

УДК 727.1

FOREIGN DESIGN EXPERIENCE OF CHILDREN'S SPORTS INSTITUTIONS IN THE STRUCTURE OF THE CITY

MERYLOVA I. O.^{1*}, *post-graduate*,
MYRONOVA K. H.^{2*}, *student*.

^{1*} Department of Architectural Planning and Design, State Higher Education Establishment «Prydniprov's'ka State Academy of Civil Engineering and Architecture», 24-A, Chernishevsky str., 49600, Dnipro, Ukraine, tel. +38(0562)46-98-88, e-mail: irina_merilova@mail.ru, ORCID ID: 0000-0001-5375-1359.

^{2*} Department of Architectural Planning and Design, State Higher Education Establishment «Prydniprov's'ka State Academy of Civil Engineering and Architecture», 24-A, Chernishevsky str., 49600, Dnipro, Ukraine, tel. +38(0562)46-98-88, e-mail: ktyamironova3@yandex.ua.

Annotation. Formulation of the problem. The institutions which are engaged in education of young athletes of Ukraine are going through a rough patch. Today there are boarding schools with a sports bias, but they are not enough, and resource base and conditions of staying in them need improvement and reorganization. In turn, foreign experience of design of sports institutions for children and adults deserves special attention as it includes the best world technology and architectural concepts and receptions. **Article purpose:** to analyze foreign experience of design of sports facilities, and also to reveal the main directions of their organization. To develop the conceptual project offer of sports boarding schools in Ukraine. **Conclusions.** The main tendencies of development of sports facilities abroad have been revealed. Relying on foreign experience, the basic principles of their formation have been defined. Knowledge gained with the help of analysis is introduced in the project offer of a children's sports complex in the city of Dnipro and can become a basis for reconsideration and modernization of the developed network of sports facilities in Ukraine.

Keywords: *sports facilities for out-of-school work, system of sports facilities, network of sports facilities*

ЗАРУБІЖНИЙ ДОСВІД ПРОЕКТУВАННЯ ДИТЯЧИХ СПОРТИВНИХ УСТАНОВ У СТРУКТУРІ МІСТА

МЕРИЛОВА І. О.^{1*}, *аспир.*,
МИРОНОВА К. Г.^{2*}, *студ.*

^{1*} Кафедра архітектурного проектування і дизайну, Державний вищий навчальний заклад «Придніпровська державна академія будівництва та архітектури», вул. Чернишевського, 24-а, 49600, Дніпро, Україна, тел. +38 (0562) 46-98-88, e-mail: irina_merilova@mail.ru, ORCID ID: 0000-0001-5375-1359.

^{2*} Кафедра архітектурного проектування і дизайну, Державний вищий навчальний заклад «Придніпровська державна академія будівництва та архітектури», вул. Чернишевського, 24-а, 49600, Дніпро, Україна, тел. +38 (0562) 46-98-88, e-mail: ktyamironova3@yandex.ua.

Анотація. Постановка проблеми. Установи, що займаються вихованням юних спортсменів України, переживають не найкращі часи. Наразі існують школи-інтернати зі спортивним ухилом, але їх катастрофічно недостатньо, а ресурсна база й умови перебування в них потребують поліпшення і реорганізації. У свою чергу, зарубіжний досвід проектування спортивних закладів для дітей і дорослих заслуговує на особливу увагу, оскільки включає в себе кращі світові технологічні та архітектурні рішення та прийоми. **Мета статті:** проаналізувати зарубіжний досвід проектування спортивних установ, а також виявити основні напрямки їх організації, розробити концептуальний проект-пропозицію спортивної школи-інтернату в Україні. **Висновки.** Виявлено основні тенденції розвитку спортивних установ за кордоном. Спираючись на зарубіжний досвід, визначено основні принципи їх формування. Отримані шляхом аналізу знання впроваджені у проект-пропозицію дитячого спортивного комплексу в м. Дніпро і можуть стати основою для переосмислення і модернізації мережі спортивних установ в Україні.

Ключові слова: *спортивні установи для позашкільної роботи, система спортивних установ, мережа спортивних закладів*

ЗАРУБЕЖНЫЙ ОПЫТ ПРОЕКТИРОВАНИЯ ДЕТСКИХ СПОРТИВНЫХ УЧРЕЖДЕНИЙ В СТРУКТУРЕ ГОРОДА

МЕРИЛОВА И. А.^{1*}, *аспир.*,
МИРОНОВА К. Г.^{2*}, *студ.*

^{1*} Кафедра архитектурного проектирования и дизайна, Государственное высшее учебное заведение «Приднепровская государственная академия строительства и архитектуры», ул. Чернышевского, 24-а, 49600, Днепр, Украина, тел. +38 (0562) 46-98-88, e-mail: irina_merilova@mail.ru, ORCID ID: 0000-0001-5375-1359.

^{2*} Кафедра архитектурного проектирования и дизайна, Государственное высшее учебное заведение «Приднепровская государственная академия строительства и архитектуры», ул. Чернышевского, 24-а, 49600, Днепр, Украина, тел. +38 (0562) 46-98-88, e-mail: katyamironova3@yandex.ua.

Аннотация. Постановка проблемы. Учреждения, занимающиеся воспитанием юных спортсменов Украины, переживают не лучшие времена. На сегодняшний день существуют школы-интернаты со спортивным уклоном, но их катастрофически недостаточно, а ресурсная база и условия пребывания в них нуждаются в улучшении и реорганизации. В свою очередь, зарубежный опыт проектирования спортивных заведений для детей и взрослых заслуживает особого внимания, поскольку включает в себя лучшие мировые технологические и архитектурные решения и приемы. **Цель статьи** – проанализировать зарубежный опыт проектирования спортивных учреждений, а также выявить основные направления их организации, разработать концептуальный проект-предложение спортивной школы-интерната в Украине. **Выводы.** Выявлены основные тенденции развития спортивных учреждений за рубежом. Опираясь на зарубежный опыт, определены основные принципы их формирования. Полученные путем анализа знания внедрены в проект-предложение детского спортивного комплекса в г. Днепр и могут стать основой для переосмысления и модернизации сложившейся сети спортивных учреждений в Украине.

Ключевые слова: спортивные учреждения для внешкольной работы, система спортивных учреждений, сеть спортивных учреждений

For the analysis of foreign experience of designing of organizations with sports function for children and adults objects in such progressive countries as Poland, Italy, Canada, the Netherlands, Austria, Germany were chosen. Sports schools and complexes in these countries are subordinated to the concept of development and in the majority are solved by the principle of monoorganized structures, it means with prevalence of one area of work. It is possible to carry an opportunity to be engaged in one chosen activity and to be focused on it, and also a single orientation of work of teaching staff and students.

In Ukraine, and in Dnipro in particular, the number of schools with a sports bias can't cover a real demand for out-of-school sports education, the territorial development of network of out-of-school sports facilities is limited and gravitates to large city centers, also the resource has base became outdated and requires reorganization.

The solution of this problem can be found with the analysis of network of the existing and operating schools of the city and country, and also with identification of problem zones and sites for their construction.

A material statement. Foreign experience of design of sports complexes and schools can be considered within the following examples.

Italy. For Italians the mandatory placement of children in sports clubs and groups has become a tradition. This usually occurs when the child turns six years, since the first grade. In the future, depending on the success and wish, the child can go on to the semi-professional level in a chosen sport [1].

The Olgiata Sporting Club project of LAB studio in Rome can be an example. The building is made up of three different pavilions connected to each other. The central one is the administrative center and contains the entrance, where the main staircase and the connections are. Through it the visitor can access the locker rooms at the lower level. The person can have an access to the two pavilions. This object is located in the outskirts of Rome, in a park zone. It has a good traffic intersection [2].

Canada. Sports for children is very popular. A large and well-developed infrastructure, the responsibility of citizens and the state aid have led to these results. More and more Canadians enroll their children in sports at an early age (5-6 years), believing that it will help them to build a character, to learn how to work in a team and to make them grow [3].

Architectural studio MacLennan Launkains Miller Architects in Toronto is the author of the Regent's Park Aquatic Center project. This project typifies the design legacy commitment of the Regent's Park revitalization program. The form of the building is simple and asymmetric; also natural materials and soft tone in external and internal finishing of the room are used. Interior design is simple and laconic. This construction is situated in downtown of Toronto. It has the convenient traffic intersection and availability [4].

The Netherlands. Sport in the Netherlands is one of the kinds of activity which are most demanded by the population of the country. From 16 million residents of the country 4,5 million people are members of more than 35 000 various

sports societies (data of 2008). Game sports have the greatest popularity among children: soccer, field hockey and volleyball are among them [5].



Fig. 1. The Olgiata Sporting Club, Rome

Ronald McDonald Center designed by the Fact Architects group is an example. The Centre has many innovations as pools with movable floors, drowning detection system, lockers with fingerprint recognition and world's first sports floor with LED lines. This center is located the heart of Amsterdam, which is surrounded by city sights, various restaurants and water channels [6].

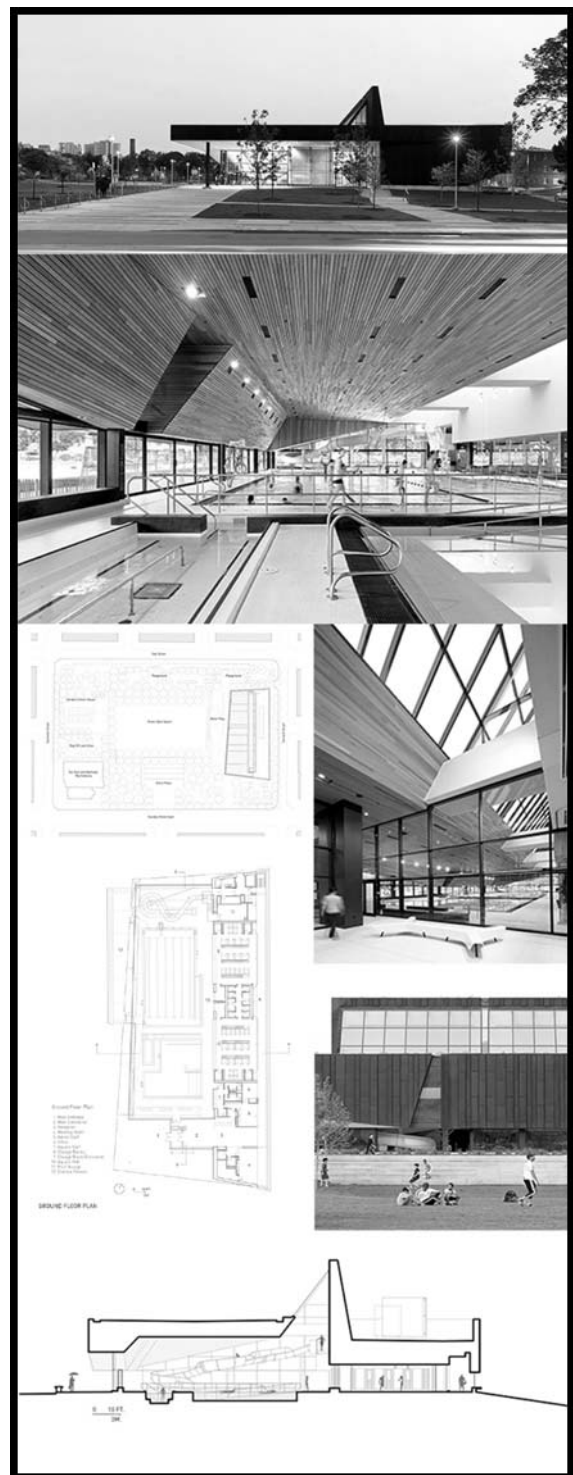


Fig. 2. Regent's Park Aquatic Center, Toronto

Poland. The sport in Poland is popular and developed. The Polish athletes represent the country in the international competitions in the majority of sports. In Warsaw in one area there are 14 schools of all kinds of sports [7].

The Sports Hall in Poznan of Neostudio Architekci studio in Poznan has been studied. The form of the building has the simple cubic form. The idea was to enter the building into the existing town-planning situation and to create

functional structure using simple lines. This complex is located on the outskirts Poznan, in a silent zone that promotes the quite rest and trainings in the open air far away from vanity of the city [8].

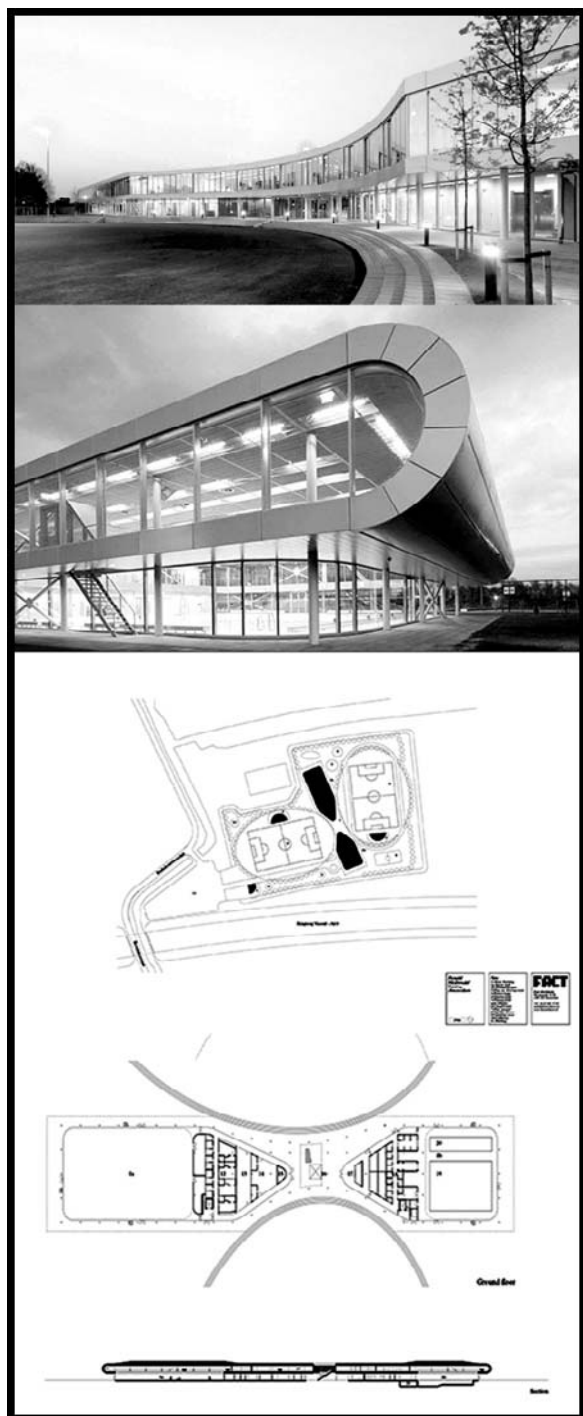


Fig. 3. Ronald McDonald Center, Amsterdam

Austria. Two complexes in Austria have been chosen: Sports Hall St. Martin and Bundesgymnasium Gainfarn in the cities of Villagh and Gaynfarn. In terms of construction, the basement floor and three sides of the building consist of reinforced concrete, the southeast wall

is built as a wooden frame construction and the roof is made of prefabricated insulated wooden elements [9]. Bundesgymnasium Gainfarn combines old and new parts of the building, desire to keep traditions, having added modern technologies. The building is executed in various shades of gray, the prevailing material is cement. The ensemble creates the new center which looks very quiet in the environment [10].

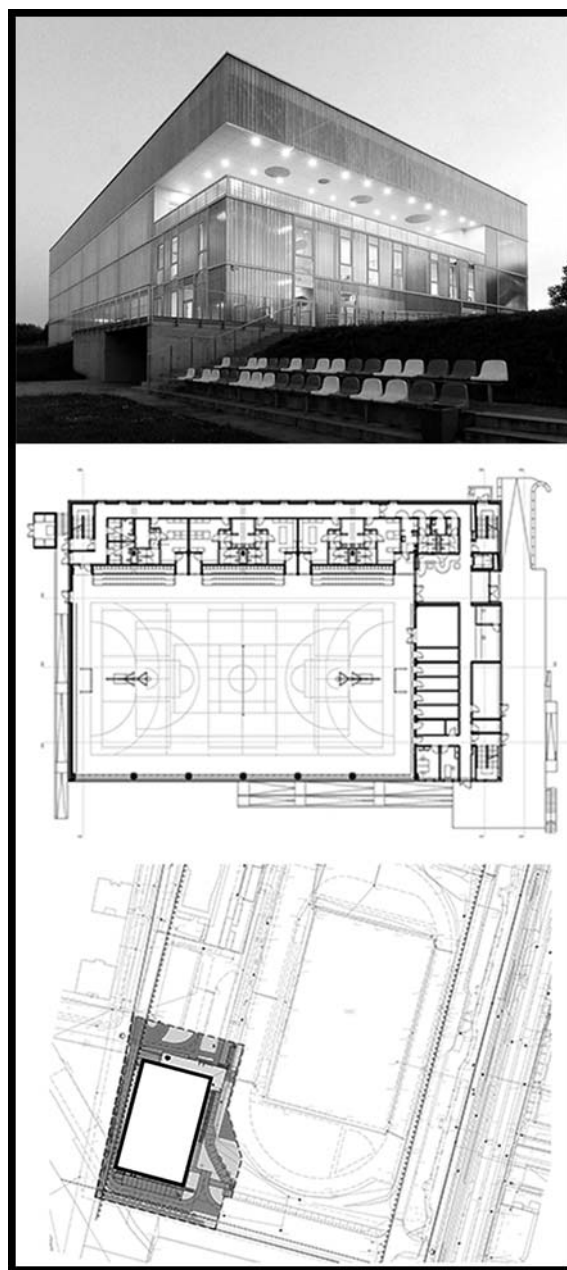


Fig. 4. Sports Hall, Poznan

Both buildings are located in the center of the two towns - Villagh and Gaynfarn, are the objects of city value and they examples of the fact that in small towns conditions for sports activities may also be at an appropriate level, which are in lack in Ukraine.

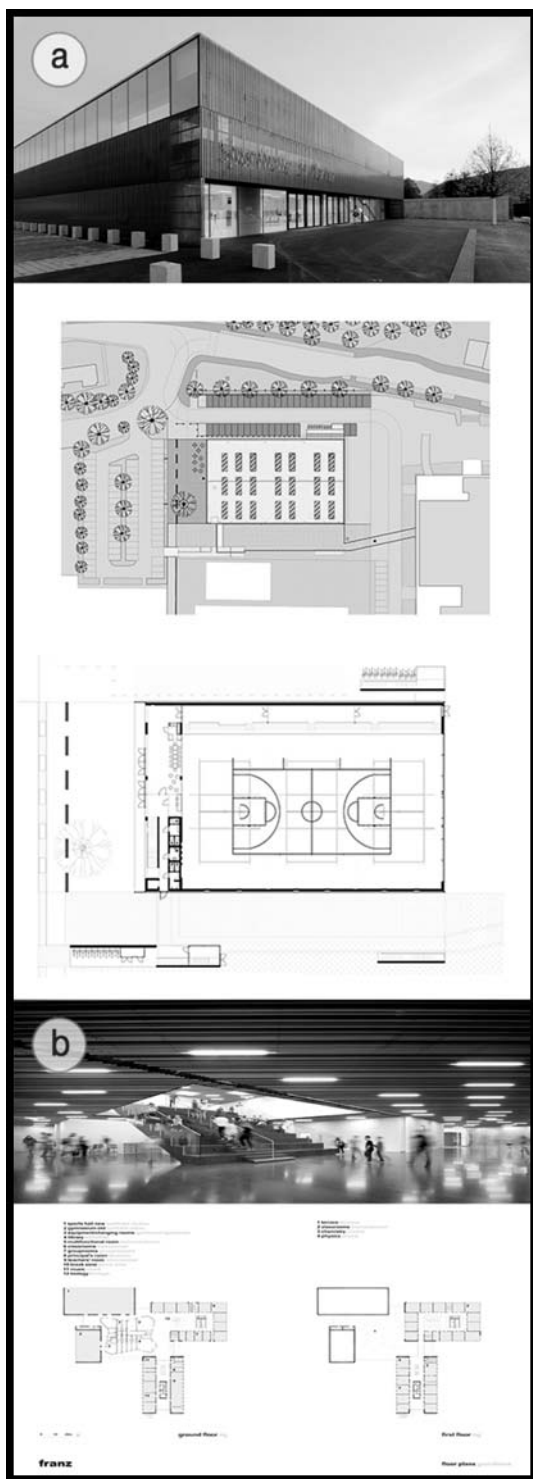


Fig. 5. a - Sports Hall St. Martin, Villach
b - Bundesgymnasium Gainfarn, Gainfarn

On the basis of the analysis of foreign experience of formation of sports facilities the conceptual design solution of sports boarding school in the city of Dnieper has been proposed. The specialization includes basketball and volleyball. These are team sports, well-known and popular in our country and the region. Every year the number of people interested in these sports grows, but our resource base can't provide their requirements. The submitted design offer is

a good platform for development of youth and a possibility of self-realization for young athletes; it is a unique object of a regional value.

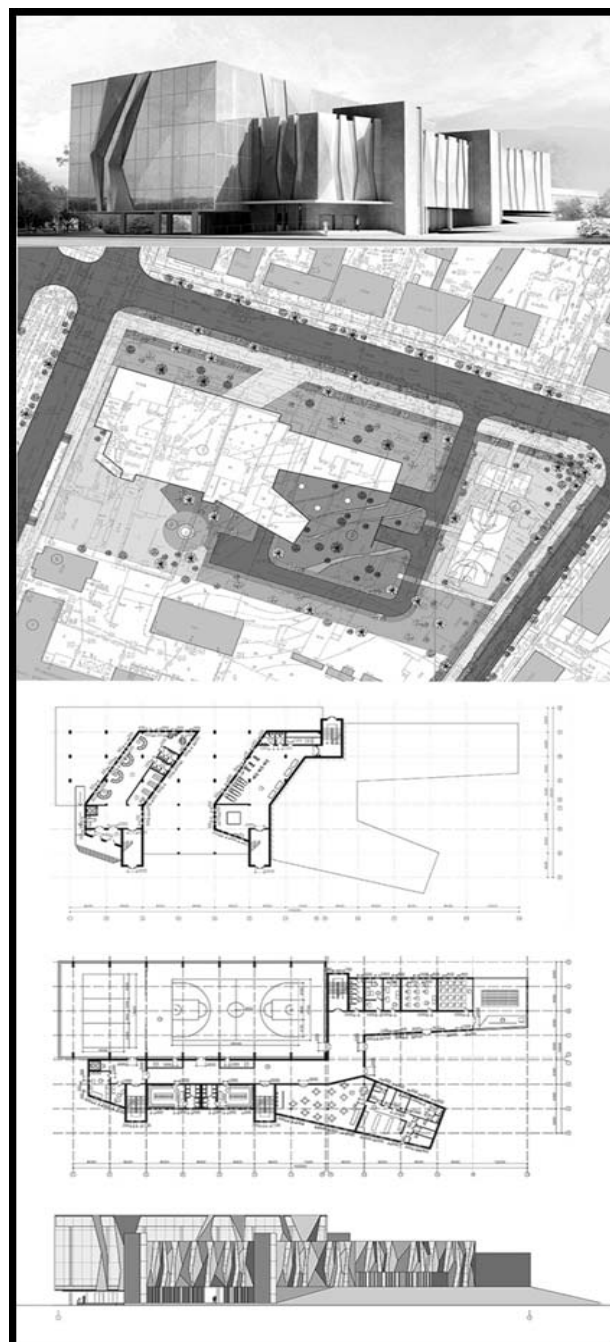


Fig. 6. Design solution of sports boarding school in the city of Dnipro. Author Myronova K. G., supervisor Merylova I. O.

First of all, athletic boarding school is a place where children can live, learn, do sports and spend time together. The aim of the project was to create a place where children would feel cozy and comfortable even being away from home. It is important to consider this fact when you create buildings for children, because the satisfaction of

their environment is an important part of the psychological development of the child.

In the design process it was important to "put" the object on the terrain and fit it into an existing building. Based on the existing urban situation, we identified the optimal size of the site and selected a suitable location of the object on it. Among the features of a given territory I can distinguish the relief with a slope of 8%, transport accessibility and proximity of sports facilities.

The building is four-storied. The first level consists of two volumes: lobby and reception group of rooms and gym. The second level contains the game hall with auxiliary rooms, a part of the educational block with the lecture hall and the dining room. The third and fourth levels

are supposed to be educational, an inhabited and leisure areas. The feature of planning solution of the site is the additional pedestrian direction between blocks of the first level of the building. It forms communication with the existing pedestrian axis of the street leading to the stadium.

Conclusions. The main tendencies of development of sports facilities abroad have been revealed. Relying on foreign experience, the basic principles of their formation have been defined. Knowledge gained with the help of analysis is introduced in the project offer of a children's sports complex in the city of Dnipro and can become a basis for reconsideration and modernization of the developed network of sports facilities in Ukraine.

REFERENCES

1. Kutilina M. *S myachom, na kon'kax, v bassejne... Sekrety sportivnogo detstva v Italii* [With ball, on skates, in the swimming pool. The secrets of sports childhood in Italy]. *AiF. Zdorov'e* [AiF. Health]. 2013, May, 8, no. 18. Available at: <http://www.aif.ru/health/children/43190>. (in Russian)
2. *Olgiata Sporting Club*. LAD; architects: Francesco Napolitano, Michelangelo Sabuzi Giuliani, Maria Carla Lini, Marcello Amalfitano, Simone Lanaro. *ArchDaily*. 2014, January, 24. Available at: <http://www.archdaily.com/469427/olgiata-sporting-club-lad>.
3. *Sport v Kanade* [Sport in Canada]. *Russkaya Kanada* [Russian Canada]. Rusmontreal. 2011, January, 13. Available at: <http://rusmontreal.com/sport-v-kanade/>. (in Russian)
4. *Regent Park Aquatic Centre*. MacLennan Jaunkalns Miller Architects. *ArchDaily*. 2015, August, 13. Available at: <http://www.archdaily.com/771720/regent-park-aquatic-centre-maclennan-jaunkalns-miller-architects>.
5. *Sport v Niderlandax* [Sport in the Netherlands]. Vikipediya. Svobodnaya enciklopediya [Vikipediya. Free encyclopedia]. Available at: http://ru.wikipedia.org/wiki/Спорт_в_Нидерландах. (in Russian)
6. *Ronald McDonald Centre*. Fact Architects. *ArchDaily*. 2011, March, 7. Available at: <http://www.archdaily.com/117008/ronald-mcdonald-centre-fact-architects>.
7. «*V Pol'she v odnom rajone 14 shkol po vsem vidam sporta! Poetomu u nix men'she prestuplenyj v podrozkovom vozraste*». *Exclusivnoe interview s direktorom Federecii biatona Romanom Bondruk* ["In Poland, 14 schools of a district do in all sports! Therefore, they have less crime between teens." Exclusive interview with Director of the Federation of biathlon Roman Bondaruk]. *Novosti Ukrainy* [News of Ukraine]. Available at: <http://from-ua.com/articles/299111-v-polshe-v-odnom-raione-14-shkol-po-vsem-vidam-sporta-poetomu-u-nih-menshe-prestuplenii-v-podrozkovom-vozhraze.html>. (in Russian)
8. *Sports Hall in Poznan*. Neostudio Architekci. *ArchDaily*. 2015, July, 26. Available at: <http://www.archdaily.com/770714/sports-hall-in-poznan-neostudio-architekci>.
9. *Sports Hall St. Martin*. Dietger Wissounig Architekten. *ArchDaily*. 2013, November, 27. Available at: <http://www.archdaily.com/452078/sports-hall-st-martin-dietger-wissounig-architekten>.
10. *Bundesgymnasium Gainfarn - Bad Vöslau*. Franz Architekten. *ArchDaily*. 2014, December, 24. Available at: <http://www.archdaily.com/579041/bundesgymnasium-gainfarn-bad-voslau-franz-architekten>.

ИСПОЛЬЗОВАННАЯ ЛИТЕРАТУРА

1. Кутилина М. С мячом, на коньках, в бассейне... Секреты спортивного детства в Италии / М. Кутилина // *АиФ. Здоровье*. – 2013. – № 18. – 8 мая. – Режим доступа: <http://www.aif.ru/health/children/43190>.
2. *Olgiata Sporting Club / LAD*; architects: Francesco Napolitano, Michelangelo Sabuzi Giuliani, Maria Carla Lini, Marcello Amalfitano, Simone Lanaro // *ArchDaily*. – 2014. – 24 January. – Режим доступа: <http://www.archdaily.com/469427/olgiata-sporting-club-lad>.
3. Спорт в Канаде // *Русская Канада*. Rusmontreal. – 2011. – 13 января. – Режим доступа: <http://rusmontreal.com/sport-v-kanade/>.
4. *Regent Park Aquatic Centre / MacLennan Jaunkalns Miller Architects* // *ArchDaily*. – 2015. – 13 August. – Режим доступа: <http://www.archdaily.com/771720/regent-park-aquatic-centre-maclennan-jaunkalns-miller-architects>.
5. Спорт в Нидерландах // Википедия. Свободная энциклопедия. – Режим доступа: http://ru.wikipedia.org/wiki/Спорт_в_Нидерландах.
6. *Ronald McDonald Centre / Fact Architects* // *ArchDaily*. – 2011. – 7 March. – Режим доступа: <http://www.archdaily.com/117008/ronald-mcdonald-centre-fact-architects>.

7. «В Польше в одном районе 14 школ по всем видам спорта! Поэтому у них меньше преступлений в подростковом возрасте». Эксклюзивное интервью с директором Федерации биатлона Романом Бондаруком // Новости Украины. – 2014. – 8 февраля. – Режим доступа: <http://from-ua.com/articles/299111-v-polshe-v-odnom-raione-14-shkol-po-vsem-vidam-sporta-poetomu-u-nih-menshe-prestuplenii-v-podrostkovom-vozhaste.html>.
8. Sports Hall in Poznan / Neostudio Architekci // ArchDaily. – 2015. – 26 July. – Режим доступа: <http://www.archdaily.com/770714/sports-hall-in-poznan-neostudio-architekci>.
9. Sports Hall St. Martin / Dietger Wissounig Architekten // ArchDaily. – 2013. – 27 November. – Режим доступа: <http://www.archdaily.com/452078/sports-hall-st-martin-dietger-wissounig-architekten>.
10. Bundesgymnasium Gainfarn - Bad Vöslau / Franz Architekten // ArchDaily. – 2014. – 24 December. – Режим доступа: <http://www.archdaily.com/579041/bundesgymnasium-gainfarn-bad-vozlau-franz-architekten>.

Рецензент: Челноков О. В., к. т. н., проф.

Надійшла до редколегії: 16.11.2016 р. Прийнята до друку: 26.11.2016 р.