- accelerated modernisation and building of a public transport infrastructure for public transport, pedestrian and cycling traffic;
- stimulation to have parking policies in cities that would result in the reduction of personal car-use in city centres.

letnik 9, št. 1/98 To stimulate the safe transport of dangerous materials and prevention of accidents the following measures are required:
- preparation of a National Directive for Transport of Dangerous Materials;
- introduction of licenses for transport of dangerous substances;
- preparation and implementation of measures for transport of dangerous substances by rail.

Reduction of the risk of sea and atmosphere pollution or to prevent pollution of waters by boats, inclusive of devices for loading, re-loading and unloading and reducing the negative influences from air traffic, could be reached by the following measures:
- assurance to consistently follow all kinds of homologous acts and the periodic control of all emissions from traffic;
- preparation of a study, to define goal values for the quality of the atmosphere, with regards to traffic pollution and the measures to reach them, on the basis of WHO standards;
- preparation and execution of regulations on environmentally friendly manoeuvres of aviation operations, winter cleaning and the execution of environmentally-friendly measures generally in aviation;
- assurance to implement all signed international conventions and protocols in the area of maritime traffic and the aim to sign up to the others;
- co-operation with the International Maritime Organisation (IMO) in relation to emission standards of maritime traffic;
- promotion of environmentally-friendly building and maintenance of harbours and moorings;.

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Notes

[1] The article summarises the draft of the chapter prepared by the author as part of the National Programme for Environmental Protection. The statements made by the author in the article are his own and do not necessarily coincide with the statements of the Ministry for Environment and Physical Planning of the Republic of Slovenia.

- *Conference on environment and development*, UN, Rio de Janeiro, 1991;
  For Sustainable Development, OECD, Vancouver, 1996; *Conference on Settlements - Habitat II,* ZN, Istanbul, 1996; *Traffic and the Environment* - declaration of ministers for environment of Central European countries, New York, June 1997; *Traffic and the Environment* - UN-ECE (European economic commission), ministerial conference, Vienna, November 1997.
- The national traffic policy is at present in the phase of adoption by the National Assembly in Parliament , also signed by Slovenia.
- Goals and measures are based on the ministerial declaration of the UN, *Traffic and the Environment* - UN-ECE (European economic commission),Vienna 1997, also signed by the Slovene delegation.

For literature and sources see page 57.

Marta GRUEV

Design in Spatial Planning of Highways

1. Introduction

The National project of highway construction in Slovenia started one of the most important development and even professionally challenging enterprises. However, there is still time, to consider other conceptual and methodological relations between development and traffic policies, between legislature and road management, between the quality of the road, urban and landscape space and the conditions for creating new identity.

Design of roads is not a technological problem any more, but it includes identification of optimal routes in still possible, spatially limited corridors. The essential element of construction is economic rationality, although it is a twenty year project, meaning that certain costlier solutions could be accepted in the short term. Lately, drives for improving aesthetic qualities of particular objects have been heavily criticised as "unacceptable expenditure" and "building monuments for individuals". The problem in assessing spatial impacts on the environment is therefore, how to adequately assess particular effects and optimise decision making concerning routes and design of particular segments.

An object of infrastructure, such as a road, because of its monumental nature and physical fatality in a given space cannot be judged only on its functional merit; it is an element of the human cultural landscape and a method of (redesigning space. Interdisciplinary solving of problems can provide solutions, when an efficient road enriches a place and generates further development in the space where it passes. A road is not a disturbing part of the landscape, it is a complementary feature.

Such an attitude means, that to invent an ideal method for indisputable long-term interventions in space without unwanted consequences isn't possible, in which professional ethical demands for creating a better, clearer model of procedures for optimising spatial interventions are important. It is an infinity count of possible trends for betterment. In other words, we speak of the human nature in complex perception of space, that cannot be realised without surplus in it, without considering non-essential elements that supersede technologically functional solutions.

2. A Critical Overview of Established Criteria for Selecting Routes

2.1 General

When completing the National programme of highway construction the first question that arises is the question of methodology and possibilities for selecting the optimal route from an array of possibilities, designed for particular segments of the new highways. The long-term consequences of a monumental object in space demand considerable deliberation concerning the endeavour before imple-

mentation, that has to encompass as many future effects as possible, by the object in the immediate vicinity and wider area. Planning and selection of routes therefore have to integrate different disciplines that interactively affect the final effect of constructing an object, with respect to:

- economic possibilities and needs in development,
- security for users, as well as protection of the environment for future generations
- re(activity) of a given space and its effect on the road and its users.

From the landscape designers point of view, one has to be aware, that the positioning of a new spatial element is a cultural and aesthetic challenge, that can enrich a place and generate further development in it. The construction of low and high buildings, representative architecture, detached houses or objects of infrastructure can identify the cultural surroundings and historical development within. An object of infrastructure, especially one with the dimensions of a highway is constantly exposed to perception and a strong factor in transforming the countryside. Therefore, it isn't and shouldn't be understood as an engineered facilitator of communication with inherently bad environmental effects. Aesthetics supersede the industrial harmonisation of standardising and recognition. It is highly amusing to see the quantity of design efforts put into a book cover, that lies on some shelf, noticed or not, while in the construction of exposed and monumental objects, such as a highway, the demand for achieving aesthetic criteria is considered an unnecessary expenditure.

To satisfy the basic goal - connecting two points in space - it is also necessary to consider a bundle of lesser goals, demands an parameters, that define criteria for determining procedures for selecting routes [1].

2.2 Limitations

On the supranational level in all places and without boundaries, with projects in the environment on such a scale we deal with the same problems: cutting the countryside, interventions in existing patterns of life of a locality, interventions in the natural structure of the landscape (water, soil ...) etc.

On the national level, two factors should be mentioned:
- structural problems when establishing a new country and an added problem of serious lagging behind in highway construction [2],
- growing sensitivity for protection of the natural environment and local specifics (on the national, regional and local level).

Local factors - acceptability of the new object for the environment in the immediate vicinity of the object - are a legitimate part of decision making concerning the route of the new element. However local sensitivity often offers space to other, completely individual desires, that in professional assessment cannot have the same weight as the broader public interest. Here we can regrettably include professional egoism, that hinders or excludes possibilities for dialogue between involved professional disciplines concerning importance and value of particular contents. It can also dissolves responsibility for using force when changing the environment, resulting in poorly thought out and unfinished solutions, that cannot be optimised with future beautification.

Established procedures for selecting routes are not satisfactory, bringing in doubt about objectivity of obtained results. Corrections in the evaluation procedure, where the relations between particular criteria would be defined in advance at the outset and for all cases could:
- ease professional work already on the first level of researching routes,
- in advance prevent possible unwanted effects in space,
- clearly and repeatedly argument procedures for route selection.

The pre-condition for this method is consensus between politics and professionals, impossible without a national strategy. We still don't have a comprehensive traffic strategy (we do have the National programme for highway construction, but that is not the same thing) and we don't have a policy of spatial development.

2.3 An overview of the present situation

By comparing three comparative studies of highway route selection on the segments Vransko - Blagovica [3], Klanec - Srmin [4] and Nova Gorica - Ljubljana [5], we can summarise that: the basic goal - optimal connection between two points
- grades partial goals:

1. traffic and technical functioning of the road
2. protection of the natural and cultural environment
3. possibilities for development
4. economics

Blagovica - Vransko

Environmental assessment was carried out on thematic maps of spatial planning components of local plans, site visits and expert projects. At first various routes were studied, based on methodological hypothesis:
- objectivity (textual, statistical and graphic) in presentation of spatial conditions,
- choice of representative segments, containing quality components,
- determining of elements (categories) to describe effects,
- description of influence,
- ranking of routes according to size of influence and/or acceptability of route.

The assessment was limited to describing potential consequences spatial functioning of particular routes, objectivity was added by choice of marking intensity of influence.

Klanec - Srmin

In the report and comparison seven routes were analytically assessed considering:
- effects on regional development, settlement and living environment,
- effects on the natural environment, cultural quality and potential uses,
- rough traffic, technical and investment characteristics of particular routes.

According to guidelines from strategic comparison of routes, design proposals for four routes were executed. The result was an optimal route for the highway and directives for further optimisation.

This phase was followed by assessment of 14 sub-routes. The result was a route, considered to be acceptable from the traffic and technical point of view, as well as environmental effects, but problematic concerning the Črni Kal section (viaduct).

After further checking the Ministry for environment and physical planning and the Ministry for traffic and communications, issued guidelines with goals, i.e. lower the height and length of the viaduct and cheapen the investment.

Repeated checking meant reconsidering routes, previously eliminated as unsuitable because of excessive effects on natural heritage and cultural monuments. Again traffic and technical criteria were devised (travelling speed, cross-sec- tions, longitudinal sections ...) and seven sub-routes designed, running on both sides of the Rižana river (previously those on the left bank were eliminated).

In the next step the Urban Planning Institute submitted "Comments to the report on assessing routes", a supplement to the report on comparative assessment of new and reassessed routes in the particular corridor, according to traffic and technical criteria and investment costs.

In the summary and joint evaluation the best route according to previously defined particular criteria was pointed out.

The committee appointed by the Agency for physical planning, emphasised, that construction of this particular segment was probably the most demanding part of the highway system, because of natural, ecological and settlement conditions, as well as technical, construction and traffic difficulties. It evaluated the material according to the following criteria:
- logical positioning in space considering construction and the drivers psychological perception of space,
- limiting the number and size of technical objects, thus providing better natural-spatial acceptability of the new construction and allowing cheaper execution,
- respect for natural and landscape features, cultural heritage and existing settlement on by whole route,
- predicting future development in the influential area of the route.

The committee proposed uniting findings from already designed routes for particular areas, while the synthesis defined the common problem - Črni Kal.

The ideas were divided into two major groups, the first with numerous and large technical objects, and the second more adapted to the terrain. The latter were given advantage because of a wider perspective and pleasant psychological effects on passengers, as well as cheaper construction.

A somewhat broader description of the evaluation process is necessary to show the specifics of the problem and diffusion as well as inconsistency of the approach. The final impression, after checking all the material and procedures is, that particular phases of the evaluation process constantly reverted to the starting points of the problem - establishing criteria.

Criteria for evaluation of acceptability of routes for the given highway were defined according to the specifics of the problem, therefore individually selected for particular sites. In the joint table, mixing of criteria levels and parameters is evident and in conclusion, the committee evaluated (particular routes) according to criteria that weren't respected when assessing acceptability. The conclusion of the auditing group was that the segment was "probably the most demanding on the highway system because of sensitivity of the environment and massive traffic - technical demands", while at the same time pushing forward cheaper solutions.

In general the assessment procedure went in a very doubtful direction, probably coupled with local influences, causing routes, which had completely missed the basic objective (traffic and technical criteria), to be assessed as well.

That is why the committee stated that particular problems were not of the presented nature and suggested repeated assessment of declined routes. As in the case of acceptability of the segment Blagovica - Vransko, even in this case economic criteria weren't respected, neither the analysis on profitability.

Nova Gorica - Ljubljana

Three proposals for connecting the goriška region to central Slovenia, the coastal region and the European highway system were evaluated: "Col", "Vipava" and "Kras". A comprehensive comparative research dealt with all three and used the findings in further debates. Since they run along different corridors and connect different goals, thus causing different traffic and spatial strategic decisions, their effects are also unequal.

The aim of the research was to prepare a debate on adopting documents for the road through the Vipava valley, while the strategic goals were as follows:
- connecting the coastal, Kras and Notranjska regions and Slovenia to the European highway network,
- connecting the Goriška region with central Slovenia and the Coastal, Kras and Notranjska regions,
- facilitating connections between the port in Koper with goals in Slovenia and Northeastern Europe; an indirect goal,
- effects on economic development in the regions and pertaining major towns.

Recommendations about costs were also respected.

The three routes were compared according to the following criteria:
- regional and urban development
- traffic, technical and security criteria
- effects on the environment
- investment costs

According to the reserachers, the mentioned criteria don't cover all comparative categories, so they added effects of particular routes on the whole national road system, main border crossings and connections to the European road system. The final goal of the comparative analysis was to describe each proposal with adequate parameters enabling choice of best solution among the proposed routes.

This reserach from 1994 was the best attempt at positioning itself within the existing and proposed highway network and in the wider sense, probably the most complex research on consequences of construction in space. The weights of particular criteria tried to comply to the National programme of highway construction, maybe because at the time the programme proposal was still under discussion in Parliament and particular parameters, criteria and goals were dealt with in much more detail, than the adopted programme from 1995.

Reporters warned about disrespect for two ignored but important parameters in spatial assessment:
- undefined national strategic goals, leading to chaotic attempts at establishing suitable criteria and hindering definitions of weights of particular criteria thus allowing subjective evaluation;
- informing the public concerning construction on a real site was too slow, causing growing mistrust to professional decisions, ignoring professional arguments and demand for new routes.

In the joint table, inconsistent use of terms can be noticed, therefore hierarchy of ranks is unclear. If the latter remark is marginal, lack of estimates on unburdening of spaces along the existing roads is much more important, because they give false results to the final values.

2.4 Synthesis

From the three approaches one can draw the following common denominators:
- criteria which the expert groups used in assessing acceptability of particular routes, generally coincide and were given in the national programme,
- the aim of achieving maximum effects with least investment was unreal when considering demanding objects with less expenditure,
- time limits, within which the time spent on undefined criteria was used irrationally (repeated procedures),
- alongside unclear strategies on long-term national development even subjective judgement on importance of particular criteria,
- in all cases the aesthetic criteria was disregarded - therefore not only protection of the natural and cultural environment, but also the aesthetic effects of redesigned space [6].

From the three researches it is clear, that there is no particular transparent and objective methodology which could assure undoubtable decisions. The unclear directives in the national policy are, in the broadest sense, the most important factor behind a clear methodology for environmental impact assessment not being developed, e.g. does agriculture have priority over tourism development, what are the relations between development and protection ... In other words, the interests of national development are unclear. There is no comprehensive traffic strategy and no policy of spatial development. Methods of selecting routes, although they try to be objective and transparent, vary from case to case. Elements which should be defined in the national programme are more or less left to individual professional judgement and are devised for each particular occasion.

When comparing results from the first research (Blagovica - Vransko) and results of the auditing group, the discrepancy between them shows freedom of interpretation in particular assessments, although objectivity, transparency and repeatability were stressed.

The other two researches are limited to textual argumentation of priorities in particular routes, freedom of interpretation is most evident in the Klanec - Srmin impact assessment. The discrepancy between the research and critique of the committee is evident already when defining criteria,
i. e. identifying the problems.

The committee judged the work of expert groups that had conducted particular researches according to criteria, that the expert groups hadn't used, meaning that problem solving was brought back to start, or worse.

Objectivity is therefore a matter of professional ethics of individual participants in the process since reinterpretation and changes in criteria are possible all along. Single criteria, defined as socially acceptable and necessary and proscribed from the proper place, are non-existent, forcing professionals to redefine starting points continuously. Asserting the prestige of a particular discipline or individual short-term interests is therefore a hunting ground for particular short-term local interests.

3. Possible methodological corrections

Construction of the "Project of the century" will cause pertaining consequences in space. Thus drives for objectivity in assessments and diminishing individual judgements have to be respected and supported. The formation of a single, transparent and repeatable methodology would also be welcome.

One of the methods to achieve objectivity is the introduction of ponders (weights) in the practical aspect of assessment, meaning, that criteria used to assess acceptability are complemented with inter-related weights, thus avoiding many unnecessary particular unclarity.

Identification of long-term national development trends requires clearly defined and graded parameters and criteria, while procedures - using ponders (weights) and relations between particular weights of criteria - can be repeated and controlled.

Since the beginning of highway construction, we could follow individual critiques and even constructive proposals for improving procedures in practice. For example in 1994, J. Črnivec proposed a clear, logical and pragmatic methodology of assessing routes, requiring minimal corrections to the practised procedures while substantially raising the level of objectivity in decision making.

The first correction was to classify criteria into those pertaining to construction and those pertaining to national interests. These criteria are then given weights. They are applied to the case and the particular routes compared. When placing weights on criteria it is important, that the same criteria can have different effects in different environments, but it remains defined and unquestionable.

4. The design point of view

In the present phase of highway construction one has to wonder, whether it is the proper time to include changes. Experience shows, that in the limited time scope of the project, time is spent irrationally, since the same questions arise all the time.

One of the more important components, which still hasn't or cannot reach con-census, is the question on joining the highway with different programmes and content, previously defined in space.

The larger sensitivity to issues of environmental and cultural heritage is a purposeful and needed factor when placing a road in space. It cannot however maximise it's potential as long as a road is understood as a necessary evil. In any case, wherever the road is placed, it will cause audio and air pollution, wherever it is placed, water resources and water tables will have to be protected, thus the problem of moving a road from "my back yard" doesn't solve anything (the NIMBY [7] syndrome is understood as localist and individual, as well as professionally egoistic). "Moving a road from a corridor providing better technical, development and traffic management to an environmentally unconflicting corridor with worse characteristics, should become an exception, especially when all professional possibilities for a compromise have been tried" (P. Gabrijelčič, 1997:71). Sensitivity for the environment can help in joining existing spatial values with new programmes and development potentials, in the economic and cultural sense. After excluding locations with extremely delicate or incompatible contents (nature reserve etc.), the construction of a new element in space is a cultural and aesthetic challenge, that should enrich and generate further development in it.

Whether aesthetic values should be respected in the construction of public or representative buildings, is a question no longer posed. These objects are, although much smaller and cheaper than a highway, most often built following selective public or invitation competitions, where the aesthetic value of the has at least the same value as its functionality. Representative architecture speaks about the civilisation and cultural moment of the environment from which it grows. That is why the position of public company in charge of highway construction (DARS), concerning excessive expenditure of public funds, "building monuments" is completely irrational, after all we are speaking about the construction of a monumental, national project, an important identifier of the cultural countryside. The value of the defined goal, which also has massive public support, can be measured in the scale of investment (although analysis of profit was often excluded from public hearings or even professional critiques). The price however is not necessarily different, if the aesthetic moment is considered - of the object as such and space in general). Another argument in favour of aesthetics is the changing nature of automobilism. The highway system is not being built for a time span of less than twenty years, therefore ignoring or discarding new traffic trends is not so innocent. Modern trends point out changes in work habits - the need for daily migration to work will diminish, while the quality and quantity of free time will increase. Any sensible traffic policy would move transit traffic to the ecologically sounder railway and roads will be used, in a much larger scale, by tourists and individual users. Visual access to the countryside will be a necessary commodity and sensitivity in the design of buildings much more expressed. At that time we will again have the opportunity to criticise the present builders, although their mistakes will be difficult to mend, if at all.

4.1 Incompatibility of content

Perception of a highway combines the duality of global (standardised, unified) and local:

1. Uniformly and in a continuous line it connects supranational character with various local landscape images. As an object it surmounts the scale of a particular area, in a graphic-directional sense and in the traffic-technical sense. Despite such clarity and uniformity, that drive the user of the road, identification of the road's surroundings is also important, to recognise the differences and characteristics.

2. Each object combines the duality of stationarity and dynamism.

The user of a road moves at a certain speed, which directs one's modes of observing events on the road and around it. This viewer receives a static image, the scale of observation and perception of details is much different than that of a static viewer. Equipment on the road must be optimised to suit the status of the participant in traffic and the ambiental image of the changed countryside.

A highway attracts certain programmes and repels others, it also generates further development in the changed space. By respecting the reality of the trend for informal events in the vicinity of a road, to a certain extent, it is possible to influence the development of desired programmes, avoid chaos and/or monotony.

In the prevailing dispersed settlement pattern, the highway network structures a spatial network, generates new concentrations, establishes new spatial hierarchy, thus clarifying its wider influential area. In Slovenia, certain contents, affected by the highway are much to frequent to be completely avoided. More than half the territory is covered with forests, a lot by agricultural land. Despite the problematic effects of vicinity to a highway - noise and emissions - many protective mechanisms, that diminish these effects (protective fences, protective planting etc.). Of course, roads shouldn't become encased corridors preventing their users contact with the countryside, that can be made possible by designing structurally acceptable spaces.

The same quantity of funds and serious thinking can provide more efficient construction, in the aesthetic sense and concerning safety, after all, good orientation is a necessary condition for feeling safe.

Even more, the prevailing notions about exposure of cultural heritage to the roads have to be discussed. Here again we can discern two excluding trends, the first claiming, that these programmes cannot mix, and the other, that sees potential possibilities for presentation, promotion and identification of space, thus enrichment of cultural heritage, from vicinity of programmes.

Following these doubts, new questions arise:

- why should the view (from the road) to a cultural monument be limited and/or, why should a route be laid through an area where there aren't any;
- should the user of the road be reduced simply to a user thus detaching one from the area, one is driving through;
- don't such trends lead to degradation of any space, despite it's "suitability";
- why cannot a monumental object, although of infrastructure, be perceived as an object of cultural value, a potential candidate of cultural heritage [8].

For example in the fifties, when the motorway towards Dolenjska was built, various professionals from different disciplines worked together (designed by architect Kobe). The road is still an example of high quality and environmentally sensitive design, that includes all the mentioned duality's (combining the local with the global as perceived from the road and towards it). That answer to the problem is also an answer to the above questions.

When defining routes for highways we promote the problem- project approach, in processes of meetings enabling identification of points of conflict. The first highways in Slovenia were designed by intuition, based on the artistic experience of particular designers. In the "second" round, construction of highways divided the role of a single designer into separate relevant professional fields, that should objectively determine effects and optimise decisions concerning routes and design. However, individual disciplines still don't co-operate closely, designers are mainly decorators of previously adopted facts. "In this sense, we can say, that we still haven't surpassed the experience of architect Kobe" (P. Gabrijelčič, 1997:71).

Today the question about where the route of the Dolenjska segment of the highway system will be, is still under discussion, although a major part of the already built segments run over it.

The questions, whether the settlement should be visible from the road, serviced by the object, whether the passengers on the road should have visual access to a nearby castle, whether an archaeological site should be connected to resting places by the highway etc., are repeatedly posed.

Then again, if the starting points are avoiding all the mentioned qualities in a place and that the highway is a necessary evil in space, it is better to choose the lesser evil. This means selecting new areas, from the heritage protection viewpoint seen as un-conflicting, finding a longer route and avoiding settlements, interesting views and contents, thus preventing users of the road visual contact with the place.

These are different conceptual viewpoints about infrastructure, although particular objects in the image of a place, are so exposed, that we repeat, they cannot be contained only as service objects facilitating needs of the inhabitants, but they are a constitutive part of the designed countryside.

5. Conclusion

Alongside all efforts to use the remaining time for highway construction rationally, despite the time used, it is still sensible to question the rationality of present practice in assessing routes. Because of the undefined national policy, judgement by professionals is hindered, it constantly has to revert to basic questions. Nevertheless, by introducing a more streamlined methodology or, at least, consensus on basic criteria, it would be possible to influence rational use of time and increase possibilities for better solutions.

The opinion that completion of the highway system is an important project with long-term influence on the national level, is more or less unanimous. However, understanding of the highway as inevitable with many disturbing side effects, is also dominant. A monumental object, such as a highway, is part of human changes to the cultural landscape, with strong functional and aesthetic effects. It manifests a place with historical and cultural reference about development in it. Function determines its shape, design optimises functioning. Efforts for functionally and aesthetically sound solutions should therefore be the basic, constitutive parts of the built environment. With respect to valuable sensitivity for protection of the natural and cultural heritage, we shouldn't ignore present design efforts, thus reducing the aesthetic potentials of an object of infrastructure, just because of its essentially functional nature (poor public response to important objects as unnecessary expenditure). Designers as beauti- fiers are confronted with a completed fact, they cannot fulfil their role. Conceptually bad solutions can always be beautified, but they will always be bad.

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Endnotes

[1] Various countries in the European Union, that Slovenia should adapt to, have different methodologies for highway construction so it is difficult to say whether any of them actually came up with an optimal method excluding in advance most possibilities for error. Since our young country still hasn't come up with a united and transparent method for selecting routes, in assessing priorities there is still individual solving of characteristic problems and some kind of a synthesis of foreign models, judged as suitable for our space.

[2] The countries, whose standards we are trying to reach, are in the process of improving present conditions on an established and operating highway system, almost without new routes, while we are establishing the basic network. The good side of "being late" is, that we can avoid pioneer mistakes, done elsewhere - of course, if we can identify them, so called "positive eclecticism" (Kos, 1994, pp. 218).

[3] Agency for physical planning, April 1994.

[4] Urban Planning Institute of Slovenia

[5] Urban Planning Institute of Slovenia

[6] Because of the monumental nature of the emerging project, the aesthetic value of the "new" should have a position close to criteria on safety and economics.

[7] Not in my back Yard, a term established in the pioneer era of highway construction, is not a domestic syndrome: everybody wants one, somewhere else ...

[8] Today we can proudly show the bridge in Solkan, the new functionally and aesthetically "satisfactory" realisations however cause a feeling of guilt.

For literature and sources see page 67.