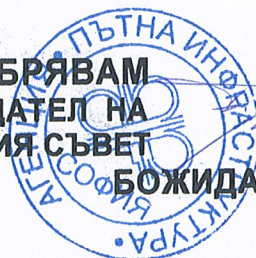




РЕПУБЛИКА БЪЛГАРИЯ
МИНИСТЕРСТВО НА РЕГИОНАЛНОТО РАЗВИТИЕ И БЛАГОУСТРОЙСТВОТО

АГЕНЦИЯ „ПЪТНА ИНФРАСТРУКТУРА”

ОДОБРЯВАМ
ПРЕДСЕДАТЕЛ НА
УПРАВИТЕЛНИЯ СЪВЕТ
БОЖИДАР ЙОТОВ



ТЕХНИЧЕСКИ ПРАВИЛА

за приложение на ограничителни системи за пътища по Републиканската пътна мрежа

СЪСТАВИЛ:

(н.с.инж. Николай Стоянов)

ДИРЕКТОР
на ЦИПТНЕНС:

(н.с.инж. Веселин Димитров)



2010 г.

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пътища от 1994 г.

1.	2
1.1	2
1.2	2
1.3	3
1.4	5
2.	6
2.1	6
2.2	6
2.3	7
2.4	7
2.5	8
2.6	9
2.7	9
2.8	9
3.	10
3.1	10
3.2	10
3.3	11
3.3.1	11
3.3.1.1	12
3.3.1.2	14
3.3.1.3	15
3.3.1.4	16
3.3.1.5	20
3.3.2	21
3.3.3	22
3.3.4	23
3.4	23
3.4.1	23
3.4.1.1	24
3.4.1.2	24
3.4.2	26
3.4.3	26
3.4.4	27
3.5	27
3.5.1	27
3.5.1.1	28
3.5.1.2	28
3.5.1.3	28
3.5.1.4	28
3.5.2	28
3.5.3	28
3.5.4	29
3.6	30
3.6.1	30
3.6.1.1	30
3.6.1.2	30
3.6.1.3	31
3.6.2	31
3.7	31
3.7.1	31
3.7.2	32
3.7.3	32
3.7.4	32
4.	33

:

EN 1317

1.

1.1

EN 1317

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-
-
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1.2

EN 1317-1:2010, 1:
EN 1317-2:2010, 2:
EN 1317-3:2010, 3:
ENV 1317-4, 4:
prEN 1317-4, 4:
(: ENV 1317-4:2001
EN 1317-5, 5:
prEN 1317-6, 6:
(:)

prEN 1317-8,

8:

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1.3

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1.3.1

1.3.2

1.3.3

1.3.3.1

1.3.3.2

1.3.4

1.3.5

1.3.6

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1.3.7

1.3.8

1.3.9

1.3.10

ENV 1317-4.

1.3.11

-
(VI), (W)

EN 1317-2.

1.3.12

1.3.13

1.3.14

EN 1317.

1.3.15

ENV 1317-4.

EN 1317-3,

1.3.16

EN 1317-2.

1.3.17

1.3.18

1.3.18.1

-

1.3.18.2

1.3.19

EN 1317-2

1.3.20

ENV 1317-4

1.3.21

EN 1317-3

1.3.22

EN 1317-3.

1.3.23

() – W

EN 1317-2.

1.3.24

EN 1317

1.3.25

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1.3.26

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1.4

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2.
2.1

EN 1317 „

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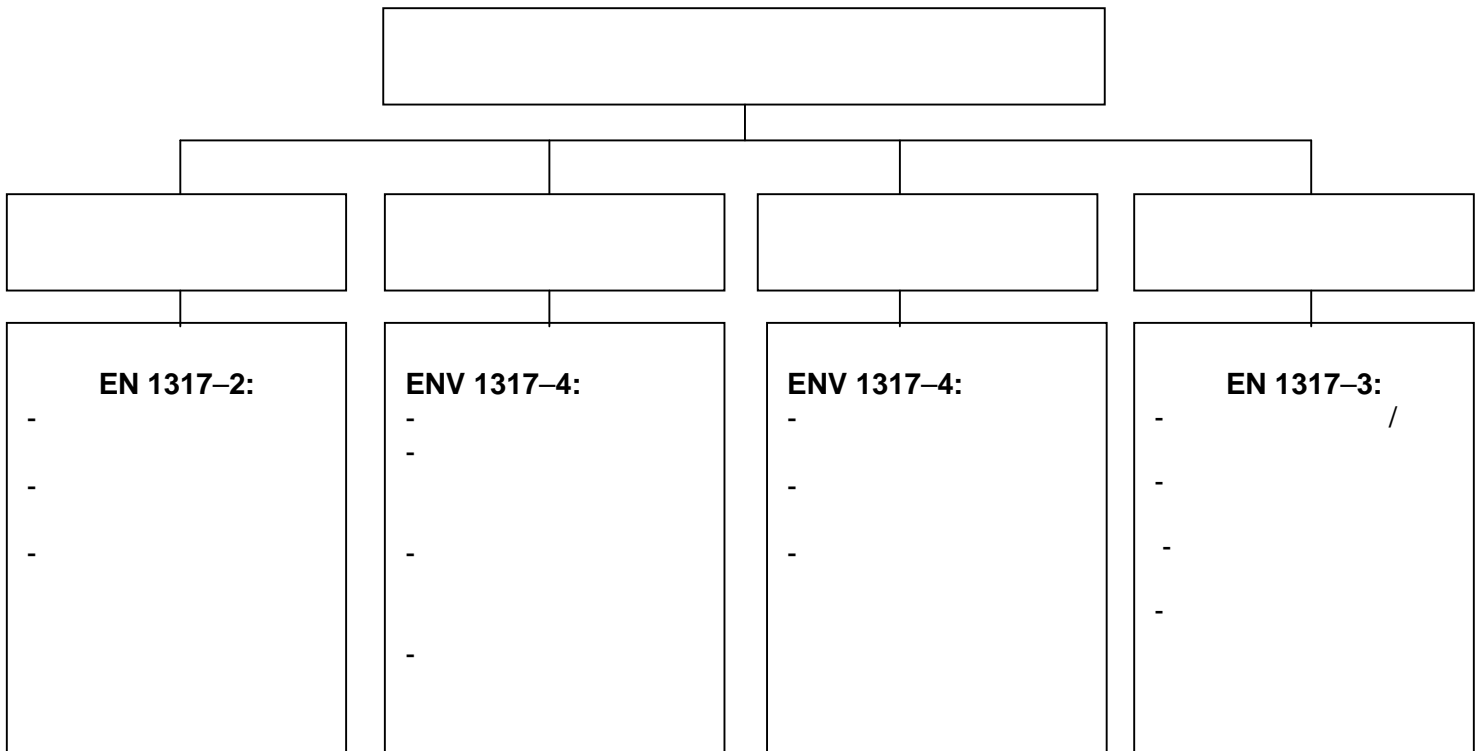
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EN 1317.
EN 1317 (1).

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EN 1317



2.2

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EN 1317-2

3

EN 1317-2).

3

2.3

ENV 1317-4

1.

1

:	N2	H1	H2	H4b
N2	N2	N2	H1	H2
H1	N2	H1	H1	H2
H2	H1	H1	H2	H2
H4b	H2	H2	H2	H4b

2.4

1317-4

- ,
 - ,
 - ,
 - ,
 (6 9)

2.

2

	- P2 A
	- P2 U

3 Y4.

Z4,

2.5

EN 1317-3

-
 -
 -
 -

3. R (R.),
 3

V [km/h]				
	50 (R)	80 (R)	100 (R)	110 (R)
50	X			
60		X		
70		X		
80		X		
90			X	
100			X	
> 100				X

D8,

Z4.

2.6

7,5 cm.

2.7

EN 1317.

(

EN 1317-2 4.)

2.8

3.

3.1

-
-
-
-
-
-

EN 12767

3.3 3.7:

- 3.3:
- 3.4:
- 3.5:
- 3.6:
- 3.7:

3.2

-

- , , - 1,5 ;
- . :
- - 5
- ” , ” ,
- - , . ,

3.3

- - : , , 130 km/h, ,
- - : , , 30
- , > 500 ;
- - : ,
- V- : ,
- > 1 > 1:3, > 3 > 1:3, > 1
- > 76,0 mm > 76,1 mm > 3,0 mm > 2,9 mm V-
- > 1:3 V-

3.3.1

3.3.1.1
3.3.1.2;
3.3.1.3;
3.3.1.4.
3.3.2
3.3.3,
3.3.4.
2 4,
7.

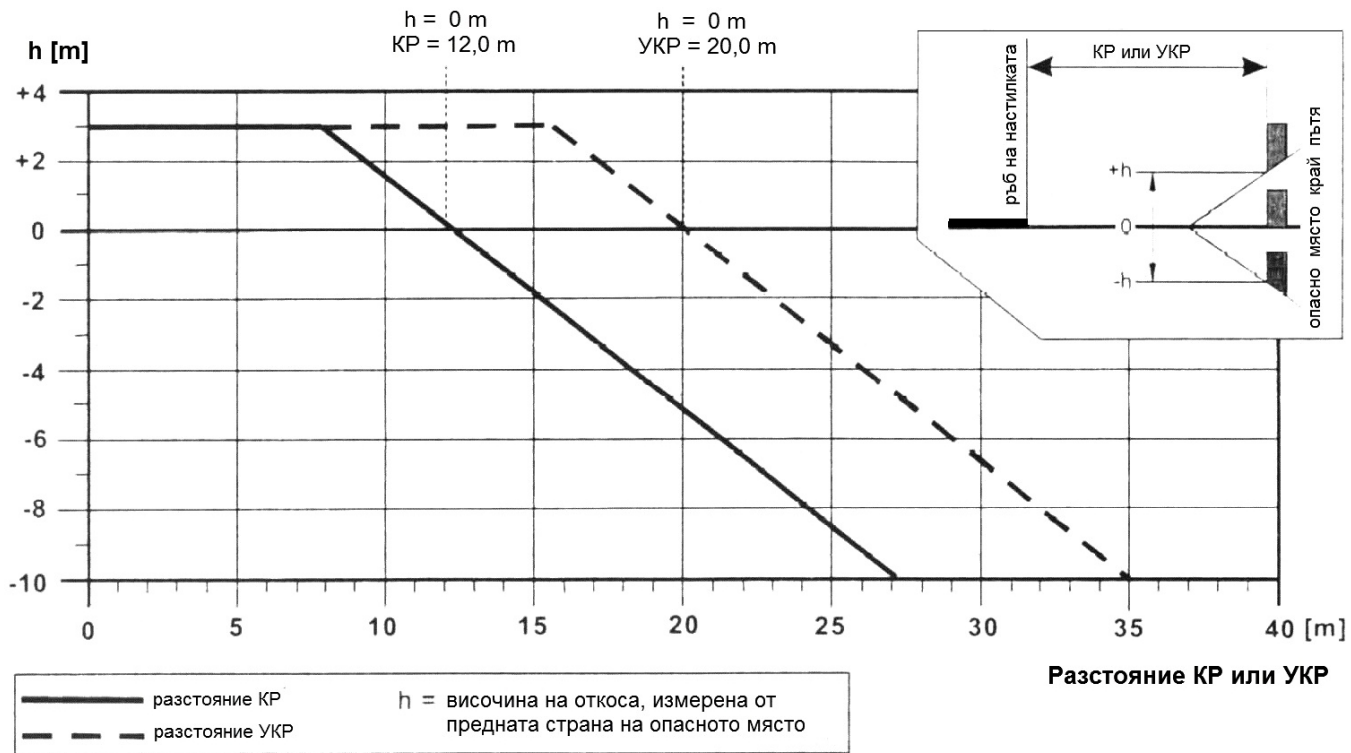
3.3.1.1

85 % V (V_{85}).
V > 100 / ;
V ≤ 100 / ;
V 80 / 100 / ;
V 60 / 70 / .
V

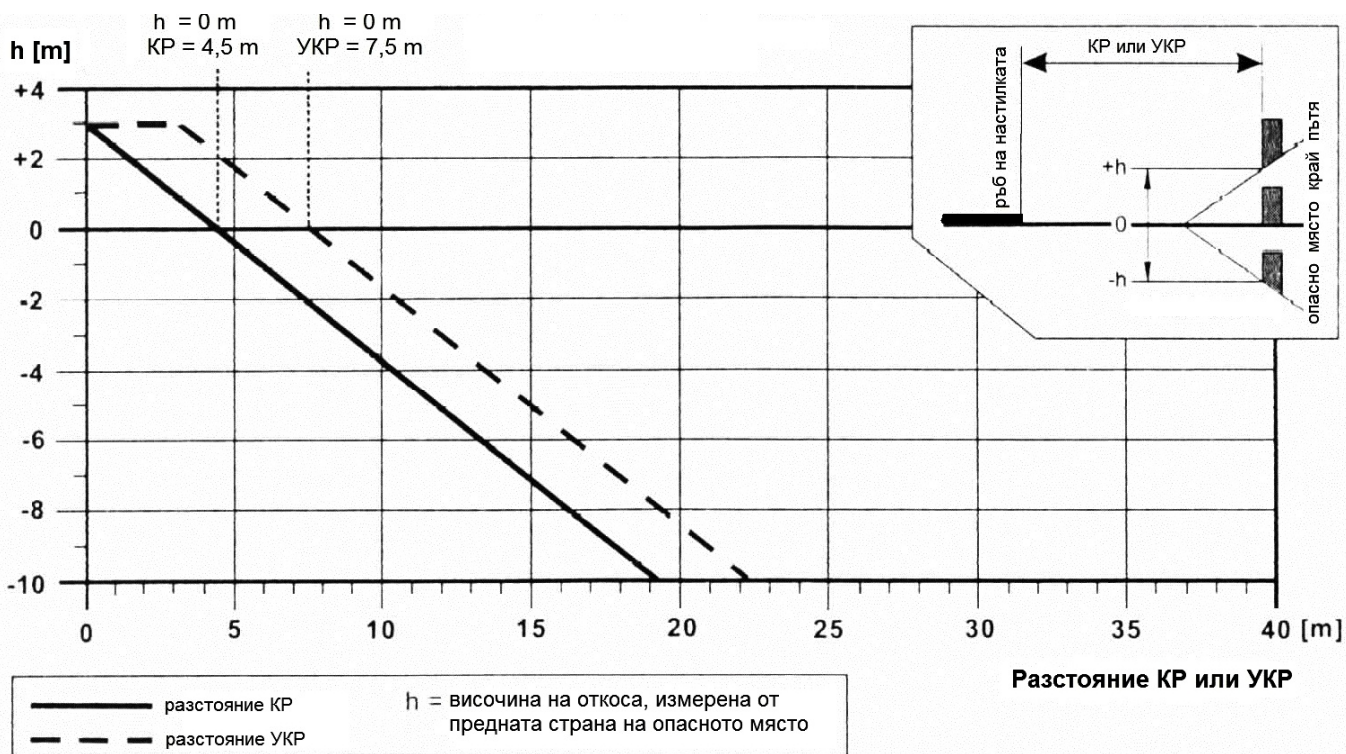
(. 5).
7 (. 3.3.1.2).

$V > 100 /$

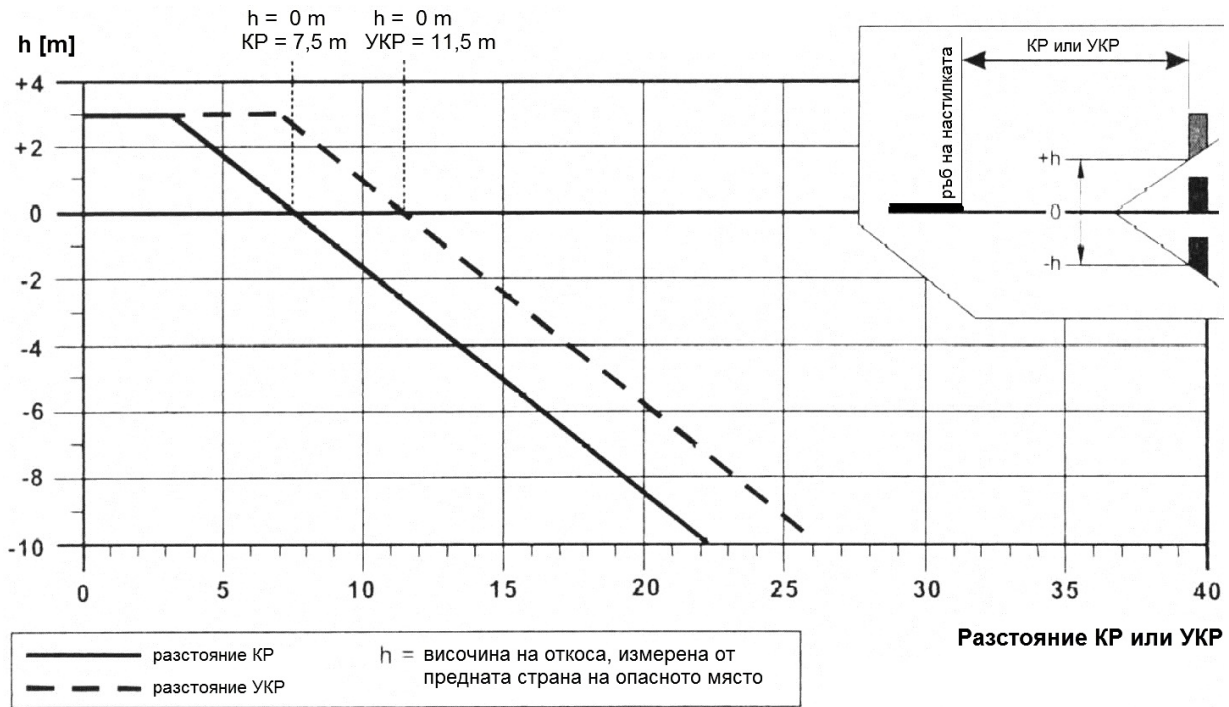
$V \leq 100 /$



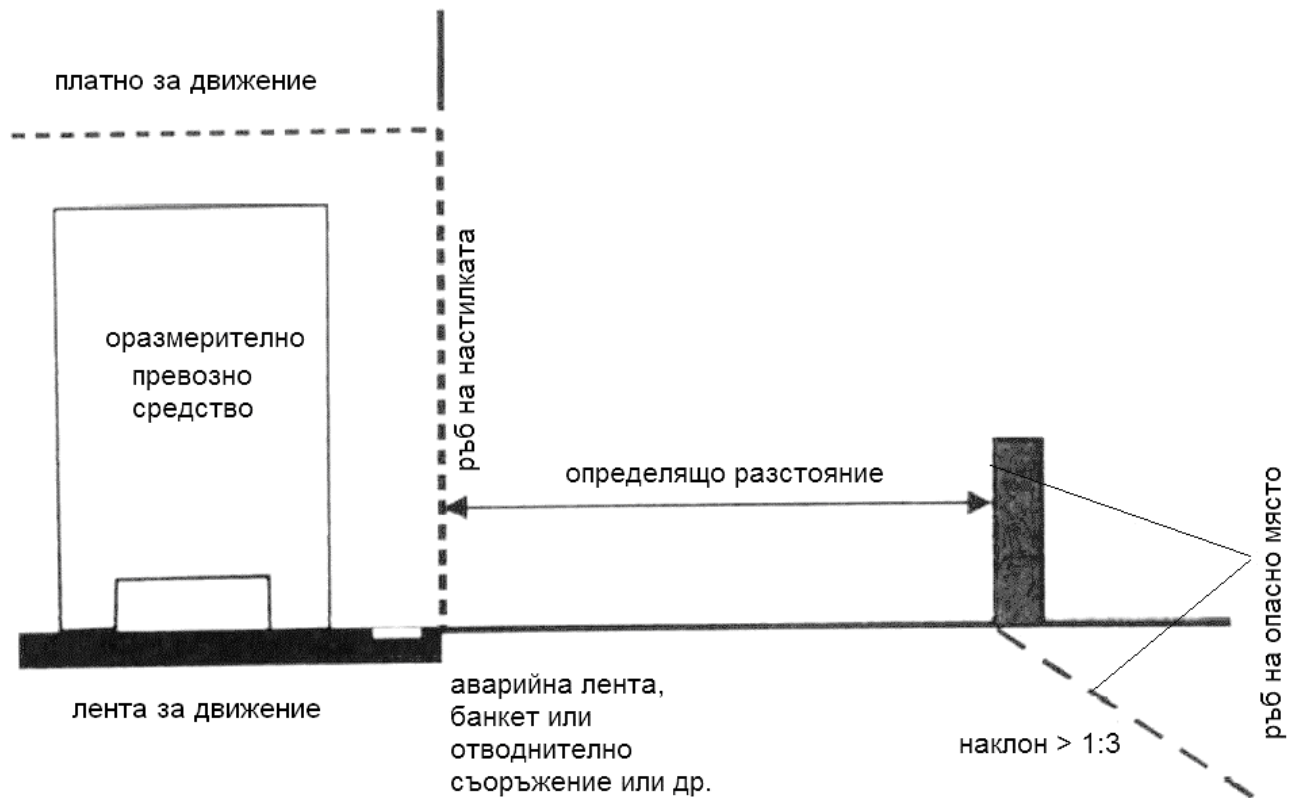
$V = 80 / 100 /$



$$V = 60 / 70 / 4$$



5



3.3.1.2

7, 7. EN 1317-2:2010,

4.

4

	T1			21
	T2			22
	T3			41 21
	N1			31
	N2			32 11
	H1			42 11
			L1	42 32 11
	H2			51 11
			L2	51 32 11
	H3			61 11
			L3	61 32 11
	H4a			71 11
	H4b			81 11
			L4a	71 32 11
			L4b	81 32 11

3.3.1.3

(W)

()

(, 6)

5.

0,5 m.

1,0 m 1,5 m

()

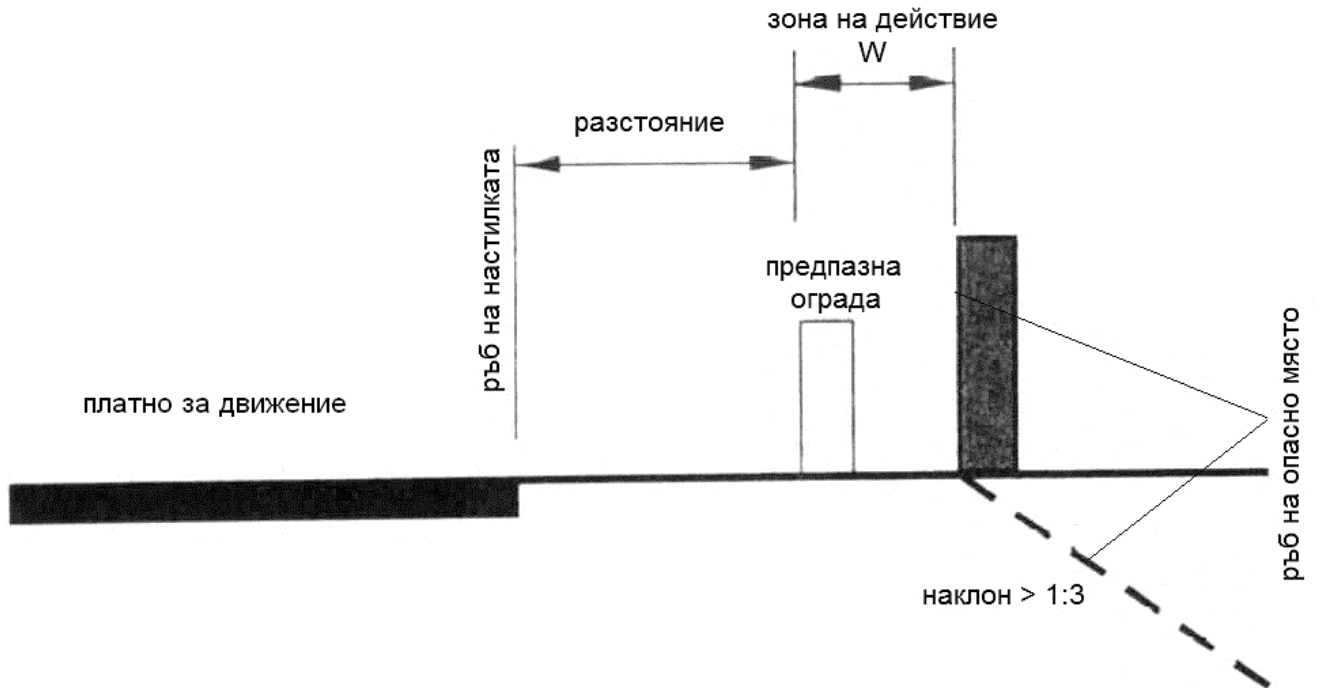
7,

-

W7

W6.

EN 1317-2



	m
W1	$W_1 \leq 0,6$
W2	$W_2 \leq 0,8$
W3	$W_3 \leq 1,0$
W4	$W_4 \leq 1,3$
W5	$W_5 \leq 1,7$
W6	$W_6 \leq 2,1$
W7	$W_7 \leq 2,5$
W8	$W_8 \leq 3,5$
:	W1.

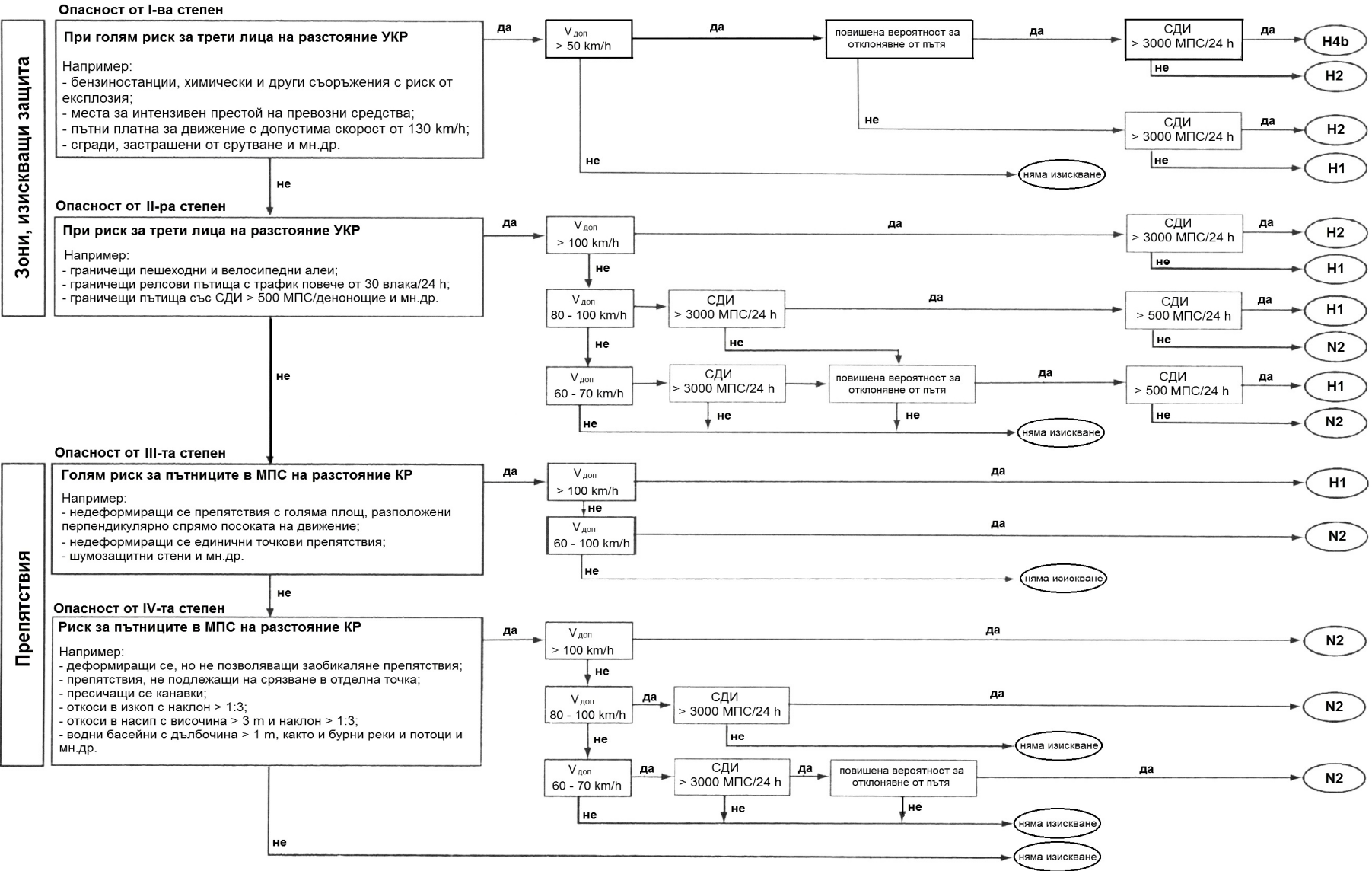
3.3.1.4

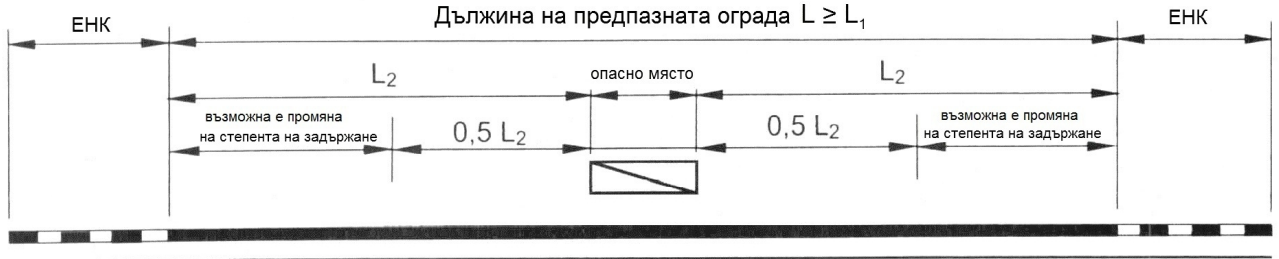
1. L_1 –
EN 1317-2

2. L_2 –

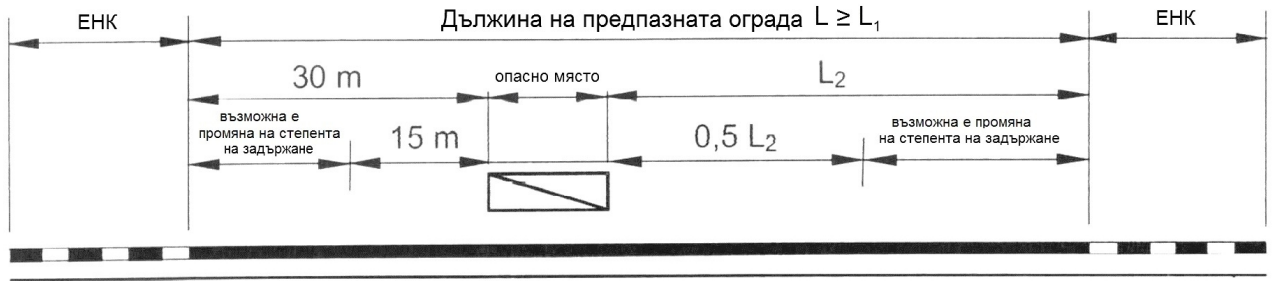
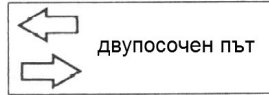
8 8).

Опасни места

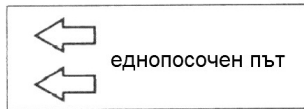




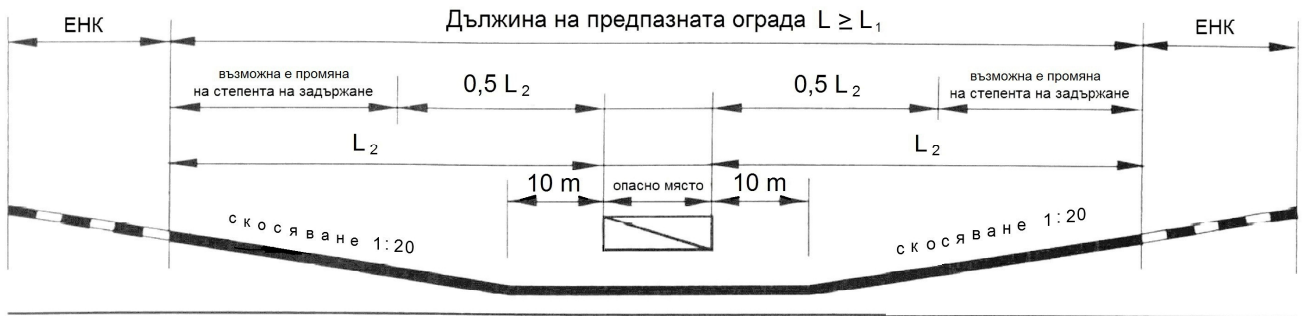
ЕНК - елементи за начало и край



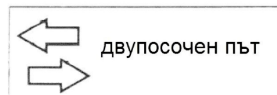
ЕНК - елементи за начало и край



/

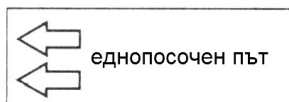


ЕНК - елементи за начало и край

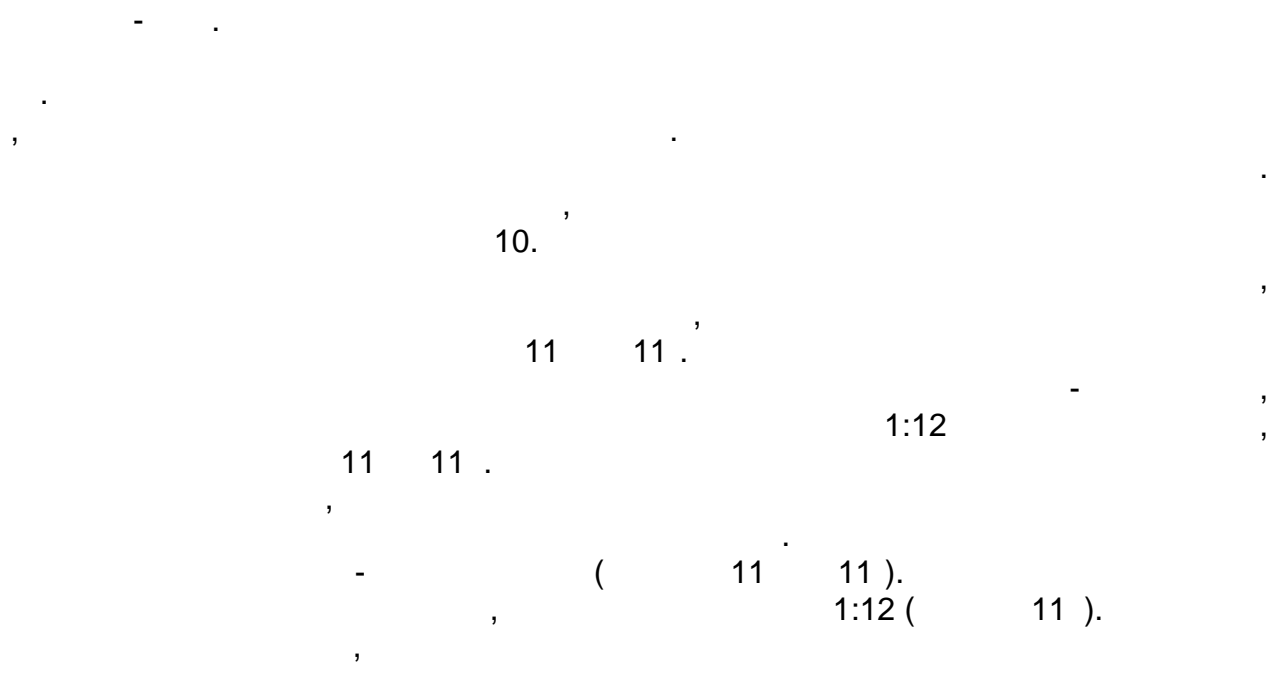




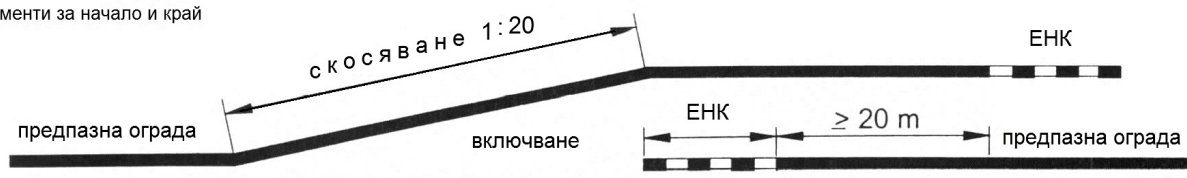
ЕНК - елементи за начало и край

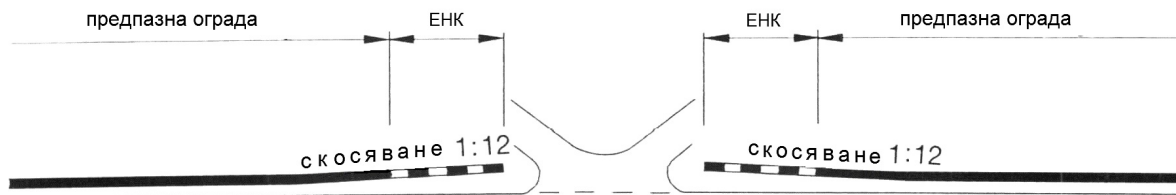


3.3.1.5

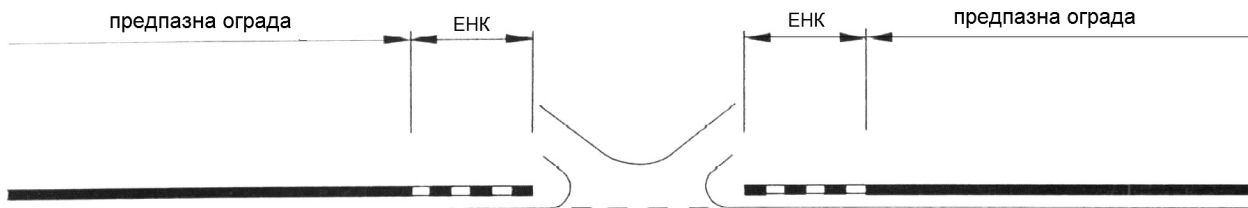


ЕНК - елементи за начало и край



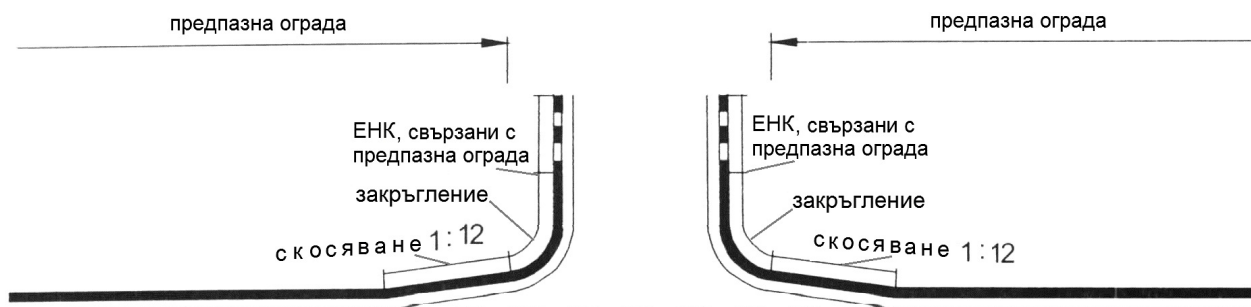


11

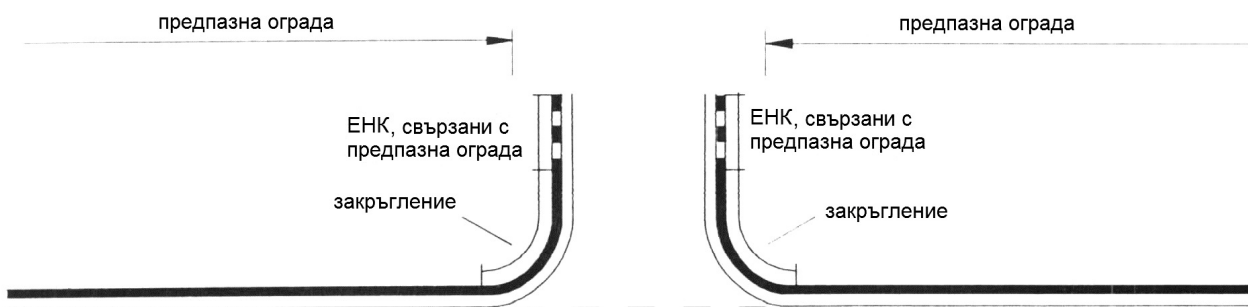


11

1:12



11



3.3.2

2.3.

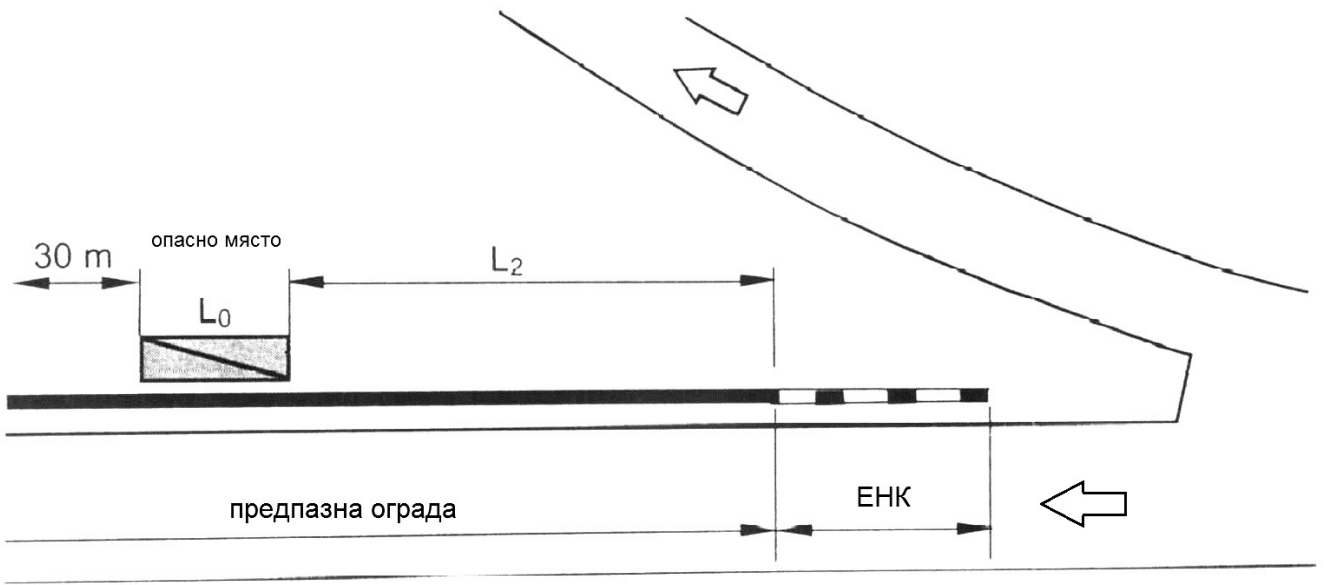
3.3.3

500

(12).

2.4.

12

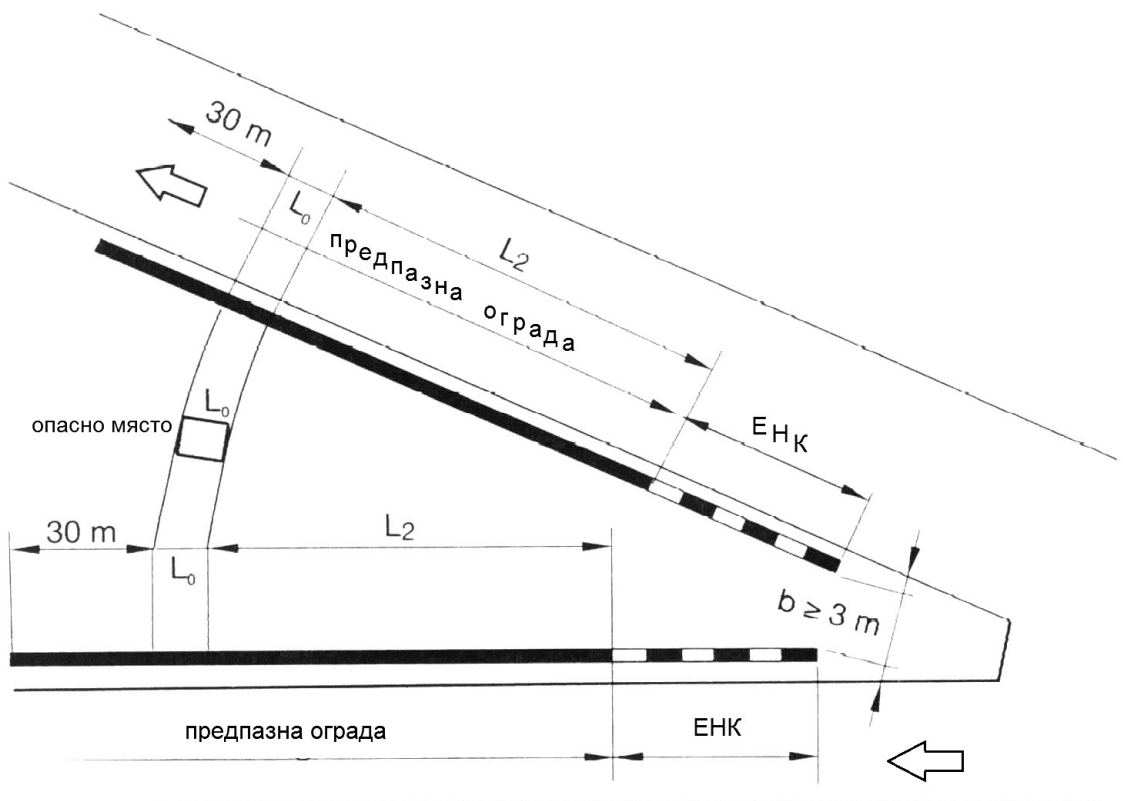


3 m

(

13).

13



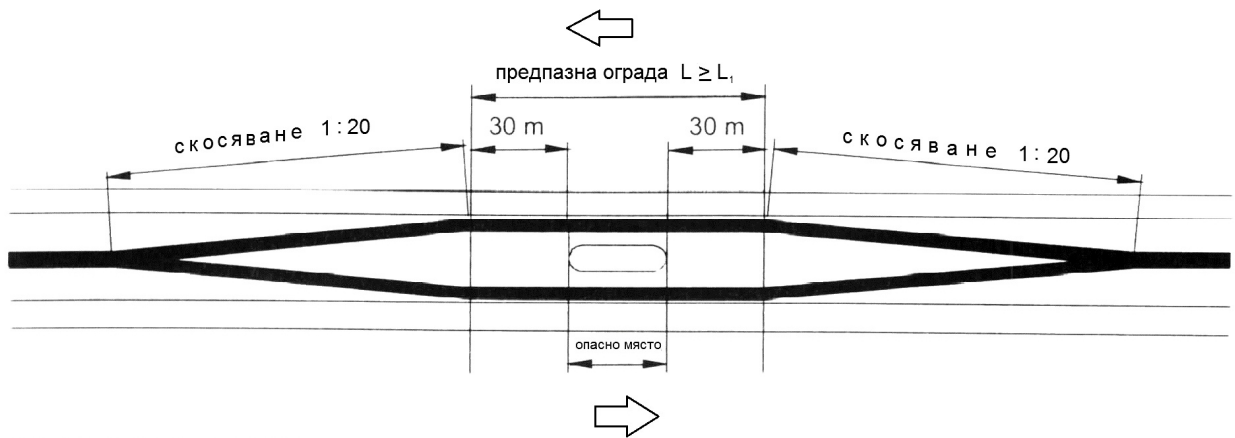
(3.4.1.1).

1:20.

$\geq 1:10,$

(3.4.2)

((3.4.3),
(3.4.4).



3.4.1.1

$V > 50 \text{ km/h}$

2.

> 3000

H4b.

$V > 50 \text{ km/h}$

1.

> 3000

H4b.

3.2.

3.4.1.2

W

(16 16).

W

W

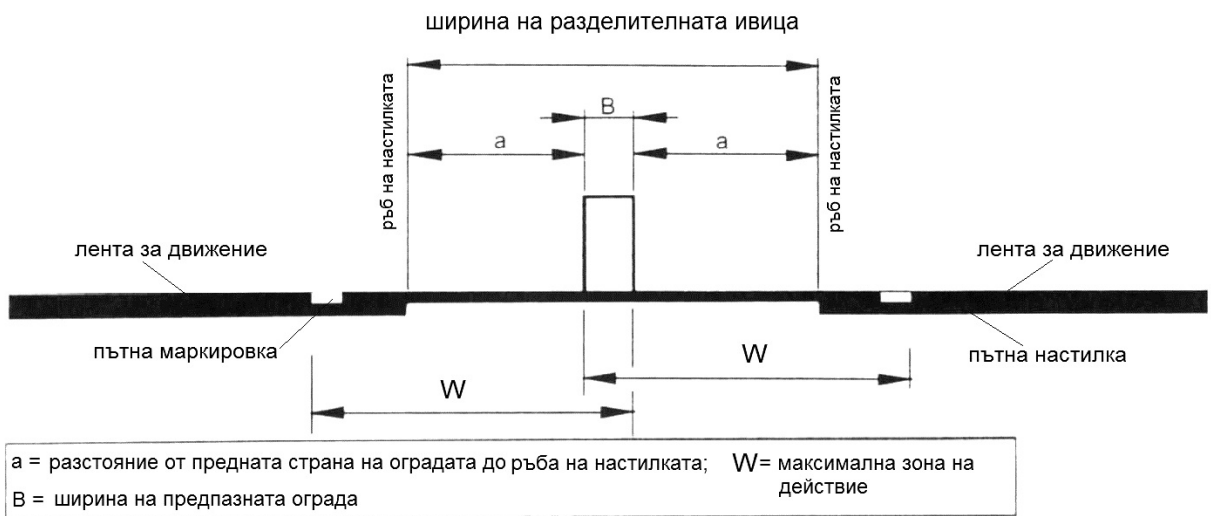
3.3.1.3.

(6),

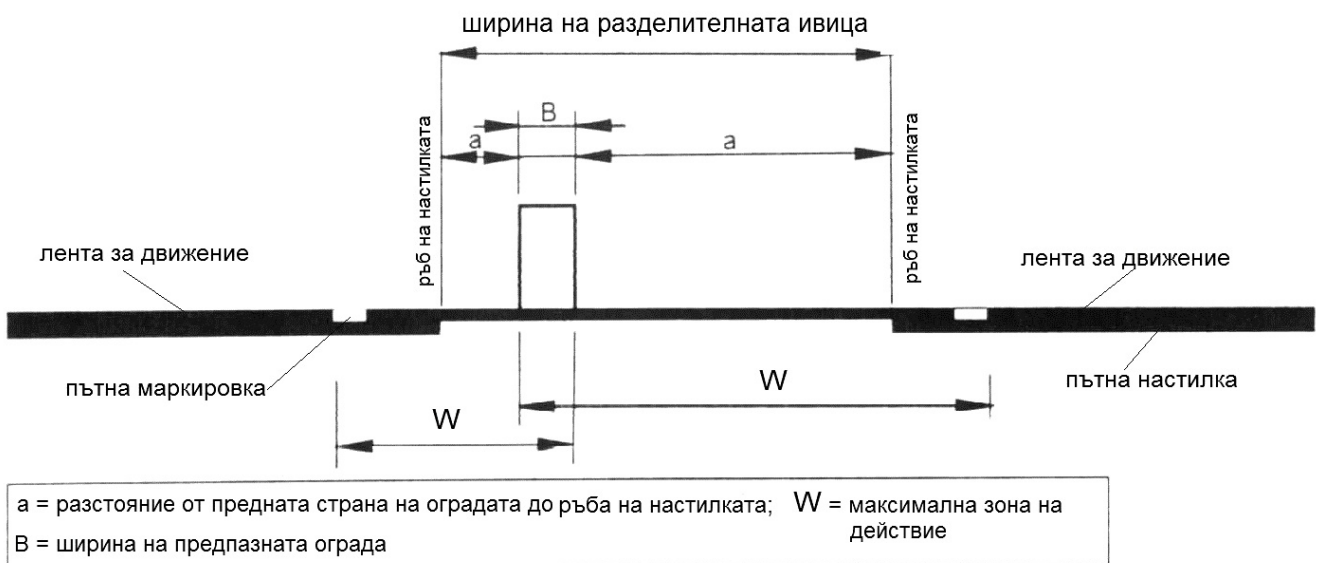
0,5 m.

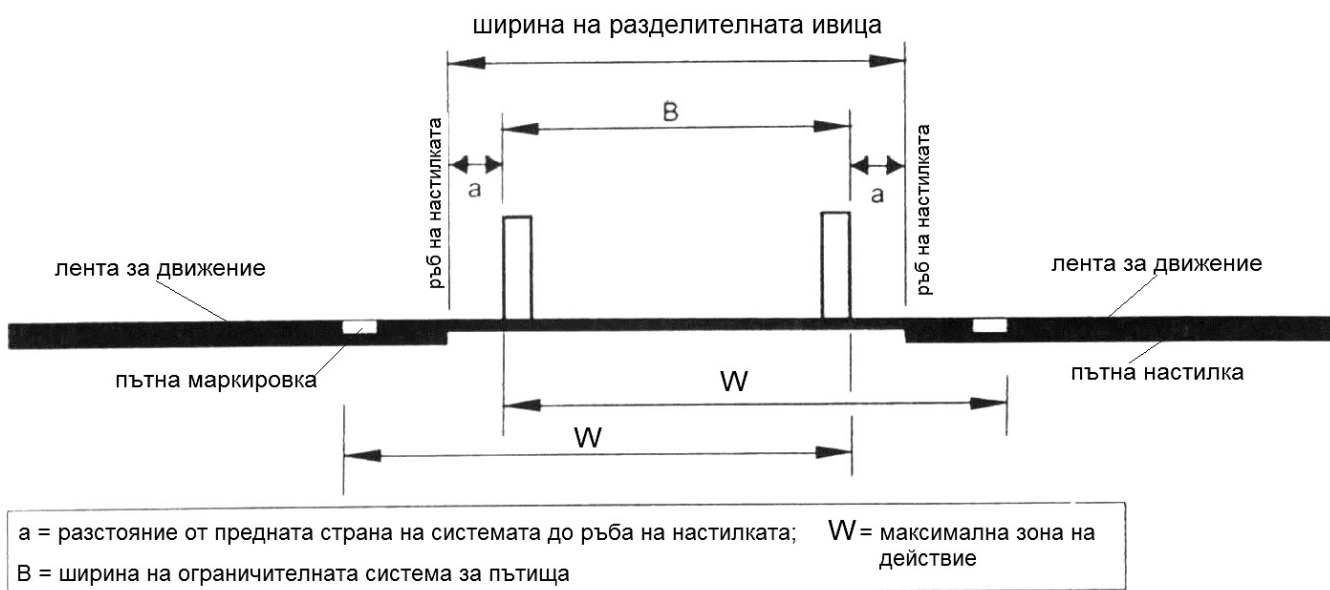
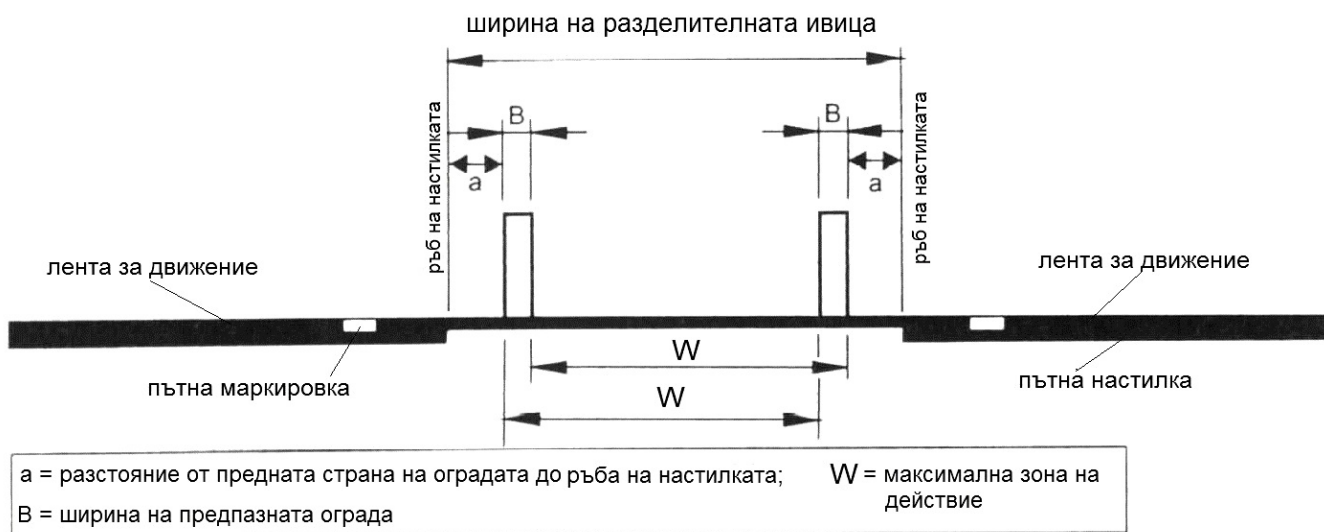
EN 1317-2,

16



16





3.4.2

3.4.3

2.4.
 3.3.1.4 L_2 (17).



3.4.4

3.3.1.4

L_2

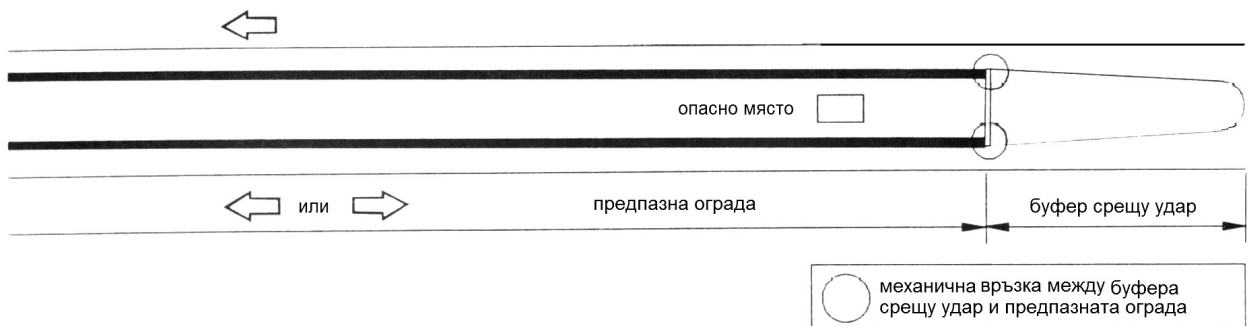
2.5.

(18).

60 km/h, 50 m

(2.5).

18



3.5

2 m.

3.3.

3.5.1

H1 N2,

3.5.1.1

7.

10 m

3.3.1.2.

7

	V > 100 km/h	V 100 km/h > 500	V 100 km/h 500	V 50 km/h
-	H4b	H2	H2	H1
V-	H2	H2	H1	

3.5.1.2

1317-2.

3.5.1.3

L₂

3.3.1.4.

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(19).

/

(3.3.1.4. ; 19).

2.3.

3.5.1.4

3.5.2

/

2.3.

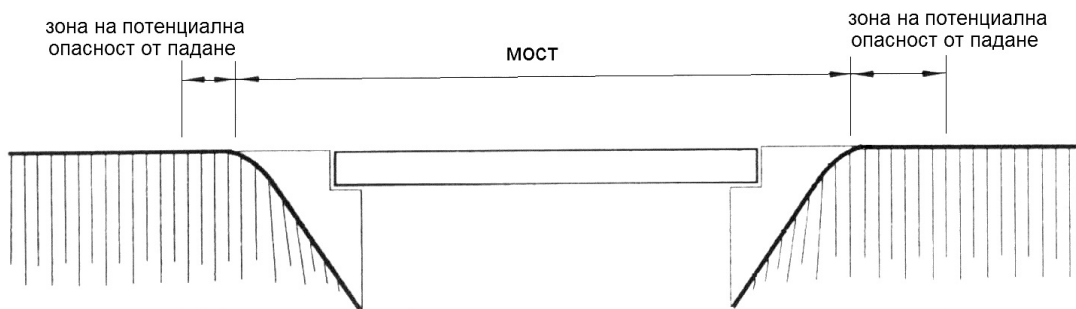
3.5.3

2.4.

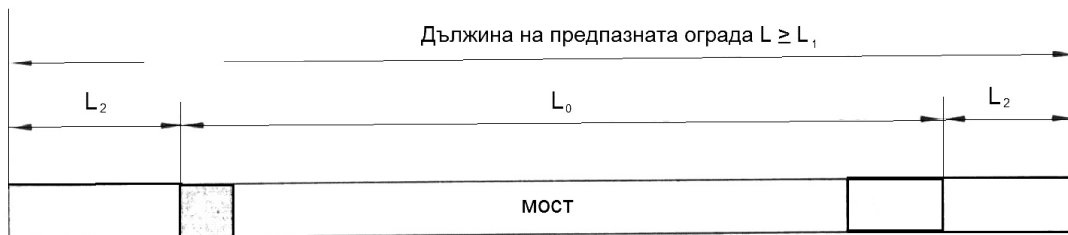
3.5.4

(, 20).
2.5.

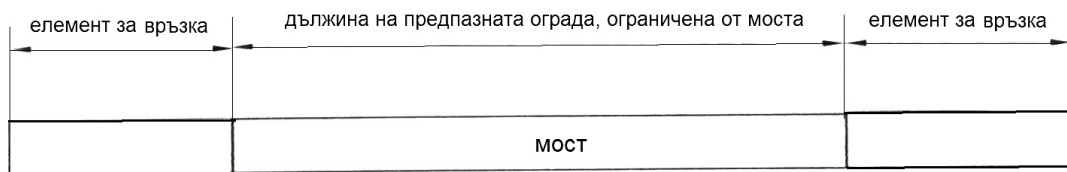
19



Случай а/: предпазна ограда върху мост



Случай б/: предпазна ограда върху мост с елемент за връзка





3.6

3.6.1

H1 N2,

3.6.1.1

- 1,5 m, - 1,5 m,
3.4.1.1 ()).

1,5 m /
3.5.1.1.

3.6.1.2

- 0,1 m - 0,1 m,
3.4.1.2. ()).

0,1 m /

0,1 m,
3.5.1.2.

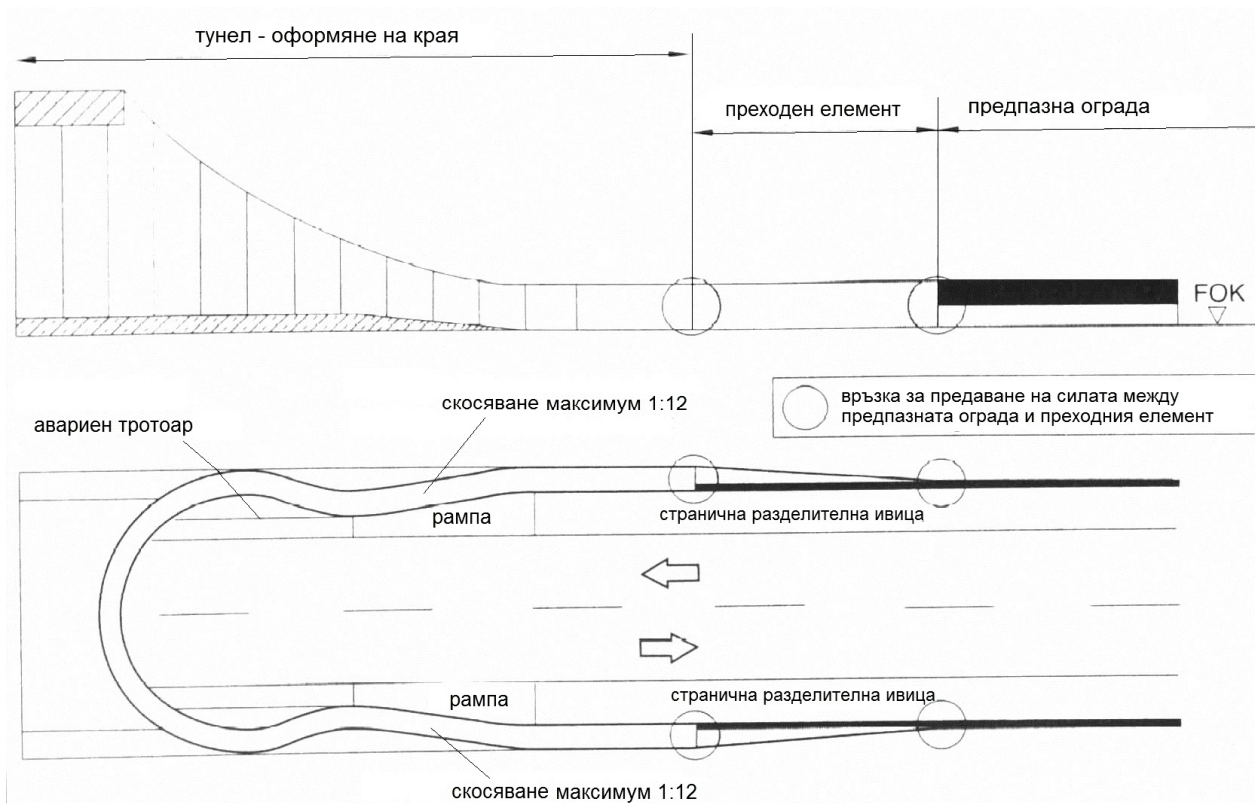
0,1m

3.6.1.3

3.6.2

. 2.3

21



3.7

3.7.1

- 4 m

0,1 m,

0,1 m

4 m,

3.3.1.2),

3.3

7

(), ()

3.3.1.3.

3.3.1.4.

3.7.2

2.3.

3.7.3

2.4.

3.7.4

2.5.

EN 1317

1

– **N 1317-2:2010**

	km/h	°	kg	
11	100	20	900	
21	80	8	1 300	
22	80	15	1 300	
31	80	20	1 500	
32	110	20	1 500	
41	70	8	10 000	
42	70	15	10 000	
51	70	20	13 000	
61	80	20	16 000	
71	65	20	30 000	
81	65	20	38 000	

2

– **EN 1317-2:2010**

A	ASI ≤ 1,0		THIV ≤ 33 km/h
B	ASI ≤ 1,4		
	ASI ≤ 1,9		

3

– **EN 1317-2:2010**

		ASI – THIV	(VCDI)	
1	21	21	21	21
2	22	22	22	22
3	41 + 21	21	21	41
N1	31	31	31	31
N2	32 + 11	32 + 11)	32 + 11	32 + 11
H1	42 + 11	11	11	42 + 11
H2	51 + 11	11	11	51 + 11
H3	61 + 11	11	11	61 + 11
H4a	71 + 11	11	11	71 + 11
H4b	81 + 11	11	11	81 + 11
L1	42 + 32 + 11	32 + 11)	32 + 11	42 + 32 + 11
L2	51 + 32 + 11	32 + 11)	32 + 11	51 + 32 + 11
L3	61 + 32 + 11	32 + 11)	32 + 11	61 + 32 + 11
L4a	71 + 32 + 11	32 + 11)	32 + 11	71 + 32 + 11
L4b	81 + 32 + 11	32 + 11)	32 + 11	81 + 32 + 11
) : VCDI				
EN 1317-1.				

- EN 1317-2:2010

	m	B m
	2,2	10
	4,4	20

- EN 1317-3:2010

a)		[kg]	[km/h]
1.1.50		900	50
1.1.80		900	80
1.1.100		900	100
1.2.80		1300	80
1.2.100			100
1.3.110		1500	110
2.1.80	, ¼	900 ^{b)}	80
2.1.100			100
3.2.80		1300	80
3.2.100	15°	1300	100
3.3.110		1500	110
4.2.50		1300	50
4.2.80		1300	80
4.2.100	15°	1300	100
4.3.110		1500	110
5.2.80		1300	80
5.2.100	165°	1300	100
5.3.110		1500	110
a)	: 1 2 80		
b)	ATD () -		

(Za Zd) -

ENV 1317-4

Z	Za [m]	Zd [m]
Z1	4	4
Z2	6	6
Z3	4	
Z4	6	

(Da Dd)
EN 1317-3:2010

()	Da	Dd
	[m]	[m]
D1	0,5	0,5
D2	1,0	1,0
D3	2,0	2,0
D4	3,0	3,0
D5	0,5	≥ 0,5 3
D6	1,0	≥ 1,0 3
D7	2,0	≥ 2,0 3
D8	3,0	≥ 3,0 3

-
- ENV 1317-4

	e	-		[kg]	[km/h]	
			, ¼			
1			, ¼	900 kg	80	TT 2.1.80
P2	A	U	, ¼	900 kg	80	TT 2.1.80
			15°, 2/3 L	1300 kg	80	TT 4.2.80
	A	D	165°, 1/2 L	900 kg	80	TT 5.1.80
P3	A	U	, ¼	900 kg	100	TT 2.1.100
			-	1300 kg	100	TT 1.2.100
			15°, 2/3 L	1300 kg	100	TT 4.2.100
		D	165°, 1/2 L	900 kg	100	TT 5.1.100
P4	A	U	, ¼	900 kg	100	TT 2.1.100
			-	1500 kg	110	TT 1.3.110
			15°, 2/3 L	1500 kg	110	TT 4.3.110
		D	165°, 1/2 L	900 kg	100	TT 5.1.100

- ENV 1317-4

x	1	Da	[m]
			0,5
y	2	Dd	1,5
	3		3,0
	1		1,0
2	2,0		
y	3	3,5	
	4	> 3,5	