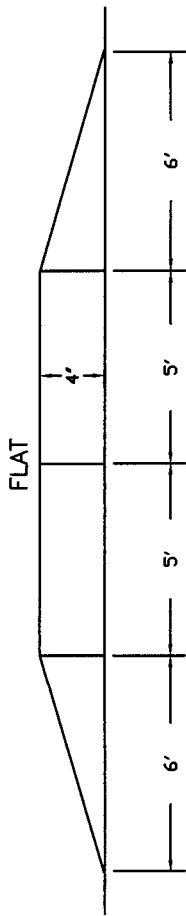
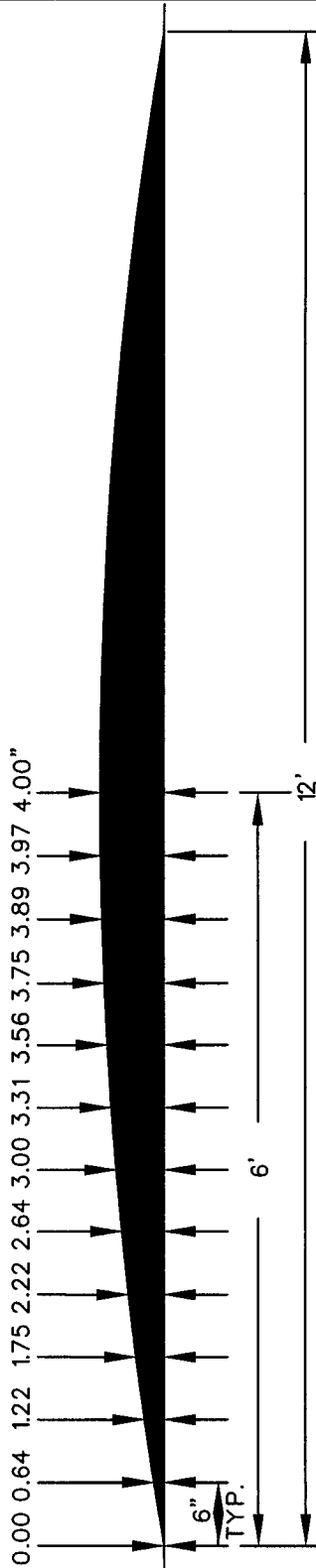




STANDARD DETAILS
ENGINEERING DEPARTMENT



SPEED TABLE

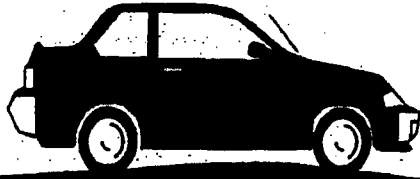


SPEED HUMPH

NOT TO SCALE

TITLE:	REVISIONS	DET. NO.
SPEED TABLE		
SPEED HUMPH		

SPEED BUMPS/HUMPS ⁽¹⁵⁾



Speed Hump

Speed Bump

Speed bumps and speed humps are raised areas in the roadway surface which extend across the roadway perpendicular to the traffic flow. Speed bumps are generally 3 to 6 inches high with a length of 1 to 3 feet (shorter than the wheel base of an automobile). They are typically used in low speed parking lots and alley situations. Speed humps, on the other hand, are generally 3 to 4 inches high with a length of approximately 12 feet (longer than the wheel base of an automobile).

Effects

Volumes. Speed bumps and speed humps will often reduce traffic volumes on the streets where they are employed. The degree of traffic reduction is dependent upon the number and the spacing of the bumps/humps, the amount of cut through traffic, and the availability of alternate routes. Speed bumps/humps have been used to deter trucks and larger vehicles from using a street.

Speed. A speed bump causes significant driver discomfort at residential traffic speeds

and generally results in vehicles slowing to 5 mph or less at the bump. At high speeds, bumps tend to have less overall vehicle impact because the vehicle suspension quickly absorbs the impact before the body can react.

At typical residential speeds, speed humps cause some driver discomfort and result in most vehicles slowing to 15 mph or less at each hump. At higher speeds, the hump tends to act as a bump and severely jolts the vehicle suspension and its occupants or cargo.

Speed bumps or speed humps should only be installed on streets where the prevailing speed limit is 30 mph or less.

These devices generally have a continuous effect on vehicle speeds if spaced at less than 800 feet. Once spacing exceeds 800 feet, the effect on speed is only in the immediate vicinity of the bump/hump.

Traffic Noise, Air Quality and Energy Consumption. Traffic noise is generally reduced slightly between the bumps/humps on low volume local streets. At the speed bumps/humps, experience has shown

anywhere from a slight reduction in noise level to an increase in noise level. The noise level at the bumps/humps is dependent upon the speed at which the vehicles traverse them.

Because of their effect in slowing traffic, bumps/humps tend to have a negative impact on air quality and energy consumption.

Traffic Safety. Traffic safety has not been found to be compromised with speed bumps and speed humps as long as proper design and installation procedures are followed when they are installed. Traffic safety benefits can be gained if speeding is involved.

Community Reaction. The initial reaction of the people living in the area of the installation is generally positive, while negative reaction can occur from those people who produce through traffic trips in the area. The reaction of the people living in the area can change over time.

Legal. As defined by the Manual on Uniform Traffic Control Devices, speed bumps and speed humps are not traffic control devices. They are geometric design features and should be designed and installed accordingly using accepted engineering principles and judgement.

Cost

The cost of constructing a speed hump has been found to be in the range of \$1,000 - \$2,000.

Speed bumps cost approximately \$500-\$1,000.

Additional Considerations

The impact on maintenance activities such as snowplowing and street sweeping is minimal.

Speed bumps/humps can significantly impact large trucks, transit and school buses. If used on regular routes of these vehicle types, attention should be given to informing these drivers of proper operation necessary to minimize impacts.

Case Study

A series of three speed humps were installed on Homestead Drive in Appleton, Wisconsin. From a technical standpoint, the speed humps were effective in reducing the 85th percentile speed from 34 mph to 26 mph. One year and five months after the installation of the speed humps, they were removed. The removal was prompted by a survey of the neighborhood residents who directly abutted the street that the speed humps were on. This experience allowed for two winters of maintenance and found that their presence did not create any unusual street maintenance problems. It is interesting to note that the vehicle speeds found to exist prior to the installation of the speed humps returned after the speed humps were removed.

References

Institute of Transportation Engineers Residential Street Design and Traffic Control

A Proposed Recommended Practice of the Institute of Transportation Engineers by the Technical Council Speed Humps Task Force Guidelines for the Design and Application of Speed Humps.