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ANALYTIC APPROACH TO RESOLVING PARKING PROBLEMS IN DOWNTOWN ZAGREB

ABSTRACT

Parking issue is one of the major problems in Zagreb, and in relation to that Zagreb does not differ from other similar or bigger European cities. The problem the city is facing is being presented in the paper. It is complex and can be solved gradually, using operative and planning measures, by applying influential parameters assessments based on which the appropriate parking-garage spaces assessment would be selected. Besides, all the knowledge learned from experiences of similar European cities should be used in resolving stationary traffic problem. Introduction of fast public urban transport would provide passengers with improved services (particularly in relation to the travelling time) introducing modern traffic system that would reduce the travelling time to below 30 minutes for the farthest relations. Further improvement in reducing parking problems in downtown as well as Zagreb broader area would not be possible without implementing this approach.

KEY WORDS

parking restrictions, fast public urban transit, law modification

1. INTRODUCTION

Due to the constant growth of the number of motor vehicles, resolving of stationary traffic problems is becoming more complex in the city of Zagreb as well. The Zagreb city core was built over 100 years ago (some parts even earlier) and it is not able to accommodate all the motor vehicles arriving drawn by the downtown Zagreb functions, which thus becomes the main core activity of all the city traffic. On a relatively small area a significant volume of various contents is concentrated, and a number of facilities of great attraction for which it is essential to ensure adequate areas for all transport modes including also an appropriate number of parking spaces.

In the planning phase, the insurance of the appropriate areas is one of the complex tasks, since the appropriate areas for parking lots and parking garages should be ensured. The traffic in motion chronically suffers from constant growth of the level of motorization which in many of the European, North American and Japanese cities reaches up to 300-500 automobiles per 1000 residents, which seriously jeopardizes downtown operation. Today, it is calculated that about 30-40% downtown areas are used for different modes of traffic in motion and stationary traffic, whilst in the other parts of the cities these areas for the same purpose use up to 20%.

Unplanned city, particularly inadequate traffic organization, lack of understanding and comprehension of the traffic system, particularly public urban transport and the disposition of garage parking spaces direct the majority of vehicles into the areas of individual interest.

Some assessments in the USA already in the sixties of the 20th century estimated that in the framework of highway construction programme 2 million hectares would be covered with concrete. As an example one could mention Los Angeles where highways, streets and parking lots already cover 2/3 of the overall city area, and this ratio will probably continue to deteriorate.

It is precisely because of the lack of parking areas, that automobile stopping in the streets is being restricted to the possibly objective short-term time span, regulated by the communal city policy. The problem, above all, occurs in the disruption of traffic in motion and decrease of street capacity because of drive slow-down due to entering and exiting from parking areas, as well as in the decrease of parts of street space, and at some points of space designed for pedestrians.

Everyday need for parking whose demand substantially exceeds the spatial possibilities, that is, capacities arising from the objective circumstances present in all the major European and world cities, imposes problems, which are generally proportional to the size of the city and which can be solved assessing all influential parameters based on which the adequate model of parking-garage spaces application will be selected (where the location of the major capacity parking garages and sizeable parking lots will be defined), clearly, having in mind the financial potentials of the city.

2. PARKING – THE PROBLEM AND THE CHALLENGE

The parking issue of the passenger automobiles in downtown area is burdened by a number of problems, which are hard-to-solve *per se*, due to:
- negative impact of the intensive use of passenger automobiles,
- the old age of the downtown area, particularly Gradec and Kaptol which were defined by urban plan back in the middle ages,
- downtown streets that were defined by urban plan in the middle of the 19th and the beginning of the 20th century when the importance and significant role of the passenger automobile could not have been presumed,
- lack of adequate standards of the newly built areas, and the assessment of the shopping, business and residential facilities according to their specific characteristics in respect to the required parking and garage parking spaces.

Along with the growth of motorization the downtown problems have multiplied since various contents (administration, shops, offices, cultural and entertainment institutions and so forth), which are of interest to every driver, are concentrated there.

According to the researches in the European cities, passenger automobiles perform, on a workday, approximately 5-7 rides for various purposes, out of which 30-50% flow towards the downtown area. Furthermore, according to these researches in the centres of economic activities or within the industrial complexes over 200 parking spaces per 1000 employees should be ensured. Similarly, in the residential areas of the cities 210-260 parking spaces should be ensured per 1000 residents, where out of the total parking space the capacity of 20% should be ensured for the downtown area. Furthermore, according to some estimates based on empiric methods of similar or bigger cities than Zagreb, 70-100 parking spaces in closed garages per 1000 residents should be ensured in the downtown area (adding also 20-30 parking spaces in closed garages per 1000 residents in broader city area) [1] aiming at increasing the number of parking-garage spaces.

New researches, individual motorization demand and engagement of urban area give answers to the dimension of the problem.

According to these researches [2], a passenger car occupies as follows:
- parking space in residential area — 1 space
- parking space at work-place — 1 space
- parking for different purposes — 2-3 spaces / 4-5 spaces
- overall used parking area with the affiliated manoeuvring area 4.5 x 40 m² — 180 m²
- shops, maintenance, gas stations, cemeteries — 90 m²
- manoeuvring along city roads — 180 m²
- passenger cars in the city — 450 m²

According to the research, a passenger car parks 4-5 times a day for the mentioned purposes, requiring certain amount of space in the city urban area that are registered and calculated and they amount to 450 m² per stationary vehicle and vehicle in motion within the city.

Hypothetically, by the end of 2003 the city of Zagreb had 370,519 [3] passengers cars, and when the data on space occupancy by passenger cars is multiplied with the number of passenger cars, the result is the area occupied by passenger vehicles which amounts to 166,738,050m² or 166km² of the city area (the city of Zagreb covers an area of 641.36 km², and the Zagreb community 307.76 km²), which is 53.94% of the Zagreb community area.

These reasons, and the fact that a passenger car requires a minimum of two parking spaces (during day and over night), as well as the notion that passenger cars are in movement merely 1.5 to 2.2 hours, that is 21.8 to 22.5 stationary hours, indicate that in the overall urban traffic organization passenger cars should be provided such an amount of space which is required not to devaluate the cultural, social and economic downtown function, as the preservation of the urban-architectural heritage of Donji Grad and Gornji Grad (old parts of the City of Zagreb).

Anyway, it is necessary to ensure as much parking demand as necessary for the normal functioning of all urban traffic without disrupting traffic demand distribution for all the transport modes.

It is precisely because of that, that in 2003 the Zagreb City Council brought a decision included in the General Urban Master Plan (GUMP), on the application of standards [4], on a defined number of parking spaces in the process of new constructions or within the process of modification of building allocations (as an important means of passenger car use control) which has determined the required number of parking-garage spaces (PGS) per 1000 m² of gross built-up area.

Table 1 - Parking spaces planning standards in Zagreb

Space purpose	Average value	Local conditions
Residence	14	11-17
Production, warehouses and similar	8	6-10
Shops	40	30-50
Other business facilities	20	15-25
Restaurants and coffee-shops	50	40-60
Universities and science institutions	10	10-20

(gross constructed area for the calculation of parking-garage spaces does not include garages and single-purpose shelters).

The existing parking standards are higher in Zagreb than in the cities of similar size and therefore should be limited in order to introduce restrictive communal policy of reducing the number of passenger cars in the downtown area. The key factor that should be taken into consideration when planning, designing and constructing new objects/buildings is the availability of the public urban transit and the upgrade of all its levels of services in order to make it a more attractive mode of transport than the passenger automobile.

For various increases of business activities which the city wishes to raise to a significant level, the stan-

dards may remain the same, and the potential difference in parking spaces should be found in the construction of garages.

Apart from these issues, the kerb parking of numerous delivery vehicles decreases the pedestrian and vehicles movement efficiency, that is, it directly decreases the street capacity by 20-40% [1] and, indirectly reduces the speed of vehicles, increases the cost of the vehicle utilization and the number of traffic incidents (parked vehicles participate in the total number of traffic incidents with 10%).

3. ANALYSIS OF THE PARKING PROBLEMS IN DOWNTOWN ZAGREB

55,893 residents live in the downtown area (Donji Grad, Gradec, Kaptol, Šalata) in 19,820 apartments. Considering the level of individual motorization, which in the City of Zagreb is 2,1, the residential population in that area owns 26,616 passenger cars.

The largest gross developed size of that area is 5,138,400 m², out of which 53% is residential area, and 47% is used for all sorts of other purposes [5] like business, recreation, culture and similar, which multiply increases the parking space demand.

According to the study "Parking Demand in Downtown Zagreb" (April 1994) the calculated (by
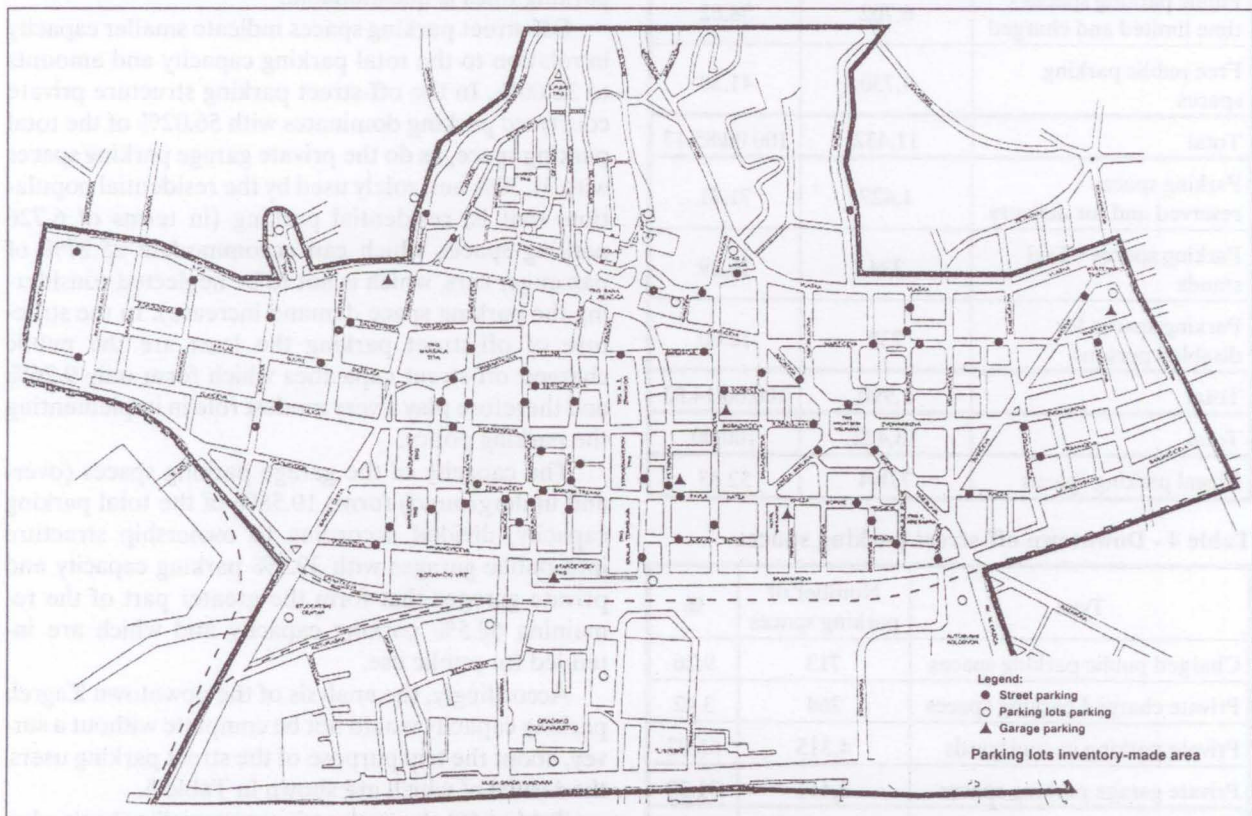

Figure 1 – Scope of parking lots inventory-processed area [6]

GUMP standards) the minimum short-term parking-garage demand for the whole area is:

- residential   21,887 pgs
- other purposes   23,432 pgs

Total: 45,519 pgs

As the GUMP parking space standards have not been changing, thus according to the physical planning documentation standards, the total registered capacity meets 51.9% of the total downtown parking space demand.

The total registered capacity of the downtown parking-garage space is shown and analyzed in Tables 2, 3, 4 and 5.

Table 2 - Number of downtown parking-garage spaces

Type	Number of spaces	%
Street spaces total	13,422	56.82
Off-street spaces total	7,703	32.60
Garage spaces total	2,499	10.54
Overall	23,624	100.00

Table 3 - Downtown on-street parking spaces

Type	Number of parking spaces	%
Public parking spaces - time limited and charged	6,702	58.62
Free public parking spaces	4,730	41.38
Total	11,432	100.00/85.17
Parking spaces - reserved and for delivery	1,427	71.71
Parking spaces - Taxi stands	324	16.29
Parking spaces for disabled persons	239	12.00
Total	1,990	100.00/14.83
Total	13,422	100.00
Illegal parking spaces	7,094	52.85

Table 4 - Downtown off-street parking spaces

Type	Number of parking spaces	%
Charged public parking spaces	713	9.26
Private charged parking spaces	264	3.42
Private parking in courtyards	4,315	56.02
Private garage parking spaces	2,411	31.30
Total	7,703	100.00

Table 5 - Number of downtown garage parking spaces

Type	Number of garage parking spaces	%
Public charged garage spaces	987	39.50
Private charged garage spaces	1,512	60.50
Total	2,499	100.00

As shown in Table 2 the total capacity of parking-garage spaces in downtown Zagreb is 23,624 spaces. Out of these 56.82% are street parking spaces, 32.6% are off-street parking spaces, while garage parking spaces cover 10.58%.

Street parking spaces dominate in the overall parking space capacity, resulting in a decrease of downtown street network traffic capacity.

Further analysis of the street parking spaces concludes that out of the total number of legal and available street parking spaces 58.62% is under the time-limit and charging regime, whilst 41.38% of parking spaces are not time-limited and are free of charge. Furthermore, the number of illegal parking spaces covers 52.85% of the total street capacity, which is an exceptionally considerable quantity showing that the parking space daily demand is at least as much in deficit, and that the efficiency of parking policy regarding parking fines is questionable.

Off-street parking spaces indicate smaller capacity in relation to the total parking capacity and amounts to 32.60%. In the off-street parking structure private courtyard parking dominates with 56.02% of the total parking space, as do the private garage parking spaces with 31.30% and solely used by the residential population, that is, residential parking (in terms of 6,726 parking spaces which can accommodate 25.27% of passenger cars, which is not to be neglected considering the parking space demand increase). In the structure of off-street parking the least are the public charged off-street capacities which form only 9.26% and therefore play a very modest role in implementing the parking policy.

The capacity of the garage parking spaces (over- and underground) forms 10.58% of the total parking capacity, divided according to ownership structure into public garages with 39.5% parking capacity and private garages that form the greater part of the remaining 60.5% parking capacity and which are intended for public use.

Accordingly, the analysis of the downtown Zagreb parking capacity would not be complete without a survey, about the trip purpose of the street parking users, the results of which are shown in Table 6.

Table 6 [6] shows the trip purpose distribution between the users of three different zone types (fare

Table 6 – Trip purpose of the street parking users (%)

Zone (fare stages)	home	work	business	shopping	leisure	education	other
Red	5.5	18.3	27.0	39.2	3.7	0.6	5.7
Yellow	10.5	27.3	33.0	24.5	1.1	0.4	3.3
Green	10.4	17.3	35.9	23.2	2.7	2.4	8.0

stages): red, yellow and green. It indicates three major parking purposes: work, business and shopping. The shopping purpose dominates by short stays in the red zone with 39.2% of all the trips, while the business purpose is the most dominating one in the yellow and green zones.

The analysis of the use of downtown public garages shows that 7% arrive home (this percentage was mostly influenced by the public garage "Gorica" in the Martićeva Street where the percentage of home-arrivals is 40%. This garage is specific for its eight-hour average vehicle parking time proving that this garage is mostly used by the residents of the nearby buildings and houses). 27.8% commute to work, 40.7% arrive on business, 17.3% for shopping, 1.7% for recreation and the rest covers 5.5%.

Besides the attempt has been made to limit the parking time in order to decrease the time of stay at parking spaces, that is, to ensure short-term parking as near as possible to one hour (resulting also in better parking turnover coefficient which unfortunately os-

cillates from 1.23 to 0.01 within one hour). This was primarily the reason for introducing the parking zones, especially the red zone where the parking is limited to one hour (in spite of the introduced and applied penalization) in practice there is the possibility of parking over periods longer than one hour, particularly during the morning peak hours when commuting to work would not be possible if the existing rules were strictly applied.

Average vehicle stay at parking spaces during the whole day is 2.49 hours, calculated on the basis of the number of sold parking tickets by "Zagrebparking". Similarly, the average stay at public garages (excluding the public garage "Gorica", Martićeva Street) is 1.5 hours, with the average occupancy of 36% and a minimum of 21,658 vehicles that can park there daily.

Generally, the parking policy in Zagreb is reflected through the activities of "Zagrebparking" trading company and the provisions of General Urban Master Plan of Zagreb related to the parking policy planning statement. "Zagrebparking" is a company established
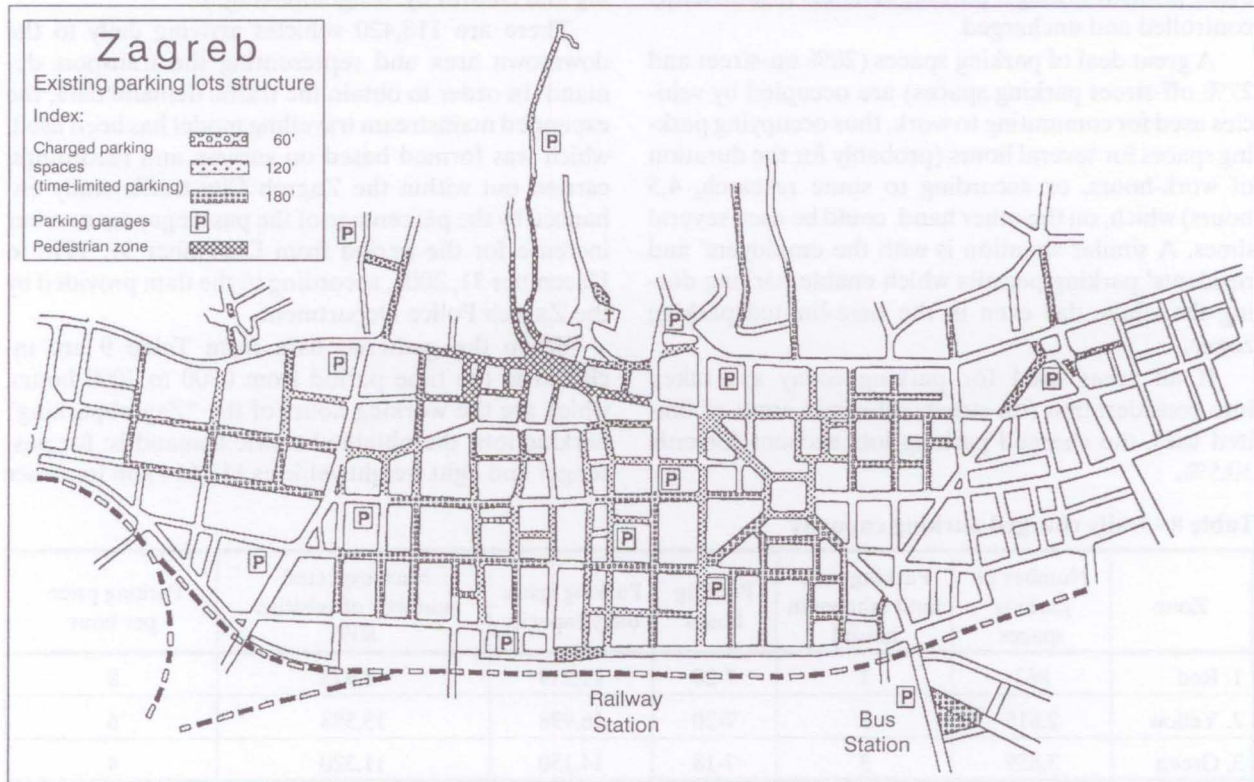

Figure 2 - Downtown parking zones (fare stages)

by the Zagreb City Assembly with the aim to enhance the parking conditions, and hence the continuous development of the City. The concept of time- and zone-limited on-street parking was implemented back in 1995, and direct cash payments have been replaced by the modern payment system with the purpose of providing high-quality service, control of parking time limitation and excess parking periods.

The number of downtown Zagreb zones and parking-garage spaces under the "Zagrebparking" supervision is shown in Table 7.

Table 7 - Number of parking spaces supervised by "Zagrebparking"

Zone	Number of parking spaces	%	Max. parking time limit
1. Red	863	11.76	60 minutes
2. Yellow	2,615	35.64	120 minutes
3. Green	3,859	52.60	180 minutes
	7,337	100.00	

"Zagrebparking" [7] controls these parking spaces and in case of excess parking period charges high fines. However, a significant number of on-street parking spaces (7094), on empty lots, catwalks and separation belts is not controlled by "Zagrebparking" and should be controlled by the traffic police. However, due to their other commitments (and, clearly, other priorities) illegal parking remains insufficiently controlled and uncharged.

A great deal of parking spaces (20% on-street and 27% off-street parking spaces) are occupied by vehicles used for commuting to work, thus occupying parking spaces for several hours (probably for the duration of work-hours, or according to some research, 4,5 hours) which, on the other hand, could be used several times. A similar situation is with the employers' and residents' parking permits which enable parking during the whole day even in the time-limited parking zones.

If all areas used for parking today are taken into consideration (on-street, off-street areas of limited use), the charged parking lots account for only 30.5%.

The charging is carried out in several ways:
- purchase of parking tickets at parking vending machines (160 ticket-machines);
- via SMS containing the vehicle registration number, sent to the m-parking number of the corresponding zone (so-called m-parking);
- purchase of parking ticket, in the corresponding zone colour (so-called commission sale).

This parking tickets sale framework is being used by "Zagrebparking", with the following distribution of sales:
- parking vending machines 50.37% of tickets;
- commission sale 6.18% of tickets;
- Vipnet parking 25.01% of tickets;
- Cronet parking 18.44% of tickets.

The structure of the sold parking tickets per zones is different (which is understandable considering the ratio of the parking spaces number), and the distribution is as follows: red zone 16.64%, yellow zone 34.32% and green zone 48.94%.

However, the occupancy of the parking space capacity per zones is significantly different:
- red zone 135%;
- yellow zone 92.13%;
- green zone 88.77%;
- average occupancy of all zones together is 95.40%.

This proportion is based on passenger cars within the time-limit and charged regime (time-limited parking and control by "Zagrebpaking").

There are 118,420 vehicles arriving daily to the downtown area and representing the transport demand. In order to obtain the traffic demand data, the expanded mainstream travelling model has been used, which was formed based on surveys and recordings, carried out within the Zagreb City traffic study enhanced by the percentage of the passenger car number increase for the period from December 31, 1998 to December 31, 2003, according to the data provided by the Zagreb Police Department.

When the gathered data from Table 9 are included in the time period from 0700 to 2000 hours, which are the working hours of the "Zagrebparking" parking lots, the obtained traffic demand is: for passenger and light freight vehicles 112,614 and for other

Table 8 - Daily charged parking capacity

Zone	Number of parking spaces	Parking time limit (shown in hours)	Parking hours	Parking space daily capacity	Max. expected number of vehicles 80%	Parking price per hour
1. Red	863	1	7-20	11,219	8,975	8
2. Yellow	2,615	2	7-20	16,998	13,598	6
3. Green	3,859	3	7-18	14,150	11,320	4
Total:	7,337			42,367	33,893	

Table 9 – Trips according to the mode and time-span

Passenger and light freight vehicles	According to 1998 traffic study	32.8% increase in 2003	Other freight vehicles, the study	34.9% increase in 2003
Morning peak hour	7,300	9,694	300	405
Off-peak hour	5,900	7,835	300	405
Afternoon peak hour	6,700	8,898	400	540

Table 10 - Theoretical downtown parking-garage space capacity

Type	Capacity	Capacity calculation method
Zagrebparking	42,367	Shown in Table 8.
Garages (public and private)	21,658	Garage parking spaces multiplied by 13 hours and divided by 1.5 hours (average garaging time)
Private courtyards and garage spaces	6,726	Only the owners' vehicles taken into account
Free public parking spaces	24,695	Number of parking spaces multiplied by 13 hours and divided by 2.49 hours (average parking time)
Public and private parking spaces	1,786	Number of parking spaces multiplied by 13 hours and divided by 2.49 hours
Total	97,232	
Illegal parking	37,037	Number of parking spaces multiplied by 13 hours and divided by 2.49 hours
Total	134,269	

freight vehicles 5,806. It is implied that the traffic demand is limited by the street network capacity having vehicles parked on one or both sides. This capacity limitation is 20-40% [1], and it is mostly determined by the vehicles entering and exiting from parking area operations, which may be positioned longitudinally, diagonally and vertically, then also by lateral obstructions, and the number and width of traffic lanes, etc.

Besides the traffic demand, the required parking lots capacity needs to be calculated and shown in Table 10.

When the data from Table 10 are compared with the number of vehicles arriving daily to the downtown area, it may be concluded that the total sum of 97,232 legal parking spaces meets only 82.11% of the transport demand. Moreover, if apart from the legal parking spaces, the illegal parking spaces capacity was added amounting to 37,037 parking spaces, then this amount would exceed the transport demand, that is, the number of vehicles by 13.34%.

However, all this falls into the scope of theoretical calculation of the parking capacity (P_t), which represents the possible number of parking in the time interval (in this case from 0700 to 2000 hours). For the needs of this analysis, the feasible parking capacity (P_o) should also be calculated according to the following formula:

$$P_o = P_t \cdot \rho$$

where: ρ represents the parking exploitation rate coefficient (tolerable excess parking period or tolerance according to some authors, amounting to 15-20%).

In this particular case, due to the specifics in relation to private parking in residential courtyards and garage spaces entirely privately owned (used solely for residential parking, with full occupancy), these should not be included in the calculation, but should not be excluded either.

Therefore:

$$P_o = (134.269 - 6726) \cdot 0,8 = 127.543 \cdot 0,8 =$$
$$= 102.034 \text{ parking}$$

The number of residential courtyards and garage parking are once again added to the derived result, hence:

$$P_o = 102.034 + 6726 = 108.760 \text{ parking lots,}$$

which, in relation to the total transport demand (118,420 vehicles) makes 91.84%, that is, a shortage of parking lots of 8.16%.

This results in the fact that the Zagreb downtown parking demand exceeds the parking capacity by merely 8.16%, where the potential (as shown in the theoretical parking capacity calculation) is such that, with better organization, that is, better management of free or illegal parking lots, the problem can be significantly improved even with such continuous increase of passenger cars, that is, the level of motorization.

Clearly, all free-of-charge street parking spaces that are not time–limited should be included in the

on-street time-limit, supervision and parking fees system, since this capacity is important and accounts for 41.38% of the total street parking spaces.

The illegal parking spaces present an identical case and should also be included in the supervision and parking fee system, which, when included, would affect the on-street parking spaces with 52.85% of the spaces. Interestingly, these two groups together account for 11,824 on-street parking spaces, which compared to the 7337 parking spaces under "Zagrebparking" supervision clearly shows what the Zagreb downtown parking problem is.

It is precisely due to this conclusion, that an expansion and modification of the policy measures to all available on-street parking spaces are needed, primarily in the central city core, followed by other downtown parts. Accordingly, the time-limit parking zones should be revised and expanded, which is not easy considering that it presents minimally a double increase in relation to the present situation.

In simple terms, it is necessary to revise the red, yellow and green zones aiming at limiting long-term parking at on-street parking spaces, increasing the number of parking spaces in zones, that is, stimulating the increase of travelling into the downtown, giving incentive to the economic development of the area (shopping, business, entertainment, recreation, etc.).

As the excessive parking demand is strictly related to travelling for the needs of education and commuting, these measures mostly refer to those needs, whereas undesirable trips are being gradually transferred to the public urban transport, either completely or partly through "Park and ride" regime. These measures are also related to the objective problem of the residents and economic subjects within the zones, which could be solved by being moved to the off-street parking facilities.

However, the parking demand in the downtown Zagreb is so high that it cannot be met solely on open areas outside the street parking lots, and therefore the garages (public, private) need to be constructed in order to meet the parking-garage needs. It should be taken into account that off-street parking capacities should not exceed 25% [8] of the total parking capacity in the area.

Parking fees charging policy should be adapted to the progressive price growth, and when included in the parking fee system they should discourage long-term parking, enabling more efficient control of illegal parking.

4. CONCLUSION

The stationary traffic issue is one of the most difficult problems of the Zagreb parking system, along with the knowledge that stationary traffic is a commu-

nal problem, the problem of urban planning designers and the city development problem. It cannot be solved in an unorganized and uncontrolled manner, but by means of calculated policy integrating communal, urban-planning and developmental policies including, as an integral part an elaborated and established means and dynamics of resolving.

Slow and inefficient public urban transport additionally burdens this problem, practically stimulating the purchase of a substantial number of passenger cars, the numerousness of which is pressing the city street network, particularly in the downtown area. For illustration, the number of passenger cars has increased from 219,257 in 1995 to 370,529 in 2003, indicating an increase of 68.99%.

Experience has shown that in case of such an increase in the number of passenger cars, neither restrictions in the use of passenger cars per se, nor complete change and quality of the public transport per se, (not even in case of free public transport) can improve the traffic situation in the city if the level of motorization is high.

The measures to be taken should be permanent and simultaneous, with insured financial means, that would be mostly used for thorough technical and technological changes in the public urban transport.

Beside these measures, the policy of gradual reduction of the number of downtown parking spaces should be consequently carried out, as an element of the parking limiting model, which is reflected through possible changes in the downtown parking system at the level of passenger car demand. These measures include various charges in parking and garage spaces, in order to discourage long-term parking (of those using passenger cars for commuting), permit validation restrictions, as well as changes in parking management and control.

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SAŽETAK

ANALITIČKI PRISTUP RJEŠAVANJU PROBLEMA PARKIRANJA U SREDIŠNJEM DIJELU ZAGREBA

Problem parkiranja jedan je od najvećih problema u gradu Zagrebu i po tome se Zagreb ne razlikuje od ostalih europskih gradova približne ili iste veličine. U radu se ukazuje na problem

s kojim se Grad suočava. Problem je složen, a moguće ga je rješavati postupno uz operativne i planske mjere i uz primjenu dobre procjene svih utjecajnih parametara na osnovu kojih bi se odabrala odgovarajuća metoda za procjenu parkirališno-garažnih mjesta. Uz to, treba primijeniti i sva iskustva i saznanja koja su nam poznata, iz sličnih europskih gradova koja bi nam pomogla pri rješavanju problema prometa u mirovanju. Uvođenje brzog gradskog javnog prijevoza bi putnicima pružao puno bolje usluge vožnje (posebno u dijelu vremenske duljine putovanja) uvođenjem modernijeg prometnog sustava koji bi smanjio putovanja ispod 30 minuta na najudaljenijim relacijama. Bez ovakvog pristupa nema daljnjeg napretka u smanjenju problema parkiranja kako u središnjem dijelu grada tako i na cijelom području grada Zagreba.

KLJUČNE RIJEČI

ograničenje parkiranja, brzi javni gradski promet, promjena zakona

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