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We are interested in finding out if other Washington state agencies have used these and what their thoughts are.

Please call or email me if you have any questions or need further information.

John W. Carpita, P.E.
Public Works Consultant
Municipal Research and Services Center
2601 Fourth Avenue, Suite 800
Seattle, WA 98121-1280
206-625-1300
Fax: 206-625-1220
jcarpita@mrsc.org
www.mrsc.org
University Place has installed the split or "speed cushions" in a couple of locations with positive results. Our biggest challenge with speed humps came from the Fire Department. We have found that while they would prefer no speed humps, they have accepted the speed cushions. We copied the City of Olympia's spec's.

Gary Cooper

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Hi John,

In 2008, we installed one application of "speed pillows" or "split/slotted speed humps" on a residential street (East Victor Street) here in Bellingham.

In terms of their effect for traffic calming, while I would say that they are better than nothing, they are clearly not as effective as full speed humps, which we have installed on several residential streets. The advantage is that the slotted speed humps do not have the same disruption to emergency service, transit, or larger delivery vehicles that full speed humps do, which was a concern for us on this particular street. It is very easy for passenger vehicles to weave and intentionally roll two of the four wheels through the slots, which significantly diminishes the vertical displacement of the vehicle and thus the effectiveness of the device as a traffic calming measure. If there were a way to prevent this weave, they might be more effective.

Feel free to call me to discuss this further.

Sincerely,

Chris Comeau, AICP
Transportation Planner
City of Bellingham Public Works Department 360.778.7900 telephone; 360.778.7901 fax

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www.mrcsc.org
Currently the city of Lacey does not have any speed humps on our public streets.

Patrick D. McGuin
Transportation Engineer
City of Lacey
P.O. Box 3400
Lacey WA 98509-3400
(360) 438-2640

Please note: This e-mail may be considered a record subject to public review.

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Pardon my earlier email John, I misunderstood what you were looking for. After viewing the link to the Portland site, I realize that you are looking for something different than what we installed. We did, however, look at this same information from Portland when considering what to do on this street. Given the length of the street, the residential classification, and the budget that we had to work with, this was not considered a viable option. Looking at the Portland study, it also seems clear that speed reduction was minimal at best with these.

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Our speed cushions were developed in conjunction with our Fire Department with the goal of minimizing impact on response times. The cushion is installed so that the engine straddles the centerline, minimizing the need to slow substantially in order to ‘clear’ the speed cushion. We have installed a number of these as a part of our traffic calming program.

The following is a link to the Engineering Design and Development Standards, standard plan 4-42A.


If you have questions, please feel free to contact me.

Fran Eide, P.E.,
City Engineer

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Hi John & Linda,

The City of Redmond installed its first split speed hump in the spring of this year (see attached photo). It was installed at a median in the 17100 block of NE 111 Street. That particular location had been specifically designed and constructed (three years earlier) to accommodate the addition of a split speed hump if speeds later required it. While we have not yet conducted “After” studies to check the effectiveness, thus far it appears to be working fine. I have heard no reports of problems or of drivers trying to avoid the device.

Jeff Palmer
City of Redmond
Neighborhood Traffic Calming Coordinator
425-556-2857

-----Original Message-----
From: John Carpita [mailto:jcarpita@mrsc.org]
Sent: Monday, June 29, 2009 11:00 AM
Cc: LGlas@bellevuewa.gov
Subject: Split Speed Bumps

Please “reply to all”. [Note: You may get more than one copy of this email. Sorry.]

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jcarpita@mrsc.org
www.mrsc.org
John Carpita

From: Noel Schoneman [NSchoneman@ci.kirkland.wa.us]
Sent: Wednesday, July 01, 2009 1:56 PM
To: John Carpita
Cc: David Godfrey; Jim Dare; Thang Nguyen; LGlas@bellevuewa.gov; KGonzalez@bellevuewa.gov
Subject: RE: Split Speed Bumps
Attachments: Emergency Response Delay-2 slides.ppt; standard plan rev 1-08.pdf

John –
We liked the results of the split speed bumps (we call them speed cushions or slotted speed humps) so well that they are now our standard for new installations. As we repave streets, our existing speed humps are converted to the split design. We find that they are as effective in slowing general traffic as the standard speed cushion, but they add little to no delay to emergency vehicles.

The Kirkland Fire Department prefers these over the use of regular speed humps or traffic circles. However, the cushions require the emergency equipment to move to the center of the street. So the placement needs to be sensitive to sight distances (approaches to curves; crests of hills) and on streets with no room for general traffic to move out of the way.

Attached for your information are: a summary table of emergency vehicle delays with speed humps speed cushions on the same street; our standard design.

Please let me know if you have additional questions.

Noel

Noel Schoneman, P.E.
Neighborhood Traffic Control Coordinator
Typical Office Hours:
   Wed 7:30 - Noon
   Th & Fri 7:30 - 4:30 p.m.

nschoneman@ci.kirkland.wa.us; (425) 587-3870

Kirkland Public Works: Caring for your infrastructure to keep our City healthy, safe, and vibrant.

---

From: John Carpita [mailto:jcarpita@mrsc.org]
Sent: Monday, June 29, 2009 11:06 AM
Subject: Split Speed Bumps

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John W. Carpita, P.E.
Public Works Consultant
Municipal Research and Services Center
2601 Fourth Avenue, Suite 800
Hi John,

Here in Shoreline, we have used speed cushions, which have the break in the speed hump to help decrease the impact on emergency vehicles, but we have not used the offset split speed humps like Portland has used. I would also be interested in hearing if other jurisdictions in Washington have tried these out and what their experiences have been.

John Marek, PE
Traffic Engineer
Shoreline Public Works Department
phone: (206) 801-2432
fax: (206) 546-2008
E-mail: jmarek@shorelinewa.gov

-----Original Message-----
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Emergency Response Delay
# Speed Cushions - Average Delay

<table>
<thead>
<tr>
<th></th>
<th>Delay per Device (seconds)</th>
<th>Hump</th>
<th>Cushion</th>
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<tbody>
<tr>
<td><strong>Engine #22/25</strong></td>
<td></td>
<td>4.87</td>
<td>0.12</td>
</tr>
<tr>
<td>@ 25 mph</td>
<td></td>
<td>4.69</td>
<td>0.07</td>
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<tr>
<td>@ 30 mph</td>
<td></td>
<td>5.04</td>
<td>0.16</td>
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<tr>
<td><strong>Ladder #26</strong></td>
<td></td>
<td>6.35</td>
<td>-0.32</td>
</tr>
<tr>
<td>@ 20 mph</td>
<td></td>
<td>6.09</td>
<td>-0.28</td>
</tr>
<tr>
<td>@ 25 mph</td>
<td></td>
<td>6.61</td>
<td>-0.35</td>
</tr>
<tr>
<td><strong>Medical Aid#21</strong></td>
<td></td>
<td>1.85</td>
<td>0.10</td>
</tr>
<tr>
<td>@ 25 mph</td>
<td></td>
<td>1.55</td>
<td>0.05</td>
</tr>
<tr>
<td>@ 30 mph</td>
<td></td>
<td>2.15</td>
<td>0.14</td>
</tr>
</tbody>
</table>
NOTES:
1. PAVEMENT MARKINGS TYPICAL IN BOTH DIRECTIONS OF TRAVEL
2. ALL SLOTTED SPEED HUMP MARKINGS SHALL BE PLASTIC
3. WHEN PLACED ON ROADWAY WITH NO CURB AND CUTTER, EDGE OF SPEED HUMP EXTENDS TO EDGE OF PAVEMENT
4. WHEN PLACED ON ROADWAY WITH CURB AND CUTTER, EDGE OF SPEED HUMP TO BE PLACED 2' FROM FACE OF CURB.
5. NOTE SIDE TAPER ON SPEED HUMP

<table>
<thead>
<tr>
<th>X (ft)</th>
<th>Y (in)</th>
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<tr>
<td>0</td>
<td>3.00</td>
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<tr>
<td>1</td>
<td>1.50</td>
</tr>
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<td>3</td>
<td>2.75</td>
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<tr>
<td>4</td>
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<td>5</td>
<td>3.25</td>
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<tr>
<td>6</td>
<td>3.60</td>
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