A Residential Guide to Neighborhood Speed Enforcement

City of Delaware, Ohio

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Introduction:

The perception of speeding on local streets is probably the most persistent problem facing residents and community officials alike.

Although residential streets carry the lowest volume of traffic and are subject to the fewest accidents, they are often the subject of the most complaints regarding neighborhood speeding. Residents observe vehicles being driven at speeds perceived as "too fast" and conclude the need for increased local speed enforcement or for the installation of All Way Stop Signs along the route.

In many cases, the speeds perceived as excessive by residents while standing in their yards are the same that they operate their vehicles at while driving. Studies have also shown that the majority of speeding violations occur by residents of that neighborhood.

Complaints regarding speeding are often accompanied by a proposed solution to the speeding problem including the use of stop signs, speed bumps or limiting access to through vehicle movements.

When the response from local officials does not support the proposed solution, a confrontational relationship is often established between frustrated residents and the community officials. The end result of this process can be 1) unhappy citizens, (2) continued complaints, (3) increased political pressure, and 4) the approval of ineffective traffic-calming measures.

The City of Delaware has adopted traffic-calming guidelines to provide direction to officials and residents when addressing vehicle speeding issues. Traffic calming is the combination of physical controls and community support to reduce the negative effects

of motor vehicle use, to alter driver behavior, and to improve the conditions for non-motorizes vehicle users.

The use of traffic calming measures is subjective in nature and without prescribed solutions to any particular speeding issue. Some objectives of traffic calming include reducing vehicle speed, reducing crash frequency and severity, increase safety, reduce need for police enforcement, and to reduce cut-through traffic. Traffic-calming measures operate best when installed as part of a traffic management scheme as opposed to a single street at a time. A successful traffic-calming program must include enforcement, education, engineering and community involvement. Community support and participation is integral to establishing an effective traffic calming program.

This booklet is established principally to improve the understanding of what defines a speeding problem and to provide guidance in the benefits of forming a Neighborhood Speed Watch Program, though the advantages and disadvantages of other traffic calming measures are also discussed.

Identifying Speeding Problems:

Perception plays a large role in an individual's determination as to the existence and severity of a speeding problem. Factors such as age, the amount and type of driving an individual performs, presence of children, and level of pedestrian activity all impact the increased perception of risk associated with the presence of speeding motorists.

To eliminate the subjective nature in determining the severity of a speeding problem, a widely accepted traffic engineering standard has been utilized nationally in determining what is commonly referred to as the 85th percent speed.

Traffic engineering research has determined that speed limits should be established according to the 85th percentile of free-flowing traffic. This means the limit should be set at the speed that 85 percent of people are driving at or below. Numerous studies have shown that the 85th percentile is the safest possible speed limit, and recognizes that most drivers voluntarily adjust their speed to the total roadway/roadside environment (width, alignment, surface condition, roadside development, pedestrian activity, weather, light conditions).

In Ohio, local street speed limits are established at 25 MPH for the majority of locations. If a speed study determines that the 85 percentile speed is within 5 MPH of the 25 MPH posted speed limit, then it is concluded that the posted speed limit is appropriate for the area with minimal associated risk. Some communities feel that 85th percentile speeds within 10 MPH of the posted speed limit are acceptable and pose minimal risk to motorists or pedestrians. Other communities have a more conservative view. In Delaware, 85th percentile speeds recorded above 5 MPH over the posted speed limit is grounds to consider a more in depth study of a particular speeding issue and to consider potential counter measures to put in place to reduce speeding.

Pre-Qualifications for Considering Installation of Traffic Calming Measures:

Delaware's traffic calming guidelines provide specified criteria that must be met when considering the application of specific traffic calming measures. In general, for a traffic calming measure to be put in place;

a. The street must have a posted speed limit of 25 MPH
b. The street is classified as a local or neighborhood collector street
c. The street has and average daily Traffic (ADT) < 3500 vehicles per day
d. The 85th percentile speed, determined by study, is at least 5 MPH over the limit
e. The street is not a cul-de-sac
f. The street is not a primary emergency route

When it is found that a street meets the referenced criteria, city staff will perform an in depth study of the situation to determine which if any, traffic calming measure could be implemented to reduce the speeding issues. Before any calming measures are considered for installation, neighborhood consensus and support for incorporating traffic calming on any street is required.

It is not unusual for a resident to present a concern over speeding as an issue that "everyone" is concerned over, only to find out that many residents do not support the installation of traffic-calming measures that will require them to have to slow or stop as they drive. Traffic-calming guidelines require support of 75% of residents on the street in question, as well as 50% from those on the adjacent side street.

All Way Stop Sign Use:

Stop signs are the most commonly requested traffic-calming measure when, in fact, stop signs are generally placed in order to establish the right-of-way for traffic through a particular intersection, and only after being warranted based on traffic studies. Nevertheless, it is generally believed by residents that the addition of stop signs will help slow traffic along a particular street.

Delaware's policy recognizes the desire for a neighborhood to exercise a feeling of ownership when agreeing to accept the impacts associated with the additional of stop signs in order to achieve the perceived benefits.

The placement of "All Way" stop signs will only be considered on streets meeting the pre-qualification criteria for traffic-calming measures, which have the majority support from the neighborhood, and full concurrence from city staff.

Though stop signs will cause traffic to slow at an intersection, numerous studies indicate that the introduction of non-warranted stop signs can yield *higher* vehicle speeds between such intersections as motorists attempt to "make up time" along the route. Stop signs also yield increased noise from additional vehicle braking, idling, and acceleration.

Another common result of the placement of additional All Way Stop Signs is an increase in resident complaints regarding vehicles "rolling through" the sign. This occurs as motorists familiar with the street realize it is unlikely there will be traffic present at the intersection from the side street and are more inclined to proceed without coming to a full stop. This introduces increased risk to pedestrians who believe the presence of the additional sign increases their safety.

Speed Bumps, Humps, and Tables:

The city also receives inquiries on an annual basis for the installation of what is commonly referred to as speed bumps. Speed bumps, or humps as others call them, are actually the term for the very narrow raised strip of pavement often found in a parking lots or drive aisle to slow a vehicle down as they advance.

In Delaware, only speed tables are permitted on public streets, and in very limited applications. A speed table is a raised section of pavement generally four inches high and 10 feet in length, with gradual sloping ramps leading up to and away from the table surface. A speed table is designed to be navigated smoothly without loss of vehicle control at 20-25 MPH. A speed bump

can cause significant damage to a vehicle travelling above those speeds. More recently however, many lower smaller cars with front-end spoilers have experienced issues travelling over speed tables without slowing to 10 MPH or slower. This situation can lead to the increased risk of rear end collisions where traffic is heavier.

Speed tables also result in increased vehicle noise and can be very inconvenient for curbside parking or if positioned in the relative proximity of a residential driveway. Speed tables are expensive to construct and are generally only effective if constructed in multiple locations on a particular street where speeding is a concern.

Traffic Calming vs. Police Enforcement

Aside from stop signs and speed tables, there are many other calming measures that could be considered for neighborhood applications, all with varying degrees of effectiveness.

Other measures include raised median islands, curb bump-outs, intersection narrowing, and pavement and striping chicanes. These traffic-calming measures are meant to be self-enforcing as opposed to traffic-control devices such as stop signs and access and turning restrictions, which are regulatory and require enforcement to be fully effective.

The best time to incorporate traffic calming is when a neighborhood is initially being developed through a community planning process. Most speeding complaints however originate from established neighborhoods where many of the calming measures considered in city policy would be expensive or impractical to implement.

When a police agency becomes aware of a particular traffic speeding problem, officers can be assigned to the problem area to enforce laws. Decisions must be made as to the enforcement strategy, number of officers, time of day, or any combination thereof depending on variables related to the reported offense. This type of activity tends to only solve the problem in the presence of the officer. The more officers assigned, the more effective this method. This can be a costly process especially when involving overtime or diverting officers from other assignments. In many cases, the police generally request a speed study be performed in conjunction with a specific enforcement request to identify the severity of the problem.

Interesting enough, the majority of speed studies determine that the 85th percentiles speed is within 5 MPH of the posted speed limit and thus not considered a risk to residents, pedestrians or motorists. This is not to say that there are not vehicles travelling at rates substantially over the posted speed limit that do pose danger.

Even in these cases though, it has been found that the most effective means to help control speeding and to modify driver behavior is through the establishment of a Neighborhood Speed Watch Program.

Neighborhood Speed Watch Program:

Another educational tool that is gaining more widespread utility is the Neighborhood Speed Watch Program whereby residents can become both educated about the perception of speeding as well as help control speeds with minimal police support. Such programs must involve law enforcement personnel to providing guidance and training while working as a team with residents capable of providing the manpower required in observing, identifying and recording violators.

With police assistance, the neighbors are charged with educating each other, communicating their goals, and policing themselves. Neighbors identify the speeders and report findings to the local police who, in turn, will make contact with the speeder to both educate and warn of the consequences of continued violations.

A Neighborhood Speed Watch Program has the benefit of bonding the residents by empowering a neighborhood group to take action to address a problem. The level of effort required will depend on an individual's role and size of neighborhood involved.

Neighborhood Speed Watch programs rely on peer pressure and community spirit to increase awareness in a subdivision that is experiencing a speeding issues. Its success revolves on the fact that in a self-contained subdivision, the drivers involved are typically neighbors and friends of those with concerns over speeding, and thus are more inclined to adjust their individual driving behavior. These programs are less effective on cut-through traffic, though the same follow-up contact by law enforcement should be implemented.

To be included in a Neighborhood Speed Watch Program;

a. The street must have a posted speed limit of 25 MPH
b. The street is classified as a local or neighborhood collector street (If unsure, Residents can contact the City of Delaware Department of Engineering Services at 740-203-1700 to find out)

Once approved, the following actions are taken:

a. A neighborhood Watch Group (NWG) of representatives must form to both communicate information to the residents and to perform speed observations.

b. The NWG meets with police staff to:
    - To receive guidance regarding Neighborhood Speed Watch Program
    - For in-field radar device operation and training
    - To discuss neighborhood Speed Watch Program signage options and public awareness messaging and strategies.

c. The NWG must communicate the purpose and goals of the Speed Watch Program to its residents in person, by letter, handouts, telephone, or email etc.
d. The NWG performs radar speed observations and reviews the results with police to understand the habits of drivers and to determine the 85% speed.

e. The NWG performs radar speed observations, records the license plate numbers of violators exceeding the calculated 85% speed, and forwards the information to the police department for written follow-up.

The length of time that a Speed Watch Program runs will vary by neighborhood and by perception of the effectiveness of the efforts. Periodically, the city traffic engineer will review the data collected and perform additional 85th percentile speed studies to determine the effectiveness of the program in reducing speeding. An effective program will involve a combination of communications to residents, public awareness messaging, and radar enforcement and notifications.

Community involvement has, and will always be, a highly effective tool in resolving problems, complaints, and other issues.

It has become convenient for residents to rely on government to address their local concerns, though the effectiveness of this approach does not always yield the desired outcome. As government staff and budgets continue to shrink, the ability for government agencies to dedicate the necessary resources to adequately address speeding problems often falls short.

In many cases, residents embrace the idea of becoming part of the solution to a local problem and are willing to provide time to communicate with residents and perform valuable field work as part of an attempt to respond to an issue.

The City of Delaware has made it possible to both train and empower its residents to be able to respond to the ongoing issue of neighborhood speed enforcement.

This information is provided by:

- The City of Delaware Department of Engineering Services, 740-203-1700, engineeringservices@delawareohio.net
- The City of Delaware Police Department, 740-203-1100