Road inspection protocol

CASE nr	

	Intro	
Road 1	Geometrics	
	Road and lane information	
	Office variables	
	Roadside information	
Road 2	Geometrics	
	Road and lane information	
	Office variables	
	Roadside information	
	Collision objects	

Additional protocols _____

U=Unknown
- = Not applicable
OT = other

Case number	

Road investigators		name
Road inspection duration		hh:mm
		start
		end
Road inspection date		yyyymmdd (if on-scene, write o-s)
Distance to accident site		hh:mm

GPS - Reference point	**x**	**y**
Reference point		

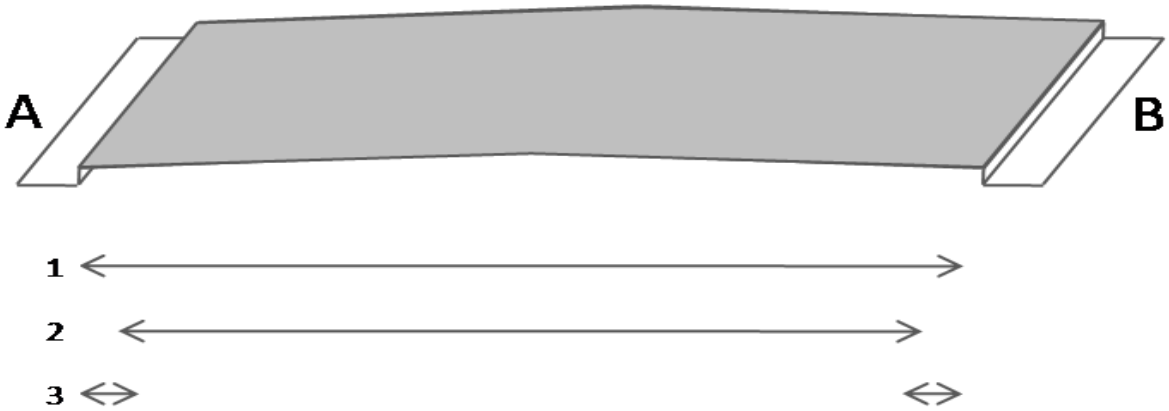
Accident site

Accident site type		1= one road, 2= crossroads, 3= T-junction, 4= Y-junction, 5= roundabout, 6= slip road/ ramp
Number of road legs (if roundabout or other)		

Road 1

Geometric data

Write directly in the picture and fill in the other information later

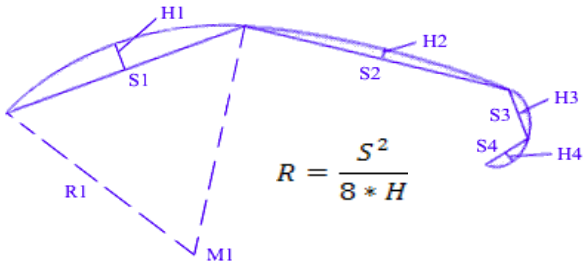


Roadway

1. Roadway width [m]	

	S	H
Curve measurements		
Curve radius, R [m]		

Curve radius calculations



Lane

Number of lanes	+

	1	2	3	4
2. Lane width [m]				
Road gradient [%]				
Lane cross fall [%]				
Track depth [cm]				

+=up hill -=down hill

Lane cross fall according to inspector [cm]	
Track depth according to inspectior [cm]	

Hard shoulder

	A	B	
3. Hard shoulder width [m]			#

Markings (mark in picture)

	1	2	3	4	5	6	
Markings							1= single dashed line, 2= double dashed line, 3= single solid line, 4= double solid line, 5= solid-dashed left, 6= solid-dashed right
Maintained marking							1= yes, it is intact, 2= no, it is worn
Rumble strips							1= no 2= yes, painted 3= yes, stamped 4= yes, grooved

Road information

General (see NVDB: http://www20.vv.se/NVDB_Webb/login.aspx)

Road number		
Road name		
Road administrator		1= state road, 2= municipal road, 3= private road
Road network classification (only on state roads)		1= European road, 2= national road, 3= county road

No state road

EuroRAP (see INTACT_Riktlinjer_för_insamling_av_data_som_inte_insamtalt_i_fält_Bilaga2.pdf)

EuroRAP-stars		1= 1 stars, 2= 2 stars, 3= 3 stars, 4= 4 stars, 5= not rated
EuroRAP-star rating date		yy/mm/dd

Road design

Road type		1= walking pace street, 2= city street, 3= rural road, 4= express road, 5=motorway
Roadway surface type		1= asphalt, 2= drainage asphalt, 3= gravel, 4= concrete, 5=brick or block

Median type		1= none, no median line 2= none, median line 3= in-level area, 4= elevated area, 5= lowered area
Median material (if median)		1= asphalt, 2= grass, 3= soil, 4= gravel, 5= leca
Median road barrier (if median)		1= none, 2= steel beam, 3= steel tube, 4= cable, 5= concrete

Vulnerable road user facilities	**A**	**B**	
Vulnerable road user facilities			1= mixed traffic, 2= wide shoulder, 3= bicycle lane separated from roadway with kerb, 4= bicycle lane separated from roadway, 5= totally separated from roadway (no road users allowed on the road)
Bicycle lane - Roadway separation width (only if seperated) [m]			
Separation strip type (if seperated)			1= in-level area, 2=elevated area, 3=lowered area
Separation strip material			1= asphalt, 2= grass, 3= soil, 4= gravel, 5= leca
Kerb height (only if kerb) [cm]			

Pedestrian crossing facilities		1= none present, 2= desire line only, 3= "gångpassage", 4= marked pedestrian crossing without traffic signal, 5= marked pedestrian crossing with traffic signal
Cycle crossing facilities		1= none present, 2= desire line only, 3= "gångpassage", 4= marked crossing without traffic signal, 5= marked crossing with traffic signal

No state road

Traffic (see Trafic flow maps: https://gis.vv.se/tfk2/tfk/indextikk.aspx?config=tikk

Average annual daily traffic (only on state roads)		
AADT, level of confidence (only on state roads)		
Average annual daily traffic for trucks (only on state roads)		
AADT for trucks, level of confidence (only on state roads)		
Measured in year (only on state roads)		yyyy

Average speed on road for cars, day (only on state roads)*		
*Traffic flow when measured		
Average speed on road for cars, night (only on state roads)**		
**Traffic flow when measured		
Period when measured (only on state roads)		yyyy-mm-dd hh:mm - yyyy-mm-dd hh:mm

No construction/maintenance zone

Construction / maintenance zone (see TIC:en)

Construction / maintenance zone		1= none, 2= construction zone, 3= maintenance zone, 4= utility zone
Traffic control plan (only if construction/maintenance zone)		1= yes, 2= no
Control of Traffic control plan		1= no, 2= yes, not approved, 3= yes, approved, 4= yes, unknown

Lane information

Lane id	**1**	**2**	**3**	**4**	
Original speed limit					w= walking speed, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130
Type of additional speed limit					1= none, 2= temporary, 3= variable (dynamic), 4= recomended
Additional speed limit (if variable, see TIC.en)					w= walking speed, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130
Microscopic road surface condition					(no values yet, describe…)
Macroscopic road surface condition					1= lane grooves, 2= tram rails, 3= potholes, 4= asphalt patchwork, 5= bitumen patchwork, 6= bleeding asphalt, 7= good condition

Road conditions

Lane id	**1**	**2**	**3**	**4**	
Road conditions					1= dry, 2=wettish, 3= wet, 4= thin ice, 5= thick ice/ packed snow, 6= fresh snow/slash, 7= hail
Road surface temperature [C°]					
Road surface contaminants					1= none, 2= mud, 3= gravel, 4= leaves, 5= oil, 6= fuel, 7= dropped tires, 8= discarded load, 9=standing water
Road friction coefficient (table value)					#
Road friction coefficient (measured value)					#

No snow ☐

Snow clerande and skid control (See TIC:en)

Snow depth [cm]					
Snow clearance					yy/mm/dd hh:mm
Skid-control					yy/mm/dd hh:mm

No junction ☐

Junction information

Junction travel direction					1= in, 2= out
Special lane type					text, for example public transport
Lane travel type					1= ahead, 2= right turn, 3= ahead+right turn, 4= left turn, 5= ahead+left turn, 6= all directions
Lane based traffic regulation					1= right-side priority rule, 2= priority road, 3= mandatory give-way, 4 =STOP-sign, 5= traffic light, 6= weaving, 7= entrance
Traffic light type (only if traffic light)					1= ordinary, red, yellow, green 2= Right-turn, 3= Left-turn, 4= Public transport signal
Traffic light function (only if traffic light)					1= In operation, 2= Amber flashing light, 3= Out of order

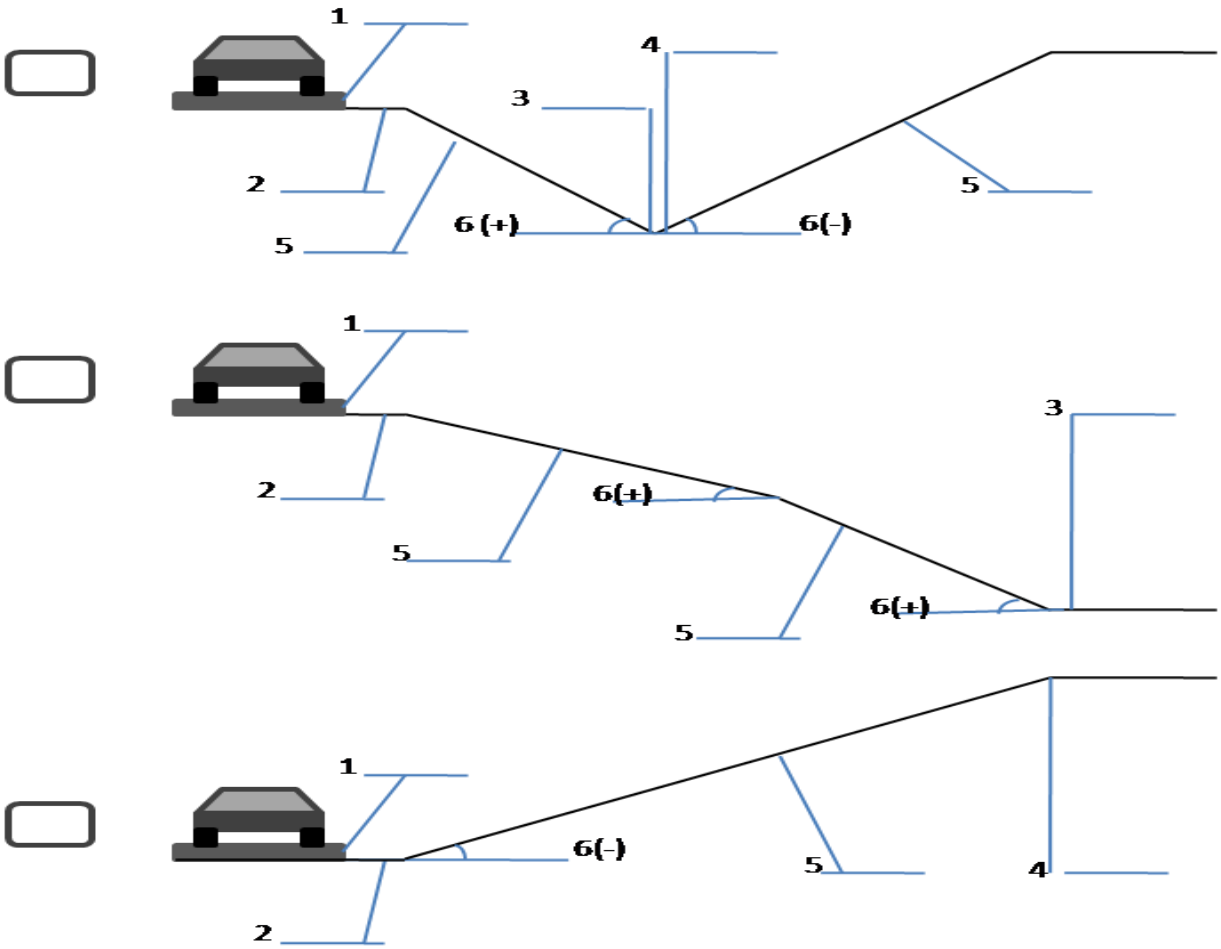
No traffic information ☐

Traffic at accident time (http://www3.vv.se/gbg_trafficinformation/)

State measure station					
Speed at accident time [km/h]					
Traffic flow at accident time					#
Traffic at accident time, level of confidence					#
Truck traffic at accident time					#
Truck traffic at accident time, level of confidence					#

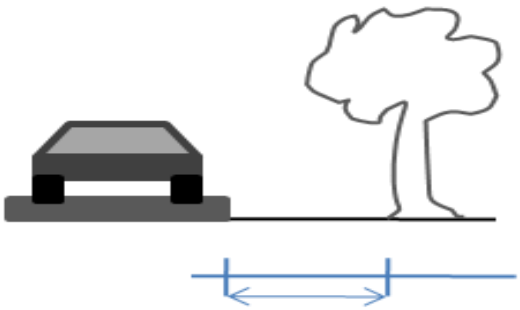
Road side information

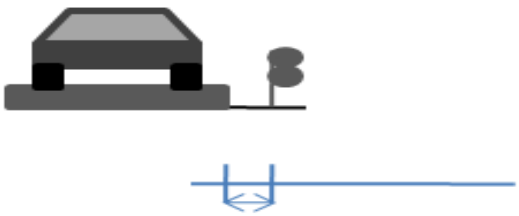
1. Drop-off height
2. Support strip width
3. Ditch depth
4. Ditch depth towards the back slope
5. Slope length
6. Slope gradient



Support strip material stiffness		1= hard, 2= medium, 3= light

	Slope 1	Slope 2	
Material in slope			1= grass, 2= soil, 3= gravel, 4= leca, 5= asphalt
Material stiffness			1= hard, 2= medium, 3= light





Distance to solid object [m]	
Reduced view in road side	

1= no, 2= yes

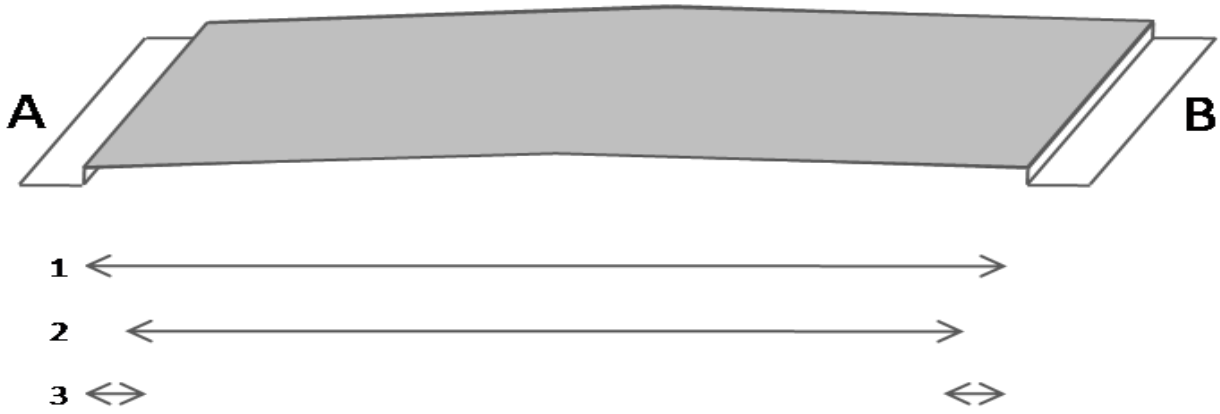
Roadside barrier set back [m]	
Roadside barrier type	

1= none, 2= steel beam, 3= steel tube, 4= cable, 5= concrete

Road 2

Geometric data

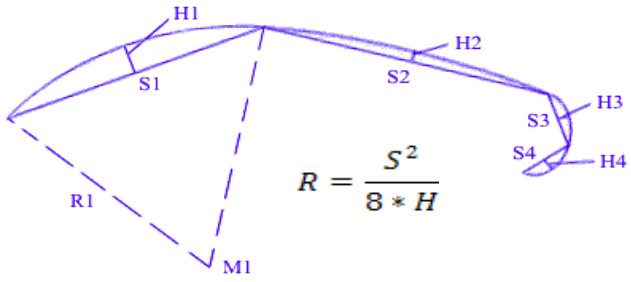
Write directly in the picture and fill in the other information later



Roadway

1. Roadway width [m]		#

Curve radius calculations



	S	H
Curve measurements		
Curve radius, R [m]		

Lane

Number of lanes	+

	1	2	3	4	
2. Lane width [m]					
Road gradient [%]					+=up hill -=down hill
Lane cross fall [%]					
Track depth [cm]					

Lane cross fall according to inspector [cm]	
Track depth according to inspectior [cm]	

Hard shoulder

	A	B
3. Hard shoulder width [m]		

Markings (mark in picture)	1	2	3	4	5	6	
Markings							1= single dashed line, 2= double dashed line, 3= single solid line, 4= double solid line, 5= solid-dashed left, 6= solid-dashed right
Maintained marking							1= yes, it is intact, 2= no, it is worn
Rumble strips							1= no 2= yes, painted 3= yes, stamped 4= yes, grooved

Road information

General (see NVDB: http://www20.vv.se/NVDB_Webb/login.aspx)

Road number		
Road name		
Road administrator		1= state road, 2= municipal road, 3= private road
Road network classification (only on state roads)		1= European road, 2= national road, 3= county road

No state road

EuroRAP (see INTACT_Riktlinjer_för_insamling_av_data_som_inte_insamtalt_i_fält_Bilaga2.pdf)

EuroRAP-stars		1= 1 stars, 2= 2 stars, 3= 3 stars, 4= 4 stars, 5= not rated
EuroRAP-star rating date		yy/mm/dd

Road design

Road type		1= walking pace street, 2= city street, 3= rural road, 4= express road, 5=motorway
Roadway surface type		1= asphalt, 2= drainage asphalt, 3= gravel, 4= concrete, 5=brick or block

Median type		1= none, no median line 2= none, median line 3= in-level area, 4= elevated area, 5= lowered area
Median material (if median)		1= asphalt, 2= grass, 3= soil, 4= gravel, 5= leca
Median road barrier (if median)		1= none, 2= steel beam, 3= steel tube, 4= cable, 5= concrete

Vulnerable road user facilities	**A**	**B**	
Vulnerable road user facilities			1= mixed traffic, 2= wide shoulder, 3= bicycle lane separated from roadway with kerb, 4= bicycle lane separated from roadway, 5= totally separated from roadway (no road users allowed on the road)
Bicycle lane - Roadway separation width (only if seperated) [m]			
Separation strip type (if seperated)			1= in-level area, 2=elevated area, 3=lowered area
Separation strip material			1= asphalt, 2= grass, 3= soil, 4= gravel, 5= leca
Kerb height (only if kerb) [cm]			

Pedestrian crossing facilities		1= none present, 2= desire line only, 3= "gångpassage", 4= marked pedestrian crossing without traffic signal, 5= marked pedestrian crossing with traffic signal
Cycle crossing facilities		1= none present, 2= desire line only, 3= "gångpassage", 4= marked crossing without traffic signal, 5= marked crossing with traffic signal

No state road ☐

Traffic (see Trafic flow maps: https://gis.vv.se/tfk2/tfk/indextikk.aspx?config=tikk

Average annual daily traffic (only on state roads)		
AADT, level of confidence (only on state roads)		
Average annual daily traffic for trucks (only on state roads)		
AADT for trucks, level of confidence (only on state roads)		
Measured in year (only on state roads)		yyyy

Average speed on road for cars, day (only on state roads)*		
*Traffic flow when measured		
Average speed on road for cars, night (only on state roads)**		
**Traffic flow when measured		
Period when measured (only on state roads)		yyyy-mm-dd hh:mm - yyyy-mm-dd hh:mm

No construction/maintenance zone ☐

Construction / maintenance zone (see TIC:en)

Construction / maintenance zone		1= none, 2= construction zone, 3= maintenance zone, 4= utility zone
Traffic control plan (only if construction/maintenance zone)		1= yes, 2= no
Control of Traffic control plan		1= no, 2= yes, not approved, 3= yes, approved, 4= yes, unknown

Lane information

Lane id	**1**	**2**	**3**	**4**	
Original speed limit					w= walking speed, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130
Type of additional speed limit					1= none, 2= temporary, 3= variable (dynamic), 4= recomended
Additional speed limit (if variable, see TIC.en)					w= walking speed, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130
Microscopic road surface condition					(no values yet, describe…)
Macroscopic road surface condition					1= lane grooves, 2= tram rails, 3= potholes, 4= asphalt patchwork, 5= bitumen patchwork, 6= bleeding asphalt, 7= good condition

Road conditions

Lane id	**1**	**2**	**3**	**4**	
Road conditions					1= dry, 2=wettish, 3= wet, 4= thin ice, 5= thick ice/ packed snow, 6= fresh snow/slash, 7= hail
Road surface temperature [C°]					#
Road surface contaminants					1= none, 2= mud, 3= gravel, 4= leaves, 5= oil, 6= fuel, 7= dropped tires, 8= discarded load, 9=standing water
Road friction coefficient (table value)					#
Road friction coefficient (measured value)					#

No snow

Snow clerande and skid control (See TIC:en)

Snow depth [cm]					
Snow clearance					yy/mm/dd hh:mm
Skid-control					yy/mm/dd hh:mm

No junction

Junction information

Junction travel direction					1= in, 2= out
Special lane type					text, for example public transport
Lane travel type					1= ahead, 2= right turn, 3= ahead+right turn, 4= left turn, 5= ahead+left turn, 6= all directions
Lane based traffic regulation					1= right-side priority rule, 2= priority road, 3= mandatory give-way, 4 =STOP-sign, 5= traffic light, 6= weaving, 7= entrance
Traffic light type (only if traffic light)					1= ordinary, red, yellow, green 2= Right-turn, 3= Left-turn, 4= Public transport signal
Traffic light function (only if traffic light)					1= In operation, 2= Amber flashing light, 3= Out of order

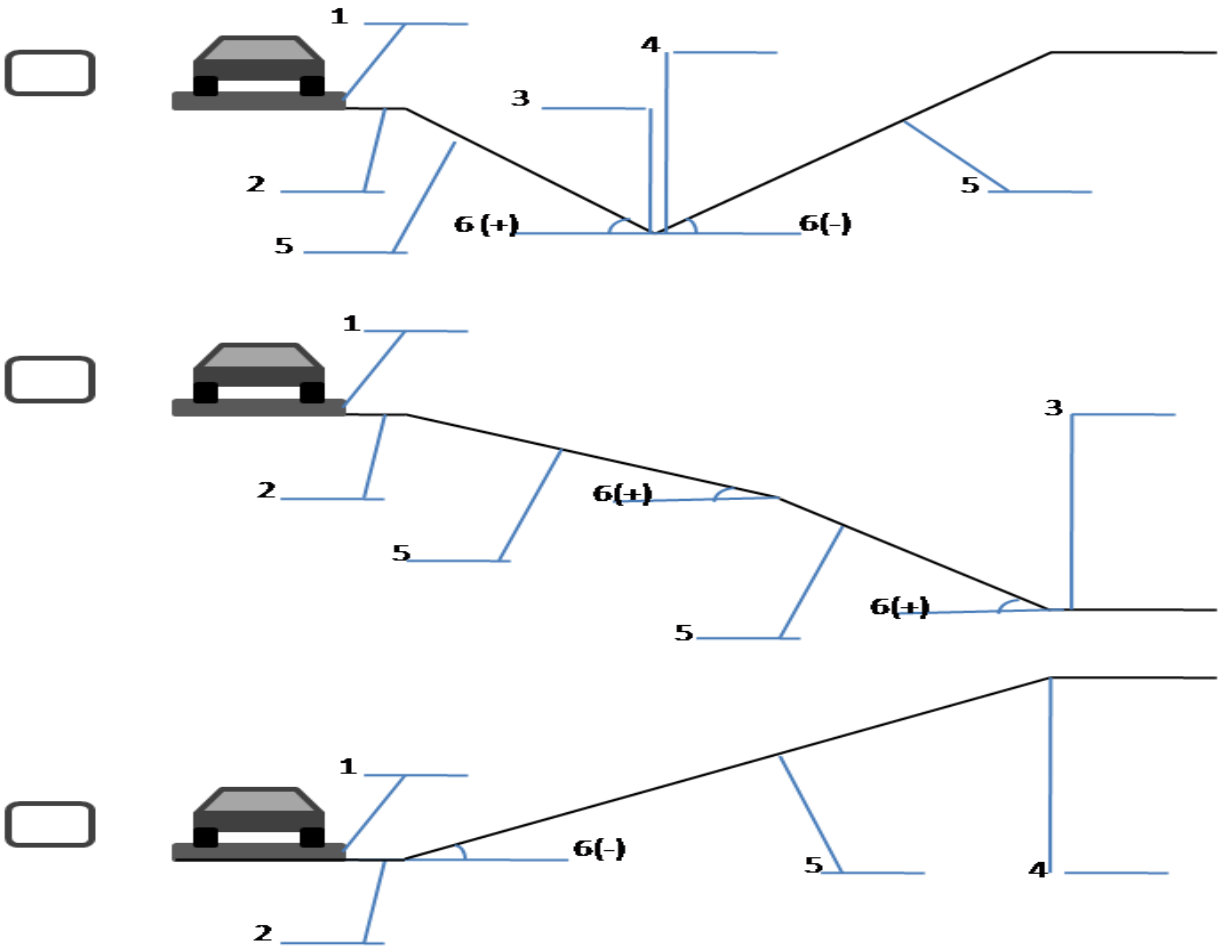
No traffic information

Traffic at accident time (http://www3.vv.se/gbg_trafficinformation/)

State measure station					
Speed at accident time [km/h]					
Traffic flow at accident time					#
Traffic at accident time, level of confidence					#
Truck traffic at accident time					#
Truck traffic at accident time, level of confidence					#

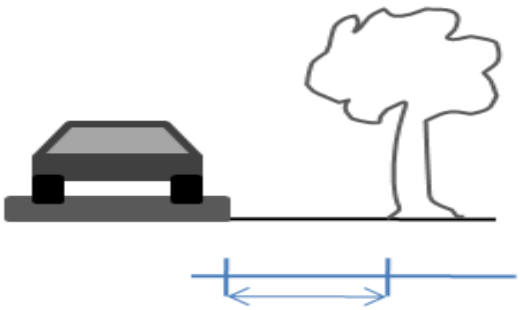
Road side information

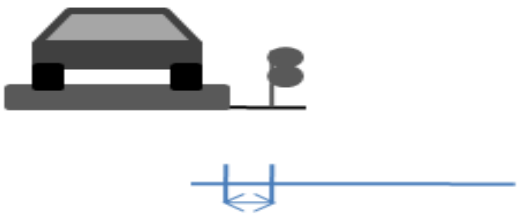
1. Drop-off height
2. Support strip width
3. Ditch depth
4. Ditch depth towards the back slope
5. Slope length
6. Slope gradient



Support strip material stiffness		1= hard, 2= medium, 3= light

	Slope 1	Slope 2	
Material in slope			1= grass, 2= soil, 3= gravel, 4= leca, 5= asphalt
Material stiffness			1= hard, 2= medium, 3= light





Distance to solid object [m]	
Reduced view in road side	

1= no, 2= yes

Roadside barrier set back [m]	
Roadside barrier type	

1= none, 2= steel beam, 3= steel tube, 4= cable, 5= concrete

Collision objects

Single objects

Object number	1	2	3	4	5	6	
Type of object (see *)							
Distance from road edge [m]							
Single object width [cm]							
Single object deformable							1= no, 2= yes, partly, 3= yes, full
Collision vehicle							

*) 1= Boulder, 2= Ground/Ditch, 3= Kerb, 4= Building, 5= Bridge Pier or Abutment, 6= Bridge Parapet,
7= Bridge Overhead Structure, 8= Guardrail Face, 9= Guardrail End,
10= Guardrail end with crash cushion, 11= Impact Attenuator/Crash Cushion,
12= Highway/Traffic Sign Post/Sign, 13= Traffic Signal Support/Signal,
14= Overhead Sign Support/Sign, 15= Luminary/Light Support, 16= Other Post, other pole, or other,
17= Culvert, 18= Fence, 19= Wall, 20= Tree (Standing Tree Only), 21= Snow Bank

Animals

Animal type		1= elk, 2= roe deer, 3= deer, 4= rein deer, 5= wild boar, 6= badger, 7= small wild animals, 8= horse (without rider), 9= cow, 10 small domestic animals
Animal weight [kg]		#

Barrier information (see VV: http://www.vv.se/templates/page3____10948.aspx)

Barrier	**1**	**2**	**3**	
Barrier name				text
Barrier capacity class				1= N2, 2=H2
Barrier working width [m]				
Barrier height [m]				
Element width [m]				
Element length [m]				
C/C length				
Barrier clearance [m]				
Barrier contact length [m]				
Barrier deformation length [m]				
Barrier deformation height [m]				
Barrier maximal deformation [m]				

Vägverkets variables

Barrier screw dimension			
Barrier screw steel quality			