

Safety Corner – a Case for Reasonable Speed Limits

Let's talk about speed limits. This may start an argument. That's okay; let's just keep it civil.

In just about every community, there are motorists that drive too fast on our streets. We like to think it's "those kids" but these scofflaws come in all stripes and all ages. And some of them are from out of town and some of them are our neighbors. Sometimes, they may even be us. Oops.

Not everyone speeds because they're uncaring jerks. Oh, they're there too. But except for the small percentage of drivers that are just rule followers (if it says 25 mph, they're going 23 just to be sure), all of us will sometimes inch it up a bit. Maybe we're the 5 mph over crowd (because Johnnie Law will probably leave me alone). Or maybe we try to hug what the sign says, but get caught up in our thoughts or get a little distracted or maybe we're in a rush to look in on a sick loved one or we're trying to get the ice cream cake home in August or we are trying to get home before Frasier comes on (the classic one; not this new nonsense). It's no excuse, but it happens for a lot of reasons. Our behavior can probably be manipulated a bit.

Then there's the jerks. Too strong? I thought we were going to keep it civil. No, there's some percentage of drivers in every community and on every street that just don't give a horse's patootie (pardon the language) about anyone but themselves. They are very important people and they are entitled. And they are going to drive as they darned well please. Why? Because they're jerks and they are good at risk management. They know that Johnnie Law is spread pretty thin and even if he does catch up with them, the courts are remarkably forgiving.

So, let's recap. There's a small part of our community that we don't need to worry about – the rule followers. There's a small part of our community that are scofflaws and no sign in the world is going to change their behavior – a leather ticket book and courts that will back it up are your only hope with these jerks. Then there's the rest of us; we try to be pretty solid citizens and follow the social contract, but we need a little management and persuasion.

That's where Speed Limit signs come in. Now theoretically, many roads in Delaware don't even need Speed Limit signs, since the maximum speeds in the absence of a sign that allows otherwise are established in §4169 of the [Delaware Code](#). But only a handful of us geeks spend much time perusing the Rules of the Road, so we put up signs to help everyone out.



§ 4169. Specific speed limits; penalty.

(a) Where no special hazard exists, the following speeds shall be lawful, but any speed in excess of such limits shall be absolute evidence that the speed is not reasonable or prudent and that it is unlawful [for] all types of vehicles:

- (1) 25 miles per hour in any business district;
- (2) 25 miles per hour in any residential district;
- (3) 20 miles per hour at all school zones where 20 mph regulatory signs are posted and state the time periods or conditions during which the speed limit is in effect; such conditions may include when children are present or while 1 or more warning lights flash;
- (4) 50 miles per hour on 2-lane roadways;
- (5) 55 miles per hour on 4-lane roadways and on divided roadways.

Now, those speed limits can be adjusted for a given street by the owning jurisdiction, but §4170 establishes that an engineering and traffic investigation is required to do so. Section 2B.13 of the Delaware Manual on Uniform Traffic Control Devices ([MUTCD](#)) require an engineering study to accomplish this, which must be performed by a Delaware Professional Engineer. Too often, speed limits are altered from the statutory levels of §4169 without the benefit of an engineering study and, while we are not attorneys, we understand that such postings are unenforceable (“Any traffic-control device erected in violation of the [Delaware MUTCD]...shall be unofficial, unauthorized and unenforceable”, Delaware Code Title 17, Chapter 1, §147).

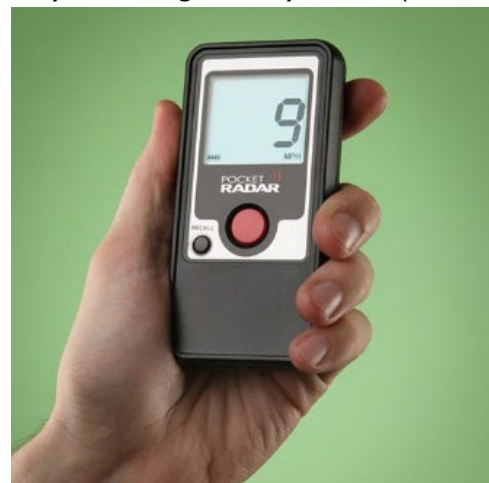
Moreover, local agencies often post lower speed limits (without the benefit of an engineering study) to appease the request of residents. For residential streets, these may be set at 20 mph, 15 mph, 10 mph, or even 8 mph. Let’s do a sidebar on that; the MUTCD Section 2B.13 standard is that “speed limits displayed shall be in multiples of 5 mph.” The problem is that when speed limits are set to unusually low levels, even the more reasonable drivers will disregard the notice.



Design of roads and traffic control devices is done on the presumption of a prudent driver. Go ahead and snicker at that, but there simply is no means to design based on imprudent drivers, those that drive unsafe vehicles, those that are distracted, those that are under the influence, those that are unexperienced, those that are fatigued, or those that speed and drive recklessly. We have to be able to assume a prudent driver. Those that aren’t are a matter for law enforcement and the courts.

For the prudent driver, which most of us aspire to be (we’re good people, but sometimes we stumble), we can design a reasonably safe roadway and place signs and pavement markings that establish where and how drivers should drive, walkers should walk, and so forth. To some degree, this is a social contract, and most of us want to be good neighbors. The traffic control devices guide us. But if those devices, in this case Speed Limit signs, guide us to something we perceive as unreasonable, we may unconsciously disregard it. At that point, we are going to proceed how we believe is prudent and we may not know all the information.

So, we post a 10 mph speed limit and what happens? In the absence of law enforcement, we find that prudent drivers are all over the place because they’re rolling their eyes at it (even if they don’t realize it) and the jerks are doing what they always do. On top of that, the rule followers are driving nine miles per hour and now we have this large range of speeds on the street. Believe it or not, this can be worse than if everyone were driving the street at 20 mph. Consistency and driver expectancy is eroded and drivers make more errors than they would otherwise.



Now, is there a case to be made for lowering the speed limit from 25 mph to 20 mph in a school district, along a park or recreation facility, or along a street with short house setbacks and lots of pedestrian activity? Yes. Indeed, these are some of the qualitative factors

discussed in the MUTCD (Section 2B.13). There is even a state of the art program, USLIMITS2, from the Federal Highway Administration that structurally takes those qualitative factors into account, beyond the quantitative basis of the 85th percentile speed. When the surrounding environment substantiates it, such as in a school zone, USLIMITS2 can establish a recommendation for 20 mph. But it is very difficult to find a set of circumstances where USLIMITS2 can substantiate a 15 mph speed zone, let alone anything lower.

Some will argue the catchy phrase that “15 will get you 20.” Perhaps. But our experience and research shows that when drivers perceive the speed limit is unreasonably low and the risk of enforcement is low, they will resort to what the roadway tells them is a safe speed. And particularly if they are visitors to the area, they may be unaware of those sensitive roadside elements that the qualitative factors in the MUTCD seek to recognize and incorporate. The result can be a wide range of speeds on the street, violating the expectations of pedestrians and cyclists, and even other motorists. That is when the very thing we were worried about can happen – crashes.

It is a messy situation. Residents of a community can perceive that speeds are higher than they are; we commonly find that when we actually measure speeds, they don’t match with perception. But it doesn’t matter, because the point is that residents are uncomfortable with the speed of at least some motorists. There can be a knee-jerk reaction to do something and too often, we put an unrealistic expectation on the erection of a sign. If some motorists will ignore it as unreasonable and law enforcement lacks the resources to compel compliance, the matter can actually be worse.

Saying all this is not popular. Understandably, residents of a community want the problem fixed. And you can fix it with enforcement. Don’t let anyone tell you otherwise. Have you ever visited the Outer Banks of North Carolina? The first thing your rental agent will tell you is that if the sign says 30, drive 29, because law enforcement does not play around. And the Outer Banks are full to capacity with tourists all the time. For most of us, if the rules are clear and we believe they must be followed, we will tighten up our game. So that’s one option.

But that is for law enforcement to decide. On our side of the equation is what we can do with the design of the roads. The Delaware Traffic Calming Design [Manual](#) is a good place to start. The manual is a toolkit of ideas that can be applied to influence motorists. Not every tool is appropriate everywhere and the manual does a good job of outlining where each tool works best and how it should be applied. There is a lot of psychology behind the tools, and they aren’t perfect either. But where there is a concern about speeds, a methodic review of these tools can be a more effective approach than erecting a Speed Limit sign that has no ability to chase down a driver that ignores it.



Give the traffic calming tools a look before you resort to a feel good approach that may not change anything.

We can be of help. The Delaware T²/LTAP Center's Municipal Engineering Circuit Rider is intended to provide technical assistance and training to local agencies and so if you have roadway safety concerns or other transportation issues, contact Matt Carter at matheu@udel.edu or (302) 831-7236.

