



TEST No.: BR0183
Test Standard: ASTM F3016-19
Company: Barrier 1
Model: S10, 4" Single Bollard
Product Rating: ASTM 3016-19, P1

8/30/23

To whom it may concern:

This letter is to certify that the S10, 4" Single Bollard provided by Barrier 1 was tested to the requirements of the ASTM standard F3016-19. This was the standardized test method for low speed (30mph and lower) dynamic crash testing using a surrogate test vehicle for perimeter barrier crash testing at the time the test was performed.

Testing was performed at the Calspan Corporation, on August 29, 2023. The S10, 4" Single Bollard was impacted by a surrogate test vehicle (STV) weighing 2274.5 kg (5014.4 lbs.) travelling at 10.1 mph [16.25 kph]. Post-test measurements of the maximum dynamic penetration into the protected area as measured from the reference line of the **test article**, found the test article to have the greatest intrusion. The test article was measured as having a maximum dynamic intrusion into the protected area of 1.8". [45.7mm]. As such, based on the surrogate test vehicle's mass, impact velocity and measured penetration into the protected area, the test article has received a rating of ASTM 3016-19-P1, IAW the ASTM 3016-19 Standard.

Calspan is accredited to ISO/IEC 17025:2017 to perform ASTM F3016-19 testing by Perry Johnson Laboratories Accreditation, Inc. (PJLA) under Certificate Number L22-574 and Accreditation Number 76654.

Respectfully,

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

David Casey
Test Director
Calspan Barrier Test
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Safer Highways...Safer Skies