



# Agenda Report

May 23, 2011

**TO:** Honorable Mayor and City Council  
**FROM:** Department of Transportation  
**SUBJECT: AMENDMENTS TO THE CURRENT SPEED HUMP POLICIES AND PROCEDURES**

## **RECOMMENDATION:**

1. Find that the amendments to the current speed hump policies and procedures are exempt from the California Environmental Quality Act ("CEQA") pursuant to State CEQA Guidelines Section 15301, Existing Facilities;
2. Approve the amendments to the current Speed Hump Policies and Procedures as shown on the attachment. The amendments revise the minimum street segment length requirement in the policy from 1,200 feet to 600 feet.

## **TRANSPORTATION ADVISORY COMMISSION RECOMMENDATION:**

The proposed revisions to the current Speed Hump Policies and Procedures were presented to the Transportation Advisory Commission (TAC) at its regular meeting of April 28, 2011. TAC supported staff's recommendation to modify the minimum street length requirement in the policy from 1,200 feet to 600 feet. During its discussions, TAC also suggested that staff consider a pool of traffic calming measures and alternatives to address speeding issues on a street rather than merely focusing on speed hump installations. TAC also suggested considering other aspects of the speed hump policy in the context of the General Plan Mobility Element Update which is currently underway.

## **BACKGROUND:**

On March 21, 2011, the City Council requested that the following three elements of the current speed hump policy be reviewed for potential revision in light of current trends: 1) the minimum street segment length of 1,200 feet; 2) the lower and upper volume thresholds of 1,000 and 4,000 vehicles per day, respectively; and 3) the street classification requirement that restricts speed humps to only local streets.

In the early 1980's, the City of Pasadena considered speed humps as traffic calming devices for residential streets. A comprehensive study of speed humps determined that they were appropriate devices for reducing traffic speed on certain streets when properly installed. The City developed policies and procedures for the installation of speed humps based on accepted engineering designs, standard guidelines, and practice of communities in California. The policies and procedures were adopted by the City Council in 1984.

In 2004, the policies and procedures for the installation of speed humps were amended based on the speed hump policy criteria collected by staff from 15 jurisdictions throughout California and reviewed thoroughly by members of the Transportation Advisory Commission. The review also included an analysis of the Institute of Transportation Engineers (ITE) 1997 Guidelines for the Installation of Speed Humps.

### **ASSESSMENT OF ISSUES:**

ITE has recently completed a three-year process to update the 1997 Guidelines and now has a 2011 version of the document in production. The criteria in the 2011 ITE Guidelines for the Design and Application of Speed Humps and Speed Hump Tables incorporate a broad set of measured responses to speed humps and, as a result, offer more refined guidance for speed hump placement than did the 1997 document.

#### **Segment Length**

The initial speed hump policies adopted in 1984 only prohibited speed hump installations on cul-de-sac streets of less than 800 feet. In 2004, a street segment minimum length criterion of 1,200 feet was adopted. The reason behind requiring this minimum distance was because it was recommended that speed humps not be installed on isolated blocks along a continuous street. Hence, the limit adopted in 2004 incorporates a distance equivalent to at least two blocks (in the residential parts of the City of Pasadena, block length varies widely but averages 600 feet). The 1,200 feet distance is also consistent with the criteria in the City's Residential Street Stop Sign Policy.

Based on the 2011 ITE Guidelines, the first speed hump in a series is normally located where it cannot be approached at a high speed from either direction. It is typically installed within approximately 200 feet of a stop sign. The spacing between successive speed humps depends on the desired (85th - percentile) operating speed (which is the speed that is used to set speed limits in California). For local streets where the desired posted speed is 25 mph, studies of in-place speed humps have shown that spacing the speed humps approximately 260 feet apart generally will result in an 85th - percentile operating speed of 25 mph on a street segment. Under these criteria, it would be possible to install two speed humps in a block that is nominally 600 feet long. The 2011 ITE Guidelines recommend that street segments 600 to 1,000 feet in length should have a two-hump configuration.

In order to close certain gaps along local street corridors that do not have speed humps, modifying the minimum segment length from 1,200 feet to 600 feet would be a feasible option because most residential blocks within the city are approximately 600 feet or longer. Under the most recent ITE Guidelines, the recommended spacing of speed humps would allow for a 600 feet long street segment to accommodate two speed humps. This revision in the current policies and procedures would incorporate street segments that have speeding issues, meet all other criteria, and could benefit from the installation of speed humps.

### Traffic Volume

The lower and upper volume threshold in the initial 1984 speed hump policy were 1,000 and 3,000 vehicles per day; respectively. This was consistent with the previous ITE Guidelines that recommended speed humps should only be installed on streets with an average daily traffic volume of 3,000 vehicles or less. In 2004, at the recommendation of TAC, the upper volume threshold was increased to 4,000 vehicles per day to account for the nominal growth in traffic volumes on residential streets as a result of regional growth trends.

The lower volume threshold of 1,000 vehicles per day has been unchanged since the original speed hump policy was adopted in 1984. The threshold was not lowered because staff wanted to maintain the application of speed humps to streets that are impacted by traffic volumes beyond what might be expected to be generated by the immediate residents on a particular local residential street.

At this time, staff recommends maintaining the current lower and upper volume thresholds of 1,000 and 4,000 vehicles per day, respectively. The current thresholds are also consistent with engineering practices of surrounding communities.

### Street Classification

Speed humps are only considered for installation on streets classified as local residential in the City's General Plan. The current policy prohibits installation of speed humps on collectors and arterials because these streets serve regional mobility needs and emergency access.

The ITE Guidelines for the Design and Application of Speed Humps and Speed Tables recommend that, "Speed humps/tables should not be installed on streets that are defined or used as primary or routine emergency vehicles access routes unless it is considered acceptable to the emergency services."

Staff recognizes that certain streets in the City mirror the design of local residential streets but are classified as and function as collectors or arterials. These streets do not qualify for speed humps based on the street classification. These same streets are

also subject to more stringent criteria for setting speed limits than are local residential streets. Absent a change in the street classification policy, staff recommends retaining the restrictions of speed humps on arterial and collector streets.

Staff is proposing, as part of the current update of the General Plan Mobility Element, an alternate system of street classification that is based on both context and function that would reorder arterials and collectors into a larger number of street types, some of which could be appropriate for speed humps. Under the proposed Context-Based Street Classification System, streets classified as Connector-Neighborhood and below would likely satisfy the conditions with regard to not being primary emergency routes or regional roadways and could be considered for the installation of speed humps if other criteria in the speed hump policy are met.

Should the proposed street classification system be adopted as part of the Mobility Element Update, staff would recommend revisiting the street classification criteria for speed humps.

#### **COUNCIL POLICY CONSIDERATION:**

The recommended amendments to the current Speed Hump Policies and Procedures are consistent with the goals of the Mobility Element of the General Plan to address traffic safety within residential neighborhoods by implementing measures to protect neighborhoods from traffic intrusion.

#### **ENVIRONMENTAL ANALYSIS:**

The proposed amendments to the current Speed Hump Policies and Procedures has been determined to be exempt from the California Environmental Quality Act (CEQA) per Section 15301, Existing Facilities. This exemption consists of the minor repair, maintenance, operation, permitting etc. of existing facilities (which includes streets and highways) where there is negligible or no expansion of the use. The recommended project consists of policy changes to an existing program and the changes will not expand the qualifying streets.

#### **FISCAL IMPACT:**

Every year, the city has installed approximately 10 speed humps. Staff anticipates an increase in the amount of speed hump installation per year if the minimum segment length criterion is lowered to 600 feet because it would enable more street segments in the City to be qualified. Each speed hump costs approximately \$2,000 to install. Speed humps are generally restriped every two years. The cost for striping is approximately \$200 per hump.

Currently, all speed hump installations are funded through the Neighborhood Traffic Management Program (NTMP) in the Capital Improvement Program (Project 75903).

Any increase in the number of speed hump installations would have a negative fiscal impact on funds available to implement other NTMP projects.

Should there be circumstances where the requests of speed humps exceed the funds available, the Department of Transportation would rank the requests in order of priority based on factors previously adopted by the City Council that include speeding, collisions, presence of schools or parks, etc. and submit these recommendations to the City Council for approval.

Respectfully submitted,



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Approved by:



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MICHAEL J. BECK  
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Attachment:

Current Speed Hump Policies and Procedures with Recommended Revisions

**POLICIES FOR THE INSTALLATION OF SPEED HUMPS**  
**(Amended July 19, 2004 May 23, 2011)**

1. Speed humps are an appropriate mechanism for reducing speeds on certain streets in Pasadena when properly installed under the right circumstances.
2. Speed humps can be considered for installation when the benefits normally derived by residents from a local residential street are significantly diminished by the speed of traffic (even though there have been few or no reported accidents) as evidenced by a substantial majority of the abutting residents signing a petition for the installation of speed humps.
3. Speed humps shall only be used on local residential streets (i.e., streets where the primary function is to provide access to abutting residents). The majority of street mileage in Pasadena can clearly be classified as local residential streets. Speed humps will not be considered for streets which are classified as collector streets or higher in the City's General Plan or which are determined to provide a transportation service to the community beyond that of simply providing access to the immediately abutting residents. However, it is not the intent of this policy to exclude the de-emphasized streets from speed hump considerations. Experience has shown that the average motorist reduces speed to approximately 16 MPH to traverse a 3-inch speed hump. It would not be realistic to expect motorists on streets intended to serve more than just abutting residents to reduce speeds to 16 MPH every 300 feet or so. Such installations would inevitably lead to extreme driver frustration and substantial negative public reaction to the concept of using speed humps for speed control, even at locations where they are clearly appropriate. Installation of speed humps on streets other than local residential streets could have potentially severe traffic safety consequences, almost certainly affect emergency services and other service delivery activities, and likely create the diversion of large amounts of through traffic onto local residential streets which were not intended for that purpose.
4. Speed humps will be considered on streets where the traffic volumes in both directions are at least 1,000 vehicles per day and no more than 4,000 vehicles per day.
5. Speed humps should be installed on logical segments of local residential streets. ~~They will not normally be installed in isolated blocks along a continuous street or on relatively short cul-de-sac streets.~~ Speed humps should not be installed on street segment(s) less than 1,200 600 feet, or where traffic signals or stop signs exist less than 1,200 600 feet apart along the street segment(s). ~~This distance is consistent with the criteria in the City's Residential Stop Sign Policy adopted by the City Council, and in most cases would typically cover only a two-block street segment in the City.~~ Cul-de-sac streets longer than 1,200 600 feet may qualify for speed humps. Logical segments are considered to be segments between arterial streets or between natural discontinuities such as jogs in the street. The cost of installing speed humps on relatively short cul-de-sac streets cannot normally be justified.
6. A substantial majority (67%) of residents on logical continuous segments of a local residential street must support the installation of speed humps.
7. Streets eligible for the installation of speed humps shall have a speed limit of 25 MPH as determined in accordance with State Law, and shall have an 85% speed of greater than 33 MPH. The need to reduce speed substantially at speed humps would not make these devices appropriate for streets posted higher than 25 MPH because of the severe speed differential such installation would create along the street. Severe differentials between the speeds of vehicles on a street are known to contribute to traffic collisions

**POLICIES FOR THE INSTALLATION OF SPEED HUMPS  
(Continued)**

8. The street shall be no more than one lane in each direction.
9. The street should not be a truck route or a transit route.
10. The street should not have grades greater than 5%. On hilly/rolling streets, the eligible segment of the street shall meet the minimum distance requirements.
11. Speed humps will only be considered for installation on local residential streets determined by the Department of Transportation to have adequate vertical and horizontal alignment and sight distances to safely accommodate the installation of speed humps. Speed humps should not be installed on streets with horizontal curves with less than 300 feet centerline radius, and on streets with vertical curves with less than minimum safe stopping sight distance.
12. The street should not be an important access route for emergency vehicles. Factors to be considered are:
  - a. Whether the street is a primary route for emergency vehicles;
  - b. Whether the installation of speed humps could cause a significant delay in the response to emergencies.
13. Speed humps should not be installed on streets where a significant portion of the traffic will be diverted to nearby residential or local streets.
14. Speed humps should generally be avoided where the drainage gutter or flow of water is in the center of the roadway. Drainage and hydraulic impacts should be carefully evaluated on a case-by-case basis for such streets.
15. Speed humps may be considered in residential alleys on a case-by-case basis based on all other criteria and engineering review.
16. Speed hump petitions not returned within 90 days of the application will lose their priority status.
17. Additions, alterations, or removal of any or all speed humps may occur at any time.
18. The representative(s) of a street not meeting the minimum criteria established in the above policies will not be able to appeal the decision to the City Council.
19. When a neighborhood has gone thru a Neighborhood Traffic Management Plan (NTMP) process, the City shall not entertain any other NTMP measures including speed humps, until all of the recommendations from the NTMP process have been fully implemented, measured or evaluated.

***Adopted by Pasadena Board of Directors, January 10, 1984.  
Amended by Pasadena Board of Directors, November 12, 1985.  
Amended by Pasadena City Council, July 19, 2004  
Amended by Pasadena City Council, May 23, 2011***

**PROCEDURES FOR THE INSTALLATION OF SPEED HUMPS**  
**(Amended July 19, 2004)**

1. The City Council adopted policies and procedures for the installation of speed humps will be made available to all interested parties.
2. A representative of a local residential street who believes the residents on their street will support the installation of speed humps will submit a request in writing to the Department of Transportation which will consult with the Police and Fire Departments in making a determination of whether the street in question is eligible for further consideration for the installation of speed humps (i.e., the street is consistent with the City Council's policies for the installation of speed humps).

Upon determination that a street is not eligible for speed humps, the representative(s) of the street will be notified in writing giving the reason why the street is not eligible.

3. Upon determination that a street is eligible for further consideration, the representative of the street will be advised to submit a petition (forms provided by the City) from the abutting residents indicating that a clear majority (67% or more) support the installation of speed humps on their street. The petition forms provided by the City will state: If there is subsequently a desire by residents to remove the speed humps, the humps will only be considered for removal after receipt of a petition from a substantial majority (67% or more) asking for the removal along with sufficient funds for the removal up to \$700 per hump.

The sponsor of the petition is required to contact every resident of the abutting properties on the subject street. If a resident is against the speed humps, the word "OPPOSED" will be noted on the petition signature space. If the sponsor is unable to contact a resident, "NO CONTACT" will be noted on the petition signature space with the days and times that contact was attempted. It is required that the sponsor makes at least two attempts on separate days to contact a resident.

Any petitions submitted prior to eligibility determination by City staff will not be processed ahead of schedule and shall be subject to rejection if all required information on the installation of speed humps is not included thereon.

4. To be considered for the program, petitions must be received by the Department of Transportation within 90 days from the date of the application.

Upon verification of the petition, staff will make every reasonable effort to notify the surrounding area of the proposal for speed humps on a particular street. Such notification may include information in City publications (IN FOCUS), and neighborhood newsletters, when available, and in some instances, special signs posted on the street. If there is substantial opposition to the installation of speed humps by people who travel the street on a regular basis, the Director of Transportation will consult with the various parties and attempt to reach consensus. If agreement cannot be reached on a particular street, the matter will be referred to the City Council for final determination.

**PROCEDURES FOR THE INSTALLATION OF SPEED HUMPS  
(Continued)**

5. Upon verification of the petition, the Department of Transportation staff will make traffic speed and volume measurements and review the traffic collision history for the street in question. In addition, staff will submit the list of requests to the Police and Fire Departments for their comments.
6. In the event the number of requests for speed humps exceeds the funds available, the Department of Transportation will rank the requests in a recommended order of priority and submit these recommendations to the City Council for approval. A comprehensive priority system to be developed by the Director of Transportation to consider additional factors including but not limited to: speeding, collisions, presence of schools or parks, bicycle routes, sidewalks, etc.
7. The physical installation of speed humps and the associated traffic control devices shall conform to design standards established by the Department of Transportation and Department of Public Works.

***Adopted by Pasadena Board of Directors, January 10, 1984.  
Amended by Pasadena Board of Directors, March 30, 1987.  
Amended by Pasadena Board of Directors, February 14, 1989.  
Amended by Pasadena City Council, July 19, 2004.***