MUNICIPALITY OF ANCHORAGE
Traffic Department

SPEED HUMP FREQUENTLY ASKED QUESTIONS

HUMPS VERSUS BUMPS?

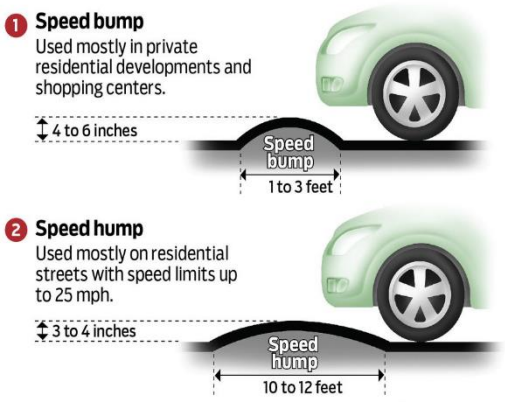
A speed hump is a (typically) rounded traffic calming device designed to reduce vehicles speeds on residential streets. They are constructed across the road, and, often installed in a series of several humps to reduce the potential for drivers to gain any significant benefit from speeding once the vehicle has crossed the hump.

The height of the device ranges from 3 to 4 inches, and, is typically 13 feet long (as measured along the center of the road) for the humps used here in Anchorage, and is constructed to a very specific curvature over which the vehicles travel. In addition, warning signs are placed at the location of the device to provide information that the hump is located on the road (important to motorists, emergency responders, and street maintenance personnel) and pavement markings on the hump to provide an added visual warning of the device.

Humps are used in locations on residential streets with low to moderate volumes (typically no less than 500 vehicles per day – about 50 homes and no greater than 1000 to 1500 vehicles per day), and not major roadways serving as connections between neighborhoods, and are rarely used on bus routes or primary emergency response routes.

1. What is a speed hump, and what is its purpose?

A speed hump is a traffic control/calming device constructed with asphalt concrete. It is constructed to a very specific design that uses one of several potential vertical layouts, and used to control speeds – typically effective only when several humps are used on a section of roadway, about 400 to 500 feet apart.



2. What is the difference between a speed hump and a speed bump?

A speed hump is a precisely laid-out traffic control device that is allowed for use on public streets. Their curved shape is designed to balance the needs of controlling speeds to reasonable levels without significant discomfort to vehicle operators and passengers and to minimize the delay, damage and potential injury to

emergency responders. The design also permits low-ground-clearance vehicles to travel over the device without damage to the vehicle undercarriage.

A speed 'bump' is, in effect, a non-engineered means of controlling vehicle speeds in parking lots, apartment complexes and other private properties. Speed bumps are typically 4 to 6 inches in height, may be as little 1 foot to 18 inches in length. A vehicle cannot traverse the hump at speeds greater than 5-10 miles per hour without substantial risk to the vehicle and passenger. They are not allowed to be installed on public streets.

3. *Where are speed humps used?*

Speed humps are used on residential streets with traffic volumes between 500 and 1500 cars per day. Roads that have less than 500 cars a day typically won't have enough speeders to justify the expense of the devices. Roads that have more than 1500 cars per day are usually collector-type roads – even if there are homes that face the street. Those higher volume roads often are the primary response routes for emergency vehicles: ambulances, police patrol cars and fire apparatus.

Speed humps are one type of traffic calming device, however, there must be a documented pattern of cars speeding – where a significant percentage of the cars are travelling at least 6 – 10 miles per hour over the posted speed limit.

4. *Where are speed humps not used – and what are they ineffective at?*

In addition to the standards cited above (traffic volumes) Speed humps are not used on streets that, primarily, providing access to commercial businesses. They can't help officers control non-traffic law enforcement matters, and they aren't effective at controlling staged 'drag races', for instance.

Roads with grades greater than about 6% are not suited to speed humps. This is due to ice formation that may occur on the uphill side of the hump, and, the resulting grade (6% plus the grade of the hump, itself) that cars may stall upon during winter.

5. *Are speed humps effective?*

They can be if properly located. They do need to be installed at least 100 to 200 feet away from intersections, and, as noted, multiple speed humps need to be installed to achieve speed reductions through a section of roadway. Installing a single hump on a street has very little benefit in controlling speeds. Studies indicate that the "85th percentile" speed – the speed at which 85 percent of the traffic is travelling at – or below – can drop by about 6 miles per hour. Travel speeds can drop to about 27 miles per hour (2 miles per hour over 'standard' posted speeds in residential areas) between pairs of speed humps.

6. How much do speed humps cost the Municipality?

Including the design, the construction, the signs and markings, and final inspection, speed humps cost about $10,000 each. To put that cost into perspective, the annual budget for the traffic calming program (all types of devices) across the entire Anchorage Bowl is only $500,000 – including a portion of the salary of the engineer responsible for administering the program.

7. Are there disadvantages to having speed humps on my street – or on neighboring streets?

Most 'problem solving' techniques may have unintended consequences. Obviously there is more noise: the compression of the cars' suspensions, the impact of the tires on the device, and the sound of the cars' acceleration after being slowed for crossing the hump. Some drivers will attempt to minimize the effect of the hump by 'gutter running': driving with the passenger-side tires in the gap between the edge of the hump and the curb on the street. That places motor vehicles closer to pedestrians and cyclists.

Response times for emergency vehicle will increase since the fire apparatus, ambulances, police patrol cars will be delayed by about 7-8 seconds for each hump that has to be driven over. That may seem like little time, but, when multiple humps have to be driven over, and every second counts when a responder is being sent to respond to heart attack, structure fire, stroke, internal injuries. Patients being transported with spinal injuries can be placed at increased risk for permanent damage each time the ambulance has to 'bump' over a speed hump.

Some vehicle operators may divert to other streets to avoid the delay and inconvenience of the humps, so neighboring streets may see an increase in both speeding and traffic volumes.

In some circumstances, speeds may increase between pairs of humps as drivers try to make up for the lost time decelerating for – and then traversing - the device. Information from the Institute of Transportation Engineers suggests that, while the speed at the hump may be as low as 19 miles per hour, the speed driven will increase by about 0.5 miles per hour at 100 feet away from the hump. These speeds can rise to as much as 27 miles per hour within about 200 feet from the device.

Finally, some residents believe that the markings on the speed humps, and the required warning signs, reduce the value of their homes and properties – if, for no other reason, that the implicit warning to potential buyers of a "speeding problem" on the street.

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