing in their efforts to accommodate new transportation environments; and develop hypothetical scenarios on how driverless cars will impact the development, maintenance, finance, and

regulation of highways. Some of the questions that should be explored are: how will the system initially operate with a mix of cars driven by drivers and those autonomously operated? Will driverless vehicles require licensed drivers? Will there be a need for changes to traffic control devices? What will be the role of traffic engineers? What is the appropriate role for regulators? Will traffic design speed be impacted in a manner different from that of the fixed standard currently employed? What will be the role of traffic enforcement and how will enforcement codes need to be revised? In the event of a system malfunction, how will liability be determined and apportioned? Must there be national standards adopted? The researcher is encouraged to suggest and address additional issues relating to use and liability.

An attorney is required to be a substantial part of this research effort. Multidisciplinary teams are permitted and encouraged.

Estimate

Phase 1: 100-150 hours, \$20,000

Phase 2: 300-450 hours, \$40,000

Total: \$60,000

Research Implementation

This research will be conducted in two (2) phases. Phase 1 will consist of Task 1. At the conclusion of Phase I, TRB will make a determination whether to proceed with Phase II. Both Phases will be pursuant to a firm fixed price agreement. If a determination is made not to proceed with Phase 2, Consultant is expected to prepare a 15-25 page, double-spaced report suitable for publication as a Research Results Report.

Phase I

Task 1. Research Plan and Detailed Report Outline. The consultant will conduct background research and develop a complete research plan. This background research should include a description of the features a “driverless vehicle” analyzed in the report; known guidance on the use of driverless vehicles. The final step of this task will consist of a work plan including consultant’s length of time and hours needed to complete tasks in Phase 2, an addition questionnaire or plans for telephone interviews (researcher is expected to initially send out a questionnaire or conduct telephone interviews to collect information on social media use, available guidance, and experiences and develop a detailed outline for the report.) The outline should be about 10-15 pages, and contain sufficient detail to inform the committee of what a 75-100 page report (or report of appropriate length for the material) will contain. This outline should also contain the pagination for each proposed section and/or subsection. This material will be submitted to the Principal Investigator for Committee consideration. At this point the project committee will decide whether this project should proceed to either: 1) accepting the information as suitable for a Research Results Report, about a 15-25 page report, detailing the research effort and the finding to that point; or 2) proceeding to a full scale legal research project with the intent of developing and publishing a legal 75-100 page legal research digest

Estimated length of time:	120 days
Estimated work effort:	100 - 150 hours

Phase 2

Task 2. Research. After TRB approval has approved the Task 1 report and a contract has been executed for Phase 2, the consultant should conduct further research, case and statutory/regulatory analysis, and collect additional primary data to the extent necessary

Estimated length of time: To be determined
Estimated work effort: To be determined

Task 3. Report Drafting. The consultant will draft report in accordance with the approved outline (including modifications required by TRB).

Estimated length of time: To be determined
Estimated work effort: To be determined

Task 4. Revisions. Revise report as necessary. The consultant should anticipate that 2 revisions will be necessary. One revision may be required after review by the Principal Investigator and members of a select subcommittee. Additional revisions may be required after the full committee has been reviewed the report.

Estimated length of time: To be determined
Estimated work effort: To be determined

Total effort: Phase 1

Estimated length of time: 120 days
Estimated work effort: 100-150 hours
Estimated compensation \$15,000 - \$20,000

Phase 2. To be determined.

If an offeror's estimation of length of time and estimated work effort differs from those above, the offeror should use his/her estimates.

An important factor in rating offers will be the offeror's commitment to promptly undertake and complete this study.

Submit statements of Interest on or before by email to:

James B. McDaniel
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Transportation Research Board
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Washington, DC 20001
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