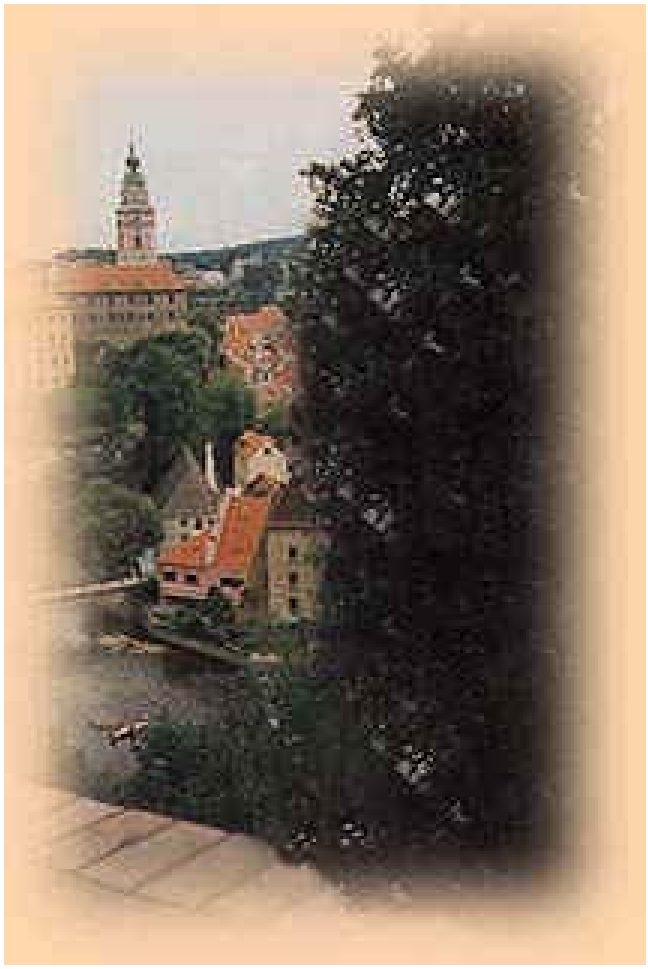
THE TOWN ČESKÝ KRUMLOV

THE TOWN ČESKÝ KRUMLOV

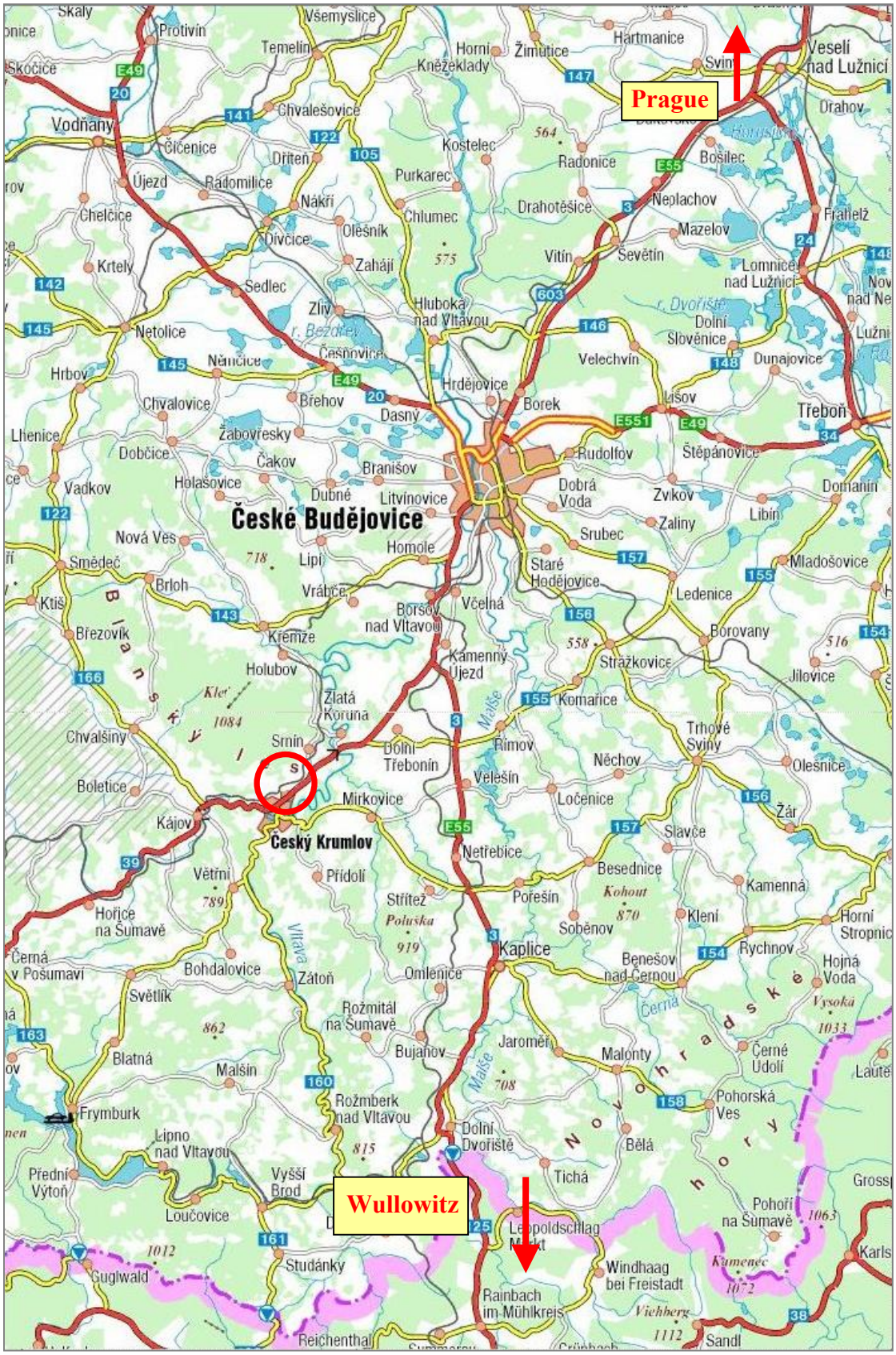


Title of project **STUDY EDITS MAIN ROADS IN ČESKÝ KRUMLOV**

Alexandra Holubová
Faculty of transportation sciences
Czech Technical University in Prague
Czech Republic 2006

TRAFFIC IN REGION

The town Český Krumlov is situaed 25 km south-west from the largest city of the region (České Budějovice). There is a main road I/3 leading through the region which beginns in capital Prague. This road continues to Wullowitz in Austria. There is also projected construction of motorway D3.

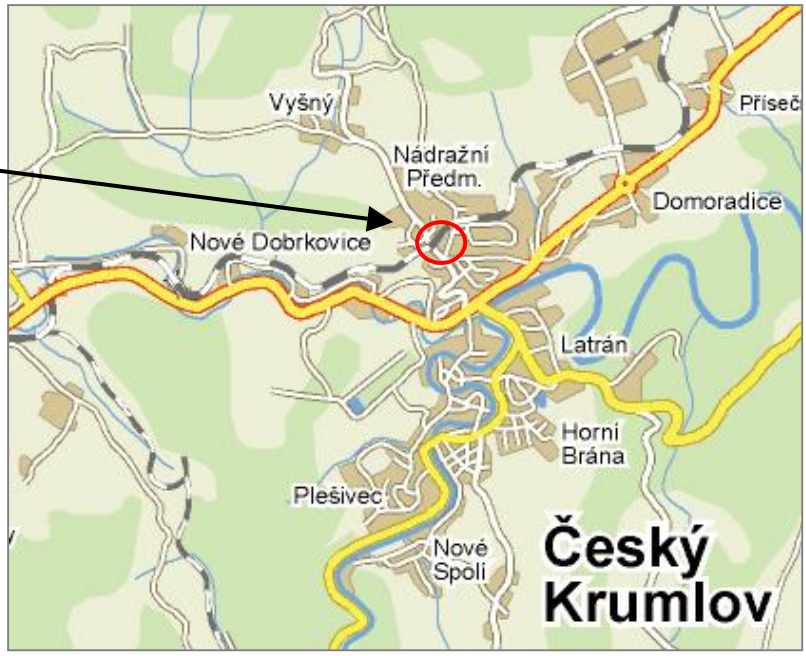


The next important communication is road I/39, which goes through the town Český Krumlov. It´s rout devides the town into 2 parts: the north one, where is situated railway-station and the south one, which contains historical centre and also main bus station. There is no road bypass of the town and that is the reason why the whole motor transport is located to road I/39.



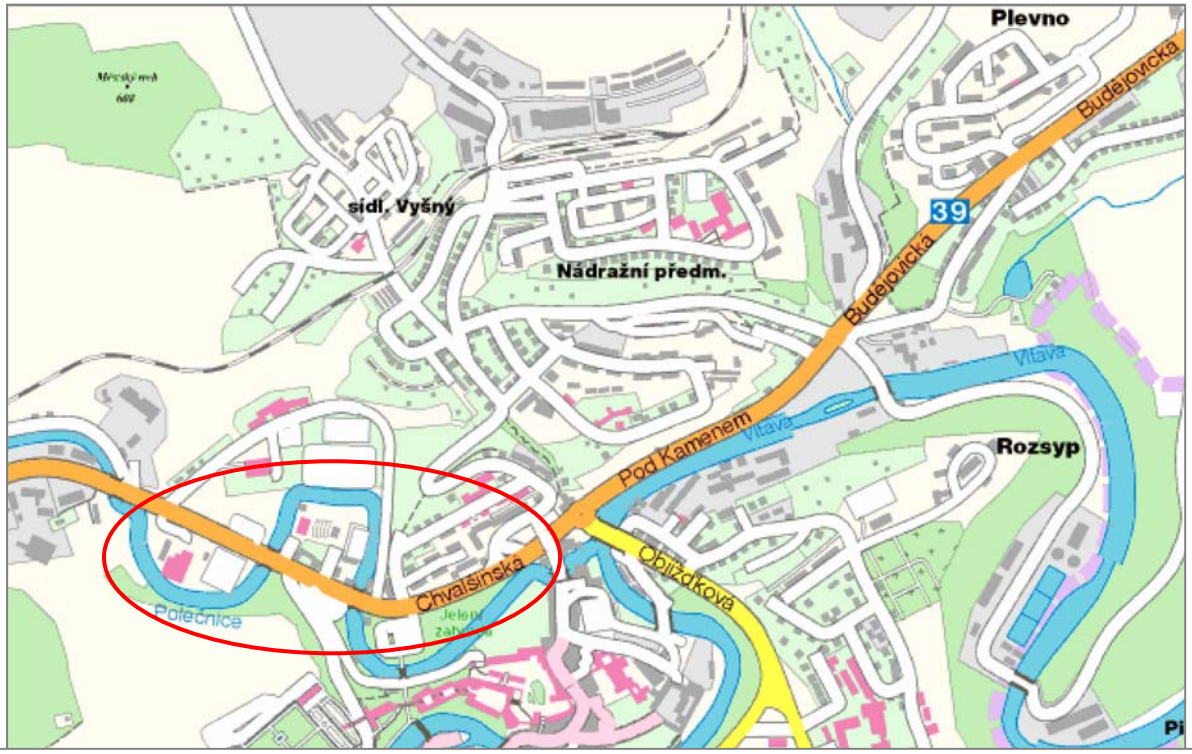
Railway – the railway station is situated on the tableland in the northern part of the town. The main disadvantage is eccentric position against the rest of the town which is located in the lowland around the river Vlatava. That is the reason why the railway isn´t so much used by people.

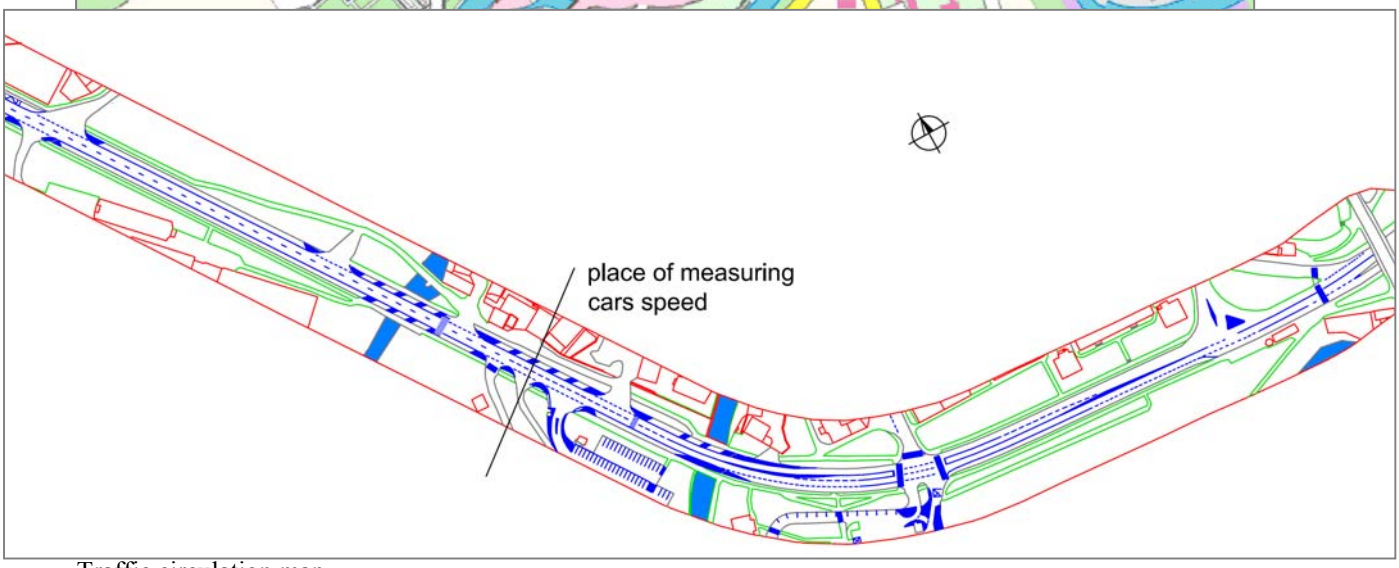
Railway station



ANALYSES OF PROBLEM AREA – PRESENT CONDITION

Rideable part of road I/39 – street Chvalšinská





Traffic circulation map

Short description:

- Intensity of cars (both direction) – over 7000 cars/24 hours
- Wrong curb parking
- Enourmous width of road profile
- High speed of cars
- High accieent frequency in the whole section
- Absence of zebra crossings – existing ones are non-conformance of safety for pedestrians

The measuring data of cars´ speed

Direction from the town

měření - směr z centra (9:30-10:30)					
č.	**Rychlost**	**č.**	**Rychlost**	**č.**	**Rychlost**
1	51	34	50	67	44
2	64	35	59	68	56
3	41	36	46	69	44
4	49	37	47	70	62
5	63	38	57	71	49
6	65	39	56	72	48
7	64	40	46	73	56
8	45	41	63	74	54
9	61	42	42	75	42
10	49	43	48	76	59
11	51	44	45	77	62
12	61	45	49	78	47
13	62	46	59	79	50
14	66	47	43	80	61
15	61	48	42	81	63
16	49	49	57	82	46
17	51	50	66	83	64
18	73	51	63	84	45
19	61	52	54	85	43
20	45	53	43	86	61
21	41	54	46	87	53
22	56	55	51	88	60
23	61	56	56	89	50
24	45	57	59	90	62
25	58	58	52	91	56
26	48	59	61	92	64
27	59	60	47	93	71
28	53	61	54	94	59
29	55	62	63	95	52
30	48	63	66	96	43
31	56	64	60	97	46
32	44	65	59	98	57
33	51	66	54	99	68
	(km/h)		(km/h)	100	59

Direction into the town

měření - směr do centra (10:30-11:30)					
č.	**Rychlost**	**č.**	**Rychlost**	**č.**	**Rychlost**
1	55	34	48	67	72
2	59	35	67	68	58
3	58	36	56	69	44
4	58	37	60	70	43
5	52	38	55	71	53
6	51	39	54	72	59
7	51	40	52	73	69
8	62	41	64	74	60
9	55	42	42	75	50
10	58	43	60	76	49
11	57	44	42	77	51
12	64	45	58	78	56
13	60	46	55	79	59
14	61	47	56	80	53
15	52	48	46	81	60
16	58	49	51	82	61
17	51	50	47	83	56
18	65	51	53	84	45
19	67	52	58	85	47
20	42	53	57	86	62
21	92	54	58	87	56
22	62	55	50	88	58
23	75	56	56	89	67
24	50	57	63	90	62
25	54	58	44	91	49
26	55	59	49	92	52
27	54	60	57	93	58
28	45	61	60	94	66
29	47	62	64	95	59
30	48	63	50	96	74
31	50	64	59	97	60
32	51	65	54	98	61
33	61	66	53	99	45
	(km/h)		(km/h)	100	53

Average speed =54,26 km/h

Average speed= 56,05 km/h

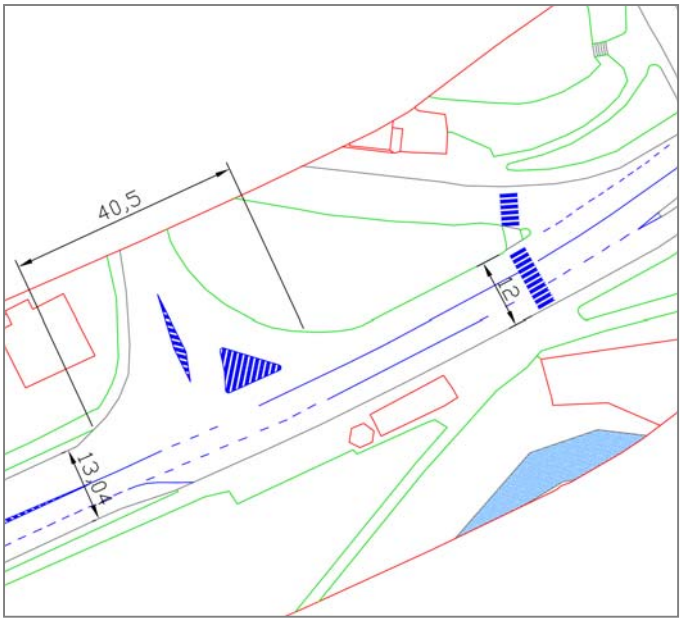
SUGGESTED SOLUTION

I devided the whole section into four separate parts for better lucidity. Suggested changes should increase the safety of all those participating of traffic operations.

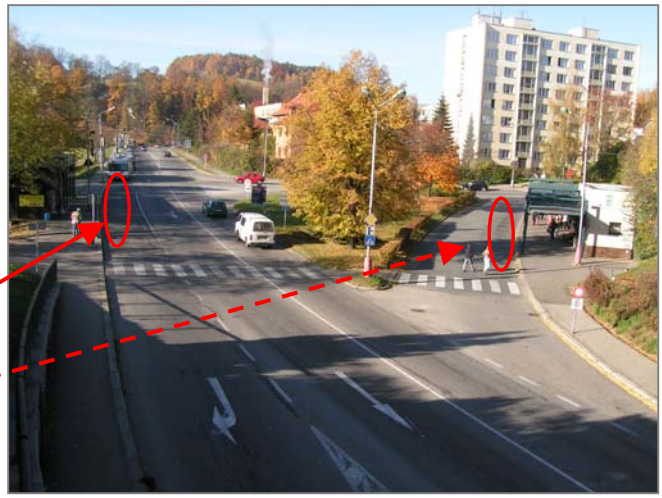
1. **intersection** Špičák km 12,0-12,3 ;
2. **intersection** Jelenka km 12,3 – 12,4 ;
3. **I.sektor** km 12,4 – 12,9 ;
4. **intersection** Chvalšinská x Fialková km 12,9 – 13,1 .

1. intersection Špičák km 12,0-12,3 - present condition

- intersection of main road I/39 and estate road Tř. Míru
- enormous width of brenches from intersection
- absence of zebra crossings on the branches
- absence of separate turning lanes
- frequent traffic flow of buses
- two bus stops with two ranks on each



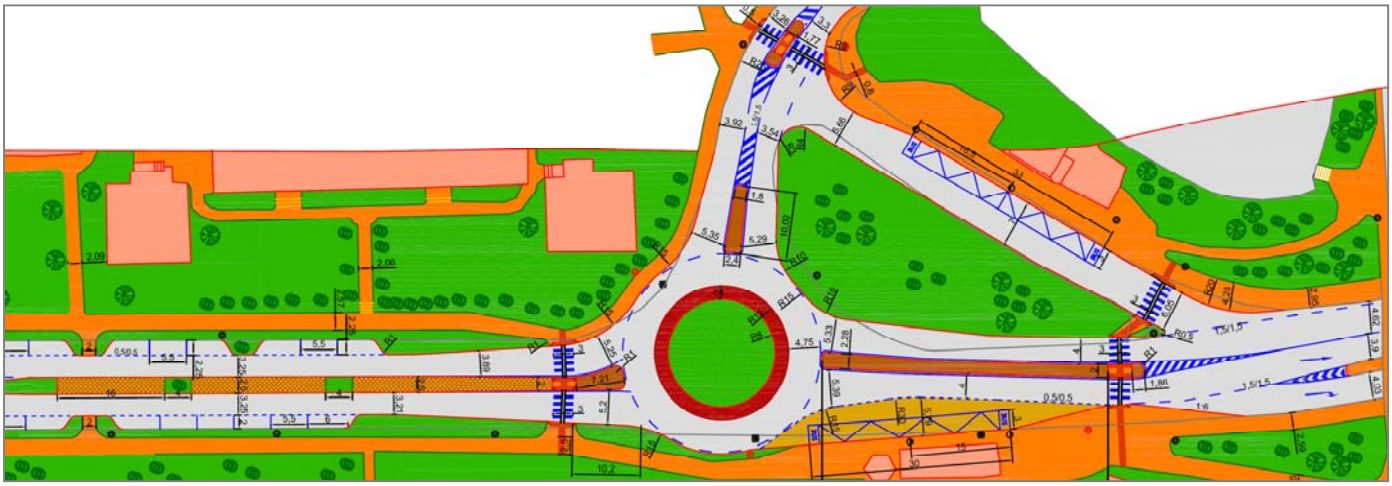




2 bus stops

1. intersection Špičák km 12,0-12,3 - suggested solution

- new shape of intersection – small roundabout, easier movements for buses,
- filling centre reserves, parking lanes,
- modification of position - bus stops
- nonbarier devided zebra crossings for pedestrians



2. intersection Jelenka km 12,3-12,4 - present condition

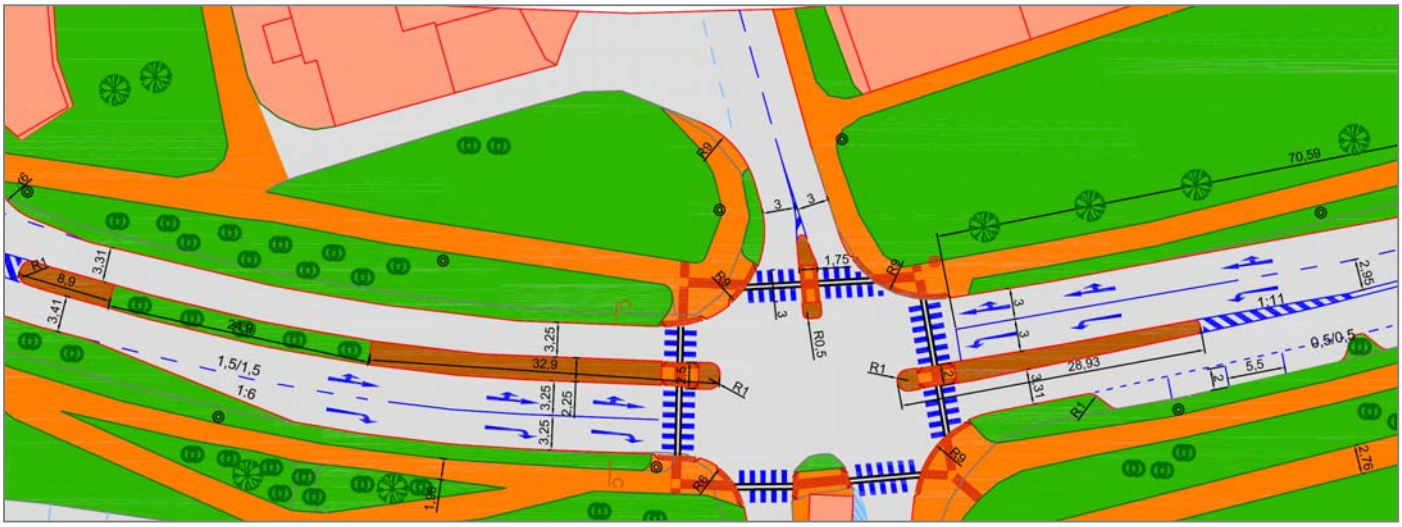
- intersection of main road I/39 and estate road,
- enormous width of brenches from intersection,
- enormous length of zebra crossings with no protection for pedestrians.





2. intersection Jelenka km 12,3-12,4 - suggested solution

- shortening the way of crossing,
- sidewalk cap, devided islands,
- filling centre reserves.



3. I.sektor km 12,4-12,9 - present condition

- long straigth distance, two briges,
- enormous width of lanes,
- outstanding curb parking,
- large area of road marking.

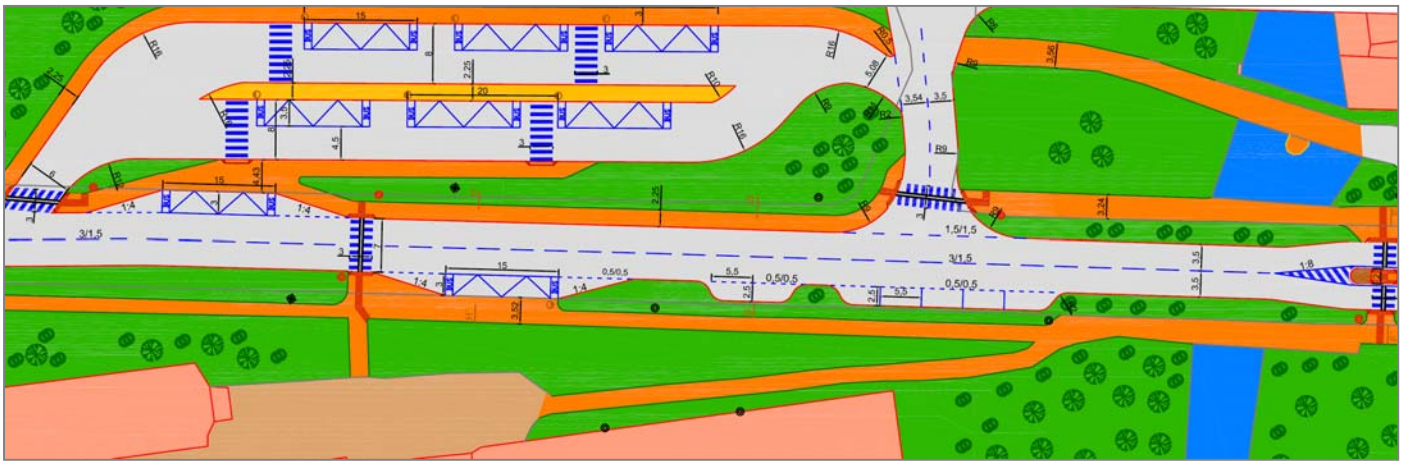





3. I.sektor km 12,4-12,9 - suggested solution

- new parking lanes, new position of zebra crossings and bus stops,
- reduction of width of lanes, changes on the entrances to estate roads.





4. intersection Chvalšinská x Fialková km 12,9 – 13,1 – present condition

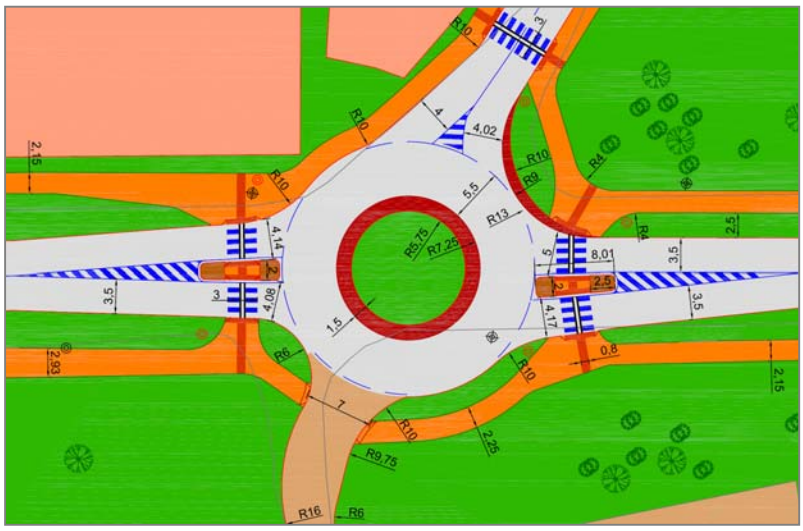
- 4-brenches intersection, big width of road I/39,
- bad range of vision, missing zebra crossings
- bad location of bus stops.





4. intersection Chvalšinská x Fialková km 12,9 – 13,1 – suggested solution

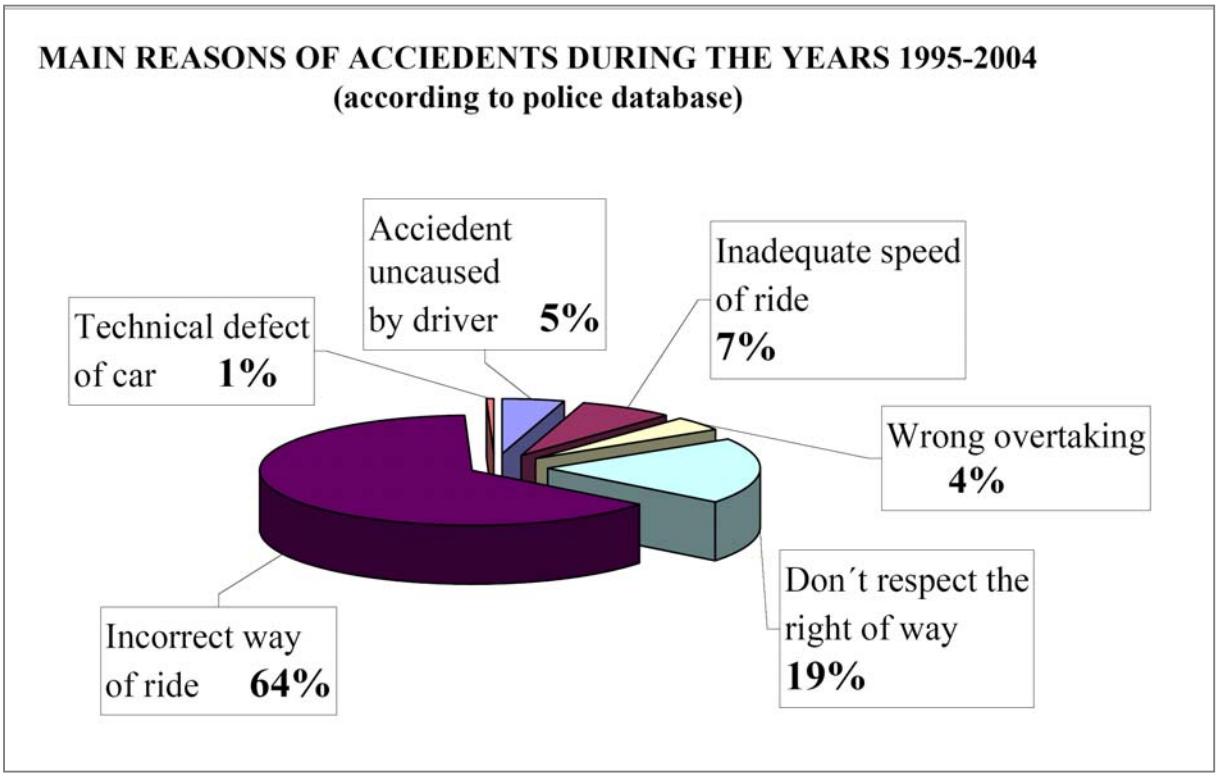
- small roundabout,
- nonbarier devided zebra crossings for pedestrians
- safer left-turn movement from minor brench
- traffic component for deceleration of cars speed on entrance to the city.



SUPPLEMENT – TRAFFIC ACCIEDENTS

- data was taken from police database.

Graph 1 – main reasons of acciedents



Tab.1- Numbers of acciedents during the years 1995-2004

Year	Acciedents	Personal acciedents	Acciedents with pedestrian		Alcohol	Number of dead	Hard injured	Fairily injured	Physical damage(EUR)
			culprit-walker	culprit-driver					
1995	25	5	1	1	1	0	1	4	35926
1996	30	5	1	0	0	0	0	5	39986
1997	20	6	1	2	2	0	1	5	29134
1998	30	1	0	0	4	0	0	1	41438
1999	34	5	0	0	4	0	0	5	38216
2000	36	1	1	0	4	1	0	0	68106
2001	24	2	0	1	2	0	0	2	74830
2002	23	6	0	1	3	0	2	4	61371
2003	29	3	0	0	2	0	1	2	112954
2004	27	3	0	1	0	0	1	2	84452

LIST OF USED LITERATURE

[1] (www.ckrumlov.cz)

[2] (www.mapy.cz)

[3] (www.cd.cz)

[4] Skládaný, P.: TP 145 Zásady pro navrhování úprav průtahů silnic obcemi, CDV Brno, 2001

[5] projekt BESIDIDO Výzkum zvyšování bezpečnosti na pozemních komunikacích, CDV Brno, 2001-2005

[6] Malina, T.: TP 135 Projektování okružních křižovatek na silnicích a místních komunikacích, V-Projekt s.r.o Ostrava, MDS ČR, 2000

[7] TP 83 Odvodnění pozemních komunikací, Pragoprojekt Praha, 1997

[8] ČSN 736102 Projektování křižovatek na silničních komunikacích

[9] ČSN 360410 Osvětlení místních komunikací

[10] TP 65 Zásady pro dopravní značení na pozemních komunikacích, CDV Brno, 2002

[11] TP 100 Zásady pro orientační dopravní značení na pozemních komunikacích, CDV Brno, 1999

[12] TP 133 Zásady pro vodorovné dopravní značení na pozemních komunikacích, CDV Brno, 2001

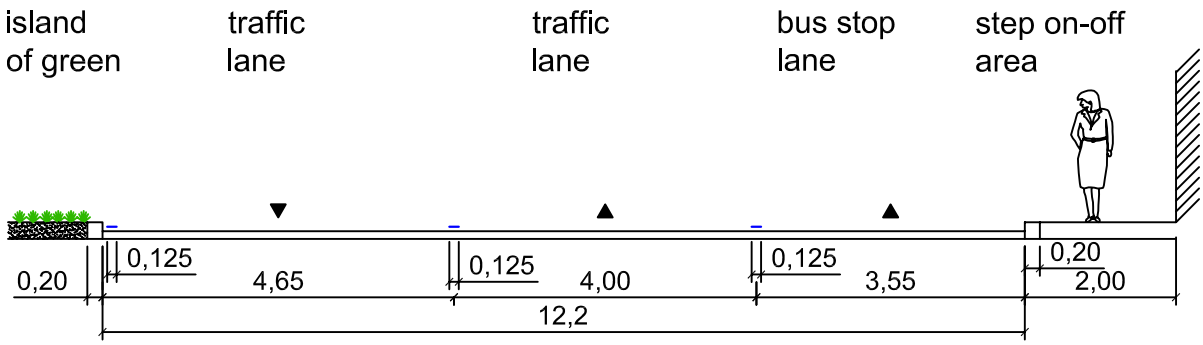
[13] Kotas, P.: Dopraví systémy a stavby, ČVUT Praha, 2002

[14] Kočárková, D.; Slabý, P.; Kocourek, J.; Jacura, M.: Základy dopravního inženýrství, ČVUT Praha, 2004

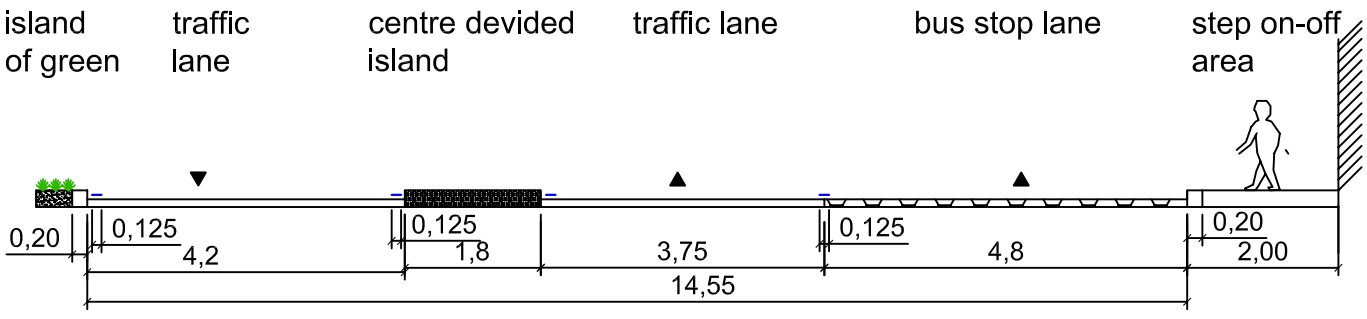


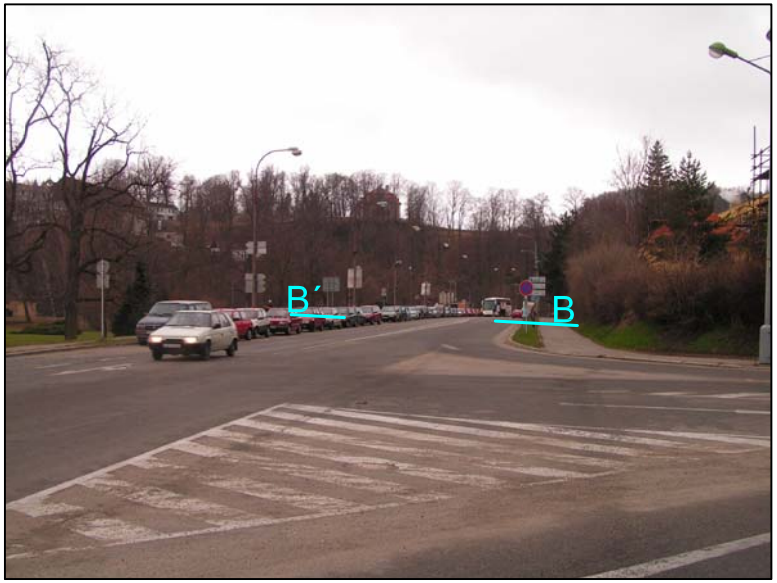
Cross section A-A´ (intersection Špičák)

present condition



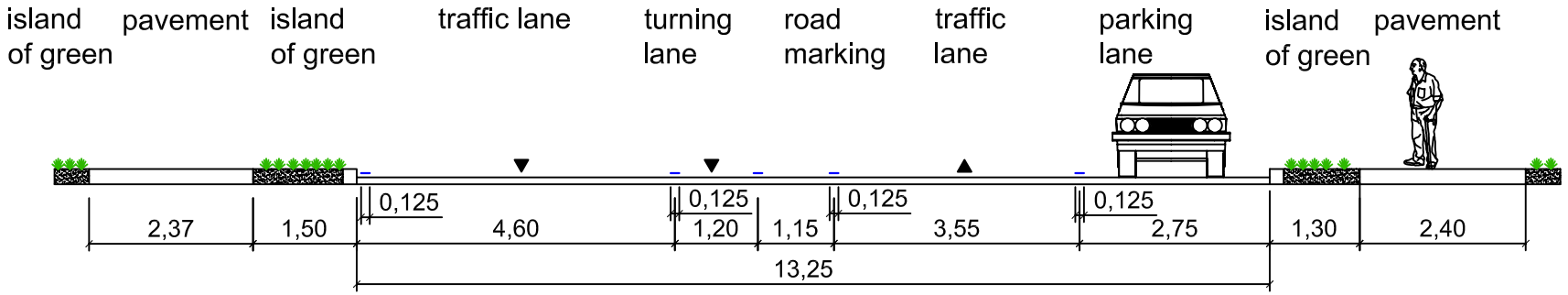
suggested solution



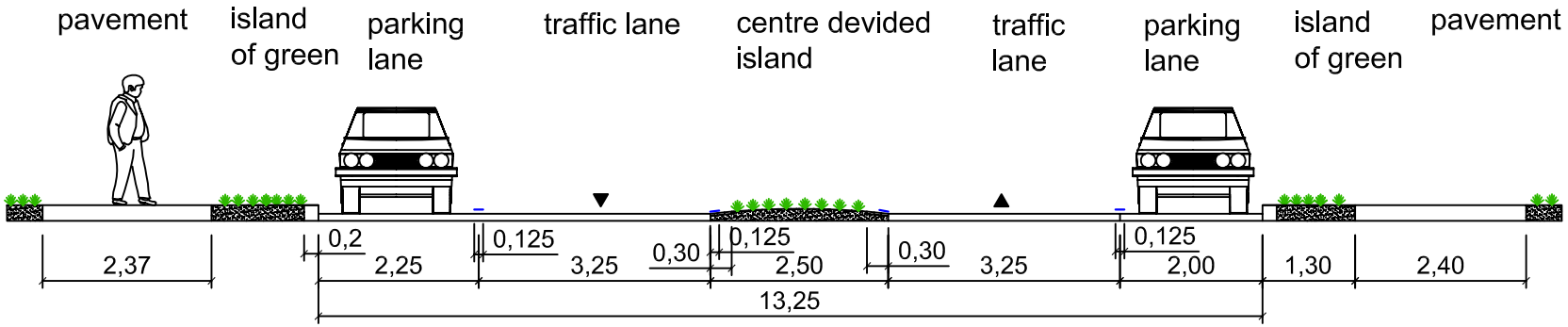


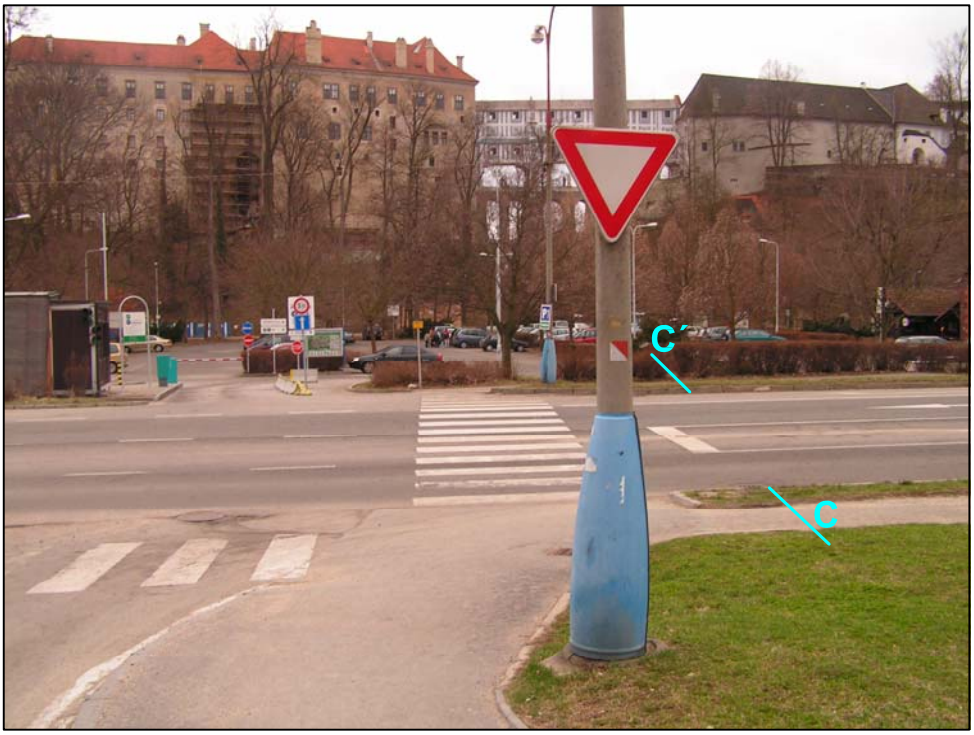
Cross section B-B´

present condition



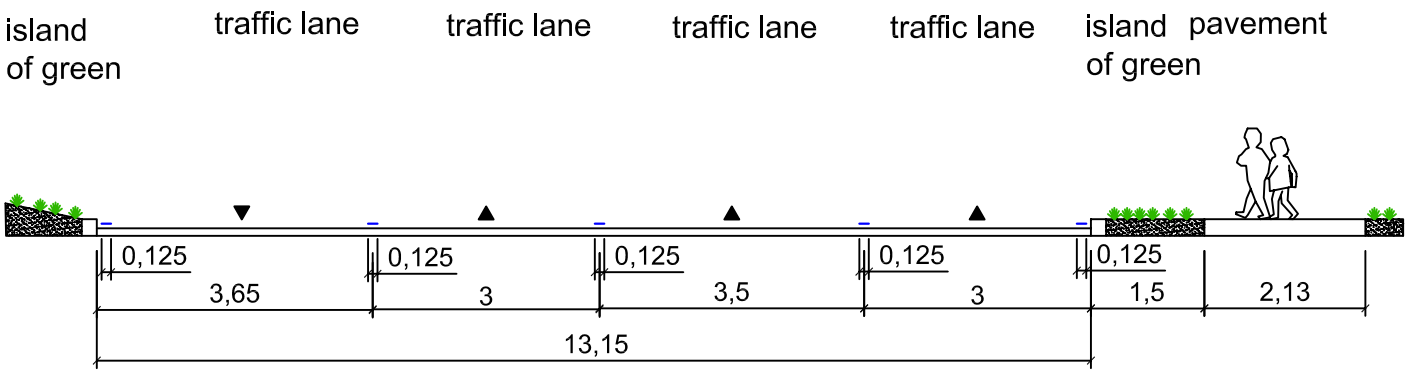
suggested solution



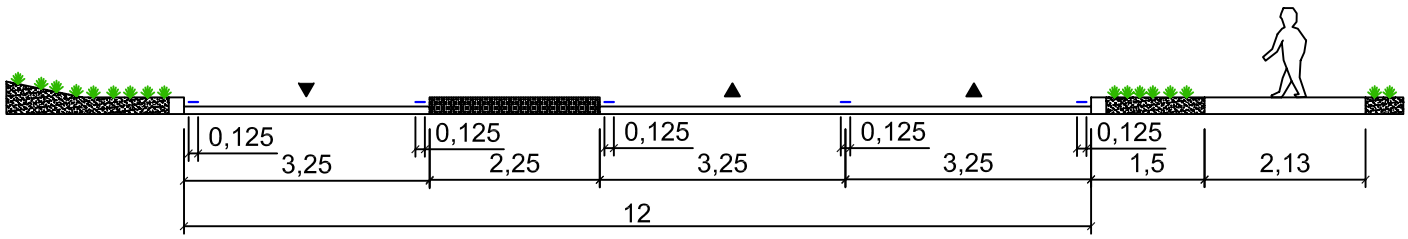


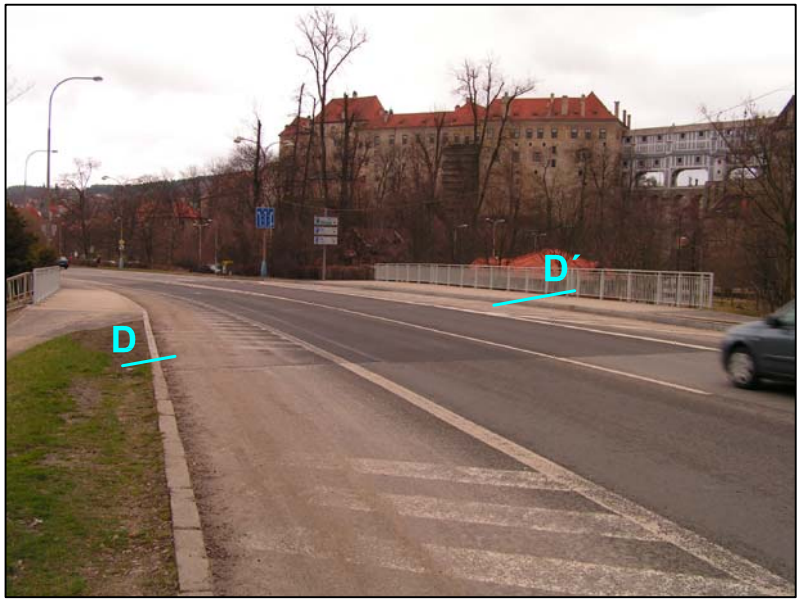
Cross section C-C´(intersection Jelenka)

present condition



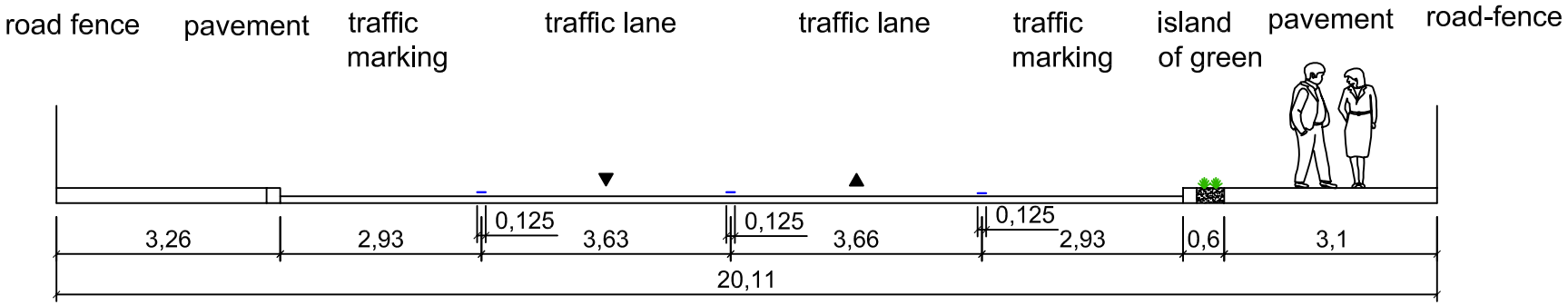
suggested solution



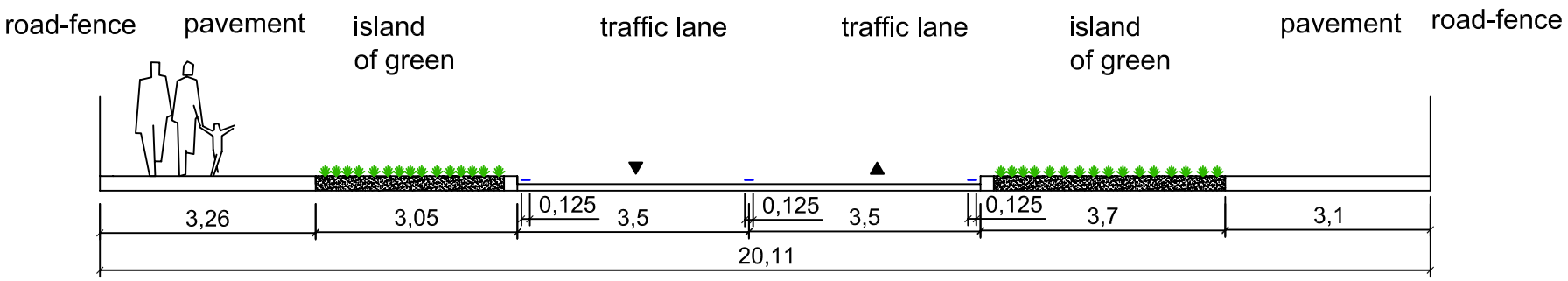


Cross section D-D´

present condition



suggested solution

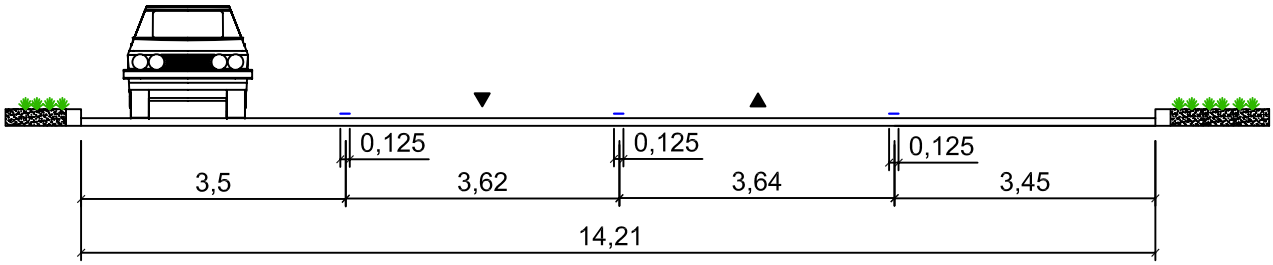




Cross section E-E´

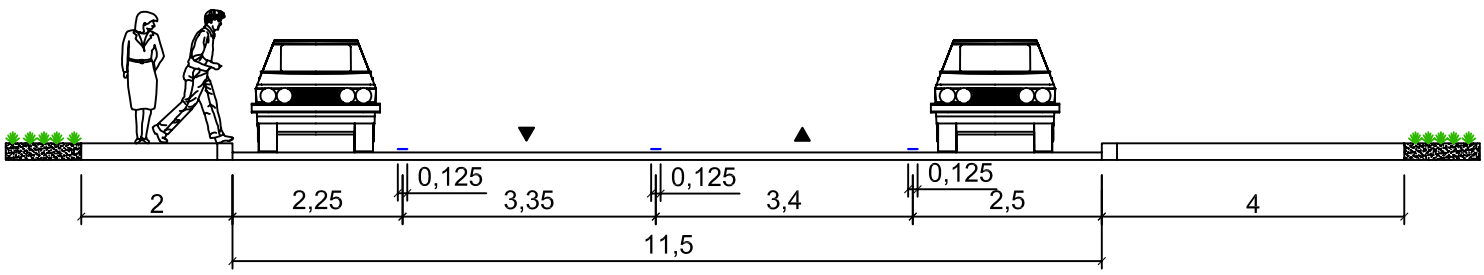
present condition

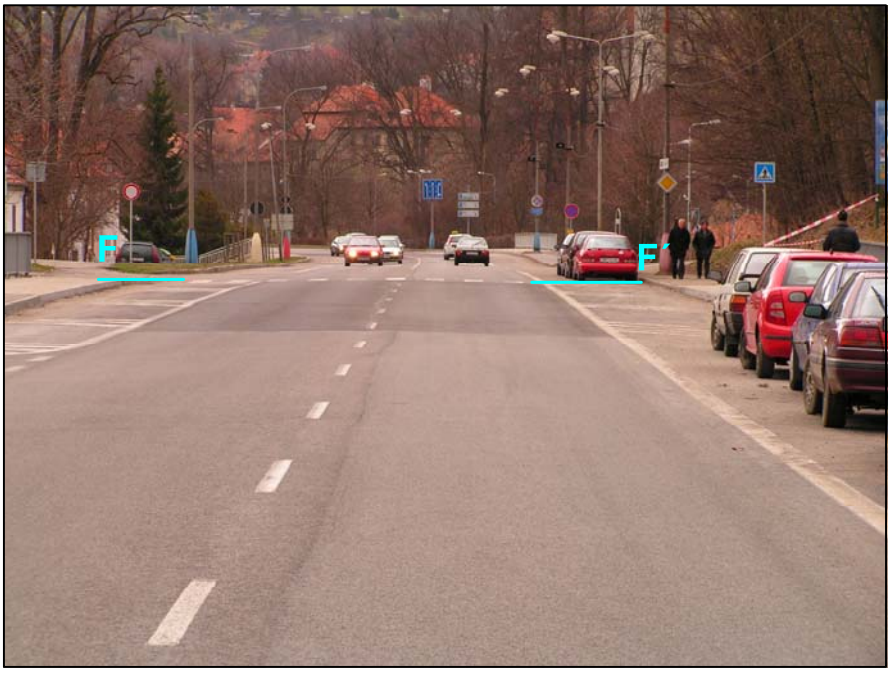
island of green | parking lane | traffic lane | traffic lane | traffic marking | island of green



suggested solution

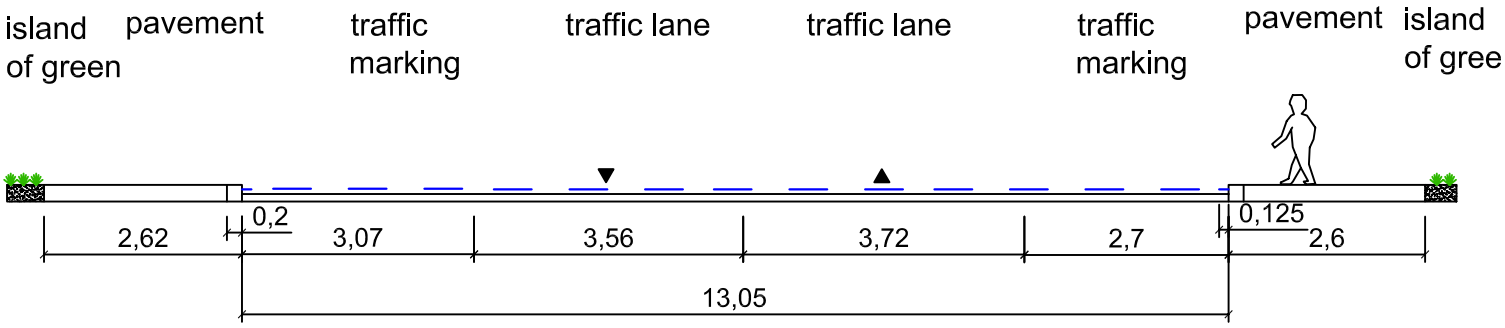
island of green | pavement | parking lane | traffic lane | traffic lane | parking lane | pavement | island of green



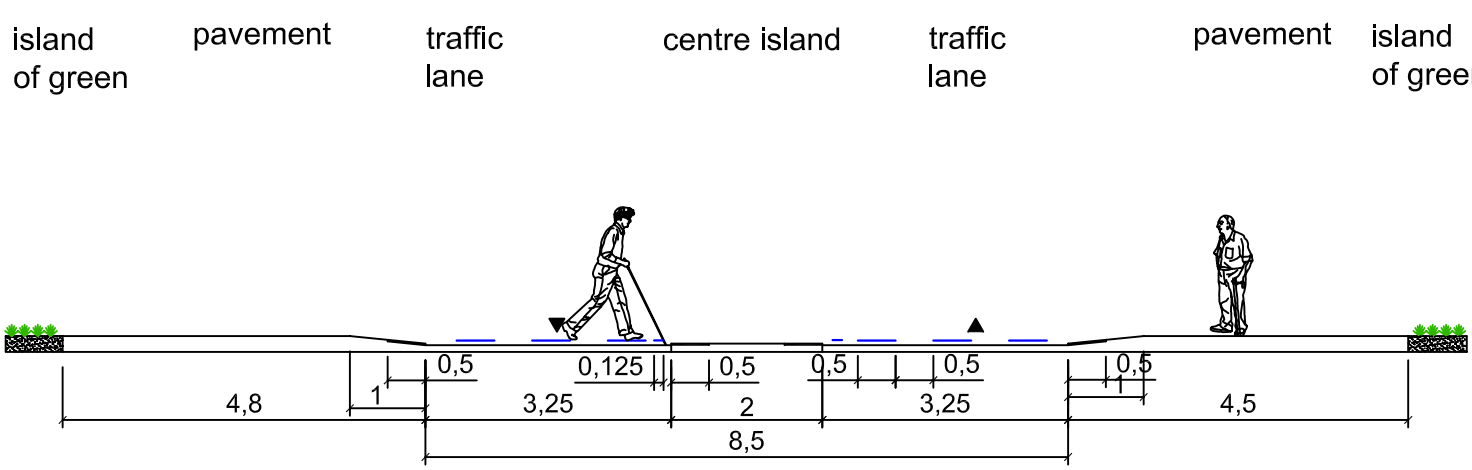


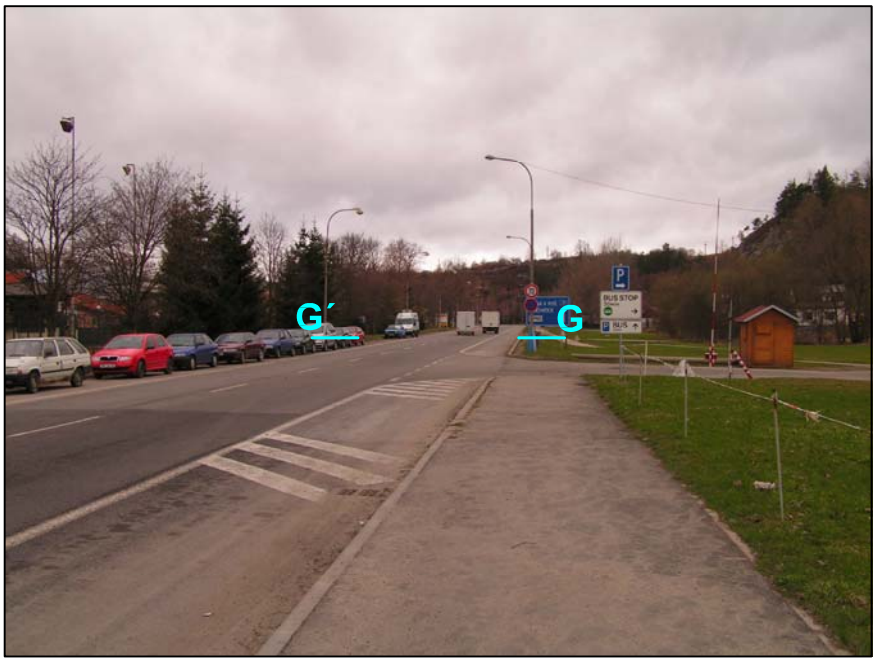
Cross section F-F´

present condition



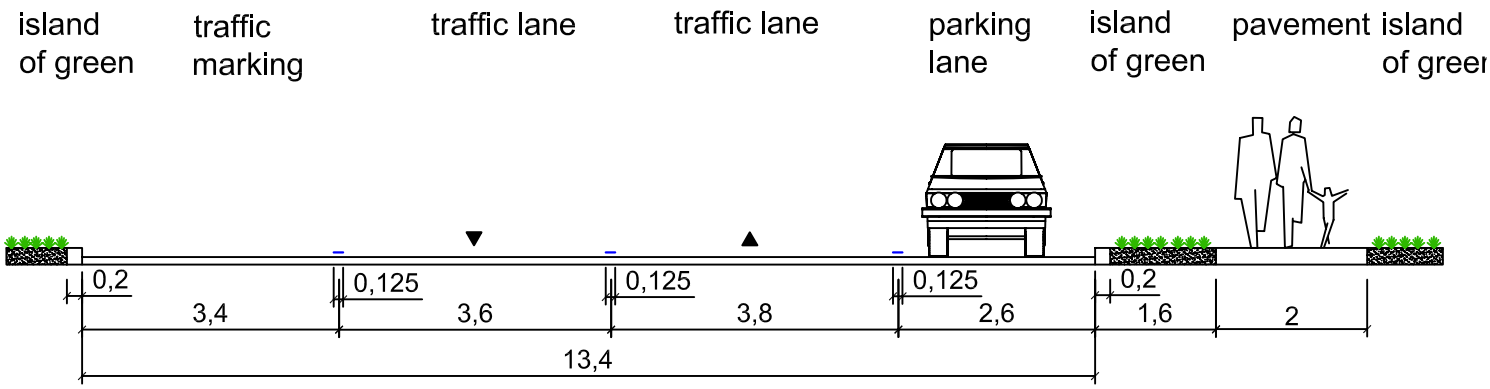
suggested solution



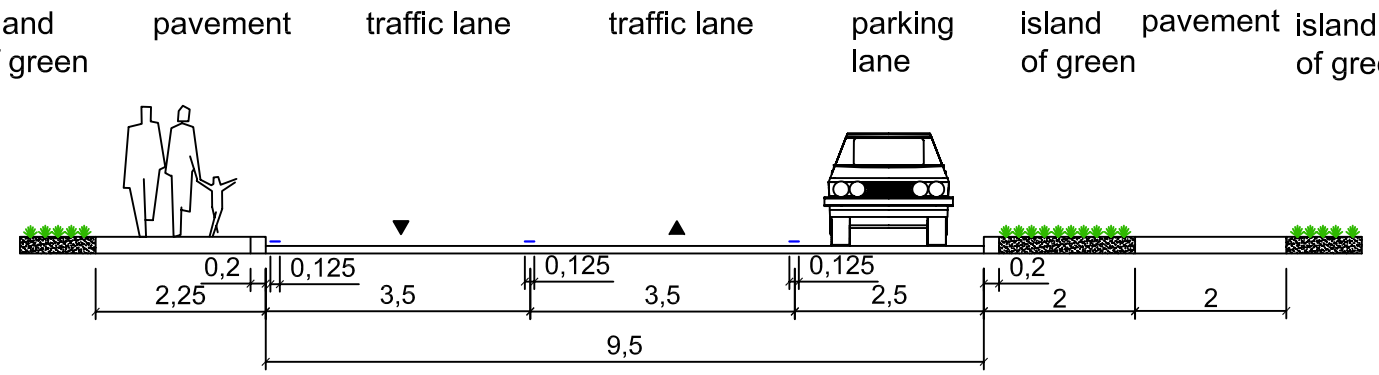


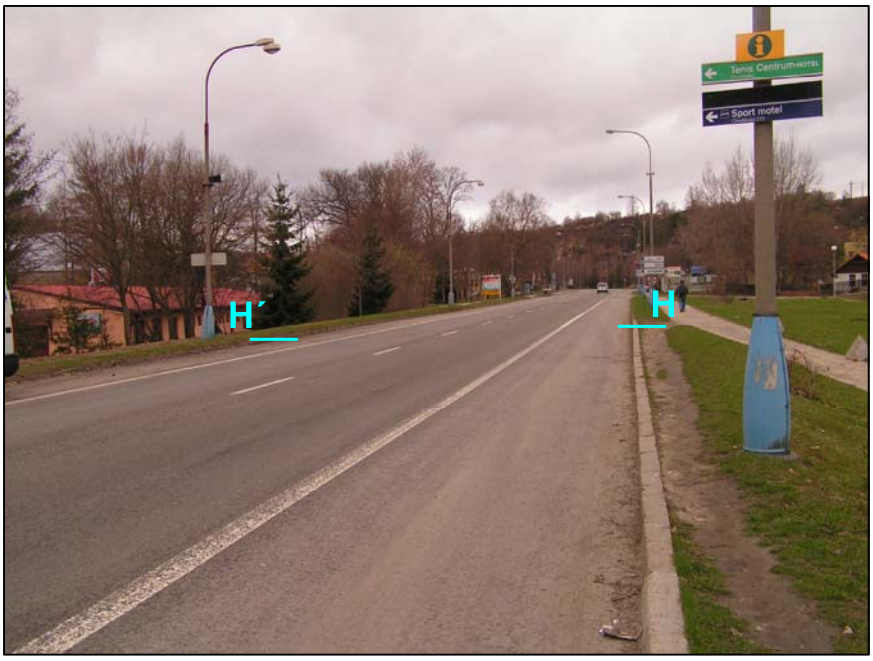
Řez G-G´

present condition



suggested solution

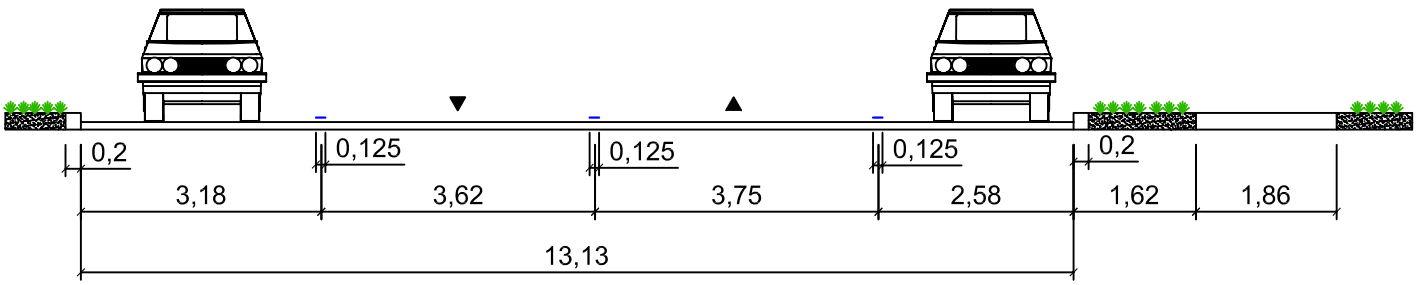




Cross section H-H´

present condition

island of green | parking lane | traffic lane | traffic lane | parking lane | island of green | pavement



suggested solution

island of green | pavement | traffic lane | traffic lane | bus stop for urban mass transportation | step on-off area | island of green

