

## NEW DISCOVERIES OF EARLY MEDIEVAL STREETS IN LESSER TOWN IN PRAGUE. CONTRIBUTION TO KNOWLEDGE OF COMMUNICATIONS NETWORK OF SUBURBIUM OF THE PRAGUE CASTLE

Between the years 2006 and 2008 a thorough archaeological research was conducted on the plot of a former town house no. 260/III. The excavations completely analyzed the historical terrains (Cymbalak, Podliska 2008; 2009; Podliska, Cymbalak 2009). The building, the first records of which trace back to the 15<sup>th</sup> century, is situated in the south-east corner of Lesser Town's Square (Vlček et al. 1999, p. 363). By its location within Prague's residential agglomeration it is situated in the very core of the oldest early medieval suburbium under the Prague Castle, nowadays Lesser Town (Malá Strana; fig. 1). Approximately 270 m<sup>3</sup> of occupation horizons with an extraordinarily complicated stratigraphy, at times even 4 m wide, was archaeologically analyzed, and more than 18 500 artefacts were extracted, dating

from early Medieval to Modern Age. The recently explored locations showed a complicated construction development of the building since the late Gothic Era up to the last Classicist alterations in the 19<sup>th</sup> century. The earlier horizon proved a dynamic settlement usage of the explored area during the whole Medieval Era. Various recessed buildings, fragments of the oldest masonry build-up area and above all the fortification elements of Lesser Town from the second half of the 13<sup>th</sup> century were documented. A massive functionally structured settlement strata belonged to Early Middle Ages. Construction relicts of several wooden roads could be dated between the first half of the 10<sup>th</sup> century and the beginning of the 11<sup>th</sup> century (fig. 2–4).

### BRIEF ARCHAEOLOGICAL AND HISTORICAL CONTEXT OF THE AREA OF LESSER TOWN IN THE EARLY MIDDLE AGES

The development of the settlement in the area of the Lesser Town Basin (excepting prehistoric times) began between the 7<sup>th</sup> and 8<sup>th</sup> centuries (Čiháková 1999, p. 13). According to the latest results of archaeological excavations the early residence on the promontory of „Hradčany” situated above Vltava River and later the establishment of the Prague Castle as a seat of the ruling clan can be placed to the period around mid 9<sup>th</sup> century (Frolík, Smetánka 1997, p. 34).

This event is probably connected to the decline of the leading role of Levý Hradec as a main residence of the first Přemyslids and consequently to its moving by approximately 10 km southwards, to the

place of present Hradčany and the Prague Castle (Frolík, Smetánka 1997, p. 38; Boháčová, Herichová 2008).

The choice of the promontory of Hradčany as a seat of the first Czech rulers was connected to several factors. Obviously the question of communication with other centres of early medieval settlement played a considerable role for its selection. It should be noted that in those days there was no easy ford across the river within several kilometres. Crossing Vltava River was only possible using the fords and islands located just in the centre of Prague's promontory (Hrdlička 2000, p. 48). It should also be mentioned that the distant trade routes heading from west

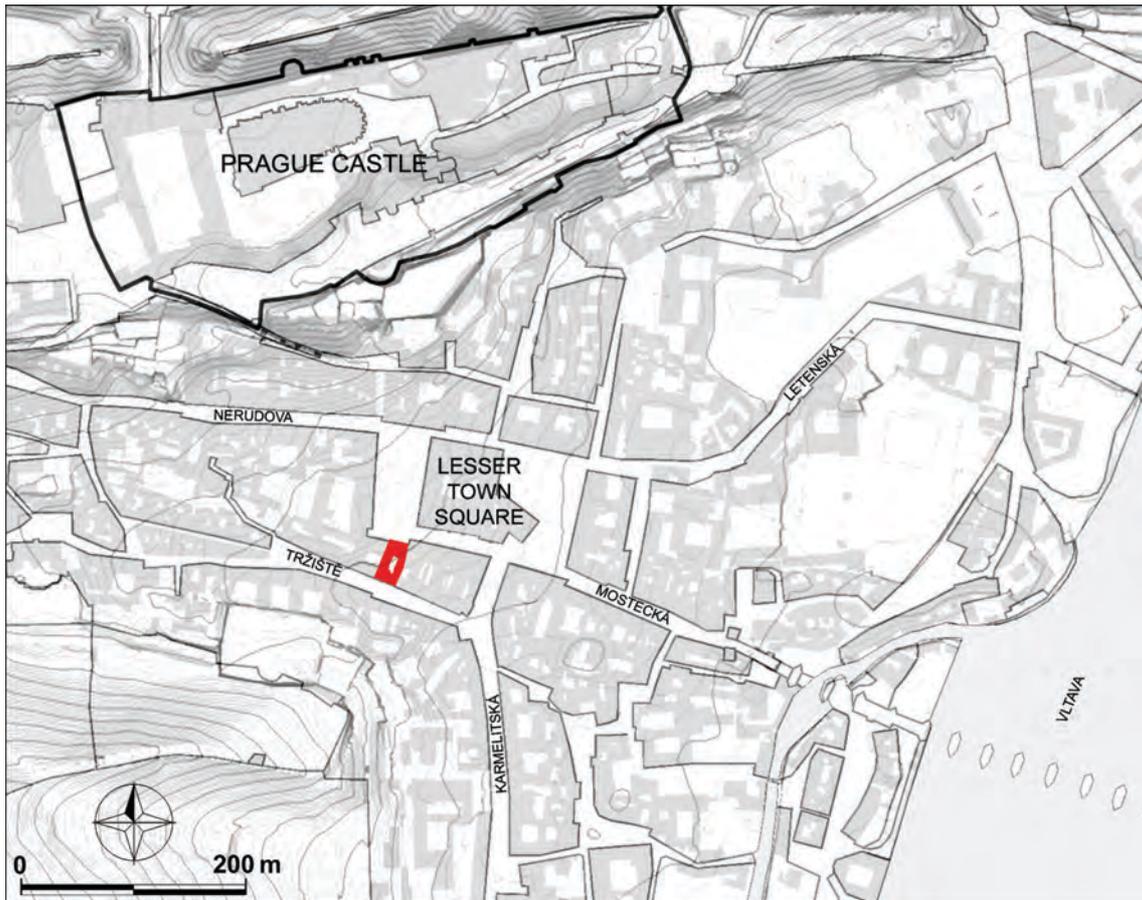


Fig. 1. Prague 1 – Lesser Town, Lesser Town Square, plot no. 260/III. Localization of the research work.  
Graphic design by J. Hlavatý



Fig. 2. Surface of one of the levels of a documented early medieval road (see fig. 4 – green)



Fig. 3. Example of a road construction (see fig. 4 – red)

to east and from south to north were intersecting in this area (Čiháková 2000, p. 175). Controlling those routes presumably provided the ruler above all with a profitable income from the protection of merchants' caravans (Ječný 1987, p. 24).

With a certain probability the enlargement of the dwelling area also played a substantial role in the choice of the new ruler's seat.

The symbolic importance of Hradčany still remains an unanswered question. According to professional literature the localization of the residence built of stones, the enthroning place of Czech sovereigns, is placed at the centre of the later fortified promontory of Hradčany (Lutovský 2005, p. 872).

The examined area was situated outside the fortification of the suburbium during the first period of the Early Middle Ages (800–950), and in a later phase was integrated into the fortification (Čiháková 1999, p. 15; 2001, p. 49). More than thousand years of development have left in the settlement core a stratigraphy of historical terrains about a 3 m in diameter, with numerous remains of structures, dwellings, agricultural and strategic buildings, as well as well-preserved wooden components. Remains of wooden constructions, undoubtedly belong-

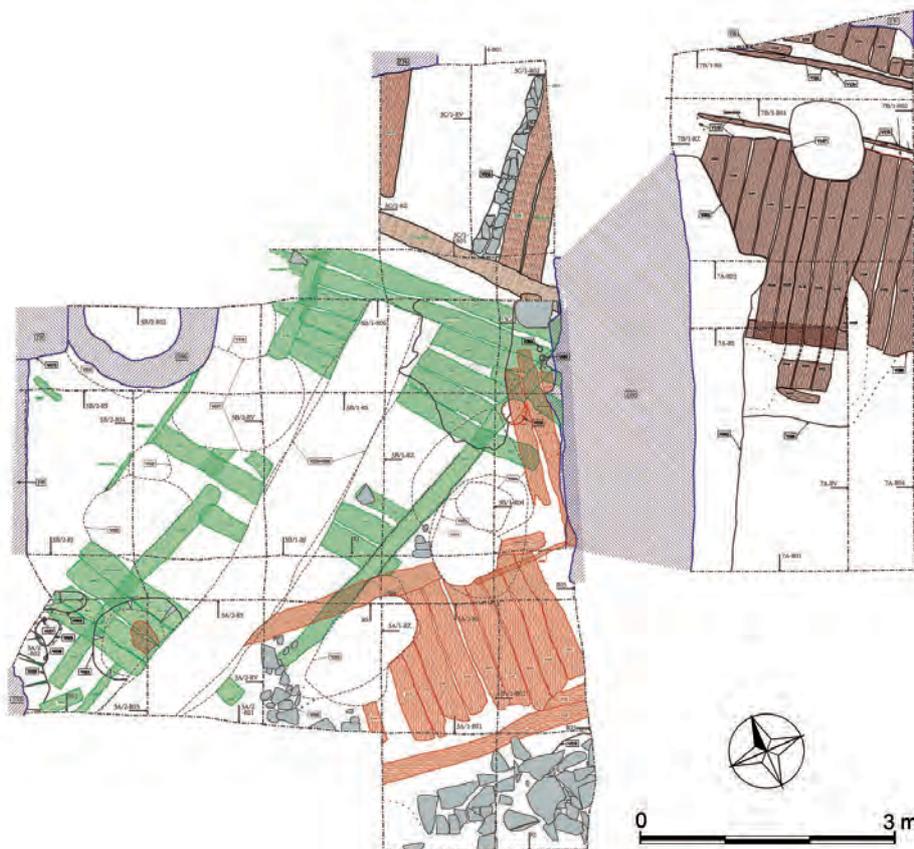


Fig. 4. Maximum extent of one of the levels of early medieval roads explored by the research. Earlier road: red – north-west – south-east direction. Later roads: green – south-west – north-east direction; orange – west-east direction.

Graphic design by M. Ditmarová, T. Cymbalak

ing to communications, were found inside as well as outside the early medieval fortified area (Čiháková 1996; 1997; Čiháková, Dobrý 1999, p. 339).

With the foundation of the town corporation of Lesser Town after 1257, the whole area of the suburbium underwent a distinct transformation, which permanently made its mark and shaped the archaeological terrains (Hrdlička 2000, p. 50). Gradual development of the town is evidenced by traces of building activities (erection of houses, ecclesiasti-

cal buildings and premises) connected with repetitive ground and public space shaping (extensive ground shaping of the territory, lowering of terrains, new public space layout). The erection of the town fortification also proved a significant medieval urban transformation.

From the standpoint of historical development, on the building in the research area the northern basement part reversed by its front to the square belonged to the oldest part of the construction (fig. 1). In the

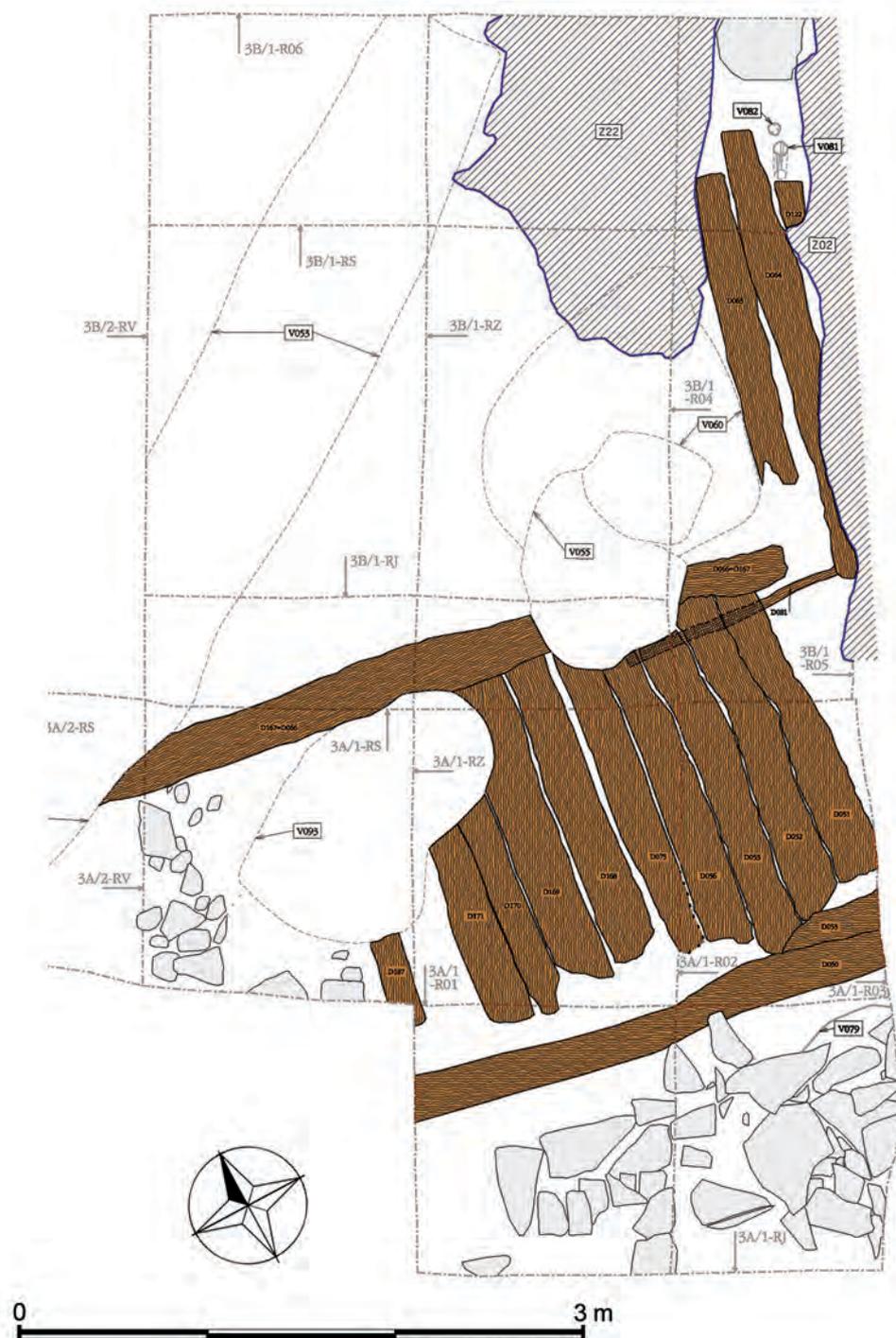


Fig. 5. Construction of the surface of an earlier road (see fig. 4 – orange). Graphic design by M. Ditmarová, J. Hlavatý

earliest period of the town the building estate markedly featured a smaller size (ca 40%) in comparison with nowadays. The southern half of the estate originally belonged to the belt of the town fortifications from the second half of the 13<sup>th</sup> century. After the demolition of the building in the second half of

the 14<sup>th</sup> century the vacant place was used for town development.

History of the house plot no. 260 is connected to several building transformations of its size between the Late Middle Ages and Modern Age but lacks an immediate connection with the above mentioned discovery of early medieval communications.

## METHODOLOGY OF THE RESEARCH

Terrain work itself took place on a relatively wide area of the house estate situated in the south-western part of Lesser Town Square, located in the block of houses between the square and Tržiště Street (fig. 1). The extension of the examined area was limited by the extension of the building project. Methodology of the research as well as the strategy of the terrain scheduling were chosen with care, proceeding in a manner as detailed as possible with record-

ing of single settlement strata and their mutual intertwining with the evolution of the town estate. Being an integral part of the project, the confrontation of the results of older researches with actually revealed situations has brought up an outline of unchained development of the settlement of the area from the 10<sup>th</sup> to the 20<sup>th</sup> centuries. Research work continued with shorter breaks for ca eight months.

## ARCHEOLOGICAL FINDINGS FOR THE PERIOD OF HIGH MIDDLE AGES AND MODERN AGE

The early medieval stratum was preceded by several chronologically earlier, but no less important findings. Among the most important ones was a 7 m long, 2.4 m wide and almost 1 m high fragment of the foundation part of the main wall of the Přemyslid fortification of Lesser Town from the second half of the 13<sup>th</sup> century (accompanied by a fragment of the moat). The building development of the town estate could be observed on the basis of the remains of several typologically various walled constructions and features (a High Medieval cellar, a recessed en-

trance to the cellars and a well).

Parts of existing but also destroyed building constructions of the house from the periods of Late Gothic to Classicism belonged to the latest periods. The most interesting discovery from the later period of the house was an adit documented in the second basement of the eastern Renaissance wing of the building. The detailed scrutiny of the drainage system proved its connection with a ca 15 m deep modern age well, revealed by the research in the southern part of the present yard.

## SITUATION OF FINDS AND CONSTRUCTION OF EARLY MEDIEVAL COMMUNICATIONS

During the archaeological research of the area situated in the northern half of the yard and the neighbouring premises situated under the western wing of the house in the lower part of historical terrains, the depth of ca 1.5–3.5 m (measured from nowadays surface) revealed a huge strata formed by remains of markedly decomposed wooden constructions of the roads (fig. 2, 3). As regards the finds, remains of roads leading approximately in three directions were uncovered in several depth levels (fig. 4). The extension of the exposure of particular sections of the roads was limited by the building project and by constructions of the existing house. Their uncovered length ranged from 6.75 to 7.25 m. Preservation of single sections and levels considerably differed. Stratigraphically later levels were rather fragmentary in comparison with the earlier ones. But the basic construction pattern was similar for all the

roads. It was always in the form of two main massive beams, evenly spaced, with planks laid across and fixed together lengthwise, thus forming the surface of the road. The width of single sections varied. The oldest communication oriented in the west–east direction reached the smallest width of ca 2.4 m (fig. 4 – orange, 5). The remaining two directions were of almost the same width of ca 3.2–3.4 m. The material used for the road construction was found to be oak / *Quercus* on the basis of a species analysis (Dobry 2007). Individual roads sometimes differed one from the other, above all by the number of levels above them and partial constructional details.

The oldest communication means (fig. 4 – orange) was preserved only on one level. In contrast with the others its foundations were slightly recessed into the subsoil. The foundation excavation was

found to be lined by a layer of argillite stones and pebbles topped by the wooden construction itself.

After the destruction of the oldest road, two new roads emerged (fig. 6), the first one oriented north-west-southeast (fig. 3, 4 – red) and the second one more or less upright on the first one in the direction of the southeast-northwest (fig. 2, 4 – green). The development of both, for a certain time simultaneously functioning communications, was a long-term enterprise as well as a richer construction. The narrower road (fig. 4 – green) was similarly constructed on main beams imbedded on the surface of slope clays. Five levels in total were identified, the earlier one being equipped with a timbered drain (?).

The same number of road levels was recorded at the northern road (fig. 4 – red), which we consider as the main road, according to the pattern of the communications network of the suburbium. Five road

horizons spaced in regular intervals one over the other were documented. Particular levels were separated from each other by a ca 8–10 cm wide layer of clay and sand soil with organic addition related to their function (fig. 7).

The exploration of the two earliest levels of this road has shown, that there used to be parallel communication means, the width of one lane being ca 3 m (maximum), and divided by a ca 0.8 m wide trough, evidently a drain (fig. 6 – right upper corner of the map). However, after some time the drain was covered up and both lanes were joined together into one continuous road with a width of more than 5 m (fig. 7). Cumulation of huge pillared items holding up the construction itself, evidenced by the negatives, belongs to another technical specificity of the above road. Three groups in total were found in partial intervals in the foundation section in the northwest part



Fig. 6. Construction of the surface of later roads (see fig. 4 – orange, green) north-west – south-east direction and south-west – north-east direction. Graphic design by M. Ditmarová, J. Hlavatý

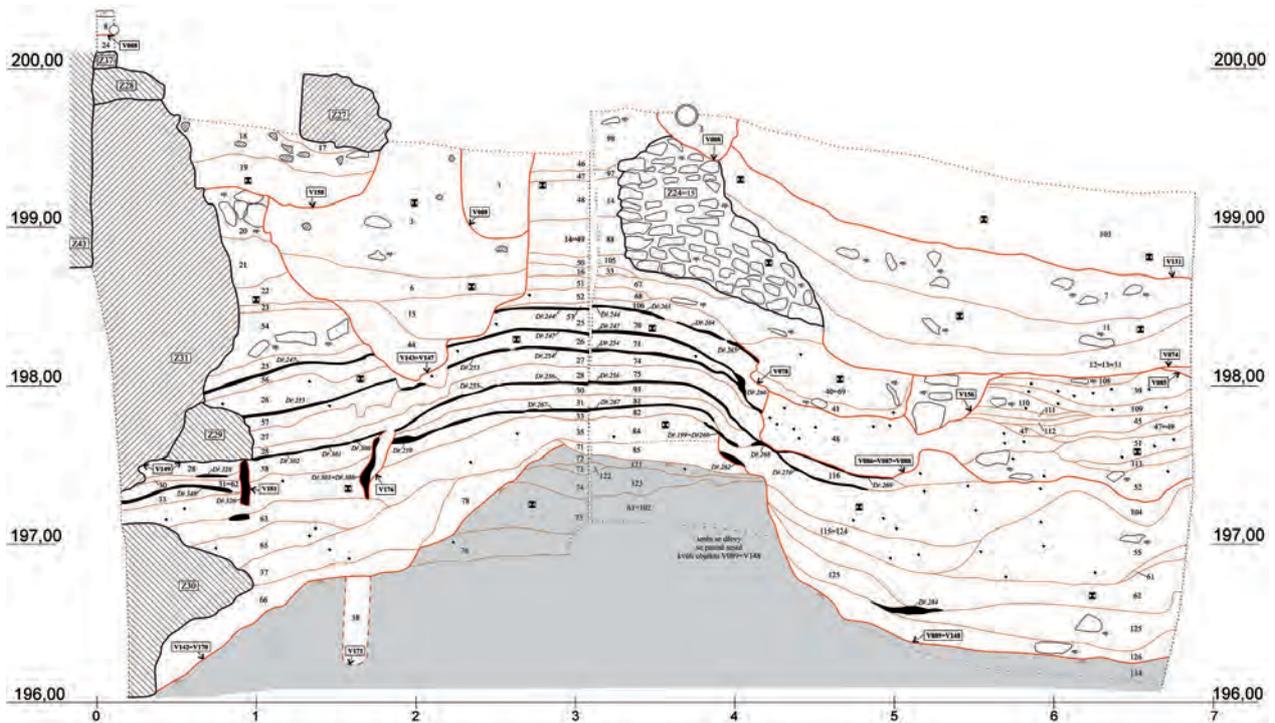


Fig. 7. Stratigraphy of the communications strata inside the body of a later road (see fig. 4 – red). Situation in the middle of the north-west – south-east road typical of the highest number of communications levels (5). Division of the oldest parts of the communication by a trough evident in the left lower part of the profile. Earlier, sizeable, recessed feature of dwelling character (?). Graphic design by O. Pulkert, T. Cymbalak

of the explored area. The main items of each group were vertically recessed wooden pillars of 0.34 m in diameter, which were supported by obliquely placed wooden stanchions of smaller diameter. Wooden items were recessed into the geological subsoil formed by slope clays. Each group had its counterpart on the other side of the road, and its distance ranged from 1.8 m to 2 m. Ten vertical items, the purpose of which was to raise the road above surface level, were documented (fig. 8).

The road had been constructed in such a manner, because the surrounding terrain was geologically rather unstable and therefore unsuitable for building the road directly on its surface. This conclusion was also corroborated by the findings of the geological research, which repeatedly detected remains of local marsh in this area (Čiháková 1999, p. 11; Zavřel 2001, p. 20). Thus the road was partly formed by

a bridge construction over the flooded terrain of the marsh. This fact most probably contributed to repeated renovations of the road surface and so testifies to gradual and marked growth of communications in that direction. Also other factors could have had an obvious influence such as increased traffic on the road, which reflected in repeated renovations of its surface as well as of the whole construction.

After destruction of the communication means, the area was found to be overlaid by a huge settlement strata of ca 1.2 m in width with domineering positions in upper part with destructions of minimally two unknown buildings with a ruined stone base wall, negatives of various pits referring perhaps to a former wooden build-up area. This marked stratum illustrates a completely different urban exploitation of the surveyed area from the 11th century to the first half of the 13th century.

#### CHRONOLOGY OF THE ROADS

The question of absolute dating of particular roads has remained unanswered. One of the reasons lied above all in bad condition of documented pieces of wood from their constructions which did not allow to carry out a positive dendrochronological measurement from more than 390 mineralized samples (Do-

brý 2007). Only the analysis of rather a small collection of pottery enabled at least general dating of the building as well as existence of single levels of roads into the period from the 1st half of the 10th century to the beginning of the 11th century.

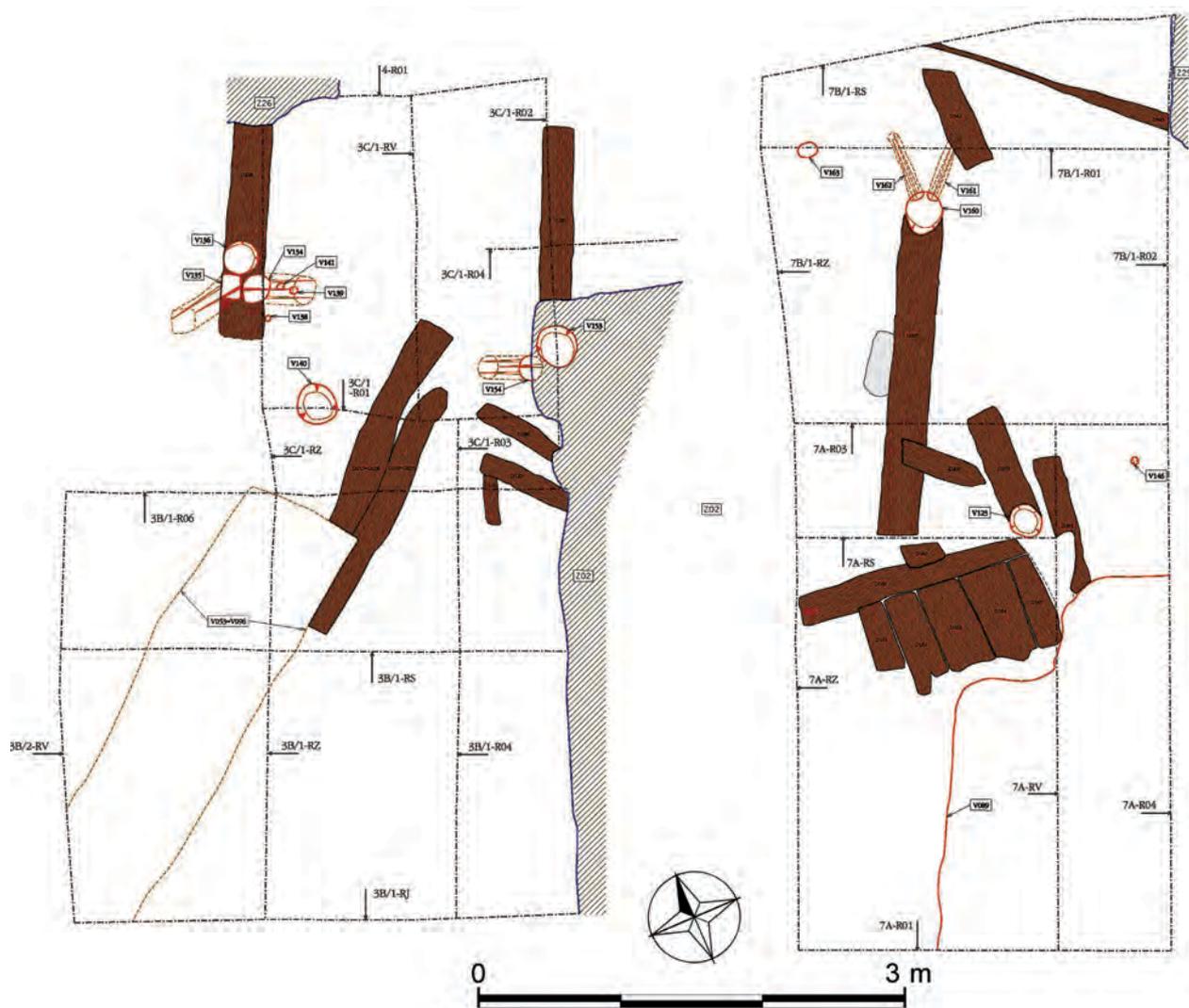


Fig. 8. Negatives showing wooden poles and single foundation components of construction of the wooden road (see fig. 4 – red). Graphic design by M. Ditmarová, J. Hlavatý

The earliest communication (fig. 4 – orange) was hereby on the basis of appearance of fractions of pottery with collar like profile rims dated into Middle Hill-Fort period (the 1st half of the 10th century). Later couple of roads (fig. 4 – red, green) were connected with the circulation of the pottery with chalice like profiled rims, the focal point of which

belongs to the course of the 2nd half of the 10th century. The latest levels of these roads may be linked with the period of fading of this type of edge, therefore in the course of the 1st half of the 11th century. Herein to emphasize, the number of found fractions of the pottery was relatively small and chronologically not very conclusive.

#### EARLY FINDINGS OF EARLY MEDIEVAL COMMUNICATIONS FROM THE AREA OF LESSER TOWN

The latest finding of wooden roads in the house plot no. 260 is closely associated with the question of the communications network of early medieval suburbium of the Prague Castle. Also in the past the archaeologists could explore the remains of communications from above mentioned period on several places of Lesser Town.

The most important as well as the biggest areal discovery of an early medieval communication was carried out in the area of nowadays Mostecká Street and neighbouring Josefská Street which was described as a huge foundation construction composed into a rectangular network of frames without extent communications levels. The total documented length

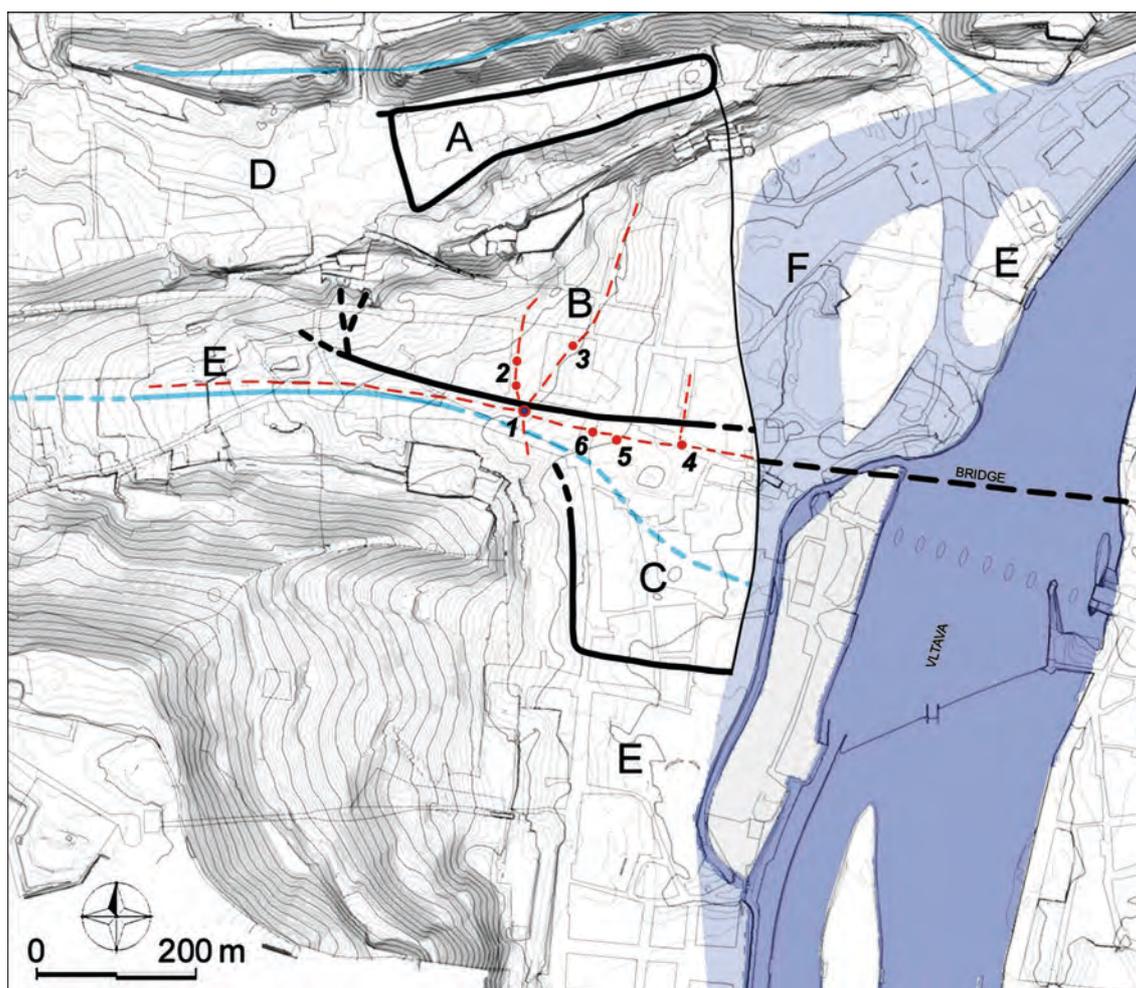


Fig. 9. Reconstruction of the network of early medieval roads in the area of the fortified Lesser Town's suburbium with highlighting of the development of its fortification, main communications directions and archaeological discovery of early medieval roads: red – localization of particular discoveries of early medieval roads and their reconstruction (shaded); blue – course of Malostranský potok (brook); A – the Prague Castle in romanesque era; B – area of suburbium; C – southern residential area; D – residential area of Hradčany; E – settlement outside Lesser Town's fortification; F – old branch of Vltava River; 1 – Lesser Town Square plot no. 260; 2 – Lesser Town Square plot no. 993; 3 – Lesser Town Square plot no. 2; 4 – Mostecká Street; 5 – Lesser Town Square plot no. 271; 6 – Karmelitská Street. Graphic design by J. Hlavatý, T. Cymbalák

of this road in the line different from nowadays Mostecká Street was ca 40 m and its width exceeded 23 m with a branch leading in the centre line of nowadays Josefská Street. Acquired dendrochronological data of pieces of wood used during the road construction enabled their dating into the period of from the end of the 9th to the half of the 10th centuries (Čiháková 1998, p. 258–259; 2000a, p. 358; Čiháková, Dobrý 1999). Another fragments of wooden constructions interpreted as early medieval communications were found in the western part of the upper part of Lesser Town Square, plot No. 993 (Čiháková, Müller 2008), in the northern part of Karmelitská Street (Čiháková, Zavřel 1998, p. 259, 260) and in the cellarage of the house with plot no. 271 on Lesser Town Square (Čiháková 2004, p. 350; 2008a). These findings again documented the situ-

ations dated into the course of the 10th century. The earliest evidence of a road in Lesser Town's suburbium is the finding situation documented in the area of the house plot no. 2 situated in the centre of Lesser Town Square. This was a two-phase communication, out of which the earliest road, paved by stones and by chance also by animal bones was dated into the beginning of the 9th century. The stratigraphically following wooden communication functioned approximately on the verge of the 9th century (Čiháková 2003; 2008; Čiháková, Havrda 2008, p. 218).

The closest known analogy for the findings from the area of Lesser Town is represented by the massive wooden and stone communication dated into the 10th century, excavated in the area of the Third Court of the Prague Castle (Boháčová 1998, p. 10, 11; Frolík, Smetánka 1997, p. 89).

## CONCLUSION

The discovered section of wooden communications signifies together with the earlier mosaic of findings a considerable contribution to the knowledge of the structure of communications network of the suburbium of the Prague Castle in Early Middle Ages. The extraordinary contribution lies in the dislocation of the finding itself – the crossing of roads which in the combination with so far known topography of the suburbium was found in the strategic position in front of its fortification in the area of a potential entrance (gate?) into the centre of the suburbium. Thanks to its position it can be connected with the section of so far documented roads in the

eastern part of Lesser Town directing to the crossing or later bridge across Vltava river (fig. 9). This section was probably an integral part of a traditionally mentioned backbone communication coming through the centre of the Prague Basin from the west to the east (Čiháková 1999, p. 19; 2000, p. 175; Čiháková, Zavřel 1997, p. 99, 100; Čiháková et al. 2000, p. 131–133). More detailed knowledge of the chronology of the development of the whole communication system of the fortified area under the Prague Castle and its gradual transformation still belongs to the main targets of a following research.

*Translated by B. Cymbalak-Jankovská*

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