

B & B Roadway and Security Solutions
5900 S. Lake Forest Dr. #230
McKinney, TX 75070
Attention: Mr. Paul Matthews

Date: 4/24/20


Mr. Matthews,

Based upon the test performed on April 17, 2020 at Applus IDIADA KARCO Engineering, the as-tested configuration of the Model 303 High Impact Operable Bollard has received an impact rating of P1 at the M30 test level, based on the ASTM F2656-18a standard test method. This test evaluated the barrier for an impact to the center of the Model 303 bollard.

The barrier was evaluated using a standard test truck (M) weighing 15,008.8 lb. traveling at a velocity of 30.1 mph. The P1 penetration rating is given when penetration of the vehicle reference point beyond the barrier reference point is less than 3.3 ft. For the standard test truck (M), the vehicle reference point is the pre-impact location of the intersection of the leading lower vertical bed edge and the frame rail. The barrier reference point for the Model 303 Bollard is the protected (non-impact) side of the bollard. The maximum penetration recorded was -3.7 ft. on the passenger side of the vehicle. The test vehicle remained attached to the barrier after impact and access for a secondary vehicle was blocked.

Complete information relating to the test can be found in report number TR-P40082-01 and Deliverable No. 2020-5800 from Applus IDIADA KARCO Engineering, LLC., including test conditions, test vehicle information, test article specifications, and manufacturer drawings. This letter should not be considered complete documentation of the test without consideration of the test report and deliverable CD.

Sincerely yours,



Bruno Haesbaert
Project Engineer
Applus IDIADA KARCO Engineering, LLC.