



TEST No.: CAL3913
Test Standard: ASTM F3016M-19
Manufacturer: Gibraltar
Model: G-1631F Fixed Shallow Mount Bollard
Product Rating: S30 – P1

January 8, 2020

To whom it may concern:

This letter is to certify that the subject test article, the model G-1631F Fixed Shallow Mount Bollard provided by Gibraltar, was tested to the requirements of the ASTM standard F3016M-19. This was the standardized test method, for low speed (30mph and lower) dynamic crash testing with surrogate cart, of perimeter barriers, at the time the protective device test was performed.

The test was performed at Calspan Corporation, on January 8, 2020. The G-1631F Fixed Shallow Mount Bollard was impacted by a surrogate vehicle weighing 2274.5 kg (5014.4 lbs) travelling at 31.4mph [48.9 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 G-1631F Fixed Shallow Mount Bollard protective device was measured as having a maximum intrusion of 9.33in [237mm] behind the trailing edge (reference line) of the impacted test article. As such, based on the surrogate test vehicle's mass, impact velocity and measured penetration into the protected area, the test article's penetration rating per the ASTM standard F3016M-19, is S30 – P1.

Calspan is accredited to ISO 17025 to perform ASTM F3016M-19 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 "Zachary Reisdorf".

Zachary Reisdorf

Test Director

Safer Highways...Safer Skies