



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

Date: 01/05/17

Mr. Matthews:

Based upon the test performed on December 14, 2016 at KARCO Engineering, LLC., the as-tested configuration of the Drop Arm Model 773 has received an impact rating of P2 at the M30 test level, based on the ASTM F 2656-15 standard test method. This test evaluated the Drop Arm Model 773 for an impact to the center of the blocking width.

The M30 test level of the ASTM F 2656-15 is evaluated using a 6,800 kg test vehicle traveling at a nominal velocity of 50 km/h. The P2 penetration rating is given when penetration beyond the protected side of the barrier is between 1.01 m and 7.00 m at the intersection of the lower leading edge of the test vehicle's cargo bed and the vehicle's frame rails. Penetration was measured from the vertical plane created by the back (non-impacted) side of the drop arm.

The Drop Arm Model 773 completely disabled the test vehicle, causing severe damage to the engine and drivetrain. The driveshaft was broken and the transmission dropped, rendering the vehicle inoperable. The maximum penetration recorded was 1.74 m measured on the passenger side of the vehicle.

Upon impact, the Drop Arm Model 773 deflected in the direction of travel of the test vehicle. The drop arm deflected and pulled the stanchions from the soil. The catch pin tore from the arm extrusion but the internal ropes remained intact.

Complete information relating to the test can be found in report number TR-P36300-01-NC and CD serial number 2016-4186 from KARCO Engineering, LLC., including test conditions, test vehicle information, test article specifications, manufacturer drawings and any deviations from the drawings in the as-tested configuration. This letter should not be considered complete documentation of this test without consideration of the test report and deliverable CD.

Sincerely yours,

A handwritten signature in black ink that reads "Frank D. Richardson".

Frank D. Richardson  
President  
KARCO Engineering, LLC.