



## **Staff Report**

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### RESOLUTION AMENDING THE NEIGHBORHOOD TRAFFIC CALMING PROGRAM

Honorable Mayor and Council Members:

#### **Summary**

Staff requests that City Council approve an amendment to the Neighborhood Traffic Calming Program to reflect latest guidelines for design and speed hump installation.

#### **Background**

In April 1996 by Resolution 7832, the City Council adopted "Policy and Standard Detail Drawings for the Installation of Speed Humps on Streets within the City of Belmont". The recommendations presented by staff at the time were based on the "Guidelines for the Design and Application of Speed Humps" developed by the Institute of Transportation Engineers (ITE) in 1993.

In July 2000 by Resolution 8803, the City Council has adopted a Neighborhood Traffic Calming Program that summarized various measures to enhance the safety and livability of Belmont's residential and collector streets. The Neighborhood Traffic Calming Program included various elements of traffic calming measures, as well as the Speed Hump Policy adopted in 1996.

The Institute of Transportation Engineers in August 2007, developed the "Guidelines for the Design and Application of Speed Humps" that provided updated criteria and recommendations for speed hump installation. Given increasing number of requests for speed hump installation from Belmont residents, City staff feels that the existing Speed Hump Installation Policy which is part of the Neighborhood Traffic Calming Program, be updated to reflect the latest standards.

#### **Discussion**

The amendment to the Speed Hump Installation Policy is based on the "Guidelines for the Design and Application of Speed Humps" issued by the Institute of Transportation Engineers. The guidelines for speed hump installation will be updated to reflect the following changes:

- The street grade of the street section to receive speed humps must be less than 8% (previously 5%).
- Speed humps should not be installed within 250 feet of a traffic signal or within 20 feet of the closest perpendicular intersection of residential local streets. Speed humps should be placed at least 100 feet from the closest perpendicular intersection of residential collector streets.

The amendment also includes speed cushions and speed lumps as modified speed humps designed to accommodate emergency vehicles to be used on streets that are designated as primary emergency response routes.

**General Plan/Vision Statement**

No impact.

**Fiscal Impact**

No fiscal impact.

**Public Contact**

The Council agenda was posted.

**Recommendation**

Staff recommends that the City Council approve an amendment to the Neighborhood Traffic Calming Program.

**Alternatives**

1. Take no action.
2. Refer back to staff for further information.
3. Deny approval.

**Attachments**

- A. Resolution
- B. Amendment to the Neighborhood Traffic Calming Program

Respectfully submitted,

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Bozhena Palatnik, P.E.  
Associate Civil Engineer

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Raymond E. Davis III, PE PTOE  
Director of Public Works

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Jack R. Crist  
City Manager

**Staff Contact:**

Raymond E. Davis, Public Works Director  
(650) 595-7459  
rdavis@belmont.gov

**RESOLUTION NO. \_\_\_\_\_**

**RESOLUTION OF THE CITY COUNCIL OF THE CITY OF BELMONT  
AMENDING THE NEIGHBORHOOD TRAFFIC CALMING PROGRAM**

**WHEREAS**, in April 1996 by Resolution 7832, the City Council adopted “Policy and Standard Detail Drawings for the Installation of Speed Humps on streets within the City of Belmont” based on the “Guidelines for the Design and Application of Speed Humps” developed by the Institute of Transportation Engineers (ITE); and,

**WHEREAS**, in July 2000 by Resolution 8803, the City Council adopted a Neighborhood Traffic Calming Program that summarized various measures to enhance the safety and livability of Belmont’s residential and collector streets; and,

**WHEREAS**, in August 2007, the Institute of Transportation Engineers developed the “Guidelines for the Design and Application of Speed Humps” that provide updated criteria and recommendations for the speed hump installation; and,

**WHEREAS**, staff recommends that the City Council approve an amendment to the Neighborhood Traffic Calming Program to reflect the latest standards for the speed hump installation.

**NOW, THEREFORE, BE IT RESOLVED** that the City Council of the City of Belmont approves amendment to the Neighborhood Traffic Calming Program.

\* \* \* \* \*

I hereby certify that the foregoing Resolution was duly and regularly passed and adopted by the City Council of the City of Belmont at a regular meeting thereof held on September 25, 2007 by the following vote:

AYES, COUNCILMEMBERS: \_\_\_\_\_

NOES, COUNCILMEMBERS: \_\_\_\_\_

ABSTAIN, COUNCILMEMBERS: \_\_\_\_\_

ABSENT, COUNCILMEMBERS: \_\_\_\_\_

\_\_\_\_\_  
CLERK of the City of Belmont

APPROVED:

\_\_\_\_\_  
MAYOR of the City of Belmont

# AMENDMENT TO THE NEIGHBORHOOD TRAFFIC CALMING PROGRAM SPEED HUMPS INSTALLATION POLICY

## BACKGROUND:

The Traffic Safety Committee (TSC) represented by staff from Department of Public Works, Police Department and South County Fire Authority receives numerous complaints about speeding on public streets. These complaints are usually accompanied by requests for stop signs and/or speed bumps/humps. The Traffic Safety Committee analyzes each request for stop signs and more often than not, the criteria set forth by the State of California are not satisfied. Studies have shown that stop signs do not reduce speeds between intersections. In fact, the State of California strongly recommends against the use of stop signs to control speed and urges their use only as a tool to assign right-of-way at intersections. The interest in speed humps has increased in the past two years due to their increased use by agencies in the State and the exposure given these speed humps by the media. The overwhelming majority of requests involve residential streets. The City of Belmont does not currently have a policy which addresses the use and installation of speed humps.

When complaints of speeding are reported on a street, PTSC attempts to address the issue by conventional means (i.e., additional signing and/or roadway striping). If these methods fail, or if these methods cannot be applied, selective speed enforcement is requested and conducted by the Belmont Police Department. More often than not, citizens desire a higher level of enforcement than is practical or feasible, especially for minor streets.

At this time, only a handful of cities in the State employ speed humps. In 1983, the California State Traffic Control Devices Committee classified speed humps as roadway design features. The significance of this finding is that the State is not obligated to establish standards for design features, whereas they must for all official traffic control devices. The State's action essentially allows each local jurisdiction to establish its own standards if the jurisdiction decides to use speed humps. However, since the State of California Department of Transportation (Caltrans) does not recognize speed humps as approved traffic control devices, many cities have been reluctant to proceed with development of a speed hump program. The potential for tort litigation, unknown effects on emergency vehicle response, and lack of State standards have contributed to this reluctance. Since Caltrans has yet to use the humps, no State standard has been established. Therefore, agencies that do initiate a speed hump program have resorted to creating their own designs and criteria. ~~In 1993, the Institute of Transportation Engineers (ITE) developed the "Guidelines for the Design and Application of Speed Humps" as a recommended practice to assist state and local agencies in developing their own speed hump programs.~~ **In 2007, the Institute of Transportation Engineers (ITE) developed the "Guidelines for the Design and Application of Speed Humps" as recommended practice to assist state and local agencies in developing their own speed hump programs.** The majority of agencies who currently have speed hump policies have referred to these guidelines and employ many of their recommendations. This report has also been used as a reference by staff for their recommendation.

The ITE report and experience of other agencies determined that when properly designed and

applied, speed humps have been found to be safe, effective devices when all other means have failed. It should be stressed that speed humps should only be considered when more conventional methods have failed to reduce speeds and increase safety (i.e., arterial and collector street improvements, enforcement, etc.).

### Speed Humps vs. Speed Bumps

Speed humps differ from speed bumps as shown in Exhibit 1. *Speed humps*, sometimes called "pavement undulations," are suitable for streets and are typically 12 feet long and 3 inches high. Humps create a gentle vehicle rocking motion that may cause some driver discomfort, which results in drivers slowing to 15 MPH at the hump. If traversed at higher speeds, humps cause a jarring effect on the vehicle and its occupants. The primary purpose of speed humps is to lower speeds on residential streets.

*Speed bumps*, on the other hand, are commonly found in parking lots on private property and are typically 1 foot long and 3 to 6 inches high. Bumps cause significant discomfort at typical residential speeds, and generally result in drivers slowing to 5 MPH or less at the bump. At speeds above 25 mph, bumps have less effect on vehicles with non-rigid vehicle suspensions which absorb the impact before the rest of the vehicle can react. For vehicles with rigid suspensions, such as trucks, buses, emergency vehicles (fire engines, ambulances, police cars), motorcycles, bicycles, etc., the risk of damage and/or injury increases with bumps.

Speed humps are intended to be driven over comfortably, at relatively low speeds, while causing increasingly more discomfort to the driver at higher speeds. The effectiveness of speed hump installations should not be gauged solely on how well they enforce a desired speed profile on a particular street. Experience of jurisdictions throughout the state suggests that a number of factors should be considered:

1. A single hump will only act as a point speed control. To reduce speeds along an extended section of street, a series of humps is needed.
2. Speed humps often divert traffic to other streets, especially in those situations where a significant amount of traffic is using the street as a shortcut, detour, or overflow from a congested collector or arterial roadway. Traffic volumes are affected by the number and spacing of humps and the availability of alternative routes.
3. Speed and volume modifications caused by humps tend to remain constant over time.
4. Large trucks, buses and emergency vehicles must pass over the humps at relatively low speeds or significant jolts to the vehicle and its occupants or cargo might be experienced.
5. Traffic noise generally decreases with fewer vehicles and lower speeds, but noise can increase at the humps, particularly if a significant number of trucks use the street.

6. Traffic speeds are decreased at the hump and between properly spaced successive humps. Speeds of the fastest drivers are affected as well as those of the average drivers. The speed

distribution generally narrows with the greatest effect on higher vehicle speeds.

7. Adequate signing and marking of each speed hump is essential to warn drivers of speed hump presence and guide their subsequent action.
8. A need to slow for speed humps tends to have a negative impact on air quality and energy consumption, assuming traffic volumes remain constant. For comparison purposes, this impact is typically less than the effects of stop sign installation.
9. Wear and tear to brakes and suspensions increase somewhat since vehicles must slow down and ride over speed humps.
10. Speed humps are safe for vehicles when properly designed and installed at appropriate locations. In fact, accident experience generally remains stable or decreases because of reduced speeds and volume, thereby improving the inherent safety of the particular street or residential area. The humps have little impact on bicycles and skateboards.

### **Speed Cushions and Speed Lumps**

**Speed cushions and speed lumps are modified speed humps designed to accommodate emergency vehicles. Speed cushions and speed lumps have similar dimensions (3 to 3.5 in.) high and 12 to 14 ft. long. However, the hump is divided into two or more sections across the roadway width. The sections are separated by a flat surface set at the track width of emergency vehicles. This permits emergency vehicles to travel through the cushion or lump without discomfort. Other vehicles, such as passenger vehicles with smaller track widths, must go over the humps with at least one wheel.**

#### **Design and Maintenance:**

The proposed speed hump design is the most common design and has been found to be effective by other agencies. Each hump would be of a parabolic shape 3 inches high and 12 feet long (See Exhibits 1 and 7), constructed the width of the roadway. Humps should not be located within 250 feet of the nearest intersection, stop sign, or traffic signal. Experience shows that spacing between humps of 275 feet allows desired speeds to be maintained and driver frustration minimized. Raised vertical face curb and gutter should be present on both sides of the street to allow for proper drainage, and to discourage drivers from avoiding the humps by driving to the side of them.

For functional purposes, humps should not be installed over manholes, drainage structures, or other utility access points, and should not be installed within 10 feet of any driveway or within 25 feet of any fire hydrant. To optimize visibility, humps should only be installed at locations where they are visible from at least 200 feet from each approach and, if possible, near street lights. To reduce the impact of signage, humps should be installed along property lines where possible and out of direct view of adjacent residents' windows whenever possible.

Warning signs reading "Bumps Ahead" should be placed up to 250 feet in advance of the first hump in each direction, while "Bump" pavement markings and warning signs reading "Bump" and "15 MPH" should be placed within 50 feet of each hump. Warning signs referring to "bump" and/or "bumps" are recommended and deemed appropriate since state standard signs are available

with such wording. These signs are familiar to motorists, and according to the Caltrans Traffic Manual, "are used to give warning of a rise in the roadway that is sufficiently abrupt to cause considerable discomfort to motorists, cause a shifting in cargo, or to deflect a vehicle from its course at normal driving speeds." Using signs such as "undulations" or "humps" may confuse drivers. Markings on each hump should consist of 6-inch white zigzagged lines along the length of the hump (see Exhibit 6). Signing and marking the humps in this manner will assure adequate warning for approaching drivers.

Based on information gathered from other agencies, it is anticipated that maintenance for speed humps will be minimal if installed into the pavement rather than on top of it. Routine maintenance may involve no more than what is required of standard street surfaces (i.e., repainting, pavement markings, patching). Furthermore, none of the agencies contacted reported problems with street sweeping, parking, or drainage. When possible, speed hump installation should be coordinated with overlay projects to minimize costs.

Guidelines, Petition, Criteria and Priority List:

Since speed humps will likely have adverse effects on wider, high speed, high volume streets, installation of humps should be restricted to only local/residential streets with one lane in each direction and a posted or prima facie speed limit of 25 mph or less. Excessive speeding should be evidenced by a speed survey which shows that 15% or more of the traffic travels in excess of 32 mph. Only streets with traffic volumes between 500 and 4000 vehicles per day, and an uninterrupted length of 750 feet, should be eligible for speed humps. For streets in industrial areas, along established truck routes, along transit routes, or along emergency vehicle routes, speed humps should not be considered due to the possible delays which may be created. For safety purposes, only those sections of streets with grades less than ~~5%~~ **8%** and centerline radii greater than 300 feet should be analyzed for use of speed humps.

It is also proposed that if staff determines that installation of speed humps will create diversion of a significant amount of traffic to adjacent streets, humps should not be installed unless speed humps are also installed on the adjacent streets.

To enable staff to confirm that the majority of residents are in concurrence with a request for speed humps, a petition should be required which contains the signatures of 75% of the residents along the street segment, as defined in the petition. Only one signature from each property will be accepted. Furthermore, because a portion of the cost of speed humps will be borne by the property owners, signatures of 66% of the property owners, by ballot will be required. Speed hump impacts include an increase in noise levels, the high visibility of the hump installations, and possible effects on parking availability. At this time, the effect of speed humps on property values is not known.

The Director of Public Works may recommend installation of speed humps along a given street segment if it is determined that installation of speed humps will further the objectives of this

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program. If this occurs, it would not be necessary for all the guidelines and warrants to be met although a petition would still be required. All recommendations for speed humps would be brought to Council for a public hearing and approval.

Statistical data will be used to score and rank locations submitted which meet the criteria in the Guidelines (attached). A location's score is obtained by adding points for various factors. These

factors take into consideration prevailing speeds, proximity to schools and parks, residential support, and accident history. The scoring process suggested follows:

- 1 point for each percentage point of vehicles exceeding the speed limit
- 1 point for every 100 vehicles over 1,000 average daily traffic volume
- 5 points for locations within one block of schools or parks
- 1 point for each percentage point of households approving speed humps
- 5 points for each speed-related accident occurring in the last 3 years along the street.

<u>Example:</u>	55% of motorists exceed speed limit	=	55
	Average daily traffic volume is 3,000	(3,000 - 1,000)/100	= 20
	Project is one block from park	=	5
	75% of residents approve installation	=	75
	Three recorded speed related accidents	(3 x 5)	= <u>15</u>
	Total Score		170

Scores of submitted locations would be used to establish a priority list. The priority list would be reviewed by staff every two years. In the event there is a tie, priority will go to the location for which a petition was received first. If circumstances warrant, the Public Works Director may recommend installation of speed humps in other than priority listing order. Recommendations would be brought to the City Council for approval.

The requirement for a petition signed by 75% of the residents is consistent with programs in other cities.

If it is determined during staff's review of a specific request that a substantial amount of traffic will be diverted to other streets, speed humps will be required on those streets affected by the diversion and the request will be treated as a system of speed humps. Therefore, the same petition requirements will be necessary for incorporation of these humps (i.e., 75% residents signatures, 66% of property owner approval, etc).

Costs and Funding:

The estimated cost for installation of a speed hump is approximately \$2,500 to \$3500 per installation. This estimate is based on the experience of those agencies surveyed by staff and includes signing and striping. Miscellaneous costs could range between \$2000 and \$2,500 per installation and would include data collection, design, and inspection. Property owners should fund one-fourth of the cost of installation, and installation should not be initiated until one quarter of the estimated cost is received by the City from the property owners. No funding has been established for a speed hump program for Fiscal Year 95/96. However, staff does anticipate that if Council adopts the recommended speed hump policy, then there will be a number of requests for speed humps based on the public's past

interest in installation of speed humps. Staff would recommend, during development of the 1996/97 Capital Improvement Program, annual funding using Gas Tax funds beginning next year. It is proposed that \$22,500 per year be allocated, which will allow 5 to 7 speed humps (one or two streets, typically, at 75%). In the event a street that is eligible for speed humps is involved in work that requires overlay or substantial improvements, the installation of speed humps should be included in the contract to reduce costs and avoid separate installation of speed humps on a new

street surface. It should be noted, however, that streets with high volumes or which are bus routes would not be eligible for speed humps under this policy.

Implementation Procedures:

The following procedures would be performed in the implementation of a speed hump program:

1. A written request for installation of speed humps is received.
2. A traffic engineering study should be completed to determine whether criteria are met and if so, where speed humps would be located. The study should specifically address traffic diversion onto surrounding streets.
3. If criteria are met, staff sends out a petition to the requester to be signed by 75% of all affected residents.
4. After receiving an acceptable petition, all property owners will be sent a ballot which requires 66% approval.
5. After receipt of the completed petition and ballot, staff will score the location and include it in the priority list. Locations to be installed will be determined by priority and by available funding (about 1 per year).
6. Plans and specifications are prepared for those locations eligible for funding. Award of the contract will go to the contractor with the lowest qualified bid.

Removal:

In the event residents desire the removal of existing speed humps, a process similar to the one for installation will be required. A petition must be received containing the signatures of 75% of the property owners; only one signature per address should be accepted. Removal should not be considered during the first two years after installation. Cost for removal should be borne by those parties petitioning for removal, and work to remove the humps should not be completed until the full amount for the estimated cost is received by the City from the property owners.



**CITY OF BELMONT  
DEPARTMENT OF PUBLIC WORKS**

**GUIDELINES FOR INSTALLATION OF SPEED HUMPS**

Guidelines are listed for determining whether speed humps would enhance safety along a given street segment, for criteria compliance, for determining placement and design, for petition acceptance, for ballot, and for priority determination.

Street Geometry and Physical Characteristics:

1. The street must be either a residential street or local street defined as follows by vehicle code:
  - a. A residential street, or "residence district," is a street having 13 or more buildings fronting on one side of the street or 16 or more buildings fronting on both sides of the street, within a distance of 1/4 mile. Buildings must be located within 75 feet of the street curb face or edge of pavement and they must face and gain access from the street, or be considered as "fronting" onto the street.
  - b. A local street is a street intended primarily to provide direct access to abutting residential buildings.
  - c. Buildings, as referred to in the above context, include separate dwelling houses, churches, apartment buildings, or multiple dwelling houses.
2. The posted or prima facie speed limit on the street shall not exceed 25 miles per hour.
3. By means of a speed survey, it is found that 15% of the traffic travels at 32 mph or greater.
4. The street must be a through street (no cul-de-sacs or alleys), have a paved width of 40 feet or less ~~and be bounded by standard vertical face curb and gutter.~~
5. The street must contain no more than one lane of traffic in each direction.
6. The average daily traffic volume for both directions must range from 500 to 4000 vehicles per day on an average weekday.
7. The street cannot be in an industrial area, and can not be an established truck route, public transit route, or established/preferred emergency vehicle route. Both the South County Fire Authority and Belmont Police Department must concur.
8. The street grade of the street section to receive speed humps must be less than ~~5%~~ **8%**, **have no less than minimum safe stopping sight distance**, and the centerline radius must be greater than 300 feet.
9. The street must have a minimum length of 750 feet which is uninterrupted by other intersections, stop signs, or traffic signals.
10. **Speed humps should not be installed within 250 feet of a traffic signal or within 20 feet of the closest perpendicular intersection of residential local streets. Speed humps should be placed at least 100 feet from the closest perpendicular intersection of residential collector streets.**

Speed Hump Placement:

1. Generally, spacing between humps shall be determined by the following formula:

$$H_s = 0.50 [2.00 (V_{85})^2 - 700]$$

$H_s$  = Optimal spacing (in feet) between humps

$V_{85}$  = Desired 85th percentile speed between humps (in miles per hour)

Example: For  $V_{85} = 25$  mph,  $H_s = 275$  feet

However, spacing may be increased or reduced if determined necessary by the Director of Public Works based on field conditions and geometrics.

2. ~~Humps should be placed at least 250 feet away from nearest intersection, stop sign, or traffic signal.~~  
**Speed humps should not be installed within 250 feet of a traffic signal or within 20 feet of the closest perpendicular intersection of residential local streets. Speed humps should be placed at least 100 feet from the closest perpendicular intersection of residential collector streets.**
3. Speed humps should not be installed at locations which will result in displacement of traffic to parallel streets.
4. Speed humps shall not be placed over manholes, drainage structures, water meters, or other utility access points and shall only be placed at locations which do not create adverse impact on drainage patterns.
5. If possible, speed humps should be placed near existing street lighting.
6. Speed humps shall be installed no closer than 10 feet to the nearest driveway and 25 feet to the nearest fire hydrant.
7. A series of two or more humps are usually more effective than single hump installations. Any one series of humps should generally not be greater than one-half mile in length and the end of one series should not be immediately adjacent to another series.
8. Spacing should allow at least two speed humps on a block or qualified street section; otherwise no speed humps should be installed on that block.
9. Speed humps shall be located so that they are clearly visible for at least 200 feet from each approach.
- ~~10. Speed humps should be positioned on property lines. Placement in front of residences should be avoided, especially those with a direct window view to the street.~~
11. Proposed installations near schools which may impact school bus routes or young bicyclists and pedestrians should be submitted to the affected schools for review and comment.

Design:

1. Speed humps shall extend 12 feet in the direction of travel, reaching a maximum height of 3 inches at midpoint along a roughly parabolic path.
2. Speed humps shall be placed perpendicular to the direction of travel, extending to each gutter lip.
3. The end of each speed hump shall begin to taper 12 inches from the gutter lip and be flush with the gutter lip.

Petition:

1. A petition supplied by the Department of Public Works shall be submitted containing the signatures of 75% of the residents

along a street or street segment. Only one signature per address will be accepted. A street segment is a portion of a street containing whole blocks, between boundaries defined by the requesting petitioners.

2. A separate petition must be received for each street or street segment.
3. Petitions shall be submitted to the Department of Public Works for consideration.
4. A ballot requiring 66% approval will be sent to each property owner in the street segment.
5. 25% of the cost of the humps shall be paid by the property owners.

Signing and Striping:

1. Modified (W37) "Bumps Ahead" (24" x 24"), warning signs with (W6) "15 mph" advisory speed plates shall be placed approximately 250 feet in advance of the first hump from each approach.
2. (W37) "Bump" (24" x 24") warning signs shall be placed within 50 feet of each hump.
3. White "Bump" pavement markings 8 feet in height shall be installed adjacent to each "Bump" warning sign.
4. Each hump shall be marked with 6" wide, white "zig-zag" type markings as shown in the specifications. Raised pavement markers shall be placed on the centerline, positioned on the crest and in front of the hump from both approaches.

Speed Hump Removal:

1. Speed humps shall not be considered for removal within the first two years of installation.
2. In order to be considered for removal, a petition containing the signatures of 75% of the property owners along the street must be submitted to the Department of Public Works. Only one signature per address will be accepted.
3. The cost of removal of speed humps shall be fully borne by those parties signing the petition for removal. Actual removal of existing humps will not take place until an amount equal to the estimated cost for removal is received by the City from those signing the petition.

Priority List:

1. Each request for speed humps will be analyzed as staff time permits after receipt of a completed petition and ballot approval. The proposed location will be scored and ranked to determine its place on the priority list. Full funding from a non-city source (i.e., petitioners, developer) would preclude the location's inclusion on the priority list and could expedite installation. Ranking on the priority list will be based on scores calculated as follows:
  - a. 1 point for each percentage point of vehicles exceeding the speed limit.
  - b. 1 point for every 100 vehicles over 1,000 Average Daily Traffic volume
  - c. 5 points for locations within one block of schools or parks.
  - d. 1 point for each percentage point of households approving speed humps.
  - e. 5 points for each speed related accident occurring within the last 3 years on the street.
2. The priority list shall be reviewed every two years. The number of speed humps installed in any given year will depend upon available funding. The Public Works Director may, if circumstances warrant, recommend installation in other than priority list order.



**CITY OF BELMONT**  
**Department of Public Works**

**PROPERTY OWNER BALLOT FOR INSTALLATION**  
**OF SPEED HUMPS**

I, the undersigned property owner(s) of \_\_\_\_\_ do hereby request  
(Street Address)

installation of speed humps between the intersections of \_\_\_\_\_ and \_\_\_\_\_ in the City  
of Belmont.

By signing this ballot, I understand and acknowledge the following:

1. 25% of the cost of the humps will be paid by the property owners. Speed humps are raised asphalt structures the width of the roadway which are 12 feet long and approximately 3 inches in height. Appropriate signs and pavement markings would be required.
2. Signatures of 75% of the residents along the street or street segment to have speed humps have been received.
3. This ballot will be mailed to all property owners and a 66% approval is required.
4. Property owner(s) may suggest hump locations in no case less than 250 feet apart. Final locations shall be determined by Engineering staff.
5. Removal of speed humps requires a petition by 75% of the property owners, and all costs for removal shall be borne by the property owners.
6. The City reserves the right to remove the speed humps at City cost after a minimum period of 2 years if it is determined that the speed humps have had a detrimental impact to circulation and/or safety.
7. A priority list will be established by the Department of Public Works. Eligible locations will be ranked and generally installed according to this list. The Director of Public Works may, if circumstances warrant, recommend installation in other than priority list order. The list will be updated every two years.

Submitted by:

Date:

Name:

Address: \_\_\_\_\_ Phone:

Submit to: City of Belmont  
Department of Public Works  
One Twin Pines Lane, Suite 385  
Belmont, CA 94002  
Phone: (650) 595-7425



**CITY OF BELMONT**  
Department of Public Works

**SPEED HUMP CRITERIA**

Street: \_\_\_\_\_

Between \_\_\_\_\_ and \_\_\_\_\_

All of the following conditions must be met to warrant installation of speed humps:

	Satisfied	Not Satisfied
1. The street has one lane in each direction and is located in a residence district as defined by Section 515 of the CVC.		
2. The street is a through street with a minimum length of 750 feet uninterrupted by other intersections, stop signs, or traffic signals.		
3. The width of the street segment is 40 feet or less and is bounded by standard vertical face curb and gutter.		
4. The longitudinal grade of the section of the street to receive speed humps is <del>5%</del> 8% or less.		
5. The centerline radius of the street exceeds 300 feet.		
6. At least 15% of the traffic travels 32 mph or greater.		
7. The average daily traffic on the street segment ranges between 500 and 4000.		
8. The street is not in an industrial area, <i>and</i> is not a truck route, public transit route, or emergency vehicle route.		
9. The posted or prima facie speed limit on the street shall not exceed 25 miles per hour.		
<b>10. Speed humps are not located within 250 feet of a traffic signal or within 20 feet of the closest perpendicular intersection of residential local streets. Speed humps are located at least 100 feet from the closest perpendicular intersection of residential collector streets.</b>		

Recommendations:

\_\_\_\_\_ By:

**CITY OF BELMONT  
Department of Public Works**

**PETITION FOR INSTALLATION OF SPEED HUMPS  
RESIDENTS ONLY**

We, the undersigned petitioners fronting on \_\_\_\_\_ do hereby request  
(Street Name)

installation of speed humps between the intersections of \_\_\_\_\_ and  
\_\_\_\_\_

in the City of Belmont.

Before signing this petition, we understand and acknowledge the following:

1. 25% of the cost of the humps will be paid by the property owners. Speed humps are raised asphalt structures the width of the roadway which are 12 feet long and approximately 3 inches in height. Appropriate signs and pavement markings would be required.
2. Signatures are required of 75% of the residents along and between the boundaries set forth above (one signature per address).
3. A ballot will be mailed to all property owners and a 66% approval is required.
4. Petitioners may suggest hump locations in no case less than 250 feet apart, however, final locations shall be determined by Engineering staff.
5. Removal of speed humps requires a petition by 75% of the property owners, and all costs for removal shall be borne by the petitioners.
6. The City reserves the right to remove the speed humps after a minimum period of 2 years if it is determined that the speed humps have had a detrimental impact to circulation and/or safety.
7. A priority list will be established by the Department of Public Works. Eligible locations will be ranked and generally installed according to this list. The Director of Public Works may, if circumstances warrant, recommend installation in other than priority list order. The list will be updated every two years.

Number of properties fronting street section: \_\_\_\_\_.

NAME	SIGNATURE	ADDRESS	PHONE #