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Defining a Road Safety Audits Program for
Enhancing Safety and Reducing Tort Liability

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MPC Interim / Phase 1 Report

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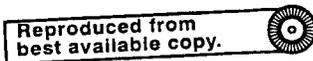
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CHAPTER ONE – INTRODUCTION

Long in our history, the safety of what we build has been mandated and our failure to build safely a source of liability. A program has been developed, which targets the improvement of the safety of the transportation road and street network. This program — the Road Safety Audit Program — originated in the United Kingdom in the 1980s and has been further developed by Austroads, the Australian transportation authority.¹ The program is aimed at identifying the “accident potential and safety performance” of existing or future transportation projects² and ensuring the full consideration of solutions for mitigating any deficiencies.³ This study explores expanding the Road Safety Audit (RSA or Program) to address the liabilities arising from an RSA review of existing roads in the United States.

Statement of the Problem

From a broad perspective, improving road safety is often considered as one aspect of a risk management program. According to the U.S. Department of Transportation (USDOT), risk management is not solely insurance, but an “overall managerial philosophy,” which helps a transportation organization identify and evaluate “all pure risk exposures faced by the [transportation] system and selec[t] the appropriate method or methods for eliminating, reducing or otherwise handling the risk.”⁴ In applying this concept, Walther further explains that insurance is “one of several methods for dealing with risk;” other methods include loss control programs, fidelity bonds, and control of exposure to liability.

It is this latter method of risk management — controlling the transportation entity’s liability exposure — that will be explored in this study. Reported here is an

assessment of the Road Safety Audit, evaluated with respect to its expanded use in avoiding the tort liability of transportation jurisdictions. Depending on the jurisdiction, this liability can arise from the design, construction, maintenance, and operation of the jurisdiction's roads. Liability and defenses from liability can be statutory or judge-made.

This study deals especially with the local rural road jurisdiction — the road jurisdiction of municipal or county governments.⁵ The local rural road jurisdiction (LRRJ) can be characterized as having high road mileage and high fatality and injury rates, but low traffic volumes, financial resources, and expertise.⁶ Excessive mileage and crashes of these jurisdictions, when coupled with lower volumes and resources, create challenges for LRRJs in managing their roads and in avoiding liability arising from the roads.

This study will analyze expanding the scope of the Road Safety Audit beyond its existing objective of improving safety by considering its usefulness in avoiding tort liability when incorporated in the risk management program of local rural road jurisdictions.

Organization of the MPC Report

At its core, this study aims to evaluate the use of the Road Safety Audit Program, by a local rural road jurisdiction, to avoid tort liability while still improving the safety of its road system. The report begins with several chapters focusing on a review of literature in transportation safety, risk management, legal liability, legal defenses, and an identification of common sources of liability for transportation agencies. The literature review exposes a “gap” in the literature regarding whether a Road Safety Audit

undertaken by a local rural road jurisdiction can be successfully defended in a civil lawsuit against the jurisdiction.

Objectives of the MPC Report

The goal of this research is to provide a thorough evaluation of applying the Road Safety Audit concepts in a manner that provides the best legal tort liability defense for Local Rural Road Jurisdictions. More specifically, the study will predict how the RSA might be accepted in the current legal framework and will provide guidelines for its acceptance as a practical tool in managing liability.

The primary purpose of the overall research is to provide an answer to the following question when posed by an individual local rural road jurisdiction (LRRJ):

“Can a Road Safety Audit be successfully defended when performed by a transportation entity characterized by [my County’s LRRJ] physical features, [my County’s LRRJ] legal features, and which undertakes [my County’s LRRJ] liability avoidance strategies?”

Note that the paper will explore and define each of the four elements of this question (“successfully defended,” “physical features,” “legal features,” and “liability avoidance strategies”) either objectively through the Literature Review or subjectively through survey(s). As an end result, the paper will provide a multidimensional matrix to account for each of the elements.

CHAPTER TWO – REVIEW OF SAFETY ISSUES

This paper used a variety of materials, including master's theses, institutional publications, law review articles, judicial opinions, and technical journals. Research targeted the Road Safety Audit, including ascertaining its history, methodology, and application. The description and vulnerabilities of local rural road jurisdictions were explored along with the doctrine of risk management. Finally, the tort liability of local rural road jurisdictions was explored. Five areas¹ of literature were reviewed for this paper: transportation safety, risk management, liability and defenses in general, liability and defenses of government, and liability and defenses of transportation entities.

Transportation Safety

Under the heading of transportation safety, literature on transportation safety programs, the Road Safety Audit, and transportation entities was reviewed. Under the current transportation safety programs, the approaches used and the benefits and drawbacks of each were reviewed. Under the Road Safety Audit, its history, methodology, and applications were reviewed. Research under transportation entities explored variations in how² states apportion transportation entity power between the state and its local governments. More specifically, the local rural road jurisdiction and the challenges that it faces were explored.

¹ Each area, of course, includes various relevant topics and subtopics. The areas are not necessarily mutually exclusive. The name of each area is, in the author's opinion, merely an appropriate handle for each class of topics.

² Note that in the Literature Review stage, only common methods of how states distribute transportation authority will be explored. As part of the survey, each transportation entity will be asked to explain their particular approach.

Transportation Safety Programs

Approaches

On behalf of the Transportation Research Board, Benjamin Chatfield explains that two approaches to road safety improvements are used by transportation organizations: the Spot Improvement Approach and the System-Wide Safety Improvement Approach.⁷

Although both approaches aim to increase highway safety, Chatfield draws three distinctions between them. First, the Spot Approach focuses on the reduction of accidents while the System-Wide Approach emphasizes “roadway consistency.”⁸ Second, as their names imply, the Spot Approach focuses on “small segments of a highway system,”⁹ while the System-Wide Approach focuses on “a substantial portion of the highways.”¹⁰ Third, the Spot Approach usually is used for “a relatively short period of time,” whereas the System-Wide Approach can be used in both “short-term project[s]” and in “long-term undertaking[s].”¹¹

Importance

Relevant to our study are Chatfield’s conclusions about the two road safety improvement approaches. First, Chatfield finds that both approaches are necessary for “a balanced system.”¹² Second, and most important here, is Chatfield’s finding of the legal protection that such balanced systems may provide to transportation organizations. “Highway agencies should not wait for the courts to tell them what to do about safety, but should recognize that the cost of doing nothing to correct a problem identified in court may be very high.”¹³

It is the latter of these two results — the potential legal protection — of using Spot- and System-Wide Approaches to improving road safety that provides the nexus for this analysis of the Road Safety Audit.

The Road Safety Audit Program

History

In 1994, Austroads (the Australian transportation authority) published a comprehensive handbook titled “Road Safety Audit,” which combined road safety auditing practices from Australia and from overseas to create guidelines for the then-fledgling Road Safety Audit.¹⁴

The Austroads handbook acknowledges that the RSA originated “in the United Kingdom in the 1980s,” with aims of helping “highway authorities to take steps to reduce the possibility of accidents on their roads.”¹⁵ Interestingly, according to the U.S. Federal Highway Administration (“FHWA”), the concept of using an independent auditor was introduced during the Victorian Period to preview new rail lines.¹⁶ By April of 1991, the Scottish Development Department and its U.K. counterpart mandated safety audits for certain roads above specified costs.¹⁷ New Zealand also adopted the safety audit concept, conducting pilot audits as early as 1992 and developing related policies and procedures by 1993.¹⁸

In October 1996, a nine-member, FHWA-sponsored scanning team of U.S. transportation personnel — from Government and academe — visited Australia and New Zealand to observe these two countries’ “applications of the [RSA] process, the framework in which audits are applied, and the policy context in which audits are

conducted.”¹⁹ As discussed *later*, the report from this 1996 scanning expedition is the progenitor of recent safety audit research and applications in the United States.

Methodology

The Austroads handbook defines the road safety audit as “a formal examination of an existing or future road or traffic project which interacts with road users, in which an independent, qualified examiner reports on the project’s accident potential and safety performance.”²⁰

Notice some of the key aspects of the methodology of the Road Safety Audit Program, which are summarized in the above definition. The program uses an independent auditor to identify and report safety aspects of existing or future transportation projects.²¹ Audits are project-specific.²² Elsewhere, the handbook explains that the RSA assesses “the operation of a road,” focuses on the safety of all “users of the road,”²³ and can be conducted on a project of any size during the feasibility, design, and pre-opening stages of a proposed project, as well as on an existing road.²⁴ Notice the objective of the road safety audit: a report “on the project’s accident potential and safety performance.”²⁵ Finally, the report produced from the Road Safety Audit may have legal consequences, as will be explored later.

Considering again Chatfield’s conclusions regarding the importance of using Spot Approaches and System-Wide Safety Approaches to create a balanced road safety system and perhaps provide liability protection, it follows that in addition to its focus on safety, the RSA’s programmed, segmental approach is relevant to this study in that the RSA may be used as either a Spot Approach or a System-Wide Safety Approach.

Applications

The Austroads definition, as identified above, allows for the road safety audit to be globally applied to future and existing traffic projects. Recent research in the United States precipitated from the 1996 FHWA scanning trip, narrowing this broad application of the RSA into finer applications primarily aimed at improving safety.

In 1998, Tate and Wilson developed an RSA program “for use by local agencies,” first creating a rural road classification system “to help structure road safety audits” and then developing an RSA program tailored specifically to the rural local roads.²⁶ Also in 1998, Haiar and Wilson developed a safety audit program for use in small cities, creating “a systematic process for examining [the] safety needs” of small cities.²⁷ In 1998, Bowler and Wilson developed checklists for a road safety audit of interstate reconstruction, focusing on evaluating “traffic control plans, devices and strategies before the interstate work begins,” to “ensure that major safety considerations have not been overlooked.”²⁸

These recent developments of the Road Safety Audit aim at applying the RSA to specific uses, whether used by rural local roads (Tate and Wilson), small cities (Haiar and Wilson), or interstate reconstruction (Bowler and Wilson). Note that this research was targeted to specific applications with a common objective of increasing safety in these specific applications. Current research also is underway which focuses not on more applications of the RSA, but on refining the method of the RSA (i.e., to identify the minimum level of expertise on the part of the auditor), again looking toward increasing safety.

While most of the RSA research to date has focused on expanding the use of the RSA — through researching new applications or refining the method of conducting RSAs

— this research focuses on protecting the use of the RSA through ascertaining the legal merits of using it.

Transportation Entities

Although the term “Transportation Entity” may be archaic or may hold specific meaning to some, it is used broadly in this paper. For the purposes of this paper “Transportation Entity” is not a title of a specific department, but a class of departments. That class may be found at all levels of government, in all corners of the Nation, and is responsible for the public administration of designing, constructing, maintaining, and operating the roadway, roadside, and their appurtenances. It is broadly defined in this paper because the class may be labeled in a variety of ways in the various jurisdictions though this paper is not restricted to considering only departments that happen to call themselves a “Transportation Entity.”

Levels

Transportation entities exist at all levels of our Nation’s government. The Federal Highway Administration of the U.S. Department of Transportation is the primary³ transportation entity of the Federal government. At the state level, the state’s Department of Transportation or (“DOT”) carries the torch. Beyond the state level, transportation entities may be found at the county and municipality levels or in districts crossing other political boundaries.

Curiously, while 48 of the 50 United States have “counties” as geographic subdivisions, two states have the functional equivalent of the “county,” but call it

³ The USDOT/FHWA is primary in the sense that other Federal agencies may have “transportation” branches which provide satellite support to the agency. For example, the U.S. Department of Agriculture has the “Office of Transportation.” See generally, Norman Walzer & David L. Chicoine, U.S. Department of Agriculture, Rural Roads and Bridges: A Dilemma for Local Officials (1989).

something else: Louisiana has the “parish” and Alaska has the “borough.”²⁹ Also the “county” in the two states without counties (Connecticut and Rhode Island), while a geographic subdivision, does not have a government.³⁰ Furthermore, the DOTs in four states (Delaware, North Carolina, Virginia, and West Virginia) are responsible for all rural county roads in their state boundaries, relieving their constituent counties of a road responsibility. Finally, many miles of roads in U.S. national park and forest lands are not within a county’s jurisdiction.

The Local Rural Road Jurisdiction

This paper concentrates on the local rural road jurisdiction. The term “local rural road jurisdiction” is a label used to describe the transportation entity—whether a town, city, or county government entity³¹ — which manages and operates rural roads at the local level. According to the U.S. Department of Transportation, the “vast majority (75.2 percent) of the nation’s roadways are under the jurisdiction of local governments,” with the remaining 24.8 percent under the jurisdiction of the federal and state governments.³² Note that the local rural road mileage of 2,238,308 accounts for 56.9 percent of the Nation’s 3,933,985 total mileage.³³

At the Fifth International Conference on Low Volume Roads (1991), Walzer and McWilliams reemphasized the significance of rural roads. The authors explained that rural roads provide the farm-to-market connection, the rural-to-urban employment commute, and are used by emergency and other public services.³⁴

Walzer and Chicoine show that although states and counties are, of course, free to allocate the responsibilities for their local rural roads as they see fit, three common approaches (with some minor variations therein) exist.³⁵ The first approach is where “the

state administers virtually all rural local roads,” the second “makes counties primarily responsible,” and the third has “a dual system of local governments.”³⁶ As of 1989, the second approach was the most common.³⁷

Unfortunately, while more than half of the roads in the United States are under the control of local rural road jurisdictions, these jurisdictions have access to only limited federal funding³⁸ and rely primarily on local and state sources of revenue. Federal funding problems stem from a number a sources, including the “poor performance of the farm economy in the early 1980s,” rural population declines, and the elimination of federal general revenue sharing.³⁹ Faced with many miles of low volume roads and funding problems, the agencies then are often forced to maintain their system with limited abilities to find adequate capital. To be sure, “[i]t is safe to say that local transportation systems across the United States are financially strapped,” and “[s]afe and efficient travel is now threatened in rural areas.”⁴⁰

Wilson and Lipinski identify other challenges facing local rural road jurisdictions: violations of “roadway consistency or driver expectation,” a “lack of trained professional engineers,” and an “increase in tort liability claims.”⁴¹ And as Lewis points out, as our litigious society searches for a “deep pocket,” roadway defects spawn tort suits.⁴² Thus it appears that the local rural road jurisdiction — the transportation entity responsible for over half of our nation’s roads — is faced with financial constraints, defective roads, a lack of expertise, and rising liability.

Risk Management

Risk management may provide some relief to the quandary faced by the local rural road jurisdiction. Risk management is the administrative backdrop from which an

organization — public or private, large or small — can at least face its risk. According to Walther, “risk or risk exposure is ‘something’ which may occur which could cause a loss of or to ‘something.’ Risks take the form of potential losses of physical property, of bodily injury or of a liability arising from negligence or direct intentional action.”⁴³

Methods

Writing on behalf of the U.S. Department of Transportation, Walther defines risk management as “a process of identifying and evaluating all pure risk exposures faced by the transit system and selecting the appropriate method or methods for eliminating, reducing, or otherwise handling the risk.”⁴⁴ Walther emphasizes that an organization’s process for managing its risk is of more importance than a “one shot activity” aimed at reducing risk.⁴⁵ Simply put, insurance is not risk management, but one component of risk management.⁴⁶

Walther proposes five elements of a risk management program: Risk Identification, Risk Evaluation, Risk Handling, Implementing the Method(s) Selected, and Continuous Monitoring and Review of the Program.⁴⁷ Gittings and Jacobs also identify five steps, which differ from Walther’s in form, but are similar in substance.⁴⁸

In addition to using insurance as a means of managing risk, Walther identifies two common risk management programs already used by Departments of Transportation (DOTs): vehicle preventative maintenance and defensive driving training.⁴⁹ Gittings and Jacobs add mitigating “high-risk elements” of roads, “improving management support systems used to identify and monitor specific types of deficiencies,” and increasing employees’ liability awareness through education and training.⁵⁰

Importance

Important to the study at hand, however, is the conclusion drawn by Walther and by Gittings and Jacobs: risk management programs provide a “logical, necessary, and effective approach for departments of transportation to use in dealing with their emerging tort liability problems.”⁵¹ This study therefore will consider use of the Road Safety Audit as one component of a transportation organization’s risk management program aimed at reducing the liability of that organization. Lewis exhorts, “tort liability risk must be managed.”⁵²

CHAPTER THREE – REVIEW OF LEGAL LIABILITY ISSUES

Before turning to the review of literature regarding the legalities of the Road Safety Audit, two points emanating from the literature already reviewed should be kept in mind with respect to this legal review. First, legal aspects of governments and transportation entities (again, with an emphasis on the local rural road jurisdiction) are the center of the legal review. Second, because the Road Safety Audit provides a record of the transportation entity's road defects, the legalities of "records" also will be paramount.

Thus the Road Safety Audit invites a multi-direction intersection, so to speak, of legal doctrines. Government and transportation entity liabilities and defenses were examined, the competing privileges and accessibility of government records when offered into evidence were explored, and various manifestations of transportation entity liability also were examined.

Liability and Defenses in General

Under the heading of general legal liability and defenses, tort law was contrasted with criminal law and contract law, and fundamentals of the doctrine of tort liability were identified. Liability and defenses in general were discussed before various aspects of government liability and transportation entity liability were explored.

Tort Liability

To a lawyer, the term, "tort liability" connotes a broad but specific area of law; to a transportation engineer, the term narrowly describes the liability of a road owner. To avoid future semantic discrepancies, in this study the term will be used in the "transportation engineering" sense as loosely including various forms of liability of a

transportation department. These various forms of liability are of utmost importance to this study. They will be explored below and, to use lawyer terminology, include liabilities imposed by tort law, statutes, and regulations. Before delving into this liability, an explanation of some distinctions between tort law and criminal law is necessary.

Tort laws are not as expressly defined as criminal laws. Criminal law deals with crimes that are specifically defined by legislation, such as robbery, murder, and kidnapping; whereas tort law, often termed “civil law,” can be thought of as “judge-made” or “common law,” not necessarily defined but developed. Criminal statutes are expressly codified by legislatures. Tort laws are developed through written opinions that judges issue in which they explain the reasoning behind their decisions in suits at law. The development of this judge-made law dates back to England, before the founding of this country and is known as “common law.” Although few statutes criminalize the bulk of acts of transportation entities, principles imputing liability on municipalities in general, and transportation entities specifically, have evolved through this common law. Note that some crimes have similar tort counterparts because both may have been rooted in common law.

In addition to differences in their nature, criminal laws and tort laws also differ in their consequences. Criminal law has prescribed physical or monetary punishments. A violation of tort law does not result in physical punishment, but in remedies such as monetary damages or restitution. Criminal law tends toward punishing⁴ the wrongdoer while tort law aims to make the victim whole.

⁴ In addition to (or, arguably, in place of) the term “punish,” the term “rehabilitate” could be used. Regardless, either word greatly simplifies the consequence to the criminal. A full treatment of the policy goals of the criminal law system is beyond the scope of this paper.

Tort law has two primary branches: intentional torts and negligence. Intentional torts are found in such categories as physical harms and property damages and require the plaintiff (victim) to show that the defendant (the alleged wrongdoer) performed or failed to perform certain actions to the detriment of the plaintiff. Examples of intentional torts include assault, battery, and defamation of character. As might be expected, these specific torts are outside the scope of this study.

Negligence, on the other hand, is the branch of tort law relevant to this study. Negligence requires the plaintiff to show that the defendant's breach of a duty of care to the plaintiff caused harm to the plaintiff. Note specifically these four elements of negligence: duty, breach, causation, and harm. A plaintiff must demonstrate each of these four elements in a court of law before a defendant will be found negligent. As a corollary, to defend from a negligence claim, a defendant need only to successfully refute one of the four elements.

Although negligence is the approach that the vast majority of courts follow in determining governmental tort liability, "a few jurisdictions" have applied the "active wrongdoing test."⁵³ This test "draw[s] a distinction between municipal misfeasance and nonfeasance," or in other words, between active and passive wrongdoing.⁵⁴ Because the negligence approach is so widely used, it is emphasized in this paper.

Contract law is a third body of law, existing apart from tort law and criminal law (with some minor overlaps). It concerns the law of contracts, including what constitutes a valid offer and acceptance, consideration, breach, and fraud. Though governments and transportation entities certainly use contracts in their operations, this area of the law — contract liability — is outside the scope of this paper.

These fundamental legal concepts will be used as this study explores criminal statutes and the common law relating to the liability of transportation jurisdictions due to their negligence. Two points are critical at this juncture. First, tort liability does not occur in all states for all potential sources of transportation entity liability; state courts are free to independently decide how they will govern various transportation entities. Second, in some states, state legislatures have passed statutes providing sovereign immunity — protection from lawsuits — for their various transportation entities. These two points will be discussed in-depth as particular attention will be paid to the duties and defenses of local rural road jurisdictions. However, in the literature review stage, only the concepts of the legal doctrines were reviewed. In the methodology stage comparisons between the states' handling of the legal doctrines will be identified and analyzed.

Legal Defenses

Several generally applicable legal defense doctrines were reviewed, including the difference between comparative fault and contributory negligence, and procedural legal defenses including the attorney-client privilege and the admissibility of public and business records.

Comparative Fault and Contributory Negligence

Two defenses to negligence that a defendant may call upon are “contributory negligence” and “assumption of risk.” Both of these defenses, although developed through common law, are largely statutory today and therefore largely depend on the applicable state law.

The contributory negligence defense applies when the plaintiff (victim), through their own negligence, contributed to their own harm. Under this view, if the plaintiff

contributed to their own harm, regardless of, to what extent, this defense acts to prohibit the plaintiff from any recovery from the defendant. Similarly, if the plaintiff knowingly assumes the risk of the operation he or she is about to undertake, this “assumption of risk” also may bar the plaintiff from recovery from the defendant.

However, several states now have statutes which apportion damages, pro rata, between the plaintiff and the defendant, according to the amount of “fault” of each party. These statutes, called “comparative fault” or “comparative negligence” statutes, varying among the states in application, are perceived to be more fair to parties. The statutes purport to place blame where it lies, prohibit plaintiffs from benefiting from their own wrongdoing, and allow plaintiffs some recovery even though they may have contributed to their own harm.

Procedural Legal Defenses

In addition to “substantive” legal defenses of contributory negligence and comparative fault, several “procedural” legal devices may be available to the defendant that may protect certain sources of information adverse to the defendant from being exploited by the plaintiff. Information may be viewed as not “discoverable” by the plaintiff prior to trial, not “admissible” during trial, or both.

These procedural defense doctrines have arisen largely as consequences of the adversarial nature of the judicial system, with an eye toward fairness. As such, the devices generally are available only under narrow circumstances.

The Attorney-Client Privilege

The attorney-client privilege protects certain communications between the attorney and client from disclosure. The privilege’s purpose is to encourage full and

frank communication between attorney and client so that the attorney can provide the best legal representation to the client. The privilege is the client's and, generally speaking, can only be waived by the client.⁵⁵ The scope of the privilege is not uniform around the country. In the Federal Courts, Rule 501 of the Federal Rules of Evidence provides no clear-cut description of the privilege, leaving it up to various Acts of Congress or the "principles of the common law."⁵⁶ The states are free individually to decide the privilege's boundaries and application in their courts.

The privilege protects client/lawyer communications. The privileged communications do not necessarily have to be verbal; those "communications to a lawyer in writing are clearly covered by the privilege."⁵⁷ But there is an exception to this general proposition. According to Wolfram, the "preexisting document" exception maintains that the attorney-client privilege does not cover a document that a client gives to an attorney — even if given for the reason of legal representation — if the document was not privileged "in the hands of [the] client" before the legal representation.⁵⁸

Further, the "privilege applies to clients who are not individual persons," extending "to artificial entities such as corporations, governmental bodies, unincorporated associations, and partnerships."⁵⁹ When the government is the client, the scope of the attorney-client privilege becomes less clear than in other relationships.⁶⁰ Note the tension in this relationship between balancing open government and confidential information.⁶¹ Wolfram reports that courts have developed four different views regarding "the applicability of the privilege to governmental clients."⁶²

First, some courts "assume that the privilege is applicable generally to communications in confidence between all government employees and government lawyers."⁶³ Other courts apply a governmental version of the "control group" test for the

corporate privilege.⁶⁴ This “control group” test is used to protect conversations between an organization’s attorney and members of the organization who make decisions, or “control” the organization’s affairs. A third group of courts hold the “governmental privilege goes no further than the work product doctrine.”⁶⁵ The “work product” doctrine, according to the leading case of Hickman v. Taylor, serves to protect information from adverse parties if the desired information was prepared in “anticipation of litigation.”⁶⁶ That the information was prepared for litigation is critical. Communications between attorney and client regarding the litigation, such as memoranda, notes, and litigation strategy, as long as prepared in “anticipation of litigation,” will generally be protected. Finally, a restrictive fourth approach says the “privilege should not exist... ‘unless the communication concerns a pending investigation, claim, or action and the court determines that disclosure will seriously impair the ability of the public officer or agency to process the claim or conduct a pending investigation litigation, or proceeding in the public interest.’”⁶⁷ Again, according to Wolfram, the views of the 50 states fall roughly into one of these four groups in regard to their treatment of the attorney-client privilege when the government is the client.

In sum, whether the communications between the government-client and the attorney are privileged will depend first on what constitutes the attorney-client privilege as defined by the State.⁵ Secondly, writings may be privileged communications so long as they were not unprivileged prior to the formation of the attorney-client relationship. Finally, communications between the client and the attorney will most likely be privileged if communications were prepared for the litigation at issue. Though these

⁵ In Federal Court, Rule 501 of the Federal Rules of Evidence and its progeny will define the attorney-client privilege.

boundaries etch out a narrow portal of privilege, one must keep public policy in mind; any privilege presents a roadblock — or at least a hurdle — in the search for the truth.

The Admissibility of Records

Recall that a writing between client and attorney may be a protected communication if the writing was made after the attorney-client relationship was formed; especially if it was prepared in anticipation of litigation. Looking instead at records made by the governmental agency as part of its ordinary course of business, the question becomes whether the records may be admissible during the course of litigation. Before exploring that problem, a brief discussion of the rule against hearsay is warranted.

One general rule of evidence is that “hearsay” evidence is inadmissible.⁶⁸ According to the Federal Rules of Evidence, “[h]earsay’ is a statement, other than one made by the declarant while testifying at the trial or hearing, offered to prove the truth of the matter asserted.”⁶⁹ In other words, “[w]hen a witness testifies that someone said something out of court, the out-of-court statement is hearsay if its relevance depends on the truth of what the out-of-court speaker meant to communicate.”⁷⁰ For example, if to show that it was a “dark and stormy night,” a witness were to testify that an out-of-court speaker said that it was a “dark and stormy night,” the witness’ testimony of this out-of-court statement would be hearsay because it was offered for the truth of the matter asserted — it was offered to prove that it was indeed a “dark and stormy night.” Had the witness’ testimony been offered to prove that the speaker was not mute and could speak, this testimony would not be hearsay because whether or not it was a “dark and stormy night” is not the question—the speaker’s muteness is. A primary concern behind excluding hearsay evidence is that if admitted, the out-of-court speaker’s words would

not be tested by cross-examination. In short, the jury would not be able to evaluate the truthfulness of the out-of-court speaker.

An exception to the general rule against hearsay is the rule admitting regularly kept records into evidence.⁷¹ The policy behind this exception that allows what would otherwise be inadmissible hearsay is “that regularly kept records typically have a high degree of accuracy,” in that the “records are calculated to train the record keeper in habits of precision...[and] the entire business of the nation and many other activities function in reliance upon records of this kind.”⁷² In other words, if businesses and government can rely on the truthfulness of such records, courts should be able to rely on their truthfulness as well.

Rule 803 of the Federal Rules of Evidence recognizes several types of regularly kept records that are admissible into evidence. Among those types are records of regularly conducted activity⁷³ and public records and reports.⁷⁴ As a corollary, the Federal Rules also recognize that the absence of an entry in either of these two types of regularly kept records can be admitted as the absence or non-occurrence of the subject or matter that would have otherwise been recorded.⁷⁵ An example of a record of regularly conducted activity is a hotel guest registry. An example of a public record or report is the log of deed transfers in the County Recorder’s office. After collecting cases that dealt with the question of admissibility of “statements contained in a report of a police officer or other public officer or employee concerning the cause of or responsibility for an injury to the person or property,” made after the alleged incident, Habeeb says “that generally the courts exclude” such statements.⁷⁶

Although several states model their rules of evidence after the Federal Rules, state courts are free to decide whether they will admit regularly kept records into evidence.

Thus in federal courts, such records may be admitted under the Federal Rules but may or may not be admitted in state courts.

Access to Public Records

Recall from the review of the attorney-client privilege that when the government is the client, the admissibility of public records into evidence is subject to the tension between protecting the confidentiality of certain governmental information and the democratic ideology of open government. This same tension also exists in the public's access to government records. At common law, a principle evolved in which "writings and information constituting military or diplomatic secrets" were excluded from public scrutiny for the obvious reason of national security.⁷⁷ In 1966 Congress codified this common law principle as one exception to the broad rule of making Federal Government information available in its enactment of the Freedom of Information Act.⁷⁸ Another exception is the "privilege [that] protects communications made between governmental personnel, or between governmental personnel and outside consultants, which consist of advisory opinions and recommendations preliminary to the formulation of agency policy."⁷⁹ Under this exception, reports to or among government officials will not be accessible if they were "communicated prior to finalization of the policy and...constituted opinion or evaluation as opposed to the mere reporting of objective facts."⁸⁰ States have also enacted their versions of the Freedom of Information Act.

The general rule favoring information accessibility is significant in that it "clear[s] the way for discovery [of the information] in litigation."⁸¹ Further, if the government is a party to the litigation, the accessibility of the information often is essential to the parties involved. If the government initiates either a criminal or civil action, but refuses to allow

the defendant access to significant governmental information, courts do not hesitate to dismiss the government's case.⁸² But the opposite situation in favor of the government may arise when the government is the defendant. For example, even given the Federal Government's Freedom of Information Act "an adverse finding cannot be rendered against [the government] as the price of asserting an evidentiary privilege."⁸³ Therefore, if "the plaintiff's action cannot be proved without disclosure of the privileged matter, the plaintiff will remain remediless," although some courts will labor to prevent this harsh result.⁸⁴

Admissibility of Subsequent Improvements

Rule 407 of the Federal Rules of Evidence holds that modifications or improvements made to a product "after an injury or harm" generally are "not admissible to prove negligence," but may be admissible "when offered for another purpose, such as proving ownership, control, or feasibility of precautionary measures, if controverted, or impeachment."⁸⁵ For example, if in response to a "loss of mobility" lawsuit a chain saw manufacturer modified a chain saw by moving the trigger further from the chain, under this rule, the evidence of this subsequent modification would most likely not be admissible (unless the evidence was used, for example, to show that the manufacturer considered the feasibility of the new trigger location but rejected it).

While this exclusion of evidence may seem unfair to injured plaintiffs, the prevailing policy behind such an exclusion is to encourage (or at least not discourage) manufacturers from improving their product. That a manufacturer's subsequent modification could be used against the manufacturer would serve as a disincentive to improve or modify the product. This rule considers evidence of modifications made

subsequent to an accident and does not concern evidence of information known before an accident.

The Self-Evaluation Privilege

In the wake of increasing federal regulations, private corporations have stepped up efforts in initiating internal evaluations to better comply with the law, identify problems in hopes of mitigating them, and avoid any unwanted sanctions from regulatory agencies. Even though such “self-evaluations” often are required by the regulatory agency, in some jurisdictions the “privilege of self-critical analysis has developed to shield certain institutional self-analyses from discovery.”⁸⁶ In other words, reports from an organization’s internal reviews may not be discoverable or admissible under the self-evaluation privilege. The policy behind such a privilege is to encourage candid investigations and analyses to better organizations’ performance and compliance, while “the public’s need for all available evidence” counters the privilege.⁸⁷

These two competing policy interests have indeed resulted in inconsistent views of the self-evaluation privilege.⁸⁸ Heller suggests a continuum along which various views lie: at one extreme are jurisdictions that refuse to allow the privilege; at the other extreme are jurisdictions that protect the underlying self-evaluative facts and the self-evaluative material; in the middle are those who protect the self-evaluative material but admit or allow discovery of the underlying facts.⁸⁹ The privilege has been used successfully in cases involving, among other things, environmental regulation compliance⁹⁰ and hospital records.⁹¹ But in the 1990 U.S. Supreme Court case of University of Pennsylvania v. Equal Employment Opportunity Commission, the Court refused to extend the privilege to academic peer review materials in a Title VII civil rights claim.⁹²

The domain of allowing the self-evaluation privilege is not left to the courts; in addition to case law, “the privilege of self-critical analysis, unlike many other privileges, has been the subject of state legislation.”⁹³ Although some state legislatures have codified the privilege, the U.S. Congress refused to do so.⁶ Regardless of the source — whether judicially or legislatively — some jurisdictions may view the privilege as necessary to protect certain documents or reports from discovery or admissibility while others may view “the public need for all available evidence”⁹⁴ as paramount.

The Makings of a “Successful” Legal Defense

The modifier of “successfully” in the phrase “successfully defended” includes several subjective and objective components. In a legal defense context, the term “successfully” could mean that a claim was avoided, dismissed, or settled, or could mean that the jury returned a pro-defendant verdict or a pro-plaintiff verdict that was less harsh than anticipated by the defendant. What makes a defense successful may well be only in the mind of the defendant.

Although no bright lines can be drawn around the definition of a “successful defense,” two sources identify components that may be considered in various definitions of the “successful defense.” In 1941, Fuller and Casner reviewed the tort claims filed against the City of Boston during 1934-38. The authors sorted the claims into two categories: those “settled without court action,”⁹⁵ and those which were not settled.⁹⁶

In the settlement category, the authors identified five subcategories: claims for personal injuries, claims for property damage, total number of claims, amount paid on claims, and the average number of months required for settlement. In the third

⁶ Congress did not enact Proposed Federal Rule of Evidence 502 which would have extended the privilege “if the law requiring [the return or report] so provides.” Fed. R. Evid. 502 (not enacted).

subcategory (total number of claims), authors analyzed the number of claims paid, the number of claims in which the city denied liability, the number of claims pending or barred by statutes of limitations, and the percentage resulting in payments.

In the non-settlement category, authors analyzed by the court in which the claim was filed (i.e., whether filed in Superior Court or Municipal Court), the following five categories: those claims that were either barred by the statute of limitations or pending, those that resulted in judgments for plaintiffs, those that resulted in judgments for the City, the total amount paid on judgments, and the average amount paid per judgment.

In December 1993, the American Association of State Highway and Transportation Officials (AASHTO) reviewed the status of sovereign immunity among the states.⁹⁷ AASHTO identified “successful defense” categories similar to those identified by Fuller and Casner and added the dollar amount spent to defend claims and lawsuits.⁹⁸

Although the phrase “successful defense” is a subjective concept that largely is individualized, it contains several objective components that can be measured. It may include components such as the quantity and rate of claims, verdicts, and settlements, procedural dismissals, and monetary damages and costs.

Liability and Defenses of Government

Recall the previous discussion, which explained that transportation entities can be found at all levels of government — whether federal, state, county, or municipal. As explained further under “Sovereign Immunity” below, the doctrine of sovereign immunity — which would provide governments at all levels an absolute defense from suit — has largely eroded, whether statutorily or via the common law. Without such

covering, governments can be found liable for various actions or inactions. The liability of individual government employees is beyond the scope of this paper.

Sovereign Immunity

Sovereign immunity provides governments at all levels with protection from lawsuits. According to Turner et al., the “concept came to have two meanings: (1) the government could not be sued unless it gave its express permission, and (2) even where the government allowed itself to be [sued], it was not responsible for the acts of its employees.”⁹⁹ The liability of municipalities for their torts has been a subject of debate for decades, with those who wish to defend governments saying “sovereignty” and those who wish to hold governments responsible saying “fairness.” Fuller and Casner frame the two sides of the debate in their 1941 Harvard Law Review article. The authors explain that defenders of municipal sovereignty “fear that fraud and excessive litigation would result in unbearable cost to the public in the event municipal corporations were treated as ordinary persons for purposes of tort liability.”¹⁰⁰ Proponents of holding municipalities liable point to the “unfairness to the innocent victim” and to “the social desirability of spreading the loss”¹⁰¹ in advocating against sovereignty.

The early rule regarding the sovereignty of municipalities is summarized in “[t]he maxim, ‘The King can do no wrong.’”¹⁰² This simple doctrine, which gives full liability protection to municipalities, according to Dray,¹⁰³ was used in the 1788 English case of Russell v. The Men of Devon.¹⁰⁴ Dray further explains that this English doctrine of providing tort immunity to municipalities eventually became American doctrine.¹⁰⁵ Then, as Dray notes, the 1842 case of Bailey v. New York¹⁰⁶ limited this liability enjoyed by

governments to only those torts arising out of governmental functions; the government could be held liable for torts arising out of its proprietary functions,¹⁰⁷ as discussed next.

The Governmental-Proprietary Distinction

In some states, a distinction is drawn between not holding a government liable for its “governmental” functions such as fire prevention, police protection, and education while holding a government liable for its “proprietary” functions such as airports, gas, lights, and playgrounds. According to Glennon, “government functions are those that can only be performed adequately by a government unit such as police, fire protection, or courts,” whereas “[p]roprietary functions are those that could be supplied by private concerns.”¹⁰⁸ Glennon maintains the distinction as lying simply in that “proprietary functions are those services that derive revenue, such as water, gas, and electric supplies.”¹⁰⁹

However, according to Fuller and Casner, the distinction has resulted in “an enormous amount of litigation” as governments argue that the function in question is governmental, while the injured party argues that the function is proprietary.¹¹⁰ Furthermore, there is little agreement between what facts constitute proprietary liability, resulting in the distinction’s determination depending on a case-by-case basis, varying among the states.¹¹¹ Fuller and Casner add that “activities involving streets, sidewalks, playgrounds, bridges, viaducts, and sewers are governmental in some jurisdictions and proprietary in others.”¹¹² Thus, functions performed by transportation departments have traditionally fallen into the “grey area” between governmental and proprietary, the first category affording immunity to governments, the latter, liability. Because of this apparent grey area, there is no “bright-line” rule; each state’s view of this distinction is

their own, although some similarities do exist among the states. According to Minge, “[a]lthough the maintenance of public ways ‘would seem to be a governmental or public function, . . . most of the courts of this country . . . have held cities liable for negligence in failing to keep their streets in a safe condition for travel.’”¹¹³ This view is echoed by Lewis: “the construction and maintenance of public streets, highways, and sewers generally have been regarded to be proprietary functions in most states.”¹¹⁴ Further, this judge-made law (or “common law”) basis for liability also may be either supplemented or reversed in a statute.

Rhyne adds a qualification to the proprietary doctrine in urging that “[e]ven if the municipal function is proprietary in nature, the city may be immune from tort liability if it appears that the act causing the injury was ultra vires.”¹¹⁵ The “ultra vires” doctrine in the law provides that an entity, whether public or private, will not be held responsible for its acts if the acts were outside the scope of its operations. Thus, if available, the ultra vires doctrine is a defense to a transportation entity if it “was acting beyond the scope of its lawful powers.”¹¹⁶ But Rhyne notes that this defense is not absolute. It “is not available where the activity causing the injury is within the scope of the city’s authority but is performed in an improper manner, or at an unauthorized place.”¹¹⁷ For example, the defense was unavailable for water damage “caused by a water line illegally laid outside the city limits,”¹¹⁸ because although installing water lines falls within the scope of the city’s authority, installing them outside of the city’s limits does not. For the same reason, the “unauthorized construction of a bridge does not relieve a city of liability for the negligent maintenance of the bridge.”¹¹⁹ Like most other defenses, the ultra vires defense is not necessarily available in all legal jurisdictions.

The Discretionary-Ministerial Distinction

Alongside the Governmental-Proprietary distinction lies the nuances of the Discretionary-Ministerial distinction. Ministerial acts are those that “usually involve clearly-defined tasks performed with minimum leeway on personal judgment and do not require any comparison of alternatives before undertaking the duty to be performed,” such as “[r]outine roadway maintenance.”¹²⁰ These acts “may create liability,”¹²¹ in that “persons involved in ministerial functions generally are open to tort liability suits.”¹²²

On the other hand, discretionary functions “are those requiring the exercise of independent judgment in arriving at a decision or choosing a course of action.”¹²³ Liability in discretionary functions is less clear than that in ministerial functions, as “courts are reluctant to second-guess discretionary decisions made by executive bodies” and because of the belief “that a jury of untrained laymen is not competent to evaluate the appropriateness of discretionary decisions.”¹²⁴ When deciding liability questions relating to discretionary functions, courts have often ruled in favor of transportation entities when the “agencies have carried out a reasonable plan of roadway improvements.”¹²⁵ Courts also often hold out as legitimate discretionary functions the “adoption of improvement plans, the designation of funds, and the setting of priorities for improvement.”¹²⁶

The Erosion of Sovereign Immunity

The covering that transportation entities once enjoyed from the doctrine of sovereign immunity has eroded via common law and the legislatures — Congress and the State legislatures. Unsatisfied with results that were patently unfair against injured parties, state Supreme Courts began restricting the defense of sovereign immunity.¹²⁷ Turner et al. explain that while this abrogation of the defense was regarded by some “as a

legal fluke,” it caught on, and through the 1960s and 1970s, “a series of states lost their immunity...through court rulings.”¹²⁸

Not to be outdone, legislatures began enacting statutes that eviscerated the defense. In 1946 Congress passed the Federal Tort Claims Act,¹²⁹ which expressly authorizes suits against the United States government. Section 2674 of the Act says, “[t]he United States shall be liable, respecting the provisions of this title relating to tort claims, in the same manner and to the same extent as a private individual under like circumstances.”¹³⁰ Although Congress limits the cause of action with respect to allowable damages¹³¹ and the statute of limitations,¹³² the Act marks the death knell of absolute United States governmental immunity.

State legislatures followed suit, so to speak. In 1996 Glennon reported that “[i]n the last thirty years, the doctrine of sovereign immunity has either been completely waived or modified in most of the States.”¹³³ Likewise, the rules of liability themselves and the exceptions and limitations found in State statutes are “quite similar” to those found in the Federal Tort Claims Act.¹³⁴

In a comprehensive 1992 survey of the status of State acts, AASHTO¹³⁵ determined that of the 42 states that responded to the question of whether their state has “sovereign immunity as to highway tort claims,” seven said they had immunity, five said they did not, and 30 said that their immunity was limited.¹³⁶ A similar compilation is found in section 895B of the 1982 Second Restatement of Torts. In that earlier compilation, seven states had sovereign immunity, five did not, and 38 states had limited sovereign immunity.¹³⁷ This earlier compilation adds two considerations regarding the transportation entity’s tort liability. First, whether a transportation entity has sovereign immunity as to its tort claims may depend on whether the agency is the state agency or a

local agency.¹³⁸ Second, some of the more common features in those states with limited immunity may include the requirement of legislative consent to suit, liability limited by dollar limits or insurance coverage limits, liability dependent upon whether the alleged harmful act was of a general or proprietary nature, or limits and procedures promulgated by a claims board.¹³⁹

Of importance in the study at hand is the polarizing effect that sovereign immunity has on the liability of transportation entities. A transportation entity either has sovereign immunity and is immune from suit or does not have immunity — or at best has limited immunity — and is therefore susceptible to liability suits. Table 1 summarizes the status of sovereign immunity in the six states of the Mountain-Plains Consortium region.

Table 1 – Summary of the Status of Sovereign Immunity of the MPC States⁷

<u>State</u>	<u>From Restatement (Second) of Torts (1982)</u>		<u>From AASHTO Survey (1993)</u>	
	<u>State Immunity</u>	<u>Local Immunity</u>	<u>Type of Limit</u>	<u>Liability Ceiling</u>
Colorado	<ol style="list-style-type: none"> Judicially abolished. Proffit v. State, 174 Colo. 113, 482 P.2d 965 (1971). Colo. Gov't Immunity Act passed, restoring to large degree but making exceptions. Colo. Rev. Stat. 1973, §§ 24-10-101 to 24-10-117. Insurance waives immunity to extent of coverage. 	Same	No Response	No Response

⁷ After summaries in Restatement (Second) of Torts §895B (1982) and Administrative Subcommittee on Legal Affairs, American Association of State Highway and Transportation Officials, Survey on the Status of Sovereign Immunity in the States – 1992 (1993).

<u>State</u>	<u>From Restatement (Second) of Torts (1982)</u>		<u>From AASHTO Survey (1993)</u>	
	<u>State Immunity</u>	<u>Local Immunity</u>	<u>Type of Limit</u>	<u>Liability Ceiling</u>
Montana	<ol style="list-style-type: none"> Constitutionally abolished. Mont. Const. Art. 2, § 18. State Comprehensive Insurance Plan and Tort Claims Act. Mont.Rev. Codes Ann. 1977, §§ 82-4301 and 82-4327. 120-day notice of claim requirement held unconstitutional. Noll v. City of Bozeman, 166 Mont. 504, 534 P.2d 880 (1975). 	Same	MCA 2-9-108, \$750,000 per person; \$1,500,000 occurrence	\$750,000 ceiling per person, \$1,500,000 ceiling per accident.

<u>State</u>	<u>From Restatement (Second) of Torts (1982)</u>		<u>From AASHTO Survey (1993)</u>	
	<u>State Immunity</u>	<u>Local Immunity</u>	<u>Type of Limit</u>	<u>Liability Ceiling</u>
North Dakota	<p>1. Insurance authorized for state agencies, with waiver of immunity to extent of policy. N.D.Cent. Code § 39-12.1-15.</p> <p>2. Insurance also authorized for motor vehicles. N.D. Cent. Code § 39-01-08.</p>	<p>1. Judicially abolished. Kitto v. Minot Park Dist., 224 N.W.2d 795 (N.D.1974).</p> <p>2. Statutory waiver of immunity for negligence actions, with exceptions for discretionary actions and enforcement of invalid statute using due care. Maximum liability \$250,000 per person, \$500,000 per occurrence. Insurance authorized. N.D. Cent. Code §§ 32-12.1 to 32-12.1-14.</p>	<p>1. Immunity granted by North Dakota Constitution Article I, Section 9; North Dakota Century Code Section 32-12-02.</p> <p>2. Contract claims are subject to mandatory arbitration NDCC Section 24-02-26 et. seq.</p>	No Response

<u>State</u>	<u>From Restatement (Second) of Torts (1982)</u>		<u>From AASHTO Survey (1993)</u>	
	<u>State Immunity</u>	<u>Local Immunity</u>	<u>Type of Limit</u>	<u>Liability Ceiling</u>
South Dakota	Office of Commissioner of Claims makes advisory findings to legislature, which determines whether to award relief. S.D.Comp. Laws §§ 21- 32-1 to 21-32-7.	1. Insurance authorized. S.D.Comp. Laws § 9-12-7. 2. Statute detailing procedure for actions against municipalities held not applicable to tort claims. Swanson v. City of Deadwood, 88 S.D. 320, 219 N.W.2d 477 (1974).	1. Tort limit to insurance coverage of employees. 2. State has sovereign immunity.	Ceiling per person is the insurance coverage, \$1,000,000 ceiling per accident.
Utah	Governmental Immunity Act. Immunity retained for gov'tl functions subject to exceptions in act. Immune for discretionary functions and intentional torts. File first with entity then appeal. Utah Code Ann. 1978, §§ 63-30-1 to 63-30-34.	Same	No Response	No Response

State	From Restatement (Second) of Torts (1982)		From AASHTO Survey (1993)	
	State Immunity	Local Immunity	Type of Limit	Liability Ceiling
Wyoming ⁸	<ol style="list-style-type: none"> 1. Constitution allows legislature to provide for suits against the state. Wyo. Const. Art. 1, § 8. 2. Legislature has provided for immunity, and courts will not judicially alter the doctrine. <i>Davis v. Bd. of County Comm'rs</i>, 495 P.2d 21 (Wyo.1972). 3. <i>Oroz</i>, <i>infra</i>, reserved question of state immunity. 	<ol style="list-style-type: none"> 1. Judicially abolished. <i>Oroz v. Board of County Comm'rs of Carbon County</i>, 575 P.2d 1155 (Wyo.1978). 2. Earlier statute provided for waiver of immunity to extent of insurance. Wyo.Stat.Ann. § 1.618(1). 	<ol style="list-style-type: none"> 1. Limit - \$250,000 each claimant / each occurrence; \$500,000 all claimants / one occurrence. W.S. 1-39-101, etc. 2. Highway immunity – W.S. 1-39-120. 	\$250,000 ceiling per person, \$500,000 ceiling per accident.

⁸ Wyoming's sovereign immunity history exemplifies the wrangling and complexity commonly involved in eroding a state's sovereign immunity. In 1978, in the case of *Oroz v. Board of County Commissioners of the Board of County of Carbon*, 575 P.2d 1155 (1978), the Wyoming Supreme Court abrogated immunity for Wyoming's counties, municipalities, school districts, and other subdivisions of the government, making it effective July 1, 1979. But in 1979, the Wyoming Legislature enacted the "Wyoming Governmental Claims Act" (W.S. §§ 1-39-101 et seq.) including W.S. § 1-39-111, which contained the phrase "public facilities" as a source of liability. This phrase was interpreted by the Wyoming Supreme Court in *State v. Stovall*, 648 P.2d 543 (1982) to include "highways," finding the Wyoming DOT liable. Dissatisfied with that result, the Legislature repealed W.S. § 1-39-111 in 1986, and enacted W.S. § 1-39-120, which said the state was immune for defects in plans, for failing to construct or reconstruct, or for the maintenance of bridges, culverts, highways, roadways, streets, alleys, sidewalks, or parking areas. But in the 1993 case of *Romero v. Hoppal*, 855 P.2d 366 (1993), the Wyoming Supreme Court interpreted the word "maintenance" in W.S. § 1-39-120 as holding the state liable for negligent maintenance, saying "maintenance" is a noun, not a verb. Accordingly, the government may be liable for negligent acts made while maintaining, but is immune from liability arising in the results of the maintenance acts.

Immunity Under the Eleventh Amendment

One general principle derived from the 11th amendment to the United States Constitution⁹ is “that states should not be brought before federal tribunals.”¹⁴⁰ In other words, the 11th amendment provides immunity to the state with respect to suits in federal courts. However, two relevant exceptions to this immunity are recognized: first, “[a] state may waive its immunity from suit in federal court,” and second, “Congress may abrogate...a state’s sovereign immunity.”¹⁴¹

In determining whether a state waived its immunity, Jesse Feder notes that the U.S. Supreme Court uses a stringent approach—giving deference to the state—in refusing to imply a waiver and requiring an unambiguous, specific waiver.¹⁴² But in determining whether Congress effectively abrogated state immunity, the Court uses a flexible approach, weighing “the interests of the states against the interests of the federal government.”¹⁴³ Accordingly, if the Court determines that “Congress is empowered to abrogate, the Court has then considered whether the specificity of Congress’ intent justifies the potential imposition on the states.”¹⁴⁴

Liability and Defenses of Transportation Entities

From the erosion of governmental sovereign immunity comes governmental liability and the ensuing defenses. Along with these general and governmental liabilities and defenses are the liabilities and defenses of transportation entities specifically. Stated differently, transportation entities have unique liabilities and defenses in addition to those they generally have and those they have because they are “government.”

⁹ “The Judicial power of the United States shall not be construed to extend to any suit in law or equity, commenced or prosecuted against one of the United States by Citizens of another State, or by Citizens or Subjects of any Foreign State.” U. S. Const. amend. XI.

Although these transportation entity liabilities and defenses—like their broader counterparts—vary among the states, they fall into certain groups. Before exploring the groups of transportation entity liability sources an exposition of some negligence criteria is warranted. Recall from the discussion of negligence the four elements that a plaintiff must show to be successful in a lawsuit against a defendant: duty, breach, causation, and harm. In short, a plaintiff must show that the defendant breached a duty owed by the defendant to the plaintiff, and that the breach caused harm to the plaintiff. From these four negligence elements spring further criteria for evaluating a transportation entity’s negligence.

Of the four negligence elements, duty and breach are those solely in the control of the transportation entity and thus are the primary consideration here. Causation often comes down to the trier of fact’s¹⁰ determination of where to draw the line between the actions of the defendant and those of the plaintiff. Similarly, whether the plaintiff was harmed usually is either obvious or is decided by the trier of fact after a showing of such things as physical and monetary damage to the plaintiff. A brief summary of the efficient roadway system is warranted before reviewing the legal aspects concerning transportation entities.

Components of an Efficient Roadway System

According to Glennon, three system components of an efficient roadway system exist: driver expectancy, roadway consistency, and positive guidance.¹⁴⁵ Glennon defines driver expectancy as “the readiness of the driver to respond in predictable and successful

¹⁰ The trier of fact usually is either a jury or, in a “bench trial,” a judge.

ways to events, situations, or the presentation of information,” and says that driver expectancy “is primarily a function of the driver’s experience both with his total driving exposure and with his most recent driving exposure.”¹⁴⁶ Violating the driver’s expectancy may result in the driver either taking “longer to respond properly,” or “respond[ing] wrong or not at all.”¹⁴⁷ Glennon says that roadway consistency “relates to sameness of the roadway from one section to the next.”¹⁴⁸ Roadway inconsistencies, such as a “two-lane roadway that suddenly narrows to a one-lane roadway,” will “violate a driver’s expectancy.”¹⁴⁹ Finally, Glennon defines positive guidance as “using traffic control devices to overcome the violations in driver expectancy created by inconsistent roadway features.”¹⁵⁰ Signage and signals are examples of positive guidance.

The roadway consistency and positive guidance components are considered in the Road Safety Audit. Violations of the road user’s expectancy through roadway inconsistency or failure to positively guide the driver may become breaches of the transportation entity’s duty to the road user.

Notice

Fairness seems to dictate and indeed “[m]ost courts hold that the roadway agency must have sufficient advance notice of the defect to have had reasonable opportunity to either correct the roadway defect or to warn of its hazard.”¹⁵¹ Lewis explains: “[r]easonable people would not act until they knew that there was a problem,” but once so informed, “there may be an obligation to respond.”¹⁵²

The requisite advance notice period afforded a transportation entity to road defects appears, on its face, to be straightforward. But this notice period does have a vast grey area, and a continuum of levels of notice is helpful for understanding the notice

requirement. At one end of the continuum is the situation in which the agency has “actual” notice of a defect. For example, when an agency has a written report by one of its employees that a bridge is washed out, the agency has “actual” notice of the missing bridge and is responsible for taking appropriate action. At the other end of the continuum is, of course, the situation in which the agency has no notice of a road defect. For example, when a traffic signal began malfunctioning just moments ago while no one, including agency employees, has witnessed the malfunctioning, the agency has no notice of the defective signal and therefore no responsibilities. But if the signal has a remote feed to an agency computer, had been defective for weeks, or was overlooked in a prior routine maintenance check, the agency may have notice imputed to it. In other words, when the agency should have noticed the defect, the agency has “constructive notice” of the defect, which in turn may give rise to the agency’s “duty to act.”¹⁵³

It appears that although constructive notice considers time and severity factors, if an agency has constructive notice of a condition, the agency still has a duty to handle the condition appropriately and may be held liable for breaching that duty. According to Lewis, once an agency is informed, “there may be an obligation to respond,” and if “the defect is extreme, however, such as the collapse of a bridge, the reasonable action would be to close the roadway as quickly as possible.”¹⁵⁴ Glennon adds that “constructive notice may arise when a roadway defect has existed for such a time and is of such a nature, that the roadway agency should have discovered the defect by reasonable diligence.”¹⁵⁵ And according to Pearson, if a transportation entity breaches its duty “to put and keep [its roads] in a reasonably safe condition for the uses for which they were established....it will be held liable...if it had either actual or constructive notice of the unsafe condition in time to have remedied it or otherwise guarded against it.”¹⁵⁶

The agency's notice of a defect is critical. Because the agency's "knowledge of the existence of the defect is a matter frequently at issue in actions for injury resulting from the defec[t]," the agency "will be liable for allowing it to continue only where [the agency] has actual or constructive knowledge of its existence."¹⁵⁷ For example, in the 1958 New Jersey case of Schwartau v. Miesmer, in which the plaintiff allegedly fell through a wood catch basin cover into the town's storm sewer, the court allowed a witness to testify that she had seen a town vehicle and work crew "at the site of the catch basin" to help establish the town's control of the catch basin.¹⁵⁸ But this type of evidence cuts both ways. An agency may be able to rely on mitigating evidence such as "that although the property in question was used by others under conditions substantially similar to those prevailing when the plaintiff was injured, there had been no previous accident at the place in question."¹⁵⁹

Duties

As stewards of the Nation's highway systems, transportation entities are entrusted with responsibility or duty to the public to provide a medium for the safe and efficient transportation of goods and people. This type of duty entails things such as care and notice.

A continuum of standards of duties has evolved in the law. The strongest duty is the fiduciary duty in which the owner of the duty subordinates his or her interests to those of the recipient of the duty. An example of a fiduciary duty is the employer-employee relationship: the employee, as the owner of the duty, subordinates his or her interests to those of the employer, the duty recipient. The weakest duty is the duty of ordinary good faith in which the owner of the duty cannot defraud or exhibit bad faith to the recipient of

the duty. Between the fiduciary duty and the duty of ordinary good faith lies the duty of utmost good faith. In this duty, the owner of the duty does not subordinate his or her interests to that of the duty recipient, but must behave reasonably and prudently in the other's interest, without loyalty to any competing interests. Highway agency duties will fall somewhere along this continuum, but again, where the courts in each state place the transportation entity's duty will vary state to state.

Derrick offers another duty distinction used by some states: the "general-duty special-duty doctrine, in essence which provides that a governmental entity is not liable for torts committed against a citizen unless a special or particular duty is owed to the injured citizen."¹⁶⁰ Under this doctrine, the agency "is not liable for injury to a citizen where liability is alleged on the ground that the governmental entity owes a duty to the public in general, as in the case of police or fire protection," but "when a citizen becomes singled out from the general population and a special duty is owed him by the governmental entity...and the breach of that duty may result in liability for the damages suffered by the citizen."¹⁶¹

Standard of Care

Glennon provides a description of the duty owed by transportation entities: "[t]he basic standard of care for roadway agencies is reasonable safety for all motorists."¹⁶² Pearson adds that the transportation entity has a "duty to exercise reasonable diligence to maintain its streets and highways in a reasonably safe condition for the uses for which they were established."¹⁶³ Exactly what "reasonable safety" is, though, is not easily defined. "Reasonable" means different things to different people and many factors "limit one's ability to act."¹⁶⁴ The definition of "reasonable" thus varies state to state.

Lewis lists several factors that courts have considered in determining the reasonableness of a transportation entity's action "[w]hen a potentially hazardous condition exists...[and] resources are not available to correct all such conditions."¹⁶⁵

Lewis' factors: (1) the "gravity of harm posed by the condition," (2) the "likelihood of harm," (3) the "availability of a method to correct the situation," (4) the "usefulness of the condition for other purposes, and" (5) the "burden of removing the condition."¹⁶⁶

To establish the standard of care, courts will consider several types of information. "One of the strongest types of information" that courts will consider is the "agency's own guidelines and policies...[which] may define in detail the minimum requirements."¹⁶⁷ The reason behind this is clear: a "reasonable person would follow such rules and orders."¹⁶⁸ Further, courts also consider "the commonly accepted good practices promulgated by authoritative national bodies in their standards, policies, or guidelines."¹⁶⁹ For example, the Manual of Uniform Traffic Control Devices is "a widely recognized authority and is the official standard in many states."¹⁷⁰

Beyond the agency's own guidelines and national guidelines, courts also will look at (1) "guidelines and policies of other agencies (to determine the state of the art)," (2) "guides developed by national and professional organizations, such as American Association of State Highway and Transportation Officials, Institute of Transportation Engineers, and National Association of County Engineers," (3) "engineering texts and manuals," (4) "professional journals," (5) "research publications," and (5) "opinions of expert witnesses."¹⁷¹

Duty to Inspect

The concept of constructive notice as applied to transportation entities has far-reaching impacts because by its definition it precludes actual notice. Therefore, the agency may be held responsible for defects that it did not realize it had, but that it should have known it had—quite an obligation for the geographically-dispersed transportation entity, such as the local rural road jurisdiction.¹¹ As a corollary, the transportation entity has the general “obligation to inspect the condition of its facilities on a regular basis,” and, “when there is reason to suspect that recent damage may have occurred, special inspections may be in order.”¹⁷²

Duty to Warn

Transportation entities have a duty to the road user to provide notice of adverse road conditions. To be sure, “it is the duty of the responsible public authority to maintain warning signs when reasonably necessary to enable travelers exercising ordinary care and prudence to avoid injury.”¹⁷³ For instance, the familiar “Slippery When Wet” sign, when combined “with an advisory speed [limit sign] could be used to alert motorists of the [potentially wet] condition.”¹⁷⁴ And “a governmental authority has a duty to provide warnings or markings at particular highway curves where the government knew of the dangerous condition of the curve.”¹⁷⁵ Although a transportation entity can be found liable solely for “failing to properly warn motorists of the dangerous situation,”¹⁷⁶ an entity’s failure to warn of an otherwise inactionable situation also may create liability for the transportation entity.¹⁷⁷

¹¹ Recall that the local rural road jurisdiction is characterized by high miles, little funding, and low expertise. Quite a disadvantage in light of the duty to inspect.

Analogy

The duties discussed above are not unique to transportation entities. Consider an example from a familiar setting: the grocery store. In the grocery store, the store has a “duty to inspect” the premises. Think of the frequent sweeping of the floor — figuratively and literally — in which clerks identify and mitigate any “defects,” such as wet spots.

Now consider a broken jar of mayonnaise lying on the floor. If the jar of mayonnaise falls and breaks open at the manager’s feet, the store has “actual notice” of the defect. The store now has — at a minimum — a “duty to warn.” But if, like the proverbial tree falling in the woods with no one around, the jar falls from the shelf and breaks open without anyone hearing or noticing it, two possibilities may arise: (1) If 30 seconds later a customer slips on the mayonnaise and breaks a hip, the store may not be liable under a duty to warn because the store had no notice of the defect. (2) If four hours later, a customer slips on the mayonnaise and breaks a hip, the store will probably be liable because the store should have known of the slick spot — the store will be considered to have “constructive notice” of the defect.

Sources of Transportation Entity Liability

Four categories of sources of breaches of the duty¹² owed by a transportation entity to the road user are apparent: breaches due to roadway defects, roadside defects, road appurtenance defects, and miscellaneous defects. Although these sources of transportation entity liability are common among the states, the statutes and case law concerning these sources are not necessarily coherent between the states.

¹² Recall the four elements of a tort claim: Duty, Breach, Causation, and Harm. Here we are dealing with the breach and duty elements.

The scope of this paper is those defects that are identifiable in a Road Safety Audit. Defects that are inherent in the road system or “passive” are considered in this paper, whereas those activities that are “active” and not identifiable in a Road Safety Audit are outside of the paper’s scope. Thus this paper excludes contractors’ activities, windshield damage from flung rocks, road maintenance operations, such as snow removal or sandblasting, the transportation entity’s liability in operating a motor vehicle, and activities by intervening vehicles or parties. Additionally, the individual liability of public officers also is outside the scope of the paper. The following four sources of liability are those “passive” defects that are included in the Road Safety Audit and therefore, within the purview of this paper.

Roadway Defects

Pearson provides the general rule regarding defects in the roadway: “[s]pecifically, a governmental entity is not required to maintain its roads in perfect condition;” the entity has a duty “only to put and keep them in a reasonably safe condition for the uses for which they were established.”¹⁷⁸ Pearson adds elsewhere “that negligence, on the part of the plaintiff, or the plaintiff’s decedent, is a good defense to an action for injuries resulting from defects or obstructions in streets or highways.”¹⁷⁹ The following roadway defects often are sources for transportation entity liability.

Holes, Ridges, Ruts, and Bumps

After collecting the cases concerning negligence based on defects “such as a hole, depression, or bump,” Evins proposes that what “constitutes negligence” often is a factual question and transportation entities are “not necessarily liable for defects of a minor or trivial character.”¹⁸⁰ In deciding the triviality of such defects, courts have refused to say

“that the street or highway must be absolutely safe,” and will consider “the character of the way and the kind of travel at the location of the alleged defect...”¹⁸¹

According to Pearson, when a pothole “could be characterized as ‘trivial,’ [it would thus be] beyond the governmental entity’s duty to repair.”¹⁸² Ervins classifies pothole cases by the depth of the hole (less than three inches, between three and five inches, and five or more inches) and the mode of travel (automobile, motorcycle/scooter, or pedestrian).¹⁸³ Although Ervins made no conclusions as to which factors resulted in more plaintiff’s or defendant’s verdicts, Ervins’ classification continuum — depth of pothole vs. mode of travel — is helpful for purposes of this paper. Glennon adds helpful categorization based on the type of road surface (unpaved, asphalt, or concrete).¹⁸⁴

Drechsler, after collecting cases regarding the duties and liabilities of those driving in or along a rut (i.e., “an unevenness running parallel” to the roadway),¹⁸⁵ proposes that in cases regarding such a situation, the issue becomes “whether or not the driver of the automobile acted negligently in view of the particular condition of the road.”¹⁸⁶ Recognizing the tendency of courts to look at negligence of the driver as opposed to that of the transportation entity, Drechsler proffers four factors courts may consider in determining the driver’s liability: “(1) the fact that the driver got the automobile into a rut...; (2) the fact that he stayed in the rut; (3) the manner in which he operated the automobile while [in] the rut; and (4) the method employed by the driver in [attempting to get] out of the rut.”¹⁸⁷

Slippery Pavement

Glennon reports that “slippery pavement is not a common aspect of tort claims,” noting the difficulty in proving that the “pavement had a low coefficient of friction,”

which “caused a collision.”¹⁸⁸ Nevertheless, Glennon says that while in “dry conditions, the friction between most tires and pavement surfaces is sufficient to handle all but the more severe vehicle maneuvers without skidding,” in “wet conditions, the ability to develop tire-pavement friction can be significantly reduced for deficient pavements and/or tires.”¹⁸⁹ It is the resultant “skidding accidents,” which are “a major concern of those involved in roadway safety.”¹⁹⁰

More specifically, plaintiffs’ “[a]llegations about hydroplaning are more common than allegations about slippery pavements. . . .”¹⁹¹ Glennon identifies five factors common “to the roadway section that causes hydroplaning:” (1) inadequate pavement cross slope, (2) sag vertical curve, (3) build-up or turf shoulders, (4) sheet-flow conditions, and (5) rutted pavements.¹⁹²

In 1958, Cross collected cases involving the accumulation of water on a street or highway.¹⁹³ Although echoing the general rule that “a state or municipality is not an insurer of the condition of its streets and highways, but that it must exercise ordinary care to keep its streets in a reasonably safe condition for travel,” Cross maintains that the duty to use ordinary care does not include protecting the public from mere puddles, “but where the accumulated water is so wide and deep as to constitute a real danger not reasonably to be anticipated by users of the street, the municipality has a duty to eliminate the hazard or to warn the public of its presence.”¹⁹⁴

Similarly, in 1980, Pearson collected cases involving ice or snow on the road surface.¹⁹⁵ Repeating the familiar general rule, Pearson added that liability of the transportation entity “for a motor vehicle accident caused by ice or snow depends on whether it has exercised due care under the circumstances.”¹⁹⁶ However, some courts impart no liability on the transportation entity “for accidents resulting from the natural

accumulations of ice or snow...[but] liability may attach if the ice or snow has become an obstruction and the entity has had time and opportunity to remove it.”¹⁹⁷ (Footnote omitted). Further, some courts consider “whether the ice or snow in question was an isolated or a general condition,” holding the government liable in “cases involving an isolated patch” while imparting no liability “in the cases involving a generally icy or snowy condition.”¹⁹⁸ Pearson suggests the following explanation for the distinction: “when dealing with an isolated condition, it would appear that the governmental entity’s ability to remedy the situation is greater than when a general condition is involved.”¹⁹⁹

Falling or Fallen Trees and Tree Limbs

After collecting the cases concerning transportation entity liability for trees and tree limbs that fall or have fallen onto the roadway, Trenkner provides common judicial approaches.²⁰⁰ First, a common condition precedent to governmental liability in such situations is that the land from which the tree or limb fell must be in the government’s possession, although some courts impose a duty of reasonable care “with respect to trees growing on urban abutting streets or highways.”²⁰¹ Second, Trenkner identifies two common fact settings: (1) injury from a falling tree or tree limb, and (2) injury from a collision “with a tree or limb after it has fallen and is lying in the highway.”²⁰²

In the first common fact setting, courts may consider the urban-rural distinction as expressed above, “the obviousness of the defect in the tree or limb, and the extent to which wind or weather may have caused the tree or limb to fall.”²⁰³ In the second situation, whether a tree or limb has been lying on the street for one day or more seems to be the dividing line.²⁰⁴ Courts typically hold transportation entities “liable for injuries which occurred in a collision with a tree or limb that had been lying on the street for more

than a day prior to the accident,” but may consider “whether the tree was blown down in a severe storm...which made cleanup more difficult and put motorists on notice that trees might be blocking the highways.”²⁰⁵ On the other hand, if the tree or limb fell within a day of the accident, courts often consider “the obviousness of the defect in the tree or limb,” the opportunity the transportation entity had to “remove the fallen tree or limb, and the obviousness of the tree or limb to the plaintiff as he was proceeding along the street or highway.”²⁰⁶

Roadside Defects

Pearson reports that the general rules regarding the liability of a governmental entity in roadway defects (as discussed *above*) “exten[d] to the road shoulders.”²⁰⁷ Thus the transportation entity has a “duty to exercise reasonable diligence to maintain its streets and highways in a reasonably safe condition for the uses for which they were established.”²⁰⁸

The contributory negligence defense is more helpful in roadside cases than it is in roadway cases. Some courts hold that the transportation entity’s “duty to protect motorists from defects or obstructions on road shoulders applies only to motorists using the shoulders in emergencies or other special circumstances,” so that those “motorists using the shoulders in nonemergency situations have no right of recovery for injury, death, or property damage incurred as a result of such use.”²⁰⁹ But a few courts, “recognizing the frequency with which drivers use shoulders inadvertently,” hold “that recovery is not automatically precluded” when drivers use “the shoulders due to their own inadvertence.”²¹⁰ Aside from the driver’s “reason for being on the shoulder...contributory negligence involves consideration” of the driver’s conduct while

on the shoulder.²¹¹ The following roadside attributes often are featured in roadside liability claims.

Pavement Edge Dropoffs

Pearson analyzed the cases regarding shoulder defects and found that “the most common are those involving a drop-off from the pavement to the shoulder, or a hole or rut in the shoulder.”²¹² Glennon adds: “[p]avement edge drops have gained increased attention...as a primary factor in tort claims,”²¹³ explaining that “the probability of severe consequences resulting from pavement edge-drop traversals is a function of the speed and path angle of the vehicle and the height and shape of the pavement edge drop.”²¹⁴

Accordingly, similar to the liability continuum for potholes and ruts as discussed above, the general rule is “that as the maximum depth of such drop-off, hole, or rut increased, there [is] a greater likelihood that the government entity would be held negligent in maintaining its shoulders.”²¹⁵ Pearson found that a dropoff of five inches seemed to be the threshold; transportation entities were found “negligent where the maximum depth was greater than five [sic] inches, at least where no warning of the dangerous condition was given,” and were less likely to be found “negligent where the maximum depth of the drop-off, hole, or rut was five [sic] inches or less.”²¹⁶

Steep Embankments

According to Glennon, “[t]he use of flatter slopes not only reduces accident frequency, but also reduces accident severity.”²¹⁷ Additionally, steep side slopes — those with a slope steeper than three horizontal: one vertical — that lie “close to the travel lanes on high-speed roadways can be candidates for roadway defect claims.”²¹⁸ Furthermore,

the “slope may be found not only as a proximate cause of the accident but also as a primary contributor to the severity of the resulting injuries.”²¹⁹

Fixed Object Hazards

Glennon provides a breakdown of fixed object roadside elements: functional and non-functional.²²⁰ Functional elements “are those roadside elements that are either a part of the basic geometric design of the roadway or serve to enhance its traffic movement,” such as “roadside slopes, bridge structures, drainage facilities, roadway lighting, traffic control devices, and curbs.”²²¹ This *subsection* considers the transportation entity’s liability with respect to non-functional fixed objects such as trees and boulders, utility poles, and traffic barriers. The next section in turn considers functional fixed objects which are appurtenant to the roadway and the roadside. Pearson points out that when a dangerous condition is due solely to a fixed object, the question becomes “whether the obstruction constituted negligent maintenance” on behalf of the transportation entity, but “[w]here the dangerous condition on the shoulder consist[s] of both an obstruction and a defect in the surface of the shoulder,” courts tend to hold the highway agency negligent.”²²²

Trenkner collected the cases regarding liability of transportation entities with respect to trees or tree stumps on government-owned land that abuts the traveled roadway.²²³ Notwithstanding the minority view disfavoring imposing liability on transportation entities for injuries or damage sustained by drivers who stray inadvertently onto the shoulder (as discussed above), Trenkner’s findings indicate that when determining whether a transportation entity was negligent, courts consider the proximity

of the tree or stump to the edge of the traveled roadway and the obscurity of the tree or stump to the driver.²²⁴

Williams analyzed cases dealing with injuries to travelers due to collisions with privately owned posts or poles¹³ in the roadway and on the roadside.²²⁵ Williams researched the liability of the owner of the pole and of the “municipality or other governmental unit for permitting the maintenance of such an alleged obstruction,” but considered only “liability for collision with privately owned poles,” leaving out those cases involving “municipal liability for collision with municipally owned poles or traffic device standards.”²²⁶ Noting the typical situation in which “privately owned poles or posts are placed in the highways pursuant to governmental sanction or authorization,” Williams finds that a typical preliminary inquiry is “whether such sanction operates to relieve the proprietor or a municipality of any charge of negligence with respect to the location of a particular pole with which a traveler has collided.”²²⁷ Williams reports that such sanctioning alone generally does not relieve from liability the proprietor of the post nor the sanctioning municipality.²²⁸ Courts have considered “whether the pole is located in or so close to the traveled portion of the highway, or is maintained in such a manner, as to constitute an obstruction dangerous to anyone properly using the highway.”²²⁹

Glennon provides that “*traffic barrier* is a broad term used to encompass all devices that are placed within the clear zone to shield roadside hazards,” including “roadside barriers (guardrails), bridge rails, median barriers, and crash cushions.”²³⁰ (Emphasis in original). Crash cushions are discussed in the next subsection.

Chapus collected the cases dealing with injuries to travelers regarding highway median barriers.²³¹ Chapus notes that the “duty to exercise reasonable diligence to

¹³ “Pole(s)” for the purposes of this subsection.

construct and maintain [the entity's] highways in a reasonably safe condition....extends to medians and median barriers."²³² Chapus suggests three groups of traffic barrier cases in which governmental liability is sought: liability sought due to (1) government's alleged negligence "in failing to erect any barrier," (2) "or if a barrier did exist, that it was negligently or defectively designed or constructed," or (3) "that it was improperly maintained or allowed to fall into a state of disrepair."²³³ In those "cases in which no barrier existed at all," Chapus reports, "courts may look to whether official standards mandated that a barrier [should] have been built," whether the transportation entity "had notice of a dangerous condition on the highway in question," or whether the lack of the barrier was due to "[a]n unjustifiable delay in constructing planned barriers."²³⁴ In the second group of cases in which "a barrier existed but failed to prevent a vehicle from crossing over the median," courts may look at accident rates, whether the barrier was built according to standards, or whether the barrier was "uncrashworthy in that [it] posed an affirmative hazard to drivers whose vehicles struck the barriers."²³⁵ Finally, in the third group of cases which "involve maintenance or repair of a barrier," courts may consider whether the "median barrier was allowed to fall into a state of disrepair," or whether the "barrier was somehow altered during the course of highway maintenance."²³⁶

Glennon lists some primary guardrail defects: beam height too low or too high, too few posts, length too short, starting too late or ending too early, no crashworthy end treatment, not tied to the bridge, inadequate splices, angled too severely, improper application, inadequate clearance to a fixed object, exposed back, and maintenance defects.²³⁷ Glennon lists some primary bridge rail defects: rail too weak, rail has snagging or impaling elements, and the rail has an untreated end which may impale traveler or send car into bridge.²³⁸

Road Appurtenance Defects

In addition to liability for defects on the roadway or for those on the roadside, courts have found transportation entities liable for defects in those elements of the road appurtenant to the roadway or roadside. Such appurtenances include signage, signals, and crash cushions.

Signage and Signals

Glennon and Lapine agree on the two common approaches for liability of transportation entities with respect to traffic control devices: the alleged failure to erect the device and an alleged defect in the device itself (or the maintenance thereof).²³⁹ Lapine says that in the first case — the “decision of whether or not to place a traffic control device at a particular intersection” — courts typically hold transportation entities “immune from liability for accidents claimed to have been caused by their failure to erect a traffic control device,” on grounds that entities “are exercising a governmental function” in the decision.²⁴⁰ Similarly, relying on the same governmental function grounds, some courts deciding “questions of the designing or planning of traffic control devices” hold such “matters not open to judicial determination,” deferring to the transportation entity.²⁴¹ Glennon reports that “[c]ommon arguments are that the roadway agency was negligent for failure to warn of a defective roadway design feature,” but the plaintiff often “must first show that the roadway agency not only had notice of the defect, but also failed to properly warn of the hazard.”²⁴²

According to Lapine, in the second case—“after the decision has been made to control the traffic at an intersection with signs or signals, and a traffic control system has been designed and installed”—the liability question may turn on the governmental-

proprietary distinction.²⁴³ Some courts thus hold “that the maintenance of traffic control devices” is a governmental function “for which highway authorities cannot be held liable,” while others “classify maintenance of traffic control devices as a proprietary or corporate function,” where the transportation entity will be liable where it is found negligent.²⁴⁴

In those negligence cases, Lapine reports that situations most favorable to plaintiffs are those where the transportation entity (1) “failed within a reasonable time to replace a traffic sign which had been removed by unauthorized persons,” (2) failed “to re-erect or repair a sign which had fallen down or had been knocked down or bent over,” or (3) failed “to replace a burned-out bulb in an electric traffic signal.”²⁴⁵ Conversely, those cases least favorable to plaintiffs are those where a “traffic sign or signal was removed from an intersection under proper authorization and those in which it was claimed that the traffic control system at an intersection had been negligently planned or designed.”²⁴⁶ Finally, Lapine notes that courts inconsistently rule on liability questions in cases such as (1) “those involving a failure to instal [sic] any traffic control devices at an intersection alleged to be dangerous,” (2) those involving “traffic signals flashing green in intersecting directions at the same time or twisted so as to give wrong or confusing directions,” and (3) those involving “traffic signs obscured by vegetation or otherwise defective and in need of repair.”²⁴⁷

Crash Cushions

According to Glennon, “[c]rash cushions (also called impact attenuators) are barrier devices that prevent ran-off-road automobiles, vans, and light trucks from impacting rigid objects,” by functioning to “smoothly decelerate an impacting vehicle

usually by crushing a deformable material contained in the cushion.”²⁴⁸ Crash cushions commonly are used around utility poles, bridge columns, and median barrier ends.

Glennon reports that if, at the time of its installation, a crash cushion “violated the commonly recognized standards for design and placement,” the transportation entity will likely be held liable.²⁴⁹ Two other inquiries are common. First, if the state views installation as “within the design function, the plaintiff has no cause of action for a defective barrier that was installed before the late 1960s either under any existing standard or in the absence of a standard.”²⁵⁰ But if the state views installation as “within the maintenance function,” the outcome may depend on “what is a reasonable number of years before a roadway agency [is required to exercise] its duty to maintain a reasonably safe roadway by upgrading a defective safety device.”²⁵¹ Second, some courts may require a transportation agency, “as part of its legal duty, to provide a reasonably safe roadway by upgrading a defective barrier after a major portion of the barrier has been damaged in a previous collision.”²⁵² Furthermore, in considering the liability of a utility, some courts do not hold utilities liable even though “the utility had allegedly failed to crash-proof the pole.”²⁵³

Miscellaneous Defects

Larger defects often consist of two or more other defects. For example, a bridge abutment or culvert headwall may extend too far into the roadway, or a design may be deficient with respect to the pavement, guardrail, and shoulder embankment slope.

Bridges

Pearson discusses two types of defects with respect to bridges: narrow bridges and the accumulation of snow or ice on the bridge.²⁵⁴ In the snow or ice cases, Pearson notes

that “[b]ridges and overpasses present special problems because of the likelihood of their surfaces freezing before the surfaces of the roads in the same area,” but goes on to say that courts are split in determining the transportation entity’s liability for accidents resulting from the accumulation of snow or ice on the bridge.”²⁵⁵ Both the isolated-general distinction and whether the accumulation was a natural accumulation discussed previously in the slippery pavements subsection appear to still be helpful inquiries when analyzing transportation entities’ liability for snow and ice accumulation on bridges.

With respect to narrow bridges, Pearson grouped cases according to questions of liability as to failure to warn of the narrow bridge, faulty design or construction of the bridge, or both a failure to warn and poor design or construction.²⁵⁶ In the failure to warn cases, where the transportation entity had notice—actual or constructive—that the bridge was narrower than the approaching road, courts typically imposed a duty on the transportation entity to warn of the narrow bridge.²⁵⁷ Courts also may consider whether the warning is reflective and whether the narrow bridge occurs after horizontal or vertical curves.²⁵⁸ In the design and construction cases reviewed by Pearson, courts typically found that absent a statute to the contrary, it was not negligent for the transportation entity “to construct a bridge narrower than the highway approaching it.”²⁵⁹ But transportation entities have been held liable for failing to install guardrails at the approaches to narrow bridges.²⁶⁰ In the cases in which courts considered the combined failure to warn and faulty design or construction, courts did not usually find the transportation entity liable for the fact alone that the bridge was too narrow, but frequently found transportation entities liable for failing to warn of the narrow bridge and occasionally required transportation entities to mitigate the situation by providing things such as better lighting or guardrails.²⁶¹ In these combination cases, courts frequently

consulted practice manuals to determine bridge width and warning standards and crash data for notice considerations.²⁶²

Culverts

Glennon reports typical problems with culverts placed parallel and perpendicular to the roadway.²⁶³ Vehicles that have been run off the road and are “sliding along a ditch can snag, spin out, and/or overturn when colliding with the pipe end” of a culvert laid parallel to the roadway.²⁶⁴ Similarly, “[c]ulvert pipes perpendicular to the roadway pose a similar hazard because they too can cause impacting vehicles to snag, spinout, and/or overturn.”²⁶⁵ Culvert headwalls which are close to the traveled lanes and extend above the traveled surface “are frequently involved in serious roadside collisions.”²⁶⁶

Design Defects

Vaccaro collected the cases regarding transportation entity liability as to design defects.²⁶⁷ Observing that “[w]hile it is difficult to formulate rules of general application to the complex area of highway design liability,” Vaccaro maintains that “the concept of governmental immunity from liability appears as perhaps the most significant factor bearing on the liability of governmental entities...for injuries arising out of vehicular accidents due to the negligent design of highways.”²⁶⁸

In the governmental immunity cases the general rule seems to be “that governmental entities are not liable generally for the consequences of accidents due either to an ill-conceived plan for a highway or to the fact that one particular design was chosen over another.”²⁶⁹ However, exceptions to the general rule of immunity may lie in liability for design defects “where the design is dangerous as a matter of law,” or where the design is “so obviously and palpably dangerous that no prudent person would approve its

adoption.”²⁷⁰ Moreover, some courts require that “actual consideration and affirmative approval of, rather than mere passive acquiescence in, a particular design must be established to shield a governmental entity from liability.”²⁷¹

In jurisdictions without governmental immunity, courts typically will apply applicable statutes or negligence principles.²⁷² In negligence cases, according to Vaccaro, “the design of a highway in accordance with generally accepted engineering standards and practices satisfies the test of reasonable care,” the duty owed by transportation entities to the traveling public.²⁷³ More specifically, “the conduct of the public authority in approving a particular design must be measured by the engineering and safety standards considered acceptable at that time, rather than by more modern standards;” the courts conceding that in retroactive analysis, “the design might not be considered proper in light of more advanced engineering and safety standards.”²⁷⁴ Although “there may be a conflict in expert opinion on the particular matter, the fact that a different design might have prevented an accident does not give rise to liability on the part of the responsible authority on the grounds of negligence.”²⁷⁵

Glennon adds that the most common “issue in the roadway curve tort case is the severity of the roadway curve in terms of how deviant the design (safe) speed is from the prevailing speed limit.”²⁷⁶ Other common design defects with respect to curves include “when the curve is hidden, usually beyond a sharp hillcrest,” and “when the curve is considerably sharper than the proceeding alignment.”²⁷⁷ In addition to roadway curve design defects, Glennon reports stopping sight distance and intersection sight distance deficiencies.²⁷⁸ “Sufficient sight distance should be provided to allow drivers enough time and distance to control the path and speed of their vehicle to avoid unforeseen collisions with objects and other vehicles.”²⁷⁹ Again, “[m]ost often at issue in the

[stopping sight distance] tort case is the severity of the sight restriction in terms of how deviant the effective design speed is from the prevailing speed limit,” often manifesting in things such as hidden signs, vehicles, or other road deficiencies.²⁸⁰ Adequate intersection sight distance ensures “that the driver of an approaching vehicle has an unobstructed view of not only the whole intersection but also a length of the intersecting roadway sufficient to permit him to avoid collision with conflicting vehicles.”²⁸¹ According to Glennon, “[m]ost often at issue in the restricted intersection sight distance case is the severity of the sight restriction in terms of how deviant the available sight distance is from the AASHTO¹⁴ requirement,”²⁸² often manifested in an issue that “revolves around the placement of needed traffic controls.”²⁸³

Alternatively, in jurisdictions using statutes “as the basis of liability,” the outcome may depend on whether a highway-specific statute or a general liability statute is used. Vaccaro notes two views interpreting highway-specific statutes. First, courts may view “that no right of action exists for injuries caused by the negligent or defective design of a highway,” reasoning that most statutes target maintenance of the highway.²⁸⁴ Second, courts may impose “liability for design-caused injuries,” under the view that such injuries are “within the purview of particular highway statutes.”²⁸⁵ Under general liability statutes, design-caused liability typically is ascertained on a case-by-case basis.²⁸⁶ However, under general liability statutes, courts may impose liability on transportation entities “for injuries suffered in design-caused accidents,” such as in “accidents attributable to the design of highway curves.”²⁸⁷ Recall, from the “duty to warn” subsection above, that some “courts have held that a governmental authority has a duty to

¹⁴ “AASHTO” is the acronym given to the American Association of State Highway and Transportation Officials.

provide warnings or markings at particular highway curves where the government knew of the dangerous nature of the curve.”²⁸⁸

Work Zone and Detour Defects

Glennon identifies four work zone defects that commonly lead to tort claims, citing the pavement edge dropoff (discussed previously) as the most common.²⁸⁹ The “Pavement Edge Dropoff” is discussed in further detail above. Other common work zone defects are found in faulty transition areas, road closures, and slow-moving maintenance operations.²⁹⁰ According to Glennon, common causes of transition area claims are: (1) “the taper was too short for a lane closure,” (2) the median crossover had too low of a design speed,” (3) “the transition lacked adequate warning signs or channelizing devices,” or (4) “the lane closure was too close to a crossover.”²⁹¹ In road closures, problems often arise where “advance signing is missing or ill-placed”²⁹² in that the transportation entity may breach its duty of reasonable care to warn for failing “to warn street users by means of signs of immediate dangerous conditions other than physical defects and obstructions as such.”²⁹³ Says Glennon, “[s]low-moving maintenance vehicles present a special hazard to motorists on high-speed roadways because they violate driver expectancies, particularly when the sight distance or visibility is marginal or poor,” often resulting in rear-end collisions.²⁹⁴

Sarno reports that aside from comparative or contributory negligence concerns, “[w]hether a governmental entity has been liable for a detour accident in the reported decisions” often depends on whether the transportation entity was “negligent in erecting, maintaining, or warning of a detour, or [whether] that detour [was] dangerous or defective.”²⁹⁵ Sarno maintains that on occasion, a “single dangerous or defective

condition” may be enough to impose liability, but “generally speaking, victims have been more likely to prevail where they are able to demonstrate multiple instances of negligence or more than one dangerous or defective condition.”²⁹⁶

Rail-Highway Crossings

According to Glennon, an accident at a rail-highway crossing is 40 times more likely to result in death or injury than in all other motor-vehicle accidents.²⁹⁷

Responsibility is split between the railroad and the transportation entity for maintaining the crossing, but while each has its own responsibilities, several aspects of the rail-highway crossing have questionable responsibility.

Glennon reports that “the railroad company has clear responsibility [for] installing and maintaining crossbucks or installing and maintaining a smooth crossing with relatively flat approach grades,” while the transportation entity “has clear responsibility [for] installing and maintaining advance warning devices.”²⁹⁸ (Footnote omitted). But “when it comes to placing additional passive devices within the common right-of-way shared by the railroad and the roadway, the responsibility and/or authority is not always clear.”²⁹⁹ Glennon notes that this uncertainty arises in “redundant signs and markings,” such as “the need for stop signs” and “for backed-up crossbucks (or flash panels).”³⁰⁰ Indeed, the railroads “argue that the responsibility to place gates (and many other types of improvement) has been placed *solely* on the states and in some instances, local municipalities,” urging that Congress preempted state laws and removed such responsibilities from the railroads.³⁰¹ (Emphasis in original). But this attempt by the railroads appears short-lived. It was quashed in CSX Transportation, Inc. v. Easterwood,³⁰² where the United States Supreme Court, in holding against the railroad,

stated that “federal regulations adopted by the Secretary of Transportation pre-empt [the victim’s] negligence action only insofar as it asserts that petitioner’s train was traveling at an excessive speed.”³⁰³

Glennon notes that “[m]ost rail-highway grade crossing cases have a combination of defective elements,”³⁰⁴ but identifies some common elements: inadequate sight distance at the crossing (the most common), crossings too close to a backed-up intersection (hazardous “particularly for large trucks and buses”), “roadway approaches that form a sharp angle with the track,” inadequate maintenance or lack of advance warning signs and crossbucks, poor visibility of flashing signals, and steep or rough grades at the crossing.³⁰⁵

The Federal-Aid Highway Program “Defense”

The Federal-Aid Highway Program (FAHP) “is a federally assisted, state-administered program which distributes Federal funds to the States for the construction and improvement of urban and rural highway systems” and “is financed from the proceeds of motor-fuel and other highway-related excise taxes deposited in the Federal Highway Trust Fund.”³⁰⁶ Such “highway-user” fees as gasoline taxes, tire taxes, and tolls make up the Federal Highway Trust Fund that is distributed among the states who in turn internally distribute funds to local governments. In 1996, of the \$101.5 billion “[t]otal highway funding by all units of government,” \$63.8 billion (or 62.9 percent) was contributed by highway-user fees through the FAHP.³⁰⁷

Section 409 of Title 23 of the United States Code (initially passed by Congress in 1987) provides that an internal safety evaluation generated by a transportation entity may be privileged and not discoverable nor admissible when the evaluation is

to be implemented in a FAHP project.¹⁵ From the combination of the tentacled reach of a 62.9 percent funding share and Congress' policy goal of increasing safety,¹⁶ it appears that this Congressional grace imparts sweeping protection to transportation entities with respect to their liability in knowing of road defects. And courts have heeded the call.

State courts have recognized inadmissibility of such transportation entity reports. In Claspill v. Missouri Pacific Railroad Company, the Missouri Supreme Court upheld the trial court's refusal to admit the state transportation department's "list of the most dangerous railroad crossings in Missouri and a Field Inspection Form proposing the addition of signal lights" at the accident site.³⁰⁸ Similarly, in Sawyer v. Illinois Central Gulf Railroad Company, the Mississippi Supreme Court upheld the denial of a hazard rank inventory and recommendation letter prepared by the Mississippi State Highway Department.³⁰⁹

The scope of the privilege is not necessarily limited to the report generated by the transportation entity itself nor to projects earmarked for Federal-aid funding. In Lusby v. Union Pacific Railroad Company, the Eighth Circuit extended the privilege to the Arkansas State Highway and Transportation Department (AHTD) by reversing the District Court's admission of the testimony of an expert—hired by the plaintiff—who's

¹⁵ "Notwithstanding any other provision of law, reports, surveys, schedules, lists, or data compiled or collected for the purpose of identifying[,], evaluating, or planning the safety enhancement of potential accident sites, hazardous roadway conditions, or railway-highway crossings, pursuant to sections 130 [Railway-highway crossings], 144 [Highway bridge replacement and rehabilitation program], and 152 [Hazard elimination program] of this title or for the purpose of developing any highway safety construction improvement project which may be implemented utilizing Federal-aid highway funds shall not be subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data." 23 U.S.C. § 409 (2000).

¹⁶ Safety certainly appears to be a policy goal of Congress. Indeed, 23 U.S.C. § 152 promulgates the "Hazard elimination program" which mandates that "[e]ach State shall conduct and systematically maintain an engineering survey of all public roads to identify hazardous locations, sections, and elements...assign priorities..., and establish and implement a schedule of projects for their improvement." 23 U.S.C. § 152(a)(1).

opinion was “based on records and data that the AHTD uses to comply with the federal program.”³¹⁰ Similarly, the Eighth Circuit extended the privilege to exclude from evidence a newspaper article that referenced “data compiled by the AHTD” and “identified the [accident crossing] as the most hazardous railroad crossing in the state.”³¹¹ In Miller v. Bailey, the trial judge was held to have erred in admitting a state trooper’s “letter to the [Louisiana Department of Transportation and Development] notifying it of the need for ‘No Parking’ signs.”³¹² Likewise, in Rodenbeck v. Norfolk & Western Railway Company, correspondence between a railroad and a department of transportation regarding “the identification and evaluation of railroad grade crossings...that might qualify for STOP signs” also was held to be inadmissible.³¹³ The court in Rodenbeck also stated that “the language of § 409 is not limited in any way to only approved or completed plans; to hold otherwise would chill the candor that is expected in administrative evaluations of highway safety standards — a recognized danger that § 409 was designed to cure.”³¹⁴

In one case the raw data underlying the evaluative report were held admissible,³¹⁵ but in the case of Southern Pacific Transportation Company v. Yarnell, the Arizona court, noting the persuasiveness of “two consistent opinions from the penultimate federal court in the land interpreting a federal statute,” which upheld the inadmissibility of underlying data, seemed to indicate the trend that such raw data are indeed inadmissible.³¹⁶

CHAPTER FOUR – SUMMARY OF SAFETY AND LEGAL LIABILITY ISSUES

To analyze the potential of successfully defending a Road Safety Audit performed by a local rural road jurisdiction, this study required two phases. In Phase 1, five areas of literature were reviewed (under the rubric of safety and legal liability issues) to provide background for the study. These five areas were: transportation safety, risk management, liability and defenses in general, liability and defenses of government, and liability and defenses of transportation entities. But before the Phase 2 analysis of the Road Safety Audit's defensibility potential, a summary of the key findings from the literature reviewed will be presented.

Key Findings in Phase 1 Review

The transportation safety literature review yielded two main points. First, the Road Safety Audit is a valuable tool for identifying road safety defects, yet is unproven in the United States as to its potential for increasing the transportation entity's liability. Second, the local rural road jurisdiction is an important transportation entity but faces distinct and significant challenges. The risk management literature review provides the safety and management backdrop in which the Road Safety Audit would take place. The review of legal liability in general, of government, and of transportation entities yielded a framework of sources of liability and potential defenses relevant to the local rural road jurisdiction. The potential for the Road Safety Audit to be "successfully" defended and the measure of the defense itself will depend on the legal liability and legal defense factors of the state and/or the transportation entity.

Finally, the Literature Review shows a "gap" in literature regarding whether a Road Safety Audit undertaken by a local rural jurisdiction will be a successful defense in

a tort liability claim. Answering the question posed by the “gap” is the primary purpose of this research project. The method of filling this “gap” is the essence of the second phase.

Reorganization for Phase 2 Analysis

One last step is necessary before turning to the method of filling the “gap.” After reviewing literature regarding transportation safety, risk management, the local rural road jurisdiction, and legal liabilities and defenses, but before reviewing the appropriate methods for statistical analyses, it is necessary to reorganize these various geographical, managerial, and legal factors in a way conducive to statistical analysis.

First, the literature revealed that the Road Safety Audit can be applied in any size of transportation entity, in any area of the country. The geographical, financial, and technical parameters of a transportation entity may affect liability exposure of the transportation entity. Thus research must account for all sizes and abilities of transportation entities in all states. In essence, the “physical features” of the transportation entity must be identified.

Second, the legal liabilities and defenses relevant to a particular transportation entity will most likely depend on the state in which the transportation entity is located. More specifically, the status of sovereign immunity of the transportation entity and admissibility of the report produced in the Road Safety Audit are central to defensibility of the transportation entity, but vary by state. In essence, the “legal features” of the transportation entity must be considered.

Third, the literature revealed the significance of a transportation entity’s approach to managing its risk and the duties that courts or legislatures have laid on the

transportation entity. Thus the transportation entity's "liability avoidance strategy" must be considered.

Finally, the literature review revealed wide variance of the availability and applicability of defenses to transportation entities. What might work in one state may not work in another. Also, various transportation entities may weigh some aspects of a defense heavier than others; i.e., settling a claim under a certain dollar amount may be acceptable to some, whereas other transportation entities may only be satisfied by avoiding a claim altogether. Thus, while the phrase "successfully defended" has components that were revealed objectively by the literature review, "success" of the defense is subjective. Thus defining "successfully defended" must include subjective and objective components.

In summary, filling the "gap" that was exposed through the first phase literature review is the essence of the second phase of the overall study and will be presented in a later report. The second phase will evaluate whether the RSA can be successfully defended, evaluating objective and subjective adequacies of the RSA. The RSA's objective adequacy will be analyzed through an evaluation and recommendation of the RSA's standing among statutes and common law, purposed toward predicting the RSA's legal acceptance. Its subjective adequacy will be explored through a survey of legal transportation experts, with an emphasis on practicability of the RSA. Tort liability areas, rules, and trends will be identified, explained, and used with Road Safety Audit concepts to prepare the survey for subjective evaluation.

The results from Phase 2 should increase one's ability to provide a bona fide answer to the following question — exposed by the Phase 1 literature review — when asked by the local rural road jurisdiction:

“Can a Road Safety Audit be successfully defended when performed by a transportation entity characterized by [my County’s LRRJ] physical features, [my County’s LRRJ] legal features, and which undertakes [my County’s LRRJ] liability avoidance strategies?”

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