Tips for Success:
In Road Design Cases

BY Brennan Delaney

Brennan Delaney is an attorney at Langdon & Emison, located in Lexington, MO. Mr. Delaney can be reached at (660) 259-6175 or brennan@lelaw.com.

As AIEG members, we deal with the ramifications of automobile crashes and assist our clients in attempting to recover for the deaths and injuries that result from them daily. However, sometimes in evaluating the claims against the other driver(s) and the product claims against the manufacturer(s) of vehicle(s) involved, we take our eyes off the road itself in evaluating all avenues of recovery.

GENERAL CONCEPTS AND EVALUATION OF ROAD DESIGN

The roads of this country were traditionally designed with the driver as the focus of attention.[1] More specifically, traffic engineers design roadways, determine sight distances, speed limits, etc., for the "design driver." "Design driver" refers to the range of drivers that roadways are designed for that encapsulates most, but not all, of the driving public, e.g. "the typical 85th percentile driver."[2] In addition, roadways ideally are designed to accommodate the traffic volume and characteristics that are likely to be present within the design life of that section of roadway.[3] However, practically speaking, road volume can only be estimated with reasonable accuracy for around a 20-year period.[4]

To deal with changes in volume or other circumstances over time, the authority responsible for a particular section of road[5] can perform traffic studies, either at regular intervals to monitor system performance or on an *ad hoc* basis to explore a particular problem or circumstance.[6] Thus, in evaluating the design of a road where your client was injured, two pieces of information are paramount: (1) the standards for which the roadway was "originally designed" and (2) what studies or other efforts have been made to evaluate the changes to that roadway since its construction under those standards.

The standards to which the roadway was "originally designed" do not necessarily address the standards in place the first time that that particular dirt path was paved over, but instead, when the roadway in its current configuration was completed. For example, in reviewing a case about a crash that occurred at an intersection on a four-lane highway, you should look to the date that the highway was widened to four lanes and not when construction was completed in its original, two-lane form.

Researching these standards helps determine if the road authority acted negligently in evaluating the traffic volume and applying the applicable standards at the time of the roadway design. It is also an important consideration in jurisdictions where a "state of the art" defense is provided when it can be shown that the design of the roadway in question complied with the standards generally accepted at the time it was designed and constructed.[7]

The other crucial piece of information to research in evaluating a road's design is the information available as to how the traffic volume and patterns have changed over time. This information

can be presented in many forms but is often contained in a traffic study or a road safety audit.[8] These can be as a matter of course or in response to a pattern of crashes at a particular intersection or roadway. As such, they often contain invaluable information, including how traffic volume has increased over time, the number and types of crashes that occur on a particular roadway, and the collision rate.[9]

OBTAINING THE INFORMATION ABOUT A PARTICULAR ROADWAY

But how can this information and the documents that contain it be obtained? The most obvious way is to simply file suit and serve discovery, asking for them. However, because the road authority responsible for the design of a particular roadway is often a public entity, other options are available. For one, a "sunshine" or open records request to the entity or entities that may be responsible for the roadway can yield documents that indicate both when the road was constructed and recent studies performed on it.

Other potential sources are planning boards, homeowners' associations, or any other local entity in close proximity to the roadway with a vested interest in its safety. Sometimes representatives from the road authority will speak at these organizations' meetings and make statements about what has been or needs to be done to a particular roadway to improve its safety. The road authority may also have a public website, a quick search of which may reveal its engineering guidelines, standards, and even priorities. And finally, local newspapers may contain stories focusing on crashes at or changes to a particular roadway.

Concordia Senior Center celebrates July birthdays

Special this week: County Fair Highlights

THE CONCORDIAN

Volume 123 Number 47 — WEDNESDAY, July 23, 2014 — CONCORDIA, MISSOURI 64020 — 12 PAGES

Mieser honored for years of service

Baa, Ram, Ewe: youth show sheep, goats at fair

TAC meeting opens floor to Rock Lake Village residents

TAC meeting opens floor to Rock Lake Village residents

(Continued from page 4)

han explained, and he asked for aid in making alterations at the intersection before any more residents die from fatal vehicle accidents.

Another resident of Rock Lake Village, Andrea Jones, said she was appreciative of the opportunity to speak at the meeting and have her voice heard.

"We figured it was better if you could see eyes and people rather than just colored dots on a map," Jones said.

Jones also sought advice on how best to address the problems facing the 29 residents of Rock Lake Village and others living on 1801 Road and surrounding streets.

"We would like to know of other avenues that really would help it. It is not just our area, but 50 in-and-of itself, the traffic has just increased so much. .... They're stopping cars at 92 mph, and it is not getting any less — it is increasing a lot more," Jones said.

Rich Shipley, Missouri Department of Transportation area engineer, explained MoDOT had conducted a safety study of the intersection.

"We have determined there is a need there. So it is going to be added in the near future. We have several projects in that area. ... It is coming up," he said.

"The most dangerous portion — in my understanding from our safety review — is the left turn lane. So that is the one I'm trying to get in as quickly as possible," Shipley added.

Members of the TAC also advised residents to write to his or her government representatives in hopes of gaining more attention about their situation. Heidrich said "a (large) number of people speaks loudly," and such action could help initiate change.

TAC members also discussed various MoDOT initiatives and programs, including the Missouri Moves Cost Share Program. With $20 million taken from the general revenue, MoDOT is providing financial aid to private and public applicants for local and state projects, which fulfill transportation needs. MoDOT will provide up to 50 percent of the funds needed for the proposed projects. Applications are due July 29.

Members approved the Pioneer Trails Transportation Work Plan and proposed the motion to amend the bylaws to have four meetings a year with the possibility to schedule a special meeting if needed.

The next TAC meeting is Sept. 15.

"We have determined there is a need there. So it is going to be added in the near future."

"The most dangerous portion - in my understanding from our safety review - is the left turn lane. So that is the one I'm trying to get in as quickly as possible."

PLAINTIFF'S EXHIBIT 24

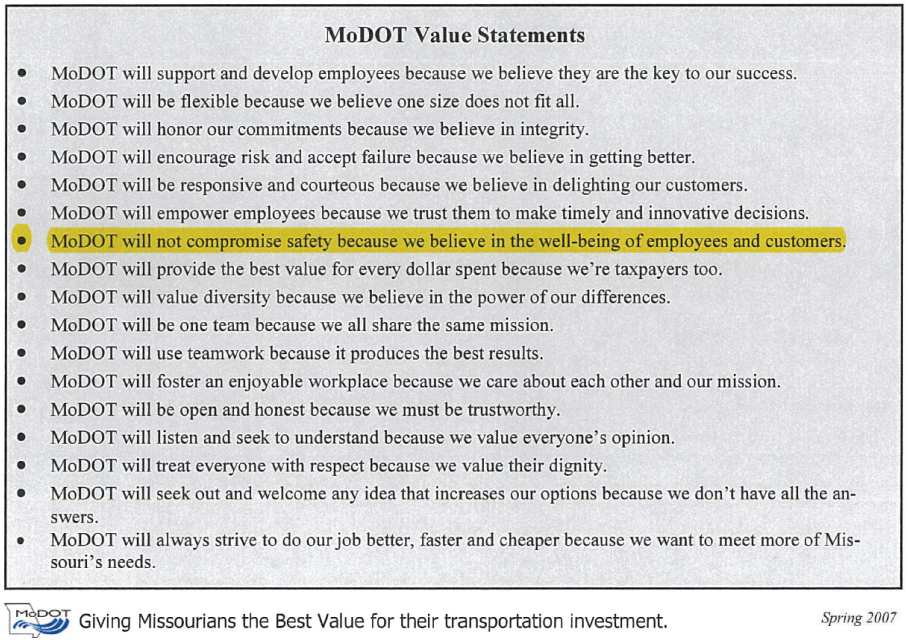
FIGURE 1 – EXAMPLE OF A NEWSPAPER ARTICLE[10]

SUCCESSFULLY UTILIZING THE INFORMATION OBTAINED

Sometimes you may be fortunate enough to obtain a newspaper or other document that contains admissions as to the dangers of the very stretch of roadway where the crash occurred, such as the article in **Figure 1**. However, most of the time, it will require deeper analysis to utilize the information obtained from the sources described to benefit your client's case.

First, one may able to successfully use the information that a road authority has made publicly available to establish "rules of the road."[11] Often, road authorities make statements, have rules, or establish priorities that espouse the valuing of the public's safety above all else.

"...traffic studies and road safety audits often show the need for improvements on a particular roadway or intersection. These traffic studies and road audits often document a pattern of crashes."



MoDOT Value Statements

- MoDOT will support and develop employees because we believe they are the key to our success.
- MoDOT will be flexible because we believe one size does not fit all.
- MoDOT will honor our commitments because we believe in integrity.
- MoDOT will encourage risk and accept failure because we believe in getting better.
- MoDOT will be responsive and courteous because we believe in delighting our customers.
- MoDOT will empower employees because we trust them to make timely and innovative decisions.
- MoDOT will not compromise safety because we believe in the well-being of employees and customers.
- MoDOT will provide the best value for every dollar spent because we're taxpayers too.
- MoDOT will value diversity because we believe in the power of our differences.
- MoDOT will be one team because we all share the same mission.
- MoDOT will use teamwork because it produces the best results.
- MoDOT will foster an enjoyable workplace because we care about each other and our mission.
- MoDOT will be open and honest because we must be trustworthy.
- MoDOT will listen and seek to understand because we value everyone's opinion.
- MoDOT will treat everyone with respect because we value their dignity.
- MoDOT will seek out and welcome any idea that increases our options because we don't have all the answers.
- MoDOT will always strive to do our job better, faster and cheaper because we want to meet more of Missouri's needs.

MoDOT Giving Missourians the Best Value for their transportation investment. *Spring 2007*

FIGURE 2: MISSOURI DEPARTMENT OF TRANSPORTATIONS' VALUE STATEMENTS[12]

Such statements can be used to persuade the judge or jury as to the failure of the roadway authority to act according to the same values it espouses as well as combat any excuses it makes for not improving the design of the roadways it is responsible for.

Second, traffic studies and road safety audits often show the need for improvements on a particular roadway or intersection. These traffic studies and road audits often document a pattern of crashes.

Table 1: Crash Severity Summary

Summary	2010	2011	2012	2013	2014	2015*	Total
Fatal	0	0	0	0	1	0	1
Disabling Injury	0	1	0	0	0	0	1
Minory Injury	2	0	0	0	0	0	2
PDO	1	2	0	1	1	1	6
Total	3	3	0	1	2	1	10

Table 2: Accident Class Summary

Accident Class	2010	2011	2012	2013	2014	2015*	Total
Left Turn	0	0	0	1	0	0	1
Passing	0	0	0	0	1	0	1
Rear End	3	3	0	0	1	0	7
Out of Control	0	0	0	0	0	1	1

FIGURE 3: EXAMPLE OF TABLES FROM A TRAFFIC STUDY SUMMARIZING PRIOR CRASHES AT AN INTERSECTION

These can be compared to the crash that injured your client for similarities. For example, if your client was injured in a rear-end collision at the intersection with the history of crashes in **Figure 3**, you have an argument that not only was a dangerous condition present but also that the road authority that performed the study had notice of it.

Once you have this evidence of the presence of a dangerous condition, you should compare it to the authorities reasonably relied on in the field of traffic engineering to determine what the road authority could have done to improve the design of the roadway. This includes such authoritative works as the Institute of Traffic Engineers' Traffic Engineering Handbook;[13] the American Association of State Highway and Transportation Officials (AASHTO)'s *A Policy on Geometric Designs of Highways and Streets;*[14] and AASHTO's *Road Design Guide.*[15]

If you do not know which of these resources to explore in pursuing your case, you have two options: 1) depose and ask the road authority's own traffic engineers about them; or 2) retain and consult your own road design engineer. Once you determine the proper authorities to use, their application can be invaluable. As an example, the Traffic Engineering Handbook demonstrates that the pattern of rear-end collisions noted in **Figure 3** could be addressed by auxiliary turn lanes so that vehicles slowing down to turn left or right at that intersection can do so without being rear-ended by through traffic.[16]

Finally, the traffic volume documented on a particular roadway or intersection alone can demonstrate that the road authority should have improved the design of the road before the crash that injured your client. Improvements such as left turn lanes can be warranted at even very low volume.[17] Thus, continuing with the example, the Traffic Engineering Handbook demonstrates that left turn lanes are warranted on a four-lane highway even when the number of vehicles turning left is 10 vehicles in an hour or less.[18]

THE POTHOLES TO AVOID ON ROAD DESIGN CASES

Road design cases also present unique challenges that must be addressed. One potential challenge that you must be aware of is sovereign immunity. Sovereign immunity may apply to any road authority that is a government entity. However, there are often exceptions that you can tailor your client's case to fall under, such as the dangerous condition exception.[19] In this same vein, you must also be aware of damage caps on recovery from public or governmental entities and adjust your case budget and client's expectations accordingly.

Another potential challenge is the "state of the art" defense as described above.[20] This defense can often be dealt with by demonstrating what other changes have been made to the subject roadway over time. For example, even the addition of something as innocuous as rumble strips can be classified as a safety improvement and pose a design question as to the roadway.[21] The argument then becomes that when the rumble strips were added, the road was redesigned, making the standards that apply those that were in place at the time of that addition. Likewise, look to recent safety improvements made to other intersections or segments of the same roadway. These changes can create a persuasive argument that the road– except for the portion where your client was injured– was recently designed in compliance with current standards.

CONCLUSION

Overall, the pursuit of a road design case can provide a greater recovery to a client injured on a roadway under the right circumstances. Often, the costs of initially evaluating such cases are low, as most of the information is publicly available if requested. Once pursued, road design cases present challenges and constraints that are different from those found in product cases; but if the methods described above are used, those challenges and constraints can be successfully planned for and dealt with.

1. ANURAG PANDE & BRIAN WOLSHON, TRAFFIC ENGINEERING HANDBOOK, 51 (7th ed. 2016).
2. *Id.* at 61.
3. AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO), A POLICY ON THE GEOMETRIC DESIGN OF STREETS AND HIGHWAYS, 65 (2001)
4. *Id.*
5. Often a state department of transportation or other local government entity such as a county, city, or town.
6. PANDE, *et al*, *supra* note 1, at 109.
7. *See, e.g.*, §537.600.1(2), RSMo; *see also Schneider v. State*, 789 N.W.2d 138, 150 (Iowa 2010).
8. A "road safety audit" is "a formal safety evaluation of a future or existing roadway by an independent audit team." *See P*ANDE, et al., *supra* note 1, at 141.
9. The "collision rate' is used to identify collision prone locations by computing the rate at which collisions occur in a particular section of roadway "in terms of collisions per million vehicle miles to normalize the frequency of collision by traffic exposure." *Id.* at 134.
10. From an article titled "TAC meeting opens floor to Rock Lake Village Residents" in the Concordian, the local newspaper of Concordia, Missouri, featuring quotes from the road authority's engineer about the dangerousness of an intersection where a client sustained fatal injuries in a rear-end collision after the article was published.
11. No pun intended. *See* RICK FRIEDMAN & PATRICK MALONE, RULES OF THE ROAD: A PLAINTIFF LAWYER'S GUIDE TO PROVING LIABILITY (2nd ed. 2010).
12. From "MoDOT's Approach to Program Management," Spring 2007.
13. *See* PANDE, et al., *supra* note 1.
14. AASHTO, *supra* note 3.
15. AASHTO, ROAD DESIGN GUIDE (4th ed. 2011).
16. *See* PANDE, et al., *supra* note 1, at 400.
17. *Id.* at 412.
18. *See id.*
19. *See, e.g.*, §537.600, RSMo; *see also* 42 PA. C.S.A. § 8522.
20. *See* note 7, *supra.*
21. *See* Missouri Department of Transportation, *Engineering Policy Guide, Category: 626 Rumble Strips,* http://epg.modot.org/index.php/Category:626_Rumble_Strips (last visited November 14, 2018).