



Calspan Test No.: BR0011
Test Standard: ASTM F2656-15
Impact Condition Designation: M30
Client: Barrier 1
Model: Shallow Mount Bollard SMB-400-SA
Product Rating: M30 – P1

July 7, 2020

To whom it may concern:

This letter is to certify that the subject barrier, the **Shallow Mount Bollard SMB-400-SA** provided by Barrier 1, was tested to the requirements of the ASTM standard F2656-15, with M30 impact condition designation. This was the standardized Test Method for Vehicle Crash Testing of Perimeter Barriers, at the time the barrier test was performed.

The test was performed at Calspan Corporation, on June 24, 2020, for Barrier 1. **The Barrier 1, Shallow Mount Bollard SMB-400-SA was impacted by a medium duty truck, weighing 6,688 kg (14,745 lbs.) travelling at 47.6 kph (29.6 mph).** Post-test measurements of the dynamic movement of the test vehicle's payload (truck bed) show that the left and right, leading edge of the truck bed, were stopped at 1.604 meters and 1.306 meters respectively, before the trailing edge (reference line) of the impacted bollard. As such, based on the test vehicle mass, impact velocity and penetration into the protected zone, **the barrier rating per the ASTM standard F2656-15, is M30 – P1.**

Calspan is accredited to ISO 17025 to perform ASTM F2656-15 testing by Perry Johnson Laboratories Accreditation, Inc. (PJLA) under Certificate Number L13-137 and Accreditation Number 76654.

Respectfully,

A handwritten signature in blue ink that reads "David Casey".

David Casey

Test Director

Safer Highways...Safer Skies