

Other Road User Cases: Draft Input on Properties

ORU cases	Physical	Functional	Behavioral
Vehicles			
1. Passenger car	Length: 2.3-5.6 m Width: 1.2-2.1 m Height: 1.1-2.1 m	Personal transport.	
2. Bus, urban (city)	Length: 12 m average Width: 2.6 m average Height: 3.0 m average	Mass transit of passengers.	Right of way in dedicated lanes at certain times.
3. Bus, coach	Length: 12 m average Width: 2.6 m average Height: 3.8 m average	Mass transit of passengers.	May be limited to lower speeds.
4. Bus, articulated	Length: 18 m average Width: 2.6 average Height: 3.1 m average	Mass transit of passengers.	Right of way in dedicated lanes at certain times.
5. Bus, shuttle	Length: 7 m average Width: 2.2 average Height: 2.7 m average	Limited common transport of passengers.	Right of way in dedicated lanes at certain times.
6. Bus, school	Dimensions range between shuttle and urban Special livery, markings, and/or visual signals (flashing lights, stop-sign arms) Extended cross-view mirrors.	Mass transit of school-age children.	May be limited to lower speeds (e.g., <= 50 kph in China).
7. Tram	Long vehicle, may consist of multiple carriages.	Mass transit.	Limited to operation on fixed tracks, may follow strict schedule, may operate on segregated way traversing cross streets and intersections.

ORU cases	Physical	Functional	Behavioral
Vehicles			
8. Goods vehicle			
9. Dangerous goods vehicle	Large size vehicle, special markings to signal function.	Vehicle specially designed for transport of toxic, inflammable, explosive, or otherwise dangerous goods.	May operate at lower relative speeds, other vehicles may be required to keep a longer distance from these vehicles to reduce safety risks.
10. Long, large vehicle	Exceptional dimensions		May operate at low relative speeds.
11. Vehicles transporting protruding cargo	Elements projecting into space beyond chassis, objects may have flags or other markings.		
12. Vehicles towing trailers			
13. Vehicles towing combination trailers	Exceptional length		
14. Special convoys, slow-moving vehicles	Group of vehicles acting as a single unit, may be preceded or followed by special vehicles. Special markings and light signals.	Special goods transport	May operate at low relative speeds. Operate as single vehicle. Special rights of passage.
15. Caravans/recreational vehicles, including towing trailers			

ORU cases	Physical	Functional	Behavioral
Vehicles			
16. Agricultural vehicles	Dimensions may differ from conventional road vehicles, may have special markings and light signals.	Designed for off-road use.	May operate at low relative speeds
17. Street sweepers	May have special audible and light signals and visual markings.	Environmental, road maintenance.	May operate at low relative speeds
18. Road sprinklers	May have special audible and light signals and visual markings, tank dimensions may differ.	Environmental, road maintenance.	May operate at low relative speeds Sprays liquid on roadway.
19. Training cars	May have special visual markings to signal possible use by student driver	Driver education.	May behave in ways different from vehicles driven by licensed drivers (slower speed, hesitant maneuvers)
20. Cranes, NRMM	May have special livery, visual markings, and/or light signals. Large size.	Off-road operation. Include mobile machines, and transportable industrial equipment or vehicles which are fitted with an internal combustion engine and not intended for transporting goods or passengers on roads.	Construction sites may have special entries/exits into roadway.
21. Fire trucks	Special livery, markings, audible, light signals.	Rapid, safety-critical transport.	Higher relative speeds. Special rights of passage. Exemptions from traffic laws.
22. Ambulances	Special livery, markings, audible, light signals.	Rapid, safety-critical transport.	Higher relative speeds. Special rights of passage. Exemptions from traffic laws.

ORU cases	Physical	Functional	Behavioral
Vehicles			
23. Police vehicles	Special livery, markings, audible, light signals.	Rapid, safety-critical transport. Law enforcement: road and vehicle	Higher relative speeds. Special rights of passage. Exemptions from traffic laws. Signal motorists to stop.
24. Rescue vehicles	Special livery, markings, audible, light signals.	Rapid, safety-critical transport.	Higher relative speeds. Special rights of passage. Exemptions from traffic laws.
25. Disabled (broken down) vehicles	Abnormal position on roadway. Hazard flashers.		May be stopped in emergency lane, road shoulder, protruding or fully in lanes of travel. May move to rejoin traffic. May have occupants nearby.
26. Other automated/connected (V2V) vehicles			These vehicles need to have two-way information exchange with road side unit or other automated/connected vehicles.
Pedestrians/VRU			
27. Child pedestrian	Size Vulnerable Children usually move slowly, also the size of child are smaller than adult, which would lead more damage during a crash.		Slow speed Unpredictable motion Children may perform irregular behaviour, such as sudden cut in, sudden swerve
28. Adult pedestrian	They are vulnerable during a crash with vehicles.		
29. Persons with disabilities	They are vulnerable during a crash with vehicles.		Persons with disabilities move slower than regular person.

ORU cases	Physical	Functional	Behavioral
Pedestrians/VRU			
30. 4.Hearing-impaired pedestrians	They are vulnerable during a crash with vehicles.		They are not sensitive to the warning sound of car horn.
31. 5.Visually impaired pedestrians	They are vulnerable during a crash with vehicles.		They usually walk along with guiding device (guide dog or person).
32. 6.Road-work crews	They wear uniform, with specific patterns or visual markings.	They are responsible to direct the traffic flow, with specific gesture, lights or other assist measures.	They have the right
33. Police officer (on foot)			They have the right to signal a vehicle to pull to the side of the road and do a inspection.
34. Police officer (in vehicle)			
35. Persons directing traffic			
36. Persons pushing strollers	Move slowly, easy to detect and recognise.		
37. Persons in wheelchairs			
38. Motorists on the roadside (stranded vehicles, changing tire)			
Cyclist			
39. Bicyclists	Move slowly. They are vulnerable during a crash with vehicles.		
40. e-Bike users			
41. Skaters (roller, skateboard)			
42. Motorcycles	They are vulnerable during a crash with vehicles.		
43. Mopeds/scooters			
44. Powered three-wheelers			
45. Quadricycles			

ORU cases	Physical	Functional	Behavioral
Animals/Inanimate Objects			
46. Small size animals			
47. Medium size animals			
48. Large size animals			
49. Stationary vehicles			
50. Debris			
51. Construction works			