

Na osnovu člana 337. tačke 1. Ustava Socijalističke Federativne Republike Jugoslavije, donosim

## U K A Z

### O PROGLAŠENJU ZAKONA O RATIFIKACIJI EVROPSKOG SPORAZUMA O GLAVNIM MEĐUNARODNIM SAOBRAĆAJNIM ARTERIJAMA

Proglasava se Zakon o ratifikaciji Evropskog sporazuma o glavnim međunarodnim saobraćajnim arterijama, koji je donela Skupština SFRJ, na sednici Saveznog veća 29. aprila 1980. i na sednici Veća republika i pokrajina 29. aprila 1980.

PR br. 852  
Beograd, 29. aprila 1980.

Po ovlašćenju  
Predsednika Republike  
potpredsednik  
Predsedništva SFRJ  
**Lazar Koliševski**, s. r.

Predsednik  
Skupštine SFRJ  
**Dragoslav Marković**, s. r.

## Z A K O N

### O RATIFIKACIJI EVROPSKOG SPORAZUMA O GLAVNIM MEĐUNARODNIM SAOBRAĆAJNIM ARTERIJAMA

#### Član 1.

Ratificuje se Evropski sporazum o glavnim međunarodnim saobraćajnim arterijama, s prilozima I, II i III, potpisani u Ženevi 15. novembra 1975, u originalu na engleskom jeziku.

#### Član 2.

Tekst Sporazuma, s prilozima I, II i III, u originalu na engleskom jeziku i u prevodu na srpskohrvatski književni jezik glasi:

# **EUROPEAN AGREEMENT ON MAIN INTERNATIONAL TRAFFIC ARTERIES (AGR)**

The contracting parties,

Conscious of the need to facilitate and develop international road traffic in Europe,

Considering that in order to strengthen relations between European countries it is essential to lay down a co-ordinated plan for the construction and development of roads adjusted to the requirements of future international traffic,

Have agreed as follows:

## **Article 1**

Definition and adoption of the international E-road network The Contracting Parties adopt the proposed road network hereinafter referred to as "the international E-road network" and described in annex I to this Agreement, as a co-ordinated plan for the construction and development of roads of international importance which they intend to undertake within the framework of their national programmes.

## **Article 2**

The international E-road network consists of a grid system of reference roads having a general north-south and west-east orientation; it includes also intermediate roads located between the reference roads and branch, link and connecting roads.

## **Article 3**

Construction and development of roads of the international E-road network The roads of the international E-road network as referred to in article 1 of this Agreement shall be brought into conformity with the provisions of annex II to this Agreement.

## **Article 4**

- Signing of the roads of the international E-road network
1. The roads of the international "E-road network" shall be identified and signed by means of the road sign described in annex III to this Agreement.
  2. All signs used to designate E roads, which are not in conformity with the provisions of this Agreement and its annexes shall be removed within three years from the date of entry into force of this Agreement for the State concerned, in accordance with article 6.
  3. New road signs conforming to that described in annex III to this Agreement shall be placed on all roads of the international E-road network within four years from the date of entry into force of this Agreement for the State concerned, in accordance with article 6.
  4. The provisions of this article shall not be subject to any limitations which may result from the national programmes referred to in article 1 of this Agreement.

## **Article 5**

Procedure for the signature of, and for becoming Party to, this Agreement

1. This Agreement shall be open until 31 December 1976 for signature by States which are either Members of the United Nations Economic Commission for Europe or have been admitted to the Commission in a consultative capacity in conformity with paragraph 8 of the terms of reference of the Commission.
2. Those States may become Parties to this Agreement by
  - (a) signature not subject to ratification, acceptance or approval;
  - (b) signature subject to ratification, acceptance or approval, followed by ratification, acceptance or approval; or
  - (c) accession
3. Ratification, acceptance, approval or accession shall be effected by the deposit of an instrument in good and due form with the Secretary-General of the United Nations.

## **Article 6**

Entry into force of this Agreement

1. This Agreement shall enter into force 90 days after the date on which the Governments of eight States have either signed it not subject to ratification, acceptance or approval or have deposited an instrument of ratification, acceptance, approval or accession provided that one or more roads of the international E-road network link, in a continuous manner, the territories of at least four of the States which have so signed or which have deposited such an instrument. If this condition is not fulfilled, the Agreement shall enter into force 90 days after the date either of the signature not subject to ratification, acceptance or approval or of the deposit of the instrument of ratification, acceptance, approval or accession, whereby the said condition will be satisfied.
2. For each State which deposits its instrument of ratification, acceptance, approval or accession after the commencement of the period of 90 days specified in paragraph 1 of this article, the Agreement, shall enter into force 90 days after the date of deposit of the said instrument.
3. Upon its entry into force, this Agreement shall terminate and replace in relations between the Contracting Parties the Declaration on the Construction of Main International Traffic Arteries signed at Geneva on 16 September 1950.

## **Article 7**

Procedures for amending the main text of this Agreement

1. The main text of this Agreement may be amended by either of the procedures specified in this article.
  2. (a) Upon the request of a Contracting Party, any amendment proposed by it to the main text of this Agreement shall be

considered in the Working Party on Road Transport of the Economic Commission for Europe (ECE).

- (b) If adopted by two-thirds majority of those present and voting and if such a majority includes a two-thirds majority of the Contracting Parties present and voting, the amendment shall be communicated by the Secretary-General to all Contracting Parties for acceptance.
  - (c) If the amendment is accepted by two-thirds of the Contracting Parties, the Secretary-General shall so notify all Contracting Parties and the amendment shall come into force twelve months after the date of such notification. The amendment shall come into force with respect to all Contracting Parties except those which, before it comes into force, make a declaration that they do not accept the amendment.
3. Upon the request of at least one-third of the Contracting Parties, a conference to which the States referred to in article 5 shall be invited, shall be convened by the Secretary-General. The procedure specified in sub paragraphs (a) and (b) of paragraph 2 of this article shall be applied in respect of any amendment submitted to the consideration of such a conference.

## **Article 8**

Procedure for amending  
annex I to this  
Agreement

1. Annex I to this Agreement may be amended by the procedure specified in this article.
2. Upon the request of a Contracting Party, any amendment proposed by it to annex I to this Agreement shall be considered in the Working Party on Road Transport of the Economic Commission for Europe (ECE).
3. If adopted by the majority of those present and voting and if such majority includes the majority of the Contracting Parties present and voting, the amendment shall be communicated by the Secretary-General to the competent administrations of the Contracting Parties directly concerned. The following shall be considered Contracting Parties directly concerned:
  - (a) in the case of a new, or the modification of an existing class-A international road, any Contracting Party whose territory is crossed by that road;
  - (b) in the case of a new, or the modification of an existing, class-B international road, any Contracting Party contiguous to the requesting country, whose territory, whose territory is crossed by the class-A international road or roads with, which the class-B international road, whether new or to be modified, is connected. Two Contracting Parties having in their respective territories the terminal points of a sea link on the class-A international road or roads specified above shall also be considered contiguous for the purposes of this paragraph.
4. Any proposed amendments communicated in accordance with paragraph 3 of this article shall be accepted in within a period of six months following the date of its communication none of the competent administrations of the Contracting Parties directly concerned notify the Secretary-General of their objection to the amendment. If the administration of a Contracting Party states that its national law obliges it to subordinate its agreement to the grant of a specific authorization or to the approval of a legislative body, the competent administration shall not be considered as having consented to the amendment to annex I to this Agreement, and the proposed amendment shall not be accepted, until such time as the said competent administration notifies the Secretary-General that it has obtained the required authorization or approval. If such notification is not made within a period of eighteen months following the date on which the proposed amendment was communicated to the said competent administration or if, within the period of six months specified above, the competent administration of a Contracting Party directly concerned expresses an objection to the proposed amendment, that amendment shall not be accepted.
5. Any amendment accepted shall be communicated by the Secretary-General to all the Contracting Parties and shall come into force for all the Contracting Parties three months after the date of its communication.

### **Article 9**

Procedure for amending Annexes II and III to this Agreement may be amended by the annexes II and III to this Agreement

1. Annexes II and III to this Agreement may be amended by the procedure specified in this article.
2. Upon the request of a Contracting Party, any amendment proposed by it to annexes II and III to this Agreement shall be considered in the Working Party on Road Transport of the Economic Commission for Europe (ECE).
3. If adopted by the majority of those present and voting, and if such majority includes the majority of the Contracting Parties present and voting, the amendment shall be communicated by the Secretary-General to the competent administrations of all Contracting Parties for acceptance.
4. Such amendment shall be accepted if during a period of six months from the date of notification, less than one-third of the competent administration of the Contracting Parties notify the Secretary-General of their objection to the amendment.
5. Any amendment accepted shall be communicated by the Secretary-General to all Contracting Parties and shall come into force three months after the date of its communication.

### **Article 10**

Notification of the address fo the administration to which proposed amendments to the annexes to this Agreement are to be communicated

Each State shall, at the time of signing, ratifying, accepting, approving or acceding to this Agreement, inform the Secretary-General of the name and address of its administration to which proposed amendments to the annexes to this Agreement are to be communicated in conformity with articles 8 and 9 of this Agreement.

### **Article 11**

Denunciation and cessation of validity of this Agreement

Any Contracting Party may denounce this Agreement by written notification addressed to the Secretary-General. The denunciation shall take effect one year after the date of receipt by the Secretary-General of such notification.

### **Article 12**

This Agreement shall cease to be in force if the number of Contracting Parties is less than eight for any period of twelve consecutive months.

### **Article 13**

- Settlement of disputes
1. Any dispute between two or more Contracting Parties which relates to the interpretation or application of this Agreement and which the Parties in dispute are unable to settle by negotiation or other means of settlement shall be referred to arbitration if any of the Contracting Parties in dispute so requests and shall, to that end, be submitted to one or more arbitrators selected by mutual agreement between the Parties in dispute. If the Parties in dispute fail to agree on the choice of an arbitrator or arbitrators within three months after the request for arbitration, any of those Parties may request the Secretary-General of the United Nations to appoint a single arbitrator to whom the dispute shall be submitted for decision.
  2. The award of the arbitrator or arbitrators appointed in accordance with paragraph 1 of this article shall be binding upon the Contracting Parties in dispute.

### **Article 14**

- Limitis to the application of this Agreement
- Nothing in this Agreement shall be construed as preventing a Contracting Party from taking such action, compatible with the provisions of the Charter of the United Nations and limited to the exigencies of the situation, as it considers necessary to its external or internal security.

### **Article 15**

- Declaration concerning article 13 of this Agreement
- Any State may, at the time of signing this Agreement or of depositing its instrument of ratification, acceptance, approval or accession, declare that it does not consider itself bound by article 13 of this Agreement. Other Contracting Parties shall not be bound by article 13 with respect to any Contracting Party which has made such a declaration.

### **Article 16**

- Notifications to Contracting Parties
- In addition to the declarations, notifications and communications provided for in articles 7, 8, 9 and 15 of this Agreement, the Secretary-General shall notify the Contracting Parties and the other States referred to in article 5 of the following:
- (a) signatures, ratifications, acceptances, approvals and accessions under article 5;
  - (b) the dates of entry into force of this Agreement in accordance with article 6;
  - (c) the date of entry into force of amendments to this Agreement in accordance with article 7, paragraph 2 (c), article 8, paragraph 4

and 5, and article 3;

(d) denunciations under article 11;

(e) the termination of this Agreement under article 12.

### **Article 17**

Deposit of the present Agreement with the Secretary-General After 31 December 1976 the original of this Agreement shall be deposited with the Secretary-General of the United Nations, who shall send certified true copies to all the States referred to in article 5 of this Agreement.

In witness whereof, the undersigned, being duly authorized thereto, have signed this Agreement.

Done at Geneva, this fifteenth day of November one thousand nine hundred and seventy-five in a single copy in the English, French and Russian languages, the three texts being equally authentic.

### **ANNEX I**

#### **INTERNATIONAL E-ROAD NETWORK**

##### **Explanatory notes**

1. Reference roads and intermediate roads, called class-A roads, have two-digit numbers; branch, link and connecting roads, called class-B roads, have three-digit numbers.
2. North-south orientated reference roads have two-digit odd numbers terminating in the figure 5 and increasing from west to east. East-west orientated reference roads have two-digit even numbers terminating in the figure 0 and increasing from north to south. Intermediate roads have respectively two-digit even numbers comprised within the numbers of the reference roads between which they are located. Class-B roads have three-digit numbers, the first digit being that of the nearest reference road to the north of the B-road concerned, and the second digit being that of the nearest reference road to the west of the B-road concerned; the third digit is a serial number.

## **LIST OF ROADS**

### **A. Main roads**

#### (1) West-east orientation

##### (a) Reference roads

- E 20 Shannons- Limerick - Portlaoise - Dublin ... Liverpool - Manchester - Bradford - Leeds - Hull ... Esbjerg - Kolding - Middelfart - Nyborg ... Korsör - Kobenhavn ... Malmö - Ystad ... Tallin - Leningrad
- E 30 Cork - Waterford - Wexford - Rosslare ... Fishguard - Swansea - Cardiff - Newport - Bristol - London - Colchester - Ipswich - Felixstowe ... Hoek van Holland - Den Haag - Gouda - Utrecht - Amersfoort - Oldenzaal - Osnabrück - Bad Oeynhausen - Hannover - Braunschweig - Magdeburg - Berlin - Świebodzin - Poznan - Lowicz - Warszawa - Brest - Minsk - Smolensk - Moskva.
- E 40 Calais - Oostende - Gent - Bruxelles - Liege - Aachen - Köln - Olpe - Giessen - Bad Hersfeld - Herleshausen - Eisenach - Erfurt - Gera - Karl-Marx-Stadt - Dresden - Görlitz - Legnica - Wrocław - Opole - Gliwice - Kraków - Przemysł - Lvov - Rovno - Zhitomir - Kiev - Kharkov - Rostov na donu.
- E 50 Brest - Rennes - Le Mans - Paris - Reims - Saarbrücken - Mannheim - Heilbronn - Feuchtwangen - Nürnberg - Rozvadov - Plzeň - Praha - Jihlava - Brno - Žilina - Prešov - Košice - Vyšné Nemecké - Uzhgorod - Mukačevo.
- E 60 Brest - Nantes - Tours - Mulhouse - Basel - Olten - Zürich - Winterthur - St. Gallen - St. Margrethen. - Lauterach - Feldkirch - Imst - Innsbruck - Wörgl - Salzburg - Linz - Wien - Nickelsdorf - Mosonmagyaróvár - Györ - Budapest -  
Püspökladany - Oradea - Cluj - Turda - Tîrgu-Mureş - Brasov - Ploieşti - Bucureşti - Urziceni - Slobozia - Hirsova - Constanţa.
- E 70 La Rochelle - Lyon - Chambéry - Susa - Torino - Alessandria - Tortona - Brescia - Verona - Mestre (Venezia) - Palmanova - Trieste - Ljubljana - Zagreb - Djakovo - Beograd - Vršac - Timisoara - Caransebeş - Turnu Severin - Craiova - Pitesti - Bucureşti - Giurgiu - Ruse - Razgrad - Choumen - Varna.
- E 80 La Coruna - Santander - Bilbao - San Sebastian - Pau - Toulouse - Narbonne - Nîmes - Aix-en-Provence - Nice - Vintimiglia - Savona - Genova - La Spezia - Migliarino - Livorno - Grosseto - Roma - Migliarino - Livorno - Grosseto - Roma - Pescara... Dubrovnik - Petrovac - Titograd - Priština - Niš - Dimitrovgrad - Sofia - Plovdiv - Edirne - Babaeski - Silivri - Istanbul - Izmir - Adapazari - Bolu - Gerede - Ankara - Yozgat - Sivaš - Erzincan - Mutu - Askale - Erzurum - Agri - Iran.

E 90 Lisboa - Setúbal - Pegões - Elvas - Badajoz - Madrid - Zaragoza - Lérida - Barcelona . . Mazara del Vallo - Palermo - Messina ... Reggio di Calabria - Cantanzaro - Sibari - Crotone - Metaponto - Taranto - Brindisi ... Igoumenitsa - Ioannina - Kozani - Thessaloniki - Alexandrovpolis - Ipsula - Kesan ... Izmir - Aydin - Antalya - Tarsus - Adana - Kömürler - Gaziantep - Urfa - Mardin - Musaybin - Cizre - Esendere - Iran.

(b) Intermediate roads

- E 12 Mo i Rana - Umea ... Vaasa - Tampere - Helsinki.
- E 16 Londonderry - Belfast ... Glasgow - Edinburgh.
- E 18 Craigavon - Belfast - Larne . . Stranraer - Gretna - Carlise - Newcastle ... Stavanger - Kristiansand - Larvik - Drammen - Oslo - Ørje - Karlstad - Örebro - Arboga - Enköping - Stockholm - Norotälje Kappelskar ... Åland Turku and Naantali - Helsinki - Vaalimaa - Leningrad.
- E 22 Holyhead - Chester - Warrington - Manchester - Leeds - Doncaster - Immingham ... Amsterdam - Groningen - Oldenburg - Bremen - Hamburg - Lübeck - Rostock - Stralsund - Sassnitz.
- E 24 Hamburg - Berlin.
- E 26 Berlin - Szczecin - Goleniow - Koszalin - Gdansk.
- E 28 Birmingham - Cambridge - Ipswich.
- E 32 Colchester - Harwich.
- E 36 Antwerpen - Eindhoven - Venlo - Oberhausen - Kamen - Band Oeynhausen.
- E 38 Berlin - Lübbenau - Cottbus - Legnica.
- E 42 Dunkerque - Lille - Mons - Chaleroi - Namur - Liege - St. Vith - Wittlich - Bingen - Wiesbaden - Frankfurt am Main - Aschaffenburg - Würzburg.
- E 44 St. Brieuc - Caen - Rouen - Amiens - Charleville - Mézieres - Luxembourg - Trier - Wittlich - Koblenz - Ransbach-Baumbach - Giessen.
- E 46 Rouen - Reims - Charleville - Mézieres - Liege.
- E 48 Bayreuth - Marktredwitz - Cheb - Karlovy Vary - Praha.
- E 52 Paris - Nancy - Strasbourg - Appenweier - Karlsruhe - Stuttgart - Uhn - München - Braunau - Wels - Linz.
- E 54 Paris - Chaumont - Mulhouse - Basel - Waldshut - Lindau - Memmingen - München - Rosenheim - Salzburg.
- E 56 Nürnberg - Regensburg - Deggendorf - Passau - Wels - Sattledt.
- E 62 Nantes - Poitiers - Mâcon - Geneve - Lausanne - Martigny - Sion - Simplon - Gravellona Toce - Milano - Tortona.
- E 64 Szeged - Arad - Deva - Sibiu - Brasov.
- E 66 Torino - Milano - Brescia.

- E 68 Fortezza - St. Candido - Spittal - Villach - Klagenfurt Graz - Veszprém - Balato-maliga.
- E 72 Nice - Cuneo - Asti - Alessandria.
- E 74 Migliarino - Firenze.
- E 76 Bordeaux - Toulouse.
- E 78 Grosseto - Arezzo - Sansepolcro - Fano.
- E 82 Coimbra - Celorico da Beira - Salamanca - Valladolid - Burgos.
- E 86 Krystalopigi - Fiorina - Vevi - Yefira - Thessalonikii.
- E 88 Kesan - Tekirdag - Silivri.
- E 92 Rion - Egion.
- E 94 Corinthos - Athinai.

## (2) North-south orientation

### (a) Reference roads

- E 05 Greenock - Glasgow - Gretna - Carlisle - Penrith - Preston - Warrington - Birmingham - Newbury - Southampton ... Le Havre - Paris - Orleans - Tours - Poitiers - Bordeaux - San Sebastian - Burgos - Madrid - Cordoba - Sevilla - Cadiz - Algeciras.
- E 15 Inverness - Perth - Edinburgh - Newcastle - Sootch-Corner - Doncaster - London - Folkestone - Dover ... Calais - Paris - Lyon - Orange - Nairbonne - Gerona - Barcelona - Tarragona - Castellon de la Plana - Valencia - Alicante - Murcia - Algeciras.
- E 25 Amsterdam - Utrecht - 's-Hertogenbosch - Eindhoven - Maastricht - Liege - Bastogne - Arlon - Luxembourg - Metz - St. Avold - Strasbourg - Mulhouse - Basel - Olten - Bern - Lausanne - Geneve - Mont-Blanc - Aosta - Torino - Alessandria - Tortona - Genova.
- E 35 Hoek van Holland - Rotterdam - Gouda - Utrecht - Arnhem - Emmerich - Obechauseen - Köln - Ransbach-Baumbach - Frankfurt am Main - Heidelberg - Karlsruhe - Offenburg - Basel - Olten - Luzern - Altdorf - S. Gottardo - Bellinzona - Lugano - Chiasso - Como - Milano - Piacenza - Parma - Modena - Firenze - Arezzo - Roma.
- E 45 Vellan - Mo i Rana - Stjordalshalsen - Trendheim - Dombas - Otta - Hamar - Eidsvoll - Oslo - Moss - Svinesund - Uddevalla - Cöteborg - Halmstad - Helsingborg ... Helsingör - Kobenhavn - Koge - Vordingborg - Rodby ... Puttgarden ... Hamburg - Walsrode - Hannover - Northeim - Göttingen - Kassel - Bad Hersfeld - Fulda - Würzburg - Nürnberg - München - Rosenheim - Wörgl - Innsbruck - Brenner-Pass/Passo del Brennero - Fortezza - Bolzano - Trento - Verona - Bologna - Cesena - Perugia - Roma - Napoli - Salerno - Sicignano - Cosenza - Villa S. Giovanni ... Messina - Catania - Siracusa - Gela.

- E 55 Tornio - Haparanda - Lulea - Umea - Sundsvall - Gävle - Uppsala - Stockholm - Södertälje - Norrköping - Linköping - Jönköping - Hälsingborg - Malmö - Trelleborg ... Sassnitz - Straslund - Rostock - Berlin - Lübbenau - Dresden - Cinovec - Teplice - Praha - Tabor - Češke Budejovice - Dolni Dvorište - Linz - Salzburg - Villach - Tarvision - Udine - Palmanova - Mestre (Venezia) - Ravenna - Cesena - Rimini - Fano - Ancona - Pescara - Canosa - Bari - Brindisi ... Igoumenitsa - Preveza - Messolongi - Rion - Patrai - Pyrgos - Kalamai.
- E 65 Ystad - ... Swinoujscie - Wolin - Goleniow - Szczecin - Świebodzin - Jelenia-Gora - Harrachov - Železny Brod - Turnov - Mlada Boleslav - Praha - Jihlava - Brno - Breclav - Bratislava - Rajka - Mosonmagyarovar - Czorna - Szombathely - Körmend - Redics - Zagreb - Karlovac - Rijeka - Split - Metković - Dubrovnik - Petrovac - Titograd - Bijelo Polje - Scopje - Kičev - Ohrid - Bitolj - Niki - Vevi - Kozani - Larissa - Domokoe - Lamia - Bralilois - Itea ... Egion - Korintos - Tripolos - Gythion.
- E 75 Tromso - Nordkjosbotn - Skibotn - Helligskogen - Kilpisjarvi - Tornio - Oulu - Jyväskylä - Lahti - Helsinki ... Gdańsk - Elblag - Ostroda - Mława - Warszawa - Radom - Krakow - Trstena - Ružomberok - Banska Bystrica - Zvolen - Šahy - Budapest - Szeged - Beograd - Niš - Kumanovo - Skopje - Gevgelija - Evzoni - Thessaloniki - Larissa - Almyros - Lamia - Athinai - Chania - Iraklion - Agios Nikolaos - Sitia.
- E 85 Cernovoy - Siret - Suceava - Roman - Bacau - Marasesti - Buzau - Urziceni - Bucuresti - Ciurgiu - Ruse - Bjaia - Velico Tirnovo - Stara Zagora - Haskovo - Podkova - Komotini.
- E 95 Leningrad - Moskva - Oryol - Kharkov - Simferopol - Alushta - Yalta.

(b) Intermediate roads

- E 01 Larne - Belfast - Dublin - Wexford - Rosslare ... La Coruna - Pontevedra - Porto - Albergaria a Velha - Coimbra - Vila Franca de Xira - Lisboa - Setual - Portimao - Faro - Huelva - Seville.
- E 03 Cherbourg - Rennes - Nantes - La Rochelle.
- E 07 Orleans - Limoges - Toulouse - Zaragoza.
- E 13 Doncaster - Sheffield - Nottingham - Leicester - Northampton - London.
- E 17 Antwerpen - Gent - Kortrijk - Cambrai - Reims - Beaune.
- E 19 Amsterdam - Den Haag - Rotterdam - Breda - Antwerpen - Bruxelles - Mons - Valenciennes - Paris.
- E 21 Metz - Nancy - Dijon - Geneve - Chambery - Grenoble - Valence - Marseille.
- E 23 Metz - Nancy - Besançon - Vallorbe - Lausanne.
- E 27 Dortmund - Köl - Prüm - Luxembourg - Saarbrücken - Sarreguemines - (E 25 Strasbourg).
- E 29 Belfort - Bern - Martigny - Grand-Saint-Bernard - Aosta.
- E 31 Parma - La Spezia.

- E 33 Rotterdam - Gorinchem - Nijmegen - Goch - Krefeld - Köln - Koblenz - Bingen - Ludwigshafen.
- E 37 Stockholm - Södertälje - Örebro - Mariestad - Göteborg ... . Frederikshavn - Alborg - Arhus - Vejle - Kolding - Krusa -Flensburg - Schleswig - Neumünster - Hamburg - Bremen - Osnabrück - Dortmund - Olpe - Giessen.
- E 39 Giessen - Frankfurt am Main - Darmstadt.
- E 41 Würzburg - Heilbronn - Stuttgart - Donaueschingen - Schaffhausen - Winterthur - Zürich - Altdorf.
- E 43 Würzburg - Feuchtwangen - Ulm - Memmingen - Lindau - Bregenz - St. Margrethen - Buchs - Chur - S. Bernardino - Bellinzona.
- E 47 Magdeburg - Halle Leipzig - Karl-Marx-Stadt - Boží Dar - Karlovy Vary - Plzen - Česke Budejovice - Trevon - Halamky - Wien.
- E 49 Orehoved - Nyköbing - Gedser ... Rostock.
- E 51 Berlin - Leipzig - Gera - Hof - Bayreuth - Nürnberg.
- E 53 Plzen - Bayer - Eisenstein - Deggendorf - München.
- E 57 Sattledt - Liezen - St. Michael - Graz - Maribor - Ljubljana.
- E 59 Praha - Jihlava - Wien - Graz - Spielfeld - Maribor - Zagreb - Karlovac - Bihać - Donjilapac - Knin - Split.
- E 63 Klagenfurt - Loibl-Pass - Ljubljana - Trieste - Rijeka.
- E 67 Warszawa - Lowicz - Wroclaw - Kłodzko - Beloves - Nachod - Hradec - Kralove - Praha.
- E 69 Warszawa - Piotrkow - Katowice - Český Tešín - Žilina - Trenčín - Piešťany - Bratislava - Wiener Neustadt.
- E 71 Košice - Miskolc - Budapest - Balatonaliga - Nagykanizsa - Zagreb.
- E 73 Budapest - Szekszárd - Mohács - Osijek - Djakovo - Samak - Zenica - Mostar - Metković.
- E 77 Püspökladány - Nyiregyháza.
- E 79 Oradea - Beius - Deva - Petrosani - Tîrgu Jiu - Craiova - Calafat ... Vidin - Vraca - Botevgrad - Sofia - Blagojevgrad - Serai - Thessaloniki.
- E 81 Halmeu - Satu Mare - Zalau - Cluj - Turda - Sebes - Sibiu - Pitesti.
- E 83 Bjala - Pleven - Jablanica - Botevgrad - Sofia.
- E 87 Tulcea - Constanta - Varna - Burgas - Mičurin - Malco Tyrnovo - Kirkclareli - Babaeski.
- E 89 Trabzon - Gümüşane - Askale - Mutu - Tunceli - Elâzig - Malatya - Maras - Kömürlər - İskenderun - Antakya - Syrian border.

E 93 Orel - Kiev - Odessa

**B. Branch, link and connecting roads**

- E 130 Vejle - Middelfart.  
E 135 Haugesund - Haukeli - Kongsberg - Drammen.  
E 136 Bergen - Gudvangen ... Laerdalsoyri - Fagernes - Honefoss - Oslo.  
E 137 Alessund - Andalsnes - Dombas.  
E 140 Trondheim - Storlien - Östersund - Sundsvall.  
E 160 Turku - Tampere - Jyväskylä - Kuopio.  
E 200 Cork - Portlaoise.  
E 230 Amsterdam - Amersfoort.  
E 231 Amersfoort - Groningen.  
E 232 Oldenzall - Bremen.  
E 233 Bremerhaven - Bremen - Walsrode.  
E 250 Stralsund - Neubrandenburg - Berlin.  
E 267 Gdańsk - Świecie - Poznań - Wrocław.  
E 269 Świecie - Łódź - Piotrków.  
E 312 Breda - Gorinchem - Utrecht.  
E 313 Antwerpen - Liège.  
E 314 Hasselt - Heerlen - Aachen.  
E 330 Unna - Soest - Kassel - Herleshausen.  
E 410 Bruxelles - Namur - Arlon.  
E 420 Aachen - St. Vith - Luxembourg.  
E 440 Karlovy Vary - Teplice - Turnov - Hradec Králové - Olomouc - Žilina.  
E 460 Brno - Olomouc - Český Tešín - Kraków.  
E 461 Hradec Králové - Brno - Wien.  
E 470 Mukachevo - Lvov...  
E 530 Offenburg - Donaueschingen.  
E 532 München - Garmisch - Partenkirchen - Mittenwald - Seefeld - Innsbruck.  
E 550 České Budějovice - Jihlava.  
E 562 Bratislava - Zvolen - Košice.  
E 571 Cluj - Dej - Bistrita - Suceava.  
E 572 Bacău - Brătov - Pitești.  
E 573 Nyíregyháza - Tchop - Užhorod.  
E 580 Marasesti - Tecuci - Albita - Leucheni - Kishinev - Odessa.  
E 650 Altenmarkt - Liezen.  
E 651 Villach - Podkoren - Naklo.  
E 660 Subotica - Sombor - Osijek.

- E 661 Balatonekeresztúr - Nagyatád - Barcs - Virovitica - Okučani - Banja Luka - Jajce - Donji Vakuf - Zenica.
- E 671 Timisoara - Arad - Oradea.
- E 717 Torino - Savona.
- 6 751 Rijeka - Pula - Koper.
- E 752 Turnu Severin - Negotin - Zaječar - Niš - Priština - Prizren - (Albania) - Petrovac.
- E 760 Beograd - Čačak - Nova Varoš - Bijelo Polje.
- E 761 Bihać - Jajce - Donji Vakuf - Zenica - Sarajevo - Titovo Užice - Čačak - Kraljevo - Kruševac - Pojate - Paraćin - Zaječar.
- E 762 Sarajevo - Titograd - Albanian Border.
- E 771 Jablanica - Velico Tirnovo - Choumen.
- E 772 Popovac - Stara Zagora - Burgas.
- E 800 Albergaria a Velha - Celorico da Beira.
- E 801 Vila Franca de Xira - Pegoess.
- E 804 Salamanca - Badajoz - Sevilla.
- E 805 Bilbao - Logrono - Zaragoza.
- E 841 Avellino - Salerno.
- E 842 Napoli - Avellino - Benevento - Canosa.
- E 843 Bari - Taranto.
- E 844 Spezzano - Albanese - Sibari.
- E 846 Cosenza - Crotone.
- E 847 Sicignano - Potenza - Metaponto.
- E 848 S. Eufemia - Catanzaro.
- E 850 Ohrid - Albanian Border.
- E 851 Joannina - Albanian Border.
- E 870 Sofia - Kjustendil - Kumanovo.
- E 880 Izmir - Ankara.
- E 881 Ankara - Adana.
- E 901 Jaén - Granada - Málaga.
- E 902 Madrid - Valencia.
- E 931 Mazara del Vallo - Gela.
- E 950 Joannina - Trikala - Larissa - Volos.
- E 951 Lamia - Karpenissd - Amfilochia.
- E 952 Tripolos - Megalopolis - Tsakona.
- E 957 Joannina - Arta - Agrinon Messologi.
- E 980 Cízre - Iraq.

## **ANNEX II**

### **CONDITIONS TO WHICH THE MAIN INTERNATIONAL TRAFFIC ARTERIES SHOULD CONFORM**

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- II. 2. Motorways
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##### III. STANDARDS FOR SECTIONS BETWEEN JUNCTIONS

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- IV.4. Railways intersections

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## **CONDITIONS TO WHICH THE MAIN INTERNATIONAL TRAFFIC ARTERIES SHOULD CONFORM**

### **I. GENERAL**

- 1.1. The fundamental characteristics of the construction or improvement of the main international traffic arteries, hereafter designated "international roads", are dealt with in the following provisions, which are based on modern concepts of road construction technology. They do not apply in built-up areas. The latter shall be by-passed if they constitute a hindrance or a danger.
- 1.2. The values of the characteristics indicated below are the absolute minima or maxima. They shall be increased or diminished respectively when this is possible without extra cost or when justified economically.
- 1.3. All the provisions of this annex shall be taken into account in the light of a comparison of the costs and the benefits realized and in particular of safety considerations. For vehicular traffic the assessment shall be made for the various possibilities, according to the different assumptions made, in particular with regard to the design speed\* and taking into account the estimated volume of traffic, its composition and the annual distribution of hourly flows.
- 1.4. The protection of the environment shall be taken into account in the surveying and construction of a new international road.

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\* The design speed is that which, in a scheme for the improvement or construction of a road, is chosen to determine the minimum geometric characteristics permitting isolated vehicles to travel at this speed in safety.

### **II. CATEGORIES OF INTERNATIONAL ROADS**

International roads are classified into one of the following categories:

#### **II.1. All-purpose roads**

Category I. Roads with two lanes (single carriageway)

Category II. Roads with more than two lanes (one or several carriageways)

#### **II.2. Motorways**

"Motorways" means a road specially designed and built for motor traffic, which does not serve properties bordering on it, and which.

- (i) Is provided, except at special points or temporarily, with separate carriageways for the two directions of traffic, separated from each other either by a dividing strip not intended for traffic or, exceptionally, by other means
- (ii) Does not cross at level with any road, railway or tramway track, or footpath and
- (iii) Is specially sign-posted as a motorway.

### **II.3. Express Roads**

Roads reserved for automobile traffic, accessible only from interchanges or controlled junctions and on which, in particular, stopping and parking are Prohibited.

## **III. STANDARDS FOR SECTIONS BETWEEN JUNCTIONS**

### **III.1. Cross-section**

The formation of international roads shall comprise, in addition to the carriageway or carriageways, verges and possibly a central reserve and special paths for pedestrians and cyclists. Such special paths shall not be permitted within the formation of motorways. They shall not be permitted along an express road unless they are separated from it by a sufficiently wide space.

Trams and railways are excluded from the carriageways of all-purpose roads and from within the formation of motorways and express roads.\*

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\* This provision shall not apply to motorways which have been specially designed to allow the installation of a railway.

#### **III.1.1. Carriageways**

##### **III.1.1.1. Width**

The traffic lanes on the carriageways shall have, on a straight alignment, a minimum width of 3.50 m.

In curves of radius less than 200 m, extra width shall be provided to ensure that the largest authorized vehicles can travel at normal speeds without hindrance.

For design speeds equal to or greater than 100 km/h the longitudinal edge markings shall not be included in the above width.

However, the width of a supplementary lane for slow vehicles on a gradient can be reduced to 3 m.

##### **III.1.1.2. Crossfall**

In straight alignment, the cross-section of the carriageway shall consist of one or two planes with a cross-fall between 2 and 3 per cent.

In curves, the maximum superelevation shall be 7 per cent. The minimum radius without modification of the cross-section of the straight alignment is given (in metres) in the following table as a function of the design speed (in km/h):

Design speed	140	120	100	80	60
All-purpose roads	-	1,800	1,300	800	450
Motorways and express roads	3,900	2,800	2,000	1,300	400

### III.1.2. Shoulders and central reserve

III.1.2.1. The recommended minimum width of the shoulder shall be 3.25 m for all purpose and express roads and 3.75 m for motorways.

III.1.2.2. The shoulders of motorways and express roads shall include on the right side of the carriageway a continuous stopping strip, paved or stabilized, with a minimum width of 2.50 m to permit stopping in an emergency.

Such a strip is recommended for all-purpose roads. If it is not provided or if it does not have a width of 2.50 m, laybys shall be provided at intervals.

If need be, draw-ins for buses shall also be provided outside the carriageways.

In all cases, surfaced or stabilized lateral strips, 1 m in width, shall be provided on the shoulder along the carriageways. For safety reasons, wider strips, free of all obstacles, shall be provided along motorways and express roads.

III.1.2.3. Where a central reserve is provided, its recommended minimum width shall be 4 m between motorway carriageways. It is recommended that this width shall be increased particularly on curves, if visibility so requires.

It is recommended that the central reserve shall include at the edge of the carriageways marginal guidance and safety strips, paved or stabilized, with a minimum width of 1 m.

### III.1.3. Special paths

On the verge of all-purpose roads, where motor traffic reaches at least 2,000 vehicles per day, special paths reserved for pedestrians, cyclists or similar traffic shall be provided whenever their number reaches 200 units per peak half-hour in one direction or 1,000 units per day in one direction.

Cycle tracks shall normally be one-way and shall have a minimum width of 2.20 m.

A separating strip with a minimum width of 1 m shall be provided between the carriageway and the special paths.

## **III.2. Horizontal and vertical alignment**

### **III.2.1. Homogeneity and co-ordination of horizontal and vertical alignment**

International roads shall present homogeneous characteristics over sufficiently long sections. Changes in characteristics shall be made at points where they are normally obvious to a driver (such as passage through a built-up area or a change in topography). If this is not possible, they shall be introduced progressively.

The horizontal and vertical alignment shall be coordinated in such a way that the road appears to the driver without undue discontinuities of alignment, permits him to anticipate his manoeuvres and to see clearly the critical points, in particular junctions and entrances and exist of interchanges.

### **III.2.2. Geometric characteristics**

**III.2.2.1.** The paving of international roads shall everywhere have an even surface. The difference in level per 3 m run shall not exceed 4 mm.

**III.2.2.2.** The principal geometric characteristics of international roads are summarized in the following table: they are based on a coefficient of longitudinal friction (locked wheels, smooth tyres) of 0.4 at 50 km/h; they shall be regarded as minimum values to be observed.

Design speed (in km/h)	140	120	100	80	60
Gradient (% not to be exceeded)	4	5	6	7	8
Minimum radii in convex vertical curves (in metres)*	One-way carriageway	27.000	12.000	6.600	3.000
	Two-way carriageway	-	-	10,000	4,500
Minimum radii in plane corresponding to maximum superelevation		1,000	600	450	240
					120

\* The convex vertical curves shown in the table correspond to transition curves with terminal slopes sensibly equal but in opposite directions. A difference in slopes is sufficient to limit visibility.

The design speed of 120 km/h shall be chosen only if the carriageways are separated and if most of the intersections are designed as interchanges (see IV below). The design speed of 140 km/h is applicable only to motorways.

Concave curves shall be such that, for a given design speed, the vertical acceleration shall not exceed  $0.25 \text{ m/sec}^2$ .

The values for horizontal curves are the minima corresponding to a superelevation of 7 per cent. They are sufficient for the stability of the vehicle and comfort of the driver under average conditions.

The gradient resulting from longitudinal slope and superelevation shall not exceed 10 per cent.

III.2.2.3. The circular and straight sections of the horizontal alignment shall be joined by curves with a progressive curvature.

III.2.2.4. The horizontal and vertical visibility provided shall be such as to give the same degree of safety, taking any gradients into account.

The minimum visibility distances necessary for overtaking on two-way carriageways are given in the following table:

desing speed (in km/h)	100	80	60
minimum overtaking visibility distance (in metres)	400	325	250

These visibility distances shall be provided on as great a percentage of the length of the road and, as uniformly distributed, as possible.

III.2.2.5. When the visibility is insufficient, doubling of the carriageway is recommended at summits and in curves on all-purpose roads with two and three traffic lanes.

### III.3. Traffic flows

Roads of the various categories shall permit normally, i.e. with a quality or level of service judged necessary for international roads, and in conformity with the standards laid down in III.2, the flows\* indicated in column I of the following table expressed in passenger car units (pcu.) per hour.\*\*

\* A passenger car unit corresponds to a private car. For other vehicles a pcu equivalent shall be applied.

\*\* Outside urban areas.

Category of road	1	2	Remarks
	Normal flow pcu/hr	Maximum admissible flow pcu/hr	
Category I	900	1,500	both ways
Category II 3-lane	1,500	2,000	both ways
4-lane	1,500	2,000	one way
for each additional lane	750	1,000	one way
Motorways and express roads with 2x2 lanes	2,000	3,000	one way
for each additional lane	1,200	1,500	one way

For a given category of roads, it is recommended that the flows indicated in column 1 shall not be exceeded during more than 50 hours per year, unless there is no economic justification for a supplementary lane or improvement to a higher category.

When the flow exceeds the values in column 2 during more than 50 hours per year, it is recommended that consideration be given to the construction of an additional lane or improvement to a higher category taking into account construction and environmental costs.

These values imply a continuous flow on condition:

- (i) that level junctions are not too numerous and do not create too many traffic incidents;
- (ii) that for two and three-lane roads, the overtaking visibility distances are provided over the whole of the route.

Three-lane roads are not recommended when the normal flow, indicated in column 1 of the above table, is exceeded.

For four-lane roads, when the peak flow in the heavier direction exceeds 1,500 pcu/hr during more than 50 hours per year, separate one-way carriageways are recommended for safety.

## **IV. STANDARDS FOR INTERSECTIONS\***

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\* This text is drafted on the assumption that traffic drives on the right.

### **IV.1. Definitions**

International roads, where they meet each other, or where they meet other roads or other ways of communication, form "intersections"

The different arrangements for road intersections are as follows:

#### **Intersections of all-purpose roads**

- level junctions in which the branches are situated on the same level or grade;
- grade-separated junctions or junctions on separate levels in which at least one of the branches crosses one or several other branches at a different level.

#### **Intersections, between motorways or express roads and roads of the same category**

A Interchanges in which the joinings do not involve any cuts in traffic flows.

#### **Intersections between motorways and all-purpose roads**

B Interchanges not involving any traffic cuts on the motorway carriageway.

#### **Intersections between express roads and all-purpose roads**

For major intersections:

B Interchanges not involving any traffic cuts on the carriageway(s) of the express road.

For intersections of secondary importance for which an interchange is not economically justified:

Level or grade-separated junctions possibly controlled by light signals.

## **IV.2. Intersections on all-purpose roads**

### IV.2.1. Level junctions

IV.2.1.1. Level junctions shall be avoided on international roads whenever this measure is economically justified.

IV.2.1.2. Level junctions comprising more than four branches shall be simplified by grouping certain traffic streams according to their volume.

IV.2.1.3. Roundabouts and light signals shall be used only if other arrangements avoiding weaving flows and cuts, are not economically justified.

IV.2.1.4. At the approaches to a junction, visibility of the junction shall be provided over a sufficient distance to ensure that drivers have enough time to take the decisions imposed by the type of control and the traffic conditions of the moment. This visibility is improved if carriageways, especially those on which drivers must give way, slope slightly down towards the junction.

IV.2.1.5. The international road, shall have priority over other roads. The priority between international roads shall be fixed according to the relative volumes of traffic.

IV.2.1.6. Through traffic on the priority international road shall not be slowed down. For this purpose, waiting zones of sufficient length shall be provided between the two lines of traffic, for vehicles about to turn left.

IV.2.1.7. Acceleration and deceleration lanes shall be provided at the entrance to and exit from the carriageway of the priority international road at important junctions where they are economically justified.

IV.2.1.8. The junction shall include, on the non-priority carriageways, directional islands to channel the traffic streams. The directional islands shall satisfy the following criteria:

- (a) the geometry of the set of traffic lanes shall be as simple as possible, so as to be immediately comprehensible to drivers;
- (b) non-priority traffic streams shall be slowed down, and the diversion, of the corresponding lanes shall be adapted to the volume of traffic they carry;
- (c) intersecting lanes shall intersect one another as nearly at right angles as possible;
- (d) the points of intersection shall be spaced (and not merged) in such a way that drivers can reach them separately via intermediate waiting zones;
- (e) the most direct path shall be reserved for pedestrians;

- (f) if cycle paths exist, cyclists shall be diverted from the junction proper in such a way that they cross the vehicle lanes as nearly at right angles as possible;
- (g) directional islands shall be bordered by a slightly raised kerb in white material. When economically justified, they shall be lit at night. If not lit, the kerbs shall be reflectorized.

#### IV.2.2. Grade-separated junctions

When the necessary improvement has been shown to be economically justified, certain important traffic streams shall be separated to eliminate traffic cuts with other streams using the same junction.

The horizontal and vertical alignments of the slip roads shall conform to the principles and standards of the interchanges which are applicable to them (see IV.3.).

Slip roads which are not grade-separated shall at their intersections form junctions corresponding to the conditions set forth above (see IV.2.1.).

### **IV.3. Interchanges**

#### IV.3.1. Definitions

The carriageways of interchanges are classed as principal carriageways and slip roads joining the principal carriageways.

The principal carriageways are those which carry the largest volumes of traffic (allowing, where appropriate for their hourly variation), and for which no significant reduction in design speed shall be tolerated.

#### IV.3.2. Flow on the carriageways of interchanges

The carriageways of an A interchange shall be one-way. In a B interchange, certain slip roads may be two-way for part of their length; however, the entries to or exits from a motorway or express road shall always be one-way.

#### IV.3.3. Principles for the alignment of interchanges

The alignment of interchanges shall satisfy the following principles:

##### IV.3.3.1. Principle A. - Type of interchange

In the choice of a type of interchange and of its principal carriageways and slip roads due account shall be taken of the absolute and relative volume of the traffic streams which pass through it.

##### IV.3.3.2. Principle B. - Divergence of traffic streams

When a carriageway divides into two other carriageways, the separation of the two traffic streams shall be effected in such a way as not to entail any significant reduction in the speeds of vehicles.

To this end the driver shall have time to place himself in the lane most favourable for the direction he wishes to take, and shall have sufficient visibility of the point of divergence. In an A interchange, a carriageway which divides into two others shall be widened before the separation, and shall comprise a number of lanes equal, to the total number of lanes on the two carriageways over a distance which will allow the streams to separate before the point of divergence. The widening shall preferably be made to the right.

The less important traffic stream shall be required to leave by the right-hand carriageway in order to reduce the number of vehicles slowing down whilst changing lanes. If the speed of this stream has to be reduced, a deceleration lane shall be provided. This right-hand carriageway shall, if possible, be raised progressively with respect to the principal carriageway to facilitate possible deceleration and provide better visibility of the point of divergence.

In a B interchange the exit carriageway leaving the motorway or express road carriageway shall diverge towards the right and include a deceleration lane.

#### IV.3.3.3. Principle C. - Convergence of traffic streams

When two carriageways converge to form one single carriageway, the integration of the two traffic streams shall be effected in safe conditions and shall not entail any significant reduction in the speeds of vehicles.

To this end:

- (a) the drivers in the less important traffic stream shall merge from the right into the more important traffic stream;
- (b) the driver who has to merge shall have good visibility of the other carriageway before and beyond the point of convergence.

The merging manoeuvre, where appropriate via an acceleration lane, shall not entail any appreciable reduction in the speed of the principal stream. Visibility is improved and the merging manoeuvre simplified if the carriageway carrying the merging stream slopes slightly down towards the other carriageway.

- (c) It is desirable also to ensure good visibility from the principal carriageway on to the other carriageway;
- (d) when two principal carriageways to form one single carriageway, and if there is a reduction in the total number of traffic lanes, this reduction shall be made at a sufficient distance from the point of convergence.

In a B interchange, the entry carriageway on to a motorway or express road carriageway shall converge from the right and include an acceleration lane.

#### IV.3.3.4. Principle D. Weaving sections

Weaving sections shall be avoided on principal carriageways. A weaving section shall be tolerated on them only if the volumes of vehicles weaving are low; if possible at least one supplementary lane shall be provided on the right of the principal carriageway.

In all cases, the geometric characteristics of the weaving section and of the carriageways before and beyond it shall be such that the speeds of the weaving vehicles do not differ greatly

from one another, and they shall not entail too great a reduction in the speeds at which traffic can move on these carriageways.

#### IV.3.3.5. Principle E. Points of divergence and convergence

Within the limits of an interchange, each principal carriageway shall include only one point of divergence and one point of convergence.

In every case where there are several points of divergence or convergence on the same carriageway, measures shall be taken to ensure ease of manoeuvre and there shall be separate signs for the successive points of divergence or convergence.

### IV.3.4. Geometric characteristics of interchanges

#### IV.3.4.1. Design-speed for principal carriageways

The principal carriageways of an interchange shall be conceived with a design speed as close as possible to that of the carriageways into which they lead beyond the interchange, and in every case at least equal to three-quarters of it. In B interchanges, however, no reduction in the design speed shall be tolerated, on the motorway carriageways or on carriageways of express roads.

#### IV.3.4.2. Radius of slip roads

On a level section, the minimum radius of the inner edge of the carriageway shall be 50 m. This value corresponds theoretically to a level carriageway with the maximum permissible superelevation.

In all cases, curves of small radius shall be joined progressively by transition curves (with a continuous variation of curvature), of sufficient length to permit the driver to adapt his speed easily.

#### IV.3.4.3. Width of slip roads

It shall be possible to overtake a stationary vehicle at any point. On slip roads of a certain length, it is desirable also to provide for the possibility of overtaking a moving vehicle.

To this end:

- single-lane carriageways shall have a total width of at least 6 m, including the stabilized shoulder not normally used by traffic.
- two-lane carriageways shall have a width of at least 7 m. The stabilized shoulder is optional in this case. These carriageways shall be reduced to single-lane carriageways near the point of entry on to (or exit from) a principal carriageway, if the total number of lanes on the principal carriageway is not increased (nečítka) after the point of entry (or reduced after the point of exit).

#### IV.3.4.4 Weaving sections

It is recommended that weaving sections shall have a minimum length of  $0.2 Q$  (in metres), being the total weaving traffic in pcu/hr. The number of lanes necessary on this hypothesis is calculated by multiplying the smaller weaving flow by a factor of 3.

If, exceptionally, a weaving section cannot be avoided on a principal carriageway, its length shall be  $Q$  metres with a minimum of 500 m.

The interchange shall be so designed that, within its limits, the total weaving traffic is less than 2,000 pcu/hr.

#### IV.3.4.5. Length of acceleration lanes

It is recommended that access carriageways shall have an acceleration lane proper followed by a lane of variable width known as a taper.

When the motorway or express road carriageway and the acceleration lane are on the level and in straight alignment, the total length of the acceleratorslane shall be 300 m minimum, and that of the acceleration lane proper 200 m minimum.

If the horizontal and vertical alignment are different, the length of the acceleration lanes shall be modified accordingly.

#### IV.3.4.6. Length of deceleration lanes

Deceleration lanes shall consist of a lane of variable width known as a taper, followed by deceleration lane proper, of constant width, which may be parallel, and adjacent to the motorway carriageway or independent of it.

The taper shall permit the driver to move gradually out of the principal stream without any appreciable reduction in his speed. The length of taper is determined by assuming that the time needed to execute this manoeuvre without difficulty is about 3.5 seconds. The length of the deceleration lane proper is determined by assuming that the rate of deceleration of vehicles is not greater than  $1.5 \text{ m/sec}^2$ .

### **IV.4. Railway intersections**

Intersections of railways with international roads shall be separate-level intersections.

## **V. STRUCTURES**

### **V.1. Alignment and cross-sections**

Except in special cases (mountainous regions, particularly difficult terrain, etc.), no restriction on the characteristics of the carriageway and, if appropriate, of cycle-tracks or footpaths shall be allowed over or under structures. In particular the lateral stopping strip referred to in III.1.2. shall be maintained on motorways and express roads.

### **V.2. Overhead clearance**

The minimum overhead clearance shall be 4.5 m.

## **VI. SAFETY EQUIPMENT**

### **VI.1. Lighting**

Sections, junctions and interchanges on international roads shall be provided with lighting whenever the volume of night traffic economically justifies the provision and operation of lighting systems. Such lighting shall be uniform and sufficient to enable motorized traffic to travel without driving-lights.

### **VI.2 Anti-glare devices**

When the volume of night traffic justifies it, plantations or screens shall be provided on the central reserve of motorways and express roads and, if necessary, on their shoulders if the driving-lights of vehicles travelling in the opposite direction on the other carriageway or on another road running alongside the international road create visual discomfort on the latter.

### **VI.3. Safety barriers**

Safety barriers shall be provided to avoid collisions with obstacles situated on, the shoulders or the central reserve, provided however that the risk and the consequences of a collision with the barriers are less than those of collision with the obstacles which they protect.

Barriers may not be necessary for the protection of road sign or lamp posts if these are so designed as to reduce the effects of impact by a vehicle.

It is recommended that the safety barriers shall be sited at the maximum distance from the edge of the carriageway compatible with the presence of vehicles or exterior obstacles.

On motorways and express roads, safety barriers shall be provided in particular:

- (a) On the central reserve when it is less than 6 m wide, if the daily volume reaches 20,000 with 2x2 lanes or 30,000 with 2x3 lanes, or when it is less than 4.50 m wide whatever the volume.
- (b) On the shoulders:
  - (i) When fixed and rigid obstacles such as bridge abutments and piers, retaining walls, gantry supports, a continuous line of lamp posts etc. are situated less than 3.50 m from the edge of the carriageway;
  - (ii) On embankments when their height or the slope of the banks presents an obvious danger;
  - (iii) On sections bordered by a water course, a road or a railway less than 10 m from the edge of the carriageway.
- (c) On structures, particularly when barriers exist on both sides of the structure.

## **VII. LANDSCAPING**

- VII.1. The co-ordination of the horizontal and Vertical alignment shall be studied (III.2.1. not only from the point of view of safety but also from that of the harmonious, integration, of the alignment with the surrounding land.
- VII.2. All the elements of the landscape shall, together with the road signs, contribute to the comfort of the driver and the safety of traffic. It is desirable, in particular, to create good visual guidance by plantations of bushes in harmony with the natural species and to establish, in monotonous flat country, screens of foliage to measure the depth of the field of vision.
- VII.3. Plantations, of bushes shall also be provided to protect users against glare, wind and snowdrifts and, where appropriate, to provide persons occupying premises alongside the road with protection from noise and air pollution.
- VII.4. For safety and, aesthetic reasons roadside advertising hoardings shall be prohibited on international roads.

## **VIII. ANCILLARY SERVICES**

### **VIII.1. Installations at frontiers**

Adequate road facilities and, in particular, parking areas, shall be provided at frontiers for the accomodation and clearance of normal traffic. Commercial and tourist traffic shall be separated, and combined frontier posts shall be established.

### **VIII.2. Miscellaneous installations**

Motorways and possibly express roads shall be provided with service and parking areas off the carriageways and regularly spaced.

Service areas shall include filling stations, parking areas, toilets, first-aid posts and also possibly restaurants and motels.

Parking areas are merely to allow vehicles to stop and are not normally provided with all the facilities mentioned above.

Service and parking areas provided on motorways shall be accessible only from the motorway.\* They shall be connected to the latter by entry and exit lanes conforming to criteria similar to those which are applicable for a B interchange.

In less developed areas filling stations and, where necessary, garages, workshops and accommodation for rest and meals shall be provided in the proximity of an international road.

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\* However, an access from the ordinary road network may be provided for use by tradesmen and service personnel.

### **VIII.3. First-aid posts**

First-aid posts shall be provided along international roads to supplement local facilities where necessary. They shall be equipped in accordance with the recommendations of the Standing International Commission on Highway First-Aid and of the League of Red Cross Societies.

#### **VIII.4. Telecommunications**

International roads shall be equipped at regular intervals with emergency telephone or other posts to enable calls to be made to the first-aid post from a position of safety. Their operation shall be simple, easy for users to understand and preferably explained by symbols or ideograms. Arrows placed sufficiently close together shall indicate the location of the nearest post.

### **ANNEX III**

#### **IDENTIFICATION AND SIGNING OF E-ROADS**

1. The sign to be used for identifying and signing E-roads is rectangular in shape.
2. This sign consists of the letter E, generally followed by the number in Arabic numerals attributed to the route.
3. It has a green ground with white inscription; it may be affixed to or combined with other signs.
4. Its size should be such that it can be easily identified and understood by drivers of vehicles travelling at speed.
5. The sign to be used for identifying and signing E-roads does not preclude the use of a sign for identifying roads on a national basis.

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## **EVROPSKI SPORAZUM O GLAVNIM MEĐUNARODNIM SAOBRĀCAJNIM ARTERIJAMA (AGR)**

Strane ugovornice

Svesne potrebe unapređivanja i daljnog razvijanja međunarodnoga drumskog saobraćaja u Evropi,

smatrajući da je za jačanje odnosa između evropskih zemalja neophodan plan izgradnje i rekonstrukcije puteva usklađen sa potrebama budućega međunarodnog saobraćaja,

saglasile su se o sledećem:

### **Član 1.**

Definicija i usvajanje mreže međunarodnih puteva E

Strane ugovornice usvajaju predloženu mrežu puteva (u nastavku teksta "mreža međunarodnih puteva E"), čiji je opis dat u Prilogu I ovog sporazuma kao koordinisan plan izgradnje i rekonstrukcije puteva od međunarodnog značaja, čiju izgradnju strane ugovornice nameravaju da preduzmu u okviru svojih nacionalnih planova izgradnje.

### **Član 2.**

Mreža međunarodnih puteva E sastoji se od mreže osnovnih puteva koji se pružaju u osnovnom pravcu sever-jug i zapad-istok; ona obuhvata i međuputeve koji se nalaze između osnovnih puteva i ogrankova kao i priključne i povezujuće puteve.

### **Član 3.**

Izgradnja i rekonstrukcija puteva mreže međunarodnih puteva E

Mreža međunarodnih puteva E koja je pomenuta u članu 1. ovog sporazuma uskladiće se s odredbama Priloga II ovog sporazuma.

#### **Član 4.**

Označavanje puteva mreže međunarodnih puteva E

1. Putevi mreže međunarodnih puteva E raspoznaju se i označavaju pomoću saobraćajnog znaka opisanog u Prilogu III ovog sporazuma.
2. Svi znakovi upotrebljeni za označavanje puteva E koji nisu u skladu sa odredbama ovog sporazuma i njegovih priloga biće uklonjeni u roku od tri godine od dana stupanja na snagu ovog sporazuma za dotičnu zemlju, prema članu 6.
3. Novi saobraćajni znakovi koji odgovaraju znaku opisanom u Prilogu III ovog sporazuma biće postavljeni na svim putevima mreže međunarodnih puteva E u roku od četiri godine od dana stupanja na snagu ovog sporazuma, prema članu 6.
4. Odredbe ovog člana ne podležu nikakvim ograničenjima koja bi mogla proizaći iz nacionalnih programa pomenutih u članu 1. ovog sporazuma.

#### **Član 5.**

Postupak za potpisivanje i dobijanje svojstva strane ugovornice ovog sporazuma

1. Ovaj sporazum otvoren je za potpisivanje do 31. decembra 1976. svim državama članicama Ekonomskog komisije Ujedinjenih nacija za Evropu ili državama koje su primljene u Komisiju u svojstvu konsultanta, u skladu sa tačkom 8. Mandata Komisije.
2. Te države mogu postati strane ugovornice Sporazuma:
  - a) potpisivanjem koje ne podleže ratifikaciji, prihvatanju ili odobrenju;
  - b) potpisivanjem koje podleže ratifikaciji, prihvatanju ili odobrenju, nakon kojeg sledi ratifikacija, prihvatanje ili odobrenje; ili
  - c) pristupanjem.
3. Ratifikacija, prihvatanje, odobrenje ili pristupanje obavljaju se deponovanjem instrumenta sačinjenog u odgovarajućem obliku kod generalnog sekretara Ujedinjenih nacija.

## **Član 6.**

Stupanje Sporazuma na 1. Ovaj sporazum stupa na snagu nakon proteka 90 dana od dana kada su vlade osam država potpisale sporazum bez obaveze ratifikacije, prihvatanja ili odobrenja ili deponovale instrument o ratifikaciji,

prihvatanju, odobrenju ili pristupanju, uz uslov da jedan ili više puteva mreže međunarodnih puteva E bez prekida povezuju teritorije najmanje četiri države koje su potpisale Sporazum ili deponovale takav instrument. Ako tom uslovu nije uđovoljeno,

Sporazum stupa na snagu nakon proteka 90 dana od dana potpisivanja koje ne podleže ratifikaciji, prihvatanju ili odobrenju, ili od dana deponovanja instrumenta o ratifikaciji, prihvatanju, odobrenju ili pristupanju, čime se uđovoljava pomenutom uslovu.

2. Za svaku državu koja deponuje instrument o ratifikaciji, prihvatanju, odobrenju ili pristupanju nakon proteka roka od 90 dana pomenutog u tački 1. ovog člana. Sporazum stupa na snagu nakon proteka 90 dana od dana deponovanja tog instrumenta.
3. Stupanjem ovog sporazuma na snagu ukida se i zamenjuje, u odnosima između strana ugovornica, Deklaracija o izgradnji glavnih međunarodnih saobraćajnih arterija, potpisana u Ženevi 16. septembra 1950.

## **Član 7.**

Postupci za izmenu osnovnog teksta ovog sporazuma

1. Osnovni tekst ovog sporazuma može se izmeniti u skladu s jednim od postupaka navedenih u ovom članu.
2. a) Na zahtev jedne strane ugovornice, svaki predlog o izmeni osnovnog teksta ovog sporazuma razmatra Radna grupa za putni saobraćaj Ekonomsko komisije Ujedinjenih nacija za Evropu (ECE).
  - b) Ako se izmena usvoji dvotrećinskom većinom glasova, a tu većinu čini dvotrećinska većina prisutnih strana ugovornica koje glasaju, generalni sekretar saopštava tu izmenu stranama ugovornicama radi prihvatanja.
  - c) Ako izmenu prihvate dve trećine strana ugovornica, generalni sekretar to saopštava svim stranama ugovornicama, a izmena stupa na snagu nakon proteka dvanaest meseci od dana saopštenja. Izmena stupa na snagu za sve strane ugovornice osim za one koje pre njenog stupanja na snagu izjave da je ne prihvataju.
3. Na zahtev najmanje jedne trećine strana ugovornica, generalni sekretar saziva konferenciju na koju se pozivaju države pomenute u članu 5. Postupak utvrđen u podtačkama a) i b) tačke 2. ovog člana primenjuje se na svaku izmenu podnetu na razmatranje konferenciji.

## **Član 8.**

- |   |  |
|---|--|
| <p>Postupak za izmenu priloga I ovog sporazuma</p>  | <ol style="list-style-type: none"><li>1. Prilog I ovog sporazuma može se izmeniti u skladu sa postupkom utvrđenim ovim članom.</li><li>2. Na zahtev jedne strane ugovornice, svaki predlog o izmeni Priloga I ovog sporazuma razmatra Radna grupa za putni saobraćaj Ekonomsko komisije Ujedinjenih nacija za Evropu.</li><li>3. Ako se izmena usvoji većinom glasova, a tu većinu čini većina prisutnih strana ugovornica koje glasaju, generalni sekretar saopštava tu izmenu nadležnim organima uprave neposredno zainteresovanih strana ugovornica. Neposredno zainteresovanim stranama ugovornicama smatraju se:<ol style="list-style-type: none"><li>a) kada je u pitanju novi put ili rekonstrukcija postojećeg međunarodnog puta reda A - svaka strana ugovornica preko čije teritorije taj put prolazi;</li><li>b) kada je u pitanju novi put ili rekonstrukcija postojećeg međunarodnog puta reda B - svaka strana ugovornica koja se graniči sa zemljom koja je podnela zahtev i preko čije teritorije prolazi međunarodni put ili put reda A sa kojima je povezan novi put ili put reda B koji treba da se rekonstruiše.</li></ol></li></ol> |
| <p>U svrhe ove tačke graničnim se smatraju dve strane ugovornice na čijim se teritorijama nalaze krajnje tačke pomorske veze predviđene trase međunarodnog puta ili puta reda A, koji su gore pomenuti.</p>   |  |
| <ol style="list-style-type: none"><li>4. Svaka predložena izmena saopštena u skladu s tačkom 3. ovog člana prihvata se ako nadležni organi uprave neposredno zainteresovanih strana ugovornica u roku od šest meseci od dana dostave tog sporazuma ne obaveste generalnog sekretara da ima prigovor na izmenu. Ako organ uprave jedne strane ugovornice izjavи da, prema unutrašnjem zakonodavstvu, njegova saglasnost ovisi o dobijanju posebnog ovlašćenja ili odobrenja zakonodavnog organa, smatra se da taj nadležni organ uprave nije saglasan sa izmenom Priloga I ovog sporazuma, a predložena izmena neće biti prihvaćena sve dok pomenuti nadležni organ uprave ne obavesti generalnog sekretara da je dobio potrebno ovlašćenje ili odobrenje. Ako se takvo saopštenje ne uputi u roku od osamnaest meseci od dana kada je predložena izmena saopštena pomenutom nadležnom organu uprave ili ako u navedenom šestomesečnom razdoblju nadležni organ uprave neposredno zainteresovane strane ugovornice stavi prigovor na predloženu izmenu, ta izmena neće biti prihvaćena.</li><li>5. Generalni sekretar saopštava svim stranama ugovornicama svaku prihvaćenu izmenu, a ona stupa na snagu za sve strane ugovornice nakon proteka tri meseca od dana dostave saopštenja.</li></ol> |  |

### **Član 9.**

Postupak za izmenu priloga II i III ovog sporazuma.

1. Prilozi II i III ovog sporazuma mogu se izmeniti u skladu s postupkom utvrđenim u ovom članu.
2. Na zahtev jedne strane ugovornice, svaku izmenu priloga II i III ovog sporazuma koju ona predloži razmatra Radna grupa za putni saobraćaj Ekonomski komisije Ujedinjenih nacija za Evropu (ECE).
3. Ako se izmena usvoji većinom glasova, a tu većinu čini većina prisutnih strana ugovornica koje glasaju, generalni sekretar saopštava izmenu nadležnim organima uprave strana ugovornica radi prihvatanja.
4. Takva se izmena prihvata ako u toku šest meseci od dana saopštenja manje od jedne trećine nadležnih organa uprave strana ugovornica obaveste generalnog sekretara da imaju prigovor na izmenu.
5. Generalni sekretar saopštava svim stranama ugovornicama svaku prihvaćenu izmenu, a ona stupa na snagu nakon proteka tri meseca od dana dostave saopštenja.

### **Član 10.**

Obaveštavanje o adresi organa uprave na koju treba slati predložene izmene priloga uz ovaj sporazum

Pri potpisivanju, ratifikaciji, prihvatanju i odobravanju ovog sporazuma, svaka država obaveštava generalnog sekretara o nazivu i adresi svog organa uprave kome treba dostaviti predložene izmene priloga uz ovaj sporazum, u skladu sa čl. 8. i 9. ovog sporazuma.

### **Član 11.**

Otkazivanje i prestanak važenja ovog sporazuma

Svaka strana ugovornica može otkazati ovaj sporazum pismenim obaveštenjem upućenim generalnom sekretaru. Otkaz stupa na snagu nakon proteka godine dana od dana kada generalni sekretar primi takvo obaveštenje.

### **Član 12.**

Ovaj sporazum prestaje da važi ako broj strana ugovornica bude manji od osam u bilo kojem razdoblju od dvanaest uzastopnih meseci.

### **Član 13.**

Rešavanje sporova

1. Svaki spor između dve ili više strana ugovornica u vezi sa tumačenjem ili primenom ovog sporazuma, koji strane u sporu ne mogu rešiti pregovorima ili na neki drugi način, podnosi se, na zahtev bilo koje strane u sporu, jednom ili više arbitara koje strane u sporu zajednički odaberu. Ako se strane u sporu ne slože o izboru

arbitra ili arbitra u roku od tri meseca od podnošenja zahteva za arbitražu, svaka strana može zatražiti od generalnog sekretara Ujedinjenih nacija da odredi jednog arbitra kojem se spor podnosi na rešavanje.

2. Odluka arbitra ili arbitra, naimenovanih u skladu sa stavom 1. ovog člana, postaje obavezna za strane ugovornice u sporu.

#### **Član 14.**

Ograničavanje primene ovog sporazuma	Nijedna odredba ovog sporazuma ne može se tumačiti tako da se na osnovu nje sprečava jedna strana ugovornica da preduzima mere koje su u skladu s odredbama Povelje Ujedinjenih nacija i koje su ograničene na potrebe nastale situacije, a koje ona smatra nužnim za obezbeđivanje svoje spoljne i unutrašnje bezbednosti.
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#### **Član 15.**

Izjava u vezi sa članom 13. ovog sporazuma	Svaka država može pri potpisivanju ovog sporazuma ili deponovanju instrumenta o ratifikaciji, prihvatanju, odobrenju ili pristupanju izjaviti da smatra da je odredbe člana 13. ovog sporazuma ne obavezuju. Član 13. ne obavezuje ostale strane ugovornice u odnosu prema svakoj strani ugovornici koja je dala takvu izjavu.
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#### **Član 16.**

Obaveštavanje strana ugovornica	Osim izjava, službenih obaveštenja i saopštenja predviđenih u čl. 7, 8, 9. i 15. ovog sporazuma, generalni sekretar obaveštava strane ugovornice i druge države pomenute u članu 5:
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- a) o potpisivanju, ratifikaciji, prihvatanju, odobrenju i pristupanju u skladu sa članom 5;
- b) o datumima stupanja na snagu ovog sporazuma u skladu sa članom 6;
- c) o datumu stupanja izmena ovog sporazuma na snagu u skladu s tačkom 2) c) člana 7. i tač. 4. i 5. člana 8. i člana 9;
- d) o otkazima prema članu 11;
- e) o prestanku važenja ovog sporazuma prema članu 12.

#### **Član 17.**

Deponovanje Sporazuma kod generalnog sekretara	Posle 31. decembra 1976. original ovog sporazuma biće deponovan kod generalnog sekretara Ujedinjenih nacija, koji će dostaviti propisno overene primerke svim državama pomenutim u članu 5. ovog sporazuma.
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U potvrdu toga su dole potpisani, propisno ovlašćeni u tu svrhu,

potpisali ovaj sporazum.

Sastavljeno u Ženevi 15. decembra 1975. u jednom primerku na engleskom, francuskom i ruskom jeziku, pri čemu su sva tri teksta jednako verodostojna.

## PRILOG I

### MREŽA MEĐUNARODNIH PUTEVA E

#### Napomena

1. Osnovni putevi i međuputevi koji se nazivaju putevima reda A obeleženi su dvocifrenim brojevima; ogranci puteva, priključni i povezujući putevi koji se nazivaju putevima reda B obeleženi su trocifrenim brojevima.
2. Osnovni putevi koji se pružaju u pravcu sever-jug obeleženi su dvocifrenim neparnim brojem koji se završava brojkom 5 a povećava se sa zapada na istok. Osnovni putevi koji se pružaju u pravcu istok-zapad imaju dvocifrene parne brojeve koji se završavaju nulom (0) a povećavaju se sa severa na jug. Međuputevi imaju odgovarajuće dvocifrene neparne i dvocifrene parne brojeve koji su sastavljeni od brojeva osnovnih puteva između kojih se nalaze. Putevi reda B imaju trocifrene brojeve od kojih prvi označava najbliži osnovni put severno od puta B, drugi označava najbliži osnovni put zapadno od puta B i treći označava serijski broj.

## POPIS PUTEVA

### A. Glavni putevi

(1) Pravac zapad - istok

(a) Osnovni putevi

E 20      Shannons- Limerick - Portlaoise - Dublin ... Liverpool - Manchester - Bradford - Leeds - Hull ... Esbjerg - Kolding - Middelfart - Nyborg ... Korsör - Kobenhavn ... Malmö - Ystad ... Tallin - Leningrad

E 30      Cork - Waterford - Wexford - Rosslare ... Fishguard - Swansea - Cardiff - Newport - Bristol - London - Colchester - Ipswich - Felixstowe ... Hoek van Holland - Den Haag - Gouda - Utrecht - Amersfoort - Oldenzaal - Osnabrück - Bad Oeynhausen - Hannover - Braunschweig - Magdeburg - Berlin - Świebodzin - Poznan - Lowicz - Warszawa - Brest - Minsk - Smolensk - Moskva.

- E 40 Calais - Oostende - Gent - Bruxelles - Liege - Aachen - Köln - Olpe - Giessen - Bad Hersfeld - Herleshausen - Eisenach - Erfurt - Gera - Karl-Marx-Stadt - Dresden - Görlitz - Legnica - Wrocław - Opole - Gliwice - Kraków - Przemyśl - Lvov - Rovno - Zhitomir - Kiev - Kharkov - Rostov na donu.
- E 50 Brest - Rennes - Le Mans - Paris - Reims - Saarbrücken - Mannheim - Heilbronn - Feuchtwangen - Nürnberg - Rozvadov - Plzeň - Praha - Jihlava - Brno - Žilina - Prešov - Košice - Vyšné Nemecké - Uzhgorod - Mukačevo.
- E 60 Brest - Nantes - Tours - Mulhouse - Basel - Olten - Zürich - Winterthur - St. Gallen - St. Margrethen - Lauterach - Feldkirch - Imst - Innsbruck - Wörgl - Salzburg - Linz - Wien - Nickelsdorf - Mosonmagyaróvár - Györ - Budapest -  
Püspökladany - Oradea - Cluj - Turda - Tîrgu-Mureş - Brasov - Ploieşti - Bucureşti - Urziceni - Slobozia - Hirsova - Constanţa.
- E 70 La Rochelle - Lyon - Chambéry - Susa - Torino - Alessandria - Tortona - Brescia - Verona - Mestre (Venezia) - Palmanova - Trieste - Ljubljana - Zagreb - Djakovo - Beograd - Vršac - Timisoara - Caransebes - Turnu Severin - Craiova - Pitesti - Bucureşti - Giurgiu - Ruse - Razgrad - Choumen - Varna.
- E 80 La Coruna - Santander - Bilbao - San Sebastian - Pau - Toulouse - Narbonne - Nîmes - Aix-en-Provence - Nice - Vintimiglia - Savona - Genova - La Spezia - Migliarino - Livorno - Grosseto - Roma - Migliarino - Livorno - Grosseto - Roma - Pescara... Dubrovnik - Petrovac - Titograd - Priština - Niš - Dimitrovgrad - Sofia - Plovdiv - Edirne - Babaeski - Silivri - İstanbul - Izmir - Adapazari - Bolu - Gerede - Ankara - Yozgat - Sivaš - Erzincan - Mutu - Askale - Erzurum - Agri - Iran.
- E 90 Lisboa - Setúbal - Pegões - Elvas - Badajoz - Madrid - Zaragoza - Lérida - Barcelona . . Mazara del Vallo - Palermo - Messina ... Reggio di Calabria - Cantanzaro - Sibari - Crotone - Metaponto - Taranto - Brindisi ... Igoumenitsa - Ioannina - Kozani - Thessaloniki - Alexandroupolis - Ipsula - Kesan ... Izmir - Aydin - Antalya - Tarsus - Adana - Kömürler - Gaziantep - Urfâ - Mardin - Musaybin - Cizre - Esendere - Iran.

(b) Međuputevi

- E 12 Mo i Rana - Umea ... Vaasa - Tampere - Helsinki.
- E 16 Londonderry - Belfast ... Glasgow - Edinburgh.
- E 18 Craigavon - Belfast - Larne . . Stranraer - Gretna - Carlise - Newcastle ... Stavanger - Kristiansand - Larvik - Drammen - Oslo - Orje - Karlstad - Örebro - Arboga - Enköping - Stockholm - Norotälje Kappelskar ... Åland Turku and Naantali - Helsinki - Vaalimaa - Leningrad.

- E 22      Holyhead - Chester - Warrington - Manchester - Leeds - Doncaster - Immingham ... Amsterdam - Groningen - Oldenburg - Bremen - Hamburg - Lübeck - Rostock - Stralsund - Sassnitz.
- E 24      Hamburg - Berlin.
- E 26      Berlin - Szczecin - Goleniow - Koszalin - Gdansk.
- E 28      Birmingham - Cambridge - Ipswich.
- E 32      Colchester - Harwich.
- E 36      Antwerpen - Eindhoven - Venlo - Oberhausen - Kamen - Band Oeynhausen.
- E 38      Berlin - Lübbenau - Cottbus - Legnica.
- E 42      Dunkerque - Lille - Mons - Chaleroi - Namur - Liege - St. Vith - Wittlich - Bingen - Wiesbaden - Frankfurt am Main - Aschaffenburg - Würzburg.
- E 44      St. Brieuc - Caen - Rouen - Amiens - Charleville - Mézieres - Luxembourg - Trier - Wittlich - Koblenz - Ransbach-Baumbach - Giessen.
- E 46      Rouen - Reims - Charleville - Mézieres - Liege.
- E 48      Bayreuth - Marktredwitz - Cheb - Karlovy Vary - Praha.
- E 52      Paris - Nancy - Strasbourg - Appenweier - Karlsruhe - Stuttgart - Uhn - München - Braunau - Wels - Linz.
- E 54      Paris - Chaumont - Mulhouse - Basel - Waldshut - Lindau - Memmingen - München - Rosenheim - Salzburg.
- E 56      Nürnberg - Regensburg - Deggendorf - Passau - Wels - Sattledt.
- E 62      Nantes - Poitiers - Mâcon - Geneve - Lausanne - Martigny - Sion - Simplon - Gravellona Toce - Milano - Tortona.
- E 64      Szeged - Arad - Deva - Sibiu - Brasov.
- E 66      Torino - Milano - Brescia.
- E 68      Fortezza - St. Candido - Spittal - Villach - Klagenfurt Graz - Veszprém - Balato-maliga.
- E 72      Nice - Cuneo - Asti - Alessandria.
- E 74      Migliarino - Firenze.
- E 76      Bordeaux - Toulouse.
- E 78      Grosseto - Arezzo - Sansepolcro - Fano.
- E 82      Coimbra - Celorico da Beira - Salamanca - Valladolid - Burgos.
- E 86      Krystalopigi - Fiorina - Vevi - Yefira - Thessalonikii.
- E 88      Kesan - Tekirdag - Silivri.
- E 92      Rion - Egion.
- E 94      Corinthos - Athinai.

(a) Osnovni putevi

- E 05 Greenock - Glasgow - Gretna - Carlisle - Penrith - Preston - Warrington - Birmingham - Newbury - Southampton ... Le Havre - Paris - Orleans - Tours - Poitiers - Bordeaux - San Sebastian - Burgos - Madrid - Cordoba - Sevilla - Cadiz - Algeciras.
- E 15 Inverness - Perth - Edinburgh - Newcastle - Sootch-Corner - Doncaster - London - Folkestone - Dover ... Calais - Paris - Lyon - Orange - Nairbonne - Gerona - Barcelona - Tarragona - Castellon de la Plana - Valencia - Alicante - Murcia - Algeciras.
- E 25 Amsterdam - Utrecht - 's-Hertogenbosch - Eindhoven - Maastricht - Liege - Bastogne - Arlon - Luxembourg - Metz - St. Avold - Strasbourg - Mulhouse - Basel - Olten - Bern - Lausanne - Geneve - Mont-Blanc - Aosta - Torino - Alessandria - Tortona - Genova.
- E 35 Hoek van Holland - Rotterdam - Gouda - Utrecht - Arnhem - Emmerich - Obehausen - Köln - Ransbach-Baumbach - Frankfurt am Main - Heidelberg - Karlsruhe - Offenburg - Basel - Olten - Luzern - Altdorf - S. Gottardo - Bellinzona - Lugano - Chiasso - Como - Milano - Piacenza - Parma - Modena - Firenze - Arezzo - Roma.
- E 45 Vollan - Mo i Rana - Stjordalshalsen - Trendheim - Dombas - Otta - Hamar - Eidsvoll - Oslo - Moss - Svinnesund - Uddevalla - Cöteborg - Halmstad - Helsingborg ... Helsingör - Kobenhavn - Koge - Vordingborg - Rodby ... Puttgarden ... Hamburg - Walsrode - Hannover - Northeim - Göttingen - Kassel - Bad Hersfeld - Fulda - Würzburg - Nürnberg - München - Rosenheim - Wörgl - Innsbruck - Brenner-Pass/Passo del Brennero - Fortezza - Bolzano - Trento - Verona - Bologna - Cesena - Perugia - Roma - Napoli - Salerno - Sicignano - Cosenza - Villa S. Giovanni ... Messina - Catania - Siracusa - Gela.
- E 55 Tornio - Haparanda - Lulea - Umea - Sundsvall - Gävle - Uppsala - Stockholm - Södertälje - Norrköping - Linköping - Jönköping - Hälsingborg - Malmö - Trelleborg ... Sassnitz - Straslund - Rostock - Berlin - Lübbenau - Dresden - Cinovec - Teplice - Praha - Tabor - Češke Bude-jovice - Dolni Dvorište - Linz - Salzburg - Villach - Tarvision - Udine - Palmanova - Mestre (Venezia) - Ravenna - Cesena - Rimini - Fano - Ancona - Pescara - Canosa - Bari - Brindisi ... Igouimenitsa - Preveza - Messolongi - Rion - Patrai - Pyrgos - Kalamai.
- E 65 Ystad - ... Swinoujscie - Wolin - Goleniow - Szczecin - Świebodzin - Jelenia-Gora - Harrachov - Železny Brod - Turnov - Mlada Boleslav - Praha - Jihlava - Brno - Breclav - Bratislava - Rajka - Mosonmagyarovar - Czorna - Szombathely - Körmend - Redics - Zagreb - Karlovac - Rijeka - Split - Metković - Dubrovnik - Petrovac - Titograd - Bijelo Polje - Scopje - Kičevi - Ohrid - Bitolj - Niki - Vevi - Kozani - Larissa - Domokoe - Lamia - Bralilois - Itea ... Egion - Korintos - Tripolos - Gythion.

- E 75      Tromso - Nordkjosbotn - Skibotn - Helligskogen - Kilpisjarvi - Tornio - Oulu - Jyväskylä - Lahti - Helsinki ... Gdansk - Elblag - Ostroda - Mlawa - Warszawa - Radom - Krakow - Trstena - Ružomberok - Banska Bystrica - Zvolen - Šahy - Budapest - Szeged - Beograd - Niš - Kumanovo - Skopje - Gevgelija - Evzoni - Thessaloniki - Larissa - Almyros - Lamia - Athinai - Chania - Iraklion - Agios Nikolaos - Sitia.
- E 85      Cernovoy - Siret - Suceava - Roman - Bacau - Marasesti - Buzau - Urziceni - Bucuresti - Ciurgiu - Ruse - Bjaia - Velico Tirnovo - Stara Zagora - Haskovo - Podkova - Komotini.
- E 95      Leningrad - Moskva - Oryol - Kharkov - Simferopol - Alushta - Yalta.

(b) Intermediate roads

- E 01      Larne - Belfast - Dublin - Wexford - Rosslare ... La Coruna - Pontevedra - Porto - Albergaria a Velha - Coimbra - Vila Franca de Xira - Lisboa - Setual - Portimao - Faro - Huelva - Seville.
- E 03      Cherbourg - Rennes - Nantes - La Rochelle.
- E 07      Orleans - Limoges - Toulouse - Zaragoza.
- E 13      Doncaster - Sheffield - Nottingham - Leicester - Northampton - London.
- E 17      Antwerpen - Gent - Kortrijk - Cambrai - Reims - Beaune.
- E 19      Amsterdam - Den Haag - Rotterdam - Breda - Antwerpen - Bruxelles - Mons - Valenciennes - Paris.
- E 21      Metz - Nancy - Dijon - Geneve - Chambery - Grenoble - Valence - Marseille.
- E 23      Metz - Nancy - Besançon - Vallorbe - Lausanne.
- E 27      Dortmund - Köln - Prüm - Luxembourg - Saarbrücken - Sarreguemines - (E 25 Strasbourg).
- E 29      Belfort - Bern - Martigny - Grand-Saint-Bernard - Aosta.
- E 31      Parma - La Spezia.
- E 33      Rotterdam - Gorinchem - Nijmegen - Goch - Krefeld - Köln - Koblenz - Bingen - Ludwigshafen.
- E 37      Stockholm - Södertälje - Örebro - Mariestad - Göteborg ... . Frederikshavn - Alborg - Arhus - Vejle - Kolding - Krusa - Flensburg - Schleswig - Neumünster - Hamburg - Bremen - Osnabrück - Dortmund - Olpe - Giessen.
- E 39      Giessen - Frankfurt am Main - Darmstadt.
- E 41      Würzburg - Heilbronn - Stuttgart - Donaueschingen - Schaffhausen - Winterthur - Zürich - Altdorf.
- E 43      Würzburg - Feuchtwangen - Ulm - Memmingen - Lindau - Bregenz - St. Margrethen - Buchs - Chur - S. Bernardino - Bellinzona.
- E 47      Magdeburg - Halle Leipzig - Karl-Marx-Stadt - Boží Dar - Karlovy Vary - Plzen - Česke Budejovice - Trevon - Halamky - Wien.

- E 49      Orehoved - Nyköbing - Gedser ... Rostock.
- E 51      Berlin - Leipzig - Gera - Hof - Bayreuth - Nürnberg.
- E 53      Plzen - Bayer - Eisenstein - Deggendorf - München.
- E 57      Sattledt - Liezen - St. Michael - Graz - Maribor - Ljubljana.
- E 59      Praha - Jihlava - Wien - Graz - Spielfeld - Maribor - Zagreb - Karlovac - Bihać - Donji Lapac - Knin - Split.
- E 63      Klagenfurt - Loibl-Pass - Ljubljana - Trieste - Rijeka.
- E 67      Warszawa - Lowicz - Wrocław - Kłodzko - Beloves - Nachod - Hradec - Kralove - Praha.
- E 69      Warszawa - Piotrkow - Katowice - Český Tešín - Žilina - Trenčín - Piešťany - Bratislava - Wiener Neustadt.
- E 71      Košice - Miskolc - Budapest - Balatonaliga - Nagykanizsa - Zagreb.
- E 73      Budapest - Szekszárd - Mohács - Osijek - Djakovo - Samak - Zenica - Mostar - Metković.
- E 77      Püspökladány - Nyiregyháza.
- E 79      Oradea - Beius - Deva - Petrosani - Tîrgu Jiu - Craiova - Calafat ... Vidin - Vraca - Botevgrad - Sofia - Blagojevgrad - Serai - Thessaloniki.
- E 81      Halmeu - Satu Mare - Zalau - Cluj - Turda - Sebes - Sibiu - Pitesti.
- E 83      Bjala - Pleven - Jablanica - Botevgrad - Sofia.
- E 87      Tulcea - Constanta - Varna - Burgas - Mičurin - Malco Tyrnovo - Kirkclareli - Babaeski.
- E 89      Trabzon - Gümüşane - Askale - Mutu - Tunceli - Elâzig - Malatya - Maras - Kömürlər - İskenderun - Antakya - Syrian border.
- E 93      Orel - Kiev - Odessa

## **B. Ogranci, priključni putevi**

- E 130      Vejle - Middelfart.
- E 135      Haugesund - Haukeli - Kongsberg - Drammen.
- E 136      Bergen - Gudvangen ... Laerdalsoyri - Fagernes - Honefoss - Oslo.
- E 137      Alessund - Andalsnes - Dombas.
- E 140      Trondheim - Storlien - Östersund - Sundsvall.
- E 160      Turku - Tampere - Jyväskylä - Kuopio.
- E 200      Cork - Portlaoise.
- E 230      Amsterdam - Amersfoort.
- E 231      Amersfoort - Groningen.
- E 232      Oldenzall - Bremen.

- E 233 Bremerhaven - Bremen - Walsrode.
- E 250 Stralsund - Neubrandenburg - Berlin.
- E 267 Gdańsk - Świecie - Poznań - Wrocław.
- E 269 Świecie - Łódź - Piotrków.
- E 312 Breda - Gorinchem - Utrecht.
- E 313 Antwerpen - Liege.
- E 314 Hasselt - Heerlen - Aachen.
- E 330 Unna - Soest - Kassel - Herleshausen.
- E 410 Bruxelles - Namur - Arlon.
- E 420 Aachen - St. Vith - Luxembourg.
- E 440 Karlovy Vary - Teplice - Turnov - Hradec Králové - Olomouc - Žilina.
- E 460 Brno - Olomouc - Český Tešín - Kraków.
- E 461 Hradec Králové - Brno - Wien.
- E 470 Mukačevo - Lvov...
- E 530 Offenburg - Donaueschingen.
- E 532 München - Garmisch - Partenkirchen - Mittenwald - Seefeld - Innsbruck.
- E 550 České Budějovice - Jihlava.
- E 562 Bratislava - Zvolen - Košice.
- E 571 Cluj - Dej - Bistrița - Suceava.
- E 572 Bacău - Brătov - Pitești.
- E 573 Nyíregyháza - Tchop - Užgorod.
- E 580 Marasesti - Tecuci - Albita - Leușeni - Chișinău - Odessa.
- E 650 Altenmarkt - Liezen.
- E 651 Villach - Podkoren - Naklo.
- E 660 Subotica - Sombor - Osijek.
- E 661 Balatonekeresztúr - Nagyatád - Barcs - Virovitica - Okučani - Banja Luka - Jajce - Donji Vakuf - Zenica.
- E 671 Timișoara - Arad - Oradea.
- E 717 Torino - Savona.
- 6 751 Rijeka - Pula - Koper.
- E 752 Turnu Severin - Negotin - Zaječar - Niš - Priština - Prizren - (Albania) - Petrovac.
- E 760 Beograd - Čačak - Nova Varoš - Bijelo Polje.
- E 761 Bihać - Jajce - Donji Vakuf - Zenica - Sarajevo - Titovo Užice - Čačak - Kraljevo - Kruševac - Pojate - Paraćin - Zaječar.
- E 762 Sarajevo - Titograd - Albanian Border.
- E 771 Jablanica - Veliko Tarnovo - Choumen.
- E 772 Popovac - Stara Zagora - Burgas.
- E 800 Albergaria a Velha - Celorico da Beira.
- E 801 Vila Franca de Xira - Pego.
- E 804 Salamanca - Badajoz - Sevilla.
- E 805 Bilbao - Logrono - Zaragoza.

- E 841 Avellino - Salerno.  
E 842 Napoli - Avellino - Benevento - Canosa.  
E 843 Bari - Taranto.  
E 844 Spezzano - Albanese - Sibari.  
E 846 Cosenza - Crotone.  
E 847 Sicignano - Potenza - Metaponto.  
E 848 S. Eufemia - Catanzaro.  
E 850 Ohrid - Albanian Border.  
E 851 Joannina - Albanian Border.  
E 870 Sofia - Kjustendil - Kumanovo.  
E 880 Izmir - Ankara.  
E 881 Ankara - Adana.  
E 901 Jaén - Granada - Málaga.  
E 902 Madrid - Valencia.  
E 931 Mazara del Vallo - Gela.  
E 950 Joannina - Trikala - Larissa - Volos.  
E 951 Lamia - Karpenissd - Amfilochia.  
E 952 Tripolos - Megalopolis - Tsakona.  
E 957 Joannina - Arta - Agrinion Messologgi.  
E 980 Cízre - Iraq.

## PRILOG II

### USLOVI KOJE TREBA DA ISPUNJAVAJU GLAVNE MEĐUNARODNE SAOBRAĆAJNE ARTERIJE

#### SADRŽAJ

- I. OPŠTE NAPOMENE
- II. KATEGORIJE MEĐUNARODNIH PUTEVA
  - II. 1. Obični putevi
  - II. 2. Auto-putevi
  - II. 3. Ekspresni putevi
- III. STANDARDI ZA DEONICE IZMEĐU RASKRSNICA
  - III.1. Poprečni profili
    - III.1.1. Kolnici
    - III. 1.2. Bankine i razdelni trak
    - III. 1.3. Posebne staze
  - III.2. Horizontalni i vertikalni profili
    - III.2.1. Homogenost i usklađenost horizontalnih i vertikalnih profila
    - III.2.2. Geometrijske karakteristike
  - III.3. Saobraćajni tokovi

## IV. STANDARDI UKRŠTANJA

- IV.1. Definicije
- IV.2. Ukrštanja na običnim putevima
  - IV.2.1. Raskrsnice u razini
  - IV.2.2. Raskrsnice u raznim razinama
- IV.3. Petlje
  - IV.3.1. Definicije
  - IV.3.2. Tok saobraćaja na kolnicima petlje
  - IV.3.3. Principi trasiranja petlji
  - IV.3.4. Geometrijske karakteristike petlji
- IV.4. Ukrštanje sa železničkom prugom

## V. OBJEKTI

- V.1. Trase i poprečni profili
- V.2. Slobodni profili

## VI. BEZBEDNOSNA OPREMA

- VI. 1. Osvetljenje
- VI. 2. Uredaji protiv zaslepljivanja
- VI. 3. Zaštitne ograde

## VII. UREĐENJE OKOLINE

## VIII. POMOĆNE SLUŽBE

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- VIII.2. Ostali objekti
- VIII.3. Službe prve pomoći
- VIII.4. Sistem telekomunikacija

## **USLOVI KOJE TREBA DA ISPUNJAVAJU GLAVNE MEĐUNARODNE SAOBRĀCAJNE ARTERIJE**

### **I. OPŠTE NAPOMENE**

- 1.1. Osnovne karakteristike kojih se treba držati pri izgradnji ili rekonstrukciji međunarodnih saobraćajnih arterija (u nastavku teksta "međunarodni putevi") iznete su u dole navedenim odredbama koje su zasnovane na savremenim koncepcijama o tehnici izgradnje puteva. One se ne odnose na naseljena područja. Njih treba zaobilaziti ako predstavljaju prepreku ili opasnost.
- 1.2. Vrednosti dole navedenih karakteristika predstavljaju apsolutne minimume ili maksimume. One će se povećavati odnosno smanjivati onda kada se to može ostvariti bez dodatnih troškova ili kada je to ekonomski opravdano.
- 1.3. Treba uzeti u obzir sve odredbe ovog priloga pri upoređivanju troškova i ostvarene dobiti, a posebno treba imati na umu bezbednost. U pogledu prometa vozila procena se obavlja za različite varijante, polazeći od raznih pretpostavki, naročito u odnosu prema projektovanoj brzini\*), imajući na umu očekivani obim saobraćaja, njegovu strukturu i godišnju raspodeljenost saobraćaja po jednom satu.

1.4. Pri planiranju i izgradnji novog međunarodnog puta vodiće se računa o zaštiti čovekove okoline.

\*) Projektovana brzina u projektu za rekonstrukciju ili izgradnju nekog puta jeste brzina odabrana da odredi najmanje geometrijske karakteristike koje dopuštaju sigurnu vožnju pojedinačnog vozila pri toj brzini.

## **II. KATEGORIJE MEĐUNARODNIH PUTEVA**

Međunarodni putevi su svrstane u jednu od ovih kategorija:

### **II.1. Obični putevi**

I kategorija: putevi sa dve saobraćajne trake (jedan kolnik)

II kategorija: putevi sa više od dve saobraćajne trake (jedan ili više kolnika)

### **II.2. Auto-putevi**

Izraz "auto-put" označava put koji je posebno projektovan i izgrađen za saobraćaj motornih vozila, koji ne opslužuje imanja s kojima se graniči i koji:

- i) osim na posebnim mestima ili privremeno ima odvojene kolničke trake za saobraćaj u dva suprotna smera koji su međusobno odvojeni razdelnim trakom koji nije namenjen za saobraćaj ili, izuzetno, drugim sredstvima;
- ii) ne ukršta se u istoj razini s drugim putem, železničkim ili tramvajskim šinama ili pešačkom stazom;
- iii) posebno je označen kao auto-put.

### **II.3. Ekspresni putevi**

Putevi određeni za saobraćaj automobila na koje se može ući samo preko petlje ili raskrsnice na kojima je regulisan saobraćaj i zabranjeno zaustavljanje ili stajanje.

## **III. STANDARDI ZA DEONICE IZMEĐU RASKRSNICA**

### **III.1. Poprečni profili**

Trasa međunarodnih puteva se sastoji, osim jednog ili više kolnika, od bankine i, po mogućnosti, razdelne trake i posebnih staza za pešake i bicikliste. Ove posebne staze ne smeju biti u sastavu trase auto-puta. Njihova izgradnja se dopušta uzduž ekspresnog puta samo ako su odvojeni od njega dovoljno širokim prostorom.

Na kolnicima običnih puteva i na trasama auto-puta i ekspresnih puteva nije dopušteno postavljanje tramvajskih ili železničkih šina.\*)

\*) Ova odredba ne važi za puteve koji su posebno projektovani tako da omogućavaju postavljanje železničkih šina.

### **III.1.1. Kolnici**

#### **III.1.1.1. Širina**

Saobraćajne trake kolnika moraju na pravim trasama biti široke najmanje 3,50 m. U zavojima čiji je poluprečnik do 200 m, saobraćajne trake se proširuju da bi se vozilima najvećih dopuštenih dimenzija osigurao nesmetan saobraćaj normalnom brzinom.

Za projektovane brzine od 100 km/sat ili veće, uzdužne oznake sa strane kolnika ne uračunavaju se u pomenutu širinu.

Međutim, širina dodatne trake na usponima za spora vozila može se smanjiti na 3 m.

#### **III.1.1.2. Poprečni nagib**

Na pravim trasama, poprečni profil kolnika sastoji se od jedne ili dve ravnine poprečnog nagiba između 2 i 3 odsto.

Najveći nagib u zavojima je 7 odsto. Najmanji dopušteni prečnik (u metrima) bez izmene poprečnog profila pravih trasa dat je u donjoj tablici u funkciji projektovane brzine (u km/sat).

Projektovana brzina	140	120	100	80	60
Obični putevi		1.800	1.300	800	450
Auto-putevi i ekspresni putevi	3.900	2.800	2.000	1.300	-

### **III.1.2. Bankine i razdelne trake**

**III.1.2.1.** Preporučuje se da najmanja širina bankine bude 3,25 m za obične i ekspresne puteve i 3,75 za auto-puteve.

**III.1.2.2.** Bankine auto-puteva i ekspressnih puteva imaju s desne strane kolnika neprekidnu traku za zaustavljanje, popločanu ili stabilizovanu, najmanje širine 2,50 m, koja omogućuje zaustavljanje u hitnim slučajevima.

Takva traka se preporučuje i za obične puteve. Ako takva traka nije predviđena ili ako je njena širina manja od 2,50 m, na određenim udaljenostima treba predvideti zaustavna mesta.

Prema potrebi, izvan kolnika može se, takođe, predvideti i stajalište za autobuse.

U svim slučajevima, na bankini kolnika moraju se osigurati popločani i stabilizirani bočni trakovi širine 1 m. Radi sigurnosti, uzduž auto-cesta i ekspressnih cesta moraju se predvidjeti širi bočni trakovi na kojima ne smije biti nikakvih zapreka.

**III.1.2.3.** Ako postoji razdelna traka preporučuje se da njena najmanja širina između kolnika auto-puta bude 4 m. Takođe se preporučuje da se ta širina povećava, posebno u zavojima, ako je to potrebno zbog vidljivosti.

Preporučuje se da se na rubovima razdelnih traka postave rubnjaci i popločane ili stabilizovane bezbednosne trake širine najmanje 1m.

### **III.1.3. Posebne staze**

Na rubu običnih puteva, na kojima saobraćaj motornih vozila iznosi najmanje 2.000 vozila na dan, obezbediće se posebne staze rezervisane samo za pešake, bicikliste ili sličan saobraćaj kad god njihov broj premašuje 200 učesnika u saobraćaju u toku pola sata najintenzivnijeg saobraćaja u jednom smeru ili 1.000 takvih učesnika u saobraćaju na dan u jednom smeru.

Staze za bicikliste su obično jednosmerne a njihova najmanja širina je 2,20 m.

Širina razdelne trake između kolnika i posebnih staza mora biti najmanje 1 m.

## **III.2. Horizontalni i vertikalni profili**

### **III.2.1. Homogenost i usklađenost horizontalnih i vertikalnih profila**

Karakteristike međunarodnih puteva moraju biti homogene na dovoljno dugim deonicama. Karakteristike se menjaju na mestima na kojima ih vozač može obično predvideti ( prolaz kroz naseljena mesta, promena topografije itd.). Ako to nije moguće, one se uvode postupno.

Horizontalni i vertikalni profili se usklađuju na takav način da vozaču trasa ne izgleda nepotrebno isprekidana, da mu omogućuje da predvidi svoje kretanje i da jasno uoči kritične tačke (posebno raskrsnice, ulaze i izlaze petlji).

### **III.2.2. Geometrijske karakteristike**

III.2.2.1. Gornji sloj međunarodnih cesta mora svuda imati ravnu površinu. Razlika u razini na 3 m puta ne sme biti veća od 4 mm.

III.2.2.2. Osnovne geometrijske karakteristike međunarodnih puteva date su u donjoj tablici; one se zasnivaju na koeficijentu uzdužnog trenja (blokirani kotači, izlizane gume), od 0,4 pri brzini od 50 km/sat, i smatraju se najmanjim vrednostima kojih se treba držati.

Projektovana brzina	140	120	100	80	60	
Nagib najviše u %	4	5	6	7	8	
Najmanji poluprečnik u konveksnim vertikalnim zavojima (u metrima)*)	Kolnik s jednosmernom vožnjom	27.000	12.000	6.000	3.000	1.500
	Kolnik s dvosmernom vožnjom	-	-	10.000	4.500	1.600
Najmanji poluprečnik u ravnini prema najvećem poprečnom nagibu		1.000	650	450	240	120

\*) Konveksni vertikalni zavoji prikazani na tablici odgovaraju zavojima krajeva nagiba, približno jednakim po veličini, ali u suprotnom smeru. Razlika u nagibu je dovoljna da ograniči vidljivost.

Projektovana brzina od 120 km/sat dopuštena je samo ako su kolnici odvojeni i ako je većina ukrštanja izgrađena u obliku petlje (vidi donju tačku IV). Projektovana brzina od 140 km/sat dopuštena je samo na auto-putevima.

Konkavni zavoji, za datu projektovanu brzinu, biće tako izgrađeni da vertikalno ubrzanje ne premašuje  $0,25 \text{ m/sec}^2$ .

Vrednosti za horizontalne zavoje predstavljaju minimume koji odgovaraju najvećem poprečnom nagibu od 7 odsto. One su dovoljne da obezbede stabilnost vozila i udobnost vozača u prosečnim uslovima.

Rezultanta uzdužnog i poprečnog nagiba ne sme biti veća od 10 odsto.

**III.2.2.3.** Kružni i pravi delovi horizontalnih deonica spojeni su zavojima s postupnim zakriviljenjem.

**III.2.2.4.** Obezbeđena horizontalna i vertikalna vidljivost treba da bude takva da omogućava isti stepen sigurnosti, bez obzira na poprečan nagib.

Potrebna najmanja udaljenost vidljivosti pri preticanju na dvosmernim kolnicama prikazana je na ovoj tablici:

Projektovana brzina (u km/sat)	100	80	60
Najmanja dužina vidljivosti pri preticanju (m)	400	325	250

Udaljenosti vidljivosti moraju se obezrediti na što većoj dužini puta i što ujednačenije.

**III.2.2.5.** Ako je vidljivost nedovoljna, preporučuje se proširenje kolnika običnih puteva na dve ili tri saobraćajne trake na usponima i u zavojima.

### **III.3. Saobraćajni tokovi**

Putevi različitih kategorija u normalnim uslovima, tj. pri određenom kvalitetu ili razini usluga predviđenih za međunarodne puteve i u skladu sa normama određenim u tački III.2. treba da obezbede tokove saobraćaja\*) navedene u koloni 1 sledeće tablice koja je izražena u putničko-automobilskim jedinicama na sat (peu)\*\*)

\*) Jedna putničko-automobilska jedinica odgovara jednom osobnom automobilu. Za ostala vozila upotrebljava se ekvivalent za "peu".

\*\*) Izvan gradske zone.

Kategorija puta	Normalni tok saobraćaja u peu/sat	Najviše, dopušten tok saobraćaja u peu/sat	Napomena

I kategorija	900	1.500	dva smera
<b>II kategorija</b>			
3 saobraćajne trake	1.500	2.000	dva smera
4 saobraćajne trake	1.500	2.000	jedan smer
za svaku dodatnu traku	750	1.000	jedan smer
Auto-putevi i ekspresni putevi sa 2x2 saobraćajne trake	2.000	3.000	jedan smer
Za svaku dodatnu saobraćajnu traku	1.200	1.500	jedan smer

Preporučuje se da tok saobraćaja na putu određene kategorije ne premašuje vrednosti u koloni 1 duže od 50 sati godišnje, osim ako izgradnja dodatne saobraćajne trake ili prelaz u višu kategoriju nisu ekonomski opravdani.

Kada tok saobraćaja premašuje vrednosti navedene u koloni 2 duže od 50 sati godišnje, preporučuje se da se ispita mogućnost izgradnje dodatne saobraćajne trake ili prelaz u višu kategoriju, pri čemu treba voditi računa o troškovima izgradnje i posledicama za okolinu.

Te vrednosti podrazumevaju neprekidan tok saobraćaja uz uslov:

- (i) da broj raskrsnica u razini nije nesrazmerno veliki i da ona nisu uzrok suviše velikog broja saobraćajnih nezgoda;
- (ii) da se za puta sa dve ili tri saobraćajne trake uzduž celog puta obezbedi udaljenost vidljivosti za preticanje.

Putevi sa tri saobraćajne trake se ne preporučuju kad je normalan saobraćaj veći od onog koji je naznačen u koloni 1 gornje tablice.

Za puteve sa četiri saobraćajne trake, kada u vreme najintenzivnijeg toka saobraćaja u najopterećenijem pravcu saobraćaj premašuje 1500 peu/sat u toku više od 50 sati godišnje, preporučuje se zbog sigurnosti izgradnja odvojenih jednosmernih kolnika.

## **IV. STANDARDI UKRŠTANJA\*)**

### **IV.1. Definicije**

Mesta na kojima se ukrštaju međunarodni putevi, zatim međunarodni putevi i obični putevi te druge saobraćajnice nazivaju se "ukrštanje".

\*) Tekst je načinjen pod prepostavkom da saobraćaj teče desnom stranom.

Postoje ove vrste ukrštanja:

### **Ukrštanje običnih puteva**

- raskrsnice u razini, kada se kraci puteva nalaze u istoj ravnini ili razini;

- denivelisane raskrsnice ili ukrštanja na odvojenim razinama, gde najmanje jedan krak puta preseca jedan ili više krakova puta u različitoj razini.

### **Ukrštanje auto-puta ili ekspresnih puteva i puteva iste kategorije**

Petlje tipa A, gde putevi koji se spajaju ne prekidaju tok saobraćaja na auto-putevima.

### **Ukrštanje auto-puta i običnih puteva**

Petlje tipa B, koje ne dopuštaju presecanje toka saobraćaja na kolnicima auto-puta.

### **Ukrštanje ekspresnih puteva i običnih puteva**

Za veća ukrštanja:

Petlje tipa B, koje ne dopuštaju nikakvo presecanje saobraćaja na kolniku (kolnicima) ekspresnog puta.

Za ukrštanja drugostepenog značenja za koja izgradnja petlje nije ekonomski opravdana predviđa se:

Raskrsnica u razini ili u različitim razinama po mogućnosti regulisano svetlosnim uređajima (semaforima).

## **IV.2. Ukrštanje na običnim putevima**

### **IV.2.1. Raskrsnice u razini**

IV.2.1.1. Raskrsnice u razini treba izbegavati na međunarodnim putevima kad god je ta mera ekonomski opravdana.

IV.2.1.2. Raskrsnice u razini koje imaju više od četiri kraka treba pojednostaviti tako što će se neki tokovi saobraćaja grupisati prema obimu saobraćaja.

IV.2.1.3. Obilazni putevi (kružna ukrštanja) i svetlosni uređaji (semafori) koriste se samo u slučaju da drugi načini za izbegavanje presecanja toka saobraćaja i prekidanja nisu ekonomski opravdani.

IV.2.1.4. U blizini raskrsnice treba obezrediti vidljivost na dovoljnoj udaljenosti da bi vozači imali dovoljno vremena da donesu odluku u skladu s načinom kontrolisanja i trenutnim uslovima saobraćaja. Ta se vidljivost povećava ako kolnici, posebno oni na kojima vozači nemaju pravo prvenstva, imaju blag nagib prema raskrsnici.

IV.2.1.5. Međunarodni put ima prioritet nad drugim putevima. Prioritet međunarodnih puteva određuje se prema relativnom obimu saobraćaja.

IV.2.1.6. Brzina protoka saobraćaja na prioritetnim međunarodnim putevima ne treba da se smanjuje. Radi toga za vozila koja skreću ulevo treba obezbediti između dva smera saobraćaja prostor za zaustavljanje dovoljne dužine.

IV.2.1.7. Na važnim raskrsnicama na ulazu i izlazu s kolnika prioritetnih međunarodnih puteva obezbeduje se trake za ubrzavanje i usporavanje, kada je to ekonomski opravdano.

IV.2.1.8. Na putevima koji nisu prioritetni, na ukrštanjima treba da se izgrade ostrva za usmeravanje tokova saobraćaja. Ostrva za usmeravanje saobraćaja treba da udovoljavaju ovim kriterijumima:

- a) geometrijsko rešenje saobraćajnih traka mora biti što jednostavnije da bi ga vozači odmah shvatili;
- b) brzina saobraćaja na pravcima bez prioriteta mora se smanjiti, a skretanja odgovarajućih saobraćajnih traka prilagoditi obimu saobraćaja koji se na njima obavlja;
- c) trake koje se ukrštaju moraju se seći što više pod pravim uglom;
- d) tačke ukrštanja moraju biti raspoređene (a da se ne spajaju) na takav način da vozači mogu doći do njih odvojeno preko središnjih zona za čekanje;
- e) za pešake treba ostaviti najizravnije staze;
- f) ako postoje staze za bicikle, biciklisti treba da prelaze samo preko raskrsnice tako da presecaju saobraćajne trake što više pod pravim uglom;
- g) ostrva za usmeravanje tokova saobraćaja moraju biti ograđeni blago izdignutim rubovima izgrađenim od materijala bele boje. Kada je to ekonomski opravdano, treba da budu osvetljeni noću. Ako nisu osvijetljeni, rubovi treba da budu obeleženi sredstvom koje odbija svetlost.

## IV.2.2. Raskrsnice u različitim razinama

Kada se utvrdi da su potrebne rekonstrukcije ekonomski opravdane, razdvojiće se određeni važni tokovi saobraćaja da bi se izbeglo presecanje tokova saobraćaja upotrebom iste raskrsnice.

Horizontalni i vertikalni profili priključnih puteva moraju biti u skladu s principima i standardima propisanim za petlje, koji vrede za njih (vidi IV.3).

Priključni putevi koji nisu u istoj razini sa svojim ukrštanjima formiraju raskrsnice koje su usklađene s navedenim uslovima (vidi IV.2.1).

## IV.3. Petlja

### IV.3.1 Definicije

Kolnici petlji se dele na glavne kolnike i prilazne rampe koje povezuju glavne kolnike.

Glavni kolnici su oni na kojima se odvija najveći obim saobraćaja (dopuštajući, prema potrebi, razlike u intenzitetu u pojedinim satima) i na kojima nije dopušteno smanjenje osnovne brzine.

#### **IV.3.2. Tok saobraćaja na kolnicima petlji**

Kolnici na petlji tipa A treba da su jednosmerni. Na petlji tipa B neki priključni putevi mogu biti dvosmerne na jednom delu; međutim, delovi za ulaz ili izlaz s auto-puteva ili ekspresnih puteva uvek treba da su jednosmerni.

#### **IV.3.3. Principi trasiranja petlji**

Trase petlji treba da udovoljavaju ovim principima:

##### **IV.3.3.1. Princip A - tip petlje**

Kod izbora tipa petlje odnosno njenih glavnih kolnika i priključnih puteva treba voditi računa o apsolutnom i relativnom obimu tokova saobraćaja na toj petlji.

##### **IV.3.3.2. Princip B - razdvajanje tokova saobraćaja**

Kada se kolnik deli na druga dva kolnika, odvajanje dva toka saobraćaja se obavlja tako da se ne izazove veće smanjenje brzine kretanja vozila.

Radi toga vozač mora imati vremena da pređe na saobraćajnu traku koja je najpogodnija za pravac kojim želi da nastavi vožnju, a mesto razdvajanja tokova saobraćaja mora biti dovoljno vidljivo. Kod petlji tipa A kolnik koji se deli na druga dva kolnika mora biti proširen ispod mesta razdvajanja i broj saobraćajnih traka mora biti jednak ukupnom broju saobraćajnih traka na oba kolnika na udaljenosti koja dopušta da se tokovi saobraćaja razdvoje pre mesta razdvajanja. Poželjno je da se proširenje nalazi s desne strane.

Najslabiji tok saobraćaja treba da se odvija na desnoj strani kolnika da bi se smanjio broj vozila koja smanjuju brzinu pri promeni saobraćajne trake. Ako brzina ovog toka saobraćaja treba da se smanji, izgradiće se traka za usporavanje. Desna strana kolnika treba, po mogućnosti, postupno da se penje u odnosu prema glavnom kolniku kako bi se olakšalo eventualno usporavanje i obezbedila bolja vidljivost mesta razdvajanja.

Na petlji tipa B kolnik kojim se izlazi s kolnika auto-puta ili ekspresnog puta razdvaja se nadesno i ima traku za usporavanje.

##### **IV.3.3.3. Princip C - spajanje tokova saobraćaja**

Kad se dva kolnika spajaju da bi formirali jedan kolnik, spajanje dva toka saobraćaja treba obaviti uz sigurne uslove i na takav način da se ne dovede do znatnijeg smanjenja brzine kretanja vozila.

Zbog toga:

- (a) vozači u najslabijem toku saobraćaja treba da se uključuju u važnije tokove saobraćaja s desne strane;
- (b) vozač koji treba da se uključi u saobraćaj mora dobro da vidi drugi kolnik, ispred i iza mesta spajanja.

Manevr uključivanja, po mogućnosti preko trake za ubrzanje, ne sme da uzrokuje znatnije smanjenje brzine u glavnom toku saobraćaja. Vidljivost se povećava, a samo uključivanje

pojednostavljuje ako kolnik priključnoga (neprioritetnog) toka ima blagi nagib prema drugom kolniku;

- c) poželjno je, takođe, osigurati dobru vidljivost drugog kolnika s kolnika glavnog toka;
- d) kada se dva glavna kolnika spajaju da bi formirali jedan kolnik i ako pri tome dolazi do smanjenja ukupnog broja saobraćajnih traka, smanjenje treba izvesti na dovoljnoj udaljenosti od mesta spajanja.

Na petlji tipa B traka ulaznog kolnika na kolnik auto-puta ili ekspresnog puta spaja se s desne strane i ima traku za ubrzanje.

#### **IV.3.3.4. Princip D - deonice s presecanjem putanja kretanja**

Na glavnim kolnicima treba izbegavati presecanje deonica. Presecanje deonica može se tolerisati samo ako je obim saobraćaja mali i ako se, po mogućnosti, osigura najmanje jedna dodatna traka s desne strane glavnog kolnika.

U svim slučajevima geometrijske karakteristike presecanje puta i kolnika ispred ili iza mesta presecanja moraju biti takve da se brzina vozila koja presecaju kolnik ne razlikuje mnogo i da ne zahtevaju veliko smanjenje brzine kojom se vozila mogu kretati na tim kolnicima.

#### **IV.3.3.5. Princip E - mesta razdvajanja i spajanja**

U okviru jedne petlje, svaki glavni kolnik treba da ima samo jedno mesto razdvajanja i jedno mesto spajanja.

U svim slučajevima kada ima više mesta razdvajanja ili spajanja na istom kolniku, moraju se preduzeti takve mere koje će osigurati lako manevrisanje i postaviti posebni znakovi za svako uzastopno mesto razdvajanja ili spajanja.

### **IV.3.4. Geometrijske karakteristike petlji**

#### **IV.3.4.1. Projektovana brzina, na glavnim kolnicima**

Projektovana brzina na glavnim kolnicima petlje mora biti što približnija brzini na kolnicima u koje oni vode izvan petlje, a u svakom slučaju jednaka  $\frac{3}{4}$  te brzine. Na petljama tipa B, međutim, nije dopušteno nikakvo smanjenje projektovane brzine, ni na kolnicima auto-puteva ni na kolnicima ekspresnih puteva.

#### **IV.3.4.2. Prečnik priključnih puteva**

Na deonici u razini minimalni prečnik unutrašnjeg ruba kolnika treba da bude 50 m. Ta vrednost teorijski odgovara kolniku u razini s najvećim dopuštenim poprečnim nagibom.

U svim slučajevima, krivine malog prečnika moraju postupno biti spojene prelaznim, krivine (sa stalnim promenama luka krivine) dovoljne dužine da bi vozač mogao lako prilagoditi brzinu vožnje.

#### **IV.3.4.3. Širina priključnih puteva**

Treba osigurati mogućnost zaobilaženja zaustavljenog vozila na svakom mestu. Poželjno je, takođe, na priključnim putevima određene dužine osigurati mogućnost preticanja vozila u pokretu.

Zbog toga:

- ukupna širina kolnika s jednom trakom mora biti najmanje 6 m, uključujući i stabilizovane bankine koje se obično ne koriste za saobraćaj;
- širina kolnika s dve trake mora biti najmanje 7 m. U tom slučaju stabilizovane bankine nisu obavezne. Ovakve kolnike treba svesti na kolnike s jednom trakom u blizini ulaska na glavni kolnik (ili izlaska s glavnog kolnika), ako ukupan broj saobraćajnih traka nije povećan iza mesta ulaska ili smanjen iza mesta izlaska).

#### **IV.3.4.4. Deonice s presecanjem putanje kretanja**

Preporučuje se da delovi puta koji se presecaju budu najmanje 0,2 Q (u metrima), pri čemu Q označava ukupan tok saobraćaja koji se preseca izražen u peu/sat. Broj potrebnih saobraćajnih traka, prema ovoj prepostavci, izražava se množenjem manjeg toka saobraćaja koji se preseca koeficijentom 3.

Ako se u izuzetnim slučajevima ne može izbeći presecanje puta na glavnom kolniku, njegova će dužina biti Q metara odnosno najmanje 500 m.

Petlja mora biti tako projektovana da unutar njenih granica ukupan obim saobraćaja koji se preseca iznosi manje od 2000 peu/sat.

#### **IV.3.4.5. Dužina traka za ubrzavanje**

Preporučuje se da prilazni kolnici imaju traku za ubrzavanje koja na krajevima ima traku promenljive širine, tzv. klin.

Kada se kolnik auto-puta ili ekspresnog puta i trake za ubrzanje nalaze u istoj razini i na pravoj trasi, ukupna dužina trake za ubrzanje treba da iznosi najmanje 300 m, a same trake za ubrzanje bez klina najmanje 200 m.

Ako su uslovi horizontalnih i vertikalnih profila različiti, na odgovarajući način menja se i dužina trake za ubrzanje.

#### **IV.3.4.6. Dužina trake za usporavanje**

Trake za usporavanje sastoje se od traka promenljive širine, tzv. klina, i same trake za usporavanje, konstantne širine, koja može biti paralelna, graničiti se sa kolnikom auto-puta ili biti odvojena od njega,

Pomenuti klin treba da omogući vozaču postupno napuštanje glavnog toka saobraćaja, bez znatnijeg smanjenja brzine. Dužina klina određuje se na osnovu prepostavke da je za izvođenje tog manevra bez poteškoća potrebno 3,5 sec. Dužina same trake za usporavanje određuje se na osnovu prepostavke da usporavanje vozila nije veće od  $1,5 \text{ m/sec}^2$ .

### **IV.4. Ukrštanje sa železničkom prugom**

Ukrštanja željezničkih pruga s međunarodnim putevima moraju se izvesti u odvojenim razinama.

## **V. OBJEKTI**

### **V.1. Trase i poprečni profili**

Osim u iznimnim slučajevima (brdovit teren, posebno težak teren itd.) ispod i iznad objekata nisu dopuštene promene karakteristika kolnika, biciklističkih i pešačkih staza, ako postoje. Na auto-putevima i ekspresnim putevima posebno treba održavati bočne trake za zaustavljanje predviđene u tački III.1.2.

### **V.2. Slobodni profili**

Najmanja slobodna visina iznad puta mora biti 4,5 m.

## **VI. BEZBEDNOSNA OPREMA**

### **VI. 1. Osvetljenje**

Deonice, raskrsnice i petlje na međunarodnim putevima moraju biti osvetljeni kad god obim saobraćaja u toku noći ekonomski opravdava postavljanje i upotrebu sistema za osvetljavanje. Takvo osvetljavanje mora biti homogeno i dovoljno kako da bi se omogućila vožnja bez velikih svetala.

### **VI.2. Uredaji protiv zaslepljivanja**

Kada obim saobraćaja u toku noći to opravdava, treba predvideti nasade ili panoe na razdelnim trakama auto-puteva i ekspresnih puteva, a prema potrebi i na bankinama, ako velika svetla na vozilima koja se kreću u suprotnom smeru na drugom kolniku ili na drugom putu koji ide uporedno s međunarodnim putem ometaju vozače na tom putu.

### **VI.3. Zaštitne ograde**

Zaštitne ograde se postavljaju da bi se izbegao sudar sa preprekama koje se nalaze na bankinama ili na razdelnim trakama uz uslov da su opasnost od sudara vozila s ogradom i njegove posledice manji od opasnosti od sudara s takvim preprekama.

Zaštitne ograde nije potrebno postavljati oko saobraćajnih znakova ili stubova svetiljki ako su tako projektovani da smanjuju posledice udara vozilom.

Preporučuje se da se zaštitne ograde postavljaju na što većoj udaljenosti od ruba kolnika u skladu s prisutnošću vozila ili spoljnih prepreka.

Na auto-putevima i ekspresnim putevima zaštitne ograde predviđene su posebno u ovim slučajevima:

- (a) na razdelnim trakama kada im je širina manja od 6 m, ako obim dnevног saobraćaja dostiže 20.000 s 2 x 2 saobraćajne trake ili 30.000 s 2 x 3 saobraćajne trake ili kada im je širina manja od 4,5 m bez obzira na obim saobraćaja;

(b) na bankinama:

- (i) kada se utvrđene i čvrste prepreke kao što su, na primer, potporni stubovi, stubovi mostova, potporni zidovi, stubovi za semafore, stubovi svetiljki itd., nalaze na udaljenosti manjoj od 3,50 m od ruba puta;
- (ii) na nasipima kad njihova visina ili nagib predstavljaju očiglednu opasnost;
- (iii) na deonicama uzduž vodenog toka, puta ili železničke pruge koji se nalaze na udaljenosti manjoj od 10 m od ruba kolnika;

(c) na objektima, posebno kada ograde postoje s jedne i s druge strane objekta.

## **VII. UREĐENJE OKOLINE**

VII.1. Koordinaciju horizontalnih i vertikalnih profila treba proučiti (III.2.1.) ne samo sa gledišta bezbednosti nego i sa gledišta skladnog uklapanja trase u okolinu.

VII.2. Svi elementi pejzaža, zajedno sa saobraćajnim znakovima, treba da doprinose većoj udobnosti vozača i bezbednosti saobraćaja. Posebno je poželjno, uz pomoć raslinja, koje treba da odgovara prirodnom raslinju, učiniti trasu dobro uočljivom, a u nizinskim jednoličnim predelima zasaditi zelenilo koje stvara utisak dubine vidnog polja.

VII.3. Takođe, treba zasaditi grmlje da bi se vozači zaštitili od zaslepljivanja, vetra, snežnih nanosa i da bi se, prema potrebi, okolno stanovništvo koje živi u blizini puta zaštitilo od buke i zagađenog vazduha.

VII.4. Zbog sigurnosti i iz estetskih razloga zabranjeno je postavljanje reklamnih panoa na međunarodnim putevima.

## **VIII. POMOĆNE SLUŽBE**

### **VIII.1. Pogranični objekti**

Na granicama treba predvideti odgovarajuće objekte, posebno parkirališta, za prihvatanje i protok normalnog Saobraćaja. Potrebno je odvojiti komercijalni od turističkog saobraćaja i postaviti kombinovane pogranične punktove.

### **VIII.2. Ostali objekti**

Na auto-putevima, a eventualno i na ekspresnim putevima, treba izgraditi servisne zone i parkirališta, i to izvan kolnika i na odgovarajućim udaljenostima.

Servisne zone moraju raspolagati benzinskim pumpama, parkiralištima, toaletima, stanicama hitne pomoći, a po mogućnosti restoranima i motelima.

Parkirališta služe samo za zaustavljanje vozila i obično ne raspolažu pomenutim službama.

Servisne zone i parkirališta na auto-putevima moraju biti pristupačni samo s auto-puteva.\* Oni moraju biti povezani s auto-putem ulaznim i izlaznim putevima, u skladu s kriterijumima koji se primenjuju za petlje tipa B.

U manje razvijenim područjima u blizini međunarodnih puteva obezbediće se benzinske pumpe, a prema potrebi i garaže, radionice, prenoćišta i restorani.

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\* Za snabdevače i osoblje može se urediti i prilaz s običnih puteva.

### **VIII.3. Službe prve pomoći**

Duž međunarodnih puteva obezbeđuju se prema potrebi, stanice prve pomoći, kao dopuna postojećim lokalnim medicinskim ustanovama. One će biti opremljene u skladu sa preporukama Stalne međunarodne komisije za pružanje prve pomoći na putevima i Udruženja društava Crvenog krsta.

### **VIII.4. Sistem telekomunikacija**

Na međunarodnim putevima treba da postoje na određenim udaljenostima telefoni za upotrebu u hitnim slučajevima ili druga vrsta telefonske veze koja omogućava da se sa bezbednog mesta uputi poziv službama prve pomoći. Rukovanje tim aparatima mora biti jednostavno, s uputama koje korisnici mogu lako da razumeju i za koje je poželjno da budu date u simbolima ili slikama. Strelice postavljene nedaleko jedna od druge treba da pokazuju lokaciju najbližeg pozivnog mesta.

## **PRILOG III**

### **POSTAVLJANJE ZNAKOVA I OBELEŽAVANJE PUTEVA E**

1. Znak kojim se označava i obeležava put E četvrtastog je oblika.
2. Znak se sastoji od slova E, iza koga obično стоји arapski broj koji označava broj puta.
3. Osnova znaka je zelene boje s belim natpisom. Ovaj znak može se dodati uz druge znakove ili kombinovati sa njima.
4. Veličina znaka mora biti takva da ga vozači koji se kreću određenom brzinom mogu lako raspoznati i shvatiti.
5. Znak predviđen za raspoznavanje i obeležavanje puta E ne isključuje postavljanje znakova koji predstavljaju nacionalnu oznaku puta.

### **Član 3.**

Ovaj zakon stupa na snagu osmog dana od dana objavljivanja u "Službenom listu SFRJ".