

Scientifically applied activity of the Lviv architecture school in the creation of architectural types of buildings relevant for Ukraine at the beginning of XXI century

Abstract

The article presents the searching and designing activity of Lviv architecture school on the example of the department of architectural environment design (AED)* in the creation of architectural types of buildings, important for Ukraine at the beginning of the 21st century.

Key words: architectural and researching, researching and designing activity of Lviv architecture school after creating new architectural types of buildings

Setting the problem

Realia of the 20th century have shown that the incredible structuredness of the typological palette of the Soviet architecture, which Ukrainian architecture has inherited, which is, in particular, 17 groups of public buildings, 200 different kinds and 3000 types, has not taken into consideration a lot of culturological and mental principles of the phenomenon of national architectures. At the beginning of the 21st century in Ukraine in fundamental research works of famous Ukrainian architects – scholars, architects – designers, professors, in particular, Yu. Bilokon, L. Prybyega, V. Yezhov, L. Kovalskyi, V. Kutsevych, V. Myronenko, V. Proskuryakov, O. Sleptsov, V. Tymokhin, V. Tovbych, B. Cherkes, V. Ureniov, V. Shtolko, V. Solobay, Candidates of Architecture I. Voronkova, O. Kordunyan, B. Goy, S. Ivanov-Kostetskyi, L. Brynda, V. Meshcheryakov and others, in research studies, searching and applied design, that are conducted by academic, scientific and research, designing, public architectural institutions of the country – Lviv Polytechnic National University, KNUBA¹, KNUBA², PSACEA³, OSACEA⁴, PNTU⁵ named after Kondratyuk, Kyiv Scientific Research and Design Institute of Urban Planning, National Union of Ukrainian Architects, Ukrainian Academy of Architecture and others, architectural and typological aspects occupy an important place and reflect both the realia of modern times and the problems of the past in the country. However, it cannot be yet claimed that our national architecture is provided sufficiently with modern scientifically proven project proposals of public buildings in a wide genre, typological, architectural palette and it is created taking into consideration national as well as European architectural experience. The experience, from which the principles of both archi-

ecture and designing have emerged in Ukraine. The experience, the basis of which is formed by the activity of separate figures, engineering organizations, architecture schools in modern Ukraine, in particular, the department of architectural environment design of Lviv architecture school of the standard from beginning of the 21st century. Its architectural and typological activity is not limited by the borders of Ukraine. It can also be useful in other European countries.

Analysis of the latest research studies and publications

It was in the mid 90s of the 20th century when former (in the times of former USSR) hypertrophic system of narrowly-specialized scientific-research and at the same time engineering organizations, that were functioning in the conditions of planned (soviet) economy and centralized funding with minor exceptions, practically collapsed, having lost the vast majority of all leading highly-qualified architects-engineers, was found to be incapable of ensuring the development of national science and practice on a high level [1].

Engineering and scientific structures of modern independent Ukraine replaced the scientific-research and engineering institutions of the previous ideological structure, such as Moscow Scientific-Research Institute (ЦНДИИЭП) of academic buildings, Scientific-Research Institute (ЦНДИИЭП) of performance and sports, Scientific-Research Institute (ЦНДИИЭП) of accommodation and others, Regional Scientific-Research and Engineering Institutes of Civil Construction in Ukraine,

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which designed and for many years were applying the multistage system of urban settling, comprised of complex series range of residential and public buildings [2, 3, 4, 5, 6]. Engineering and scientific structures of independent Ukraine were then established. These were societies, workshops, cooperative societies, studios, salons and others, which in their potential could perform only scientific and research activity on separate architectural objects, however, not complex research studies on creating typological systems, which would satisfy architectural and construction development of Ukraine in general and its regions, in particular. On the verge of the 20th and 21st centuries Ukraine lost up to 70% of its scientific-engineering professionally-oriented architectural institutions, what has undoubtedly influenced the level of architectural and construction sphere development in comparison to the global experience.

However, at the beginning of the 3 millennium the work in the sphere of architectural and typological science has been activated due to the efforts of Ukrainian Academy of Architecture, National Union of Ukrainian Architects, some departments of Ukrainian Regional Scientific-Research and Engineering Institute of Civil Construction, State Scientific Research and Design Institute of Urban Planning and Ukrainian State Institute of Urban Planning. University scientific and applied activity has also contributed to this. These were not only the scholars who came into architectural education from scientific-research and engineering institutions – professors V. Kutsevych, O. Sleptsov, V. Shtolko, M. Dyomin, T. Panchenko from Kyiv National University of Building and Architecture; V. Proskuryakov, B. Cherkes, I. Gnes, M. Bezv, O. Rybchynskiyi from Lviv Polytechnic National University; V. Myronenko, S. Chechelnytskyi, Yu. Shkodovskiyi from Kharkiv National University of Building and Architecture; V. Vadymov from Poltava National Technical University; L. Prybega from National Academy of Fine Arts and Architecture [7]. These were also those scholars-pedagogues who had been trained by them and who dived into the practical activity, not breaking the connection with academic activity.

A special place in this activity is occupied by Lviv architecture school and, in particular, one of its departments – department of architectural environment design [8, 9, 10].

Forming the aim of the article

To present the results of architectural and scientific activity of the department of architectural environment design of Lviv architecture school regarding developing the ar-

chitectural types of buildings, important for construction in the conditions of modern Ukraine and their approbation in real construction.

Presentation of the main material

Since its creation (28 November 2003) the department staff, apart from academic and pedagogical activity itself, have been actively working on scientific grounding of applied aspects of new types of buildings architecture needed in the independent Ukraine. This process was assisted by the fact that the department founder – professor V. Proskuryakov – having defended a doctoral dissertation in Moscow and a habilitational thesis, already in the times of independence in Kyiv, had considerable experience in conducting fundamental researches of the architecture of theatrical and performing as well as cultural and educational buildings; and not only the separate objects but also complex typological systems. Indeed, in times of USSR Proskuryakov suggested creating the systems of multipurpose relocatable theatres (not to be confused with mobile theatres) for serving the residents in the areas of mining operations, health resorts, recreational areas, in the regions with noticeable population migrations. He suggested creating the systems which would complete the systems of already existing immovable buildings. In the times of independence, he became the first one among Ukrainian scholars-architects to be researching the culturological aspect of forming the architectural typology of Ukrainian buildings and constructions, having also arranged the events regarding real implementation of TV show ideas, monumental, virtual, total and other theatres (III. 1, 2), [11].

During habilitational thesis defence the leading researchers-architects, professors I. Fomin, V. Yezhov, V. Dyomin, V. Shtolko, L. Kovalskiyi and others suggested him to also expand the gained experience on the buildings of other architectural types: sacred, medical-recreational, academic-pedagogical, sports ones, buildings of the higher educational institutions, culturally-performing ones etc. During the last 15 years, 9 doctoral dissertations and one habilitational thesis have been defended at the department.

While the first dissertation by O. Pasichnyk presented the genesis and connections of Lviv Polytechnic National University architecture school and defined

the contribution of its graduates starting from 1854 till 1979 into architecture development of Lviv and the western region of Ukraine taking into consideration historical-theoretical aspects only, without applied recommendations for the development of modern architecture, then all the followings ones had suggestions regarding the implementation of results into real and researching construction [12]. In the same way, the research by B. Goy is dedicated to presenting the main tendencies of development of historical and contemporary architecture of the Jewish theatres in Ukraine and defining the principles of their typology and the basics of their modern design, which were approbated in the project of creating the theatrical studio space of Lviv regional Jewish charitable foundation “Hesed-Arieh”. The same was for the build-up of the stage and the club hall at Ivan Franko National University in Lviv (III. 3), [13]. Basing himself on the research of historical types of the Jewish theatrical buildings and constructions in Ukraine, B. Goy has suggested the modern forms of functioning, the mains ones being the Jewish theatre in a communal centre, in a culturally-artistic centre, a theatre in a separate immovable building and in the form of a touring theatre.

Discovering modern tendencies of architectural energy saving of school buildings and complexes and defining their main principles, L. Shuldan has developed the recommendations regarding the designing of new and reconstructions of already existing school buildings in Ukraine, taking energy-saving principles into account [14]. That’s what has been approbated in real designing and constructing. An architect R. Stotsko, researching the genesis and development of architecture of

religiously-educational institutions in Ukraine and Europe from the end of the 16th till the beginning of the 21st century, has composed their modern typological palette and developed the recommendations regarding architecturally-planning arrangement of the centres of higher theological education of Ukrainian Greek-Catholic church in Ukraine [15]. He implemented them into the construction of the complex of Lviv Theological seminary in Lviv. (III. 4.) R. Stotsko took the suggestions regarding the development of architectural typology of theologically-humanitarian academic institutions in Ukraine as the basis for the project of building the institute of socially-humanitarian sciences at Lviv Polytechnic National University ordered by its management (III. 5). At the end of 2009 O. Kordunyan defended a dissertation where he defined the proportioning principles in architectural typology of public buildings and structures in Ukraine as well as developed the recommendations regarding their application in modern conditions. [16] Which were implemented by him in the series of buildings in the city of Chernivtsi (III. 6). Dissertation by S. Ivanov-Kostetskyi was dedicated to architectural and functional rehabilitation of historical types of industrial architecture in Lviv. [17]. Its principles were later implemented by the author not only for renovation and rehabilitation of historical industrial buildings (mineral water plant, woodworking complex) but also for working projects and construction of new objects in modern Ukrainian cities (III. 7). Designed by I. Voronkova architecturally-typological principles

III. 1. TV show theatre on the premises of Lviv TV station, 1999 Architect V. Proskuryakov. Photo archive of V. Proskuryakov

III. 2. Landscape-folk theatre in the museum skansen “Shevchenkivkyi Hay” in Lviv. Built in 1989, architect V. Proskuryakov. Photo archive of V. Proskuryakov



III. 3. The project of the Jewish culturally-artistic centre with the theatre in Lviv in Kulisha street, designed by an architect V. Proskuryakov with the participation of B. Goy. Photo from AED archive





III. 4. The project of architecture of religious-educational institutions in Ukraine. Architect R. Stotsko. The complex of Lviv Theological seminary, 2008. Photo archive of R. Stotsko



III. 5. Project of the Institute of socially-humanitarian sciences building at Lviv Polytechnic National University, designed by an architect R. Stotsko by the order of the management, 2017. Photo from AED archive

III. 6. Shopping centre "Dytiachyi Svit" (Children's World) in Sadova street in the city of Chernivtsi. Architect O. Kordunyan 2009. Photo archive of O. Kordunya



a.



b.

III. 7. Implementation of the research results of an architect S. Ivanov-Kostetskiy into real construction of modern industrial buildings in contemporary Ukraine in the cities: a. Brody. b. Zhovkva (the plants are currently on the construction stage), 2017. Photo from AED archive

and methods of renovating the libraries at higher educational institutions in Ukraine were implemented into the creation of the bookstore chain in Lviv Polytechnic National University buildings and during the reconstruction of the building of the library named after V. Zabolotnyi in Kyiv, during the renovation of old academic building of scientific library at National University of "Kyiv-Mohyla Academy", during the renovation of the library at Lviv National Academy of Arts. [18], (III. 8). Researching the phenomenon, genesis, parameters and place of architecturally-scenographic heritage of a worldwide-known theatrical artist Ye. Lysyk, Z. Klymko has

defined the principles of his artistic method. And their influence on practising architects [19]. She has also used and developed them in real projects "Theatre of scenographic projections of Ye. Lysyk" and researching project regarding renovating the assembly hall of the 1st academic building of Lviv Polytechnic National University with extending the theatrical functions (III. 9). Scientific-research work has been actively conducted by the department staff during the last few years. And while I. Gumennyk, researching the development of architectural typology of landscape theatres in Ukraine, [20] and



III. 8. The bookstore chain of Lviv Polytechnic National University, architect I. Voronkova, a., b. Photos from the archive of an architect I. Voronkova

K. Yanchuk – architecturally-theatrical activity of a world-wide-known, born in Ukraine architect F. Kiesler, who H. Hollein, Z. Hadid, F. Gehry called their teacher, specify, research deeper and develop important for Ukraine ideas of the previous architects-researchers [21], then architects O. Krasyl'nikov and Yu. Filipchuk make ground for new architecturally-typological directions with the help of their works. Having conducted a series of surveys in the biggest universities of Lviv, O. Krasyl'nikov has concluded that within 3-4 years of studying the students' health condition gets two times worse, they practically don't use the services of student's polyclinics because of unsatisfactory conditions and psychological discomfort. Among 7 existing student's polyclinics, none of them is built by the project adapted

to the medical needs of the youth, and the absence of regulations for university buildings of medical purpose also influences it [22]. While at the beginning of his researches Krasyl'nikov directed his efforts into creating the system of medical aid objects on the campus premises, for ensuring the functional component of students' healthcare, which are polyclinics, the centre of medical and prophylactic help, consultation modules, first medical aid centres, then having deepened his knowledge in global tendencies, his vector was directed at creating the buildings where the preference would be given to the psychological stabilization, healthy nutrition, physical activity and quitting bad habits of the students. Thus, it was decided to transform in 2018-2021 the

III. 9. Theatre of kinetic projections of an artist Ye. Lysyk at Prague Quadrennial in 2015. Author prof. V. Proskuryakov with the participation of Yu. Filipchuk and Z. Klymko, 2015. Photo from AED archive

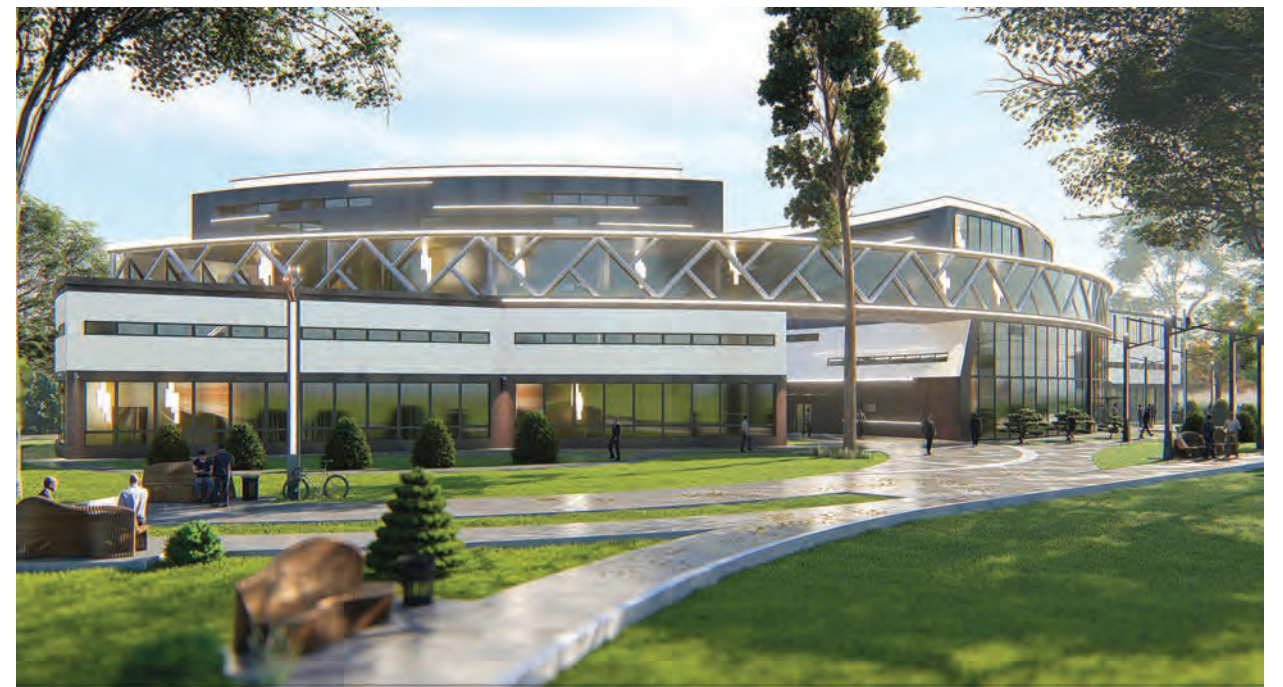


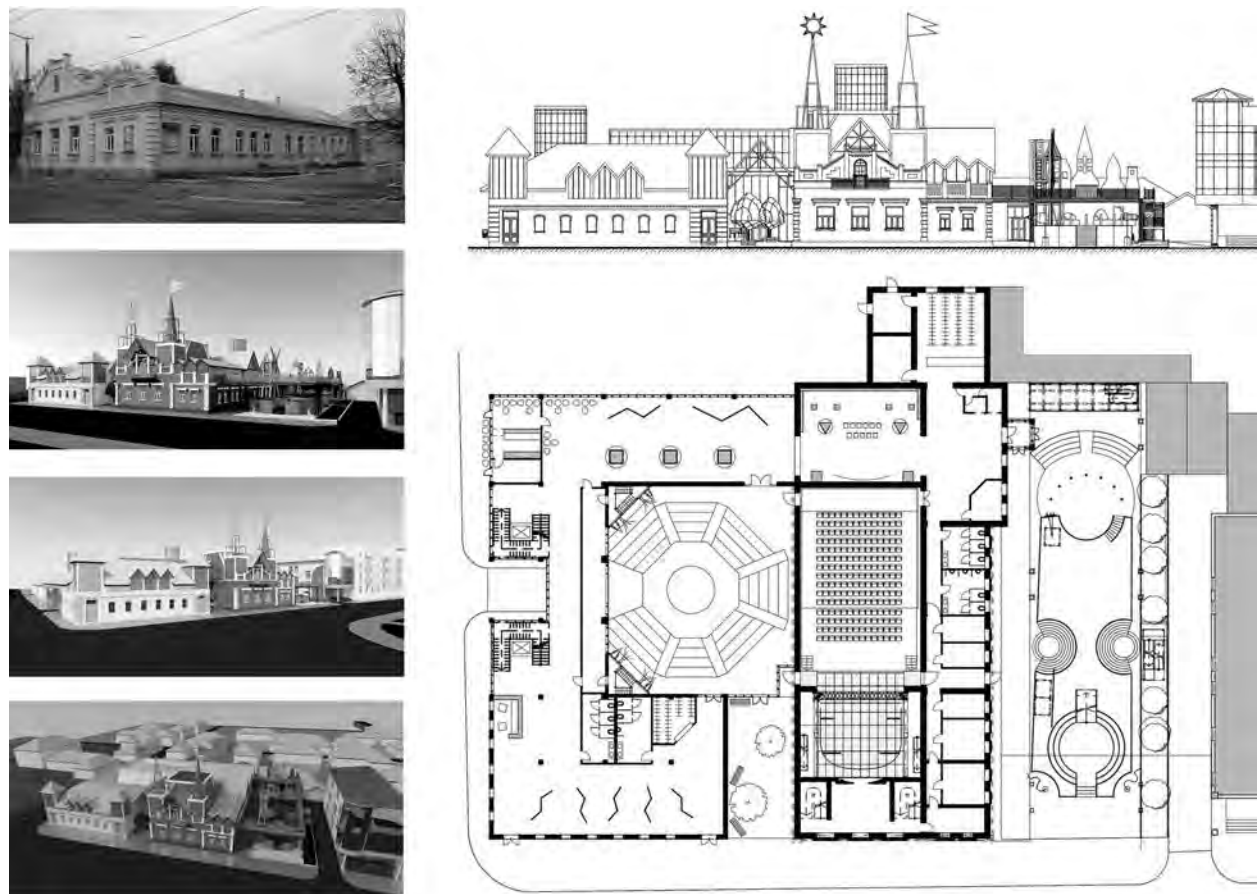
III. 10. The project of student's polyclinic-club "Zdorovya" ("Health") on the campus of Lviv Polytechnic National University. Architect O. Krasyl'nikov. Photo archive of O. Krasyl'nikov

proposed before 2016 medical-prophylactic centres into new architectural types – polyclinic-club (III. 10, 11.), and the health club. Basing the research on the experience of designing the environment of university medical-recreational centres, in particular on Cannon Design, HMC Architects, Shepley Bulfinch, Ratcliff Architects, Duda Paine Architects in the USA and their own scientific research, the researching design of the health centres has also been started at the department of architectural environment design. They serve as healthcare complexes for students and have inter-university direction. Such projects have the peculiarity of being similar to global tendencies,

the following being the most important ones: De-institutionalisation – avoiding the direct association with a medical institution; transparency – using the "transparent" constructions which do not hide the processes that happen in the centres; designing the leisure places in the spatial structure of the centres; the proposal to add the functions of student's club to the main functions; integration of centre architecture with already existing architectural environment of the campus etc. Researching the system of theatrical buildings in Ukraine, an architect-master Yu. Filipchuk has con-

III. 11. The project of inter-university centre of students' health for higher educational institutions in Lviv. Architect O. Krasyl'nikov. Photo archive of O. Krasyl'nikov





III. 12. Project proposal of creating the theatrically-performing centre for children and youth in the city of Kropyvnytskyi, architect Yu. Filipchuk (project delivered to the customer), 2017. From AED archive

cluded that by the genre and capacity it still consists of the theatres which were functioning during USSR period. The theatres which were subsidized exclusively by the government. This, in particular is related to the theatres for children and youth as well as puppet theatres which worked on the shaping of "the personality of building communism". Practically all the theatres (8 theatres for children and youth and 24 puppet theatres) were theatres of the same type, with the same stage of remote type and a hall which could not be transformed to adjust to the ideas and concepts of the directors and scriptwriters who worked there. At the same time, the analysis of work experience of performing institutions in the World has shown that nowadays and in the future theatrically-performing centres are the most effective ones, their functional and genre palette has the features of theatrically-performing as well as culturally-educational function. Centres, the architecturally-spatial solution of which can have the following types: The first type – a separate building, when all the rooms are located on the premises of one building; The second type – when the centre is created from the buildings that are located nearby in the same area and are connected with each other. The third type – the buildings of the centre are located nearby but in the different areas; and The fourth type – when the centre is connected by genre and function, operates in the scattered around the city areas, buildings, complexes connected solely by the activity concept. [23].

For approbations of his scientific research Yu. Filipchuk under the supervision and authorship of a professor V. Proskuryakov has designed the work projects ordered by the management of the puppet theatres in the city of Kropyvnytskyi and Lviv (III. 12), (III. 13). In the first case the idea of the second type was approbated, in the second one the first type of theatrically-performing centre was designed. And while in the first case the theatrically-performing centre based on the puppet theatre in Kropyvnytskyi was a rather mechanistic integration of designed spaces in the building-ruin, which was located next to the puppet theatre building, in Lviv the buildings of theatrical space got a various functional and genre development. After project search in the existing space of the theatre in Lviv, a theatre-museum and a theatre-studio appeared and the main facade, apart from its primary function, started playing the role of an interactive screen for advertising and presenting needs of the theatre as well as cultural needs of the city. It was also favoured by the staging by means of landscape, scenographic and urban design of the environment of Danylo Halytskyi square in front of the main theatre facade. This project was also approved by the management and artistic council of the theatre however, it was not implemented due to the lack of funding, moratorium on usage of which has been still imposed in Ukraine because of Russian aggression in the East of Ukraine.



a.



b.



c.

III. 13. Project of creating the theatrically-performing centre for children and youth in the building of Lviv puppet theatre. a. Project of the theatre-studio. b. Project of museum theatre. c. Project of multifunctional environment within the space of D. Halytskyi square in Lviv. Architects prof. Proskuryakov, Yu. Filipchuk (project delivered to the customer), 2017. From AED archive



Ill. 14. The main facade of Lviv State University of Internal Affairs. Architect Yu. Dzhygil, built in 2001. Photo by an architect Yu. Dzhygil

Conclusions

Development of architecture in Ukraine as well as in the World is happening as a result of realizing and generalizing the artistic project experience. That is why the architectural science cannot be separated from the engineering process. Practically each research work concludes into certain artistic proposals. However, it is worth mentioning that there are moments in architecture when the thematics is connected with individual creativity, while designing single solutions it loses its topicality, what is precisely taking place in Ukraine.

At the beginning of the 21st century the need has emerged in the country to define the general rules of various architectural objects development and to work out the new ones, which are designed and built by the unknown earlier principles.

Architectural needs of a young country on the current stage can be satisfied by architectural and research departments and, in particular, Lviv architecture school, as they are based on the leading research methods and conduct the researching design in a wide typological range. The activity of Yu.

Ill. 15. Lighting of the main building of Lviv Polytechnic National University, architect M. Yatsiv, 2015. Photo archive of M. Yatsiv



a.



b.

Ill. 16. Landscape design in urbanized environment for the leisure complex "Burevisnyk" in the city of Ternopil. Architects Yuliya Bogdanova and Igor Kopylyak, 2017. Photo by Yu. Bogdanova and I. Kopylyak

Dzhygil, M. Yatsiv, Yu. Bogdanova and I. Kopylyak should definitely be counted to them. (Ill. 14, 15, 16).

ENDNOTES

- * AED – architectural environment design
- ¹ Kyiv National University of Building and Architecture
- ² Kharkiv National University of Building and Architecture
- ³ Prydniprovskaya State Academy of Civil Engineering and Architecture
- ⁴ Odesa State Academy of Civil Engineering and Architecture
- ⁵ Poltava National Technical University

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