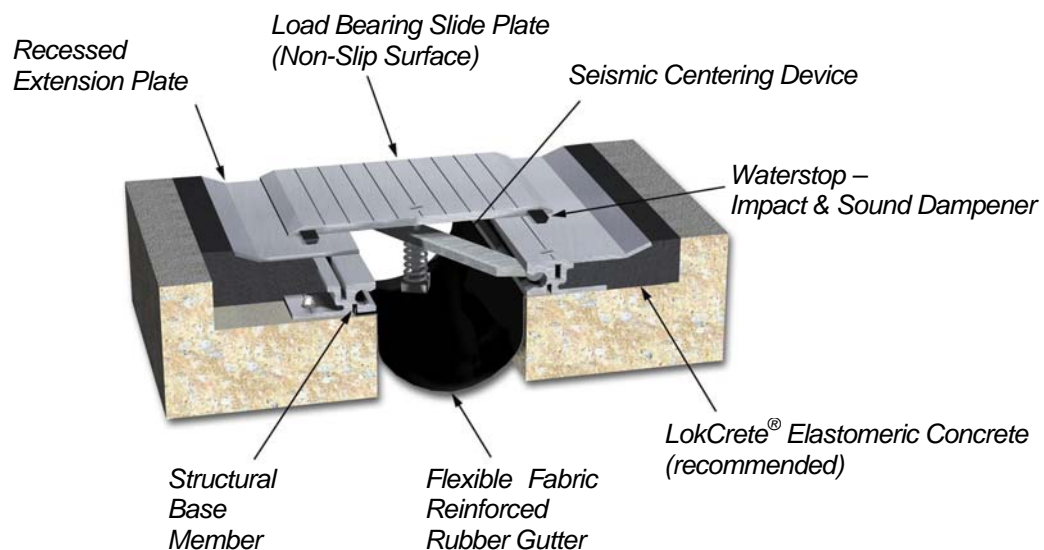




# TECHNICAL BULLETIN 105

Subject: Seismic Slide Plate Expansion Joint System



Please note the “built-in” quality assurance features of our SSP Series System. The SSP is designed for wide expansion joint openings with the ability to accommodate heavy loading (designed for AASHTO HS-20 load carrying capability) and multi-directional seismic movement.

Recessed extension plates allow the seismic slide plate to remain flush with finished deck surface.

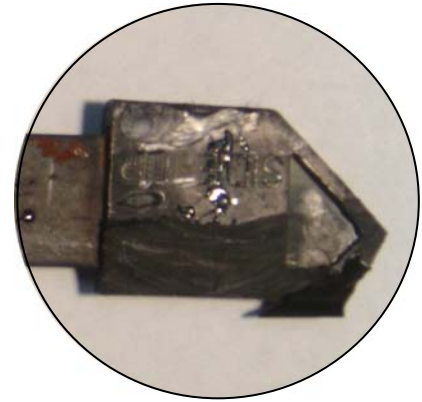
A seismic centering device with impact dampeners and displacement springs (detailed on the next page) allow the slide plate to displace and return to its natural position after a seismic occurrence. Solid aluminum ball ends eliminate the concern of plastic / nylon ball ends fracturing during vehicular impact loads.

The integral impact and sound dampener also acts as a waterstop. The 60-mil fabric reinforced moisture barrier locks into the base member eliminating any through penetrations associated with typical attachment methods.

LokCrete® Elastomeric Concrete used as blockout infill enhances the system’s waterproofing capability. It acts as a buffer between the varying material expansion and contraction characteristics of aluminum and concrete. It bonds tenaciously to both aluminum and concrete.

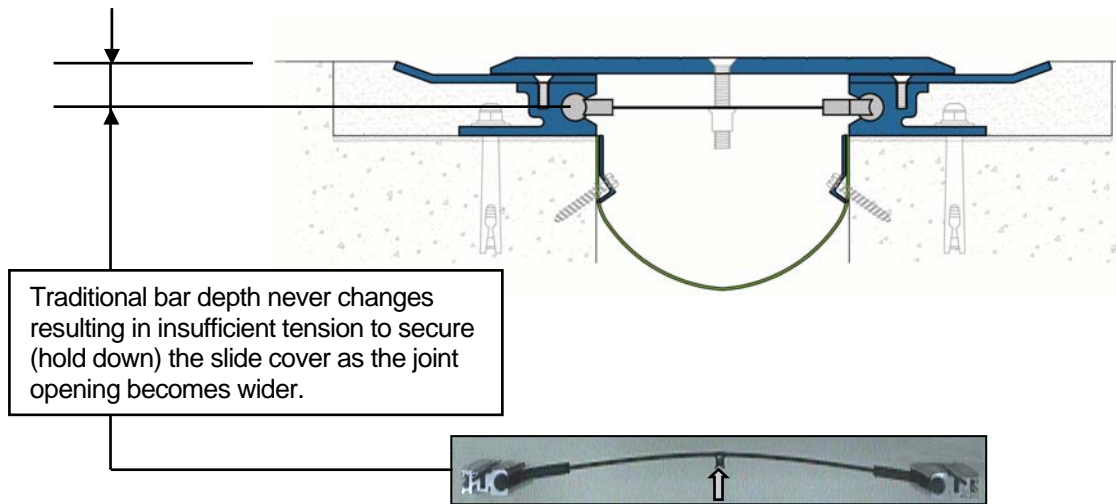


**MM Systems / Seismic Centering Device**



**Nylon Ball Ends** – plastic / nylon ball ends may fracture during vehicular impact loads

One of the key features of the SSP System is the seismic centering device. As previously mentioned, the solid aluminum ball ends eliminate the concern of plastic/nylon ball ends fracturing during vehicular impact loads or not being properly epoxy bonded to the bar. Please note that the stainless steel bolt that secures the slide plate is not directly attached to the centering bar. This avoids fatigue and shear concerns associated with fixed moment connections. The design also accommodates vertical displacement. As the slide plate becomes wider to accommodate larger openings, the tension/displacement springs can be increased in size or quantity (dual springs) to handle the engineered requirements.



Traditional Centering bar designs that employ spring steel bars and plastic ball ends (glued in place) do not provide sufficient tension to properly secure the slide plate cover. This is due to the fact that most concrete slab depths are limited therefore the base member of the expansion joint can not be lowered sufficiently to develop a proper tension arch to secure the plate. The second concern is the excess height that the plate is displaced above the deck surface during a seismic event may become a hazard to pedestrians.

MM Systems provides a Contractor Certification Program that includes classroom and hands-on training related to the proper installation and the “built-in” quality assurance features of each type of expansion joint system. The MM Systems Field Service Group supervises the first project installed by each Certified Contractor.



*Toronto's Pearson International Airport – 30,000 feet of SSP with PyroFlex Fire Barrier*

The photos above demonstrate quality installations available through the MM Systems Certified Contractor Network.

MM Systems offers a comprehensive field-support program available to troubleshoot field problems, recommend remedial solutions and provide on-site expansion joint analysis. Our team includes: Field Application Engineers, Engineering Manger, Product Development Engineer and Parking Division General Manager.

For additional information or to schedule an AIA accredited continuing education seminar, contact MM Systems at 866-506-6929 for the nearest local representative.

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