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Troy, MI 48084
troymi.gov

CITY COUNCIL REPORT

Date: September 15, 2020

To: Mark F. Miller, City Manager

From: Robert J. Bruner, Assistant City Manager
Frank Nastasi, Police Chief
William J. Huotari, City Engineer

Subject: Speed Humps

The City of Troy does not have a formal speed hump process in place at this time as the Traffic Engineering Department was essentially eliminated as a standalone department back in 2008. The City utilizes consultants for traffic related concerns as needed to augment our traffic engineering services and works with the Troy Police Department Traffic Safety Unit on direct enforcement in areas where speeding is a concern.

The City currently uses the Road Commission for Oakland County (residential streets only) procedure that looks at 85th percentile speeds greater than or equal to 35 mph and traffic volumes in excess of 1,000 vehicles per day as the minimum for consideration for speed humps which is similar to the process used by the City of Farmington Hills. The City of Rochester Hills has lower thresholds for their process and has the highest number of speed humps or other traffic calming measures in place (see attached).

The City and most public agencies do not allow speed “bumps” on a public road. A speed “bump” is typically 4”-6” high by 1’ wide and used in a parking lot or area where speeds are already very low as a speed “bump” is very abrupt and can cause damage to a vehicle at normal roadway speeds. A speed “hump” is similar in height at 3” but wider at 14’ wide, so that they are not as abrupt and can be traversed at slower speeds more commensurate with local roads. A detail is attached showing the difference between a “bump” and a “hump”.

There is only one speed hump in the City and it is located on Walnut Hill, just north of Wattles and east of Adams. This was petitioned for and approved by City Council at the May 12, 2003 meeting as part of a Special Assessment District (SAD) gravel to asphalt paving project. The speed hump was included in the cost of the SAD paving project. Most traffic calming programs require residents in the project area to fund the physical measures that are placed.

If Council desires to pursue speed humps, we would need to develop minimum criteria for which a speed hump may be considered. These guidelines would need to establish or outline: approval requirements, support criteria, funding, maintenance responsibilities, removal requests, etc.

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ROAD COMMISSION for OAKLAND COUNTY BOARD OF COUNTY ROAD COMMISSIONERS OAKLAND COUNTY	**ROAD COMMISSION** OPERATING INSTRUCTION	EFFECTIVE DATE: DECEMBER 8, 2008	NUMBER: 12, REV # 1
		PREPARING ORGANIZATION: TRAFFIC SAFETY DEPARTMENT	SUPERSEDES NUMBER 12 DATED 11-1-2006

SUBJECT:

INSTALLATION OF SPEED HUMPS

I. PURPOSE:

To establish guidelines for the installation of speed humps on subdivision streets.

II. INFORMATION:

There have been an increasing number of instances where vehicular traffic utilizes subdivision streets, in order to bypass congested intersections, avoid gravel roads or take advantage of a short cut. In addition, this same traffic, as well as residents that reside within the subdivision, often travels at speeds that significantly exceed the residential speed limit.

The installation of speed humps is increasingly being used as a method to deter speeding and "cut through" traffic. Speed humps are raised pavement sections that are between 3 to 4 inches in height and approximately 14 feet in length. When designed properly and installed in warranted locations, speed humps have been proven to reduce vehicle speeds and/or "cut through" traffic on subdivision streets.

In order for speed humps to be warranted, the 85th percentile speed must be equal to or greater than 35 miles per hour. In addition, the following criteria should be considered:

1. Traffic volumes in excess of 1000 vehicles a day, which includes a minimum of 25% "cut through" traffic.
2. Acceptable vertical and horizontal curvature.
3. Pavement width less than or equal to 40 feet.

In order to ensure consistency for speed humps which are installed on subdivision streets under its jurisdiction, the Road Commission for Oakland County establishes the following procedure:

III. PROCEDURE:

Responsibility	Action
Traffic-Safety Department Staff	**1.** Upon receipt of a written request from the homeowners association or interested residents of the area, shall meet with representatives from the subdivision, the Township, and local law enforcement, for the purpose of discussing the traffic concerns, along with the various countermeasures available, including the requirements for the installation of speed humps.
Traffic-Safety Department Staff	**2.** If it is agreed that speed humps are a potential countermeasure of interest, shall conduct the necessary traffic studies to determine whether or not the traffic speeds, volumes and "cut through" traffic, meet the above criteria for the installation of speed humps.
Traffic-Safety Department Staff	**3.** Shall hold a follow-up meeting with the representatives from the previous meeting to discuss the results of the traffic studies and whether or not the speed humps are warranted. **Note:** If speed humps are warranted, the RCOC shall also provide cost estimates and proposed acceptable locations for the speed humps.
Traffic-Safety Department Staff	**4.** Shall inform the residents and the Township that to move forward with the installation of warranted speed humps, the following must be submitted to the Road Commission: **a.** A Petition agreeing to the installation, to be signed by at least 75% of the homeowners on the subject segment of street(s) with the proposed speed humps; and **b.** An appropriate Township Board Resolution supporting the installation of the speed humps.

Note: The "subject segment" of street(s) shall be the segment determined by the Traffic-Safety Department staff as being significantly impacted by the proposed speed humps.

Traffic-Safety Department Staff

5. Upon receipt of the above information, shall give the subdivision/homeowners authorization to proceed to have the speed humps designed by a consultant and constructed by a contractor, subject to review and approval by the RCOC Traffic-Safety and Permits & Environmental Concerns Departments, through the RCOC permit process.

Note: At its option, the RCOC may elect to construct the speed humps. In either event, the cost of installation (which includes signs and pavement markings as necessary) and, as appropriate, the removal of speed humps, will be at the subdivision's expense.

Traffic-Safety Department Staff

6. Future maintenance costs of the speed humps, including the pavement markings, will be the responsibility of the subdivision. The RCOC will be responsible for the maintenance of the associated signs.

Traffic-Safety Department Staff

7. Following installation, shall conduct follow-up traffic studies to determine the effectiveness of the speed humps.

Approved by: _____ 12/2/08
Managing Director Date

Safety Awareness For Everyone
Through Education, Enforcement and Engineering

INFORMATION BROCHURE

What is the Traffic SAFE-TE^3 Program?

Traffic SAFE-TE^3 is an acronym for "Safety Awareness for Everyone Through Education, Enforcement, and Engineering." The Farmington Hills Traffic SAFE-TE^3 Program was created to address neighborhood traffic safety concerns while enabling citizens and/or community groups to become actively involved in the improvement process. This program allows City staff and the community to work together to create safe and pleasant conditions in our residential areas for motorists, bicyclists, pedestrians and children.

What types of issues can the program address?

- Speeding
- Cut-through traffic
- Collisions
- Pedestrian safety
- Sight distance

How does the program work?

The program is divided into three phases that must occur in order.

Phase I - PROBLEM IDENTIFICATION/INFORMATIONAL MEETING

Phase I identifies the problem, provides for a complete explanation of the Traffic SAFE-TE^3 Program, gains the support of a Core Group of residents, and collects benchmark data in the form of speed studies or other traffic engineering information.

Residents with a traffic safety concern can contact the City. In return they receive a Program Information Brochure and a Traffic Information Survey Form. Information in the brochure directs the resident to discuss traffic concerns with neighbors and/or the neighborhood association. If there is interest, the City hosts an informational meeting to present the program.

From the informational meeting, a sub-group of residents or Core Group will be formed to work with the City to gather information. Speed studies will be performed at locations identified by the residents. In addition, traffic counts may be taken and other operational areas studied. All of the data gathering will be done in partnership; City employees and resident volunteers working together. This information, jointly collected, will establish baseline data from which Phase II and Phase III of the program will stem.

Phase II - EDUCATION AND ENFORCEMENT

Phase II is the development of an education and enforcement plan based on the specific findings of the field review. Past enforcement activities in the City have found that most violations of traffic ordinances within a residential area are the residents of that area. Therefore, much of the following activities will be directed towards neighbors and possibly friends.

EDUCATION

Currently, two educational programs are in use. **City staff and the Core Group will determine the extent to which each will be used.** They are:

1. **THE NEIGHBORHOOD TRAFFIC SAFETY CAMPAIGN**

   This involves the distribution of a brochure or letter describing the findings of the data collection, providing techniques that pedestrians and parents can use to create a safer neighborhood and encourage motorists to become better aware of their driving habits.

2. **USE OF THE SPEED MONITORING AWARENESS RADAR TRAILER**

   This program consists of a portable, unmanned trailer equipped with radar speed detection equipment. The unit obtains speeds of oncoming vehicles and displays them on a digital display board visible to the passing motorist. The intent is to show motorists their actual travel speed. This program can be combined with Police Department enforcement activity.

ENFORCEMENT

The enforcement plan includes the selective enforcement of specific traffic controls and vehicle movements by our Police Department. Following current practice, the Core Group would identify specific time periods and locations from the collected data and field review that the Police will target for strict traffic ordinance enforcement. (i.e. speeding, disobeying stop signs, improper parking, etc.)

After implementation of the education and enforcement measures, the effectiveness is monitored, re-measured, and re-evaluated. If the measures prove to be effective and the speeding situation is reduced, the Core Group will notify the neighborhood of their success and encourage the continuation of safe driving. If however, these measures prove ineffective, the location then qualifies for consideration of Phase III of the program.

Phase III – ENGINEERING

Phase III involves the installation of actual physical speed control devices in the roadway. Because the devices are designed to make it less comfortable for the motorist to speed, it is extremely important that these devices only be installed after exhausting the alternatives provided in Phase I and II. Installation is determined by traffic engineering analysis and four main factors:

1. Residential street must be functionally classified as a local roadway.

2. 85th percentile speeds of 35 mph or greater (the speed at which 85% of the traffic is traveling at or below).

3. Topography (i.e. hills, curves and intersections).

4. Presence of existing traffic controls (i.e. traffic signals, stop signs).

Proper engineering analysis and judgement must be included prior to installation of any physical devices. These devices can include, speed humps, traffic circles, slow points, entrance/exit barriers, pavement markings and traffic control signing.

Once the Core Group and City staff has determined the best traffic control plan, it is presented to residents at a community meeting. Input from the residents is incorporated into the plan. Neighborhood support is absolutely essential during the entire process, but especially if traffic control devices are to be installed. Before implementation, 75% support from residents on the segment of roadway being considered is required, through petitions. After petitions have been received and verified, the City Council will be notified of the recommended project. Funds can only be allocated based on acceptance by City Council, after review of budget limitations. Following this approval step, the device(s) will be designed and constructed.

How do we get started?

1. Identify traffic concerns in your neighborhood.

2. Discuss possible solutions with your neighbors and the neighborhood association.

3. Fill out the attached "Traffic Information Survey" Form and mail to the City's Engineering Division.

4. Attend the Informational Meeting to hear more about the Traffic SAFE-TE^3 Program.

5. Form a Core Group of residents who will be advocates for the safety improvements.

Let's begin...

We want to work with you and your neighbors to make your neighborhood streets safer. Please take the first step in achieving this by filling out the enclosed Traffic Information Survey providing us with your concerns and indicating what solutions you feel would be appropriate for your neighborhood.

City of Farmington Hills
TRAFFIC INFORMATION SURVEY

Contact Name: _____ Phone: _____

Address: _____ Date: _____

Neighborhood/Subdivision: _____

List names & phone numbers of interested neighbors:

_____

_____

_____

Location(s) of Concern:

_____

What concerns have you identified with the above location?

_____

_____

_____

Please identify the specific time periods that the traffic concern takes place
(For example form 4:00 p.m. to 6:00 p.m.) _____

_____

What solutions do you feel would address your concerns? (Check one or more)

__ Brush trimming/Corner clearing
__ Signing
__ Pavement markings
__ Police Enforcement
__ Speed reduction devices
__ Other

Thank you for taking the time to fill out the Traffic Information Survey. Once we receive this Survey, you will be contacted by City staff to establish a meeting date and location.

FOR OFFICE USE ONLY
Date Received: _____ Initial Meeting Date: _____

-City of Rochester Hills

SPEED HUMP REQUEST POLICY

Staff Evaluation – An engineering and safety evaluation for any speed hump request will be made to determine that the guidelines listed below are met. Since speed humps might have a wide ranging impact not only on the vehicles crossing them but also on the residents living on the immediate and nearby streets, their installation will be evaluated within the context of an overall neighborhood traffic management study. Speed hump requests will be handled in the order in which they are received.

Streets – Speed humps will be considered for installation only on residential, local, and collector streets. A local or collector street is defined as one whose abutting land use is at least 85% residential when considered in segments of one-quarter mile.

Speed – Speed humps will be considered on local or collector streets where the posted speed does not exceed 30 mph. Speed humps may be considered when speeds on these streets exceed the posted speed by 6 mph or more and by at least 85% of those vehicles using the street.

If the speed requirements are not met at the time of the initial study, a second study can be obtained 6 months later to determine if the street meets this qualification.

Traffic Volumes – Each individual street location should be evaluated to justify installing speed humps. Streets with volumes less than 400 vehicles per day will not be considered for speed humps. However, if a study identifies a cut-through problem, speed humps may be installed regardless of speeds or volumes.

Impacts on City Services - Prior to approving locations for speed hump installations, staff will review the proposed locations with respect to the potential impact on City services. If the proposed installation of speed humps has a significant impact, the request for installation of speed humps may be denied.

Resident Surveys - City staff will determine a petition area and coordinate petition circulation in order to determine support for speed hump installation. Where proposed speed hump locations are determined, 100% of signatures of the owners of adjacent properties are required. The subdivision homeowner's association is required to submit a board approved resolution indicating support for the installation of speed humps.

Speed Hump Installation – After obtaining all studies, approvals, and appropriate neighborhood surveys, the City will arrange to have its contractor install the speed humps. Along local residential streets, the neighborhood

homeowner's association would be required to pay for 100% of the installation cost. Along major collector residential streets, the neighborhood homeowner's association would be required to pay for 50% of the installation cost. If residents choose to pay the full cost, it is with the understanding that speed humps will be installed under City contract meeting City requirements. Appropriate signs and striping will also be installed by the City.

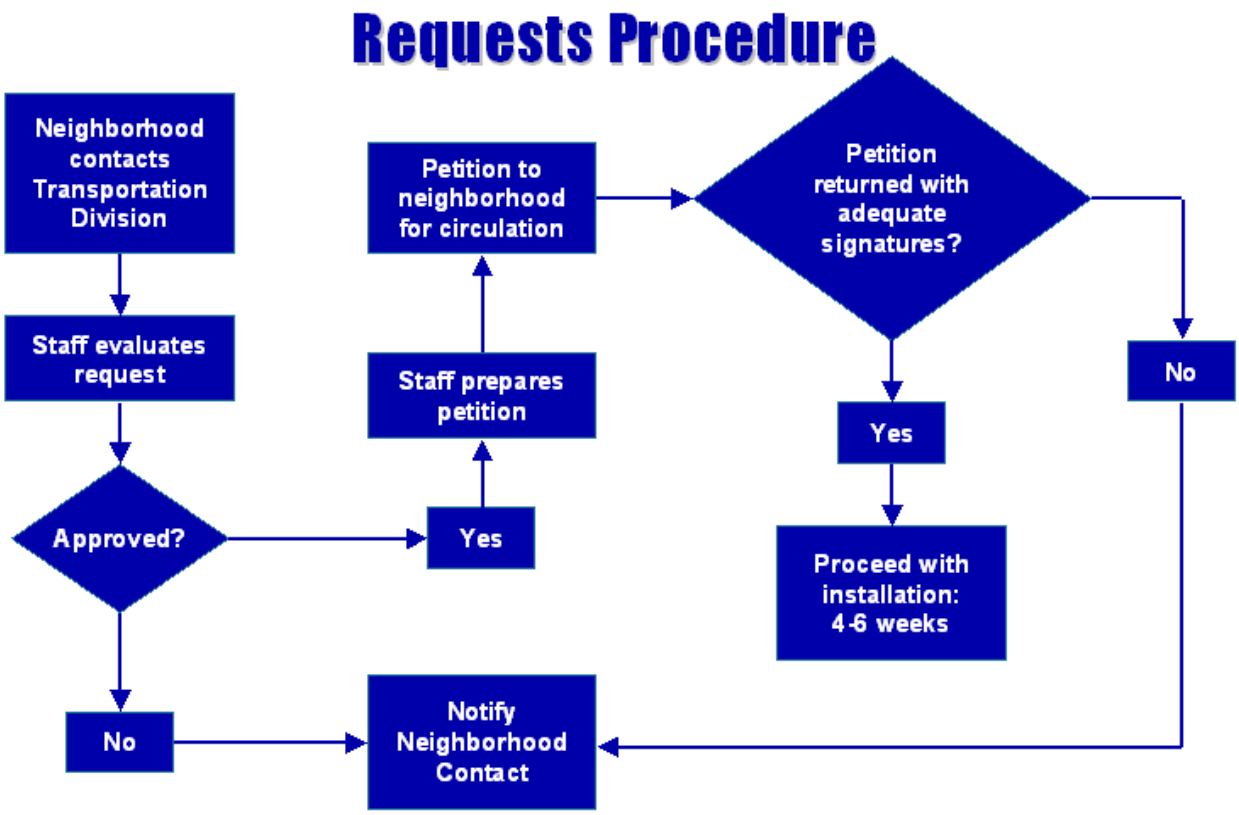
Speed Hump Removal – Speed humps may be removed at any time due to lack of public support. All petitioners originally requesting the installation of speed humps will be given the opportunity to comment on the removal of speed humps. This would occur after considerable time (approx. 1 year) has passed to adequately evaluate the impact and the performance of the speed humps. In order to have a speed hump removed, 100% support from those properties directly adjacent to proposed speed humps along with a homeowner association board resolution. The neighborhood would be required to pay for 100% of the removal installation cost.

SPEED HUMP REQUEST PROCEDURE

Any questions or requests regarding the Speed Hump Program can be addressed to City of Rochester Hills Department of Public Services at (248) 656-4640 or e-mail to: ***www.dps@rochesterhills.org***

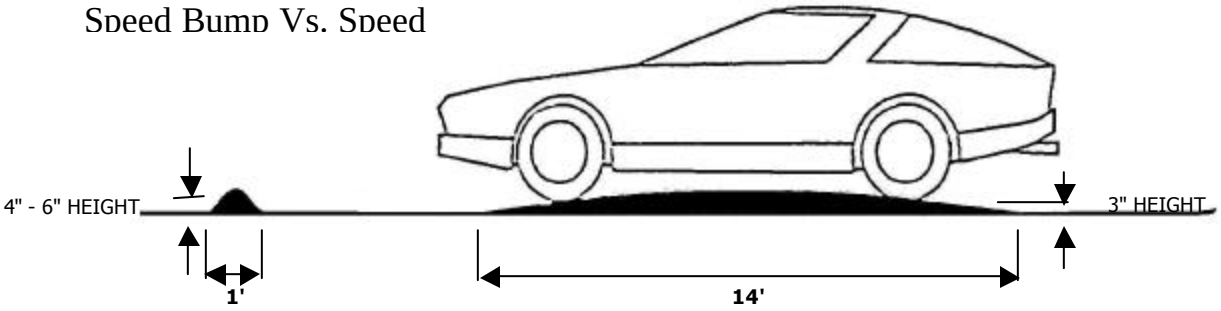
1. If it has been determined that criteria set forth in the attached policy has been met for the potential speed hump installation, then a petition will be sent to a neighborhood representative who will coordinate obtaining the necessary signatures. The Transportation Division will provide a petition with a list of names and addresses of affected homeowners or renters.
2. After appropriate signatures have been obtained and returned to the City, one of the following actions will be taken:
    a. If the necessary signatures are obtained for the installation of speed humps, then the City will proceed with the installation of speed humps per City requirements;
    b. If the necessary signatures for the installation of speed humps are not obtained, then no further action will be taken and no speed humps will be installed.
3. Whether the speed hump installation has been denied or approved, each neighborhood will be informed as to the outcome resulting from the signatures obtained on the petition.
4. When speed humps are approved, they are generally installed under the City's next contractor road project in order to achieve economies of scale and reduce construction costs.

SPEED HUMP REQUEST FLOWCHART

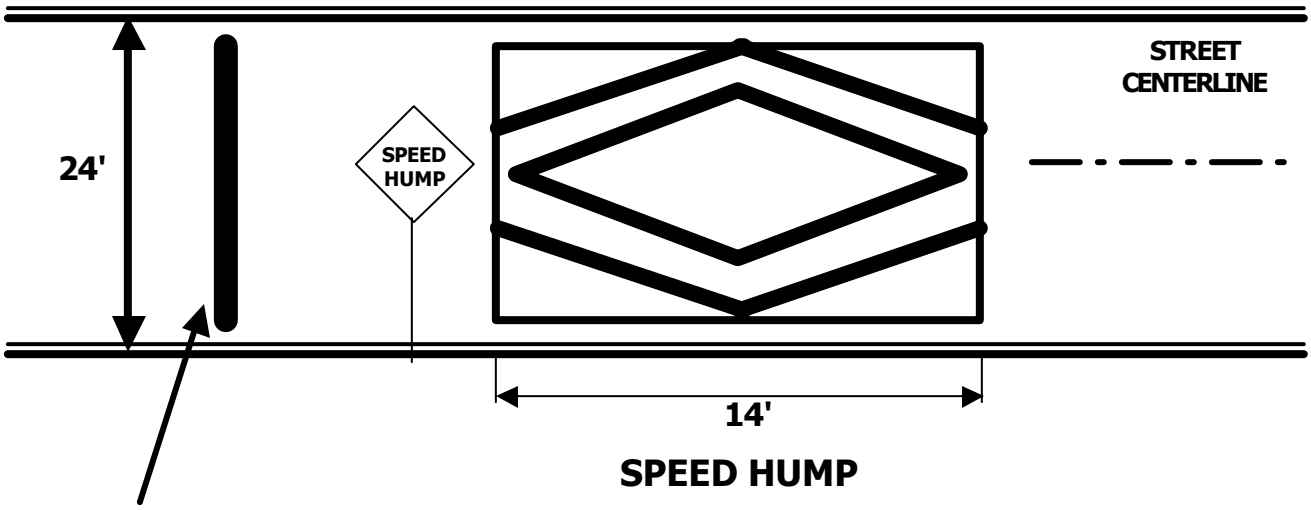


City of Troy
Speed Hump

Speed Bump Vs. Speed



SPEED BUMP **SPEED HUMP**



SPEED HUMP

SPEED BUMP
(Parking Lots etc.)