

Problems of Preservation of Architectural Heritage in the Areas of Industrial Development of Siberia*

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Abstract—The article deals with the main factors that contributed to the socio-economic transformation in the Eastern territories of Russia in the twentieth and early 21st century. It also reaches to determine the origins of ideas for the relocation of the country's industrial centers to the hinterland along with establishing a new type of a Siberian city. The influence of the industrialization process on the radical reconstruction of historically developed Siberian cities is shown. The evolution of architects' views on the historical and cultural heritage of the Eastern regions of the country is also presented. Significant losses in the architecture of the Siberian old-residents' settlements have happened due to the process of inundation in the areas where hydroelectric power stations were built in the 1950-s. Furthermore, the article reveals some problems caused by the new stage of industrialization that began in the 21st century and have entailed the threat of disappearance of the last identity hubs of the Siberian region. The principles and methods of preserving the architectural heritage in the areas of industrial development of Siberia advanced by the author are given in the present study as well.

Keywords—industry; industrialization; architectural heritage; Siberia; reconstruction of cities; culture of Siberian old-residents; methods of preservation of architectural heritage

I. INTRODUCTION

Built at the turn of the 19th and 20th centuries, the Siberian railway has become a significant factor of social and economic transformations in the Eastern territories of Russia, including those associated with a new stage of industrial development. The first world war stimulated the idea of moving the centers of industrial production in the remote from the borders and rich in raw materials areas of Siberia, which would allow, according to its supporters, to fulfill the task of national importance — “laying a new center for the entire Russian economy within the country”

[1]. Prospects for future changes in Siberian life were seen by contemporaries at the beginning of the last century in accelerating the pace and increasing the scale of development of these vast territories, in which the dominant role was assigned to large cities.

II. URBAN PLANNING FORECASTS OF THE EARLY 20TH CENTURY

A figurative picture of the future was drawn in the article “Express. Siberian fantasy”, signed by a certain patrol, and printed in the first issue of the journal “Siberian notes”, published in Krasnoyarsk in January 1916 [2].

The author presents himself in the high-speed Express train, which is rushing from the Ural mountains to the East, gives pictures of the future Siberia, rapidly changing outside the Windows. He consistently describes the huge city: “the Kurgan, surrounded by a ring rail, has grown into a city of oil, bread, meat. It has long been called “kitchen of the world” [3]. The author's attention is drawn to the people's House, which occupies four blocks, and the height of the building is ten floors: “the windows of the house are solid continuous glass from the roof to the ground, and the house seems both heavy and light, like everything great” [4].

From Kurgan Express is racing through the sunlit lands, where roam all summer, and equate fields steel monster machine. Uninhabited before steppe and tundra, according to the author, became the breadbasket of the world, and the free Siberian settlers created a new type of villages, “going straight lines in two rows of houses for hundreds of miles, and from the steppes created a thousand-verst farm, cutting through the fast, bold lines of Siberia from South to North and from West to East” [5].

Flashes new city “with a thousand factory chimneys, instead of producing smoke, only non-combustible gases; it is Steel-a city that was once called Novo-Nikolaevsk” [6].

“In the air above the city there is a whole hubbub of light and sound, it is a new human Symphony of fire and iron. Plants go the right rows of buildings, stokers stretched straight lines, it's a thousand burning armored hearts “Steel-

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city”; black giants-pipes threaten the sky itself. Private houses are forming square blocks; their flat roofs are connected together composing a lush green garden” [7].

“But further, further on the main highway! Fast past the city without a future. They wanted to be ostrogs, but they died like uninhabited prisons” [8].

The next city on the way of the Express is Krasnoyarsk, according to the author's forecasts, it turned into a “brain of Siberia” — with the Central Siberian Museum, which became a whole scientific city, with the University [9].

Next, the traveler meets Irkutsk — the city of transport facilities, wholesale trade, finance, syndicates, trusts, exchange. [10]

But the Express rushes on. From Irkutsk to the North across the continent there is a one-rail road; sometimes the rail goes at the bottom of the train, sometimes-at the top; this way is not afraid of snow drifts. On Vitim is the Golden capital — Bodaibo [11].

Express in Yakutsk. “Not city, and a fairy tale. It is now often called “house of cards”. Who was in Yakutsk at the beginning of the twentieth century, did not recognize him. No duct, no wetlands, and vanished lakes: all dried, cleaned, and tidied. The city is planned with the right houses-blocks made entirely of paper: the city is advertising. Yakutsk became the center of the paper. The vast taiga all bought “paper” and now the paper mills in Yakutsk make paper sheets, furniture, cars, ships, houses and roads” [12]. It is Siberia with its boundless expanses and relatively shallow, according to the then views, the previous history was presented in the forecasts of the early twentieth century as a “polygon” where it was possible to carry out social and economic transformations from scratch.

III. INDUSTRIALIZATION AND ARCHITECTURAL HERITAGE OF THE CITIES OF SIBERIA

After the October revolution, the process of industrialization of the Eastern regions led to an almost complete reconstruction of the old Siberian cities, the former architecture of which was considered by the ideologists of the new government as examples of “uncharacteristic development”. Architects and engineers who had greater professional experience tried to warn their less experienced colleagues and Soviet officials from poorly considered decisions of destroying the heritage. It is appropriate to recall the words of the engineer P. A. Paramonov, addressed to the Siberian town planners in the 1920s: “Any movement forward has a basis in the past, so modern urban planning must necessarily preserve continuity and create prospects for the future of economic life, its character on the basis of its historical past, as well as present and future opportunities. Each generation builds up the city according to their tastes and needs and leaves one or another imprint of his era, so the city as a whole is a product of collective creativity and serves as a historical monument for future generations. That is why the old parts of the city should be carefully preserved as architectural monuments and new buildings should not violate its appearance, new places of urban settlements

should be built according to the rules of modern technology and sanitation” [13].

However, in the era of “global” destruction of the old system, such views, from which, in the words of the then critics, breathed “the spirit of social idyll”, of course, were not accepted. In the first descriptions of the coming socialist transformations it was persistently stated that: “Simple, clear forms of modern constructivism, put forward by revolutionary architecture instead of the old decorative styles, fully correspond to the era... The type of cities of the near future in Siberia has already been outlined; undoubtedly, it will develop along the path drawn by Europe and America, with those basic amendments that follow from a different structure of the social system. The central and business districts of the city would be developed with multi-story public buildings, and the outskirts, solving the problem of urban traffic, would occupy residential areas and take the form of garden cities with low buildings” [14]. In the pre-war period, the complete destruction of the existing buildings in Siberian cities was avoided due to the lack of economic opportunities for large-scale urban transformation.

In the postwar years, the growing pace of industrial construction leveled the individual characteristics of historically developed cities, and their architectural appearance, according to some designers, was not of interest and was “common to all the old cities of Siberia” [15]. The ongoing work to overcome the “archaism and excesses” in Siberian cities prevailed in the widely implemented facade reconstruction of pre-revolutionary buildings, most of which, according to the architects of the new generation, were a typical a typical product of the merchant of modernism of the beginning of the century, and it was absolutely unacceptable to take such architecture as a basis [16]. Such views of architects led as a result of their professional activities to the loss of Siberian cities unique features that architects did not seek to notice, and even more so to preserve and emphasize in the new construction. Utopias on the construction of a “bright future” without any material signs of a “dark past”, which dominated the minds of designers until the end of the twentieth century, at the beginning of the new century, were replaced by obsessive ideas about achieving the financial well-being of cities by compacting historical buildings, which often leads to the loss of the last fragments of historical and cultural heritage.

IV. PROBLEMS OF PRESERVATION OF ARCHITECTURAL HERITAGE OF SIBERIAN OLD-TIMERS

Since the 1930s, the Eastern regions of the country have become of interest for the development of energy-intensive industries, created in a single complex with hydroelectric power plants, planned for construction on the rivers of Siberia, among which Angara and Yenisei were chosen for priority development. In the study of river valleys, the researchers pointed to their development by Siberian old-timers. For example, in the Angara region it was noted that “the nature of the villages is peculiar, and in many you can find courtyards, completely paved with wood and houses of architecture of Russia of the 17th century” [17].

In the architecture of the villages of Siberian old-timers subsequently there were significant losses, as a huge number of villages were in the areas of flooding of reservoirs of hydroelectric power stations, continuously erected since the 1950s. In connection with the construction of hydroelectric power plants and their detrimental impact on the pristine identity of the Siberian region in the scientific, creative and social environment of particular importance began to acquire questions about the wide study and fixation of monuments of old-lived culture, and the most valuable examples of this folk art was proposed to preserve. For example, the architect A. Kovalev wrote about this: "Studying the residential settlements on the Angara, Ilim and in other areas of Eastern Siberia, you can trace the development of ancient architecture in Russia, its typical features and construction techniques. Here are preserved in its original form buildings three centuries ago, absorbed the folk wisdom, the magnificent art of Russian craftsmen" [18].

In this case, the only optimal form of protection and promotion of monuments of wooden architecture was recognized as the organization of architectural and ethnographic museums, created on the basis of imported buildings from the settlements flooded by reservoirs. For example, to preserve the ancient original architecture of the Angara region, part of the courtyards with outbuildings were transported to the open — Museum, created on the shore of the Irkutsk reservoir (now-the architectural and ethnographic Museum "Taltsy"). In 1979 was created the Museum "Angara village" in the city of Bratsk.

In the second half of the 1980s, specialists of the Moscow Institute "Spetsprojectrestavratsiya" conducted studies of old-lived villages in the flood zone of Boguchanskaya HPP and developed a project of the architectural and ethnographic Museum, which was supposed to be located on the on the shore Angara near the new city of Kodinsk [19]. However, the social changes that followed in the country did not allow to complete the hydroelectric power station in those years and to realize the plans of architects-restorers about the Museum of folk architecture, which were forgotten for more than two decades.

At the beginning of the 21st century, the implementation of major investment projects began in Central Siberia, in particular, the construction of Boguchanskaya HPP was resumed. In the surrounding areas, work is underway to develop oil and gas fields, in the future it is planned to build another hydroelectric power station in the lower Angara. The implementation of these plans entails not only significant nature-transforming activities, but also poses a real threat to the loss of the last monuments of history and culture, including architectural heritage. At the new stage of industrialization of the region, the authorities and investors do not even raise the issue of preserving historical objects, and designers issue modest recommendations that "the inventory of cultural heritage objects and their distribution to departments of different levels should be carried out within the framework of specialized work" [20]. Ignoring the results of historical and architectural research in the Lower Angara region allows some "experts" to make unreasonable

conclusions about the lack of valuable features among the surviving objects of peasant architecture.

The survey of Angara old-living settlements carried out by the authors in 2011-2017 has made it possible to see a steady trend associated with the outflow of residents from rural areas caused by the beginning of industrial development of the region. This leads to the desolation of peasant estates, to the extinction of the last centers of folk architecture, and as a result to the loss of a powerful layer of historical and cultural heritage of the Siberian region. Field surveys have shown that in the areas of the Lower Angara region is concentrated a wealth of material for the study of the history of Siberian folk architecture, the tradition of which was maintained and developed by Russian old — timers-descendants of people who came almost four hundred years ago to new lands for them. These material signs of development of the Russian national culture need the fastest measures for their preservation.

V. CONCLUSION

During the expedition studies of planning and development of two dozen old-lived villages and villages, the authors identified and studied about 200 objects of architectural and historical heritage: peasant estates with residential and commercial buildings, social and economic buildings, engineering structures and religious buildings; photo-fixation was conducted, as well as measurements of individual buildings. The development of principles and methodological approaches to the preservation of the architectural heritage of the Lower Angara region is focused on the concept of creating a regional historical, architectural, cultural and recreational complex. One of the options for the preservation of architectural heritage in the study area can be a proposal to create areas of concentration of historical and cultural objects in a single urban structure of the Kodin industrial hub. Project forecasts presented in the documents of territorial planning of the industrial area of the Lower Angara region, some of the old-time villages — Syromolotova, Chadobets, Zaledeevo and Klimino, founded in the 17th-18th centuries, must enter into a combined structure of the future city of Kodinsk. A unique feature of the villages and villages under consideration is that in their construction there are peasant estates, consisting of residential and commercial buildings, which have preserved the elements of carpentry more than two hundred years ago.

In these territories it would be expedient to collect the most valuable samples of complexes of the residential estates, separate objects of cult and economic appointment taken out of zones of active industrial development. For example, in the area of the old-lived village of Chadobets there is a possibility of forming such a local core, which can include the territory of archaeological excavations of the ancient peoples of Siberia. It is proposed to restore the optimal authentic appearance of the Angara village, using a wide range of monuments of folk architecture. The development of the exposition of the architectural and historical Museum is envisaged in the environment of the landscape Park, created on the basis of the natural environment of the Angara region. At the same time, modern methods and forms of

agro-tourism organization can be used. The implementation of the proposals of this concept will increase the architectural, cultural and economic importance of the area of new industrial development. The solution to the problems of preserving the architectural heritage of Siberia is possible only by combining the efforts of all interested subjects of scientific, cultural, educational and management activities in a single organizational structure. We should remember the lessons of history, which demonstrate to us that progress without preserving the foundations of culture leads to destructive barbarism.

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