

**AASHTO Technology Implementation Group  
Nomination of Technology Ready for Implementation**

<b>Sponsoring DOT</b>	1. Sponsoring DOT (State): New York															
<b>Primary Technical Contact</b>	2. Name: David J. Clements, P.E. Organization: NYSDOT Traffic Engineering & Highway Safety Div. Address: Safety Program Management Bureau, 50 Wolf Road City: Albany State: NY Zipcode: 12232 E-mail: dclements@dot.state.ny.us Phone: 518-457-3537 Fax: 518-457-1780															
<b>Technology Description</b>	3. Name of Technology: Shoulder Wedge Maker (SWM)															
	4. Briefly describe the technology. The SWM is a device which when mounted on a road paver produces a pre-compacted extruded wedge on the shoulder edge of the paved mat having an angle to the horizontal of ~30 degrees. This extruded feature allows for vehicle transition from the paved lane to the shoulder area and back with little or no loss of control of the vehicle, thus reducing the accidents associated with road edge run-off. Extensive prior research has shown that a fillet of 45 degrees or less enables vehicles that have inadvertently traveled beyond the pavement edge to safely return to the driving lane. The technology is particularly pertinent on rural two-lane roads that often have drop-offs instead of shoulders.															
	5. Briefly describe the history of its development. In conjunction with the Federal Highway Administration, the NYSDOT began work on solving the road edge run-off problem several years ago. Several prototype devices were designed and manufactured and demonstrated on various road paving projects. Over the past three years, sites in New York, Georgia, and Indiana have been used to demonstrate the efficacy of the design with great success and acceptance by DOT's and contractors alike. Presently New York is funding 4 demonstrations at 4 maintenance sites across the state.															
<b>State of Development</b>	6. For how long and in approximately how many applications has your organization used this technology? NYSDOT has funded six sites in five counties in five regions across the state over the past two years and intends to recommend usage of the device on all maintenance contracts in the state in 2006. This technology has been developed over the past three years as a variation of a device known as the Notch Wedge Joint Maker that was developed in the 1990's. To date there has been approximately twenty applications of the SWM.															
	7. What additional development is necessary to enable routine deployment of the technology? Some minor modifications may be required when installing the SWM on some limited-use paver models, otherwise, the SWM is ready for deployment.															
	8. Have other organizations used this technology? If so, please list organization names and contacts. <table border="1" data-bbox="391 1360 1445 1501"> <thead> <tr> <th>Organization</th> <th>Name</th> <th>Phone</th> <th>E-mail</th> </tr> </thead> <tbody> <tr> <td>GADOT</td> <td>Lynn Bean</td> <td>478-451-8710</td> <td></td> </tr> <tr> <td>FHWA</td> <td>Chris Wagner</td> <td>404-993-8405</td> <td></td> </tr> <tr> <td>INDOT</td> <td>Elizabeth Pastuska</td> <td>317-610-7251</td> <td></td> </tr> </tbody> </table>	Organization	Name	Phone	E-mail	GADOT	Lynn Bean	478-451-8710		FHWA	Chris Wagner	404-993-8405		INDOT	Elizabeth Pastuska	317-610-7251
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<b>Potential for Payoff</b>	9. What benefits has your organization realized from using this technology? Include cost savings, safety improvements, transportation efficiency or effectiveness, environmental benefits, or other advantages over other existing technologies. The Shoulder Wedge Maker has provided several locations in New York State with a ramped edge on the highway, with virtually no additional expense or time, which allow the lane to be open until backfilling can be completed. Also it allows for a back up in the event of erosion of the shoulder material or if backfilling is not done. The SWM provides substantial safety benefits where local road jurisdictions perform roadway overlays with no intention of backfilling the shoulder drop off due to a variety of constraints such as cost and traffic delays.															

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<b>Implementation Potential</b>	10. Please describe what actions another transportation agency would need to take to adopt this technology. Where necessary, conduct evaluation projects to demonstrate efficacy and then merely specify an extruded ramped shoulder edge on the road mat.
	11. What is the estimated cost, effort, and length of time required for procurement or adoption by another transportation agency? Approximately \$10,000 for each evaluation/ demonstration site for purchase of a device along with technical support. A Shoulder Wedge Maker pair has a retail price of \$4,200.
	12. What organization(s) currently supply and provide technical support for this technology? TransTech Systems Inc., Schenectady NY, manufactures a Shoulder Wedge Maker with a pre-compacted extruded wedge and provides technical support. Other devices have been fabricated by individual pavement contractors which only employ a strike off device with no pre-compaction which effects overall quality/longevity of the ramp.
	13. Please describe any legal, regulatory, social, intellectual property, or other issues that could affect ease of implementation. None
<b>Willingness to Champion</b>	14. Is the sponsoring DOT willing to promote this technology to other states, if partially supported by the AASHTO Task Force on Technology Implementation? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>Date Submitted</b>	15. Date: August 1,2005

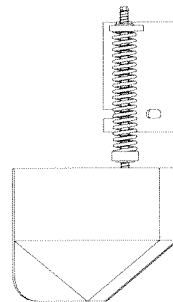
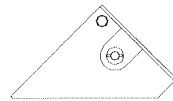
16. Please include image(s) of sketches or photographs, if available  Image(s) are attached

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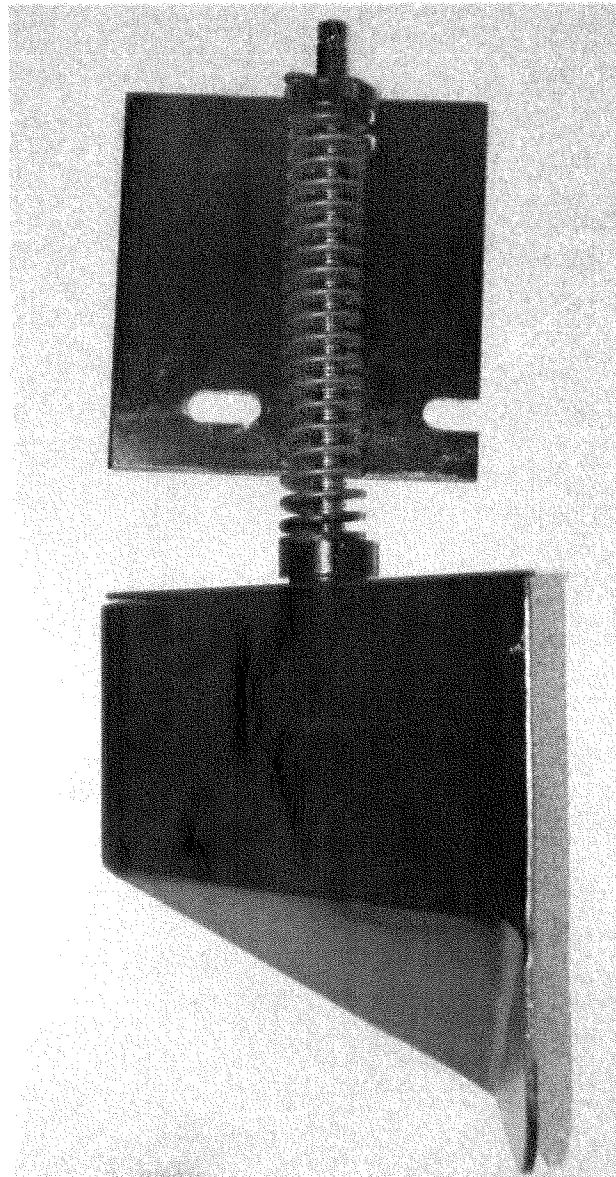
**Attachments**

**Shoulder Wedge Maker Right Hand  
Illustration**



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Shoulder Wedge Maker Left Hand  
Photograph



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**Shoulder Wedge Maker  
Application Photograph  
After 1 year in place**

