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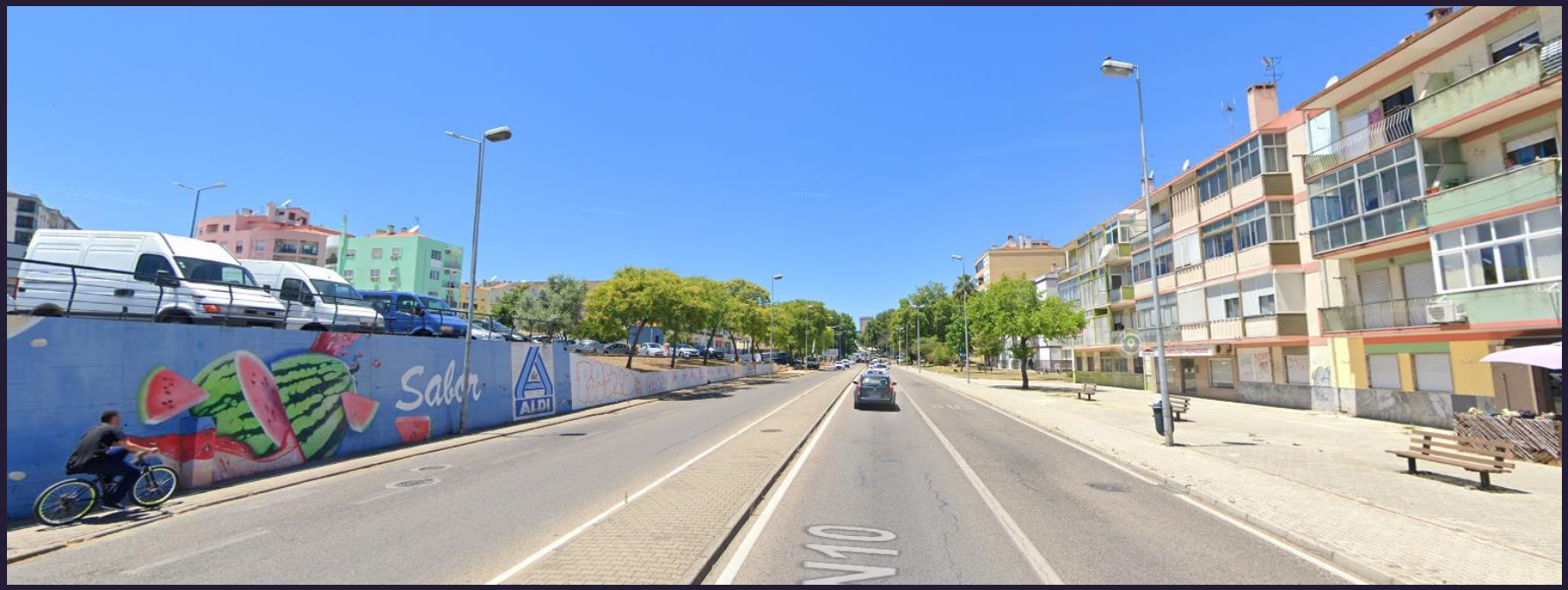

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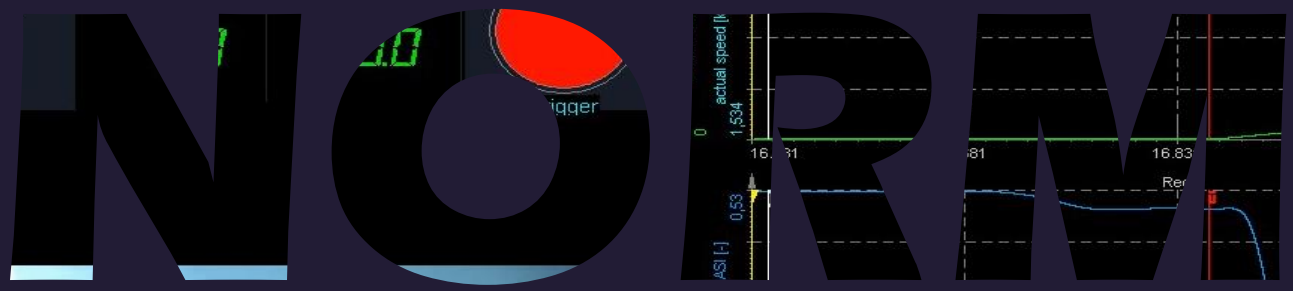
NORM
actual speed
1,534
0
16.83
ASI [-]
0,53


EN 12767
ACC YpreASI [-]
0,35
2,59
16.681
Rec

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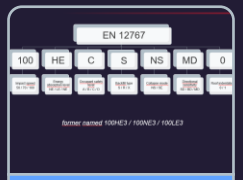
TOPICS

Crash tests of all times

Certified Test Centre

EN 12767, the norm



Notulation of the norm

Behavior of NE / HE / LE

Impact of crash at 50, 70, 90

Portofolio overview

Crashtest at Tecpoles

Certification

Production process Tecpoles

Workshop

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CRASH TESTS OF ALL TIMES

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- ✓ Own certified Testcentre at facilities of Tecpoles
- ✓ Certified body makes the tests when needed
- ✓ When temperature above 10 degrees Celsius, Tecpoles has own Test possibilities during year for developments & innovations

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EN 12676 Certified Test & Research centre

Tecpoles Test & Research centre

Tecpoles production facility Poland

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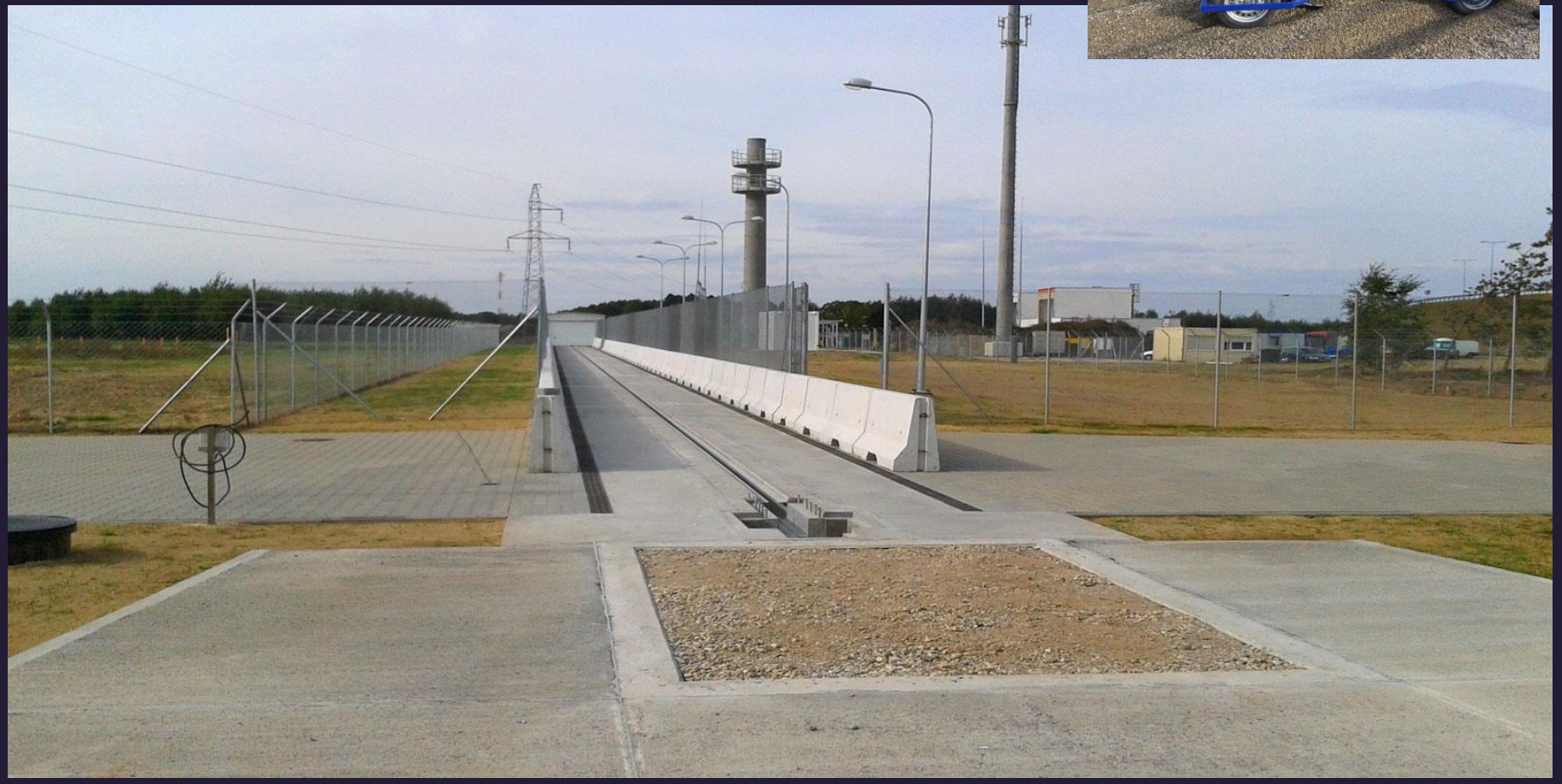

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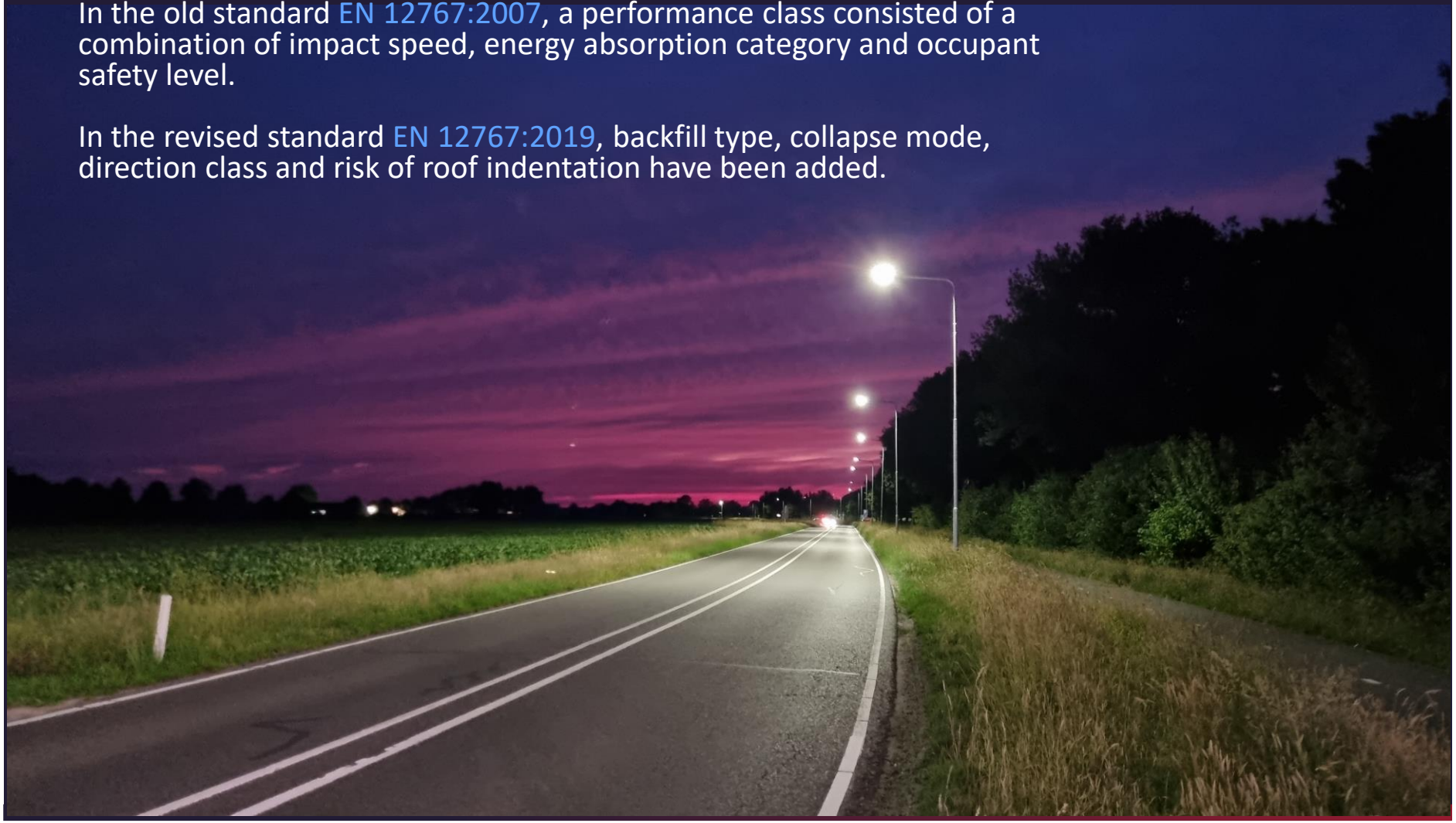
Revised EN 12767

In the revision of the passive safety standard the notation of the performance classes has changed.

In the old standard EN 12767:2007, a performance class consisted of a combination of impact speed, energy absorption category and occupant safety level.

In the revised standard EN 12767:2019, backfill type, collapse mode, direction class and risk of roof indentation have been added.



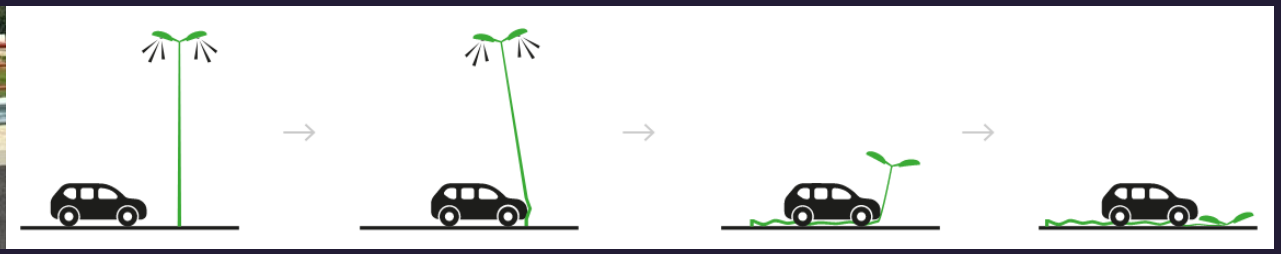
What is the safest choice?

With every road situation this depends on the presence of obstacles (pedestrians, cyclists, trees, etc.) and the speed limit of the road itself.

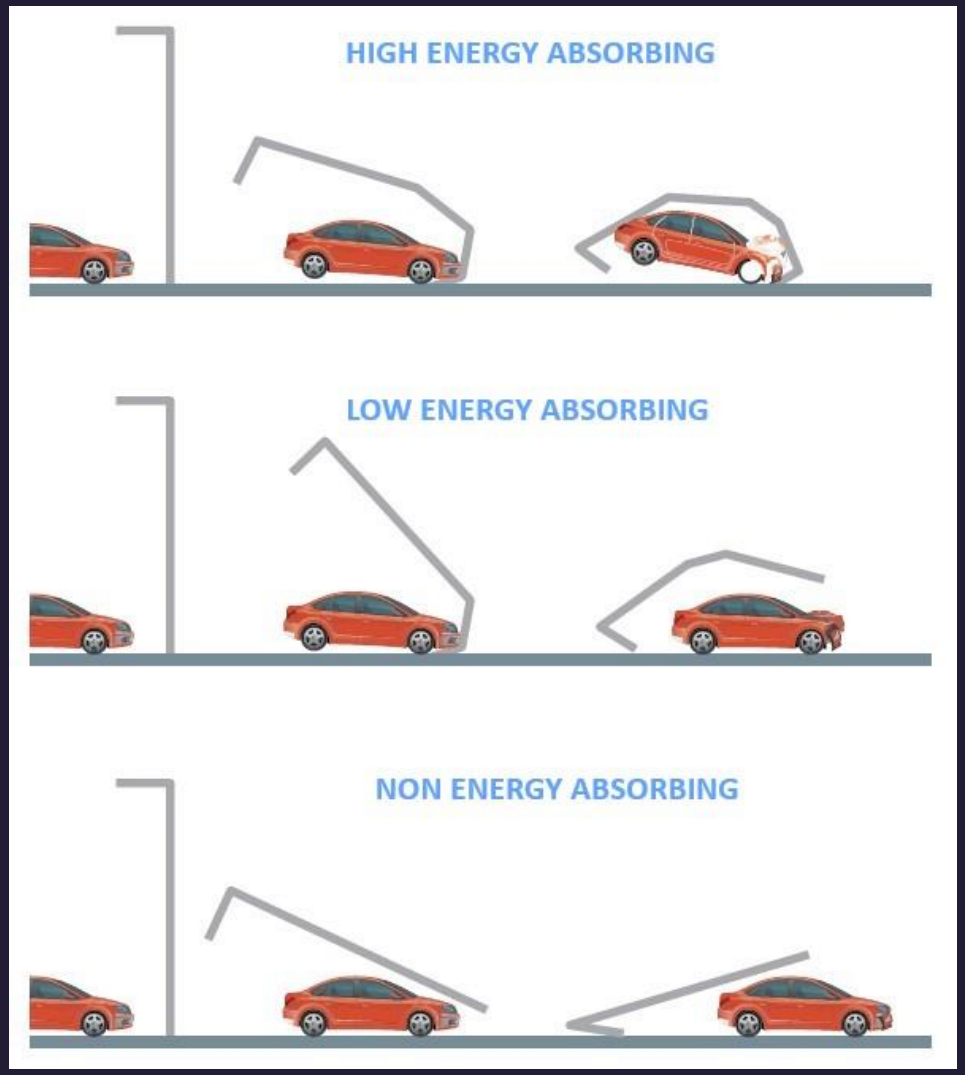
If you want to make a safe choice easily, then placing a crash barrier is often a solution.

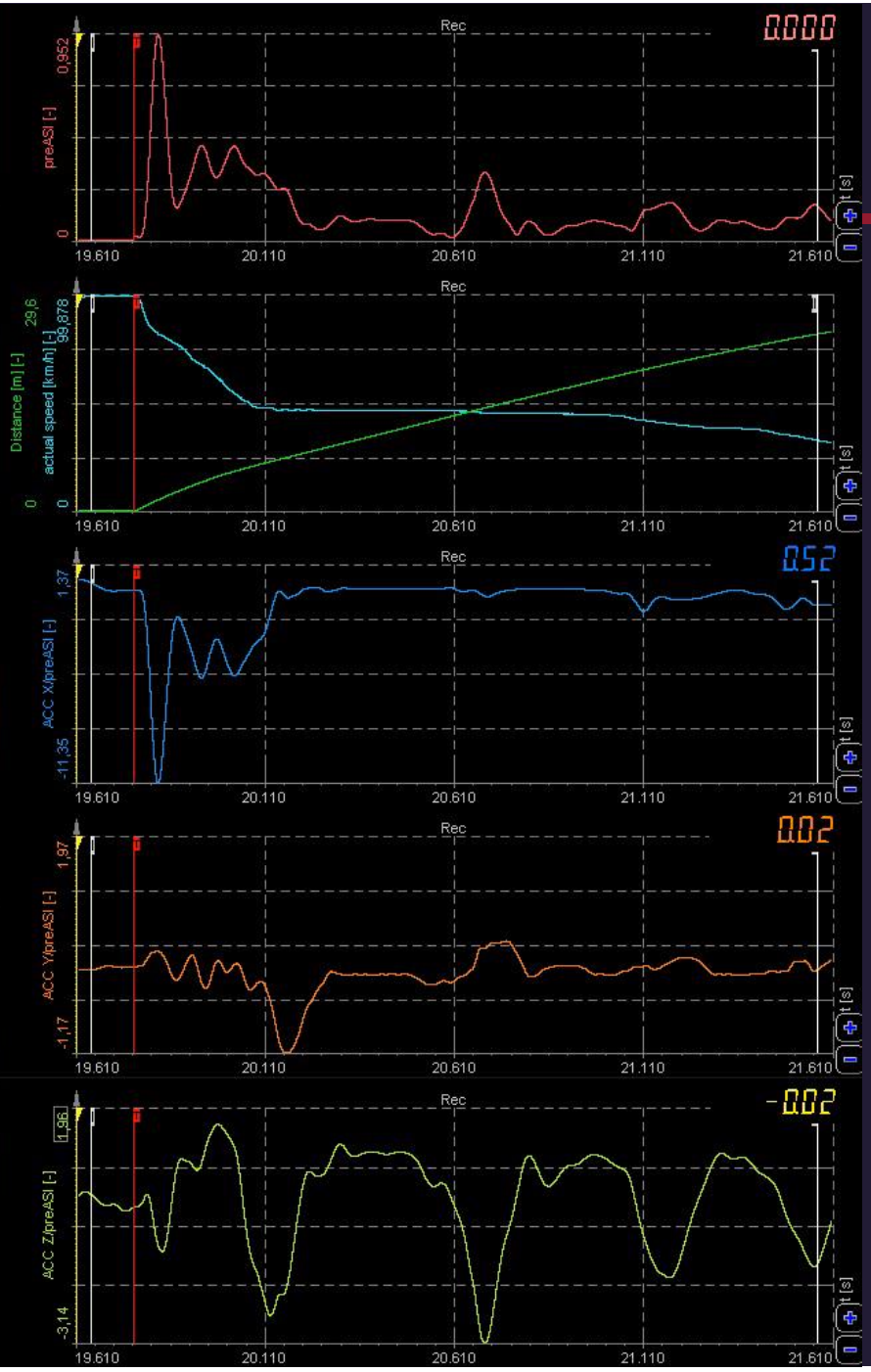
However, a crash barrier is a costly solution and is not always desirable in the environment.

A more cost effective and attractive alternative is the installation of passive safe products.



BEHAVIOR OF NE / HE / LE





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CERTIFICATION

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Prüfbericht Nr: 0-05 EPRO_20330_02
Passive Sicherheit von Tragkonstruktionen
EN 12767 Ausgabe: 2019-11-01
Anprallprüfungen zur Leistungsartermittlung

Prüfobjekt: Stahlmasten
Type :CC Slip base V2.0
CC 3m und CC12m
Prüfingenieur: Manfred Harrer
Prüfort: Kragola, Polen
Prüfdatum: 13.10. – 15.10.2020

ALTRAN
Akkreditierte Prüfstelle
Altran Austria GmbH
PSID 0307
8101 Gratkorn / Graz
Concept Straße 1

Annex 1

Confirmation

The accredited Laboratory of the company:

Altran Austria GmbH
Concept Straße 1
8101 Gratkorn

Herby confirms that the tested lighting columns of steel according the
Passive safety of support structures of road equipment EN 12767 Edition : 2019-11-01
made the lighting columns with the type declaration for type CC Slip base V2.0:

Lighting column 3 m type declaration CC 3m 60/102/2 Slip base V2.0
with 1,5 meter extension arm for lighting
up to and including
Lighting column 12 m type declaration CC 12m 62/230/4 Slip base V2.0
with 3 meter extension arm for lighting
of the manufacturer:

Europoles GmbH & Co. KG
Ingolstädter Straße 51
92318 Neumarkt
Or
Europoles Sp. z o. o. w upadłości
ul. Marszałkowska 126/134 lok. 1 piętro
00-117 Warszawa/ Poland

Achieves a categorization of:

100-NE-B-S-SE-SD-0 , 70-NE-B-S-SE-SD-0 und 50-NE-B-S-SE-SD-0

Summary of inspection results:

Test declaration	Test vehicle [Model]	Colum length [m]	Impact angle [°]	Impact velocity [km/h]	Ricochet velocity [km/h]	ASI [g]	THIV [km/h]	Energy abortation category	Passenger safety
M1_P_100_120	VW Polo	12m	20°	97,57 km/h	85,00 km/h	0,5 g	11 km/h	NE	B
M2_P_35_120	VW Polo	12 m	20°	35,03 km/h	25,65 km/h	0,3 g	6 km/h	NE	B
M3_P_35_30	VW Polo	3 m	20°	35,40 km/h	30,43 km/h	0,1 g	4 km/h	NE	B

Pretests at a speed of 35 km/h with the calibration car, have shown the compliance to the boundary conditions for the testing vehicle according to EN 12767 Edition : 2019-11-01, Apendix E.

Altran Austria GmbH / Prüfstelle PSID 0307 Gratkorn 16.03.2021

Dipl. Ing. Wolfgang Körner / Leiter Prüfstelle

Prüfbericht Nr: 0-05 EPRO_20330_02
Passive Sicherheit von Tragkonstruktionen
EN 12767 Ausgabe: 2019-11-01
Anprallprüfungen zur Leistungsartermittlung

Prüfobjekt: Stahlmasten
Type :CC Slip base V2.0
CC 3m und CC12m
Prüfingenieur: Manfred Harrer
Prüfort: Kragola, Polen
Prüfdatum: 13.10. – 15.10.2020

ALTRAN
Akkreditierte Prüfstelle
Altran Austria GmbH
PSID 0307
8101 Gratkorn / Graz
Concept Straße 1

Anhang 1

Bestätigung

Die Prüfstelle der Firma:

Altran Austria GmbH
Concept Straße 1
8101 Gratkorn

bestätigt die Erfüllung der Anforderungen zur Kategorisierung von Lichtmasten aus Stahl nach
Passive Sicherheit von Tragkonstruktionen für die Straßenausstattung EN 12767
Ausgabe: 2019-11-01 für die Lichtmasten mit den Typenbezeichnungen für Typ CC Slip base V2.0:

Mast 3 m Länge, Bezeichnung CC 3m 60/102/2 Slip base V2.0
mit einem 1.5 Meter Beleuchtungs-Ausleger
bis zu und einschließlich
Mast 12 m Länge Bezeichnung CC 12m 62/230/4 Slip base V2.0
mit einem 3 Meter Beleuchtungs-Ausleger
des Herstellers:

Europoles GmbH & Co. KG
Ingolstädter Straße 51
92318 Neumarkt
Or
Europoles Sp. z o. o. w upadłości
ul. Marszałkowska 126/134 lok. 1 piętro
00-117 Warszawa/ Poland

eine Kategorisierung nach EN 12767 Ausgabe: 2019-11-01 von:

100-NE-B-S-SE-SD-0 , 70-NE-B-S-SE-SD-0 und 50-NE-B-S-SE-SD-0

Zusammenfassung der Prüfergebnisse:

Test declaration	Test vehicle [Model]	Colum length [m]	Impact angle [°]	Impact velocity [km/h]	Ricochet velocity [km/h]	ASI [g]	THIV [km/h]	Energy abortation category	Passenger safety
M1_P_100_120	VW Polo	12m	20°	97,57 km/h	85,00 km/h	0,5 g	11 km/h	NE	B
M2_P_35_120	VW Polo	12 m	20°	35,03 km/h	25,65 km/h	0,3 g	6 km/h	NE	B
M3_P_35_30	VW Polo	3 m	20°	35,40 km/h	30,43 km/h	0,1 g	4 km/h	NE	B

Vorangegangene Prüfung bei 35 km/h mit dem Kalibrier-Fahrzeug ergaben die Einhaltung der Kalibrier-Grenzwerte nach DIN 12767 Ausgabe: 2019-11-01, Anhang E.

Altran Austria GmbH / Prüfstelle PSID 0307 Gratkorn 16.03.2021

Dipl. Ing. Wolfgang Körner / Leiter Prüfstelle

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