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Item 6(a) of the provisional agenda

**Traffic censuses in the United Nations Economic Commission for Europe region:
2015 and 2020 E-Road traffic censuses**

Updated recommendations for the E-Road Census 2020

Summary

The following document shows the minor suggested updates to the 2020 E-Road traffic census recommendations as contained in ECE/TRANS/WP.6/2018/11, as updated in ECE/TRANS/WP.6/2019/11, in tracked changes.

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Item 6 (a) of the provisional agenda

Traffic censuses in the ECE region:**2015 and 2020 E-Road traffic censuses****Recommendations for the E-Road Census 2020****Note by the secretariat****I. Background**

1. The Working Party at its last session adopted ECE/TRANS/WP.6/2018/11 which describes recommendations ~~for~~ to Governments on the 2020 E-Road traffic census. This was adopted as a resolution of the Inland Transport Committee at its session in February 2019. This document provides minor updates to the recommendations, to remove certain ambiguities with regards to how to count the number of lanes of an E-Road.

Documentation

ECE/TRANS/WP.6/2018/11

II. Coverage of the census

2. For purposes of the 2020 E-Road traffic census, the E-Road network referred to is that described in Annex I of the European Agreement on Main International Traffic Arteries (AGR) of 1975 and in Amendments 1-9 to the Agreement (ECE/TRANS/16/Amends. 1-9) and in any other amendment which comes into force before 2020. Where an E-Road is not open to traffic (e.g. because it is closed for repairs, has not yet been built, or for other reasons), the census could, if possible, be taken on the road(s) used by the traffic which would otherwise use the E-Road.

3. Lists of AGR roads as at the beginning of the reference year will be made available by the United Nations Economic Commission for Europe (UNECE) secretariat if necessary.

4. For those member States who are not covered in the AGR, in particular Canada and the United States, a census covering their principal route network may be undertaken if the member State wishes, and the secretariat can disseminate the results alongside those of the E-Road census.

III. Purpose of the census

5. Internationally comparable data on main international road traffic arteries are of increasing importance in Europe and elsewhere, given the growing volume of international and transit traffic. The E-Road traffic census carried out under the auspices of UNECE is the only existing international framework providing comparable data on traffic flows on main European roads on a pan-European basis. In view of the fact that the E-Road traffic census is taken, not in isolation, but as a by-product of the respective national road traffic censuses, only marginal costs are involved in the compilation and transmission of the E-Road traffic census data by UNECE member Governments.

6. Every effort should be made within the framework of the E-Road traffic census to arrive at data which are as comparable as possible at the international level and respond to new data requirements and changes in traffic patterns. Continuous efforts are, therefore, necessary to keep the scope and the quality of the E-Road traffic census data in line with user requirements.

7. The E-Road traffic census is undertaken to obtain data for improving and developing the E-Road system, in conformity with the standards set out in Annex II to the European Agreement on Main International Traffic Arteries (AGR) of 1975 (ECE/TRANS/16 and Amends. 1-9).

8. In particular, census data are aimed at providing detailed data on the traffic on the E-Road network which will facilitate international passenger and goods traffic.

9. Information on the extent to which various types of vehicles use different sections of the E-Roads enables improved land use management and better integration of road traffic in the planning processes of the country itself, allowing for adequate maintenance, renewal and improvement programmes, ~~and also~~ at the international level. This information also contributes to finding solutions to the problems raised by traffic congestion and facilitates the study of environmental issues, road safety and energy consumption.

10. An additional objective of the E-Road traffic census is the measurement of the distance travelled on the Road network, expressed mainly in vehicle-kilometres, by the different categories of vehicles counted.

11. In this context, another purpose of the E-Road traffic census is to reflect the volume of night traffic, holiday traffic and peak-hour traffic on the E-Road network. These phenomena are increasingly important and thus more information on these types of traffic is required, despite the difficulty in obtaining such information.

IV. Scope of the census

12. As E-Roads constitute a relatively limited part of a country's road network, it is of particular interest to know the importance of the traffic on these roads as compared with the traffic borne by the whole of the road network.

13. For this comparison, vehicle-kilometres are the most important statistical measure to express the volume and development of traffic in a country. Figures on vehicle-kilometres

are also indispensable in the context of calculations concerning road traffic accidents and energy consumption.

14. Accordingly, it is recommended that data be provided in vehicle-kilometres on all E-Roads, as a subset of the total road network of the country to the extent possible.

V. Comparability with the results of earlier censuses

15. Governments should take the necessary steps to ensure that the results of the 2020 E-Road traffic census are as comparable as possible with the 2015¹ census. The most important step in this regard is keeping the segments the same, whenever possible.

VI. Categories of vehicles to be counted

16. All vehicles should be counted according to the following vehicle classification system:

- Category A: Motor vehicles with not more than 3 wheels (motor cycles with or without sidecars, including motor scooters, and motor tricycles).
- Category B: Passenger and light goods vehicles (vehicles, including station wagons, with not more than nine seats, including the driver's seat, and light vans with a permissible maximum weight of not more than 3.5 tonnes). Passenger and light goods vehicles are recorded as such, irrespective of whether they are with or without trailers, including caravans and recreational vehicles.
- Category C: Goods road vehicles (lorries with a permissible maximum weight of more than 3.5 tonnes, lorries with one or more trailers; tractors with semi-trailers; one or more trailers; tractors with one or more trailers and tractors without trailers or semi-trailers) and special vehicles (agricultural tractors, special vehicles such as self-propelled rollers, bulldozers, mobile cranes and army tanks and other road motor vehicles not specified elsewhere).
- Category D: Motor buses, mini-buses, coaches and trolley buses.

17. Categories A and B constitute light motor traffic; categories C and D constitute heavy motor traffic.

18. When there is doubt as to whether a vehicle should be assigned to category B or C, it should be assigned to category C, the category representing the heavier vehicles; the same rule applies when there is doubt as to whether a vehicle should be assigned to category B or D.

19. To facilitate the identification of the various vehicles, it is recommended that the recording staff be given descriptions of the appearance of vehicles and a list of vehicle outlines.

20. Those countries which are already using or developing non-manual counting systems can fit the results to the classification of the categories of vehicles without being obliged to specify more than is technically possible. These simplified data should at least distinguish

¹ In the case of countries where the traffic census of E-Roads was not taken in 2015, the results of the 2020 E-Road traffic census should be as comparable as possible with those of the most recent census. Countries which did not take a complete census in 2015 but which were, nevertheless, able to supply data for that year are deemed to have taken a census in 2015.

between light motor traffic and heavy motor traffic. Nevertheless, for the network as a whole, a division into four vehicle categories is recommended.

VII. Values to be calculated²

21. For each E-Road in a country, it is recommended that the average annual daily traffic flow (AADT) be calculated. In addition, night traffic, holiday traffic and peak-hour traffic should be calculated. Night traffic is, in principle, defined as traffic between 10 p.m. and -6 a.m.; holiday traffic is defined, in principle, as the average daily traffic (ADT) during the approximately two-month vacation period (in exceptional cases, one month). Peak-hour traffic is, in principle, defined as the traffic at the 50th highest hour.

22. For the total E-Road network (and other roads if possible) in each country, vehicle-kilometres should be calculated for the year of the census and for the different vehicle categories distinguished.

23. In view of the highly differentiated techniques used for road censuses in various countries, there is no need for a uniform standard design for all counts. Nevertheless, certain principles are fundamental.

24. It is necessary that the E-Road network be divided into road sections. A section should be chosen in such a way that the volume of traffic is nearly the same over its entire length. Since traffic densities tend to increase rapidly in and around large built-up areas, it is necessary to choose counting posts on road sections in rural areas at sufficiently large distances from urban zones. The data for counting posts in urban zones may be added if the E-Road has at least four lanes (in total). In addition, to aid ~~census-to-census~~ ~~inter-temporal~~ comparisons over time it is recommended to use the same sections as previous censuses if possible.

25. For each section, the average annual daily traffic flow (AADT) for the year 2020 is to be provided. Three methods can be used for providing the AADT:

- (a) Continuous counting for the whole year;
- (b) Counting during short periods, ensuring their representation across the year;
or
- (c) A combination of the above types of counting. Sampling methods may be integrated into systems of permanent counts, using so-called “ratio estimates”.

26. In certain exceptional cases, AADT may be determined without counting, based on previous counts or on counts on adjoining sections of the same road.

27. Traffic data should be given for 2020. However, it is left to the countries concerned to decide whether to undertake counting at every post in that year or to spread it over ~~a number of multiple~~ years and to statistically adjust the data obtained. If the counting is spread over ~~a number of multiple~~ years, the influence of other changes in the network, such as the opening of new roads to traffic during those years, would have to be ~~taken into account~~ considered.

28. In order to arrive at the AADT for each E-Road as a whole, the sum of the vehicle-kilometres for all road sections on that E-Road should be divided by the length of the E-Road.

² In calculating the values and in designing the counting procedures, results obtained should be representative for the average annual daily traffic flow (AADT).

29. The design of the counts in respect of the classification of vehicle categories is to be arranged in such a way that:
- (a) For the whole network the complete classification can be given;
 - (b) For each separate E-Road either a complete classification or a limited classification can be given;
 - (c) For each road section, either a complete classification or a limited classification can be given.
30. The limited classification referred to above should at least-minimum distinguish between “light motor traffic” and “heavy motor traffic”.

VIII. Characteristics of E-Roads

31. Information about the volume and distribution of traffic on these E-Roads will be of greater value if information about the characteristics of such roads can be obtained. Governments are therefore requested to submit information at the same time on infrastructure parameters of E-Roads (tables 1 to 4), in accordance with the European Agreement on Main International Traffic Arteries (AGR), as decided by the Working Party on Road Transport at its ninety-first session (15-17 October 1997) (ECE/TRANS/SC.1/361, paras. 15-18).

32. For the publication of results, roads should be classified as follows, according to the number and width of the carriageways and numbers of traffic lanes:

(a) Single carriageway roads

width of carriageway: <u>road</u> :	number of traffic lanes <u>(for the entire road)</u> :
--	--

- | | |
|---------------------|-------------------------|
| (i) < 6 m | (i) two lanes |
| (ii) 6 - 6.99 m | (ii) three lanes |
| (iii) 7 - 8.99 m | (iii) four lanes |
| (iv) 9 - 10.49 m | (iv) five or more lanes |
| (v) 10.50 - 11.99 m | (v) 2+1 roads (memo) |
| (vi) 12 - 13.99 m | |
| (vii) 14 m or wider | |

(b) Roads with two carriageways separated by a central reserve

width of each carriageway:	number of traffic lanes in each carriageway:
----------------------------	---

- | | |
|----------------------|-------------------------|
| (i) < 7 m | (i) two lanes |
| (ii) 7 - 8.99 m | (ii) three lanes |
| (iii) 9 - 10.49 m | (iii) four lanes |
| (iv) 10.50 - 11.99 m | (iv) five or more lanes |
| (v) 12 - 13.99 m | |
| (vi) 14 m or wider | |

33. Motorways will usually constitute a subdivision of category (b) in paragraph 32, but could also, at special points or temporarily, have only one carriageway and would then constitute a subdivision of category (a).

34. Express roads are defined in the AGR Agreement as “... road(s) reserved for motor traffic accessible only from interchanges or controlled junctions and on which, in particular, stopping and parking are prohibited on the running carriageway(s)” (ECE/TRANS/16/Amend.2, annex II).

35. Roads with different numbers of lanes in each carriageway should be classified according to the smaller number of lanes. The length of these road sections should be indicated. The so-called “2 + 1” roads should be classified in this way too; however, as they are a unique case the new census asks for data on them separately, as a “memo” item, [for some tables](#).

36. In accordance with paragraph 29 above, information should be provided on the following:

- (a) Design speeds on E-Roads;
- (b) Average width of traffic lanes, central reserves and emergency stopping strips; and
- (c) Application of E-Road signing.

IX. Compilation and publication of the 2020 E-Road traffic census

37. It is recommended that Governments provide the UNECE secretariat with a report on the census carried out in their countries. Since the usefulness of the publication of the census depends to a large extent on its timeliness, it is desirable that Governments try, to any extent possible, to furnish the data (including the map), before 1 November 2021.³ The report should include:

- (a) Particulars concerning the characteristics of the E-Roads, in conformity with tables 1 to 4 in the present document;
- (b) Particulars concerning the number and nature of the counting posts, in conformity with table 5 in the present document;
- (c) Particulars specified in respect of all E-Roads taken together and in respect of each E-Road, in conformity with table 6 in the present document;
- (d) Particulars specified in respect of each E-Road, in conformity with table 7 in the present document;
- (e) Particulars concerning the length and usage of roads in respect of all E-Roads, motorways, express roads, as well as all other roads, and the total of these taken together, in conformity with table 8 in the present document;
- (f) A concise description of the design of the counts and the sampling methods used, including the method used for estimating vehicle-kilometres for the whole road network;
- (g) Shapefiles (or other geospatial data files that can be used to produce a map) showing data obtained from the 2020 census (see next section). In previous census rounds, a manually-drawn map has been requested; this now only needs to be provided if Shapefiles are not available. For guidance on how a basic map should be manually drawn, users are advised to read the guidance for the 2015 E-Road census, at ECE/TRANS/WP.6/2013/4 and ECE/TRANS/WP.6/2013/4/Corr.1. A sufficient number of selected counting posts should be shown in the data in order to reveal important variations in the distribution of traffic among the various categories of traffic volume distinguished.

³ Given the delays observed with several previous censuses, governments are kindly requested to plan as necessary to meet this deadline.

38. In principle, the following details should be observed when preparing the shapefiles:
- (a) The Shapefiles should, for each segment, contain the following information:
 - (i) E-road number (E4, E28 etc.);
 - (ii) AADT total value, together with separate heavy vehicle AADT, and night, holiday and peak AADT as available. Each of these should be clearly labelled in English.
 - (b) The number of segments reported is the choice of the reporting country, and will depend on data collection issues, in addition to the local traffic situation. To allow intertemporal comparisons, governments are encouraged to use the same traffic segments as previous rounds of census, if feasible.
39. Where governments have technical difficulties preparing the Shapefiles, the secretariat can provide the Shapefiles from earlier censuses (where available), that can be edited and updated with new traffic information, assuming segments remain the same.

X. Creating and sharing shapefiles

Guidance on the easiest software to use to create the shapefiles

40. Shapefiles are a file format widely used within a geographic information system (GIS). Proprietary software such as ArcGIS, MapInfo and GeoConcept can create shapefiles. There are also free and open-source software, such as QGIS. Transport infrastructure administrations often use GIS software to manage transport networks.

41. When sharing shapefiles with the secretariat, the shapefiles' coordinate system should also be submitted (prj file), together with a short explanation – in English, French or Russian if possible – on the columns' significance, allowing the identification of E-Road number, AADT levels, and any other field with useful information.

XI. 2020 E-Road traffic census tables

42. Each country should provide data in accordance with the following tables for the census year 2020:
- (a) Table 1 asks for the total length of E-Roads in 2015 and 2020, broken down by the total number of lanes;
 - (b) Table 2 asks for the total length of single carriageway E-Roads in 2015 and 2020, broken down by the width of carriageway and total number of lanes;
 - (c) Table 3 asks for the total length of dual carriageway E-Roads in 2015 and 2020, broken down by the width of carriageway and number of lanes of each carriageway;
 - (d) Table 4 asks for the length of E-Road sections for given levels of AADT;
 - (e) Table 5 asks for the number of counting posts on E-Roads in 2015 and 2020, by type of post;
 - (f) Table 6 asks for AADT levels for each E-Road broken down by vehicle type;
 - (g) Table 7 asks for special types of traffic level for each E-Road broken down by vehicle type;

- (h) Table 8 asks for the length and usage of roads, by road type and vehicle type;
- (i) Table 9 asks for motor traffic density data at the counting posts shown in the census map;
- (j) Table 10 asks for the status of E-Road signposting.

Table 1
Total length of E-Roads by total number of lanes at the end of 2015 and 2020

<i>E-Roads (Unit: km)</i>	<i>2015</i>	<i>2020</i>
1. All E-Roads		
Of which have become motorways since 2015 ¹		
By total number of lanes		
Ordinary road		
- With 1 lane	-	-
of which: 2+1 roads		
- With 2 lanes		
- With 3 lanes		
of which: <u>2+1 roads</u>		
- With 4 lanes		
- With 5 lanes and over		
- unknown		
Express road		
- With 1 lane	-	-
of which: 2+1 roads		
- With 2 lanes		
- With 3 lanes		
of which: <u>2+1 roads</u>		
- With 4 lanes		
- With 5 lanes and over		
- unknown		
Motorway		
- With 2 lanes		
- With 3 lanes		
- With 4 lanes		
- With 5 lanes		
- With 6 lanes		
- With 7 lanes and over		
- unknown		

¹ The total length should be given for roads that have, since 2015, become motorways as a result of an upgrading of an E-Road or a change in the rating of an E-Road.

<i>E-Roads (Unit: km)</i>	<i>2015</i>	<i>2020</i>
<i>Note:</i> Symbols to be employed:		
...	Not available	
-	Magnitude zero	
0	Magnitude not zero, but less than half the unit employed	

Table 2

Total length of single carriageway E-Roads by width of carriageway and number of lanes at the end of 2015 and 2020

E-Roads (Unit: km)		Number of lanes	2015	2020 ¹
2. Sections of single carriageway roads ¹				
2.1 By number of lanes				
	- With 2 lanes			
	- With 3 lanes			
	- <u>of which: 2+1 roads</u>			
	- With 4 lanes			
	- With 5 lanes and over			
	- unknown			
2.2 By width of carriageway				
(a) Total by width of carriageway up to 5.99 m				
	- Ordinary road	1		
		2		
(b) Total by width of carriageway of 6 m – 6.99 m				
	- Ordinary road	2		
(c) Total by width of carriageway of 7 m – 8.99 m				
	- Ordinary road	2		
		3		
	- Express road	2		
	- Motorway	2		
(d) Total by width of carriageway of 9 m – 10.49 m				
	- Ordinary road	2		
		3		
	- Express road	2		
		3		
	- Motorway	2		
		3		
(e) Total by width of carriageway of 10.50 m – 11.99 m				
	- Ordinary road	3		
		4		
	- Express road	2		
		3		
	- Motorway	2		
		3		
(f) Total by width of carriageway of 12 m – 13.99 m				
	- Ordinary road	3		
		4		
	- Express road	3		
		4		
	- Motorway	3		
		4		

E-Roads (Unit: km)		Number of lanes	2015	2020 ¹
(g) Total by width of carriageway of 14 m and over				
	- Ordinary road	3		
		4		
		5 and >		
	- Express road	4		
		5 and >		
	- Motorway	4		
		5 and >		

¹ Roads with different numbers of lanes in each carriageway should be classified according to the smaller number of lanes. The length of these road sections should be indicated.

Table 3

Total length of dual carriageway E-Roads by width of carriageway and number of lanes at the end of 2015 and 2020

E-Roads		Number of lanes in each carriageway	2015	2020
3. Sections of roads with two carriageways separated by a central strip^{1,2}				
3.1 By total number of lanes of both carriageways				
	- With 2 lanes			
	- With 3 lanes			
	- With 4 lanes			
	- With 5 lanes			
	- With 6 lanes			
	- With 7 lanes and over			
	- unknown			
3.2 By width of each carriageway				
(a) Total by width of each carriageway up to 6 m – 56.99 m				
	- Ordinary road	1		
		2		
(ab) Total by width of carriageway 6 m – 6.99 m				
		2		
(bc) Total by width of each carriageway of 7 m – 8.99 m				
	- Ordinary road	2		
		3		
	- Express road	2		
	- Motorway	2		
(ed) Total by width of each carriageway of 9 m – 10.49 m				
	- Ordinary road	2		
		3		
	- Express road	2		
		3		

E-Roads (Unit: km)	Number of lanes	2015	2020¹
- Motorway	2		
	3		

E-Roads (Unit: km)		Number of lanes	2015	2020 ¹
(de) Total by width of each carriageway of 10.50 m – 11.99 m				
	- Ordinary road	3		
		4		
	- Express road	2		
		3		
	- Motorway	2		
		3		
(ef) Total by width of each carriageway of 12 m – 13.99 m				
	- Ordinary road	3		
		4		
	- Express road	3		
		4		
	- Motorway	3		
		4		
(fg) Total by width of each carriageway of 14 m and over				
	- Ordinary road	3		
		4		
		5 and >		
	- Express road	4		
		5 and >		
	- Motorway	4		
		5 and >		

¹ Roads with different numbers of lanes in each carriageway should be classified according to the smaller number of lanes. The length of these road sections should be indicated.

² For section 3.1, the number of lanes of the two carriageways should be indicated, while for the subdivision by width of each carriageway in 3.2 only the number of lanes of one carriageway should be indicated.

Table 4
Length of E-Road sections by average annual daily traffic (AADT)

Average Annual Daily Traffic (AADT)		Length of road section (km)	
		2015	2020
1	Up to 999		
2	1 000 - 1 999		
3	2 000 - 3 999		
4	4 000 - 5 999		
5	6 000 - 9 999		
6	10 000 - 14 999		
7	15 000 - 19 999		
8	20 000 - 24 999		
9	25 000 - 29 999		
10	30 000 - 39 999		
11	40 000 - 49 999		
12	50 000 - 59 999		
13	60 000 - 79 999		
14	80 000 - 99 999		
15	100 000 - 119 999		
16	120 000 - 149 999		
17	150 000 and over		
18	Unknown ¹		
19	Total		

¹ Road sections where no counts were taken (such as in built-up and peripheral urban areas) should be included in "unknown" in this table. However, where countries have established counts covering the total E-Road network, including in these areas, the total of these figures should be given. In both cases, the totals of tables 1 and 2 should coincide.

Table 5
Counting posts on E-Roads in 2020

E-Road number	Length of road ¹ (km)	Number of counting posts				Total number of posts ² (C)+(D)+(E)+(F)
		Manual counts only ^{2, 3}	Manual counts and automatic counts ^{2, 3}	Automatic counts only ²	Other counting posts ^{2, 3, 4}	
(A)	(B)	(C)	(D)	(E)	(F)	(G)
All E-Roads in the country						
E						
E						
E						
E						
E						
E						
E						
E						
E						
E						
E						
E						
E						
E						
E						
E						
E						
E						
E						
E						

¹ The length of road common to two or more E-Roads should be stated in a footnote.
² The number of counting posts common to two or more E-Roads should be stated in a footnote.
³ The dates on which manual counts were taken should be stated in a footnote.
⁴ The nature and dates of operation of such posts should be stated in a footnote.

Table 6

Distribution of motor traffic by vehicle category in 2020

Vehicle category		code	E-Roads and number of corresponding counting posts											
			Total E-Roads		E		E		E		E		E	
			All counting posts ¹		Counting posts ¹		Counting posts ¹		Counting posts ¹		Counting posts ¹		Counting posts ¹	
		
		Average number per post in 2020		Change over 2015 (%)		Average number per post in 2020		Change over 2015 (%)		Average number per post in 2020		Change over 2015 (%)		
1	All Motor vehicles	a												
1.1	Light motor vehicles (total categories A and B)	a												
		b												
1.11	Category A	a												
		c												
1.12	Category B	a												
		c												
1.2	Heavy motor vehicles (total categories C and D)	a												
		b												
1.21	Category C	a												
		d												
1.22	Category D	a												
		d												

¹ Insert number of posts. Number of counting posts common to two/more E-Roads should be stated in a footnote.

Note: Vehicle categories:

- A = Motor vehicles with not more than 3 wheels (motor cycles with or without sidecars, including motor scooters, and motor tricycles)
- B = Passenger and light goods vehicles (vehicles including station wagons, with not more than nine seats, including the driver's seat, and light van with a permissible maximum weight of not more than 3.5 tonnes). Passenger and light goods vehicles are recorded as such, irrespective of whether they are with or without trailers, including caravans and recreational vehicles
- C = Goods road vehicles (lorries with a permissible maximum weight of more than 3.5 tonnes, lorries with one or more trailers; tractors with semi-trailers; tractors with semi-trailers and one or more trailers; and tractors without trailers or semi-trailers) and special vehicles (agricultural tractors, special vehicles such as self-propelled rollers, bulldozers, mobile cranes and army tanks and other road motor vehicles not specified elsewhere)
- D = Motor buses, coaches, mini-buses and trolley buses

Explanation of code:

- a = Daily average of motor vehicles
- b = Percentage of daily average of all motor vehicles
- c = Percentage of the daily average of the light motor vehicles
- d = Percentage of the daily average of the heavy motor vehicles

Table 7

Distribution of special types of motor traffic by vehicle category in 2020

Vehicle category		code	E-Roads and number of corresponding counting posts												
			E						E						
			Number of counting posts ¹		Number of counting posts ¹		Number of counting posts ¹		Number of counting posts ¹		Number of counting posts ¹		Number of counting posts ¹		
			Night traffic ²		Holiday traffic ³		Peak-hour traffic ⁴		Night traffic ²		Holiday traffic ³		Peak-hour traffic ⁴		
			(Veh/8h)		(Veh/24h)		(Veh/h)		(Veh/8h)		(Veh/24h)		(Veh/h)		
Average number per post in 2020		Change over 2015 (%)		Average number per post in 2020		Change over 2015 (%)		Average number per post in 2020		Change over 2015 (%)		Average number per post in 2020		Change over 2015 (%)	
1	All Motor vehicles	a													
1.1	Light motor vehicles (total categories A and B)	a													
		b													
1.11	Category A	a													
		c													
1.12	Category B	a													
		c													
1.2	Heavy motor vehicles (total categories C and D)	a													
		b													
1.21	Category C	a													
		d													
1.22	Category D	a													
		d													

For explanation of categories of motor vehicles and codes, see table 4 of this document.

Footnotes:

- ¹ Insert number of posts. The number of counting posts common to two or more E-Roads should be stated in a footnote.
- ² Night traffic is, in principle, defined as the average annual daily traffic flow (AADT) between 10 p.m. and 6 a.m.
- ³ Holiday traffic is defined in principle as the average daily traffic flow (ADT) in the two months' period, (in exceptional cases, one month).
- ⁴ Peak-hour traffic is, in principle, defined as the traffic at the 50th highest hour of the year.

Explanation of code:

- a = Daily average of motor vehicles
b = Percentage of daily average of all motor vehicles
c = Percentage of the daily average of the light motor vehicles
d = Percentage of the daily average of the heavy motor vehicles

Table 8
Length and usage of roads ^{1,2}

			Length (km)	Total	Vehicles kilometre (million per annum)			
					of which: ³			
					Vehicles category A	Vehicles category B	Vehicles category C	Vehicles category D
1	Total length	2015						
		2020						
By type of road								
1.1	All E-Roads	2015						
		2020						
1.11	- Motorways	2015						
		2020						
1.12	- Express roads	2015						
		2020						
1.13	- Other E-Roads	2015						
		2020						
1.2	Total non E-Roads	2015						
		2020						
1.21	- Motorways	2015						
		2020						
1.22	- Express roads	2015						
		2020						
1.23	- Other non E-Roads ⁴	2015						
		2020						

¹ Data for rows 1 and 1.1 should be based on the 2015/2020 E-Road Traffic Census results; data for rows 1.2, 1.21, 1.22 and 1.23 may be estimated.

² The method used for estimating vehicle-kilometre should be described in a note.

³ For explanation of categories of motor vehicles A-D, see table 4 of this document.

⁴ Each country must indicate which network (e.g. communal, regional, national) it has used.

Table 9

2020 Motor traffic density data at counting posts on E-Roads shown on the accompanying map

E-Road number ¹	Counting post number	Length of road section	Number of carriageways	Normal width of road section of each carriageway	Number of lanes ²	Normal or average width of lanes between counting posts	Width of central reserves ³	Width of emergency stopping strips ³	Average design speeds ⁴	Annual average daily motor traffic flow in 2020	% change in comparison with 2015 ⁵	% of heavy motor vehicles ⁶
(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)

¹ Counting posts should be arranged in the same order as set out in Annex 1 of the European Agreement on Main International Traffic Arteries (AGR).

² The number of lanes should be given which best represents the section of the road concerned. In case of section of single carriageway roads, the total number of lanes should be given (i.e. 2, 3, 4, 5 ...). In case of road sections with two carriageways separated by a central reserve the total number of lanes should be indicated (i.e. 2+2, 2+3, 3+3, 3+4 ...).

³ For width of central reserves (H) and width of emergency stopping strips (I), indicate the normal width on the majority of kilometres between one counting post and another. In case this information is not available for central reserves (H) and emergency stopping strips (I) on the majority of kilometres between one counting post and another, please indicate the existence of a central reserve and an emergency stopping strip (YES or NO).

⁴ For average design speeds (J), indicate the normal speed on the majority of kilometres between one counting post and another.

⁵ If the figures of percentage increase or decrease in comparison with 2015 do not correspond with the actual difference between the figures given for 2015 and those published earlier for the 2015 census, an explanation should be given in a footnote.

⁶ Vehicle categories (C) and (D) represent heavy vehicles.

Table 10
 Status of E-Road Signposting as of 31 December 2020

E-Road number	E-Roads for which signposting has been completed	E-Roads for which signposting is under way or planned	
		Signposting under way (expected date of completion)	Signposting planned (expected date of completion)
A	B	C	D
E			
E			
E			
E			
E			
E			
E			
E			
E			
E			
E			
E			
E			
E			
E			
E			
E			
E			
E			
E			
E			
E			

XII. Definitions

43. All definitions used in the census tables can be found in the Glossary of Transport Statistics (Fourth edition, 2009, UNECE-International Transport Forum-Eurostat) www.unece.org/trans/main/wp6/publications/stats_glossary.html. In particular, delegates are invited to view definitions B.I-01, B.I-05, B.I.06, B.I.07, B.I.08, B.I.09, B.I.10, B.I.11, B.I.12 B.I.17, B.I.18, B.II.A-14, B.II.A-15, B.II.A-16, B.II.A-17, B.II.A-21, B.II.A-22, B.II.A-23, B.IV-07 and B.IV-11.

XIII. Draft Resolution

Draft Resolution No. ...

E-Road Traffic Census of Motor Traffic and Inventory of Standards and Parameters on Main International Traffic Arteries in Europe in 2015 (“2015 E-Road traffic census”).

The Inland Transport Committee,

Having regard to the last paragraph of its resolution No. 169 of 15 January 1954 (E/ECE/TRANS/445),

1. Invites Governments:

(a) To take a census of traffic on the E-Roads on their national territory, in accordance with the European Agreement on Main International Traffic Arteries in Europe (AGR) as in force in 2020, and in line with the Recommendations to Governments for the E-Road Traffic Census of Motor Traffic and Inventory of Main Standards and Parameters on Main International Traffic Arteries in Europe in 2020 (2020 E-Road traffic census) as set forth in the document ECE/TRANS/WP.6/2018/11 considering 2020 as the reference year.

(b) To supply the results of the 2020 E-Road traffic census to the UNECE secretariat, if possible before 1 November 2021, in conformity with the Recommendations set forth in the document ECE/TRANS/WP.6/2018/11.

2. Recommends that Governments take a census of traffic on other non-urban roads in their national territory, applying where possible, the methods set out in the Recommendations mentioned under paragraph 1 (a) above.

3. Requests Governments to inform the Executive Secretary of the United Nations Economic Commission for Europe by 30 September 2019 whether they agree to implement the provisions of this resolution.