

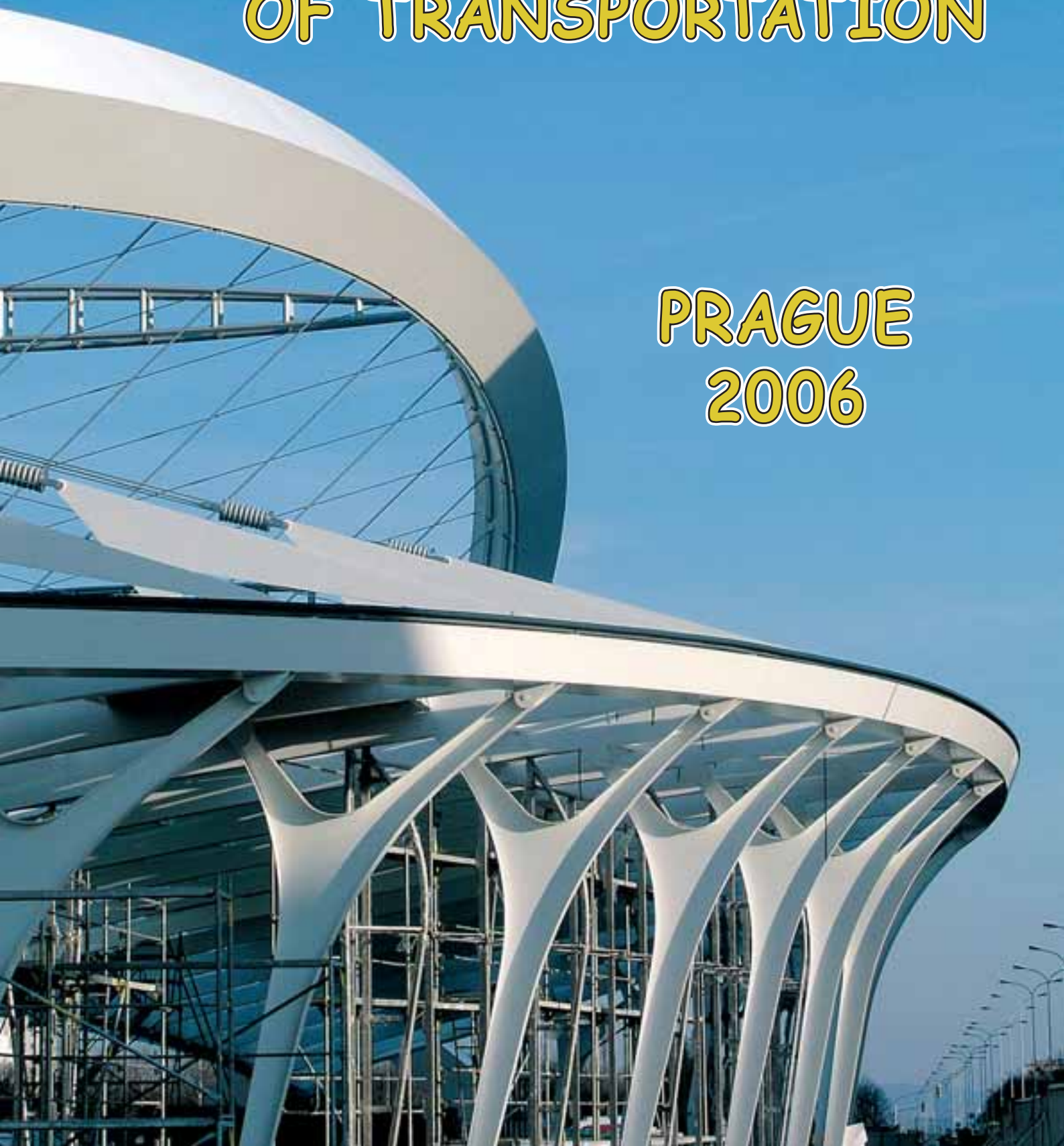


INSTITUTE OF TRANSPORTATION ENGINEERING
OF THE CITY OF PRAGUE

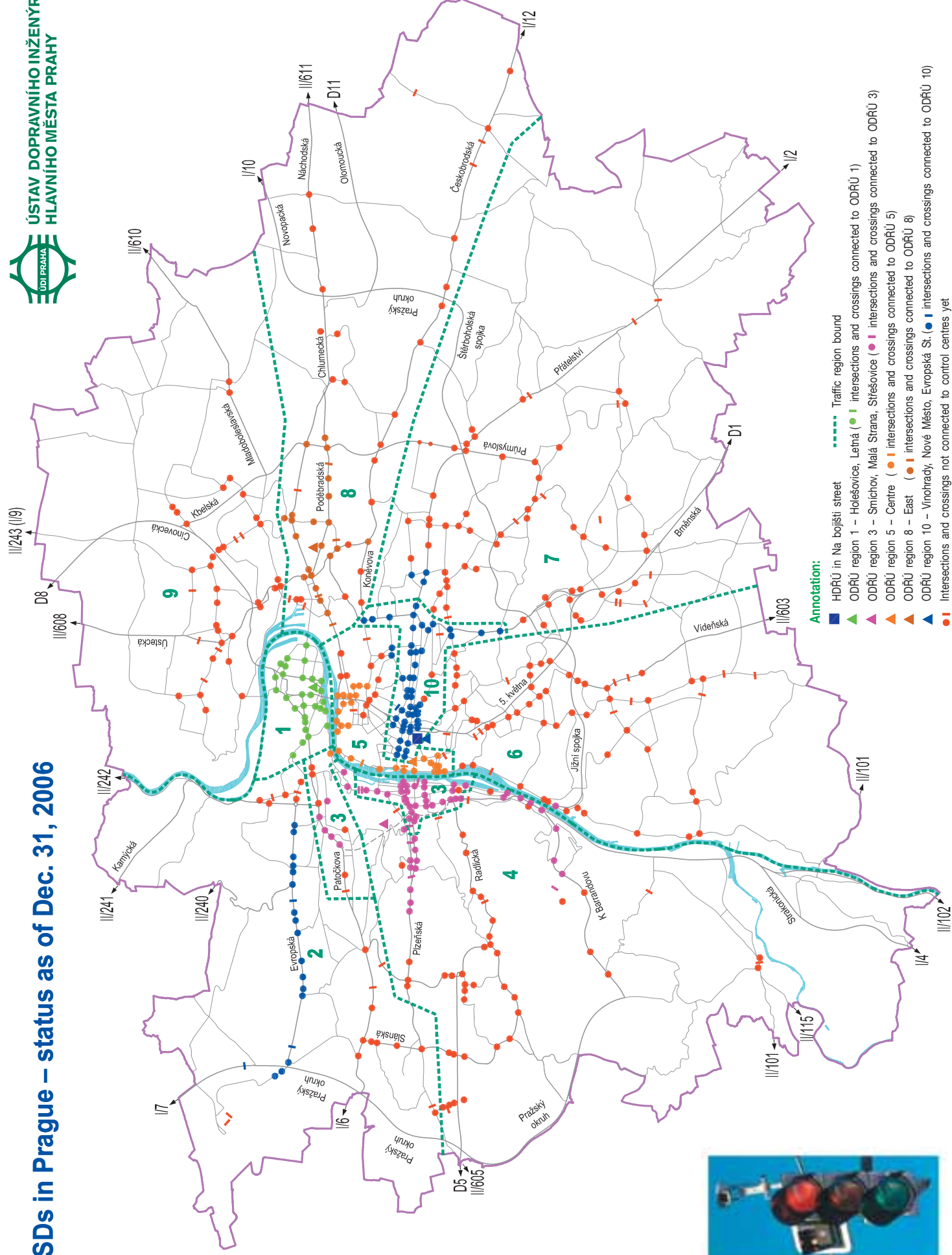
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THE YEARBOOK OF TRANSPORTATION

PRAGUE
2006



TSDs in Prague – status as of Dec. 31, 2006



INSTITUTE OF TRANSPORTATION
ENGINEERING OF THE CITY OF PRAGUE



THE YEARBOOK
OF TRANSPORTATION
PRAGUE 2006



Dear Readers,

one of the most significant political events in Prague in 2006 apart from the Parliamentary elections were also local elections to the Prague City Assembly. The citizens of Prague expressed an overwhelming confidence in the current city leadership. Voters also expressed their agreement with the strategic plans for the city's development in line with previously approved planning documents. Thus the citizens enabled a smooth continuation of the implemented transport policy concerning both investment projects as well as the enactment of organizational and regulatory measures.

The importance of transport sector is evident in its share of the city's overall expenditure which annually amounts to more than a third of the city budget and almost a half of capital investment. Unfortunately, not even such expenses are sufficient to bring a quick solution to the current transport problems which arose from the disproportion between the existing transport infrastructure and ever-growing transport demands. Despite this, 2006 was the year of completion and commissioning of the Depo Hostivař Metro station on the A line, the year of successful continuation of construction on the most important transport projects, chief among which are the extension of the C line of Prague Metro to Letňany, the ongoing construction of the City Ringroad in the Malovanka – Pelc-Tyrolka section and of the first section of the Vysočanská express road. Neither should we forget significant investments in modernization of Prague public transport vehicle fleet.

I am glad to be able to say that State institutions have recently paid more attention to Prague transport than previously. The construction of major transport projects financed from the State Fund for Transport Infrastructure is underway on the territory of Prague exceeding the scope of previous years. Two Prague Ringroad projects were commenced, construction and modernization of the arterial railway infrastructure (the so-called New Connection Main Station – Libeň, IVth Railway corridor south-east of Hostivař station) is successfully continuing and the North 2 Terminal of Ruzyně Airport was put into operation. However, the State still provides inadequate support for the extension of Prague Metro network backbone of Prague public transport system. Financing of Metro construction therefore has to be to a large extent provided from the budget of the City of Prague itself.

A handwritten signature in blue ink, appearing to read 'R. Šteiner'.

Radovan Šteiner
Prague City Councillor for Transport

April 1, 2007, in Prague

Dear readers,

You have in your hands the Yearbook of Transportation 2006, a continuation of the annual publication on transportation in Prague. We have been publishing the Yearbooks in various formats and with various amounts of detail for more than 15 years now with the aim of providing the professional and non-professional public in general with information on how the transportation situation in Prague is developing, what kinds of important transportation structures have gotten underway or been completed, and what has taken place of new in the city in all types of transport.



In creating the Yearbook we begin primarily with our own sources of data, systematically updated transportation research, and surveys. The endeavour to make the abstract comprehensive, i.e. so that it contains information on all types of transport, means using the resources of other institutions as well (such as those of municipal and state bodies and organisations, transportation operators). The capacities of those providing such data sometimes influences the thoroughness, detail, or accuracy of the information. Nonetheless, this abstract constitutes informative material on current transportation in Prague that is not available at the same level of comprehensiveness elsewhere.

As the content of the Yearbook shows, automobile transportation in Prague continued to grow in 2006, although its tempo decelerated compared to previous years. The number of registered motor vehicles increased by 1.5% in 2006 (of that, personal automobiles only by 0.6%). The total transportation output of automobile transportation within the city grew by nearly 2%. The intensity of automobile transportation grew perceptibly, particularly in the city's outer zone, by 7%, while the intensity of transportation in the centre of the capital has stagnated for several years now.

The number of casualties of automobile accidents having consistently decreased over the last few years is a positive indication amid the state of general growth in automobile transportation in Prague. This decline was 19% less in 2006 than in the preceding year, in spite of the number of reported accidents being higher overall.

In addition to the construction of basic transportation structures, which was expanded in 2006 to include additional important projects (such as additional segments of the Prague Ring Road in the southwest and south part of the city, including a bridge over the Vltava near Lahovice and the reconstruction of Hlavní Nádraží), the previous year saw a large number of other provisions made for the city's road network. The tramway has been given preference on other intersections (it is already functioning on half of the light-controlled intersections on the tramway network) as have MHD buses (now on 20 intersections). The Prague Transportation Information Centre was put into permanent operation at the beginning of 2006. A great deal of attention has been paid to pedestrian crossings. With the aim of increasing their safety, a number of crossings have been shortened by modifying the pavements, adding traffic islands, or increasing the street lighting. The regulation of lorry traffic has been extended to include the district of Spořilov; the regulation of automobile traffic has been contributed to by increasing the capacity of the P+R system by 68% (3 new park-and-ride yards in 2006). The adjustment to the speed limit on selected road sections in accordance with the amendment to act 361/2000 Coll. and the introduction of the point scoring system for traffic offences in 2006 also cannot be ignored.

The constant optimisation of the organisation and management of municipal road transit, proposals for transportation engineering measures to decrease the rate of traffic accidents, monitoring and assessing the developments in transportation, and the systematic preparation of the further development of the city's transit system as a whole is among the underlying tasks of the field of transportation engineering. The Institute of Transportation Engineering of the City of Prague (ÚDI Prague) provides services in this area for the needs of Prague in particular.

A blue ink handwritten signature, appearing to read 'L. Pivec', written in a cursive style.

Ing. Ladislav Pivec
director

April 1, 2007, in Prague

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BASIC INDICATORS

1.1 The Capital City of Prague

Selected data on the Capital of Prague as of 31.12.2005

City area	496	km ²
Population	1 188 000	
Total road network	3 775	km
specifically, motorways within the city	10	km
other urban motor roads	76	km
Number of bridges in road network	579	
specifically, bridges across the Vltava	27	
grade-separated intersections	204	
underpasses	120	
Number of tunnels (total length 4 553 m).	7	
All motor vehicles	761 071	
of that, passenger cars	605 774	
Motor vehicles per capita		
vehicles per 1 000 inhabitants.	640	
Passenger cars per capita		
cars per 1 000 inhabitants.	510	
Metro (underground) network (in operation)	54.7	km
Tram network	140.9	km
specifically, dedicated track bed.	52	%
Public Transport bus network	682.0	km
Traffic lights	491	
specifically, with tram priority	101	
with bus priority	20	
separate pedestrian crossings	70	
Automobile kilometres travelled throughout road network		
per average workday	20.3 mil.	km
annually	6.7 bn.	km
Modal split (based on all trips in the city on a workday)		
public transport	57	%
car transport	43	%
Traffic accidents	34 689	
Traffic accident injuries		
fatal	56	
serious.	357	
slight.	2047	
Relative accident rate (accidents per 1 million km travelled).	5.2	

1.2 Prague as compared to the Czech Republic

	Prague	CZ	Prague/CZ (%)
Area (km ²)	496	78 864	0.6
Population (mill.)	1.188	10.287	11.5
specifically, the workforce (mil)	0.624	4.839	12.9
Motor vehicles (000s)	761	5614	13.6
specifically, passenger cars (000s)	606	4098	14.8
Motor vehicles per capita	(motor vehicles per 1000 persons)	546	
	(persons per 1 motor vehicle)	1.8	
	(passenger cars per 1000 persons)	398	
Passenger cars per capita	(persons per 1 passenger car)	2.5	

Kilometres Travelled 1990 – 2006 (million vehicle km/average workday, 0-24:00)

Year	Prague*	CZ*
1990	7.3	80.9
2000	16.6	131.2
2005	19.9	148.5
2006	20.3	152.9**
Index 06/90 (%)	278.0	189.0**
Index 06/05 (%)	101.9	103.0**

* entire road network

+ motorways + class 1 + 2 + 3 roads, including sections within Prague

** preliminary data



TSD at the Ohrada intersection



Vysočany overpass



Prague Ring Road – West



Cars on Jiráskův Bridge

AUTOMOBILE TRAFFIC

2.1 Development in Number of Motor Vehicles and Cars

The total number of motor vehicles registered in Prague rose steeply until 1999, at which point the growth slowed down.

Registered motor vehicles in 1961 – 2006

Year	Prague					Czech Republic (Czechoslovakia till 1971)				
	Pop.	Motor vehicles		Passenger cars		Pop.	Motor vehicles		Passenger cars	
	(000s)	tot.	%	tot.	%	(000s)	tot.	%	tot.	%
1961	1 007	93 106	22	44 891	13	13 746	1 326 801		291 680	
1971	1 082	203 519	48	133 129	40	14 419	2 931 629		1 041 137	
1981	1 183	367 007	86	284 756	85	10 306	3 449 300	85	1 872 694	79
1990	1 215	428 769	100	336 037	100	10 365	4 039 606	100	2 411 297	100
1995	1 210	641 590	150	535 805	159	10 321	4 728 859	117	3 113 476	129
2000	1 181	746 832	174	620 663	185	10 267	5 230 846	129	3 720 316	154
2001	1 170	760 726	177	627 891	187	10 270	5 357 727	133	3 788 627	157
2002	1 152	775 014	181	639 000	190	10 182	4 961 169	123	3 619 374	150
2003	1 166	654 700	153	534 100	159	10 211	5 041 255	125	3 702 153	154
2004	1 171	735 350	171	594 143	177	10 221	5 185 218	128	3 815 547	158
2005	1 180	749 786	175	602 339	179	10 247	5 401 917	134	3 954 769	164
2006	1 188	761 071	178	605 774	180	10 287	5 613 943	139	4 098 114	167

100% 1990

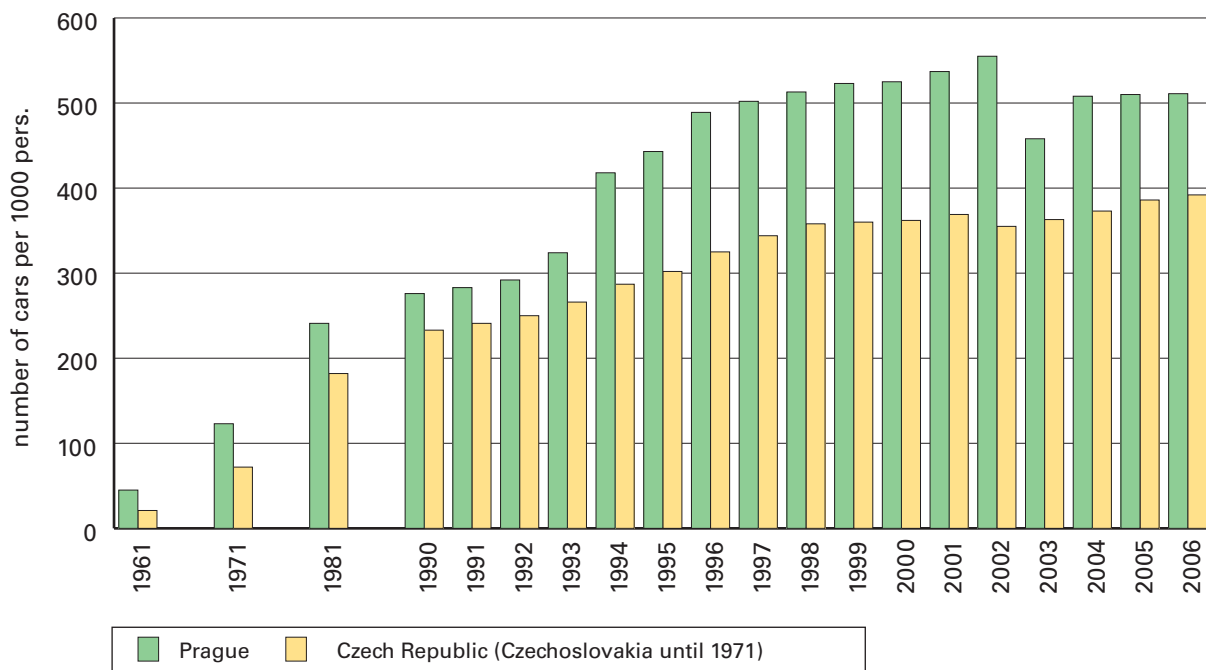
The figures for Prague for 2003 are encumbered by an error in the records of up to 130 000 vehicles; the data for later years are also encumbered by an error, however the quantity of the error is not specified.

Numbers of motor vehicles and cars per capita 1961 – 2006

Year	Prague				Czech Republic (Czechoslovakia till 1971)			
	Vehicles per capita		Passenger cars per capita		Vehicles per capita		Passenger cars per capita	
	Veh. per 1 000 pers.	Pers. per 1 vehicle	Cars per 1 000 pers.	Pers. per 1 car	Veh. per 1 000 pers.	Pers. per 1 vehicle	Cars per 1 000 pers.	Pers. per 1 car
1961	92	10.8	45	22.4	97	10.4	21	47.1
1971	188	5.3	123	8.1	203	4.9	72	13.8
1981	310	3.2	241	4.2	335	3.0	182	5.5
1990	353	2.8	276	3.6	390	2.6	233	4.3
1995	530	1.9	443	2.3	458	2.2	302	3.3
2000	632	1.6	525	1.9	510	2.0	362	2.8
2001	650	1.5	537	1.9	522	1.9	369	2.7
2002	673	1.5	555	1.8	487	2.1	355	2.8
2003	561	1.8	458	2.2	494	2.0	363	2.8
2004	628	1.6	507	2.0	507	2.0	373	2.7
2005	635	1.6	510	2.0	527	1.9	386	2.6
2006	640	1.6	510	2.0	546	1.8	398	2.5

The figures for Prague from 2003 are encumbered by an error in the records as shown in the note for the table above.

Passenger cars per capita 1961 – 2006



2.2 Volume of Automobile Traffic on Working Days

The growth in the automobile traffic and its ramifications became apparent in the 1930s. World War II and post-war trends inhibited automobile traffic in the city for time (for example the level of passenger cars per person in 1937, when there was 1 car for each 32 people in Prague, was not reached again after the war and post-war decline until 1959). Beginning in the 1960s, the number of motor vehicles in Prague increased considerably, as did traffic problems, particularly the insufficient capacity of key intersections. Until the 1980s however, these problems only involved a limited number of intersections, the majority of them being in the city centre, and they generally only arose during peak travel hours. The new situation in the 1990s created explosive growth in automobile transport. In 1992-1997 in particular, automobile traffic in the city grew at a rate that was unrivalled anywhere else in Europe – with the exception of cities in the former East Germany.

Prague holds a special position in automobile traffic in the Czech Republic, with above average intensity and traffic volume as compared to other Czech cities or motorways and roads in unincorporated areas.

The basic aggregated indicator of the development of automobile traffic in Prague is the vehicle kilometres travelled (VKT) throughout the roads network. The Institute of Transportation Engineering has been monitoring VKT since 1978.

Aside from VKT, cordon monitoring is also used to determine trends in the development of automobile traffic in Prague, i.e. periodic traffic counts at locations where self-contained cordons are created from all of the major entry roads into a defined area. The development of inner-city transportation is monitored on the so-called “central cordon”; the development of external transportation is monitored using the “outer cordon”. Time series for both cordons are available in ÚDI Prague from 1961.

Note: all VKT data relate to the 0-24:00 period on average workdays; all car traffic data exclude public transportation buses

During the 0-24:00 period of the average workday motor vehicles throughout the whole of Prague travelled a total of 20 278 000 km. Of that, the share of personal automobiles amounted to 18 330 000 km, i.e. 90%. Compared to the preceding year, this means that in 2006 motor vehicles in Prague travelled 379 000 km more (+1.9%) than in 2005 per day.

In the wider area of the city centre, automobile traffic stagnated in comparison with the preceding year – it remained practically the same. In 2006, 318 000 vehicles, of that 303 000 personal cars, entered the wider area of the city centre over the 24 hours of average workdays. The growth of the intensity in the city centre has been halted by the transit demands during peak hours having reached capacity limits of key intersections, hence the overload on the road network is no more local, but rather sweeping in character.

In the middle-city zone automobile traffic increased from the previous year by 2% to 5%. Transportation in the city's middle zone has grown consistently and considerably since 1990, and has increased three to four times on certain roads compared to 1990.

In the outer-city zone the intensity of automobile traffic grew by 7.0% compared to the previous year. Automobile traffic in the outer-city zone has continued to grow since 1990. In 2006, 269 000 vehicles, of that 232 000 personal cars, drove into Prague over the 24 hours of average workdays.

Traffic volumes on the central and outer cordons 1961 – 2006

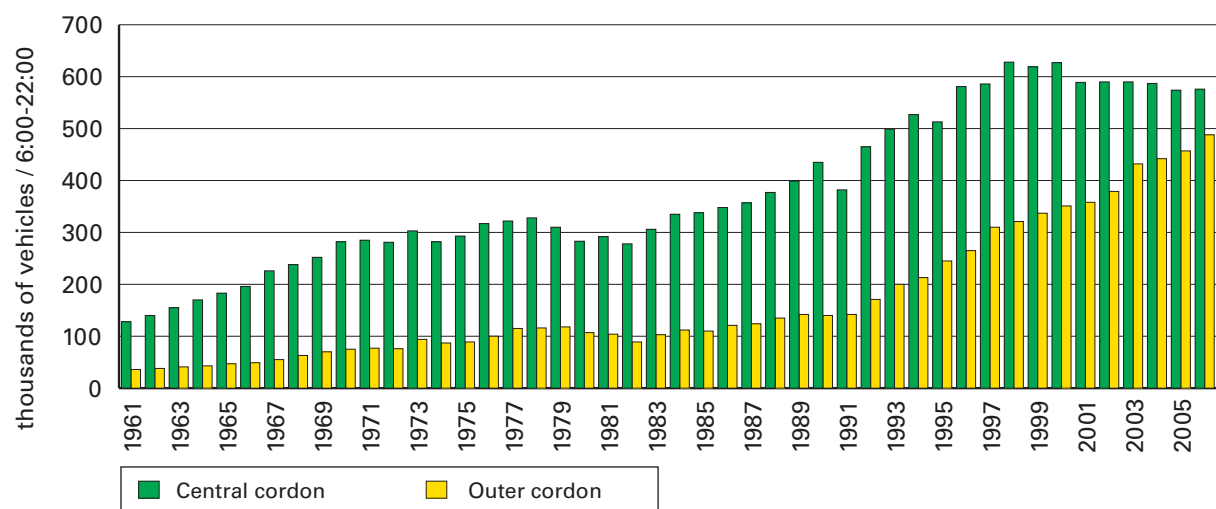
Workday, both directions total, 6:00 to 22:00

Year	Central cordon						Outer cordon					
	Passenger cars		Lorries		All vehicles		Passenger cars		Lorries		All vehicles	
	number	%	number	%	number	%	number	%	number	%	number	%
1961	69 000	18	32 000	82	128 000	29	14 000	14	14 000	41	36 000	26
1971	241 000	63	38 000	97	299 000	69	50 000	50	23 000	68	77 000	55
1981	247 000	64	39 000	100	292 000	67	67 000	66	31 000	91	104 000	74
1990	385 000	100	39 000	100	435 000	100	101 000	100	34 000	100	140 000	100
1995	474 000	123	31 000	79	513 000	118	204 000	201	36 000	106	245 000	175
2000	594 000	154	23 000	59	627 000	144	304 000	301	43 000	126	351 000	251
2001	556 000	144	21 000	54	589 000	135	310 000	307	43 000	126	358 000	256
2002	560 000	145	18 000	46	590 000	136	329 000	326	45 000	132	379 000	271
2003	561 000	146	18 000	46	590 000	136	376 000	372	50 000	147	432 000	309
2004	558 000	145	18 000	46	587 000	135	382 000	378	54 000	159	442 000	316
2005	547 000	142	17 000	44	574 000	132	394 000	390	56 000	165	457 000	326
2006	551 000	143	15 000	38	578 000	133	421 000	417	60 000	176	489 000	349

100% = 1990

Traffic volumes on the central and outer cordon 1961 – 2006

Workday, both directions total, 6:00 to 22:00



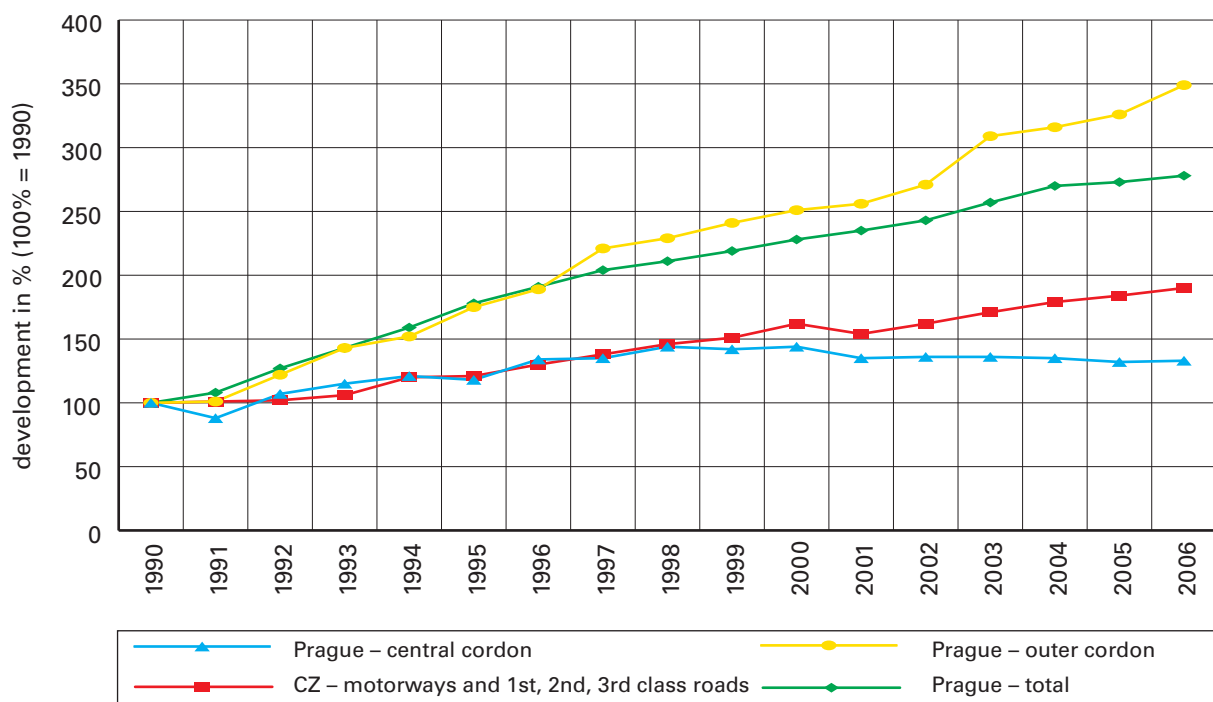
The most heavily overloaded section of the Prague road network in 2006 was Barrandov Bridge, which 127 000 vehicles crossed per day (0-24:00), the most heavily overloaded multi-level junction was 5. Května – South Junction (218 000 vehicles per day) and the most heavily overloaded single-level junction was Anglická-Legerova (79 000 vehicles per day).



Prague Ring Road by the D11 motorway junction

Development of automobile traffic in Prague and in the Czech Republic, 1990-2006

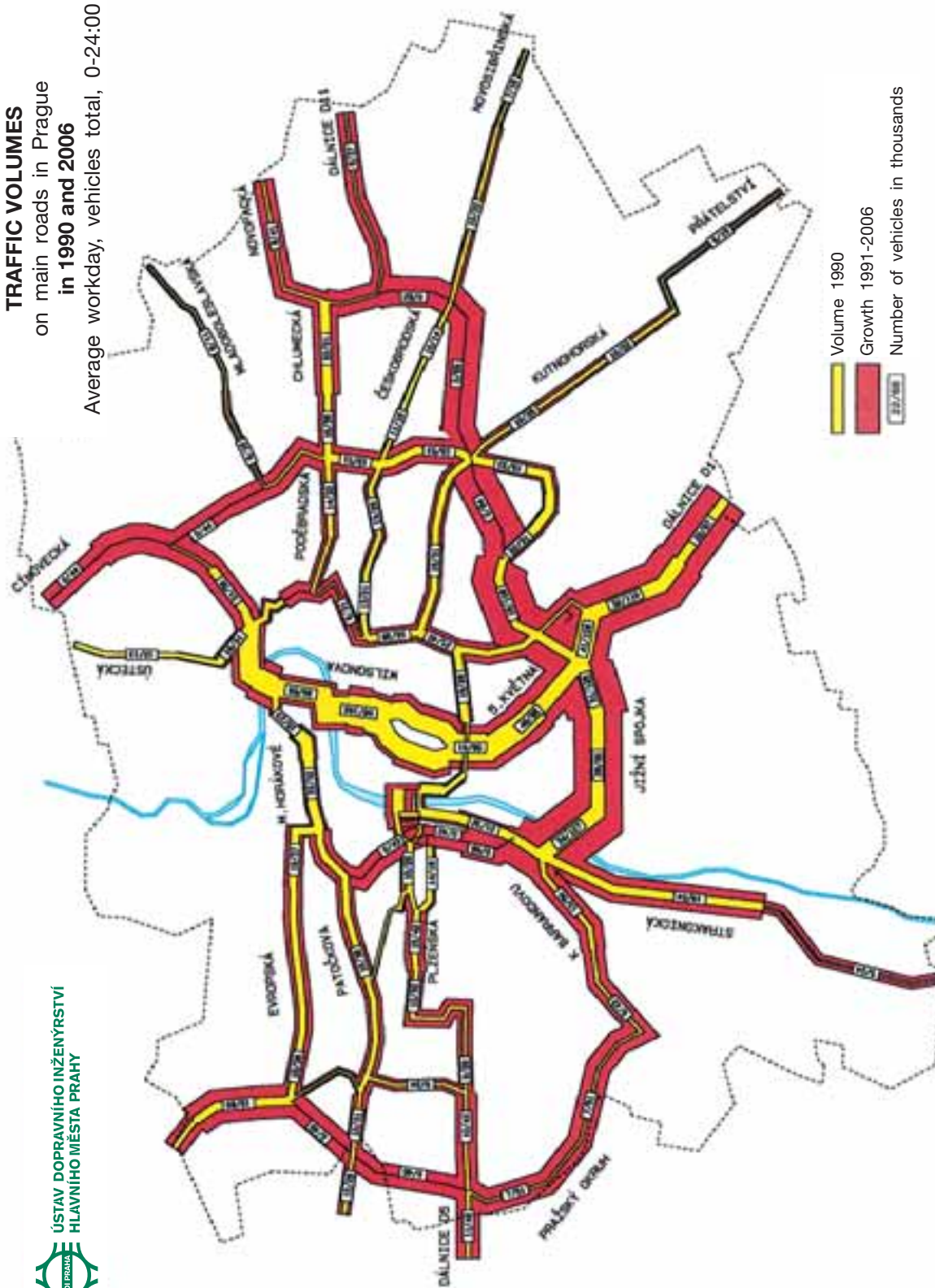
Average workday



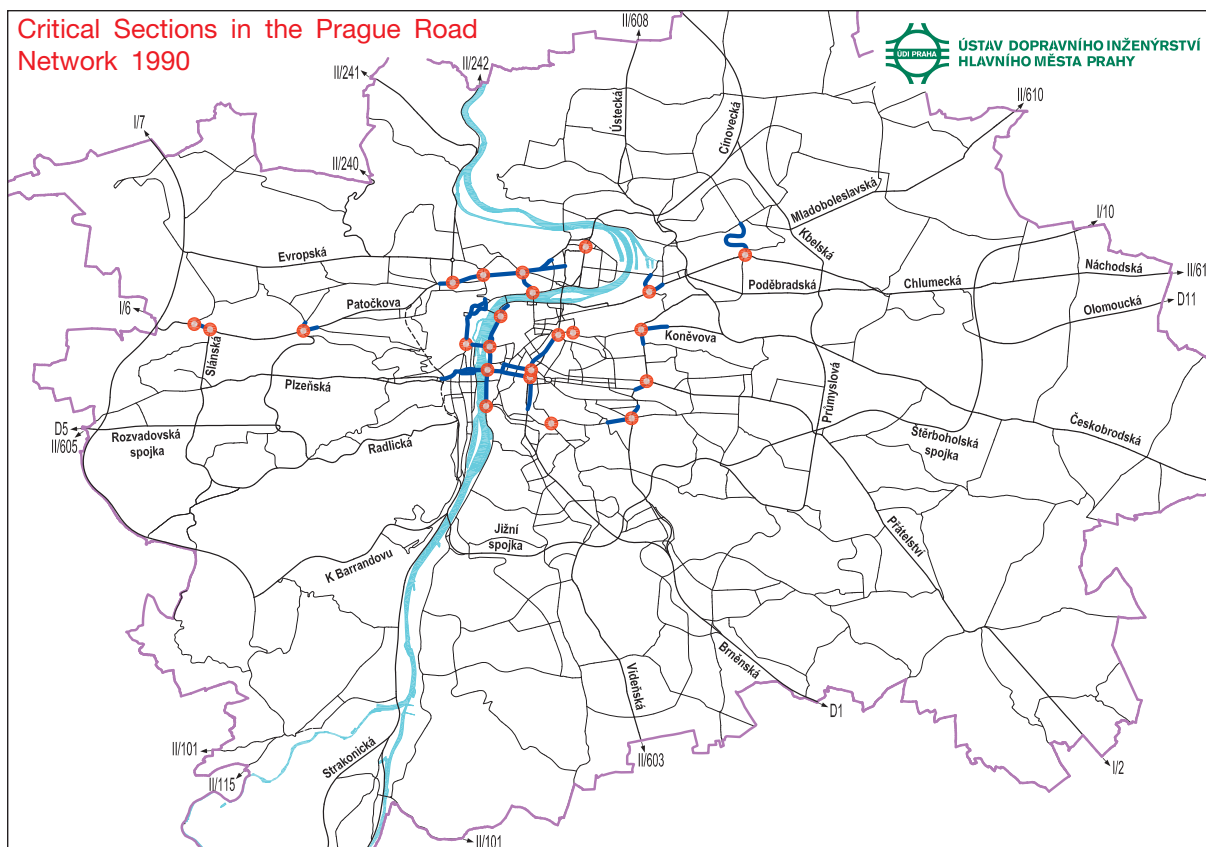
TRAFFIC VOLUMES
on main roads in Prague
in 1990 and 2006
Average workday, vehicles total, 0-24:00

on main roads in Prague
in 1990 and 2006

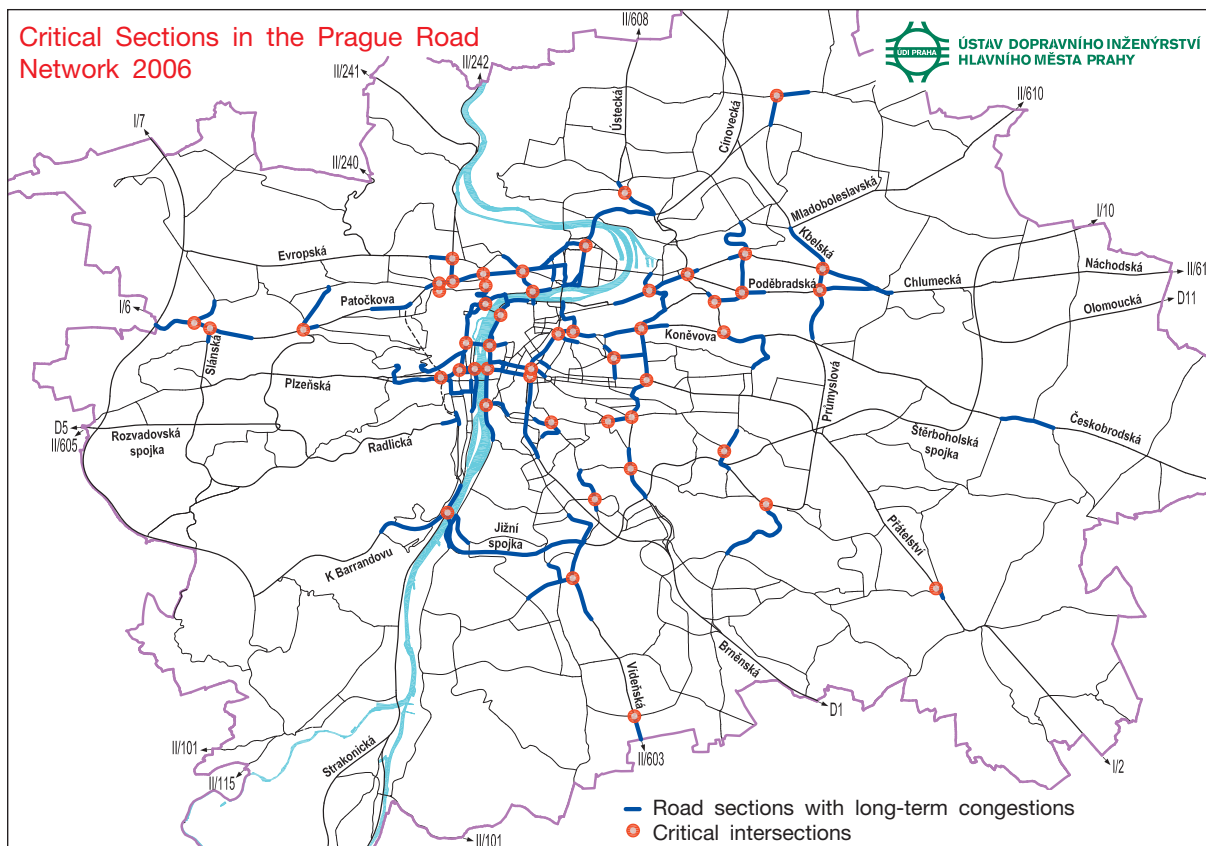
Average workday, vehicles total, 0-24:00



Critical Sections in the Prague Road Network 1990



Critical Sections in the Prague Road Network 2006



The rate of growth in automobile traffic in Prague was highest after 1990, as is evident when comparing average interannual growth rates for daily traffic on the entire road network:

1981-1990	interannual	+192 000 VKT/day
1991-1995	interannual	+1 134 000 VKT/day
1996-2000	interannual	+736 000 VKT/day
2001-2006	interannual	+606 000 VKT/day

The predominant part of growth in automobile traffic in Prague since 1990 has been brought about by personal cars. In the period between 1991 and 2006, automobile traffic in Prague increased as follows according to the individual types of vehicles:

personal cars	+213%
lorries and buses	+35%
vehicles, total	+178%

Automobile traffic in Prague, 1961 – 2006

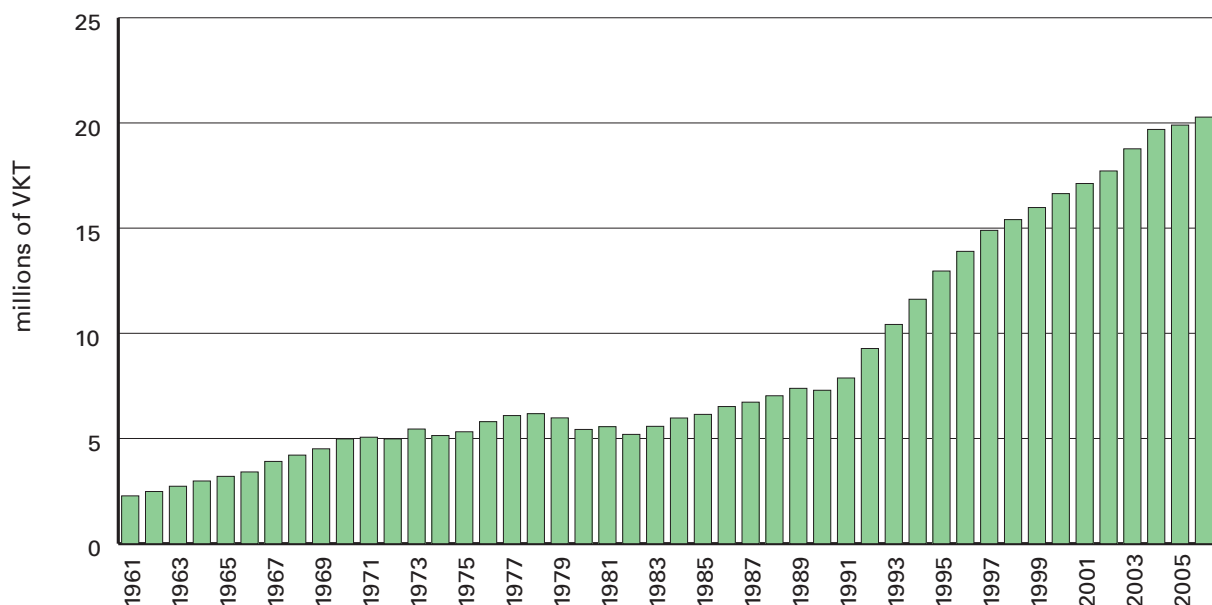
Entire road network, average workday, 0-24:00

Year	Motor vehicles, total		of that, personal cars		Percentage of personal cars in total traffic
	Million VKT	%	Million VKT	%	
1961	2.273*	31	1.273*	23	56
1971	5.061*	69	3.543*	65	70
1981	5.562	76	4.338	79	78
1990	7.293	100	5.848	100	80
2000	16.641	228	15.131	259	91
2001	17.121	235	15.585	267	91
2002	17.718	243	16.191	277	91
2003	18.771	257	17.123	293	91
2004	19.691	270	17.815	305	91
2005	19.899	273	18.023	308	91
2006	20,278	278	18,330	313	90

100% = 1990

* estimate according to trends in the development of intensity on the central and outer cordon (VKT is monitored in Prague since 1978)

Automobile traffic in Prague, 1961 – 2006
Entire road network, average workday, 0-24:00



Average Vehicle Occupancy – persons per passenger car

Year	Inner city (central cordon)	Outer zone (outer cordon)	all-Prague average
1990	1.57	1.90	1.71
1995	1.45	1.60	1.50
2000	1.37	1.49	1.44
2005	1.35	1.42	1.40
2006	1.35	1.40	1.38

2.3 A Workday Mode Share

The traffic flow is made up largely of passenger cars. In terms of the spread across Prague, the percent of personal cars in the traffic flow increases closer to the city centre. In 2006 this amounted to:

- on the central cordon 95%
- on the outer cordon 86%
- on average across the network 90%

Percentage of mode share, 1961 – 2006

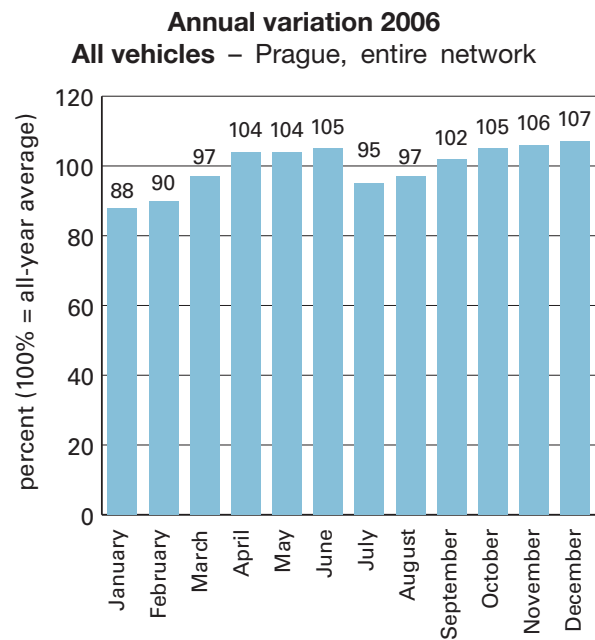
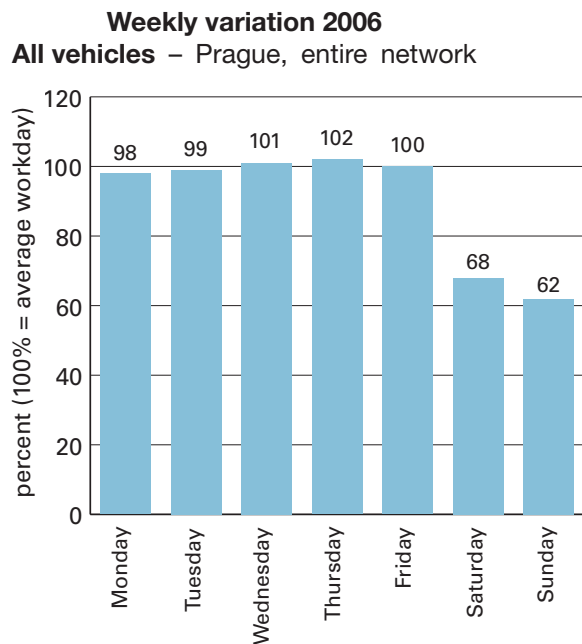
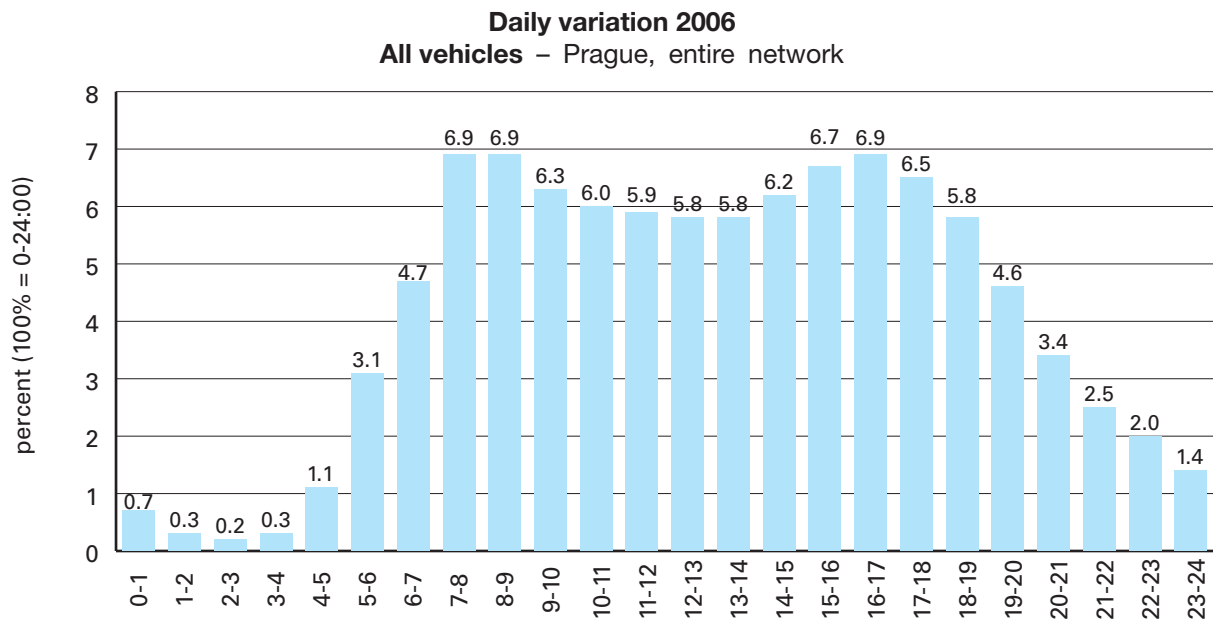
Workday, both directions total, 6-22:00

Year	Central cordon				Outer cordon			
	Passenger cars	Motocycles	Lorries	Buses (exc. PT)	Passenger cars	Motocycles	Lorries	Buses (exc. PT)
1961	53.7	19.4	29.4	2.0	38.6	22.1	34.4	4.9
1971	79.3	5.6	13.3	1.8	63.2	8.6	25.1	3.1
1981	84.3	0.4	13.2	2.0	65.1	0.6	30.3	4.0
1990	88.6	0.7	9.1	1.6	72.1	0.5	24.0	3.4
1995	92.4	0.3	6.0	1.3	83.4	0.2	14.7	1.7
2000	94.7	0.6	3.7	1.0	86.5	0.2	12.1	1.2
2005	95.4	0.7	2.9	1.0	86.2	0.4	12.2	1.2
2006	95.4	0.9	2.7	1.0	86.0	0.4	12.4	1.2

2.4 Temporal Patterns in Automobile Traffic

Workday volume variations in motor vehicles traffic show the following characteristics.

- The bulk of the daily traffic volumes is takes place during daylight hours (75% from 6 a.m. to 6 p.m., or 80% from 6 a.m. to 7 p.m.) while the period from 6 a.m. to 10 p.m. covers about 91%.
- After 5 p.m., the traffic volume displays a steep and largely balanced decline until midnight.
- The morning peak hour comes at 7-9 a.m.; the afternoon peak hour is between 4-5 p.m.
- The morning peak hour amounts to 6.9%, the afternoon peak hour also amounts to 6.9 (100% = 0-24 h).
- The differences between peak hour share and off-peak share are not very sharp. The noon lull hour (from 12-13:00) is 5.8% of the entire day.
- Daily traffic density variation in lorries and buses (excluding public transportation) displays a different characteristic from the overall profile. Their peak hour is 10-11:00, making 8.5% of the day-long lorry and bus volumes. After 11 a.m. there is a mild and more or less regular decrease without any lull or next peak until midnight.
- Consequently, the percentage of lorries and buses in the traffic flow changes significantly during the day:
 - the day-long average is 9%
 - rising to up to 15% in the morning
 - and decreasing to 7% in the afternoon
 - the evening and night-time values range between 4 and 10%.



2.5 Weekend Car Traffic

The ÚDI Praha Institute's annual traffic volume surveys include monitoring weekend traffic on the urban outer limit. Weekend departures occur mostly on Friday afternoons between 3 to 7 p.m., on Saturdays between 8 to 11 a.m. and partially also on Sunday mornings. On the other hand, weekend arrivals concentrate in a narrow band of Sunday return time from 2 to 10 p.m. This is also the frequency of periodic holiday traffic monitoring during spring survey time on the outer cordon. The ÚDI Praha has been registering the weekend car traffic since 1973.

Weekend traffic volumes, 1973 – 2006

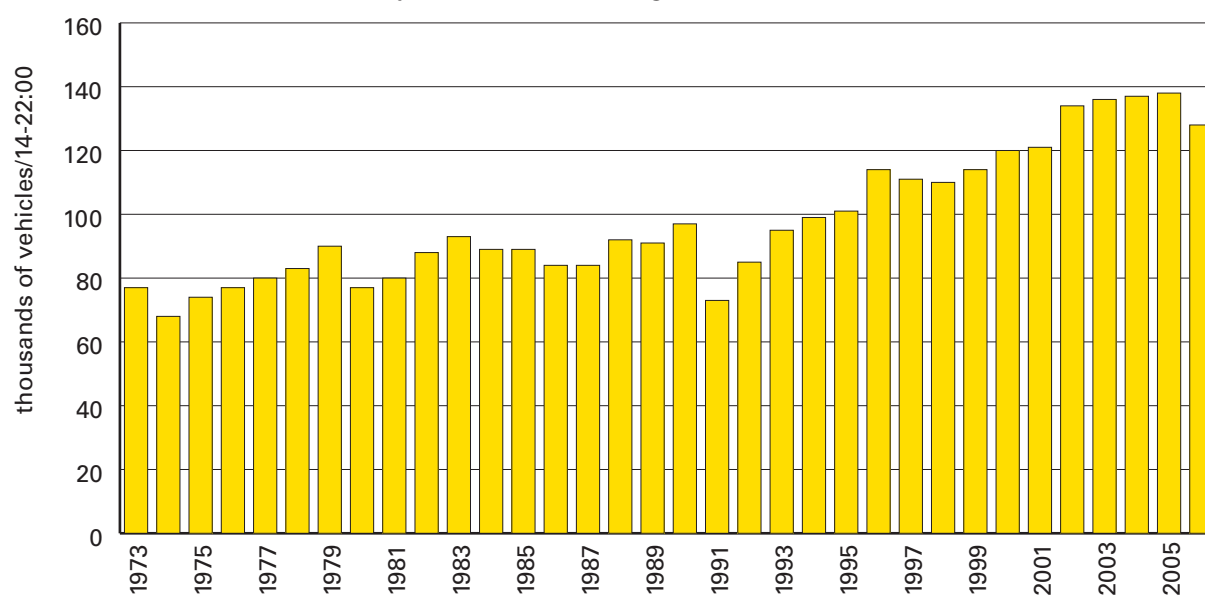
Sunday, outer cordon, Prague bound, from 2 p.m. to 10 p.m.

Year	Passenger cars		All types of vehicles	
	number	%	number	%
1973	70 000	74	77 000	77
1981	77 000	82	80 000	80
1990	94 000	100	100 000	100
1995	98 000	104	101 000	101
2000	116 000	123	120 000	120
2001	117 000	124	121 000	121
2002	130 000	138	134 000	134
2003	131 000	140	136 000	136
2004	133 000	141	137 000	137
2005	132 000	140	138 000	138
2006	123 000	131	128 000	128

100% = 1990

Weekend traffic volume development, 1973 – 2006

Sunday, outer cordon, Prague-bound, 14-22:00



The weekend traffic modal share is dominated by passenger cars. They made 96 % in 2006.

The average vehicle occupancy in weekend traffic in 2006 was 1.91 passengers per car.

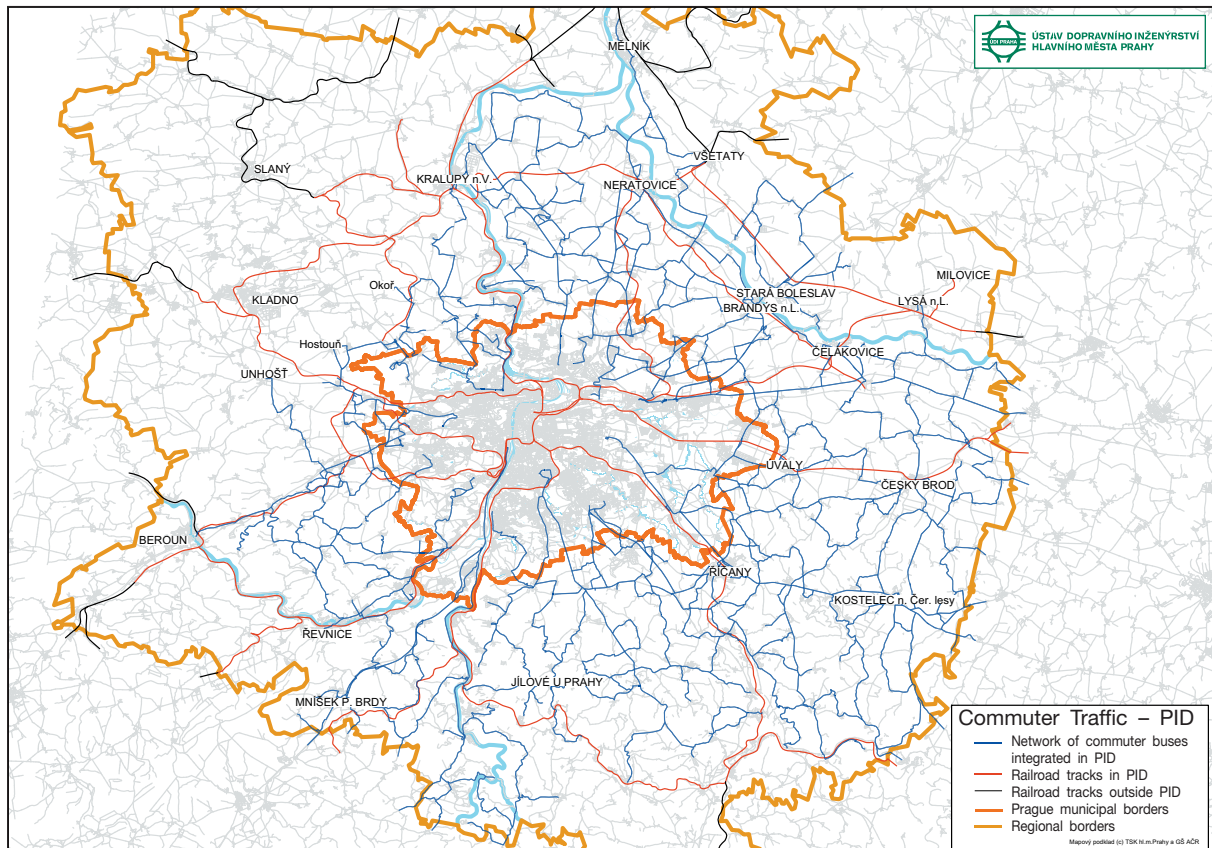
PUBLIC TRANSPORT

3.1 Prague Integrated Transport

3.1.1 Basic Information

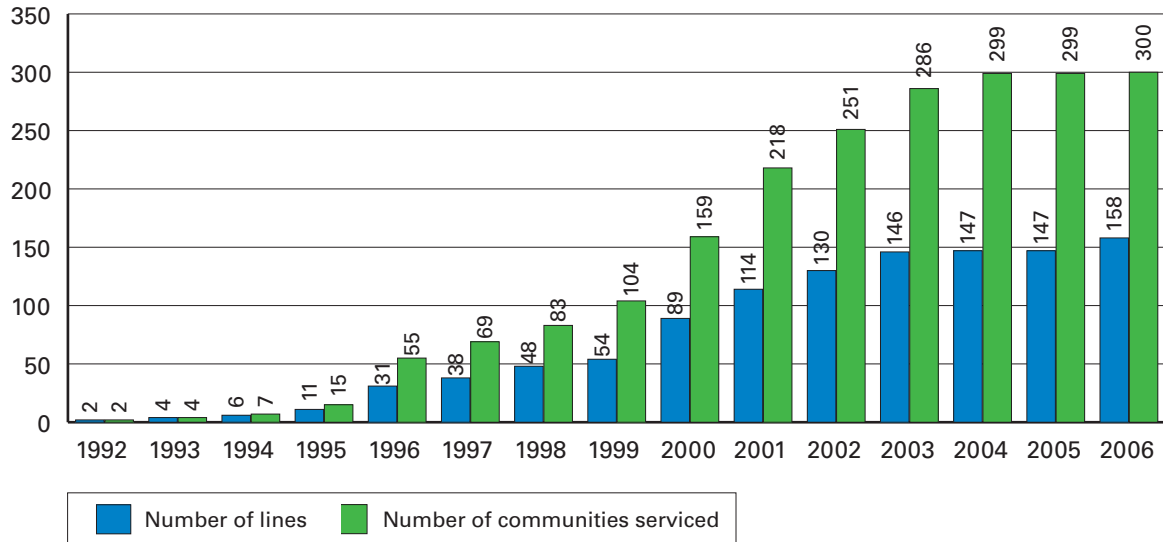
Prague Integrated Transport System is organized by Prague Integrated Transport Regional Organizer (ROPID), an allowance organization established by the Municipality of Prague.

Prague Integrated Transport (PID) System comprises the City of Prague and several communities outside of Prague, which help support (including the region of Central Bohemia) the operation of bus lines outside the capital. The operators include Prague Public Transit Co. Inc. (*Dopravní podnik hl. m. Prahy, a.s. – DP*) which operates the Metro (underground), tram lines, funicular railway and most of the bus lines; Czech Railways (*České dráhy, a.s.*) which operates the railways; and 14 other carriers sharing in bus line operation. The integrated transport includes two river ferries.

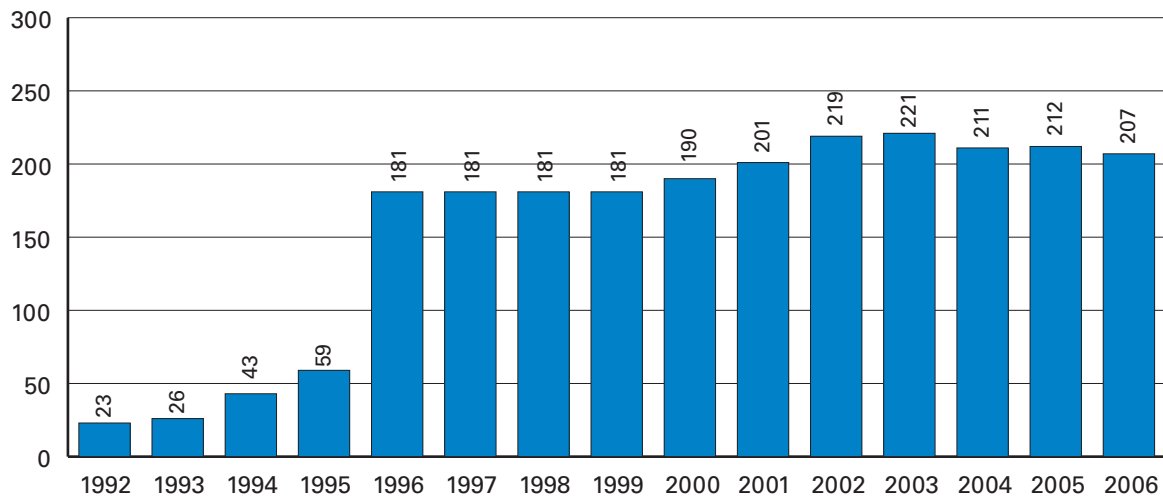


The foundation for the integrated passenger transport system in and around Prague was laid in 1992, and its development continued with the gradual linking-up of railway routes with the integrated system, by increasing the range of suburban bus transport with a number of lines, by increasing the size of the territory covered and the number of communities served by the suburban *PID* buses. Simultaneously, the tariff system also developed, a zoned tariff has been implemented, with the number of tariff zones gradually increasing. The following graphs show the gradual development of the *PID* system around Prague:

PID bus development (outside of Prague)



Number of railway stations and PID stops



Numbers of operated PID bus lines

Operator	city territory	region territory
DP hl. m. Prahy, a. s. (incl. night and school lines)	178	19
Others	9	139
Total	187	158

At the end of 2006 there was a total of 158 regional bus lines. Of that, 90 lines offered city-to-country transport, 7 lines were nightlines and 61 lines were led outside of the city.

Basic data about Prague Integrated Transport (PID) 1997 – 2006

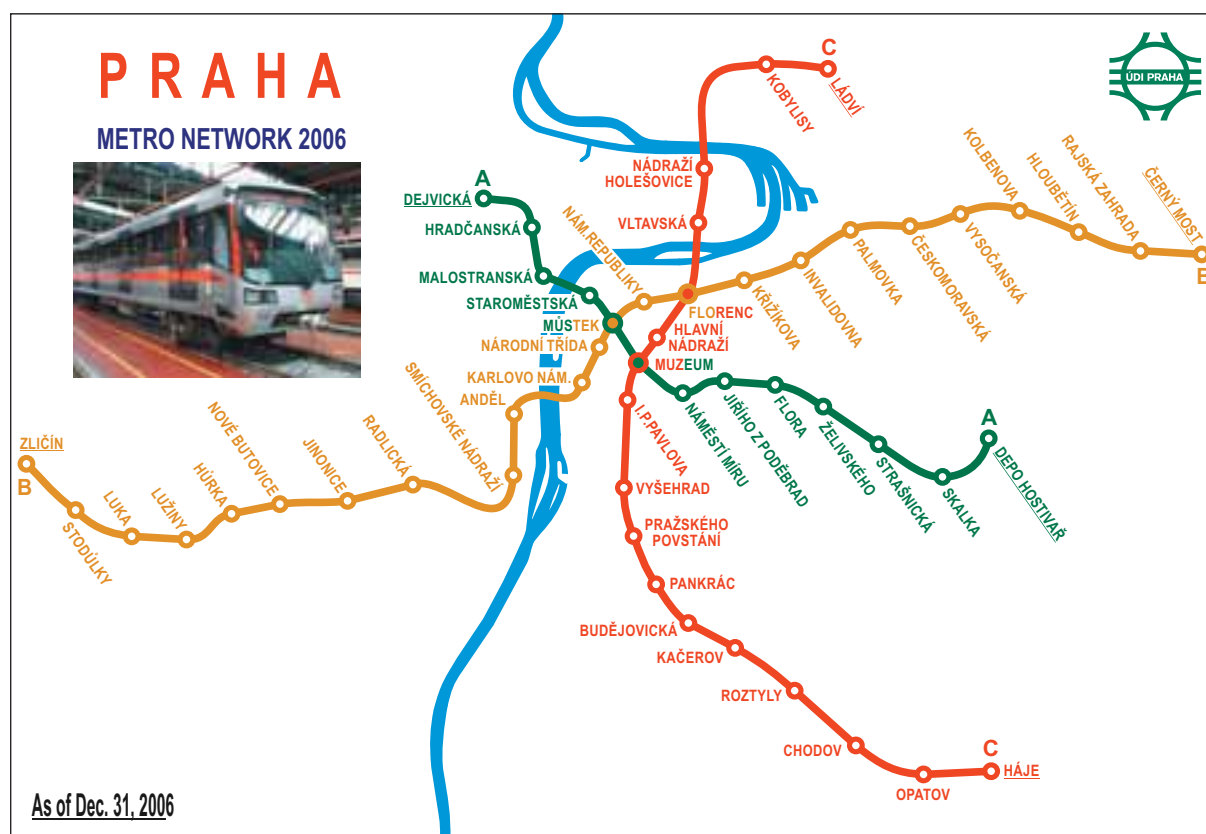
Year	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Number of communities served by suburban PID buses	69	83	104	159	218	251	278	299	299	300
Number of railway stations and stops linked up with PID	181	181	181	190	200	219	221	211	212	207
Number of suburban PID bus lines	38	48	54	89	114	133	146	147	147	158
Millions of VKT in suburban PID bus lines	4.12	5.03	7.99	9.36	12.91	15.79	18.48	20.20	22.2	22.4
Millions of VKT in all the PID lines except railway (i.e. Metro + tramway + city and suburban buses)	150	149	156	157	163	161.6	172.9	177.8	178.9	187.1
Share of travel PID tickets in the railways integrated into the PID system (% of the total)	32.5	35.6	37.2	39.2	43.0	52.1	56.5	57.7	59.7	60.4

Number of passengers transported via PID in 2006 (thousands of persons/year)

Carrier, Type of transport	within city	outside city	total
Dopravní podnik, a.s. metro	531 239	-	531 239
tramway	349 116	-	349 116
buses	292 357	8 693	301 050
Contracted carriers buses	47 908	43 776	91 684
Total	1 220 620	52 469	1 273 089
Czech Railways			16 531
Total (including railway)			1 289 620

3.1.2 Municipal Public Transport

The **Metro** (underground) is the backbone network of the Municipal Public Transport (*MHD*) system. The Metro consists of three lines with a total operational length of 54.7 km and 54 stations (including three interchanges). Barrier-free access is now available in 30 stations, and lifts and escalators are gradually being installed in more stations.



The trains travel at an average speed of 34.6 km/h with the average distance between stations 1,072 m. The Metro's percentage share in persons transported was 45.3% of all the passengers of public transport in 2006.

The average age of the metro cars is 7.3 years. The delivery of new cars continued in 2006, whereby there are now 46 M1-type trains. 35 cars (81-71M) have been modernised.

In 2006 the operational train fleet amounted to 555 cars, of that 230 cars M1, 175 cars 81-71M and 150 cars 81-71.

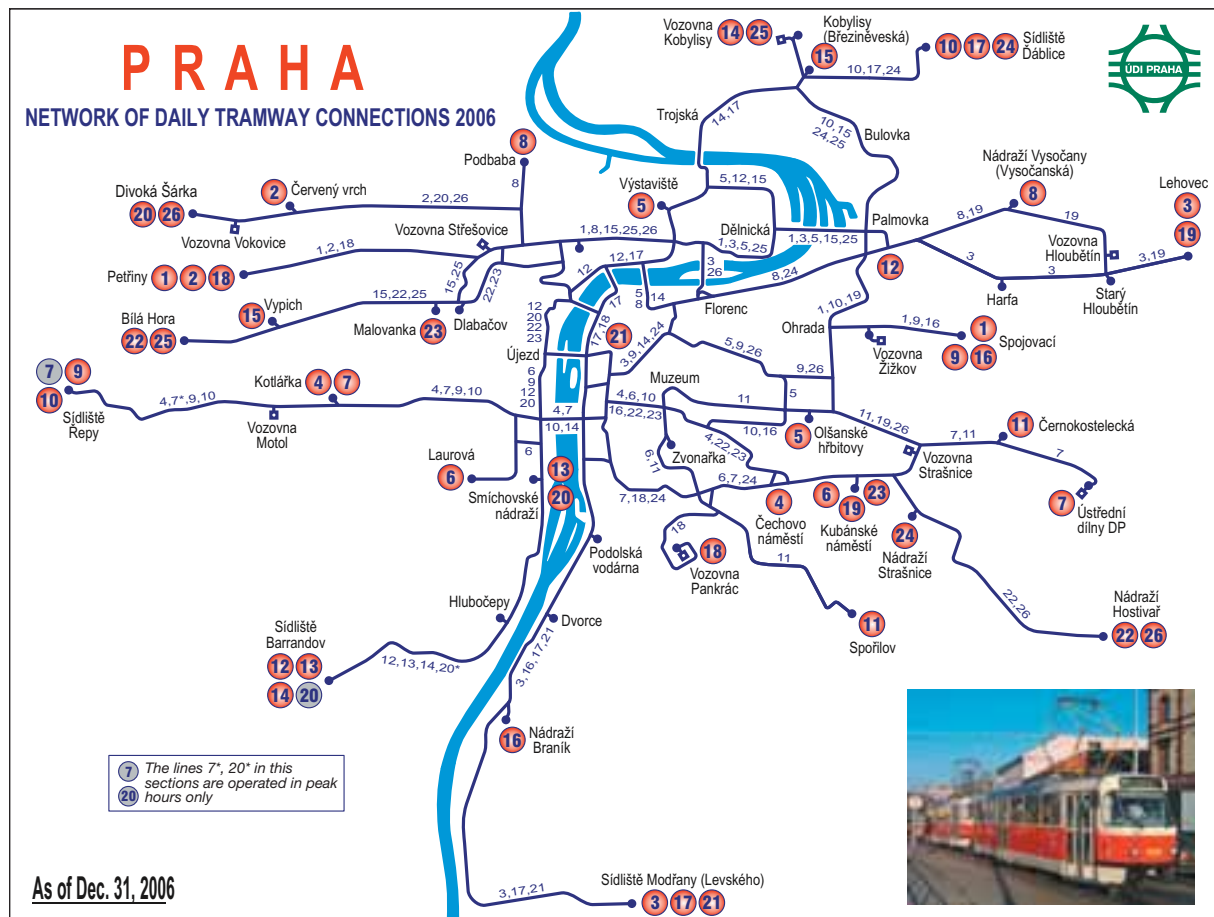


M1 car



Modernised 81-71M train

In 2006 **tramway transit** utilised a total network of tracks of 140.9 km in length. Of that, 52% of the length runs on a dedicated track bed (raised embankments in roads, and in some places on separate off-road tracks). The average stop distance throughout the network was 542 m. In 2006 the trams shared 29.8% of all persons transported.



The operational tram fleet amounted to 929 vehicles, of that 876 standard trams T3, T6, 48 articulated trams and 5 new trams 14T. There was a total of 20 low-floor vehicles, including the new 14T trams. In addition to this operational status 28 vehicles were in the process of modernisation at the end of the year. The average age of the operational tram fleet was 14.5 years.



14T low-floor tram



Hostivař tram loop

Bus transit constitutes a complementary network to the Metro and trams. They provide a spread coverage of the area and selected tangential links especially in the outer zone of the city. The operational length of the network within the city is 682 km. The average distance between stations and stops is 679 m. In 2006 the percentage of bus transit of the overall number of persons transported by MHD was 24.9%.

The Prague Public Transit Co. Inc. (DP) bus fleet registered 1235 vehicles in 2006, of that 571 standard, 274 articulated, 53 articulated low-floor, 331 standard low-floor buses, and 6 E91 midibuses.

The average age of the operating buses is 6.8 years, of that the standard buses have an average age of 6.6 years and the articulated buses 7.4 years. 524 operating buses are older than 7 years, of which 243 are articulated.



Midibus E91



Karosa B741 articulated bus

The **funicular** railway provides a connection between *Újezd* Street and *Petřín* hill (via a midpoint stop *Nebozítek*). Two carriages with a capacity of 100 persons each travel on a 510m-long railway at an average speed 6.12 km/h climbing to the height of 130.45 m. The electrically powered traction cable has a diameter of 35.3 mm. In 2006 the funicular transported almost 1.06 million passengers.

The ferries across the Vltava river contributed to passenger transport in the north of the city. Two ferries were in operation, between Sedlec – Zámky and between Podbaba – Podhoří (the latter began operation in July of 2006). Both ferries run year-round according to the valid timetables. In 2006 the ferries transported nearly 73 000 persons, of that Sedlec – Zámky 39 200 persons and Podbaba – Podhoří 33 800 over six months.



Podbaba – Podhoří ferry



Sedlec – Zámky ferry

Basic data about Prague Integrated Transport, 2006 (operated by DP hl.m. Prahy, a.s.)

	Metro	Trams	Buses	Total
Operational network length (km)	54.7	140.9	682.0	877.6
specifically, dedicated track bed (%)	100	52	-	-
Operational network length outside Prague (km)	-	-	135.0	135.0
Average stop distance (m)	1072.5	542	679	-
Average commercial speed (km/h)	34.6	18.9	25.8	-
VKT in Prague per year (000s)	46 976	49 606	61 955	158 537
VKT outside Prague per year (000s)	-	-	1 445	1 445
Passengers transported in Prague per year (000s)	531 239	349 116	292 357	1 172 712
Passengers transported outside Prague per year (000s)			8 693	8 693
Prague Public Transit Co. Inc. employees	12 594			
Revenue from tickets (mill. CZK)	3 783			
Operational costs (mill. CZK)	13 575			
Revenue/costs ratio (%)	27,5 %			

Development of selected characteristics of public transport

Year	Operational network length (km)*			Average commercial speed (km/h)			Public Transport performance on an average day	
	Metro	Trams	Buses	Metro	Trams	Buses	Seat-km (mill.)	Passengers (000s)
1981	19.3	122.9	545.0	32.2	15.7	23.8	46.7	3 638
1990	38.5	130.5	607.3	34.6	18.7	23.7	57.6	4189
1995	43.6	136.2	671.4	34.9	19.0	23.3	53.4	3 409
2000	49.8	136.4	812.4*	35.7	18.9	25.2*	56.0*	3 290++
2001	49.8	137.5	806.8*	35.4	19.2	25.9*	56.8*	3 468++
2002	49.8	137.5	818.0*	35.4	19.5	25.9*	56.4*	3 492++
2003	49.8	140.9	819.8*	35.7	19.6	26.3*	58.3*	3 530++
2004	53.7	140.9	822.1*	34.6	19.3	26.1*	61.3*	3 599++
2005	53,7	140,9	810,6*	34,6	18,7	25,9*	62,8*	3 774 (3 628)++
2006	54.7	140.9	817.0*	34.6	18.9	25.8*	63.1*	3 900 (3 747)++

+ The operational length is the total length of regularly operated lines that are available to passengers (i.e. without service tracks, sidings, lay-bys, depots, yards, etc.), measured along the line axis, or street axis with bus lines. In the case of the Metro, it is the total length of the lines from terminal to terminal platform midpoint.

* incl. suburban PID lines operated by DP hl. m. Prahy, a. s.

++ passengers transported within Prague (in parenthesis persons transported only by DP hl. m. Prahy, a. s.)

3.1.3 Suburban Public Transport in the PID System

The suburban public transport included in PID (i.e. the transport extending beyond the territory of the capital) is provided by railway and bus lines.

Rail commuter transport is operated by Czech Railways (České dráhy, a.s.) on all 10 of the rail lines entering Prague. 7 lines are fully integrated into the integrated transportation system. The length of the railroads within Prague territory is 145 km; there are 65 stations and stops. The highest volumes transported are achieved by the Praha-Kolín and Praha-Benešov u Prahy railway lines.

Development of number of passengers within Prague transported by PID railway

Year	1999	2000	2001	2002	2003	2004	2005	2006
Passengers (000s)	8 093	10 048	14 932	15 700	16 032	15 998	16 584	16 531

The use of railway transportation is very advantageous time-wise for passengers travelling from outlying areas of the city to railway stations in the city centre. The travel time and the peak travel interval on the most important routes is shown by the following table:

Section	Average interval at peak (min)	Average journey duration (min)	Length (km)
Praha-Klánovice – Praha-Masarykovo nádraží	15 – 30	22	18
Praha-Kolovraty – Praha-Hlavní nádraží	30	25	17
Praha-Radotín – Praha-Hlavní nádraží	15 – 30	17	13
Praha-Sedlec – Praha-Masarykovo nádraží	30	12	9
Praha-Horní Počernice – Praha-Masarykovo nádraží	15 – 30	23	15

PID commuter bus transport consists of 158 lines, of which 90 allow a connection with Prague. 3500 connections crossed the municipal borders on these lines on average workday in 2006 transporting around 81 500 passengers in both directions.

3.2 Long-distance Passenger Transport

3.2.1 Railway Transport

The railways offer transport connections between Prague and other places by means of local and long-distance trains. The transport is operated by České dráhy, a.s., the rail network is run by a government agency Správa železniční dopravní cesty.



451 commuter unit entering the Praha-Uhřetěves station (under reconstruction)



CityElefant commuter unit under tram bridge at Krejčířek

Development of railway traffic volume in Prague

		2002	2003	2004	2005	2006
Total passengers transported (000s persons)		46 296	47 481	52 739	55 727	58 884
Average usage of lines (000s pers./km)		2 359	2 211	2 686	2 786	2 944
Trains dispatched from Prague	outgoing	162 578	170 706	159 681	159 524	161 193
	incoming	162 990	170 324	160 888	160 731	163 510
	total	325 568	341 030	320 569	320 255	324 703

Traffic at primary Prague stations in 2006

	incoming passengers (000s)	outgoing passengers (000s)	total (000s)	dispatched trains
Praha-Hlavní nádraží	9 443	9 601	19 044	83 616
Praha-Masarykovo nádraží	5 032	5 303	10 335	41 028
Praha-Smíchov	1 623	1 839	3 462	11 330
Praha-Vršovice	452	594	1 046	6 708
Praha-Libeň	381	495	876	5 605
Praha-Vysočany	475	494	969	255
Praha-Holešovice	698	902	1 600	9 308

3.2.2 Coach Services

Public coach services (non-PID) connecting Prague with the other parts of the region and the rest of the country are offered by many operators from the Czech Republic and some international lines are also offered by foreign operators. On average workdays from 5-22:00 Prague is entered and left by over 2,600 buses, of which nearly 1,500 are regional buses (non-PID), more than 900 are long-distance coaches, and more than 200 are international coaches.

The terminal with the heaviest load is Florenc. There are around 650 arrivals and departures at the terminal from 5:00 to 22:00 on average workday. Of that, 73% are long-distance domestic connections and 23% are international connections. The remaining 4% are regional.

Other connections are dispatched and terminated at the coach terminals at Černý Most, Dejvická, Hradčanská, Nádraží Holešovice, Nádraží Smíchov, Na Knížecí, Roztyly and Zličín.



Public bus on the Praha-Plzeň line at the Zličín



Public bus entering AN Florenc bus station

4.1 Construction and Reconstruction of Traffic Signals

Within the scope of the work done on developing traffic signal devices (TSD) a selection procedure was held in 2006 for the maintenance, overhauling, and delivery of TSD, LTCC (local transportation control centres), and coordinated cables within Prague. The winner was the company Eltodo DS s.r.o. along with the subcontractors SBH CZ, s.r.o. and AŽD Praha, s.r.o.

By December 31, 2006, there were a total of 491 TSD in operation in Prague. 17 TSD were erected during 2006 and one was made after a new control unit was added to the Střelničná-Rochlická intersection.

Of the total number of TSDs, 76 independent pedestrian crossings are in operation and 382 intersections have acoustic signalisation installed for the blind. A total of 212 TSD work connected to the Principal Traffic Control Centre through the local transportation control centres by the end of 2006.



TSD 7,171 Bubenská-U Výstaviště

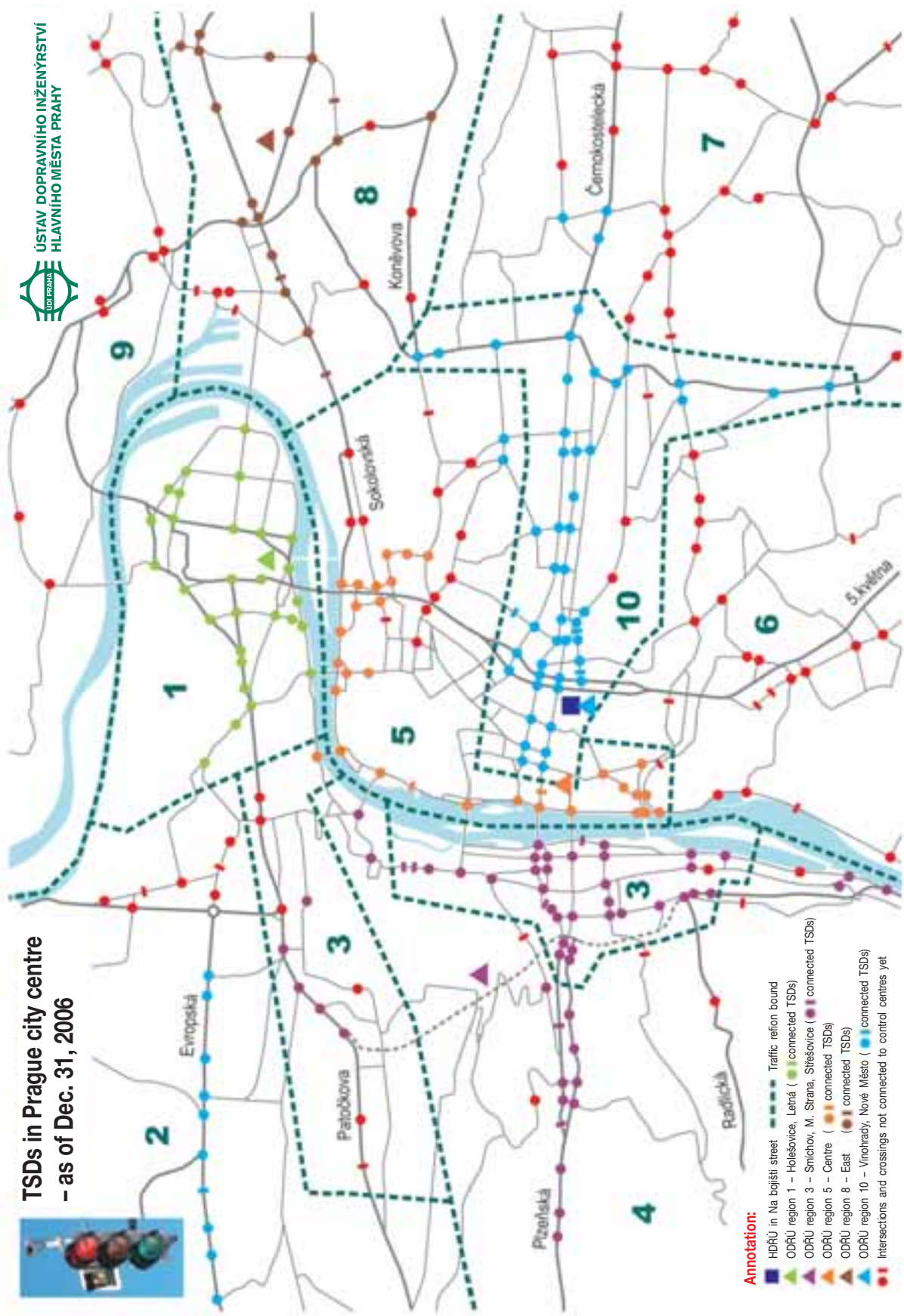


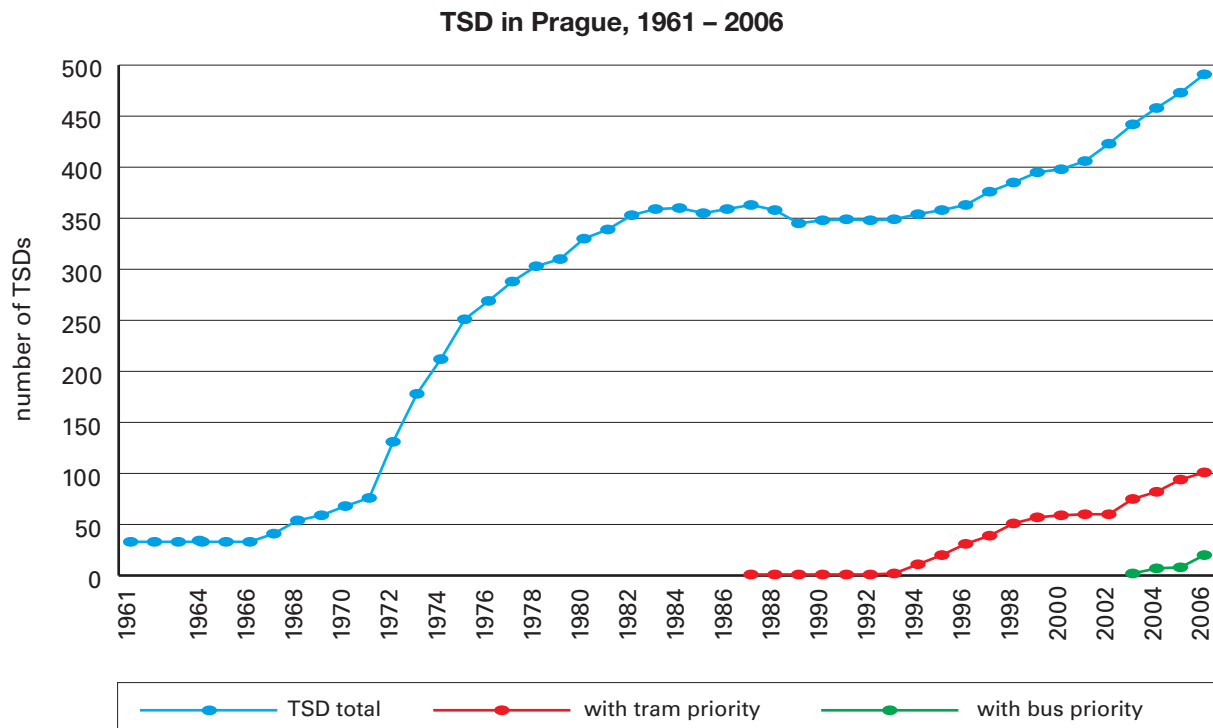
TSD 9,218 Vysočanská-Prosecká

Basic data on TSD, 1961 – 2006

Year	1961	1971	1981	1990	1995	2000	2003	2004	2005	2006
TSDs total	33	76	339	348	358	398	442	458	473	491
incl. pedestrian crossings	-	9	37	45	46	57	61	60	72	76
with tram priority	-	-	-	1	20	59	75	82	94	101
with bus priority	-	-	-	-	-	-	2	8	8	20

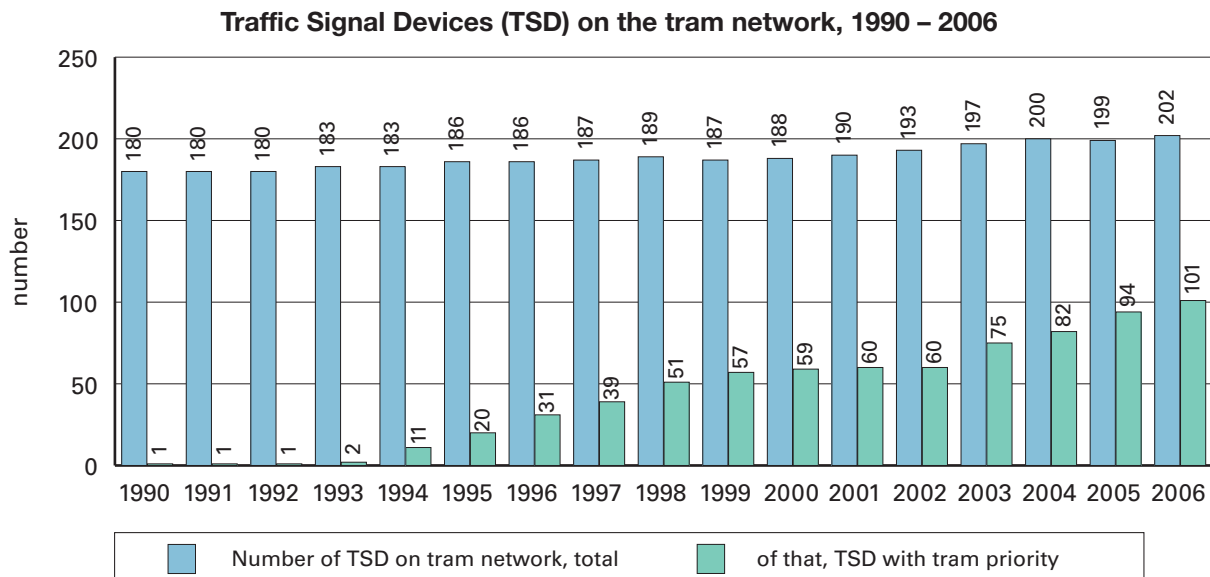
TSDs in Prague city centre
– as of Dec. 31, 2006



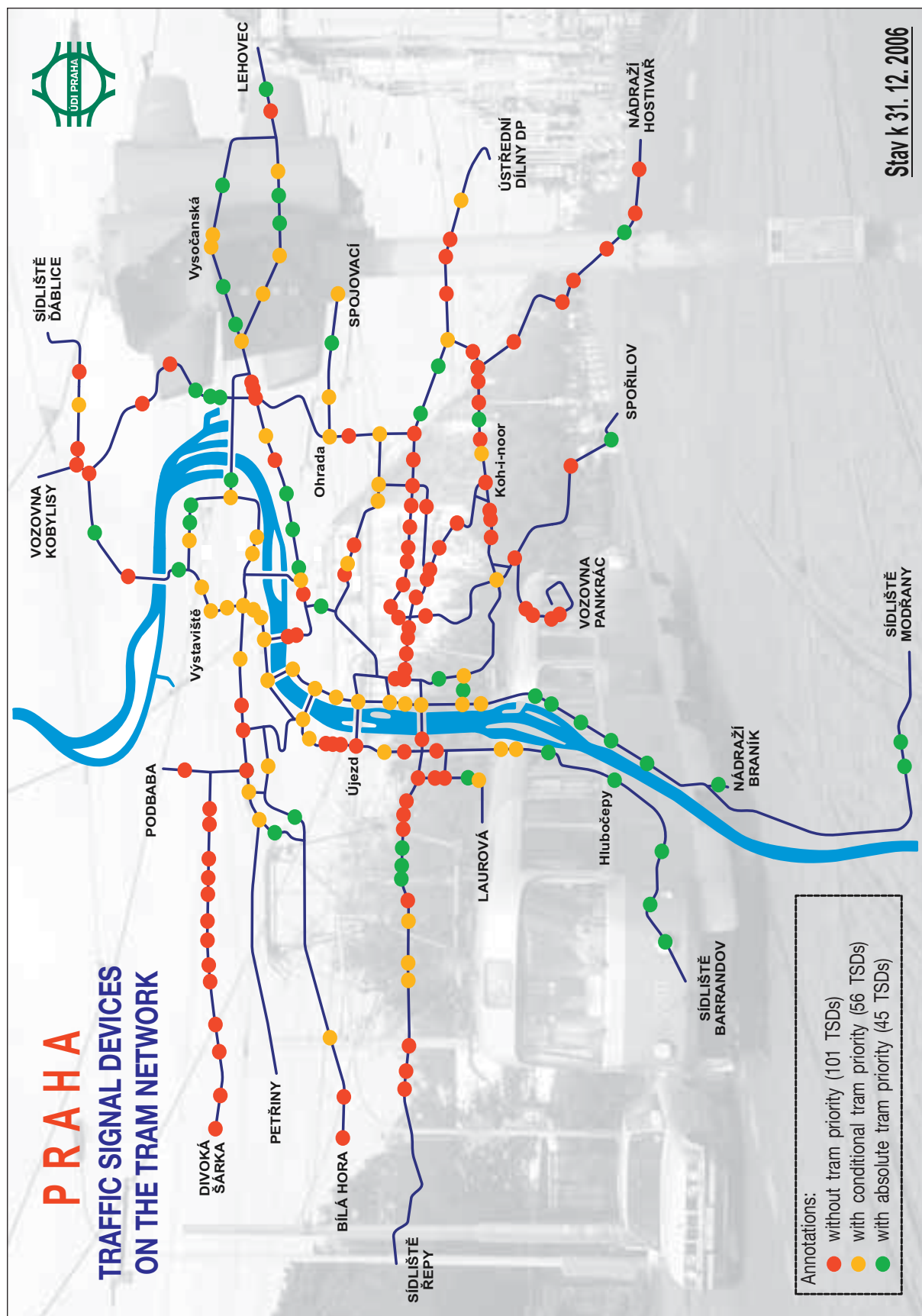


4.2 MHD Vehicles Preference on TSDs

The new and reconstructed TSDs are equipped with devices that, in addition to dynamic control based on vehicle and pedestrian demand, also give preference to MHD vehicles.



During the course of 2006, the number of TSD with **tramway priority** increased by an additional 7 locations. As of December 31, 2006, tramway priority had been introduced at 101 locations, which means 50% of the total number of 202 TSDs on the Prague tram network. At 45 intersections with less complicated transportation situations the priority is programmed absolutely, and the tram can cross the intersection without waiting at all. At the other locations the priority is conditional, and takes into consideration the demands of other types of transportation, or the requirements of trams coming from various directions.





Absolute tram preference at TSD 1.052 Havlíčkova – Hybernská



Bus preference at TSD 8.241, Kobyliské náměstí

Pilot operation of **bus priority** was introduced during the course of 2003 at two intersections as a part of the Trendsetter project, in which Prague participated. In 2004 bus priority was made to TSD in the vicinity of the newly opened parts of Metro line C to Kobylisy and Ládví, and in 2006, an additional 12 were added, primarily on Vysočanská street, in connection with the construction of an additional segment of Metro line C.

The bus priority system operates on the basis of radio communication between the vehicles and the TSD control units. Vehicles arriving at an intersection are localised using an infra-beacon installed at a suitable distance before the stop-line. Equipment in the vehicle allows the system to be integrated with the line's valid timetable, so the control unit at the intersection gives priority to the connections that need it due to delays. The priority requirement corresponding to any deviations from the timetables discovered is sent to the control unit, and these requirements are categorised into 3 levels from high to low.

At the end of 2006, a total of 286 buses were equipped with the mobile components necessary for the system's operation. Vehicles delivered to Dopravní podnik hl. m. Prahy in the autumn of 2006 were equipped with the equipment in question by the manufacturer.

4.3 Traffic Control Centres

The expanding and updating of the "system of control and regulation of the urban road traffic" continued in accordance with the approved principles during 2006. It is the Prague Road Maintenance (Technická správa komunikací hl. m. Prahy) that is responsible for maintaining and developing the system in the capital.

The Principal Traffic Control Centre (HDŘÚ) is installed in the building of Public Transport Central Control (Centrální dispečink MHD) in Na bojišti street, district Praha 2. It is operated by the Police of the Czech Republic specifically the Prague Constabulary (Správa hl. m. Prahy). As of Dec. 31, 2006, the traffic control subsystem had 212 TSDs connected via 5 local transportation control centres (LTCC). The control units were connected to VRS 2100, MIGRA and ADT systems in the individual areas.



HDŘÚ Prague hall (DIC Praha room on left)



Wall map of connected TSDs in the HDŘÚ Prague hall

Three of the 10 traffic areas into which Prague is divided are connected to the server of the VRS 2100 system. Area 1 – Holešovice, Letná now has 27 TSDs connected to the HDŘÚ, 29 TSDs are connected to the Area 5 – Centre (right embankment) control centre, and the Area 8 – East control centre manages 24 TSDs.

A subsystem under the VRS 2100 is the TRASSIS system – a traffic responsive signal program selection. It is in operation on eight TSDs in the coordinated route Argentinská – Bubenské nábreží – nábreží Kpt. Jaroše. In 2006 a traffic responsive signal program selection was also put into operation at the Národní divadlo intersection.

The MIGRA control system serves Area 3 – Smíchov, Malá Strana, Střešovice – with a total of 61 TSDs linked to it. The basic features and operator options are analogous to the VRS 2100 system, however the MIGRA has an overlay system (MOTION) that applies the adaptive management principle on a larger scale (on 21 TSDs). By pooling the strategic, duration, and demand detector data, the system finds the best values for the cycle duration, green-light (offset) at the follow-up crossroads and green-light limit values. Hence the system does not select from pre-set programs, but rather tries to optimise the traffic in keeping with the current traffic conditions.

At the end of 2006, 52 TSDs were being managed by the ADT control server in Area 10 – Vinohrady, Vršovice, Nové Město. This system processes an additional 19 TSDs on Evropská street. The ADT system is the oldest in Prague. In the ADT system, traffic can only be controlled by prolonging the phases of the structural signal plan using stop points.

Another vital component of the HDŘÚ control is a worksite for Prague **road tunnel management**. This worksite was put into operation in 1997 in connection with the completion of the Strahovský tunnel. Over almost the next decade the Mrázovka, Těšnov, Zlíchov tunnels were added to this control system. The traffic management in Letenský tunnel depends on TSD control at its entries.

The management of traffic in the tunnels is fully automatic. Considering the greater need for safety in traffic constructions of this type, the supervision over the tunnel operation is allocated to yet another worksite. The Prague Tunnel Control at Strahov takes care of technical matters such as ventilation, lighting, and accidents.



Prague road tunnel management worksite in the HDŘÚ hall



TVD system screens in the HDŘÚ Prague hall

The HDŘÚ operates a large **TV monitoring system** (TVD) that supervises key spots at the Prague road network. There are 222 stationary and rotary TV monitoring cameras in total in Prague, the broadcasts of which are used, apart from the HDŘÚ staff, also by dispatchers of Prague Public Transit Co. Inc. (Dopravní podnik hl. m. Prahy). 105 of these cameras are located in road tunnels (Zličov, Mrázovka, Strahovský). A large number of these cameras are not merely cameras but are also able to automatically detect a number of situations that can arise in tunnels.

The other camera system in the city is the DP hl. m. Prahy system, which has around 600 cameras available in the spaces and vestibules of the Metro. These two primary options for camera supervision are also complemented by the Security Camera System (BKS), to which a total of 384 cameras focused primarily on supervising security situations in the city are connected.

The spectrum of cameras integrated in the Municipal Camera System (MKS) is thus comprised of all three systems; MKS development falls under the MHMP's crisis management division, and a total of 512 cameras are integrated into it. This includes all of the BKS system cameras as well as an additional 64 selected cameras from the DP Praha system and 64 cameras managed by TSK. For cases of emergency traffic situations arising at locations where there are no DP or TSK cameras, some of the MKS cameras can be used for monitoring and resolving traffic problems as well.

Among the systems assigned to HDŘÚ Praha there is also a system for **driver guidance and capacity monitoring at P+R car parks** (Park and Ride). At present only three car parks in the western part of the city (P+R Zličín 1 and 2 and Nové Butovice) are connected to the centre. The current capacity is already being monitored in all of the other car parks and information on the number of free spaces is available on the website www.doprava-praha.cz.



Guidance table at P+R Zličín 1

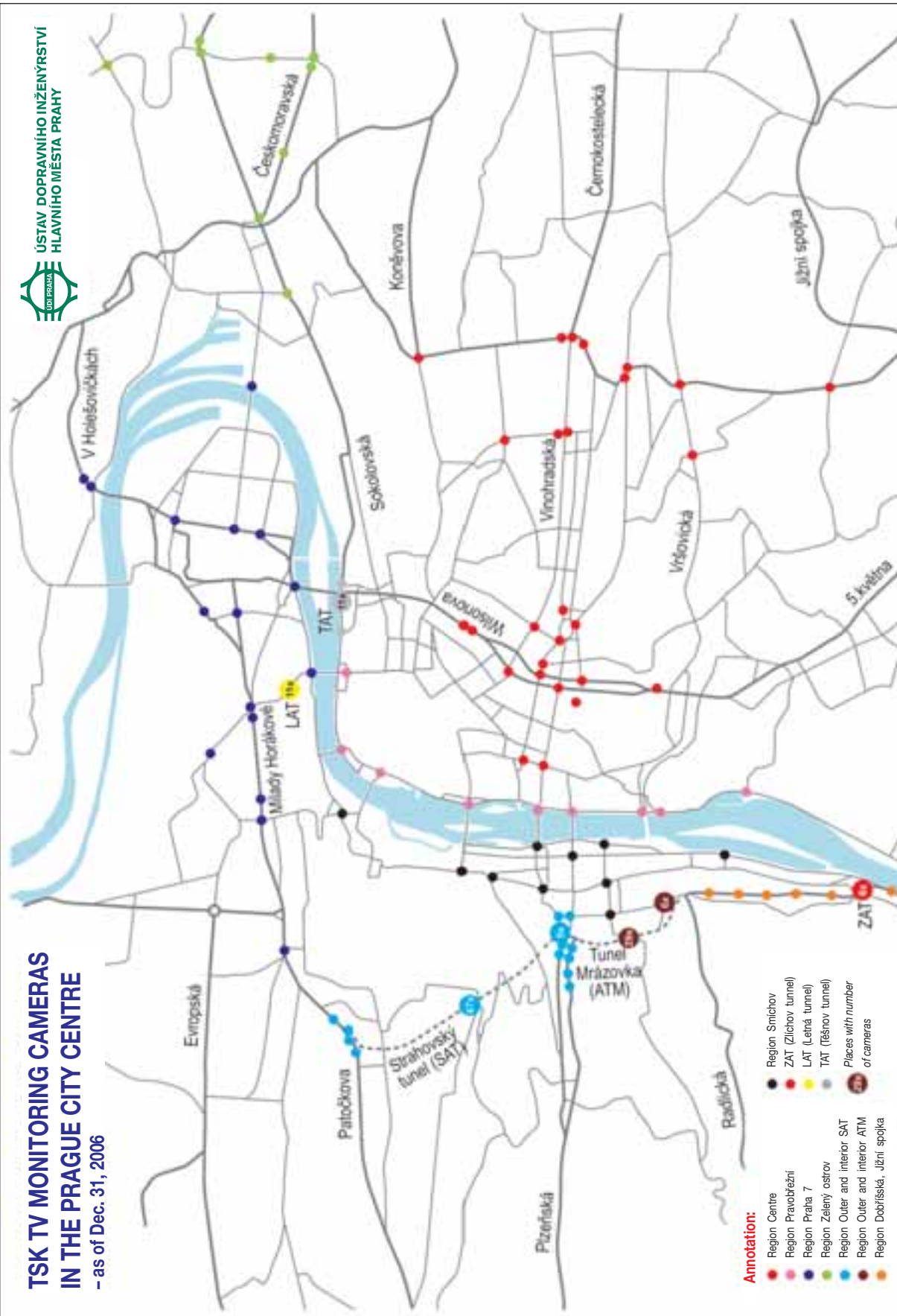


PIT at Dienzenhoferovy sady in Prague 5

Variable information signs (PIT) that use three-line text messages to inform drivers of important changes in the local traffic (congestions, traffic level, accidents, traffic restrictions in tunnels, etc.) have been continuously installed in several locations around the city.

TSK TV MONITORING CAMERAS IN THE PRAGUE CITY CENTRE

- as of Dec. 31, 2006



4.4 Telematics in Traffic

Traffic telematics integrates IT and telecommunications technology with traffic engineering for the purpose of helping current infrastructure increase traffic volumes, safety, and amenity of travel.

The principles for the development of telematics in traffic in Prague from 2002 defined 11 areas in which traffic telematics needs to be developed:

- Area 1: Road traffic control
- Area 2: Information for traffic and travel
- Area 3: Parking systems
- Area 4: Public transport
- Area 5: Systems of supervision and warning
- Area 6: Safety and rescue systems
- Area 7: Electronic payments
- Area 8: Vehicle systems
- Area 9: Haulage
- Area 10: Data collection and management
- Area 11: Traffic infrastructure administration

The practical outworking of the Prague system of telematics is a long-term affair and due to its large scale it must be implemented in stages. In 2006 development continued primarily on areas 1, 2, 3, and 5 in line with the approved strategy.

Area 1: Road traffic control

The development of this area is described in previous parts of chapter 4.

In relation to the ongoing preparation and implementation of additional structures on the Prague Ring Road, the City Ring Road, and certain radial roads, work continued in 2006 on the preparations for fitting the Prague trunk roads with telematic applications (variable information signs, line management of traffic, variable direction and information road signs, dynamic vehicle weighing, supervisory camera systems, running shoulder systems on ring roads, traffic control on multilevel junctions, detection and safety systems in tunnels, etc), and an alternative proposal characterising the necessary numbers, locations, and functional organisation of the traffic control centres and tunnel structure control centres in the region of Prague.

Area 2: Information for traffic and travel

The **Mobility Information Centre** (DIC Praha), located in the HDŘÚ building has been in operation since July 1, 2005. During 2006 work was carried out on switching the assessment levels for traffic loads from manual to automatic according to the data from the detectors. At the end of 2006, 55 of the 95 monitored sections were being assessed automatically.



DIC Praha operator workstation

Within DIC Praha, a RDS – TMC system (Radio Data System – Traffic Message Channel) is also available for drivers in Prague; this system is able to display up-to-date traffic information on navigational maps inside the vehicles.

PRAHA

NETWORK OF TRUNK ROADS AND METRO (UNDERGROUND)

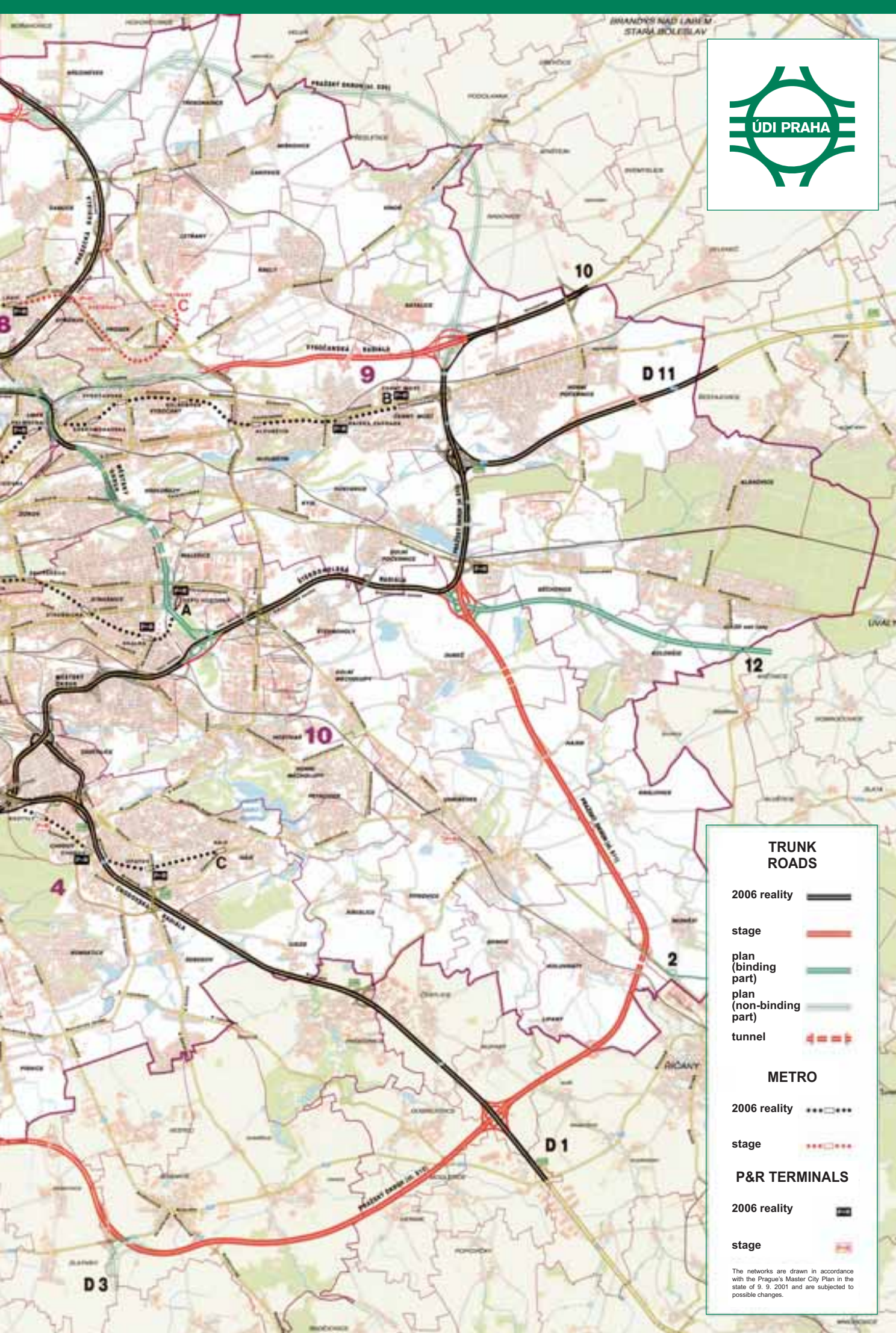
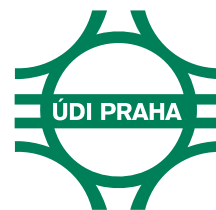


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1 : 90 000



In the area of telematics applications in public transportation, 2006 saw continued development of the **GPS bus monitoring** system on public commuter lines. An information centre for public transportation is now running in pilot operation and helps the transport operators monitor the movements of vehicles on individual lines, assess delays, or state administrative or self-governing bodies can make sure that the connections they have paid for are being properly run by the transport operators, etc. The data from this system is suitable for use in the information signs installed at important transfer points, such as at Strančice u Prahy for the train – regional bus line transfer.

The individual station timetables for public transport lines in the region of Prague, with the exception of railway and ferry timetables are available for the public at the website www.dpp.cz/jrportal.

Area 3: Parking systems

In 2005 and 2006, garages were chosen that are suitable for the inclusion of the parking guidance system in the public garages in the centre of Prague. Guidance routes were specified and locations for erecting the guidance signs were proposed, as was the content of the messages on the signs. The objective of the system, among other things, is to help decrease the kind of automobile traffic in the central area of the city that arises from looking for a suitable place to park vehicles, and also to decrease the occurrence of congestion during traffic peaks in the central direction towards the city centre, and to help increase the use of public transport on radial roads. Dynamic guidance combined for example with the presentation of data on departure times for connected public transport helps ensure the more balanced capacity of the car parks.

Area 5: Systems of supervision and warning

In the attempt to improve safe traffic on the City Ring Road, **vehicle average speed measurement** using Unicam Velocity video cameras has been installed in recent years in the Zlíchov-Radlická (Dobříšská St.) section, in the Mrázovka tunnel, and in the Strahovský tunnel (always in both directions). In 2006 this was expanded to include an additional 10 sections.



Average speed measurement at Evropská street

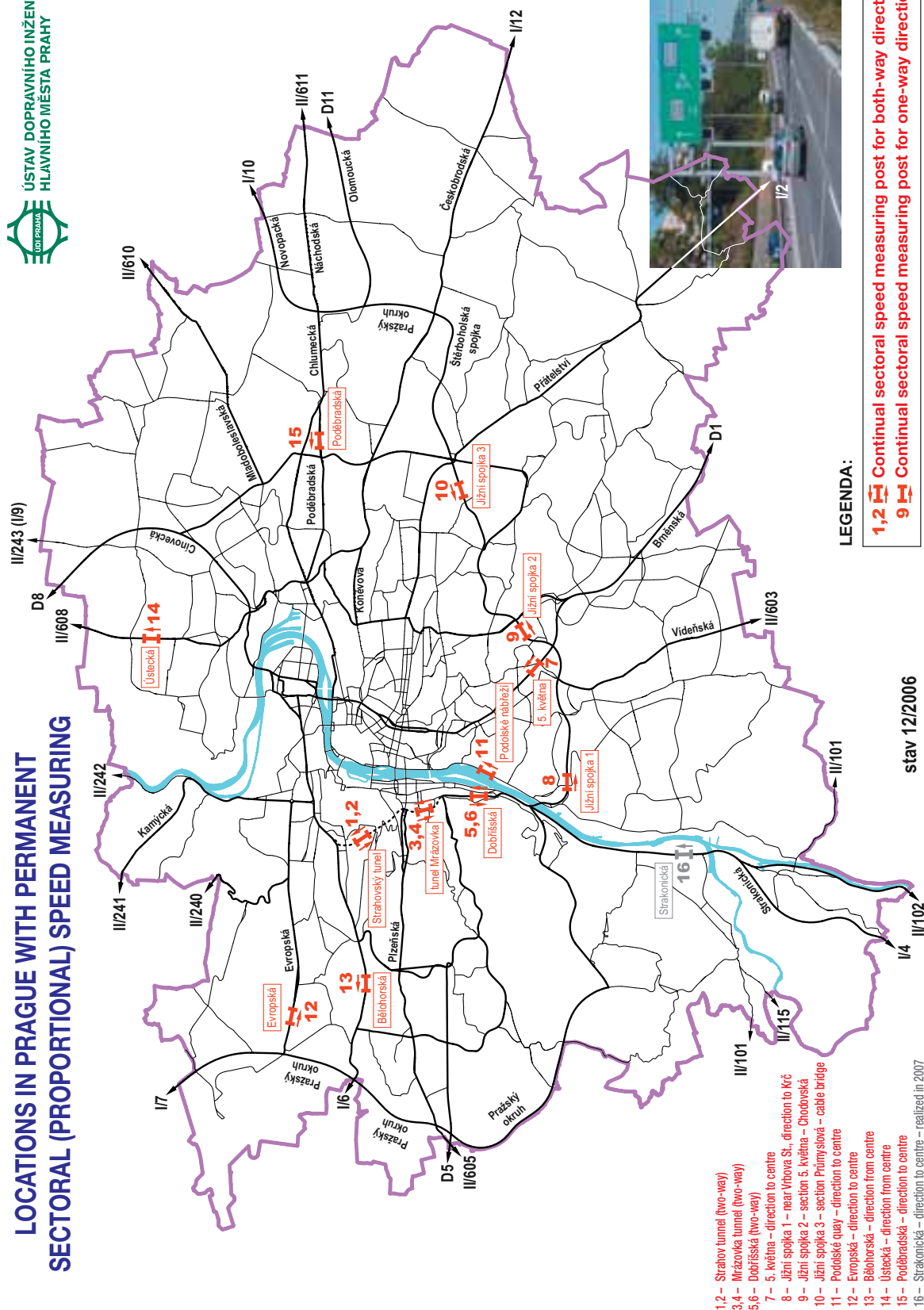


Average speed measurement at Bělohorská street

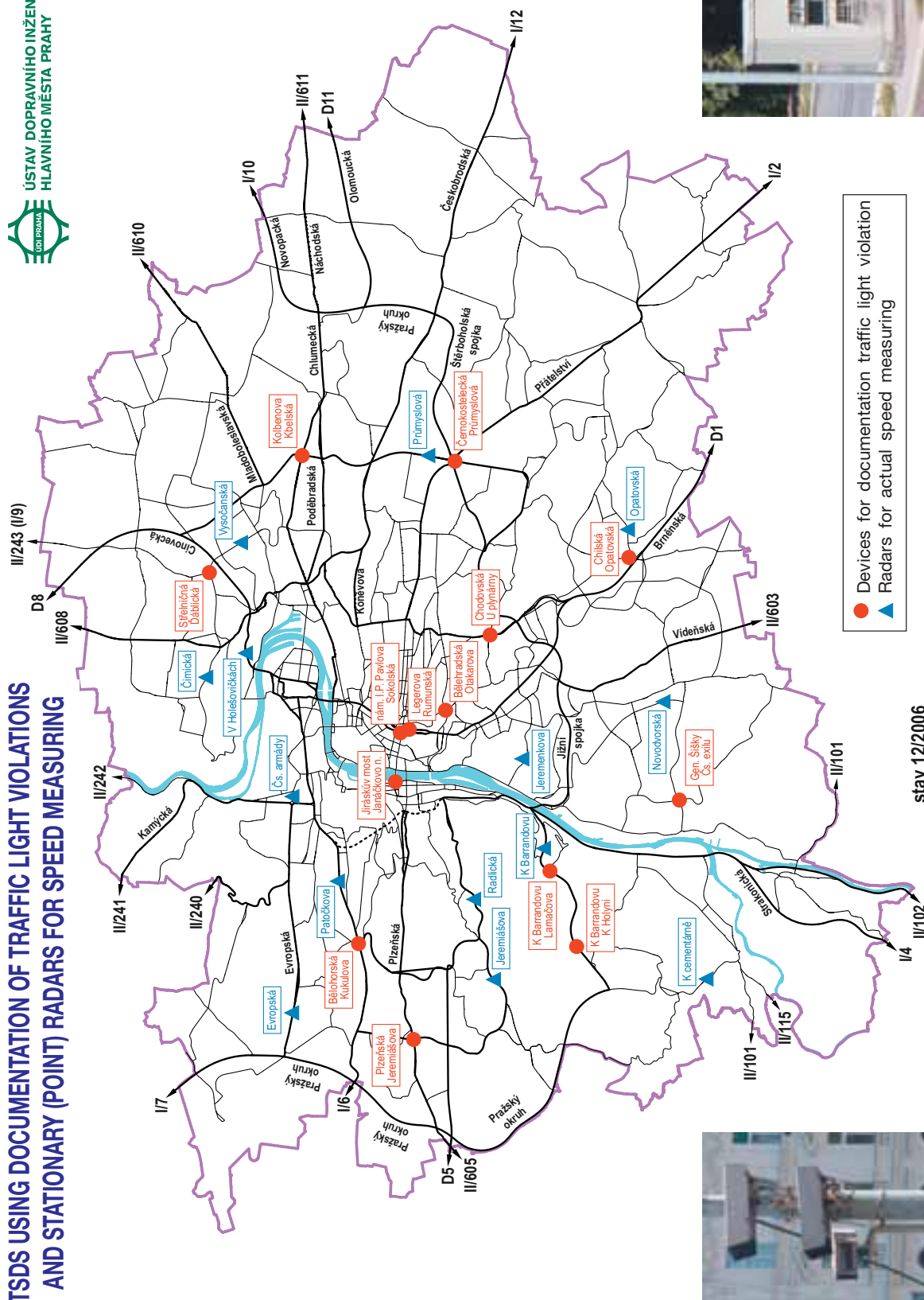
15 permanent devices for actual travelling speed measurement have also been installed on the Prague road network.

Within the scope of the application for recording traffic violation, equipment for detecting and documenting traffic light violation has also been distributed along the Prague road network at 14 intersections.

LOCATIONS IN PRAGUE WITH PERMANENT SECTORAL (PROPORTIONAL) SPEED MEASURING



TSDS USING DOCUMENTATION OF TRAFFIC LIGHT VIOLATIONS AND STATIONARY (POINT) RADARS FOR SPEED MEASURING



NEW TRAFFIC ARRANGEMENTS

The optimization of speed limits on several city's roads took place in 2006.

Traffic signs limiting the speed limits to 30 km/h or 40 km/h have been removed on a number of roads, where the standard traffic arrangement now allows 50 km/h on roads. This has brought about not only better traffic flow but has also contributed to the desired reduction in traffic signs.

On selected roads, particularly the city's radial and backbone roads, the speed limit has been increased from 50 km/h to 70 km/h, for example in Chlumecká St. (see photograph), Podbabská St., and in Zlíchovský tunnel.



Chlumecká St. – 50 km/h speed limit



Chlumecká St. – 70 km/h speed limit

On the Southern Connection (Jižní spojka) road, which is reserved for motor vehicle traffic, the speed limit has been set to 100 km/h during night time hours 23:00 – 5:00.

The combined zone with a traffic ban for cargo vehicles with total weight of over 6t and a standing ban for buses outside of designated vehicle parks, which until 2005 included the greater Prague conservation area in the districts of Prague 1 and 2 and parts of Prague 4 and 5, was extended in May of 2006 to include the areas of Spořilov with primarily residential developments.



Speed limit 100km/h during night-time hours on Jižní spojka



Designation of combined zone with ban on cargo vehicles of over 6t in Spořilov

Important temporary changes in the traffic arrangement involving the building of the Prague traffic infrastructure also took place in 2006, for example with the continued construction of Metro line C in Prosek and the construction of the Malovanka multilevel junction in the northern zone of the Strahovský tunnel. The construction of the “New Connection” (part of the redevelopment of the Prague railway junction) demanded long-term traffic restrictions in the area of Bulhar, and additional traffic restrictions were associated with the overall reconstruction of Náměstí Republiky and the construction of the Vysočany radial roads and their connection to Kbelská St. (see photographs at chapter 12).

6.1 Road Accidents

In 2006, the number of accidents that occurred in Prague was 34,689 (+4% as opposed to 2005); 56 victims died (-8%) and 2,404 victims were injured (-20%). Pedestrians were involved in 649 accidents (-13%) with 25 fatalities (-29%) and 629 injured (-12%). Pedestrians themselves were culpable in 328 accidents (-7%) whereby 12 people were killed (-7%) and 300 were injured (-9%). The number of accidents in which alcohol was found in the perpetrator was 556 (-26%).

Accidents, impacts on health, and main causes of accidents

Year	2004	2005	2006	diff. 06/05 (%)
accidents	29 598	33 349	34 689	+ 4
fatal injuries	56	61	56	- 8
serious injuries	428	393	357	- 9
slight injuries	3 313	2 603	2 047	- 21
accidents with injuries	3 086	2 506	2 022	- 19
accidents without injuries	26 512	30 843	33 667	+ 6
Driver culpable due to	28 695	32 494	33 759	+ 4
speed	144	140	85	- 39
overtaking	222	263	253	- 4
failure to give way	8 463	9 658	10 034	+ 4
reckless driving	17 189	19 329	20 961	+ 8
Driver not culpable	903	855	930	+ 9
due to road defect	121	81	167	+ 106
due to pedestrian	384	352	328	- 7

Traffic accidents, injuries and relative accident rate, 1961 – 2006

Year	Total accidents		Fatal injuries		Serious injuries		Slight injuries		Relative accident rate	% VKT
	number	%	number	%	number	%	number	%		
1961	5 495	30	63	67	580	157	2 361	84	7.3	31
1971	8 496	47	123	131	567	154	4 046	144	5.1	69
1981	13 064	72	81	86	401	109	2 572	92	7.1	76
1990	18 024	100	94	100	369	100	2 806	100	7.5	100
1995	33 898	188	123	131	679	184	4 044	144	7.9	178
2000	40 560	225	80	85	521	141	3 260	116	7.4	228
2001	34 195	190	67	71	452	122	3 521	125	6.1	235
2002	35 888	199	82	87	477	129	3 679	131	6.1	243
2003	35 589	197	65	69	466	126	3 509	125	5.7	257
2004	29 598	164	56	60	428	116	3 313	118	4.6	270
2005	33 349	185	61	65	393	107	2 603	93	5.1	273
2006	34 689	192	56	60	357	97	2 047	73	5.2	278

100% = 1990

Relative accident rate = number of accidents per million VKT (average values, total road network)

VKT = vehicle kilometres travelled, total road network

A review of the long-term trends in the development of traffic accident rate will show that from the 1960s until the 1980s the long-term trend in the development of the accident rate was relatively positive, as the number of traffic accidents roughly corresponded to the development of VKT and increased more slowly than VKT. In the 1990s the basic trends in this development changed for the worse, as traffic accidents multiplied more quickly than VKT. This also caused the degree of accident risk to grow, which is expressed by the relative accident rate indicator (number of accidents per million VKT).

Since 2001, the number of reported traffic accidents has decreased in spite of the continuing growth in automobile traffic, and thus the relative accident rate has also decreased. The decline in the number of reported traffic accidents in 2001 however was impacted on by the provisions of act no. 361/2000 Coll., on road traffic, which mandated that as of January of 2001 only traffic accidents resulting in injury or material damage obviously exceeding the amount of 20 000 CZK would have to be reported to the police, whereas until the end of the year 2000 accidents resulting in injury or material damage obviously exceeding the amount of 1000 CZK had to be reported to the police. The change in the regulations for reporting traffic accidents was reflected in the decline in registered traffic accidents in Prague in 2001 as compared to the year 2000 by 16%.

An analogous situation occurred in 2006 as well. As of July 1, 2006, an amendment to act no. 361/2000 Coll., on road traffic, took effect. According to this amendment, only accidents resulting in injury or material damage obviously exceeding the amount of 50 000 CZK must be reported to the police.

The change in the regulations for reporting traffic accidents has been reflected in the decline in registered traffic accidents in Prague in the second half of 2006 as compared to the second half of 2005 by 13%. The number of injuries resulting from traffic accidents in the second half of 2006 compared to the second half of the previous year decreased by 20%, however a similar decrease occurred in the first half of year as well.

Influence of Amendment on Road Traffic as of July 1, 2006

		1st half-year	2nd half-year	Total
Number of accidents	2005	15 953	17 396	33 349
	2006	19 579	15 110	34 689
	Index 2006/2005 (%)	123	87	104
Number of casualties	2005	1 534	1 523	3 057
	2006	1 245	1 215	2 460
	Index 2006/2005 (%)	81	80	80

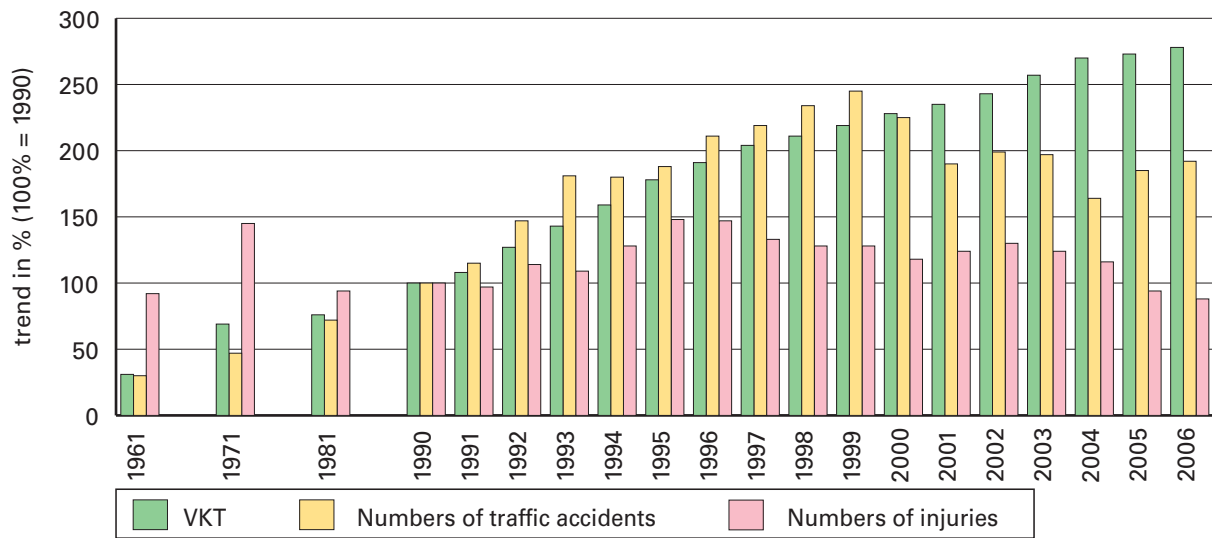
A favourable trend in traffic safety is the considerable decrease in the number of fatal, serious, and light injuries from traffic accidents over the last five years, even in spite of the continuing growth of automobile traffic in the city. The total number of injuries from traffic accidents decreased from the original 4238 injuries in 2002 to 2460 injuries in 2006, i.e. by 42%, while at the same time automobile traffic in Prague grew by 14%. The number of injuries from traffic accidents in Prague in 2006 was the lowest in 15 years.

An even more positive factor is the comparison of the long-term development in the number of injuries with the intensity of automobile traffic. As compared to 1990, automobile traffic in the city has increased over the last 16 years nearly 3 times over (by 178%), while the number of injuries from traffic accidents has decreased by 25% (from 3269 injuries in 1990 to 2460 injuries in 2006). This decline has been apparent with all types of injuries: fatal, serious, and light.

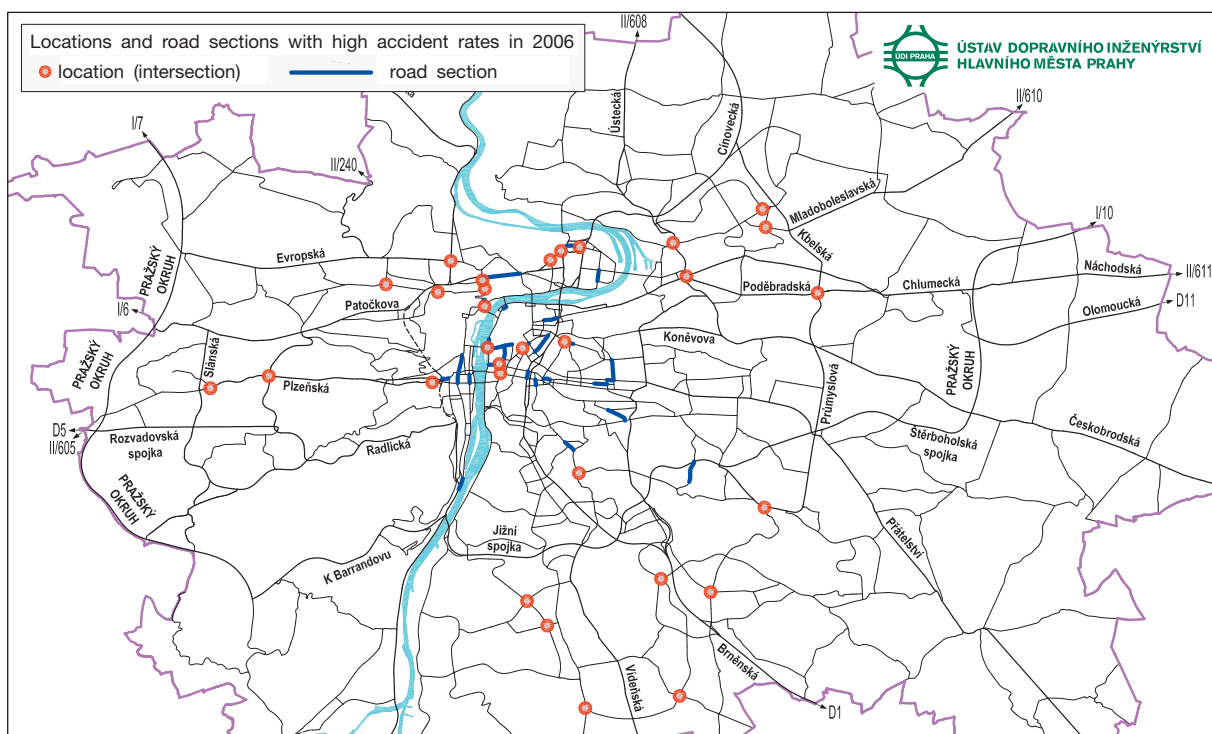


Accident at highway D1 near Chodov

Accidents, injuries, and VKT in Prague, 1961 – 2006 entire road network, annual total



Locations with high accident rates, 2006



6.2 Traffic Education

The Institute of Transportation Engineering of the City of Prague takes part in traffic education for adult, children and youth road traffic participants. Some of the events concerned with preventing traffic accidents are held jointly with the Czech Ministry of Transportation.

Many programmes dealing with traffic education for children were held in 2006, among which were the systematic training programme at children's traffic playgrounds (DDH), the program for beginning cyclists (Young Cyclists' Traffic Contest), traffic education programs for children and

youths, an interactive children's theatre presentation with a theme of traffic education, and the "No Worries" pilot program.

There were 9 permanent children's traffic playgrounds (DDH) in operation in Prague in 2006 at which training took place. In 2006 Institute of Transportation Engineering equipped all of the Prague DDH with new bicycles and scooters.

A series of traffic education programmes intended for children from preschools, primary schools, and secondary schools focuses on preventing traffic accidents. 32 programmes working with 2300 pupils were held in cooperation with the International Student Theatre Europe. 20 interactive children's theatre presentations called "The Fairytale Traffic Light" and "Aunt Berta's Bike" were held on the grounds of the Police Museum.

Some examples from the events in the "Young Cyclists' Traffic Contest"



Riding on roads according to traffic rules



Tests on road traffic rules



Health studies



Riding dexterity

6.3 Measures for Enhancing Road Safety

A total of 31 289 000 CZK was expended in 2006 on implementing measures for enhancing road safety through the BESIP budget. These finances were intended primarily for measures meant to increase the protection of pedestrians and their safety amid road traffic.

Modifications in 2006 dealt with structurally implementing speed thresholds (for example in the areas of Pod Višňovkou, Na strži, Formanská), assembling speed thresholds (in 56 locations in all), modifying tram stops and access to them (for example the Šumavská tram stop in Korunní St.), implementing accentuated road signs that better designate zebra crossings, street lighting for zebra crossings (at 17 locations), creating central traffic islands (at 8 locations), and narrowing roads at zebra crossings in some cases. The finances were also used to install traffic-safety equipment – crash barriers, guard rails, areas on central traffic islands (at a total of 20 locations),

road mirrors (9 locations), coarsening roadways at zebra crossings, and other traffic-safety measures (particularly near schools) according to the requirements of individual municipal districts and a total cost of 6.55 million CZK.



Corner modification at intersection Rumunská-Londýnská



Modification to Šumavská tram stop

Measures for increasing traffic safety on roads are also undertaken through other activities financed from the BESIP project (such as activities involved in reconstructing tram tracks, etc).



Decreasing the number of traffic lanes at zebra crossings – Patočkova St.



Modification of zebra crossing – Podbabská St.



Reconstructed TT Ohrada – Vápenka, Vápenka stop



Biskupcova tram stop

Among other measures helping to increase traffic safety is influencing the behaviour of drivers, for example by monitoring the adherence to the speed limit. Sectional velocity metres were installed in 10 locations in 2006 (see chapter 4.4) to increase respect for and adherence to the maximum speed limit.

TRAFFIC AT A STANDSTILL

7.1 City Centre

In the **Prague Conservation Area** (8.7 km²), i.e. in Prague 1 and portions of Prague 2, 4 and 5, there are:

on the streets 16 150 parking spaces,
in courtyards 2 842 parking spaces,
totalling 18 992 parking spaces (not including garages)

The following table provides a list of the garages available to the public that are within or around the Prague conservation area and the number of parking spaces in them:

Public garages

District	Name, Address	Parking spaces
Prague 1	Rudolfinum /Parking Centrum/ (nám. J. Palacha)	450
	Intercontinental (nám. Curieových 43/5)	200
	OD Kotva (entry Králodvorská St)	300
	Renaissance (V celnici 7)	90
	Wilsonova (Hlavní nádraží)	480
	Millenium Plaza (V celnici 10)	312
	Opletalova (Opletalova 9)	90
	Slovan (Wilsonova 327/77)	520
	Národní divadlo (Ostrovni 9)	210
Prague 2	Václavské garáže (Václavská 18)	150
Prague 4	Kongresové centrum (5. května 65/1640)	1090 + 5 BUS
	Corinthia Towers (Kongresová 1)	150 + 5 BUS
Prague 5	Obchodní centrum (Kartouzská St)	2000
	Anděl City (entries Radlická St and Stroupežnického St)	553
	Zlatý Anděl (Bozděchova St)	500
Prague 8	Hilton (Pobřežní 1)	300

Another public garage in the Palladium multifunctional building on Náměstí Republiky in Prague 1 is under construction; it will have a capacity of 900 parking spaces and should be in use as of November of 2007.

Parking in the city centre is regulated due to the vast demand and short supply of parking places. Parking space regulation is thoroughly enforced in the territory on the right riverbank of Prague 1 (approx. 3 km²) by means of **“Paid Parking Zones”** (ZPS).

Street sections in the ZPS are divided into:

- standing with a time limit, i.e. “orange and green zone”, designated for vehicles of visitors,
- standing without a time limit, i.e. “blue zone”, designated for the cars of residents (individuals permanently living within the ZPS) and subscribers (business or private individuals with a residency or a place of business in the ZPS).

Number of parking places in ZPS:

- short-term and midterm (orange and green zone) 2 148 places
- long-term (blue zone) 5 544 places
- handicapped 241 places
- other (reserved for the Government and authorities). 448 places

Average occupancy of standing places in ZPS (2006)

- short-term and midterm standing 90.0 %
- long-term standing 88.5 %

Fees for the utilization of standing places in ZPS

▪ short-term standing (orange zone)	40 CZK/h
▪ midterm standing (green zone)	30 CZK/h
▪ midterm standing (green zone – border sectors).	15 CZK/h
▪ long term standing (blue zone)	
▪ 1st vehicle of an individual	700 CZK/veh./yr
▪ 1st vehicle of an individual over 65 years of age	350 CZK/veh./yr
▪ 2nd vehicle of an individual	7 000 CZK/veh./yr
▪ 3rd vehicle of an individual	14 000 CZK/veh./yr
▪ 1st business vehicle of an individual.	12 000 CZK/veh./yr
▪ any vehicle of a business legal entity or 2nd or more business vehicles of an individual – basic price for the parking card	36 000 CZK/veh./yr
▪ vehicle of a corporate entity while providing a public service . . .	250 CZK/veh./3 months

On the left riverbank of Prague 1 (area of 2.4 km², capacity of approx. 1.5 thousand parking places), a zone of standing with a time limit is delimited, consisting of designated reserved standing, guarded parking places and standing for residents designated by means of permits issued by the authority of Prague 1.

7.2 Other Areas of the City

There is no city-wide garage capacity list available. The total capacity of the garages is estimated at approximately 170 000 parking spaces.

There are also 365 off-street car parks in the city with a total capacity of roughly 39 700 parking spaces, of which 43% are supervised.

7.3 Park and Ride (P+R)

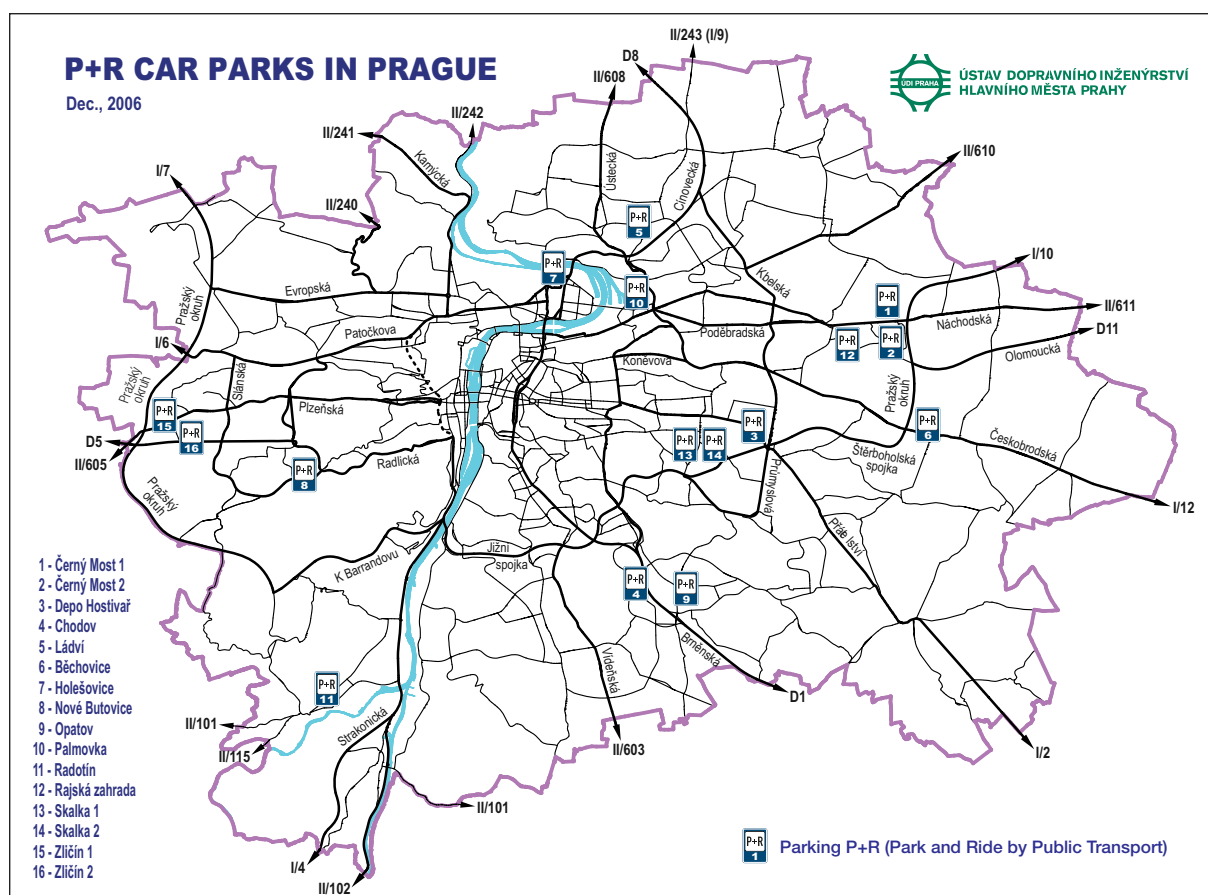
2006 saw substantial growth in the number of parking places at P+R car parks in Prague. In January and February of 2006, P+R car parks in Chodov and Skalka 2 were taken into standard operation. With the extension of Metro line A to the Depo Hostivař station, operation was begun in July on the construction of the new Depo Hostivař P+R car park. While operation was terminated on the original P+R car park by the eastern vestibule of Palmovka Metro station in August, the new car park was put into operation at the intersection of Sokolovská x Zenklova with a link to the station's western vestibule. Traffic guidance signs were also set up or updated when putting new locations into operation.



Occupancy information for Chodov and Opatov P+R car parks when arriving in Prague along the D1 motorway



Traffic signs guiding drivers at Skalka P+R



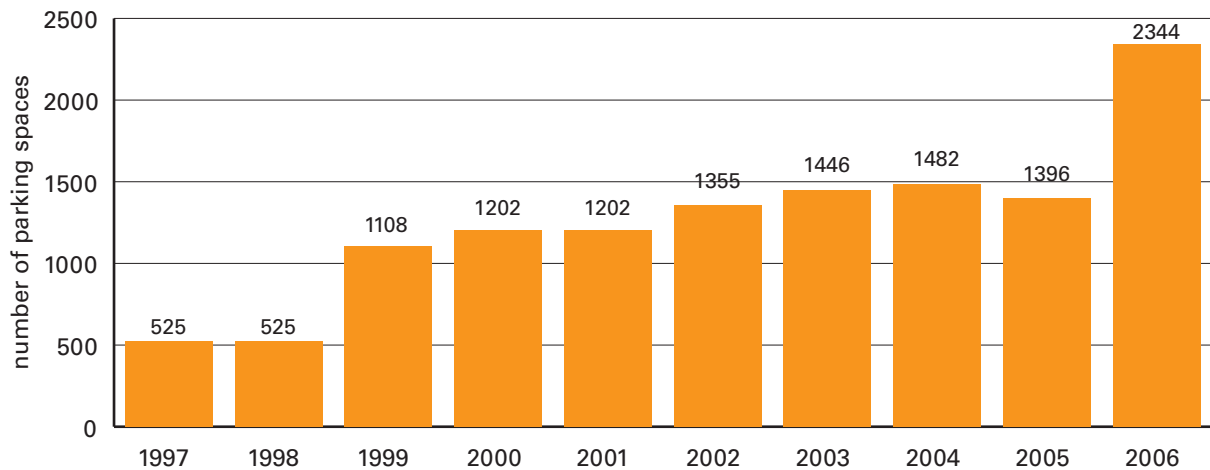
Development of P+R car parks, 1997 – 2006

Car park	Parking spaces – Year*									
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Zličín 1	103	103	94	94	94	94	88	85	85	85
Nové Butovice	75	75	60	60	60	60	60	57	57	57
Radlická	40	40	40	37	37	37	37	35		
Skalka 1	157	157	175	114	114	114	114	107	107	107
Opatov	150	150	212	186	186	186	186	182	182	182
Zličín 2			70	70	70	70	70	64	64	64
Rajská zahrada			80	80	80	80	80	87	87	87
Černý Most 1			300	300	300	300	300	294	294	294
Holešovice			77	77	77	77	77	74	74	74
Palmovka				122	122	122	122	119	119	171
Radotín				62	62	62	21	21	21	21
Běchovice						100	100	94	94	94
Modřany						53	53	51		
Černý Most 2							138	131	131	131
Ládví								81	81	81
Chodov										658
Skalka 2										71
Depo Hostivař										167
Total	525	525	1 108	1 202	1 202	1 355	1 446	1 482	1 396	2 344

* The given number of parking spaces does not include parking spaces reserved for indolent and residents

The total number of parking spaces for users of the P+R system as of December 31, 2006 amounted to 2344 spaces + 102 spaces for invalids at 16 P+R car parks.

Development of number of parking spaces at P+R car parks in Prague



The use of the individual P+R car parks can be seen in the table, which compares the number of parked vehicles at P+R car parks in 2001-2006, in all cases for the entire month of October.

Vehicles parking at P+R in October 2001, October 2002, October 2003, October 2004, October 2005, and October 2006

Car park	Parked vehicles					
	10/2001	10/2002	10/2003	10/2004	10/2005	10/2006
Běchovice	-	1 498	180	140	597	307
Černý Most 1	10 716	3 481	9 818	9 714	9 226	10 610
Černý Most 2	-	-	2 042	2 934	2 555	3 631
Holešovice	3 226	1453	3 299	2 759	2 765	3 318
Depo Hostivař	-	-	-	-	-	2 439
Chodov	-	-	-	-	-	9 856
Ládví	-	-	-	2184	2117	2 612
Modřany	-	213	310	0*	192	-
Nové Butovice	2 572	1 689	2 136	1 988	1 866	2 165
Opatov	5 073	5 389	5 732	5 890	5 168	5771
Palmovka	4 446	3 779	4183	3 521	3 874	1 966
Radlická	1 272	948	1 169	1 003	-	-
Radotín	463	878	918	768	805	890
Rajská Zahrada	2 837	409	2 697	2 626	2 701	2 919
Skalka 1	2 762	2 461	3 408	3 336	3 223	3 052
Skalka 2	-	-	-	-	-	332
Zličín 1	3 508	3 622	3 510	3 618	3111	3 548
Zličín 2	2111	3 432	2 505	2 609'	2 240	2 508
Total	38 986	29 252	41907	43 090	40 440	55 195

* Modřany P+R car park was not available due to road reconstruction



Exit from Zličín 2 P+R car park



P+R Běchovice

The P+R car parks are incorporated into the Prague Integrated Transport system using pre-paid PID tickets and special-price daily MHD tickets. The fare for parking at the P+R car parks is 10 CZK for parking, 30 CZK for a transfer return ticket, or 60 CZK for a one-day network ticket.

The majority of P+R car parks offer the possibility of bike storage. Bikers are offered this service free of charge, however they cannot use the public transport discount.

7.4 K+R Stopping Places

The “K+R” (Kiss and Ride) combined mode of transit allows drivers to stand or park for a short period of time at a reserved location near an MHD station. The system is also used in the case of a public transport passenger arriving and entering a waiting vehicle, which then departs. The duration allowed for the K+R short-time parking is 5 minutes.

This mode of transport was introduced to Prague in 2001, mostly at Metro stations, where there are parts of the roadway designated for safe standing.

The system uses two types of signs, either the “car park” traffic sign with text reading five minutes and an additional “K+R” sign, or “no parking” sign with an additional “K+R” sign. The signs are complemented by a horizontal traffic sign with “K+R” on the roadway.



K+R Ládví



K+R Opatov

In continuing with research undertaken in 2005 at selected K+R locations, 12 hour research was repeated in November of 2006 at the K+R locations at the Opatov and Ládví metro stations in order to nap development trends. The results can be summarised as follows in comparison with the survey made in 2005:

- Use of K+R locations, i.e. the number of vehicle stops at both locations increased in 2006 by approximately 40% as opposed to 2005.
- The five-minute K+R parking limit was adhered to by 98% of drivers at Opatov and by only 73% of drivers at Ládví, where the K+R was even frequently used for long-term parking. At both locations, 99% of the vehicles were personal automobiles mostly from Prague territory. This situation was the same in 2005.

In the autumn of 2006, a new system for the numeric designation of bicycle routes within the city of Prague was approved. It includes the backbone bicycle routes (class I), which comprise the framework of the bicycle traffic in Prague and serve primarily for long-distance connections within the city and interconnection with the region of Central Bohemia, main bicycle routes (class II), which extend the network of backbone bicycle routes and primarily have a transportation function, and local bicycle routes (class III), which serve the operation of the entire area and are within the competencies of the municipal districts.

In previous years, including 2006, 196 km of bicycle routes were delineated. Of that number, approximately a third are run along roads without automobile traffic that allow pedestrian traffic, along roads in parks and orchards, or a long new reconstructed separate roads for pedestrians and cyclists.

In the spring months of 2006, a new leg on the class I bicycle path over Rohanský Island to the Rokytka estuary was opened. The section is 2.5 km long and was built at the same time as flood prevention was being built.



Bicycle path to the Rokytka estuary



Bicycle path in Braník

In September construction was completed on the bicycle path in Braník between Vrbova and Na Mlejnku streets. The bicycle path is located at the foot of the South Connection slope. The path is 3 m wide and 483 m in total length; the surface is bituminous.

In the autumn months of 2006, a section was marked off for both cyclists and pedestrians along Rabakovská St. in the section between Mokřanská and K Pérovně. This section is approximately 1 km in length and has a variable width of 3 to 4 m.



Path for pedestrians and cyclists along Rabakovská St – view from Mokřanská St.



Modifications made to the horizontal traffic signs on the A2 path on Podolské nábřeží

At the end of 2006, modifications were made to the traffic signs on the class I bicycle path (route A2) running along the right-hand embankment of the Vltava along Podolské Nábřeží. The modifications entailed directional division of the path with horizontal traffic signs, including the addition of cyclists and pedestrians pictograms, and painting the pathway red where it crosses driveways to adjacent lands and marking them off with dashed border lines. The path was also relabelled according to the new numerical designation A2.



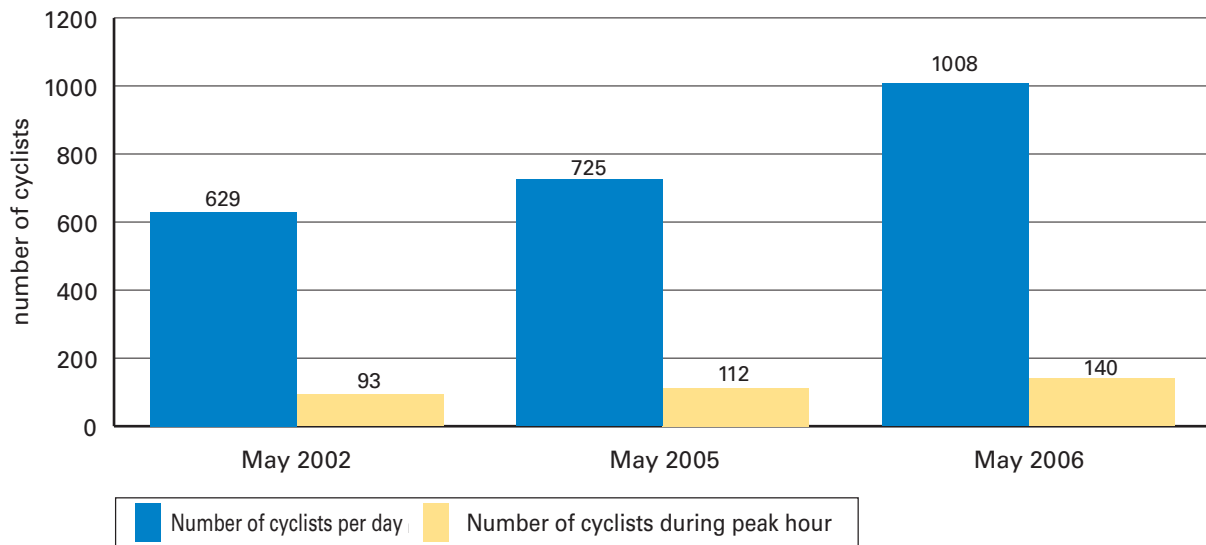
Path for pedestrians and cyclists – view from Rašínovo nábřeží



Cyclists under Vyšehrad near the waterworks in Podolí

According to research carried out on the intensity of long-term bicycle use, this bicycle path is the one most used. Daily intensity reached 1008 cyclists per day in 2006.

Podolské nábřeží – results of survey of bicycle intensity, 2002 – 2006



In 2006, further modifications were made to the horizontal traffic signs at Nábřeží Ludvíka Svobody and levees Na Františku, Rašínovo nábřeží were reconstructed, where bicycle traffic has been enabled.

Projects have been prepared for new activities and a total length of approximately 34 km.

In order to support bicycle traffic, the possibility of transporting bicycles in the Metro was extended in 2006, seasonal operation of cycle-bus line was commenced by Prague Integrated Transport from Dobřichovice to Mníšek pod Brdy and Kytín, and transportation of bicycles on all personal transport trains marked with the bicycle symbol has been made possible.

Bicycles can still be parked at the majority of P+R car parks (in 2006 this came to include P+R car parks in Skalka 2 and Depo Hostivař). In 2006 bike rental project was expanded in the region of Karlín. There are 18 stands in operation and 30 bicycles available. The service was used by 280 participants, and approximately 20 rentals were registered daily.

Approximately one quarter of all of the inner-city routes in Prague are solely pedestrian. Walking is the most natural and most frequent mode of personal transportation, and any trip by whatever means of transportation begins and ends by walking.

The greatest number of intra-urban trips (almost one third) is made in the city centre in the district Praha 1. For this reason as well, it is the city centre area that sees the greatest gradual expansion of pedestrian zones and other types of steadied traffic on roads on which better conditions can be made for pedestrians' movement and relaxation.

In 2006 modifications began on a pedestrian zone with tram traffic in the area of Náměstí Republiky within the scope of the construction of the multifunctional Palladium building.



Construction of pedestrian zone on Náměstí Republiky, view from Municipal House



Construction of pedestrian zone on Náměstí Republiky, reconstructed tram track

Construction began on a more protected and more attractive space offering relaxation for pedestrians on Petřské náměstí as well as a continuation of the activities completed in 2005 in Petřská St. in the area of the Church of St. Peter.

Sections and parts of local paths serving mainly for pedestrians have been gradually repaired also in other districts. For example, the gradual modification of sections of pavements in Korunní St., Prague 2, concentrating on the safety of pedestrians primarily at intersections and tram stop platforms, is successful.



Intersection between Korunní and Šumavská



Pavement and Šumavská tram stop platform

The large intersections on Rumunská St. have also been suitably modified, as can be seen in the following pictures of the Londýnská-Rumunská intersection.



Londýnská St. approach to the intersection from Jugoslávská St. (under construction)



Londýnská St. leaving the intersection with Rumunská St. towards Bruselská (after completion of construction)

The administrative and self-governing bodies of the city are constantly trying to increase the safety of traffic on roads, particularly for their most vulnerable participants, i.e. pedestrians and cyclists. Each year a number of measures are taken across the city to increase the safety of pedestrian traffic, particularly in the area of tram stops and at places where larger numbers of pedestrians cross the driving lanes on the roads (see also chapter 6.3).



Notification for pedestrians of right-of-way of tram at the pedestrian zone at Palmovka



Increased safety for pedestrians around the tram stop at Olšanské náměstí.



Illuminated zebra crossing for pedestrians on Jugoslávských partyzánů St.



Details of the lights which are illuminated when a pedestrian is on the crossing

10 AIR TRANSPORT

Air passenger and freight transport is conducted mainly at the Praha-Ruzyně airport located in the north-west of the city. The other three airports in and close to Prague are usually used for other, special purposes. The Praha-Ruzyně airport has three take-off and landing runways, two of them equipped for instrument traffic. The maximum capacity was increased in May of 2006 to 40 aircraft movements (take-offs and landings) per hour after completion of construction of rapid turning. The airport's total annual traffic capacity is 200 000 movements/year. The transport capacity also increased from 7.2 million passengers to 10 million passengers after the opening of the North 2 terminal at the beginning of 2006. There are two terminals available for cargo clearance, each with a capacity of 100 000 t/year.

In 2006 59 companies with regular lines, 7 of which are cargo transporters, were working at the Praha-Ruzyně airport, and 126 companies contributed to charter flights. Regular connections to different parts of the world further expanded, and the total number of destinations in Europe and on other continents reached 120 in 2006. New connections were introduced to destinations in, for example, Basel/Mulhouse, Bilbao, Dubrovnik, Florence, Voronezh, and other. The largest volumes of passengers in regular transportation were cleared to London (1 million), Paris, Frankfurt, Amsterdam, Moscow, Rome, Zurich, Copenhagen, Milan, and Dublin. In charter transportation the largest volumes were recorded to Egypt's Hurgada airport (177 000).

The position of the Praha-Ruzyně airport in international comparison is seen from the following table.

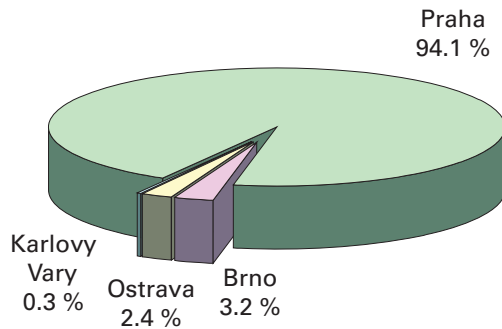
Passenger volumes processed at selected airports (million passengers/year)

Airport	1995	2000	2005	05/95 (%)
Chicago O'Hare	67.25	72.14	76.58	113.9
London Heathrow	54.13	64.28	67.92	125.5
Frankfurt Rhein-Main	37.4	48.96	52.22	139.6
Paris Charles de Gaulle	28.0	47.8	53.76	192.0
Amsterdam Schiphol	24.86	39.27	44.16	177.6
Madrid Barajas	19.57	32.57	41.93	214.3
Roma Fiumicino	20.71	25.88	28.62	138.2
Bruxelles National	12.50	21.52	16.12	129.0
Stockholm Arlanda	14.31	18.26	17.24	120.5
Copenhagen Kastrup	12.71	18.16	19.75	155.4
Vienna Schwechat	8.37	11.79	15.86	189.5
Praha Ruzyně	3.21	5.79	10.78	335.8
Budapest Ferihegy	2.94	4.67	8.06	274.1
Warszawa Okęcie	2.74	4.33	7.07	258.0
Bratislava M. R. Štefánika	0.19	0.28	1.33	700.0

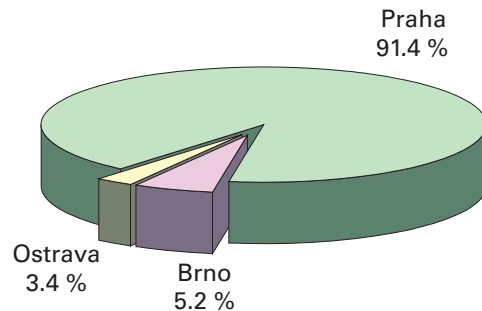
Source: MD ČR (ICAO) Annual Abstract, The Chicago Department of Aviation

The total volume of cleared passengers in 2006 at the four Czech airports that are international (Praha, Brno, Ostrava, Karlovy Vary) was 12.3 million passengers, i.e. 8% more than in 2005. The volume of transported cargo (goods and mail) grew by 6.3% to 60.1 thousand tons as compared with 2005.

**Share of Czech airports
in passenger transport performance**
% from the overall volume of cleared passengers



**Share of Czech airports
in cargo transport performance**
% from the overall volume of cleared cargo incl. mail



A total of 11 581 500 passengers were cleared through Praha-Ruzyně airport in 2006, which constitutes year-on-year growth by 0.8 million passengers (7.5%). The majority of the passengers were cleared at the terminals North 1 and North 2, only 50 600 passengers went through the South terminal. Of the total volume of 11.6 million, 85.1% of passengers were transported on regular connections, the remaining 14.9% on irregular connections. The most passengers were cleared in August (1 289 900 persons) and the least in February (603 800 persons). Compared to 2005, the monthly maximum was by 8.6% higher than in 2005.



Terminal North 2 – in front of the first floor

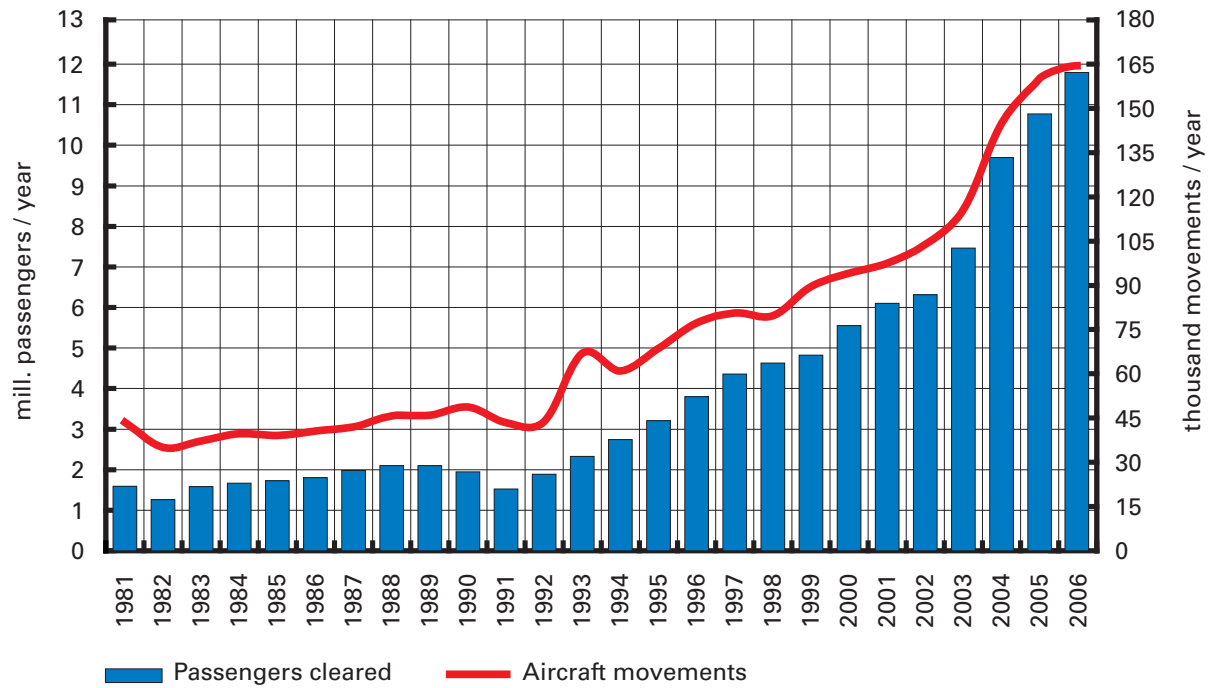
In 2006, cargo transport handled 48,990.2t of goods and 5,982.7t of mail. The total cargo transport reached 54 972.9, 6.3% more than in 2005. The greatest amount cargo was transported in December (5379.3 t) and the lowest amount was in January (4017.5t). The monthly maximum was 10.8% higher in 2006 than in 2005.

The number of aircraft movements in 2006 amounted to 166 346 movements/year, which is 6133 movements more than in 2005 (growth of 7.5%). The largest number of movements (15 765) was recorded in June, the lowest (10 636) in February. The maximum monthly number of movements in 2006 was 3.2% higher than in 2005.

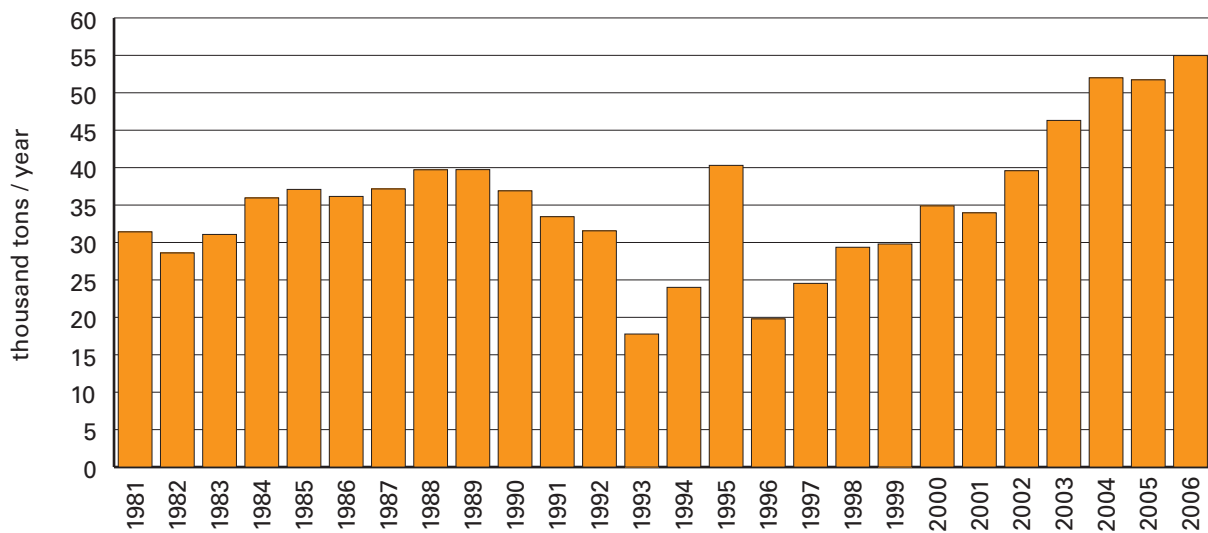


Terminal North 2 – in front of the ground floor

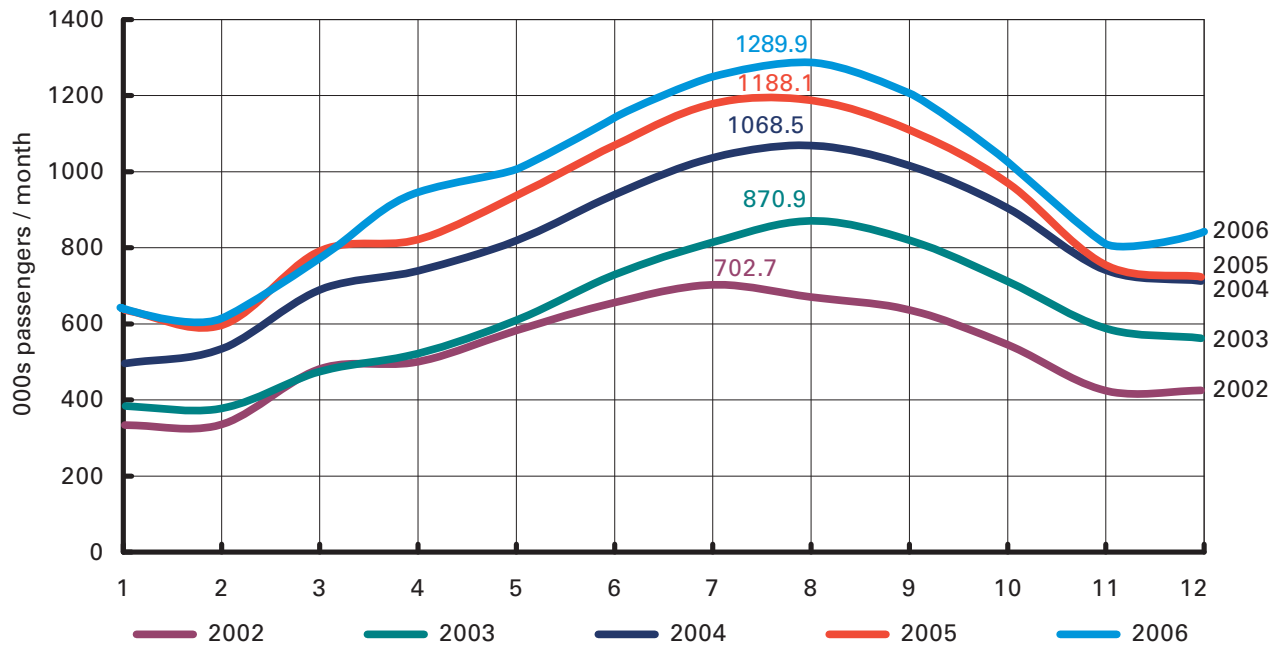
Development of the Praha-Ruzyně airport volumes passengers cleared and aircraft movements



Development of performance of the Praha-Ruzyně airport The volume of transported cargo (goods and mail)

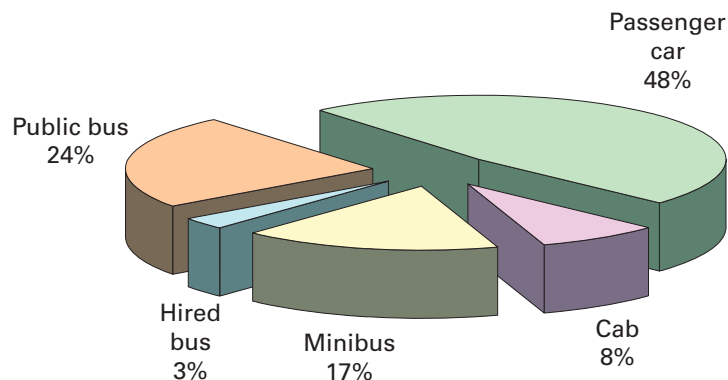


Number of passengers cleared at Praha-Ruzyně, monthly, 2002 – 2006



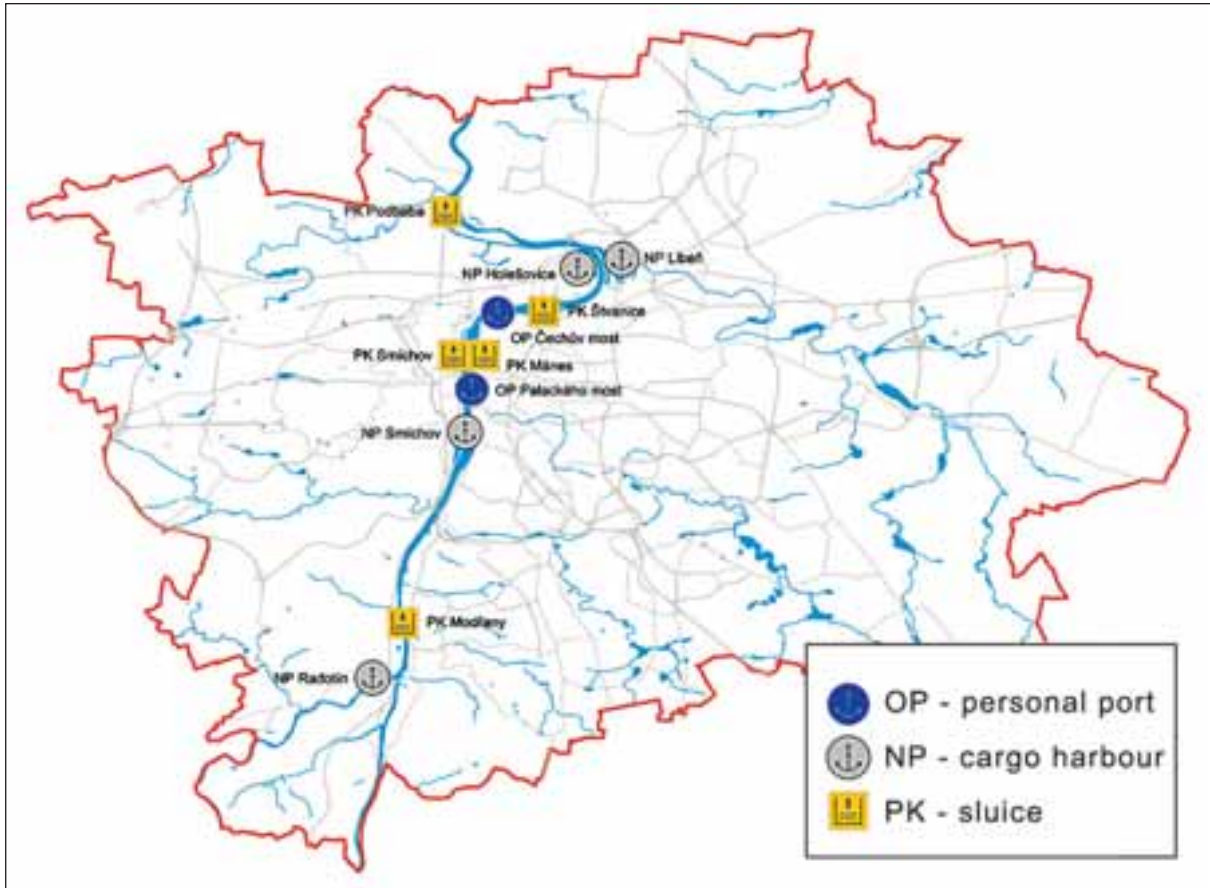
The Prague airport is roughly 11 km from the city centre, where the inner-city terminal is located. For air passengers, the connection is handled by special bus transportation, and in addition to that there is also an Airport Express bus line run to the Praha-Holešovice train station and tying into the Pendolino train traffic on the Praha-Ostrava line. The airport is also serviced by two fast municipal bus lines which run to the end stations of Metro lines A (Dejvice) and B (Zličín) and by other Prague Integrated Transport bus lines as well. Taxi transportation is available both in personal cars and minibuses (connection taxis) and there are a number of car hire services in operation. Individual automobile transportation has the greatest share in transferring persons between the airport and the city.

Airport-to-city modal split
October 2003



The total number of lay-bys and parking spaces at the Air Terminal North serving the general public and airport employees amounted to 5635 spaces in 2006, of which 131 spaces were reserved for the handicapped. There are also additional car parks reserved for organisations operating in the airport. The largest number of parking spaces (2963) is available for the public and for employees in the building “C”. The majority of parking spaces are long-term, and 185 short-term parking spaces are available for operative servicing. The Air Terminal South provides 108 parking places for the public.

Shipping on the Vltava river provides both passenger and cargo transport. The waterway capacity is limited by the capacity of the sluices Podbaba (5.2 mill. tons/year) and Smíchov (2.8 mill. tons/year).



Passenger shipping is mostly of recreational type. It is carried out by several companies which offer a various types of services. The largest passenger shipping operators are the Prague Steamship Company (Pražská paroplavební společnost, a. s. – PPS) and European Water Transport (Evropská vodní doprava s. r. o. – EVD).

The Prague Steamship Company, established in 1865, was the first water transport operator on the Vltava in Prague. It currently owns one saloon steamer with a maximum capacity of 300 places, and two sightseeing motorboats each with a capacity of 200 places. Cruises on the Praha – Slapy, Praha – Troja and Praha – Mělník lines are offered from the spring until the autumn. Trips around Prague, on-board lunches or dinners, and a disco in the evening are offered year-round. The boats' wharf lies between the Jiráskův and Palackého bridges. In 2006 the company transported 89 960 persons on regular lines, of which approximately 27 000 were foreigners. 25 000 persons were transported on irregular cruises.

Another large company offering passenger ship transport is the European Water Transport. The company owns eight ships with capacities of 160 for 320 persons. It operates ships throughout the entire year, either along regular timetables, or on special customer orders. One or two-hour regular cruises are offered in the daytime or in the evening. In 2006 the company transported 198 600 passengers. The wharf is at Čechův bridge.

In addition to these companies, a number of other smaller companies operate recreational water transport and have their own smaller wharfs on both banks of the Vltava, such as at Mánesův bridge, Charles bridge, and at Rašínovo nábřeží between Palackého and Železniční bridges.



Boat wharf at Palackého bridge



Smíchov sluice

There are also two ferries over the Vltava that offer personal water transport between Prague 6 and Prague 8 and that connect to the bicycle paths on both sides of the Vltava. Since July of 2005 a river ferry across the Vltava between Sedlec and Zámky has been in operation, and in July of 2006 a ferry was put into operation between Podbaba and Podhoří. Prepaid MHD coupons can be used here, however individual MHD tickets cannot. A ferry ticket costs 20 CZK. The ferries are operated by První Všeobecná Člunovací Společnost, s.r.o.

Various domestic and foreign carriers operate **cargo ship traffic** along the Vltava river.

One of the largest carriers is European Water Transport (Evropská vodní doprava s.r.o.), which provides domestic and international transport of mass substrates, heavy pieces, containers, etc. The company owns 38 vessels, 1 tanker, and floating equipment with platforms for construction and other purposes.

Development of volume of goods transported through Prague sluices, 1997 – 2006

Sluice	Freight handled (t)									
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Modřany	206 921	136 407	97 325	108 168	109 282	71 136	63 158	86 254	56 759	12 482
Smíchov	234 537	196 487	190 323	197 740	175 941	126 206	77 398	130 404	59 378	33 109
Mánes	2 363	1 320	10	238	360	7 251	6 523	4 018	690	545
Štvanice	232 442	191 624	186 153	201 712	176 936	117 296	83 289	126 295	106 749	54 743
Podbaba	379 606	403 840	356 008	370 037	374 692	214 173	241 000	293 027	302 726	236 344

There are four harbours in Prague: Libeň, Holešovice, Smíchov, and Radotín. They serve for reloading various types of freight. The operator is the Czech Harbours Company (České přístavy a.s.). The harbour users are carrier, warehousing, and loading companies.

Development of number of ships going through Prague sluices, 1997 – 2006

Sluice	Number of ships									
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Modřany	2 164	1 863	1 897	1 898	1 852	1 307	1 758	2 413	2 530	2 265
Smíchov	18 581	17 844	20 305	21 716	22 291	17 729	21 617	23 967	24 576	24 247
Mánes	1 273	3 103	3 919	3 747	3 434	2 604	2 878	2 998	2 329	2 285
Štvanice	3 529	5 091	4 794	5 775	5 732	3 603	4 118	5 330	7 740	6 492
Podbaba	2 237	1 562	1 649	1 897	1 851	1 203	1 415	1 690	1 799	1 736

12 TRANSPORTATION INFRASTRUCTURE DEVELOPMENT

A number of important transportation structures for the development and maintenance of the city's transportation system were completed or still underway during 2006.

In the second half of January, the Prague airport opened the new terminal North 2. For a transport, this entails a considerable shift in modernisation and an increase in transport capacities. The new terminal will allow around 4 million more passengers to be cleared annually. The building is a two-storey structure and allows arrivals and departures to be cleared separately. In addition to the increased capacity of the Prague airport, the North 2 terminal will allow flights to and from destinations in the Schengen zone to be separated from other international flights. The airport's increased capacity has also been aided by modifications to the runway system allowing aeroplanes to turn more quickly.



North 2 terminal at the airport in Ruzyně



Depo Hostivař Metro station

At the end of May the new Depo Hostivař Metro station was opened. It is now the 54th Metro station in Prague. The transit length of line A was thus extended by more than 1000 m from the Skalka station. The station was created by reconstructing a wagon-washing facility and the trains are using the depot tracks. The structure also includes a newly constructed bus terminal for both municipal and commuter bus transportation, and a P+R car park. The reassignment of 14 bus lines to the new terminal resulted in easing the pressure on the Skalka Metro station and its environs both in terms of the volume of transportation and on the environment.

At the beginning of 2006 additional P+R car parks at Chodov and at Skalka 2 were put into operation as part of the Chodov commercial centre and the Tesco shopping centre.

A new footbridge for pedestrians over K Barandovu street was put into operation and eased the connection between old and new Barandov and the access to the tram stop.



Footbridge over K Barandovu street



Reconstruction of the Ládví – Sídliště Ďáblice tram track

The district of Karlín saw the completion of another part of the infrastructure renewal, destroyed by the flood in 2002.

Several major repairs of the tram lines were also made in 2006:

- Klárov – Letenská
- Ládví – Sídliště Ďáblice (renewal after Metro construction)
- Francouzská
- Reconstruction of the Ohrada intersection and the Vápenka loop



Reconstruction of Vysočanská street



Traffic restrictions near the Ohrada intersection during its reconstruction

The following major repairs or road adjustments have been done in the network:

- Broumarská – overall reconstruction of the roadway
- Libušská and part of Meteorologická – road repair including underground network
- Roztocká – reconstruction of the roadway at the Kamýcká – V Rokli segment
- Davídková – Binarova intersection in – reconstruction after Metro construction
- Vysočanská – repair of the roadway after Metro construction
- Nábřeží Kpt. Jaroše a E. Beneše – reconstruction of the roadway, including barriers
- Replacement of the railway bridge on Jandová St.
- repairs to the service of certain important roads by milling the roadway (such as V Holešovičkách, certain segments of the South Connection, Jeremiášova St.)
- repairs to the services and crossings on Antala Staška St. and Zelený pruh
- Reconstruction of the Na Františku embankment with modification of the boat anchorages



Construction of the New Connection near Husitská St.



Traffic restrictions in Husitská St. relating to the construction of the New Connection

Apart from the construction work completed in 2006, preparatory or construction work started or went on at other traffic construction sites in 2005. The largest ones include:

- the prolongation of the Metro between Ládví and Letňany
- the New Connection (i.e. connecting the railway stations Praha-Hlavní nádraží and Praha-Masarykovo nádraží with the stations Praha-Libeň and Praha-Vysočany) – Within the scope of the construction the protected Křenovka substation technical building, built during the electrification of the Prague railway stations in 1927, was renewed and modifications were made in Husitská St.

- construction of railway corridor IV from the Praha-Uhřetěves station to Stránčice
- the Prague Ring in the section Slivenec – Lahovice
- reconstruction of náměstí Republiky within the scope of the construction of the Palladium shopping centre
- the multilevel junction Malovanka at the northern portal of the Strahovský tunnel
- Vysočanská radial road, including multilevel junction with Kbelská St.
- Liberecká – Cínovecká – expansion of bridge structures
- reconstruction of Hlavní nádraží



Construction of Střížkov metro station



Construction of corridor IV at the Praha-Uhřetěves



Traffic restrictions in the northern zone of the Strahovský tunnel



Construction of the Malovanka multilevel junction



Construction of multilevel junction Vysočany radial – Kbelská



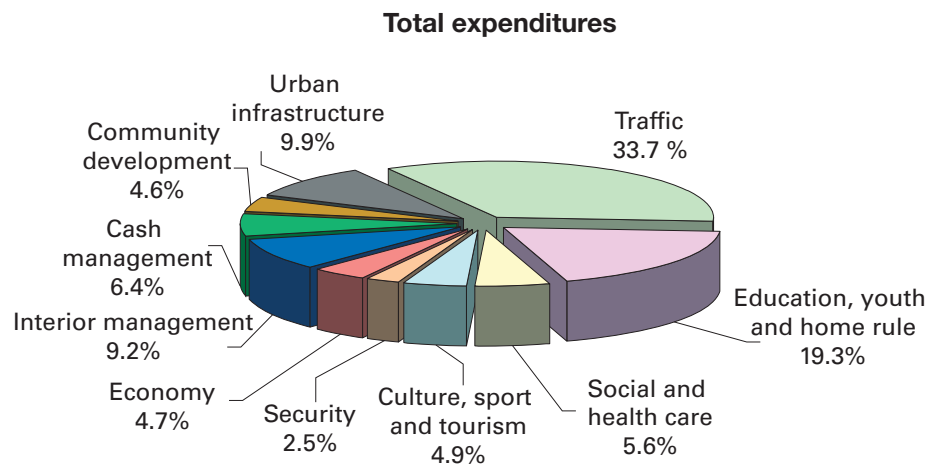
Bicycle path over Rohanský Island

13 FUNDING THE TRANSPORT AND TRAFFIC DEVELOPMENT

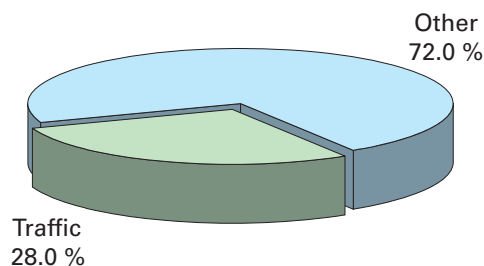
The urban transport operation and engineering infrastructure (with the exception of the railway, air, and water infrastructure) were paid for from Prague's municipal budget in 2006, with further contributions from the national budget and corporate resources of the Prague Public Transit Co. Inc. (DP hl. m. Prahy, a. s.) and other municipal enterprises. Revenues for debentures, grants from EU funds, and an loan from EIB were also used for financing.

Prague's municipal budget, adjusted on 30.9.2006, attained expenditures of 62.8 billion CZK, of which 21.1 billion CZK consisted of the expenditures in chapter 03 Transportation, which again in 2006 was the most substantial chapter of the municipal budget's expenditures. Traffic investments amounted to 43% of capital expenditures in all investments funded from the municipal budget and 28% of the city's standard expenditures..

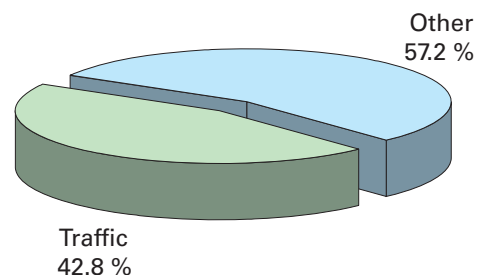
Breakdown of expenditures in municipal budget in 2006
budget adjusted as of 30.9.2006



Share of traffic in operational expenditures



Share of traffic in capital expenditures



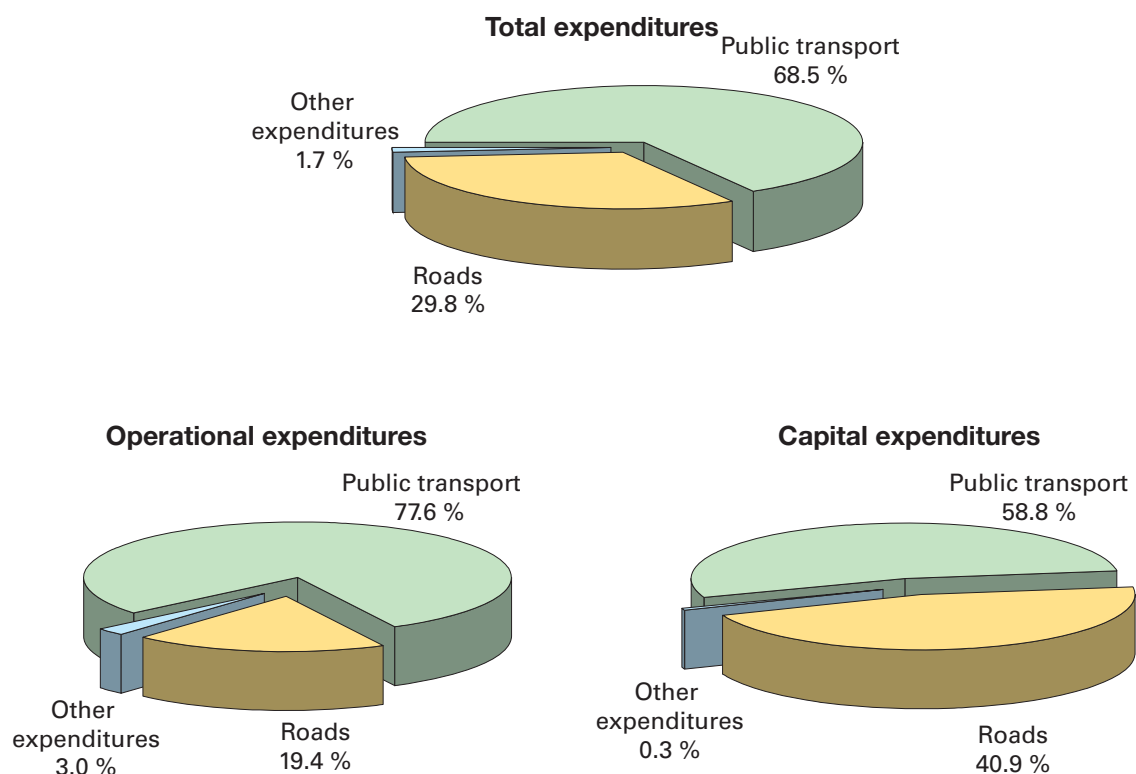
The amount of 21.1 billion CZK also included 10.9 billion CZK earmarked to cover running operational expenditures and 10.2 billion for capital expenditures.

The **operational expenditures** in transportation cover, predominantly, subsidies for public passenger transport in and around the city. The total of almost 8.5 billion CZK was allotted in the adjusted budget for this purpose. Over 2 billion CZK were set aside to cover repairs, maintenance and operation of the roads.

The **capital expenditures** covered mostly investment in development, i.e. construction of new roads, Metro lines, and other transportation facilities (62%) as well as larger repairs and redevelopment of traffic routes, equipment and renewal of technical devices (36%). Expenditures allotted for improving the condition of public passenger transport prevailed also in the capital portion of the budget. Out of the total 10.2 billion CZK, almost 6 billion CZK was earmarked for public transport renovation and development, and 4.2 billion CZK for investments in the road network.

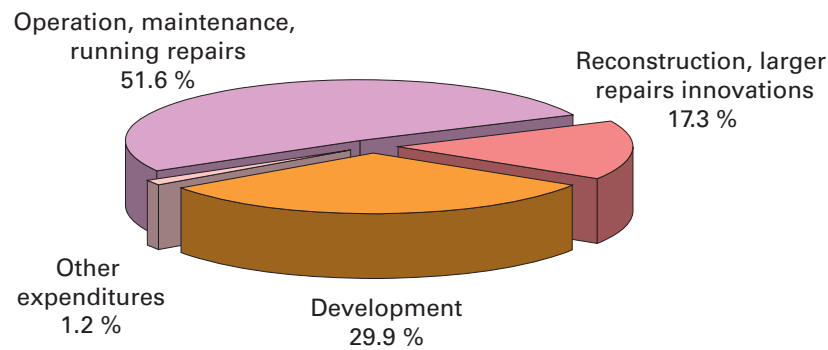
Expenditures for providing operation, modernization and development of public transport prevailed in the 2006 budget. Their share in the total expenditures in the chapter of transportation amounted to 68%.

Structure of transportation expenditures in the 2006 municipal budget
(budget adjusted as of 30.9.2006)

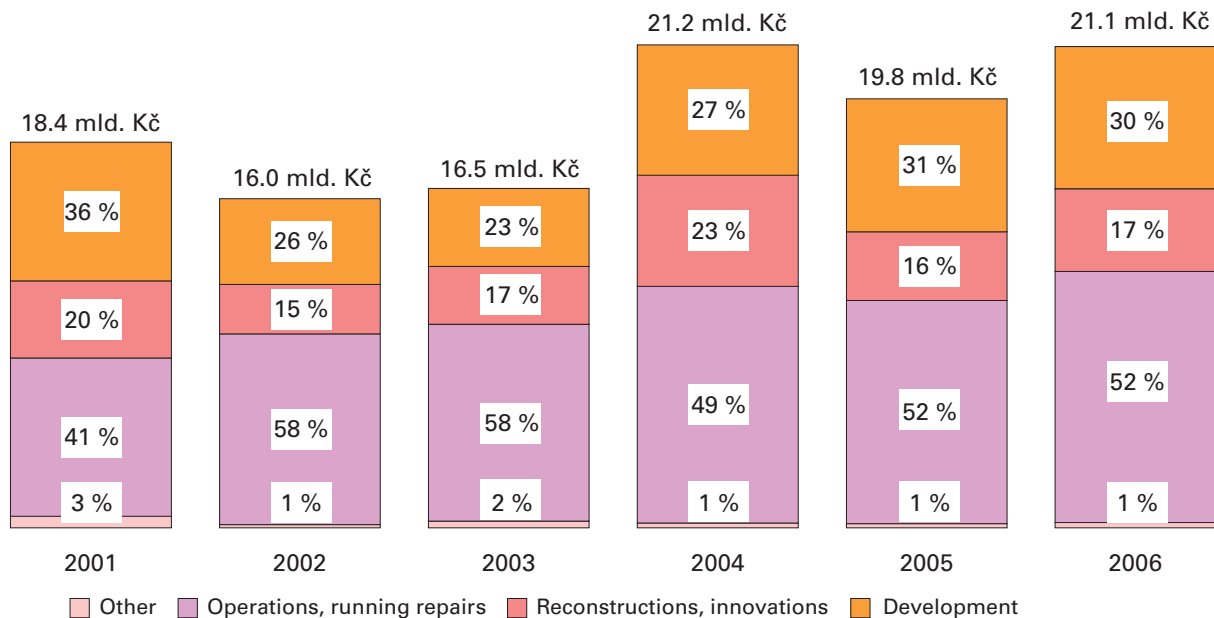


A more detailed analysis of the items listed in the breakdown of expenditures shows that some 11 billion CZK was directed toward operation, running repairs and maintenance of the urban transport system, less than 4 billion CZK to provide for larger repairs, redevelopment and renewal of the technical equipment, over 6 billion CZK was earmarked for investments into development.

Total transportation expenditures in the 2006 budget



Transportation expenditure development in Prague's municipal budget



The targeted contributions from the national budget were provided to the Capital of Prague for the construction of the Metro and maintenance of its protection system (460 million CZK) and from the resources of the National Fund for Traffic Infrastructure for the repair, maintenance, and construction of roads (1.37 billion CZK). The state is also participating in the Prague Ring Road construction, the financing of which the state has already given a full guarantee for. In 2006, construction work was underway on the Lochkov-Jesenice section, and other sections were prepared to various extents. In total, 714 million CZK was used for the construction of the Prague Ring Road during 2006.

The Prague Public Transit Co. Inc. contributed to investment constructions from its own resources and also covered 55% (1.78 billion CZK) of the cost spent in the year 2006 to renew the public transport fleet out of their own corporate resources.

Funding of suburban transport was shared by communities around Prague whose population are users of PID integrated transport. The state also contributed to ensure the basic transportation service in the suburbs.

JPD 2 Project – traffic modelling

This project, which is included in the Unified Programme Document for Objective 2 (JPD 2) for the region of Prague, is incorporated into the priority Revitalisation and Development of Municipal Environment and measure 1.1 Transportation Systems Supporting Transformation of the Municipal Environment.

The main objective of the JPD 2 project – transportation modelling – is to create an effective specialised instrument that will allow alternative means of optimising and regulating traffic in the city to be verified in the form of a traffic model.

The handling of the project focuses on describing in detail the current traffic situation at selected intersections in Prague. The specific conditions of these intersections are created by various characteristics and parameters, primary among which are the method of traffic control at the intersection, the structural arrangement of the intersection, the traffic load in individual directions, the presence of mass – namely tram – traffic, and the intensity of bicyclists and pedestrians. These characteristics and parameters create a wide range of combinations that must be described in the model in such a way as for its output to best to correspond to the actual traffic. After creating the model instrument, which will take all of the said parameters influencing the traffic on specific intersections into consideration, conclusions corresponding to the principles of Prague's traffic policy will be tested.

The project is co-financed by the European Regional Development Fund, the City of Prague, and the Czech Republic. It will be completed in 2007.

CONNECT Project

Prague is taking part in the CONNECT project (Co-ordination and stimulation of innovative ITS activities in Central and East European countries) for the second year now.



This is a regional project shared, apart from the Czech Republic, by all the surrounding countries and smaller regional units, i.e. Slovakia, eastern regions of Germany (Berlin, Brandenburg, Saxony, Saxony-Anhalt), Austria (eastern regions of the country), Slovenia, Hungary and Poland.

CONNECT focuses mainly on “infomobility” services. It includes necessary studies and pilot projects to introduce systems providing quality information on traffic conditions and information for passengers. In Prague this area includes the handling of the Prague Mobility Information Centre (DIC Praha) project, which will be in full operation as of January 1, 2006. Within the scope of the CONNECT project, Prague Road Maintenance (TSK hl. m. Prahy) and ÚDI Praha will be contributing to the further development of the centre conceptually and technologically. Another area in which Prague is getting involved in the CONNECT project is with information systems and stands for the blind. The chief co-ordinator in this is ROPID.

The first phase of the project was concluded on March 31, 2006. Some of the activities of an academic nature, which led to the restoration of DIC Praha, were co-financed at up to 50% from the resources of the European Union thanks to participation in the project. In Prague this is expected to help equip the newly constructed parts of the main roads with telematics applications, which considerably contribute towards safer and more fluent vehicle traffic, among other things. Additionally, the development of DIC Praha is being counted on, both in terms of data and information resources and from the point of view of the spectrum of users for whom the centre will be intended (for example information on public transportation).

ABBREVIATIONS

ADT	Average Daily Traffic (a 24 hour average, no seasonal correction)
AN	bus terminal
av.	average
bn.	billion(s) (1×10 ⁹), thousand(s) of millions
B+R	Bike & Ride
cca	approximately
Coll.	Collection of Laws and Ordinances
CZ	Czech Republic, Czechia
CZK	Czech crown (Kč)
DDH	children's traffic playground
DP hl. m. Prahy	Prague Public Transit Co. Inc.
h	hour(s) (unless specified by a.m./p.m., the 24 h cycle is used)
HDŘÚ	Principal traffic control centre
IT	information technology
K+R	Kiss & Ride
MHD	municipal public transport (i.e. PT)
mill.	million(s)
PID	Prague Integrated Transport
PT	public transport service (i.e. MHD)
P+R	Park & Ride
TSD	Traffic Signal Device
TSK	Prague Road Maintenance
ÚDI Praha	Institute of Transportation Engineering of the City of Prague
veh.	vehicle
VKT	Vehicle Kilometres Travelled
yr	year
ZPS	Zones of Paid Standing
000s	thousands
%	per cent

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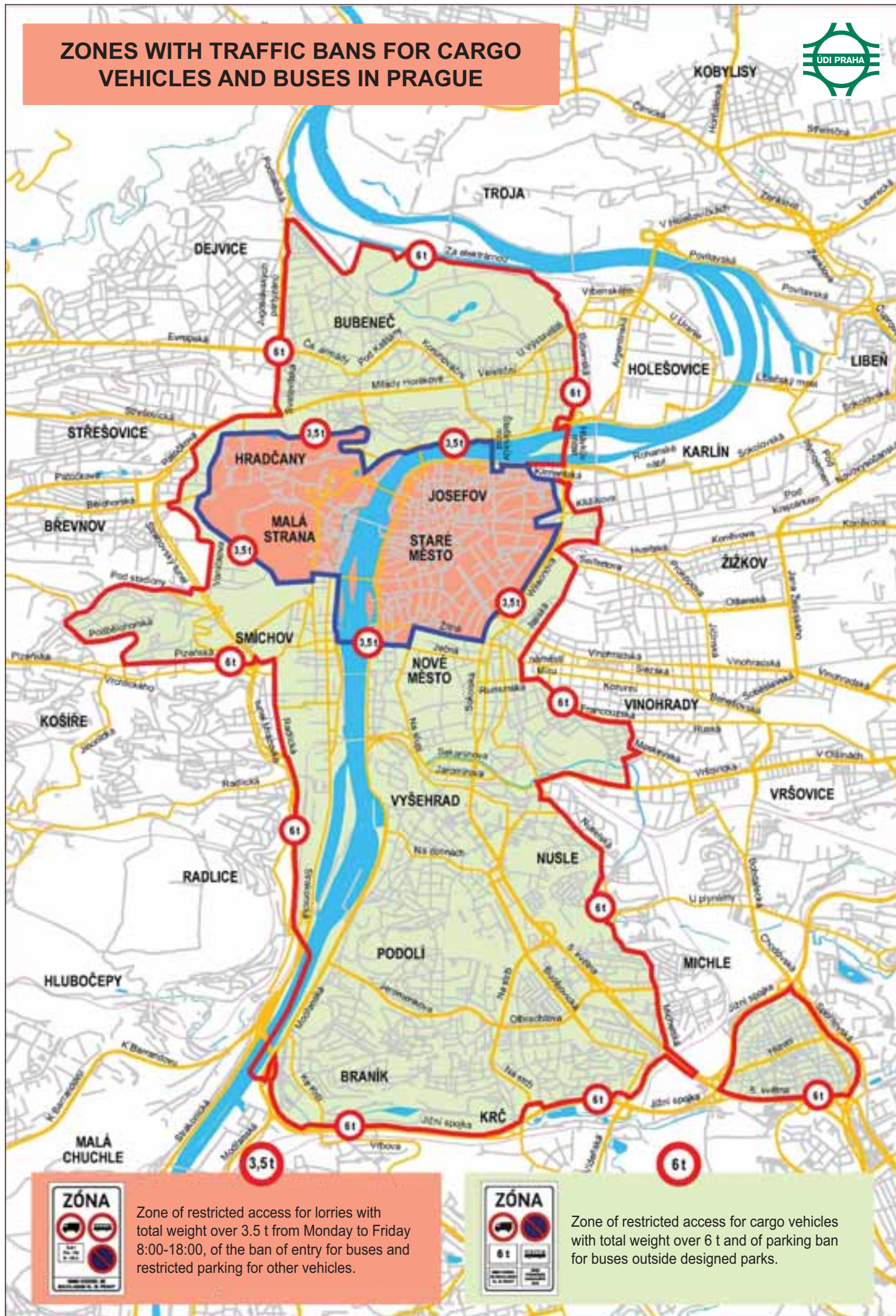


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ZONES WITH TRAFFIC BANS FOR CARGO VEHICLES AND BUSES IN PRAGUE



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