PROSTOR

29 [2021] 1 [61]

A SCHOLARLY JOURNAL OF ARCHITECTURE AND URBAN PLANNING
ZNANSTVENI ČASOPIS ZA ARHITEKTURU I URBANIZAM

UNIVERSITY OF ZAGREB, FACULTY OF ARCHITECTURE
SVEUČILIŠTE U ZAGREBU, ARHITEKTONSKI FAKULTET

ISSN 1330-0652
https://doi.org/10.31522/p
UDC 71/72
CODEN PORREV
29 [2021] 1 [61]
1-152
1-6 [2021]

Af

Fig. 1 Glavna street in 1910. The conflict of the new and pre-existing Ottoman urban structure

Borislav Puljić

Ecoplan d.o.o. Mostar, Dr. Ante Starčevića bb, Mostar, Bosnia and Herzegovina
boro.puljic@ecoplan.ba

Original Scientific Paper
https://doi.org/10.31522/p.29.1(61).1
UDC 711.4 (497.6 Mostar) "18/19"
Technical Sciences / Architecture and Urban Planning
2.01.02. – Urban and Physical Planning
Article Received / Accepted: 16. 4. 2021. / 18. 6. 2021.

Urbanization Models of Mostar in the Period of Austro-Hungarian Rule

Austro-Hungarian rule
legal basis
Mostar, Bosnia and Herzegovina
urbanization models
urban planning engineers

In the period of Austro-Hungarian occupation between 1878 and 1918, the City of Mostar had a process of intensive urbanization. In that period, newly arrived engineers (surveyors) transformed the pre-existing Eastern – Ottoman *qasaba* (provincial town) into a Central European city. This paper revealed four models of urbanization they used in planning. The first model was developed within the existing physical structure of the city through the first regulatory plan. The second model forms the new urban centre using the empty space within the old town. The third and the fourth models expand the city over the river. While the third model forms orthogonal urban blocks, the fourth is a construction of free-standing villas within the Neo-Baroque Square in which six radial streets inflow. The engineers who worked on the regulatory plans were also discovered and presented, as well as the legislative and legal framework within which all these processes took place.

INTRODUCTION

Mostar had an intensive development during the Austro-Hungarian rule between 1878 and 1918. In that time, between the statistical periods of 1879 and 1910, the number of inhabitants increased from 10,848 to 16,392, the number of houses increased by 860 and thus from 1,909 to 2,769, and the number of apartments by 894, or from 2,535 to 3,429. An increase in the number of inhabitants by 51%, as well as in the number of houses by 45%, and the number of apartments by 35% speaks of the intensity of construction in just thirty years (Hadžibegović, 1991: 26, 31, 79).

During this period, the first trained engineers came to Mostar, masters of all professions were educated, and a state legal framework for construction and planning was created (Zadro, 2017: 63-67; Dimitrijević, 1989: VI-29), and new architectural forms of Historicism and Secession were brought.

The city is changing, the houses are no longer inside a closed and walled complex, they go out on the street and get more floors. A building for rent is a novelty in the city. Only office buildings in the city centre – bazaar *(čaršija)* are slowly disappearing, residential and commercial buildings with a different content of the construction system and materials with now decorated historicist neo-styles are appearing. The city is developing infrastructure, new water supplies, sewers, bridges, squares, public buildings, railways, tobacco factory. All this took place in a planned manner, and depending on the time or the pre-existing condition at the location within four clearly visible and recognizable models, which is the main topic of this paper.

The research that resulted in this paper was conducted on several occasions between 2016 and 2020, when the Archives of Herzegovina in Mostar, Archives of Bosnia and Herzegovina in Sarajevo, as well as well as rare literature on this topic were consulted. The research in the Archives of the Cadaster of Municipality of Mostar, the Archives of the Franciscan Monastery in Mostar and the Museum of Herzegovina was conducted between 1988 and 1990. The aim of the paper was to discover the methods used in the urbanization of the city in the Austro-Hungarian period, their trace in today's physical structure, as well as the plans and authors of the plans and the legal framework that enabled these processes.

The biggest limitation in the deeper research of the topic is the destruction of a large part of the archival material due to lack of caring it in the post-war period. The research on this topic has not yet been carried out on the territory of Bosnia and Herzegovina.

LEGISLATIVE AND LEGAL FRAMEWORK OF URBANIZATION

Just before the end of the Ottoman occupation in Bosnia and Herzegovina, there was an attempt to modernize the Empire and transform it into a developed society as they were in the countries of Western Europe. Given that it was the very end of the Ottoman presence, as well as it was the province far from the centre, the reforms did not take root significantly and their impact was almost not felt. At that time, we record the arrival of the first few trained engineers in Bosnia and Herzegovina, and even in Mostar (Miletić, 2005: 330; Kurto, 1998: 287; Kreševljaković, 1969: 62; Puljić, 2020: 101-102). The then enacted *Law on Construction and Roads* from 1863 (Kruševac, 1960: 36; Kurto, 1998: 19; Sladović, 1913: 46) and the *Law on City Municipalities* from 1877 (Branković, 2009: 59-64) were applied only partially. With the arrival of the Austro-Hungarian rule, significant reforms in the field of construction and planning of cities and settlements began. The first was the enactment of the law "*Building Order for Sarajevo and Cities and Trade Markets in Bosnia and Herzegovina, which will be subjected to these institutions by a special order of the Provincial Government*" dated 14 May 1880 (ABiH, No. 19/602/32; Spasojević, 1988: 157-167). This building order (law) was passed only two years after the arrival of the Austro-Hungarian occupation troops. It represents a

significant progress in regulating the field of construction and planning and the adoption of modern construction achievements, and at the same time, it has been adapted to the local pre-existing conditions in order to implement it clearly. In addition to all the novelties it brought, it establishes the building permit institute and the obligatory development of architectural designs, as well as the presentation and adoption of regulatory plans, and thus establishing the city planning.

The Building Order for Sarajevo was discussed by the Construction Committee on 10 June 1886, and adopted by the Municipal Representation of Mostar on July 16 of the same year. All the proposed amendments to the Building Order for Sarajevo are the work of engineer Miloš Komadina, District Assistant Surveyor and are not small and insignificant, so we can consider him the author of this Building Order for the City of Mostar. Such an amended Building Order was prepared for the Mostar District Office, as the competent building authority, for further action by the Provincial Government where it was approved the same year (ABiH No. 19/602/32; MHM S.G.V. 5.7.1897). At several sessions of the City Council, the minutes say that Mostar does not have a building order (MHM, S.G.V. 28.10.1901, 22.8.1894), which is contrary to the documents in the Archives of Bosnia and Herzegovina in Sarajevo. It is probably thought here that Mostar did not accept the second building order for Sarajevo from 1893. Further research should provide an answer to this question.

In addition to many amendments, engineer Komadina proposed a new classification of streets. A proposal was adopted that the classification be proposed by the municipality, and adopted by the District Authority. Five categories of streets have been established for the old part of the city and the new city. The width of the first-class streets in the old town is 10 m, and in the new city is 12 m (at least 11.25 m in Sarajevo), the second class in the old town is 8 m, and 10 m in the new city (9 m in Sarajevo), the third class in the old town is 6 m, and 8 m in the new city (7.5 m in Sarajevo). Both Mostar and Sarajevo determined a street width of 6 m for the fourth class, as well as dead ends – the fifth class, both Mostar and Sarajevo at a minimum of 4 m. From these amendments one can see the desire of a smaller city for greater progress than the capital.

In Bosnia and Herzegovina, and even in Mostar, in accordance with the Order of the Provincial Government from 1878, the old Ottoman laws were applied until new ones were passed (Kruševac, 1960: 94). Although the Building Code for Sarajevo was passed in 1880, the old Ottoman Law on Construction and Roads from 1863 continued to be applied, but limited to some sensitive cases of expropriation of land, and in order to mitigate political problems (MHM: S.G.V.: 22.8.1894; 5.3.1891; 28.10.1901.). The German translation of this Law used in Mostar is located in the Archives of Herzegovina (Zadro, 2017: 62, 68; MHM, S.G.V.:16.10.1899; AHM: GHP bill of quantities K-1). At several places in the minutes of the City Council, its application can be seen over a longer period of time (MHM, S.G.V.: 5.3.1891).

The *"Regulation (Law) on Tax Exemption for New Construction and Reconstruction for The Cities of Mostar and Sarajevo"* published on 10 April 1884 is also important for the urbanization of Mostar and its intensity "Landesregierung für Bosnien und die Hercegovina №7458/I, Verardnung über die Steuerbefreiung von Neu = Zu und Umbauten von Gebäuden, gilting für die Städte Sarajevo und Mostar. Sarajevo von 10. april 1884." (ABiH bN. 253/1-41). It exempted construction investors from taxes in the most direct way and stimulated them to invest. This Regulation was valid for 10 years, i.e. until 1894, and its validity was extended until the end of 1899 (MHM, S.G.V.: 26.7.1897).

Registered plans (regulatory plans and sketches of plans)

By researching the Archives of Herzegovina in Mostar and the Archives of the Cadaster of the Municipality of Mostar the existence of several regulatory plans from that period was revealed. There are also a number of regulatory sketches that were analyzed to create a general picture of the development and planning of the city, but are not recorded here because we deemed it is not necessary at this level of research.

Thus, the subject of a detailed analysis were the following regulatory plans:

1. In the Archives of Herzegovina Mostar, there is a Regulatory Plan on one map for the entire western part of the then city, and in addition to part of the Rondo complex (Štefanijino šetalište street), there is also a regulated Bolnička street. Due to the year written by hand on the back, it is to be assumed that this plan was made in 1898. Due to the year written by hand on the back, it is to be assumed that this plan was made in 1898 (AHM, box No. 23) "*City Administration Mostar, Regulierungs Plan, Des Riedes Kremenak in Mostar, Mostab 1:2000*. We know from the minutes of the City Council that this plan was also discussed in 1894. The same plan is in the Archives of the Cadaster of the Municipality of Mostar, but the text has been added at the bottom: "Engetragen, Mostar, in Novembar 1900., Ing. Dragutin Köhler" (AKM, without reference number).

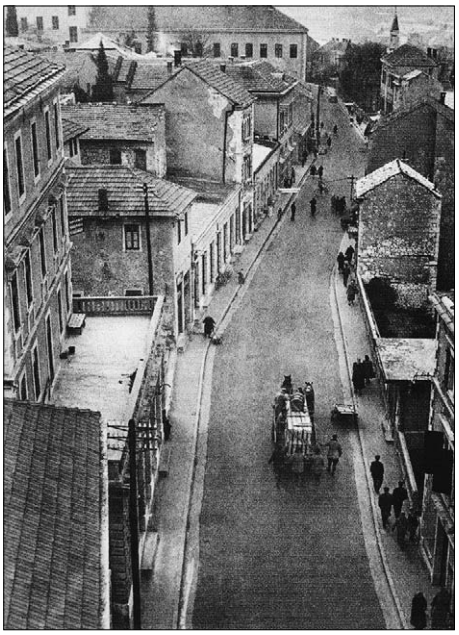


FIG. 2 GLAVNA STREET, 1920. STRAIGHTENED CENTRE LINE, EXPANDED STREET AND BUILT SIDEWALK

2. Regulatory Plan of Rondo, only partially preserved (AKM, without reference number).

This plan was originally made on a geodetic basemap on which the street, Štefanijino šetalište (Stéphanie Allée), from the Gymnasium (railway) to Balinovac and Bolnička street (today kneza Domagoja street) was planned and it is written on the plan "... in Mostar, mastab 1:2000", and at the bottom of the plan in the right corner *"Mostar im jun 1900., Hugo Jedlička Ingenier, Eugne Pogliarmicci, Stads geometar"*. On this plan, four streets are drawn in red ink as follows: *"... Pruga za kuće, Na Smrćenjake, Na Piesak, Liska"*. (These are today's streets: Kralja Tvrtka, Kralja Petra Krešimira IV, Kraljice Katarine and Višeslava Humskog), as well as the block at the intersection of Franje Josipa (Franz Joseph) and Kolodvorska streets. It is written in the red ink in the lower right corner of the plan: *"Drawn in, Mostar November 1900. Eng Dragutin Köhler"*. Considering this plan (sheet) in a unique manner, we can call it conditionally as Amendments to the Regulatory Plan of Rondo from 1894, prepared in 1900 (AKM, without reference number). It is obviously about two plans, the original one made by Eng. Hugo Jedlička and surveyor Eugen Pagliarmicci, as well as changes made by Eng. Dragutin Köhler.

3. Regulatory Plan of a part of Sauerwald and Jonica street "*Regulieungs – Skizze eines Theiles der Suerwaldgosse und der Jonićeva – street*" signature of M. Komadina. This plan forms a block, expands the street and allows wider access to Rudolf Square (AKM, without reference number).

4. Regulatory Plan of Ilićka street from Balinovac to Ilići (Stara Ilićka street), date and signature on the sheet are missing (Miletić, 1997: 28; AHM, folder No. 36), *"Regulierungs – Plan eines Theiles der "Ilićka – street", Zahum, 1:500"*.

5. Development (Regulatory) Plan of the City of Mostar (AKM, without reference number) in the scale of 1:500 for the left bank of the river and 1:100 for the right bank. The plan has no title or signature, but we know everything about its adoption and the authors from the minutes from the City Council session between 1898 and 1903 (MHM, SGV: 27.9.1897., 16.12.1899., 23.2.1903., 28.1.1901. i 17.4.1900.).

6. Regulation of Musala Square without a title "Scale = 100, Mostar in the month of December 1910" unclearly signed and text with signature, but it can be discerned only Eng. Köhler (AHM, box No. 36).

7. Plan, sketch of establishing the Glavna street *("Glavna luka")* across the Šarić cemetery and the formation of the entrance to the city. It is made in a scale of 1:500, and the signature is *"Mostar – in the month of May 1911, Eng. Dragutin Köhler, city surveyor* (AKM, without reference number).

8. Regulatory Plan of the block system from Franje Josipa street to behind Bolnička street all the way to the Catholic cemetery *("Kreisbehörde Mostar, Zür Zehl B 292: 7 ex 1911, "Sitüations – Plan, der Bahnhofstrasse und der Ričinagasse in Mostar, Mostar, im Mai 1911, Masstab 1:1000", signature "M. Klinger (unclear)*. It is written on the back of the plan "*Stadtbezirksamt Mostar zum Z 5519:11 von 16.III.1912*" (AKM, without reference number). This plan has another variant, the same one, only its northern part. This plan was probably copied once more to serve for analysis and sketches. It is written by hand on the plan: "*Regülierning linian enigezerahnat won Hern Ing. Köhler*" (AKM, without reference number).

9. Regulatory Plan with unclear scale of only part of Ričina and Bolnička streets around the Financial Administration. *"Situationskizze, 1:500, Mostar im juni 1913, Ing Hugo Jedlička der baurat M. Komadina*" (AKM, without reference number).

10. Sketch for the requirements for the construction of a house showing that the regulation lines that break through Nova street from Glavna street to Musala Square have been determined, and it was prepared by Đorđe Knežević in 1913 (AHM: box No. 36).

11. Regulation of the street from the cemetery at Carina to the Gendarmerie Station over the Carina Bridge prepared in Sarajevo in March 1916, is in the Archives of Herzegovina in Mostar *"Bauabteilung der Landesregierung, strassen – und brückenbaudepartement Vierte Narentabrücke in Mostar, situationsplan 1:1000, Der Abteilungsudrstand (illegible signature,* probably Karl Fitzinger*), Der departementchet Reddy, OBR, Sarajevo, im märz 1916*." (AHM, box No. 23.). There is the same plan with other data from 1915 (AHM, box No. 36).

In addition to the regulatory plans found in the Archives of Herzegovina in Mostar and the Archives of the Cadaster of the Municipality of Mostar, as well as by reading the minutes of the City Council in the Museum of Herzegovina in Mostar, it is visible in many places that there were regulatory plans with bill of quantities for some streets or zones, and some of them are as follows:

1. We did not find a plan for expansion of streets from the Franz Joseph Bridge to the railway station, but several minutes from City Council sessions show that it existed *"The City and District Office in Mostar, by its Order No. 3376 of July 27 of the current year, based*

*on the Order of the District Authority in Mostar no. 3006 of 14 April 1893, i.e. the Order of the Provincial Government no. 9173 /IV of 20 February 1893, proposes a Plan for expansion of streets from the Franz Joseph Bridge – to the railway station to the Municipal Council for approval." ... From this arises the future entire width of the entire street of 16 meters ... in order to make 3 m wide sidewalks (Trotoir) for pedestrians on both sides of the street" (*MHM, S.G.V.: 7.8.1893). This plan does not exist in the Archives of Herzegovina Mostar, but there are several sketches showing a part of Musala Square and Franje Josipa street.

2. It is evident from the minutes of the session of the City Council that the land is being seized for the purpose of expanding Ričina street (today Cernica) *"on the basis of a plan"* (MHM, S.G.V: 5.4.1897). It can be concluded that there was a regulatory plan identifying the street elements.

3. On 22 July 1894, the Provincial Government approved the plan for the regulation of Bolnička street, ordering the construction of 2 m wide sidewalks on both sides, because the proposal was without sidewalk (MHM, S.G.V: 5.11.1894).

4. There was a plan to build today's Mile Budaka street from the hospital to the new Catholic cemetery (MHM, S.G.V: 5.4.1897).

Analysis of models of changes in physical structure

Immediately after their arrival, the Austro-Hungarian authorities started intensive urbanization of Mostar, as well as a change in the physical structure of the city within it. The basis of this process is the Building Order adopted in 1886 for the City of Mostar and the Law on Tax Exemption, as well as the establishment of a state and local structure that carried out all construction activities. The planning contribution of the builders of Mostar in the transformation of the pre-existing and the formation of a new urban structure can be divided into four special approaches – models. Depending on the time in which they started, each of them also represents a special time phase. After their creation, they were developing in parallel until the end of the monarchy's presence.

• **The first approach**, conditionally called the "irregular block model" (Fig. 3), was formed in the old part of the city in the current Ottoman urban form. This model was developed from the beginning of the Austro-Hungarian period on the basis of the Building Order for the City of Mostar from 1886, and it reached its full application after 1903 with the adoption of the Regulatory Basis. This plan was made by the municipal surveyor Anton Janaček from 1898 until 1899, and continued by Eugen von Pagliarucci until 1903., for planning purposes the geodetic maps of the whole city were made in 1878 and 1882, and exact geodetic plans at a scale of 1:500 for the left and 1:1000 for the right side of the river between 1898 and 1903 (Puljić, 2020: 10-12; AKM, without reference number). All the axes of the streets were drawn on it along the corrected direction where possible, as well as the central points of their connection. Then, construction routes were established at an equal distance from the axles and a new shape of the intersection of streets was determined. The construction routes, which fixed the width of the streets, were determined depending on their category. As a novelty, the division of the street into a carriageway and a sidewalk appeared, separating the vehicular from the pedestrian traffic. Such construction encroached on the private ownership of land and existing buildings. This was possible given the long period of implementation of the plan, within which the creation of conditions was waited for its implementation in each new individual con-

Fig. 3 Irregular block model

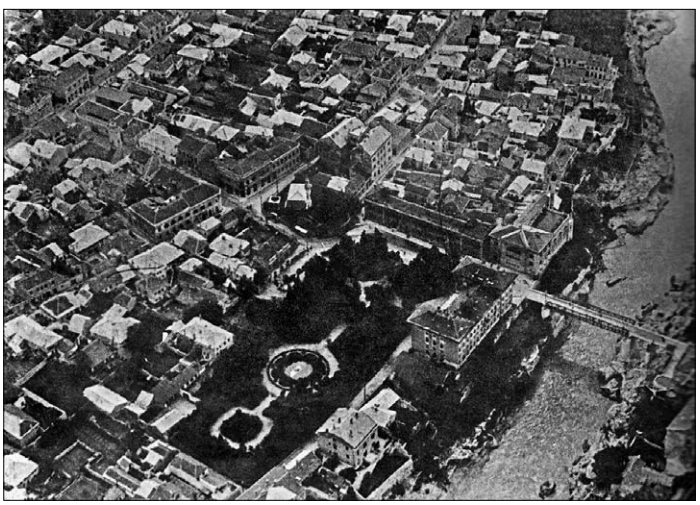
struction. This happened when the owner submitted a request for new construction or it was ordered the demolition of an old dilapidated building that endangers the public interest, and sometimes at the initiative of the Municipality. The initiative of the Municipality appeared when the owner had a request, so the interests were reconciled. In the case of a request for construction, it was, as a rule, moved to a new construction direction with the simultaneous correct payment of damages to the owner of the house or land. (MHM, S.G.V.: 7.12.1891; 7.4.1891; 4.4.1892; 20.3.1899; 28.8.1899). This step-by-step approach to city regulation has achieved its goal, works on new streets, their classification and expansion, correction of directions and establishing sidewalks (Fig. 2), as well as development of new streets. The expansion of the streets with the construction of buildings on the new construction line is visible in a number of sessions of the City Council (MHM, SGV), as well as on the accompanying regulatory sketches (MHM, S.G.V.:16.10.1899; 20.5.1901; 22.7.1901; 21.3.1903; 28.9.1903; 3.9.1908; 25.9.1908; 5.12.1892; 5.7.1893; 16.5.1898). Another big novelty brought by this plan is the establishment of residential and residential-commercial blocks. They were relatively easy to implement because the pre-existing Ottoman structure suggested them somehow in a layout sense. Old dilapidated, plain buildings of poor quality were demolished with a pre-planned intention to form residential and commercial, and often in combination with commercial urban blocks. Somewhere we see their beginnings, and in other places they are completely established. Finally, as a result of the application of this regulation, the irregular structure of the streets was corrected and some form of urban blocks was formed. They arose where it was possible between Glavna street (today Titova) and Srednja street, and then called Sauerwald (today Braće Fejića) street. Within these blocks, a square was shaped (today Trg 1. maja) (MHM, S.G.V.:17.6.1886; AFS, Glas Hercegovca No. 26 of 28 June 1886) on the site of the Ottoman square. This square began to be formed in the previous Ottoman period with the construction of a post office, telegraph office and the building of the district head, and now completed by widening the access streets and building an officer's casino in 1885 (AFS, Novi hercegovački bosiljak of 7 February 1885). Since it was the end of the 19th and the beginning of the 20th century, new street facades were created on buildings in the Historicist style, and in some places in the Secession style.

Thus, part of the old town, and especially its business part: Glavna street (Velika tepa) and Srednja street (Sauerwald street) changed its image and partially took on the characteristics of other provincial Central European cities of the Empire. This is evidenced by many minutes of the City Council, as well as daily sketches of construction conditions in the Archives of Herzegovina in Mostar (MHM, SGV: 7.12.1891; 2.5.1892; 15.10.1892; 7.4.1892; 5.6.1893; 21.5.1904). Many engineers were involved in the planning and implementation of this model (Knežić, Köhler, etc.), but most often Engineer Miloš Komadina.

- **The second model** developed in the open space Musala located on the northern periphery of the city (Fig. 6). It encompasses a newly built street, "Nova street" (Braće Brkića street) from Glavna street to Musala Square (MHM, S.G.V: 5.3.1891), Musala Square and the street across the Franz Joseph Bridge. This street went from the Square over the Franz Joseph Bridge and further to the railway, so it belongs to both the second and third model. The Square itself was framed by buildings: Municipal Public Bath (Banja; Loose, 1914), Hotel Neretva (1890,

FIG. 4 MUSALA SQUARE WITH THE PARK, NOVA STREET AND THE FRANZ JOSEPH BRIDGE, AERIAL SHOT FROM 1929

FIG. 5 TRAIN STATION SQUARE FRAMED BY BUILDINGS OF THE DISTRICT AUTHORITY, HOTEL AND TRAIN STATION, PHOTO FROM 1900



Aleksandar Witek) (AFS, Glas Hercegovca, No. 20 of 25 March 1891 and No. 32 of 3 June 1891), city park, elementary school (1880, Franc Vacek), city fountain (1883) Kjose Jahija Hojja mosque (Vakuf – Endowment building developed in 1937; Fig. 4).

This model has the shape of a square as advocated by Kamilo Zite in the early twentieth century (Zite, 1967: 32-49, 134-151). It is now becoming the centre instead of the bazaar in the Old Town and Mostar gets a new city hotspot. The entire complex was built over a long period of time, and began in 1882 with the development of Nova street (MHM, S.G.V.: 5.1.1891, 20.1.1891; Miletić, 1997: 29, 37), and then by building the Square and surrounding buildings. We did not find the Regulatory Plan for Musala Square in the archives, but we know that it existed from the minutes of the City Council and regulatory sketches. In the end, Franje Josipa street was taken shape from 1894 to 1902 and buildings were built along the new construction line.

Firstly, its northern and then its southern street façade was decorated (MHM, S.G.V: 7.4.1892; 5.12.1892; 7.8.1893). Drago Karlo Miletić claims that the Regulatory Plan for Musala Square was made by Miloš Komadina (Miletić, 1997: 41).

• **The third model** of urbanization was developed from the Neretva River in the east to the railway in the west (Figs. 7 and 9). It regulated the space to the Crafts School and the Catholic cemetery in the north, and to Franje Josipa street in the south. This model should also include streets that go even south of Franje Josipa street, namely Ričina street, which is today called Cernica (MHM, S.G.V.: 16.5.1898) i and a parallel street along the railway that goes to the Franciscan Monastery (MHM; S.G.V.: 13.11.1899) as well as another street across the railway, Bolnička (today Kneza Domagoja) street. This street connected Štefanijino šetalište from the Gymnasium with the newly built hospital, and it also passed by the access to the train station that went over the railway tracks. The proposal for its regulation was deficient with regard to the establishment of sidewalks, so

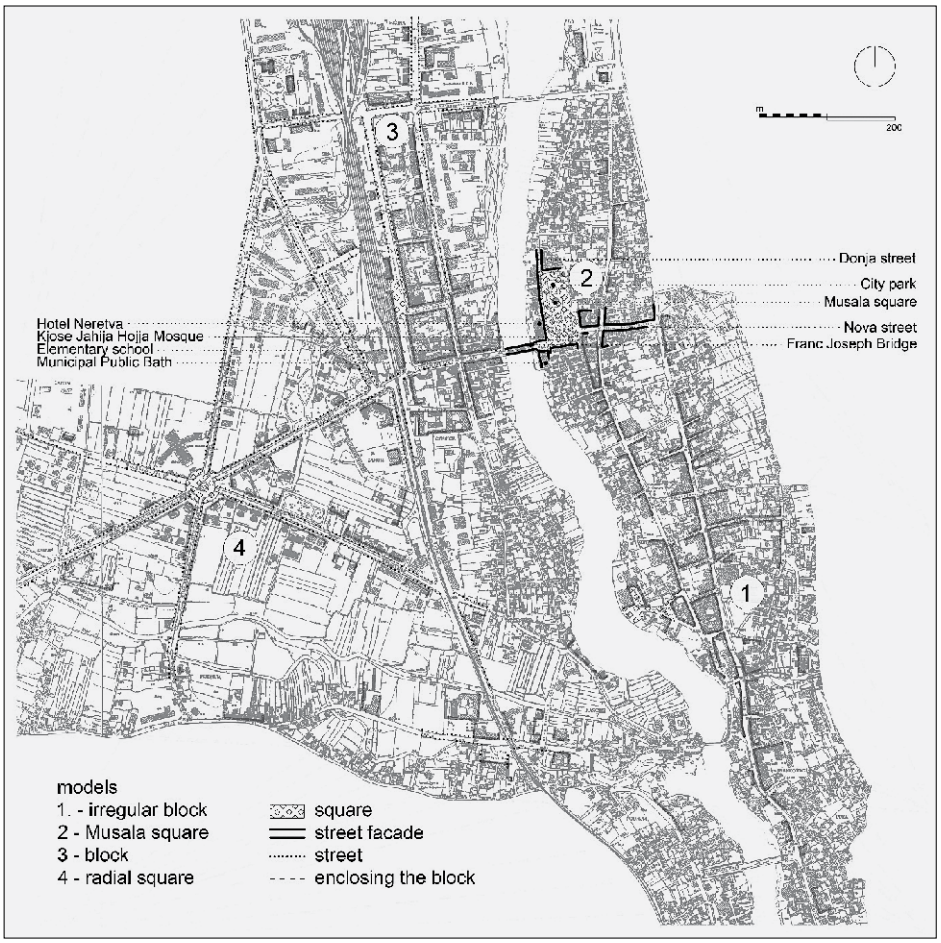
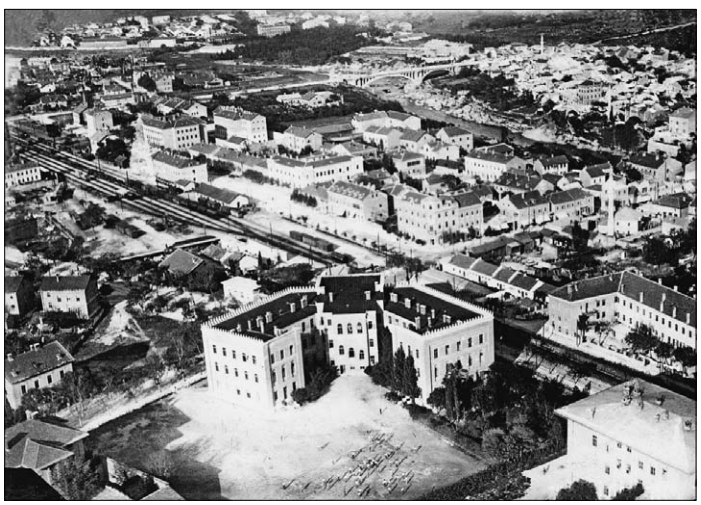


Fig. 6 The second model, Musala square, Nova street and Franje Josipa (Franz Joseph) street

Fig. 7 Aerial shot from 1941. The third model, the block building system

Fig. 8 Photo from 1900. Gymnasium and Štefanijino šetalište (Stéphanie Allée)



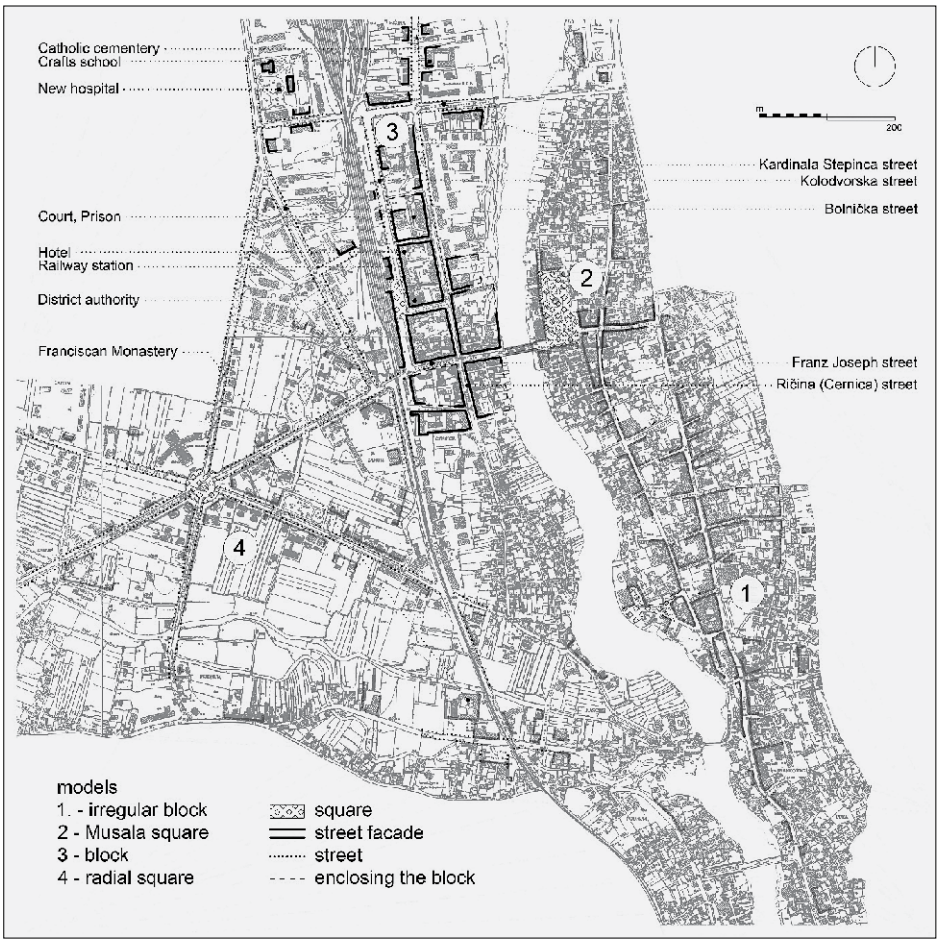


FIG. 9 THE THIRD MODEL OF BLOCK CONSTRUCTION

when approving its Regulatory Plan, the Provincial Government in Sarajevo, by letter dated 22 July 1894 ordered to add a 2 m wide sidewalk on both sides of the street to the Regulatory Plan (MHM, S.G.V: 5.11.1894, 5.4.1897. From the same minutes it is evident that there is a regulatory plan and bill of quantities for extension of this street from the New Hospital, next to the Crafts School to the Catholic cemetery, and that the City Council allocate funds to purchase land for its construction in 1897 (MHM, S.G.V: 5.4.1897; 13.11.1899). The part of the city that was built within this model, there is also a street from the Carina cemetery to the Gendarmerie Barracks (today Kardinala Stepinca street). It is planned by the Regulatory Plan from 1916 *"Vierte Narentabrücke in Mostar"* signature *"der departementchet Reddy o.b.r.,* and on the right the signature is unclear, probably Karl Kneshaurek, at the bottom of the sheet it is written *"Sarajevo, im märz 1916."* (AHM, box No. 36). If we exclude Franje Josipa street, which has been under construction since 1893, this area was urbanized only after 1900. It represents a clear block system and an orthogonal network of streets. The construction of this complex represents the beginning of a new city and new urban principles. The specificity of this model is the construction of public buildings such as the District Authority, hotel, Financial Administration, court (1891) (AFS, Glas Hercegovca No. 11 of 18.2.1891 and No.36 of 17.6.1891), prison, railway station, New Hospital (1885 and 1888) and Crafts School with apartment blocks. Another contribution is the development of the train station square between the train station and the District Authority building (Fig. 5).

For this area, we found several regulatory plans or traces of their existence in other documents. Those are the Regulatory Plan of Kolodvorska and Ričina streets (AKM, without reference number; MHM, S.G.V.:5.4.1897), another version of the same Plan (AKM, without reference number) and Regulatory Plan of Franje Josipa street (MHM, S.G.V: 7.8. 1893). We did not find the plan of Ričina street from Franje Josipa street to the south, but their existence is visible as information about the widths of streets and sidewalks in them (MHM, S.G.V: 5.4.1897, 8.2.1894).

- **The fourth model** is the construction of the city towards the West and Cernićko polje, and across the railway. Great obstacles have always been the impetus for the development of a new model of urbanization, first the river and now the railway. This construction, planning is performed according to the new urban model of the Neo-Baroque circular square, which has six streets that connect at one point (Fig. 10). Free-standing urban villas are being built along the streets, all in the spirit of historicist architecture. From that time, in addition to the visible and valuable urban complex, we are left with alleys of plane trees as very valuable monuments of landscape architecture. This urban model is a product of historicist architecture and urbanism. Its construction took place in several waves. The first was the construction of Štefanijino šetalište street (Fig. 8; MHM, S.G.V.: 17.6. 1886; AFS, Glas Hercegovca, No. 26 of 28 June 1886) that went from the railway all the way to Balinovac. In essence, it was an extension of Franje Josipa street. The planning of this stretch started with the initiative of the district head Wilhelm von Sauerwald already before 1894. This street was developed already then, and a small number of urban villas were built on both sides of the street. It is clear that the basic length and direction of the street had already been planned and formed (MHM, S.G.V: 8.2.1894). The second wave of construction started from the session of the City Council held on 8 February 1894 when the regulation of Štefanijino šetalište street was discussed (MHM, S.G.V.: 22.8.1894). This is about the regulation of part of Rondo Square and the proposed plan

submitted to the Council for consideration. It was noted that then Mayor Ibrahim Kapetanović proposed that this street be widened to 8 m and a sidewalk of 2.5 m on both sides and a green belt on both sides of 0.5 m, that houses be 6 m away from the sidewalk, and that houses are lonely or open *("freigestellt"),* and that the whole concept of construction is a system of free-standing villas *("Villen System"*; MHM, S.G.V: 8.2.1894). His proposal for the amended plan was prepared for the High Government in Sarajevo, through the District Office for adoption. The Government adopted this plan proposal on 22 July 1894 (MHM, S.G.V.: 5.11.1894). The year 1898 is handwritten on the back. The discussion at the sessions of the Council was regularly attended by the chief-engineer Miloš Komadina, under whose leadership the implementation of the plan was carried out (MHM, S.G.V.: 8.2.1894, 22.8.1894, 12.4.1894; AHM, box No. 36). The plan shows three waves of planning in different colours. The initiative to seize the land for the construction of the Rondo roundabout, which the people then called *Gumno*, was realized only in 1897 (MHM, S.G.V: 10.3.1897, 16.10.1899).

• **The third wave** is the construction of four more streets which, with two more old ones (interrupted by Štefanijino šetalište on two streets), complete the entire complex. This phase began in 1900, when its Regulatory Plan was made, that is, the amendment of the basic plan. It was made on a geodetic base map (basic regulatory plan) which has only Štefanijino šetalište street. This plan was signed by Engineer Hugo Jedlička (AKM, without reference number), and everything else was planned (drawn in) by the city surveyor Dragutin Köhler, so we can say that he is the author of the Rondo regulation for the most part since at the bottom of the plan it is written in red ink *"... drawn in, Mostar November 1900 by Eng. Dragutin Köhler"*. Rondo and the four streets framing the urban solution is drawn in red ink (AKM, without reference number). The last phase of construction is the planning of Muštovića street (today Bariše Smoljana street) and Kalemova street (today Zagrebačka street; MHM, S.G.V: 16.10.1899).

Continuation of construction according to the pre-existing urban form

Arriving in Mostar, Austro-Hungarian engineers found a clear urban structure of the city divided into neighbourhoods *(mahale)* for housing and a bazaar with shops, ground floor office buildings. The same principle was preserved in the last Ottoman period when stone ground floor and high-rise buildings were built in the bazaar, but again completely office ones without housing. This principle of exclusively office buildings, and not residential-commercial ones, continues on some street stretches. The only difference is that these are now buildings with a higher clear height of rooms of 3.5 m and more, infrastructural equipped and dressed in the guise of historicist architecture. It means with regard to architecture we have street canvases with buildings of the new time, but the old urban principle, solely office buildings in the bazaar-centre.

Fig. 10 The fourth Neo-Baroque Rondo Square with urban villas

These buildings are visible on the section of Glavna street (Fig. 11) within the first model of urbanization as an exception, but also partly in Franje Josipa street within the third model (Fig. 12). This phenomenon has also been noticed in other cities in Bosnia and Herzegovina, but it seems nowhere like in Mostar. It is a connection with the pre-existing and the preservation of one of the principles of Ottoman construction. Several engineers are their designers, but mostly Đorđo Knežić construction technician from Mostar. It cannot be answered whether this phenomenon is the product of a deliberate approach of the

FIG. 11 GROUND FLOOR, EXCLUSIVELY OFFICE PREMISE WITHOUT DWELLING ON GLAVNA STREET. PHOTO FROM 1905.

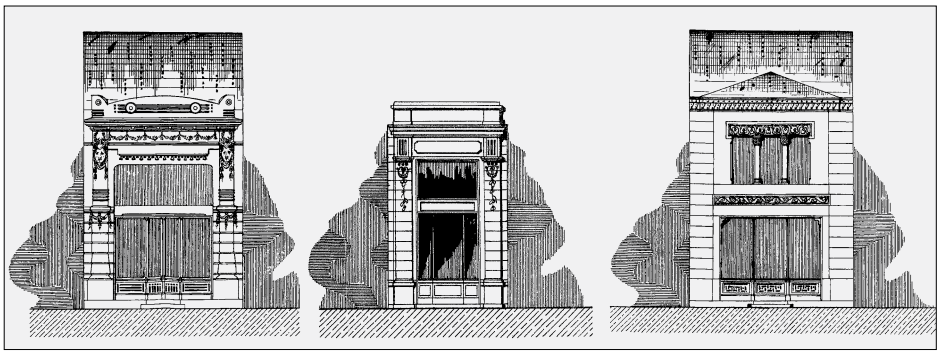


FIG.12 SHOPS IN THE BAZAAR OF THE KNEŽIĆ, BETWEEN 1900 AND 1910

authorities, as we can say for the Neo-Moorish style, which is a political project or the inertia of the learned and repeated experience of investors.

PLANNING ENGINEERS (SURVEYORS) AND THEIR ACTIVITY

Technical staff employed in the state administration prepared planning documents (regulatory sketches and regulatory plans), in addition to activities related to design, supervision and organization of construction of state facilities. Their activity took place within the Construction Office of the City Administration of Mostar and the Technical Department of the District Authority of Mostar and the Construction Department, and later within the Departments of the Provincial Government in Sarajevo.

In principle, the plans were prepared in the Technical Department of the District Authority, submitted for opinion, objections and suggestions to the City Government (Council) of Mostar. With those possible modifications through the District Office or directly through the District Authority they went to the Construction Section (later the Department) of the Provincial Government for approval. This referred only to more serious spatial interventions, while frequent corrections of street expansion were done through regulatory sketches, which were prepared within the City Office of the City Administration. They determined building lines and seizure of land for public use and were adopted by the City Council. This way of working is visible in a whole series of interventions recorded through the minutes of the City Council (AFS, Glas Hercegovca, No. 16 of 6 March 1885). A major limitation in attributing the authorship of individual plans is the lack of a consistent rule when signing on drawings, so we do not know who is the author and who is the chief who approves them (Dimitrijević, 1989: VI-27). There are also rare supporting documents that would clarify this issue. Therefore, we have limited our work only to those attributions of authorship for which we are sure of, not only through the plans but also other documents. Through our research, we unequivocally found that, along with other participants (Miloš Komadin, Hugo Jedlička and Eugena Pagliarucci), the author of the regulation of the baroque square Rondo is the city surveyor Dragutin Köhler (MHM, S.G.V: 18.11. 1898; AKM: without reference number; MHM, S.G.V.: 8.2.1894 and 12.4.1894, 10.3.1897). This claim overturned the previous conviction that Rondo was the work of Miloš Komadina. It is now known that he regulated only Štefanijino šetalište street in 1894, and the concept of the square into which the six streets inflow was created in 1900 after amendments to this plan, which was signed by Dragutin Köhler. Dragutin Köhler is the author of the Regulatory Plan based on which all the streets and all blocks of buildings from Franje Josipa street to the Catholic cemetery in the north were constructed (AKM: without reference number). This plan was made in 1911, and according to it, construction continued also in the following period until the end of the 1960s. As a city surveyor, Köhler is often the author of other regulatory sketches and a large number of architectural designs (Puljić, Šetka-Prlić, Rakić, 2017: 10). According to the number of regulatory sketches, and probably also regulatory plans, the greatest contribution to the development of the city was given by the city surveyor, and part of the working life as the head of the Construction Office of the District Authority, Miloš Komadina (Puljić, Šetka-Prlić, Rakić, 2017: 10) over a period from 1883 until 1919. He is probably the author of the regulation of Musala Square (Miletić, 1997: 41), but those plans were not found in the archives.

CONCLUSION

The City of Mostar was urbanized in a planned manner during the Austro-Hungarian period, unlike the previous Ottoman period. This urbanization was a transformation of the pre-existing physical structure, but also the construction of new parts of the city. The entire activity of planning, design, building permits, construction and construction control took

place in a planned manner and in accordance with legal solutions. Within this process, four recognizable urban models were created, different in their physical structure, but also in contents. These were: the first model of an "irregular block system" by which the pre-existing urban form was transformed. The second model is visible in establishing Musala Square and new streets coming to it. The third one was developed between the Neretva River and the railway as a model of block city construction, and the fourth is construction of free-standing villas within the Neo-Baroque Square called Rondo in which six radial streets inflow. The specificity of Mostar, but also other cities of Bosnia and Herzegovina is the continuation and partial preservation of the pre-existing Ottoman urban principle, the construction of exclusively office buildings, without residential part in the business part of the city, but also in newly built neighbourhoods.

The paper revealed several authors of these urban models, as well as overturned the established attributions of the authors of the plan. The legislative, legal and state organizational framework of the urbanization process was also presented. This paper deals with a whole historical architectural and urban layer of a cultural monument that has been devastated in the past hundred years, and very often completely destroyed, but it remains a trace in the urban matrix of today's Mostar.

[Translated by Zlatan Buljko, prof., Certified Court Interpreter for English]

Bibliography and Sources

1. Branković, J. (2009) *Mostar 1833.-1918. Upravni i politički položaj grada*. Sarajevo.
2. Dimitrijević, B. (1989) *Arhitekt Karlo Paržik (Karel Pařik)*. doctoral dissertation, Arhitektonski fakultet, Zagreb.
3. Hadžibegović, I. (1991) *Bosanskohercegovački gradovi na razmeđu 19. i 20. stoljeca*. Sarajevo.
4. Kreševljaković, H. (1969) *Sarajevo za vrijeme austrougarske uprave*. Sarajevo: Arhiv grada Sarajeva.
5. Krušević, T. (1960) *Sarajevo pod austrougarskom upravom 1878.-1918*. Sarajevo.
6. Kurto, N. (1998) *Arhitektura BiH, razvoj bosanskog stila*. Sarajevo.
7. Miletić, D.K. (1997) *Mostar, susret svjetskih kultura*. Mostar.
8. Miletić, D.K. (2005) *Mostar, glavna ulica*. Mostar.
9. Puljić, B., Šetka-Prlić, M. and Rakić, M. (2017) 'Arhitekti i graditelji Mostara za vrijeme Austrougarske Monarhije', *Prostor*, 25 (1/53/), pp. 2-19, Zagreb, https://doi.org/10.31522/p.25.1(53).1
10. Puljić, B. (2020) *Čitati grad (Urbana struktura Mostara u razdoblju 1440.-1878.)*. Zagreb: Arhitektonski fakultet Zagreb i UPI2M.
11. Sladović, J.U.E. (1913) *Priručnik zakona i naredaba za upravnu službu u Bosni i Hercegovini*. Sarajevo.
12. Spasojević, B. (1988) *Arhitektura stambenih palata austrougarskog perioda u Sarajevu*. Sarajevo.
13. Zadro, S. (2017) *Mostarska arhitektura od 1850. do Drugog svjetskog rata,* Sveučilište u Zagrebu, Filozofski fakultet
14. Zite, K. (1967) *Umetničko oblikovanje gradova*. Beograd.

Author's biography

Borislav Puljić, PhD, grad.eng.arch., Assoc. Prof., graduated from the Faculty of Architecture in Sarajevo in 1983, and received his PhD from the Faculty of Architecture in Zagreb in 2012. He has worked on architectural design and urban and spatial planning tasks. In addition to these tasks, he was engaged in scientific work studying the urban development of cities from the Ottoman and Austro-Hungarian periods. He has published several scientific articles and a book "Reading the City; Urban Structure of Mostar from 1440 to 1878".

The author prepared the whole work.

Archive sources

ABiH – Archives of Bosnia and Herzegovina

AHM – Archives of Herzegovina Mostar

MHM, S.G.V. – Museum Herzegovina Mostar, minutes from the sessions of the City Council

AKM – Archives of the Cadaster of the Municipality of Mostar

CIDOM – Centre for Information and Documentation Mostar

Illustrations Source

CIDOM