

VILLAGE OF GODFREY
STOP SIGNS PROCEDURES

Two-way and one-way stop signs are primarily installed to safely assign right-of-way. Other considerations are sight distance restrictions, crosswalk locations and accident history. The purpose of a multi-way stop is to provide safe and adequate gaps for vehicles to enter an intersection. The Village of Godfrey does not use stop signs for speed control. National data concludes that the installations of unwarranted stop signs or artificially low speed limits do not reduce excessive speeding. In fact, stop signs often provide a false sense of security for pedestrians and motorists, which increases the potential for accidents.

Residents desiring a stop sign in their neighborhood should fill out and file with the Village Clerk the application attached. Required information on the application:

- 1) A contact name with a phone number, and an e-mail address (optional)
- 2) A written description (or map) of the location of concern for the stop sign
- 3) The reason for the placement of a traffic control device (cannot be for controlling speed)
- 4) Signature, printed name and phone number from 10 different address households (signature must be from a resident of the household of at least 18 years of age) in the subdivision or area *and they have seen the **traffic control brochure*** (also attached below, after the application)
- 5) The contact person should appear in person, after filing a completed application, at the next available Public Safety Committee meeting to express concerns and answer questions of the committee members. Following initial Public Safety Committee meeting, the committee will refer request to the Engineering department to collect data and to write up the department recommendation. The Engineering Department must make its report back to the committee by their third (3) Public Safety Committee meeting after the initial request.

Some items that may be used by the Engineering department are:

- 1) Have the Police observe the area and write a report about the traffic problem in the area
- 2) Do traffic counts
- 3) Check crash reports
- 4) Check the intersection visibility and see if trimming trees and bushes in the right-of-way can help
- 5) See if restricting parking can help
- 6) Observe car, bike and pedestrian traffic in the area
- 7) Others steps (which may be offered by the Village's Board members, Village Engineer or Street Director)

The time between the initial Public Safety Committee meeting and the time the Engineering department reports back to the Public Safety Committee, will allow time for members of the Public Safety Committee to visit the site, talk to the residents and to form their perceptions.

Following the Engineering Department's report to the Public Safety Committee, the committee will take one of the following actions:

- 1) Take No Action
- 2) Act to lay over until next meeting
- 2) Act to defer action to some future date
- 3) Act to amend recommendation
- 4) Act to defer to seek additional information or complete analysis of request
- 5) Act to recommend other solutions, improve visibility by reshaping area, trimming or removing obstructions, etc
- 6) Act to place traffic control device
- 7) Act to deny request for traffic control device.

[illegible]

*Application needs ten (10) different address households, the signature must come from a resident of the household eighteen (18) years or older and the household address must be in the subdivision or a home that is near and effected by the location of the Stop Sign. Completed Stop Sign Application should be return to the Village Clerk. This application will be submitted to the Village of Godfrey Public Safety Committee and will be placed on the next available Public Safety Committee Agenda.



The Village of Godfrey

Village Engineer Department / Director of Public Works

6810 Godfrey Road • P.O.Box 5067 • Godfrey, Illinois 62035 • Phone (618) 466-4319 • Fax:(618)466-4519

Report for the Village of Godfrey on Making a Stop Signs Rules and Procedures

In response to numerous concerns from its residents about placement of traffic stop signs at street intersections in residential neighborhoods, the Village of Godfrey is looking at developing rules and procedures for requesting and installing traffic stop signs on residential streets.

In my research, the requested of stop signs by residents is a concern that many if not all municipalities faces with residents. Most of these communities have standard guidelines that need to be met for each request to the communities Traffic Boards, Traffic Departments for the larger communities, or to the local smaller communities Councils. However, for the most part every one of them uses the guidance of the Manual on Uniform Traffic Control Devices (MUTCD).

In addition, most of the communities try to state to their residences that Stop signs are not always the best answers and sometimes can intensify the problem that they were trying to solve. Most communities have brochures or FAQ's on their websites that uses information collected by the Institute of Transportation Engineers which states: A stop sign is one of the most valuable and effective control devices when used at the right place and under the right conditions. It is intended to help drivers and pedestrians at an intersection decide who has the right-of-way. One common misuse of stop signs is to arbitrarily interrupt through traffic, either by causing it to stop, or by causing such an inconvenience as to force the traffic to use other routes. Where stop signs are installed as "nuisances" or "speed breakers", there is a high incidence of intentional violation. In those locations where vehicles do stop, the speed reduction is effective only in the immediate vicinity of the stop sign, and frequently speeds are actually higher between intersections. For these reasons, it should not be used as a speed control device. Well-developed, national and state recognized guidelines help to indicate when such controls become necessary. These guidelines take into consideration, among other things, the probability of vehicles arriving at an intersection at the same time, the length of time traffic must wait to enter, traffic delays, and the availability of safe crossing opportunities.

The State of Illinois still recognize the 2003 Edition of the Manual on Uniform Traffic Control Devices (MUTCD), with a 2003 State Supplement, while there is a new 2009 Edition of the National MUTCD. However, IDOT is using the 2009 MUTCD in there viewing of all new projects. The 2009 MUTCD was published on December 16, 2009. The adopted changes are effective as of January 15, 2010. 23 CFR provides the States with a 2-year period from the effective date to adopt the MUTCD. By January 15, 2012, States are required to adopt the National Manual or have a State MUTCD/supplement that is in substantial conformance with the National Manual. Therefore, I will be referencing from the 2009 Edition of the Manual on Uniform Traffic Control Devices.

Under the Illinois Vehicle Code (625 ILCS 5/11-302) it basically states that local authorities with highways under their jurisdiction may designate any intersection as a stop or yield intersection and erect stop signs or yield signs at one or more entrances to such intersection. However, every stop sign and yield sign shall conform to the State Manual and Specifications. An interesting by product

of placing a stop or yield sign fall under (625 ILCS 5/11-1303) which prohibits parking within 30 feet upon the approach to any flashing signal, stop sign, yield sign, or traffic control signal located at the side of a roadway. Moreover, with no parking within 15 feet of a fire hydrant, there may be a location in which a residence may not be able to park within 60 feet from the intersection.

When working with the MUTCD there needs to be an understanding of the definitions of the text headings of **Standard**, **Guidance**, **Option**, and **Support** from Section 1A.13.

Standard is a statement of required, mandatory, or specifically prohibitive practice regarding a traffic control device. All Standard statements are labeled, and the text appears in bold type. The verb "shall" is typically used. The verbs "should" and "may" are not used in Standard statements. Standard statements are sometimes modified by Options. Standard statements shall not be modified or compromised based on engineering judgment or engineering study.

Guidance is a statement of recommended, but not mandatory, practice in typical situations, with deviations allowed if engineering judgment or engineering study indicates the deviation to be appropriate. All Guidance statements are labeled, and the text appears in unbold type. The verb "should" is typically used. The verbs "shall" and "may" are not used in Guidance statements. Guidance statements are sometimes modified by Options.

Option is a statement of practice that is a permissive condition and carries no requirement or recommendation. Option statements sometime contain allowable modifications to a Standard or Guidance statement. All Option statements are labeled, and the text appears in unbold type. The verb "may" is typically used. The verbs "shall" and "should" are not used in Option statements.

Support is an informational statement that does not convey any degree of mandate, recommendation, authorization, prohibition, or enforceable condition. Support statements are labeled, and the text appears in unbold type. The verbs "shall," "should," and "may" are not used in Support statements.

In the following paragraphs, I hope to supply the reader some background information from the 2009 Edition of the MUTCD to understand what is required by law and want are suggestions for the placement of a traffic control devices, more in particular a stop sign to help in forming a standard procedure for requesting the placement of a stop sign.

The MUTCD under Section 1A.01, P1 & P2, is a **Support** statement:

"The purpose of traffic control devices, as well as the principles for their use, is to promote highway safety and efficiency by providing for the orderly movement of all road users on streets, highways, bikeways, and private roads open to public travel throughout the Nation. Traffic control devices notify road users of regulations and provide warning and guidance needed for the uniform and efficient operation of all elements of the traffic stream in a manner intended to minimize the occurrences of crashes."

Section 2A.01, P1, is a **Support** statement:

"This Manual contains Standards, Guidance, and Options for the signing of all types of highways, and private roads open to public travel. The functions of signs are to provide regulations, warnings, and guidance information for road users. Words, symbols, and arrows are used to convey the messages. Signs are not typically used to confirm rules of the road."

Under Section 1A.02, P2, this is under a **Guidance** statement:

"To be effective, a traffic control device should meet five basic requirements:

- A. Fulfill a need;*
- B. Command attention;*
- C. Convey a clear, simple meaning;*
- D. Command respect from road users; and*
- E. Give adequate time for proper response."*

Section 2A.03, P2 & P3, under the title of Standardization of Application, is a **Guidance** statement:
"Signs should be used only where justified by engineering judgment or studies, as provided in Section 1A.09." and "Results from traffic engineering studies of physical and traffic factors should indicate the locations where signs are deemed necessary or desirable."

Section 2A.04. titled Excessive Use of Signs is a **Guidance** statement.

"Regulatory and warning signs should be used conservatively because these signs, if used to excess, tend to lose their effectiveness. If used, route signs and directional guide signs should be used frequently because their use promotes efficient operations by keeping road users informed of their location."

Section 2B.01, P1, is a **Standard** statement:

"Regulatory signs shall be used to inform road users of selected traffic laws or regulations and indicate the applicability of the legal requirements."

Section 2B.04, Section 2B.06 and Section 2B.07 deal with Right-of-Way at Intersections, Stop Sign Applications, and Multi-way Stop Applications which has lot of guidance about Engineer judgment and Engineer Studies but little to no **Standard** criteria for having a stop sign.

Section 2B.04, P2, is a **Guidance** statement:

"Engineering judgment should be used to establish intersection control. The following factors should be considered:

- A. Vehicular, bicycle, and pedestrian traffic volumes on all approaches;*
- B. Number and angle of approaches;*
- C. Approach speeds;*
- D. Sight distance available on each approach; and*
- E. Reported crash experience."*

Section 2B.04, P3, is a **Guidance** statement:

"YIELD or STOP signs should be used at an intersection if one or more of the following conditions exist:

- A. An intersection of a less important road with a main road where application of the normal right-of-way rule would not be expected to provide reasonable compliance with the law;*
- B. A street entering a designated through highway or street; and/or*
- C. An unsignalized intersection in a signalized area."*

Section 2B.04, P4, is a **Guidance** statement:

In addition, the use of YIELD or STOP signs should be considered at the intersection of two minor streets or local roads where the intersection has more than three approaches and where one or more of the following conditions exist:

- A. The combined vehicular, bicycle, and pedestrian volume entering the intersection from all approaches averages more than 2,000 units per day;*
- B. The ability to see conflicting traffic on an approach is not sufficient to allow a road user to stop or yield in compliance with the normal right-of-way rule if such stopping or yielding is necessary; and/or*
- C. Crash records indicate that five or more crashes that involve the failure to yield the right-of-way at the intersection under the normal right-of-way rule have been reported within a 3-year period, or that three or more such crashes have been reported within a 2-year period."*

Section 2B.04, P5, is a **Guidance** statement:

"YIELD or STOP signs should not be used for speed control."

Section 2B.04, P7 & P8, are **Guidance** statement:

"Once the decision has been made to control an intersection, the decision regarding the appropriate roadway to control should be based on engineering judgment. In most cases, the roadway carrying the lowest volume of traffic should be controlled. A YIELD or STOP sign should not be installed on the higher volume roadway unless justified by an engineering study."

Section 2B.06, P1 & P2, titled STOP Sign Applications are **Guidance** statement:

At intersections where a full stop is not necessary at all times, consideration should first be given to using less restrictive measures such as YIELD signs (see Sections 2B.08 and 2B.09). The use of STOP signs on the minor-street approaches should be considered if engineering judgment indicates that a stop is always required because of one or more of the following conditions:

- A. The vehicular traffic volumes on the through street or highway exceed 6,000 vehicles per day;*
- B. A restricted view exists that requires road users to stop in order to adequately observe conflicting traffic on the through street or highway; and/or*
- C. Crash records indicate that three or more crashes that are susceptible to correction by the installation of a STOP sign have been reported within a 12-month period, or that five or more such crashes have been reported within a 2-year period. Such crashes include right-angle collisions involving road users on the minor-street approach failing to yield the right-of-way to traffic on the through street or highway.*

Section 2B.07, P1, under the title of Multi-Way Stop Applications is a **Support** statement:

Multi-way stop control can be useful as a safety measure at intersections if certain traffic conditions exist. Safety concerns associated with multi-way stops include pedestrians, bicyclists, and all road users expecting other road users to stop. Multi-way stop control is used where the volume of traffic on the intersecting roads is approximately equal.

Section 2B.07, P3 & P4, are **Guidance** statements:

The decision to install multi-way stop control should be based on an engineering study.

The following criteria should be considered in the engineering study for a multi-way STOP sign installation:

- A. Where traffic control signals are justified, the multi-way stop is an interim measure that can be installed quickly to control traffic while arrangements are being made for the installation of the traffic control signal.*
- B. Five or more reported crashes in a 12-month period that susceptible to correction by a multi-way stop installation. Such crashes include right-turn and left-turn collisions as well as right-angle collisions.*
- C. Minimum volumes:*
 - 1. The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day; and*
 - 2. The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour; but*
 - 3. If the 85th-percentile approach speed of the major-street traffic exceeds 40 mph, the minimum vehicular volume warrants are 70 percent of the values provided in Items 1 and 2.*
- D. Where no single criterion is satisfied, but where Criteria B, C.1, and C.2 are all satisfied to 80 percent of the minimum values. Criterion C.3 is excluded from this condition.*

Then there is an Option statement, which states other criteria that may be considered if an engineering study was to be done.

The MUTCD in Section 1A.13, define an Engineer Judgment as “the evaluation of available pertinent information, and the application of appropriate principles, provisions, and practices as contained in this Manual and other sources, for the purpose of deciding upon the applicability, design, operation, or installation of a traffic control device. Engineering judgment shall be exercised by an engineer, or by an individual working under the supervision of an engineer, through the application of procedures and criteria established by the engineer. Documentation of engineering judgment is not required.”

A Engineer Study as "the comprehensive analysis and evaluation of available pertinent information, and the application of appropriate principles, provisions, and practices as contained in this Manual and others sources, for the purpose of deciding upon the applicability, design, operation, or installation of a traffic control device. An engineering study shall be performed by an engineer, or by an individual working under the supervision of an engineer, through the application of procedures and criteria established by the engineer. An engineering study shall be documented."

Section 1A.09, under the title of Engineering Study and Engineering Judgment has a **Standard** statement:

"This Manual describes the application of traffic control devices, but shall not be a legal requirement for their installation."

Section 1A.08, P1, under the title of Authority for Placement of Traffic Control Devices is a **Standard** statement:

"Traffic control devices, advertisements, announcements, and other signs or messages within the highway right-of-way shall be placed only as authorized by a public authority or the official having jurisdiction, or, in the case of private roads open to public travel, by the private owner or private official having jurisdiction, for the purpose of regulating, warning, or guiding traffic."

Also in Section 1A.08, P3, is a **Standard** statement:

"All regulatory traffic control devices shall be supported by laws, ordinances, or regulations."

It may be mention that MUTCD Part 5 could be used because it deals with traffic control devices for low-volume roads. However, there is a statement in Section 5A.01, P1B, that is a **Standard** states:

"A low-volume road shall not be a freeway, an expressway, an interchange ramp, a freeway service road, a road on a designated State highway system, or a residential street in a neighborhood. In terms of highway classification, it shall be a variation of a conventional road or a special purpose road as defined in Section 1A.13."

Basically, my understanding, from all this information, is that as long as the Village has jurisdiction of the road, support the sign by laws, ordinances or regulations, correctly use the required signage and placement of the sign, and continue maintenance; then the Village can place a stop or yield sign at any intersection. Most of what the MUTCD does is offer guidance for placing stop or yield signs.

Now to what the report is about, suggestion on how the Village may like to have a standard for the residents to make request for stop signs.

One method is to form a sub-committee under the Public Safety committee called Traffic or even Streets. Under the name street, that committee could also look at not just signs but street repair, curb and gutter repair, street lights, and even storm water problem, if the board would like to take that from the Special Project Sewer Committee. The board could be made of a representative from the fire and police departments, an engineer, and others. Then this board could write up a procedure. This option may be too redundant or to long to form to solve the problems now.

Method two write a policy and have a written procedure. To write this procedure the board would need to express what ideas they like and do not like. In this paper, I am just putting out ideas that some communities have try and to see what the board would like to work with to form a procedure.

A policy or regulation on stop and yield sign installations could state something like this:

The Village with reference to streets under its jurisdiction may designate through streets and erect stop signs or yield signs at specified locations thereto, or may designate any intersection as a stop intersection or as a yield intersection and erect stop signs or yield signs at one or more entrances to such intersection.

Every stop and yield sign shall conform to the State Manual and Specifications. Two-way and one-way stop signs are primarily installed to safely assign right-of-way. Other considerations are drainage dips, sight distance restrictions, school pedestrian crosswalk locations and accident history.

All-way signs (typically four-way) are not installed to control speeds. All-way stops may be installed on collector street intersections and on intersections of collector and local streets depending on volumes, sight distance, accident history, school crosswalks and pedestrian usage.

The Village may in its discretion and when traffic conditions warrant such action give preference to traffic upon any of the streets under its jurisdiction over traffic crossing or entering such street by erecting appropriate traffic control devices.

Another policy idea is from the City of Naperville. (Please see Exhibit 1.)

Some thoughts about a procedure that a resident(s) should go through to get a stop or yield sign placed at an intersection.

To start the process there should be a request form filled out and given back to the Village's Clerk office or can be dropped off at the Public Works office. The form should have the requester to answer five questions.

- 1) A contact name with a phone number, fax, or e-mail address
- 2) A written description (or map) of the location of concern
- 3) What type of action they want from the Village
- 4) The reason for the placement of a traffic control device
- 5) Signature from 10 different address households (signature must be from a resident of the household of at least 18 years of age) in the subdivision or area

Once the form has been filled out and given back to the Village Clerk's office, it will then be placed on the next available scheduled Public Safety Committee Meeting Agenda. The Village Engineer should write up a preliminary report of action for the committee. The committee at this meeting can make four different motions to vote on for the placement of a traffic control device. They are:

- 1) A vote to table the discussion to the next meeting; or
- 2) A vote against the request; or
- 3) A vote to place the control sign; or
- 4) A vote to start the action of a Level 1 Tier Control

The Level 1 Tier Control will then have a procedure to go through before the request goes back to the Public Safety Committee. The Village Engineer or Street Director will talk to the contact person of the request to inform them that the request has gone to the Level 1 Tier Control. At this time, the Village Engineer will determine a designated petition area. This area could include additional neighborhoods that might be affected. Under the Level 1 Tier Control, the Village Engineer or Street Director will incorporate all or some of these steps:

- 1) Send out brochures and letter explaining the Level 1 Tier Control (Some example are attached as Exhibit 2) (I do not have an example letter for explanation)
- 2) Police spot enforcement/presence
- 3) Place signs or barrack announcing Level 1 Tier Control in the neighborhood
- 4) Place the speed board/trailer in the neighborhood
- 5) Do traffic counts
- 6) Check crash reports
- 7) Improving the intersection visibility by trimming trees and bushes in the right-of-way
- 8) Restrict parking
- 9) Priority scoring guideline (Example Exhibit 3)
- 10) Others steps (offered by the Village's Board members, Village Engineer or Street Director)

After a minimal of thirty (30) days of the Level 1 Tier Control being in effect, the Village Engineer or Director of Streets or their representative will make contact with the Contact person and ask them if these measures have helped in their problems. If not and they would like to continue on with the procedure to place a traffic control device, then the contact person will start on Level 2 Tier Control. A map of the required homes to be petitioned, a letter explaining the petition, and the petition will be provided to the contact person. The contact person has sixty (60) days to return the signed petition back to the Village Clerk's office (the return date and number of households needed will be stated on the petition). The contact person needs to collect signatures from sixty (60) percent of the required household (1 signature per house) that are located on the map provided.

When the Village Clerk's office receives the petition, the clerk will place the petition on the next available Public Safety Committee Meeting Agenda. The Committee will receive the petition with the signatures, a letter from the Village Engineer and/or the Director of Streets with any results and/or comments of their observation of the situation during the Level 1 Tier Control frame. The Public Safety Committee should make a yes or no vote for the traffic control device.

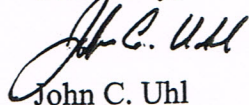
If the petition was turned in after the due date, with not enough signatures, or never received; then that location can not be petitioned again for a minimum of eight (8) months from the turn in date of the petition.

The initial request form, any FAQ's, brochures, procedures and policies should be placed on the Village's website.

Nothing above should be used as final. These are just ideas gathered from going on to different communities' websites in the country and picking out different programs and policies from them. Many of the statements above are from merging different ideas and policies together. I would suggest that some of these ideas and interpretations of some of the rules from the MUTCD and State Statute be verified by a lawyer and a traffic engineer.

I also think that we should make sure that a traffic control device is really wanted by the neighborhood or by just a few. With these steps, I think we would see the commitment of the neighborhood for the desire of the placement of a traffic control device.

Offered by,



John C. Uhl
Village of Godfrey
Engineer Technician



Naperville

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Stop Signs

The purpose of a multi-way stop is to provide safe and adequate gaps for vehicles to enter an intersection. The City of Naperville does not use stop signs are not used for speed control. National data concludes that the installation of unwarranted stop signs or artificially low speed limits do not reduce excessive speeding. In fact, stop signs often provide a false sense of security for pedestrians and motorists which increases the potential for accidents.

When considering stop sign placement, the City evaluates School Safe Walk Routes and street conditions such as, street dips, bumps or locations with obscured vision.

Non-Residential Stop Sign Criteria

The City of Naperville follows Federal Highway Administration standards for the placement of stop signs on non-residential streets. According to these standards, intersections must meet one or more of the following conditions:

1. Intersection of a less important road with a main road where application of the normal right-of-way rule would not be expected to provide reasonably safe operation.
2. Street entering a through highway or street.
3. Unsignalized intersection in a signalized area.
4. High speeds, restricted view, or crash records indicate a need for control by the stop sign.

Residential Stop Sign Criteria

The City of Naperville evaluates requests for stop signs on a residential street using criteria approved by the City Council. The factors considered when evaluating an intersection for an all-way stop control include:

- pedestrians and bicyclists,
- established School Safe Walk Routes,
- speed of traffic on all approaches,
- the amount of cut-through traffic,
- traffic crash experience and types of crashes,
- sight obstructions and sight distance adequacy for all quadrants,
- unexpected and unusual traffic hazards and their proximity to the intersection,
- conflict analysis,
- location of public facilities including parks, neighborhood recreation clubs, churches, and shopping centers,
- conditions of the intersection, approaching streets, widths, shoulders, street lighting, and parking,
- traffic volumes including approach volumes by turning movement and presence of pedestrians, and
- functional classification and designation as a collector or arterial street.

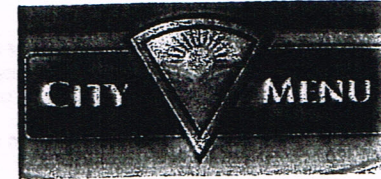
Contact Information:

City of Naperville
TED Business Group
400 S. Eagle Street
Naperville, IL 60540
(630) 420-6100
[Contact Us](#)

[e-Bill](#) | [Planning Viewer](#) | [Your Place](#) | [Site Map](#) | [Citizen Support](#)

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EXHIBIT 1



Expansive Soil Guidelines
 Stop Signs
 Proposed Street Resurfacing
 Completed Streets 2001-2010

[Homepage](#) > ... > [Engineering Division](#) > [Projects](#) > [Stop Signs](#)

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Stop Signs

WHY DON'T THEY PUT IN MORE STOP SIGNS

A stop sign is one of our most valuable and effective control devices when used at the right place and under the right conditions. It is intended to help drivers and pedestrians at an intersection decide who has the right-of-way.

One common misuse of stop signs is to arbitrarily interrupt through traffic, either by causing it to stop, or by causing such an inconvenience as to force the traffic to use other routes. Where stop signs are installed as "nuisances" or "speed breakers", there is a high incidence of intentional violation. In those locations where vehicles do stop, the speed reduction is effective only in the immediate vicinity of the stop sign, and frequently speeds are actually higher between intersections. For these reasons, it should not be used as a speed control device.



Well-developed, national and state recognized guidelines help to indicate when such controls become necessary. These guidelines take into consideration, among other things, the probability of vehicles arriving at an intersection at the same time, the length of time traffic must wait to enter, traffic delays, and the availability of safe crossing opportunities.

Speed

An unwarranted STOP sign installation reduces speed only immediately adjacent to the sign. In most cases, drivers accelerate as soon as possible, to a speed faster than they drove before STOP signs were installed. They do this apparently to make up for time lost at the STOP sign. **STOP signs are not effective for speed control.**

Through-Traffic Volumes

In almost all cases, through-traffic volumes stay the same after the installation of unwarranted STOP signs. Occasionally the street experiences a slight volume decrease. However, after a few months, the volume of through-traffic at the test sites where an initial decrease did occur was back to original levels or in some cases it was even higher. STOP signs do not necessarily reduce volume.

Local Neighborhood Traffic Volumes

Local neighborhood traffic generally finds the path of least resistance. If there are alternative routes to get from Point A to Point B and if these alternate routes have fewer traffic controls, local drivers will take them. In many cases, this significantly increases the traffic volume on other local streets - thus relocating the problem. In the very few cases where they have, the problem merely shifted to another location - often times from a collector to a purely local street. STOP signs generally do not reduce volumes on a street.

Information collected by the Institute of Transportation Engineers

Compliance

Drivers tend to ignore unwarranted traffic controls or obstacles that, in their view, are unnecessary. If they are frequently required to stop for STOP signs and rarely see any traffic on the opposing street, they may become impatient and tend to disregard STOP signs that have no obvious need.

Accidents

Unwarranted STOP signs do not reduce accidents and may increase the potential for accidents. There is not enough documentation to determine if there is an actual increase in accidents on local low volume streets, but experience of some cities shows that where unwarranted signs used to stop a high volume street for a local street, cause the accidents to increase drastically.

Vehicle Operating Costs

Unwarranted STOP signs increase vehicle fuel consumption. The unwarranted STOP signs require additional stop/start maneuvers costing the motorists a substantial amount of money, wear and tear, and causing excessive gasoline consumption. This is especially noteworthy in light of the present fuel situation. Wear and tear on vehicles also increases. It should be noted that no detailed mechanical evaluations have been made but obviously increased stopping and starting would increase wear on tires, brakes, transmission, and engine.

Environmental

Although not specifically documented in this report, it is logical to assume that unwarranted STOP signs increase stop/start actions and therefore increase exhaust fumes and associated hydrocarbons.

Noise

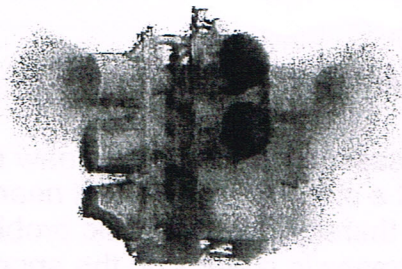
Noise pollution increases due to stops and acceleration and the associated engine noises and brakes. Noise tests at the STOP signs and at mid-block locations showed that the stop/start and acceleration resulting from the four-way STOP installations increased the noise levels over the "before" conditions.

Effectiveness

Even the minimal initial compliance and through-traffic diversion wear off over time because the unwarranted signs are not associated with a perceived need by the motorist. Most drivers are reasonable and prudent with no

EXHIBIT 2

11/29/2010



Traffic Information Series



STOP SIGNS

Brochure pdf

Each year the City of Hillsboro receives many requests for stop signs. The following information explains the correct use of stop signs and states the City's criteria for installation of stop signs.

What is a stop sign used for?

Stop signs are intended to help drivers and pedestrians determine who has the right-of-way at an intersection. Intersections not controlled by stop signs are subject to the right-of-way rule that states that a driver, when approaching an uncontrolled intersection, shall look out for and give right-of-way to any driver on the right simultaneously approaching a given point, regardless of which driver first reaches and enters the intersection.

Stop signs are installed to assign right-of-way at intersections where accidents or other data show that the driver observance of the right-of-way rule is not working. Stop signs are also occasionally considered an interim measure to a traffic signal where extreme congestion or multiple accidents have been recorded.

Why not stop signs at every intersection?

Too many stop signs reduce the effectiveness in observance of right-of-way and control of intersections. Furthermore, installation of stop signs at all intersections would be very expensive. More stop signs in a neighborhood usually result in higher pollution and noise levels from vehicles' braking and acceleration.

Can a stop sign reduce speeding?

Stop signs are only used at intersecting streets and not at mid-block locations. They are not always effective at reducing vehicle speeds. Studies show that drivers accelerate rapidly after a stop. Within 100 feet of the stop sign they reach their top operating speeds. For speeders, the stop signs do little to slow them down.

Where stop signs are installed as "speed breakers", there is a high incidence of intentional violation or running the stop sign. Most drivers are reasonable and prudent with no intention of violation traffic regulations. However, when an unreasonable restriction is imposed, it can result in flagrant violations. In these cases, the stop sign creates a false

EXHIBIT 2

- An email address if available

The City carefully evaluates most requests. However, because we receive many requests each year, we cannot always investigate your request as quickly as we would like to. We appreciate your patience and understanding.

EXHIBIT 2

intersection visibility by trimming trees and bushes in the right-of-way and/or restricting parking is more effective in improving intersection safety.

Criteria

The City of Hillsboro observes federal guidelines outlined in the Manual on Uniform Traffic Control Devices for stop sign applications.

STOP signs should not be used unless engineering judgement indicates that one or more of the following conditions exist:

- A. Intersection of a less important road with a main road where application of the normal right-of-way rule would not be expected to provide reasonable safe operation.*
- B. Street entering a through highway or street.*
- C. Unsignalized intersection in a signalized area.*
- D. High speeds, restricted view, or crash records indicate a need for control by the STOP sign.*

Where to begin

If you believe your street might benefit from a stop sign, please review the

criteria and contact the City Engineer with your traffic concerns. Outline your concerns and requests in writing and send them to the Public Works Department, Engineering Division, 150 E Main Street, Hillsboro, OR 97123. Please include the following in your letter to assist us:

- ❖ Your name
- ❖ Your address
- ❖ A daytime phone number
- ❖ A fax number if available
- ❖ An email address if available

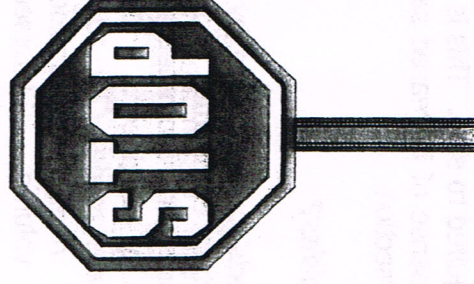
The City carefully evaluates most requests. However, because we receive many requests each year, we cannot always investigate your request as quickly as we would like to. We appreciate your patience and understanding.

Other Information Series Topics

Additional information series brochures are also available through the City of Hillsboro Engineering Division on the following topics:

- NEIGHBORHOOD TRAFFIC
- VISUAL CLEAR ZONES
- SPEED ZONING

STOP SIGNS



CITY OF HILLSBORO

Engineering Division
Public Works Department
150 E Main Street, 4th Floor
Hillsboro, OR 97123
Phone: 503-681-6146
Fax: 503-681-6245

www.ci.hillsboro.or.us/engineering/

Procedures and guidelines for the installation of all STOP signs

All Stop signs must comply with the Texas Manual on Uniform Traffic Control Devices (TMUTCD), which itself must also conform to national standards. Using the guidelines found in this manual, an investigation is conducted which determines whether the placement of a STOP sign is justified. The following are some of the steps taken to ensure STOP signs are installed correctly.

1. First a history of the intersection in question is reviewed. This includes reviewing prior investigations and accident data to determine if a STOP sign is justified.
2. A field investigation is also performed to check the visibility, street layout, and general surroundings of the site.
3. If it is necessary, a count of all vehicles, pedestrians, and bicyclists is conducted for the intersection of concern on an average day. The results of the count are then reviewed and compared to the minimum requirements allowed by the TMUTCD for multiway STOP signs.
4. Once it has been determined that the installation of a STOP sign is justified and the City Engineer approves, the Street Department is instructed to install the sign.

**Engineering Department,
Traffic Division
2 Civic Center Plaza – 6th Floor
El Paso, Texas 79901-1196
(915) 541 - 4050**

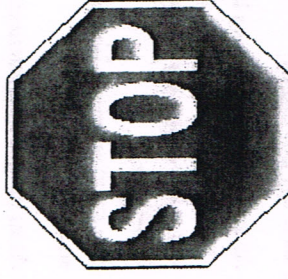
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ENGINEERING
DEPARTMENT
TRAFFIC DIVISION

Information Brochure

Stop Signs



January 2005



City of El Paso

City of El Paso
Texas

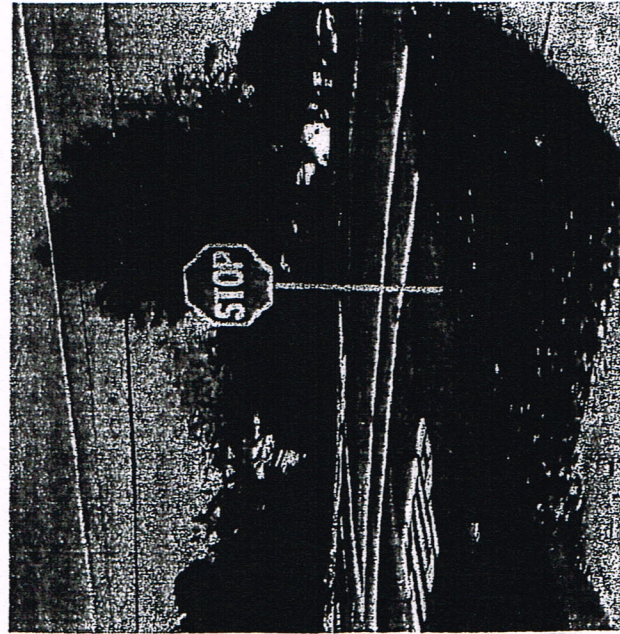
STOP

How do I ask for a stop sign in my neighborhood?

The first step is to contact the City's Department of Transportation (DOT) and describe your concern. The quickest way to reach us is to call 408-535-3850 and ask for Traffic Engineering, or send an email to us at traffic.calming@sanjoseca.gov. Some traffic solutions require community involvement, because they can result in loss of parking, stronger enforcement measures, or the redirection of traffic onto other roadways. DOT staff can meet with neighborhood representatives to discuss different options. Community input is encouraged throughout the process.

How do I report a damaged or missing stop sign?

Please call our Sign Maintenance Shop directly at 408-361-0170. Please provide the intersecting street names.



USEFUL NUMBERS

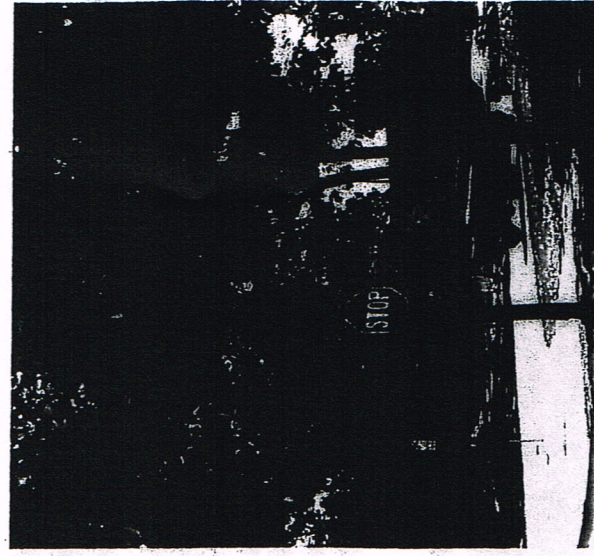
Crosswalk Studies	535-3850
Damaged or Uneven Sidewalks	277-3158
New Streetlights	535-8300
Potholes/Pavement Problems	277-4373
School Safety Presentations	975-3296
Sign Maintenance	361-0170
Sign & Marking Requests	535-3850
Streetlight Repair	277-5517
Street Tree Issues	277-2762
Storm Drains Clogged	277-4373
Street Smarts Presentations	975-3238
Traffic Signal Malfunctions	277-4373
Traffic Signal Timing Concerns	975-3700
Traffic Visibility Obstructions	535-3850
Call Center 24-Hour Hotline	535-3500

Upon request, this publication can be made available in alternative formats, such as Braille, large print, audio tape or computer disc. Requests can be made by calling 408 535-3850 (voice) or 408 294-9337 (TTY).

Department of Transportation

200 East Santa Clara Street
8th Floor
San José, CA 95113
408-535-3850
www.sanjoseca.gov/transportation

Stop Signs In San Jose



Department of Transportation



December 2006



Town of Greenwich Neighborhood Traffic Calming Program

Table 1 – NTCP PRIORITY SCORING GUIDELINES

Criteria	Definition	Value	Points
Average Daily Traffic Volume (ADT)	Traffic volumes are measured for an average 24 hour period on a single street in the traffic calming area.	<1000	0
		1000-1500	1
		1500-2000	2
		2000-3000	3
		3000-4000	4
		>4000	5
Peak Hour Traffic Volumes	Traffic volumes are measured during the peak hour for both directions on a single street in the traffic calming area.	<200	1
		200-250	2
		250-300	3
		300-400	4
		>400	5
Percentage of Cut-Through Traffic	Percentage of traffic without an origin or destination within the study area versus the total peak hour traffic entering/exiting the area.	<20%	1
		20%-40%	2
		40%-60%	3
		60%-80%	4
		>80%	5
85 th Percentile Speed	Measured speed at which 15% of vehicles exceed. Scoring based on mph over the posted speed limit.	6-7	1
		8-9	2
		10-12	3
		13-15	4
		>15	5
Accidents	Number of reported accidents, correctable by traffic calming on the project street in the last three years.	<5	1
		6-9	2
		10-12	3
		13-15	4
		>15	5
Pedestrian Generators	Public and private facilities on or near the project street, such as schools, parks, community houses, senior housing, etc., which generate a substantial amount of pedestrian traffic.	>1 mile	1
		3/4 - 1 mile	2
		1/2 - 3/4 mile	3
		1/4 - 1/2 mile	4
		< 1/4 mile	5
Public Support	For DPW neighborhood surveys one additional point is given for every 5% of households supporting the proposed plan over 70%	75%-79%	1
		80%-84%	2
		85%-89%	3
		90%-95%	4
		>95%	5