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Table C: List of Selected Scenarios for Safety Testing of ADS using ODD1 and D2 -  $O_{12}$ 

| Sr. # | Groups                    | Scenario Name                                                        | Identifier | Score | Priority |
|-------|---------------------------|----------------------------------------------------------------------|------------|-------|----------|
| G8    | Cyclist<br>Interaction    | Ego vehicle approaching cyclist riding in same direction             | $S_{48}$   | 19    | 1        |
|       |                           | Ego vehicle driving alongside a cyclist                              | $S_{49}$   | 19    | 1        |
|       |                           | Cyclist and ego vehicle driving in opposite direction                | $S_{50}$   | 19    | 1        |
|       |                           | Cyclist crossing from left side at signalized junction               | $S_{46}$   | 18    | 2        |
|       |                           | Cyclist crossing from right side at signalized junction              | $S_{47}$   | 18    | 2        |
|       |                           | Cyclist turning left and ends up in lane of ego vehicle              | $S_{56}$   | 18    | 2        |
|       |                           | Cyclist turning right and ends up in lane of ego vehicle             | $S_{57}$   | 18    | 2        |
|       |                           | Cyclist at left turn at signalized junction                          | $S_{51}$   | 17    | 3        |
|       |                           | Cyclist driving in same direction obstructed at ego left turn        | $S_{52}$   | 17    | 3        |
|       |                           | Entering a roundabout with a cyclist Interaction                     | $S_{54}$   | 16    | 4        |
|       |                           | Leaving a roundabout with a cyclist                                  | $S_{55}$   | 16    | 4        |
|       |                           | Cyclist at right turn at signalized junction                         | $S_{53}$   | 14    | 5        |
| G5    | Crossing<br>Path          | Oncoming vehicle turns right at signalized junction                  | $S_{25}$   | 21    | 6        |
|       |                           | Sirens                                                               | $S_{29}$   | 21    | 6        |
|       |                           | Left Turn Clip                                                       | $S_{30}$   | 20    | 7        |
|       |                           | Wrong Driveway                                                       | $S_{31}$   | 20    | 7        |
|       |                           | Run Red Into Left Turner                                             | $S_{33}$   | 20    | 7        |
|       |                           | Misjudgment, Left Turn                                               | $S_{34}$   | 20    | 7        |
|       |                           | Entering a roundabout with another vehicle                           | $S_{28}$   | 19    | 8        |
|       |                           | Ego vehicle turns right with oncoming vehicle at signalized junction | $S_{26}$   | 17    | 9        |
|       |                           | Navigating on an empty roundabout                                    | $S_{27}$   | 14    | 10       |
|       |                           | Wave to Go                                                           | $S_{32}$   | 14    | 10       |
| G7    | Pedestrian<br>Interaction | Jaywalking                                                           | $S_{36}$   | 21    | 11       |
|       |                           | Pedestrian crossing at zebra crossing                                | $S_{37}$   | 21    | 11       |
|       |                           | Pedestrian running a red light                                       | $S_{41}$   | 20    | 12       |
|       |                           | Struck Human                                                         | $S_{45}$   | 20    | 12       |
|       |                           | Pedestrian stationary at road side                                   | $S_{39}$   | 19    | 13       |
|       |                           | Pedestrian walking along the road                                    | $S_{40}$   | 19    | 13       |
|       |                           | Pedestrian at left turn at signalized junction                       | $S_{42}$   | 19    | 13       |
|       |                           | Pedestrian in same direction obstructed at ego left turn             | $S_{43}$   | 19    | 13       |
|       |                           | Zebra crossing                                                       | $S_{38}$   | 18    | 14       |
|       |                           | Pedestrian at right turn at signalized junction                      | $S_{44}$   | 16    | 15       |
| G3    | Opposite                  | Oncoming vehicle swerving into ego vehicle's lane                    | $S_{64}$   | 22    | 16       |
|       | Direction                 | Oncoming vehicle                                                     | $S_{65}$   | 22    | 16       |
| G3    | Following<br>Lead Vehicle | Ego vehicle approaching slower lead vehicle                          | $S_{17}$   | 21    | 17       |
|       |                           | Turning lead vehicle                                                 | $S_{18}$   | 20    | 18       |
|       |                           | Inattentive, Rear                                                    | $S_{19}$   | 14    | 19       |
|       |                           | Stutter Stop                                                         | $S_{20}$   | 14    | 19       |
| G2    | Lane<br>Change            | Cut-in in front of the ego vehicle                                   | $S_4$      | 22    | 20       |
|       |                           | Cut-out in front of the ego vehicle                                  | $S_7$      | 22    | 20       |
|       |                           | Vehicle swerving towards ego vehicle                                 | $S_8$      | 22    | 20       |
|       |                           | Vehicle backing up into the ego vehicle                              | $S_9$      | 22    | 20       |
|       |                           | Impassable object on intended path                                   | $S_{10}$   | 22    | 20       |
|       |                           | Object road with incoming traffic                                    | $S_{12}$   | 22    | 20       |
|       |                           | Driving straight                                                     | $S_{13}$   | 22    | 20       |
|       |                           | U-Turn                                                               | $S_{16}$   | 22    | 20       |
|       |                           | Ego performing lane change with the vehicle behind                   | $S_5$      | 19    | 21       |
|       |                           | Ego merging into an occupiedlane                                     | $S_6$      | 19    | 21       |
|       |                           | Passable object on intended path                                     | $S_{11}$   | 19    | 21       |
|       |                           | Avoidance, Rear                                                      | $S_{14}$   | 19    | 21       |
|       |                           | Lane Change, Rear.                                                   | $S_{15}$   | 19    | 21       |
|       | Reversing                 | Back Into Object                                                     | $S_{61}$   | 17    | 22       |
| G10   |                           | Back into Roadway                                                    | $S_{62}$   | 17    | 22       |
|       |                           | Back Track                                                           | $S_{63}$   | 17    | 22       |