1. Speed limit sign

Set the speed limit signs on the long straight road to test if the subject vehicle can identify the signs or not.

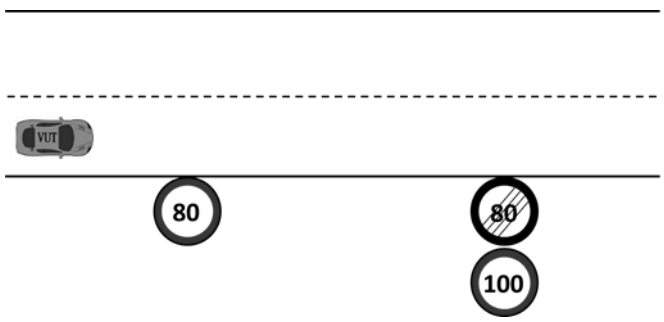

Figure1 The testing scenario diagram for speed limit sign

2. Lane line(s)

The test road is a combination of long straight road and curve road. And the length of the curve road is more than 100 meters. According to Vmax, the curve road's minimum radius and the speed limit sign are chosen.

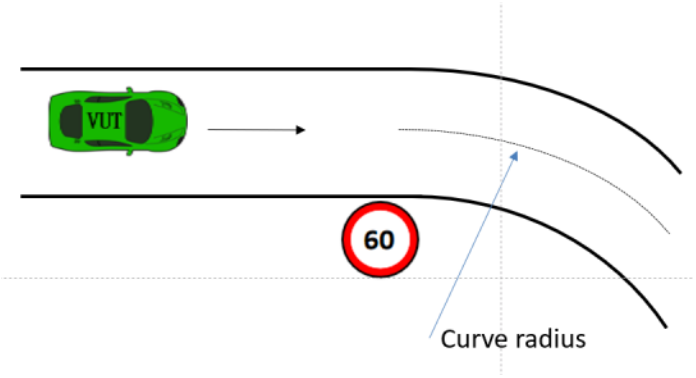

Figure2 Testing scenario for lane line

3. Expressway signal lights

The test road consists of at least two lanes. The signal lights are set above the road, and the signal lights of adjacent lanes are kept in green state.

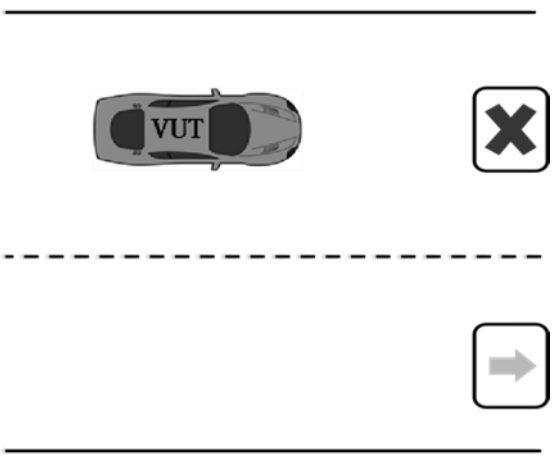

Figure3 Testing scenario diagram for expressway signal lights

4. Tunnel

The test road consists of at least two straight lanes, and the tunnel appears at one part of that.

Figure4 Testing scenario for passing tunnel

5. Ramp

There are two long straight roads with at least two lanes. These two roads are connected by a ramp of no less than 100 meters, and speed limit sign(s) are set at the entrance of ramp.

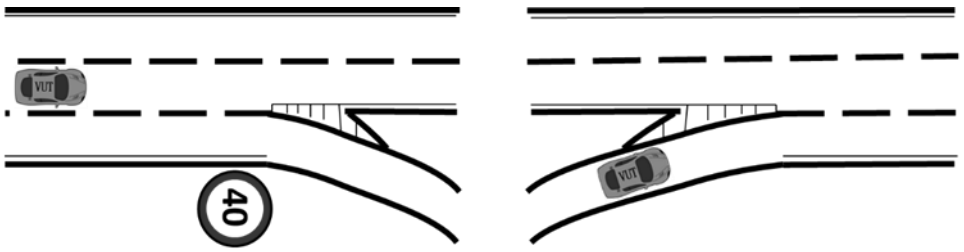

Figure5 Testing scenario diagram for driving in the ramp and driving off the ramp

6. Toll

The test road is a long straight road with at least one lane. A toll station is set on this section, and toll station signs, speed limit signs and speed bumps are set in front of the toll station. This is shown in Figure 6.

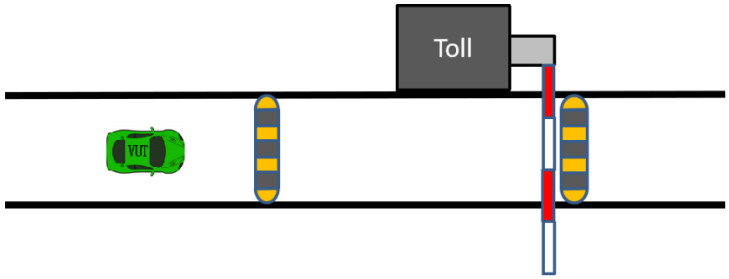

Figure 6 Schematic diagram of the test scenario of driving in and out of a toll station

7. Conventional Obstacles

The test road is a long straight road containing at least two lanes, and the middle lane line is a white dashed line. Within the lanes, conical traffic signs and traffic markings are placed according to the traffic control requirements of the road maintenance operation. This is shown in Figure 7.

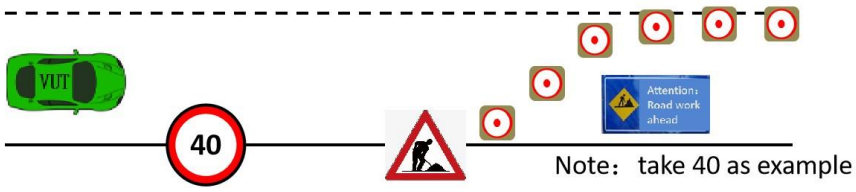

Figure 7 Diagram of a conventional obstacle course.

8. Stationary vehicles occupy part of the lane

The test road is a long straight road containing two traffic lanes and the center lane line is a dashed line. There is a stationary target vehicle in the right lane and the stationary target vehicle occupying the test vehicle lane. The angle between the target vehicle and

the center lane line is under a certain angle. As shown in Figure 8.

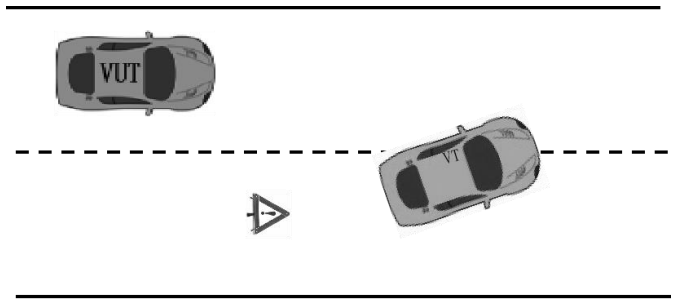

Figure 8 Schematic diagram of a stationary vehicle occupying part of the lane.

9. Motorcycle running along the road

The test road is a long straight with at least two lanes and the center lane line is a dashed line. The motorcycle is ridden along the road before the test vehicle. This is shown in Figure 9.

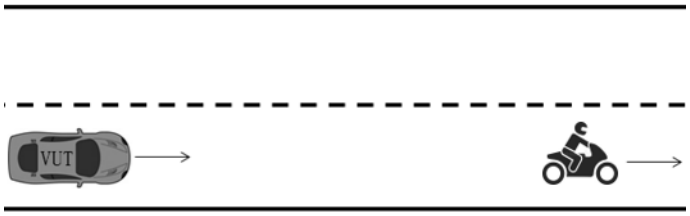

Figure 9 Schematic diagram of a motorcycle running along a road.

10. Recognition and Response for Pedestrian Cross walking

The test road is a long straight road with at least two lanes and the middle lane line is dashed white. The pedestrian is walking through the road when the automotive system is driving the vehicle. As shown in Figure 10.

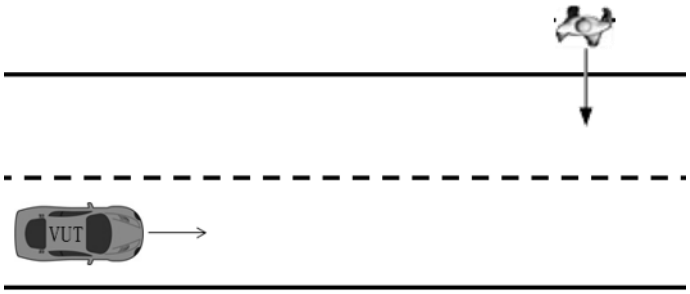

Figure 10 Diagram of Pedestrian Crossing though the road

11. The vehicle ahead cut-in

The test road is a long straight road with two lanes, and the middle lane line is a white dashed line. The test vehicle is driving in the left lane. When the expected collision time between the two vehicles reaches the preset time for the first time, the target vehicle cuts into the lane. As shown in Figure 11.

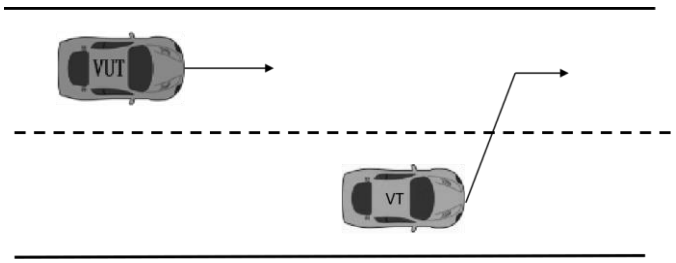

Figure 11 Schematic diagram of the front vehicle cut in

12.Cut out the front vehicle

The test road is a long straight road with two lanes, and there are target vehicles in both lanes. The speed limit of the test section is greater than the speed of the target vehicle. When the test vehicle follows the target vehicle steadily, the target vehicle triggers a lane change action to merge into the adjacent lane. As shown in Figure 12.

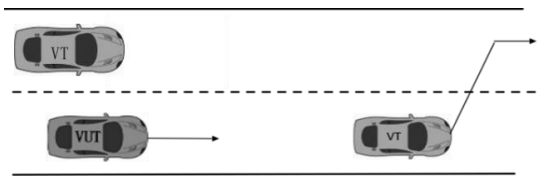

Figure 12 Schematic diagram of the front vehicle cut out test scene

13. Target vehicle stop-go

The test road is a long straight road containing at least two lanes, and the middle lane line is a white dashed line. The test vehicle follows the target vehicle driving ahead, After the test vehicle steadily follows the target vehicle, the target vehicle decelerates until it

stops, When the test vehicle speed drops to 0, the target vehicle starts. As shown in Figure 13.

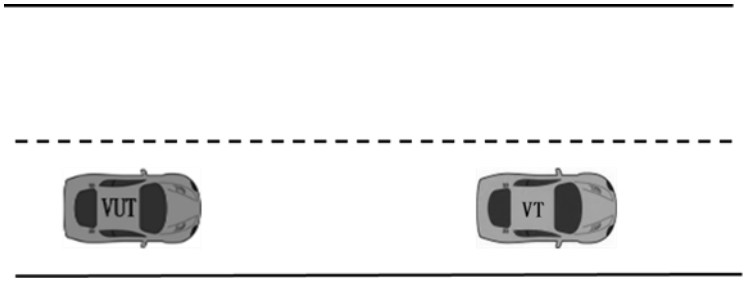

Figure 13 Schematic diagram of the target vehicle stop-and-go test scenario

14. A stationary vehicle in front of the following car

The test road is a long straight road containing at least two lanes, and the middle lane line is a white dashed line. There are two target vehicles in the same lane，Among them, VT1 drives to a stationary state VT2 at a preset speed. As shown in Figure 14.

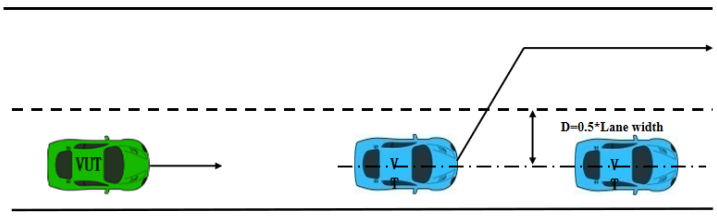

Figure 14 Schematic diagram of the scene of a stationary vehicle ahead

15.The vehicle ahead brakes suddenly

The test road is a long straight road with at least one lane and the lane lines on both sides are solid lines. The test vehicle steadily follows the target vehicle driving ahead, and the vehicle in front brakes and stops suddenly. As shown in Figure 15.

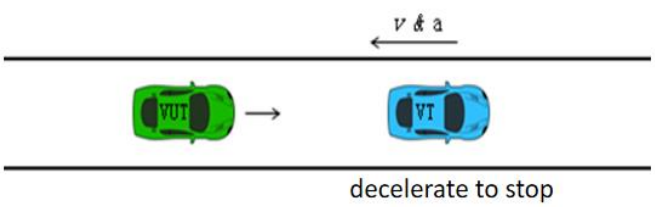

Figure 15 Schematic diagram of the target vehicle's sudden braking scene